XC90

VOLVO for life



WEB EDITION

Introduction



Dear Volvo owner

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.

Thank you for choosing Volvo!

Owner's Manual

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:



/ WARNING!

"Warning!" texts indicate where there is a risk of personal injury in the event of the instructions not being followed.

Important!

"Important!" texts indicate a risk of damage to the car in the event of the instructions not being followed.

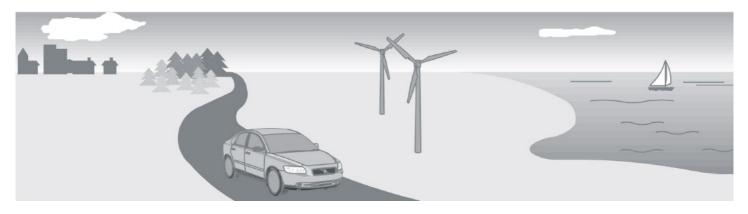
The equipment described in the owner's manual is not present in all models. In addition to standard equipment, this manual also describes options (factory fitted equipment) and certain accessories (extra equipment).

NOTE! 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.

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Volvo Cars and the environment



Our environmental philosophy

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

models and engines. Visit epd.volvocars.se for more information.

Clean inside and out

Your Volvo is designed to be Clean inside and out, a concept which means that you benefit in two ways - from a clean cabin and a highly efficient exhaust treatment system. which ensures that your car saves fuel and releases a minimum of harmful substances. Inside, the air entering the passenger compartment is filtered to protect you and your passengers from dust, particles and pollen.

A sophisticated air quality system known as AQS¹ can be added as an option to ensure that the air supplied to the passenger

compartment is cleaner than the air outside. Consisting of an electronic sensor and an activated carbon filter, the system monitors the level of carbon monoxide in the incoming air and closes the air intakes to prevent the level in the cabin from becoming too high - for example in heavy city traffic, tailbacks and tunnels - while the carbon filter traps nitrogen oxides, ground-level ozone and hydrocarbons. In addition, to benefit allergy sufferers, the fabrics used in the interior comply with the provisions of the international Öko-Tex² standard. Outside, a special catalytic coating known as PremAir®3 is

- Interior Air Quality System An international ecological standard for textiles.

Volvo Cars and the environment

used to convert harmful ground-level ozone in the air passing through the radiator into pure oxygen.

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

Volvo workshops and the environment

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

Reducing environmental impact

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

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

- Always ensure that your tyre pressures are correct. Poorly inflated tyres increase fuel consumption.
- Since roof racks and ski boxes increase air resistance, leading to significantly higher fuel consumption, they should be removed immediately after use.
- Remove unnecessary items from the carthe greater the load the higher the fuel consumption.
- Is your car equipped with an engine block heater? If so, use it for a few hours before starting from cold to reduce fuel consumption and exhaust emissions.
- Drive gently! Avoid accelerating and braking too hard.

- Drive in the highest possible gear - lower engine revs reduce fuel consumption.
- Ease back on the accelerator on downhill gradients.



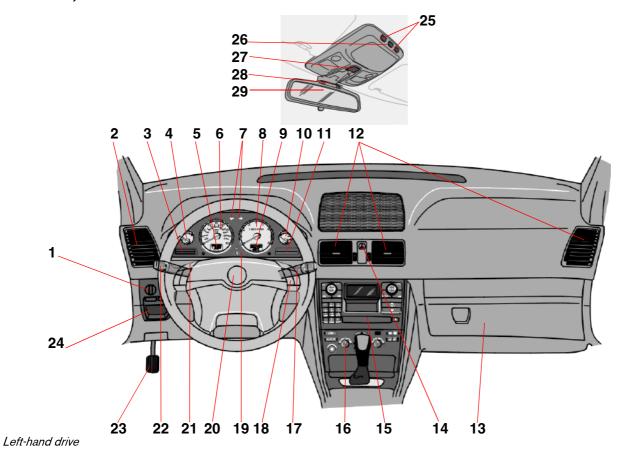
- Use engine braking. Take your foot off the accelerator and change down.
- Avoid idling. Switch off the engine in traffic queues.
- Always dispose of environmentally hazardous waste, such as batteries and oils, in an environmentally safe manner. If uncertain, ask your authorised Volvo workshop for advice.
- · Service your car regularly.

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

^{3.} PremAir® is a registered trademark of Engelhard Corporation.

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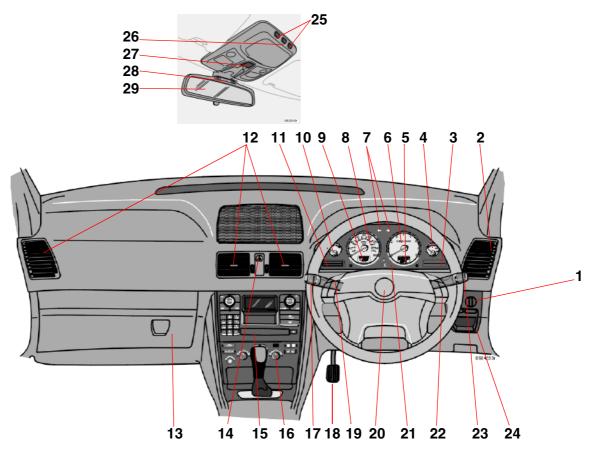
Overview, left-hand drive car



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Overview, right-hand drive car

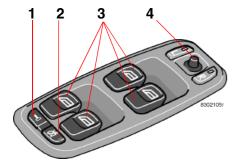


Right-hand drive

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Drive's door control panel



- 1. Lock button for all doors
- Blocking power windows in the rear doors
- 3. Power window controls
- 4. Door mirror control

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Seatbelts



Tensioning the hip strap. The belt must be positioned low down.

Always use a seatbelt

Heavy braking can have serious conseguences if the seatbelts are not used. Ensure that all passengers use their seatbelts. Otherwise, rear seat passengers may be thrown forward against the backs of the front seats in a collision.

Putting on a seatbelt:

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

Releasing the belt:

- Press the red lock button and let the belt retract. If the belt does not retract fully. feed the belt in by hand so that it does not hang lose.

The belt locks and cannot be withdrawn:

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

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

Keep the following in mind:

- · do not use clips or anything else that can prevent the belt from fitting properly.
- ensure the belt is not be 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 illustrated.

/ 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.



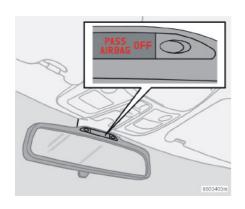
/!\ WARNING!

Each belt is intended for one person only.



/ WARNING!

- · If the belt has been subjected to a major load, such as in a collision, the entire belt must be replaced. This includes the reel, mountings, bolts and buckles. Some of the protective characteristics of the belt may have been lost, even if it appears to be undamaged. 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 belt.
- · Never modify or repair the seatbelts yourself. Contact an authorised Volvo workshop.



child seat is fitted in the front seat, the seatbelt reminder does not switch on.



Seatbelt reminder

The seatbelt warning symbol in the combined instrument panel and above the rearview mirror flashes until the driver and front seat passenger buckle their seatbelts. The seatbelt reminder switches off after 6 seconds if speed is below 10 km/h. If the driver or front seat passenger have not buckled their seatbelts, the reminder switches on if speed exceeds 10 km/h and switches off if speed drops below 5 km/h. If the belt is released, the function reactivates when speed exceeds 10 km/h.

NOTE! The seatbelt reminder is intended for an adult sitting in the front seat. If a belt-fitted

Seatbelts and pregnancy

It is extremely important that the seatbelt is used correctly during pregnancy. It should be in contact with the body. The upper part of the seatbelt should fit between the breasts and against the side of the abdomen. The hip section of the seatbelt must be flat and as far under the abdomen as possible. It must not slide up towards the abdomen.

An expectant mother who is driving should move the seat as far back as possible in order to obtain the greatest possible distance between the steering wheel and the abdomen. Set the steering wheel as far forward as a comfortable driving position permits.

Seatbelts



Label on seatbelts with seatbelt tensioner

Seatbelt tensioner

All the seatbelts (except the centre rear belt) are equipped with belt tensioners. A mechanism in the belt tensioner tightens the belt around the body in the event of a sufficiently violent collision. This provides more effective restraint for passengers.



/ WARNING!

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

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

Airbags (SRS)





Airbag (SRS) on the driver's side

The car has an SRS airbag (Supplemental Restraint System) in the steering wheel 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.



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 (SRS)

The passenger airbag⁴ is fitted behind a panel above the glovebox. This 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!

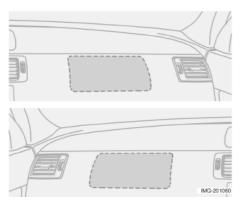
- Never place a child in a child seat or on a booster cushion in the front seat if the airbag (SRS) is activated.¹
- Never allow a child to stand or sit in front of the front passenger seat.
- No one shorter than 140 cm should sit. in the front passenger seat if the airbag (SRS) is activated.

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

 For information on activated/deactivated. airbag (SRS), see page 18.

Not all cars have a passenger airbag (SRS). This can be unselected when the car is ordered.

Airbags (SRS)



Location of the passenger airbag in left-hand drive and right-hand drive cars



- · Objects and accessories must not be positioned or glued on or near the SRS AIRBAG panel (above the glovebox) or in the area affected by a deployed airbag.
- Never interfere with SRS components in the steering wheel or the panel above the glovebox.

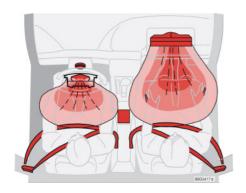


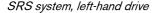
Warning lamp in the combined instrument panel

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

/!\ WARNING!

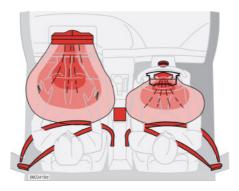
If the airbag warning lamp remains lit or lights while driving, the airbag system is not fully functional. The symbol can indicate a fault in the seatbelt, SRS, SIPS or IC system. Contact an authorised Volvo workshop as soon as possible.





SRS system

The SRS system consists of a gas generator surrounded by an inflatable airbag. A sufficiently violent collision trips sensors and ignites the gas generator, inflating the airbag with hot 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.



SRS system, right-hand drive

NOTE! The sensors react differently depending on the course of the collision and whether 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 SRS system senses the force of the collision on the car and adapts accordingly so that one or more airbags is deployed.



/!\ WARNING!

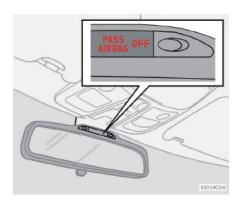
Work on the SRS system can cause malfunction and result in serious personal injury.

Repairs must only be performed by an authorised Volvo workshop.

Airbags (SRS)

NOTE! The airbags have a function whereby their capacities are adapted to the collision force to which the vehicle is subjected.

Activating/deactivating the airbag (SRS)



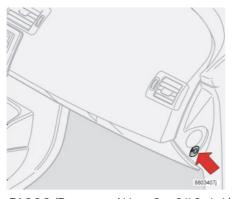
Indicator showing that the passenger airbag (SRS) is deactivated.

PACOS (option)

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

Indicator

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



PACOS (Passenger Airbag Cut-Off Switch)

Activating/deactivating

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

/!\ WARNING!

Activated airbag (passenger seat): Never place a child in a child seat or on a booster cushion in the front passenger seat. This also applies to persons shorter than 140 cm.

Deactivated airbag (passenger seat): Persons taller than 140 cm must never sit in the passenger seat.

Failure to follow the advice given above can endanger life.



/!\ WARNING!

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





Switch for SRS in ON position.

Switch position

ON = Airbag (SRS) 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.

Switch for SRS in Off position.

OFF = Airbag (SRS) 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.

Do not allow anyone to sit in the front passenger seat if the text message in the roof panel indicates that the airbag (SRS) is deactivated and the airbag warning symbol is displayed in the combined instrument panel. This indicates that there has been a severe malfunction. Contact an authorised Volvo workshop as soon as possible.

Side airbags (SIPS)



Side airbag locations.

Side airbags - SIPS bags

A large proportion of the collision force is transferred by the SIPS to the floor, roof, beams, pillars, and other structural parts of the body. The side airbags on the driver and front passenger seats protect the chest area and are an important part of the SIPS. The SIPS bag system consists of two main parts: The side airbags and the sensors. The side airbags are located in the front seat backrests.



↑ WARNING!

Side airbags are a supplement to the SIPS system. Always wear a seatbelt.





♠ WARNING!

Use only Volvo genuine car seat covers, or seat covers approved by Volvo. Other seat covers may impede the operation of the side air bags.

Child seats and side airbags

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

A child seat or booster cushion can be placed on the front passenger seat provided

/!\ WARNING!

- Work on the SIPS bag system can cause malfunction and result in serious personal injury. Always contact an authorised Volvo workshop.
- 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.

that the car does not have an activated⁵ passenger airbag.

Side airbags are a supplement to the SIPS system. Always wear a seatbelt.

For information on activated/deactivated airbag (SRS), see page 18.





SIPS bag system

The SIPS bag system consists of a gas generator, side airbag and sensors. A sufficiently violent collision trips the sensors and ignites the gas generator, inflating the side airbag. The airbag inflates between the occupant and the door panel and thereby cushions the initial impact while deflating. The side airbag is only normally deployed on the side of the collision.



Right-hand drive

Roll-Over Protection System (ROPS)

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

The system consists of:

- · A stabiliser system, RSC (Roll Stability Control) that minimises the risk of overturning during sudden evasive manoeuvres or the like or if the car skids.
- Increased protection for the driver and passengers through a reinforced body, inflatable curtains and seatbelt tensioners. in all seats. See also page 21 and page 23.

The RSC system uses a gyro sensor which registers changes in the car's lateral inclination angle. This information is then used to calculate the risk for overturning. If a risk is detected, the DSTC system is engaged, engine speed is reduced and one or more wheels are braked until the car returns to a stable position.

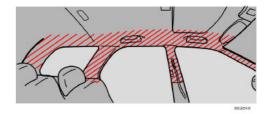
For more information on the DSTC system, see page 41 and page 114.

/!\ WARNING!

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

Inflatable Curtain (IC)





Properties

The inflatable curtain is a supplement to the SIPS system. It is concealed in the headlining along both sides of the roof and protects both front and rear seat passengers. The inflatable curtain is activated by the SIPS collision sensors if the car is hit from the side. When deployed, the inflatable curtain inflates. The inflatable curtain helps to prevent the driver and passengers from striking their heads on the inside of the car during a collision.

♠ WARNING!

The inflatable curtain is a supplement to the seatbelts.

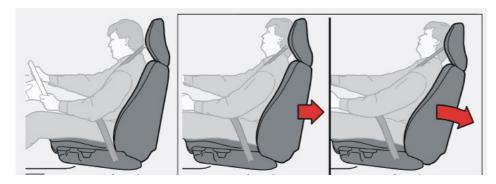
Always use a seatbelt.

In the Volvo XC90, the inflatable curtains have been developed to protect occupants in the event of overturning. The inflatable curtain also covers those travelling in the third row of seats in the variant that seats seven.

· Never hang or fasten anything on the

- roof handles. The hook is only intended for light outer garments (not for hard objects such as umbrellas).
- · Do not screw or fit anything to the headlining, door pillars or side panels. This could compromise the intended protection. Only use Volvo genuine parts that are approved for placement in these areas.

WHIPS



Protection against whiplash injury - WHIPS

The whiplash protection system (WHIPS) consists of energy absorbing backrests and specially designed head restraints for the front seats. The system is actuated by a rearend 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 supplement to the seatbelts. Always wear your seatbelt.

Properties of the seat

When the WHIPS system is deployed, the front seat backrests fall backward to alter the position of the driver and front seat passenger. This diminishes the risk of whiplash injury.

WHIPS system and child seats/booster cushions

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



↑ WARNING!

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

/ WARNING!

- If a seat has been subjected to extreme forces, such as due to a rear 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.

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.

You may place:

- · a child seat or booster cushion on the front passenger seat, provided the passenger airbag is not activated⁶.
- a rear-facing child seat in the rear seat that uses the back of the front seat as support.



Do not obstruct the WHIPS system



/N 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.

For information on activated/deactivated airbag (SRS), see page 18.

WHIPS



⚠ 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.

When are the safety systems activated?

System

Triggered

Seatbelt tensioner

In the event of a head-on collision and/or overturning. Airbags (SRS)

Side airbags

In the event of a head-on collision¹.

Inflatable Curtain (IC)

In the event of a side impact¹. In the event of a side impact or if the car overturns¹.

WHIPS

In a rear-end collision¹.

RSC During sudden evasive manoeuvres or the like or if the car skids.

1. The bodywork of the car could be greatly deformed in a collision without airbag deployment. This does not indicate a fault in the airbags. This means that the function was not needed at that moment and the occupants were protected by the other safety systems of the car.



The airbag system sensor is located in the centre console. If the centre console has become soaked with water or any other fluid, disconnect the battery cables in the cargo compartment. Do not attempt to start; the airbags may be triggered. Have the car towed to an authorised Volvo workshop.



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 after intensive exposure. In case of irritation, wash with cold water. The rapid deployment sequence and airbag fabric may cause friction and skin burns.

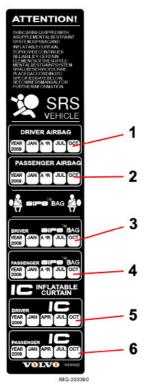
NOTE! Activation of the airbag system occurs only once in a collision. If the airbags have deployed then the following is recommended:

- Have the car towed to an authorised. Volvo workshop. Do not drive the car with the airbags deployed even if the car can be driven after an accident.
- Entrust replacement of components in the SRS, SIPS, seatbelt and IC systems to an authorised Volvo workshop.

Inspecting the airbags and inflatable curtains

Inspection intervals

The decal on the door pillar(s) shows the dates (year, month) when you should contact an authorised Volvo workshop to inspect and, if necessary, replace the airbags, belt tensioners and inflatable curtains. If you have questions concerning the systems, contact an authorised Volvo workshop.



This decal is located in the rear left door opening.

- Driver airbag
- 2. Front passenger airbag
- 3. Side airbag on the driver's side
- 4. Side airbag on the passenger side
- 5. Inflatable curtain on the driver's side
- 6. Inflatable curtain on the passenger side

Child safety



Children should sit comfortably and safely

The position of a child in the car and the choice of equipment is dictated by the child's height and weight, for more information, see page 31.

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.

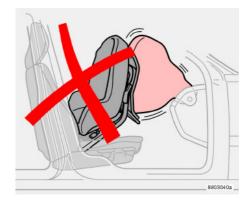
NOTE! Regulations regarding the placement of children in cars vary from country to country. Check what laws apply.

You may place:

- · a child seat or booster cushion on the front passenger seat, provided the passenger airbag is not activated⁷.
- · a rear-facing child seat in the rear seat that uses the back of the front seat as support.

Child seat and seatbelt reminder

If a rear-facing infant or child seat is placed in the front seat and secured using the seatbelt, the seatbelt reminder might not be activated. Always check that the belt is locked before driving off!



Child seats and airbags are not compatible

Child seats and airbags

Always place a child in the rear seat if the passenger airbag is activated⁸. A child in a child seat on the front passenger seat may suffer serious injury if the airbag deploys.



∕N WARNING!

Persons shorter than 140 cm may only sit in the front passenger seat if the passenger airbag is deactivated.

- For information on activated/deactivated airbag (SRS), see page 18.
- For information on activated/deactivated airbag (SRS), see page 18.

Child safety



Pictogram on the car's sun visor

Placement of children in the car

Weight/Age	Front passenger seat with activated ¹ airbag (SRS)	Front passenger seat without (or with deactivated ¹) airbag (SRS) (option)	
<10 kg	Not suitable for this	Alternatives: Rear-facing child seat, secured with seatbelt and	
(0-9 months)	age group.	mounting strap. Type approval: E503135 ²	
		Rear-facing infant seat, secured with seatbelt.	
		Type approval: E5 03160 ²	
		Rear-facing infant seat, secured in Isofix attachment. Type approval:	
		E5 03162 ²	
9–18 kg	Not suitable for this	Alternatives: Rear-facing child seat, secured with seatbelt and	
(9-36 months)	age group	mounting strap.	
		Type approval: E5 03135 ²	
İ		Rear-facing child seat, secured with seatbelt.	
		Type approval: E5 03161 ²	
		Rear-facing child seat, secured in Isofix attachment. Type approval:	
		E5 03163 ²	
15–36 kg	Not suitable for this	Booster cushion with or without backrest.	
(3-12 years)	age group.	Type approval: E5 03139	

- 1. For information on activated/deactivated airbag (SRS), see page 18.
- 2. Suitable for certain child seats as listed in the specified type approval. Child seats may be vehicle-specific, limited, semi-universal or universal.

⚠ 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 sit in the front passenger seat if the airbag (SRS) is activated. Failure to follow the advice given above can endanger the life of the child.

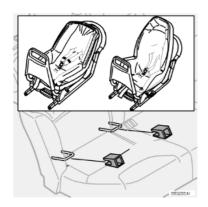
Child safety

Placement of children in the car

Weight/age	Second row of seats, outer seats ¹	Second row of seats, centre seat ¹	Third row of seats in cars seating seven.
<10 kg (0-9 months)	Alternatives: Rear-facing child seat, secured with seatbelt, support and mounting strap. Type approval: E5 03135 ² Rear-facing child seat, secured with seatbelt and support legs. Type approval: E5 03160 ² Rear-facing infant seat, secured with Isofix attachment and support. Type approval: E5 03162 ²	Rear-facing child seat, secured with seatbelt, support legs and straps. Type approval: E5 03135 ²	Not suitable for this age group.
9-18 kg (9-36 months)	Alternatives: Rear-facing child seat, secured with seatbelt, support and mounting strap. Type approval: E5 03135 ² Rear-facing child seat, secured with seatbelt and support. Type approval: E5 03161 ² Rear-facing child seat, secured with Isofix attachment and support. Type approval: E5 03163 ²	Rear-facing child seat, secured with seatbelt, support legs and straps. Type approval: E5 03135 ²	Not suitable for this age group.
15-36 kg (3-12 years)	Booster cushion with or without backrest. Type approval: E5 03139 ²	Alternatives: Booster cushion with or without backrest. Type approval: E5 03139 ² Integrated booster cushion. Type approval: E5 03167 ³	Booster cushion with or without backrest. Type approval: E5 03139 ²

In cars seating seven, the seat row must be in its rearmost position when using a child seat.

Suitable for certain child seats as listed in the specified type approval. Child seats may be vehicle-specific, limited, semi-universal or universal. Integrated and approved child safety equipment for this age group.



ISOFIX fixture system for child seats (option)

The outer rear seats have ISOFIX attachment points. Contact a Volvo dealer for further information on child safety equipment.



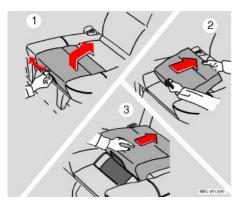
Integrated booster cushions (option in cars seating five, standard in cars seating seven)

Volvo's integrated booster cushion for the outer rear seats is specially designed to provide optimum safety for children. Combined with the regular seatbelts, the booster cushion is approved for children weighing between 15 and 36 kg.

Check that:

- the seatbelt is locked
- the head restraint position is carefully adjusted for the child's head
- the belt is in contact with the child's body and is not slack or twisted
- the belt lies correctly over the shoulder and not below it
- the lap belt is low over the pelvis for optimum protection.

Child safety



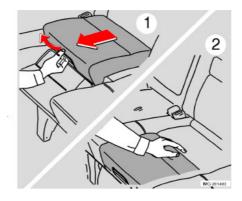
Raising the booster cushion

- Pull that handle to raise the booster. cushion (1).
- Grasp the cushion with both hands and push it backwards (2).
- Push until it locks in place (3).



WARNING!

The booster cushion must be in the locked position before the child is placed there.



Lowering the booster cushion

- Pull the handle (1).
- Lower the seat and press until it locks (2). Remember to stow away the booster cushion before lowering the rear seat backrest.



MARNING!

If an integrated booster cushion has been subjected to great stress, such as in a collision, the entire booster cushion. including the seatbelt and bolts, must be replaced. Even if the integrated booster cushion appears undamaged, it may not afford the same level of protection. The booster cushion should also be replaced if it is worn or damaged. Note, however, that the cushion should only be replaced by a professional as it is vital for passenger safety that the booster cushion is properly installed. Therefore, replacement and any repairs to the cushion should be entrusted to an authorised Volvo workshop. If the cushion becomes dirty, try to clean it in situ. If the upholstery is so dirty that it needs to be washed separately, the instructions given above for replacing and installing the cushion should be followed. Do not modify or adapt the booster cushion in any way.

Important tips!

When using other child safety products that are available on the market, it is important to read the installation instructions included with the product and follow them carefully. Here are some points you should consider:

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

The child seat must always be placed according to the manufacturer's directions. See the child seat instruction manual for further installation instructions.

Do not attach the child seat straps to the horizontal adjustment bar, springs or any of the rails and struts under the seat that may have sharp edges.

Allow the back of the child seat to rest against the dashboard. (For cars **not** equipped with an activated front passenger airbag (SRS).)

Never place a child seat in the front seat if the car is equipped with an activated airbag (SRS) on the passenger side.

NOTE! If there are any problems with installation of child safety products, contact the manufacturer for clearer installation instructions.

/!\ WARNING!

Support cushions/child seats with steel frames or another design that can lie against the seatbelt release button must not be used because they can cause accidental release of the seatbelt. Do not allow the top of the child seat to rest against the windscreen.

Fitting a child seat

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

When using other products that are available on the market, it is important to read the fitting instructions included with the product.

- 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.
- Never place the child seat in the front seat if the car is equipped with an activated 10 front passenger airbag. If problems arise when fitting child safety

products, contact the manufacturer for clearer instructions.

Replacing the booster cushion

It is important that the integrated booster cushion is properly secured. Therefore, leave replacement and any repair of the cushion to an authorised Volvo workshop. Do not modify or adapt the booster cushion in any way.

Extra locking function in seatbelt (ALR/ELR¹¹)

The seatbelt in the centre of the second row of seats has an extra locking function (ALR/ELR) to help hold the belt taunt in order to facilitate child seat installation.

When installing a child seat with the help of the seatbelt:

- Secure the seatbelt in the child seat following the instructions of the child seat manufacturer.
- Pull out the entire seatbelt.
- Lock the belt by inserting the locking tab in the buckle. A loud "click" indicates that the belt is locked.
- Allow the seatbelt mechanism to retract the belt while stretching it around the
 - 10. For information on activated/deactivated airbag (SRS), see page 18.
 - 11. Automatic Locking Retractor/Emergency Locking Retractor.

For information on activated/deactivated airbag (SRS), see page 18.

Child safety

child seat.

A mechanical sound will be audible from the seatbelt. This is normal.

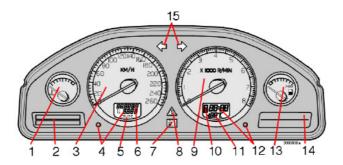
This function is automatically deactivated when the seatbelt is released from the buckle and retracts back to its starting position.

If there are any problems with installation of child safety products, contact the manufacturer for clearer installation instructions.

Instruments and controls

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Combined instrument panel



1. Temperature gauge

Displays the temperature of the engine cooling system. If the temperature is abnormally high and the needle enters the red zone, a message is shown in the display. Bear in mind that extra lamps in front of the air intake reduce the cooling capacity at high outside temperature and high engine loads.

2. Display

The display shows information and warning messages.

3. Speedometer

Shows the speed of the car.

4. Trip odometer, T1 and T2

The trip odometers are used for measuring short distances. The right-hand digit displays tenths of a kilometre. Press the button for more than 2 seconds to reset. Change

between trip odometers by briefly pressing the button once.

- Cruise control indicator
- See page 52.
- 6. Odometer

The odometer indicates the total distance the car has travelled.

- 7. Main beam, On/Off
- 8. Warning symbol

If a fault arises, the symbol lights up and a message is shown in the display.

9. Tachometer

Indicates engine speed in thousands of revolutions per minute (RPM). Do not allow the needle of the tachometer to enter the red field.

10. Automatic gearbox indicator The selected gearshift programme is displayed here.

11. Outside temperature gauge

Displays outside temperature. When the temperature lies between +2 °C and -5 °C, a snowflake symbol is shown in the display. This symbol serves as a warning for slippery road surfaces.

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

12. Clock

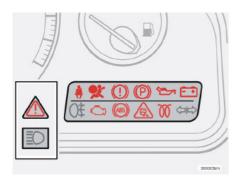
Turn the button to set the clock.

13. Fuel gauge

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

- 14. Indicator and warning symbols
- 15. Direction indicators left/right

Indicator and warning symbols



Indicator and warning symbols

All indicator and warning symbols light up when the ignition key is turned to position **II** before starting. This is to check that the symbols/lights are working. When the engine starts, all the symbols should go out except the handbrake symbol, which extinguishes when the handbrake is released.





If the engine does not start within five seconds, all symbols extinguish except the symbols for a fault in the car's emissions system and for low oil pressure. Certain symbols may

have no function, depending on the car's specifications.

Warning symbol in the centre of the instrument panel



This symbol is lit with a red or amber glow depending on the severity of the fault.

Red symbol

Stop the car. Read the message in the display.

Symbol and message text are visible until the fault has been rectified.

Yellow symbol

 Read the message in the display. Remedy!

The message text is cleared using the READ button, see page 42, or disappears automatically after 2 minutes.



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

Indicator and warning symbols

ABS fault



If the ABS symbol lights, the ABS system is not functioning. The car's normal braking system continues to

work, but without the ABS function.

- Stop the car in a safe place and switch off the engine. Restart the engine.
- If the warning symbol goes out, continue driving. It was an indicator error.
- If the warning symbol remains lit, drive to an authorised Volvo workshop to have the ABS system checked.

Fault in brake system



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

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



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



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

- If both symbols go out, it was an indicator error.
- If the warning symbols remain lit, check the brake fluid reservoir level.
- If the reservoir level is below MIN, the car should not be driven further. Have it towed to an authorised Volvo workshop to have the brake system checked.
- · If the brake fluid level is normal and the lamps remain lit, carefully drive the car to the nearest authorised Volvo workshop to have the brake system checked.



/ WARNING!

If the BRAKE and ABS warning symbols light at the same time, there is a risk that the rear end will have a tendency to slide during heavy braking.

Seatbelt reminder



The lamp remains lit until the driver and front seat passenger put on their seatbelts.

Low oil pressure



If the lamp lights while driving, engine oil pressure is too low. Stop the engine immediately and check the oil level. If the lamp lights but the oil level is normal, stop the car and contact an authorised Volvo workshop.

Fault in car's emissions system



Contact an authorised Volvo workshop to have the system checked.

Fault in SRS



If the symbol remains lit or lights while driving, a fault has been detected in the SRS system. Drive

to an authorised Volvo workshop to have the system checked.

Alternator not charging



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

Engine preheater (diesel)

This lamp lights to indicate that the engine is being preheated. You can start the car when the lamp goes out. Applies to cars with diesel engines only.

Parking brake applied



Bear in mind that the lamp only indicates that the parking brake is applied, not how hard. Check by

depressing the pedal! If the pedal is set when driving, a signal will be heard as a reminder.

Rear fog lamp



This lamp lights when the fog lamp is on.

Trailer indicator lamp



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

of the direction indicators on the trailer or car is defective.

Stability system and DSTC

The DSTC system contains several different functions that are described in more detail on page 114.

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



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

The symbol flashes



The SC function acts to prevent the car's drive wheels from spinning.

The TC function acts to improve the

car's traction.

The AYC function acts to prevent skidding. The RSC function acts to prevent overturning.

The warning symbol shines with a steady amber glow



TRACTION CONTROL TEMPORARILY OFF is shown on the information display together

with the symbol.

The TC function has been temporarily suppressed because the brake temperature is too high.

Automatic reactivation of the function takes place when the brake temperature has returned to normal.

The warning symbol shines with a steady amber glow



ANTI-SKID SERVICE REQUIRED is shown on the information display together with the symbol.

The DSTC system has been switched off because of a fault.

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

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

Fault in DSTC system

If the warning symbol lights and shines with a constant glow even though you did not switch off the system, it indicates a fault in

one of the systems. The text "ANTI-SKID SFRVICE REQUIRED" is shown in the display.

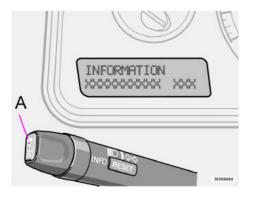
- Stop the car in a safe place and switch off the engine. Restart the engine.
- · If the warning symbol goes out, the fault was temporary and it is not necessary to visit a workshop.
- If the warning symbol remains lit, drive to an authorised Volvo workshop to have the system checked.



/ WARNING!

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

Indicator and warning symbols



Messages on the display

Any warning or indicator symbol that appears is accompanied by a message in the display. Once you have read and understood the message, press the READ button (A). Messages which have been read are cleared from the display and stored in the car's memory. Fault messages will remain in the memory until the fault has been remedied.

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

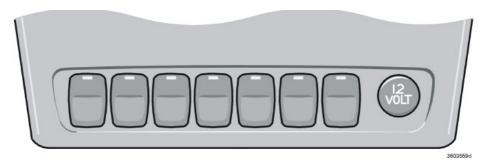
Messages stored in the memory can be read again. Press the READ button (A) to see stored messages. Scroll through the messages stored in the memory by pressing the READ button. Press the READ button to return read messages to the memory.

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

Message	Specification
STOP SAFELY	Stop and switch off the engine. Serious risk of damage.
STOP ENGINE	Stop and switch off the engine. Serious risk of damage.
SERVICE URGENT	Take your car in for service immediately.
SEE MANUAL	Consult your owner's manual.
SERVICE REQUIRED	Take your car in for service as soon as possible.
FIX NEXT SERVICE	Have your car checked at the next service interval.
TIME FOR REGULAR SERVICE	When this message is shown, the car is due for a service. When the message is displayed is affected by the distance travelled, number of months since last service and engine running time.
OIL LEVEL LOW ¹ – FILL OIL ³	Low engine oil level. Check and remedy as soon as possible. See page 164 for more information.
OIL LEVEL LOW ² –	Low engine oil level. Stop the car safely and check the oil level. See page 164.
STOP SAFELY ³	
OIL LEVEL LOW ² –	Low engine oil level. Stop the car safely, switch off the engine and check the oil level. See page 164.
STOP ENGINE ³	
OIL LEVEL LOW ² – SEE MANUAL ³	Low engine oil level. Stop the car safely, switch off the engine and check the oil level. See page 164.

- Displayed together with yellow warning triangle.
 Displayed together with red warning triangle.
 Only applies to engine variants with oil level sensor.

Switches in the centre console



NOTE! The order of the buttons may vary.

DSTC system



This button is used to reduce or reactivate the functions of the DSTC system. When the LED in the button is lit, the DSTC system is activated

(assuming there is no fault).

NOTE! Hold the button depressed for at least half a second to reduce the function of the DSTC system. The LED in the button goes out and the text "DSTC SPIN CONTROL OFF" is shown on the display. Deactivate the system if you must use a wheel of a different size than the other wheels.

The DSTC system is reactivated when the engine is restarted.

/ WARNING!

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

Air conditioning in the rear of the passenger compartment (option)



Press the button to activate the air conditioning in the rear of the passenger compartment. Rear air conditioning is deactivated when the ignition is

completely switched off.

Child safety locks in the rear doors (option)



Use this button to activate or deactivate the electric child safety locks in the rear doors. The ignition key must be in position I or II. When the child safety locks are

activated, the LED in the button lights. A message is shown on the display when the child safety locks are activated or deactivated.

Retractable door mirrors (option)



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

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

- Manually adjust the appropriate door mirror to its normal position.
- Turn the ignition key to position II.
- Fold the door mirror inward and then outward using the button. The door mirrors have now returned to their original fixed positions.

Parking assistance (option)



The system is always activated when the car is started. Press the button to deactivate/reactivate the parking assistance system. See also page 115.

Deactivation of the deadlocks¹ and detectors



Use this button to switch off the deadlock function (deadlock means that the doors cannot be opened from the inside when they are locked). This button is

also used to deactivate the movement and tilt detectors in the alarm system². The LED lights when these systems are deactivated.

Auxiliary lamps (accessory)



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

Electrical socket (standard)/ Cigarette lighter (option)



The electric socket can be used for various 12 V accessories, such as a mobile phone or cooler. The cigarette lighter is activated by pushing in the button.

Once the lighter has been heated, the button pops out again. Pull out the lighter and use the heated coils. For reasons of safety, always keep the cover on the socket when it is not in use. The maximum current tap is 10 A.

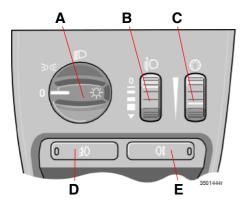
BLIS - Blind Spot Information System (option)



Press the button to deactivate or reactivate the function. See page 133 for further information.

- . Certain markets
- Option

Lighting panel



A - Headlamps and position/ parking lamps



All lighting off.

Cars with daytime running lights (certain countries)

Ignition key in position II: Dipped beam on (plus front and rear parking lamps, number plate lighting and instrument illumination). Dipped beam lights automatically when the ignition key is switched to the driving position and cannot be switched off. Before trips to certain countries, your Volvo workshop can help you deactivate the daytime running lights.



Front and rear position/parking lamps.



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

Ignition key in position II:

Headlamps light (plus front and rear parking lamps, number plate lighting and instrument illumination).

NOTE! You must always turn the light switch to this position to switch on the main beam.

B - Headlamp levelling

To allow for headlamp beam adjustment to compensate for different loads, certain cars come equipped with an actuator motor for each headlamp. Adjust the headlamps using the headlamp levelling control on the dashboard.

Cars with Bi-Xenon lighting (option) do not have control B because headlamp levelling is automatic.

C - Instrument lighting

Control upwards: brighter illumination.

Control downwards: dimmer illumination.

D - Front fog lamps

Ignition key in position **II**. Press the button. The fog lamps light in combination with the parking lamps and main/dipped beam. The

LED in the button is lit while the fog lamps are on.

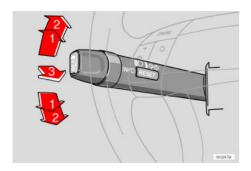
NOTE! In some countries, dipped beam may not be used in combination with front fog lamps.

E - Rear fog lamp

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

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

Direction indicator lever



1. Resistance point position

When changing lanes or overtaking, move the lever until you feel a distinct resistance. The lever returns when released.

2. Normal turns

The direction indicators light when you move the lever in the direction the wheel moves during the turn. When the wheel returns after a turn, the direction indicators switch off automatically.

3. Main beam "flash"

Pull the lever lightly towards you (until you feel a slight resistance). The main beam remains lit until the lever is released.

3. Switch, main/dipped beam

Pull the lever towards you past the "flash position" and release it to change between main/dipped beam.

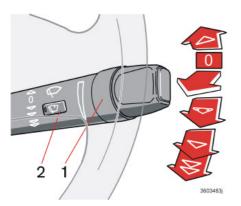
3. Home safe lighting

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

- Remove the key from the ignition.
- Pull the left lever (direction indicator) towards you.
- Exit the car.
- Lock the doors.

Dipped beam, parking lamps, number plate lighting and the lamps in the door mirrors (option) now light and remain lit for 30, 60 or 90 seconds. An authorised Volvo workshop can set a suitable duration for your car.

Windscreen wipers/washer



Wiper/washer function - windscreen

Windscreen wipers

Windscreen wipers off.

If the lever is in the **0** position and you move it upwards, the wipers will sweep one stroke at a time for as long as you hold the lever up.

Intermittent wiping

You can adjust and set a suitable speed for intermittent wiping.

Twisting the ring (see 1 in illustration) upwards increases the frequency of wiper strokes. Twisting the ring towards you decreases the frequency of

wiper strokes.

Wipers operate at "normal" speed.



Wipers operate at "high" speed.

Rain sensor (option)

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

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

On/Off

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

To activate the rain sensor:

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

To turn the rain sensor off, either:

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

The rain sensor is automatically deactivated when the key is removed from the ignition

switch or five minutes after the ignition is switched off.

Important!

In an automatic car wash:

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

Windscreen washer

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

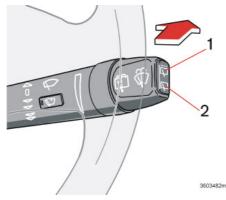
Headlamp washer

(option on certain markets)

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

Reduced washing

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



already engaged at normal speed, there is no change to the selected function.

Wiper/washer function - rear window

Rear window washer and wiper

Move the lever forward to start the rear window washer.

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

Wiper - reversing

If you engage reverse gear when the windscreen wipers are already activated, the rear window wipers will go into intermittent wiping mode¹. If the rear window wiper is

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

Hazard warning flashers, heated rear window/rearview mirrors/front seats



Hazard warning flashers

Use the hazard warning flashers (all direction indicators flash) when the car is stopped where it could be a traffic hazard or obstruction. Press the button to activate the function.

NOTE! Regulations regarding the use of hazard warning flashers vary from country to country.

Rear window and door mirror defrosters



Use the defroster to remove ice and misting from the rear window and door mirrors. Pressing the switch starts defrosting of the rear window and door mirrors simultaneously. The LED in the switch lights to indicate this. A built-in timer automati-

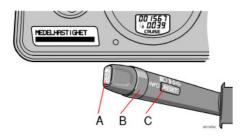
cally disconnects the defroster from the door mirrors after about 4 minutes and from the rear window after about 12 minutes.

Heated front seats



See page 65 or page 68 for further information.

Trip computer



Controls

To access the trip computer information, you must turn the ring (B) in steps, either forward or backward. By turning again, you return to the starting point.

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

Functions

The trip computer displays the following information:

- AVERAGE SPEED
- SPEED IN MILES PER HOUR¹

- CURRENT FUEL CONSUMPTION
- AVERAGE FUEL CONSUMPTION
- RANGE TO EMPTY FUEL TANK

Average speed

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

Speed in miles per hour¹

Current speed is displayed in mph.

Current fuel consumption

Continuous information on current fuel consumption, calculated each second. The figure in the display is updated every couple of seconds. When the car is stationary, "----" is shown on the display.

NOTE! There may be a slight error in the reading if a fuel-driven heater is used.

Average fuel consumption

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

NOTE! There may be a slight error in the reading if a fuel-driven heater is used.

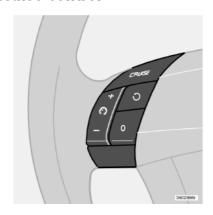
Range to empty fuel tank

Displays the approximate distance that can be driven with the fuel remaining in the tank, the calculation is based on the average fuel consumption over the last 30 km and the remaining fuel volume. When the range to empty is less than 20 km "----" appears on the display.

NOTE! There may be a slight error in the reading if a fuel-driven heater is used.

Certain countries

Cruise control



Activating

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

Setting the desired speed:

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

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

Increasing or decreasing speed

Increase or decrease the speed by pressing and holding + or -. The speed of the car when the button is released is set as the new speed.

A brief press (less than half a second) on + or - changes the speed by one km/h.

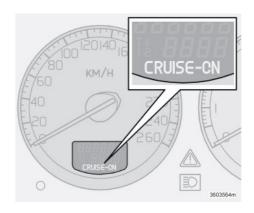
NOTE! A temporary increase in speed (less than one minute) using the accelerator, such as while overtaking, does not affect the cruise control setting. When you release the accelerator, the car will return to the programmed speed.

Temporary disengagement

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

The cruise control is also temporarily disengaged when:

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



Return to the set speed



Press this button to resume the previously set speed. CRUISE ON appears on the combined instrument panel.

Disengaging

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

Parking brake, bonnet, electric socket, etc.



Parking brake, LHD car

Parking brake

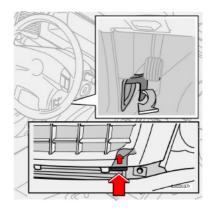
The parking brake pedal is located to the left at floor level. Apply the parking brake by depressing the pedal (1). Release the brake by pulling the handle (2).

The parking brake holds the rear wheels. When the brake is applied, the warning symbol lights in the combined instrument panel.

Remember that the warning symbol in the combined instrument panel lights even if the parking brake is only "slightly" applied.



Parking brake, RHD car



Opening the bonnet

Pull the handle towards you to release the bonnet lock mechanism.



/ WARNING!

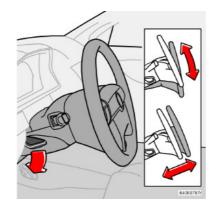
Close the bonnet by placing your hand on its top and pressing down. Do not close it by holding the grille. Engine components on the inside could injure your fingers.

Parking brake, bonnet, electric socket, etc.



Electrical socket for rear seat passengers (option)

The electric socket can be used for various 12 V accessories, such as mobile phones or CD players. The maximum current is 10 A.



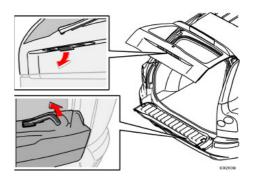
Steering wheel adjustment

The steering wheel can be adjusted both vertically and front-rear. Press down the control on the left-hand side of the steering column. Then adjust the steering wheel to the position that suits you best. Press the control back into place to lock the steering wheel. If this is difficult, press the steering wheel slightly while pressing the control back.



WARNING!

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



Opening the tailgate

Open the tailgate by pulling the handle indicated in the illustration. Fold down the rear flap by lifting the handle up.

Power windows

The power windows are operated using the controls in the door armrests. The ignition key must be in position I or II for the power windows to work. Once you finish driving and remove the ignition key, the windows can still be opened or closed as long as neither of the front doors has been opened.

Open a window by depressing the front of the control, and close it by pulling up the front of the control.



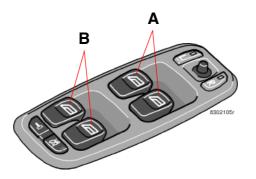
WARNING!

If there are children in the car:

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

If the rear door windows are operated from the driver's door:

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

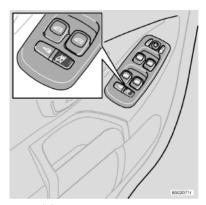


Power windows in the front doors

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

- Press the control (A) slightly down or pull it slightly up. The power windows go up or down as long as the switch is actuated.
- Press the control (A) all the way down or pull it all the way up, and then release.
 The windows then open or close automatically. Movement is stopped if the window is blocked in any way.

NOTE! The function auto up for the passenger side is only available in certain markets.



Controls (B) to operate windows in the rear doors.

Blocking power windows in the rear doors

The power windows in the rear seat can be blocked with the switch on the driver's door control panel. Always remember to switch off current to the power windows (i.e. remove the ignition key) if you leave children in the car unattended.

LED in the switch is unlit

The rear door windows can be operated both with the control on each rear door and with the controls on the driver's door.

LED in the switch is lit

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

Power windows



Power window in the front passenger seat

The control for the power window at the front passenger seat operates that window only.



Power windows in the rear doors

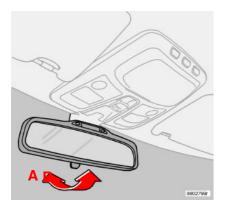
The rear door windows can be operated with the controls on the doors and the switch on the driver's door. If the LED in the switch for blocking power windows in the rear doors (located in the driver's door control panel) is lit, the rear door windows can only be operated from the driver's door.



/!\ WARNING!

If rear door windows are being operated from the driver's door, check that no rear seat passenger are in danger of getting pinched when the windows close.

Rearview mirror, door mirrors and side windows



Interior rearview mirror

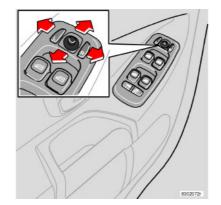
A. Normal position.

B. Dimming position. Use this if headlamps from the car behind you is irritating.

Certain models have an autodim function (option). Dimming occurs automatically based on comparative light relationships. An authorised Volvo workshop can adjust the sensitivity.



Adjust the mirrors before you begin driving!



Door mirrors

The controls for adjusting the two door mirrors are at the front of the driver's door armrest.

- Press the **L** or **R** button (**L** = left door mirror, \mathbf{R} = right door mirror). The LED in the button lights.
- Adjust the position with the adjustment control in the centre. Press the button again. The LED should no longer be lit.

Important!

Use the defroster (see page 50) to remove ice from the mirrors, not an ice scraper. The scraper could scratch the mirror glass.

Door mirrors with memory function (option)

If the car has door mirrors with memory function, they work together with the memory setting of the seat, see page 73.

Memory function in remote control

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

Laminated side windows (option)

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

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

The front windows and/or door mirrors are treated with a coating that ensures that the view through the windows or in the mirrors is good even if it is raining. For information on glass care, see page 155.

Rearview mirror, door mirrors and side windows



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

Rearview and door mirrors

In certain weather conditions, the function of the dirt-repellent coating is improved if the door mirror defrosters are used, see page 50.

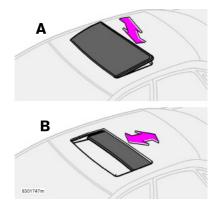
Defrost the door mirrors:

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

Important!

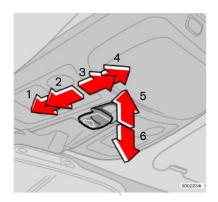
Do not use a metal ice scraper to remove ice from the windows. The water and dirtrepellent coating could be damaged. Use the defroster to remove ice from the mirrors!

Power sunroof (option)



∴ WARNING!

If there are children in the car: Remember to switch off the supply to the power sunroof (remove the ignition key) if the driver leaves the car.



Open positions

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

A: Raise/lower trailing edge – ventilation position

B: Rearwards/forwards – opening position/comfort position¹. The ignition key must be in position I or II.

- 2. Closing, manual
- 3. Opening, manual
- 4. Opening, automatic
- 5. Opening, ventilation position
- 6. Closing, ventilation position

Ventilation position

Open: Push the trailing edge of the control (5) upward.

Close: Pull the trailing edge of the control (6) downward

Switch from ventilation position to comfort position: pull the control rearwards to its end position (4) and release.

Automatic closing

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

Power sunroof (option)

Opening position/comfort position **Automatic operation**

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

In order to open from comfort position to maximum opening: Pull the control to the rear once more to the end position (4) and release.

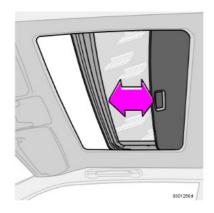
Manual operation

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

Close: Press the control forward to the resistance point (2). The sunroof moves towards closing position as long as the control is held in this position.



If you have children in the car, make sure that their hands are clear when closing the sunroof.



Sunscreen

The sunroof features a manual, sliding interior sunscreen. The sunscreen slides back automatically when the sunroof is opened. Grip the handle and slide the screen forwards to close the screen.

Pinch protection

The sunroof's pinch protection function is activated if the hatch is blocked by an object. If blocked, the sunroof will stop and automatically open to the previous position.



/!\ WARNING!

The sunroof's pinch protection function only operates during automatic closing, not during manual closing.

Make sure children's hands are clear when closing the sunroof.

	Climate control
General information on climate control	62
Manual climate control, A/C	64
Electronic Climate Control, ECC	66
Parking heater (option)	69

General information on climate control

Misting windows

Reduce the problem of windows misting up on the inside by cleaning the windows. Use a regular window cleaner.

Particle filter

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

Ice and snow

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

Fault tracing

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

Refrigerant

The air conditioning system contains R134a refrigerant. This refrigerant contains no chlorine, which means that it is harmless to the ozone layer. The system must only be charged with R134a refrigerant. Have an authorised Volvo workshop carry out this work.

Fan function to reduce risk of battery discharge

When the engine is switched off (even if the ignition key is in position I or II), the fan will be switched off automatically. To activate the fan, turn the knob and set the desired speed. After two minutes, the fan will reduce to a lower speed. This is one way to avoid discharging the battery when the engine is switched off.

Cars with ECC

Actual temperature

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

Sensors

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

Side windows and sunroof

To ensure that the air conditioning works satisfactorily, close all side windows and the sunroof (if fitted).

Acceleration

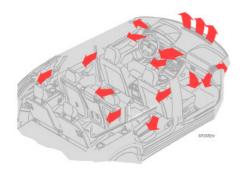
The air conditioning system switches off temporarily at full acceleration. You may feel a temporary rise in temperature.

Condensation

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

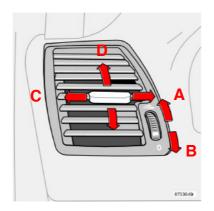
Fuel economy

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



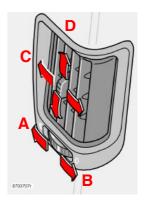


Incoming air is distributed through several different vents located throughout the car.



Air vents in the dashboard

- A. Open
- B. Closed
- C. Lateral airflow
- D. Vertical airflow
- Aim the outer vents towards the side windows to remove misting.
- In cold climates: close the centre vents for the most comfortable climate and best demisting.

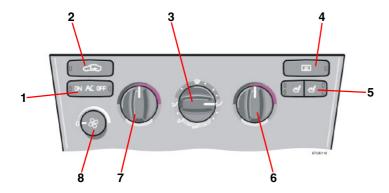


Air vents in the door pillars

- A. Open
- B. Closed
- C. Lateral airflow
- D. Vertical airflow
- Aim the vents towards the windows to remove misting from the rear side windows.
- Aim the vents inwards into the car for a comfortable climate in the rear seat.

Bear in mind that small children can be sensitive to airflow and draughts.

Manual climate control, A/C



- AC ON/OFF
- 2. Recirculation
- 3. Air distribution
- Rear window and door mirror defroster
- 5. Heated front seats
- 6. Heating/Cooling right-hand side
- 7. Heating/Cooling, left-hand side
- 8. Fan

You must turn the fan knob (8) from the **0** position to connect the air conditioning.

Use the air conditioning at low temperatures (0 - 15 °C) to dehumidify incoming air.

1. AC - ON/OFF

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

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

2. Recirculation

Recirculation can be used to shut out bad air, exhaust, etc. from the passenger compartment. The air in the passenger compartment is then recirculated, i.e. no air from outside the car is taken into the car when this function is activated. Recirculation (together with the air conditioning system) cools the passenger compartment more quickly in a warm climate.

If you allow the air in the car to recirculate, there is a risk of icing and misting, especially in winter. The timer function minimises the risk of ice, misting and bad air.

Activate the function as follows:

Manual climate control, A/C

- Press for more than 3 seconds.
 The LED flashes for 5 seconds. The air recirculates in the car for 3- 12 minutes depending on the outside temperature.
- The timer function is activated each time you press .

To switch off the timer function:

Press again for more than
 3 seconds. The LED lights for 5 seconds
 to confirm your selection.

Recirculation is always disconnected when you select Defroster.

3. Air distribution

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

Air distribution	Use
▶ ∠○ Air through	When you want
front and	good cooling in a
rear air	warm climate.
vents.	

Air distribution	Use
Air to windows. Air is not recirculated in this position. The air conditioning is always connected. There is a certain amount of airflow to the air vents.	When you want to remove ice and misting. High fan speed is good for this.
Air to both floor and windows. There is a certain amount of airflow to the air vents.	When you want comfortable condi- tions and good demisting in a cold climate. Not too low a fan speed.
Air to floor. There is a certain amount of airflow to the air vents and the defroster vents for the windscreen and side windows.	When you want to warm your feet.
Air to floor and air vents.	In sunny weather with cool outside temperatures.

4. Rear window and door mirror defroster

Use this button to quickly remove misting and ice from the rear window and door mirrors, see page 50 for further information about this function.

5. Heated front seats

Do as follows for heated front seat(s):

- Press once: High heat both LEDs in the switch light up.
- Press twice: Low heat one LED in the switch lights up.
- Press yet again: Heating is switched off no LEDs in the switch are lit.

An authorised Volvo workshop can adjust the temperature.

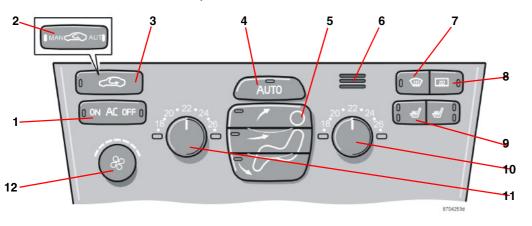
6. and 7. Heating/Coolingleft/right side

Turn to set how warm or cold the incoming air should be. For cooler air, the air conditioning must be connected.

8. Fan

Fan speed can be increased or decreased by turning the knob.

Electronic Climate Control, ECC





- AC ON/OFF
- 2. Recirculation/Multifilter with sensor
- 3. Recirculation
- 4. AUTO
- 5. Air distribution
- Passenger compartment temperature sensor
- Defroster, windscreen and side windows
- 8. Rear window and door mirror defroster
- 9. Heated front seats
- 10. Temperature, right-hand side
- 11. Temperature, left-hand side
- 12. Fan
- 13. Fan, rear passenger compartment (option in cars seating seven)

1. AC - ON/OFF

The air conditioning system is controlled automatically by the system when the ON LED is lit. This way, incoming air is cooled and dehumidified sufficiently. When AC OFF is selected and the OFF LED lights, the air conditioning system is disconnected; other functions are still controlled automatically. The air conditioning system operates down to approximately 0 °C.

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

2. Air quality system (option in certain markets)

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

When the air quality sensor is active, the green AUT LED lights in Tuna AUT.

Operation

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

Or:

Select one of the following three functions by pressing repeatedly.

- AUT LED lit: The air quality sensor is now activated.
- No LED lit: Recirculation is not activated unless needed to cool in a warm climate.
- MAN LED lit: Recirculation is now activated.

Keep in mind the following:

- Make it a rule to have the air quality sensor activated at all times.
- Recirculation is limited in cold weather to avoid misting.
- If misting occurs, you should deactivate the air quality sensor.
- If misting occurs, you can use the defroster functions for the windscreen, side windows and rear window, see page 67.
- Follow the Volvo Service Programme for the recommended replacement interval of the Multifilter. If the car is used in a severely contaminated environment, it may be necessary to change the Multifilter more often.

3. Recirculation

Recirculation can be used to shut out bad air, exhaust, etc. from the passenger compartment. The air in the passenger compartment is then recirculated, i.e. no air from outside the car is taken into the car when this function is activated.

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

The timer function (cars with Multifilter and air quality sensor have no timer function) minimises the risk for ice, misting and bad air.

Activate the function as follows:

- Press for more than 3 seconds.
 The LED flashes for 5 seconds. The air recirculates in the car for 3-12 minutes depending on the outside temperature.
- The timer function is activated each time you press .

To switch off the timer function:

Press again for more than
 3 seconds. The LED lights for 5 seconds
 to confirm your selection.

Recirculation is always disconnected when you select Defroster.

4. AUTO

The AUTO function automatically regulates climate control so that the desired temperature is attained. The automatic function controls heating, air conditioning, fan speed, recirculation, and air distribution. If you select one or more functions manually, the other functions continue operating automatically. All manual settings are switched off when AUTO is switched on.

5. Air distribution

- When the top button is depressed, air is directed to the windows.
- When the centre button is depressed, air is directed to the head and body.
- When the lower button is depressed, air is directed to the legs and feet.

Press AUTO to return to automatic air distribution.

6. Passenger compartment temperature sensor

The passenger compartment temperature sensor monitors the temperature inside the car.

7. Defroster, windscreen and side windows

Use this button to quickly remove misting and ice from the windscreen and side windows.

Electronic Climate Control, ECC

The air flows to the windows at high fan speed. The LED in the defroster button lights when this function is activated. The air conditioning system is now controlled so that the air is maximally dehumidified. The air is not recirculated.

8. Rear window and door mirror defrosters

Use this button to quickly remove misting and ice from the rear window and door mirrors, see page 50 for further information about this function.

9. Heated front seats

Do as follows for heated front seat(s):

- Press once: high heat both LEDs in the switch light up.
- Press twice: low heat one LED in the switch lights up.
- Press yet again: heating is switched off, no LEDs in the switch are lit.

An authorised Volvo workshop can adjust the temperature.

10 and 11. Temperature

The two knobs can be used to set the temperature for the passenger and driver's sides of the car. Remember that the car does not heat up or cool down any more quickly even if you select a higher or lower temper-

ature than you want in the passenger compartment.

12. Fan

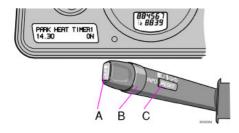
Fan speed can be increased or decreased by turning the knob. If AUTO is selected, fan speed is controlled automatically. The previously set fan speed is disconnected.

If the knob for the fan is turned so far to the left that only the left LED above the knob lights with an orange glow, the fan and air conditioning are switched off.

13. Fan, rear passenger compartment (option in cars seating seven)

Fan speed can be increased or decreased by turning the knob provided that AC is selected for both the front (1) and rear passenger compartment. The button for the rear passenger compartment is located in the centre console switch panel, see page 44.

Parking heater (option)



outside temperature. If the outside temperature exceeds 25 °C, the heater does not switch on. At temperatures of -10 °C and below, the maximum running time of the parking heater is 60 minutes.

If the parking heater does not start despite repeated attempts, a message is shown on the display. Contact an authorised Volvo workshop.



♠ WARNING!

- · Switch off the fuel-driven heater before refuelling. Spilled fuel could be ignited by the exhaust gases.
- Check on the information display that the heater is off. (When the additional heater is running, PARK HEAT ON is shown on the display.)

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

This is most easily done by:

General

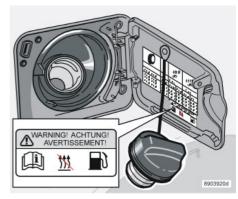
- pressing the READ button or
- pressing the main beam flash or
- turning on the ignition.

The parking heater can be started immediately or set with two different start times using TIMER 1 and TIMER 2. Start time refers to the time the car should be heated and ready.

The car's electronic system calculates when heating should be started based on the



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



Warning decal on fuel filler flap

Messages on the display

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

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

Parking on a hill

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

Parking heater (option)

Car clock/timer

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

Setting TIMER 1 and 2

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

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

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

Deactivating timer-started heating

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

- Press the READ button (A).
- Use the ring (B) to toggle to PARK HEAT TIMER 1 (or 2). The text ON flashes.

 Press the RESET button (C). The text
 OFF is displayed with a steady glow and the heater is switched off.

Direct start

- Use the ring (B) to toggle to DIRECT START.
- Press the RESET button (C) to access the alternatives ON or OFF.
 Select ON.

The heater will now run for 60 minutes. Heating of the passenger compartment will begin as soon as the engine coolant has reached an adequate temperature.

Deactivating heater after direct start

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

Battery and fuel

If the battery is not sufficiently charged or the petrol tank is close to empty, the parking heater will be switched off. If this is the case, you will receive a message in the display. Confirm the message using the READ button (A).

Important!

Repeated use of the parking heater in combination with short trips can lead to battery discharge and thereby difficulty starting.

If the heater is used regularly, the car should be driven for the same amount of time as the heater was used in order to ensure that the generator is able to produce enough energy to compensate for the amount consumed.

Additional heater (diesel)

(certain countries)

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

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

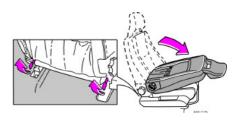
	Interio
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Front seats



/ WARNING!

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



Seating position

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

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

Lowering the front seat backrest

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

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

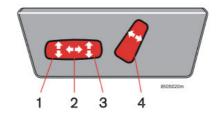
Power seat (option)

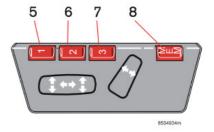
Preparations

The seat is normally adjusted with the ignition key is in position I or II. It can also be adjusted within 4,5 minutes of the door being unlocked with the key or remote control. If the door is closed and the ignition key is not yet in the ignition, or is in the 0 position, adjustments can be made within 40 seconds of the door being closed.

Memory function in remote control

The remote control used to unlock the car stores information about the changes made to the seat settings. When the car is next unlocked with the same remote control and the door is opened within five minutes, the driver's seat and the door mirrors assume the stored positions.





Seat adjustment

The switches can be used to make the following adjustments:

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

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

Seat with memory function

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

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

Front seats

Setting preset positions

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

Emergency stop

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

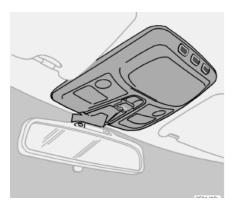


∴ WARNING!

Ensure that there is nothing in front of, behind, or under the seat during adjustment.

Ensure that none of the backseat passengers will be trapped. To avoid injury, ensure that children do not play with the switches.

Interior lighting



General lighting

General lighting is activated and deactivated by pressing the centre button. A brief press on this button will switch general lighting on or off in any situation. General lighting comes on automatically¹ and remains lit for either 30 seconds or 10 minutes when the engine is off.

General lighting comes on and remains lit for 30 seconds when you...

- unlock the car from the outside using the key or remote control.
- stop the engine and turn the ignition key to position **0**.
 - The function is light-dependent and is only activated when it is dark.

General lighting lights up and remains lit for 10 minutes when...

- · one of the doors is open.
- unless general lighting is switched off.
 General lighting goes out when...
- the engine is started.
- you lock the car from outside using the key or remote control.

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

Unless switched off manually, general lighting goes out automatically 10 minutes after the engine is switched off.

You can switch off the timer by pressing the button for more than 3 seconds. When you then briefly press the button again, the timer reconnects.

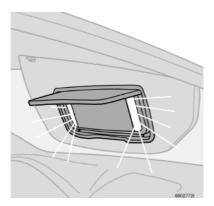
The pre-programmed times of 30 seconds and 10 minutes can be modified. Contact an authorised Volvo workshop.



Reading lamps

Reading lamps can be switched on or off by pressing the respective button. For cars seating seven, both reading lamps for the third row of seats are switched on or off when one of the buttons is pressed. Unless switched off manually, reading lamps are switched off automatically 10 minutes after the ignition is switched off.

Interior lighting

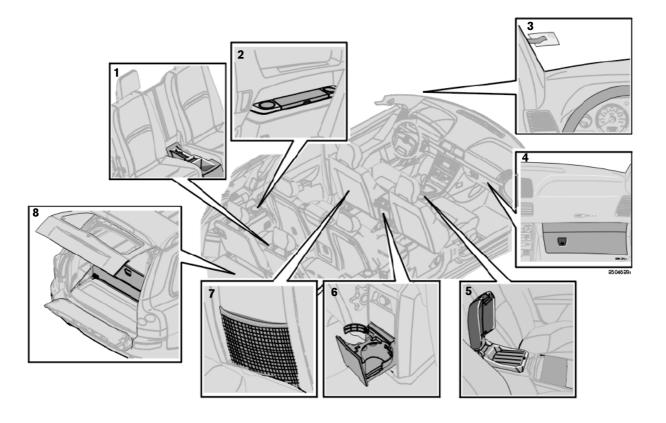


Vanity mirror¹

The light comes on automatically when the cover is lifted.

^{1.} Option on certain markets.

Storage spaces in the passenger compartment



Storage spaces in the passenger compartment

Storage spaces

- Storage compartment in third row of seats.
- Storage compartment and cup holder.
- Ticket clip.
- Glovebox.
- Storage tray in centre console.
- Cup holder for rear seat passengers.
- Storage pocket.
- Grocery bag holder.



↑ WARNING!

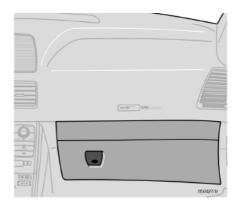
Ensure that no hard, sharp or heavy objects lie or protrude in such a way that they could cause injury during heavy braking.

Always secure large and heavy objects with a seatbelt or cargo retaining straps.



Pen holder

The centre console contains a pen holder.



Glovebox

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

Floor mats (option)

Volvo supplies floor mats specially manufactured for your car. These should be properly anchored with the clips on the floor so they do not slide and get jammed beside or under the driver's pedals.





The coat hanger is only intended for light garments.

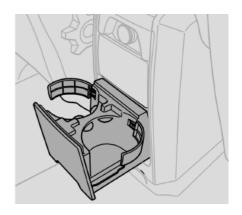


Ashtray for rear seat passengers (option)

Open the ashtray by pulling the top edge outward.

To empty:

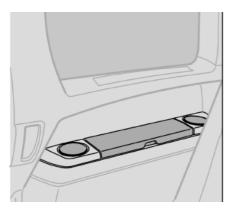
- Open the ashtray.
- Press the cover outwards and tip it back.
- Then lift it out.



Cup/bottle holder for rear seat passengers

Pull the bottom edge of the insert to open. The cup holder insert can be removed: Detach the two clips so the holder can be used for large bottles.

Storage spaces in the passenger compartment



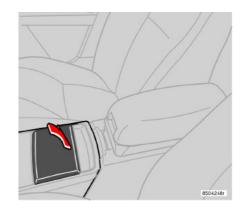
Storage compartment and cup holder (cars seating seven)

This storage compartment can be used for CDs, books and the like.



Storage tray in centre console

The centre console contains a storage tray for food and drinks, for example. The armrest can be folded back to make a "table" for rear seat passengers.



Cup holder

Cup holder for front seat passengers.

Ashtray (option)

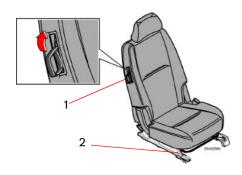
Pull out the insert to empty the astray.

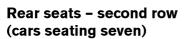


Storage compartment in the third row of seats (cars seating seven)

This storage compartment can be used for pens and other small items.

Rear seat



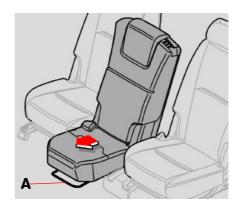


Lowering the backrest for entry into the car

Lift the handle (1) up while pushing the backrest forward. Do the reverse to return the seat to its original position.

Adjusting the seat front - rear

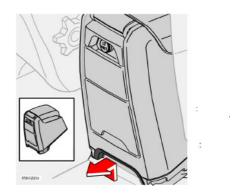
Lift the bracket (2) to move the seat front or back.



Sliding seat (cars seating seven)

The centre seat in the second row can be slid farther forward than the other seats. Sliding the seat completely forward improves contact between a child sitting on the integrated booster cushion and front seat occupants.

Lift the bracket (A) to move the seat front or back.



Removing the rear section of the centre console

The centre console must first be removed if you wish to slide the centre seat in the second row forward.

- Remove the rear section of the centre console by pulling the catch straight out as illustrated above.
- Then lift the console out of the way.



/ WARNING!

The lowest position should only be used when the backrest is to be folded down or when no one is sitting in this seat.

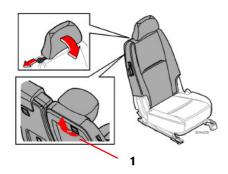
After raising the backrests in the second and third row, it is important to make sure that the backrests have locked into position. Otherwise the protective system of the seats may be compromised.

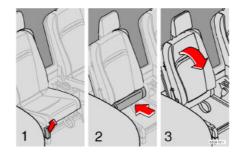
Head restraint, rear seat - centre seat

The centre seat head restraint can be adjusted to four different heights. Slide the head restraint up as desired. Press in the release button to lower it. See illustration!

Note that the head restraint cannot be removed completely!

Cargo compartment





Repositioning the seats in the third row

- Raise the backrest to its normal position.
- Take hold of the eyes and pull out the seat cushion until you hear a click.
- Raise the head restraint.

The seat is now ready for use.

Extending the cargo compartment – second row of seats

- Set the seats in their rearmost positions (applies only to cars seating seven).
- Lower the head restraint.
- Release the catch (1) and fold down the backrest. Press down to lock the backrest in its folded position.

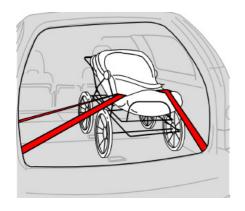


For reasons of safety, no passengers should sit in the third row of seats if the outer head restraints in the second row are lowered.

Extending the cargo compartment – third row of seats (cars seating seven)

Push the rear seats to the entrance/exit position, see page 82.

- 1. Lift the handle upward.
- Slide the seat cushion to its rearmost position. Fold in the right and left-hand cargo eyes in order to avoid damage when lowering the backrest.
- Fold down the backrest (The head restraint folds in automatically when the backrest is folded).



General

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

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

Loading the cargo compartment

The seatbelts and airbags provide the driver and passengers substantial protection, especially in head-on collisions. However. you must also remember to protect yourself

against injuries from behind. When loading cargo, bear in mind that improperly secured or incorrectly loaded objects in the cargo compartment could be thrown forward with great speed and force in the event of a collision or sudden braking, causing serious injuries.

Bear in mind that if an object weighing 20 kg is subjected to a head-on collision at a speed of 50 km/h, its impact weight will be 1000 kg.

Think about the following when loading:

- Do not load extremely heavy objects up by the front seats. The lowered backrest will be pressed down unnecessarily hard.
- · Place the load by the backrest.
- Position heavy loads as low as possible.
- Position wide loads on each side of the division in the backrest.
- Cover sharp edges with something soft.
- Secure the load with retaining straps using the car's lashing eyes.
- Never load above the backrest without a load net.



WARNING!

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



/ WARNING!

Never load cargo above the backrests! If you do so, the load could be thrown forward in the event of sudden braking or a collision and severely injure you or your passengers. Remember to always secure (bind) the load properly.

If the rear seat backrest is lowered, do not load the car higher than 50 mm under the top edge of the rear passenger windows. Leave 10 cm of free space from the windows inwards. Otherwise, the intended protection of the inflatable curtain, which is hidden in the headlining, may be compromised.

Always secure the load. During heavy braking the load may otherwise shift, causing personal injury.

Turn off the engine and apply the parking brake when loading or unloading long objects! 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.

Cargo compartment

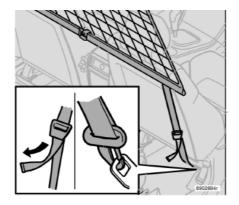


Safety net

The safety net prevents luggage and cargo from being thrown forward in the passenger compartment during heavy braking.

The net is made of a strong nylon fabric and can be secured two different ways:

- Behind the rear seat backrest
- Behind the front seats if the rear seat is lowered.



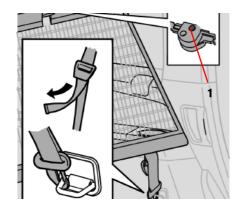
Fitting the safety net

If the car is equipped with a privacy panel, remove it before fitting the safety net.

- Hook the upper rod in the front or rear roof mounting.
- Hook the other end of the rod in the roof mounting on the other side.
- Secure the safety net anchoring straps in the eyes on the floor if the net is secured in the rear roof mountings.
 - Use the eyes in the seat slide rail if the net is secured in the front roof mountings.

Only applies to cars seating seven:

- Make sure the net lies in front of the side panel armrest when securing.
- Tension the safety net using the anchoring straps.





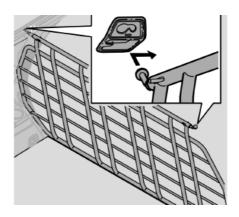
The safety net can be folded up and placed in the cargo compartment floor (for cars seating five).

Press the buttons (1) in the safety net hinges to release the hinges and fold up the net.



♠ 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.



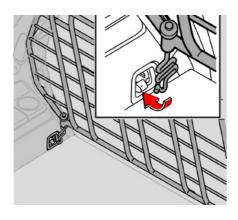
Steel safety grille (option)

The protective grille in the cargo compartment prevents cargo or pets from being thrown forward in the passenger compartment in the event of heavy braking.

For reasons of safety, the protective grille must always be mounted and secured correctly.

Fit the protective grille as follows:

- Lift in the protective grille through the tailgate opening or one of the rear doorways (fold down the seats in the second row if necessary).



- Insert one of the protective grille mountings in its bracket above the rear door behind the second row of seats.
- Slide the protective grille mounting to the front position of the bracket.
- Place the other protective grille mounting in its bracket above the other rear door and slide it to the front position.
- Insert the attaching brace through the lower mounting in the protective grille from underneath, as indicated in the illustration.
- Fit the spring on the attaching brace and screw in the knob.
- Fit the attaching brace hook in the load anchorage and tighten the knob until the

Cargo compartment

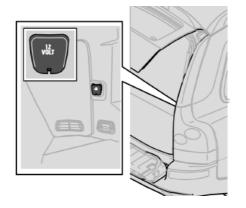
attaching brace takes hold in the load anchorage.

- Do the same on the other side.
- Tighten both attaching braces alternately.
- Fit protective caps on the exposed screw threads above the knobs.



♠ WARNING!

For cars seating seven: For reasons of safety, no passengers should sit in the third row of seats if the protective grille is positioned behind the second row of seats.

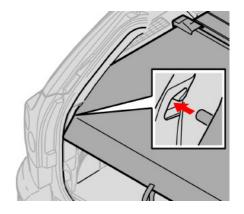


Electric socket in the cargo compartment

Slide down the cover when you wish to use the socket. It works regardless of whether the ignition is on or off.

If the ignition is switched off and a power consumer that uses more than 0.1 A is connected to the electric socket, a warning message is shown on the display.

Do not use the electric socket with the ignition switched off as there is a risk of the battery becoming discharged.



Cargo cover (option, cars seating 7)

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

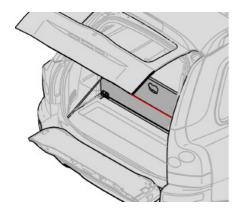
Removing the privacy panel

Press the end pieces of the privacy panel inwards, pull up and release. When fitting, press the end pieces of the privacy panel down into the holders.



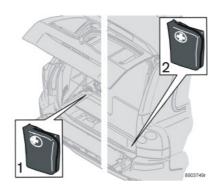
∕N WARNING!

Do not place objects on the cargo cover. They could injure passengers during braking or evasive manoeuvres.



Grocery bag holder

Open the tailgate. Hang or secure your grocery bags using the tensioning straps or holders.



1. Cars seating five 2. Cars seating seven

Compartment in cargo compartment floor (cars seating five)

 Lift up the hatch in the cargo compartment floor.

If the car is equipped with a grocery bag holder:

- Lift the floor hatch and loosen the retaining straps of the grocery bag holder.
 The following is bound in the floor.
- The following is housed in the floor compartment:
- Warning triangle (certain markets)
- Tool kit
- First-aid kit (certain markets)
- Jack (alternative location)

Compartment in cargo compartment floor (cars seating seven)

Lift up the floor hatch.
 If the car is equipped with a grocery bag holder:

 Raise the upper floor hatch, loosen the retaining straps of the grocery bag holder and raise the lower floor hatch.

The following is housed in the floor compartment:

- Tool kit
- Jack
- Warning triangle, see page 143
- · First-aid kit

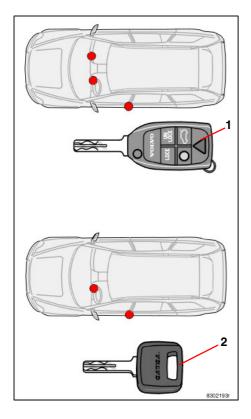
Important!

Remember not to put anything in the area the cushions fold into. The cushions and seat mechanisms could be damaged.

NOTE! Some components of the first-aid kit have an expiration date and should be replaced before this date.

	Locks and alarm
Keys and remote controls	92
ocking and unlocking	95
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Keys and remote controls



- Master key
 This key opens all locks.
- Service key*
 Key to front door, ignition switch and steering wheel lock.
 - *: certain markets only

Keys - Immobiliser

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

If you lose one of your keys, you must take all other keys to an authorised Volvo workshop. As a crime prevention measure, the code of the lost key is erased from the system. At the same time, the other keys must be re-coded in the system.

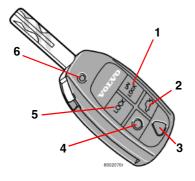
The mechanical key codes are recorded on a separate label accompanying the keys. Store the label in a safe place. Take the label to your Volvo dealer if you wish to order new keys. A maximum of six remote controls/keys can be programmed and used.

Immobiliser

The keys are equipped with coded chips. This code must match the reader in the ignition switch. The car can only be started if the correct key with the correct code is used.

Ignition keys and electronic immobiliser

The ignition key must not hang with other keys or metal objects on the same key ring. The electronic immobiliser could be activated accidentally and the car will not start.



- 1. Unlock
- Open tailgate
- 3. Alarm function
- Approach lighting
- 5. Locks
- 6. Folding/opening the key

Remote control functions

Unlocking

 Press button (1) to unlock all doors, the tailgate and the fuel filler flap.

Tailgate

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

Alarm function

The alarm function can be used to attract attention in the event of an emergency. If the red button (3) is held depressed for at least three seconds or is pressed twice in a short period of time, the direction indicators and horn are triggered. The alarm is deactivated automatically after 25 seconds or by pressing any of the buttons on the remote control.

Approach lighting

Do as follows when approaching your car:

 Press the yellow button (4) on the remote control.

The interior lighting, parking lamps, number plate lighting, door mirror lamps (option) and will switch on and remain lit for 30, 60 or 90 seconds. Your authorised Volvo workshop can select a suitable time setting for your car.

To switch off the home safe lighting:

- Press the yellow button again.

Locking

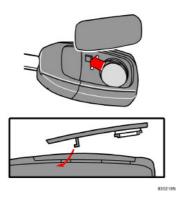
Lock all doors, tailgate and fuel filler flap with button 5. There is a delay of approx. 10 minutes for the fuel filler flap.

Folding/opening key

The key can be folded by pressing button 6 while folding the key blade into the keypad.

The folding key will open automatically with one press of the button.

Keys and remote controls



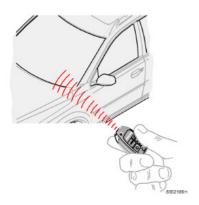
 Turn the old battery in to your Volvo workshop so that it is disposed of in an environmentally friendly way.

Changing the remote control battery

If the locks repeatedly fail to react to signals from the remote control at a normal distance, the battery should be replaced.

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

Locking and unlocking



Locking and unlocking the car from the outside

Using the master key or its remote control, all doors and the tailgate can be unlocked simultaneously from the outside. In this mode, the door lock buttons and interior door handles are inoperative.

The fuel filler flap can be opened when the car is unlocked. The flap remains unlocked for 10 minutes after the car has been locked.

Automatic relocking

If none of the doors or the tailgate are opened within two minutes of unlocking from the outside with the remote control, all locks relock automatically. This function prevents you from unintentionally leaving the car unlocked. For cars with alarms, see page 99.

Automatic locking (option)

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



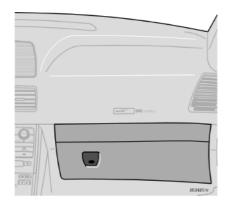
Locking and unlocking the car from the inside

Using the control in the door panel, all doors and the tailgate can be locked or unlocked simultaneously.

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

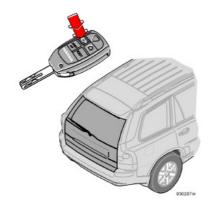
The above applies only if the car was not locked from the outside!

Locking and unlocking



Locking the glovebox

The glovebox can be locked/opened with the master key only – not with the service key.



Locking/unlocking the tailgate with the remote control

Do as follows to unlock the tailgate only:

- Press the button on the remote control (see illustration) slowly twice within 3 seconds.
- If all doors are locked when you close the tailgate, it remains unlocked and its alarm is not armed when you close it. The other doors remain locked with their alarms armed.
- To arm the alarm and lock the tailgate only when you close it, press the LOCK button again.

NOTE! If you use this button to unlock the tailgate, but do not open it, the tailgate will relock automatically after two minutes.

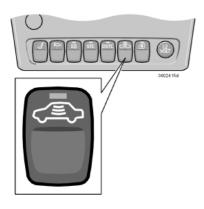
Deadlocks¹

Your car has a special deadlock function, which means that the doors cannot be opened from the inside if they are locked.

Deadlocks can only be activated from the outside by locking the driver's door with the key or remote control. All doors must be closed before deadlocks can be activated. Once activated, the doors cannot be opened from the inside. The car can only be unlocked from the outside via the driver's door or by using the remote control.

Deadlocks are engaged after a 25 second delay once the doors have been closed.

Certain countries



is shown on the display as long as the key remains in the ignition switch. The sensors will be reactivated the next time the ignition is switched on.

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

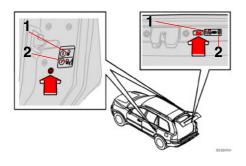
Temporary deactivation of the deadlocks and any detectors

If others prefer to remain seated in the car with the doors locked from the outside, e.g. during transport by ferry, it is possible to deactivate the deadlocks.

- Insert the key into the ignition switch, turn it to position II and then back to position I or **0**.
- Press the button (see illustration). If the car is equipped with an alarm, movement and tilt detectors are also deactivated. See page 99.

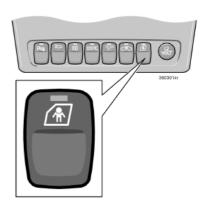
The LED in the button lights until you lock the car with the key or remote control. A message

Child safety locks



∴ WARNING!

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



Mechanical child safety locks - rear doors and tailgate

The controls for the child safety locks are in the rear edges of the rear doors and the bottom edge of the tailgate (certain markets). Each control is only accessible when the door or tailgate is open. Use the ignition key to turn the control, thereby activating or deactivating the child safety lock.

- 1. The door can be opened from inside.
- 2. The door cannot be opened from inside.

Electric child safety locks – rear doors (option in certain markets)

Use the button in the centre console to activate or deactivate the child safety locks in the rear doors. The ignition key must be in position I or II. The LED in the button comes on when the child safety lock is activated. A message appears in the display when you activate or deactivate the child safety lock.

NOTE! The rear doors cannot be opened from the inside as long as the electric child safety locks are activated.

Alarm (option)

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

- the bonnet is opened
- · the tailgate is opened
- · a side door is opened
- the ignition switch is turned with a nonapproved key or subjected to force
- if movement is detected in the passenger compartment
- the car is raised or towed away (if fitted with a tilt detector – option)
- · a battery cable is disconnected
- · anyone tries to disconnect the siren.

Activating the alarm

Press the LOCK button on the remote control. A long flash from the car's direction indicators confirms that the alarm is armed and that all doors are closed.

Deactivating the alarm

Press the UNLOCK button on the remote control. Two short flashes from the car's direction indicators confirm that the alarm has been deactivated.

Automatic alarm activation

If none of the doors or the tailgate is opened within two minutes of the alarm being deactivated, and the car was unlocked with the remote control, the car reactivates the alarm automatically. The car locks at the same time. This function prevents you from accidentally leaving the car without the alarm on.

Automatic alarm activation

In certain countries (e.g. Belgium, Israel) the alarm is activated after a certain delay if the driver's door was opened and closed but the car was not re-locked.

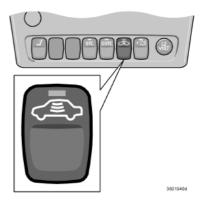
Deactivating a triggered alarm

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

Alarm signals

An audible signal is given from a siren with a reserve battery. Each alarm signal lasts 25 seconds.

When the alarm is triggered, all direction indicators flash for 5 minutes or until the alarm is deactivated as described earlier.



Temporary deactivation of detectors and deadlocks

To avoid inadvertently triggering the alarm, for example when leaving a dog in the car or during a ferry crossing, the movement and tilt detectors can be temporarily deactivated:

- Insert the key in the ignition switch, turn it to position II and then back to position I or 0.
- Press the button.

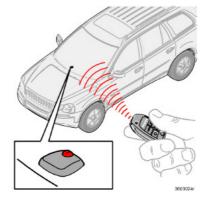
The LED in the button lights until you lock the car with the key or remote control.

A message is shown in the display as long as the key remains in the ignition switch. This

Alarm (option)

temporary deactivation ends the next time you switch on the ignition.

If your car has deadlocks, they are reactivated at the same time. See page 96.



/!\ WARNING!

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

Alarm LED on the dashboard

An alarm LED at the top of the dashboard (see illustration) indicates the status of the alarm system:

- Lamp not lit: Alarm is deactivated.
- The lamp flashes once every other second: the alarm is armed.
- · Lamp flashes quickly, after deactivating the alarm and until the ignition is switched on: The alarm has been triggered.
- If there is a fault in the alarm system, a message appears on the display.

If the alarm system does not function correctly, have an authorised Volvo workshop examine the car.

Starting and driving

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General

Economical driving

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

Keep in mind the following:

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

Your new car - slippery road surfaces

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

Driving on rough roads

The Volvo XC90 is primarily designed for driving on main roads, but also has good handling properties on uneven or rough roads. Keep the following in mind in order to preserve the service life of your car:

- Drive slowly on rough roads so you do not damage the car's underbody.
- If the ground is loose or is made up of dry sand or snow, it is always best to keep the car moving at all times and avoid shifting. Do not stop the car.
- If the road is extremely steep and there is a risk of overturning, never try to turn the car around. Reverse back down. Do not drive diagonally across an incline. Drive in the direction of the incline.

NOTE! Avoid driving on steep slopes if the fuel level is low. The catalytic converter could be damaged if the engine does not receive enough fuel. When driving on extremely steep slopes, make sure the tank is more than half full to avoid the risk of breakdown.

Wading

The car can be driven through water with a depth of no more than 48 cm.

NOTE! In greater depths, water can enter the differentials and the transmission. This reduces the lubricating ability of the oil and shortens the service life of the systems.

When driving through shallow water, maintain a low speed and do not stop the car. Once you have passed through the water, apply a light pressure to the brake pedal and check brake function. Water, mud and the like can dampen brake linings, resulting in delayed braking action.

Clean the electric contacts of the electric engine heater and trailer coupling after driving in water and mud.

NOTE! Do not let the car stand with water over the sills for any long period of time. This could cause electrical malfunctions.

Do not overload the battery

The electrical functions in the car load the battery to varying degrees. Avoid having the ignition key in position **II** when the engine is turned off. Use position **I** instead, as less power is used. The 12 volt outlet in the cargo area supplies power even when the ignition key is removed.

Examples of functions that use a lot of power:

- ventilation fan
- · windscreen wipers
- · audio system
- parking lights

Also take note of different accessories that load the electrical system. Do not use functions the consume a lot of current when the engine is switched off. A text is shown on the display in the combined instrument panel if battery voltage is low and remains until the engine has started. The energy economy function shuts down certain functions or reduces the load on the battery, e.g. by lowering ventilation fan speed and switching off the audio system.

Charge the battery by starting the engine.

Do not allow the engine and cooling system to overheat

Under certain conditions, e.g. when driving in hilly terrain or with a heavy load, especially in

warm weather, there is a risk of the engine and cooling system overheating.

To avoid the cooling system overheating

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

To avoid the engine overheating

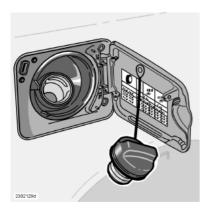
Do not exceed engine speeds of 4500 rpm if driving with a trailer or caravan in hilly terrain. The oil temperature can become too high.

Do not drive with an open tailgate!

If you drive with the tailgate open, some of the exhaust gases and poisonous carbon monoxide could be sucked into the car through the cargo compartment. If you must drive a short distance with the tailgate open, do as follows:

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

Refuelling



Opening the fuel filler flap

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

NOTE! The filler flap remains unlocked for ten minutes after the car is locked. It then locks automatically.

Fuel filler flap

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

There may be overpressure in the tank if outdoor temperatures are high. Open the cap slowly. Do not overfill the fuel tank. Stop refuelling when the pump cuts out for the first time! If the tank is overfilled fuel may overflow at high temperatures!

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



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.

Refuelling with petrol

NOTE! Do not add cleaning additives unless specifically recommended by a Volvo workshop.

Important!

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

Refuelling with diesel

At low temperatures, paraffin can precipitate out of diesel fuel (-5 °C - -40 °C). This can cause problems when starting. Make sure you use a special winter grade fuel during cold periods.

Starting the car

Starting the engine (petrol)

- Depress the parking brake.
- Automatic gearbox: Gear selector in position P or N. Manual gearbox: Gear lever in neutral and the clutch pedal completely depressed. This is especially important in severe cold.
- Turn the ignition key to start position. If the engine does not start within 5-10 seconds, release the key (see also "Autostart", page 106) and try again.

NOTE! Depending on the engine temperature at the time of the start attempt, engine speed after a cold start may be higher than normal - for a short time period - for certain engine types. This is because Volvo strives to minimise exhaust emissions by having the engine exhaust system reach the correct operating temperature as quickly as possible.

Starting the engine (Diesel)

- Depress the parking brake.
- Automatic gearbox: Gear selector in position P or N. Manual gearbox: Gear lever in neutral and the clutch pedal completely depressed. This is especially important in severe cold.
- Turn the ignition key to the driving position. A symbol on the combined instrument panel will come on indicating that the engine preheater is activated.

Turn the key to the start position when the lamp extinguishes.

Ignition keys and electronic immobiliser

The ignition key must not hang with other keys or metal objects on the same key ring. The electronic immobiliser could be activated accidentally. If this happens, remove the excess keys and restart the car.

Never rev the engine hard straight after a cold start! If the engine does not start or misfires, contact a Volvo workshop.

♠ WARNING!

Never switch off the ignition (position 0 or 1) or remove the ignition key when the vehicle is in motion. This could activate the steering wheel lock, making the car impossible to steer.

Always remove the ignition key from the ignition switch before leaving the vehicle especially if children remain in the car.

Ignition switch and steering lock



0 - Locked position

The steering wheel locks when the ignition key is removed.



I - Intermediate position - "radio position"

Certain electrical components can be switched on. The engine's electrical system is not activated.



II - Driving position

The key position when driving. The car's entire electrical system is connected.



III - Start position

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

position. If the key is hard to turn, the front wheels may be turned in such a way that there is tension in the steering wheel lock. Turn the wheel back and forth to make it easier to turn the key.

Starting the car

Autostart (V8 AWD)

Using the autostart function, the ignition key does not need to be kept in the start position (position III) until the engine has started. Turn the ignition key to the start position and release it. The starter motor then operates automatically (up to ten seconds) until the engine has started.

NOTE! Make sure the steering wheel locks when you leave the car. This reduces the risk of theft.

Manual gearbox





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

Use 6th gear as often as possible for the best possible fuel economy.



Reverse gear inhibitor

Only engage reverse gear when the car is stationary.

Automatic gearbox

Cold start

When starting in low temperatures, the gear changes can sometimes feel hard. This is due to the gearbox oil's viscosity at low temperatures. To minimise engine emissions, the gearbox shifts up later than normal when the engine is started at low temperatures.

NOTE! Depending on the engine temperature when the engine is started, the idle speed after a cold start may be higher than normal for certain engine types.

Turbo engine

When the engine is cold, the transmission shifts gears at higher revs. This allows the catalytic converter to reach normal operating temperature more quickly, with less exhaust emissions.

Adaptive system

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

Lock-up function

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

Safety systems

Cars with an automatic gearbox have special safety systems:

Keylock

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

Parking position (P)

Stationary car with engine running:

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

Electric gear inhibitor - Shiftlock Parking position (P position)

To be able to move the gear selector from the **P** position to other gear positions, the ignition key must be in position **I** or **II** and the brake pedal must be depressed.

Kick-down

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

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

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

To prevent overrevving, the gearbox control program has a protective downshift inhibitor.

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



P - Park

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

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

In **P**, the gearbox is mechanically blocked. Apply the parking brake when parking.

R - Reverse

The car should be stationary when you select \mathbf{R} .

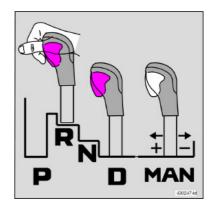


N - Neutral

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

D - Drive

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



Gear selector inhibitor

The gear selector can always be moved freely between **N** and **D**¹. Other positions are locked with a latch that is released with the inhibitor button on the gear selector.

With one press on the inhibitor button you can move the lever forwards or backwards between the gear positions, **N**, **R** and **P**.

In models with 4-speed automatic gearbox the inhibitor button on the gear lever must be pressed.

Automatic gearbox

Gear selector manual positions Manual positions

To move from automatic **D** to the manual gears, press the gear selector to the left. To move from **MAN** back to **D**, press the gear selector to the right to **D**.

On the 4-speed automatic gearbox gears **3** and **4**¹ have the Lock-up function (locked gears), which provides better engine braking and lower fuel consumption.

While driving

Manual gear positions can be selected at anytime during your trip. The engaged gear is locked until you select another gear. The car will only shift if you slow to a very low speed. If you move the gear selector to minus (–), the car downshifts automatically one gear at a time while engine braking. If you move the gear selector to plus (+), the car upshifts one gear at a time.

Third gear is the highest gear that can be used when starting.

W - Winter



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

winter programme is activated.

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

The **W** programme can only be selected in position **D**.

 ⁵th gear also has lock-up on the 5-speed automatic gearbox.
 2nd and 6th gear also have lock-up on the 6-speed automatic gearbox.

All-wheel drive

All-wheel drive - AWD

All-wheel drive is always engaged.

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

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

All-wheel drive improves driving safety in rain, snow and icy conditions.

Brake system

Brake servo

If the car is rolling or is being towed with the engine turned off, the brake pedal must be pressed about five times harder than when the engine is running. If the brake pedal is pressed when the engine is started, you will feel the pedal drop. This is normal and due to the brake servo becoming active. This may be more noticeable if the car has emergency brake assistance (EBA).

NOTE! If braking with the engine switched off, press the brake pedal sharply once. not repeatedly.



↑ WARNING!

The brake servo only works when the engine is running.

Brake circuits



This symbol lights if a brake circuit is not workina.

If a fault should occur in one of the circuits, it is still possible to brake the car. The brake pedal will travel further and may feel softer than normal. Harder pressure on the pedal is needed to produce the normal braking effect.

Dampness can affect braking characteristics

Brake components become wet when the car is driven in heavy rain, through pools of water or when the car is washed. This may alter brake pad friction characteristics so that there is a delay before braking effect is noticed.

Press the brake pedal lightly from time to time if driving for long stretches in rain or slushy snow, as well as after setting off in very damp or cold weather. This warms up the braking surfaces and dries off any water. It is also recommended to do this before parking the car for a long period in such weather conditions.

If the brakes are used heavily

When driving in the Alps or other roads with similar characteristics, the car's brakes are heavily loaded even if the brake pedal is not being depressed especially hard.

Because speed is often low, the brakes are not cooled as effectively as when driving on flat roads at higher speed.

So as not to overload the brakes, shift down when driving downhill instead of using the foot brake. Use the same gear driving downhill as you would use driving uphill. This using engine braking more efficiently and requires the foot brake for only brief periods.

Bear in mind that driving with a trailer puts an additional load on the car's brakes.

Anti-lock braking system (ABS)



The anti-lock braking system (ABS) prevents the wheels from locking up under braking.

This means the ability to steer is maintained and it is easier to swerve to avoid a hazard, for example.

After the engine has been started, the ABS will perform a brief self-test at a speed of about 20 km/h. This can be felt and heard as pulses in the brake pedal.

To get the most out of the ABS:

- · Press brake pedal with full force. Pulses will be felt.
- Steer the car in the direction of travel. Do not release the pressure on the pedal.

Practice braking with the ABS system in a traffic-free area and in different weather conditions.

The ABS symbol lights up: for about two seconds when the car is started if the ABS is disengaged due to a fault.

Electronic Brakeforce Distribution system - EBD

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

registering how quickly the brake pedal is depressed. Continue braking without easing off on the brake pedal. The function is suspended when the pressure on the brake pedal eases. This function is always active and cannot be disengaged.



⚠ WARNING!

If the BRAKE and ABS warning symbols are lit at the same time, a fault may have occurred in the brake system. If the level in the brake fluid reservoir is normal, drive carefully to the nearest authorised Volvo workshop to have the brake system checked.

If the 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.

Emergency Brake Assistance - EBA

(Emergency Brake Assistance) In case of sudden braking, full-strength braking is provided instantaneously. The EBA function senses when heavy braking is underway by

Stability system

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

The car is either equipped with STC (Stability and Traction Control) - Stability and traction control system or DSTC (Dynamic Stability and Traction Control) - Dynamic stability and traction control system.

Function/ system	STC	DSTC ¹
TC	Х	Χ
SC	Х	Χ
AYC		Х

1. Option on certain markets.

Traction Control (TC)

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

Spin Control (SC)

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

Active Yaw Control (AYC)

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

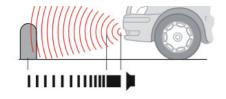
The AYC function is always active and cannot be deactivated.

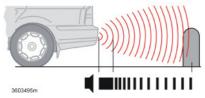


/ WARNING!

Suppressing the STC or DSTC system may alter the driving characteristics of the car. Always take care when cornering and driving in slippery conditions.

Parking assistance (option)





Parking assistance front and rear

General

Parking assistance is used as an aid to parking. A signal indicates the distance to a detected object.

The frequency of the signal increases as you come closer to an object in front of or behind the car.

The tone becomes constant at a distance of about 30 cm. If there are objects within this distance both behind and in front ¹ of the car, the signal alternates between front and rear speakers.

If the volume of another sound source from the audio system is high, this is automatically lowered.

The system is always activated when the car is started.

/ WARNING!

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

Front parking assistance

The measurement area straight in front of the car is approx. 0.8 m. The text message PARK ASSIST ACTIVE appears in the audio display when the sensors react to an obstacle in front of the car.

Front parking assistance cannot be combined with extra lights because the sensors are affected by the extra lights.

Rear parking assistance

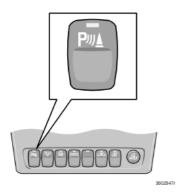
The measurement area straight behind the car is approx. 1.5 m. The text message PARK ASSIST ACTIVE appears in the audio display when reverse gear is engaged.

The system must be deactivated when driving with a trailer, bike carrier on the towbar or the like as they would trigger the sensors.

Rear parking assistance is deactivated automatically when towing a trailer if a Volvo genuine trailer cable is used.

Provided that the parking assistance is mounted both front and rear.

Parking assistance (option)



Deactivating and reactivating the parking assistance

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

Front parking assistance

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

Rear parking assistance

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

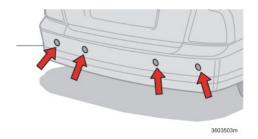
Fault indicator



The information symbol comes on and stays lit

PARK ASSIST SERVICE REQUIRED is shown in the infor-

mation display in the centre of the combined instrument panel together with the symbol.



Parking assistance sensors

Cleaning the sensors

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

The sensors can react if covered by ice and snow.

Towing and recovery

Do not bump start the engine

If you bump start a car with manual gearbox, the catalytic converter(s) may be damaged. Cars with an automatic gearbox cannot be bump started. Use a booster battery if the battery is flat.

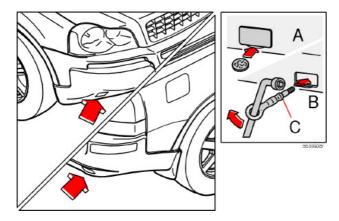
If the car must be towed

- Unlock the steering wheel lock so that the car can be steered.
- Keep in mind the highest legally permissible speed.
- Bear in mind that the brake and power steering servos do not function when the engine is off. Approx. five times more pressure must be exerted on the brake pedal and steering requires much more force than usual.
- Drive gently. Keep the towline taut to avoid unnecessary jerking.

For automatic gearboxes

- The gear selector should be in position N.
- The maximum permissible speed when towing a car with automatic gearbox is 80 km/h.
- Only tow with the car facing forward.
- The engine cannot be bump started.
 "Jump starting", see page 119.

Towing and recovery



Towing eye

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

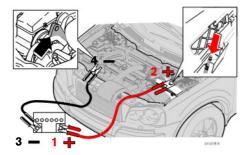
Remove the cover as follows:

- Release the bottom edge of the cover with a coin.
- B. Screw the towing eye securely into place up to the flange (C). You can use a wheelbrace.

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

The towing eye may only be used for towing on roads, not for recovery after driving into a ditch or the like. Professional help should be called for recovery.

Start assistance



Starting with a booster battery

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

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

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

compartment (2+).

Connect the clamp to the contact point under a small black cover which has a plus sign on it. The cover is integrated with the fuse box cover.

- Connect one clamp of the black cable to the negative terminal of the booster battery (3-).
- Connect the other clamp of the black cable to the lifting eye on your car's engine (4-).
- Start the engine of the "donor car". Let the engine run a few minutes at a speed slightly higher than idle 1500 rpm.
- Start the engine of the car with the flat battery.
- Remove the clamps in reverse order.

NOTE! Do not remove the clamps during the start attempt; risk of spark build-up.



/!\ WARNING!

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

The battery contains sulphuric acid, which can cause serious burns. If the acid comes into contact with eyes, skin or clothing, flush with large quantities of water. If acid splashes into the eyes, seek medical attention immediately.

Driving with a trailer

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

/N WARNING!

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

- The car's towing bracket must be of an approved type.
- If the towing bracket is fitted by Volvo, the car is delivered with the necessary equipment to drive with a trailer. If retrofitting, check with your Volvo dealer to ensure that the car is fully equipped to drive with a trailer.
- Distribute the load on the trailer so that the weight on the towing bracket follows the specified maximum towball load.
- Increase tyre pressure to correspond to the pressure for full load. See the tyre pressure table!
- · Clean the towing bracket regularly and grease the towball¹ and all moving parts to prevent unnecessary wear.

- · Do not drive with a heavy trailer when your car is brand new! Wait until it has gone at least 1000 km.
- The brakes are loaded much more than usual on long and steep downhill slopes. Downshift to a lower gear and adjust your speed.
- If the car is driven with a heavy load in a hot climate, the engine and gearbox may overheat. The temperature gauge in the combined instrument panel goes into the red zone when the car overheats. Stop and let the engine idle a few minutes.
- If the car overheats, the air conditioning system can be temporarily switched off.
- The gearbox reacts with a built-in protection function if the car overheats. See the message in the display!
- The engine is loaded more heavily than usual when driving with a trailer.
- · For reasons of safety, you should not drive faster than 80 km/h, even if the laws of certain countries permit higher speeds.
- The maximum permissible trailer weight for a trailer without brakes is 750 kg.
- Select position **P** (automatic gearbox) or engage a gear (manual gearbox) when parking with a trailer and always apply the parking brake. If you are parking on a

steep incline, place chocks behind the wheels.

Trailer weights

See page 225 for permitted trailer weights.

NOTE! The stated maximum permitted trailer weights are those permitted by Volvo. National vehicle regulations can further limit trailer weights and speeds. Towbars can be certified for higher towing weights than the car can actually tow.



∕N WARNING!

Follow the stated recommendations for trailer weights. Otherwise, the rig may be difficult to control during evasive manoeuvres and braking.

Does not apply to ball hitch with vibration damper.

Driving with trailer and automatic gearbox

When parking on hills, you should apply the parking brake before moving the gear selector to **P**. When you start on a hill, you should first put the gear selector in drive and then release the parking brake.

- Select a low gear in the gearbox when driving on steep inclines or when driving slowly. This prevents the gearbox from upshifting. The gearbox oil will be cooler.
- 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 trailer and automatic gearbox on inclines exceeding 15 %.

NOTE! An automatic gearbox oil cooler for trailer towing is required for a number of models.

Consult your Volvo dealer for information regarding your car's specifications if the towbar has been installed after purchase.

Assisted starting with a trailer

Cars equipped with a V8 engine have an integrated function which reduces the risk of significant jerking and wheelspin when starting with a trailer hitched to the car.

Activating

To activate, the cables from the trailer must be connected to the trailer socket which is fitted beside the towbar, see page 122.

Deactivating

Unplug the cables from the electrical socket.

NOTE! The function is also activated when any other electrical equipment is plugged into the trailer socket, and the car then accelerates more gently when pulling away.



Levelling (option on cars seating five, standard on cars seating seven)

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

Driving with a trailer

Towing bracket (option)

NOTE! Check that the car is equipped with transmission oil cooling if the towing bracket is retrofitted.

Fixed towbar (A)

Always remember to fasten the trailer's safety cable to the attachment. See the illustration!

Detachable towbar (B)

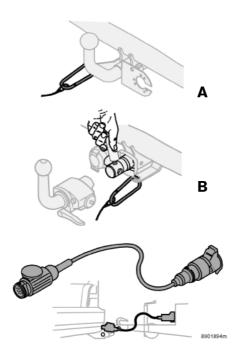
Always follow mounting instructions carefully.

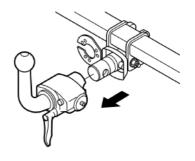
Always remember to fasten the trailer's safety cable to the attachment. See the illustration!

Always remember to clean and grease the connector pin regularly.

Use recommended grease 8624203.

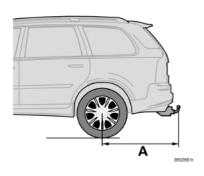
NOTE! Your car may have a towing bracket with a 13 pin contact that you must connect to a trailer with a 7 pin contact. In such a case, use a Volvo Genuine adapter cable. Make sure that the cable does not drag on the ground.

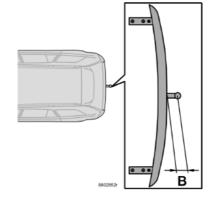




If your car is equipped with a Volvo detachable towbar:

- Make sure that the towbar is locked before you begin driving.
- The red signal pin (see the arrow in the illustration above) should not be visible.
- The lock must be locked using the key.
 See the description on page 124.





Specifications

Distance A above:

Fixed towbar: 1124 mm

Detachable towbar: 1124 mm

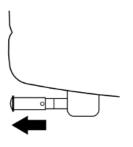
Max. permissible ball pressure: 90 kg

Distance B above:

Fixed towbar: 80 mm

Detachable towbar: 80 mm

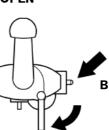
Detachable towbar - mounting





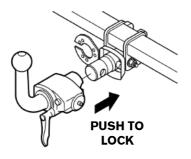


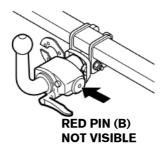
OPEN



- Remove the connector pin cover.

- Insert the key into the detachable part and turn it clockwise to the unlocked position.
- Hold the towball and turn the lever clockwise to the locked position.







LOCKED

Push the towball to the locked position.
 Do not hold the lever.

NOTE! The lever changes position quickly.

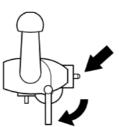
- Check that the signal pin (B) is pushed in.
- Turn the key anticlockwise to the locked position and remove it from the lock.

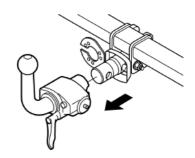
Detachable towbar - removing

OPEN







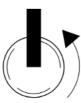


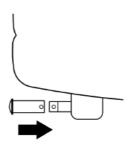
- Insert the key into the detachable part and turn it clockwise to the unlocked position.
- Turn the lever clockwise to the locked position and grip the towball.
- Pull the towball from the connector pin.
 Do not hold the lever.

Important!

The lock on the towball can only be locked when the red plastic pin is not visible.

LOCKED





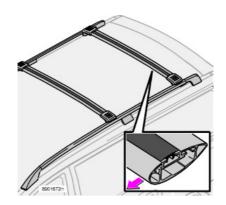
- Turn the key anticlockwise to the locked position and remove it from the lock.
- Refit the connector pin cover as in the illustration.

Loading

General

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

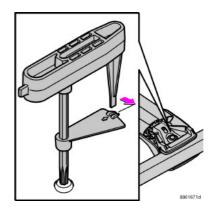
The car's driving characteristics change depending on how heavily it is loaded and how the load is distributed.



Load on the roof

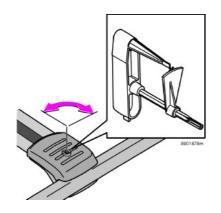
Load carrier position (accessory)

Make sure the load carrier is placed in the right direction on the roof rails. Load carriers can be positioned anywhere along the roof rails. When driving without a load, the front load carrier should be positioned 200 mm in front of the centre rail foot and the rear load carrier centred between the centre and rear rail foot (see illustration) to minimise wind noise. The longer load carrier should be in the front.



Fitting load carriers

Make sure that the load carrier sits correctly against the roof rail. Screw on the load carrier using its torque wrench. Tighten to the marking on the torque wrench (corresponds to 6 Nm). See illustration!



Load carrier cover

Use the end of the torque wrench (see illustration) or the ignition key to loosen or secure the cover. Rotate 1/4 turn.

Load carriers

- · To avoid damaging your car and to achieve the best level of safety when driving, we recommend that you only use load carriers that Volvo has specially designed for your car.
- Check periodically that the load carriers and load are properly secured. Lash the load securely with retaining straps!
- Distribute the load evenly over the load carriers. Do not load lopsidedly! Place the heaviest items at the bottom.

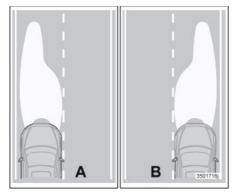
- Remember that the car's centre of gravity and driving characteristics change if you have a load on the roof.
- · Keep in mind that the car's wind resistance and fuel consumption increase in proportion to the size of the load.
- Drive gently! Avoid quick accelerations, heavy braking and taking curves hard.



♠ WARNING!

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

Adjusting headlamp pattern



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

Correct light pattern for left or right-hand traffic

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

Headlamp masking

Copy the templates found on page 132 and transfer the pattern to a self-adhesive, water-proof material such as opaque tape or similar.

The mask is positioned using the dot (5) in the headlamp lens as a reference point, which should align with the red dot on the respective template. The long red line on the illustrations corresponds to the line in the headlamp lens that the template should be matched to.

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

The templates are for both LHD and RHD variants and are positioned as illustrated. The upper illustration is for LHD cars. The lower illustration is for RHD cars.

Halogen headlamps

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

Position each template so that the arrows point towards the centre and the dot on the template matches the dot on the headlamp lens.

Reference measurements:

Template 1 and 2.) The long sides of the templates should be approx. 82 mm.

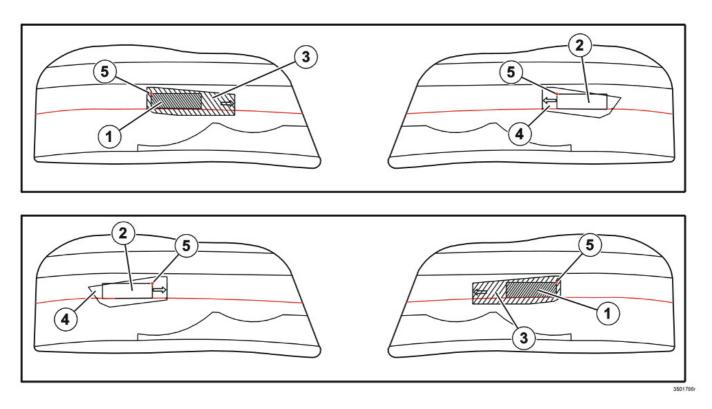
Bi-Xenon headlamps

Copy templates 3 and 4. Check the measurements to ensure they are correct. Transfer the template to a self-adhesive, waterproof material and cut it out. Position each template so that the arrows point towards the centre and the dot on the template matches the dot on the headlamp lens. The template marking > < should be aligned with the line on the headlamp lens.

Reference measurements:

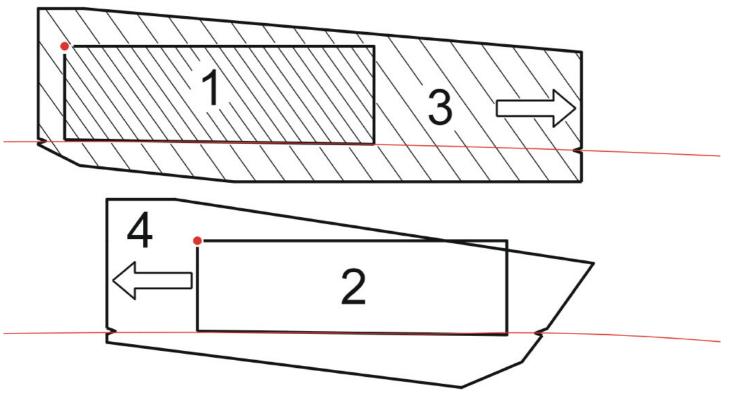
Template 3.) The line between the > < markings on the templates should be approx. 140 mm.

Template 4.) The line between the > < markings on the templates should be approx. 112 mm.



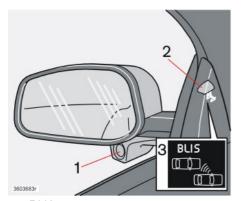
Fitting the mask to the headlamps. The upper illustration is for LHD variants and the lower illustration is for RHD variants. Templates 1 and 2 are for halogen headlamps, 3 and 4 are for Bi-Xenon headlamps.

Adjusting headlamp pattern



Masking templates

BLIS (Blind Spot Information System)



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

BLIS

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

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

/ WARNING!

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

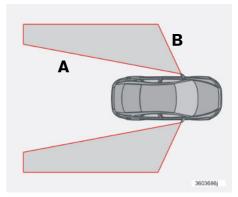
NOTE! The lamp comes on on the side of the car where the system has detected the vehicle. If the car is overtaken on both sides at the same time then both lamps come on.

When BLIS operates

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

When you overtake another vehicle:

- The system reacts if you overtake another vehicle at a speed of up to 20 km/h faster than the other vehicle.
- The system does not react if you drive at a speed of more than 20 km/h faster than the other vehicle.



"Blind spots" covered by BLIS
Distance A = approx. 9.5 m
Distance B = approx. 3 m

When you are overtaken by another vehicle:

- The system reacts if you are overtaken by a vehicle travelling up to 70 km/h faster than you are travelling.
- The system does not react if you are overtaken by a vehicle travelling more than 70 km/h faster than you are travelling.

BLIS (Blind Spot Information System)

∴ WARNING!

- BLIS does not work in sharp bends.
- The system does not work if the camera lenses are covered. In this case the BLIS indicator lamps flash and a text message is shown in the display (see table on page 135).
- BLIS does not work when the car is reversing.

System function in daylight and darkness

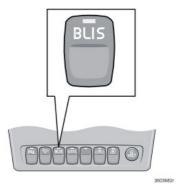
Daylight: In daylight the system reacts to the shape of the surrounding vehicles. The system is designed to detect motor vehicles such as cars, trucks, motorcycles etc.



/!\ WARNING!

- The system does not react to bicycles or mopeds.
- BLIS does not react to stationary vehicles.
- Darkness: In darkness the system reacts to the **headlamps** of surrounding vehicles. A vehicle in the blind spot must at least have its daytime running lights on

to be detected by the system. This means for example that the system does not react to a trailer without headlamps / daytime running lights which is towed behind a car or truck.



Switching off and reactivating BLIS

BLIS is always active when the ignition is switched on.

- The system can be switched off by pressing the BLIS button in the switch panel in the centre console (see illustration above). The LED in the button goes out when the system is switched off and a text message is shown in the display in the dashboard.
- · BLIS can be reactivated by pressing the button. An LED in the button then lights and a new text message is shown in the display. Press the READ button, see page 42, to clear the text message.

System status	Text in the display	
BLIS not functioning	BLIND-SPOT SYST SERVICE REQUIRED	
Right-hand camera blocked	BLIND-SPOT SYST R CAMERA BLOCKED	
Left-hand camera blocked	BLIND-SPOT SYST L CAMERA BLOCKED	
Both cameras blocked	BLIND-SPOT SYST CAMERAS BLOCKED	
BLIS system off	BLIND-SPOT INFO SYSTEM OFF	
BLIS system on	BLIND-SPOT INFO SYSTEM ON	



⚠ WARNING!

The BLIS cameras have the same limitations as the human eye, i.e. they "see" worse in heavy snowfall or thick fog for example.

The messages above are only shown if the ignition key is in position II and BLIS is active (i.e. if the driver has not switched off the system).

	Wheels and tyres
General	138
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Changing wheels	142
Warning triangle and spare wheel	143
Removing wheels	145
Emergency puncture repair	147

General

Driving characteristics and tyres

The 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.

When changing tyres, ensure that tyres of the same type and dimensions, and preferably also the same make, are fitted to all four wheels. Follow the recommended tyre pressures specified on the tyre pressure label, see page 141.

Designation of dimensions

The dimensions are stated on all car tyres. Example:

225/70R16 102H.

225 Section width (mm)

70 Ratio between section height and width (%)

R Radial ply

16 Rim diameter in inches (")

102 Tyre load index (in this case 615 kg)

H Speed rating (in this case 210 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 vehicle's registration document. 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).

Remember that traffic regulations determine how fast a car can be driven, not the speed class of the tyres.

Note! Maximum permitted speeds indicated.

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

New tyres

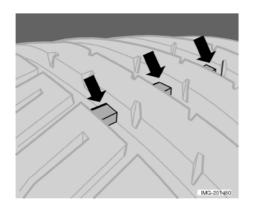


Tyres are perishable. After a few years they begin to harden at the same time as the friction capacity/characteristics gradually deteriorate. Therefore aim to get

as fresh tyres as possible when you replace them. This is especially important with regard to winter tyres. The week and year of manufacture are stated with four digits, for example 1502. The tyre in the illustration was manufactured in week 15 of 2002.

Tyre age

Even if tyres have a theoretical lifespan of up to ten years, it is not recommended to drive on tyres which are more than six years old.



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 only 1.6 mm of tread remains, this band is clearly visible. Change the tyres as soon as possible. Remember that tyres with little tread depth provide very poor grip in rain and snow.

Winter tyres

Volvo recommends winter tyres with particular dimensions. These are stated on the tyre pressure label, see page 141 for its location. The tyre dimensions are dependent on the engine variant. When driving on winter tyres, these 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 tyre. This gives the tyre, and especially the studs, a longer lifespan.

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. It is therefore not recommended to drive on winter tyres that have a tread depth of less than four millimetres.

Snow chains

Snow chains may only be used on the front wheels. This 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 disks and the wheels is too small.

Important!

Use Volvo genuine snow chains or equivalent chains designed for the car model, and tyre and rim dimensions. Consult an authorised Volvo workshop

Temporary spare

The spare wheel ¹ is only intended to be used for the short time it takes to get the ordinary wheel replaced or repaired. Replace the spare wheel as soon as possible with a normal wheel. The car's handling may be altered by the use of the spare wheel.

Never drive faster than 80 km/h with a spare wheel on the car.

By law, it is only legal to use the spare wheel/ tyre temporarily in connection with damage to a tyre. A wheel/tyre of this type should be replaced with a normal wheel/tyre as soon as possible.

Remember also that this tyre combined with the normal tyres will affect driving character-

Certain variants and markets

Wheels and tyres

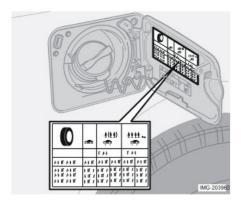
General

istics. On four wheel drive vehicles excess speed may also damage the transmission.

Important!

The car must never be driven fitted with more than one temporary spare wheel.

Tyre pressure



few kilometres of driving, the tyres warm up and the pressure increases. Therefore air should not be released if the pressure is checked when the tyres are warm. However the pressure should be increased if it is too low.

Recommended tyre pressure

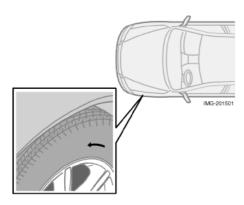
The tyre pressure decal on the inside of the fuel filler flap shows what pressure the tyres should have with different load and speed conditions.

Checking the tyre pressure

Check the tyre pressure regularly. The correct tyre pressure is shown in the tyre pressure table. The stated tyre pressures refer to cold tyres. (Cold tyres mean the tyres are the same temperature as the ambient temperature.)

Driving with the wrong tyre pressure adversely affects the car's driving characteristics and can increase tyre wear. After just a

Changing wheels



The arrow shows the tyre's direction of rotation.

Summer and winter wheels

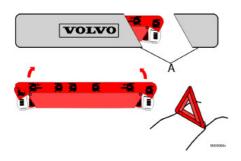
When summer and winter wheels are changed they should be marked with which side of the car they were mounted on, for example **L** for left and **R** for right. Tyres with a tread pattern which are designed to only turn in one direction have the direction of rotation marked with an arrow. The tyre should 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, snow and slush out of the way are

adversely affected. Tyres with the greatest tread depth should always be fitted to the rear of the car (to decrease the risk of skidding).

Wheels should be stored lying down or hanging up, and not standing up.

Contact an authorised Volvo workshop if you are uncertain about tread depth.

Warning triangle and spare wheel



After use:

Pack everything in reverse order.
 Make sure that the warning triangle with case is securely fastened in the compartment.

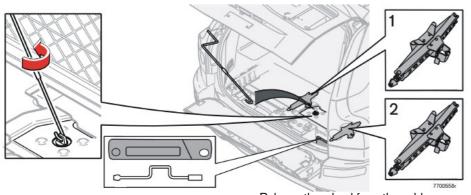
Warning triangle (certain countries)

Follow the warning triangle regulations of the country you are in.

Use the warning triangle as follows:

- Detach the warning triangle case. It is held in place with a velcro strap.
- Remove the warning triangle from its case (A).
- Fold out the four support legs on the warning triangle.
- Fold out both red sides of the warning triangle. Place the warning triangle in a location that is appropriate for the traffic situation.

Warning triangle and spare wheel



Spare wheel¹ - removing

The spare wheel is located underneath the car. The jack and tool kit with crank are located under the floor hatch. Jack position varies depending on whether it is a variant seating seven (1) or five (2).

Detach the spare wheel as follows:

- Lower the bottom of the tailgate.
- Lift up the floor hatch in the cargo compartment.
- Remove the two parts of the crank from the tool kit and assemble them.
- Fit the crank in the winch.
- Loosen the tyre by cranking anticlockwise until you reach the stop.
 - Certain variants and markets

- Release the wheel from the cable.
- Rewind up the cable (clockwise).

NOTE! The cable could damage the car if it hangs free while driving.

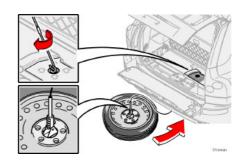
 Place the punctured tyre in the cargo compartment. The tool kit contains a plastic bag for the tyre.

NOTE! The spot under the car is only intended for the car's original spare wheel. Do not place any other wheels there.

Spare wheel - refitting

It is best to have two people put the spare wheel back in place. One person to crank and the other to guide the wheel.

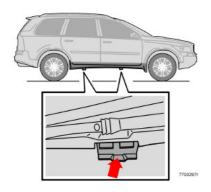
 Crank out the cable and place its anchor in the centre hole of the wheel.



- Slowly crank (clockwise) the cable in a bit.
- Angle the wheel so that it comes in over the exhaust system.
- Hold down the rear edge of the wheel while cranking it in.
- Place the wheel above the rear axle, against the floor.
- Crank until you reach the stop.

Check that the wheel is properly secured!

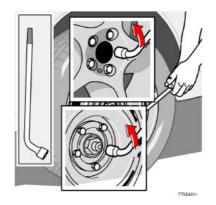
Removing wheels



The jacking points are centred under the bottom of the doors.

Removing wheels

Remember to set out the warning triangle if you must change a wheel in a trafficked area. There are two jacking points on each side of the car, centred under the bottom of the doors.



/ WARNING!

Check that the right attachment points are being used. A production anchorage with pin is located between the jacking points. This is not strong enough to use to lift the car. If you are unsure about the location of the jacking points, contact your Volvo workshop. An incorrectly fitted jack could damage the door and body.

- Park the car on an even, firm surface with no incline.
- Apply the parking brake and engage 1st gear (manual gearbox) or move the gear selector to P (automatic gearbox). Place

- chocks on either side of the wheels remaining on the ground - use stones or wooden blocks.
- Take out the jack, wheelbrace and crank, see location page 144.
- Use the wheelbrace to loose the wheel bolts 1/2-1 turn. Turn anticlockwise.



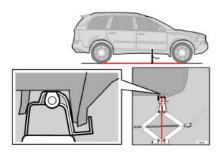
Never crawl under the car when it is raised on a jack! The car could fall, causing injuries.

The car's original jack should only be used when changing wheels. All other work on the car should be done using workshop jacks and axle stands under the part of the car that is raised.

The jack screw should be kept well lubricated.

If the surface is too soft, the jack could slide to the side and the car could fall. No one should be in the car when the wheel is being changed.

Removing wheels



Place the jack under the jacking point and crank it up towards the car floor. Check that the jack sits securely in the anchorage. Then adjust the jack so that its foot is positioned vertically under the anchorage. See illustration. Do not place wood blocks or the like under the jack as you will not achieve full bearing capacity.



♠ WARNING!

If the jack is positioned incorrectly, the car could fall. Risk of injury!

- Lift the car until the wheel is free.
- Remove the wheel bolts and lift off the wheel.

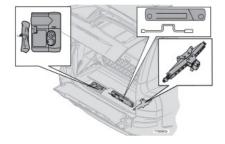
Fitting the wheel

- Clean the contract surfaces on the wheel and hub.
- Fit the wheel. Screw the wheel nuts.
- Lower the car so that the wheel cannot rotate.
- Tighten the wheel bolts alternately and in torque steps. Tightening torque: 140 Nm (14.0 kpm). It is important that they are tightened to the correct torque. Check with a torque wrench.
- Screw the jack all the way down before returning it to the cargo compartment. Then secure it in place.
- Check that the new tyre has the correct amount of pressure.

NOTE! There are two different types of wheel bolts depending on whether or not your car has steel or aluminium rims; bolts used with aluminium rims have a loose, rotating ring. Bolts used with steel rims have no rotating ring.

Make sure to use the correct type of bolt. If you are unsure, check with the nearest Volvo workshop.

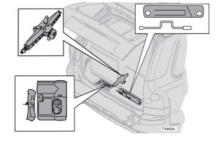
Emergency puncture repair





General

Cars which do not have a spare wheel are instead equipped with an emergency puncture repair kit. This kit can be used to both seal the puncture and to check and adjust the tyre pressure. The kit consists of an electric air compressor and an integrated canister with sealing liquid.



Cars seating seven

Emergency puncture repair kit

The emergency puncture repair kit¹ is only intended to work as a temporary repair so that the car can be driven a further 200 km (max.) or to the nearest tyre centre. The sealing fluid has the ability to effectively seal tyres which have punctures in the tread.

The canister with the sealing fluid should be replaced before the best-before date has expired or after the emergency repair kit has been used. Puncture repair kit replacement, see page 151 for information on canister replacement.

Certain variants and markets

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 abilities to seal tyres which have punctures in the wall of the tyre. Do not seal tyres with the emergency puncture repair kit if they have larger slits, cracks, irregularities or similar damage.

The emergency puncture repair kit with compressor and tools are found under the floor in the cargo area.

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.



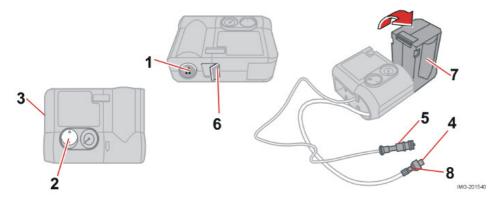
/\!\ WARNING!

The sealing fluid may cause irritation if it comes into direct contact with skin. In the case of contact with skin, wash away the fluid with soap and water.

Taking out the emergency puncture repair kit

- Fold the rear edge of the floor mat forward.
- Lift up the emergency puncture repair kit.

Emergency puncture repair



Inflating tyres

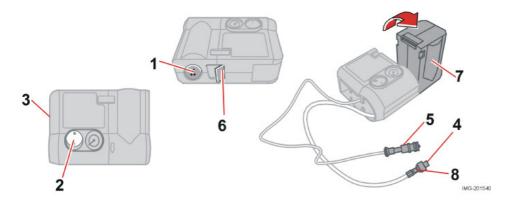
Set up the warning triangle if a tyre must be inflated in an area close to traffic.

- Ensure that the orange switch (2) is in position 0 and take out the lead (5) and air hose (4) from the side compartment (3).
- Screw the air hose's valve connection to the bottom of the thread on the tyre's air valve.
- Connect the lead (5) to one of the car's 12 V sockets.
- Start the engine. The car must be in a well-ventilated place.
- Start the compressor by flicking the switch (2) to position I.

- Pump up the tyre to the pressure specified on the tyre pressure label.
- Turn off the compressor, the switch (2) should be in position 0. Detach the air hose and unplug the lead. Replace the valve's dust cap.
- Put the lead (5) and air hose (4) into the side compartment (3).
- Put the puncture repair kit back under the floor in the cargo area.
- The compressor should not run for more than ten minutes at a time. Let it cool afterwards as there is a risk of overheating.
- Objects with a volume of up to 50 litres can be pumped up with the compressor.

/ 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.



Sealing punctured tyres

Set up the warning triangle if emergency tyre repairs must be carried out in an area where there is other traffic.

- Remove the decal (1) regarding the highest permitted speed from the emergency puncture repair kit and stick it on the steering wheel where it can be clearly seen by the driver.
- Ensure that the orange switch (2) is in position **0** and take out the lead (5) and air hose (4) from the side compartment (3).
- Screw the air hose's valve connection to the bottom of the thread on the tyre's air valve.

- Connect the lead (5) to one of the car's 12 V sockets.
- Release the safety catch (6) and turn the orange-coloured part (7) 90 degrees to the vertical position, until a click is heard.
- Start the engine. The car must be in a well-ventilated place.

Inhaling car exhaust fumes can result in danger to life. Never leave the engine running in sealed areas or areas that lack sufficient ventilation.

 Start the compressor by flicking the switch (2) to position I. The pressure may

- increase temporarily up to a maximum of 4 bar while the sealing liquid is being pumped in. After about one minute, the pressure will drop and the pressure gauge show a more correct tyre pressure.
- Pump the tyre to a pressure of between 1.8 bar and 3.5 bar. If the pressure does not reach 1.8 bar after ten minutes of pumping, the compressor should be turned off so it does not overheat.
- Undo the air hose (4) from the air valve and put the dust cap back on. Unplug the lead (5) from the electrical socket. Fold the orange-coloured part (7) back into its original position and secure the catch (6). Keep the emergency repair kit in a safe place in the car.

Emergency puncture repair



∴ WARNING!

Never stand next to the tyre when the compressor is running. Be particularly observant of the tyre walls. If cracks, irregularities or other damage appears, turn off the compressor immediately. Under these circumstances your journey should not continue. Contact an authorised tyre centre.

Immediately drive about 3 km, at a maximum speed of 80 km/h, to allow the sealing fluid to seal the tyre well.



♠ 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).

- Check the tyre pressure again:

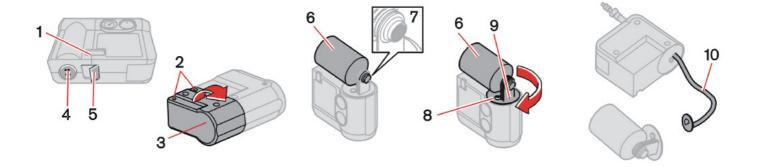
NOTE! Do not raise the orange-coloured part (7) when only the compressor is to be used for inflation.

 Connect the air hose (4) to the air valve on the tyre.

- Connect the lead (5) to the 12 V power point. Read the pressure on the compressor. If the tyre pressure is below 1.3 bar, the tyre has not been sufficiently well sealed. The journey should not be continued under these circumstances. Contact a tyre centre.
- If the tyre pressure is higher than 1.3 bar, the tyre should be pumped up to the pressure stated on the tyre pressure label, see page 141 for its location. Release pressure with the reduction valve (8) if the tyre pressure is too high.
- Turn off the compressor, the switch (2) should be in position 0. Detach the air hose and unplug the lead. Replace the valve's dust cap.
- Put the lead (5) and air hose (4) into the side compartment (3).
- Put the puncture repair kit back under the floor in the cargo area.

The compressor should not run for more than ten minutes at a time. Let it cool afterwards as there is a risk of overheating.

NOTE! The canister with sealant and hose should be replaced after use.



Changing the sealing fluid canister

The canister of sealing fluid should be changed before the best-before date has expired, see date label (1), or after the tyre has been sealed. After use, the canister (6) with holder (8) and air hose (10) should be changed.

Important!

Read the safety instructions on the bottom of the canister.

∴ WARNING!

Ensure the compressor is not connected to the 12 V socket when the canister is changed.

Before the best-before date has expired

- Undo the two screws (2) on the orangecoloured case (3).
- Remove the speed label (4) and date label (1), and open the safety catch (5).
 Loosen the case (3) and take it off.
- Unscrew and remove the canister (6).

- Check that the seal (7) on the new canister is not damaged. Screw the canister into place.
- Refit the case (3). Check that the case is correctly fitted. Screw it on with the screws (2).
- Affix the speed label (4) and new date label (1) to the tyre repair kit.

Treat the removed canister as hazardous waste.

Changing the canister and hose after use

 Undo the two screws (2) on the orangecoloured case (3).

Emergency puncture repair

- Remove the speed label (4) and date label (1), and open the safety catch (5).
 Loosen the case (3) and take it off.
- Push down the button (8) while turning the canister (6) and the holder (9) clockwise. Remove them.
- Pull out the air hose (10).
- Wipe off remaining sealing fluid with a rag or scrape it away if it is has already dried.
- Fit a new air hose (10). Check that it is fitted correctly.
- Check that the seal (7) on the new canister is not damaged. Screw the holder (9) onto the canister (6) and turn it anticlockwise until a click is heard.
- Refit the case (3). Check that the case is correctly fitted. Screw it on with the screws (2).
- Affix the speed label (4) and new date label (1) to the tyre repair kit.

The empty canister and air hose can be treated as normal waste.

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Cleaning

Washing the car

Wash the car as soon as it becomes dirty. Use car shampoo. Dirt and road salt can lead to corrosion.

- Do not park the car in direct sunshine. Washing a car with hot paintwork can cause permanent paintwork damage. Wash the car in a carwash with waste water separator.
- Thoroughly rinse dirt off the underbody of the car.
- Rinse the entire car to remove loose dirt. When using a pressure washer: Make sure that the nozzle of the pressure washer is not closer than 30 cm to the bodywork. Do not spray directly at the locks.
- Wash using a sponge, car shampoo and plenty of lukewarm water.
- If the dirt is difficult to dislodge, wash the car using a cold degreasing agent.
- Dry the car using a clean, soft chamois or a water scraper.
- Clean the wiper blades with a lukewarm soap solution or car shampoo.

Removing bird droppings

Wash bird droppings off the paintwork as soon as possible. Bird droppings contain chemicals that affect and discolour paintwork very quickly. This discoloration can only be removed by a specialist.



Always have the engine cleaned by a workshop. There is a risk of fire if the engine is hot.

Automatic carwashes

An automatic car wash is a simple and quick way of washing the car. Bear in mind, however, that an automatic car wash can never replace a proper handwashing - the brushes of a car wash cannot reach everywhere. During the first months of the car's life we recommend that you handwash the car.



/ WARNING!

Always test the brakes after washing the car to ensure that moisture and corrosion do not attack the brake pads and reduce braking performance.

Press the brake pedal lightly from time to time if driving for long periods in rain or slush. This heats and dries the brake pads. You should also do this when you begin driving in extremely damp or cold weather.

Cleaning the upholstery

Treating spots on fabric

A special cleaning agent, available from your Volvo dealer, is recommended for cleaning the fabric upholstery. Other chemicals can impair the fire retardant qualities of the upholstery.

Important!

Sharp objects and Velcro may damage the fabric upholstery.

Treating spots on vinyl and plastic parts

A special cleaning agent, available from your Volvo dealer, is recommended for cleaning interior vinyl and plastic parts. Do not scrape or rub spots. Do not use strong stain removers.

Treating spots on leather

A special cleaning agent, available from your Volvo dealer, is recommended when cleaning leather upholstery. Treat the leather upholstery once or twice a year using Volvo's leather care kit. Never use strong solvents. Such products may damage fabric, vinyl and leather upholstery.

Cleaning seatbelts

Use water and a synthetic detergent. A special textile cleaning agent is available from your Volvo dealer. Make sure the seatbelt is dry before allowing it to retract.

Polishing and waxing

Polish and wax the car when you feel the paintwork is matte and when you wish to give the paintwork extra protection, such as before winter.

The car does not usually need polishing until after one year. It can be waxed earlier.

Wash and dry the car thoroughly before you begin polishing and/or waxing. Clean off asphalt and tar stains with white spirit. More stubborn marks can be removed with fine rubbing paste designed for paintwork. Polish first with a polish and then wax with liquid or solid wax. Carefully follow the instructions on the package. Many preparations contain both polish and wax.

Do not polish or wax surfaces warmer than 45 °C.

Cleaning door mirrors and front door windows with water-repellent coating (option)

Never use products such as car wax, degreaser or the like on mirror/ glass surfaces as this could ruin their waterrepelling properties. Take care when cleaning so as not to damage the glass surface.

To avoid damaging glass surfaces when removing ice, only use plastic ice scrapers.

There is natural wear of the water-repellent coating.

NOTE! Treatment with a special finishing agent available from Volvo dealers is recommended in order to maintain the water-repellent properties. This should be used first after three years and then each year.

Touching up paintwork



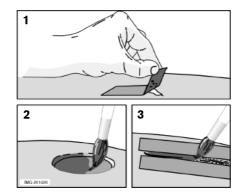
Colour code

Make sure you have the right colour. The colour code number is on the data plate in the engine compartment.

Paintwork

Paint is an important part of the car's rustproofing and should therefore be checked regularly. Repair paintwork damage immediately so that it does not start to rust. The most common types of paintwork damage that you can repair yourself are:

- minor stone chips and scratches
- damage to wing edges and door
 When repairing paintwork, the car should be clean and dry with a temperature above 15 °C.



Remove any paint residue with tape Mask if necessary

Minor stone chips and scratches

Material:

- Primer in a can
- Paint in a can or a touch-up pen
- Brush
- Masking tape
- If the stone chip has not gone down to the bare metal and an unpainted colour coat remains, you can add paint immediately after removing dirt.

Do as follows if the stone chip went down to the bare metal:

 Fasten a piece of masking tape over the damaged surface. Then remove the tape, removing any paint residue (illustration 1).

- Stir the primer thoroughly and apply using a fine brush or matchstick (illustration 2).
- When the primer is dry, apply the surface coat with a brush.
- Make sure the paint is well stirred and apply several thin coats; allowing it to dry between coats.
- The procedure is the same for scratches, but masking tape can be used to protect undamaged paintwork (illustration 3).
- Wait a day or so and then finish the repair by polishing. Use a soft rag and apply lapping paste sparingly.

Rustproofing

Rustproofing - check and repair

Your 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. Members, cavities and enclosed sections are sprayed with a thin, penetrating rust inhibitor.

The car's rustproofing is maintained by doing the following:

- Keep the car clean! Hose down the underbody. When high pressure washing, hold the nozzle at least 30 cm from painted surfaces!
- Check and repair the rustproofing regularly.

The car's rustproofing does not normally require treatment for approximately 8 years. After that time, it should be treated at three year intervals. If your car requires treatment, consult your Volvo workshop.

Repair

If you want to repair the rustproofing yourself, make sure the area is clean and dry. Hose down, wash and dry the car thoroughly. Use a rustproofing agent in a spray can or one that is intended for brush application.

There are two different types of rustproofing agents:

- thin (colourless), for visible areas
- thick, for areas prone to wear on the underbody

Possible repair areas with these agents:

- Visible welds and sheet metal joints; thin fluid
- · Underbody; thick fluid
- Door hinges; thin fluid
- · Bonnet hinges and catch; thin fluid

Once you have finished treatment, excess rustproofing can be wiped off with a rag dipped in a recommended cleaning agent. Parts of the engine and suspension strut mountings in the engine compartment are treated at the factory with a wax-based, colourless rustproofing. This withstands normal detergents without dissolving and losing its rustproofing ability.

If you wash the engine using aromatic solvents, such as turpentine or white spirit (especially those that do not contain emulsifiers), the protective wax should be renewed after washing. Your Volvo dealer handles such waxes.

Maintenance and service

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Volvo service

Volvo service programme

Before the car left the factory, it was thoroughly test driven. It was checked again in accordance with Volvo Car Corporation regulations before it was handed over to you.

To keep your Volvo as safe and reliable as possible, follow the Volvo service programme 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.

Special service measures

Certain service measures, which affect the car's electrical system, can only be performed using electronic equipment specially developed for your car. Always contact an authorised Volvo workshop before beginning or performing service work that affects the electrical system.

Installing accessories

The incorrect connection and installation of accessories can negatively affect the car's electrical system. Certain accessories only function when the appropriate software has been programmed into the car's electrical system. Always contact an authorised Volvo workshop before installing accessories which are connected to or affect the electrical system.

Recording vehicle data

One or more of the computers in your Volvo are capable of recording detailed information. This information is intended for use in research to enhance safety and for diagnosing faults in some of the in-car systems. The data may include details regarding seatbelt use by the driver and passengers, the functions of various vehicle systems and modules, and status information about the engine, throttle, steering, brakes and other systems. This data can also include details of the way the car is driven. This type of information can include, without being limited to, specific details such as vehicle speed, the use of the brake and accelerator pedals and steering wheel position. This latter type of data can be stored for a limited period while the car is being driven and subsequently during a collision or a nearcollision. Volvo Car Corporation will not disclose the stored information without consent. However, Volvo Car Corporation may be forced to disclose the information due to national legislation. Volvo Car Corporation and its workshops may also read and use the information.

Adverse driving conditions

Change the engine oil and replace the air and oil filters more often than recommended in the Service and Warranty Booklet when driving in adverse conditions.

Adverse driving conditions include extended periods of driving:

- · in a dusty or sandy environment.
- towing a caravan or trailer.
- · in mountainous regions.
- · at high speeds.
- · at low speeds or idling.
- short journeys (less than 10 km) at low temperatures (below 5 °C).

Self-maintenance

Before starting work on the car **Battery**

Check that the battery cables are correctly connected and tightened.

Never disconnect the battery when the engine is running (e.g. if replacing the battery).

Never use a quick charger to charge the battery. The battery cables must be disconnected when charging the battery.

The battery contains acid that is both corrosive and toxic. Handle the battery in an environmentally-suitable way. Let your Volvo dealer assist you.



♠ WARNING!

High voltage output from the ignition system. The voltage in the ignition system is dangerous. The ignition must therefore always be switched off for work in the engine compartment.

Do not touch the spark plugs or ignition coils when the ignition is on or the engine is hot.

Check regularly

Check the following at regular intervals, for example, when refuelling:

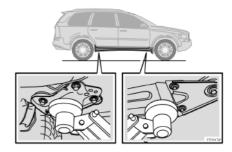
- Coolant The level must be between the MIN and MAX marks on the expansion tank.
- Engine oil The level must be between the MIN and MAX marks.
- · Power steering fluid The level must be between the MIN and MAX marks.
- Washer fluid The reservoir should be well filled. Use washer antifreeze at temperatures around freezing.
- · Brake and clutch fluid The level must be between the MIN and MAX marks.



/N 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.



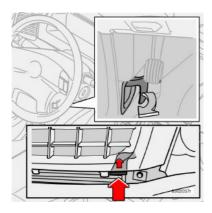
Lifting the car

If the car is lifted with a workshop jack; position the jack with the front edge on the subframe.

Do not damage the splashquard under the engine. Ensure that the jack is positioned so that the car cannot slide off. Always use axle stands or the like.

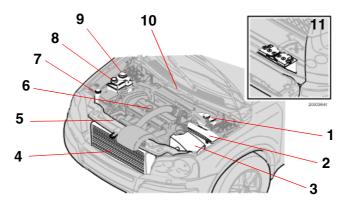
If you lift the car using a two pillar workshop lift, ensure that the front and rear lift arms are fixed under the lifting points on the door sill. See the illustration.

Bonnet and engine compartment



Opening the bonnet

- Pull the handle on the far left (or right if the car is RHD) under the dashboard. You will hear when the lock releases.
- Insert your hand to the right under the front edge of the bonnet (below the grille).
- Press up the safety catch handle.
- Release the handle and open the bonnet.



Engine compartment

- Clutch and brake fluid reservoir
- Relay and fuses
- Air filter
- Radiator
- Engine oil dipstick
- Engine oil filling
- Washer fluid reservoir
- Power steering fluid reservoir
- Expansion tank, cooling system
- 10. Chassis data plate

11. Battery (in cargo compartment)



№ WARNING!

Check that the bonnet locks properly when you close it!

Diesel

Fuel system

Diesel engines are sensitive to contaminants. Only use diesel from a well-known oil company. Never fill up with diesel if the quality is dubious. The large oil companies also produce a special winter-grade diesel for temperatures around freezing. This fuel is less viscous at low temperatures and reduces the risk of wax forming in the fuel system.

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.

Empty tank

No special procedures are required if the tank runs dry.

RME (Rape Methyl Ester)

A maximum of 5 % RME may be mixed with the diesel.

Important!

There is a risk of engine damage if the RME concentration is greater than 5 %.

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.

Oils and fluids

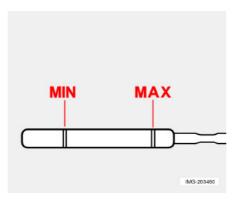
Checking and changing the engine oil and oil filter

The Service and Warranty Booklet specifies suitable intervals for changing the oil and oil filter. Shorter intervals are recommended if driving in adverse conditions. See page 160. Check the level of engine oil and change the oil regularly.

Checking the oil level in a new car is especially important before the first scheduled oil change. The Service and Warranty Booklet specifies the odometer readings for oil changes.

Volvo recommends checking the oil level every 2500 km. The most accurate measurements are made on a cold engine before starting. The measurement will be inaccurate if taken immediately after the engine is switched off. The dipstick will indicate that the level is too low because the oil has not had time to flow down into the oil sump.

See the recommended oil grade, viscosity and capacities on page 227.



The oil level must be within the area marked on the dipstick

Important!

Always use oil of the recommended grade and correct viscosity. Never use oil additives. These can damage the engine. If the system is topped up with a different oil, contact the nearest authorised Volvo workshop for servicina.

Checking the oil in a cold engine:

- Wipe the dipstick clean before checking the level.
- Check the oil level using the dipstick. The oil level must be between the MIN and MAX marks.

- If the level is close to the MIN mark, start by topping up with 0.5 litres of oil. Top up until the oil level is nearer the MAX than the MIN mark on the dipstick. See page 227 for volumes.

Checking the oil in a warm engine:

- Park the car on a level surface, switch off the engine and wait 10-15 minutes to allow the oil time to run back to the sump.
- Wipe the dipstick clean before checking the level.
- Check the oil level using the dipstick. The oil level must be between the MIN and MAX marks.
- If the level is close to the MIN mark, start by topping up with 0.5 litres of oil. Top up until the oil level is nearer the MAX than the MIN mark on the dipstick. See page 227 for volumes.

Important!

Never fill above the MAX mark. Oil consumption may increase if too much oil is poured into the engine.



♠ WARNING!

Do not spill oil onto the hot exhaust manifold due to the risk of fire.

Certain engine variants have an oil level sensor, see page 227.



Washer fluid reservoir

The windscreen and headlamp washers have the same reservoir. See capacities and recommended grade for fluids and oils on page 229.

Add frost protection in the winter so that the fluid does not freeze in the pump, reservoir and hoses.

Tip: Clean the wiper blades when topping up washer fluid.



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.

See the capacities on page 229.

Check the coolant regularly

The level should lie between the MIN and MAX marks on the expansion tank. If the system is not filled sufficiently, high local temperatures could occur, causing a risk of

Oils and fluids

damage (cracks) to the cylinder head. Top up the coolant when the level falls to the MIN mark.

NOTE! The engine must only be run with a well-filled cooling system. High temperatures can occur, causing a risk of damage (cracks) to the cylinder head.



/ WARNING!

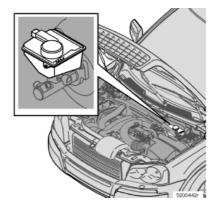
The coolant may be very hot. If the coolant requires topping up when the engine is at operating temperature, unscrew the expansion tank cap slowly to gently release the overpressure.

Important!

The engine must only be run with a wellfilled cooling system. High temperatures can occur, causing a risk of damage (cracks) to the cylinder head.

Important!

Always use coolant with anti-corrosion agent as recommended by Volvo. New cars are filled with coolant that can withstand temperatures down to approximately -35 °C.



Checking and topping up the brake and clutch fluid

The brake and clutch fluid have a common reservoir¹. The fluid level must be between the MIN and MAX marks. Check the level regularly. Change the brake fluid every other year or at every other regular service.

See the capacities and recommended fluid grade on page 229.

NOTE! The fluid should be changed annually on cars driven in conditions requiring hard, frequent braking, such as driving in

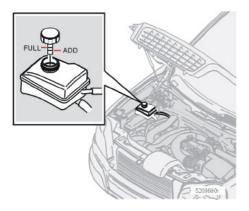
Location dependent on whether car is left or right-hand drive.

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.



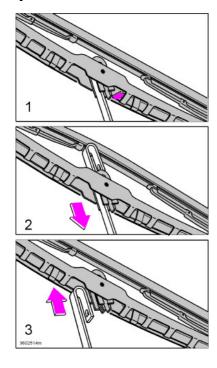
Checking and topping up the power steering fluid

Check the level at every service. It is not necessary to change the fluid. The level should lie between the ADD and FULL marks.

See capacities and recommended grade on page 229.

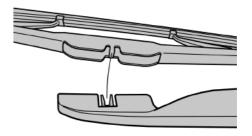
NOTE! If a fault should arise in the power steering system or if the car is without power and must be towed, it can still be steered. However the steering will be much heavier than normal and it will require more effort to turn the wheel.

Wiper blades



- Press the entire wiper blade down so that the wiper arm eye passes through the hold in the wiper blade mounting.
- Then pull the blade up so that the wiper arm eye passes beside the wiper blade mounting. Fit the new blade in reverse order and check that it is securely in place.

NOTE! Keep in mind that the wiper blade on the driver's side is straight and has a spoiler while the one on the passenger side is curved. The spoiler on the driver's side should sit on the lower side of the blade. The curve of the blade should follow the curve of the bottom edge of the windscreen.



Replacing rear window wiper blades

- Fold out the wiper arm.
- Remove the wiper blade by pulling it outwards towards the tailgate.
- Press the new wiper blade into position.
 Check that the blade fits securely!

Changing the wiper blades

 Fold out the wiper arm and hold the wiper blade at 45° to the wiper arm. Press in the spring on the wiper blade.

Battery



Battery care

The function and life of the battery is affected by number of starts, number of times discharged, driving style, driving conditions, climate conditions, etc.

Repeated use of the parking heater and similar large power consumers combined with short driving distances could lead to a discharged battery and thereby problems starting.

For the battery to function satisfactorily, consider the following:

 Regularly check that the battery electrolyte level is correct (A).

- Check all cells. Use a screwdriver to remove the caps. Each cell has its own maximum level mark.
- If necessary, top up with distilled water to the battery's maximum mark.
- Never fill above the maximum mark (A).

Important!

Always use distilled or deionised water (battery water).

- Tighten the caps properly.

NOTE! The life of the battery is shortened if it becomes discharged repeatedly.

Symbols on the battery

These symbols displayed 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.

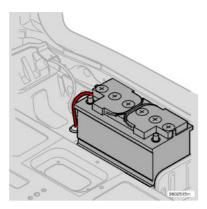


Avoid sparks and naked flames.



Risk of explosion.

Battery





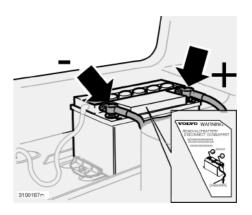
The battery can develop oxyhydrogen, which is highly explosive. An evacuation hose draws any oxyhydrogen gas from around the battery out of the car and prevents gas from accumulating in the passenger and cargo compartments. If you must change the battery for some reason, it is imperative that the evacuation hose is connected to the new battery and that it is routed to the outlet in the bodywork.



Changing the battery

Do as follows once you have unscrewed the console and battery cover and wish to remove the battery:

- Check that the ignition is switched off.
- Wait at least 5 minutes before touching any electrical terminals (so that the information in the car's electrical system can be stored in the different control modules).
- Disconnect the negative lead first.
- Then disconnect the positive lead and the evacuation hose for the oxyhydrogen.



Do as follows when installing the battery:

- Set the battery in place.
- Connect the positive lead first.
- Then connect the negative lead.
- Make sure the evacuation hose is correctly connected to both the battery and the outlet in the bodywork.



№ WARNING!

The battery contains oxyhydrogen, which is highly explosive. Be sure that the evacuation hose is correctly connected!



№ WARNING!

Batteries can generate oxyhydrogen gas, which is highly explosive. A spark, which can be generated if you connect the jump leads incorrectly, is sufficient to make the battery explode. The battery also contains sulphuric acid, which can cause serious burns. If the acid comes into contact with eyes, skin or clothing, flush with large quantities of water. If acid splashes into the eyes, seek medical advice immediately.

Bulbs

General

All bulb specifications are given on page 233.

The following list contains bulbs and pointsource lamps that are specialised or unsuitable for changing except at a workshop:

- General interior lighting in the roof.
- Roof lighting
- Reading lamp
- Glovebox lighting
- Lamps, Bi-Xenon headlamps.

Important!

Never touch the bulbs' glass with your fingers. Grease and oils from your fingers are vaporised by the heat, coating and damaging the reflector.

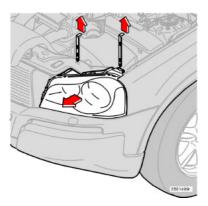


♠ WARNING!

On cars with Bi-Xenon headlamps, all work on the lights should be carried out at an authorised Volvo workshop.

Bi-Xenon headlamps must be handled with extreme care due to the high-voltage unit.

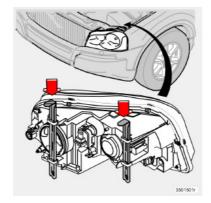
Replacing bulbs



Dipped beam, main beam, direction indicator, parking lamp and side marker light

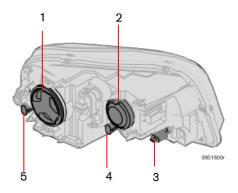
The entire lamp insert must first be removed when replacing dipped beam, main beam and parking lamp bulbs. To replace one of these bulbs, do the following and then consult the instructions for the specific lamp.

- Switch off all lights and turn ignition key to position 0.
- Open the bonnet.
- Release the insert by pulling up the two lock pins holding it in place.
- Lift the insert straight out.



- Unplug the connector by first pressing in the catch from underneath and then pulling it up a bit from above.
- Lift out the entire headlamp insert and place it on a soft surface so as not to damage the lens.

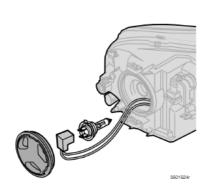
Refit the headlamp insert in reverse order. Check that the lock pins are correctly situated.



Location of bulbs in front lamp

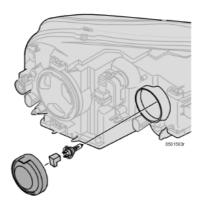
- 1. Dipped beam
- 2. Main beam
- 3. Direction indicator
- 4. Parking lamp
- 5. Side marker lamps

Replacing bulbs



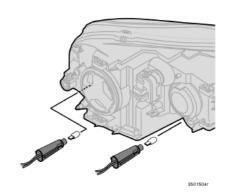


- Undo the outer cover by turning it anticlockwise.
- Unplug the connector.
- Disconnect the spring clamp. First push to the right so that the spring clamp disconnects, then out and down.
- Pull out the bulb.
- Fit the new bulb. It can only be fitted in one position.
- Press the spring clamp up and a little to the left so that it fastens in its catch.
- Press the connector back in place.
- Screw the cover back into place; the marking "HAUT" should be at the top.



Main beam lamp

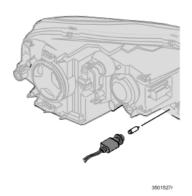
- Undo the outer cover by pulling it straight out.
- Unplug the connector.
- Disconnect the spring clamp. First push to the right so that the spring clamp disconnects, then out and down.
- Pull out the bulb.
- Fit the new bulb. It can only be fitted in one position.
- Press the spring clamp up and a little to the left so that it fastens in its catch.
- Press the connector back in place.
- Refit the cover.

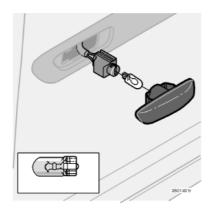


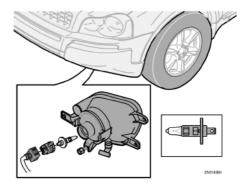
Side marker lamps and position/parking lamps

The bulbs are housed in bayonet holders.

- Turn the bulb holder anticlockwise and remove.
- Pull the bulb straight out.
- Fit the new bulb by carefully pressing it into the recess.
- Fit the bulb holder back in place and turn clockwise.







Direction indicators

The bulbs are housed in bayonet holders.

- Turn the bulb holder anticlockwise and remove.
- Press in the bulb, turn anticlockwise and remove.
- Fit the new bulb by pressing it into the recess and then turning clockwise.

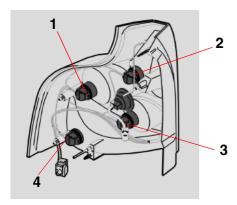
Side indicator lamp

- Switch off all lights and turn ignition key to position 0.
- Prise out the lamp housing from underneath using a small slotted screwdriver.
- Turn the bulb holder ¼ turn anticlockwise and pull straight out.
- Pull the defective bulb straight out.
- Replace with a new bulb and press the lamp straight in.

Fog lamps

- Switch off all lights and turn ignition key to position 0.
- Turn the bulb holder slightly anticlockwise.
- Remove the lamp.
- Put the new bulb in place. The profile of the bulb holder matches the one on the foot of the lamp.
- Refit the bulb holder by turning slightly clockwise. "TOP" should be up!

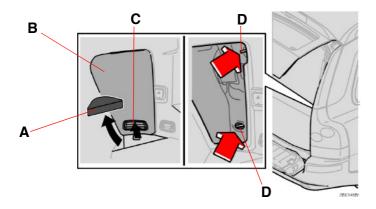
Replacing bulbs



Location of bulbs in rear lamp cluster

- Direction indicator
- 2. Brake light
- 3. Reversing lamp
- 4. Position lamps

NOTE! If the error message "BULB FAILURE"/"CHECK BRAKE LIGHT" remains after a faulty bulb has been replaced then an authorised Volvo workshop needs to be consulted to rectify the fault.

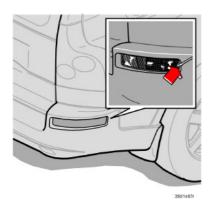


Bulbs in rear lamp cluster

- Switch off all lights and turn ignition key to position 0.
- Lower the bottom of the tailgate and open the floor hatch.
- If the car is equipped with a grocery bag holder (option), loosen the holder's retaining straps.
- Remove the corner piece (A).
- Open the hatch (B) in the side panel by pulling the catch (C) up and towards you.
- Take spanner no. 10 out of the tool kit.
- Loosen the nuts (D).
- Pull the entire insert straight back.
- Loosen the extra length of cable for better accessibility.

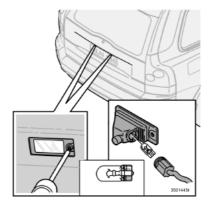
- Place the insert on a soft surface so as not to scratch the glass.
- Turn the bulb holder anticlockwise and pull it out.
- Turn the bulb anticlockwise to loosen it.
- Replace the bulb.
- Refit the bulb holder in the recess and turn clockwise.
- Press back the extra length of cable.
- Refit the insert against the bolt holes.
 Press the insert into place.
- Tighten the nuts.
- Refit the side panel and corner piece.

Replacing bulbs



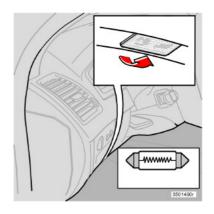
Rear fog lamp

- Insert a slotted screwdriver as indicated by the arrow in the illustration.
- Prise out the lamp insert.
- Turn the lamp insert anticlockwise and pull out the bulb.
- Replace the bulb.



Number plate lighting

- Switch off all lights and turn ignition key to position 0!
- Remove the screw with a screwdriver.
- Carefully detach the entire lamp housing and withdraw it. Turn the connector anticlockwise and pull out the bulb.
- Replace the bulb.
- Refit the contact and turn clockwise.
- Refit the entire lamp housing and screw it into place.

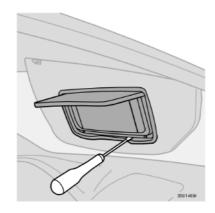


Courtesy lighting

Courtesy lighting is found under the dashboard on the driver and passenger sides. Do as follows to replace the bulb:

- Insert a screwdriver and gently turn so that the lamp housing comes loose.
- Remove the blown bulb.
- Replace the bulb. Check that the bulb lights.
- Refit the lamp housing.





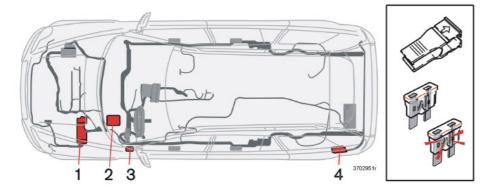
Bulbs in the cargo compartment

- Insert a screwdriver and gently turn so that the lamp housing comes loose.
- Remove the blown bulb.
- Replace the bulb. Check that the bulb lights.
- Refit the lamp housing.

Vanity mirror

- Insert a slotted screwdriver at the side of the centre clip in the bottom edge of the mirror. Lift up so the centre clip releases.
- Slide the screwdriver from side to side so that the outer clips release.
- Lift out the mirror insert.
- Replace the bulbs.
- Refit the insert top edge first. Be sure that the upper clips are properly depressed before pressing the insert back.

Fuses



All electrical functions and components are protected with a number of fuses to protect your car's electrical system from damage by short-circuits or overloads.

Fuses are housed in four different locations in the car:

- Relay/fuse box in the engine compartment.
- Fuse box in the passenger compartment within the sound barrier on the driver's side.
- 3. Fuse box in the passenger compartment at dashboard end on driver's side.
- 4. Fuse box in cargo compartment. If an electrical component or function does not work, this may be because the

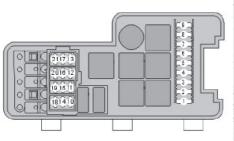
component's fuse was temporarily overloaded and blew.

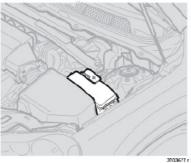
- Look in the fuse diagram to locate the fuse.
- Pull out the fuse and check from the side to see whether the curved wire has blown.
- If this is the case, replace it with a new fuse of the same colour and amperage.

There are a number of spare fuses in the cover on the end of the dashboard. There are also pliers which facilitate the removal and fitting of fuses.

If the same fuse blows repeatedly, there is a fault in the component and you should

contact an authorised Volvo workshop to have it checked.





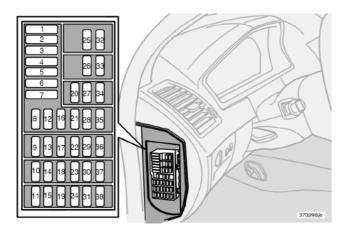
Relay/Fuse box in the engine compartment

•••	pa	
1.	ABS	30 A
2.	ABS	30 A
3.	High-pressure washer,	
	headlamps	35 A
4.	Parking heater (option)	25 A
5.	Auxiliary lamps (option)	20 A
6.	Starter motor relay	35 A
7.	Windscreen wipers	25 A
8.	Transmission control	
	module (TCM) (V8)	15 A
9.	Fuel pump	15 A
10.	Ignition coils (petrol),	
	Engine control module	
	(ECM) (petrol) injectors,	
	high-pressure valve (diesel)	20 A

11.	Accelerator pedal sensor (APM),	
	AC compressor,	
	fan electronics box	10 A
12.	Engine control module	
	(ECM) (petrol) Injectors (petrol),	
	mass air flow sensor	15 A
	Mass air flow sensor (diesel)	5 A
13.	Control module, throttle body (V8)	10 A
14.	Lambda-sond (petrol)	20 A
15.	Crankcase ventilation heater,	
	solenoid valves glow plugs	
	(diesel)	10 A
	Crankcase ventilation heater,	
	solenoid valves	
	mass air flow sensor (V8)	15 A
16.	Dipped beam (left)	20 A
17.	Dipped beam (right)	20 A
18.	-	-

19.	Engine control module (ECM) supply, engine relay	5 A
20.	Position lamps	15 A
21.	-	-

Fuses

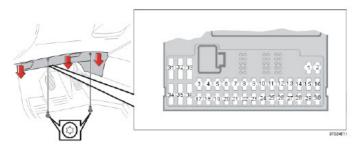


Fuses in the passenger compartment at dashboard end on driver's side

1.	Climate control system fan	30 A
2.	Amplifier	30 A
3.	Power driver's seat	25 A
4.	Power passenger seat	25 A
5.	Control module, left front door	25 A
6.	Control module, right front door	25 A
7.	-	-
8.	-	-
9.	Infotainment, RTI display, CD,	
	MD	10 A

5 A
gine
е
7,5 A
10 A
15 A
5 A
-

10. OBDII, light switch (LSM), Steering



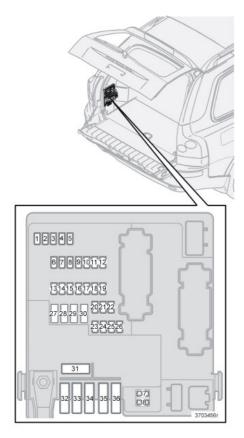
Fuses in the passenger compartment within the sound barrier on the driver's side

1.	Seat heating, right side	15	Α
2.	Seat heating, left side	15	Α
3.	Horn	15	Α
4.	-		-
5.	Infotainment system	10	Α
6.	Reserve		-
7.	Reserve		-
8.	Siren	5	Α
9.	Brake lamp switch feed	5	Α
10.	Combined instrument panel (DIM),		
	climate control (CCM),		
	parking heater, power driver's seat	10	Α
11.	Front and rear seat socket	15	Α
12.	-		-
13.	Reserve		-
14.	-		-

15. ABS, STC/DSTC	5 A
 Electronic power steering (ECPS Bi-Xenon, headlamp levelling), 10 A
17. Fog lamp, front left	7,5 A
18. Fog lamp, front right	7,5 A
19. Reserve	-
20. Coolant pump (V8)	5 A
21. Transmission Control	
Module (TCM),	10 4
reverse gear inhibitor (M66)	10 A
22. Main beam, left	10 A
23. Main beam, right	10 A
24	-
25	-
26. Reserve	=
27. Reserve	-
28. Power passenger seat	5 A
29. Reserve	-
30. BLIS	5 A
31. Reserve	-

32. Reserve33. Vacuum pump34. Washer pump3536	20 A 15 A -

Fuses



Fuses in the cargo compartment			
1.	Reversing lamps	10 A	
2.	Parking lamps, fog lamps, cargo		
	compartment lighting, number pla	te	
	lighting, LEDs in brake lighting	20 A	
3.	Accessories (AEM)	15 A	
4.	Reserve	-	
5.	REM electronics	10 A	
6.	RTI, radio receiver, RSE	7,5 A	
7.	Towing bracket wiring (30-feed)	15 A	
8.	Cargo compartment socket	15 A	
9.	Rear right door: power window,		
	power window lock	20 A	
10.	Rear left door: power window,		
	power window lock	20 A	
11.	Reserve	-	
12.	Reserve	-	
13.	Diesel filter heater	15 A	
14.	Subwoofer, rear air conditioning		
	(AC)	15 A	
15.	Reserve	-	
16.	Reserve	-	
17.	Infotainment system accessories	5 A	
18.	Reserve	-	
19.	Rear wiper	15 A	
20.	Towing bracket wiring (15-feed)	20 A	
21.	Reserve	-	
22.	-	-	

23.	AWD	7,5 A
24.	Reserve	-
25.	-	-
26.	Parking assistance	5 A
27.	Main fuse: Towing bracket wiring,	
	parking assistance, AWD	30 A
28.	Central locking system (PCL)	15 A
29.	Trailer lighting, left: parking lamp,	
	direction indicator	25 A
30.	Trailer lighting, right: brake lamp,	
	rear fog lamp,	
	direction indicator	25 A
31.	Main fuse: Fuse 37, 38,	40 A
32.	-	-
33.	-	-
34.	-	-
35.	-	-
36.	-	-
37.	Heated rear window	20 A
38.	Heated rear window	20 A

Infotainment system

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Infotainment system

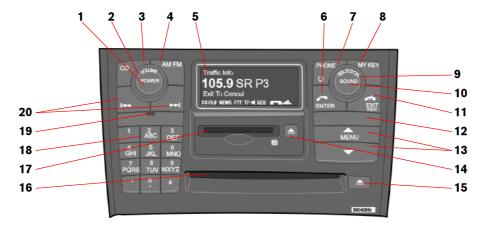
Information - Entertainment

Infotainment is a system with integrated audio and telephone functions. You can easily and conveniently use your Infotainment system using the joint control panel or the steering wheel keypad. The control panel display indicates the current function.

XC90 can be equipped with Dolby Surround Pro Logic II (Premium Sound), which offers an optimal sound experience very close to being there with a broad, natural sound profile.

The system also allows your passengers to use headphones (option) with separate sound sources.

Control panels

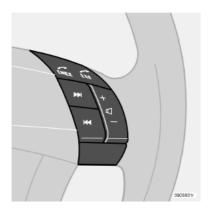


- On/Off Audio
- Volume
- 3. CD shortcut button
- AM/FM shortcut button to switch between FM1, FM2 and AM
- 5. Display
- ENTER select in the menu, activate a selection or activate the telephone from standby mode
- 7. On/Off/Standby Telephone
- 8. MY KEY programmable shortcut key for your favourite function
- 9. SELECTOR select sound source
- 10. SOUND make sound settings

- 11. EXIT/CLEAR scroll back in the menu, cancel a selection, put the telephone in standby mode, or erase the previous character when entering text and numbers
- 12. SIM card holder
- 13. Menu selection buttons
- 14. CD and CD changer eject
- 15. MD eject
- 16. CD player and CD changer (option)
- 17. MD player (option)
- Station setting buttons/selecting CD changer position (1-6), number/ character buttons for the telephone and menu shortcuts

- 19. IR receiver for remote controls (option)
- Seek/change tracks/stations or scroll forward and back when entering text and digits

Control panels



Steering wheel keypad Audio - Telephone

The four buttons at the bottom of the steering wheel keypad control both the radio and the telephone. The function of the respective button depends on which system is active. The steering wheel keypad can be used to adjust volume, shift between preset stations and change CD/MD tracks.



By holding the button depressed you can fast forward or rewind in a song or search for a radio station.

To use these buttons for the telephone functions, the telephone must be active, see page 213.

To make audio system settings with these buttons, the telephone must be in standby mode (deactivated).

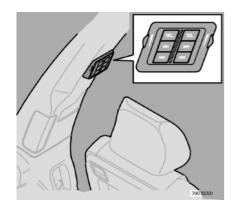
Menus

In menu mode, you can check or modify settings and programme new functions in the system. The different menu alternatives are shown in the display. Menu alternatives followed by periods indicate that there are several submenus.

Press the MENU button (1) to activate menu mode.

The following applies in menu mode:

- The menu selection buttons are used to scroll up or down in the menu.
- A long press on EXIT/CLEAR allows you to leave menu mode.
- A brief press on EXIT/CLEAR allows you to clear, cancel, decline an alternative or go back one step in the menu structure.
- A press on ENTER allows you to confirm, select or scroll from a submenu to the next submenu.



Headphone sockets (option)

The door panels behind the second row of seats contain headphone sockets. This means that several passengers can listen to different sound sources, such as CDs or the radio, at the same time without disturbing each other.

Two sets of headphones can be connected to each socket.

- Switch sound source with the SEL button.
- Use the arrow keys, or let, to change CD/MD tracks or switch between preset stations.

- Hold the or or button depressed to fast forward/rewind or search for the next strong station.
- Hold the SEL button depressed to switch off the system.
- Use the volume control button to adjust the volume of the respective headphones.

All headphones are switched off automatically when the audio system is switched off with the ignition key and must be activated manually when the car is restarted.

For the best sound reproduction, we recommend headphones with impedance between 16-32 ohm. The sensitivity of these should be equal to or greater than 102 dB. The headphone socket is intended for 3.5 mm contacts and is located on the bottom of the headphone panel (1).

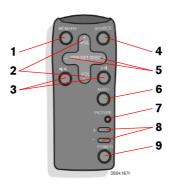
Headphones - limitations

- If a set of headphones is connected to the same source that is being sent through the speakers, the headphones controls cannot be used to change track or station. This is so the driver is not surprised by an unexpected change in music.
- If the driver uses the control panel to select the same sound source as someone wearing headphones, the driver takes control of the sound source.

- Headphone users can choose from among the presets of the frequency (AM, FM1, FM2) previously set by the driver. In some cases, this means that the driver will not receive NEWS - or traffic information even if TP/NEWS is selected.
- The CD changer can only play one disc and one song at a time.

Control panels





- 8. Function not available
- 9. On/Off Audio

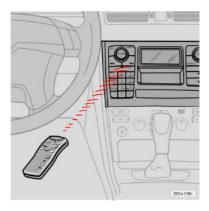
Display

The display (2) shows the current function, such as menu alternatives, messages, telephone numbers, or settings.

Clean the display with a soft, dry cloth. Do not use cleaning agent.

Remote control (option)

- Memory Stores radio stations. To store a station:
- Press the Memory button
- Select Preset using Preset/Disc (5)
- Confirm your selection using the Memory button
- 2. Volume
- 3. Seek/change tracks forward or back
- 4. Source switch sound source
- 5. Preset/Disc select CD changer position or preset radio station
- 6. Auto find and store the strongest stations
- 7. Function not available



Direct the remote control towards the IR receiver (see illustration) that is located in the dashboard.

NOTE! The remote control contains AAA batteries (R03). If the remote control does not work, first try replacing the batteries.

Audio system functions



The selected sound source is shown on the display.

MD can only be chosen using the SELECTOR knob.



On/Off switch - Audio

Press the POWER button (1) to switch the audio system on or off.

If the audio system is active when the ignition is switched off, it will reactivate automatically when the car is restarted.

Selecting the sound source

There are two ways to select sound source: By using the shortcut buttons CD (2), AM/FM (3) or by using the SELECTOR knob (4):

- Turn the SELECTOR knob to select Radio (FM1, FM2 or AM), CD/CD changer (option) or MD (option).
- Press the AM/FM button repeatedly to scroll between FM1, FM2 and AM.

Volume control

Turn the knob (1) clockwise or anticlockwise to raise or lower the volume, respectively. The volume control is electronic and has no end position. Volume can also be raised (+) or lowered (-) using the steering wheel keypad.

Pause mode

When volume is in position zero, the CD/MD player is put in pause mode. Reactivate the player by turning up the volume.

Volume control – TP/PTY/ NEWS/ALARM

If a CD or the like is playing when the radio receives a traffic bulletin, the CD player is put in pause mode. The message is played at the volume selected for that type of message. Playback of the originally selected sound source is then resumed at the previous volume. If volume is adjusted while the bulletin is played, the new volume is saved and used for the next bulletin.



Audio settings

- Press the SOUND button (1).
- Press the SOUND button repeatedly until you come to the function you wish to set. Choose BASS, TREBLE, FADER, BALANCE, SUBWOOFER (option), CENTRE (option) or SURROUND (option).
- Use the SELECTOR knob (2) to adjust the level. The display shows a scale from min. to max. position. The middle indicates the normal position.

NOTE! The level for the centre speaker can only be set if Dolby Pro Logic II (DPL II) or three-channel stereo (3-CH) has been selected from the menu.

The level for Surround can only be set if Dolby Pro Logic II has been selected in the menu.

The level for Subwoofer can only be set if Subwoofer is activated.

Audio settings	Shown on the display
Bass	BASS
Treble	TREBLE
Balance between the left and right-hand speakers	BALANCE
Balance between the front and rear speakers	FADER
Level for subwoofer	SUBWOOFER (option)
Level for centre speaker	CENTRE (Premium Sound)
Level for surround sound	SURROUND (Premium Sound)

Audio system functions



SURROUND (option) Dolby Surround Pro Logic II

Dolby Surround Pro Logic II with centre dashboard speaker provides a more realistic audio experience. The normal left-right stereo channels are divided into left-centre-right and are coupled with surround sound from the rear speakers. Surround sound can be described as the types of residual tones which are audible in a concert hall. Dolby Surround Pro Logic II functions in CD and MD modes. 3-Channel stereo is recommended for AM and FM radio broadcasts. Dolby Surround Pro Logic II is available for Premium Sound audio only.

- Select AUDIO SETTINGS in the menu and press ENTER.
- Select SURROUND and press ENTER.
- Select Dolby AM/FM or Dolby CD/MD and press ENTER.
- Select PRO LOGIC II, 3 CHANNEL or OFF and press ENTER.
- The symbol PL II is shown in the display if Pro Logic II has been selected.
- 3 CH is shown in the display if
 3 CHANNEL has been selected.
- OFF means the audio system is in normal stereo mode.

Dolby Surround Pro Logic II is a trademark of Dolby Laboratories Licensing Corporation. Dolby Pro Logic II Surround System is manufactured under license from Dolby Laboratories Licensing Corporation.



Bass speaker - SUBWOOFER (option)

The subwoofer helps the system provide fuller sound and deeper bass.

- Select AUDIO SETTINGS in the menu and press ENTER.
- Select SUBWOOFER and press ENTER.
 A check in the box indicates that
 SUBWOOFER is activated.

Equalizer FR (certain models)

This function is used to fine-tune the sound from the front speakers.

- Select AUDIO SETTINGS in the menu and press ENTER.
- Select Equalizer FR and press ENTER.

- Use the menu selection buttons or the SELECTOR knob to set the level.
- Press ENTER to select the next frequency. You can select five frequencies.
- Press ENTER until you come to menu mode to save any changes.

Equalizer RR (certain models)

This function is used to fine-tune the sound from the rear speakers.

- Select AUDIO SETTINGS in the menu and press ENTER.
- Select Equalizer RR and press ENTER.
- Use the menu selection buttons or the SELECTOR knob to set the level.
- Press ENTER to select the next frequency. You can select five frequencies.
- Press ENTER until you come to menu mode to save any changes.

Radio functions



- Release the button when the desired frequency shows in the display.
- Frequency can be adjusted with a short press on one of the arrow keys, or
- Manual adjustment mode stays in effect five seconds after the last press.



Tuning

- Choose radio mode AM/FM1/FM2 using the SELECTOR knob (2) or the AM/FM button (1).
- A short press on the or button is used to search for the next strong station.
- Press one of the buttons again to search again.

Manually seek a known frequency

Hold the selected direction and increases tempo after a few seconds.

Storing stations

To store a selected station under one of the station setting buttons 0-9 (1):

- Set the desired station.
- Press the button under which the station is to be stored and keep it depressed.
 The sound will disappear for a few seconds and STATION STORED will be shown in the display. The station is now stored.

You can store up to 10 stations each for AM, FM1 and FM2, i.e. a total of 30 stations.

Radio	Frequency band
FM	87.5 - 108 MHz
AM(LW)	153 - 279 kHz
AM(MW)	522 - 1611 kHz



Storing stations automatically – AUTOSTORE

This function automatically finds and stores up to ten strong AM or FM stations in a separate memory. If more than ten stations are found, the ten strongest are stored. This function is especially beneficial in areas in which you are not acquainted with radio stations or their frequencies.

- Choose radio mode using the SELECTOR knob or the AM/FM button.
- Select AUTOSTORE in the menu and press ENTER.
- Select AST SEARCH and press ENTER.
- AUTOSTORING is shown in the display and a number of strong stations (max. 10)

- from the set frequency band are now stored in the autostore memory. If there are no stations with sufficient signal strength, NO AST FOUND is shown.
- The preset stations can be selected with buttons 0-9.
- When the radio is in autostore mode, AUTO is shown in the display. AUTO disappears when you return to the ordinary radio mode.
- Return to the ordinary radio mode by pressing the AM/FM button or EXIT/ CLEAR.
- In order to gain access to a previously stored setting, follow steps 1-2, select AST MODE in step 3 and press ENTER.

Radio functions



Scanning - SCAN

The scan function automatically searches for AM or FM station signals. When the radio finds a station, scanning stops for approx. 8 seconds and then resumes.

- Choose radio mode using the SELECTOR knob or the AM/FM button.
- Select SCAN in the menu and press ENTER.
- SCAN is shown in the display.
- Press the EXIT/CLEAR button to exit.

Radio Data System - RDS

RDS is a system which links specific network transmitters together and is used, for example, to assist motorists by setting the correct frequency irrespective of the transmitter to which the car occupants are listening or the active audio source (e.g. CD). The system can also be used for receiving traffic information and for finding broadcasts of a specific type. Radiotext, which is also a part of RDS, is used by radio stations to send information regarding broadcasts already in progress.

NOTE! Some radio stations do not use RDS or only use a limited range of its features.

Automatic search for program information – PI Seek

When listening to an RDS transmitter, various information, such as traffic information, is stored in the radio.

When a preselected RDS transmitter is later selected, the radio updates the transmitter's RDS information. If the radio is in the boundary area or just outside of the transmitter's range, the radio automatically searches for the strongest possible transmitter of this station.

If there is no transmitter within "listening distance", the radio becomes silent and "PI SEEK PRESS EXIT TO CANCEL" is shown in the display until a station is found.

If you press EXIT (1), the radio begins to play the selected transmitter, but without updated RDS information.

News - NEWS

This function interrupts other sound sources, e.g. CD, when a news broadcast starts.

- Choose radio mode using the SELECTOR knob or the AM/FM button.
- Select NEWS in the menu and press ENTER.
- NEWS is shown in the display.
- Select NEWS again and press ENTER to deactivate the NEWS function.

With this function, programmes from RDS stations that are news-coded will interrupt other audio sources using the volume setting for this specific purpose. As soon as the news broadcast is finished, the audio system returns to the previous audio source and resumes the previous volume setting.

 If you do not wish to listen to a news item in progress, press the EXIT button. The NEWS function remains active and the radio waits for the next news programme.



Traffic information - TP

This function interrupts other audio sources in order to broadcast traffic information from RDS stations; the message is heard at the volume set for this specific purpose. As soon as the message ends, the audio system returns to the previous audio source and resumes the previous volume setting.

- Select TP in the menu and press ENTER.
- TP is shown in the display.
- Select TP again and press ENTER to deactivate the TP function.

TP is shown in the display when this function is active. If the set station can send traffic information,))) is shown in the display. Traffic

information will only interrupt the sound source if TP))) is shown in the display.

 If you do not wish to listen to a traffic bulletin, press the EXIT button. The TP function, however, remains active and the radio waits for the next traffic bulletin.

TP Search

This function allows you to listen to traffic information when travelling between different countries and states in Europe without needing to select a station.

- Select RADIO SETTINGS in the menu and press ENTER.
- Select TP and press ENTER.
- Select TP Search and press ENTER.
- To deactivate the function, select TP Search again and press ENTER.



Radio text

Some RDS stations send information on programme content, artists, etc. This information can be indicated with text in the display.

- Press the MENU button.
- Select Radio text on the menu and press ENTER.
- Select RADIOTEXT again and press ENTER to deactivate.

Radio functions

Alarm

Alarms are transmitted automatically and the function cannot be deactivated.

"Alarm!" is shown in the radio display when an alarm message is sent. This function is used to warm motorists of major accidents and catastrophes, such as a bridge collapse or an accident at a nuclear plant.



Programme type - PTY

The PTY function allows you to select programmes that fit your taste. Use the PTY function to select from among the different programme types shown in the list.

Show PTY Which PTY does the set station have?

- Select RADIO SETTINGS in the menu and press ENTER.
- Select PTY in the menu and press ENTER.
- Select SHOW PTY and press ENTER.
 The PTY of the selected station is now shown in the display.

NOTE! Not all radio stations have a PTY designation.

Programme type	Shown on the display
Current affairs	CURRENT
	AFFAIRS
Information	INFORMATION
Sport	SPORT
Education	EDUCATION
Drama	DRAMA
Culture and Art	CULTURES
Science	SCIENCE
Varied discussions	VARIED SPEECH
Pop music	POP MUSIC
Rock music	ROCK MUSIC
Easy listening	EASY LISTENING
Light classic	LIGHT CLASSIC
Serious classic	SERIOUS
	CLASSIC
Other music	OTHER MUSIC
Weather & Metro	WEATHER
Finance	FINANCE
Children's progs	CHILDREN
Social affairs	SOCIAL AFFAIRS
Religion	RELIGION
Phone In	PHONE IN
Travel and holiday	TRAVEL

Programme type

Shown on the display

Leisure and hobby

LEISURE & **HOBBY** JA77 MUSIC **NATIONAL** MUSIC

Oldies music Folk music Documentary

Country music

National music

Jazz music

COUNTRY MUSIC OLDIES MUSIC **FOLK MUSIC DOCUMENTARY**



Search for a specific programme type - PTY

This function helps you find programmes with a specific focus by searching the entire frequency band.

- Select FM1 or FM2 and press the MENU button.
- Select RADIO SETTINGS and press FNTFR.
- Select PTY and press ENTER.
- Choose SELECT PTY and press ENTER.
- Press ENTER for one or more of the listed programme types you desire. The PTY symbol in the display lights up when the first selection is made and the radio continues in standby for PTY.

- Once you have selected all desired types, select EXIT/CLEAR to exit the PTY list.
- Select SEARCH PTY and press ENTER. If the radio finds a station with the selected programme type, it is played through the speakers.
- If the radio finds a station that is unsuitable, continue the search with the and buttons.
- If no stations with the selected programme type are found, the radio resumes its previous frequency. PTY then remains in standby mode until the selected programme type is aired, at which time the radio automatically switches to the station sending the selected programme type.
- In order to deactivate PTY standby, enter the menu and select CLEAR ALL PTY. The symbol disappears from the display and the radio resumes normal mode.

PTY standby

To continue with the radio in PTY standby, repeat steps 1-6.

Radio functions



Traffic information - TP STATION

Here, you set from which station traffic information is to be heeded.

Note that))) must be shown in the display for this to work.

- Listen to the station from which traffic information is to be heeded.
- Select RADIO SETTINGS in the menu and press ENTER.
- Select TP and press ENTER.
- Select TP Station and press ENTER.
- Select SET CURRENT and press ENTER.

NOTE! Now only traffic information from the stored station will by played.

News - NEWS STATION

Here, you set from which station news is to be heeded.

Note that the set station in question must be an RDS station for this to work.

- Listen to the station from which news is to be heeded.
- Select RADIO SETTINGS in the menu and press ENTER.
- Select NEWS STATION and press ENTER.
- Select SET CURRENT and press ENTER.

NOTE! Now only news from the stored station will by played.

Deactivate TP STATION/NEWS STATION

- Select RADIO SETTINGS in the menu and press ENTER.
- Select TP/NEWS STATION and press ENTER.
- Select RESET STATION and press ENTER.

Automatic frequency updating – AF

The AF function is usually active and makes sure that the strongest available transmitter for a radio station is used.

 Select RADIO SETTINGS in the menu and press ENTER.

- Select AF and press ENTER.
- To deactivate AF, select AF and press ENTER.

Regional radio programme – REG

The REG function is usually deactivated. It makes it possible to stay tuned to a regional transmitter even if signals are weak.

- Select RADIO SETTINGS in the menu and press ENTER.
- Select Regional and press ENTER.
- REG is shown on the display.
- To deactivate REG, select REG again and press ENTER.



 Select LOCAL, DISTANT or OFF and press ENTER.

Resetting RDS functions – RESET ALL

This function restores all radio settings to the original factory settings.

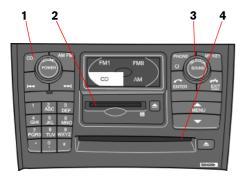
- Select RADIO SETTINGS in the menu and press ENTER.
- Select RESET ALL in the menu and press ENTER.
- Press ENTER again to confirm your selection.

EON - LOCAL/DISTANT (Enhanced Other Networks)

Normally, the EON function is in DISTANT mode and determines if it is necessary to interrupt the radio station you are listening to for traffic bulletins, news broadcasts or the like from other channels (if these functions are selected). The function has two levels: LOCAL only interrupts if the signal is strong. DISTANT will even interrupt with weaker signals. No interruptions occur if OFF is selected.

- Select RADIO SETTINGS in the menu and press ENTER.
- Select EON and press ENTER.

CD/MD (option)



Starting the CD/MD player

- Start the CD player with the SELECTOR knob (3) or by pressing the CD button (1). Insert a disc in the CD player (4).
- Start the MD player with the SELECTOR knob (3). Insert a disc in the MD player (2).

Changing tracks

Press to skip to the next track or to skip to the previous track. The track number is shown in the display. If you have a keypad in the steering wheel, you can also use the corresponding buttons.

Fast forward/reverse

Press and hold down or to search within a track or the whole disc. The search continues as long as the button is depressed. If you have a keypad in the steering wheel, you can also use the corresponding buttons.

Random - RANDOM

This function chooses a CD track in no particular order (shuffle).

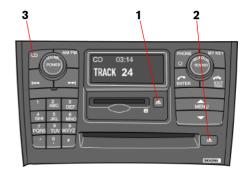
- Select RANDOM in the menu and press ENTER.
- RND is shown on the display as long as the function is activated.
- Select RANDOM OFF or press the EXIT button to exit.

NOTE! Do not use CDs with that have disc labels. The heat from the CD player could cause the label to come loose from the disc. The CD player could then be damaged.



Use only 12 cm CDs, no smaller! If the quality of the CD does not comply with the requirements of standard EN60908 or if it has been recorded using

poor equipment, sound quality may be poor or playback interrupted.



Scan

This function plays the first ten seconds of each song or track.

- Select SCAN in the menu and press ENTER.
- Press EXIT/CLEAR when you find a song or track you wish to listen to.

Disc text (MD only)

Certain discs contain information on album and song titles. This information is shown in the display in text form if the function DISCTEXT is activated.

 Select DISCTEXT in the menu and press ENTER.

- If information is stored on the disc, it is shown in the display.
- To deactivate the function, select DISCTEXT and press ENTER.

MD eject

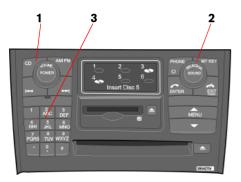
If you press the button (1), the MD player stops and ejects the disc.

CD eject

If you press the button (2), the CD player stops and ejects the disc.

For reasons of traffic safety, the ejected CD remains out no more than 12 seconds. The CD player then pulls it back in. To reactivate the CD player, press the CD button (3).

CD changer (option)



Starting the CD changer

The CD changer can hold up to six discs.

- Choose CD mode using the SELECTOR knob (2) or the CD button (1).
- Select an empty position using the numbered buttons 1-6 (3). The display shows which are empty.
- Insert a disc into the changer.

Make sure INSERT DISC is shown before you insert a new disc.

Selecting discs

Select which disc is to be played using numbered buttons 1-6 (3). The number of the disc and track are shown in the display.

Changing tracks

Press to skip to the next track or to skip to the previous track. The track number is shown in the display. If you have a keypad in the steering wheel, you can also use the corresponding buttons.

Fast forward/reverse

Press and hold down or to search within a track or the whole disc. The search continues as long as the button is depressed. If you have a keypad in the steering wheel, you can also use the corresponding buttons.

Scan

This function plays the first ten seconds of each song or track.

- Press the MENU button.
- Select SCAN and press ENTER.
- Press EXIT/CLEAR when you find a song or track you wish to listen to.

Scan only works on the selected disc.

Random - RANDOM

This function chooses a CD track in no particular order.

- Select RANDOM in the menu and press ENTER.
- Select SINGLE DISC or ALL DISCS for the player to randomly choose from one or all discs in the CD changer.

- RND or RND ALL is shown on the display while the function is active.
- Press FXIT to exit.

Press to select the next random track.

NOTE! You can only select the next random track on the disc in question.

Disctext

Certain discs contain information on album and song titles. This information is shown in the display in text form if the function DISCTEXT is activated.

- Press the MENU button.
- Select DISCTEXT in the menu and press ENTER.
- If information is stored on the disc, it is shown in the display instead of the current track.
- To deactivate the function, select DISCTEXT and press ENTER.

Eject All

A long press on the EJECT button (1) starts EJECT ALL. This empties the entire magazine disc by disc. The text EJECTING ALL is shown in the display.

The function can only be activated when the car is stationary and is interrupted if the car begins to move.

For reasons of traffic safety, the ejected disc remains out for 12 seconds. If it is not taken care of, the function is interrupted.

NOTE! Do not use CDs with that have disc labels. The heat from the CD player could cause the label to come loose from the disc. The CD player could then be damaged. Use only 12 cm CDs, no smaller. If the quality of the CD does not comply with the requirements of standard EN60908 or if it has been recorded using poor equipment, sound quality may be poor or playback interrupted.



CD eject

If you press the button (1) the CD player stops and ejects the disc.

For reasons of traffic safety, you have 12 seconds to handle the ejected disc or it will be re-fed into the CD player.

Menu settings and options - Audio

Main menu/submenus RADIO

1. AUTOSTORE1

1.1. AST Mode

1.2. AST Search

1.2.1. AUTOSTORING

2. SCAN¹ ON/OFF²

3. NEWS¹ ON/ OFF²

4. TP¹ ON/OFF²

5. RADIOTEXT¹ ON/OFF²

6. RADIO SETTINGS

6.1. PTY

6.1.1. SELECT PTY

6.1.2. SEARCH PTY¹

6.1.3. SHOW PTY ON/OFF²

6.2. TP

6.2.1. TP STATION SET CURRENT/RESET STN

6.2.2. TP SEARCH ON/OFF²

6.3. NEWS STATION

6.3.1. SET CURRENT/RESET STN

6.4. AF¹ ON²/OFF

6.5. REGIONAL¹ ON/OFF²

6.6. EON

6.6.1. OFF

2. Default

6.6.2. LOCAL

6.6.3. DISTANT²

6.7. RESET All

7. AUDIO SETTINGS (certain models)

7.1. Dolby AM/FM

7.1.1. Pro Logic II

7.1.2. 3CH

7.1.3. OFF²

7.2. Dolby CD/MD

7.2.1. Pro Logic II²

7.2.2. 3CH

7.2.3. OFF

7.3. SUBWOOFER¹ ON²/OFF (option)

7.4. EQUALIZER Fr (certain models)

7.5. EQUALIZER RR (certain models)

7.6. RESET ALL

CD

1. RANDOM¹

2. SCAN¹

. NEWS¹ ON/OFF²

4. TP¹ ON/OFF²

5. AUDIO SETTINGS

5.1. Dolby AM/FM

5.1.1. Pro Logic II

5.1.2. 3 Channel

5.1.3. Off²

5.2. Dolby CD/MD

5.2.1. Pro Logic II²

5.2.2. 3 Channel

5.2.3. Off

5.3. SUBWOOFER¹ ON²/OFF (option)

5.4. EQUALIZER Fr (option)

5.5. EQUALIZER Rr (option)

5.6. RESET ALL

CDX

1. RANDOM³

1.1. Off⁴

1.2. Single Disc

1.3. All Discs

2. SCAN³

3. NEWS³ ON/OFF²

4. TP³ ON/OFF²

5. DISCTEXT³ ON/OFF²

6. AUDIO SETTINGS

6.1. Dolby AM/FM

6.1.1. Pro Logic II

6.1.2. 3 Channel

6.1.3. Off²

6.2. Dolby CD/MD

6.2.1. Pro Logic II²

6.2.2. 3 Channel

I. Programmable with MY KEY

^{3.} Programmable with MY KEY

^{4.} Default

- 6.2.3. Off SUBWOOFER³ ON²/ OFF (option)
- 6.2.4. EQUALIZER Fr (certain models)
- 6.3. EQUALIZER Rr (certain models)
- 6.4. Reset All

MD

- 1. RANDOM¹
- 2. SCAN1
- 3. NEWS¹
- 4. TP¹
- 5. DISC TEXT¹ ON/OFF²
- 6. AUDIO SETTINGS
- 6.1. SURROUND¹
 - 6.1.1. Pro Logic II
 - 6.1.2. 3 Channel
 - 6.1.3. Off²
- 6.2. SUBWOOFER¹ ON²/OFF (option)
- 6.3. EQUALIZER FR (certain models)
- 6.4. EQUALIZER RR (certain models)
- 6.5. Reset All

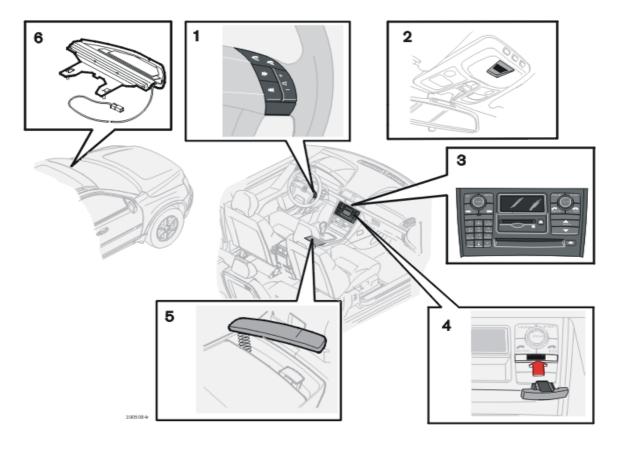


My own shortcut button – MY KEY

The MY KEY button (1) can be used to store your favourite menu functions, such as SCAN. AUTOSTORE or TP.

- Use the menu selection buttons to scroll among the functions.
- Select the function to be stored by holding the MY KEY button depressed for more than two seconds.
- When MY KEY STORED is shown in the display, the function has been stored.
- Activate the function by briefly pressing the MY KEY button.
- Repeat steps 1-4 to store a new function for the button.

Telephone (option)



Telephone system components

1. Steering wheel keypad

You can control the majority of telephone functions using the steering wheel keypad.

When the telephone is active, the steering wheel keypad can only be used for telephone functions. When in active mode, telephone information is always shown in the control panel display.

2. Microphone

The handsfree microphone is integrated in the ceiling panel.

3. Control panel

All telephone system functions, except call volume, can be controlled from the control panel keypad. The display shows menu functions, messages, telephone numbers, etc.

4. SIM card

The SIM card is inserted into the front of the control panel.

5. Privacy handset

The privacy handset can be used when you do not wish to be disturbed.

6. Antenna

The antenna is mounted against the windscreen in front of the rearview mirror.

General rules

- Put traffic safety first! If as the driver you need to use the privacy handset, park the car in a safe place first.
- Switch off the system when refuelling the car.
- Switch off the system near blasting work.
- Let only authorised personnel service your telephone system.

Emergency calls

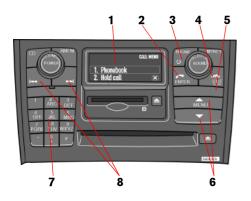
Emergency calls to alarm centres can be made without a SIM card as long as there is coverage by a GSM operator.

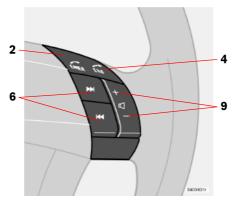
- Activate the telephone.
- Ring the emergency number that applies to your region (within EU: 112).
- Press the ENTER button on the control panel or steering wheel.

Loudspeaker

The telephone uses the speaker in the driver's door or the centre speaker of the audio system (if there is one).

Telephone functions





- Display
- ENTER accept a call, make a menu selection or activate the telephone from standby mode
- 3. On/Off/Standby
- EXIT/CLEAR terminate/refuse a call, scroll back in the menu, cancel a selection or erase entered digits/ characters

- 5. SIM card holder
- 6. Menu selection buttons
- 7. Number/character buttons and menu shortcuts
- 8. Seek scroll forward or back when entering text and numbers
- Increase/decrease call volume during a call



Switch, On/Off/Standby - Telephone

To activate the system:

 Press the PHONE button (1) to activate the telephone system.

To switch off the system:

 Hold the PHONE button depressed to switch off the telephone system

Continuing with system in standby mode:

- The telephone will continue in standby mode with a brief press of the PHONE button or if you press EXIT/CLEAR.
- Reactivate the system with the PHONE button.

When the telephone is active or in standby mode, a handset is shown in the display.

NOTE! With the Performance audio system (standard level), it is not possible to listen to the radio, CD, MD or receive traffic messages during a telephone call.

If you switch off the car's ignition with the telephone system on, it will be on the next time you switch on the ignition. No calls can be received when the telephone system is switched off.

Volume reduction during telephone call

If the telephone rings when the radio is switched on, the volume is lowered when the call is answered. When the call is concluded, the volume returns to the previously set level. Radio volume can also be adjusted during a telephone call, whereby the newly selected level will resume when the call is concluded. Audio system volume can be switched off completely during a telephone call. See menu 5.5.3, see page 213.

This function only applies to the Volvo integrated telephone system.



Standby mode

In standby mode, you can receive calls while the audio system is active and information from audio system sources is shown in the display.

To use other functions of the telephone system, the phone must be in active mode.

Menu shortcuts

Once you have used the menu button to enter the menu system, you can use numbers instead of the arrows and the ENTER button to select the right menu in the main menu level. Each menu selection is numbered. The numbers are shown in the display together with the menu alternative.

Telephone functions

Traffic safety

For reasons of safety, parts of the telephone menu system cannot be accessed at speeds in excess of 8 km/h. You may only complete menu system activities that have already been started.

The speed limiter can be disconnected using menu function 5.6.



SIM card

The telephone can only be used with a valid SIM card (Subscriber Identity Module). Your network operator supplies this card.

Always insert the SIM card when you wish to use the telephone.

- Switch off the telephone.
- Open the SIM card holder with a short press.
- Insert the card with the metallic surface down.
- Make sure that the bevelled corner of the SIM card matches the bevel of the holder.
- Press in the holder.

Contact your network operator if you experience difficulties with the SIM card.

Making and receiving calls

To call:

 Dial the number and press ENTER on the steering wheel or the control panel keypad or lift the handset.

To receive an incoming call:

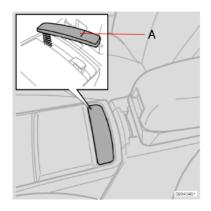
 Press ENTER (or lift the handset). You can also use Automatic Answer. See menu function 4.3.

The car's audio system can be muted automatically while a telephone conversation is in progress. See menu option 5.6.3.

Ending a call

Press EXIT/CLEAR on the steering wheel or control panel keypad or hang up the handset. The audio system resumes its previous activity.

Refuse an incoming call by pressing EXIT/CLEAR.



Privacy handset

If you wish to speak without disruptions, use the privacy handset. Lift the handset and press (A).

- Select the desired telephone number using the centre console keypad and lift the handset to place the call. Adjust the volume with the dial on the side of the handset.
- The call is ended when you replace the handset in its holder.
- If you wish to switch to a handsfree unit without ending the call: press on the steering wheel keypad (or control panel menu buttons) and select Handsfree.
 Press ENTER and replace the handset in

its cradle. If the handset is already removed from its cradle, the ringing party will be audible in the handsfree system. Press the MENU button, scroll to Handset and press ENTER in order to transfer to the handset.

Last number called

The telephone automatically stores the last telephone numbers/names called.

- Press ENTER in the steering wheel or control panel keypad.
- Use the menu buttons to scroll forward or back through the last numbers dialled.
 They are shown in the display.
- Press ENTER.

Speed dial

Storing speed dial numbers

A number stored in the phone book can be linked to a speed dial button (1-9) as follows:

- Select Phone book on the menu and press ENTER.
- Scroll to Speed dial, Menu 3.3, and press ENTER.
- Select which number is to be the speed dial number. Press ENTER to confirm.
- Search for the desired name or phone number in the phone book. Press ENTER to select.

Using speed dial

To make a call, press and hold the desired speed dial button for two seconds or press the button briefly and then press ENTER.

NOTE! Once you switch on the telephone, wait a moment before using speed dial. If you wish to use a speed dial number, Menu 3.3.1 must be activated.

Call waiting

If you hear two beeps in your speaker during a phone call, someone else is calling. This function can be selected or deselected in the menu.

In this mode, you can choose to either take the call or refuse it. If you do not wish to take the call, press EXIT/CLEAR or do nothing.

If you do wish to take the call, press ENTER. Your current call will be put in "park mode". If you press EXIT/CLEAR, both calls will be terminated.

Telephone functions

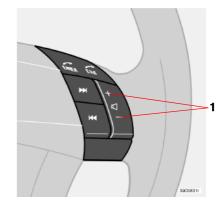
Functions during a call

The following functions are available during a call (scroll with the arrows and press ENTER to make a selection):

Secret mode/ Secret mode off	Secret mode
Hold/Resume	Choose if the call is to be parked or resumed.
Handset/ Handsfree	Use the handset or handsfree
Phone book	Show phone book

The following functions are available when you have a current call and a parked call (scroll with the arrows and press ENTER to make a selection):

Secret mode/ Secret mode off	Secret mode
Handset/	Use the handset or
Handsfree	handsfree
Phone book	Show phone book
Three-way	Speak with both
calling	parties simultaneously
	(conference call)
Switch	Switch between the
	two calls



Call volume

Increase or decrease call volume by pressing the + or – button (1) of the steering wheel keypad during a call.

When the telephone is activated, the steering wheel keypad only controls the telephone functions.

The telephone must be in standby mode in order to adjust the audio system with these buttons, see page 213.

Phone book

Telephone numbers and names can be stored in either the telephone memory or the SIM card memory.

If the number of the person calling is found in the phone book, his or her name is shown in the display.

The telephone memory can store up to 255 names.

Storing telephone numbers with names

- Press the MENU button, select Phone book and press ENTER.
- Scroll to Enter item and press ENTER.
- Enter a name and press ENTER.
- Enter a number and press ENTER.
- Choose in which memory to save and press ENTER.

Enter a name (or message)

Press the button with the desired character: once for the first character, twice for the second, etc. Press 1 to enter a space.

- space 1-?!,.:"'()
- abc2äåàáâæç
- d e f 3 è é ë ê
- ghi4ìíîï

- jkl5
- mno6ñöòóØ
- pqrs7ß
- tuv8üùúû
- w x y z 9
- if you enter two letters in a row from the same button, press * between them or wait a few seconds
- +0@*#&\$£/%
- switch between upper and lower case
- delete the last letter or number entered. If you press for a long time, the enter number or text is deleted.

Quitting text input:

- Clear all entered characters with a long press on the EXIT/CLEAR button.
- Return to the menu with an additional long press on the EXIT/CLEAR button.



Calling from the memory

- Press the MENU button's down arrow (1) or in the steering wheel to search in the phone book.
- Choose from the following alternatives:
- Press ENTER and scroll with the arrows until you find the desired name.
- Press the key for the first letter of the name (or enter the entire name) and press ENTER.
- Press ENTER to call the selected number.

Telephone functions



Double SIM cards

Many network operators offer double SIM cards - one for your car and one for another telephone. A double SIM card allows you to have the same number for two different telephones. Ask your network operator about the offers available and the use of double SIM cards.

Specifications

Output 2 W
SIM card small, 3V
Memory entries 255¹
SMS Yes

(Short Message

Service)

Data/Fax No

Dualband Yes (900/ 1800)

 The telephone memory contains 255 positions. The number of SIM card memory positions varies depending on your subscription.

IMEI number

In order to block the telephone, you must provide your network operator with the telephone's IMEI number which is a 15-digit serial number that is programmed in the phone. To display this number, press *#06#. Make a note of this number and keep it in a safe place.

Menu settings and options - Telephone

1. Call log - CALL

- 1.1. Missed calls
- 1.2. Received calls
- 1.3. Outgoing calls
- 1.4. Erase list
 - 1.4.1. All calls
 - 1.4.2. Missed calls
 - 1.4.3. Received calls
 - 1.4.4. Outgoing calls
- 1.5. Call duration
 - 1.5.1. Last call
 - 1.5.2. Number of calls
 - 1.5.3. Total time
 - 1.5.4. Reset time

2. Messages

- 2.1. Read
- 2.2. New
- 2.3. Message settings
 - 2.3.1. SMSC number
 - 2.3.2. Validity period
 - 2.3.3. Message type

3. Phone book

- 3.1. Enter item
- 3.2. Search
- 3.3. Copy all
 - 3.3.1. SIM to telephone
 - 3.3.2. Telephone to SIM
- 3.4. Speed dial
 - 3.4.1. Active

- 3.4.2. Select number
- 3.5. Empty SIM
- 3.6. Empty telephone
- 3.7. Memory status

4. Call options.

- 4.1. Transmit number
- 4.2. Call waiting
- 4.3. Automatic answer
- 4.4. Call back
- 4.5. Call divert
 - 4.5.1. All calls
 - 4.5.2. When busy
 - 4.5.3. When not answered
 - 4.5.4. If unreachable
 - 4.5.5. Fax calls
 - 4.5.6. Data calls
 - 4.5.7. Cancel all diverts

5. Tel. settings

- 5.1. Network selection
 - 5.1.1. Automatic
 - 5.1.2. Manual
- 5.2. Language
 - 5.2.1. Dansk
 - 5.2.2. Deutsch
 - 5.2.3. English UK
 - 5.2.4. English US
 - 5.2.5. Español
 - 5.2.6. Français CAN
 - 5.2.7. Français FR
 - 5.2.8. Italiano
 - 5.2.9. Nederlands

- 5.2.10. Portuguës BR
- 5.2.11. Portuguës P
- 5.2.12. Suomi
- 5.2.13. Svenska
- 5.3. SIM security
 - 5.3.1. On
 - 5.3.2. Off
 - 5.3.3. Automatic
- 5.4. Change codes
 - 5.4.1. PIN code
 - 5.4.2. Telephone code
- 5.5. Volume
 - 5.5.1. Ringer volume
 - 5.5.2. Ringer tone
 - 5.5.3. Mute radio
 - 5.5.4. Message beep
- 5.6. Traffic safety
- 5.7. Factory settings

Menu settings and options - Telephone

1. Call log

1.1. Missed calls

A list of missed calls is shown here. You can choose to call, erase or store the number in the phone book.

1.2. Received calls

A list of received calls is shown here. You can choose to call, erase or store the number in the phone book.

1.3. Outgoing calls

A list of dialled numbers is shown here. You can choose to call, erase or store the number in the phone book.

1.4. Erase list

This option can be used to erase the list of menus 1.1, 1.2 and 1.3 as follows.

- 1.4.1. All
- 1.4.2. Missed
- 1.4.3. Received
- 1.4.4. Outgoing

1.5. Call duration

Here you can see the duration of all your calls or the most recent. You can also see the number of calls and clear the call timer.

- 1.5.1. Last call
- 1.5.2. Number of calls
- 1.5.3. Total time
- 1.5.4. Reset time.

Resetting the call timer requires the telephone code (see Menu 5.5).

2. Messages

2.1. Read

Here you can read received text messages. You can then choose to erase the message, forward it, change or save the entire message or parts of it.

2.2. New

You can write a text message using the keypad. Then choose to save or send it.

2.3. Message settings

Enter the number (SMSC number) of the message centre to which you want your messages transferred as well as how long they are to be saved at the message centre.

- 2.3.1. SMSC number
- 2.3.2. Validity period
- 2.3.3. Message type

Contact your service provider for information on these settings and for an SMSC number. Normally, these settings should not be altered.

3. Phone book

3.1. Enter item

You can store names and telephone numbers in the phone book. See the section on phone book functions for more information.

3.2. Search

3.3. Copy all

Copy telephone numbers and names from the SIM card to the telephone memory.

- 3.3.1. From SIM to telephone memory
- 3.3.2. From telephone to SIM memory

3.4. Speed dial

A number stored in the telephone book can be stored as a speed dial number.

3.5. Empty SIM

The entire memory of the SIM card can be erased.

3.6. Empty telephone

The entire memory of the phone can be erased.

3.7. Memory status

See how many places in the SIM card or telephone memory are occupied by names and numbers.

4. Call options

4.1. Transmit number

Choose whether or not your own number should be displayed to the person you call. Contact your network operator regarding exdirectory numbers.

4.2. Call waiting

Choose whether or not you want to be alerted during a phone call that there is another call coming in.

4.3. Automatic answer

Choose to automatically accept incoming calls.

4.4. Call back

Choose to call a previously dialled number that was busy.

4.5. Call divert service

Choose when and what type of calls are to be diverted to a specified telephone number.

- 4.5.1. All calls (this setting only applies during the call in progress).
- 4.5.2. When busy
- 4.5.3. When not answered
- 4.5.4. If unreachable
- 4.5.5. Fax calls
- 4.5.6. Data calls
- 4.5.7. Cancel all diverts

5. Telephone settings

5.1. Network selection

Choose a network automatically or manually. The selected operator is shown in the display in the telephone's basic mode.

- 5.1.1. Auto
- 5.1.2. Manual

5.2. Language

Here you can choose which language the telephone is to display.

- 5.2.1. Dansk
- 5.2.2. Deutsch
- 5.2.3. English UK
- 5.2.4. English US
- 5.2.5. Español
- 5.2.6. Français CAN
- 5.2.7. Français FR
- 5.2.8. Italiano
- 5.2.9. Nederlands
- 5.2.10. Português BR
- 5.2.11. Português P
- 5.2.12. Suomi
- 5.2.13. Svenska

5.3. SIM security

Select if the PIN code should be on, off or if the telephone should automatically give the PIN code.

- 5.3.1. On
- 5.3.2. Off
- 5.3.3. Automatic

5.4. Change codes

Change the PIN code or telephone code.

- 5.4.1. PIN code
- 5.4.2. Telephone code (use 1234 until you change to your own code). The telephone code is used to reset the call timer.

NOTE! Make a note of your code as save it in a safe place.

5.5. Volume

- 5.5.1. Ringer volume: Here you can choose the volume of the ringer for incoming calls.
- 5.5.2. Ringer tone: There are eight different ringer tones to choose from.
- 5.5.3. Mute radio: On/Off
- 5.5.4. Speed volume: Choose whether the volume should be adjusted according to speed.
- 5.5.5. Message beep

5.6. Traffic safety

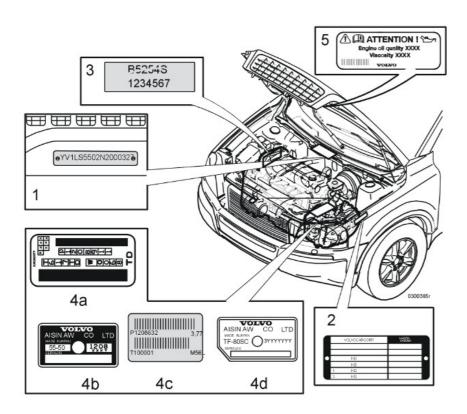
Here you can choose to disengage the speed limiter, i.e. have access to the entire menu system even while driving.

5.7. Factory settings

Function to return to the system's factory settings.

	Technical data
Type designation	224
Dimensions and weights	225
Engine specifications	226
Capacities	227
Fuel	230
Catalytic converter	231
Electrical system	232

Type designation



Whenever contacting your Volvo dealer and when ordering spare parts and accessories for your car, it makes things easier if you know your car's type designation, vehicle identification number and engine number.

- 1. VIN
 - Stamped in the engine compartment underneath the windscreen.
- Type designation, vehicle identification number, maximum permissible weights, codes for colour and upholstery and type approval number.
 Plate on the wing liner behind the lefthand headlamp.
- 3. Engine type designation, component and serial number
 - On the right-hand side of the engine
- Gearbox type designation and serial number
 - a: Automatic gearbox GM: on the rear b: Automatic gearbox AW: on the upper side
 - c: Manual gearbox: on the upper side
 - d: Automatic gearbox: on the top
- 5. Engine oil decal¹

The decal specifies oil grade, viscosity and volume.

. Certain engine variants.

Dimensions and weights

Dimensions

Length: 480 cm Width: 190 cm Height: 178

Wheelbase: 286 cm Front track: 163 cm Rear track: 162 cm

Weights

The kerb weight includes the driver, the fuel tank 90 % full and all fluids. The weight of passengers and accessories, such as a towbar, towball load (when a trailer is hitched, see table), load carriers, and roof box etc. influence the payload and must not be included in the kerb weight. Permitted weight (in addition to driver) = Gross vehicle weight-Kerb weight.

	VOLVO CA	R CORP.	MADE IN SWEDEN	
				-
•	KG	1		-6
	KG	2		
1.	KG	3		
2.	KG	4		

03000474

For the location of the label, see page 224.

- Max. total weight
- Max. train weight (car+trailer)
- Max. front axle load
- 4. Max. rear axle load

Maximum load: See registration document.

Maximum roof load: 100 kg

Trailer with brakes:

Maximum trailer weight	Maximum towball load	
0-1200 kg	50 kg	
2250 kg	90 kg	

Trailer without brakes

Maximum trailer weight 750 kg



∴ WARNING!

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

Engine specifications

Specification	Engine designation				
	2.5T B5254T2	T6 B6294T	V8 AWD B8444S	D5 AWD D5244T	
Output (kW/rps)	154/83	200/85	232/98	120/67	
(hp/rpm)	210/5000	272/5100	315/5850	163/4000	
Torque (Nm/rps)	320/25-75	380/30-83	440/65	340/29-50	
(kpm/rpm)	32.6/1500- 4500	38.8/1800- 5000	44.9/3900	34.7/1750- 3000	
No. of cylinders	5	6	8	5	
Bore (mm)	83	83	94	81	
Stroke (mm)	93.2	90	79.5	93.2	
Swept volume (dm ³ or litres)	2.521	2.922	4.414	2.401	
Compression ratio	9.0:1	8.5:1	10.4:1	18.0:1	
Spark plugs:		•			
Electrode gap (mm)	0.7	0.7	1.1	-	
Tightening torque (Nm)	30	30	30	-	

Engine type designation, component and serial number can be read on the engine, see page 224.

Capacities

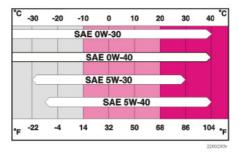
Engine oil

If there is an engine oil decal on the bonnet, the volume and grade specifications in this table apply. See location on page 224.

Engin	ne variant	Volume between MIN – MAX	Volume ¹ litres	Recommended oil grade	Viscosity ²
2.5T	B5254T2	0-1.2 litres	5.5	ACEA A5/B5	SAE 0W-30
V8 AWD	B8444S	0-1.2 litres	6.7	ACEA A5/B5	

- 1. Including filter change.
- 2. The oil grade requirement must be fulfilled even if a different viscosity is chosen according to the diagram.





Engine oil decal

The engine oil decal specifies:

- 1. oil grade
- 2. viscosity

Capacities

The oil grade, viscosity and volume specified in this table is to be followed if the car has an engine oil decal on the bonnet; see page 224 for location.

Engi	ne variant	Volume between MIN – MAX	Volume ¹ litres	Recommended oil grade	Viscosity ²
2.5T	B5254T2	0-1.2 litres	5.8	ACEA A1/B1	SAE 5W-30
T6	B6294T	0-1.5 litres	6.6		
D5 AWD	D5244T	0-2.0 litres	6.5	ACEA A3/B3/B4	SAE 0W-30

1. Including filter change.

2. The oil grade requirement must be fulfilled even if a different viscosity is chosen according to the diagram.

Extreme driving conditions

Check the oil more often in extreme driving conditions such as alpine driving with a great deal of engine braking or motorway driving at high speed. These conditions may cause abnormally high oil temperatures and oil consumption.

Petrol engines: For extreme conditions, choose a fully synthetic engine oil to provide extra protection.

Volvo recommends Castrol[®] oil products.

Important!

Always use oil of the recommended grade and correct viscosity.

Never use oil additives. These can damage the engine.

If the system is topped up with a different oil, contact the nearest authorised Volvo workshop for servicing.

Other fluids and lubricants

Fluid	Engine variant/number of components	Volume	Recommended oil grade
Gearbox oil	Manual 6-speed (M66)	2.0 litres	Transmission fluid MTF 97309
	Automatic gearbox (AW55-51)	7.2 litres	Transmission fluid JWS 3309
	Automatic gearbox (GM4T65)	12.7 litres	Transmission fluid Dexron III G
	Automatic gearbox (TF-80SC)	7.0 litres	Transmission fluid JWS 3309
Coolant	Petrol engine 2.5T	9.0 litres	Coolant with corrosion inhibitor mixed with
	Petrol engine T6	10.5 litres	water, see packaging. The thermostat starts
	Petrol engine V8	10.2 litres	opening at: 90 °C in petrol engines and at
	Diesel engine D5	12.5 litres	82 °C in diesel engines.
Air conditioning		1000 gr.	Oil: PAG
	with AC in rear passenger compartment	1300 gr	Refrigerant R134a (HFC134a)
Brake fluid		0.6 litres	DOT 4+
Power steering	System	1.0 litre	Power steering fluid: WSS M2C204-A or
	of which reservoir	0.2 litres	equivalent product with same specifications.
Washer fluid		6.5 litres	Use a washer antifreeze recommended by Volvo mixed with water at temperatures below freezing.

Important!

The recommended transmission fluid must be used to prevent damage to the gearbox. Do not mix with any other transmission fluid. If the transmission is topped up with a different fluid, contact an authorised Volvo workshop for servicing.

Fuel

Consumption, emissions

E	ngine	Gearbox	Consumption litre/100 km	Emissions of CO2 (g/km)	Tank volume litres
2.5T	B5254T2	Manual 6-speed (M66)	11.1(11,2) ¹	266(269) ¹	80
		Automatic gearbox (AW 55-51)	11.7(11,8) ¹	280(282 ¹)	
T6	B6294T	Automatic gearbox (GM4T65)	12.7	304	80
V8 AWD	B8444S	Automatic gearbox (TF-80SC)	13.3(13,5) ¹	317(322) ¹	80
D5 AWD	D5244T	Manual 6-speed (M66)	8.2	216	68
		Automatic gearbox (AW 55-51)	9.0	239	

1. Applies to cars seating 7.

Fuel consumption and emissions of carbon dioxide

Official fuel consumption figures are based on a standard driving cycle in accordance with EU Directive 80/1268 comb. Fuel consumption figures may change if the car is equipped with extra equipment that affects the car's weight. The manner in which the car is driven and other non-technical factors can affect fuel consumption. Consumption is higher and power output lower for fuel with an octane rating of 91 RON.

Petrol

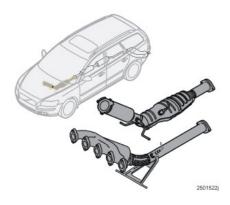
Most engines can be run with octane ratings of 91, 95 and 98 RON.

- 91 RON must **not** be used in 4 cylinder engines.
- 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, it is recommended to use fuel with the highest possible octane rating for optimum performance and fuel economy.

Petrol: Standard EN 228
Diesel: Standard EN 590

Catalytic converter



Catalytic converter

The purpose of the catalytic converter is to purify exhaust gases. It is located in the flow of exhaust gases close to the engine so that it quickly reaches operating temperature. The catalytic converter consists of a monolith (ceramic or metal) with channels. The channel walls are lined with a thin layer of platinum, rhodium and palladium. These metals act as catalysts, i.e. they participate in and accelerate a chemical reaction without being used up themselves.

Lambda-sondTM 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 continuously controls the injectors. The ratio of air to fuel is continuously adjusted. These adjustments create optimal conditions for efficient combustion, and together with the three-way catalytic converter reduce harmful emissions (hydrocarbons, carbon monoxide and nitrous oxides).

Electrical system

General

12 V 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.

Battery

Performance	Engine			
	2.5T	T6	V8 AWD	D5 AWD
Voltage	12 V	12 V	12 V	12 V
Cold start capacity (CCA)	600 A ¹	600 A ¹	600 A ¹	800 A
Reserve capacity (RC)	120 min	120 min	120 min	170 min

1. Cars with a parking heater have an 800 A battery.

If the battery is changed, replace it with a battery of the same cold start capacity and reserve capacity as the original (see the decal on the battery).

Alternator

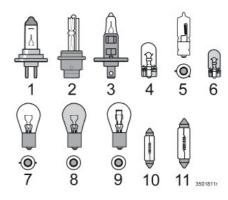
Performance	Engine			
	2.5T	T6	V8 AWD	D5 AWD
Max. current (A)	140	160	180	140

Starter motor

Performance	Engine			
	2.5T	T6	V8 AWD	D5 AWD
Output (kW)	1.4	1.7	2.0	2.2

Bulbs

Lighting	Output W	Socket
1. Main beam/dipped beam	55	H7
2. Bi-Xenon	35	D2R
3. Front fog lamps	55	H1
4. Front position lamps, front parking lamps, front side marker lamps, number plate lighting, rear courtesy lighting	5	W 2.1 x 9.5d
5. Front direction indicators, rear fog lamp	21	BAY9s
6. Side direction indicators	5	W 2.1 x 9.5d
7. Brake lamp, reversing lamp	21	BAY15d
8. Rear direction indicators	21	BA15s
9. Rear position lamps,	4	BAZ15s
10. Vanity mirror	1.2	SV5.5
11. Front courtesy lighting, cargo compartment lighting	5	SV8.5
Glovebox lighting	3	BA9



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