VOLVO XC60

OWNERS MANUAL

WEB EDITION

DEAR VOLVO OWNER

THANK YOU FOR CHOOSING VOLVO

We hope you will enjoy many years of driving pleasure in your Volvo. The car has been designed for the safety and comfort of you and your passengers. Volvo is one of the safest cars in the world. Your Volvo has also been designed to satisfy all current safety and environmental requirements.

In order to increase your enjoyment of the car, we recommend that you familiarise yourself with the equipment, instructions and maintenance information contained in this owner's manual.

This insert is printed on recycled paper.

Table of contents

* Option/accessory, for more information, see Introduction.

03 Your driving environment

04 Comfort and driving pleasure

05 During your journey

06 Maintenance and specifications

07 Alphabetical Index

Important information

Reading the Owner's Manual

Introduction
A good way of getting to know your new car is to read the owner's manual, ideally before your first journey. This will give you the opportunity to familiarise yourself with new functions, to see how best to handle the car in different situations, and to make the best use of all the car's features. Please pay attention to the safety instructions contained in the manual.

The equipment described in the owner's manual is not present in all cars . In addition to standard equipment, this manual also describes options (factory fitted equipment) and certain accessories (retrofitted extra equipment). If you are uncertain over what is standard, an option or an accessory then contact your Volvo dealer.

Volvo cars are adapted for the varying requirements of different markets, as well as for national or local legal requirements and regulations.

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

Option
All types of option/accessory are marked with an asterisk * .

The range of options/accessories for the different car models varies depending on the market. The majority of options are factory fitted and cannot be retrofitted, accessories are retrofitted.

Contact your authorised Volvo dealer for more information.

Special texts

WARNING

Warning texts advise of a risk of personal injury.

IMPORTANT

Important texts advise of a risk of material damage.

NOTE

NOTE texts give advice or tips that facilitate the use of features and functions for example.

Footnote
There is footnote information in the owner's manual that is located at the bottom of the page. This information is an addition to the text that it refers to via a number. If the footnote refers to text in a table then letters are used instead of numbers for referral.

Message texts
There are displays in the car that show text messages. These text messages are highlighted in the owner's manual by means of the text being slightly larger and printed in grey. Examples of this are in menu texts and message texts on the information display (e.g. **Audio settings**).

Labels
The car contains different types of label which are designed to convey important information in a simple and clear manner. The labels in the car have the following descending degree of importance for the warning/information.

Important information

Warning for personal injury

Black ISO symbols on yellow warning field, white text/image on black message field. Used to indicate the presence of danger which, if the warning is ignored, may result in serious personal injury or fatality.

Risk of property damage

White ISO symbols and white text/image on black or blue warning field and message field. Used to indicate the presence of danger which, if the warning is ignored, may result in damage to property.

Information

White ISO symbols and white text/image on black message field.

Procedure lists

Procedures where action must be taken in a certain sequence are numbered in the owner's manual.

1. When there is a series of illustrations for step-by-step instructions each step is numbered in the same way as the corresponding illustration.

A. There are numbered lists with letters adjacent to the series of illustrations where the order of the instructions is not significant.

- Arrows appear numbered and unnumbered and are used to illustrate a movement.

Important information

If there is no series of illustrations for step-by-step instructions then the different steps are numbered with normal numbers.

Position lists

1 Red circles containing a number are used in overview images where different components are pointed out. The number recurs in the position list featured in connection with the illustration that describes the item.

Bulleted lists

A bulleted list is used when there is a list of points in the owner's manual.

Example:

- Coolant
- Engine oil

To be continued

▸▸ This symbol is located furthest down to the right when a section continues on the following page.

Recording data

The driving and safety systems in the car use computers which check and share information with each other on the car's function. One or more of these computers may store information on the systems they check during normal driving, during the course of a collision or near-collision. Stored information may be used by:

- Volvo Car Corporation
- Service or repair workshops
- Police or other authorities
- Other parties who claim legal entitlement for access to the information or someone who has permission from the owner to access the information.

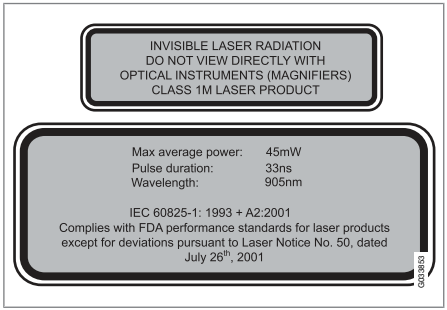
Accessories and extra equipment

The incorrect connection and installation of accessories can negatively affect the car's electrical system. Certain accessories only function when their associated software is installed in the car's computer system. Always contact an authorised Volvo workshop before installing accessories which are connected to or affect the electrical system.

Laser sensor

This vehicle is equipped with a sensor which transmits laser light. It is absolutely essential to follow the prescribed instructions when handling the laser sensor.

The following two labels relate to the laser sensor:



- The upper label describes the laser light's classification, Invisible Laser radiation – Do not view directly with optical instruments (magnifiers) – Class 1M laser product.

This text is printed in the next warning box.

- The lower label describes the laser light's physical data:
  IEC 60825-1:1993 + A2:2001. Complies with FDA performance standards for laser products except for deviations pursuant to

Laser Notice No. 50, dated July 26th, 2001.

The physical data is specified in the following table and other text is printed in the next warning box.

Radiation data for the laser sensor

Maximum pulse energy	2.64 µJ
Maximum average output	45 mW
Pulse duration	33 ns
Divergence (horizontal × vertical)	28° × 12°

WARNING

If any of these instructions are not followed then there is a risk of eye injury!

- Testing, repair, removal, adjustment and/or replacement of the laser sensor's spare parts must only be carried out by an authorised Volvo workshop.
- To avoid exposure to harmful radiation, do not carry out any readjustments or maintenance other than those specified here.
- The repairer must follow specially drawn up workshop information for the laser sensor.
- Do not remove the laser sensor (this includes removing the lenses). A removed laser sensor does not fulfil laser class 3B as per standard IEC 60825-1. Laser class 3B is not eye-safe and therefore entails a risk of injury.
- The laser sensor's connector must be unplugged before removal from the windscreen.
- The laser sensor must be fitted onto the windscreen before the sensor's connector is plugged in.
- Never look into the laser sensor (which emits spreading invisible laser radiation) at a distance of 100 mm or closer with magnifying optics such as a magnifying glass, microscope, lens or similar optical instruments.
- The laser sensor transmits laser light when the remote control key is in position **II** and also with the engine switched off (see page 70 on key positions).

For more information on the laser sensor, see page 164.

Owner's manual on the Internet

At www.volvocars.com there is further information concerning your car.

Volvo and the environment

Volvo Cars' environmental philosophy

Environmental care is one of Volvo Car Corporation's core values which influence all operations. We also believe that our customers share our consideration for the environment.

Your Volvo complies with strict international environmental standards and is also manufactured in one of the cleanest and most resource-efficient plants in the world. Volvo Car Corporation has global ISO certification, which includes the environmental standard ISO 14001 covering all factories and several of our other units. We also set requirements for our partners so that they work systematically with environmental issues.

EPI (Environmental Product Information) is supplied for all Volvo models. Here you can see how the environment is affected during the entire lifecycle of the car.

Read more at www.volvocars.com/EPI.

Fuel consumption
Volvo cars have competitive fuel consumption in each of their respective classes. Lower fuel consumption generally results in lower emission of the greenhouse gas, carbon dioxide.

It is possible for the driver to influence fuel consumption. For more information read under the heading, **Reducing environmental impact**.

Efficient emission control
Your Volvo is manufactured following the concept "Clean inside and out" – a concept that encompasses a clean interior environment as well as highly efficient emission control. In many cases the exhaust emissions are well below the applicable standards.

Clean air in the passenger compartment
A passenger compartment filter prevents dust and pollen from entering the passenger compartment via the air intake.

A sophisticated air quality system, IAQS* (Interior Air Quality System) ensures that the incom-

* Option/accessory, for more information, see Introduction.

ing air is cleaner than the air in the traffic outside.

The system consists of an electronic sensor and a carbon filter. The incoming air is monitored continuously and if there is an increase in the level of certain unhealthy gases such as carbon monoxide then the air intake is closed. Such a situation may arise in heavy traffic, queues and tunnels for example.

The entry of nitrous oxides, ground-level ozone and hydrocarbons is prevented by the carbon filter.

Textile standard

The interior of a Volvo is designed to be pleasant and comfortable, even for people with contact allergies and for asthma sufferers. Extreme attention has been given to choosing environmentally-compatible materials. This means that they also fulfil the requirements in the Oeko-Tex 100 standard[1], a major advance towards a healthier passenger compartment environment.

Oeko-Tex certification covers seatbelts, carpets and fabrics for example. The leather in the upholstery undergoes chromium-free tanning with plant substances and fulfils the certification requirements.

Volvo workshops and the environment

Regular maintenance creates the conditions for a long service life and low fuel consumption for your car. In this way you contribute to a cleaner environment. When Volvo's workshops are entrusted with the service and maintenance of your car it becomes part of our system. We make clear demands regarding the way in which our workshops are designed in order to prevent spills and discharges into the environment. Our workshop staff have the knowledge and the tools required to guarantee good environmental care.

Reducing environmental impact

You can easily help reduce environmental impact, for example, by driving economically and by servicing and maintaining the car according to the instructions in the owner's manual.

The following advice will help you to do your bit for the environment: (for further advice on how you can reduce environmental impact and drive economically, see page 204).

- Decrease fuel consumption by choosing ECO tyre pressure, see page 261.
- A roof load and ski box increase air resistance, leading to higher fuel consumption. Remove them directly after use.
- Remove unnecessary items from the car. The greater the load the higher the fuel consumption.
- If the car is equipped with an engine block heater, always use it before starting from cold. This reduces fuel consumption and exhaust emissions.
- Drive gently and avoid braking too hard.
- Drive in the highest gear possible. Low engine speeds result in lower fuel consumption.
- Use engine braking to slow down.
- Avoid letting the engine idle. Pay attention to local regulations. Switch off the engine when stationary for longer periods.
- Always dispose of environmentally hazardous waste, such as batteries and oils, in an environmentally safe manner. If uncertain about disposal, consult an authorised Volvo workshop for advice.
- Service your car regularly.
- High speed increases consumption considerably due to increased wind resistance. A doubling of speed increases wind resistance 4 times.

These hints will help reduce fuel consumption without increasing travel time or lessening the enjoyment of driving. Apart from being kind to

1 More information on www.oekotex.com

Volvo and the environment

your car, you'll be saving money - and the Earth's resources.

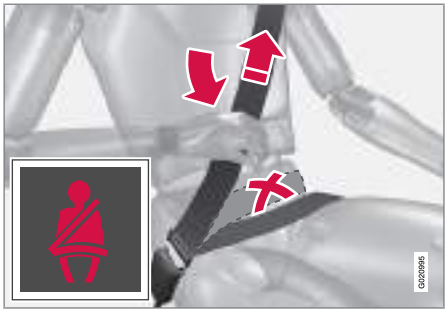
* Option/accessory, for more information, see Introduction.

SAFETY

01

Seatbelts

General information



Heavy braking can have serious consequences if the seatbelts are not used. Ensure that all passengers use their seatbelts.

It is important that the seatbelt lies against the body so it can provide maximum protection. Do not lean the backrest too far back. The seatbelt is designed to protect in a normal seating position.

Putting on a seatbelt

Pull the seatbelt out slowly and secure it by pressing the buckle into the lock. A loud "click" indicates that the seatbelt has locked.

The buckles only fit the intended lock in the rear seat.

Releasing the seatbelt

Press the red lock button and then let the seatbelt retract. If the seatbelt does not retract fully, feed the seatbelt in by hand so that it does not hang loose.

The seatbelt locks and cannot be withdrawn:

- if it is pulled out too quickly
- during braking and acceleration
- if the car leans heavily.

Keep in mind the following

- do not use clips or anything else that can prevent the seatbelt from fitting properly
- ensure that the seatbelt is not twisted or caught on anything
- the hip strap must be positioned low down (not over the abdomen)
- tension the hip strap over the lap by pulling the diagonal shoulder belt as in the preceding illustration.

WARNING

The seatbelts and airbags interact. If a seatbelt is not used or is used incorrectly, this may diminish the protection provided by the airbag in the event of a collision.

WARNING

Each seatbelt is designed for only one person.

WARNING

Never modify or repair the seatbelts yourself. Contact an authorised Volvo workshop.

If a seatbelt has been subjected to a major load, such as in conjunction with a collision, the entire seatbelt must be replaced. Some of the protective characteristics of the seatbelt may have been lost, even if it appears to be undamaged. In addition, replace the seatbelt if the belt is worn or damaged. The new seatbelt must be type-approved and intended for installation in the same position as the replaced seatbelt.

Seatbelts and pregnancy

The seatbelt should always be worn during pregnancy. But it is then crucial that it be worn in the correct way. The diagonal section should wrap over the shoulder then be routed between the breasts and to the side of the abdomen.

The lap section should lay flat over the thighs and as low as possible under the abdomen. – It must never be allowed to ride upward. Remove all slack from the seatbelt and ensure that it fits close to the body. In addition, check that there are no twists in the seatbelt.

As the pregnancy progresses, pregnant drivers should adjust their seats and steering wheel such that they can easily maintain control of the vehicle as they drive (which means that they must be able to easily operate the foot pedals and steering wheel). They should strive to position the seat with as large a distance as possible between their abdomen and the steering wheel.

Seatbelt reminder

Unbelted occupants will be reminded to fasten their seatbelts by means of an audio and visual reminder. The audio reminder is speed dependent, and in some cases time dependent. The visual reminder is located in the roof console and the combined instrument panel.

Child seats are not covered by the seatbelt reminder system.

Rear seat

The seatbelt reminder in the rear seat has two subfunctions:

- Provides information on which seatbelts are being used in the rear seat. The message is shown in the information display when the seatbelts are being used or when a rear door is opened. The message is automatically cleared after approx. 30 seconds or can be acknowledged manually by pressing the direction indicator lever's **READ** button.
- Provides a warning if one of the rear seatbelts is unfastened during travel. This warning takes the form of a message on the information display along with the audio/visual signal. The warning stops when the seatbelt is re-fastened, or it can also be acknowledged manually by pressing the **READ** button.

The message on the information display showing which seatbelts are in use is always available. Press the **READ** button to see stored messages.

Certain markets

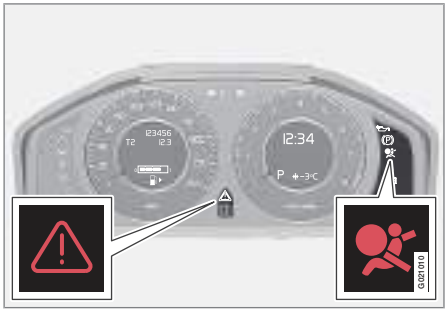
An acoustic signal and indicator lamp remind the driver if not wearing a seatbelt to use one. At low speed, the audio reminder will sound for the first 6 seconds.

Seatbelts

Seatbelt tensioner

All the seatbelts are equipped with belt tensioners. A mechanism in the seatbelt tensioner tightens the seatbelt in the event of a sufficiently violent collision. The seatbelt then provides more effective restraint for the occupants.

Warning symbol on the combined instrument panel



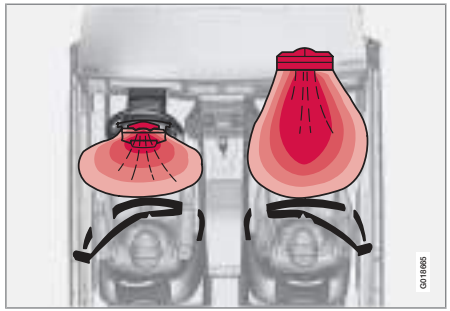
The airbag system is continuously monitored by the system's control module. The warning symbol in the combined instrument panel illuminates when the remote control key is in position **II** or **III**. The symbol goes out after approx. 6 seconds provided the airbag system is fault-free.

WARNING

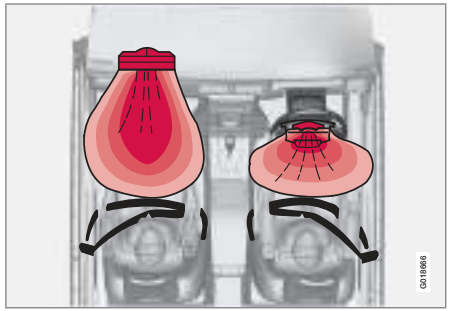
If the warning symbol for the airbag system remains illuminated or illuminates while driving, it means that the airbag system does not have full functionality. The symbol indicates a fault in the seatbelt tensioner system, SIPS, the IC system or another fault in the SRS system. Contact an authorised Volvo workshop immediately.

As well as the warning symbol, a message may appear on the information display in appropriate cases. If the warning symbol malfunctions, the warning triangle illuminates and **SRS Airbag Service required** or **SRS Airbag Service urgent** appears in the display. Contact an authorised Volvo workshop immediately.

Overview, airbag system



SRS system, left-hand drive.



SRS system, right-hand drive.

The SRS system consists of airbags and sensors. A sufficiently violent collision trips the sensors and the airbag(s) are inflated with hot

Airbag system (SRS - Airbag)

gas. To cushion the impact, the airbag deflates when compressed. When this occurs, smoke escapes into the car. This is completely normal. The entire process, including inflation and deflation of the airbag, occurs within tenths of a second.

WARNING

Repairs must only be performed by an authorised Volvo workshop. Any interference in the airbag system could cause malfunction and result in serious personal injury.

NOTE

The sensors react differently depending on the course of the collision and whether or not the seatbelts on the driver and passenger side are used.

It is therefore possible that only one (or none) of the airbags may inflate in a collision. The airbag system senses the force of the collision on the car and adapts accordingly so that one or more airbags are deployed.

The capacity of the airbags is also adapted to the collision force to which the vehicle is subjected.

Location of the front passenger airbag in a left-hand drive car.

Location of the front passenger airbag in a right-hand drive car.

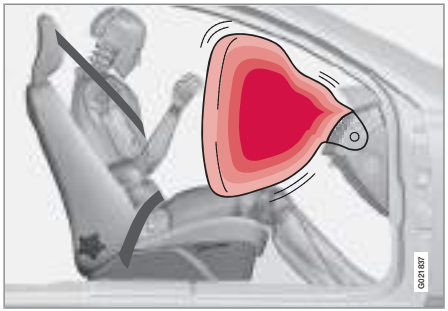
Airbag on the driver's side

The car has an SRS airbag (Supplemental Restraint System) on the driver's side to supplement the protection afforded by the seatbelt. This airbag is fitted into the centre of the steering wheel. The steering wheel is marked **SRS AIRBAG**.

WARNING

The seatbelts and airbags interact. If a seatbelt is not used or is used incorrectly, this may diminish the protection provided by the airbag in the event of a collision.

Passenger airbag



The car has an airbag to supplement the protection afforded by the seatbelt on the passenger side. This airbag is folded up into a compartment above the glovebox. Its cover panel is marked **SRS AIRBAG**.

WARNING

To minimise the risk of injury if the airbag deploys, passengers must sit as upright as possible with their feet on the floor and backs against the backrest. Seatbelts must be secured.

WARNING

Do not put objects in front of or above the dashboard where the passenger airbag is located.

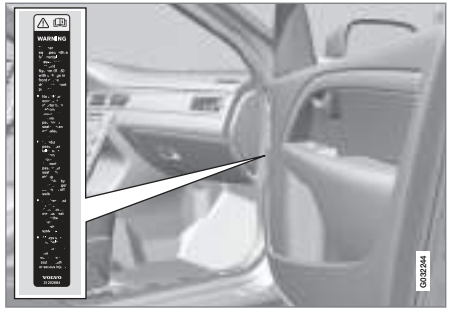
WARNING

Never place a child in a child seat or on a booster cushion in the front seat if the airbag is activated [1].

Never allow a child to stand or sit in front of the front passenger seat. No one shorter than 140 cm should ever sit in the front passenger seat if the airbag is activated.

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

Airbag label



Label for airbag located on door pillar.

1 For information on how to activate/deactivate the airbag, see page 22.

Activating/deactivating the airbag*

Key switch off - PACOS

General information

The airbag for the front passenger seat can be deactivated if the car is equipped with a switch, PACOS (Passenger Airbag Cut Off Switch). For information on how to activate/deactivate, see under the heading Activating/deactivating.

Key switch off/switch

The switch for the passenger airbag (PACOS) is located on the passenger end of the instrument panel and is accessible when the passenger door is open, (see under the following heading, "Switch – PACOS"). Check that the switch is in the required position. Volvo recommends that the remote control key's key blade be used to change position.

For information on the key blade, see page 42.

WARNING

Failure to follow the advice given above could endanger the life of passengers in the car.

WARNING

If the car is equipped with a front passenger airbag, but has no switch (PACOS, Passenger Airbag Cut Off Switch), then the airbag is always activated.

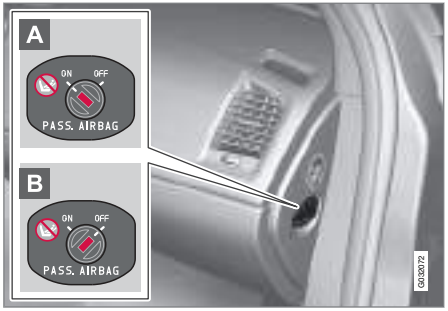
WARNING

Never place a child in a child seat or on a booster cushion in the front seat if the airbag is activated and the symbol  in the roof console is illuminated. Failure to follow this advice could endanger the life of the child.

WARNING

Do not allow anyone to sit in the front passenger seat if the message in the roof panel (see page 23) indicates that the airbag is deactivated and if the warning symbol for the airbag system is also displayed in the combined instrument panel. This indicates that there has been a severe malfunction. Contact an authorised Volvo workshop immediately.

Activating/deactivating



Switch location.

A The airbag is activated. With the switch in this position, persons taller than 140 cm can sit in the front passenger seat, but never children in a child seat or on a booster cushion.

B The airbag is deactivated. With the switch in this position, children in a child seat or on a booster cushion can sit in the front passenger seat, but never persons taller than 140 cm.

* Option/accessory, for more information, see Introduction.

Activating/deactivating the airbag*

WARNING

Activated airbag (passenger seat):

Never place a child in a child seat or on a booster cushion on the front passenger seat when the airbag is activated. This applies to everyone shorter than 140 cm.

Deactivated airbag (passenger seat):

No one taller than 140 cm should ever sit in the front passenger seat when the airbag is deactivated.

Failure to follow the advice given above could endanger life.

Messages

Indicator in the roof console showing that the passenger airbag is deactivated.

A text message and a symbol in the roof panel indicate that the airbag for the front passenger seat is deactivated (see preceding illustration).

Indicator in the roof console showing that the passenger airbag is activated.

A warning symbol in the roof panel indicates that the airbag for the front passenger seat is activated (see preceding illustration).

NOTE

When the remote control key is turned to ignition position **II** or **III**, the airbag warning symbol is shown in the combined instrument panel for approx. 6 seconds, see page 19.

Following which, the indicator in the roof console is illuminated showing the correct status for the front passenger seat airbag. For more information on the remote control key's different ignition positions, see page 70.

Side airbags (SIPS bags)

Side airbag

In a side impact collision a large proportion of the collision force is transferred by the SIPS (Side Impact Protection System) to beams, pillars, the floor, the roof and other structural parts of the body. The side airbags at the driver's and front passenger seats protect the chest area and the hip and are an important part of the SIPS.

The SIPS bag system consists of two main components, side airbag and sensors. The side airbags are located in the front seat backrests.

WARNING

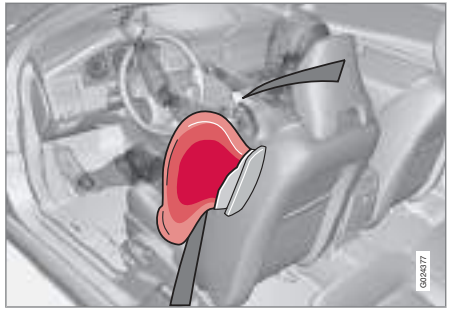
- Repairs must only be performed by an authorised Volvo workshop. Any interference in the SIPS bag system could cause malfunction and result in serious personal injury.
- Do not put objects in the area between the outside of the seat and the door panel, since this area is required by the side airbag.
- Use only seat covers approved by Volvo. Other seat covers may impede the operation of the side airbags.
- The side airbag is a supplement to the seatbelts. Always use a seatbelt.

Child seats and side airbags

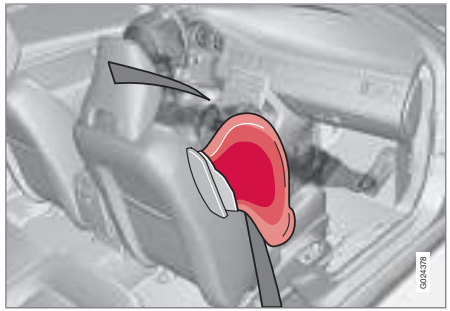
The protection provided by the car to children seated in a child seat or on a booster cushion is not diminished by the side airbag.

A child seat or booster cushion can be placed on the front passenger seat provided that the car does not have an activated[1] passenger airbag.

Location



Driver's seat, left-hand drive.



Front passenger seat, left-hand drive.

The SIPS bag system consists of side airbags and sensors. A sufficiently violent collision trips

1 For information on activating/deactivating the airbag, see page 22.

the sensors and the side airbags are inflated. The airbag inflates between the occupant and the door panel and thereby cushions the initial impact. The airbag deflates when compressed by the collision. The side airbag is normally only deployed on the side of the collision.

Label

Label for side airbag located on door pillar.

Inflatable Curtain (IC)

Properties

The inflatable curtain (IC) is a supplement to the SIPS and SRS airbags. It is fitted in the headlining along both sides of the roof and protects the car occupants sitting in the outer seats. A sufficiently violent collision trips the sensors and the inflatable curtain is inflated. The inflatable curtain helps to prevent the driver and passengers from striking their heads on the inside of the car during a collision.

WARNING

Never hang or attach heavy items onto the handles in the roof. The hook is only designed for light clothing (not for solid objects such as umbrellas for example).

Do not screw or install anything onto the car's headlining, door pillars or side panels. This could compromise the intended protection. Only ever use Volvo genuine parts that are approved for placement in these areas.

WARNING

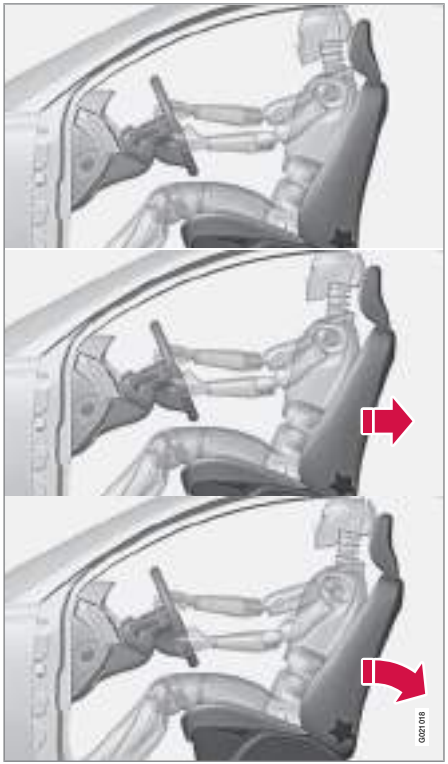
Do not load the car higher than 50 mm under the top edge of the door windows. Otherwise, the intended protection of the inflatable curtain, which is concealed in the headlining, may be compromised.

WARNING

The inflatable curtain is a supplement to the seatbelts.

Always use a seatbelt.

Protection against whiplash injury – WHIPS



The whiplash protection system (WHIPS) consists of energy absorbing backrests and specially designed head restraints in the front seats. The system is actuated by a rear-end collision, where the angle and speed of the collision, and the nature of the colliding vehicle all have an influence.

WARNING

The WHIPS-system is a complement to the seatbelt. Always use a seatbelt.

Properties of the seat

When the WHIPS system is deployed, the front seat backrests are lowered backward to alter the seating position of the driver and front seat passenger. This reduces the risk of whiplash injury.

WARNING

Never modify or repair the seat or WHIPS system yourself. Contact an authorised Volvo workshop.

WHIPS system and child seats/cushions

The protection provided by the car to children seated in a child seat or on a booster cushion is not diminished by the WHIPS system.

Correct seating position

For the best possible protection, the driver and front seat passenger should sit in the centre of the seat with as little space as possible between the head and the head restraint.

WARNING

If a seat has been subjected to extreme forces, such as due to a rear-end collision, the WHIPS system must be checked by an authorised Volvo workshop.

Part of the WHIPS system's protective capacity may have been lost even if the seats appear to be undamaged. Contact an authorised Volvo workshop to have the system checked even after a minor rear-end collision.

WHIPS

Do not obstruct the WHIPS system

Objects behind driver's/passenger seat.

WARNING

Do not squeeze rigid objects between the rear seat cushion and the front seat backrest. Make sure you do not to obstruct the function of the WHIPS system.

Objects in the rear seat.

WARNING

If a rear seat backrest is folded down, the corresponding front seat must be moved forward so that it does not touch the folded backrest.

Roll-Over Protection System - ROPS

Function

Volvo's Roll-Over Protection System (ROPS) has been designed to reduce the risk of the car overturning and to provide the best possible protection in the event of such an accident.

The system consists of a stabiliser system, Roll Stability Control (RSC) that minimises the risk of overturning, for example, during sudden evasive manoeuvres or if the car skids.

The RSC system uses a sensor which registers changes in the car's lateral inclination angle. This information is used to calculate the risk of the car overturning. If a risk exists, the DSTC system engages, engine torque is lowered and one or more wheels are braked until the car has regained its stability.

Read more about the DSTC system on page 150.

WARNING

Under normal driving conditions, the RSC system improves the car's road safety, but this must not be taken as a reason to increase speed. Always follow the usual precautions for safe driving.

When the systems deploy

When the systems deploy

System	Triggered
Seatbelt tensioner, front seat	In the event of a frontal collision, and/or side-impact collision, and/or rear-end collision and/or overturning
Seatbelt tensioner, rear seat	In the event of a frontal collision and/or overturning
Airbags (SRS)	In a frontal collision[A]
Side airbags (SIPS)	In a side-impact accident[A]
Inflatable Curtain IC	In the event of a side-impact collision and/or overturning[A]
Whiplash protection WHIPS	In a rear-end collision

A The bodywork of the car could be greatly deformed in a collision without airbag deployment. A number of factors such as the rigidity and weight of the object hit, the speed of the car, the angle of the collision etc. affects how the different safety systems of the car are activated.

If the airbags have deployed, the following is recommended:

- Have the car transported to an authorised Volvo workshop. Do not drive with deployed airbags.
- Let an authorised Volvo workshop replace components in the car's safety system.
- Always contact a doctor.

NOTE

The SRS, SIPS, IC and belt tensioner systems are deployed only once during a collision.

WARNING

The airbag control module is located in the centre console. If the centre console is drenched with water or other liquid, disconnect the battery cables. Do not attempt to start the car since the airbags may deploy. Have the car transported to an authorised Volvo workshop.

WARNING

Never drive with deployed airbags. They can make steering difficult. Other safety systems may also be damaged. The smoke and dust created when the airbags are deployed can cause skin and eye irritation/injury after intensive exposure. In case of irritation, wash with cold water. The rapid deployment sequence and airbag fabric may cause friction and skin burns.

Reduced functionality

If the car is involved in a collision, the text Safety mode See manual may appear on the information display. This means that the car has reduced functionality. Safety mode is a protective state that is enforced when the collision may have damaged any of the car's vital functions, such as the fuel lines, sensors for one of the safety systems, or the brake system.

Attempting to start the car

First, check that no fuel is leaking from the car. There must be no smell of fuel either.

If everything seems normal and you have checked for indications of fuel leakage, you may attempt to start the car.

Firstly, remove the remote control key and then reinsert it. The car's electronics will then try to reset themselves to normal mode. Then try to start the car. If the message Safety mode See manual is still shown on the display then the car must not be driven or towed, but a vehicle recovery service used instead. Even if the car appears to be driveable, hidden damage may make the car impossible to control once moving.

Moving the car

If Normal mode is shown after Safety mode See manual has been reset, the car can be moved carefully out of a dangerous position. Do not move the car further than necessary.

WARNING

Never attempt to repair your car or reset the electronics yourself if the car has been in safety mode. This could result in personal injury or the car not functioning as normal. Always allow an authorised Volvo workshop to check and restore the car to normal status after Safety mode See manual has been displayed.

WARNING

Never, under any circumstances, attempt to restart the car if it smells of fuel when the Safety mode message is displayed. Leave the car at once.

WARNING

If the car is in safety mode it must not be towed. It must be transported to an authorised Volvo workshop.

Child safety

Children should sit comfortably and safely

The position of a child in the car and the choice of equipment are dictated by the child's weight and size, for more information, see page 33.

NOTE

Regulations regarding the placement of children in cars vary from country to country. Check what does apply.

Children of all ages and sizes must always sit correctly secured in the car. Never allow a child to sit on the knee of a passenger.

Volvo's own child safety equipment is designed for your car. Use Volvo genuine equipment to best ensure that the mounting points and attachments are correctly positioned and are sufficiently strong.

NOTE

In the event of questions when fitting child safety products, contact the manufacturer for clearer instructions.

Child seats

Child seats and airbags are not compatible.

Volvo has child safety products that are designed for and tested by Volvo.

NOTE

When using child safety products it is important to read the installation instructions included.

Do not attach the straps for the child seat to the horizontal adjustment bar, springs, rails or beams under the seat. Sharp edges can damage the straps.

Allow the back of the child seat to rest against the dashboard. This applies to cars without a passenger airbag, or where the airbag is deactivated.

Location of child seats

You may place:

- a child seat/booster cushion on the passenger seat, provided the passenger airbag is not activated [1].
- a rear-facing child seat in the rear seat that uses the passenger seat backrest as support.

Always place a child in the rear seat if the passenger airbag is activated. A child sitting on the front passenger seat could suffer serious injury if the airbag deploys.

WARNING

Never place a child in a child seat or on a booster cushion in the front seat if the airbag (SRS) is activated.

No one shorter than 140 cm should ever sit in the front passenger seat if the airbag (SRS) is activated.

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

1 For information on activated/deactivated airbag (SRS), see page 22.

WARNING

Booster cushions/child seats with steel braces or some other design that could rest on the seatbelt buckle's opening button must not be used, as they could cause the seatbelt buckle to open accidentally.

Do not allow the upper section of the child seat to rest against the windscreen.

Airbag label

Label located on instrument panel end face on the passenger side.

Recommended child seats [2]

Weight/Age	Front seat	Outer rear seat	Centre rear seat
Group 0 max 10 kg (0 – 9 months) Group 0+ max 13 kg	Volvo Child seat – rear-facing child seat, secured with the car's seatbelt and straps. Type approval: E5 03135	Volvo Child seat – rear-facing child seat, secured with the car's seatbelt, straps and support legs. Type approval: E5 03135	
	Britax Baby Safe Plus – rear-facing child seat, secured with the ISOFIX fixture system. Type approval: E1 03301146	Britax Baby Safe Plus – rear-facing child seat, secured with the ISOFIX fixture system. Type approval: E1 03301146	Britax Baby Safe Plus – rear-facing child seat, secured with the car's seatbelt. Type approval: E1 03301146

2 With regard to other child seats your car should be included in the manufacturer's enclosed list of vehicles or be universally approved in accordance with the ECE R44 legal requirement.

Child safety

Weight/Age	Front seat	Outer rear seat	Centre rear seat
Group 1 9 – 18 kg (9 – 36 months)	Volvo Child seat – rear-facing child seat, secured with the car's seatbelt and straps. Type approval: E5 03135	Volvo Child seat – rear-facing child seat, secured with the car's seatbelt, straps and support legs. Type approval: E5 03135	
	Britax Fixway – rear-facing child seat, secured with the ISOFIX fixture system and straps. Type approval: E5 03171	Britax Fixway – rear-facing child seat, secured with the ISOFIX fixture system and straps. Type approval: E5 03171	
Group 2/3 15 – 36 kg (3 – 12 yr)	Volvo Booster cushion – with or without backrest. Type approval: E5 03139	Volvo Booster cushion – with or without backrest. Type approval: E5 03139	Volvo Booster cushion – with or without backrest. Type approval: E5 03139
		Volvo 2-stage Integrated booster cushion – available as a factory fitted option. Type approval: E5 04189	

* Option/accessory, for more information, see Introduction.

Integrated two-stage booster cushions*

Correct position, the seatbelt is positioned above the shoulder.

Incorrect position, the head must not be positioned above the head restraint and the seatbelt must not be below the shoulder.

The booster cushions are specially designed to provide optimum comfort and safety. In combination with the seatbelt they are approved for children who weigh between 15 and 36 kg and who are 95 to 140 cm in height.

Check before driving that:

- the 2-stage integrated booster cushion is correctly set (see table below) and in locked position
- the seatbelt is in contact with the child's body and is not slack or twisted
- the seatbelt does not lie across the child's throat or below the shoulder (see preceding illustrations)
- the lap section of the seatbelt is positioned low over the pelvis to provide optimal protection.

	Stage 1	Stage 2
Weigh t	22 - 36 kg	15 – 25 kg
Lengt h	115 - 140 cm	95 - 120 cm

For instructions on adjusting the booster cushion's two levels, see pages 35– 36.

Raising the two-stage booster cushion

Stage 1

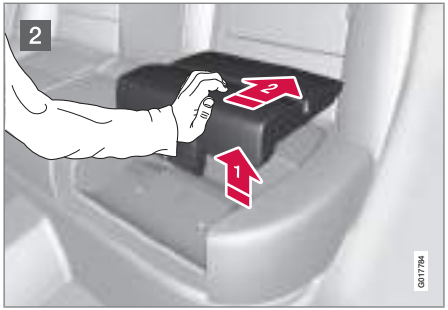
1 Pull the handle forward and up in order to release the booster cushion.

Child safety

2 Press the booster cushion backwards to lock.

Stage 2

1 Start from the lower stage. Press the button.



2 Lift the booster cushion up at the front edge and press it back against the backrest to lock.

WARNING

Repair or replacement should only be performed by an authorised Volvo workshop. Do not make any modifications or additions to the booster cushion. If an integrated booster cushion has been subjected to a major load, such as in conjunction with a collision, the entire booster cushion must be replaced. Even if the booster cushion appears to be undamaged, it may not afford the same level of protection. The booster cushion must also be replaced if it is heavily worn.

NOTE

It is not possible to adjust the booster cushion from stage 2 to stage 1. It must first be reset by being fully folded into the seat cushion. Refer to the heading below, Lowering the two-stage booster cushion.

Lowering the two-stage booster cushion

Lowering can take place from both the upper and lower stage to fully lowered position in the cushion. However, it is not possible to adjust the booster cushion from the upper stage to the lower stage.

1 Pull the handle forwards to release the cushion.

2 Press down with your hand in the centre of the cushion in order to lock it.

WARNING

If the instructions regarding the two-stage booster cushion are not followed then this could cause serious injury to a child in the event of an accident.

IMPORTANT

Check that there are no loose objects (e.g. toys) left behind in the space under the cushion before lowering.

NOTE

The booster cushion must be lowered first when lowering the backrest.

Child safety locks, rear doors

The controls for operating the rear door power windows and the rear door opening handles can be blocked from opening from the inside. For more information, see page 55.

ISOFIX fixture system for child seats

Mounting points for the ISOFIX fixture system are concealed behind the lower section of the rear seat backrest, in the outer seats.

The location of the mounting points is indicated by symbols in the backrest upholstery (see preceding illustration).

Press the seat cushion down to access the mounting points.

NOTE

The ISOFIX fixture system is an accessory for the passenger seat.

Always follow the manufacturer's installation instructions when connecting a child seat to the ISOFIX mounting points.

Size classes

Child seats are in different sizes – cars are in different sizes. This means that not all child seats are suitable for all seats in all car models.

Consequently, a size classification has been introduced for child seats using the ISOFIX fixture system in order to assist users in choosing the correct child seat (see the following table).

Size class	Description
A	Full size, front-facing child seat
B	Reduced size (alt.1), front-facing child seat
B1	Reduced size (alt.2), front-facing child seat
C	Full size, rear-facing child seat
D	Reduced size, rear-facing child seat
E	Rear-facing infant seat

Child safety

Size class	Description
F	Transverse infant seat, left-hand
G	Transverse infant seat, right-hand

WARNING

Never place a child in the passenger seat if the car is equipped with an activated airbag.

NOTE

If an ISOFIX child seat has no size classification then the car model must be included on the child seat's vehicle list.

NOTE

Contact a Volvo dealer for Volvo recommendations on ISOFIX child seats.

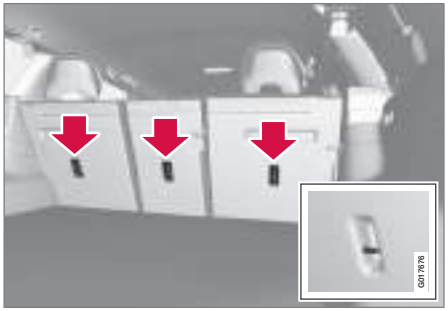
Types of ISOFIX child seat

Type of child seat	Weight (Age)	Size class	Passenger seats for ISOFIX installation of child seats	
			Front seat	Outer rear seat
Infant seat transverse	max. 10 kg (0 – 9 months)	F	-	-
		G	-	-
Infant seat, rear-facing	max. 10 kg (0 – 9 months)	E	OK	OK
Infant seat, rear-facing	max. 13 kg (0 – 12 months)	E	OK	OK
		D	OK	OK
		C	-	OK
Child seat, rear-facing	9 – 18 kg (9 – 36 months)	D	OK	OK
		C	OK	OK

Type of child seat	Weight (Age)	Size class	Passenger seats for ISOFIX installation of child seats	
			Front seat	Outer rear seat
Front-facing child seat	9 – 18 kg (9 – 36 months)	B	OK [A]	OK[A]
		B1	OK[A]	OK[A]
		A	OK[A]	OK[A]

[A] Volvo recommends rear-facing child seats for this group.

Upper mounting points for child seats



The car is equipped with upper mounting points for certain front-facing child seats. These mounting points are located on the rear of the seat.

The upper mounting points are primarily intended for use with front-facing child seats.

Volvo recommends that small children should sit in rear-facing child seats to as late an age as possible.

NOTE

For cars with folding head restraints on the outside seats the head restraints should be folded to facilitate the installation of this type of child seat.

NOTE

For cars equipped with a cargo area cover over the cargo area, this must be removed before a child seat can be fitted in the mounting points.

For detailed information on how the child seat should be tensioned in the upper mounting points, see the seat manufacturer's instructions.

WARNING

The child seat's straps must always be routed under the rear head restraints before being tensioned at the mounting point.

* Option/accessory, for more information, see Introduction.

LOCKS AND ALARM

02

Remote control key/key blade

General

The car is supplied with two remote control keys or two PCCs (Personal Car Communicator). They are used to start the car and for locking and unlocking.

More remote control keys can be ordered – up to six can be programmed and used for the same car.

The PCC has increased functionality compared with the remote control key. Only the remote control key is referred to in the remainder of this chapter when describing functions available in both the PCC and remote control key.

WARNING

If there are children in the car:

Always remember to switch off the power supply to power windows and sunroof by removing the remote control key if the driver leaves the car.

Detachable key blade

A remote control key includes a detachable metal key blade for mechanical locking/unlocking of the driver's door and glovebox. The key blade is also used to deactivate/activate PACOS*, see page 22.

For key blade functions, see page 46.

The key blades' unique code is available at authorised Volvo workshops, who can order new key blades.

Loss of a remote control key

If you lose a remote control key then new ones can be ordered at an authorised Volvo workshop. The remaining remote control keys must then be taken to the workshop. The code of the missing remote control key must be erased from the system as a theft prevention measure.

The current number of keys registered to the car can be checked under **Car settings ➔ Car Key memory ➔ Number of keys**. For a description of the menu system, see page 116.

Key memory – door mirrors and power driver's seat*

The settings are automatically linked to the remote control key; see page 73 and see page 91.

The function can be activated/deactivated under **Car settings ➔ Car Key memory ➔ Seat & mirror positions**. For a description of the menu system, see page 116.

For cars with Keyless drive function, see page 48.

Indicator for locking/unlocking

When the car is locked or unlocked using the remote control key, the direction indicators confirm that locking/unlocking was correctly performed:

- Locking - one flash
- Unlocking - two flashes.

After locking the indication is only given if all locks are activated once the doors have been closed.

The function can be activated/deactivated under **Car settings ➔ Light settings ➔ Lock confirmation light** and **Car settings ➔ Light settings ➔ Unlock confirmation light**.

For a description of the menu system, see page 116.

Immobiliser

Each remote control key has a unique code. The car can only be started with the correct remote control key with the correct code.

The following error messages in the combined instrument panel's information display are related to the electronic immobiliser:

* Option/accessory, for more information, see Introduction.

Message	Specification
Key error Try again	Error reading remote control key during start. Try to start the car again.
Car key not found	Applies only to the PCC's Keyless drive function. Errors reading the PCC during starting. Try to start the car again.
Immobiliser Try start again	Remote control key function error during start. If the fault persists; contact an authorised Volvo workshop.

For starting the car, see page 95.

Low battery in remote control key

The batteries should be replaced if:

- the information symbol illuminates and **Replace car key battery** is shown in the display

and/or

- the locks repeatedly do not react to signals from the remote control key within 20 metres from the car.

For changing the battery, see page 47.

Functions

Remote control key.

Locking

Unlocking

Approach light duration

Tailgate

Panic function

PCC (Personal Car Communicator).*

Information

Function buttons

Locking – Locks the doors and tailgate and then activates the alarm.

Unlocking – Unlocks the doors and tailgate while the alarm is deactivated.

The function can be changed from unlocking all doors simultaneously, to opening the driver's door after one press of the button and, after a further press of the button - within 10 seconds - opening the remaining doors.

The function is changed under **Car settings ➔ Lock settings ➔ Doors unlock**. For a description of the menu system, see page 116.

Remote control key/key blade

Approach lighting – Used to switch on the car's lighting at a distance. For more information, see page 82.

Tailgate - Unlocks and disarms the alarm for the tailgate only[1]. For more information, see page 51.

Panic function – Used to attract attention in an emergency.

Press and hold the red button for at least 3 seconds or press it twice within 3 seconds to activate the direction indicators and the horn.

The function can be turned off with the same button once it has been active for at least 5 seconds. Otherwise the function switches off automatically after 2 minutes and 45 seconds.

Global opening*

One long press - at least 4 seconds - on button or opens or closes all windows. Also closes the sunroof if open.

The function can be used to quickly air the car in hot weather for example.

WARNING

If the sunroof and windows are closed using the remote control key, check that no one is in danger of getting hands caught.

Range

The remote control key has a range of up to 20 m from the car.

NOTE

The remote control key functions can be disrupted by surrounding radio waves, buildings, topographical conditions etc. The car can always be locked/unlocked using the key blade, see page 46.

Unique functions PCC*

1. Information button
2. Indicator lamps

Using the information button enables access to certain information from the car via the indicator lamps.

Using the information button

– Press the information button .

All indicator lamps flash for approximately 7 seconds and the light travels around on the PCC. This indicates that the information from the car has been read.

If any of the other buttons are pressed during this time then the reading is interrupted.

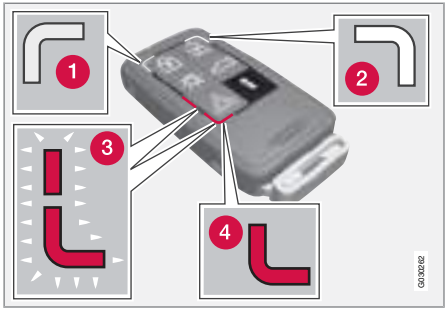
NOTE

If none of the indicator lamps illuminates with repeated use of the information button and in different locations (as well as after 7 seconds and after the light has travelled around on the PCC), contact an authorised Volvo workshop.

Indicator lamps display information in accordance with the following illustration:

1 On cars with power tailgate* the tailgate is opened if the button is kept depressed for more than 2 seconds.

* Option/accessory, for more information, see Introduction.



1. Green continuous light – the car is locked.
2. Yellow continuous light – the car is unlocked.
3. Red light flashing alternately in the two indicator lamps – indicates, using the HBS (Heart Beat Sensor) that someone may be in the car. This indication is only displayed if the alarm was triggered.
4. Red continuous light – the alarm has been triggered.

Range

The PCC lock functions have a range of up to 20 m from the car.

The approach lighting, panic function and the functions controlled by the information button have a range of up to a maximum of 100 m from the car.

NOTE

The information button functions can be disrupted by surrounding radio waves, buildings, topographical conditions etc.

Out of PCC range

If the PCC is too far away from the car for the information to be read then the status the car was last left in is shown, without the light travelling around on the PCC.

If several PCCs are used for the car then it is only the PCC last used for locking/unlocking that shows correct status.

NOTE

If no indicator lamps illuminate when the information button is used then this can be because the last communication between the PCC and the car was disrupted by surrounding radio waves, buildings, topographical conditions etc.

Heart Beat Sensor

The function 3 operates using an HBS (Heart Beat Sensor). HBS is a supplement to the car's alarm system and can indicate at a distance whether anybody is in the car. This indication is only displayed if the alarm was triggered.

The HBS detects an individual's heartbeat that is transmitted to the car's bodywork. For this reason the function of the HBS can be disturbed in an environment subject to noise and vibration.

Detachable key blade

Using the remote control key's detachable key blade:

- the driver's door can be opened manually if central locking cannot be activated with the remote control key
- access to the glovebox is blocked.

Remote control key/key blade

Removing the key blade

1. Slide the spring-loaded catch to the side.
2. At the same time pull the key blade straight out backwards.

Inserting the key blade

Carefully refit the key blade in place in the remote control key, to avoid damaging it.

1. Hold the remote control key with the slot pointed up and lower the key blade into its slot.
2. Lightly press the key blade. You should hear a "click" when the key blade is locked in.

Unlocking doors with the key blade

If central locking cannot be activated with the remote control key, e.g. if the batteries are discharged, then the driver's door can be opened as follows:

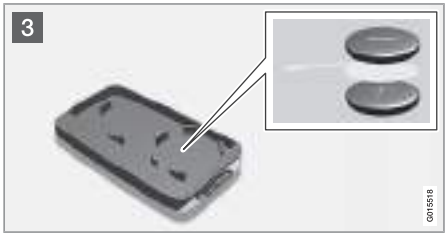
NOTE

When the driver's door is unlocked using the key blade and is opened, the alarm is triggered.

1. Unlock the driver's door using the key blade in the door handle's keyhole.
2. Deactivate the alarm by inserting the remote control key in the ignition switch.

Battery replacement, remote control key/PCC*

Replacing the battery



Opening

1 1 Slide the spring-loaded catch to the side.

2 At the same time pull the key blade straight out backwards.

2 3 Insert a 3 mm slot screwdriver in the hole behind the spring-loaded catch and gently prize the remote control key up.

NOTE

Turn the remote control key over with the buttons facing up, this is to avoid the batteries falling out when it is opened.

IMPORTANT

Avoid touching the battery and its terminals with your fingers, as this could damage their functionality.

Battery replacement

3 Closely study how the battery/batteries are secured on the inside of the cover, with regard to their (+) and (–) sides.

Remove control key (1 battery)

1. Carefully prize out the battery.
2. Install a new one with the (+) side down.

PCC* (2 batteries)

1. Carefully prize out the batteries.
2. First install one new one with the (+) side up.
3. Position the white plastic tab in between and finally install a second new battery with the (+) side down.

Battery type

Use batteries with the designation CR2430, 3V - one in the remote control key and two in the PCC.

Assembly

1. Press the remote control key together.
2. Hold the remote control key with the slot pointed up and lower the key blade into its slot.
3. Lightly press the key blade. You should hear a "click" when the key blade is locked in.

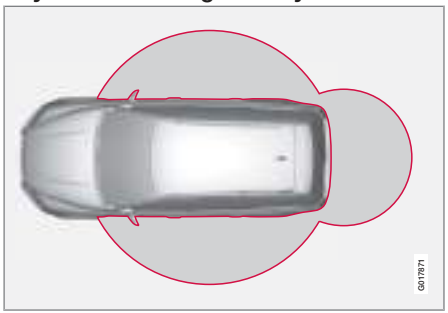
IMPORTANT

Make sure that you dispose of old batteries in an environmentally-friendly way.

Keyless drive*

Keyless drive (only PCC)

Keyless lock and ignition system



The keyless drive function in the PCC allows the car to be unlocked, driven and locked without the need for a key. You simply have to have the PCC with you. The system makes it easier and more convenient to open the car, for example when your hands are full.

The car's two PCCs incorporate the Keyless function. Additional PCCs can be ordered.

PCC range

In order to open a door or the tailgate, a PCC must be no more than approx. 1.5 metres from the car door handle or tailgate. This means that the person who wishes to lock or unlock a door must have the PCC with him or her. It is not possible to lock or unlock a door if the PCC is on the opposite side of the car.

The red rings in the preceding illustration indicate the range covered by the system's antennas.

If all PCCs are removed from the car when the engine is running or key position **II** is active (see page 70) and if all doors are closed, then a warning message is shown in the information display and an audio reminder signal sounds at the same time.

The warning message clears and the audio reminder signal stops when the PCC is brought back to the car after:

- a door has been opened and closed
- the PCC is inserted into the ignition switch
- the **READ** button has been pressed.

Handling the PCC safely

If a PCC with keyless drive function is left in the car, it is deactivated temporarily when the car is locked. This prevents unauthorised entry.

However, if someone breaks into the car, opens the door and finds the PCC, it can be reactivated. It is therefore important to handle all PCCs with great care.

IMPORTANT

Never leave a PCC behind in the car.

Interference to PCC function

Electromagnetic fields and screening can interfere with the keyless drive system. For this reason, do not place the PCC near mobile phones or metallic objects.

If interference is experienced nonetheless, use the PCC and key blade in the normal way, see page 43.

Unlocking

Open the doors with the door handles or open the tailgate with the tailgate's handle.

Unlocking with the key blade

If the keyless drive function in the PCC is not operating, then the driver's door can be unlocked with the key blade. In this case central locking is not activated.

NOTE

Unlocking with the key blade triggers the alarm. For deactivation, see page 56.

Key memory – driver's seat and door mirrors

PCC memory function

If several people each with a PCC approach the car, then the settings for seat and mirrors are implemented for the person who opens the driver's door.

* Option/accessory, for more information, see Introduction.

After the driver's door has been opened by person A with PCC-A, but person B with PCC-B shall drive, the settings can be changed in three ways:

- Standing by the driver's door, or sitting behind the steering wheel, person B presses their PCC's unlock button, see page 43
- Select one of three possible memories for seat adjustment with seat button 1-3, see page 73.
- Adjust the seat and mirrors manually; see page 72 and see page 90.

Locking

Lock the doors and the tailgate by pressing the lock button on one of the door handles on the outside.

All doors and the tailgate must be closed before the car can be locked. Otherwise the car will not be locked.

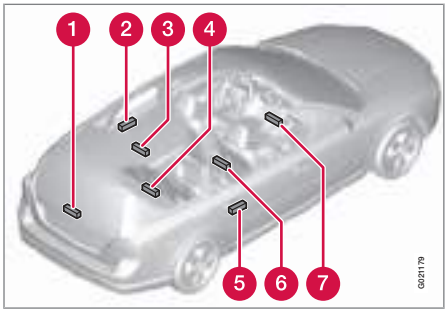
NOTE

On cars with automatic transmission, the gear selector must be set in the **P** position – otherwise the car cannot be locked or the alarm armed.

Lock settings

The keyless function can be adapted to specify which of the car doors are to be unlocked, under **Car settings ➔ Lock settings ➔ Keyless entry**. For a description of the menu system, see page 116.

Antenna location



The keyless system has a number of integrated antennae located around the car:

1. Tailgate, by wiper motor
2. Door handle, left rear
3. Roof, above centre rear seat
4. Cargo area, central and furthest in under the floor
5. Door handle, right rear
6. Centre console, under the rear section
7. Centre console, under the front section.

WARNING

People with pacemaker operations should not come closer than 22 cm to the keyless system's antennae with their pacemaker. This is to prevent interference between the pacemaker and the keyless system.

Locking/unlocking

From the outside

The remote control key can lock/unlock all doors and the tailgate simultaneously. Different sequences can be selected for locking/unlocking; see page 116.

The lock buttons and door handles are disengaged during locking which also prevents opening from the inside, so-called deadlocks function*, see page 53.

If it is not possible to lock/unlock with the remote control key, the battery may be discharged - lock or unlock the door with the detachable key blade; see page 46.

The fuel filler flap can be opened when the car is unlocked, see page 206. It cannot be opened if the car is locked and the alarm is armed.

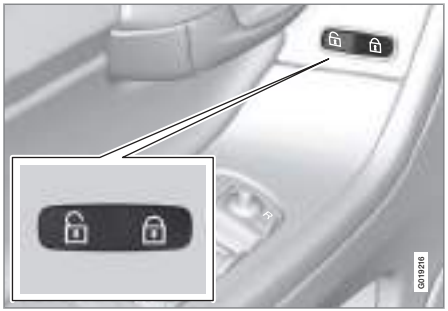
WARNING

Be aware that there is a risk that you can be locked in the car if it is locked from the outside.

Automatic relocking

If none of the doors or the tailgate is opened within two minutes of unlocking, all are locked again automatically. This function prevents the car from being left unlocked unintentionally. For cars with alarms, see page 56.

From the inside



All of the doors and the tailgate can be locked or unlocked simultaneously using the central locking button on either front door. Press one side of the button to lock - the other side to unlock.

Unlocking

A door can be unlocked from the inside in two different ways:

- Press the central locking button (front doors only).

Press and hold to also open all side windows*.

- Pull the door handle once and release. Pull the door handle again to open the door.

Locking

Press the central locking button after the front doors have been closed. Press and hold to also close all of the side windows and the sunroof*.

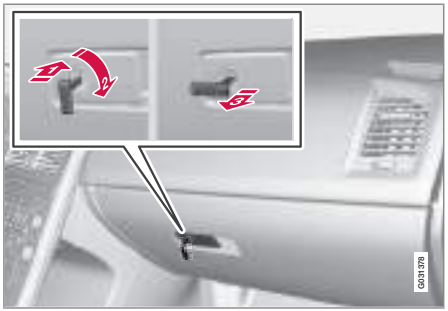
All the doors can be locked manually with their respective lock buttons after the door has been closed.

Automatic locking

The doors and tailgate can be locked automatically when the car starts to move.

The function can be activated/deactivated under **Car settings ➔ Lock settings ➔ Doors automatic lock**. For a description of the menu system, see page 116.

Glovebox



* Option/accessory, for more information, see Introduction.

The glovebox can only be locked/unlocked using the remote control key's detachable key blade. (For information on the key blade, see page 42).

Locking the glovebox:

1. Insert the key blade in the glovebox lock.
2. Turn the key blade 90 degrees clockwise. The keyhole is horizontal in the locked position.
3. Pull out the key blade.

Unlock by carrying this out in reverse order.

Tailgate

Unlocking with the remote control key

The alarm for the tailgate can be disarmed*, and the tailgate unlocked and opened on its own* by using the remote control key.

NOTE

On cars with the power operated tailgate option, the tailgate is opened – otherwise it is only unlocked, see page 52.

If the car is equipped with an alarm* the alarm indicator on the instrument panel stops to show that alarm for the whole of the car is not armed. The alarm's level and movement sensors and the sensors for opening the tailgate are automatically disconnected.

The doors remain locked and armed.

NOTE

When the tailgate is closed it remains unlocked until the car is relocked with the remote control key.

Unlocking the car from inside

To unlock and open* the tailgate.

– Press the lighting panel button (1).

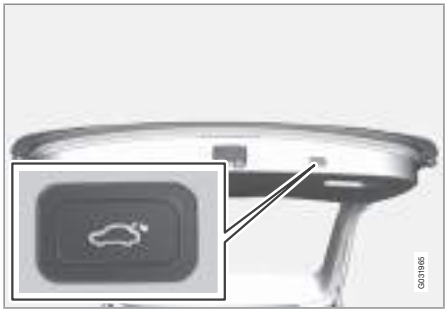
Locking with the remote control key

Press the remote control key button for locking, see page 43.

If the car is equipped with an alarm* the alarm indicator on the instrument panel starts to flash to show that alarm is armed.

Locking/unlocking

Power operated tailgate*



IMPORTANT

Pay attention to the height of the roof when using power operation. Do not use power tailgate operation with low roof heights, see under the heading "Interrupt opening/closing the tailgate".

NOTE

- If the system has been operating continuously for more than 60 seconds then it is switched off to avoid overloading. It can be used again after about 10 minutes.
- If the battery has been discharged or disconnected then the cover must be opened and closed manually once in order to reset the system.

Snow and wind

If the tailgate is forced down by something just when it is being opened, e.g. snow, ice or strong wind, and this causes the tailgate to lower, then it is closed automatically.

Pinch protection

If something with sufficient resistance prevents the tailgate from opening/closing then the pinch protection is activated.

- During opening - power tailgate operation is deactivated and the tailgate is disengaged.
- During closing - the tailgate returns to the fully open position.

WARNING

Pay attention to the risk of crushing when opening/closing. Before starting to open/close; make sure that there is nobody close to the tailgate as a crushing injury could have serious consequences.

Always operate the tailgate with caution.

Manual tailgate operation

The system is disengaged if the rubberised pressure plate beneath the outside handle is actuated a second time. The tailgate can then be operated manually.

Opening the tailgate

The tailgate can be opened three ways (two of which involve this button):

- Long press on the tailgate button in the lighting panel - hold the button depressed until the tailgate starts to open.
- Long press on the tailgate button on the remote control key - hold the button depressed until the tailgate starts to open.
- Lightly press the rubberised pressure plate beneath the outside handle and raise the tailgate.

* Option/accessory, for more information, see Introduction.

Closing the tailgate

Close using this button on the tailgate or manually.

- Press the tailgate's button – the tailgate closes automatically.

Stop the opening/closing of the tailgate

This can be done four ways (of which three involve this button):

- Press the tailgate button in the lighting panel
- Press the tailgate button on the remote control
- Press the tailgate button on the tailgate
- Press the rubberised pressure plate beneath the outside handle.

Tailgate movement is stopped following the same pattern as when pinch protection is triggered. Refer to the section with the heading "Pinch protection".

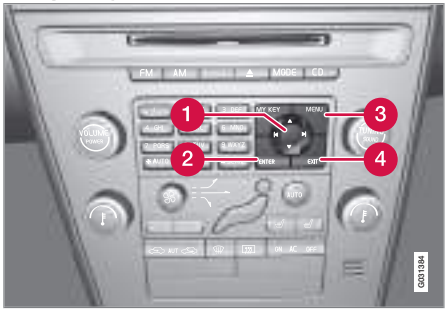
Deadlocks*

When deadlocked, the doors cannot be opened from the inside if they are locked.

The deadlocks are activated with the remote control key and are set after a 10 second delay after the doors are locked.

The car can only be unlocked from a deadlock state with the remote control key. The driver's door can also be unlocked with the detachable key blade.

Temporary deactivation



Active menu options are indicated with a cross.

1. Navigation
2. **ENTER**
3. **MENU**
4. **EXIT**

If someone is going to stay in the car but the doors must be locked from the outside, then the deadlocks function can be temporarily switched off. This is carried out as follows:

1. Access the menu system under **Car settings** (for a detailed description of the menu system, see page 116).
2. Select **Reduced guard**.
3. Select **Activate once**: The instrument panel display shows the message **Reduced guard - See manual** and the deadlocks function is switched off when the car is locked.

   or

   Select **Ask on exit**: Each time the engine is switched off the audio system's display shows the message **ENTER reduces protection until the engine is started again. Press EXIT to cancel** - then select one of the alternatives:

- If the deadlocks function shall be switched off: Press **ENTER** and lock the car.

If the car is equipped with an alarm with movement and tilt detectors*, then these are switched off at the same time, see page 56.

The next time the engine is started, the system is reset to zero and the instrument panel display shows the message **Full guard** at which

Locking/unlocking

the deadlocks function and the alarm's movement and tilt detectors* are re-engaged.

Or:

- If the locking system shall not be changed: Make no selection and lock the car or press **EXIT** and lock the car.

NOTE

If the car is equipped with an alarm:

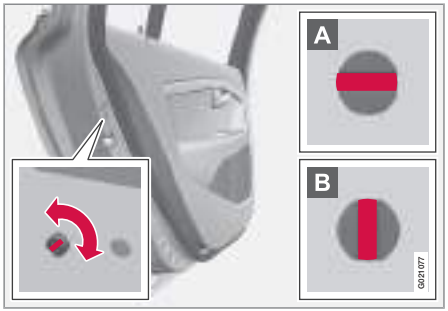
Remember that the car's alarm is armed when the car is locked.

If any of the doors are opened from the inside then the alarm will be triggered.

WARNING

Do not allow anyone to remain in the car without first deactivating the deadlocks to avoid the risk of anyone being locked in.

Manual blocking of the rear doors



The child safety locks are located on the trailing edge of the rear doors and are only accessible when the doors are open.

– Use the key blade to turn the lock and thus activate or deactivate the child safety lock.

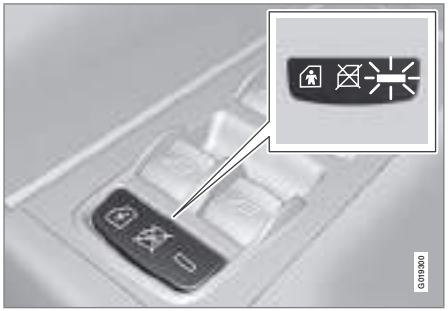
A The door cannot be opened from inside.

B The doors can be opened from inside.

NOTE

Cars with electric child safety locks do not have manual child locks.

Electrical locking of the rear doors and power windows*



When the electric child safety lock is active:

- the rear windows can only be opened with the driver's door control panel
- the rear doors cannot be opened from the inside.

1. Child safety locks are activated/deactivated in ignition position **I** or **II** see page 70.
2. Press the button in the driver's door control panel.
   > The information display shows a message.

   The lamp on the switch illuminates when the locks are activated.

Alarm*

General

The alarm is triggered if:

- a door, the bonnet or the tailgate is opened
- a non-approved key is used or if an attempt is made to force the ignition switch
- a movement is detected in the passenger compartment (if fitted with a movement detector*)
- the car is raised or towed away (if fitted with a tilt detector*)
- a battery cable is disconnected
- anyone tries to disconnect the siren.

If there is a fault in the alarm system, the information display shows a message. Contact an authorised Volvo workshop.

NOTE

The movement detectors trigger the alarm in the event of movements in the passenger compartment. For this reason the alarm could be triggered if the car is left with a window open or if an electric passenger compartment heater is used. To avoid this: Close the windows when leaving the car and aim the air from the passenger compartment heater so that it is not directed up into the passenger compartment.

NOTE

One of the detectors for the alarm is located under the cup holder in the centre console. This detector is sensitive for metals.

Avoid storing coins, keys or similar metal objects in the centre console's cup holder as such objects could accidentally trigger the alarm.

NOTE

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

Alarm indicator

A red LED on the instrument panel indicates the alarm system's status:

- LED not lit – Alarm not armed
- The LED flashes once every other second – Alarm is armed
- The LED flashes rapidly after disarming the alarm (and until the remote control key is inserted in the ignition switch and key position **I** is selected) – Alarm has been triggered.

Arming the alarm

- Press the remote control key lock button.

Disarming the alarm

- Press the remote control key unlock button.

Deactivating a triggered alarm

Press the remote control key unlock button or insert the remote control key in the ignition switch.

Other alarm functions

Automatic re-arming of the alarm

This function prevents the car being left with alarm disarmed unintentionally.

If the car is unlocked with the remote control key (and the alarm is disarmed) but none of the doors or the tailgate is opened within 2 minutes, then the alarm is automatically re-armed. The car is relocked at the same time.

* Option/accessory, for more information, see Introduction.

Alarm signals

When the alarm is triggered, the following happens:

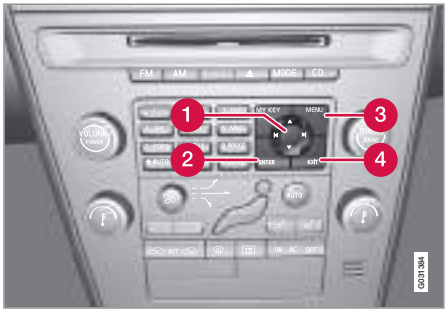
- A siren sounds for less than 30 seconds. The siren has its own battery which is independent of the car battery.
- The direction indicators flash for 5 minutes or until the alarm has been deactivated.

Remote control key not working

If the remote control key is not working, the alarm can still be switched off and the car started as follows:

1. Open the driver's door with the key blade. The alarm is triggered and the siren sounds.
2. Insert the remote control key in the ignition switch. The alarm is deactivated. The alarm indicator flashes quickly until the remote control key is inserted.

Reduced alarm level



Active menu options are indicated with a cross.

1. Navigation
2. **ENTER**
3. **MENU**
4. **EXIT**

To avoid inadvertently triggering of the alarm - for example when leaving a dog in the car or during a ferry crossing - the movement and tilt detectors can be temporarily switched off. This is carried out as follows:

1. Access the menu system under **Car settings** (for a detailed description of the menu system, see page 116).
2. Select **Reduced guard**.
3. Select **Activate once**: The instrument panel display shows the message **Reduced guard See manual** and the movement and tilt detectors are switched off when the car is locked.

   or

   Select **Ask on exit**: Each time the engine is switched off the audio system's display shows the message **Press ENTER to reduce guard until engine is started. Press EXIT to cancel** - then select one of the alternatives:

- If the movement and tilt detectors shall be switched off: Press **ENTER** and lock the car.

If the car is equipped with the deadlocks function* then it is switched off at the same time, see page 53.

The next time the engine is started, the system is reset to zero and the instrument panel display shows the message **Full guard** at which the movement and tilt detectors and the deadlocks function are re-engaged.

Or:

- If the detectors shall not be switched off: Make no selection and lock the car or press **EXIT** and lock the car.

Alarm*

Testing the alarm system

Testing the movement detector in the passenger compartment

1. Close all windows. Remain in the car.
2. Arming the alarm, see page 56.
3. Wait 15 seconds.
4. Trigger the alarm by moving your arms forward and back at backrest height. A siren sounds and all direction indicators flash.
5. Deactivate the alarm by unlocking the car with the remote control key.

Testing the alarm sensors in the doors

1. Arming the alarm, see page 56.
2. Wait 15 seconds.
3. Unlock the driver's door using the key blade.
4. Open the driver's door. A siren sounds and all direction indicators flash.
5. Deactivate the alarm by unlocking the car with the remote control key.

Testing the alarm sensors in the bonnet

1. Sit in the car and deactivate the alarm, see page 56.
2. Arm the alarm, see page 56. Remain in the car and lock the doors with the button on the remote control key.
3. Wait 15 seconds.
4. Open the bonnet with the handle under the dashboard. A siren sounds and all direction indicators flash.
5. Deactivate the alarm by unlocking the car with the remote control key.

* Option/accessory, for more information, see Introduction.

G020912

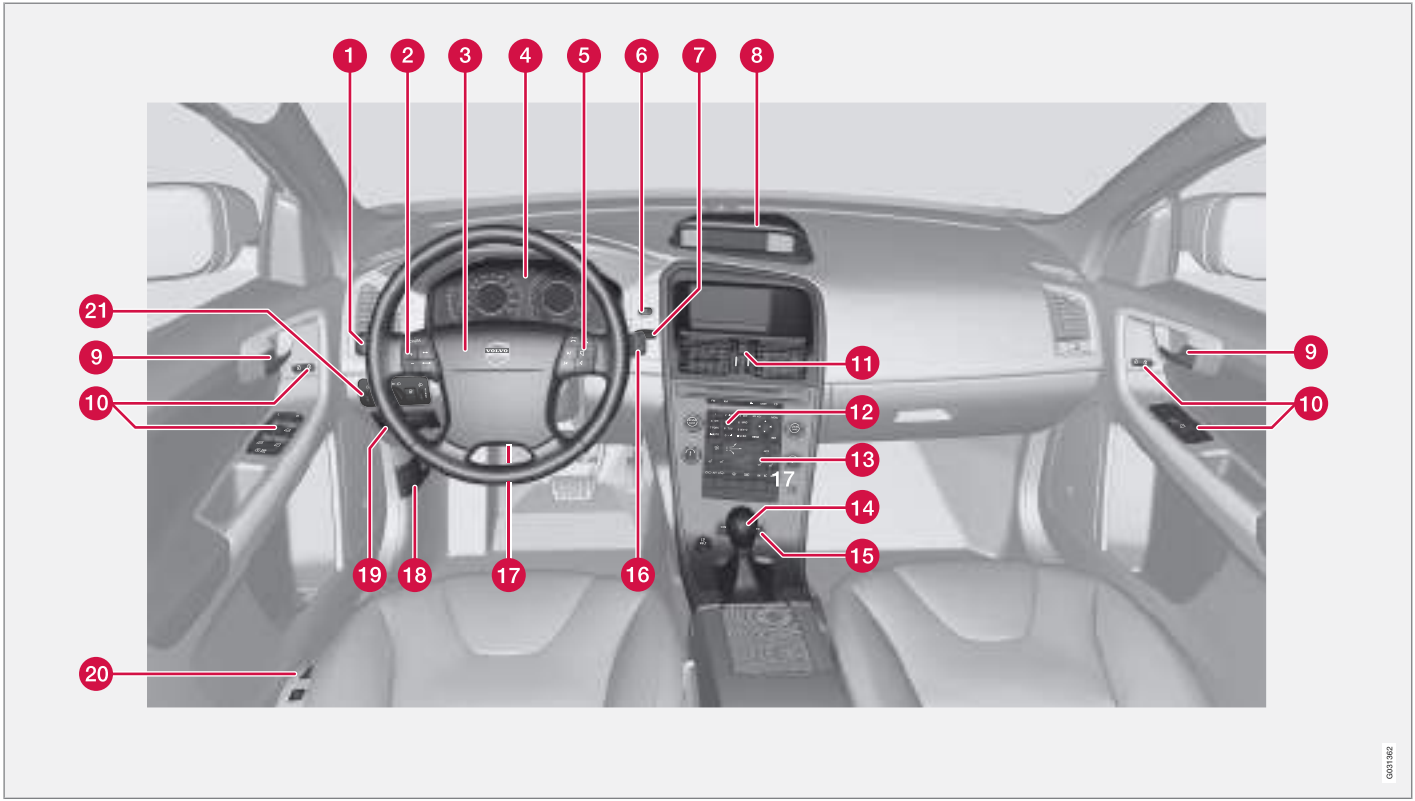
* Option/accessory, for more information, see Introduction.

YOUR DRIVING ENVIRONMENT

03

Instruments and controls

Instrument overview

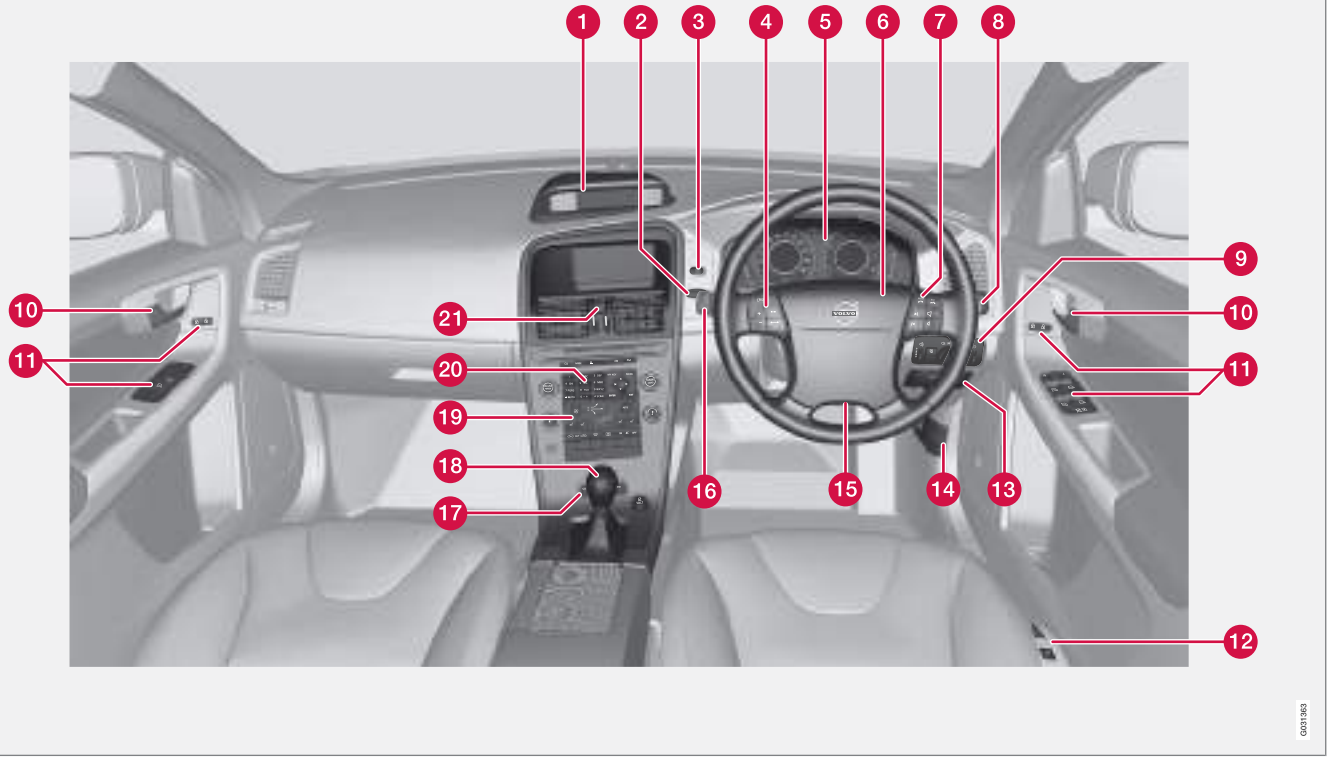


Left-hand drive.

	Function	Page
1	Menus and messages, direction indicators, main/dipped beam, trip computer	77, 80, 118, 147
2	Cruise control	152, 153
3	Horn, airbags	20, 76
4	Combined instrument panel	65, 69
5	Menu, audio and phone control	116, 133, 192
6	Start/stop button	95
7	Ignition switch	70
8	Information display for menu navigation	116
9	Door handle	-
10	Control panel	50, 55, 89, 90
11	Hazard warning flashers	80
12	Menu control, climate control and audio system	116, 123, 135

	Function	Page
13	Climate control, ECC*	123
14	Gear selector	98
15	Controls for active chassis (Four-C)*	151
16	Wipers and washing	86, 87
17	Steering wheel adjustment	76
18	Bonnet opener	226
19	Parking brake*	107
20	Seat adjustment*	72
21	Headlamp control, opener for fuel filler flap and tailgate	51, 77, 206

Instruments and controls



Right-hand drive.

	Function	Page
1	Information display for menu navigation	116
2	Ignition switch	70
3	Start/stop button	95
4	Cruise control	152, 153
5	Combined instrument panel	65, 69
6	Horn, airbags	20, 76
7	Menu, audio and phone control	116, 123, 135
8	Wipers and washing	86, 87
9	Headlamp control, opener for fuel filler flap and tailgate	51, 77, 206
10	Door handle	-
11	Control panel	50, 55, 89, 90
12	Seat adjustment*	72
13	Parking brake	107

	Function	Page
14	Bonnet opener	226
15	Steering wheel adjustment	76
16	Menus and messages, direction indicators, main/dipped beam, trip computer	77, 80, 118, 147
17	Controls for active chassis (Four-C)*	151
18	Gear selector	98
19	Climate control, ECC*	123
20	Menu control, climate control and audio system	116, 123, 135
21	Hazard warning flashers	80

Information displays

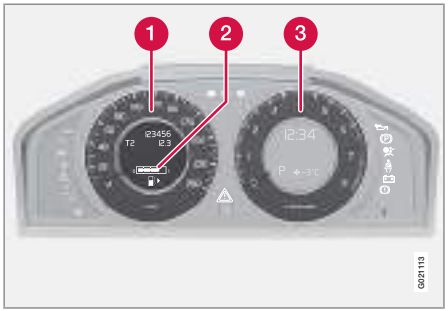
Information displays.

The information displays show information on some of the car's functions, e.g. cruise control, trip computer and messages. The information is shown with text and symbols.

There are further descriptions under the functions that use the information displays.

Instruments and controls

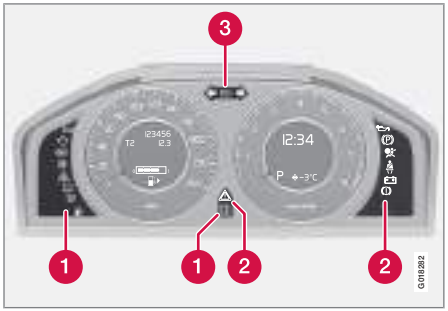
Meters



Meters in the combined instrument panel.

1. Speedometer
2. Fuel gauge. See also Trip computer, page 147, and Refuelling, page 206.
3. Tachometer. The meter indicates engine speed in thousands of revolutions per minute (rpm).

Indicator, information and warning symbols



Indicator and warning symbols.

1. Indicator and information symbols
2. Indicator and warning symbols [1]
3. Main beam and direction indicator symbol

Functionality check

All indicator and warning symbols illuminate in key position **II** or when the engine is started. When the engine has started, all the symbols should go out except the parking brake symbol, which only goes out when the brake is disengaged.

If the engine does not start or if the functionality check is carried out in key position **II** then all symbols go out after 5 seconds except the symbol for faults in the car's emissions system and the symbol for low oil pressure.

Indicator and information symbols

Symbol	Specification
	Direction indicators on trailer
	Emissions system
	ABS fault
	Rear fog lamp on
	Stability system
	Engine preheater (diesel)
	Low level in fuel tank
	Information, read display text
	Main beam On

[1] For certain engine variants, the symbol for low oil pressure is not used. Warnings are made via display text. For information on checking the oil level, see page 227.

Symbol	Specification
	Left-hand direction indicators
	Right-hand direction indicators

Direction indicators on trailer
This symbol flashes when the direction indicators are used and the trailer is connected. If the symbol flashes more quickly then one of the lamps on the car or the trailer is broken.

Emissions system
If the symbol illuminates then it may be due to a fault in the car's emissions system. Drive to an authorised Volvo workshop to have the system checked.

ABS fault
If this symbol illuminates then the system is not working. The car's regular brake system continues to work, but without the ABS function.

1. Stop the car in a safe place and turn off the engine.
2. Restart the engine.
3. If the symbol remains illuminated, drive to an authorised Volvo workshop to have the ABS system checked.

Rear fog lamp
This symbol illuminates when the rear fog lamp is on. There is only one fog lamp. It is located on the driver's side.

Stability system
A flashing symbol indicates that the stability system is operating. If the symbol illuminates with constant glow then there is a fault in the system.

Engine preheater (diesel)*
This symbol illuminates during engine preheating. Preheating occurs when the temperature is below -2 °C. The car can be started once the symbol goes out.

Low level in fuel tank
When the symbol illuminates the level in the fuel tank is low, refuel as soon as possible.

Information, read display text
When one of the car's systems does not behave as intended, this information symbol illuminates and a text appears on the information display. The message text is cleared with the **READ** button, see page 119, or it disappears automatically after a time (time depending on which function is indicated). The information symbol can also illuminate in conjunction with other symbols.

NOTE

When a service message is shown, the symbol and message are cleared using the **READ** button, or clear automatically after a while.

Main beam On
The symbol illuminates when main beam is on and with main beam flash

Left/right-hand direction indicators
Both direction indicator symbols flash when the hazard warning flashers are used.

Indicator and warning symbols

Symbol	Specification
	Low oil pressure [A]
	Parking brake applied
	Airbags – SRS
	Seatbelt reminder
	Alternator not charging

Instruments and controls

Symbol	Specification
	Fault in brake system
	Warning

A For certain engine variants the symbol for low oil pressure is not used. Warnings are made via display text. For information on checking the oil level, see page 227

Low oil pressure

If this symbol illuminates during driving then the engine's oil pressure is too low. Stop the engine immediately and check the engine oil level, top up if necessary. If the symbol illuminates and the oil level is normal, contact an authorised Volvo workshop.

Parking brake applied

This symbol illuminates with a constant glow when the parking brake is applied. With the electric parking brake, this symbol flashes while it is being applied and then illuminates with a constant glow.

A flashing symbol means that a fault has arisen. Read the message on the information display.

NOTE

This symbol also illuminates when the mechanical parking brake is only lightly applied.

Airbags – SRS

If this symbol remains illuminated or illuminates while driving, it means a fault has been detected in the seatbelt buckle, SRS, SIPS, or IC systems. Drive immediately to an authorised Volvo workshop to have the system checked.

Seatbelt reminder

This symbol illuminates if someone in a front seat has not put on their seatbelt or if someone in a rear seat has taken off their seatbelt.

Alternator not charging

This symbol illuminates during driving if a fault has occurred in the electrical system. Contact an authorised Volvo workshop.

Fault in brake system

If this symbol illuminates, the brake fluid level may be too low. Stop the car in a safe place and check the level in the brake fluid reservoir, see page 229.

If the brake and ABS symbols illuminate at the same time, there may be a fault in the brake force distribution system.

1. Stop the car in a safe place and turn off the engine.
2. Restart the engine.
   - If both symbols extinguish, continue driving.
   - If the symbols remain illuminated, check the level in the brake fluid reservoir, see page 229. If the brake fluid level is normal but the symbols are still illuminated, the car can be driven, with great care, to an authorised Volvo workshop to have the brake system checked.

WARNING

If the brake fluid is under the **MIN** level in the brake fluid reservoir, do not drive further before topping up the brake fluid.

The reason for the loss of brake fluid must be investigated by an authorised Volvo workshop.

WARNING

If the brake and ABS symbols are illuminated at the same time, there is a risk that the rear end will skid during heavy braking.

Warning

The red warning symbol illuminates when a fault has been indicated which could affect the safety and/or driveability of the car. An explanatory text is shown on the information display at the same time. The symbol remains visible until the fault has been rectified but the text message can be cleared with the **READ** button, see page 119. The warning symbol can also illuminate in conjunction with other symbols.

Action:

1. Stop in a safe place. Do not drive the car further.
2. Read the information on the information display. Implement the action in accordance with the message in the display. Clear the message using the **READ** button.

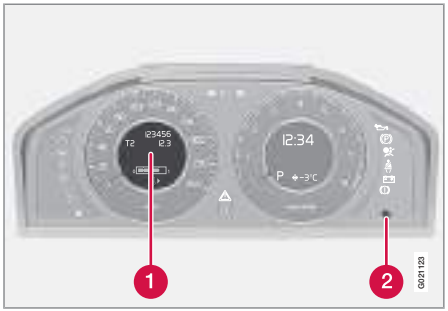
Reminder – doors not closed

If one of the doors, the bonnet [2] or tailgate is not closed properly then the information or warning symbol illuminates together with an explanatory text message in the combined instrument panel. Stop the car in a safe place as soon as possible and close the door, bonnet or boot lid, whichever is open.

If the car is driven at a speed lower than approx. 7 km/h then the information symbol illuminates.

If the car is driven at a speed higher than about 7 km/h then the warning symbol illuminates.

Trip meter



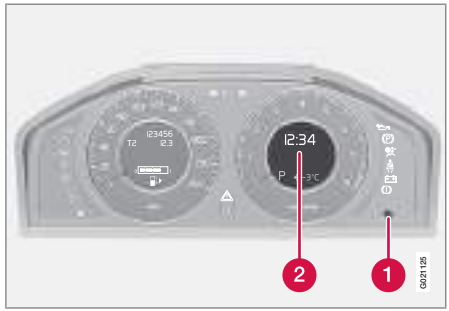
Trip meter and controls.

1. Display for trip meter
2. Controls for switching between trip meters T1 and T2, as well as resetting the trip meters.

The meters are used to measure short distances.

One short press on the control switches between the two trip meters T1 and T2. A long press (more than 2 seconds) resets an active trip meter to zero. The distance is shown in the display.

Clock



Clock and setting knob.

1. Controls for setting the clock.
2. Information display for showing the time.

Turn the knob clockwise/anticlockwise to set the time. The set time is shown in the information display.

The clock can be temporarily replaced by a symbol in conjunction with a message, see page 119.

[2] Only cars with alarm*.

Key positions

Functions

Ignition switch with remote control key, start/stop button.

Insert and remove the remote control key
The remote control key is inserted into the ignition switch. With one gentle push the remote control key is captured into the correct position.

The remote control key is withdrawn from the ignition switch by means of one touch. The key is then ejected and can be removed. Automatic transmission* must be in position **P**.

For information on the audio system's functions with remote control key removed, see page 133.

IMPORTANT

Foreign objects in the ignition switch can impair the function or destroy the lock.

Do not insert the remote control key backwards! Grip the end with the detachable key blade. see page 45.

NOTE

For cars with keyless function*, see page 48.

Key position 0
Insert the remote control key in the ignition switch.

Key position I
Press the remote control key into the ignition switch and press **START/STOP ENGINE**.

NOTE

To reach key position **II** without starting the engine - do not depress the brake/clutch pedal.

Key position II
Press the remote control key into the ignition switch and press **START/STOP ENGINE** for approx. 2 seconds.

Starting the engine
Start the engine, see page 95.

Stop engine
Press **START/STOP ENGINE**.

If the car is moving or has automatic transmission and the gear selector is not in position **P**: Press twice or hold the button depressed until the engine stops.

Return to key position 0
Press **START/STOP ENGINE** to return from **I** or **II** to key position **0**.

WARNING

When towing, the remote control key must be in the ignition switch so that the lighting can be switched on.

* Option/accessory, for more information, see Introduction.

Key positions

Position	Function
0	Odometer, clock and temperature gauge are illuminated. The steering lock is deactivated. The audio system can be used.
I	The panorama roof, power windows, phone, ventilation fan, ECC and windscreen wipers can be used.
II	The headlamps come on. Warning/indicator lamps illuminate for 5 seconds. All equipment operates apart from heated seats and rear window defroster which only work when the engine is running.

Seats

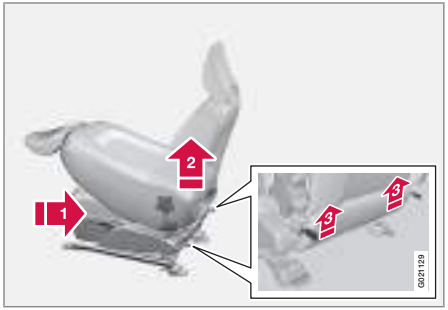
Front seats

1. Lumbar support adjustment, turn the wheel [1].
2. Forward/backward: lift the handle to adjust the distance to the steering wheel and pedals. Check that the seat is locked after changing position.
3. Raise/lower* front edge of seat cushion, pump up/down.
4. Adjust backrest rake, turn the wheel.
5. Raise/lower the seat, pump up/down.
6. Control panel for power seat*.

WARNING

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

Lowering the front seat backrest*



The passenger seat backrest can be folded forward to make room for long loads.

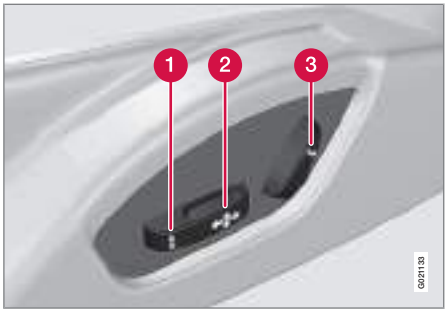
1. Move the seat as far back/down as possible.
2. Adjust the backrest to an upright position.
3. Lift the catches on the rear of the backrest and fold it forward.

Raising takes place in reverse order.

WARNING

Check that the front seat backrest is properly engaged after it is raised.

Power seat*



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

The power front seats have overload protection which is tripped if a seat is blocked by an object. If this happens, go to key position **I** or **0** and wait a short time before adjusting the seat again.

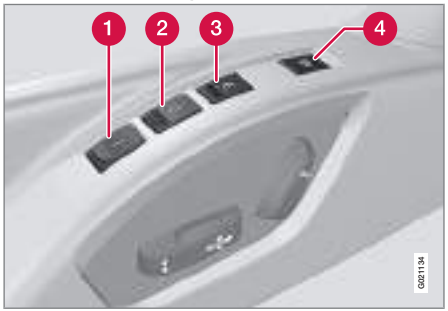
Only one movement (forward/back/up/down) can be made at a time.

[1] Also applies to power seat.

* Option/accessory, for more information, see Introduction.

Preparations
The seats can be adjusted for a certain time after unlocking the door with the remote control key without the key in the ignition switch. Seat adjustment is normally made in key position **I** and can always be made when the engine is running.

Seat with memory function*



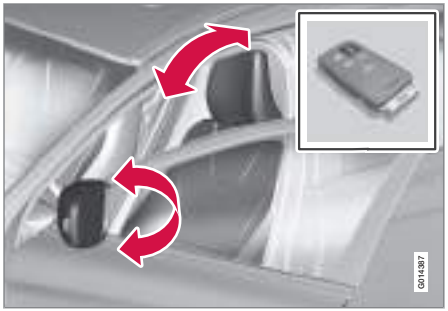
Store setting

1. Memory button
2. Memory button
3. Memory button
4. Button for storing settings

1. Adjust the seat and the door mirrors.
2. Hold the button depressed to store settings while depressing one of the memory buttons.

Using a stored setting
Hold one of the memory buttons depressed until the seat and the door mirrors stop. If you release the button then the movement of the seat will stop.

Key memory* in remote control key [2]
The positions of the driver's seat and the door mirrors are stored in the key memory when the car is locked with the remote control key.



When the car is unlocked with the same remote control key and the driver's door is opened the driver's seat and also the door mirrors automatically adopt the positions stored in the key memory.

NOTE

The seat and the door mirrors do not move if they are already set the relevant position.

It is also possible to use the key memory by pressing the unlock button on the remote control key when the driver's door is open.

The key memory can be activated/deactivated under **Car Key memory ➔ Seat & mirror positions**. For a description of the menu system, see page 116.

NOTE

The key memory in the two remote control keys and the seat's three memories are completely independent of each other.

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

Restarting to reach the seat position stored in the key memory is performed by pressing the unlock button on the remote control key. The driver's door must then be open.

2 For key memory for keyless drive, see page 48.

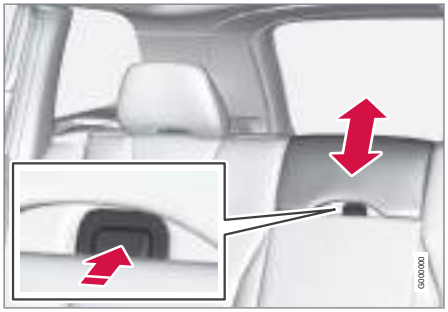
Seats

WARNING

Risk of crushing! Make sure that children do not play with the controls. Check that there are no objects in front of, behind or under the seat during adjustment. Ensure that none of the backseat passengers will be trapped.

Rear seats

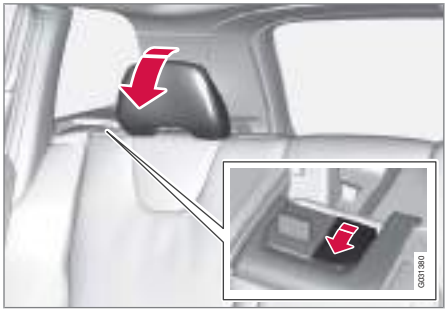
Head restraint, centre seat, rear



Adjust the head restraint according to passenger height so that the whole of the back of the head is covered if possible. Slide it up as required.

To lower the head restraint again, the button (located in the centre between the backrest and head restraint, see illustration) must be pressed in while the head restraint is pressed down.

Manual lowering of the outer head restraints, rear seat



Pull the locking handle closest to the head restraint to fold the head restraint forward.

The head restraint is moved back manually until a "click" can be heard.

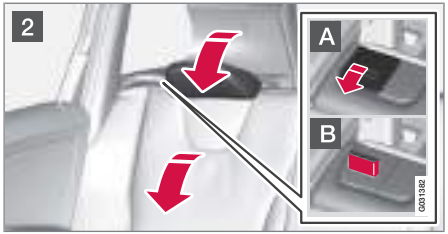
Lowering the rear seat backrest

The triple-section rear seat backrest can be folded in different ways in order to facilitate loading long objects.

NOTE

The front seats may need to be pushed forwards, and/or the backrests adjusted upwards, in order that the rear backrests can be folded forward fully.

- The left-hand backrest can be folded separately.
- The centre backrest can be folded separately.
- The right-hand backrest can be folded together with the centre backrest.
- All backrests can be folded together.



1 If the centre backrest is being lowered - fold and adjust the centre backrest's head restraint downwards, see page 74.

2 The outer head restraints are lowered automatically when the outer backrests are lowered. Pull up the backrest's locking handle A while folding the backrest forward at the same time. A red indicator on the lock catch B shows that the backrest is no longer locked in place.

Raising takes place in reverse order.

NOTE

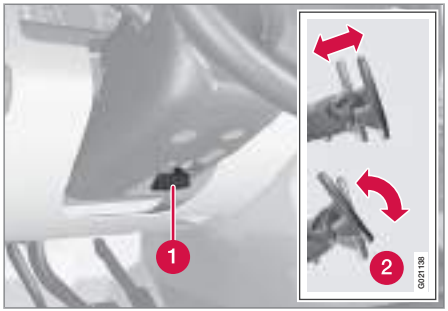
When the backrest has been raised, the red indicator should no longer be showing. If it is still showing then the backrest is not locked in place.

WARNING

Check that the backrests and head restraints in the rear seats are firmly locked after raising.

Steering wheel

Adjusting



Adjusting the steering wheel.

1. Lever - releasing the steering wheel
2. Possible steering wheel positions

The steering wheel can be adjusted for both height and depth:

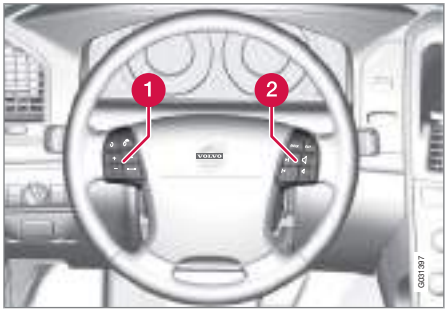
1. Pull the lever towards you to release the steering wheel.
2. Adjust the steering wheel to the position that suits you.
3. Push back the lever to fix the steering wheel in place. If the lever is stiff, press the steering wheel lightly at the same time as you push the lever back.

WARNING

Adjust and secure the steering wheel before driving.

With speed related power steering* the level of steering force can be adjusted, see page 151.

Keypads*



Keypads in the steering wheel.

1. Cruise control, see page 152

   Adaptive cruise control, see page 153
2. Audio and phone control, see page 133

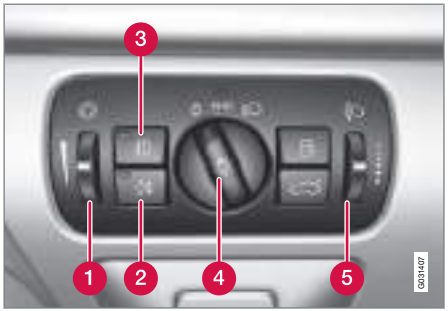
Horn

Horn.

Press the centre of the steering wheel to signal.

* Option/accessory, for more information, see Introduction.

Light switches



Overview, light switches.

1. Thumbwheel for adjusting display and instrument lighting
2. Rear fog lamp
3. Front fog lamps*
4. Light switches
5. Thumbwheel [1] for headlamp levelling

Instrument lighting

Different display and instrument lighting is switched on depending on key position, see page 70.

The display lighting is automatically subdued in darkness - the sensitivity is set with the thumbwheel.

The intensity of the instrument lighting is adjusted with the thumbwheel.

Headlamp levelling

The load in the car changes the vertical alignment of the headlamp beam, which could dazzle oncoming motorists. Avoid this by adjusting the height of the beam. Lower the beam if the car is heavily laden.

1. Allow the engine to run or have the remote control key in position **I**.
2. Roll the thumbwheel up/down to raise/lower beam alignment.

Cars with active Xenon headlamps* have automatic headlamp levelling and are therefore not equipped with the thumbwheel.

Main/dipped beam

Headlamp control and stalk switch.

1. Position for main beam flash
2. Position for main beam

Position	Specification
0	Automatic*/deactivated dipped beam. Only main beam flash.
≡D◐≡	Position/parking lamps
≡D	Automatic dipped beam. Main beam and main beam flash work in this position.

[1] Not available for cars equipped with active Xenon headlamps*.

Lighting

NOTE

Main beam can only be activated in position .

Main beam flash

Move the stalk switch gently towards the steering wheel to the position for main beam flash. Main beam comes on until the stalk switch is released.

Dipped beam

When the engine is started, dipped beam is activated automatically* if the headlamp control is in position 0 [2]. If necessary, automatic dipped beam for this position can be deactivated by an authorised Volvo workshop.

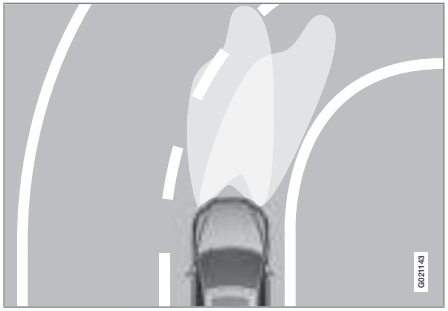
In position dipped beam is always activated automatically when the engine is running or when the remote control key is in position **II**.

Main beam

Main beam can only be activated when the headlamp control is in position . Activate/deactivate main beam by moving the stalk switch towards the steering wheel to the end position and release.

When main beam has been activated the symbol illuminates in the combined instrument panel.

Active Xenon lights*



Headlamp pattern with function deactivated (left) and activated (right) respectively.

If the car is equipped with active Xenon headlamps (ABL) then the light from the headlamps follows steering wheel movement to provide maximum illumination in bends and crossings, so providing increased safety.

The function is activated automatically when the car is started. The button in the centre console illuminates when the function is activated, it flashes in the event of a malfunction. The function is only active in twilight or darkness and only when the car is moving.

The function can be deactivated/activated with the button.

For headlamp pattern adjustment, see page 83.

Position/parking lamps

Headlamp control in position for position/parking lamps.

Turn the headlamp control to the centre position (number plate lighting comes on at the same time).

Rear position lamps also come on when the tailgate is opened in order to alert anybody behind.

[2] For certain markets dipped beam is deactivated in this position.

* Option/accessory, for more information, see Introduction.

Brake light

The brake light automatically comes on during braking.

Emergency brake light and automatic hazard warning flashers, EBL

Emergency Brake Lights (EBL) are activated in the event of heavy braking or if the ABS brakes are activated. This function means that the brake light flashes intensely to immediately alert cars travelling behind.

The system is activated if ABS is used for more than 0.5 seconds or in the event of heavy braking, however, only when braking from speeds above 50 km/h. When the speed of the car is lower than 30 km/h the brake lights shine normally again and the hazard warning flashers are switched on automatically. The hazard warning flashers remain on until the car accelerates again but can be deactivated with the button for hazard warning flashers.

Front fog lamps*

Button for front fog lamps.

The front fog lamps can be switched on along with main/dipped beam or position/parking lamps.

Press the button for on/off. The light in the button illuminates when the fog lamps are on.

NOTE

Regulations for using front fog lamps vary between different countries.

Rear fog lamp

Button for rear fog lamp.

The rear fog lamp consists of one rear lamp and can only be switched on in combination with main/dipped beam or the front fog lamps.

Press the button for On/Off. The rear fog lamp indicator symbol on the combined instrument panel and the light in the button illuminate when the rear fog lamp is switched on.

The rear fog lamps are switched off automatically when the engine is switched off.

NOTE

Regulations for using rear fog lamps vary between different countries.

Lighting

Hazard warning flashers

Button for hazard warning flashers.

Press the button to activate the hazard warning flashers. Both direction indicator symbols in the combined instrument panel flash when the hazard warning flashers are in use.

The hazard warning flashers are activated automatically when the car brakes so suddenly that the emergency brake lights (EBL) are activated and if the speed is below 30 km/h. They remain on when the car has stopped and are deactivated automatically when the car is driven off again or if the button is depressed.

Direction indicators/flashers

Direction indicators/flashers.

Short flash sequence

1. Move the stalk switch up or down to the first position and release. The direction indicators flash three times. The function can be activated/deactivated under **Car settings ➔ Light settings ➔ Turn indicators, 3-flash**. For a description of the menu system, see page 116.

Continuous flash sequence

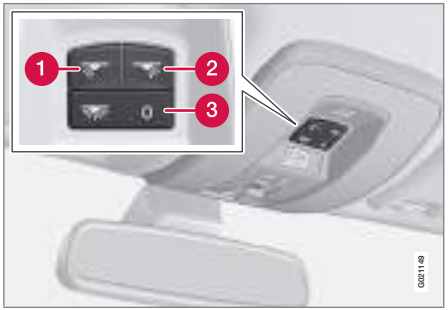
2. Move the stalk switch up or down to the outer position.

The stalk switch remains in its position and is moved back manually, or automatically by the steering wheel movement.

Direction indicator symbols

For direction indicator symbols, see page 67.

Interior lighting



Controls in roof console for the front reading lamps and passenger compartment lighting.

1. Reading lamp, left-hand side
2. Reading lamp, right-hand side
3. Interior lighting

All lighting in the passenger compartment can be switched on and off manually within 30 minutes from when:

- the engine has been switched off and the remote control key is in position **0**
- the car has been unlocked but the engine has not been started.

Lighting

Front roof lighting
The front reading lamps are switched on or off by pressing the relevant button in the roof console.

Rear roof lighting


Rear roof lighting in cars with panorama roof.

Rear roof lighting in cars without panorama roof.

The lamps are switched on or off by pressing each respective button.

Courtesy lighting
Courtesy lighting (and passenger compartment lighting) is switched on and off respectively when a side door is opened or closed.

Glovebox lighting
Glovebox lighting is switched on and off respectively when the lid is opened or closed.

Vanity mirror
The lighting for the vanity mirror, see page 191, is switched on and off respectively when the cover is opened or closed.

Lighting, cargo area
The lighting in the cargo area is switched on and off respectively when the tailgate is opened or closed.

Automatic lighting
The switch for passenger compartment lighting has three positions for the lighting in the passenger compartment:

- **Off** – right-hand side depressed, automatic lighting deactivated.
- **Neutral position** – automatic lighting activated.
- **On** – left-hand side depressed, passenger compartment lighting on.

Neutral position
When the button is in neutral position the passenger compartment lighting is switched on and off automatically in accordance with the following.

The passenger compartment lighting is switched on and remains on for 30 seconds if:

- the car is unlocked with the remote control key or key blade, see pages 43 or 45
- the engine is switched off and the remote control key is in position **0**.

Passenger compartment lighting is switched off when:

Lighting

- the engine is started
- the car is locked.

The passenger compartment lighting comes on and remains on for two minutes if one of the doors is open.

If any lighting is switched on manually and the car is locked then it will be switched off automatically after two minutes.

Home safe light duration

Some of the exterior lighting can be kept switched on to work as home safe lighting after the car has been locked.

1. Remove the remote control key from the ignition switch.
2. Move the left-hand stalk switch toward the steering wheel to the end position and release it. The function can be activated in the same way as with main beam flash, see page 77.
3. Get out of the car and lock the door.

When the function is activated, dipped beam, parking lamps, door mirror lamps, number plate lighting, interior roof lamps and courtesy lighting are switched on.

The length of time for which the home safe lighting should be kept on can be set under **Car settings ➔ Light settings ➔ Home safe light duration**. For a description of the menu system, see page 116.

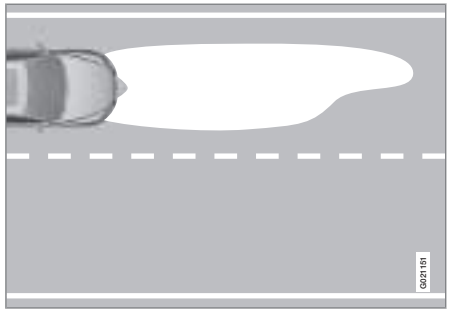
Approach light duration*

Approach lighting is switched on with the remote control key, see page 43, and is used to switch on the car's lighting at a distance.

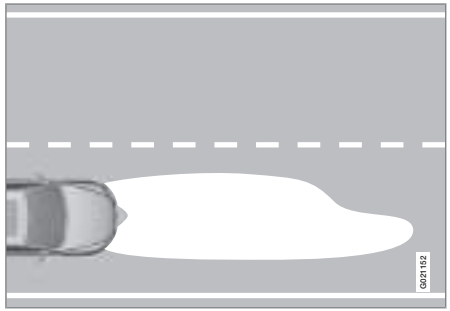
When the function is activated with the remote control, parking lamps, door mirror lamps, number plate lighting, interior roof lamps and courtesy lighting are switched on.

The length of time for which the approach lighting should be kept on can be set under **Car settings ➔ Light settings ➔ Approach light duration**. For a description of the menu system, see page 116.

Adjusting headlamp pattern



Headlamp pattern, left-hand traffic.



Headlamp pattern, right-hand traffic.

The headlamp pattern must be adjusted to avoid dazzling oncoming motorists and can be set for right or left-hand traffic. The correct pattern will also better illuminate the verge.

* Option/accessory, for more information, see Introduction.

Active Xenon headlamps*

Hold the button in the centre console depressed for at least 5 seconds. The car must be stationary when the headlamp pattern is adjusted. The message **HEADLIGHTS SET FOR RH TRAFFIC** or **HEADLIGHTS SET FOR LH TRAFFIC** is shown in the display.

Halogen headlamps

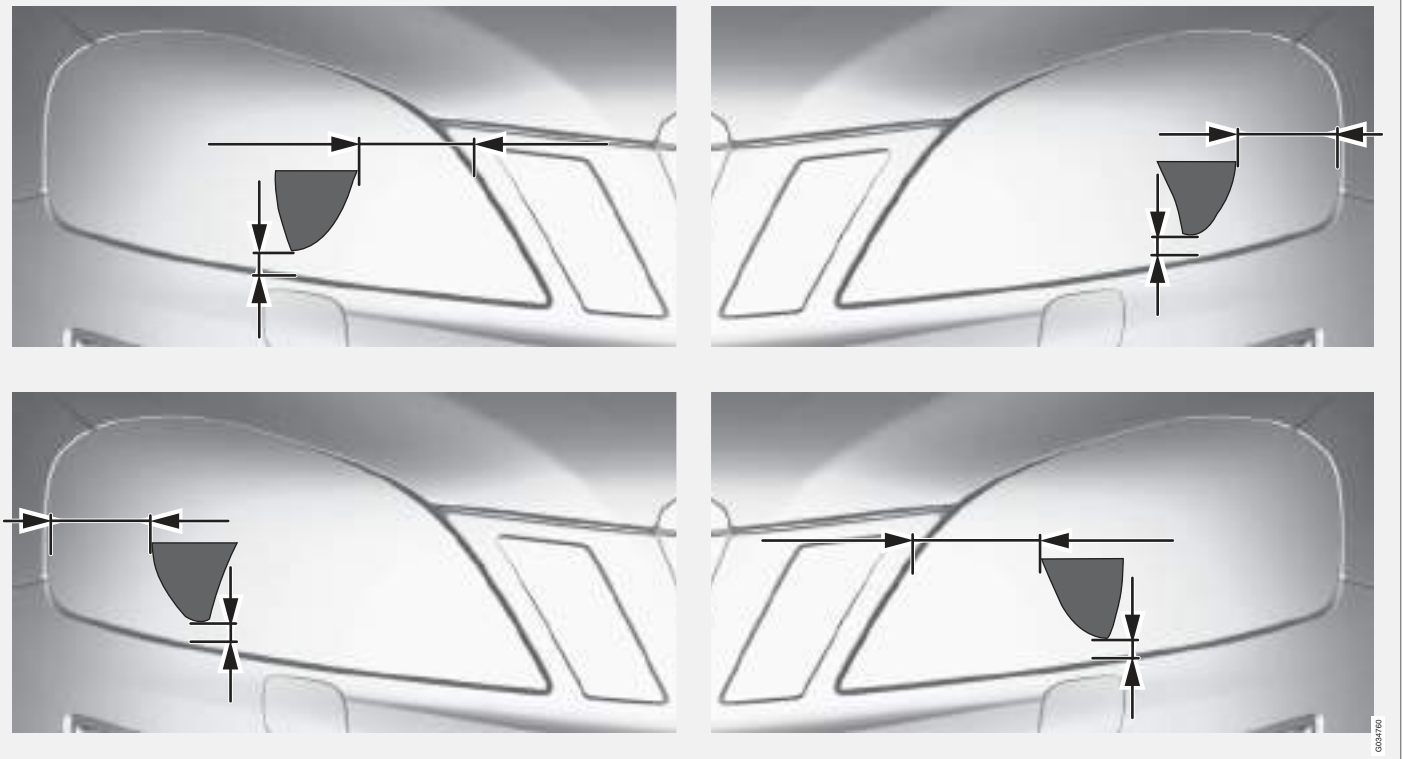
The headlamp pattern for halogen headlamps is readjusted by masking the headlamp lens. The headlamp pattern may not be as good.

Masking the headlamps

1. Copy the A and B templates for left-hand drive cars or the C and D templates for right-hand drive cars with a scale of 1:1, see page 85:
   - A = LHD Right (left-hand drive, right lens)
   - B = LHD Left (left-hand drive, left lens)
   - C = RHD Right (right-hand drive, right lens)
   - D = RHD Left (right-hand drive, left lens)
2. Transfer the template to a self-adhesive waterproof material and cut it out.
3. Position the self-adhesive templates at the right distance from the edge of the headlamp lens using the illustration, see page 84, and the dimensions in the following list:
   - Templates A and D: horizontal line approx. 104 mm, vertical line approx. 20 mm
   - Templates B and C: horizontal line approx. 167 mm, vertical line approx. 14 mm

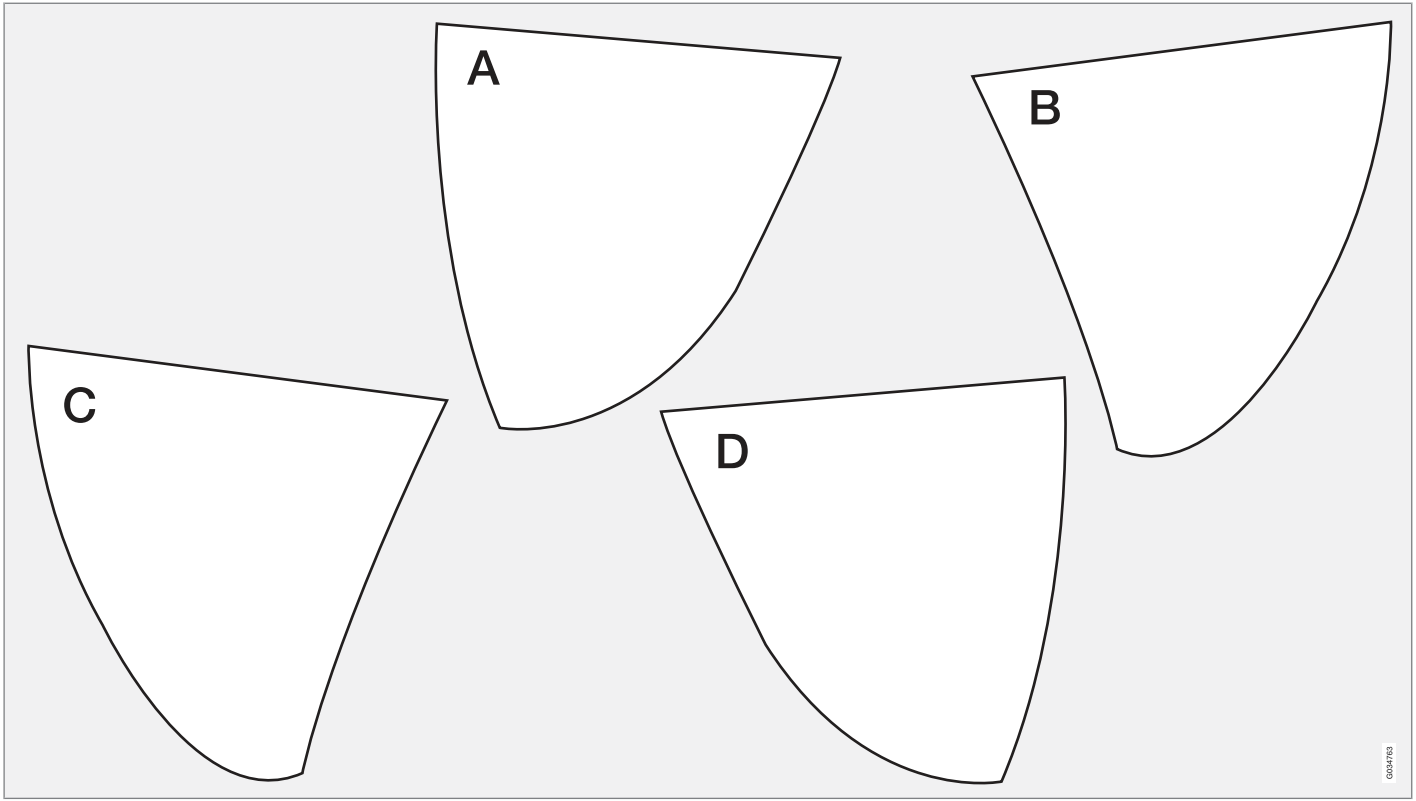
Lighting

Aligning the templates



Upper row: masking left-hand drive cars, templates A and B. Lower row: masking right-hand drive cars, templates C and D.

Templates for halogen headlamps



Wipers and washing

Windscreen wipers [1]

Windscreen wipers and windscreen washers.

1. Rain sensor, on/off
2. Thumbwheel sensitivity/frequency

Windscreen wipers off

0 Move the stalk switch to position **0** to switch off the windscreen wipers.

Single sweep

Raise the stalk switch and release to make one sweep.

Intermittent wiping

INT Set the number of sweeps per time unit with the thumbwheel when intermittent wiping is selected.

Continuous wiping

The wipers sweep at normal speed.

The wipers sweep at high speed.

IMPORTANT

Before activating the wipers during winter - ensure that the wiper blades are not frozen in and that any snow or ice on the windscreen (and rear window) is scraped away.

IMPORTANT

Use plenty of washer fluid when the wipers are cleaning the windscreen. The windscreen must be wet when the windscreen wipers are operating.

Rain sensor*

The rain sensor automatically starts the windscreen wipers based on how much water it detects on the windscreen. The sensitivity of the rain sensor can be adjusted using the thumbwheel.

When the rain sensor is activated a light in the button the rain sensor symbol is shown in the right-hand display in the combined instrument panel.

Activating and setting the sensitivity

When activating the rain sensor, the car must be running or the remote control key in position **I** or **II** while the windscreen wiper stalk switch must be in position **0** or in the position for a single sweep.

Activate the rain sensor by pressing the button . The windscreen wipers make one sweep.

Press the stalk switch up for the wipers to make an extra sweep.

Turn the thumbwheel upward for higher sensitivity and downward for lower sensitivity. (An extra sweep is made when the thumbwheel is turned upward.)

Deactivating

Deactivate the rain sensor by pressing the button or move the stalk switch down to another wiper program.

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

1 Replacing the wiper blades and filling washer fluid, see page 238.

* Option/accessory, for more information, see Introduction.

IMPORTANT

The windscreen wipers could start and be damaged in an automatic car wash. Deactivate the rain sensor while the car is running or the remote control key is in position **I** or **II**. The symbol in the combined instrument panel and the lamp in the button go out.

Washing the headlamps and windows

Washing function.

Washing the windscreen

Move the stalk switch toward the steering wheel to start the windscreen and headlamp washers.

The windscreen wipers will make several more sweeps once the stalk switch has been released. The headlamps are washed alternately to prevent light intensity being reduced.

NOTE

One headlamp is washed at a time.

Heated washer nozzles*

The washer nozzles are heated automatically in cold weather to prevent the washer fluid freezing solid.

High-pressure headlamp washing*

High-pressure headlamp washing consumes a large quantity of washer fluid. To save fluid, the headlamps are washed automatically at every fifth windscreen wash cycle.

Wiper and washer, rear window

1 Rear window wiper – intermittent wiping

2 Rear window wiper – continuous speed

Press the stalk switch forward (see the arrow in the illustration above) to initiate rear window washing and wiping.

Wiper – reversing

Engaging reverse gear while the windscreen wipers are on initiates intermittent rear window wiping [2]. The function stops when reverse gear is disengaged.

If the rear window wiper is already on at continuous speed, no change is made.

2 This function (intermittent wiping when reversing) can be deactivated. Contact an authorised Volvo workshop.

Wipers and washing

NOTE

On cars with rain sensor, the rear window wiper is activated with reversing, if the sensor is activated and it is raining.

General

Laminated glass

The windscreen and panorama roof have laminated glass. It is reinforced which provides better protection against break-ins and improved sound insulation in the passenger compartment. Other glass surfaces*.

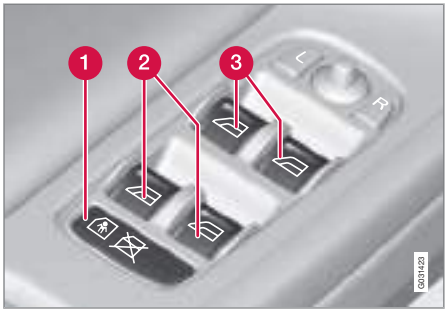
Water and dirt-repellent coating*

Windows are treated with a coating that improves the view in difficult weather conditions. Maintenance, see page 264.

IMPORTANT

Do not use a metal ice scraper to remove ice from the windows. Use the defroster to remove ice from the mirrors. An ice scraper could scratch the mirror glass!

Power windows



Driver's door control panel.

1. Switch for electric child safety locks* and disengaging rear power window buttons, see page 55.
2. Rear window controls
3. Front window controls

WARNING

Check that none of the rear seat passengers is in danger of becoming trapped in any way when closing the windows from the driver's door.

WARNING

Make sure that children or other passengers are not in danger of becoming trapped in any way when closing the windows, in particular when the remote control key is used.

WARNING

If there are children in the car, remember to always switch off the power supply to the power windows by removing the remote control key if the driver leaves the car.

Operating

Operating the power windows.

1. Operating without auto
2. Operating with auto

Windows, rearview and door mirrors

All power windows can be operated using the control panel in the driver's door. Each control panel in the other doors can only control its own respective power window. The power windows can only be controlled with one control panel at a time.

In order that the power windows can be used the remote control key must be in position **I** or **II**. After the car has been running the power windows can be operated for several minutes even when the remote control key has been removed, but not however after the door has been opened.

Closing of the windows is stopped and the window is opened if anything prevents its movement. It is possible to override the pinch protection when closing has been interrupted, e.g. with ice, by continuously holding the button up until the window is closed. The pinch protection is reactivated after a brief pause.

NOTE

One way to reduce the pulsating wind noise when the rear windows are open is to also open the front windows slightly.

Operating without auto

Move one of the controls up/down gently. The power windows move up/down as long as the control is held in position.

Operating with auto

Move one of the controls up/down to the end position and release it. The window runs automatically to its end position.

Remote control and central locking buttons

All side windows can be opened/closed automatically with the remote control key or the central locking buttons:

– Press and hold the lock button until the windows start to open/close. To interrupt opening/closing, press the lock button again.

Resetting

If the battery is disconnected then the function for automatic opening must be reset so that it can work correctly.

1. Gently raise the front section of the button to raise the window to its end position and hold it there for one second.
2. Release the button briefly.
3. Raise the front section of the button again for one second.

WARNING

Resetting must be carried out to ensure that pinch protection works.

Door mirrors

Door mirror controls.

Adjusting

1. Press the **L** button for the left-hand door mirror or the **R** button for the right-hand door mirror. The light in the button illuminates.
2. Adjust the position with the joystick in the centre.
3. Press the **L** or **R** button again. The light should no longer be illuminated.

WARNING

The mirrors are the wide angle type for optimum surveillance. Objects may appear further away than they actually are.

Retractable power door mirrors*

The mirrors can be retracted for parking/driving in narrow spaces:

1. Press down the **L** and **R** buttons at the same time.
2. Release them after approximately one second. The mirrors automatically stop in the fully retracted position.

Fold out the mirrors by pressing down the **L** and **R** buttons at the same time. The mirrors automatically stop in the fully extended position.

Storing the position*

The mirror positions are stored in the key memory when the car has been locked with the remote control key. When the car is unlocked with the same remote control key the mirrors and the driver's seat adopt the stored positions when the driver's door is opened.

The function can be activated/deactivated under **Car Key memory ➔ Seat & mirror positions**. For a description of the menu system, see page 116.

Angling the door mirror when parking

The door mirror can be angled down for the driver to view the side of the road when parking for example.

– Engage reverse gear and press the **L** or **R** button.

When reverse gear is disengaged the mirror automatically returns to its original position after about 10 seconds, or earlier by pressing the button labelled **L** or **R** respectively

Automatic retraction when locking

When the car is locked/unlocked with the remote control key the door mirrors are automatically retracted/extended.

The function can be activated/deactivated under **Car settings ➔ Fold mirr. when locking**. For a description of the menu system, see page 116.

Resetting to neutral

Mirrors that have been moved out of position by an external force must be reset electrically to the neutral position for electric retracting/extending to work correctly:

1. Retract the mirrors with the **L** and **R** buttons.
2. Fold them out again with the **L** and **R** buttons.
3. Repeat the above procedure as necessary.

The mirrors are now reset in neutral position.

Home safe and approach lighting

The light on the door mirrors illuminates when approach lighting or home safe lighting is selected, see page 82.

Rear window and door mirror defrosters

Use the defroster to quickly remove misting and ice from the rear window and the door mirrors.

Press the button once to start simultaneous rear window and door mirror defrosting. The light in the button indicates that the function is active. Defrosting is deactivated automatically and its duration is controlled by the outside temperature.

Windows, rearview and door mirrors

The rear window is demisted/defrosted automatically if the car is started in an outside temperature lower than +9 °C.

Automatic defrosting can be selected under **Climate settings** ➔ **Auto. rear defroster**. Select between **On** or **Off**. For a description of the menu system, see page 116.

Interior rearview mirror

1 Control for dimming

Manual dimming
Bright light from behind could be reflected in the rearview mirror and dazzle the driver. Use dimming with the dimming control when lights from behind are distracting:

1. Use dimming by moving the control in towards the passenger compartment.
2. Return to normal position by moving the control towards the windscreen.

Automatic dimming*
Bright light from behind is automatically dimmed by the rearview mirror. The control is not available in mirrors with automatic dimming.

The compass* can only be specified for rearview mirrors with automatic dimming, see page 149.

* Option/accessory, for more information, see Introduction.

Power panorama roof*

General

The panorama roof is divided into two sections. Only the front section can be opened - horizontally or vertically at the rear edge (ventilation position).

The panorama roof has a curtain made of perforated fabric and located under the glass roof to provide extra protection from factors such as strong sunlight.

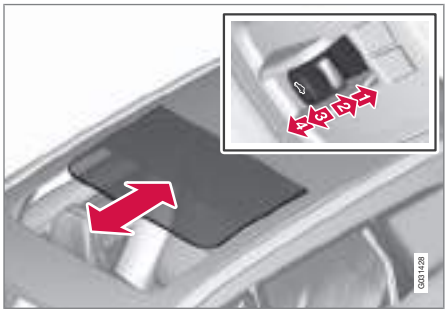
The panorama roof and curtain are operated with a control located in the roof. The control is activated when the key is in position **I** or **II**, see page 70.

WARNING

Children, other passengers or objects can be trapped by the panorama roof's moving parts.

- Always operate the panorama roof with caution.
- Do not allow children to play with the controls.
- If leaving the car, always take the remote control key/PCC with you*, and so prevent the panorama roof from being operated.

Operating



1. Opening, automatic
2. Opening, manual
3. Closing, manual
4. Closing, automatic

The panorama roof and curtain can be operated in key position **I** or **II**.

Automatic operation

1. To open the curtain all the way - press the control rearward to the automatic opening position and release.
2. To then open the panorama roof all the way - press the control rearward again to the automatic opening position and release.

Close the roof/curtain by repeating the preceding procedure in reverse order - press the control forward to the automatic closing position instead.

Rapid opening/closing

The panorama roof and curtain can be opened/closed simultaneously:

- To open - press the control rearward to the automatic operation position twice and release.
- To close - press the control forward to the automatic operation position twice and release.

Power panorama roof*

Manual operation

1. To open the curtain - press the control rearward to the point of resistance for manual opening. The curtain moves towards maximum opening as long as the button is depressed.
2. To angle the panorama roof - press the control rearward again to the point of resistance for manual opening
3. To open the panorama roof - press the control rearward to the point of resistance for manual opening a third time. The panorama roof moves towards maximum opening as long as the button is kept depressed.

Close the roof/curtain by repeating the preceding procedure in reverse order - press the control forward to the manual closing position instead.

NOTE

For manual opening, the curtain must be fully open before the panorama roof can be opened. For the reverse procedure, the panorama roof must be fully closed before the curtain can be closed.

Ventilation position

Ventilation position, vertically at the rear edge.

1. Open by pressing the rear edge of the control upward.
2. Close by pulling the rear edge of the control down.

When the ventilation position is selected the front section is raised at its rear edge. If the curtain is fully closed when ventilation position is selected - then it opens automatically approx. 50 mm.

Closing using the remote control key or central locking button

One long press on the lock button, see pages 43 (remote control key) and 50 (central locking button), closes the panorama roof and all the windows. The door mirrors are retracted* and the doors and tailgate are locked. To interrupt closing, press the lock button again.

WARNING

If closing the panorama roof with the remote control key, make sure nothing could become trapped.

* Option/accessory, for more information, see Introduction.

Petrol and diesel engines

Ignition switch with remote control key, start and stop button (for more information, see page 70).

IMPORTANT

Do not insert the remote control key backwards!

Grip the end with the detachable key blade, see page 46.

1. For cars with remote control key, insert the remote control key into the ignition switch. Gently push in the key until it is pulled in.
2. Hold the clutch pedal fully depressed[1]. Depress the brake pedal in cars with automatic gearbox.
3. Press the **START/STOP ENGINE** button and then release it.

The starter motor works until the engine has started, but for no longer than 10 seconds (diesel up to 60 seconds).

If the engine has not started after 10 seconds, try again by holding in the **START/STOP ENGINE** button until the engine starts.

WARNING

Always remove the remote control key from the ignition switch when leaving the car, especially if there are children in the car.

WARNING

Never remove the remote control key from the ignition switch while driving or when the car is being towed. The steering lock could be activated which would mean that the car cannot be steered.

Never remove the remote control key with the Keyless drive* function from the car while driving or during towing.

NOTE

The idling speed can be noticeably higher than normal for certain engine types during cold starting. This is so that the emissions system can reach normal operating temperature as quickly as possible, which minimises exhaust emissions and protects the environment.

Keyless drive

Follow steps 2–3 for starting petrol and diesel engines.

[1] If the car is moving then it is enough to press the **START/STOP ENGINE** button to start the car.

Starting the engine

NOTE

In order for the engine to start, one of the car's remote control keys with Keyless drive* function must be located in the passenger compartment or the cargo area.

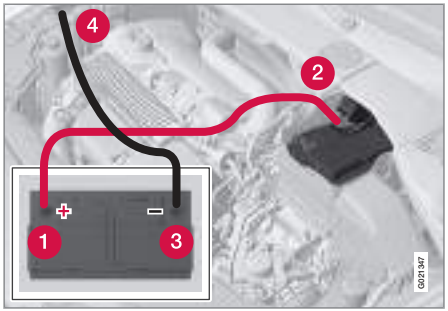
Steering lock

The steering lock is deactivated when the remote control key is inserted into the ignition switch[2] and activated when the remote control key is removed from the ignition switch.

Activate the steering lock when leaving the car to reduce the risk of car theft.

[2] On cars with Keyless drive* the steering lock is deactivated when the start button is pressed in for the first time. The steering lock is activated when the engine is switched off and the driver's door is opened.

Jump starting



If the battery is flat then the car can be started with current from another battery.

The following points are recommended when using a donor battery in order to avoid the risk of an explosion:

1. Set the remote control key into position **0**, see page 70.
2. Ensure that the donor battery is 12 volt.
3. If the donor battery is in another car, switch off the donor car's engine in the other car and ensure that the cars do not touch one another.
4. Connect the red jump lead to the positive terminal on the donor battery 1.
5. Open the clips on the front cover of the battery in your car and remove the cover, see page 241.
6. Connect the red jump lead to the positive terminal 2 on the battery in your car, located under a folding plastic cover.
7. Connect one clamp from the black jump lead to the donor battery's negative terminal 3.

IMPORTANT

Connect the start cable carefully to avoid short circuits with other components in the engine compartment.

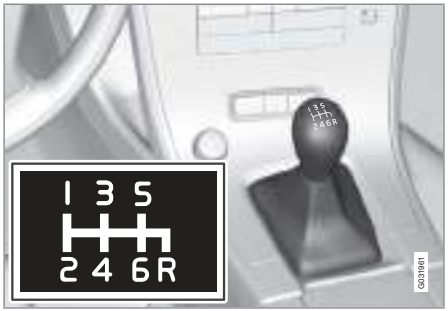
8. Connect the other clamp to an earthing point, (right-hand engine mounting at the top, the outer screw head) 4. Check that the jump lead clamps are fixed securely so that there are no sparks during the starting procedure.
9. Start the engine of the "donor car". Let the engine run a few minutes at a speed slightly higher than idle (1500 rpm).
10. Start the engine of the car with the flat battery. Do not touch the crocodile clips during the start procedure. There is a risk of sparks forming.
11. Remove the jump leads, first the black and then the red. Make sure that none of the clamps on the black jump lead comes into contact with the battery's positive terminal or the clamp connected to the red jump lead.

WARNING

The battery can generate oxyhydrogen gas, which is highly explosive. One spark, which can be generated if you connect a jump lead 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.

Gearboxes

Manual - six-speed



- Depress the clutch pedal fully during each gear change.
- Take your foot off the clutch pedal between gear changes.
- Follow the shifting pattern indicated.

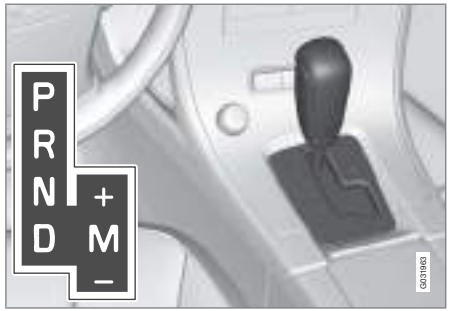
For the best possible fuel economy, use the highest gear possible as often as possible.

Reverse gear inhibitor - six-speed

The reverse gear inhibitor prevents the possibility of mistakenly attempting to engage reverse gear during normal forward travel.

Only engage reverse gear when the car is stationary.

Automatic gearbox, Geartronic



The information display shows the position of the gear selector using the following indications: P, R, N, D, S, 1, 2, 3, 4, 5 or 6, see page 65.

Gear positions

Parking position (P)

Select **P** when starting the engine or when the car is parked. The brake pedal must be depressed to disengage the gear selector from the **P** position.

The gearbox is mechanically blocked when the **P** position is engaged. Activate the electric parking brake by pressing the button, see page 107.

IMPORTANT

The car must be stationary when position **P** is selected.

Reverse (R)

The car must be stationary when position **R** is selected.

Neutral position (N)

No gear is engaged and the engine can be started. Apply the parking brake if the car is stationary with the gear selector in position **N**.

Drive (D)

D is the normal driving position. Shifting up and down takes place automatically based on the level of acceleration and speed. The car must be stationary when the gear selector is moved to position **D** from position **R**.

Geartronic – manual gear positions (M)

The driver can also change gear manually using the Geartronic automatic gearbox. The car engine-brakes when the accelerator pedal is released.

Manual gearshift mode is obtained by moving the lever from **D** position to the end position at **M**. The information display shifts the indication from **D** to one of the figures "**1**-**6**", depending on which gear is engaged just then, see page 65.

Move the lever forwards towards **+** (plus) to change up a gear and release the lever, which returns to its rest position at **M**.

Pull the lever back towards **–** (minus) to change down a gear and release the lever.

The manual gearshift mode **M** can be selected at any time while driving.

Geartronic automatically shifts down if the driver allows the speed to decrease lower than a level suitable for the selected gear, in order to avoid jerking and stalling.

To return to automatic driving mode move the lever to the end position at **D**.

NOTE

If the gearbox has a Sport programme then the gearbox will only become manual after the lever has been moved forwards or backwards in its **M** position. The information display then shifts the indication from **S** to show which of the gears **1**–**6** is engaged.

Geartronic - Sport mode (S) [1]

The Sport programme provides sportier characteristics and allows higher engine speed for the gears. At the same time it responds more quickly to acceleration. During active driving, the use of a lower gear is prioritised, leading to a delayed upshift.

Sport mode is obtained by moving the lever from **D** position to the end position at **M**. The information display shifts the indication from **D** to **S**.

Sport mode can be selected at any time while driving.

Geartronic - Winter mode

It can be easier to pull away on slippery roads if 3rd gear is engaged manually.

1. Depress the brake pedal and move the gear lever from the **D** position to the end position at **M** - the instrument panel display shifts the indication from **D** to the figure **1**.
2. Change up to gear 3 by pushing the lever forward towards **+** (plus) twice - the display shifts the indication from **1** to **3**.
3. Release the brake and accelerate carefully.

The gearbox "winter mode" means that the car moves off with a lower engine speed and reduced engine power on the drive wheels.

[1] Only on the T6 model.

Gearboxes

Kick-down

When the accelerator pedal 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.

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.

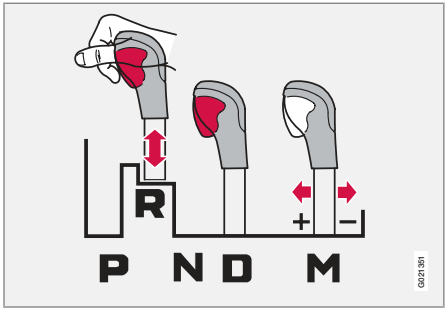
Safety function

To prevent overrevving the engine, the gearbox control program has a protective downshift inhibitor which prevents the kick-down function.

Geartronic does not permit downshifting/kick-down which would result in an engine speed high enough to damage the engine. Nothing happens if the driver still tries to shift down in this way at high engine speed – the original gear remains engaged.

When kick-down is activated the car can change one or more gears at a time depending on engine speed. The car changes up when the engine reaches its maximum speed in order to prevent damage to the engine.

Mechanical gear selector inhibitor



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

With the inhibitor button depressed the lever can be moved forwards or backwards between **P**, **R**, **N** and **D**.

Automatic gear selector inhibitor

The automatic gearbox has special safety systems:

Keylock

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

Parking position (P)

Stationary car with engine running:

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

Electric gear inhibitor – Shiftlock Parking position (P)

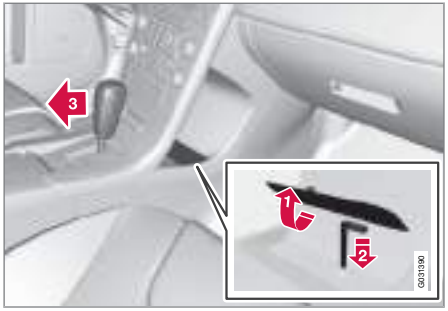
To be able to move the gear selector from **P** to other gear positions, the brake pedal must be depressed and the remote control key must be in position **II**, see page 70.

Shiftlock – Neutral (N)

If the gear selector is in the **N** position and the car has been stationary for at least 3 seconds (irrespective of whether the engine is running) then the gear selector is locked.

To be able to move the gear selector from **N** to other gear positions, the brake pedal must be depressed and the remote control key must be in position **II**, see page 70.

Deactivating the automatic gear selector inhibitor



If the car cannot be driven, e.g. due to a flat battery, the gear selector must be moved from the **P** position so that the car can be moved.

1. Lift away the rubber mat on the floor behind the centre console and open the hatch.
2. Fully insert the key blade. Press the key blade down and hold (For information on the key blade, see page 46.)
3. Move the gear selector from the **P** position.

All-wheel drive – AWD*

All Wheel Drive is always engaged

All Wheel Drive means that the car is driving all four wheels at the same time.

The power is automatically distributed between the front and rear wheels. An electronically controlled clutch system distributes the power to the wheels that have the best grip on the current road surface. This provides the best traction and prevents wheel spin. Under normal driving conditions, the majority of power is transmitted to the front wheels.

All Wheel Drive improves driving safety in rain, snow and icy conditions.

* Option/accessory, for more information, see Introduction.

General

The car is equipped with two brake circuits. If one brake circuit is damaged then this will mean that the brakes engage at a deeper level and harder pressure on the pedal is needed to produce the normal braking effect.

The driver's brake pedal pressure is assisted by a brake servo.

WARNING

The brake servo only works when the engine is running.

If the brake is used when the engine is switched off then the pedal will feel stiff and more force must be used to brake the car.

In very hilly terrain or when driving with a heavy load the brakes can be relieved by using engine braking. Engine braking is most efficiently used if the same gear is used downhill as up.

For more general information on heavy loads on the car, see page 271.

Anti-lock braking system

The car is equipped with ABS (Anti-lock Braking System) which prevents the wheels from locking during braking. This means the ability to steer is maintained and it is easier to swerve to avoid a hazard for example. Vibration may be felt in the brake pedal when this is engaged and this is normal.

A short test of the ABS system is made automatically after the engine has been started when the driver releases the brake pedal. A further automatic test of the ABS system may be made when the car reaches 40 km/h. The test may be experienced as pulses in the brake pedal.

Cleaning the brake discs

Coatings of dirt and water on the brake discs may result in delayed brake function. This delay is minimised by cleaning the brake linings.

Manual cleaning is advisable with wet road surfaces, prior to long-stay parking and after the car has been washed. Carry this out by braking gently during a short period while en route.

Emergency Brake Assistance

Emergency Brake Assistance EBA (Emergency Brake Assistance) helps to increase brake force and so reduce braking distance. The EBA system detects the driver's braking style and increases brake force as necessary. The brake force can be reinforced up to the level when the ABS system is engaged. The EBA function is interrupted when the pressure on the brake pedal is reduced.

NOTE

When EBA is activated the brake pedal lowers slightly more than usual, depress (hold) the brake pedal as long as necessary. If the brake pedal is released then all braking ceases.

Symbols in the combined instrument panel

Symbol	Specification
	Constant glow – Check the brake fluid level. If the level is low, fill with brake fluid and check for the cause of the brake fluid loss.
	Constant glow for 2 seconds when the engine is started – There was a fault in the brake system's ABS function when the engine was last running.

Foot brake

WARNING

If  and  illuminate at the same time then a fault may have arisen in the brake system.

If the level in the brake fluid reservoir is normal at this stage, drive carefully to the nearest authorised Volvo workshop and have the brake system checked.

If the brake fluid is under the **MIN** level in the brake fluid reservoir, do not drive further before topping up the brake fluid.

The reason for the loss of brake fluid must be investigated.

Hill Descent Control - HDC*

General

HDC can be compared to an automatic engine brake. When you release the accelerator on downhill gradients the car is normally braked by means of the engine striving for low engine idling speeds, so-called engine braking. But the steeper the road and the more load there is in the car, the faster the car rolls despite engine braking. In order to then reduce speed the driver has to assist using the footbrake.

The HDC function makes it possible to increase/reduce speed on steep downhill gradients, with a foot only on the accelerator pedal, without using the footbrake. The force on the accelerator pedal is adapted. The brake system brakes itself and automatically provides a low and even speed, so allowing the driver to fully focus on steering.

HDC is particularly helpful on steep gradients with an uneven road surface and slippery sections. E.g. when launching a boat on a trailer from a ramp.

WARNING

HDC does not work in all situations, but is instead only intended to be supplementary assistance.

The driver always has ultimate responsibility that the car is driven safely.

Function

HDC is engaged or disengaged using a switch on the centre console. An indicator lamp in the button illuminates when the function is switched on. When HDC is operating the symbol illuminates and the display shows **Hill descent control ON**.

The function only operates in first gear position and in reverse gear. For an automatic gearbox, gear position **1** must be selected, which is shown with the figure 1 in the trip computer display, see page 98.

NOTE

HDC cannot be activated in an automatic gearbox with the gear selector in position **D**.

Operation

HDC allows the car to roll at a maximum of 10 km/h forwards with engine braking and 7 km/h backwards. However, any speed within the gear's speed register can be selected using the accelerator pedal. When the accelerator pedal is released, the car is braked quickly to 10 or 7 km/h respectively, irrespective of the hill's gradient and without the need for the footbrake.

The brake lights come on automatically when the function is operating. The driver can brake or stop the car at any time by using the footbrake.

HDC is deactivated:

- with the on/off button on the centre console
- if a gear higher than **1** is selected on a manual gearbox
- if a gear higher than **1** is selected on an automatic gearbox, or if the gear selector is moved to position **D**.

The function can be disengaged at any time. If it takes place on a steep downhill gradient then the braking effect will not release directly, but slowly instead.

Hill Descent Control - HDC*

NOTE

When HDC is activated, engine response during acceleration seems slower than normal.

* Option/accessory, for more information, see Introduction.

Parking brake, electric

An electric parking brake has the same applications as a manual parking brake, e.g. when starting uphill.

Function

A faint electric motor noise can be heard when the parking brake is being applied. The noise can also be heard during the automatic function checking of the parking brake.

If the car is stationary when the parking brake is applied then it only acts on the rear wheels. If it is applied when the car is moving then the normal foot brake is used, i.e. the brake acts on all four wheels. Brake function changes over to the rear wheels when the car is almost stationary.

Low battery voltage

If the battery voltage is too low then the parking brake can neither be released nor applied. Connect a donor battery if the battery voltage is too low, see page 97.

How to apply the parking brake

Parking brake control

1. Press the foot brake pedal down firmly.
2. Press the control.
3. Release the foot brake pedal and make sure that the car is at a standstill position.

- When parking the vehicle, always engage 1st gear (for manual gearbox) or put the gear selector in position **P** (for automatic gearbox).

The symbol Ⓟ in the combined instrument panel flashes until the parking brake is fully applied. When the symbol illuminates the parking brake is applied.

In an emergency the parking brake can be applied when the vehicle is moving by depressing the control. When the control is released or the accelerator pedal is depressed the braking is interrupted.

NOTE

In the event of emergency braking at speeds above 10 km/h a signal sounds during the braking procedure.

Parking on a hill

If the car is parked facing uphill; turn the wheels away from the kerb.

If the car is parked facing downhill, turn the wheels towards the kerb.

How to release the parking brake

Parking brake control

Parking brake

Cars with manual gearbox

Releasing manually

1. Insert the remote control key in the ignition switch.
2. Depress the brake pedal firmly.
3. Pull the control.

NOTE

The parking brake can also be released manually by depressing the clutch pedal instead of the brake pedal. Volvo recommends the use of the brake pedal.

Releasing automatically

1. Start the engine.
2. Ease up the clutch and depress the accelerator.

IMPORTANT

It is possible to release the parking brake automatically, even when the gear lever is in neutral position, if the engine is running.

Cars with automatic gearbox

Releasing manually

1. Put the seatbelt on.
2. Insert the remote control key in the ignition switch.
3. Depress the brake pedal firmly.
4. Pull the control.

Releasing automatically

1. Put the seatbelt on.
2. Start the engine.
3. Move the gear selector to position **D** or **R** and depress the accelerator.

NOTE

For safety reasons, the parking brake is only released automatically if the engine is running and the driver is wearing a seatbelt. The parking brake is released immediately on cars with automatic gearbox when the accelerator pedal is depressed and the gear selector is in position **D** or **R**.

Heavy load uphill

A heavy load, such as a trailer, can cause the car to roll backward when the parking brake is released automatically on a steep incline. Avoid this by depressing the control while driving off. Release the control when the engine achieves traction.

Cars with Keyless drive function

Release manually by pressing the **START/STOP ENGINE** button, then depress the brake or clutch pedal and pull the control.

Symbols

Symbol	Specification
(P)!	Read the message on the information display
(P)	A flashing symbol indicates that the parking brake is applied. If the symbol flashes in any other situation then this means that a fault has arisen. Read the message on the information display.

Messages

Park brake not fully released - A fault is preventing the parking brake from being released. Contact an authorised Volvo workshop. A warning signal sounds if you pull away with this error message.

Parking brake not applied - A fault is preventing the parking brake from being applied. Try to apply and release. Contact a Volvo workshop if the message remains.

The message is also illuminated on cars with manual gearbox when the car is driven at low speed with the door open in order to alert the driver that the parking brake may have been unintentionally disengaged.

Parking brake Service required - A fault has arisen. Contact a Volvo workshop if the fault remains.

If the car has to be parked before the fault has been rectified then the wheels must be turned as if parking on a hill and 1st gear engaged (manual gearbox) or the gear selector must be in position **P** (automatic gearbox).

Replacing the brake linings

The rear brake linings must be replaced by an authorised Volvo workshop due to the design of the electric parking brake.

HomeLink® EU*

General

HomeLink is a programmable remote control which can control up to three different devices (e.g. garage door, alarm system, outdoor lighting and indoor lighting etc.) and in doing so replace their remote controls. HomeLink is supplied built into the left-hand sun visor.

HomeLink's panel consists of three programmable buttons and one indicator lamp.

NOTE

HomeLink is designed to be inoperable if the car is locked from the outside.

Save the original remote controls for future programming (e.g. for purchasing a new car).

Erase the programming for the buttons when selling the car.

Metallic sun visors should not be used in cars equipped with HomeLink. This could have a negative effect on the HomeLink function.

Operation

When HomeLink is fully programmed it can be used in place of the separate original remote controls.

Press the programmed button to activate the garage door, alarm system etc. The indicator lamp illuminates for the time that the button is kept depressed.

NOTE

In the event that the ignition is not activated, HomeLink operates for 30 minutes after the driver's door has been opened.

The original remote controls can of course be used in parallel with HomeLink.

WARNING

If HomeLink is used to operate a garage door or gate, ensure that nobody is in the vicinity of the door or gate while it is in motion.

Do not use the HomeLink remote control for any garage door that does not have safety stop and safety reverse. The garage door must react immediately when it detects that something is preventing its movement, and stop directly and reverse. A garage door without these characteristics could cause personal injury. For further information - contact the supplier via the Internet: www.homelink.com.

Programming for the first time

The first step erases the memory in HomeLink and must not be carried out when only one individual button is being reprogrammed.

1. Depress the two outer buttons and do not release until the indicator lamp starts to flash after approx. 20 seconds. The flashing indicates that HomeLink is set in "learn mode" and is ready to be programmed.
2. Position the original remote control 5-30 cm from HomeLink. Monitor the indicator lamp.

   The particular distance that is required between the original remote control and

* Option/accessory, for more information, see Introduction.

HomeLink depends on the programming of the device in question. Perhaps several attempts will be required at different distances. Maintain each position for approx. 15 seconds before trying a new one.

3. Depress the button for the original remote control and the button to be programmed on HomeLink simultaneously. Do not release the buttons until the indicator lamp has changed over from slow to rapid flashing. The rapid flashing indicates successful programming.
4. Test the programming by depressing the programmed button on HomeLink and watching the indicator lamp:
   - **Constant glow:** The indicator lamp illuminates with a constant glow when the button is kept depressed, this indicates that the programming is complete. The garage door, gate or similar should now be activated when the programmed HomeLink button is depressed.
   - **Glow not constant:** The indicator lamp flashes quickly for approx. 2 seconds and then changes over to a constant glow for approx. 3 seconds. This process is repeated for approx. 20 seconds and indicates that the device has a "rolling code". The garage door, gate or similar is not activated when the programmed HomeLink button is depressed. Continue the programming in accordance with the following.
5. Locate the "programming button [1]" on the receiver for the garage door for example, normally located close to the antenna's bracket on the receiver. If you have difficulty in finding the button - consult the supplier manual or contact the supplier via the Internet: www.homelink.com.
6. Depress and release the "programming button". The button flashes for approx. 30 seconds and the next step must be carried out within this period.
7. Depress the programmed button on HomeLink, while the "programming button" is still flashing, keep it depressed for approx. 3 seconds and then release. Repeat the press/hold/release sequence up to 3 times to conclude the programming.

Programming individual buttons

To reprogram an individual button, proceed in accordance with the following:

1. Depress the required button on HomeLink and do not release until step 3 has been completed.
2. When the indicator lamp on HomeLink starts to flash, after approx. 20 seconds, position the original remote control 5-30 cm from HomeLink. Monitor the indicator lamp.

   The particular distance that is required between the original remote control and HomeLink depends on the programming of the device in question. Perhaps several attempts will be required at different distances. Maintain each position for approx. 15 seconds before trying a new one.
3. Depress the button on the original remote control. The indicator lamp will start to flash. When the flashing has changed over from a slow to a rapid flashing - release both buttons. The rapid flashing indicates successful programming.
4. Test the programming by depressing the programmed button on HomeLink and watching the indicator lamp:

[1] Button designation and colour vary depending on manufacturer.

HomeLink® EU*

- **Constant glow:** The indicator lamp illuminates with a constant glow when the button is kept depressed, this indicates that the programming is complete. The garage door, gate or similar should now be activated when the programmed HomeLink button is depressed.
- **Glow not constant:** The indicator lamp flashes quickly for approx. 2 seconds and then changes over to a constant glow for approx. 3 seconds. This process is repeated for approx. 20 seconds and indicates that the device has a "rolling code". The garage door, gate or similar is not activated when the programmed HomeLink button is depressed. Continue the programming in accordance with the following.

5. Locate the "programming button [2]" on the receiver for the garage door for example, normally located close to the antenna's bracket on the receiver. If you have difficulty in finding the button - consult the supplier manual or contact the supplier via the Internet: www.homelink.com.
6. Depress and release the "programming button". The button flashes for approx. 30 seconds and the next step must be carried out within this period.
7. Depress the programmed button on HomeLink, while the "programming button" is still flashing, keep it depressed for approx. 3 seconds and then release. Repeat the press/hold/release sequence up to 3 times to conclude the programming.

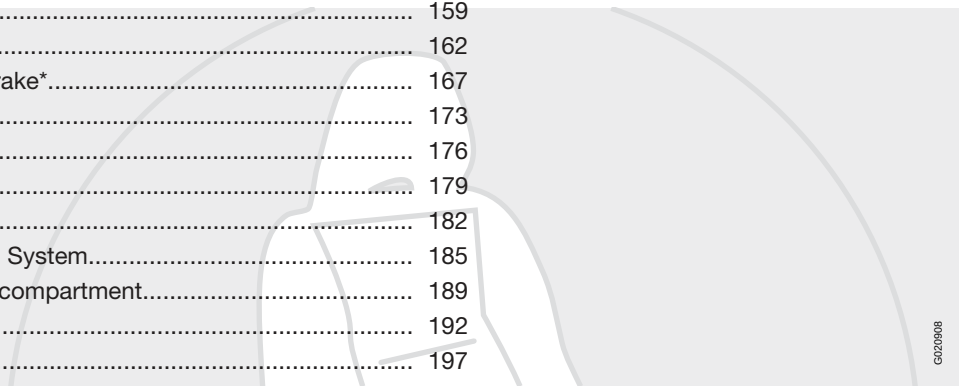
Erasing programming

It is only possible to erase the programming for all the buttons on HomeLink, not for individual buttons.

– Depress the two outer buttons and do not release until the indicator lamp starts to flash after approx. 20 seconds.
  > HomeLink is now set in so-called "learn mode" and is ready to be programmed once more, see page 110.

[2] Button designation and colour vary depending on manufacturer.

* Option/accessory, for more information, see Introduction.



G020908

* Option/accessory, for more information, see Introduction.

COMFORT AND DRIVING PLEASURE

04

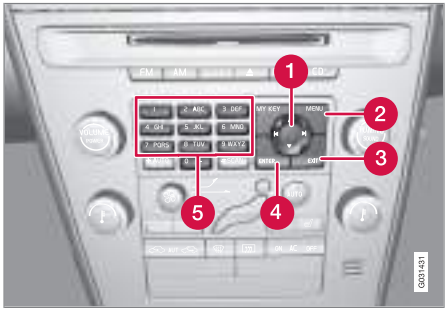
Menus and messages

Centre console

Some functions are controlled from the centre console via the menu system or via the keypad in the steering wheel. Each function is described under its respective section.

The current menu level is shown at the top right of the centre console's display.

Centre console controls



Centre console with controls for menu navigation.

1. Navigation button – scrolls and selects among menu options
2. **MENU** – leads to the menu system
3. **EXIT** – leads back one step in the menu structure. A long press leads out from the menu system.
4. **ENTER** – selects menu options
5. Numerical keypad **1–9**

Steering wheel keypad*

1. **ENTER**
2. **EXIT**
3. Navigation buttons – up/down.

If the steering wheel keypad has **ENTER** and **EXIT** then these buttons, and the navigation buttons, have the same functions as the controls in the centre console.

Search paths

Access to some functions is provided directly via the function buttons and some are reached via the menu system.

The search paths to the menu system's functions are stated in the form: **Car settings** ➔ **Lock settings**, which presupposes that following is carried out before:

1. Press **MENU**.
2. Scroll to the required menu, e.g. **Car settings**, using the navigation buttons and press **ENTER**.
3. Scroll to the required submenu, e.g. **Lock settings**, and press **ENTER**.

The navigation buttons can be used instead of **ENTER** and **EXIT** when navigating in the menu hierarchy. The right-hand arrow is equal to **ENTER** and the left-hand arrow to **EXIT**.

The menu options are numbered and can also be selected directly with the numerical keypad (only **1–9**).

Menu overview

The phone and audio sources each have separate main menus. An audio source main menu (e.g. CD) can only be accessed when that particular audio source is active, see page 135.

The following menu options are included in **Main menu**:

Car Key memory

Seat & mirror positions*

* Option/accessory, for more information, see Introduction.

Car settings
- Fold mirr. when locking*
- Collision warning settings*
- Information
- Light settings
- Lock settings
- Reduced guard[1]
- Parking camera settings*
- Steering force level*
- Tyre pressure
- Unit settings

Climate settings
- Automatic blower adjust
- Auto. rear defroster
- Recirculation timer
- Reset climate settings

Main menu AM
- Audio settings
  - Sound stage
  - Equalizer front
  - Equalizer rear
  - Auto. volume control
  - Reset all audio settings

Main menu FM
- FM settings
  - News
  - TP (Traffic information)
  - Radio text
  - PTY (Program type)
  - Advanced radio settings
- Audio settings[2]

Main menu DAB*[3]

Main menu CD
- Random
  - Off
  - Folder[4]
  - Disc[4]
  - Single disc[5]
  - All discs[5]
- CD settings
  - Disc text*
  - News
  - TP (Traffic information)
- Audio settings[2]

Main menu AUX
- AUX input volume
- Audio settings[2]

Main menu USB
- USB settings
  - News
  - TP (Traffic information)
- Audio settings[2]

Main menu iPod
- iPod settings
  - News
  - TP (Traffic information)
- Audio settings[2]

1 Available in certain models.
2 For submenus, see "Main menu AM/Audio settings".
3 See page 143.
4 Only in systems that allow the playback of MP3 and WMA format audio files.
5 Only in systems with CD changer.

Menus and messages

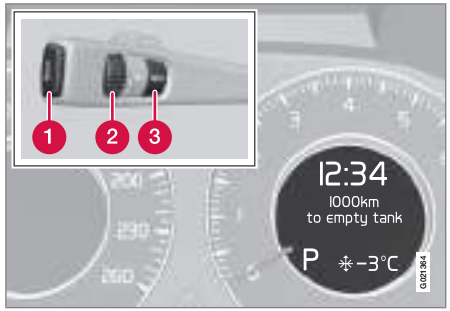
Main menu, Bluetooth

- Last 10 missed calls
- Last 10 received calls
- Last 10 dialled calls
- Phone book
  - Search
  - Copy fr. mobile phone
- Bluetooth*
  - Connect phone
  - Change phone
  - Remove phone
- Phone settings
  - Call options
  - Sounds and volume
  - Synchronise phone book

Main menu, built-in phone

- Call register
  - Last 10 missed calls
  - Last 10 received calls
  - Last 10 dialled calls
  - Erase list
  - Call duration
- Phone book
  - New contact
  - Search
  - Copy all
  - Erase SIM
  - Erase phone
  - Memory status
- Messages
  - Read
  - Write new
  - Message settings
- Call options
  - Send my number
  - Call waiting
  - Automatic answer
  - Voice mail number
  - Diversions
- Phone settings
  - Network selection
  - SIM security
  - Edit PIN code
  - Sounds and volume
- IDIS
- Reset Phone settings

Combined instrument panel



Information display and controls for menus.

1. **READ** – access to message list and message confirmation.
2. Thumbwheel – browse between menu options.
3. **RESET** – reset the active function. Used in certain cases to select/activate a function, see the explanation under each respective function.

The menus shown on the information displays in the combined instrument panel are controlled with the left-hand stalk switch. The menus shown depend on key position, see

* Option/accessory, for more information, see Introduction.

page 70. If a message appears then this must be acknowledged with **READ** for the menus to be shown.

Menu overview[6]

To empty fuel tank

Average

Instantaneous

Average speed

Lane departure warning

Tyre pressure Calibration

City Safety

Current speed

Park heat timer 1/2

Park vent timer 1/2

Park timer mode

Direct start Park heat

Direct start Park el.heat

Direct start Park vent

Additional heat auto

Rest heat start

DSTC

Message

Text message in the information display.

When a warning, information or indicator symbol illuminates, a corresponding message appears on the information display. An error message is stored in a memory list until the fault is rectified.

Press **READ** to acknowledge and browse between the messages.

NOTE

If a warning message appears while you are using the trip computer, the message must be read (press **READ**) before the previous activity can be resumed.

Message	Specification
Stop safely	Stop and switch off the engine. Serious risk of damage. Contact an authorised Volvo workshop.
Stop engine	Stop and switch off the engine. Serious risk of damage. Contact an authorised Volvo workshop.
Service urgent	Have the car checked by an authorised Volvo workshop immediately.
Service required	Have the car checked by an authorised Volvo workshop as soon as possible.
See manual	Read the owner's manual.
Book time for maintenance	Time to book regular service at an authorised Volvo workshop.

6 Certain menu options*.

Menus and messages

Message	Specification
Time for regular maintenance	Time for regular service at an authorised Volvo workshop. The timing is determined by the number of kilometres driven, number of months since the last service, engine running time and oil grade.
Maintenance overdue	If the service intervals are not followed then the warranty does not cover any damaged parts. Contact an authorised Volvo workshop for service.
Temporarily OFF	A function has been temporarily switched off and is reset automatically while driving or after starting again.
Power save mode	The audio system is switched off to save energy. Charge the battery.

General

Air conditioning

The car is equipped with Electronic Climate Control* (ECC) or Electronic Temperature Control (ETC). The climate control system cools or heats as well as dehumidifies the air in the passenger compartment.

NOTE

The air conditioning can be switched off, but to ensure the best possible climate comfort in the passenger compartment and to prevent the windows from misting, it should always be on.

Actual temperature

The temperature you select corresponds to the physical experience with reference to factors such as air speed, humidity and solar radiation* in and around the car.

The system includes a sun sensor* which detects on which side the sun is shining into the passenger compartment. This means that the temperature can differ between the right and left-hand air vents despite the controls being set for the same temperature on both sides.

Sensor location

- The sun sensor* is located on the top side of the dashboard.
- The temperature sensor for the passenger compartment is located below the climate control panel.
- The outside temperature sensor is located on the door mirror.
- The humidity sensor* is located in the interior rearview mirror.

NOTE

Do not cover or block the sensors with clothing or other objects.

Side windows and sunroof

To ensure that the air conditioning works optimally, the side windows, and sunroof if appropriate, should be closed.

Misting windows

Remove misting on the insides of the windows by primarily using the defroster function.

To reduce the risk of misting, keep the windows clean and use window cleaner.

Temporary shut-off of the air conditioning

When the engine requires full power, e.g. for full acceleration or driving uphill with a trailer, the air conditioning can be temporarily switched off. There may then be a temporary increase in temperature in the passenger compartment.

Condensation

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

Ice and snow

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

Fault tracing and repair

Entrust fault tracing and repair of the climate control system to an authorised Volvo workshop only.

Refrigerant

The climate control system contains R134a refrigerant, see also page 273. This refrigerant contains no chlorine, which means that it is harmless to the ozone layer. Have an authorised Volvo workshop carry out the filling/changing of refrigerant.

Total airing function

The function opens/closes all side windows simultaneously and can be used for example to quickly air the car during hot weather, see page 44.

Climate control

Passenger compartment filter

All air entering the car's passenger compartment is cleaned with a filter. This must be replaced at regular intervals. Follow the Volvo Service Programme for the recommended replacement intervals. If the car is used in a severely contaminated environment, it may be necessary to replace the filter more often.

NOTE

There are different types of passenger compartment filter. Make sure that the correct filter is fitted.

Clean Zone Interior Package (CZIP)*

This option keeps the passenger compartment clear of allergy and asthma inducing substances. For more information on CZIP, see the brochure included with the purchase of the car. The following is included:

- An enhanced fan function that means that the fan starts when the car is opened with the remote control key. The fan fills the passenger compartment with fresh air. The function starts when required and is disengaged automatically after a time or when one of the passenger compartment doors is opened. The amount of time the fan runs is reduced gradually due to reduced need up until the car is 4 years old.
- Interior Air Quality System (IAQS). A fully automatic system that cleans the air in the passenger compartment from contaminants such as particles, hydrocarbons, nitrous oxides and ground-level ozone.

Use of tested materials in the interior equipment.

The materials have been developed in order to minimise the quantity of dust in the passenger compartment and they contribute to making the passenger compartment easier to keep clean. The carpets in both the passenger compartment and the cargo area are removable and easy to remove and clean. Use cleaning agents and car care products recommended by Volvo, see page 265.

NOTE

In cars with CZIP the IAQS air filter must be replaced every 15000 km or once per year. In cars without CZIP the IAQS air filter must be replaced at the normal service.

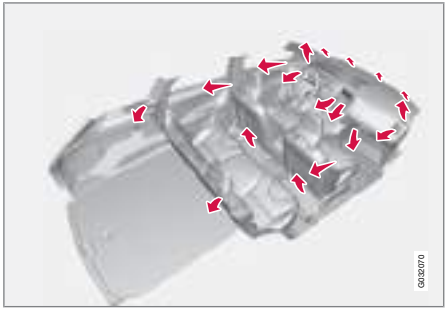
Menu settings

It is possible to change the default settings for three of the climate control system's functions via the centre console, see page 116:

- Fan speed in automatic mode*, see page 125.
- Recirculation timer for passenger compartment air, see page 126.
- Automatic rear window defrosting, see page 91.

All climate control system functions are set to original position with **RESET** via the display.

Air distribution



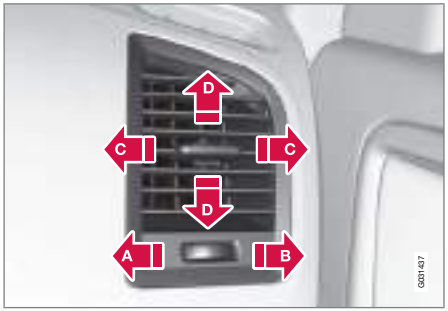
The incoming air is divided between 20 different vents in the passenger compartment.

Air distribution is fully automatic in **AUTO** mode*.

* Option/accessory, for more information, see Introduction.

If necessary it can be controlled manually, see page 127.

Air vents in the dashboard



A Open

B Closed

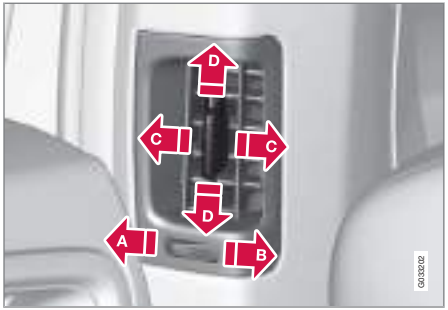
C Lateral airflow

D Vertical airflow

Aim the outer vents at the side windows to remove misting.

A certain air flow always comes from the vents in order to maintain a good climate in the passenger compartment.

Air vents in the door pillars



A Closed

B Open

C Lateral airflow

D Vertical airflow

Aim the vents at the windows to remove misting.

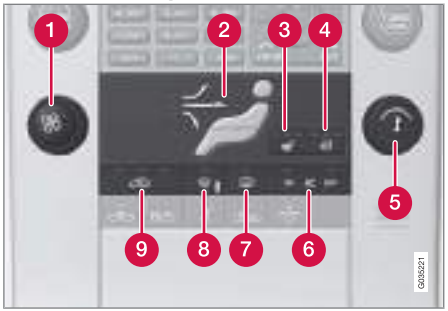
Aim the vents into the passenger compartment to maintain a comfortable climate in the rear seat.

NOTE

Remember that small children may be sensitive to air flows and draughts.

Climate control

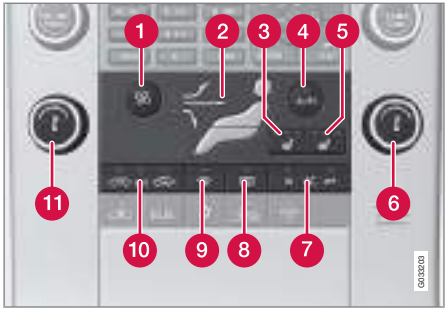
Electronic Temperature Control, ETC



1. Fan
2. Air distribution
3. Heated front seats, left-hand side
4. Heated front seats, right-hand side
5. Temperature control
6. **AC ON/OFF** – Air conditioning On/Off
7. Rear window and door mirror defrosters, see page 91
8. Max. defroster
9. Recirculation

Climate control

Electronic climate control, ECC



1. Fan
2. Air distribution
3. Heated front seats, left-hand side
4. **AUTO**
5. Heated front seats, right-hand side
6. Temperature control, right-hand side
7. **AC ON/OFF** – Air conditioning On/Off
8. Rear window and door mirror defrosters, see page 91
9. Max. defroster
10. Recirculation/Air quality system
11. Temperature control, left-hand side

Operation

Fan [1]

Turn the knob to increase or decrease fan speed. If **AUTO** is selected then fan speed is regulated automatically. The previously set fan speed is disengaged.

NOTE

If the fan is fully disengaged the air conditioning is not engaged which may result in a risk of misting windows.

Heated seats*

Front seats

Press the button once for the highest heat level – three lamps illuminate.

Press the button twice for a lower heat level – two lamps illuminate.

Press the button three times for the lowest heat level – one lamp illuminates.

Press the button four times to switch off the heat – no lamps illuminate.

Rear seats

Heat control takes place in the same way as for the front seat [2].

Air distribution

The figure consists of three buttons. When the buttons are pressed a lamp in front of the respective part of the figure illuminates and shows which air distribution is selected, see page 127.

[1] Only applies to ECC.
[2] Not included if 2-stage booster cushion is selected.

* Option/accessory, for more information, see Introduction.

Auto[1]

The Auto function automatically regulates temperature, air conditioning, fan speed, recirculation, and air distribution.

If you select one or more manual functions, the other functions continue to be controlled automatically. The air quality sensor is engaged and all manual settings are switched off when **AUTO** is pressed. The display shows **AUTO CLIMATE**.

Fan speed in automatic mode can be set under **Climate settings ➔ Automatic blower adjust**. Select between **Low**, **Normal** or **High**.

For a description of the menu system, see page 116.

- **Low** - Automatic fan control. Low airflow is prioritised.
- **Normal** - Automatic fan control.
- **High** - Automatic fan control. A more intense airflow is prioritised.

Temperature control

ECC: The temperatures on the driver and passenger sides can be set independently.

ETC: The whole of the passenger compartment is regulated using the knob.

When the car is started, the most recent setting is resumed.

NOTE

Heating or cooling cannot be hastened by selecting a higher/lower temperature than the actual temperature required.

AC – Air conditioning on/off

ON: The air conditioning is controlled by the system's Auto function. This way, incoming air is cooled and dehumidified.

OFF: When the defroster function is activated the air conditioning is switched on automatically (can be switched off using the **AC** button).

Defroster

Used to quickly remove misting and ice from the windscreen and side windows. Air flowing to the windows. The light in the defroster button illuminates when the function is active.

The following also takes place in order to provide maximum dehumidification in the passenger compartment:

- the air conditioning is automatically engaged
- recirculation and the air quality system are automatically disengaged.

The air conditioning can be disengaged manually using the **AC** button. When the defroster function is switched off the climate control system returns to the previous settings.

1 Only applies to ECC.

Climate control

Recirculation/Air quality system

Recirculation

ECC - The right-hand orange light in the button illuminates when recirculation is engaged. The function is selected to shut out bad air, exhaust gases etc. from the passenger compartment. The air in the passenger compartment is recirculated, i.e. no outside air is taken into the car when this function is activated.

ETC - The right-hand orange light in the button illuminates when recirculation is engaged. The function is selected to shut out bad air, exhaust gases etc. from the passenger compartment. The air in the passenger compartment is recirculated, i.e. no outside air is taken into the car when this function is activated.

NOTE

If the air in the car recirculates for too long, there is a risk of misting on the insides of the windows.

Timer

With the timer function activated the system will exit manually activated recirculation mode according to a time that depends on the outside temperature. This reduces the risk of ice, misting and bad air. Activate/deactivate the function under **Climate settings ➔ Recirculation timer**. For a description of the menu system, see page 116.

NOTE

When Defroster is selected, recirculation is always deactivated.

Air quality system*

The air quality system separates gases and particles to reduce the levels of odours and pollution in the passenger compartment. If the outside air is contaminated then the air intake is closed and the air is recirculated. When the **AUTO** button is depressed the air quality sensor is always engaged.

Activating recirculation/air quality sensor [3]

Switch between the three functions by pressing the button repeatedly.

- The left-hand orange lamp illuminates – the air quality sensor is disengaged. There is no recirculation, only fresh air.
- The centre green lamp illuminates – recirculation not engaged, providing it is not required for cooling in hot weather.
- The right-hand orange lamp illuminates – recirculation is engaged.

NOTE

The air quality sensor should always be engaged in order to obtain the best air in the passenger compartment.

Recirculation is limited in cold weather to avoid misting.

If the insides of the windows start misting up, disengage the air quality sensor, and the defroster functions for the windscreen, the side and the rear windows should also be used to demist the windows.

[3] Only applies to ECC.

* Option/accessory, for more information, see Introduction.

Activating recirculation

Switch between recirculation[3] On/Off by pressing the button repeatedly. The lamp illuminates when recirculation is engaged.

Air distribution table

	Air distribution	Use		Air distribution	Use
	Air to windows. Some air flows from the air vents. The air is not recirculated. Air conditioning is always engaged.	to remove ice and misting quickly.		Air to the floor and windows. Some air flows from the dashboard air vents.	to ensure comfortable conditions and good demisting in cold or humid weather.
	Air to windscreen and side windows. Some air flows from the air vents.	to prevent misting and icing in a cold and humid climate, (not at too low fan speed to enable this).		Air to floor and from dashboard air vents.	in sunny weather with cool outside temperatures.

[3] Only applies to ECC.

Climate control

	Air distribution	Use		Air distribution	Use
	Airflow to windows and from dashboard air vents.	to ensure good comfort in warm, dry weather.		Air to floor. Some air flows to the dashboard air vents and windows.	to direct heat or cold to the floor
	Airflow to the head and chest from the dashboard air vents.	to ensure efficient cooling in warm weather.		Airflow to windows, from dashboard air vents and to the floor.	to provide cooler air along the floor or warmer air higher up in cold weather or hot, dry weather.

Fuel-driven engine block heater and passenger compartment heater*

Fuel-driven heater

General information about the parking heater

The parking heater heats the engine and passenger compartment and can be started directly or with the timer.

Two different times can be selected using the timer. Here, time refers to the time when the car is heated and ready. The car's electronic system calculates when heating should be started based on the outside temperature.

The heater cannot start if the outside temperature exceeds 15 °C. At –10 °C or lower the maximum running time of the parking heater is 50 minutes.

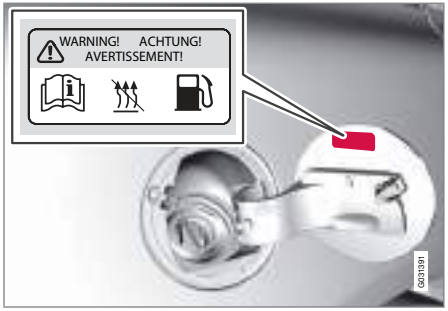
WARNING

The car must be outdoors when the parking heater is used.

NOTE

When the parking heater is active there may be smoke from the right-hand wheel housing, which is perfectly normal.

Refuelling



Warning decal on fuel filler flap.

WARNING

Fuel which spills out can be ignited. Switch off the fuel-driven heater before starting to refuel.

Check the information display to see that the parking heater is switched off. When it is running, the information display shows **Park heat ON**.

Parking on a hill

If the car is parked on a steep hill, the front of the car should point downhill to ensure that there is a supply of fuel to the parking heater.

Battery and fuel

If the battery has insufficient charge or the fuel level is too low, the parking heater will be switched off automatically and a message appears on the information display. Acknowledge the message by pressing the indicator stalk **READ** button once, see page 130.

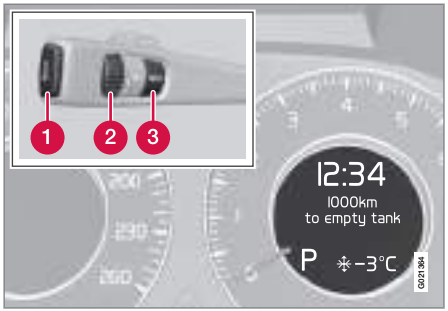
IMPORTANT

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

The car should be driven for the same time as the heater is used to ensure that the car's battery is recharged adequately to replace the energy consumed by the heater when it is used on a regular basis.

Fuel-driven engine block heater and passenger compartment heater*

Operation



1. **READ** button
2. Thumbwheel
3. **RESET** button

For more information on the information display and **READ**, see page 118.

Symbols and display messages

When one of the timer's settings or **Direct start** is activated, the information symbol in the combined instrument panel illuminates while the information display shows an explanatory text and a further illuminated symbol. The table shows symbols and display texts that appear.

Symbol	Display	Specification
	Fuel heater ON	The heater is switched on and running.
	Timer is set for Fuel heater	Reminder that the heater will start at the set time after the car has been left, when the remote control key is removed from the ignition switch.
	Heater stopped Low battery	The heater has been stopped by the car's electronics in order to facilitate starting the engine.
	Heater unavail. Low fuel level	The heater has been stopped by the car's electronics in order to facilitate starting the engine and about 50 km driving.
	Park heater Service required	Heater not working. Contact an authorised Volvo workshop for repair.

A display text clears automatically after a time or after one press on the indicator stalk **READ** button.

Direct start and immediate stop

1. Scroll with the thumbwheel to **Direct start Park heat**.
2. Press **RESET** to select between **ON** and **OFF**.

ON: Parking heater switched on manually or with programmed timer.

OFF: Parking heater switched off.

Following the direct start of the heater it will be activated for 50 minutes.

* Option/accessory, for more information, see Introduction.

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

NOTE

The car can be started and driven while the parking heater is running.

Setting the timer

The time when the car shall be used and heated is specified with the timer.

Select between **TIMER 1** and **TIMER 2**.

NOTE

The timer can only be programmed when the remote control key is in key position **I**, see page 70.

1. Scroll with the thumbwheel to **Park heat timer 1**.
2. Briefly press **RESET** to move to the flashing hours setting.
3. Select the required hour using the thumbwheel.
4. Briefly press **RESET** to move to the flashing minutes setting.
5. Select the required minute using the thumbwheel.
6. Briefly press **RESET** to confirm the setting.
7. Press **RESET** to activate the timer.

After setting **Park heat timer 1** a second start time can be programmed with **Park heat timer 2** by scrolling to it with the thumbwheel.

Set the alternative time in the same way as **Park heat timer 1**.

Deactivating a timer-started heater

A timer-started heater can be switched off manually before the set time has elapsed. Proceed as follows:

1. Press **READ**.
2. Use the thumbwheel to scroll to the text **Park heat timer 1** or **2**.
   > The text **ON** flashes on the display.
3. Press **RESET**.
   > The text **OFF** is shown with a constant glow and the heater is switched OFF.

A timer-started heater can be switched off in accordance with the instructions in the section "Direct start and immediate stop", see page 130.

Clock/timer

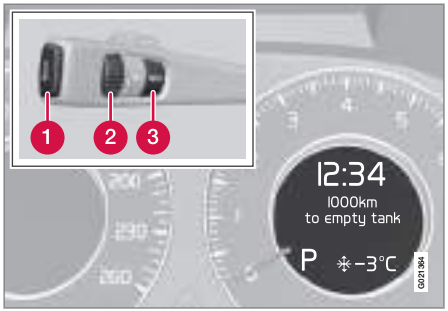
The heater's time is connected to the car's clock.

NOTE

All timer programming will be cleared if the car's clock is reset.

Fuel-driven additional heater*

Additional heater (diesel)



1. **READ** button
2. Thumbwheel
3. **RESET** button

In diesel-engined cars the additional heater may be required for achieving the correct temperature in the passenger compartment during cold weather.

The heater starts automatically when extra heat is required when the engine is running.

The heater is switched off automatically when the correct temperature is reached or when the engine is switched off.

NOTE

When the additional heater is active there may be smoke from the right-hand wheel housing which is perfectly normal.

Auto mode or shutdown

The additional heater can be switched off for short distances if required.

1. Scroll with the thumbwheel to **Additional heat auto**.
2. Press **RESET** to select between **ON** and **OFF**.

Passenger compartment heater*

If the additional heater is supplemented with timer function then it will be a fuel-driven passenger compartment heater, see page 129.

* Option/accessory, for more information, see Introduction.

General

The audio system can be equipped with different options and is one of the following three basic versions:

- Performance
- High Performance
- Premium Sound

The system version is shown in the display when the audio system is started.

Dolby Surround Pro Logic II and the Dolby symbol are trademarks of Dolby Laboratories Licensing Corporation. Dolby Surround Pro Logic II System is manufactured under license from Dolby Laboratories Licensing Corporation.

Remote control key and ignition positions

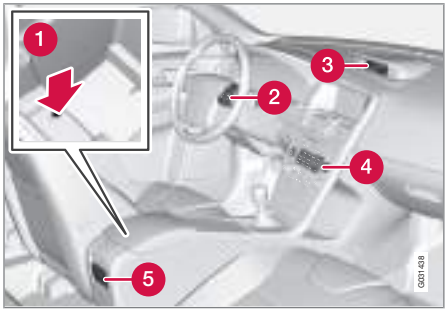
The audio system can be used without the remote control key in the ignition switch for 15 minutes at a time.

NOTE

Remove the remote control key from the ignition switch if the audio system is used when the engine is switched off. This is to avoid discharging the battery unnecessarily.

If the audio system is active when the engine is switched off then it is activated automatically next time the engine is started.

Overview



1. Input for external audio source; AUX and USB (e.g. iPod®)[1]
2. Steering wheel keypad
3. Information display
4. Centre console control panel
5. Control panel with headphones socket*

Steering wheel keypad

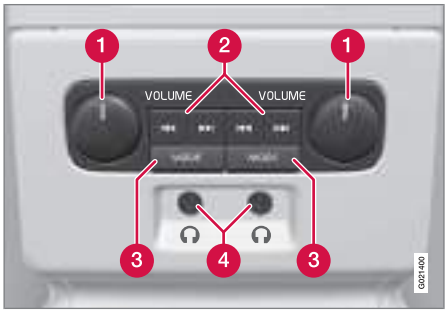
1. Confirm selection in menu system, accept phone call.
2. Lead up in menu system. Interrupt current function, end/refuse phone calls, clear entered characters.
3. Volume
4. A short press scrolls between CD tracks or preset radio stations. A long press fast-winds CD tracks or seeks the next available radio station.

[1] USB only applies for High Performance and Premium Sound. The iPod trademark belongs to Apple Computer Inc.

Audio system

Rear control panel with headphones socket

Headphones with an impedance of 16-32 ohm and sensitivity of 102 dB or higher are recommended for best sound reproduction.



1. **VOLUME** – Volume, left and right.
2. Scroll/search forward and backward.
3. **MODE** - Select between AM, FM, CD, AUX, USB*/iPod, DAB1/DAB2* and On/Off. For connection via AUX or USB, see page 133.
4. Headphones sockets (3.5 mm).

Activating/deactivating

The control panel is activated with **MODE**. Deactivation is possible via a long press on **MODE** or when the engine is switched off.

Scroll/search forward and backward

A short press on 2 scrolls between CD tracks or preset radio stations. A long press fast-winds CD tracks or seeks the next available radio station.

Limitations

- The audio source (FM, AM, CD etc.) played back in the speakers cannot be controlled from the rear control panel.

Menus and MY KEY[2]

Some functions are controlled from the menu system in the centre console. For more information on menus, see page 116. For information on the audio system's functions together with Bluetooth™ handsfree or phone, see page 194.

Store favourite functions with MY KEY

1. Navigate to the function to be stored in the menu. Only a selection of the functions can be stored.
2. Hold **MY KEY** depressed for more than 2 seconds.

The following functions can be stored with MY KEY:

CD/CD changer

- Random
- News
- TP
- Track information

2 MY KEY is not available if the car is equipped with built-in phone as an option.

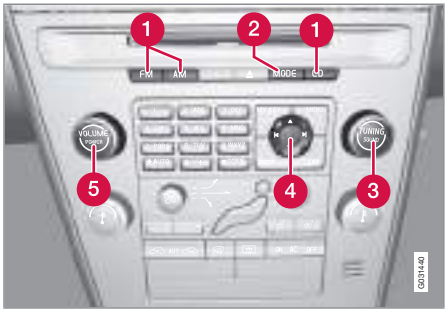
* Option/accessory, for more information, see Introduction.

FM
- News
- TP
- Radio text
- Search PTY
- Show PTY text

Audio settings
- Audio mode
- Auto. volume control

Activate the stored function with a short press on **MY KEY**.

Audio functions



Centre console, controls for audio functions.

1. **AM**, **FM** and **CD** - Internal audio sources.
2. **MODE** - Scroll between external audio sources (AUX, USB* and DAB1/DAB2*). For connection via AUX or USB, see page 133.
3. **SOUND** – Push button and knob controls for adjusting the sound pattern.
4. Navigation button
5. **VOLUME** - Volume and On/Off.

Audio volume and automatic volume control

The audio system compensates for disrupting noises in the passenger compartment by increasing the volume in proportion to vehicle speed. The level of compensation can be set at low, medium or high. Select the level under Audio settings ➔ Auto. volume control.

Audio controls

Press the control 3 repeatedly to browse among the following listed options. Adjustment is made by turning the control.

NOTE

Press **MENU** to access other audio settings. For more information, see page 116.

- Bass - Bass level.
- Treble - Treble level.
- Fader – Balance between the front and rear speakers.
- Balance – Balance between the left and right-hand speakers.
- Subwoofer* – Subwoofer level. MIN deactivates the subwoofer.

Audio system

Subwoofer location.

- **Surround*** – Surround settings.

Under **Surround** 3 channel stereo or Dolby Surround Pro Logic II can be activated by selecting **3-channel** or **DPLII** respectively. This enables the following options:

- **Centre level*** – Level for centre speaker.
- **Surround level*** – Level for surround.

Equalizer*
The equalizer can be used to adjust different frequency bands separately.

1. Go to **Audio settings** and select **Equalizer front** or **Equalizer rear**.

   The sound level for the wavelength is adjusted with ▲ / ▼ on the navigation button. Press ◀| / |▶ to select another wavelength.

2. Use **ENTER** to save or **EXIT** to close.

Sound stage*
The sound experience can be optimised for the driver's seat, both front seats or the rear seat. Select one of the options under **Audio settings ➔ Sound stage**.

Optimum sound reproduction

The audio system is calibrated for optimum sound reproduction by means of digital signal processing.

This calibration takes into account loudspeakers, amplifiers, passenger compartment acoustics, listener position etc. for each combination of car model and audio system.

There is a also a dynamic calibration that takes into account the position of the volume control, radio reception and vehicle speed.

The controls explained in these operating instructions, e.g. **Bass**, **Treble** and **Equalizer**, are only intended for the user to be able to adapt the sound reproduction according to personal taste.

External audio source audio volume

The AUX input can be used for connecting an MP3 player which has no USB connection for example, see page 133.

NOTE

The audio quality may be impaired if the player is charged while the audio system is in AUX mode. In which case, avoid charging the player via the 12 V socket.

The audio source connected to the AUX input may have a different volume to the internal audio sources. Correct this by adjusting the input volume of the AUX input:

1. Set the audio system in AUX mode using **MODE** and navigate with 4 to **AUX input volume**.
2. Turn the control 3 or press ◀| / |▶ the navigation button.

Resetting the audio functions

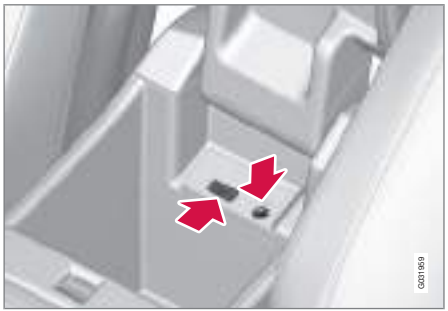
All audio settings can be reset to the original factory settings.

– The reset is carried out in FM mode under **Audio settings ➔ Advanced audio sett. ➔ Reset all**.

* Option/accessory, for more information, see Introduction.

AUX, USB and iPod®*

General



An iPod® or MP3 player can be connected to the car's infotainment system via the AUX socket or the USB connection in the centre console.

The AUX input enables the connection of an external audio source, e.g. an iPod® or MP3 player.

If you choose to connect an iPod®, MP3 player or a USB memory stick to the USB connection then you can control the media via the car's audio controls.

Use the **MODE** button to select:

1. If **USB** is selected then **Connect Device** is shown in the display. For information on the AUX input, see page 133.
2. Connect your iPod®, MP3 player or USB memory stick to the USB connection in the centre console's storage compartment (see preceding illustration).

The text **Loading** is shown in the display when the system is loading the storage media's file structure. This takes a moment.

Once loading is complete, track information is shown on the display and the desired track can be selected.

A track can be selected in two ways:

1. Turn **TUNING** 3 clockwise or anticlockwise
2. or use the navigation control's 4 right or left-hand button to scroll to the required track.

It is also possible to change track using the steering wheel keypad

In USB or iPod® mode the infotainment system operates in an equivalent way to the CD player playing back music files. For more information, see page 139.

NOTE

The system supports the playback of music files in the MP3, WMA and WAV file formats. However, there are variants of these file formats that are not supported by the system. The system also supports the majority of iPod® models produced in 2005 or later. iPod® Shuffle is not supported.

USB memory

To facilitate use of a USB memory, only store music files on it. It takes a lot longer for the system to load storage media that contains anything other than compatible music files.

NOTE

The system supports removable media which is compatible with USB 2.0 and the file system FAT32. The player or USB memory stick can hold a maximum of 500 folders and 64 000 files, and must have a capacity of at least 128 Mb.

MP3 player

Many MP3 players have their own file systems that are not supported by the audio system. For use in the system, an MP3 player must be set in USB Removable device/Mass Storage Device mode.

Audio system

iPod®

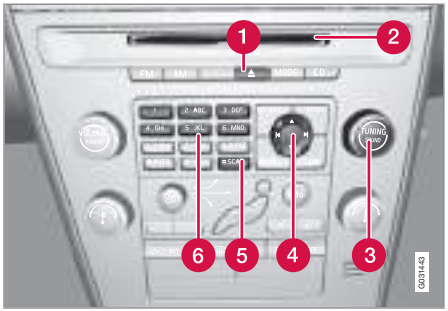
An iPod® is charged and supplied with power by the USB connection, via the player's connection cable. However, if the player's battery is fully discharged then it must be charged before being connected.

NOTE

When an iPod® is used as audio source, the car's infotainment system has a menu structure that is similar to the iPod® player's own menu structure.

For information on USB/iPod in combination with Performance audio, see the accessory manual for USB and iPod® Music Interface.

CD functions



Centre console, controls for CD functions.

1. CD eject
2. CD insertion/eject slot
3. Fast-wind and change CD track
4. Navigation button for changing CD tracks
5. Scan CD
6. CD changer position selection (only applies to the High Performance and Premium Sound audio systems)*

Starting playback (CD player)

Start CD playback by pressing the **CD** button. If a music CD is in the player when this takes place then playback is started automatically. Otherwise, insert a disc and press **CD**.

Starting playback (CD changer)

If a CD position with a music CD is already selected when **CD** is pressed then playback starts automatically. Otherwise, select a disc with the number buttons **1-6** or ▲ / ▼ on the navigation button.

Insert a CD (CD changer)

1. Select an empty position with the number buttons **1-6** or ▲ / ▼ on the navigation button.

   An empty position is marked on the display. The text **Insert disc** shows that a new disc can be inserted. The CD changer can hold up to six CDs.
2. Insert a CD in the CD changer slot.

Disc eject

A CD will stay in the ejected position for approx. 12seconds. Following which it is re-inserted in the player and playback continues.

Eject individual discs by pressing the eject button.

Eject all discs with a long press on the eject button. The entire magazine is emptied disc by disc.

* Option/accessory, for more information, see Introduction.

Pause
When the volume is lowered all the way, the CD player stops if no one is using headphones. When the volume is increased, it starts again.

Audio files[3]
The CD player also supports compressed audio files in MP3 and WMA formats.

NOTE

Some copy protected audio files may not be read by the player.

When a CD with audio files is inserted into the player the disc's file structure is loaded. Depending on the quality of the disc and the quantity of information there may be a delay before playback starts.

Navigation and playback
If a disc containing audio files is inside the CD player then **ENTER** leads to the disc's file structure. The file structure is navigated in the same way as the audio system's menu structure. Audio files have the symbol ♩ and directories have the symbol 🗀. Start audio file playback with **ENTER**.

When the playback of a file is finished the playback of the other files in the same directory continues. Directory change takes place automatically when all files in the current directory have been played back.

Fast wind/change CD tracks and compressed audio files
Short presses ◀ / ▶ on the navigation button are used to scroll between CD tracks or compressed audio files. Long presses are used to fast-wind CD tracks or compressed audio files. The steering wheel keypad can also be used for this purpose. Track change can also be made by turning **TUNING**.

Scan CD
This function plays back the first ten seconds of each CD track or compressed audio file. Press **SCAN** to activate. Interrupt with **EXIT** or **SCAN** to continue playback of the current CD track or compressed audio file.

Random
This function plays the tracks in random order. The random CD tracks or compressed audio files can be scrolled through in the normal way.

NOTE

It is only possible to scroll between random CD tracks on the current disc.

Different messages appear depending on which random function has been selected:

- **RANDOM** means that the tracks from only one music CD are played
- **RND ALL** means that all tracks on all music CDs in the CD changer* are played.
- **RANDOM FOLDER** means that the compressed audio files in a directory on the current CD are played back.

CD player
If a normal music CD is being played, activate/deactivate under **Random**.

If a disc with compressed audio files is being played back, activate/deactivate under **Random ➔ Folder**.

CD changer
If a normal music CD is being played under **Random ➔ Single disc** or **Random ➔ All discs**. The **All discs** option applies to all music CDs in the changer.

If a CD with audio files is being played, activate/deactivate under **Random ➔ Folder**. If you select another CD the function is deactivated.

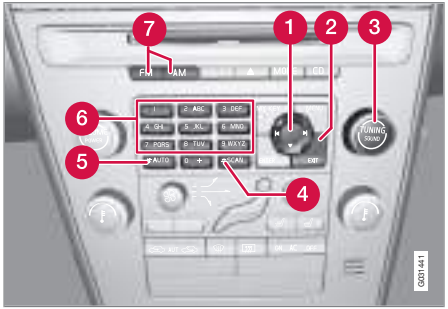
Track information
If track information is stored on a music CD then it can be shown on the display. This also

[3] High Performance and Premium Sound

Audio system

applies to MP3 and WMA files for Premium Sound and High Performance. Activate/deactivate in CD mode under **CD settings** ➔ **Track information**.

Radio functions



Centre console, controls for radio functions.

1. Navigation button for tuning, automatic
2. Cancel function in progress
3. Tuning, manual
4. Scan wavelength
5. Preset storage, automatic
6. Preset buttons and preset storage, manual
7. Select wavelength AM and FM (FM1 and FM2)

Tuning, automatic

1. Select wavelength using **FM** or **AM**.
2. Press ◀ / ▶ on the navigation button.

Tuning, manual

1. Select wavelength using **FM** or **AM**.
2. Turn **TUNING**.

Preset

10 station presets can be stored per wavelength. FM has 2 memories for presets: **FM1** and **FM2**. The stored presets are selected using the preset buttons.

Preset storage can be carried out manually or automatically.

Preset storage, manual

1. Set a station or frequency.
2. Hold in a station preset button until the message **Channel stored** appears on the display.

Preset storage, automatic

The function is especially useful in areas where the radio stations and their frequencies are unfamiliar. The 10 strongest radio stations are stored automatically in a separate memory. Autostoring does not affect the manually stored stations.

1. Select wavelength using **FM** or **AM**.
2. Hold in **AUTO** until **Autostoring..** appears on the display.

Once **Autostoring..** disappears from the display, the stations are stored. The radio continues in Auto mode and **Auto** appears on the display. The automatically stored presets can now be selected using the preset buttons. Automatic preset storage can be cancelled using **EXIT**.

Auto mode is cancelled by pressing for example **AUTO** or **FM**.

Returning to Auto mode provides access to the autostored presets:

1. Press **AUTO**.
   > **Auto** appears on the display.
2. Press a preset button.

Scan wavelength

The function automatically searches the current wavelength for strong stations. When a station is found, it is played for approx. 8 seconds before scanning is resumed.

1. Select wavelength using **AM** or **FM**.
2. Press **SCAN**.

SCAN appears on the display. Close using **SCAN** or **EXIT**.

RDS functions

RDS (Radio Data System) links FM transmitters into a network. An FM transmitter in such a network sends information that gives an RDS radio the following functions:

- Automatically switches to a stronger transmitter if reception in the area is poor.
- Searches for programme type, e.g. news.
- Receives text information on current radio programme.

NOTE

Some radio stations do not use RDS or only some if its functionality.

If a required programme type is located the radio can switch stations interrupting the audio source currently in use. For example, if the CD player is in use, it is paused. The interrupting transmission is played at a preset volume, see page 142. The radio returns to the previous audio source and volume when the set programme type is no longer broadcast.

The programme functions alarm (ALARM), traffic information (TP), news (NEWS), and programme types(PTY) interrupt one another in order of priority, where alarm has the highest priority and programme types has the lowest. For further programme interruption settings (EON and REG), see page 142. Press **EXIT** to return to the interrupted audio source.

Alarm

This function is used to warn of serious accidents and catastrophes. The alarm cannot be temporarily interrupted or deactivated. The message **ALARM!** appears on the display when an alarm message is transmitted.

Traffic information – TP

This function allows traffic information sent within a set station's RDS network to break through. The **TP** symbol indicates that the function is activated. If the set station can send traffic information then TP appears on the display.

– Activate/deactivate under **FM settings ➔ TP**.

TP from selected station/all stations

The radio can interrupt with traffic information only from the pre-selected station or all stations within the same network.

– Go to **FM settings ➔ Advanced radio settings ➔ TP ➔ TP Station** to change.

News

This function allows news broadcasts sent within a set station's RDS network to break through. The **NEWS** symbol indicates that the function is active.

– Activate/deactivate under **FM settings ➔ News**.

News from selected/all stations

The radio can interrupt with news only from the pre-selected station or all stations within the same network.

– Go to **FM settings ➔ Advanced radio settings ➔ News station** to change.

Programme types – PTY

The PTY function can be used to select different programme types, such as pop music and serious classic. The PTY symbol indicates that the function is active. This function allows programme types broadcast within a set station's RDS network to break through.

1. Activate in FM mode by selecting a programme type under **FM settings ➔ PTY ➔ Select PTY**.
2. Deactivate by clearing the PTYs under **FM settings ➔ Clear all PTY**.

PTY search

This function searches the entire wavelength for the selected programme type.

Audio system

1. Select one or more PTYs under **FM settings ➔ PTY ➔ Select PTY**.
2. Go to **FM settings ➔ PTY ➔ Search PTY**.

If the radio finds any of the selected programme types, **>| To seek** appears on the display.

– To continue searching for another broadcast of the selected programme types, press ➔ on the navigation button.

Display of programme type

The programme type of the current station can be shown on the display.

– Activate/deactivate in FM mode under **FM settings ➔ PTY ➔ Show PTY**

Radio text

Some RDS stations transmit information on programme content, artists, etc. This information can be shown on the display.

– Activate/deactivate in FM mode under **Radio text**.

Advanced radio settings

Automatic frequency update – AF

This function selects one of the strongest transmitters for a set station. The function may need to search through the entire FM wavelength to find a strong transmitter. If this occurs, the radio mutes and **PI Seek** appears on the display. Press **EXIT** to cancel, which is also shown in the display.

– Activate/deactivate in FM mode under **FM settings ➔ Advanced radio settings ➔ AF**.

Regional radio programmes - Regional

This function causes the radio to continue with a regional transmitter even if its signal strength is low. The symbol **Regional** shows that the function is active.

– Activate/deactivate in FM mode under **FM settings ➔ Advanced radio settings ➔ Regional**.

Enhanced Other Networks – EON

This function is useful in urban areas with many regional radio stations. It allows the distance between the car and the radio station transmitter to determine when programme functions should interrupt the current audio source.

– Activate/deactivate in FM mode by selecting one of the options under **FM settings ➔ Advanced radio settings ➔ EON**:

- **Local** – interrupts only if the radio station transmitter is close.
- **Distant**[4] – interrupts if the station transmitter is far away, even if the signal is weak.
- **Off** – no interruption for programmes from other transmitters.

Resetting RDS functions

All radio settings can be reset to the original factory settings.

– The reset is carried out in FM mode under **FM settings ➔ Advanced radio settings ➔ Reset all**.

Volume control, programme types

The interrupting programme types, e.g. NEWS or TP, are heard at the volume selected for each respective programme type. If the volume level is adjusted during the programme interruption, the new level is saved until the next programme interruption. There is, however, a minimum level.

4 Factory settings.

Menu structure FM

Main menu FM
FM settings

- 1.1 News
- 1.2 TP (Traffic information)
- 1.3 Radio text
- 1.4 PTY (Program type)
  - 1.4.1 Select PTY
    - Clear all PTY
    - Current affairs
    - Information
    - Sport
    - Education
    - Drama
    - Culture & Art
    - Science
    - Varied speech
    - Pop music
    - Rock music
    - Easy listening
    - Light classic
    - Classical
    - Other music
    - Weather & metro
    - Finance
    - Children's programs
    - Social affairs
    - Religion
    - Phone in
    - Travel & touring
    - Leisure & hobby
    - Jazz music
    - Country music
    - National music
    - Oldies music
    - Folk music
    - Documentary
    - Alarm test
    - !!Alarm!!
  - 1.4.2 Search PTY
  - 1.4.3 Show PTY text
- 1.5. Advanced radio settings
  - 1.5.1 TP station
  - 1.5.2 News station
  - 1.5.3 AF
  - 1.5.4 EON
    - Off
    - Local
    - Distant
  - 1.5.5 Regional
  - 1.5.6 Reset FM sett.

Radio system - DAB*

General
DAB (Digital Audio Broadcasting) is a digital broadcasting system for radio.

NOTE

This system does not support DAB+.

Service and Ensemble

- **Service** - Channel, radio channel (only audio services are supported by the system).
- **Ensemble** - A collection of radio channels on the same frequency.

Audio system

Storing channel groups (Ensemble learn)
When the vehicle is moved to a new broadcasting area, programming of existing channel groups in the area can take place.

Programming of channel groups creates an updated list of all available channel groups. The list is not updated automatically. Programming takes place via the **Ensemble learn** menu or directly by means of a long press on **AUTO**. If can take up to a minute to program a channel group if both **Band III** and **LBand** are selected.

Wavelength
DAB is transmitted on two wavelengths[5]; **Band III** and **LBand**.

- **Band III** – over the whole country[6]
- **LBand** - mainly in large cities

By selecting for example **Band III** on its own, channel programming takes place more quickly than if both **Band III** and **LBand** are selected. It is not certain that all channel groups will be found. Wavelength selection does not affect the stored memories.

Navigation via lists
There are three types of basic list which can be used for navigation:

- **Ensemble list** - Shows channel groups that the receiver has obtained via channel group programming.
- **Service list** - Shows channels irrespective of the channel group to which they are allocated. The list can also be filtered using **DAB PTY** (see below).
- **Subchannel list** - Subchannels to a selected channel.

The lists can be accessed via the menu. The channel groups can also be accessed by pressing **ENTER**.

Scanning
Scanning means that all channels in the list are played for 10 seconds each.

– Press **SCAN** to activate.

Scanning can also be selected in DAB-PTY mode. In which case only channels of the preselected programme type are played.

– Stop scanning by pressing **SCAN** once, or by pressing **EXIT**.

Subchannel
Secondary components are usually named subchannels. These are temporary and can contain e.g. translations of the main programme into other languages.

If one or more subchannels are broadcast then the > symbol is shown to the right of the channel name in the display. A subchannel is indicated by the > symbol appearing to the left of the channel name in the display.

To access a subchannel:

– Press ▶|

To navigate between subchannels:

– Press |◀ or ▶|

Subchannels can only be accessed on the selected main channel and not on any other one without selecting it.

DAB PTY (program type)
DAB PTY selects one type of radio programme. There are 29 different programme types which also include different programme categories. After selecting a programme type, navigation only takes place within the channels broadcasting that type.

Exit this mode as follows:

– Press **EXIT**

It is also possible to select a preset channel or exit **DAB-PTY** via the menu. In certain cases DAB radio will exit PTY mode when DAB to DAB linking (see below) is implemented.

5 Not all areas/countries use both wavelengths.
6 During a build-up phase DAB will not cover the whole country but will only work in larger urban areas.

DAB to DAB link

It is possible to exit a channel with poor or no reception to the same channel in another channel group with better reception. There may be a certain delay when changing channel group. There may be a period of silence between the current channel no longer being available to the new channel becoming available.

DAB display settings

1. **Basic** - Only the channel name is shown if a primary component is being played. A subchannel name is shown if it is a subchannel being played
2. **Ensemble mode** - Adds the channel group name to the channel name
3. **Ensemble + PTY** - Adds the programme type name under the channel name

Preset

10 station presets can be stored per wavelength. DAB has 2 memories for presets: **DAB1** and **DAB2**. The stored presets are selected using the preset buttons.

A preset contains one channel but no subchannels. If a subchannel is being played and a preset is saved then only the channel ID is registered. This is because subchannels are temporary. At the next attempt to retrieve the preset, the channel which contained the subchannel will be played. The preset is not dependent on the channel list.

A saved channel does not have to be in the channel list for it to be playable. If the channel is loaded when it is not available then a preset number is shown and there is silence until an available preset is selected for loading. Alternatively another channel.

NOTE

The audio system's DAB system does not support all functions available in the DAB standard.

Menu structure DAB

Main menu DAB

1. **Select ensemble**
2. **Select service**
3. **Select subchannel**
4. **DAB PTY**
   - 4.1. DAB PTY off
   - 4.2. News
   - 4.3. Current affairs
   - 4.4. Information
   - 4.5. Sport
   - 4.6. Education
   - 4.7. Drama
   - 4.8. Culture & Art
   - 4.9. Science
   - 4.10. Varied speech
   - 4.11. Pop music
   - 4.12 Rock music
   - 4.13. Easy listening
   - 4.14. Light classic
   - 4.15. Serious classic
   - 4.16. Other music
   - 4.17. Weather & metro
   - 4.18. Finance
   - 4.19 Children's programs
   - 4.20. Social affairs
   - 4.21. Religion
   - 4.22. Phone in
   - 4.23. Travel & touring
   - 4.24. Leisure & hobby
   - 4.25. Jazz music
   - 4.26. Country music
   - 4.27. National music

Audio system

4.28. Oldies music

4.29. Folk music

4.30. Documentary

4.31. Alarm test

4.32. !!Alarm!!

5. Ensemble learn

6. DAB settings

6.1. DAB settings

6.1.1. Ensemble name

6.1.2. Ensemble name and PTY

6.1.3. Basic

6.2. DAB to DAB link

6.3. FM traffic

6.4. Select DAB band

6.4.1. Band III

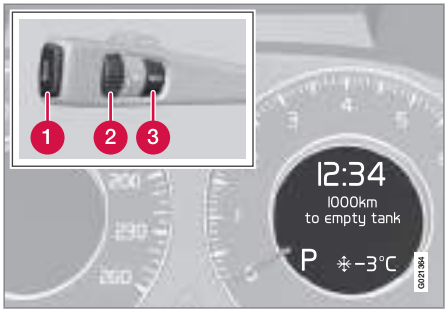
6.4.2. LBand

6.4.3. LBand & Band III

6.5. Reset DAB

Trip computer

General



Information display and controls.

1. **READ** - confirms
2. Thumbwheel – browse between menus and options in the trip computer list
3. **RESET** – resets

To scroll through trip computer information, turn the thumbwheel up or down in steps. Continue turning to return to the starting point.

Functions

NOTE

If a warning message appears while you are using the trip computer, this message must be acknowledged in order to revert to the trip computer function. Acknowledge by pressing **READ**.

To change unit specified for distance and speed, contact an authorised Volvo workshop.

Current speed*
The instrument panel display shows current speed in mph if the speedometer is graduated in km/h. If the speedometer is graduated in mph then the current speed is shown in km/h.

Average speed
The car calculates the average speed from the last resetting. Reset using **RESET**.

Instantaneous
Current fuel consumption is calculated every second. The information on the display is updated every couple of seconds. When the car is stationary, " ----" appears on the display.

Average
The average fuel consumption since the last reset. Reset using **RESET**.

NOTE

There may be a slight error in the reading if a fuel-driven additional [1], and/or parking heater* has been used.

Km to empty tank
The calculation is based on the average fuel consumption over the last 30 km and the remaining driveable fuel quantity. The display shows the approximate distance that can be driven with the fuel quantity remaining in the tank. No guaranteed range remains when the display shows " **--- km to empty tank**". Refuel as soon as possible.

NOTE

There may be a slight error in the reading if a fuel-driven parking heater* has been used or if driving style has been changed.

Resetting
1. Select **Average speed** or **Average**.
2. Press and hold **RESET** for approx. 1 second to reset the selected

[1] Diesel cars only.

Trip computer

function. If **RESET** is kept depressed for at least 3 three seconds then Average speed and Average are reset simultaneously.

Operation

Rearview mirror with compass.

The upper right-hand corner of the rearview mirror has an integrated display that shows the compass direction in which the front of the car is pointing. Eight different directions are shown with English abbreviations: **N** (north), **NE** (north east), **E** (east), **SE** (south east), **S** (south), **SW** (south west), **W** (west) and **NW** (north west).

The compass is activated automatically when the car is started or in ignition position **II**see page 70. To deactivate/activate the compass - press in the button on the underside of the mirror using a paper clip for example.

Calibration

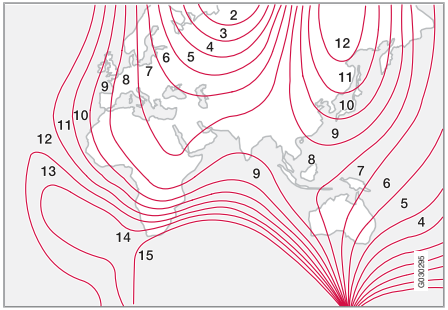
The earth is divided into 15 magnetic zones. The compass is set for the geographic area to which the car was delivered. The compass should be calibrated if the car is moved across several magnetic zones.

1. Stop the car in a large open area free from steel structures and high-voltage power lines.
2. Start the car.

NOTE

For optimum calibration - switch off all electrical equipment (climate control system, wipers etc.) and make sure that all doors are closed.

3. Hold the button on the underside of the rearview mirror depressed approx. 6 seconds (using a paper clip for example) until the character **C** is shown.



Magnetic zones.

4. Hold the button on the underside of the rearview mirror depressed approx. 3 seconds. The number of the current magnetic zone is shown.
5. Press the button repeatedly until the required magnetic zone (**1–15**) is shown. See the map of magnetic zones for the compass.
6. Wait until the display resumes showing the character **C**.
7. Drive slowly in a circle at a speed of no more than 10 km/h until a compass direction is shown in the display, indicating that calibration is complete. Then drive a further 2 circles to fine-tune calibration.
8. Repeat the above procedure as necessary.

DSTC – Stability and traction control system

General information on DSTC

The stability and traction control system, DSTC (Dynamic Stability and Traction Control) helps the driver to avoid skidding and improves the car's traction.

The system limits the driving and brake force of the wheels individually so that skidding can be avoided. This increases manoeuvrability and as a result safety in the event of sudden movement.

Traction is improved by means of the system distributing the driving force between the wheels. The system primarily engages at low speed on poor road surfaces.

The activation of the system during braking may be noticed as a throbbing sound. The car may accelerate slower than expected when the accelerator pedal is depressed.

Messages in the information display

DSTC Temporarily OFF
System temporarily reduced due to excessive brake disc temperature. The function is reactivated automatically when the brakes have cooled.

DSTC Service required
System disabled due to a fault.

Stop the car in a safe place and turn off the engine. If the message remains when the engine is restarted, drive to an authorised Volvo workshop.

Symbols in the combined instrument panel

If the symbols and are displayed at the same time, read the message on the information display.

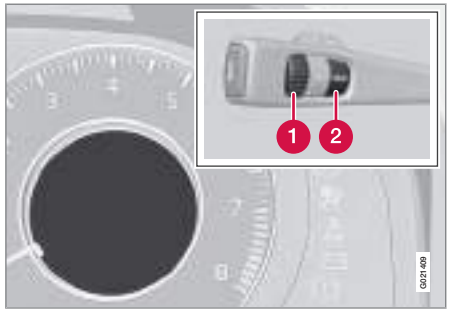
If the symbol appears alone then it may appear as follows:

- Flashing light means that the system is now being activated.
- Constant glow for 2 seconds means system check when the engine is started.
- Constant glow after starting the engine or while driving means system fault.

Reduced operation

System operation during skidding and acceleration can be reduced. Operation during skidding is delayed and so allows more skidding which provides greater freedom for dynamic driving. Traction in deep snow or sand is improved as traction is no longer limited.

Operation



1. Turn the thumbwheel 1 until the **DSTC** menu is shown. **DSTC ON** means that the system function is unchanged.

   DSTC spin control OFF means that system operation is reduced.

2. Press and hold **RESET** 2 until the **DSTC** menu is changed.

The system remains reduced until the engine is next started.

WARNING

The car's driving characteristics may deteriorate if the function is reduced.

Active chassis (Four C)*

Active chassis, Four-C (Continuously Controlled Chassis Concept), regulates the characteristics of the shock absorbers so that the car's driving characteristics can be adjusted. There are three settings: Comfort, Sport and Advanced.

Comfort

This setting means that the car is perceived as being more comfortable and is recommended for longer journeys. Shock absorption is soft and the movement of the body is smooth and gentle.

Sport

This setting means that the car is perceived as being more sporty and is recommended for more active driving. Steering response is faster than in the Comfort mode. Shock absorption is harder and the body follows the road in order to reduce rolling during fast cornering.

Advanced

This setting is only recommended on very even and smooth road surfaces.

The shock absorbers are optimised for maximum roadholding and rolling in bends is further minimised.

Operation

Chassis settings.

Use the buttons in the centre console to change setting. The setting in use when the engine is switched off is activated next time the engine is started.

Speed related steering force*

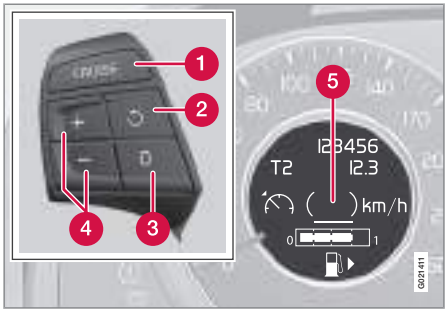
Steering force increases with the speed of the car to give the driver enhanced sensitivity. The steering is firmer and more immediate on motorways. Steering is light and requires no extra effort when parking and at low speed.

Steering force can be set in three levels so that you can select the level that suits you in terms of road responsiveness or steering sensitivity. Go to **Car settings ➔ Steering force level** in the menu system.

For a description of the menu system, see page 116. This menu cannot be accessed while the car is in motion.

Cruise control*

Operation



Display and controls.

1. Standby mode
2. Resume set speed
3. Deactivating
4. Activate/set speed
5. Set speed (in brackets = standby mode)

Activating and setting the speed
In order to enable the activation of cruise control, it must first be engaged in standby mode with the **CRUISE** button 1. The symbol illuminates in the display and the text **(---) km/h** 5 shows that cruise control is in standby mode.

Cruise control is then activated with + or − after which the current speed is stored and is used as the set speed. The display text **(---) km/h** changes to show the set speed, e.g. **100 km/h.**,

NOTE

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

Adjusting the set speed
In active mode the speed is adjusted with long or short presses on + or −.

A temporary increase in speed using the accelerator, such as while overtaking, does not affect the cruise control setting. When the accelerator is released the car will return to the set speed.

NOTE

If one of the cruise control buttons is kept depressed for more than approx. one minute then cruise control is disengaged. The engine must then be switched off in order to then reset cruise control.

Deactivation
Cruise control is disengaged with **CRUISE** or by switching off the engine. The set speed is cleared.

Temporary deactivation
Press On 0 to disengage cruise control temporarily. The saved speed is shown in brackets in the display, e.g. **(100) km/h**.

Automatic temporary deactivation
Cruise control is deactivated spontaneously when the driving wheels spin or if the car's speed falls below approx. ca 30 km/h. Cruise control is also deactivated when the brakes are used, when the gear selector is moved to neutral position or if the accelerator pedal is depressed for a longer time (approx. 60 seconds). Cruise control then changes over to standby mode and the set speed is saved.

Resume set speed
If cruise control has been deactivated temporarily, it can be reactivated by pressing ↻. The speed is then set to the previously set speed.

NOTE

A significant increase in speed may arise after the speed has been resumed with ↻.

* Option/accessory, for more information, see Introduction.

General

Adaptive Cruise Control – (ACC) is designed to assist the driver with support on long straight roads in steady traffic, for example on motorways and main roads.

WARNING

You must always pay attention to the traffic conditions and intervene when adaptive cruise control is not maintaining a suitable speed or suitable distance.

Adaptive cruise control cannot cover all driving situations and traffic, weather and road conditions.

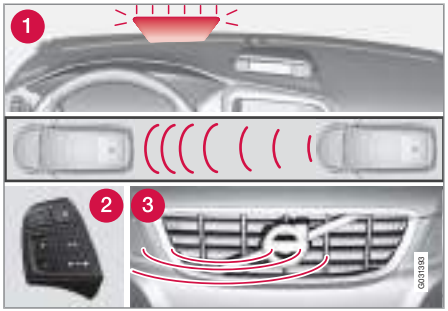
The Function section and after informs about limitations that the driver must be aware of before using the adaptive cruise control.

When driving you are responsible for maintaining the correct distance and speed, even when adaptive cruise control is used.

IMPORTANT

Maintenance of adaptive cruise control components must only be performed by an authorised Volvo workshop.

Function



Functions overview.

1. Warning lamp, braking by driver required
2. Controls
3. Radar sensor

Adaptive cruise control consists of a cruise control system and a coordinated spacing system.

WARNING

Adaptive cruise control is not a collision avoidance system. The driver must intervene if the system does not detect a vehicle in front.

Adaptive cruise control does not brake for people or animals. Nor for oncoming, slow or stationary vehicles and objects.

Do not use the adaptive cruise control, for example, in city traffic, in dense traffic, at junctions, on slippery surfaces, with a lot of water or slush on the road, in heavy rain/snow, in poor visibility, on winding roads or on slip roads.

The distance to the vehicle ahead is measured by a radar sensor. The speed is regulated by acceleration and braking. It is normal for the brakes to emit a low sound when they are being used by cruise control.

WARNING

The brake pedal moves when the cruise control brakes. Do not rest your foot under the brake pedal as it could become trapped.

The cruise control objective is to follow the vehicle ahead but in the same lane and at a set time interval. If the radar sensor has not detected a vehicle ahead then the only objec-

Adaptive cruise control*

tive is the set speed. This is also the case if the speed of the vehicle ahead exceeds the cruise control set speed.

The adaptive cruise control aims to control the speed in a smooth way. In situations that demand sudden braking you must brake yourself. This applies with large differences in speed, or if the vehicle in front brakes heavily. Due to limitations in the radar sensor, braking may come unexpectedly or not at all, see page 156.

Adaptive cruise control can only be activated above 30 km/h. If speed falls below 30 km/h or if engine speed becomes too slow, then the adaptive cruise control disengages and stops braking. In which case the driver must immediately take over and maintain the distance to vehicles in front. The highest speed setting is 200 km/h.

Warning lamp, braking by driver required
Adaptive cruise control has a braking capacity that is equivalent to approximately 30% of the car's braking capacity.

If the car needs to brake more heavily than cruise control capacity and the driver does not brake, then the cruise control uses the collision warning system's warning lamp and warning sound to alert the driver that immediate intervention is required.

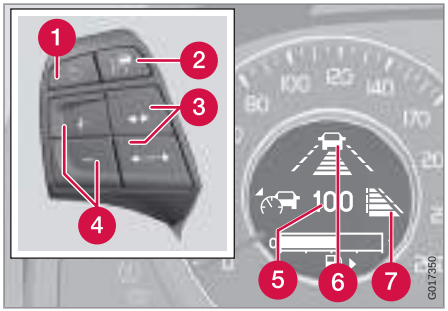
NOTE

The warning lamp may be difficult to notice in strong sunlight or when sunglasses are being worn.

WARNING

Cruise control only warns of vehicles detected by the radar sensor. Consequently there may be no warning or it may be subject to a delay. Do not wait for a warning but brake when it is necessary.

Operation

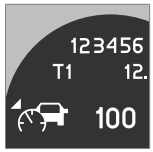


Display and controls.

1. Activate and resume settings, increase speed
2. Standby mode, on/off
3. Set time interval
4. Activating and setting the speed
5. Set speed (in brackets = standby mode)
6. Set time interval during adjustment
7. Set time interval after adjustment

Activating and setting the speed
In order to enable the activation of cruise control, it must first be engaged in standby mode with the button. The symbol illuminates in the display and the characters (---) show that cruise control is in standby mode.

Cruise control is then activated with + or −, after which the current speed is stored and is used as the set speed. The display characters (---) change to show the set speed, e.g. 100.



The car symbol is illuminated on the left-hand side of the display when the radar sensor has detected another vehicle. The distance to vehicles in front is only regulated when the symbol is illuminated.

NOTE

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

* Option/accessory, for more information, see Introduction.

Adjusting the set speed

In active mode the speed is adjusted with long or short presses on +, − or ↻. In active mode the button ↻ has the same function as + but results in a lower increase in speed.

NOTE

If any cruise control button is held depressed for more than approx. one minute, cruise control is disengaged. The engine must be switched off in order to reset cruise control.

In certain situations, cruise control cannot be activated. **Cruise control Unavailable** is then shown in the display; see page 157.

Set time interval

The set time interval to vehicles in front is increased with ⟷ and decreased with ↔.

Five different time intervals can be chosen from and shown in the display as 1–5 horizontal lines – the more lines there are the longer the time interval, see page 159 for table.

At low speed, when the distances are short, the adaptive cruise control increases the time interval slightly.

The adaptive cruise control allows the time interval to vary noticeably in certain situations in order to allow the car to follow the vehicle in front smoothly and comfortably.

Note that a short time interval only allows the driver a short reaction time if any unforeseen traffic problem should arise.

The number of lines for the selected time interval is shown during the setting itself and for several seconds afterwards. Then a smaller scale version of the symbol is shown to the right of the display. The same symbol is also shown when Distance Alert is activated, see page 159.

NOTE

Only use the time interval that is allowed in accordance with local traffic regulations.

If cruise control does not seem to react to activation the reason may be that the time interval to the closest vehicle prevents an increase in speed.

The higher the speed, the longer the calculated distance in metres for a specific time interval.

Deactivating and resuming settings

Cruise control is deactivated, either with a short press on ↶, or by means of driver intervention, e.g. braking. The set speed is then shown in brackets, e.g. (**100**). Speed and time interval are resumed with one press on ↻.

For each additional press on ↻, when cruise control is activated, the set speed increases in stages of 1 km/h.

NOTE

A significant increase in speed may arise after the speed has been resumed with ↻.

A short press on ↶ in standby mode or a long press in active mode deactivates cruise control. The set speed is cleared and cannot be resumed.

Deactivation due to driver intervention

Cruise control is deactivated when the brakes are used, the gear selector is moved to neutral position, or if the accelerator pedal is depressed for a longer period. Cruise control then changes over to standby mode and the driver must regulate vehicle speed manually.

If the accelerator pedal is kept depressed for a shorter period, for example during overtaking, cruise control is temporarily disengaged and

▸▸

Adaptive cruise control*

then re-engaged when the accelerator pedal is released.

Automatic deactivation
Adaptive cruise control is dependent on other systems e.g. stability and traction control system (DSTC). If any of these systems stop working then cruise control is automatically deactivated.

In the event of automatic deactivation a signal will sound and the message **Cruise control Cancelled** is shown in the display. The driver must then intervene and adapt the speed to vehicles in front.

An automatic deactivation can be due to:

- speed falls below 30 km/h
- wheels lose traction
- brake temperature is high
- engine speed is too low
- the radar sensor is covered e.g. by wet snow or heavy rain (radar waves blocked).

The radar sensor and its limitations

Apart from the adaptive cruise control, the radar sensor is also used by the Collision Warning with Auto Brake function (see page 167) and the Distance Alert function (see page 159). It is designed to detect cars or larger vehicles driving in the same direction.

Modification of the radar sensor could result in it being illegal to use.

WARNING

Accessories or other objects such as auxiliary lamps must not be installed in front of the grille.

The capacity of the radar sensor to detect vehicles in front is reduced significantly:

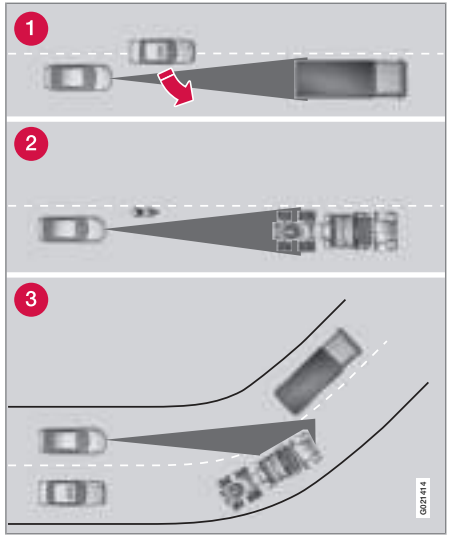
- if the radar sensor becomes blocked and cannot detect other vehicles e.g. in heavy rain or slush, or if other objects have collected in front of the radar sensor.

NOTE

Keep the surface in front of the radar sensor clean.

- if the speed of vehicles in front is significantly different from your own speed.

The radar sensor has a limited field of vision. In some situations it may detect another vehicle later than expected or not detect any vehicle at all.



Radar sensor field of vision (grey).

1. Sometimes the radar sensor cannot detect vehicles at close quarters, for example a vehicle that drives in between your car and vehicles in front.
2. Small vehicles, such as motorcycles, or vehicles not driving in the centre of the lane can remain undetected.

* Option/accessory, for more information, see Introduction.

3 In bends the radar sensor may detect the wrong vehicle or lose a detected vehicle from view.

Fault tracing and action

If the display shows the message **Radar blocked See manual** this means that the radar signals from the radar sensor are blocked and that vehicles in front of the car could not be detected.

In turn this means that the Adaptive Cruise Control, Distance Alert and Collision Warning with Auto Brake functions are not operating either.

The table presents possible causes for a message being shown along with the appropriate action.

Cause	Action
The radar surface in the grille is dirty or covered with ice or snow.	Clean the radar surface in the grille from dirt, ice and snow.
Heavy rain or snow blocking the radar signals.	No action. Sometimes the radar does not work during heavy rain or snowfall.
Water or snow from the road surface swirls up and blocks the radar signals.	No action. Sometimes the radar does not work on a very wet or snowy road surface.
The radar surface has been cleaned but the message remains.	Wait. It could take several minutes for the radar to sense that it is no longer blocked.

Symbols and messages in the display

Symbol	Message	Specification
		Standby mode or active mode without detected vehicle.
		Active mode with detected vehicle to which cruise control adapts the speed.
		Set time interval, during adjustment.

Adaptive cruise control*

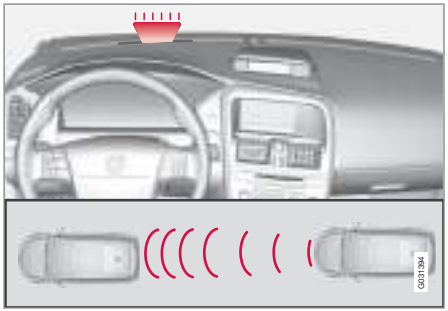
Symbol	Message	Specification
		Set time interval, after adjustment.
	Turn on DSTC to enable Cruise	Cruise control cannot be activated until the traction control and stability function (DSTC) has been activated.
	Cruise control Cancelled	The cruise control has been shut down. The driver must regulate the speed.
	Cruise control Unavailable	Cruise control cannot be activated. This could be due to: • brake temperature is high • the radar sensor is blocked e.g. by wet snow or rain.
	Radar blocked See manual	Cruise control temporarily disengaged. The radar sensor is blocked and cannot detect other vehicles, e.g. in the event that heavy rain or slush has collected in front of the radar sensor. Read about the limitations of the radar sensor, see page 156.
	Cruise control Service required	Cruise control not working. Contact an authorised Volvo workshop.

* Option/accessory, for more information, see Introduction.

General

Distance Alert is a function that indicates the time interval to vehicles in front.

The distance information is only provided for vehicles driving in front of the car and in the same direction. No distance information is provided for oncoming, slow or stationary vehicles.



A small section of the red warning lamp in the windscreen illuminates with a constant glow when driving closer than the set time interval to vehicles in front.

NOTE

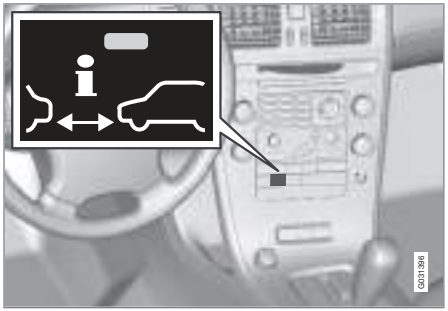
Distance Alert is deactivated during the time that Adaptive Cruise Control is active.

Distance Alert is active at speeds above 30 km/h.

WARNING

Distance Alert only shows the distance to vehicles in front – the speed of the car is not affected.

Operation



Press the button in the centre console to switch the function on or off. The function is switched on if one lamp is illuminated in the button.

Set time interval

The buttons for setting the time interval to vehicles in front are located to the left in the steering wheel. Time intervals are increased using ⟷ and decreased using ↔.

Five different time intervals can be chosen from and shown in the display as 1–5 horizontal lines – the more lines there are the longer the time interval.

Number of lines	Time interval (seconds)
1	1.0
2	1.4
3	1.8
4	2.2
5	2.6

The number of lines for the selected time interval is shown during the setting itself and for several seconds afterwards. Then a smaller scale version of the symbol is shown to the right of the display. The same symbol is also shown when adaptive cruise control is activated.

Distance Alert

NOTE

The higher the speed, the longer the distance in metres for a given time interval.

The set time interval is also used by the Adaptive Cruise Control function; see page 153.

Only use time intervals permitted by local traffic regulations.

Limitations

The function uses the same radar sensor as adaptive cruise control and the collision warning system. For more information on the radar sensor and its limitations, see page 156.

NOTE

Strong sunlight, reflections or strong variations in light intensity, as well as wearing sunglasses, could mean that the warning light in the windscreen cannot be seen.

Poor weather or winding roads could affect the radar sensor's capacity to detect vehicles in front. The size of other vehicles could also affect detection capacity, e.g. motorcycles. This could mean that the warning lamp illuminates at a shorter distance than the setting or that the warning is temporarily absent.

Extremely high speeds can also cause the lamp to illuminate at a shorter distance than that set due to limitations in sensor range; see page 156.

Symbols and messages in the display

Symbol	Message	Specification
		Set time interval, during adjustment.
		Set time interval, after adjustment.

Distance Alert

Symbol	Message	Specification
	**Radar blocked.** **See manual**	Distance Alert temporarily disengaged. The radar sensor is blocked and cannot detect other vehicles, e.g. in the event that heavy rain or slush has collected in front of the radar sensor. Read about the limitations of the radar sensor see page 156
	**Collision warn.** **Service required**	Distance Alert or Collision Warning with Auto Brake is fully or partially disengaged. Contact an authorised Volvo workshop if the message remains.

City Safety™

General

City Safety™ is a function for helping the driver to avoid a collision when driving in queues, amongst other things, when changes in the traffic ahead, combined with a lapse in attention, could lead to an incident.

The function is active at speeds up to 30 km/h and assists the driver by braking the car automatically.

City Safety™ is activated in situations where the driver should have started braking earlier, which is why is cannot help the driver in every situation.

City Safety™ must not be used as an excuse for the driver to change his/her driving style. If the driver solely relies on City Safety™ to do the braking, there will be a collision sooner or later.

The driver or passengers normally only notice City Safety™ if a situation arises where the car is extremely close to being in a collision.

If the car is also equipped with a Collision Warning function with Auto Brake*, these two systems complement each other. For more information on Collision Warning function with Auto Brake, see page 167.

IMPORTANT

Maintenance and replacement of City Safety™ components may only be performed by an authorised Volvo workshop.

WARNING

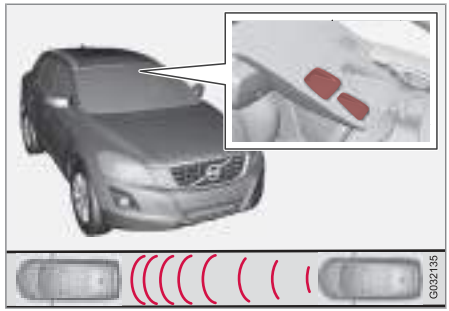
City Safety™ does not engage in all driving situations or traffic, weather or road conditions.

City Safety™ does not react to vehicles driving in a different direction from the car, to small vehicles such as bicycles and motorcycles or to humans and animals.

City Safety™ can prevent collision at a speed difference of less than 15 km/h - at a higher speed difference, it is only possible to reduce collision speed. In order to obtain full brake function, the driver must depress the brake pedal.

Never wait for City Safety™ to engage. The driver always bears responsibility for maintaining the proper distance and speed.

Function



Laser sensor transmitter and receiver window.

City Safety™ detects the traffic in front of the car with a laser sensor fitted in the top edge of the windscreen. If there is an immediate risk of collision, City Safety™ will automatically brake the car with approx. 50% of maximum brake force.

If the speed difference is 15 km/h or less in relation to the vehicle in front then City Safety™ can completely prevent a collision.

If the difference is 15-30 km/h, City Safety™ may not prevent the collision on its own. To obtain full brake force, the driver must depress the brake pedal. This could make it possible to prevent a collision even at speed differences above 15 km/h.

* Option/accessory, for more information, see Introduction.

When the function is activated and brakes, the instrument panel display shows a message to the effect that the function is/has been active.

NOTE

The brake lights come on when City Safety™ brakes the car.

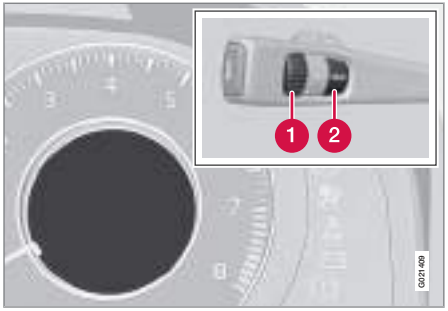
Operation

NOTE

The City Safety™ function is always enabled after the engine has been started via key position **I** and **II** (see page 70 on key positions).

On and Off

In certain situations, it may advisable to disable City Safety™, e.g. for driving off-road where leafy branches could sweep over the bonnet/windscreen or similar.



Display and direction indicator stalk.

1. Thumbwheel
2. **RESET** button

With the engine running City Safety™ can be disabled as follows:

1. Use the thumbwheel to scroll to **City Safety** on the display.
2. Hold the **RESET** button depressed for 1 second to switch to **Off**.

However, the function will be enabled the next time the engine is started, regardless of whether the system was enabled or disabled when the engine was switched off.

WARNING

The laser sensor also transmits laser light when City Safety™ is disabled manually.

To enable City Safety™ again:

- Follow the same procedure as for disabling, but select the **On** option with the **RESET** button.

or

- Switch off the engine and take out the remote control key to position **I**, then reinsert it to position **II** and start the engine - by which means City Safety™ is re-enabled (see page 70 on key positions).

Limitations

City Safety™ sensor is designed to detect cars and other large vehicles in front of the car irrespective of whether it is day or night.

However, the sensor has limitations and has poorer functionality in e.g. heavy snowfall or rain, dense fog, dust storms or snow flurries. Mist, dirt, ice or snow on the windscreen may disrupt the function.

Low-hanging objects, e.g. a flag/pennant for projecting load, or accessories such as auxiliary lamps and bull bars that are higher than the bonnet limit the function.

City Safety™

Vehicles with low reflectivity may disrupt the function of the sensor.

NOTE

- Keep the windscreen surface in front of the laser sensor free from ice, snow and dirt (see the illustration for sensor location, page 162).
- Do not affix or mount anything on the windscreen in front of the laser sensor
- Remove ice and snow from the bonnet - snow and ice must not exceed a height of 5 cm.

Fault tracing and action

If the message **Windscreen Sensors blocked** is shown on the instrument panel display, it indicates that the laser sensor is blocked and cannot detect vehicles in front of the car. This means that City Safety™ is not operational.

The **Windscreen Sensors blocked** message is not shown for all situations in which the laser sensor is blocked. The driver must therefore be diligent about keeping the windscreen and area in front of the laser sensor clean.

The following table presents possible causes for the message being shown, along with suggestions for appropriate action.

Cause	Action
The windscreen surface in front of the laser sensor is dirty or covered with ice or snow.	Clean the windscreen surface in front of the sensor from dirt, ice and snow.
The laser sensor field of vision is blocked.	Remove the blocking object.

IMPORTANT

If there are cracks, scratches or stone chips in the windscreen in front of either of the laser sensor's "windows" and they cover a surface of approx. 0.5 × 3.0 mm (or larger), then an authorised Volvo workshop must be contacted for repair or replacement of the windscreen (see the illustration for sensor location, page 162). Failure to take action may result in reduced performance for City Safety™.

To avoid the risk of reducing City Safety™ performance the following also applies:

- The same type or a Volvo-approved windscreen must be fitted during replacement
- The same type or Volvo-approved windscreen wipers must be fitted during replacement.

Laser sensor

The City Safety™ function includes a sensor which transmits laser light. It is absolutely essential to follow the prescribed instructions when handling the laser sensor.

WARNING

Never look into the laser sensor (which emits spreading invisible laser radiation) at a distance of 100 mm or closer with magnifying optics such as a magnifying glass, microscope, lens or similar optical instruments - this would involve a risk of eye injury (the illustration on page 162 shows sensor location).

For more information on the laser sensor, see page 8.

Symbols and messages in the display

In conjunction with automatic braking by the City Safety™ system, one or more symbols may illuminate on the instrument panel and a message may appear on its display.

A text message can be acknowledged by briefly pressing the **READ** button on the direction indicator stalk.

Symbol	Message	Meaning/Action
	Auto braking by City Safety	City Safety™ is braking or has automatically braked.
	Windscreen Sensors blocked	The laser sensor is temporarily non-operational because something is blocking it. • Remove the object blocking the sensor and/or clean the windscreen in front of the sensor. Read about the limitations of the laser sensor, see page 163.
	City Safety Service required	City Safety™ is not operational. • Contact an authorised Volvo workshop if the message remains.

City Safety™

Symbol	Message	Meaning/Action
	City Safety ON/OFF	City Safety™ can be manually disabled/enabled, whereby OFF or ON is selected, see section "On/Off".
	City Safety Unavailable	If the text Unavailable is shown instead of Off or On, City Safety™ is switched off due to a technical fault. City Safety Service required is shown in the instrument panel display prior to this.

Collision Warning with Auto Brake*

General

Collision Warning with Auto Brake is designed to assist the driver when there is a risk of colliding with a vehicle in front that is stationary or driving in the same direction.

The collision warning system has the following three functions.

- **Collision warning** warns the driver of a potentially imminent collision.
- **Brake support** assists the driver to brake effectively in a critical situation.
- **Auto Brake** brakes the car automatically when a collision is unavoidable. The Auto Brake function cannot prevent a collision but instead aims to reduce collision speed.

IMPORTANT

Maintenance of collision warning system components must only be performed by an authorised Volvo workshop.

WARNING

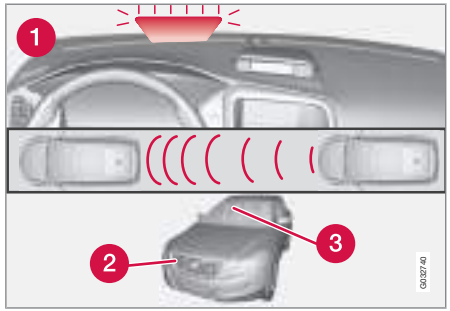
The collision warning system does not work in all driving situations and traffic, weather and road conditions. The collision warning system does not react to vehicles driving in another direction to the car or to people and animals.

Warning only activated in the event of a high risk for collision. The Function section and the section after advise about limitations of which the driver should be aware before using Collision Warning with Auto Brake.

The Auto Brake function can only reduce the collision speed. The driver must depress the brake pedal to achieve full brake function.

Never wait for a collision warning. When driving you are responsible for maintaining the correct distance and speed, even when the collision warning system is used.

Function



Functions overview.

1. Visual warning signal in the event of a collision risk
2. Radar sensor
3. Camera sensor

Collision warning

Together with a camera sensor, the radar sensor detects stationary vehicles as well as vehicles driving in the same direction in front of the car. In the event of there being a risk of collision with such a vehicle your attention is drawn with a red flashing warning lamp and a warning sound.

The collision warning system is active from and including 7 km/h.

Collision Warning with Auto Brake*

Brake support
If the risk of collision still increases after the collision warning then the brake support is activated. The brake support prepares the brake system for rapid braking and the brakes are applied gently, which may be noticed as a slight jerk.

If the brake pedal is depressed sufficiently quickly then full brake function is implemented, even with light pedal force.

Auto Brake
If the driver has not yet started an evasive manoeuvre in this situation and the risk of a collision is imminent then the Auto Brake function comes into effect, without the driver needing to touch the brake pedal. Braking then takes place with limited brake force in order to reduce collision speed. The driver has to brake in order to achieve full brake force.

Operation
Settings are made from the centre console display via a menu system. For information on how the menu system is used, see page 116.

NOTE

The Auto Brake function is always switched on and cannot be switched off.

On and Off
To select whether the collision warning system should be switched on or off: Under the **Car settings ➔ Collision warning settings** menu, select between the options for **On** or **Off**. The setting selected when the engine was switched off is automatically obtained when the engine is started.

Activating/deactivating warning signals
The warning sound and warning lamp are activated automatically when the engine is started if the system is switched on.

The warning sound can be activated/deactivated separately using the options for **On** or **Off** under **Car settings ➔ Collision warning settings ➔ Warning sound**.

Set warning distance
The warning distance regulates the distance at which the visual and acoustic warnings are deployed. Select one of the options from **Long**, **Normal** or **Short** under **Car settings ➔ Collision warning settings ➔ Warning distance**.

The warning distance determines the system's sensitivity. Warning distance **Long** provides an earlier warning. First test with **Long** and if this setting produces too many warnings, which could be perceived as irritating in certain situations, then change to warning distance **Normal**.

Only use warning distance **Short** in exceptional cases, e.g. for dynamic driving.

NOTE

When the adaptive cruise control is in use the warning lamp and warning sound will be used by the cruise control even if the collision warning system is switched off.

The collision warning system warns the driver in the event of a risk of a collision, but the function cannot shorten driver reaction time.

In order for the collision warning system to be effective, always drive with the Distance Alert set at time interval 4 – 5. see page 159.

NOTE

Even if the warning distance has been set to **Long** then in certain situations warnings could be perceived as being late. E.g. in the event of large differences in speed or if vehicles in front brake heavily.

Checking settings
The settings required can be controlled on the centre console display. Access via the menu

* Option/accessory, for more information, see Introduction.

for Car settings ➔ Collision warning settings, see page 116.

Limitations

The visual warning signal may be difficult to notice in the event of strong sunlight, reflections, when sunglasses are being worn or if the driver is not looking straight ahead. The warning sound should therefore always be activated.

NOTE

The visual warning signal can be temporarily disengaged in the event of high passenger compartment temperature caused by strong sunlight for example. If this occurs then the warning sound is activated even if it is deactivated in the menu system.

- Warnings may not appear if the distance to the vehicle in front is small or if steering wheel and pedal movements are large, e.g. a very active driving style.

WARNING

Warnings and braking action could be implemented late or not at all if the traffic situation or external influences mean that the radar or camera sensor cannot detect a vehicle in front correctly.

The sensor system has a limited range for stationary or slow vehicles so the system provides less effective warnings or no warnings at all at a higher vehicle speed (above 70 km/h) for such vehicles.

Warnings for stationary or slow vehicles could be disengaged due to darkness.

The collision warning system uses the same radar sensors as adaptive cruise control. For more information on the radar sensor and its limitations, see page 156.

An absent or late warning could mean that there is no brake support or it comes late.

If warnings are perceived as being too frequent or disturbing then the warning distance can be reduced. This would lead to the system warning at a later stage, which reduces the total number of warnings.

Camera sensor limitations

The car's camera sensor is used by the three functions - Collision Warning with Auto Brake, Driver Alert Control, see page 173 and Lane Departure Warning, see page 176.

NOTE

Keep the windscreen surface in front of the camera sensor clean from ice, snow, mist and dirt.

Do not attach or fit anything to the windscreen in front of the camera sensor, as this could reduce or prevent the function of one or more camera-dependent systems.

The camera sensors have limitations similar to the human eye, i.e. they "see" worse in darkness, heavy snowfall or rain and in thick fog for example. Under such conditions the functions of camera-dependent systems could be significantly reduced or temporarily disengaged.

Strong oncoming light, reflections in the carriageway, snow or ice on the road surface, dirty road surfaces or unclear lane markings could also significantly reduce a camera sensor function. Functions such as scanning the carriageway and detecting other vehicles for example.

During very high temperatures the camera is temporarily switched off for about 15 minutes after the engine is started in order to protect camera functionality.

Collision Warning with Auto Brake*

Fault tracing and action

If the display shows the message **Windscreen Sensors blocked** then this means that the camera sensor is blocked and cannot detect vehicles or road markings in front of the car.

In turn this means that the Collision Warning with Auto Brake, Lane Departure Warning and Driver Alert Control functions are not operating with full functionality.

The table presents possible causes for a message being shown along with the appropriate action.

Cause	Action
The windscreen surface in front of the camera is dirty or covered with ice or snow.	Clean the windscreen surface in front of the camera from dirt, ice and snow.
Thick fog, heavy rain or snow means that the camera does not work sufficiently well.	No action. At times the camera does not work during heavy rain or snowfall.
The windscreen surface in front of the camera has been cleaned but the message remains.	Wait. It may take several minutes for the camera to measure the visibility.
Dirt has appeared between the inside of the windscreen and the camera.	Contact an authorised Volvo workshop to have the windscreen inside the camera cover cleaned.
Low-hanging objects, e.g. flag for projecting load.	Find another way to signal the load or accept reduced functionality.

* Option/accessory, for more information, see Introduction.

Symbols and messages in the display

Symbol	Message	Specification
	Collis'n warning OFF	Collision warning system switched off. Shown when the engine is started. The message clears after about 5 seconds or after one press of the **READ** button.
	Collision warn. Unavailable	The collision warning system cannot be activated. Shown when the driver attempts to activate the function. The message clears after about 5 seconds or after one press of the **READ** button.
	Auto braking was activated	Auto Brake has been active.
	Windscreen Sensors blocked	The camera sensor is temporarily disengaged. Shown in the event of snow, ice or dirt on the windscreen for example. Clean the windscreen surface in front of the camera sensor. Read about the limitations of the camera sensor, see page 169.

Collision Warning with Auto Brake*

Symbol	Message	Specification
	Radar blocked. See manual	Collision Warning with Auto Brake is temporarily disengaged. The radar sensor is blocked and cannot detect other vehicles, e.g. in the event that heavy rain or slush has collected in front of the radar sensor. Read about the limitations of the radar sensor see page 156
	Collision warn. Service required	Collision Warning with Auto Brake is fully or partially disengaged. Contact an authorised Volvo workshop if the message remains.

* Option/accessory, for more information, see Introduction.

Introduction

The Driver Alert System is intended to assist drivers whose driving ability is deteriorating or who are inadvertently leaving the lane they are driving on.

The Driver Alert System consists of two different functions, which can either be switched on at the same time or individually:

- Driver Alert Control (DAC)
- Lane Departure Warning (LDW), see page 176.

A switched-on function is set in standby mode and is not activated automatically until speed exceeds 65 km/h.

The function is deactivated again when speed decreases to below 60 km/h.

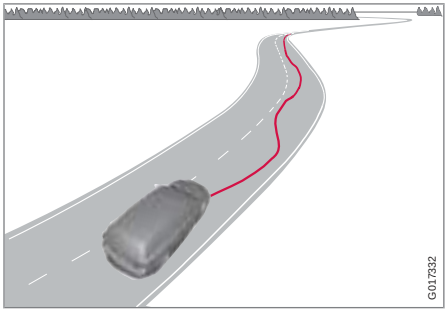
Both functions use a camera which is dependent on the lane having side markings painted on each side.

WARNING

The Driver Alert System does not work in all situations but is instead only intended to be of supplementary assistance.

The driver always has ultimate responsibility that the car is driven safely.

General information on Driver Alert Control - DAC



The function is intended to attract the driver's attention when he/she starts to drive less consistently, e.g. if he/she becomes distracted or starts to fall asleep.

A camera detects the side markings painted on the carriageway and compares the section of the road with the driver's steering wheel movements. The driver is alerted if the vehicle does not follow the carriageway evenly.

NOTE

The camera sensor has certain limitations; see page 169.

The objective for DAC is to detect slowly deteriorating driving ability and it is primarily intended for major roads. The function is not intended for city traffic.

In some cases driving ability is not affected despite driver fatigue. In which case there may not be any warning issued for the driver. For this reason it is always important to stop and take a break in the event of any signs of driver fatigue, irrespective of whether or not DAC issues a warning, see page 174.

NOTE

The function must not be used to extend a driving stint. Always plan breaks at regular intervals and ensure that you are fully rested.

Limitation

In some cases the system may issue a warning despite driving ability not deteriorating, for example:

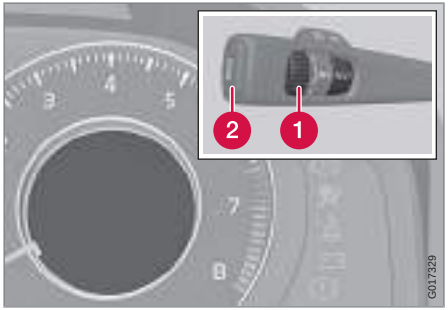
- if the driver tests the LDW function.
- in strong side winds.
- on rutted road surfaces.

Driver Alert System – DAC*

Operation

Some settings are made from the centre console display and its menu system. For information on how the menu system is used, see page 116.

The current status can be checked on the trip computer display with the left-hand stalk switch.



1. Thumbwheel. Turn the rotary control until the display shows **Driver Alert**. The second row displays the **Off**, **Unavailable** or **Level mark** options.
2. **READ** button. Confirms or clears a warning in the memory.

Activating Driver Alert Control

Using the centre console display with its menu system, locate **Car settings** ➔ **Driver Alert**. Select the **On** option.

The function is activated when speed exceeds 65 km/h and it remains active as long as the speed exceeds 60 km/h. The display shows a level mark with 1-5 bars, where a low number of bars indicates inconsistent driving ability. A high number of bars indicates stable driving.

If the vehicle is driven inconsistently then the driver is alerted by an acoustic signal as well as the text message **Driver Alert Time for a break**. The warning is repeated after a time if driving ability does not improve.

WARNING

An alarm should be taken most seriously as a sleepy driver is not usually aware of his/her condition.

In the event of an alarm or signs of driver fatigue; stop the car in a safe manner as soon as possible and rest.

Studies have shown that it is equally as dangerous to drive when tired as it is under the influence of alcohol.

Symbols and messages in the display

Symbol	Message	Specification
	Driver Alert OFF	Function not switched on.
	Driver Alert Unavailable	Speed is lower than 60 km/h, the carriageway does not have clear side markings or the camera sensor is temporarily disengaged. Read about the limitations of the camera sensor, see page 169.

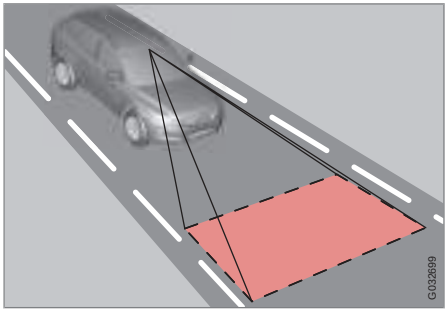
* Option/accessory, for more information, see Introduction.

Driver Alert System – DAC*

Symbol	Message	Specification
	**Driver Alert**	The function analyses the driver's driving style. The number of bars can vary in the range 1-5, where a low number of bars indicates inconsistent driving ability. A high number of bars indicates stable driving.
	**Driver Alert Time for a break**	The vehicle has been driven inconsistently; the driver is alerted by an acoustic warning signal + text.
	**Windscreen Sensors blocked**	The camera sensor is temporarily disengaged. Shown in the event of snow, ice or dirt on the windscreen for example. Clean the windscreen surface in front of the camera sensor. Read about the limitations of the camera sensor, see page 169.
	**Driver Alert Sys Service required**	The system is disengaged. Contact an authorised Volvo workshop if the message remains.

Driver Alert System - LDW*

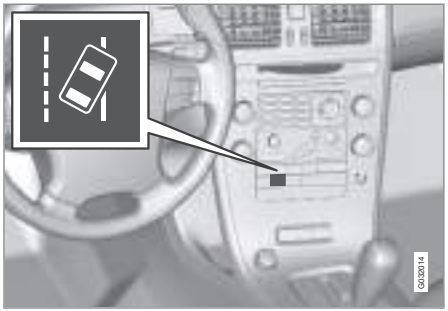
General information on Lane Departure Warning - LDW



The function is intended to reduce the risk for single-vehicle accidents – accidents where, in certain situations, the vehicle leaves the carriageway and is in danger of driving either into a ditch or into oncoming traffic.

LDW consists of a camera that detects the side markings painted on the carriageway. The driver is alerted by an acoustic signal if the vehicle crosses a side marking.

Operation and function



The function is switched on or off by means of a switch on the centre console. An indicator lamp in the button illuminates when the function is switched on.

The trip computer display shows **Lane Depart Warn Unavailable** when the function is in standby mode.

The LDW function is activated automatically from standby mode after the camera has scanned in the carriageway's side markings and speed exceeds 65 km/h. The trip computer display then shows **Lane Depart Warn Available**.

If the camera can no longer detect the carriageway's side markings or if speed decreases to below 60 km/h then the function resumes standby mode and the display shows **Lane Depart Warn Unavailable**.

If the vehicle crosses the left or right-hand side marking of the carriageway without due cause then the driver is alerted by an acoustic signal.

No warning is given in the following situations:

- Direction indicators activated
- The driver has his/her foot on the brake pedal [1]
- In the event of the accelerator pedal being depressed rapidly[1]
- In the event of rapid steering wheel movements[1]
- In the event of a sudden turn so that the car rolls.

The camera sensor also has certain limitations. For more information, see page 169.

NOTE

The driver is only warned once each time the wheels cross a line. So there is no acoustic alarm when there is a line between the car's wheels.

[1] A warning is still given when **Increased sensitivity** is selected, see Personal preferences.

* Option/accessory, for more information, see Introduction.

Symbols and messages in the display

Symbol	Message	Specification
	Lane departure warning On/Off	The function is switched on/off. Shown at switch-on/off. The text disappears after 5 seconds.
	Lane Depart Warn Available	The function scans the carriageway's side markings.
	Lane Depart Warn Unavailable	Speed is lower than 60 km/h, the carriageway does not have clear side markings or the camera sensor is temporarily disengaged. Read about the limitations of the camera sensor, see page 169.
	Windscreen Sensors blocked	The camera sensor is temporarily disengaged. Shown in the event of snow, ice or dirt on the windscreen for example. Clean the windscreen surface in front of the camera sensor. Read about the limitations of the camera sensor, see page 169.
	Driver Alert Sys Service required	The system is disengaged. Contact an authorised Volvo workshop if the message remains.

Driver Alert System - LDW*

Personal preferences

Using the centre console display with its menu system, locate **Car settings ➔ Lane departure warning**. Select the option required, see page 116.

On at start up: This option sets the function in standby mode each time the car is started. Otherwise the same value as when the engine was switched off is obtained.

Increased sensitivity: This option increases sensitivity, an alarm is triggered earlier and fewer limitations apply.

* Option/accessory, for more information, see Introduction.

General[1]

Parking assistance is used as an aid to parking. An acoustic signal as well as symbols on the top centre console display indicate the distance to the detected obstacle.

Parking assistance is available in two variants:

- Rear only
- Both front and rear.

WARNING

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

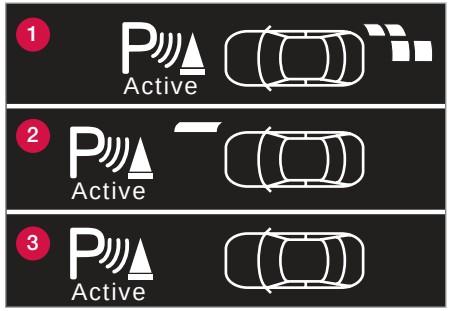
Function

The system is automatically engaged when the car is started and the switch's On/Off lamp is illuminated. If parking assistance is switched off with the button, the lamp goes out.

The centre console display shows an overview of the relationship between the car and detected obstacle.

Marked fields show which of the four sensors detected an obstacle. The more marked fields in the same bar, the shorter the distance between the car and detected obstacle.

The frequency of the signal increases the shorter the distance to an obstacle, in front of or behind the car. Other sound from the audio system is muted automatically.



Display screens in different situations.

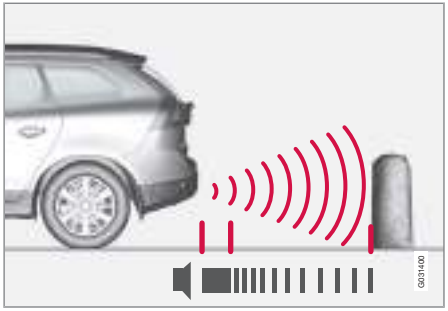
1. Display in car with only rear sensors. Obstacle detected by both right-hand sensors.
2. Display in car with both front and rear sensors. The front right-hand sensor is 30 cm or closer to a detected obstacle.
3. Display in car with both front and rear sensors. No obstacle detected in the front or rear.

When the distance is within 30 cm the tone is constant and the marked sensors' bar is fully filled in, see figure (2). If the detected obstacle is within the distance for the constant tone both behind and in front of the car, then the tone sounds alternately from the loudspeakers.

[1] Depending on the market, the Parking assistance system may be either Standard, Option or Accessory.

Park assist syst*

Rear parking assistance



The distance covered to the rear of the car is about 1.5 metres. The acoustic signal for obstacles behind comes from the rear loudspeakers.

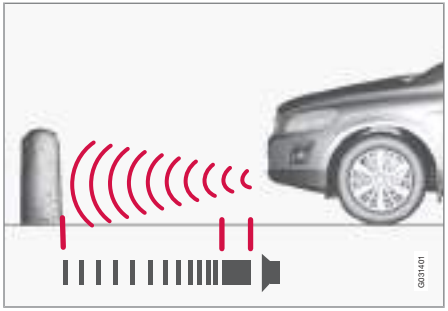
Rear parking assistance is activated when reverse gear is engaged.

The system must be deactivated when reversing with a trailer, or bike carrier on the towbar or similar. Otherwise they would trigger the sensors.

NOTE

Rear parking assistance is deactivated automatically when towing a trailer if Volvo genuine trailer wiring is used.

Front parking assistance



The distance covered to the front of the car is about 0.8 metres. The acoustic signal for obstacles in front comes from the front loudspeaker.

Front parking assistance is active at speeds up to 15 km/h, and also during reversing. The system is deactivated at a higher speed. However, the lamp in the button remains illuminated in order to indicate that the system is activated for the next time the driver shall park. When the speed is below 10 km/h the system is reactivated.

NOTE

Front parking assistance is deactivated when the parking brake is applied.

IMPORTANT

When fitting auxiliary lamps: Remember that they must not obscure the sensors – the auxiliary lamps could then be detected as obstacles.

Fault indicator

If the information symbol illuminates with constant glow and the information display shows **Park assist syst Service required** then parking assistance is disengaged.

IMPORTANT

In certain conditions the parking assistance system may produce incorrect warning signals that are caused by external audio sources that emit the same ultrasonic frequencies that the system works with.

Examples of such sources include horns, wet tyres on asphalt, pneumatic brakes and exhaust noises from motorcycles etc.

* Option/accessory, for more information, see Introduction.

Cleaning the sensors

Sensor location, front.

Sensor location, rear.

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

NOTE

Dirt, ice and snow covering the sensors may cause incorrect warning signals.

Parking camera*

General information on PAC

The PAC (Park Assist Camera) displays what is behind the car when reversing with the help of a display screen.

Using references lines in the display screen, the system also indicates where the car will end up based on steering wheel movement. This makes it easier to parallel park, reverse into tight spaces or connect a trailer.

PAC can also be installed on cars equipped with Volvo genuine GPS navigator RTI* - Road and Traffic Information System.

WARNING

- The parking camera serves as an aid. It does not relieve the driver of responsibility when reversing.
- The camera has blind spots, where obstacles cannot be detected.
- Be aware of people and animals in the vicinity of the car.

Function

The driver sees what is behind the car and if something appears from the sides.

The parking camera is mounted at the opening handle of the tailgate.

The camera's strong wide-angle lens shows a wide area behind the car as well as the car's bumper and towbar.

The system's electronic image processing corrects the "fisheye" effect of the camera image to display a natural image. As a result, objects on the screen may appear to be tilted. This is perfectly normal.

NOTE

Objects on the screen may appear further away than they actually are.

Light conditions

The parking camera automatically detects light conditions and continually adjusts sensitivity. Because of this, the image may vary slightly in brightness and quality. In poor light conditions or darkness, the camera compensates by increasing light sensitivity, which could reduce image quality.

If the display screen seems too dark, brightness can be increased with the thumbwheel (1) for instrument lighting; see page 77.

NOTE

In poor light conditions, it is extremely important that the camera lens is free of dirt, snow and ice.

* Option/accessory, for more information, see Introduction.

Operation

Activation

The parking camera is activated when reverse gear is engaged, if the function is selected in the menu system, see page 116.

If RTI is active, the PAC system automatically takes over and the camera image appears on the display screen instead of navigation system information.

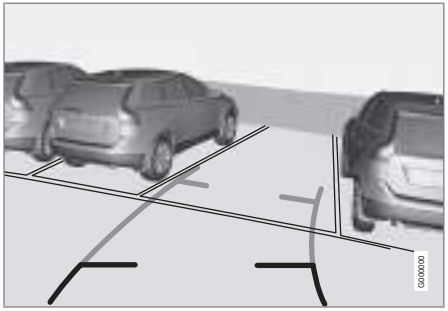
Deactivation

The parking camera works with a delay. This means that the image behind the car may be shown even if reverse gear has been disengaged in order to drive the car forward a little.

After reversing is complete, the camera image remains for approx. 15 seconds or until speed exceeds 10 km/h.

The system then resumes whatever mode was active prior to reverse gear engagement - e.g. the RTI system is reactivated.

Guide lines



The lines on the screen are projected as if they were at ground level behind the car and are directly related to steering wheel movement, which shows the driver the path the car will take, even when turning.

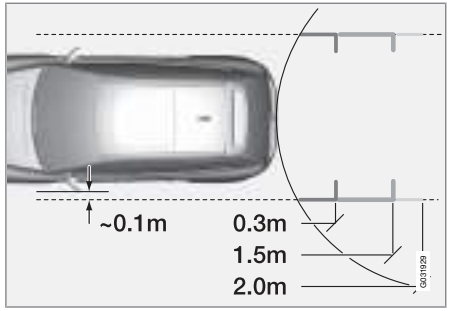
NOTE

When reversing with a trailer, the lines on the screen show the path of the **car** - not the trailer.

IMPORTANT

Bear in mind that the screen only shows the area behind the car - pay attention to the sides and front of the car when manoeuvring during reversing.

Side lines



The side lines indicate the path the car will take during reversing. They indicate approx. 10 cm of "free space" between the inside of the line and the outer tip of the door mirrors - even when turning.

- The side lines extend 2.0 m back from the bumper.

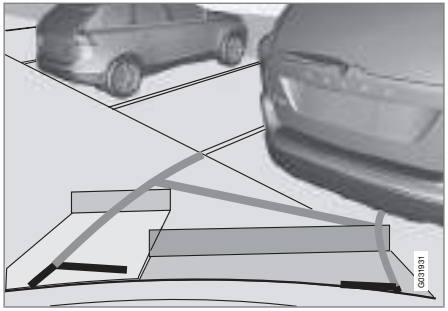
Transverse lines

The short transverse lines show the distance from the bumper and back.

- The RED transverse line indicates 0.3 m
- The YELLOW transverse line indicates 1.5 m.

Parking camera*

Cars equipped with Park Assist



If the car is also equipped with Park Assist* rear (see page 179), coloured markings indicate the distance to the obstacle, e.g. when reversing into a parking spot.

Marking (colour)	Distance to obstacle (m)
Green	0,8-1,5
Yellow	0,3-0,8
Red	0–0,3

If one of the outer Part Assist sensors detects an object closer than 0.4 m,but outside of the parking camera's field of vision, a door mirror icon is shown on the screen.

If this is the case, check the door mirrors for any obstacles.

Settings

To set system activation, press **MENU** and go to **Main menu** ➔ **Car settings** ➔ . Select from the following options:

Parking camera settings

- Select **Park Assist lines** to show side lines when reversing.
- Select **Distance Bars** to show distance lines when reversing[1].

System activation

- Select **Automatic** for PAC to be active during reversing.
- Select **Off** for PAC to be permanently off.

Limitations

NOTE

A bike carrier or other accessory mounted on the rear of the car could obscure the camera's view.

Even if it only looks like a relatively small part of the image is obscured, it could be a relatively large sector that is hidden from view. Obstacles could thereby go undetected until they are very close to the car.

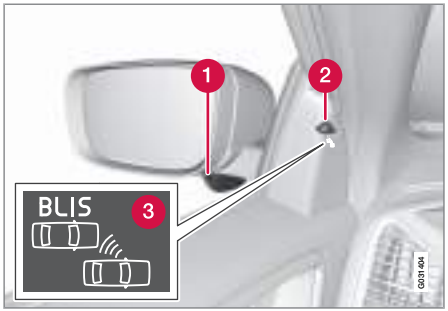
To bear in mind

- Keep the camera lens free from dirt, ice and snow.
- Clean the camera lens regularly with lukewarm water and car shampoo - take care not to scratch the lens.

1 Only if Park Assist is installed.

BLIS* – Blind Spot Information System

General information on BLIS



1. BLIS camera
2. Indicator lamp
3. BLIS symbol

BLIS is an information system based on camera technology that under certain conditions can help the driver to notice vehicles moving in the same direction as the host vehicle in the so-called "blind spot".

IMPORTANT

Repair of the BLIS system components must only be performed by an authorised Volvo workshop.

WARNING

The system is a supplement to, not a replacement for, a safe driving style and use of the rearview mirrors. It can never replace the driver's attention and responsibility. The responsibility for changing lanes safely always rests with the driver.

The system is designed to work most effectively when driving in dense traffic on multi-lane highways.

When a camera 1 has detected a vehicle inside the blind spot zone the indicator lamp 2 illuminates with a constant glow.

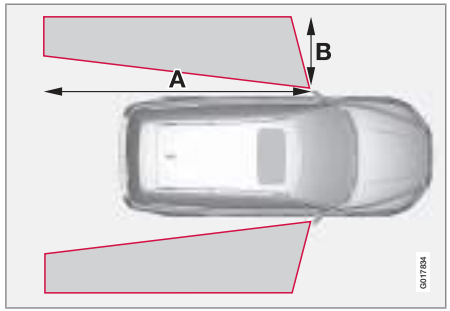
NOTE

The lamp illuminates 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 illuminate.

BLIS advises the driver with a message if a fault arises in the system. If for example the system's cameras are obscured then the BLIS indicator lamp flashes and a message is shown on the information display. In such cases, check and clean the lenses.

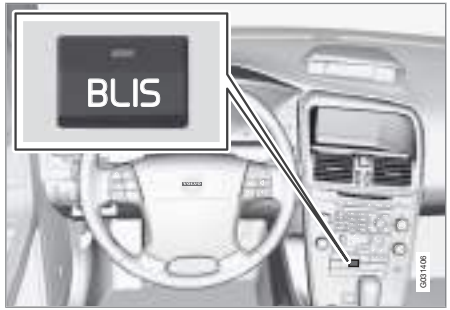
If necessary, the system can be switched off temporarily by pressing the **BLIS** button once, see page 185.

Blind spots



A = approx. 9.5 m and B = approx. 3 m

Activating/deactivating



Button for activating/deactivating.

BLIS* – Blind Spot Information System

BLIS is activated when the engine is started. Upon activation, the indicator lamps in the door panels flash 3 times.

The system can be deactivated/activated when the engine is started by pressing the **BLIS** button.

When BLIS is deactivated, the lamp in the button goes out and a text message is shown in the instrument panel display.

When BLIS is activated the light in the button illuminates, a new text message is shown and the indicator lamps in the door panels flash 3 times. Press the **READ** button to clear the text message. For more information on messages, see page 118.

When BLIS operates

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

Overtaking

The system is designed to react if:

- you overtake another vehicle at a speed of up to 10 km/h faster than the other vehicle
- you are overtaken by a vehicle travelling up to 70 km/h faster than you are travelling.

WARNING

BLIS does not work in sharp bends.

BLIS does not work when the car is reversing.

A wide trailer coupled to the car can conceal other vehicles in adjacent lanes. It can prevent the vehicle in the screened area from being detected by BLIS.

Daylight and darkness

In daylight the system reacts to the shape of the surrounding vehicles. The system is designed to detect motor vehicles such as cars, trucks, buses and motorcycles.

In darkness the system reacts to the headlamps of surrounding vehicles. If the headlamps of surrounding vehicles are not switched on then the system does not detect the vehicles. This means for example that the system does not react to a trailer without headlamps which is towed behind a car or truck.

WARNING

The system does not react to cyclists or moped riders.

The BLIS cameras may have problems in conditions with intense light or when driving in the dark with no light sources (e.g. roadway lighting or other vehicles). The system may interpret the lack of lights as a blocked camera or cameras.

In either case, a message appears on the information display.

When driving in such conditions, system performance may be temporarily poorer and a text message is shown; see page 187. If the message disappears automatically, it indicates that BLIS has resumed normal function.

The BLIS cameras have limitations similar to those of the human eye, i.e. they do not "see" as well in e.g. heavy snowfall or thick fog.

* Option/accessory, for more information, see Introduction.

Cleaning

In order to work most effectively the BLIS camera lenses must be clean. The lenses can be cleaned with a soft cloth or damp sponge. Clean the lenses carefully so that they are not scratched.

IMPORTANT

The lenses are electrically heated to melt ice or snow. If necessary, brush snow away from the lenses.

Messages on the display

Message	Specification
Blind-spot info system ON	BLIS system on
Blind spot syst. Service required	BLIS not functioning. Contact an authorised Volvo workshop.
Blind spot syst. Camera blocked	The BLIS camera is blocked by dirt, snow or ice. Clean the lenses.
Blind spot syst. Reduced function	The BLIS camera is disrupted by fog or strong sunlight shining directly into the camera. The camera resets itself when the environment has returned to normal.
Blind-spot info system OFF	BLIS system off

Limitations

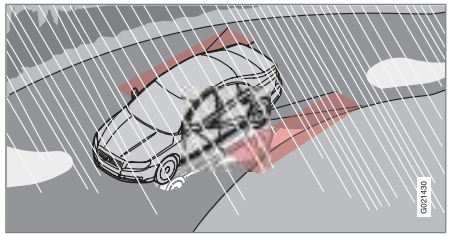
In some situations the BLIS indicator lamp may illuminate despite there being no other vehicle within the blind spot.

NOTE

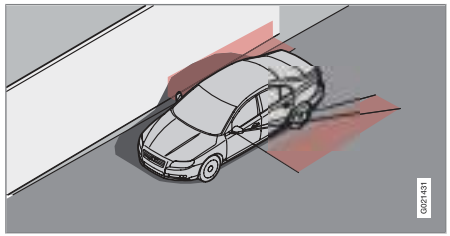
If the BLIS indicator lamp illuminates on isolated occasions despite there being no other vehicle within the blind spot then this does not mean that a fault has arisen in the system.

In the event of a fault in the BLIS system the display shows the text **Blind spot syst. Service required**.

Here are several examples of situations where the BLIS indicator lamp may illuminate even if there is no other vehicle within the blind spot.

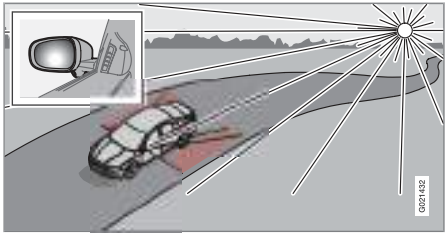


Reflection from shiny wet road surface.



Own shadow on large light smooth surface, e.g. noise barrier or concrete road surface.

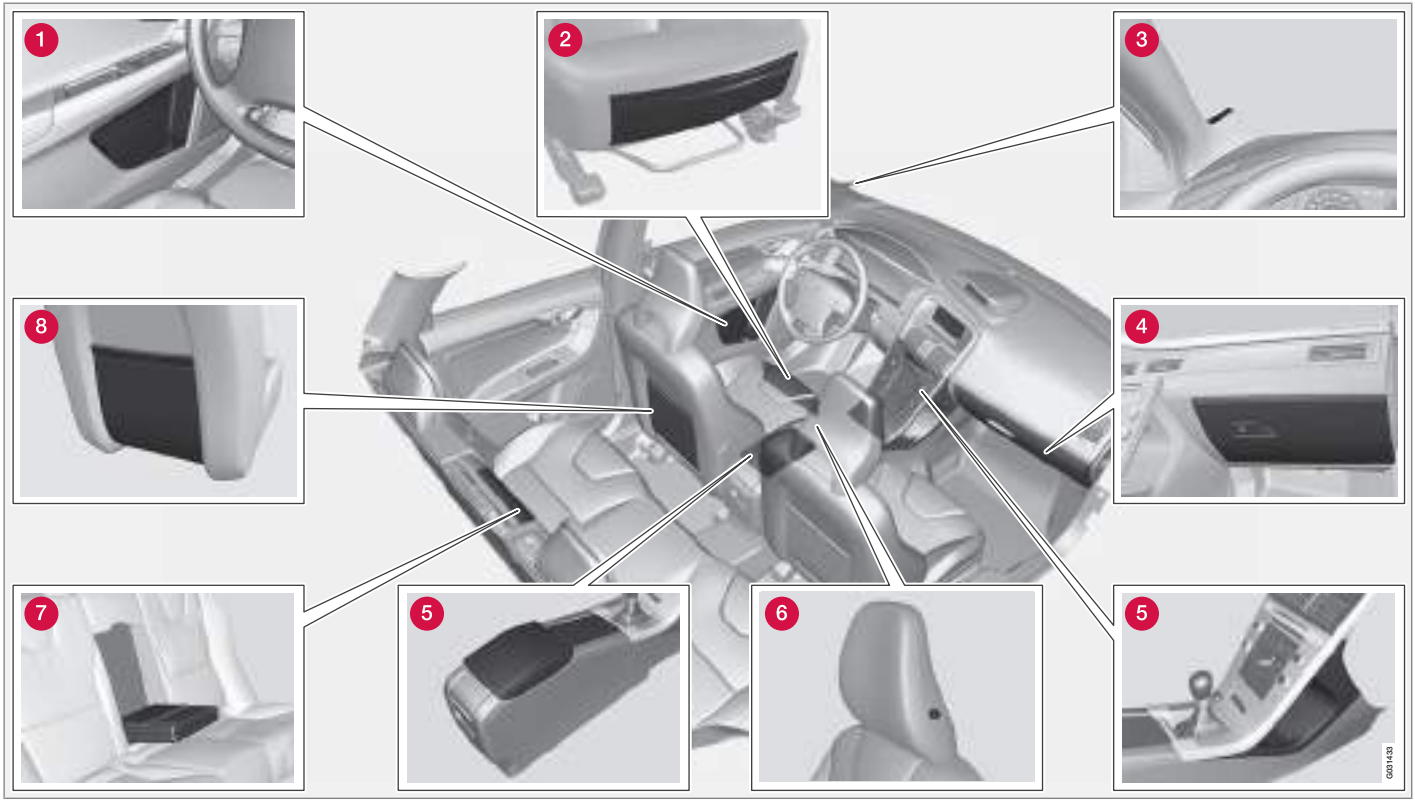
BLIS* – Blind Spot Information System



Low stationary sunlight shining into the camera.

* Option/accessory, for more information, see Introduction.

Storage spaces



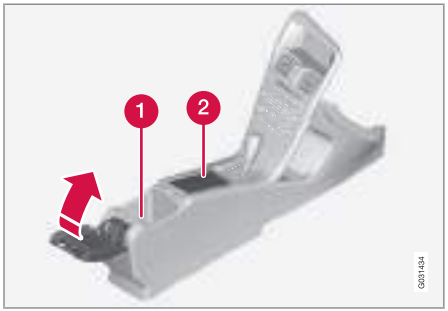
Comfort inside the passenger compartment

1. Storage compartment in door panel
2. Storage pocket* on front edge of front seat cushions
3. Ticket clip
4. Glovebox
5. Storage compartment, cup holder
6. Coat hanger
7. Cup holder* in armrest, rear seat
8. Storage pocket

Coat hanger

The jacket holder is only designed for light clothing.

Tunnel console



1. Storage compartment (e.g. for CDs) and USB*/AUX input under the armrest.
2. Includes cup holder for driver and passenger. (If ashtray and cigarette lighter are specified then there is a cigarette lighter in the 12 V socket for the front seat, see page 191, and a detachable ashtray in the cup holder.)

Avoid storing coins, keys or similar metal objects in the cup holder as such objects could accidentally trigger the alarm*, see page 56.

Cigarette lighter and ashtray*

The ashtray in the tunnel console is detached by lifting the tray straight up.

Activate the lighter by pushing in the button. The button pops out when the lighter is hot. Pull out the lighter and light a cigarette on the heated coils.

Glovebox

The owner's manual and maps can be kept here for example. There are also holders for pens on the inside of the lid. The glovebox can be locked with the key blade, see page 42.

Floor mats*

Volvo supplies specially manufactured floor mats.

* Option/accessory, for more information, see Introduction.

WARNING

The floor mat at the driver's seat must be firmly fitted and secured in the attachment clips to prevent it from being trapped around and under the pedals.

Vanity mirror

Vanity mirror with lighting.

The lamp for the vanity mirror, on the driver's side* and passenger side respectively, is switched on automatically when the cover is raised.

12 V socket

12 V socket, front seat.

12 V socket in tunnel console, rear seat.

The electrical socket can be used for 12 V accessories, such as mobile phone chargers and coolers. The maximum current is 10 A. For the socket to supply current, the remote control key must be in at least position **I**, see page 70.

WARNING

Always leave the plug in the socket when the socket is not in use.

Electrical socket in cargo area*

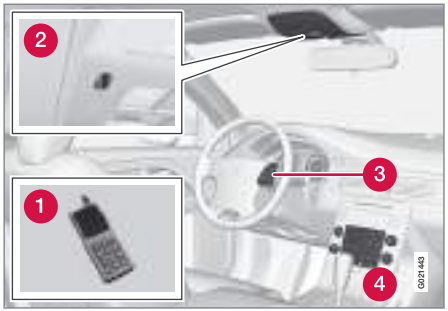
Fold down the cover to access the electrical socket. It works irrespective of whether or not the ignition is switched on.

NOTE

Do not use the electric socket with the engine switched off as there is a risk of the battery becoming discharged.

Bluetooth handsfree*

General



System overview.

1. Mobile phone
2. Microphone
3. Steering wheel keypad
4. Centre console

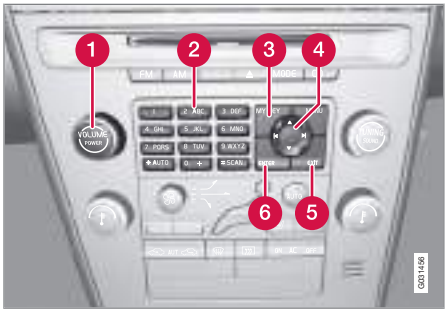
Bluetooth™

A mobile phone equipped with Bluetooth™ can be connected wirelessly to the audio system. The audio system then works handsfree, with the option to control a range of the mobile phone's functions remotely. The mobile phone can be operated by its own keys irrespective of whether or not it is connected.

NOTE

Only a selection of mobile phones is fully compatible with the handsfree function. Information on compatible phones is available at Volvo dealers and at www.volvocars.com.

Phone functions, controls overview



Centre console control panel.

1. **VOLUME** – Same functionality available in steering wheel keypad.
2. Number and letter buttons
3. **PHONE** - On/off and standby mode
4. Navigation button
5. **EXIT** - End/refuse phone calls, clear entered characters, interrupt current function. Same functionality available in steering wheel keypad.
6. **ENTER** – Accept calls. A press of the button reveals latest dialled numbers. Same functionality available in steering wheel keypad.

Remember

The menus are controlled from the centre console and the steering wheel keypad. For general information on menus, see page 116.

Activating/deactivating

A short press on **PHONE** activates the handsfree function. The text PHONE at the top of the display shows that it is in phone mode. The symbol shows that the handsfree function is active.

One long press on **PHONE** deactivates the handsfree function and disconnects a connected phone.

Connect mobile phone

A mobile phone is connected in different ways depending on whether or not it has been connected previously. To connect a mobile phone for the first time, follow the instructions below:

* Option/accessory, for more information, see Introduction.

Alternative 1 - via the car's menu system

1. Make the mobile phone detectable/visible via Bluetooth™, see mobile phone manual or www.volvocars.com.
2. Activate the handsfree function with **PHONE**.
   > Menu option **Add phone** appears on the display. If one or more mobile phones have already been registered then these are also shown.
3. Select **Add phone**.
   > The audio system searches for mobile phones in the vicinity. The search takes approximately 30 seconds. The mobile phones detected are specified with their respective Bluetooth™ name in the display. The handsfree function's Bluetooth™ name is shown in the mobile phone such as **My Car**.
4. Choose one of the mobile phones in the audio system display.
5. Enter the number series shown in the audio system display via the mobile phone keypad.

Alternative 2 - via the phone's menu system

1. Activate the handsfree function with **PHONE**. If there is a phone connected, disconnect the connected phone.
2. Search with the phone's Bluetooth™, see the mobile phone manual.
3. Select **My Car** in the list of units detected in your mobile phone.
4. Enter the PIN code '1234' into the mobile phone when prompted for the PIN code.
5. Select to connect to **My Car** from the mobile phone.

The mobile phone is registered and connected automatically to the audio system while the text **Synchronising** is shown in the display. For more information on how mobile phones are registered, see page 195.

When the connection is established the symbol is shown and the mobile phone Bluetooth™ name is shown in the display. Now the mobile phone can be controlled from the audio system.

To call

1. Make sure that the text **PHONE** is shown at the top of the display and that the symbol is visible.
2. Dial the number or use the phone book, see page 195.
3. Press **ENTER**.

The call is interrupted with **EXIT**.

Disconnecting the mobile phone

Automatic disconnection takes place if the mobile phone moves out of the audio system's range. For more information on connection, see page 195.

Manual disconnection takes place by deactivating the handsfree function with one long press on **PHONE**. The handsfree function is also deactivated when the engine is switched off or when a door is opened[1].

When the mobile phone has been disconnected an ongoing call can be continued with the mobile phone's built-in microphone and speaker.

1 Only Keyless Drive

Bluetooth handsfree*

NOTE

Some mobile phones require that the changeover from handsfree is confirmed from the phone's keypad.

Making and receiving calls

Incoming call
Calls are accepted with **ENTER** even if the audio system is in CD or FM mode for example. Refuse or end with **EXIT**.

Automatic answer
The automatic answer function means that calls are accepted automatically.

– Activate/deactivate under **Phone settings ➔ Call options ➔ Automatic answer**.

In call menu
Press **MENU** or **ENTER** during an ongoing call to access the following functions:

- **Mute microphone** - audio system microphone is muted.
- **Transfer call to mobile** - the call is transferred to the mobile phone.

NOTE

With certain mobile phones the connection is terminated when the privacy function is used. This is normal. The handsfree function asks if you want to reconnect.

- **Phone book** – searching in the phone book.

NOTE

A new call cannot be started during an ongoing call.

Audio settings

Phone call volume
The call volume can be regulated when the handsfree function is in phone mode. Use the steering wheel keypad or **VOLUME**.

Audio system volume
Providing there is no ongoing call taking place, the audio system volume is controlled as usual with **VOLUME**. In order to control audio system volume during an ongoing call you have to switch to one of the audio sources.

The audio source can be automatically muted for incoming calls under **Phone settings ➔ Sounds and volume ➔ Mute radio**.

Ring volume
Go to **Phone settings ➔ Sounds and volume ➔ Ring volume** and adjust with ▲ / ▼ on the navigation button.

Ring signals
The handsfree function has integrated ring signals that can be selected under **Phone settings ➔ Sounds and volume ➔ Ring signals ➔ Ring signal 1, 2, 3** etc.

NOTE

The connected mobile phone's ring signal is not deactivated when one of the handsfree system's integrated signals is used.

In order to select the connected phone's ring signal[2], go to **Phone settings ➔ Sounds and volume ➔ Ring signals ➔ Use mobile phone signal**.

2 Not supported by all mobile phones.

More on registering and connecting

A maximum of five mobile phones can be registered. Registration is performed once per phone. After registration the phone no longer needs to be visible/detectable. A maximum of one mobile phone can be connected at a time. Phones can be deregistered under **Bluetooth ➔ Remove phone**.

Automatic connection

When the handsfree function is active and the last mobile phone connected is in range it is connected automatically. When the audio system searches for the last phone connected its name is shown in the display. To change over to manual connection of another phone, press **EXIT**.

Manual connection

If you want to connect a mobile phone other than the last connected or change the connected mobile phone, proceed as follows:

1. Set the audio system in phone mode.
2. Press **PHONE** and select one of the phones in the list.

The connection can also be made via the menu system under **Bluetooth ➔ Connect phone** or **Change phone**.

Phone book

All use of the phone book presupposes that the text **PHONE** is shown at the top of the display and that the symbol is visible.

The audio system stores a copy of the phone book from each registered mobile phone. The phone book is copied automatically to the audio system during each connection.

– Deactivate the function under **Phone settings ➔ Synchronise phone book**. Searching for contacts is only performed in the connected mobile phone's phone book.

NOTE

If the mobile phone does not support copying of the phone book then **List is empty** is shown when copying is finished.

If the phone book contains a ringing caller's contact information then this is shown in the display.

Searching for contacts

The easiest way to search in the phone book is with long presses on the keys **2–9**. This starts a search in the phone book based on the key's first letter.

The phone book can also be reached with ▼ / ▲ on the navigation button or with ⏮ / ⏭ on the steering wheel keypad. The search can also be performed from the phone book's Search menu under **Phone book ➔ Search**:

1. Enter the first few letters of the contact and press **ENTER**, or simply press **ENTER**.
2. Scroll to a contact and press **ENTER** to call.

Voice recognition

The mobile phone's voice recognition function for dialling can be used by holding in **ENTER**.

Voice mail number

Voice mail number can be changed under **Phone settings ➔ Call options ➔ Voice mail number**. If there is no number stored then this menu can be reached with one long press on **1**. Press **1** for a long time to use the stored number.

Call lists

The call lists are copied to the handsfree function at each new connection and are then updated during the connection. Press **ENTER** to show the last dialled. Other call lists are available under **Call register**.

Bluetooth handsfree*

NOTE

Certain mobile phones show a list of the last dialled calls in reverse order.

Inputting text

Input text using the keypad in the centre console. Press once for the key's first character, twice for the second etc. Continue pressing for more characters, see the following table.

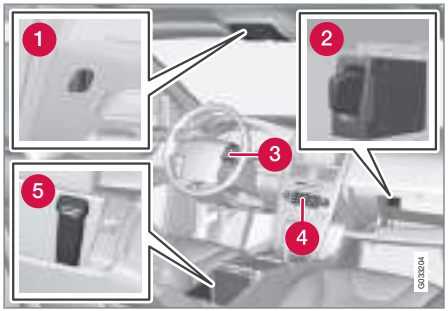
A short press on **EXIT** deletes an input character. One long press on **EXIT** clears all input characters. ▲ / ▼ on the navigation button scrolls between the characters.

Key	Function
1	Space .1-?!,:"'()
2 ABC	A B C 2 Ä Å À Æ Ç
3 DEF	D E F 3 È É
4 GHI	G H I 4 Ì
5 JKL	J K L 5
6 MNO	M N O 6 Ñ Ö Ò Ø
7 PQRS	P Q R S 7 ß
8 TUV	T U V 8 Ü Ù
9 WXYZ	W X Y Z 9
AUTO *	Pressed briefly if two characters shall be entered after each other with the same key.
0 +	+ 0 @ * # & $ £ / %
SCAN #	Shift between upper and lower case letter

* Option/accessory, for more information, see Introduction.

Built-in phone*

General



System overview.

1. Microphone
2. SIM card reader
3. Keypad, see page 133.
4. Control panel
5. Privacy handset

Safety

Only entrust phone servicing to an authorised Volvo workshop. The built-in phone must be switched off during refuelling or in the vicinity of blasting work. IDIS limits the menu system depending on the speed of the car, see page 199.

Remember

SIM card

The phone can only be used with a valid SIM card (Subscriber Identity Module). For installation, see page 200. Emergency calls to emergency numbers can be made without a SIM card.

NOTE

The built-in phone cannot read 3G type SIM cards. Combined 3G/GSM cards work. Contact the network operator if the SIM card needs to be changed.

Menus and controls

The menus are navigated using the control panel 4 and the steering wheel 3 keypad. For general information on menus, see page 116. For information on the phone's controls, see page 192.

On/Off

Switch on the phone with a short press on **PHONE**. Enter the PIN code if necessary. The symbol shows that the phone is switched on. When this symbol is shown calls can be received even if the CD menu for example is shown in the display. Briefly press **PHONE** to use the phone menus and to dial out. The text PHONE shows that the phone menu is active.

Switch off the phone with one long press on **PHONE**.

Making and receiving calls

Making calls

1. Switch on the phone.
2. If PHONE is not shown in the display, briefly press **PHONE**.
3. Dial the number or use the phone book, see page 192.
4. Press **ENTER** for handsfree calls or pick up the privacy handset. Release the handset by pulling it down.

Ending a call

End a call by pressing **EXIT** or by hanging up the privacy handset.

Incoming call

Press **ENTER** for handsfree calls or pick up the privacy handset. If the privacy handset is off the hook when the phone rings then calls must be received using **ENTER**.

End calls by pressing **EXIT** or by hanging up the privacy handset. Refuse calls using **EXIT**.

Automatic answer

See page 194.

Built-in phone*

Call waiting
The function enables a new call to be answered during an ongoing call. The new call is answered as usual and the previous call is put on hold.

– Activate/deactivate under **Phone settings ➔ Call options ➔ Call waiting**.

Automatic diversions
Incoming calls can be diverted automatically depending on the type of call and situation.

– Activate/deactivate under **Call options ➔ Diversions**.

During a call
Press **MENU** or **ENTER** during a call to access the In-call menu.

To call
1. Put the call on hold under **Hold**.
2. Dial the number of the third party or use the **Phone book** menu option.

Switch between calls using the **Swap** menu option.

Conference call
A conference call consists of several parties. It can be initiated when a call is underway and another is on hold. The **Join** menu option starts the conference call.

All ongoing calls are disconnected if the conference call is terminated.

Switching between the privacy handset and handsfree
Switch from handsfree to the privacy handset by picking up the privacy handset or selecting **Privacy handset** in the menu.

Switch from the privacy handset to handsfree using the **Handsfree** menu option.

Mute mode
Mute mode involves deactivating the microphone, see page 197.

– Activate/deactivate the microphone using the **Microphone On/Off** menu option.

Audio settings

Phone call volume
The phone uses the front door speakers. Call volume can be controlled when the text **PHONE** is shown at the top of the display.

– Use the steering wheel keypad or **VOLUME**.

Audio system volume
See page 135.

Signals and volume
Change the ring signal under **Phone settings ➔ Sounds and volume ➔ Ring signals**.

Activate/deactivate the message beep under **Phone settings ➔ Sounds and volume ➔ Message beep**.

Control the ring volume under **Phone settings ➔ Sounds and volume ➔ Ring volume**. Adjust using ▲ / ▼ on the navigation button.

Phone book
Contact information can be stored on the SIM card or in the phone.

Storing contacts in the phone book
1. Press **MENU** and scroll to **Phone book ➔ New contact**.
2. Enter a name and press **ENTER**. For information on text input, see below.
3. Enter a number and press **ENTER**.
4. Scroll to **SIM card** or **Phone memory** and press **ENTER**.

Inputting text
See page 196.

Searching for contacts
See page 195.

* Option/accessory, for more information, see Introduction.

Erasing contacts
Erase a contact in the phone book by selecting it and pressing **ENTER**. Then scroll to **Erase** and press **ENTER**.

Erase all contacts under **Phone book ➔ Erase SIM** or **Erase phone**.

Copying entries between the SIM card and the phone book
Go to **Phone book ➔ Copy all ➔ SIM to phone** or **Phone to SIM** and press **ENTER**.

Voice mail number
See page 195.

Other functions and settings

IDIS
IDIS (Intelligent Driver Information System) can, in active driving situations, delay or refuse ring signals from incoming calls. This way less attention is distracted from driving.

– IDIS is deactivated under **Phone settings ➔ IDIS**.

Reading messages
1. Scroll to **Messages ➔ Read** and press **ENTER**.
2. Scroll to a message and press **ENTER**.
3. The message text is shown in the display. Additional selections can be made by pressing **ENTER**.

Writing and sending messages
1. Scroll to **Messages ➔ Write new** and press **ENTER**.
2. Enter text and press **ENTER**. For information on text input, see page 196.
3. Scroll to **Send** and press **ENTER**.
4. Enter a phone number and press **ENTER**.

Message settings
Message settings are not normally changed. The network provider has further information on these settings. There are three options under **Messages ➔ Message settings**:

- **SMSC number** - Specifies the message centre which will transfer the messages.
- **Validity time** - Specifies how long the message will be stored in the message centre.
- **Message type**.

Call lists
Lists of received, dialled and missed calls are stored in **Call register**. Dialled calls are also shown by pressing **ENTER**. The phone numbers in the lists can be saved in the phone book.

Call duration
Call duration is stored under **Call register ➔ Call duration**.

– Reset the values under **Call register ➔ Call duration ➔ Reset timers**.

Show/hide number for third party
The phone number can be temporarily hidden under **Call options ➔ Send my number**.

IMEI number
In order to block a phone the network provider must be advised of the phone's IMEI number.

– Dial ***#06#** to show the number in the display. Write it down and keep it in a safe place.

Network selection
The network can be selected either automatically or manually under **Phone settings ➔ Network selection**.

SIM code and security
The PIN code can protect the SIM card from unauthorised use.

The code can be changed under **Phone settings ➔ Edit PIN code**.

Change the security level under **Phone settings ➔ SIM security**.

Built-in phone*

Select maximum security with the **On** option. The code will then need to be entered each time the phone is switched on.

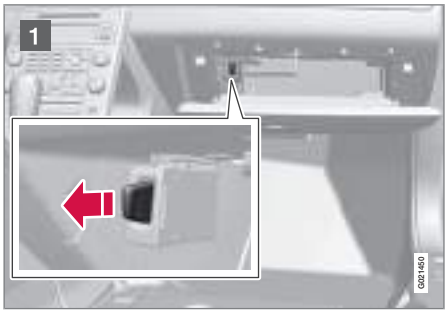
Select the next highest security level with the **Automatic** option. The phone then stores the code and automatically specifies it when the phone is switched on. When the SIM card is used with another phone the code must be entered manually.

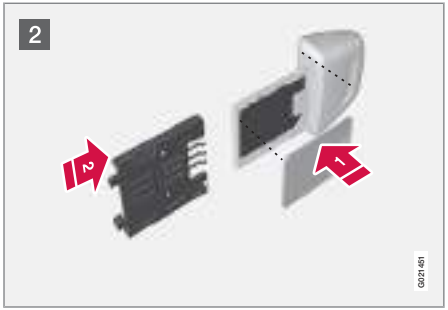
Select minimum security with the **Off** option. The SIM card can then be used without the code at all.

Reset to factory settings

The phone settings are fully reset under **Phone settings** ➔ **Reset phone settings**.

Installing the SIM card





1 Make sure that the phone is deactivated. Pull out the SIM card holder which is located in the glovebox.

2 Place the SIM card with the metal surface visible 1 and fit the cover on the SIM card holder 2. Refit the SIM card holder.

* Option/accessory, for more information, see Introduction.

DURING YOUR JOURNEY

05

Recommendations during driving

General

Economical driving
Economical driving and reducing environmental impact result from driving gently with anticipation and adapting your driving style and speed to the current situation (for further advice on how you can reduce environmental impact, see page 11).

- Do not let the engine idle, but drive at light loads as soon as it is possible.
- A cold engine consumes more fuel than a warm one.
- Do not drive with unnecessary loads in the car.
- Do not use winter tyres when the roads are dry.
- Remove the load carrier when it is not in use.
- Use the parking heater* in cold weather so that the engine reaches its normal operating temperature more quickly.

Driving in water
The car can be driven through water at a maximum depth of 25 cm at a maximum speed of 10 km/h. Extra caution should be exercised when passing through flowing water.

During driving in water, maintain a low speed and do not stop the car. When the water has been passed, depress the brake pedal lightly and check that full brake function is achieved. Water and mud for example can make the brake linings wet resulting in delayed brake function.

Clean the electric contacts of the electric engine block heater and trailer coupling after driving in water and mud.

Do not let the car stand with water over the sills for any long period of time. This could cause electrical malfunctions.

IMPORTANT

Engine damage can occur if water enters the air filter.

In depths greater than 25 cm, water could enter the transmission. This reduces the lubricating ability of the oils and shortens the service life of the systems.

In the event of stalling in water, do not try to restart - tow the car out of the water to an authorised Volvo workshop. Risk of engine breakdown.

Engine and cooling system
Under special conditions, for example when driving in hilly terrain, extreme heat or with heavy loads, there is a risk that the engine and cooling system will overheat. Proceed as follows to avoid overheating the engine:

- Maintain a low speed when driving with a trailer up long, steep ascents.
- Do not turn the engine off immediately you stop after a hard drive.

NOTE

It is normal for the engine's cooling fan to operate for a while after the engine has been switched off.

- Remove any auxiliary lamps from in front of the grille when driving in extreme high temperatures.
- Do not exceed engine speeds of 4500 rpm (3500 rpm for diesel engines) if driving with a trailer or caravan in hilly terrain. The oil temperature could become too high.

Open tailgate
Avoid driving with the tailgate open. If it is however necessary, only drive for a short distance. Close all windows, set the air distribution to the windscreen and floor and run the fan at the highest speed.

WARNING

Do not drive with the tailgate open. Toxic exhaust fumes could be drawn into the car through the cargo area.

Do not overload the battery

The electrical functions in the car load the battery to varying degrees. Avoid using the ignition position **II** when the engine is switched off. Use ignition position **I** instead, as less power is consumed.

Also, be aware of different accessories that load the electrical system. Do not use functions which use a lot of power when the engine is switched off. Examples of functions that use a lot of power:

- ventilation fan
- windscreen wiper
- audio system (high volume)
- parking lamps

If the battery voltage is low, a message appears on the information display. The energy-saving function shuts down certain functions or reduces certain functions such as the ventilation fan and audio system. Charge the battery by starting the engine.

Before a long journey

- Check that the engine is working normally and that fuel consumption is normal.
- Make sure that there are no leaks (fuel, oil or other fluid).
- Check all bulbs and tyre tread depths.
- Carrying a warning triangle is a legal requirement in certain countries.

Winter driving

Check the following in particular before the cold season:

- The engine coolant must contain at least 50% glycol. This mixture protects the engine down to approximately –35 °C. To achieve optimum antifreeze protection, different types of glycol must not be mixed.
- The fuel tank must be kept filled to prevent condensation.
- Engine oil viscosity is important. Oils with lower viscosity (thinner oils) facilitate starting in cold weather and also reduce fuel consumption while the engine is cold. For more information on suitable oils, see page 271.

IMPORTANT

Low viscosity oil must not be used for hard driving or in hot weather.

- The condition of the battery and charge level must be inspected. Cold weather places great demands on the battery and its capacity is reduced by the cold.
- Use washer fluid to avoid ice forming in the washer fluid reservoir.

To achieve optimum roadholding Volvo recommends using winter tyres on all four wheels if there is a risk of snow or ice.

NOTE

The use of winter tyres is a legal requirement in certain countries. Studded tyres are not permitted in certain countries.

Slippery driving conditions

Practise driving on slippery surfaces under controlled conditions to learn how the car reacts.

Refuelling

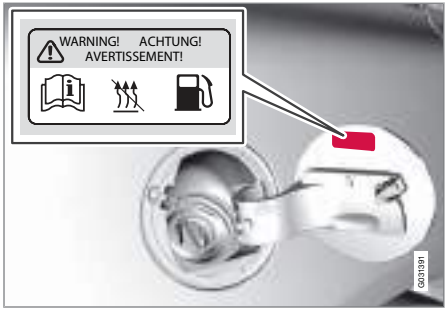
Refuelling

Opening/closing the fuel filler flap

Open the fuel filler flap using the button on the lighting panel. The filler flap is located on the right-hand rear wing, as indicated by the symbol's arrow in the information display.

Close the fuel filler flap by pressing it in until a click confirms that it is closed.

Opening/closing the fuel cap



A certain overpressure may arise in the tank in the event of high outside temperatures. Open the cap slowly.

After refuelling, refit the cap and turn it until one or more clicking sounds are heard.

NOTE

If the fuel cap is not properly closed or if the engine is running during refuelling then the symbol for a fault in the exhaust system is illuminated. However, this does not affect the performance of the car.

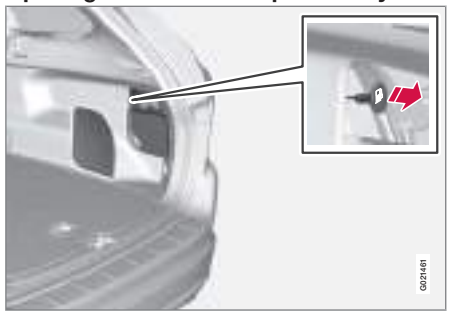
Filling up with fuel

Do not overfill the tank but fill until the pump nozzle cuts out.

NOTE

Excess fuel in the tank can overflow in hot weather.

Opening the fuel filler flap manually



The fuel filler flap can be opened manually when electric opening from the passenger compartment is not possible.

1. Open the side hatch in the cargo area (same side as fuel filler flap).
2. Locate the green cord with handle.
3. Pull it straight back until the fuel filler flap folds out with a "click".

General information on fuel

Fuel of a lower quality than that recommended by Volvo must not be used as engine power and fuel consumption is negatively affected.

WARNING

Always avoid inhaling fuel fumes and fuel splashing in the eyes.

If fuel gets into your eyes, take out contact lenses if worn and rinse your eyes with plenty of water for at least 15 minutes and seek medical attention.

Never swallow fuel. Fuels such as petrol, bioethanol and mixtures of the two, as well as diesel, are highly toxic and could cause permanent injury or be fatal if swallowed. Seek medical attention immediately if fuel has been swallowed.

WARNING

Fuel which spills onto the ground can be ignited.

Switch off the fuel-driven heater before starting to refuel.

Never carry an activated mobile phone when refuelling. The ring signal could cause spark build-up and ignite petrol fumes, leading to fire and injury.

IMPORTANT

The use of other fuels for each respective engine type, other than recommended here by Volvo, could cause engine damage and impaired performance.

The use of other fuels also invalidates Volvo's warranties as well as any supplementary service agreement.

NOTE

Extreme weather conditions, driving with a trailer or driving at high altitudes in combination with fuel grade are factors that could affect the car's performance.

Petrol

Petrol must meet the EN 228 standard. Most engines can be run with octane ratings of 95 and 98 RON. 91 RON should only be used in exceptional cases.

- 95 RON can be used for normal driving.
- 98 RON is recommended for optimum performance and minimum fuel consumption.

When driving in temperatures above +38 °C, fuel with the highest possible octane rating is recommended for optimum performance and fuel economy.

IMPORTANT

- Always refuel with unleaded petrol so as not to damage the catalytic converter.
- In order that Volvo's warranty shall remain valid, never mix alcohol with petrol, as the fuel system could be damaged.
- Do not use additives not recommended by Volvo.

Catalytic converters

The purpose of the catalytic converters is to purify exhaust gases. They are located close to the engine so that operating temperature is reached quickly.

The catalytic converters consist of a monolith (ceramic or metal) with channels. The channel walls are lined with a thin layer of platinum/rhodium/palladium. These metals act as catalysts, i.e. they participate in and accelerate a chemical reaction without being used up themselves.

Lambda-sond™ oxygen sensor

The Lambda-sond is part of a control system intended to reduce emissions and improve fuel economy.

An oxygen sensor monitors the oxygen content of the exhaust gases leaving the engine. This value is fed into an electronic system that con-

Fuel

tinuously controls the injectors. The ratio of fuel to air directed to the engine 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).

Diesel

Diesel must fulfil the EN 590 or JIS K2204 standards. Diesel engines are sensitive to contaminants, such as excessively high volumes of sulphur particles for example. Only use diesel fuel from well-known producers. Never use diesel of dubious quality.

At low temperatures (-6 °C to -40 °C), a paraffin precipitate may form in the diesel fuel, which may lead to ignition problems. Special diesel fuel designed for low temperatures around freezing point is available from the major oil companies. This fuel is less viscous at low temperatures and reduces the risk of paraffin precipitate.

The risk of condensation in the fuel tank is reduced if the tank is kept well filled. When refuelling, check that the area around the fuel filler pipe is clean. Avoid spilling fuel onto the paintwork. Wash off any spillage with detergent and water.

IMPORTANT

Only ever use fuel that fulfils the European diesel standard.

The sulphur content must be a maximum of 50 ppm.

IMPORTANT

Diesel type fuels which must not be used:

- Special additives
- Marine Diesel Fuel
- Fuel oil
- RME [1] (Rape Methyl Ester) and vegetable oil.

These fuels do not fulfil the requirements in accordance with Volvo recommendations and generate increased wear and engine damage that is not covered by the Volvo warranty.

Empty tank

No special procedures are required if the tank runs dry. The fuel system is bled automatically if the remote control is kept in key position **II** (see page 70) for approx. 60 seconds before the start attempt.

Draining condensation from the fuel filter

The fuel filter separates condensation from the fuel. Condensation can disrupt engine operation.

The fuel filter must be drained at the intervals specified in the Service and Warranty Booklet or if you suspect that the car has been filled with contaminated fuel.

IMPORTANT

Certain special additives remove the water separation in the fuel filter.

Diesel particle filter (DPF)

Diesel cars are equipped with a particle filter, which results in more efficient emission control. The particles in the exhaust gases are collected in the filter during normal driving. So-called "regeneration" is started in order to burn away the particles and empty the filter. This requires the engine to have reached normal operating temperature.

Regeneration of the filter takes place automatically at an interval of approximately 300-900 km depending on driving conditions.

[1] Diesel fuel may contain a certain amount of RME, but further amounts must not be added.

Regeneration normally takes 10-20 minutes. It may take a little longer at a low average speed. Fuel consumption may increase slightly during regeneration.

Regeneration in cold weather

If the car is frequently driven short distances in cold weather then the engine does not reach normal operating temperature. This means that regeneration of the diesel particle filter does not take place and the filter is not emptied.

When the filter has become approximately 80% full of particles, a warning triangle on the instrument panel illuminates, and the message **Soot filter full. See manual** is shown on the instrument panel display.

Start regeneration of the filter by driving the car until the engine reaches normal operating temperature, preferably on a main road or motorway. The car should then be driven for approximately ca 20 minutes more.

When regeneration is complete the warning text is cleared automatically.

Use the parking heater* in cold weather so that the engine reaches normal operating temperature more quickly.

IMPORTANT

If the filter fills up with particles then it can be difficult to start the engine and the filter will be incapable of functioning. Then there is a risk that the filter will have to be replaced.

Fuel consumption and emissions of carbon dioxide

Fuel consumption figures may change if the car is equipped with extra equipment that affects the car's weight. Table, see page 275.

The manner in which the car is driven, and other non-technical factors can also affect fuel consumption.

Consumption is higher and power output lower for fuel with an octane rating of 91 RON.

NOTE

Extreme weather conditions, driving with a trailer or driving at high altitudes in combination with fuel grade are factors that could affect the car's performance.

Loading

General

The load capacity is affected by what is mounted on the car, such as a towbar, load carriers and roof box. The load capacity of the car is also reduced by the number of passengers and their weight.

WARNING

The car's driving characteristics change depending on the weight and distribution of the load.

Loading the cargo area

- Position the load firmly against the backrest in front.
- Put wide loads in the centre.
- Heavy objects should be placed as low as possible.
- Cover sharp edges with something soft to avoid damaging the upholstery.
- Secure all loads to the load retaining eyelets with straps or web lashings.

WARNING

A loose object weighing 20 kg can, in a frontal collision at a speed of 50 km/h, carry the impact of an item weighing 1000 kg.

Always secure the load.

WARNING

The protection provided by the inflatable curtain in the headlining may be compromised or eliminated by high loads. Never load cargo above the backrest. During heavy braking the load may otherwise shift, causing injury to the car's occupants.

WARNING

Always secure the load. During heavy braking the load may otherwise shift, causing injury to the car's occupants.

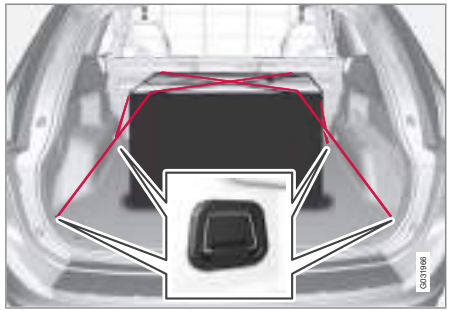
Protect sharp edges with something soft.

Turn off the engine and apply the parking brake when loading or unloading long objects. Otherwise you may accidentally knock the gear lever or gear selector with the load and cause a gear to engage and the car to move off.

Lowering the rear seat backrest

To simplify loading in the cargo area, the rear seats of the car can be folded down, see page 74.

Securing loads



Each corner of the cargo area has attachment points intended for the anchorage of loads.

WARNING

Hard, sharp and/or heavy objects that are loose or protrude could cause injury during heavy braking.

Always secure large and heavy objects with a seatbelt or cargo retaining straps.

Bag holder*

Bag holder under folding hatch in the floor.

The bag holder keeps carrier bags in place and prevents them from overturning and spreading their contents across the cargo area.

1. Open the hatch that is part of the floor in the cargo area.
2. Tension and secure the carrier bags using the strap.

Safety net*

The safety net is fitted into four mounting points.

A safety net prevents loads or pets from being thrown forward in the passenger compartment in the event of sudden braking. For safety reasons, the safety net must always be correctly fastened and secured.

The net is made of a strong nylon fabric and can be secured two different locations in the car:

- Rear fitting - Behind the rear seat backrest
- Front fitting - Behind the front seat backrests.

WARNING

Loads in the cargo area must be firmly secured, even if the safety net is correctly fitted.

Installation

NOTE

The safety net is most easily fitted via one of the rear doors.

WARNING

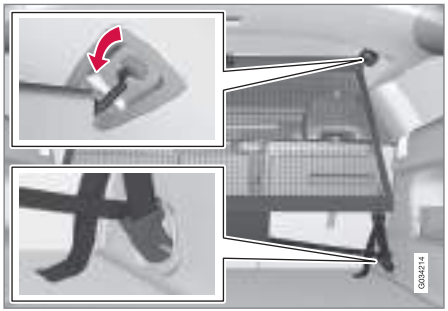
Make sure that the upper mountings of the safety net are correctly fitted and that the anchoring straps are securely fastened.

Do not use a damaged net.

1. Unfold the safety net and make sure that the split upper rod is locked in extended position.
2. Hook one end of the rod into the front or rear roof mounting with the anchoring strap locks turned towards you.
3. Hook the other end of the rod into the roof mounting on the opposite side - the telescopic spring-loaded retaining hooks facilitate alignment.

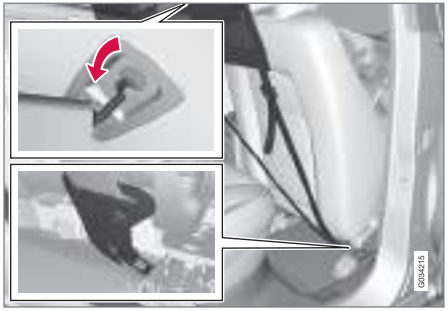
Cargo area

- Take care to press forward the rod's retaining hooks for each respective roof mounting's front end position.



Rear fitting.

4. Rear fitting: With the net fitted in the rear roof mountings, hook the safety net's anchoring straps into the front floor eyes in the cargo area.



Front fitting.

Front fitting: With the net fitted in the front roof mountings, hook the safety net's anchoring straps into the eyes on the rear of the seat slide rails - it is easier if the backrests are straightened and the seats are moved forward slightly.

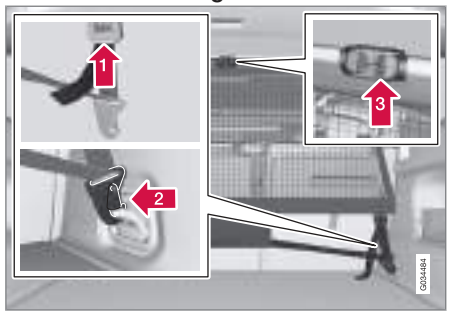
Pay attention to make sure that you do not press the seat/backrest hard against the net when the seat/backrest is moved back again - only adjust until the seat/backrest makes contact with the net.

IMPORTANT

If the seat/backrest is pressed hard backwards against the safety net then the net and/or its roof mountings could be damaged.

5. Tension the safety net with the anchoring straps.

Removal and storage



The safety net can be easily removed and folded up.

1. Release the tension in the net by pressing in the button on the anchoring strap's lock and feeding out part of the strap.
2. Press in the catch and detach both of the anchoring strap's hooks.

3. Break the rod in the centre, fold it together and roll up the net.

The folded safety net can be stored under the cargo compartment floor.

Safety grille*

A safety grille prevents loads or pets from being thrown forward in the passenger compartment in the event of sudden braking. For safety reasons, the grille must always be mounted and secured correctly.

Folding up

Take hold of the bottom of the safety grille and pull back/up.

IMPORTANT

The safety grille cannot be folded up or down when a cargo cover is fitted.

Installation

NOTE

The safety grille is most easily fitted and removed by two people via the rear doors.

When fitting, the handle, see illustration 1–3, must be on the front of the grille.

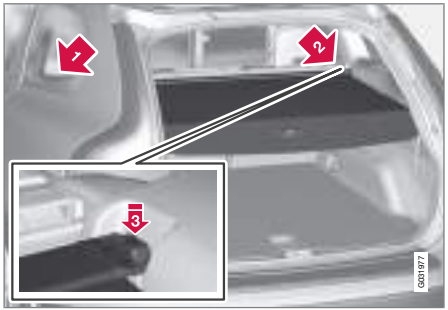
The backrests must be lowered to allow the safety grille to be fitted, see page 74.

1. Position the handle in fitting position, see illustration. Press gently on the handle to enable it to be turned into position, see arrow.
2. Press the strut in towards the grille and align the grille in the roof mounting.
3. Turn the handle 90° 1. Press gently as in the illustration (1) if necessary. Secure the grille by angling the handle 90° 2.

Cargo area

Removal
Removal of the grille takes place in reverse order to the description in the related section entitled "Installation".

Cargo cover*



Pull the cargo cover over the load and hook it into the holes by the rear pillars in the cargo area.

IMPORTANT

The safety grille cannot be folded up or down when the cargo cover is fitted.

Fitting the cargo cover
1. Move one end piece of the cover into the recess on the side panel.
2. Move the other end piece into the corresponding recess.
3. Press both sides in. A "click" should be audible and the red marking should disappear.
   > Check that both end pieces are locked.

Removing the cargo cover
1. Press in one end piece button and lift it out.
2. Carefully angle the cover up/out and the other end piece loosens automatically.

Lowering the cargo cover's rear sealing disc
In its rolled-in position, the cargo cover's rear sealing disc protrudes horizontally into the cargo area when it is fitted.

– Pull the sealing disc back gently, free from its support shelves, and lower.

Long load
The passenger seat backrest can also be folded for an extra long load, see page 72.

Roof load

Using load carriers
To avoid damaging the car and for maximum possible safety while driving, the load carriers designed by Volvo are recommended.

Carefully follow the installation instructions supplied with the carriers.

- Check periodically that the load carriers and load are properly secured. Lash the load securely with retaining straps.
- Distribute the load evenly over the load carriers. Put the heaviest objects at the bottom.
- The size of the area exposed to the wind, and therefore fuel consumption, increase with the size of the load.
- Drive gently. Avoid quick acceleration, heavy braking and hard cornering.

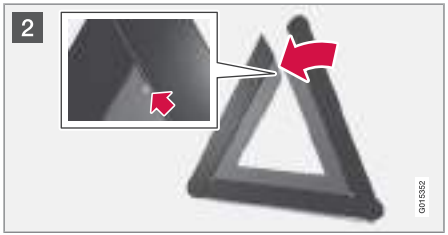
WARNING

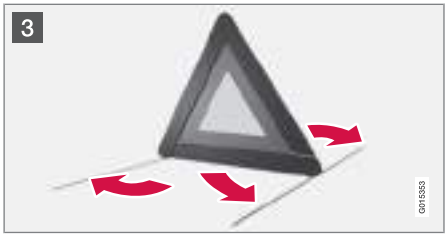
The car's centre of gravity and driving characteristics are altered by roof loads.

For information on maximum permitted roof load, including load carriers and any space box, see page 269.

* Option/accessory, for more information, see Introduction.

Warning triangle





1 Lift the floor mat and take out the warning triangle.

2 Take the warning triangle from the case, fold out and assemble the two loose sides.

3 Fold out the warning triangle's support legs.

Follow the regulations in force for the use of a warning triangle*. Position the warning triangle in a suitable place with regard to traffic.

Ensure the warning triangle and its case are properly secured in the cargo area after use.

First aid

A case with first aid equipment is located under the floor in the cargo area

Driving with a trailer

General

If the towing bracket is mounted by Volvo, then the car is delivered with the necessary equipment for driving with a trailer.

- The car's towing bracket must be of an approved type.
- If the towbar is retrofitted, check with your Volvo dealer that the car is fully equipped for driving with a trailer.
- Distribute the load on the trailer so that the weight on the towing bracket complies with the specified maximum towball load.
- Increase the tyre pressure to the recommended pressure for a full load. For tyre pressure label location, see page 261.
- Clean the towing bracket regularly and grease the towball.
- Do not tow a heavy trailer when the car is brand new. Wait until it has been driven at least 1000 km.
- The brakes are loaded much more than usual on long and steep downhill slopes. Downshift to a lower gear and adjust your speed.
- The engine is loaded more heavily than usual when driving with a trailer.
- If the car is driven with a heavy load in a hot climate, the engine may overheat. If the temperature in the engine's cooling system is too high the warning symbol is illuminated and the information display shows **High engine temp Stop safely**. Stop the car in a safe way and allow the engine to run at idling speed for several minutes and cool down. If **High engine temp Stop engine** or **Coolant level low, Stop engine** are shown then the engine must be switched off after stopping the car.
- The automatic gearbox has a built-in protection system that engages in the event of overheating. If the temperature in the gearbox is too high the warning symbol is illuminated and the information display shows **Transmission hot Reduce speed** or **Transmission hot Stop safely**. Follow the instructions and reduce speed or stop the car in a safe way and allow the engine to run at idling speed for several minutes to enable the gearbox to cool down. In the event of overheating the car's air conditioning may be temporarily switched off.
- In the interests of safety, you should restrict speed to 80 km/h, even if the laws of certain countries allow for higher speeds.
- Move the gear selector to position **P** when parking an automatic car with a hitched trailer. Always use the parking brake. Block the wheels with chocks when parking a car with hitched trailer on a hill.

Trailer cable

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

Direction indicators on trailer

A symbol in the combined instrument panel flashes when the direction indicators are used and the trailer is connected. If the symbol flashes more quickly then one of the lamps on the car or the trailer is broken, see page 67.

Automatic gearbox

Parking on a hill

1. Activate the parking brake.
2. Move the gear selector to position **P**.

Starting on a hill

1. Move the gear selector to position **D**.
2. Release the parking brake.

Steep inclines

- Do not use a higher manual gear than the engine can "handle". It is not always economical to drive in high gears.
- Avoid driving with a trailer on inclines of more than 15%.

Level control

The rear shock absorbers maintain a constant height irrespective of the car's load (up to the maximum permissible weight). When the car is stationary the rear of the car lowers slightly, which is normal.

Trailer weights

National vehicle regulations can limit trailer weights and speeds. The towbar can be certified for a higher towing weight than the car can actually tow. For Volvo's permitted trailer weights, see page 270.

WARNING

Follow the stated recommendations for trailer weights. Otherwise, the car and trailer may be difficult to control in the event of sudden movement and braking.

Towing equipment

If the car is equipped with a detachable towbar, the towball mounting instructions must be followed carefully, see page 218.

WARNING

If the car is fitted with a Volvo detachable towbar:

- Follow the assembly instructions for the towball section carefully.
- The towball section must be locked with the key before setting off.
- Check that the indicator window shows green.

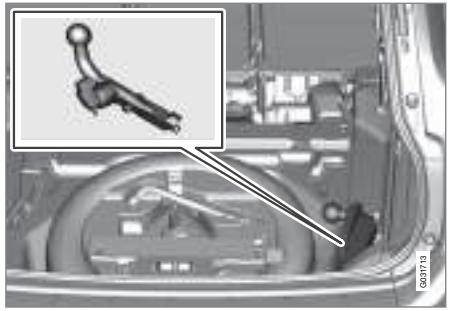
Important checks

- The towball section's towball must be cleaned and greased regularly.

NOTE

If a towball hitch with vibration damper is used, it is not necessary to grease the towball.

Storing the towball section



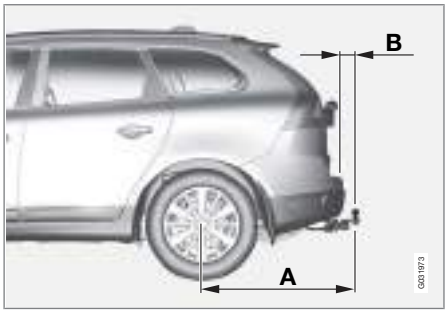
Towball section storage location.

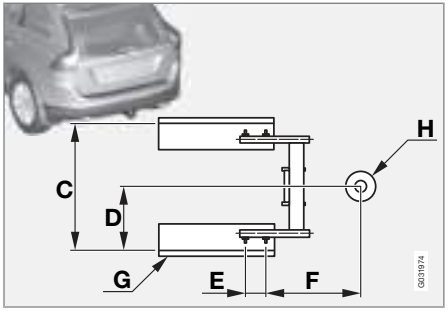
IMPORTANT

Always remove the towball section after use and store it in the appointed location in the car, firmly fastened with its strap.

Driving with a trailer

Specifications





Dimensions, mounting points (mm)	
A	1013
B	69
C	855
D	428
E	109
F	296
G	Side member
H	Ball centre

Installing the towball

1 Remove the protective cover by first pressing in the catch 1 and then pulling the cover straight back 2.

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

Driving with a trailer

3 The indicator window must show red.

4 Insert the towball section until you hear a click.

5 The indicator window must show green.

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

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

WARNING

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

IMPORTANT

Only grease in the ball for the towing hitch, the remainder of the towball section should be clean and dry.

Driving with a trailer

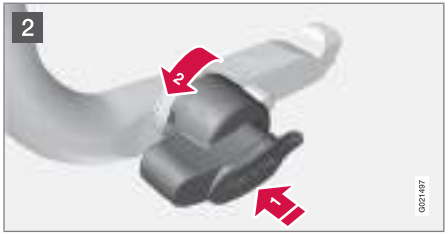
8 Safety cable.

WARNING

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

Removing the towball

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



2 Push in the locking wheel 1 and turn it anticlockwise 2 until you hear a 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.

WARNING

Secure the towbar's loose towball safely if it is stored in the car, see page 217.

4 Push the protective cover until it snaps tight.

Trailer Stability Assist - TSA

The TSA system (Trailer Stability Assist) serves to stabilise the car and trailer combination if it begins to snake.

The TSA function is part of the **DSTC** system (Dynamic Stability and Traction Control), see page 150.

Function

The snaking phenomenon can occur with any car/trailer combination. Normally, snaking occurs at extremely high speeds. But, there is a risk of it occurring at lower speeds (70-90 km/h) if the trailer is overloaded or the load is improperly distributed, e.g. too far back.

In order for snaking to occur, there must be a triggering factor, e.g.:

- Car with trailer subjected to a sudden and powerful side wind.
- Car with trailer drives on an uneven road surface or in a pothole.
- Sweeping steering wheel movements.

Operation
If snaking has started, it could be difficult or even impossible to suppress. This makes the car/trailer combination difficult to control and there is a risk that you could, for example, end up in the wrong lane or leave the carriageway.

The TSA system continually monitors car movements, particularly lateral movements. If snaking is detected, the front wheels are individually braked. This serves to stabilise the car/trailer combination. This is often enough to help the driver regain control of the car.

If snaking is not eliminated the first time the TSA system comes into action, the car/trailer combination is braked with all wheels and engine power is reduced. Once snaking has been gradually suppressed and the car/trailer combination is once again stable, the TSA system stops regulating and the driver once again has full control of the car.

Miscellaneous
The TSA system can engage within the speed interval 60 to 160 km/h.

NOTE

If the driver chooses to deactivate (reduce) the **DSTC** system, the TSA system is also deactivated, see page 150.

TSA may fail to engage if the driver uses severe steering wheel movements to try to rectify the snaking because in such a situation the TSA system cannot determine whether it is the trailer or the driver that is causing the snaking.

The **DSTC** symbol in the combined instrument panel flashes when the TSA is working.

Towing and recovery

Towing

Find out the highest legal speed for towing before towing the car.

1. Press the remote control key into the ignition switch to unlock the steering lock so that the car can be steered, see page 70.
2. The remote control key must remain in the ignition switch while the car is being towed.
3. Ensure the towrope is always taut by gently depressing the brake pedal to avoid violent jerks.
4. Be prepared to brake to stop.

WARNING

Insert the remote control key in the ignition switch to unlock the steering lock (so that the car can be steered) before towing.

WARNING

The steering lock stays in the position it was in when the power was cut off. The steering lock must be unlocked before towing. The ignition must be in position **II**. Never remove the remote control key from the ignition switch while driving or when the car is being towed.

WARNING

The brake servo and power steering do not work when the engine is switched off. The brake pedal must be pressed about five times harder than normal, and the steering will be considerably heavier than normal.

Manual gearbox

– Move gear lever into neutral and release the parking brake.

Automatic gearbox

– Move the gear selector to position **N** and release the parking brake.

IMPORTANT

Note that the car must always be towed with the wheels rolling forward.

- Cars with automatic gearbox must not be towed at speeds above 80 km/h or further than 80 km.

Jump starting

Do not tow the car to bump start it. Use a donor battery if the battery is discharged to the extent that the engine does not start, see page 97.

IMPORTANT

Bump starting the car can damage the catalytic converter.

Towing eye

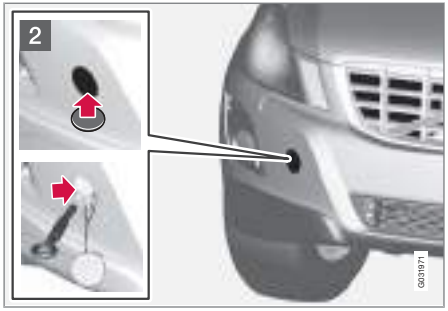
Use the towing eye if the car needs to be towed on the road. The towing eye is fastened in the socket on the right-hand side of the bumper.

After use, unscrew the towing eye and put it back in its storage space.

Fitting the towing eye

1 Take out the towing eye from its storage space under the floor hatch in the cargo area.

> In some cases, the towing eye may be hidden under the sill.



2 Use a slotted screwdriver or a coin to detach the cover at its bottom edge.

Screw in the towing eye firmly, right in up to the flange. Use the wheel wrench to tighten the towing eye.

NOTE

On certain cars with fitted towbar the towing eye cannot be secured in the rear mounting. In which case, secure the tow rope in the towbar.

For this reason it is advisable to store a detachable towbar towball in the car.

Recovery

IMPORTANT

Note that the car must always be towed with the wheels rolling forward.

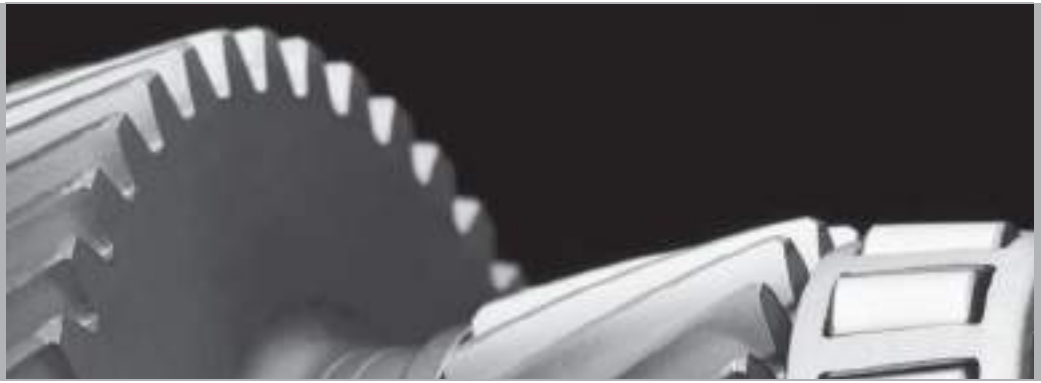
- An all-wheel drive car (AWD) with raised front suspension must not be towed at speeds above 70 km/h. It should not be towed further than 50 km.

WARNING

The towing eye is only designed for towing on roads - not for recovering the car. Call a recovery service for recovery assistance.

G020922

MAINTENANCE AND SPECIFICATIONS



06

Engine compartment

General

Volvo service programme
To keep the car as safe and reliable as possible, follow the Volvo service programme as specified in the Service and Warranty Booklet. Have an authorised Volvo workshop carry out service and maintenance work. Volvo workshops have the personnel, special tools and service literature to guarantee the highest quality of service.

IMPORTANT

For the Volvo warranty to apply, check and follow the instructions in the Service and Warranty Booklet.

Check regularly
Check the following oils and fluids at regular intervals, e.g. when refuelling:

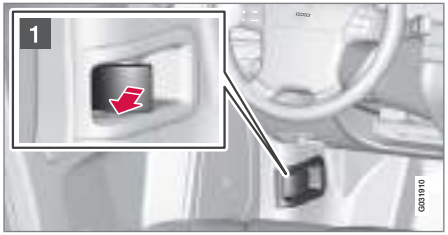
- Coolant
- Engine oil
- Power steering fluid
- Washer fluid

WARNING

Bear in mind that the radiator fan may start automatically some time after the engine has been switched off.

Always have the engine cleaned by a workshop. There is a risk of fire if the engine is hot.

Opening and closing the bonnet

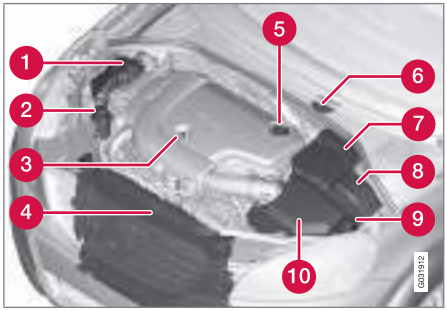


1. Pull the handle by the pedals. An information symbol lights when the bonnet is open, see page 66.
2. Move the catch to the left and open the bonnet. (The catch hook is located between the headlamp and grille, see illustration.)

WARNING

Check that the bonnet locks properly when closed.

Engine compartment, overview



The appearance of the engine compartment may vary depending on engine variant.

1. Coolant expansion tank
2. Power steering fluid reservoir

3. Engine oil dipstick
4. Radiator
5. Filler opening for engine oil
6. Brake and clutch fluid reservoir (left-hand drive)
7. Battery
8. Relay and fuse box, engine compartment
9. Filling washer fluid
10. Air filter.

WARNING

High voltage output from the ignition system. The voltage in the ignition system is highly dangerous. The ignition switch must therefore always be in position **0** during work in the engine compartment; see page 70.

Do not touch the spark plugs or ignition coils when the ignition is in ignition position **II** or when the engine is hot.

Checking the engine oil

Label for oil grade.

Volvo recommends Castrol oil products. If the car is driven in adverse conditions, see Volvo's recommendations, see page 271.

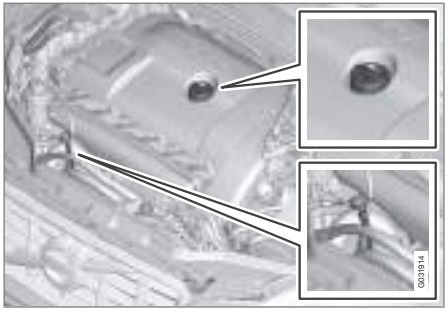
IMPORTANT

In order to fulfil the requirements for the engine's service intervals all engines are filled with a specially adapted synthetic engine oil at the factory. The choice of oil has been made very carefully with regard to service life, starting characteristics, fuel consumption and environmental impact. An approved engine oil must be used in order that the recommended service intervals can be applied. Only use a prescribed grade of oil (see the engine compartment decal) for both filling and oil change, otherwise you will risk affecting service life, starting characteristics, fuel consumption and environmental impact. Volvo Car Corporation disclaims all warranty liability if engine oil of the prescribed grade and viscosity is not used.

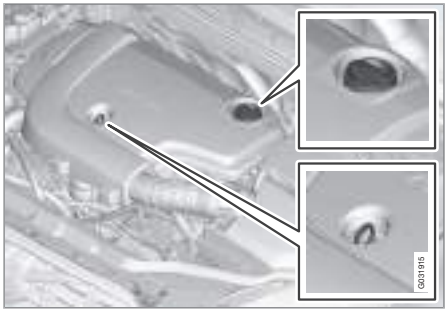
Volvo uses different systems for warning of low oil level or low oil pressure. Certain variants have an oil pressure sensor, and then the lamp for oil pressure is used. Other variants have an oil level sensor, and then the driver is informed via the warning symbol in the centre of the instrument unit as well as by display texts. Certain models have both variants. Contact a Volvo dealer for more information.

Engine compartment

Filling and dipstick



Petrol engine.



Diesel engine.

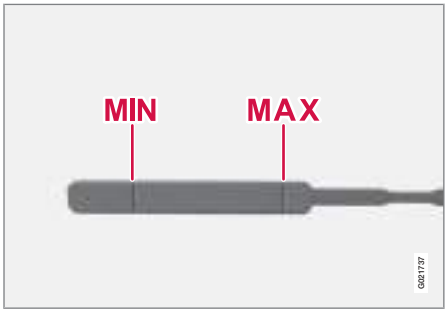
Change in accordance with the intervals specified in the Service and Warranty Booklet.

IMPORTANT

When filling oil to top up, the oil being filled must have the same grade, see page 273.

Checking the oil level in a new car is especially important before the first scheduled oil change.

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.



The oil level must be within the area marked on the dipstick.

Park the car on a level surface, switch off the engine and wait 10-15 minutes to allow the oil time to run back to the sump. For capacities, see page 271 and onwards.

Checking with a cold engine

1. Wipe the dipstick clean.
2. Check the level using the dipstick. It must be between the **MIN** and **MAX** marks.
3. If the level is close to the **MIN** mark, start by topping up with 0.5 litres of oil. Top up until the level is nearer to **MAX** than **MIN** on the dipstick.

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.

Checking with a warm engine

1. Wipe the dipstick clean.
2. Check the oil level using the dipstick.
3. If the level is close to the **MIN** mark, start by topping up with 0.5 litres of oil. Top up until the level is nearer to **MAX** than **MIN** on the dipstick.

Coolant

Checking and topping up the 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. For capacities, see page 273.

IMPORTANT

- A high content of chlorine, chlorides and other salts may cause corrosion in the cooling system.
- Always use coolant with anti-corrosion agent as recommended by Volvo.
- Ensure that the coolant mixture is 50% water and 50% coolant.
- Mix the coolant with approved quality tap water, see page 273. In the event of any doubt about water quality, used ready-mixed coolant in accordance with Volvo recommendations.
- When changing coolant/replacing cooling system components, flush the cooling system clean with approved quality tap water, or flush with ready-mixed coolant, see page 273.
- 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.

Check the coolant regularly

The level must lie between the **MIN** and **MAX** marks on the expansion tank. If the system is not filled sufficiently, high temperatures could occur, causing a risk of damage to the engine.

WARNING

Coolant can 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.

Brake and clutch fluid

Checking the level

Brake and clutch fluid have a common reservoir. The level must be between the **MIN** and **MAX** marks that are visible inside the reservoir. Check the level regularly.

Change the brake fluid every other year or at every other regular service.

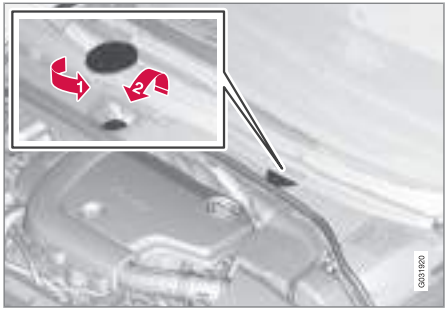
For capacities and recommended fluid grade, see page 273. The fluid should be changed annually on cars driven in conditions requiring hard, frequent braking, such as driving in mountains or tropical climates with high humidity.

WARNING

If the brake fluid is under the **MIN** level in the brake fluid reservoir, do not drive further before topping up the brake fluid. The reason for the loss of brake fluid must be investigated by an authorised Volvo workshop.

Engine compartment

Filling



The fluid reservoir is located on the driver's side.

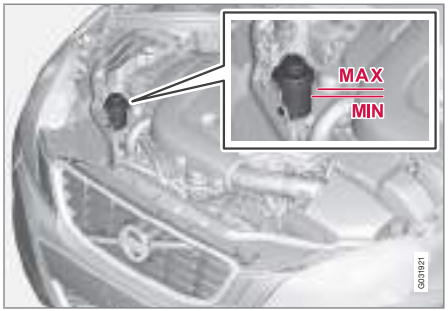
The fluid reservoir is protected under the cover over the cold section in the engine compartment. The round cover must be removed first before the reservoir cap can be reached.

1. Turn and open the cover located on the covering.
2. Unscrew the reservoir cap and fill the fluid. The level must be between the **MIN** and **MAX** marks, which are located on the inside of the reservoir.

IMPORTANT

Remember to close the cap.

Power steering fluid



IMPORTANT

Keep the area around the power steering fluid reservoir clean when checking.

Check the level frequently. The most accurate measurements are made on a cold engine before starting. The fluid does not require changing. The fluid level must be between the **MIN** and **MAX** marks. For capacities and recommended fluid grade, see page 273.

NOTE

If a fault should arise in the power steering system or if the engine is switched off and the car must be towed, it can still be steered.

General

All bulbs are specified, see page 237. Bulbs and spotlights that are of a special type or that are only suitable for replacement by a workshop are:

- General interior lighting in the roof, reading lamps
- Glovebox lighting
- Direction indicators, door mirror
- Direction indicators, rear
- Approach light duration
- Position lamp
- Active Xenon lamps
- LED lamps

WARNING

On cars with Xenon headlamps, Xenon lamp replacement must be carried out at an authorised Volvo workshop. The headlamps must be handled with extreme caution due to the Xenon lamp's high-voltage unit.

IMPORTANT

Never touch the glass part of the bulbs with your fingers. Grease and oils from your fingers are vaporised by the heat, coating the reflector and then causing damage.

Front lamp housing

All front bulbs (except those for fog lamps) are replaced by first removing the whole lamp housing from the engine compartment.

WARNING

Always switch off the ignition and remove the remote control key before starting to replace a bulb.

Removing the headlamp

1. Press quickly on the **START**-/**STOP** button and remove the remote control key.
2. (Upper illustration)

   1 Withdraw the lamp housing's locking pins.

   2 Pull the lamp housing straight forward.

IMPORTANT

Do not pull the electrical cable, only the connector

3. (Lower illustration)

   3 Detach the lamp housing connector by pressing down the clip with your thumb.

   4 At the same time, guide out the connector with your other hand.
4. Lift out the lamp housing and place it on a soft surface to avoid scratching the lens.
5. Replace the bulb in question.

Lamps

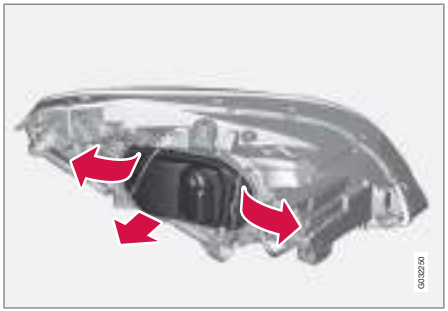
Installing the headlamp

When installing, check that the long lock pin is engaged - it should be engaged in both eyes.

1. Plug in the connector, a clicking sound should be heard.
2. Reinstall the lamp housing and locking pins. Check that they are correctly inserted.
3. Check the lighting.

The lamp housing must be plugged in and installed before the lighting is switched on or the remote control key is inserted into the ignition switch.

Removing the cover

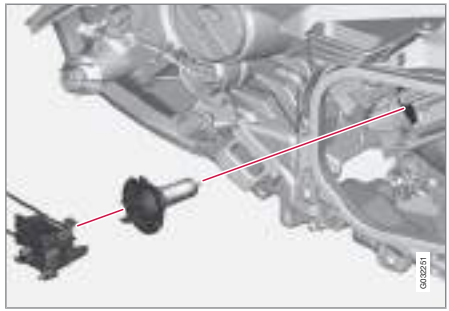


Before starting to replace a bulb, see page 231.

1. Release the catches by pressing out.
2. Remove the cover by pulling it straight out.

Reinstall the cover in reverse order.

Dipped beam, halogen

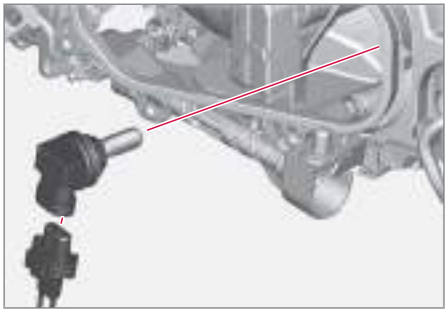


1. Detach the headlamp.
2. Remove the cover.
3. Detach the bulb by pressing the holder downwards.
4. Unplug the connector from the bulb.
5. Fit the new bulb in the socket and snap it in. It can only be secured in one position.

Reinstall the parts in reverse order.

Lamps

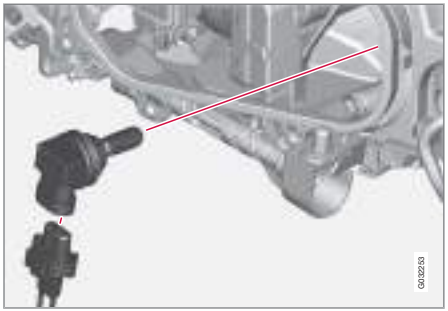
Main beam, Halogen



1. Detach the headlamp.
2. Remove the cover.
3. Unplug the connector from the bulb.
4. Detach the bulb holder by pulling it straight out.
5. Replace the bulb and fit the new one in the socket. It can only be secured in one position.

Reinstall the parts in reverse order.

Extra main beam, Xenon*



1. Detach the headlamp.
2. Remove the cover.
3. Unplug the connector from the bulb.
4. Detach the bulb holder by pulling it straight out.
5. Replace the bulb and fit the new one in the socket. It can only be secured in one position.

Reinstall the parts in reverse order.

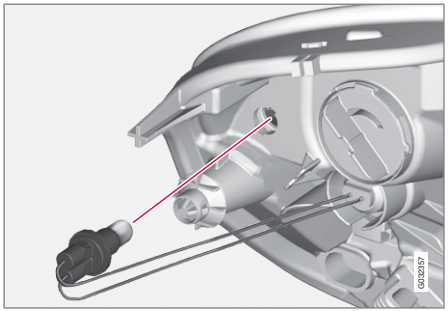
Direction indicators/flashers

1. Detach the headlamp.
2. Detach the bulb holder by turning anti-clockwise.
3. Pull the bulb holder in order to extract the bulb.
4. Remove the blown bulb by pressing it in and turning anticlockwise.
5. Fit a new bulb, press down and turn clockwise.
6. Fit the bulb holder and turn clockwise.

Reinstall the parts in reverse order.

Lamps

Side marker lamps



Before starting to replace a bulb, see page 231.

1. Detach the headlamp.
2. Turn the bulb holder anticlockwise and remove it.
3. Remove the blown bulb and fit a new one. It can only be installed in one way.
4. Fit the bulb holder in the socket and turn clockwise.

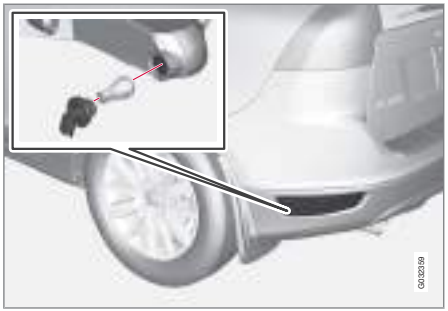
Reinstall the parts in reverse order.

Front fog lamps

Undo the cover by pulling out the top corner, closest to the grille, see the illustration above.

1. Pull the cover straight out in the direction of the centre of the car using a tool, see the illustration above.
2. Unscrew the lamp housing screw and remove the fog lamp.
3. Turn the bulb anticlockwise and remove it.
4. Fit a new bulb and turn clockwise.
5. Refit the bulb holder. The **TOP** mark on the bulb holder must always be upward.

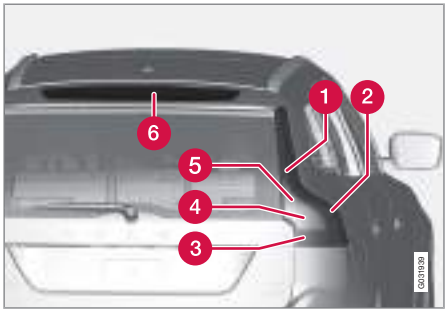
Rear fog lamp



The rear fog lamp is accessed behind the bumper

1. Detach the bulb holder by turning anti-clockwise.
2. Remove the blown bulb by pressing it in and turning anticlockwise.
3. Fit a new bulb, press down and turn clock-wise.
4. Fit the bulb holder and turn clockwise.

Location of rear bulbs



Lamp lens, right-hand side

1. Position (LED)/side marker lamps
2. Side reflector, rear
3. Brake light
4. Reversing lamp
5. Indicator
6. Brake light (LED)

Brake lights and reversing lamps

Both the brake light and the reversing lamp bulbs are replaced from inside the cargo area.

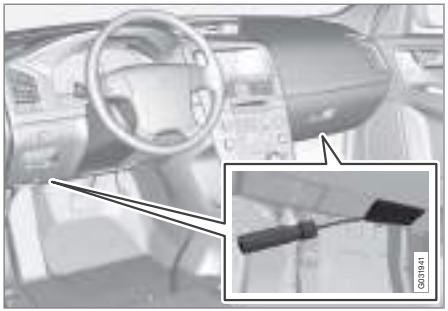
1. Open the panel.
2. Detach the bulb holder by turning anti-clockwise.
3. Remove the blown bulb by pressing it in and turning anticlockwise.
4. Fit a new bulb, press down and turn clock-wise.
5. Fit the bulb holder and turn clockwise.

Number plate lighting

1. Remove the screws with a screwdriver.
2. Carefully detach the entire lamp housing and withdraw it.
3. Replace the bulb.
4. Refit the entire lamp housing and screw it into place.

Lamps

Courtesy lighting



Before starting to replace a bulb, see page 231.

1. Insert a screwdriver at the short end of the lens closest to the tunnel console and turn gently so that the lens comes loose. (Applies to both lamps).
2. Turn carefully until the lens comes loose.
3. Replace the bulb.
4. Refit the lens.

Lighting, cargo area

1. Insert a screwdriver and gently prize so that the lamp housing comes loose.
2. Replace the bulb.
3. Check that the bulb illuminates and press back the lamp housing.

Vanity mirror lighting

Removing the mirror glass

1. Insert a screwdriver underneath the lower edge, in the centre. Carefully prize up the lug on the edge.
2. Insert the screwdriver underneath the edge on the left and right-hand sides (by the black rubber sections), and prize carefully so that the glass comes loose in the lower edge.
3. Carefully detach and lift aside the entire mirror glass and cover.
4. Replace the bulb.

Fitting the mirror glass

1. Press the three lugs at top edge of the mirror glass back into position.

2. Then press the three lower lugs back into position.

Specification, bulbs

Lighting	Output (W)	Type
Extra main beam, Xenon, ABL	65	H9
Dipped beam, halogen	55	H7 LL
Main beam, Halogen	65	H9
Front direction indicators	21	PY21W
Front fog lamps	35	H8
Courtesy lighting, cargo area lighting, number plate lighting	5	Tubular lamp SV8.5
Vanity mirror	1.2	Tubular lamp SV5.5
Front side marker lamps	5	W3WLL
Glovebox lighting	5	Tubular lamp SV8.5

Wiper blades and washer fluid

Wiper blades

For more information on wipers and washing, see page 86.

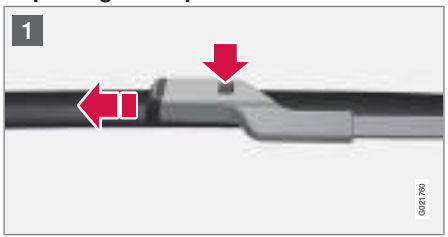
Service position

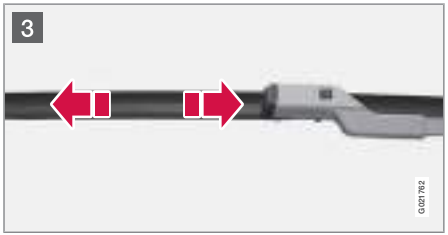
The wiper blades must be in service position to facilitate replacement or washing.

1. Turn the remote control key to position **0**, see page 70, and keep the remote control key in the ignition switch.
2. Move the right-hand stalk switch up for about 1 second. The wipers then move to standing straight up.

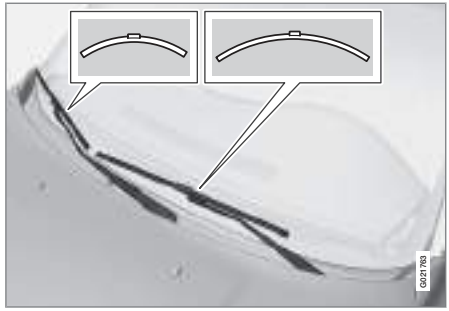
The wipers return to the starting position when the car is started.

Replacing the wiper blades





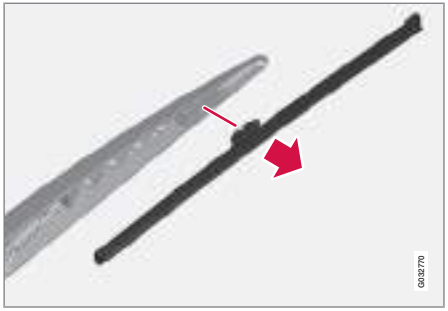
1. Turn up the wiper arm. Press the button located on the wiper blade mounting and pull straight out parallel with the wiper arm.
2. Slide in the new wiper blade until a "click" is heard.
3. Check that the blade is firmly installed.



NOTE

The wiper blades are different lengths. The blade on the driver's side is longer than the blade on the passenger side.

Replacing the wiper blades, rear window



1. Pull the wiper arm straight out.
2. Grip the inner section of the blade (by the arrow).
3. Turn anticlockwise to use the blade's end position against the wiper arm as a lever to detach the blade more easily.
4. Press the new wiper blade into position. Check that it is firmly installed.
5. Lower the wiper arm.

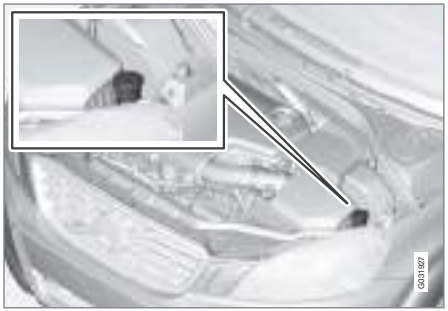
Cleaning

For cleaning wiper blades and windscreen, see page 263.

IMPORTANT

Check the wiper blades regularly. Neglected maintenance shortens the service life of the wiper blades.

Filling washer fluid



The windscreen and headlamp washers share a common reservoir.

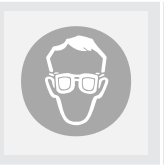
IMPORTANT

Add washer antifreeze during the winter so that the fluid does not freeze in the pump, reservoir and hoses.

For capacities, see page 273.

Battery

Warning symbols on the battery

	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.

NOTE

An expended battery must be recycled in an environmentally responsible manner - it contains lead.

Operation

- Check that the cables to the battery are correctly connected and properly tightened.
- Never disconnect the battery when the engine is running.

The service life and function of the battery is influenced by factors such as the number of starts, discharging, driving style, driving conditions, climatic conditions etc.

IMPORTANT

Never use a quick charger to charge the battery.

WARNING

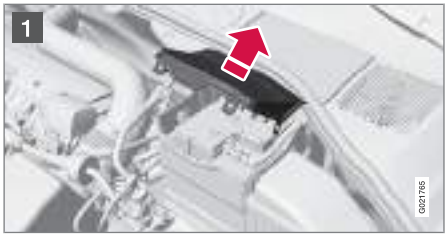
Batteries can generate oxyhydrogen gas, which is highly explosive. One spark, which can be generated if you connect jump leads incorrectly, is sufficient to make the battery explode. The battery contains sulphuric acid, which can cause serious burns. If sulphuric acid comes into contact with eyes, skin or clothing, flush with large quantities of water. If acid splashes into the eyes, seek medical attention immediately.

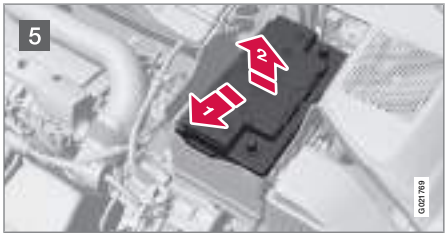
NOTE

The life of the battery is shortened if it becomes discharged repeatedly.

Changing

Removal





Switch off the ignition and wait for 5 minutes.

1. Open the clips on the front cover and remove the cover.
2. Release the rubber moulding so that the rear cover is free.
3. Remove the rear cover by screwing one quarter turn and lifting it away.

WARNING

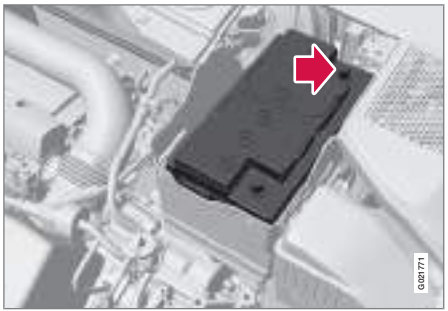
Connect and disconnect the positive and negative cables in the correct sequence.

4

1. Detach the black negative cable
2. Detach the red positive cable
3. Detach the ventilation hose from the battery
4. Loosen the screw holding the battery clamp.

5. Move the battery to the side and lift it up.

Installation



1. Lower the battery into the battery box.

Battery

2. Move the battery inward and to the side until it reaches the rear edge of the box.
3. Screw in the battery with the screw in the clamp.
4. Connect the ventilation hose.
5. Connect the red positive cable.
6. Connect the black negative cable.
7. Press in the rear cover. (See Removal).
8. Reinstall the rubber moulding. (See Removal).
9. Reinstall the front cover and secure it with the clips. (See Removal).

Fuses

General

All electrical functions and components are protected by a number of fuses in order to protect the car's electrical system from damage by short circuiting or overloading.

If an electrical component or function does not work, it may be because the component's fuse was temporarily overloaded and failed. If the same fuse fails repeatedly then there is a fault in the circuit. In which case, contact an authorised Volvo workshop to have the system checked.

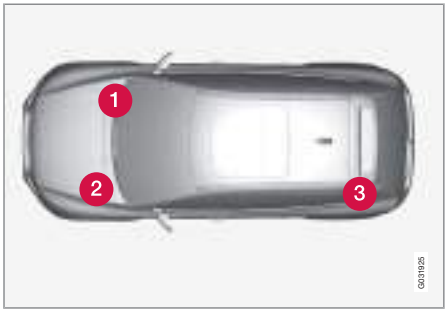
Changing

1. Look in the fuse diagram to locate the fuse.
2. Pull out the fuse and check from the side to see whether the curved wire has blown.
3. If this is the case, replace it with a new fuse of the same colour and amperage.

WARNING

Never use a foreign object, or a fuse with an amperage higher than that specified when replacing a fuse. This could cause significant damage to the electrical system and possibly lead to fire.

Location, fuse boxes



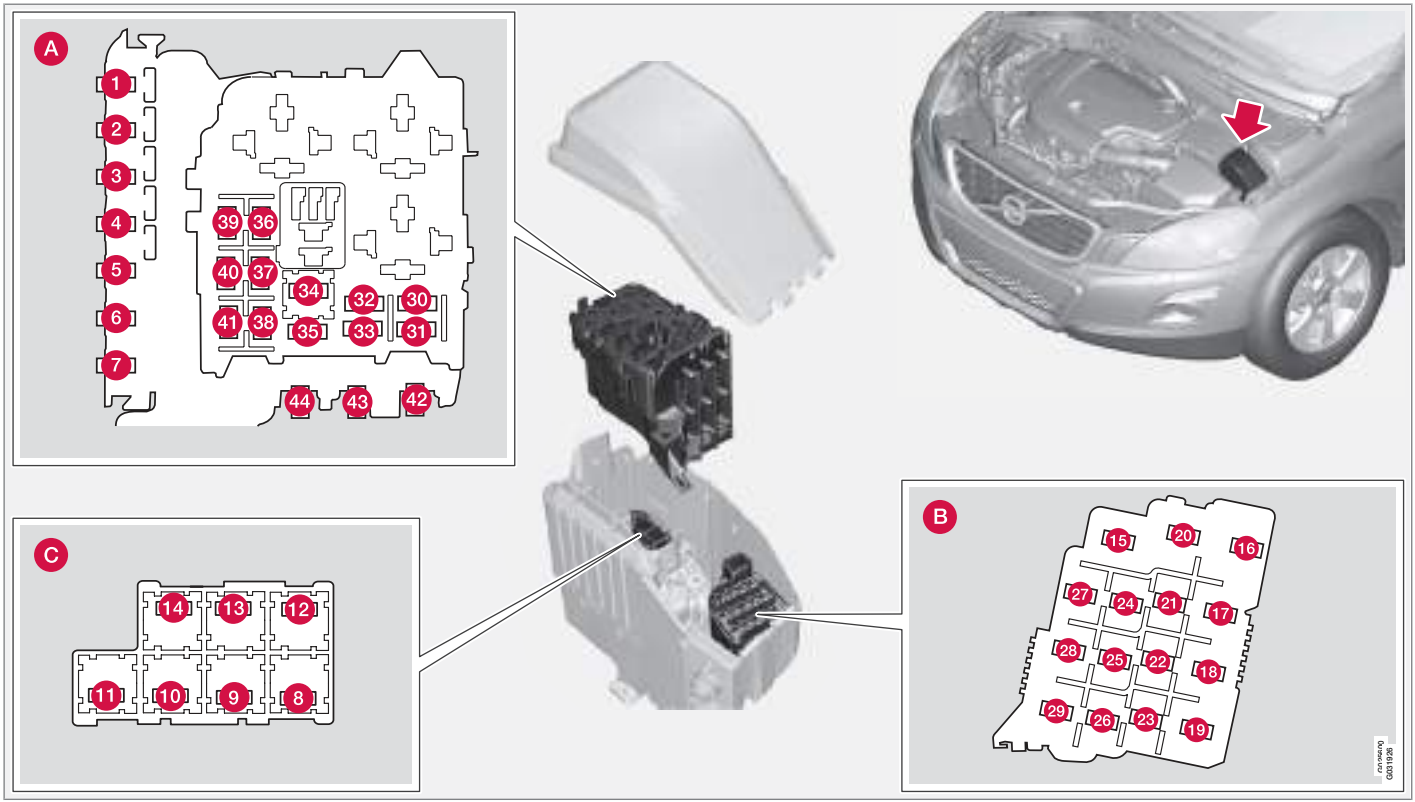
Location of fuse boxes, left-hand drive.

If the car is right-hand drive, the fuse box changes 1, to under the side of the glovebox.

1. Under the glovebox
2. Engine compartment
3. Cargo area

Fuses

Engine compartment



Fuses

General fuses, engine compartment
On the inside of the cover are tweezers that facilitate the removal and fitting of fuses.

Positions (see preceding illustration)
A Engine compartment, upper

B Engine compartment, front

C Engine compartment, lower

These fuses are all located in the engine compartment box. Fuses in C are located under A.

- Fuses 1 – 7 and 42 – 44 are of the "Midi Fuse" type and must only be replaced by an authorised Volvo workshop.
- 8 – 15 and 34 are of the "JCASE" type and must only be replaced by an authorised Volvo workshop.
- 16 – 33 and 35 – 41 are of the "MiniFuse" type.

Pos	Function	A
1	Primary fuse CEM KL30A	50
2	Primary fuse CEM KL30B	50
3	Primary fuse RJBA KL30	60
4	Primary fuse RJBB KL30	60
5	Primary fuse RJBD KL30	50
6	-	-
7	PTC Air preheater*	100
8	-	-
9	Windscreen wipers	30
10	Parking heater*	25
11	Ventilation fan	40
12	-	-
13	ABS pump	40
14	ABS valves	20
15	-	-
16	Headlamp levelling*, (Active Bi-Xenon*	10
17	Primary fuse CEM	20
18	Radar, ACC control module*	5
19	Speed related power steering	5
20	Engine Control Module (ECM), transm. SRS	10
21	Heated washer nozzles	10
22	-	-
23	Lighting panel	5
24	Headlamp washers	15
25	12 V socket, front and rear seat	15
26	Sunroof*, Roof console/ ECC*	5
27	Relay, engine compartment box	5
28	Auxiliary lamps*	20
29	Horn	15
30	Engine Control Module (ECM)	10
31	Control module, automatic gearbox*	15

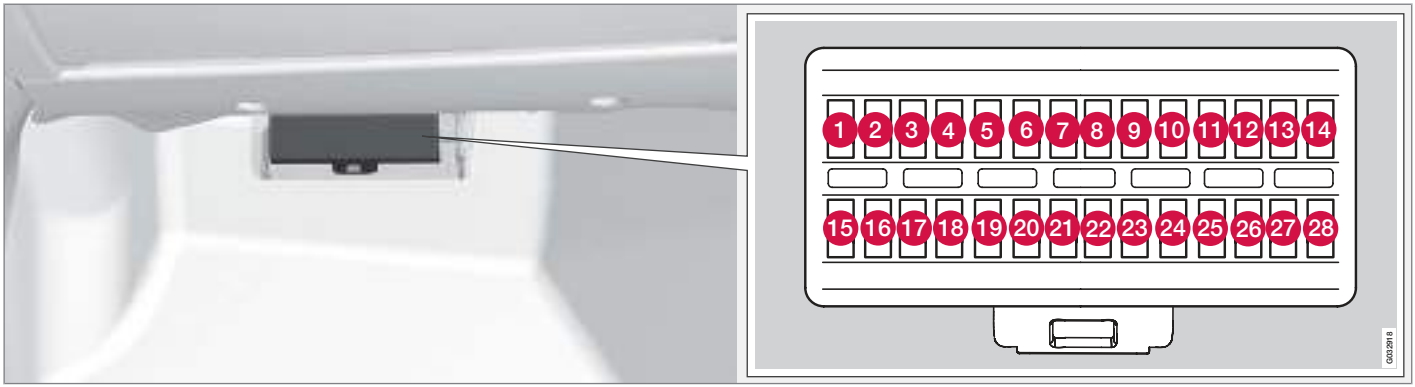
Fuses

Pos	Function	A
32	Compressor A/C	15
33	Relay coils	5
34	Starter motor relay	30
35	Ignition coils	20
	Glow system (5-cyl. diesel)	10
36	Engine control module, Throttle petrol	10
	Engine control module, Throttle diesel	15
37	Injection system, Mass air flow sensor	15
38	Engine valves	10
39	EVAP, Lambda-sond, Injection (petrol)	15
	Lambda sond (diesel)	10
40	Diesel filter heater, crankcase ventilation heater (diesel)	15
41	-	-

Pos	Function	A
42	Glow plugs (diesel)	70
43	-	-
44	Cooling fan	80

Fuses

Under the glovebox



1. Fold aside the interior trim covering the fuse box.
2. Press the cover's lock and fold it up.
3. The fuses are accessible.

Positions

Pos	Function	A
1	Rain sensor*	5
2	SRS system	10
3	ABS brakes	5
4	Accelerator pedal*, air heater (PTC)*, heated seats	7,5
5	-	-
6	ICM display, CD & Radio, RSE system*	15
7	Steering wheel module	7,5
8	-	-
9	Main beam	15

Pos	Function	A
10	Sunroof*	20
11	Reversing lamps	7,5
12	-	-
13	Fog lamp, front*	15
14	Windscreen washers	15
15	Adaptive cruise control, ACC*	10

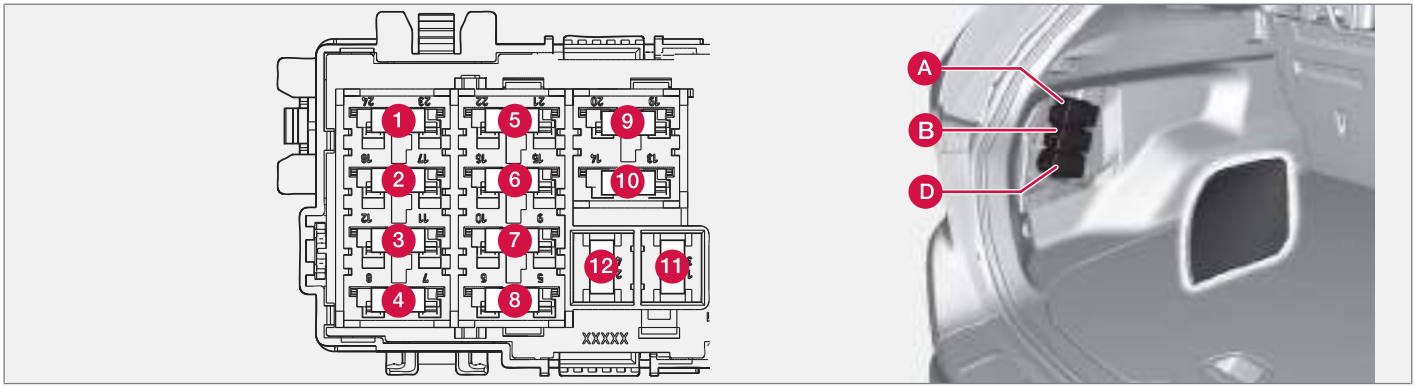
Fuses

Pos	Function	A
16	-	-
17	Roof lighting, control panel driver's door/Power passenger seat*	7,5
18	Information display	5
19	Power driver's seat*	5
20	Windscreen wiper, rear	15
21	Remote control key receiver, alarm sensors	5
22	Fuel pump	20
23	Electric steering lock	20
24	-	-
25	Lock, tank/tailgate	10
26	Alarm siren, ECC	5
27	Start/stop button	5
28	Brake light switch	5

* Option/accessory, for more information, see Introduction.

Fuses

Cargo area



The fuse box is located behind the upholstery on the left-hand side.

Positions

Pos	Module A (black). Function	A
1	Control panel, driver's door	25
2	Control panel, passenger door	25
3	Control panel, rear door, left	25
4	Control panel, rear door, right	25
5	-	-
6	12 V socket, cargo area	15
7	Rear window defroster	30
8	-	-
9	Trailer socket 2*	15
10	Power seat driver's side*	25
11	Trailer socket 1*	40
12	POT (automatic tailgate opening)*	30

Fuses

Pos	Module B (white). Function	A
1	Parking assistance, Parking camera*	5
2	Control module Four C*	15
3	Seat heating, driver's side front*	15
4	Seat heating, passenger side front*	15
5	Seat heating right rear*	15
6	AWD control module	10
7	Seat heating left rear*	15
8	-	-
9	Power seat passenger side*	25
10	Keyless drive*	20
11	Electric parking brake, left	30
12	Electric parking brake, right	30

Pos	Module D (blue). Function	A
1	Display RTI*	10
2	-	-
3	Bass speaker*	25
4	DAB radio	5
5	Audio amplifier*	25
6	Audio system	15
7	Phone, Bluetooth*	5
-	8 - 12	-

* Option/accessory, for more information, see Introduction.

General

Tyres greatly affect the car's driving characteristics. The type of tyre, dimensions, tyre pressure and speed rating are important for how the car performs.

Direction of rotation

The arrow shows the tyre's direction of rotation.

Tyres with a tread pattern which are designed to only turn in one direction have the direction of rotation marked with an arrow. The tyre must always rotate in the same direction throughout its lifespan. Tyres should only be switched between front and rear positions, never between left and right-hand sides, or vice versa. If the tyre is mounted incorrectly, the car's braking characteristics and capacity to force rain and slush out of the way are adversely affected.

NOTE

Ensure that tyres of the same type and dimensions, and also the same make, are fitted to all four wheels.

Follow the recommended tyre pressures specified in the tyre pressure table, see page 262.

Tyre care

Tyre age

All tyres older than 6 years old should be checked by an expert even if they seem undamaged. Tyres age and decompose, even if they are hardly ever or never used. The function can therefore be affected. This also applies to spare tyres, winter tyres and tyres saved for future use. Examples of external signs which indicate that the tyre is unsuitable for use are cracks or discoloration.

New tyres

Tyres are perishable. After a few years they begin to harden at the same time as the friction capacity/characteristics gradually deteriorate. For this reason, aim to get as fresh tyres as possible when you replace them. This is especially important with regard to winter tyres. The week and year of manufacture, the tyre's DOT marking (Department of Transportation), are stated with four digits, for example 1502. The tyre in the illustration was manufactured in week 15 of 2002.

Summer and winter tyres

When summer and winter wheels are changed the wheels should be marked with which side of the car they were mounted on, for example **L** for left and **R** for right.

Wheels and tyres

Wear and maintenance

The correct tyre pressure results in more even wear, see page 262. Driving style, tyre pressure, climate and road condition affect how quickly your tyres age and wear. To avoid differences in tread depth and to prevent wear patterns arising, the front and rear wheels can be switched with each other. A suitable distance for the first change is approx. 5000 km and then at 10 000 km intervals. Contact an authorised Volvo workshop if you are uncertain about tread depth.

Wheels should be stored lying down or hanging up - and not standing up.

WARNING

A damaged tyre can lead to loss of control of the car.

Tyres with tread wear indicators

Tread wear indicators are narrow treadless bands across the width of the tread. On the side of the tyre are the letters **TWI** (Tread Wear Indicator). When the tyre's tread depth is down to 1.6 mm, the tread depth will be level in height with the tread wear indicators. Change to new tyres as soon as possible. Remember that tyres with little tread depth provide very poor grip in rain and snow.

Rims and wheel bolts

IMPORTANT

The wheel bolts must be tightened to 140 Nm. Overtightening can damage the nuts and the bolts.

Only use rims that are tested and approved by Volvo and which are Volvo genuine accessories. Check the torque with a torque wrench.

Locking wheel bolts

Locking wheel bolts can be used on both aluminium and steel rims.

Winter tyres

Volvo recommends winter tyres with particular dimensions. Tyre dimensions are dependent on engine variant. When driving on winter tyres, the correct tyres must be fitted to all four wheels.

NOTE

Ask a Volvo dealer which rim and tyre types are most suitable.

Studded tyres

Studded winter tyres should be run in gently for 500-1000 km so the studs settle properly into the tyres. This gives the tyre, and especially the studs, a longer service life.

NOTE

The legal provisions for the use of studded tyres vary from country to country.

Tread depth

Road conditions with ice, slush and low temperatures place considerably higher demands on tyres than summer conditions. Volvo therefore recommends not to drive on winter tyres that have a tread depth of less than 4 millimetres.

Using snow chains

IMPORTANT

Only **single-sided** snow chains are permitted. Use Volvo genuine snow chains or similar that are properly suited to the car model, tyre size and wheel rim size. Consult an authorised Volvo workshop.

Snow chains may only be used on the front wheels (also applies to all-wheel drive cars).

Never drive faster than 50 km/h with snow chains. Avoid driving on bare ground as this wears out both the snow chains and tyres. Never use quick-fit snow chains as the space between the brake discs and the wheels is too small.

Tyre pressure monitoring, TPMS*

TPMS (Tyre Pressure Monitoring System) warns the driver when the pressure is too low in one or more of the car's tyres. It uses sensors located inside the air valve in each wheel. When the car is driven at about 40 km/h the system detects the tyre pressure. If the pressure is too low then a warning lamp on the instrument panel illuminates and a message is shown on the display.

Always check the system after changing a wheel in order to ensure that replacement wheels work with the system.

For information on correct tyre pressure, see page 262.

The system does not replace normal tyre maintenance.

IMPORTANT

If a fault should arise in the tyre pressure system a warning lamp on the instrument panel will illuminate. The message **TYRE PRESS. SYST SERVICE REQUIRED** will be shown. This can be for various reasons, e.g. fitting a wheel not equipped with a sensor adapted for Volvo's tyre pressure monitoring system.

Adjusting tyre pressure monitoring

Tyre pressure monitoring can be adjusted in order to follow Volvo's tyre pressure recommendations, when driving with a heavy load for example.

NOTE

The engine must not be running.

The settings are made with the control in the centre console. see page 116

1. Inflate the tyres to the required pressure and select ignition position **I** or **II**.
2. Select **Car settings** ➔ **Tyre pressure**
3. Select **Tyre pressure Calibration**.
4. Press **ENTER**.
5. Drive the car at least at 40 km/h in total for at least 1 minute.

Rectifying low tyre pressure

When the message **Tire pressure low** is shown on the display

1. Check the tyre pressure in all four tyres. The tyres should be cold, see page 262.
2. Inflate the tyre(s) to the correct pressure.
3. Drive the car at least at 40 km/h in total for at least 1 minute and check that the message disappears.

Wheels and tyres

Deactivating/activating tyre pressure monitoring

NOTE

The engine must not be running.

Settings are made in the controls in the centre console, see page 116

1. Select ignition position **I** or **II**.
2. Select **Car settings** ➔ **Tyre pressure**
3. Select **Tyre press. syst** and press **ENTER**.
   > A **X** is shown in the display if the system is activated, the option disappears if the system is deactivated.

Recommendations

Only factory fitted wheels are equipped with TPMS sensors in the valves.

- The temporary spare wheel does not have this sensor.
- If wheels without TPMS sensors are used then **Tyre press. syst Service required** will be shown every time the car is driven faster than 40 km/h for more than 10 minutes.
- Volvo recommends that TPMS sensors are fitted to all wheels on the car.
- Volvo recommends that sensors are not moved between different wheels.

WARNING

When inflating a tyre equipped with TPMS, hold the nozzle of the pump directly against the valve to avoid damaging the valve.

Driveable punctured tyres*

If Self Supporting run flat Tyres (SST) have been selected then the car is also equipped with TPMS.

This type of tyre has a specially reinforced side wall that makes continued driving possible despite the tyre losing some air. These tyres are fitted on a special rim. (Normal tyres can also be fitted to this rim).

If an SST tyre loses tyre pressure then the yellow TPMS lamp on the instrument panel illuminates and a message is shown in the text panel. If this occurs, reduce speed to max. 80 km/h.

Drive carefully. In order to establish which tyre needs attention, check the tyre pressure on all four tyres. The tyre should be checked as soon as possible.

WARNING

SST tyres should only be fitted by individuals with expertise on SST tyres.

SST tyres must only be fitted together with TPMS.

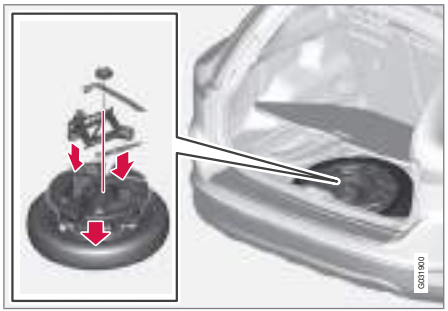
After a fault message on low tyre pressure has been shown, do not drive faster than 80 km/h.

Maximum driving distance to tyre change is 80 km.

Avoid hard driving.

SST tyres must be replaced if they are damaged or punctured.

Tools



* Option/accessory, for more information, see Introduction.

A foam block, located in the cargo area, contains all tools. The tools consist of a towing eye, jack* and wheel wrench*. The foam block is screwed into a bracket in the bottom of the spare wheel well.

Jack*

The original jack should only be used for changing wheels. The jack's thread must always be well greased.

Spare wheel*

The spare wheel (Temporary spare) is only intended for temporary use. Replace the spare wheel with a normal wheel as soon as possible. The car's handling may be altered by the use of the spare wheel. The correct tyre pressure for the spare wheel is stated on the tyre pressure table, see page 262.

IMPORTANT

Never drive faster than 80 km/h with a spare wheel on the car.

IMPORTANT

The car must never be driven fitted with more than one temporary spare wheel.

The spare wheel is located in the spare wheel well with the outside down. Two foam blocks, one under the spare wheel and one over/inside affix the spare wheel in position. The upper one contains all tools.

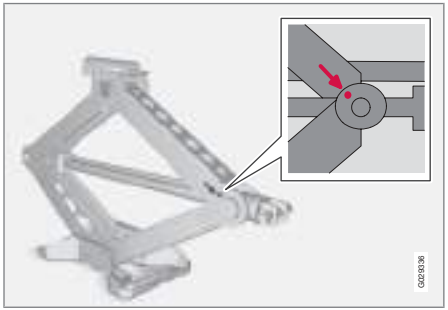
The same bolt runs through to secure the spare wheel and the foam blocks.

Taking out the spare wheel

1. Raise the floor hatch and floor mat, from the back and forward.
2. Undo the retaining screw.
3. Lift out the foam block with its tools.
4. Lift out the spare wheel.

The lower block does not need to be lifted out.

Tools - returning into place



The tools and jack must be returned to their correct places after use. The jack must be cranked to the correct position in order to have space.

The foam block and spare wheel must be replaced in the reverse order to taking out.

Note that there is an arrow on the upper foam block. It must point forwards in the car.

IMPORTANT

The tools and jack must be stored in the intended location in the car's cargo area when not in use.

Changing wheels

Removing

Set up the warning triangle, see page 215 if a wheel must be replaced at a busy location. The car and jack* must be on a firm horizontal surface.

1. Apply the parking brake and engage first gear, or position **P** if the car has an automatic gearbox.

Wheels and tyres

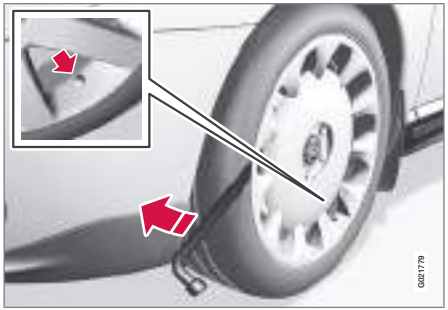
WARNING

Check that the jack is not damaged, that the threads are thoroughly lubricated and that it is free from dirt.

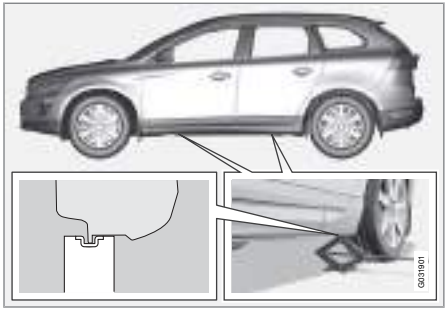
NOTE

Use the jack belonging to the car.

2. Take out the spare wheel, jack, wheel wrench and wrench for the lockable wheel bolts.
3. Place chocks in front of and behind the wheels which will remain on the ground. Use heavy wooden blocks or large stones.



4. Loosen the wheel nuts ½–1 turn anticlockwise with the wheel wrench.



WARNING

Never position anything between the ground and the jack, nor between the jacking point and the jack.

5. There are two jacking points on each side of the car. There is a recess in the plastic cover at each point. Crank the foot of the jack down so it is pressed squarely on the ground.
6. Check that the jack sits in the anchorage as illustrated and that the foot is positioned vertically under the anchorage.

IMPORTANT

The jack mounting point is the rearmost of the two rear recesses.

7. Lift the car so that the wheel is free. Remove the wheel bolts and lift off the wheel.

Installation

1. Clean the contact surfaces on the wheel and hub.
2. Put on the wheel. Screw in the wheel bolts so that there is no space between the wheel and brake disc.
3. Lower the car so that the wheel cannot rotate and remove the jack

4. Tighten the wheel bolts crosswise. It is important that the wheel bolts are tightened properly. Tighten to 140 Nm. Check the torque with a torque wrench.
5. Fit the hub cap (for cars with steel wheel rims).

NOTE

The hubcap outlet for the valve must be located over the valve on the rim when fitted.

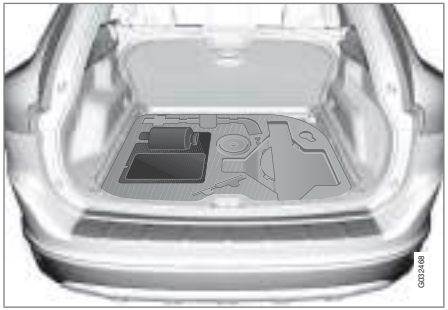
WARNING

Never crawl under the car when it is raised on the jack.

Passengers must leave the car when it is raised on the jack.

Park the car so that passengers have the car - or preferably a crash barrier - between them and the road.

Emergency puncture repair*



General

The emergency puncture repair kit is used to seal a puncture as well as to check and adjust the tyre pressure. It consists of a compressor and a bottle with sealing fluid. The kit works as a temporary repair. The sealing fluid bottle must be replaced before its expiration date and after use.

The sealing fluid effectively seals tyres punctured in the tread.

NOTE

The emergency puncture repair kit is only intended for sealing tyres with a puncture in the tread.

The emergency puncture repair kit has limited capacity 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 or similar damage.

12 V sockets for the compressor are located by the centre console in the front, by the rear seat and in the cargo area. Choose the electrical socket that is nearest the punctured tyre.

Taking out the emergency puncture repair kit

Set up the warning triangle adjacent to a trafficked location. The emergency puncture repair kit is located in the foam block under the floor in the cargo area.

1. Raise the floor hatch and floor mat, from the back and forward.
2. Unscrew the retaining screw.

Wheels and tyres

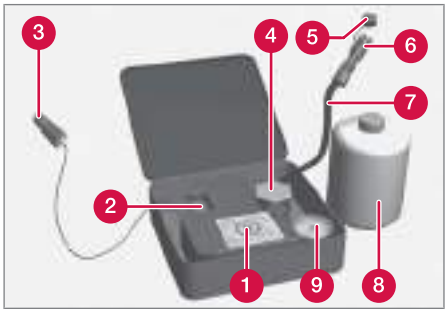
3. Lift up the emergency puncture repair kit.

Replace the parts after use.

WARNING

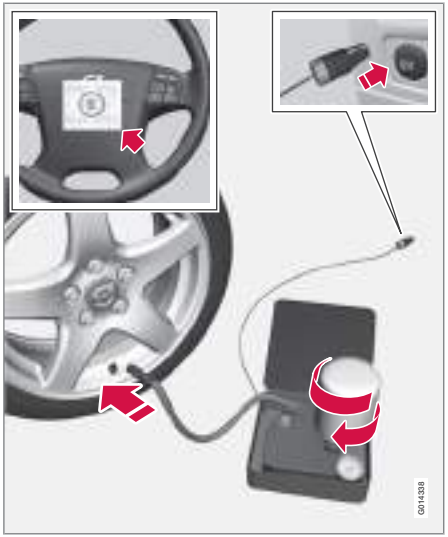
You should not drive faster than 80 km/h after the emergency tyre repair kit has been used. The temporarily sealed tyre must be changed as soon as possible (maximum driving distance: 200 km).

Overview



1. Label, maximum permitted speed
2. Switch
3. Cable
4. Bottle holder (orange cap)
5. Protective cap
6. Pressure reducing valve
7. Air hose
8. Sealing fluid bottle
9. Pressure gauge

Sealing punctured tyres



For information on the function of the parts, see preceding illustration.

1. Open the lid of the emergency puncture repair kit.
2. Detach the label for maximum permitted speed and affix it to the steering wheel.

WARNING

The sealing fluid can irritate the skin. In the case of contact with skin, wash away the fluid with soap and water.

3. Check that the switch is in position **0** and locate the cable and the air hose.

NOTE

Do not break the bottle seal. The seal is broken when the bottle is screwed in.

4. Unscrew the orange cap and unscrew the bottle's stopper.

WARNING

Do not unscrew the bottle, it is equipped with a reverse catch to prevent leakage.

5. Screw the bottle into its holder.
6. Unscrew the wheel's dust cap and screw in the air hose valve connection to the bottom of the thread on the tyre's air valve.

WARNING

Do not leave children in the car without supervision when the engine is running.

7. Plug the cable into the 12 V socket and start the car.

WARNING

Never stand next to the tyre when the compressor is running. If cracks or unevenness arise then the compressor must be switched off immediately. The journey should not be continued. Contact an authorised tyre centre.

NOTE

When the compressor starts, the pressure can increase up to 6 bar but the pressure drops after approximately 30seconds.

8. Flick the switch to position **I**.

IMPORTANT

Risk of overheating. The compressor must not run for more than 10 minutes.

9. Inflate the tyre for 7 minutes.

WARNING

If the pressure is below 1.8 bar then the hole in the tyre is too big. The journey should not be continued. Contact an authorised tyre centre.

10. Switch off the compressor to check the pressure on the pressure gauge. Minimum pressure is 1.8 bar and maximum is 3.5 bar.
11. Switch off the compressor and unplug the cable from the 12 V socket.
12. Detach the hose from the tyre valve and fit the valve cap.
13. As soon as possible, drive approximately 3 km at a maximum speed of 80 km/h so that the sealing fluid can seal the tyre.

Rechecking the repair and pressure

1. Reconnect the equipment.
2. Read the tyre pressure on the pressure gauge.
   - If it is below 1.3 bar then the tyre is insufficiently sealed. The journey should not be continued. Contact a tyre centre.
   - If the tyre pressure is higher than 1.3 bar, the tyre must be inflated to the pressure specified on the tyre pressure

Wheels and tyres

label. Release air using the pressure reducing valve if the tyre pressure is too high.

WARNING

Do not unscrew the bottle, it is equipped with a reverse catch to prevent leakage.

3. Switch off the compressor. Detach the air hose and cable. Refit the dust cap.
4. Return the emergency puncture repair kit to the cargo area.

NOTE

The sealing fluid bottle and hose must be replaced after use. Replacement must be performed by an authorised Volvo workshop.

WARNING

Check the tyre pressure regularly.

Drive to the nearest authorised Volvo workshop for the replacement/repair of the damaged tyre. Advise the workshop that the tyre contains sealing fluid.

WARNING

You should not drive faster than 80 km/h after the emergency tyre repair kit has been used. Contact an authorised Volvo workshop for inspection of the sealed tyre (maximum driving distance is 200 km).

Inflating the tyres

The car's original tyres can be inflated by the compressor.

1. The compressor must be switched off. Make sure that the switch is in position **0** and locate the cable and air hose.
2. Unscrew the wheel's dust cap and screw in the air hose valve connection to the bottom of the thread on the tyre's air valve.

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.

WARNING

Do not leave children in the car without supervision when the engine is running.

3. Connect the cable to one of the car's 12 V sockets and start the car.
4. Start the compressor by flicking the switch to position **I**.

IMPORTANT

Risk of overheating. The compressor must not run for more than 10 minutes.

5. Inflate the tyre to the pressure specified on the tyre pressure label, (release air using the pressure reducing valve if the tyre pressure is too high.)
6. Switch off the compressor. Detach the air hose and cable.
7. Refit the dust cap.

Replacing the sealing fluid canister

Replace the bottle when the expiration date has passed. Treat the old bottle as environmentally hazardous waste.

WARNING

The bottle contains 1.2-Ethanol and natural rubber-latex.

Harmful if ingested. Could result in allergic reaction in the event of skin contact.

Avoid contact with the skin and eyes.

Store out of the reach of children.

NOTE

Leave the container at a collection point for storing dangerous waste.

Specifications

Designation of dimensions

The dimensions are stated on all car tyres. Example of designation:

235/60 R18 94 W.

235	Section width (mm)
60	Ratio between section height and width (%)
R	Radial ply
18	Rim diameter in inches (")
94	Tyre load index
W	Speed rating for maximum permitted speed (in this case 270 km/h).

Speed ratings

The car is approved as a whole, which means that dimensions and speed ratings must not differ from those specified on the car's registration document.[1]

The only exception to these conditions is winter tyres (both those with metal studs and those without). If such a tyre is chosen, the car must not be driven faster than the speed rating of the tyre. (For example, class Q can be driven at a maximum of 160 km/h).

Traffic regulations determine how fast a car can be driven, not the speed rating of the tyres.

Q	160 km/h (used only on winter tyres)
T	190 km/h
H	210 km/h
V	240 km/h
W	270 km/h
Y	300 km/h

NOTE

It is the maximum permitted speed that is stated in the table.

Tyre pressure

The tyre pressure label on the driver's side door pillar (between front and rear door) shows which pressures the tyres should have at different loads and speed conditions, this is also specified in the tyre pressure table, see below.

[1] There may be deviations in certain markets.

Wheels and tyres

- Tyre pressure for the car's recommended wheel dimension
- ECO pressure
- Spare wheel pressure (Temporary Spare)

NOTE

Temperature differences change tyre pressure.

Recommended tyre pressure

Variant	Tyre size	Speed (km/h)	Load, 1 – 3 persons		Max. load		ECO pressure[A]
			Front (kPa)[B]	Rear (kPa)	Front (kPa)	Rear (kPa)	Front/rear (kPa)
All engines	235/65 R 17	0 – 160	240	240	270	270	270
	235/60 R 18 235/55 R 19	160 +	240	240	270	270	-
Spare wheel[C]	T 125/80 R 17	max. 80	420	420	420	420	-

[A] Economical driving.
[B] In certain countries there is the "bar" unit beside the SI unit "Pascal": 1 bar = 100 kPa.
[C] Temporary spare.

Fuel economy, ECO pressure

At speeds under 160 km/h, the general tyre pressure for full load is recommended in order to obtain optimum fuel economy.

Checking the tyre pressure

The tyre pressures must be checked every month. This also applies to the car's spare wheel. After several few kilometres of driving, the tyres warm up and the pressure increases. Check tyre pressures on cold tyres. "Cold tyres" means the tyres are the same temperature as the ambient temperature.

Inadequate tyre pressure increases fuel consumption, shortens tyre lifespan and impairs the car's roadholding. Driving on tyres with tyre pressure that is too low could result in the tyres overheating and being damaged. Tyre pressure affects travelling comfort, road noise and steering characteristics.

NOTE

Tyre pressure decreases over time, this is a natural phenomenon. Tyre pressure also varies depending on ambient temperature.

Washing the car

Wash the car as soon as it becomes dirty. Wash the car in a car wash with oil separator. Use car shampoo.

- Remove bird droppings from the paintwork as soon as possible. Bird droppings contain chemicals that affect and discolour paintwork very quickly. An authorised Volvo workshop is recommended for the removal of any discoloration.
- Hose down the underbody.
- Rinse the entire car to remove loose dirt. Do not rinse directly onto the locks.
- Wash using a sponge, car shampoo and plenty of lukewarm water.
- Clean the wiper blades with a lukewarm soap solution or car shampoo.
- Use cold degreasing agent on very dirty surfaces.
- Dry the car using a clean, soft chamois or a water scraper.

WARNING

Always have the engine cleaned by a workshop. There is a risk of fire if the engine is hot.

IMPORTANT

Dirty headlamps have impaired functionality. Clean them regularly, when refuelling for example.

NOTE

Outside lighting such as headlamps, fog lamps and rear lamps may temporarily have condensation on the inside of the lens. This is a natural phenomenon, all outside lighting is designed to withstand this. Condensation is normally vented out of the lamp housing when it has been switched on for a time.

Cleaning the wiper blades

Asphalt, dust and salt residue on wiper blades, as well as insects, ice etc. on the windscreen, impair the service life of wiper blades.

NOTE

Wash the wiper blades and windscreen regularly with lukewarm soap solution or car shampoo.

Do not use any strong solvents.

Automatic car washes

An automatic car wash is a simple and quick way of washing the car, but it cannot reach everywhere. Handwashing the car is recommended for achieving optimum results.

NOTE

During the first few months a new car must only be handwashed. This is because the paintwork is more sensitive when it is new.

High-pressure washing

When using high-pressure washing, use sweeping movements and make sure that the nozzle does not come closer than 30 cm to the surface of the car (the distance applies to all exterior parts). Do not spray directly onto the locks.

Testing the brakes

WARNING

Always test the brakes after washing the car, including the parking brake, to ensure that moisture and corrosion do not attack the brake linings and reduce braking performance.

Lightly depress the brake pedal now and then when driving long distances in rain or slush. The heat from the friction causes the brake linings to warm up and dry. Do the same thing after starting in very damp or cold weather.

Car care

Exterior plastic, rubber and trim components

A special cleaning agent available from Volvo dealers is recommended for cleaning coloured plastic parts, rubber and trim components, such as glossy trim mouldings. When using such a cleaning agent the instructions must be followed carefully.

IMPORTANT

Avoid waxing and polishing on plastic and rubber.

When using degreasant on plastic and rubber, only rub with light pressure if it is necessary. Use a soft washing sponge.

Polishing glossy trim mouldings could wear away or damage the glossy surface layer.

Polishing agent that contains abrasive must not be used.

Rims

Only use cleaning agent recommended by Volvo. Strong rim cleaning agents can damage the surface and cause stains on chrome-plated aluminium rims.

Polishing and waxing

Polish and wax the car if the paintwork is dull or to give the paintwork extra protection.

The car does not need to be polished until it is at least one year old. However, the car can be waxed during this time. Do not polish or wax the car in direct sunlight.

Wash and dry the car thoroughly before you begin polishing or waxing. Clean off asphalt and tar stains using Volvo tar remover or white spirit. More stubborn stains can be removed using fine rubbing paste designed for car paintwork.

Polish first with a polish and then wax with liquid or solid wax. Follow the instructions on the packaging carefully. Many preparations contain both polish and wax.

IMPORTANT

Paint treatment such as preserving, sealing, protection, lustre sealing or similar could damage the paintwork. Paintwork damage caused by such treatments is not covered by Volvo warranty.

Cleaning front side windows that have a water-repellent surface*

Never use products such as car wax, degreaser or similar on 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.

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.

Rustproofing – inspection and maintenance

The car received a thorough and complete rustproofing at the factory. Parts of the body are made of galvanised sheet metal. The underbody is protected by a wear-resistant anti-corrosion compound. A thin, penetrating rustproofing fluid was sprayed into the exposed members, cavities, closed sections and side doors.

* Option/accessory, for more information, see Introduction.

Under normal conditions the rustproofing does not require treatment for approximately 12 years. After this period, it should be treated at three-year intervals. Please contact an authorised Volvo workshop if the car needs further treatment.

Dirt and road salt can lead to corrosion so it is important to keep the car clean. The car's rustproofing needs to be checked regularly and touched-up if necessary in order for it to be maintained.

Cleaning the interior

Only use cleaning agents and car care products recommended by Volvo. Clean regularly and follow the instructions included with the car care product.

Stains on fabric upholstery and roof upholstery

A special fabric cleaning agent, available from authorised Volvo dealers, is recommended to avoid impairing the fire retardant qualities of the upholstery. Use water and a synthetic detergent to clean the seatbelts. Make sure the seatbelt is dry before allowing it to retract.

IMPORTANT

Sharp objects and Velcro may damage the fabric upholstery.

Treating stains on leather upholstery

Volvo leather upholstery is chromium-free and approved in accordance with the Oeko-Tex 100 standard.

The leather is refined and processed so that it retains its natural characteristics. It is given a protective coating, but regular cleaning is required in order to maintain both characteristics and appearance. Volvo offers a comprehensive product for the cleaning and treatment of leather upholstery which, when used in accordance with the instructions, preserves the leather's protective coating. After a period of use the natural appearance of the leather will nevertheless emerge, depending more or less on the surface texture of the leather. This is a natural maturing of the leather and shows that it is a natural product.

To achieve best results Volvo recommends cleaning and application of the protective cream once to four times per year (or more if required). Ask a Volvo dealer about Volvo's Leather care product.

IMPORTANT

Never use strong solvents. Such products may damage fabric, vinyl and leather upholstery.

IMPORTANT

Note that materials with colour that runs when dry (new jeans, suede garments etc.) may discolour the upholstery material.

Washing instructions for leather upholstery

1. Pour the leather cleaner on the dampened sponge and squeeze out a strong foam.
2. Work the dirt away with gentle circular movements.
3. Dab accurately with the sponge on the stains. Allow the sponge to absorb the stain. Do not rub.
4. Wipe off with soft paper or a cloth and allow the leather to dry completely.

Protective treatment of leather upholstery

1. Pour a small amount of the protective cream on the felted cloth and massage in a thin layer of cream with gentle circular movements on the leather.
2. Allow the leather to dry for 20 minutes before use.

The leather has now been given improved protection against stains and improved UV protection.

Car care

Treating stains on interior plastic, metal and wood parts

A fibrillated fibre or microfibre cloth, lightly moistened with water, available from Volvo dealers, is recommended for cleaning interior parts and surfaces.

Do not scrape or rub stains. Never use strong stain removers. A special cleaning agent available from Volvo dealers can be used for more difficult cleaning.

Carpets and cargo area

Remove inlaid carpets for separate cleaning of the floor carpet and the inlaid carpets. Use a vacuum cleaner to remove dust and dirt.

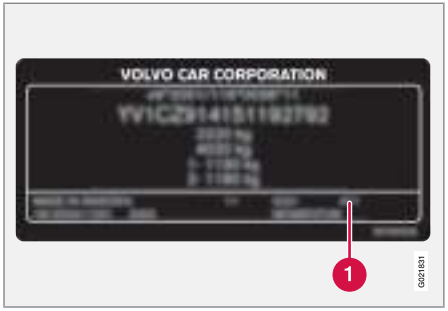
Touching up paintwork

Paint is an important part of the car's rust-proofing and should therefore be checked regularly. To avoid the onset of rust, damaged paintwork should be rectified immediately. The most common types of paintwork damage are stone chips, scratches, and marks on the edges of wings and doors.

Materials

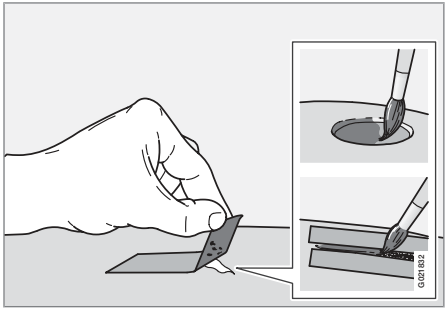
- primer in a can
- paint in a can or touch-up pen
- brush
- masking tape

Colour code



It is important that the exact correct colour is used. The product decal specifies the car's colour code, see page 267.

Repairing stone chips



Before work is begun, the car must be clean and dry and at a temperature above 15 °C.

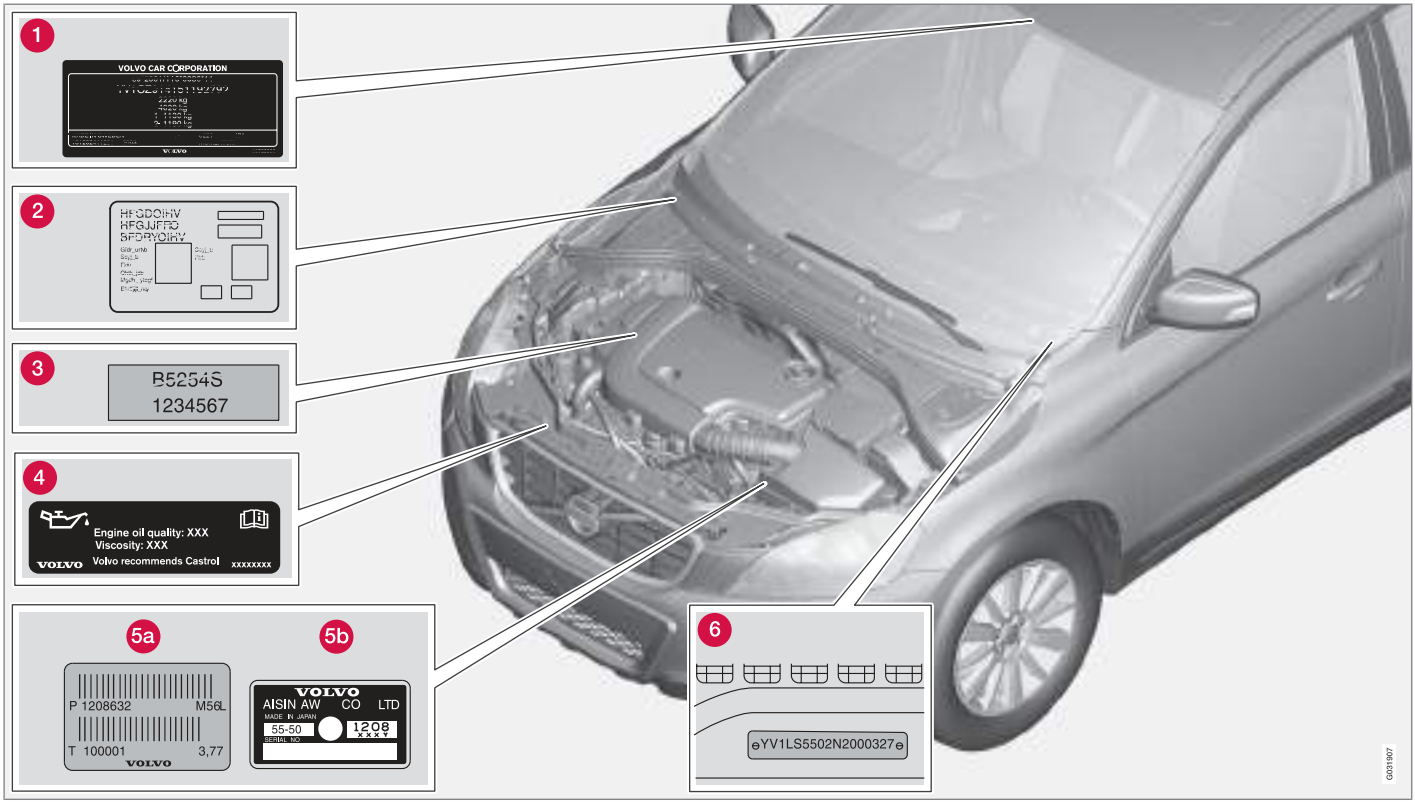
1. Apply a piece of masking tape over the damaged surface. Then remove the tape to remove any loose paint.
2. Stir the primer well and apply using a fine brush or a matchstick. Apply paint using a brush once the primer is dry.
3. For scratches, proceed as above, but mask around the damaged area to protect the undamaged paintwork.
4. After a few days, polish the touched-up areas. Use a soft rag and a small amount of lapping paste.

NOTE

If the stone chip has not penetrated to the bare metal and there is an undamaged colour coat, you can paint straight after cleaning the damaged surface.

Type designations

Decal location



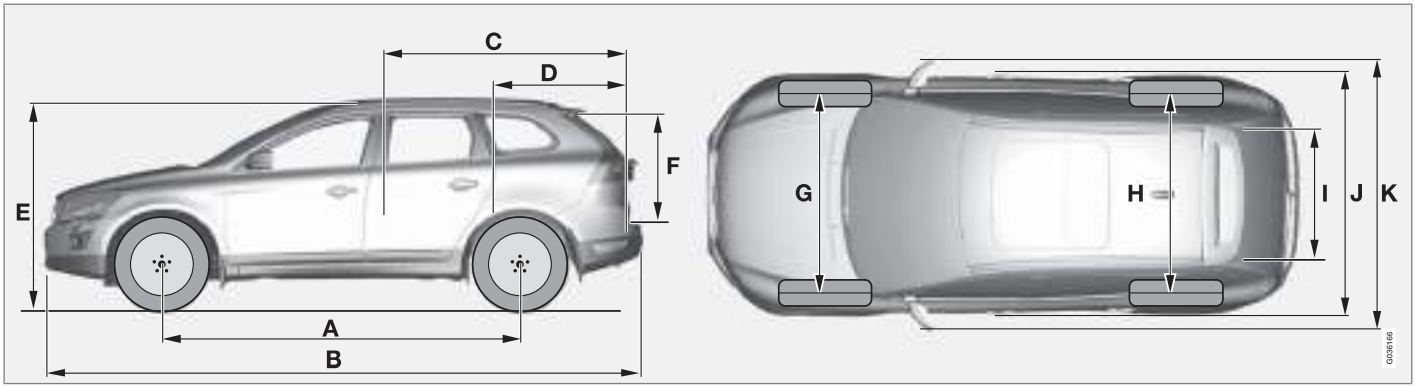
Type designations

Knowing the car's type designation, vehicle identification and engine numbers can facilitate all contact with an authorised Volvo dealer regarding the car and when ordering spare parts and accessories.

1. Type designation, vehicle identification number, maximum permissible weights, codes for colour and upholstery and type approval number.
2. Label for parking heater.
3. Engine type designation, component and serial number.
4. The engine oil decal specifies oil grade and viscosity.
5. Gearbox type designation and serial number.
   - A Manual gearbox
   - B Automatic gearbox
6. Car's identification number. (VIN Vehicle Identification Number)

Further information on the car is presented in the registration document.

Dimensions



	Dimensions	mm
A	Wheelbase	2774
B	Length	4628
C	Load length, floor, folded rear seat	1789
D	Load length, floor	972
E	Height	1713
F	Load height	802
G	Front track	1632

	Dimensions	mm
H	Rear track	1586
I	Load width, floor	1090
J	Width	1891
K	Width including door mirrors	2142

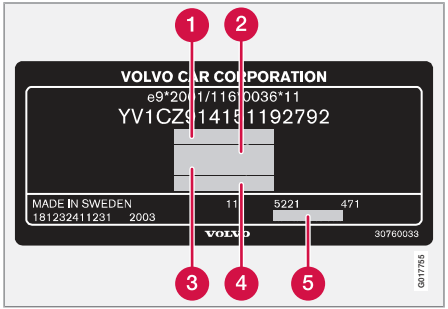
Weights

Kerb weight includes the driver, the fuel tank 90% full and all fluids. The weight of passengers and accessories, such as a towbar, load carriers, space box etc. and towball load (when a trailer is hitched, see table) influences the payload and must not be included in the kerb weight. Permitted weight (in addition to driver) = Gross vehicle weight – Kerb weight.

Specifications

WARNING

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



For information on label location, see page 226.

1. Gross vehicle weight
2. Max. train weight (car+trailer)
3. Max. front axle load
4. Max. rear axle load
5. Equipment level

Max. load: See registration document.

Max. roof load: 100 kg.

Towing capacity and towball load

Model	Transmission	Trailer weight with brake (kg)	Towball load (kg)	Trailer weight without brake (kg)	Towball load (kg)
All	All	0–1200	50	max. 750	50
T6	Automatic (TF–80SC) AWD	2000	90	max. 750	50

Specifications

Model	Transmission	Trailer weight with brake (kg)	Towball load (kg)	Trailer weight without brake (kg)	Towball load (kg)
D5	Automatic AWD	2000	90	max. 750	50
D5	Manual AWD	1800	75	max. 750	50
2.4D	Automatic AWD	2000	90	max. 750	50
2.4D	Manual AWD	1600	75	max. 750	50

NOTE

The use of stabilising devices is recommended with trailers heavier than 1800 kg.

Engine specifications

Model	Engine	Output (kW/rpm)	Output (hp/rpm)	Torque (Nm/rpm)	No. of cylinders	Bore (mm)	Stroke (mm)	Swept volume (litres)	Compression ratio
T6	B6304T2	210/5600	285/5600	400/1500–4800	6	82	93.2	2,953	9.3:1
D5	D5244T4	136/4000	185/4000	400/2000 – 2750	5	81	93.1	2.400	17,3:1
2.4D	D5244T5	120/4000	163/4000	340/1750–2750	5	81	93.1	2.400	17,3:1

Specifications

Engine oil

Adverse driving conditions
Adverse driving conditions can lead to abnormally high oil temperature or oil consumption.

Check the oil level more frequently for long journeys:

- towing a caravan or trailer
- in mountainous regions
- at high speeds
- in temperatures colder than -30 °C or hotter than +40 °C
- shorter driving distances (shorter than 10 km) at low temperatures (under 5 °C).

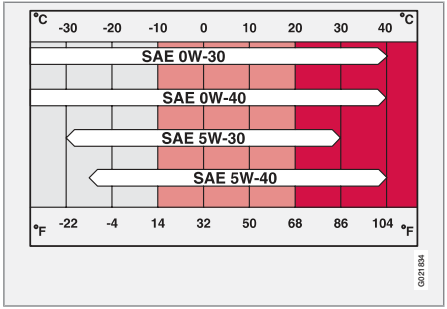
This can produce abnormally high oil temperature or oil consumption.

Choose a fully synthetic engine oil for adverse driving conditions. It provides extra protection for the engine.

Volvo recommends Castrol oil products.

IMPORTANT

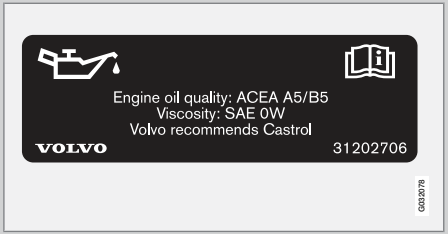
In order to fulfil the requirements for the engine's service intervals all engines are filled with a specially adapted synthetic engine oil at the factory. The choice of oil has been made very carefully with regard to service life, starting characteristics, fuel consumption and environmental impact. An approved engine oil must be used in order that the recommended service intervals can be applied. Only use a prescribed grade of oil (see the engine compartment decal) for both filling and oil change, otherwise you will risk affecting service life, starting characteristics, fuel consumption and environmental impact. Volvo Car Corporation disclaims all warranty liability if engine oil of the prescribed grade and viscosity is not used.



Viscosity chart

Specifications

Oil label

	Engine variant		Volume between MIN and MAX (litres)	Volume (litres)
 When the label shown here is fitted in the car's engine compartment then the following applies. For information on label location, see page 226. **Oil grade: ACEA A5/B5** **Viscosity: SAE 0W–30**	T6	B6304T2	1.2	7.4
	D5 2.4D	D5244T4 D5244T5	1.5	6.0

Other fluids and lubricants

Fluid	System	Volume (litres)	Prescribed grade
Transmission oil	Manual (M66)	2.0	Transmission fluid: MTF 97309
Transmission oil	Automatic (TF-80SC)	7.0	Transmission fluid: JWS 3309

Specifications

Fluid	System	Volume (litres)	Prescribed grade
Coolant	Petrol engine T6	8.9	Coolant with corrosion inhibitor mixed with water[A], see packaging.
	Diesel engine D5 Diesel engine 2.4D	12,65	
Air conditioning		-	Oil: PAG Refrigerant: R134a (HFC134a)[B]
Brake fluid		0.6	DOT 4+
Power steering		1.2	Power steering fluid WSS M2C204-A2 or equivalent product.
Washer fluid	Cars with headlamp washing Cars without headlamp washing	6.5 4,5	Use a washer antifreeze recommended by Volvo, mixed with water.

A Water quality must fulfil the standard STD 1285.1.
B Refrigerant quantity varies depending on engine variant. Contact an authorised Volvo workshop for the correct information.

NOTE

Under normal driving conditions, the gearbox oil does not need to be replaced during the car's service life. However, this may be necessary under adverse driving conditions, see page 272.

Consumption, emissions and volume

Model	Engine	Transmission	Consumption (litre/100 km)	Emissions of carbon dioxide(CO_2, g/km)	Tank volume (litres)
T6	B6304T2	Automatic (TF–80SC) AWD	11.9	284	approx. 70
D5	D5244T4	Manual (M66) AWD	7.5	199	approx. 70
D5	D5244T4	Automatic (TF–80SC) AWD	8.3	219	approx. 70
2.4D	D5244T5	Manual (M66) AWD	7.5	199	approx. 70
2.4D	D5244T5	Automatic (TF–80SC) AWD	8.3	219	approx. 70

Fuel consumption and emissions of carbon dioxide

Official fuel consumption figures are based on a standard driving cycle in accordance with EU Directive 80/1268comb.

The manner in which the car is driven, and other non-technical factors affect fuel consumption. For more information, see page 11.

Electrical system

12 volt system with a voltage-regulated alternator. Single pole system in which the chassis and engine block are used as conductors. The negative terminal is connected to the chassis.

IMPORTANT

If the battery is replaced, replace it with a battery of the same cold start capacity and reserve capacity as the original (see the decal on the battery).

Performance, battery	Voltage (V)	Cold start capacity (A)	Reserve capacity (min)
T6	12	520-700	100-135
D5, 2.4D	12	700-800	135-160

Type approval

Remote control system

Country	
A, B, CY, CZ, D, DK, E, EST, F, FIN, GB, GR, H, I, IRL, L, LT, LV, M, NL, P, PL, S, SK, SLO	CE Delphi hereby certifies that this remote control system conforms to the essential characteristic requirements and other relevant regulations of directive 1999/5/EC.
IS, LI, N, CH	
HR	
ROK	Delphi 2003-07-15, Germany R-LPD1-03-0151
BR	
RC	CCAB06LP1940T4

A

B

C

D

E

F

G

H

I

J

K

L

M

O

P

R

S

T

U

V

W

Volvo. for life

VOLVO

Volvo Car Corporation TP 10601 (English), AT 0835, Printed in Sweden, Göteborg 2008,