XC90

WEB EDITION

OWNER'S MANUAL

DEAR VOLVO OWNER

THANK YOU FOR CHOOSING VOLVO

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

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

Table of contents

00 Introduction

Important information..... 8
Volvo and the environment..... 12

01 Safety

Seatbelts..... 18
Symbols, airbags..... 21
Airbags..... 22
Activating/deactivating the airbag*..... 24
Side airbags (SIPS bags)..... 26
Inflatable Curtain (IC)..... 28
WHIPS..... 29
Roll-over protection - ROPS..... 31
When the systems deploy..... 32
Child safety..... 34

02 Instruments and controls

Overview, left-hand drive cars..... 50
Overview, right-hand drive cars..... 52
Driver's door control panel..... 54
Combined instrument panel..... 55
Indicator and warning symbols..... 57
Information display..... 60
Switches in the centre console..... 61
Lighting panel..... 64
Left-hand stalk switch..... 67
Trip computer*..... 68
Right-hand stalk switch..... 70
Cruise control*..... 73
Parking brake, electrical socket, etc..... 75
Power windows..... 77
Windows, rearview and door mirrors..... 79
Power sunroof*..... 84

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

03 Climate control

General information on climate control..... 88
Electronic Climate Control, ECC..... 91
Fuel-driven parking heater*..... 94

04 Interior

Front seats..... 100
Front seats - Executive 103
Interior lighting..... 104
Storage spaces in the passenger compartment..... 106
Storage spaces in the passenger compartment - Executive 111
Rear seat..... 112
Loading..... 114
Cargo area..... 115

05 Locks and alarm

Remote control key - key with remote control..... 124
Locking and unlocking..... 126
Child safety locks..... 130
Alarm*..... 131

Table of contents

06 Starting and driving

General..... 136
Refuelling..... 139
Starting the engine..... 145
Automatic gearbox..... 147
All-wheel drive*..... 150
Brake system..... 151
Stability and traction control system*..... 153
Park assist syst*..... 155
Blind Spot Information System - BLIS*... 157
Towing and recovery..... 161
Jump starting..... 163
Driving with a trailer..... 165
Towing equipment*..... 167
Detachable towbar*..... 169
Adjusting headlamp pattern..... 173

07 Wheels and tyres

General..... 180
Tyre pressure..... 183
Warning triangle* and spare wheel *..... 184
Changing wheels..... 187
Emergency puncture repair*..... 190

08 Car care

Cleaning..... 198
Touching up paintwork..... 202
Rustproofing..... 204

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

09 Maintenance and service

Volvo service 208
Self-maintenance 209
Bonnet and engine compartment 211
Oils and fluids 213
Wiper blades 218
Battery 220
Replacing bulbs 223
Fuses 230

10 Infotainment system

General 244
Control panels, audio 245
Audio system functions 248
Radio functions 253
CD functions 259
Menu structure – audio system 262
Phone functions* 263
Menu structure – phone 270
Bluetooth handsfree* 274
RSE - Rear Seat Entertainment system - Dual Screen* 280

11 Specifications

Type designation 286
Dimensions and weights 288
Engine specifications 291
Engine oil 292
Fluids and lubricants 294
Fuel 296
Wheel and tyres, dimensions and pressure 297
Catalytic converter 298
Electrical system 299
Type approval 301
Symbols in the display 302

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

12 Alphabetical Index

Alphabetical Index..... 304

Important information

Reading the owner's manual

Introduction

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

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

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Option

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

In addition to standard equipment, this manual also describes options (factory fitted equipment) and certain accessories (retrofitted extra equipment).

The equipment described in the owner's manual is not available in all cars - they have different equipment depending on adaptations for the needs of different markets and national or local laws and regulations.

In the event of uncertainty over what is standard or an option/accessory, contact a Volvo dealer.

Special texts

WARNING

Warning texts appear if there is a risk of injury.

IMPORTANT

"Important" texts appear if there is a risk of damage.

NOTE

NOTE texts give advice or tips that facilitate the use of e.g. features and functions.

Footnote

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

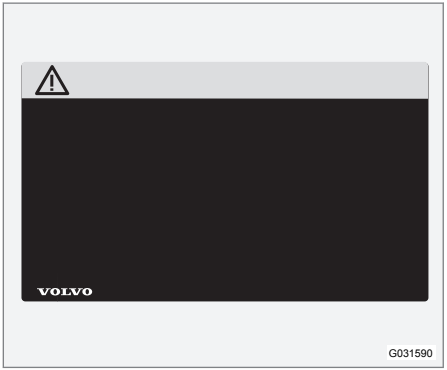
Message texts

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

Decals

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

Warning for personal injury



Black ISO symbols on yellow warning field, white text/image on black message field. Used to indicate the presence of danger

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

which, if the warning is ignored, may result in serious personal injury or fatality.

Risk of property damage

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

Information

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

NOTE

It is not intended that the decals illustrated in the owner's manual should be exact replicas of those in the car. They are included to show their approximate appearance and location in the car. The information that applies to your particular car is available on the respective decals for your car.

Procedure lists

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

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

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

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

A Arrows with letters are used to clarify a movement when the reciprocal order is of no relevance.

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

Position lists

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

Important information

Bulleted lists

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

Example:

- Coolant
- Engine oil

Images

The manual's images are sometimes schematic and may deviate from the car's appearance depending on equipment level and market.

To be continued

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

Recording data

Your vehicle contains a number of computers whose function is to continuously check and monitor the vehicle's operation and functionality. Some of the computers can record information during normal driving if they detect an error. In addition, information is recorded in the event of a collision or incident. Parts of the recorded information are required so that technicians can diagnose and rectify faults in the vehicle during servicing and maintenance and so that Volvo can fulfil legal requirements and other regulations. In addition to this, the information is used for research purposes by Volvo in order to continually develop quality and safety, as the information can contribute to a better understanding of the factors that cause accidents and injuries. The information includes details of the status and functionality of various systems and modules in the vehicle with regard to engine, throttle, steering and brake systems, amongst other things. This information may include details regarding the way the driver drives the vehicle, such as vehicle speed, brake and accelerator pedal use, steering wheel movement and whether or not the driver and passengers have used their seatbelts. For the reasons given this information may be stored in the vehicle's computers for a certain length of time, but also as a result of a collision or incident. This information may be stored by Volvo as long as it can help to further develop and further enhance safety and quality and as long as there are legal requirements and other regulations that Volvo needs to consider.

Volvo will not contribute to the above-described information being disclosed to third parties without the vehicle owner's consent. However, due to national legislation and regulations Volvo may be required to disclose such information to authorities such as police authorities, or others who may assert a legal right to have access to it.

To be able to read and interpret the information recorded by the computers in the vehicle requires special technical equipment that Volvo, and workshops that have entered into agreements with Volvo, have access to. Volvo is responsible that the information, which is transferred to Volvo during servicing and maintenance, is stored and handled in a secure manner and that the handling complies with applicable legal requirements. For further information - contact a Volvo dealer.

Accessories and extra equipment

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

Change of ownership for cars with Volvo On Call *

Volvo On Call is a supplemental service that consists of safety, security and comfort services. If the car has Volvo On Call and there is a change of owner, it is very important that these services are discontinued so that the former owner cannot access the services in the car. Contact an authorised Volvo dealer in the event of a change of ownership.

Information on the Internet

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

A QR code reader is required to read the QR code, which is available as a supplemental program for several mobile phones. The QR code reader can be downloaded from App Store or Google Play.

QR code

Volvo and the environment

Volvo Cars' environmental philosophy

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

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

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

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

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

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

Volvo and the environment

A sophisticated air quality system, IAQS* (Interior Air Quality System) ensures that the incoming air is cleaner than the air in the traffic outside.

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

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

Interior

The interior of a Volvo is designed to be pleasant and comfortable, even for people with contact allergies and for asthma sufferers. Extreme attention has been given to choosing environmentally-compatible materials.

Volvo workshops and the environment

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

Reducing environmental impact

You can easily help reduce environmental impact - here are a few tips:

- Avoid letting the engine idle - switch off the engine when stationary for longer periods. Pay attention to local regulations.
- Drive economically - think ahead.
- Perform service and maintenance in accordance with the instructions in the owner's manual - follow the Service and Warranty Booklet's recommended intervals.
- If the car is equipped with an engine block heater*, use it before starting from cold - it improves starting capacity and reduces wear in cold weather and the engine reaches normal operating temperature more quickly, which lowers consumption and reduces emissions.
- High speed increases consumption considerably due to increased wind resistance - a doubling of speed increases wind resistance 4 times.
- Always dispose of environmentally hazardous waste, such as batteries and oils, in an environmentally safe manner. Consult a workshop in the event of uncertainty about how this type of waste should be discarded - an authorised Volvo workshop is recommended.

Following this advice can save money, the planet's resources are saved, and the car's durability is extended. For more information and further advice, see the pages 136 and 296.

Recycling

As a part of Volvo's environmental work, it is important that the car is recycled in an environmentally sound manner. Almost all of the car can be recycled. The last owner of the car is therefore requested to contact a dealer for referral to a certified/approved recycling facility.

The owner's manual and the environment

The Forest Stewardship Council® symbol shows that the paper pulp in this publication comes from FSC® certified forests or other controlled sources.

Volvo and the environment

Seatbelts..... 18
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Airbags..... 22
Activating/deactivating the airbag*..... 24
Side airbags (SIPS bags)..... 26
Inflatable Curtain (IC)..... 28
WHIPS..... 29
Roll-over protection - ROPS..... 31
When the systems deploy..... 32
Child safety..... 34

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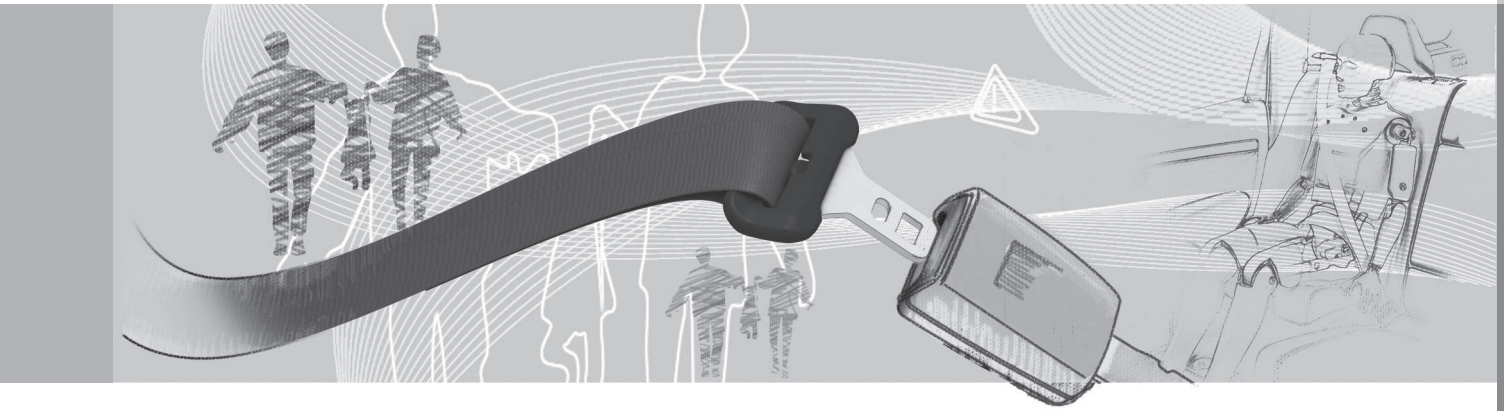
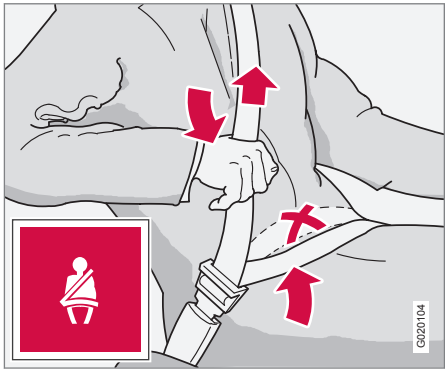
01

SAFETY



Seatbelts

Always use a seatbelt



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

Heavy braking can have serious consequences if the seatbelts are not used. Ensure that all passengers use their seatbelts. It is important that the seatbelt lies against the body so it can provide maximum protection. Do not lean the backrest too far back. The seatbelt is designed to protect in a normal seating position.

Putting on a seatbelt:

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

Releasing the seatbelt

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

The seatbelt locks and cannot be withdrawn

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

Keep in mind the following

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

WARNING

Never modify or repair the seatbelts yourself. Volvo recommends that you contact an authorised Volvo workshop. If a seatbelt has been subjected to a major load, such as in conjunction with a collision, the entire seatbelt must be replaced. Some of the protective characteristics of the seatbelt may have been lost, even if it appears to be undamaged. In addition, replace the seatbelt if the belt is worn or damaged. The new seatbelt must be type-approved and intended for installation in the same position as the replaced seatbelt.

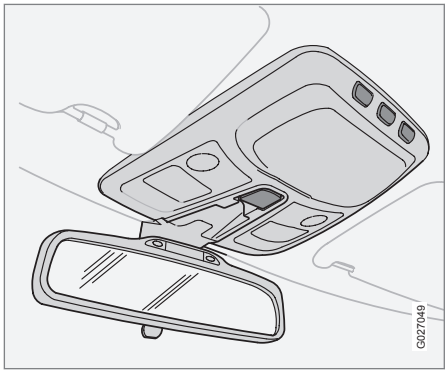
Seatbelts and pregnancy

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

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

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

Seatbelt reminder



An acoustic signal and indicator lamp remind the driver and front seat passenger to use a seatbelt if either of them is not wearing one. The audible reminder is speed dependent (at low speeds), and time dependent (when the car is started). The visual reminder is located in the roof console and in the combined instrument panel.

NOTE

The seatbelt reminder is intended for an adult sitting in the front seat. If a belt-fitted child seat is fitted in the front seat, the seatbelt reminder does not switch on.

Certain markets

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

Seatbelt tensioner

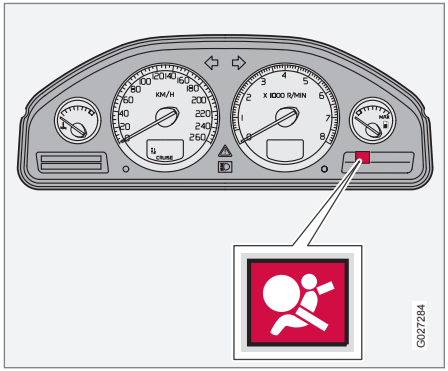
All the seatbelts are equipped with belt tensioners. A mechanism in the seatbelt tensioner tightens the seatbelt around the body in the event of a sufficiently violent collision. The seatbelt then provides more effective restraint for the occupants.

Seatbelts

WARNING

Never insert the tongue of the passenger's seatbelt into the buckle on the driver's side. Always insert the tongue of the seatbelt into the buckle on the correct side. Do not make any damages on seatbelts nor insert any foreign objects into a buckle. The seatbelts and buckles would then possibly not function as intended in the event of a collision. There is a risk of serous injury.

Warning symbol on the combined instrument panel



The warning symbol in the combined instrument panel illuminates when the remote control key is turned to key position **I**, **II** or **III**. The symbol goes out after approx. 6 seconds provided the airbag system is fault-free.

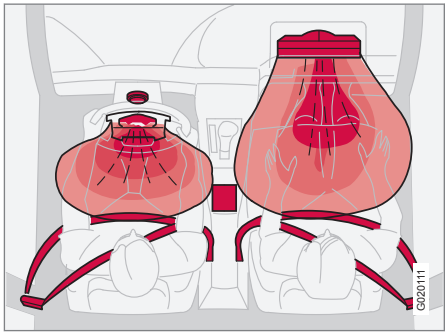
As well as the warning symbol, a message may appear on the display in appropriate cases. If the warning symbol malfunctions, the warning triangle illuminates and the message **SRS AIRBAG SERVICE URGENT** appears in the display. Volvo recommends that you contact an authorised Volvo workshop immediately.

WARNING

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

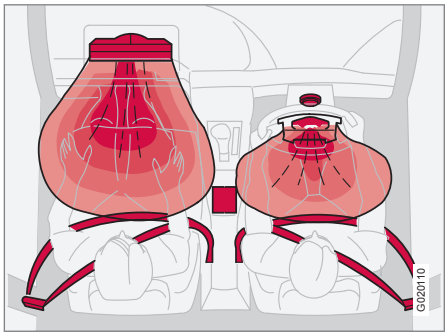
Airbags

Airbag system[1]



Airbag system, left-hand drive car.

The system consists of airbags and sensors. A sufficiently violent collision trips the sensors and the airbag(s) are inflated 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, takes place within tenths of a second.



Airbag system, right-hand drive car

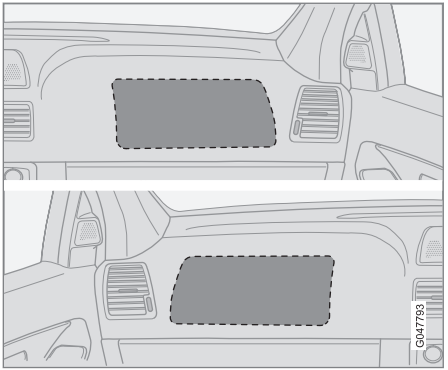
WARNING

Volvo recommends that you contact an authorised Volvo workshop for repair. Defective work in the airbag system could cause malfunction and result in serious personal injury.

NOTE

The detectors react differently depending on the nature of the collision and whether or not the seatbelts are fastened. Applies to all seatbelt positions apart from centre seat rear.

It is therefore possible that only one (or none) of the airbags may inflate in a collision. The detectors sense the force of the collision on the vehicle and the action is adapted accordingly so that one or more airbags are deployed.



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

[1] Also called the SRS system.

WARNING

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

Airbag on the driver's side

The car has an airbag to supplement the protection afforded by the seatbelt on the driver's side. It is folded up into the centre of the steering wheel. The steering wheel is marked **SRS AIRBAG**.

WARNING

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

Passenger airbag

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

WARNING

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

WARNING

Never place a child in a child seat or on a booster cushion in the front seat if the airbag is activated.[2]

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

Failure to follow the advice given above can endanger life.

[2] For information on activated/deactivated airbag, see page 24.

Activating/deactivating the airbag*

Key switch off - PACOS*

General information

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

Key switch off/switch

The switch for the passenger airbag (PACOS) is located on the passenger end of the instrument panel and is accessible when the passenger door is open, (see under the heading below, Activating/deactivating).

Check that the switch is in the required position. The remote control key's key blade should be used to change position.

For information on the key blade, see page 124.

WARNING

Failure to follow the advice given above can endanger life.

WARNING

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

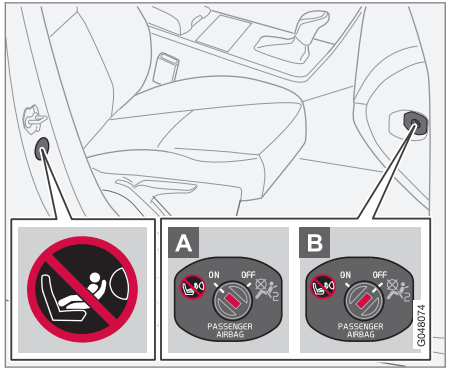
WARNING

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

WARNING

Do not allow anyone to sit in the front passenger seat if the text message in the rear-view mirror indicates that the airbag is deactivated, and if the warning symbol for the airbag system is also displayed on the combined instrument panel. This indicates that there has been a severe malfunction. Visit a workshop as soon as possible. Volvo recommends that you contact an authorised Volvo workshop

Activating/deactivating



Location of airbag label plus switch.

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

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

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

WARNING

Activated airbag (passenger seat):

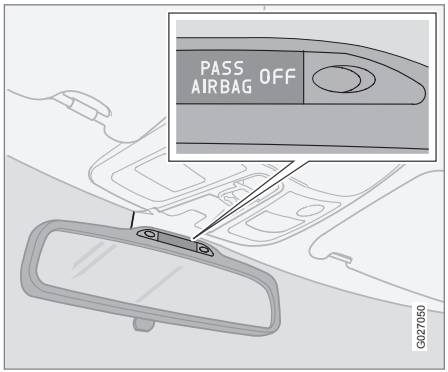
Never place a child in a child seat or on a booster cushion on the front passenger seat when the airbag is activated. This applies to everyone shorter than 140 cm.

Deactivated airbag (passenger seat):

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

Failure to follow the advice given above can endanger life.

Message



Indicator showing that the passenger airbag is deactivated.

A text message in the rearview mirror indicates that the airbag for the front passenger seat is deactivated (see preceding illustration).

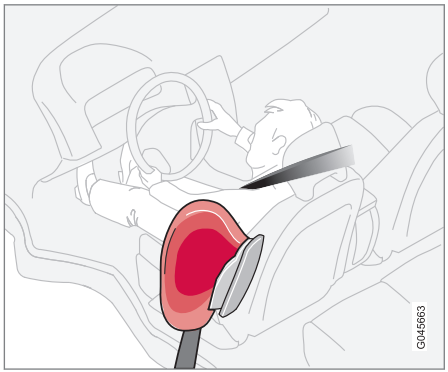
Side airbags (SIPS bags)

Side airbag

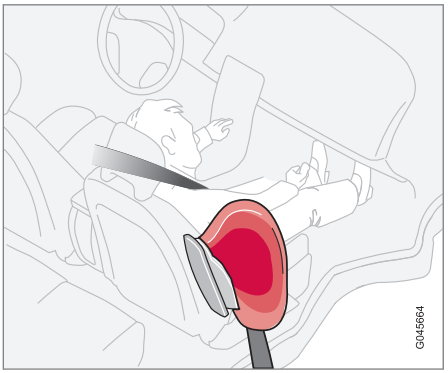
Side airbag locations.

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

Location



Driver's seat, left-hand drive



Front passenger seat, left-hand drive

The SIPS bag system consists of side airbags and sensors. A sufficiently violent collision trips the sensors and the side airbags are inflated. The airbag inflates between the occupant and the door panel and thereby cushions the initial impact. The airbag deflates when compressed by the collision. The side airbag is normally only deployed on the side of the collision.

Child seats and side airbags

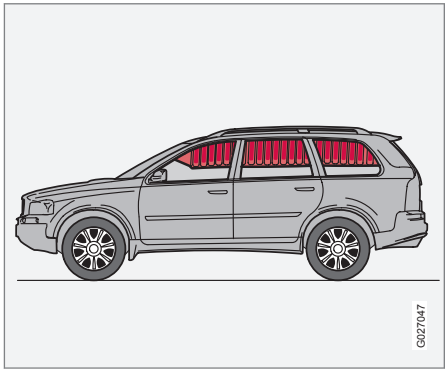
The protection provided by the car to children seated in a child seat or on a booster cushion is not diminished by the side airbag.

WARNING

- Volvo recommends that repairs are only carried out by an authorised Volvo workshop. Defective work in the SIPS-bag system could cause malfunction and result in serious personal injury.
- Do not put objects in the area between the outside of the seat and the door panel, since this area is required by the side airbag.
- Volvo recommends the use only of car seat covers approved by Volvo. Other seat covers may impede the operation of the side airbags.
- Side airbags are a supplement the seatbelts. Always use a seatbelt.

Inflatable Curtain (IC)

Properties



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

WARNING

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

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

WARNING

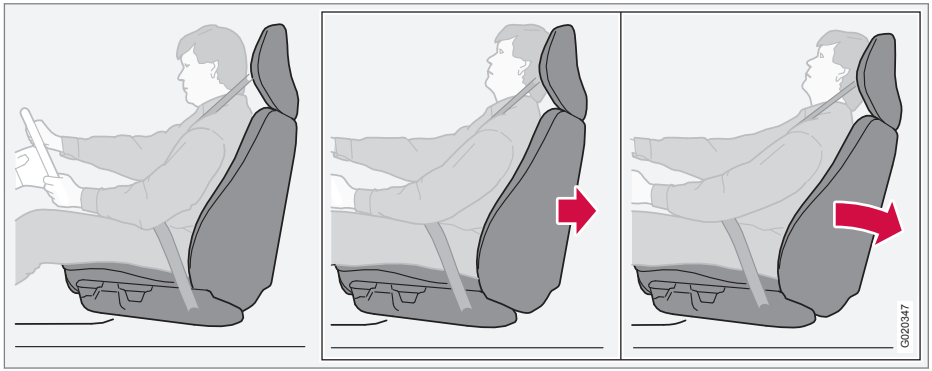
Do not load the car higher than 50 mm under the top edge of the side windows. Otherwise, the intended protection of the inflatable curtain, which is concealed in the headlining, may be compromised.

WARNING

The inflatable curtain is a supplement to the seatbelts.

Always use a seatbelt.

Protection against whiplash injury – WHIPS



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

WARNING

The WHIPS system is a supplement to the seatbelts. Always use a seatbelt.

Properties of the seat

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

WARNING

Never modify or repair the seat or WHIPS system yourself. Volvo recommends that you contact an authorised Volvo workshop.

WHIPS system and child seats/booster cushions

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

Correct seating position

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

WHIPS

Do not obstruct the WHIPS system

Do not leave any objects on the floor behind the driver's seat/passenger seat that may prevent the WHIPS system from functioning.

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.

Do not place objects in the rear seat that may prevent the WHIPS system from functioning.

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.

WARNING

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

Part of the WHIPS system's protective capacity may have been lost even if the seats appear to be undamaged.

Volvo recommends that you contact an authorised Volvo workshop to have the system checked even after a minor rear-end collision.

Function

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

The system consists of:

- A stabiliser system, 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 pages 19 and 28.

The RSC system uses a gyro sensor which registers changes in the car's lateral inclination angle. This information is used to calculate the risk of the car overturning. If a risk 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 153.

WARNING

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

When the systems deploy

System	Triggered
Seatbelt tensioner[A]	In a frontal collision and/or overturning.
Airbags (Steering wheel and passenger airbag)	In a frontal collision[B]
Side airbags SIPS	In a side-impact accident[B]
Inflatable Curtain IC	In a side-impact accident and/or overturning[B].
Whiplash protection WHIPS	In a rear-end collision.
RSC	During sudden evasive manoeuvres or the like or if the car skids.

[A] Seatbelt tensioner is not available in centre seat rear.
[B] The bodywork of the car could be greatly deformed in a collision without airbag deployment. A number of factors such as the rigidity and weight of the object hit, the speed of the car, the angle of the collision etc. affects how the different safety systems of the car are activated.

If the airbags have deployed, the following is recommended:

- Recovering the car. Volvo recommends that you have it conveyed to an authorised Volvo workshop for repair. Do not drive with deployed airbags.
- Volvo recommends that you engage an authorised Volvo workshop to handle the replacement of components in the car's safety systems.
- Always contact a doctor.

NOTE

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

WARNING

The airbag system's control module is located in the centre console. If the centre console is drenched with water or other liquid, disconnect the battery cables. Do not attempt to start the car since the airbags may deploy. Recovering the car. Volvo recommends that you have it conveyed to an authorised Volvo workshop.

WARNING

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

Child safety

Children should sit comfortably and safely

Volvo recommends that children travel in rear-facing child seats until as late an age as possible, at least until 3-4 years of age, and then front-facing booster cushions/child seats until up to 10 years of age.

The position of a child in the car and the choice of equipment are dictated by the child's weight and size, for more information, see page 35.

NOTE

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

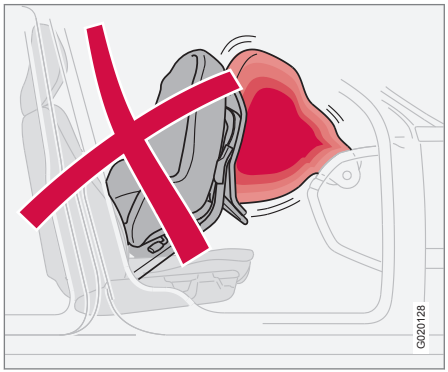
Children of all ages and sizes must always sit correctly secured in the car. Never allow a child to sit on the knee of a passenger.

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

NOTE

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

Child seats



Child seats and airbags are not compatible.

NOTE

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

WARNING

Do not attach the child seat's straps in the seat's horizontal adjustment bar, springs or rails and beams under the seat. Sharp edges may damage the straps.

Look in the installation instructions for the child seat for the correct fitting.

Location of child seats

You may place:

- a child seat/booster cushion on the front passenger seat, provided the passenger airbag is not activated[1].
- one or more child seats/booster cushions in the rear seat.

Always fit child seats/booster cushions in the rear seat if the passenger airbag is activated. A child sitting on the front passenger seat could suffer serious injury if the airbag deploys.

1 For information on activating/deactivating the airbag (SRS), see page 24.

WARNING

Never place a child in a child seat or on a booster cushion in the front seat if the airbag (SRS) is activated.[2]

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

Failure to follow the advice given above can endanger life.

WARNING

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

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

Label Airbag

The label becomes visible when the passenger door is opened; see the illustration on page 24.

Recommended child seats[3]

Weight	Front seat (with deactivated airbag)
Group 0 <10 kg Group 0+ <13 kg	Volvo infant seat (Volvo Infant Seat) - rear-facing child seat, secured with the car's seatbelt Type approval: E1 04301146 (U)
Group 0 <10 kg Group 0+ <13 kg	Rear-facing child seat (Child Seat) - rear-facing child seat, secured with the car's seatbelt and straps. Type approval: E5 04215 (L)

[2] For information on activated/deactivated airbag (SRS), see page 24.
[3] For other child seats your car should be included in the manufacturer's enclosed list of vehicles or be universally approved in accordance with the ECE R44 legal requirement.

Child safety

Weight	Front seat (with deactivated airbag)
Group 0 <10 kg Group 0+ <13 kg	Child seats which are universally approved. (U)
Group 1 9-18 kg	Volvo rear-facing/turnable child seat (Volvo Convertible Child Seat) - rear-facing child seat, secured with the car's seatbelt and straps. Type approval: E5 04192 (L)
Group 1 9-18 kg	Rear-facing child seat (Child Seat) - rear-facing child seat, secured with the car's seatbelt and straps. Type approval: E5 04215 (L)
Group 1 9-18 kg	Child seats which are universally approved. (U)
Group 2 15-25 kg	Volvo rear-facing/turnable child seat (Volvo Convertible Child Seat) - rear-facing child seat, secured with the car's seatbelt and straps Type approval: E5 04192 (L)
Group 2 15-25 kg	Volvo rear-facing/turnable child seat (Volvo Convertible Child Seat) - front-facing child seat, secured with the car's seatbelt. Type approval: E5 04191 (U)

Weight	Front seat (with deactivated airbag)
Group 2/3 15-36 kg	Booster cushion with and without backrest (Booster Cushion with and without backrest). Type approval: E5 04216 (UF)
Group 2/3 15-36 kg	Volvo booster seat with backrest (Volvo Booster Seat with backrest). Type approval: E1 04301169 (UF)

L: Suitable for specific child seats. These child seats may be intended for use in a special car model, limited or semi-universal categories.

U: Suitable for universally approved child seats in this weight class.

UF: Suitable for front-facing universally approved child seats in this weight class.

Child safety

Weight	Second row of seats, outer seats[A]	Second row of seats, centre seat[A]	Third row of seats in cars seating seven
Group 0 <10 kg Group 0+ <13 kg	Volvo infant seat (Volvo Infant Seat) - rear-facing child seat, secured with the car's seatbelt. Type approval: E1 04301146 (U)	Volvo infant seat (Volvo Infant Seat) - rear-facing child seat, secured with the car's seatbelt. Type approval: E1 04301146 (U)	
Group 0 <10 kg Group 0+ <13 kg	Volvo infant seat (Volvo Infant Seat) - rear-facing child seat, secured with the ISOFIX fixture system. Type approval: E1 04301146 (L)		
Group 0 <10 kg Group 0+ <13 kg	Rear-facing child seat (Child Seat) - rear-facing child seat, secured with the car's seatbelt, straps and support legs. Type approval: E5 04215 (L)	Rear-facing child seat (Child Seat) - rear-facing child seat, secured with the car's seatbelt, straps and support legs. Type approval: E5 04215 (L)	
Group 0 <10 kg Group 0+ <13 kg	Child seats which are universally approved. (U)	Child seats which are universally approved. (U)	Child seats which are universally approved. (U)

Child safety

Weight	Second row of seats, outer seats[A]	Second row of seats, centre seat[A]	Third row of seats in cars seating seven
Group 1 9-18 kg	Volvo rear-facing/turnable child seat (Volvo Convertible Child Seat) - rear-facing child seat, secured with the car's seatbelt and straps. Type approval: E5 04192 (L)		
Group 1 9-18 kg	Rear-facing child seat (Child Seat) - rear-facing child seat, secured with the car's seatbelt and straps. Type approval: E5 04215 (L)	Rear-facing child seat (Child Seat) - rear-facing child seat, secured with the car's seatbelt, straps and support legs. Type approval: E5 04215 (L)	
Group 1 9-18 kg	Britax Fixway – rear-facing child seat, secured with the ISO-FIX fixture system and straps. Type approval: E5 03171 (L)		
Group 1 9-18 kg	Child seats which are universally approved. (U)	Child seats which are universally approved. (U)	Child seats which are universally approved. (U)

Child safety

Weight	Second row of seats, outer seats[A]	Second row of seats, centre seat[A]	Third row of seats in cars seating seven
Group 2 15-25 kg	Volvo rear-facing/turnable child seat (Volvo Convertible Child Seat) - rear-facing child seat, secured with the car's seatbelt and straps. Type approval: E5 04192 (L)		
Group 2 15-25 kg	Volvo rear-facing/turnable child seat (Volvo Convertible Child Seat) - front-facing child seat, secured with the car's seatbelt. Type approval: E5 04191 (U)	Volvo rear-facing/turnable child seat (Volvo Convertible Child Seat) - front-facing child seat, secured with the car's seatbelt. Type approval: E5 04191 (U)	
Group 2/3 15-36 kg	Booster cushion with and without backrest (Booster Cushion with and without backrest). Type approval: E5 04216 (UF)	Booster cushion with and without backrest (Booster Cushion with and without backrest). Type approval: E5 04216 (UF)	Booster cushion with and without backrest (Booster Cushion with and without backrest). Type approval: E5 04216 (UF)

Child safety

Weight	Second row of seats, outer seats[A]	Second row of seats, centre seat[A]	Third row of seats in cars seating seven
Group 2/3 15-36 kg	Volvo booster seat with backrest (Volvo Booster Seat with backrest). Type approval: E1 04301169 (UF)	Volvo booster seat with backrest (Volvo Booster Seat with backrest). Type approval: E1 04301169 (UF)	Volvo booster seat with backrest (Volvo Booster Seat with backrest). Type approval: E1 04301169 (UF)
Group 2/3 15-36 kg		Integrated booster cushion (Integrated Booster Cushion) - available as a factory fitted option. Type approval: E5 04215 (B)	

L: Suitable for specific child seats. These child seats may be intended for use in a special car model, limited or semi-universal categories.

U: Suitable for universally approved child seats in this weight class.

UF: Suitable for front-facing universally approved child seats in this weight class.

B: Built-in child seats approved for this weight class.

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

Child safety

Integrated booster cushion*

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

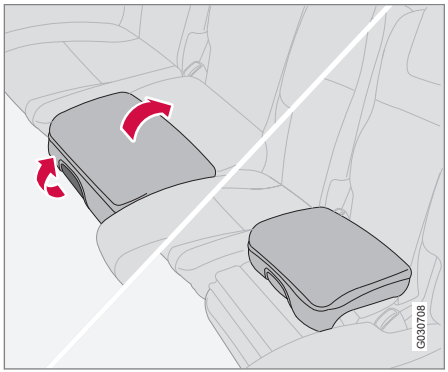
WARNING

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

No one shorter than 140 cm should ever sit in the front passenger seat if the airbag (SRS) is activated.[4]

Failure to follow the advice given above can endanger life.

Raising the booster cushion



1. Pull the handle on the front of the booster cushion forwards and then up so that the booster cushion is raised.
2. Grasp the cushion with both hands and push it backwards.
3. Push until the cushion locks in place.

WARNING

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

Check that:

- the seatbelt is locked.
- the seatbelt is in contact with the child's body and is not slack or twisted, and that the seatbelt is positioned correctly across the shoulder.
- the lap belt is low over the pelvis for optimum protection.
- the seatbelt does not lie across the child's throat or below the shoulder.
- Carefully adjust the position of the head restraint to suit the child.

[4] For information on activated/deactivated airbag (SRS), see page 24.

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

WARNING

Volvo recommends that repair or replacement is only carried out by an authorised Volvo workshop. Do not make any modifications or additions to the booster cushion.

If an integrated booster cushion has been subjected to a major load, such as in conjunction with a collision, the entire booster cushion must be replaced. Even if the booster cushion appears to be undamaged, it may not afford the same level of protection. The booster cushion must also be replaced if it is heavily worn.

Lowering the booster cushion

1. Pull the handle forwards.
2. Move the cushion down and press until it locks.

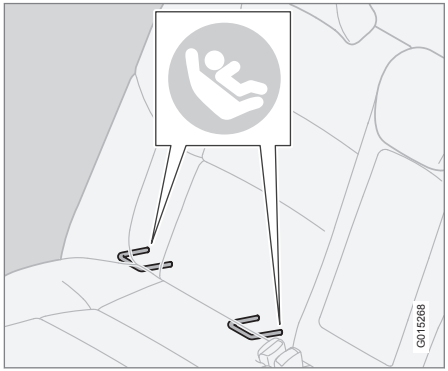
NOTE

Remember to stow away the booster cushion before lowering the rear seat backrest.

Child safety locks, rear doors

The controls for operating the rear door power windows and the rear door opening handles can be blocked from opening from the inside. For more information see page 130.

ISOFIX fixture system for child seats*



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

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

Press the seat cushion down to access the mounting points.

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

Size classes

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

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

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

Child safety

Size class	Description
D	Reduced size, rear-facing child seat
E	Rear-facing infant seat
F	Transverse infant seat, left-hand
G	Transverse infant seat, right-hand

WARNING

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

NOTE

If an ISOFIX child seat has no size classification, the car model must be included on the vehicle list for the child seat.

NOTE

Volvo recommends that you contact an authorised Volvo dealer for recommendations about which ISOFIX child seats Volvo recommends.

Types of ISOFIX child seat

Type of child seat	Weight	Size class	Passenger seats for ISOFIX installation of child seats	
			Front seat	Outer rear seat
Infant seat transverse	max 10 kg (0 – 9 months)	F	X	X
		G	X	X
Infant seat, rear-facing	max 10 kg (0 – 9 months)	E	X	OK (IL)

Child safety

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

Child safety

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

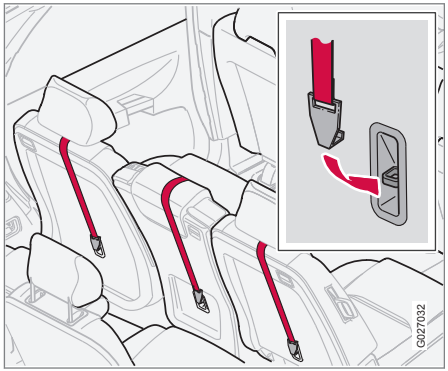
X: The ISOFIX position is not suitable for ISOFIX child seats in this weight class and/or size class.

IL: Suitable for specific ISOFIX child seats. These child seats may be intended for use in a special car model, limited or semi-universal categories.

IUF: Suitable for front-facing ISOFIX child seats that are universally approved in this weight class.

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

Mounting points for child seat



The car is equipped with upper mounting points for child seats. These mounting points are located on the rear of the rear seats.

The upper mounting points are primarily intended for use with front-facing child seats. Volvo recommends that small children should sit in rear-facing child seats to as late an age as possible.

NOTE

These mounting points are only on the second row of seats in cars seating seven.

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

Extra locking function in seatbelt (ALR/ELR)[5]

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

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

1. Secure the seatbelt in the child seat following the instructions of the child seat manufacturer.
2. Pull out the entire seatbelt.
3. Lock the seatbelt by inserting the locking tab in the buckle. A clear "click" indicates that the seatbelt has locked.
4. Allow the seatbelt mechanism to retract the seatbelt while stretching it around the 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.

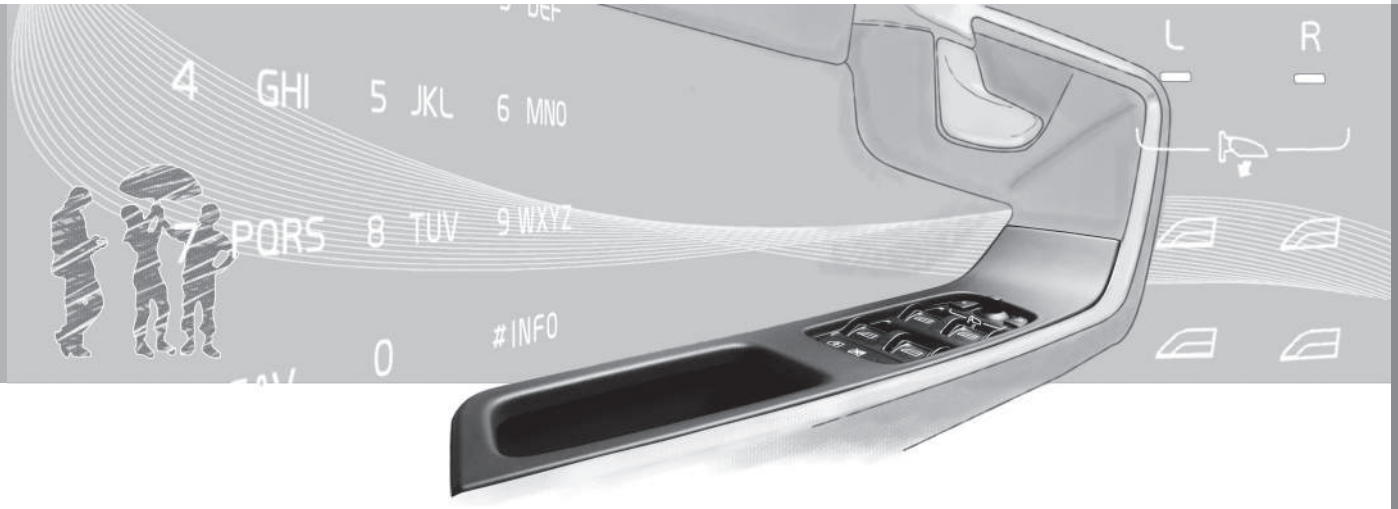
[5] Automatic Locking Retractor/Emergency Locking Retractor.

Overview, left-hand drive cars..... 50
Overview, right-hand drive cars..... 52
Driver's door control panel..... 54
Combined instrument panel..... 55
Indicator and warning symbols..... 57
Information display..... 60
Switches in the centre console..... 61
Lighting panel..... 64
Left-hand stalk switch..... 67
Trip computer*..... 68
Right-hand stalk switch..... 70
Cruise control*..... 73
Parking brake, electrical socket, etc..... 75
Power windows..... 77
Windows, rearview and door mirrors..... 79
Power sunroof*..... 84

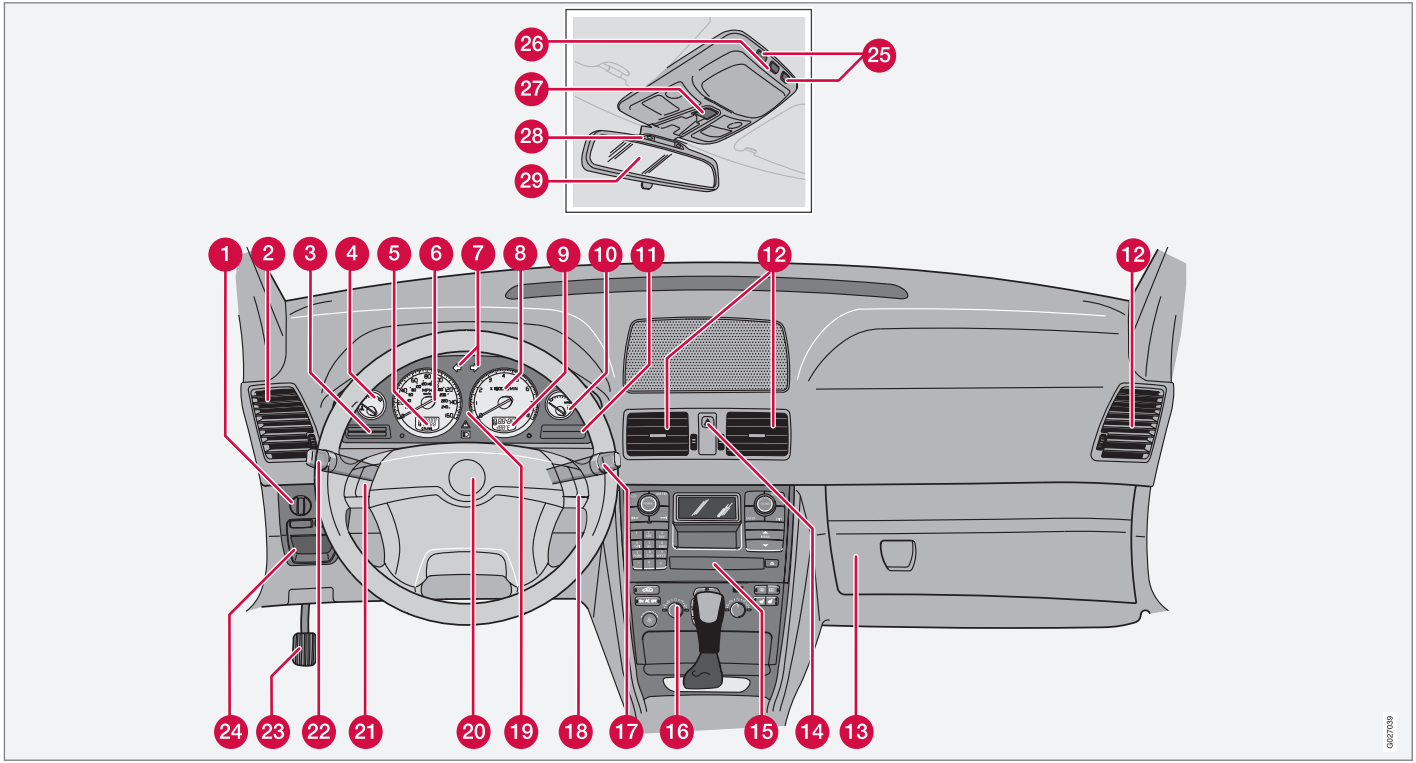
* Option/accessory, for more information, see Introduction.

02

INSTRUMENTS AND CONTROLS



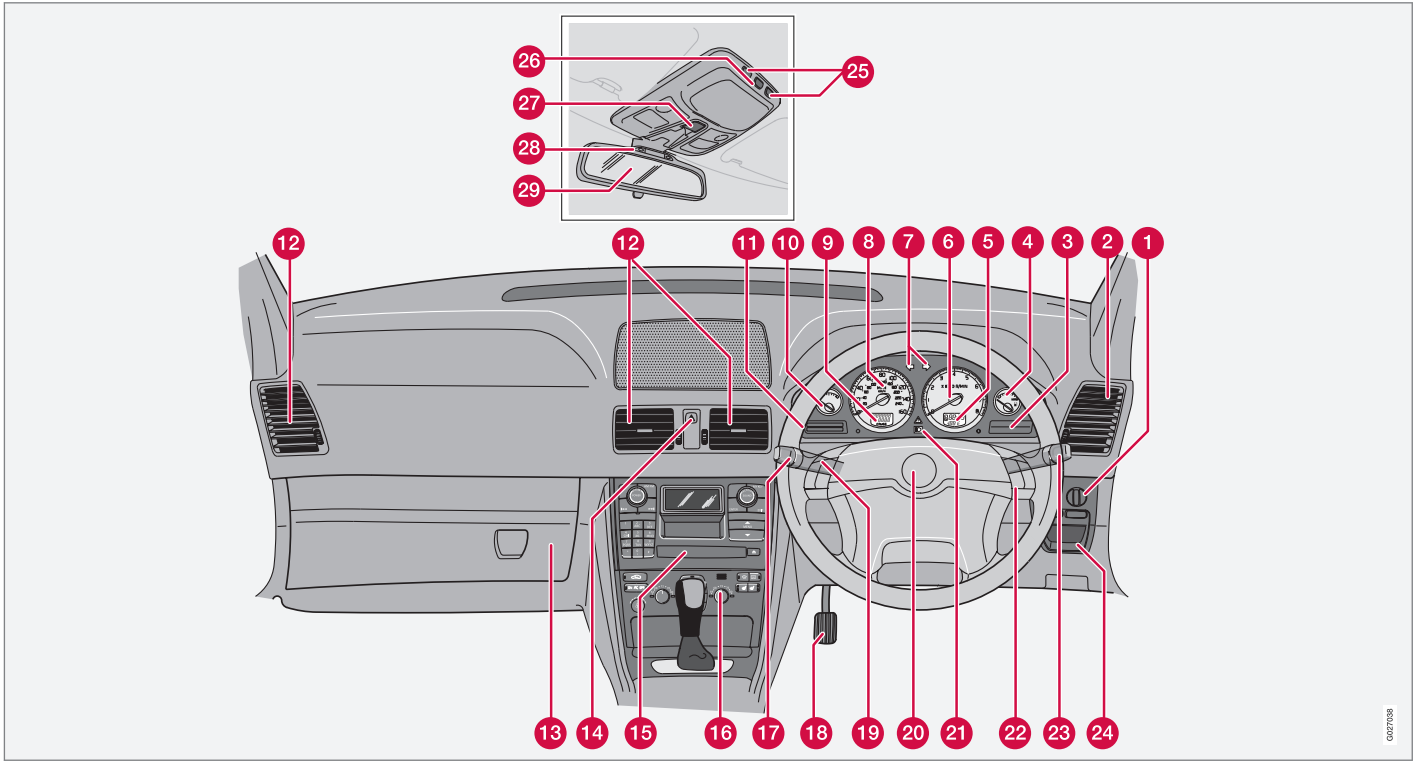
Overview, left-hand drive cars



Overview, left-hand drive cars

1. Lighting panel
2. Panel vents
3. Display
4. Temperature gauge
5. Odometer, trip meter, cruise control
6. Speedometer
7. Direction indicators
8. Tachometer
9. Outside temperature, clock, gear position
10. Fuel gauge
11. Indicator and warning symbols
12. Panel vents
13. Glovebox
14. Hazard warning flashers
15. Audio system
16. Climate control
17. Windscreen wipers
18. Keypad for phone/audio
19. Combined instrument panel
20. Horn
21. Cruise control
22. Direction indicators, dipped-main beam switch, **READ** button
23. Parking brake
24. Parking brake release
25. Switches, reading lamps
26. Interior lighting
27. Sunroof control
28. Seatbelt reminder
29. Rearview mirror

Overview, right-hand drive cars

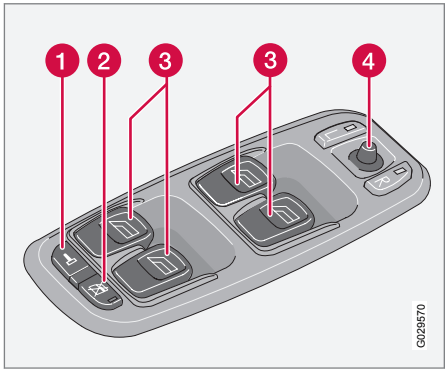


Overview, right-hand drive cars

1. Lighting panel
2. Panel vents
3. Indicator and warning symbols
4. Fuel gauge
5. Outside temperature, clock, gear position
6. Tachometer
7. Direction indicators
8. Speedometer
9. Odometer, trip meter, cruise control
10. Temperature gauge
11. Display
12. Panel vents
13. Glovebox
14. Hazard warning flashers
15. Audio system
16. Climate control
17. Direction indicators, dipped-main beam switch, **READ** button
18. Parking brake
19. Cruise control
20. Horn
21. Combined instrument panel
22. Phone/Audio keypad
23. Windscreen wipers
24. Parking brake release
25. Switches, reading lamps
26. Interior lighting
27. Sunroof control
28. Seatbelt reminder
29. Rearview mirror

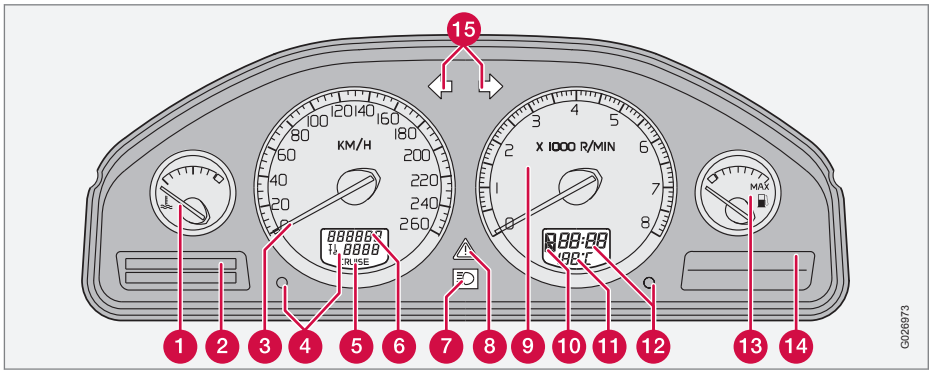
Driver's door control panel

Control panel



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

Combined instrument panel



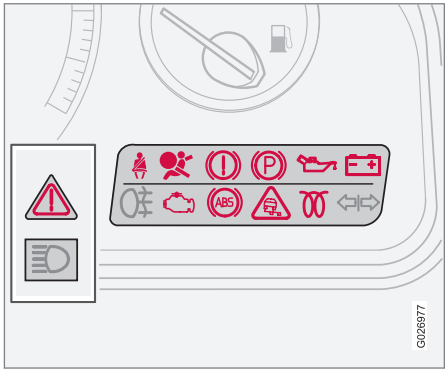
1. Temperature gauge – Displays the temperature of the engine cooling system. A message will appear on the display if the gauge goes into the red zone. Bear in mind that extra lights placed in front of the air intake reduce the cooling capacity of the system.
2. Display – The display shows information and warning messages.
3. Speedometer – Shows the speed of the car.
4. Trip meters T1 and T2 – Used for measuring short distances. The right-hand digit displays tenths of a kilometre. Press the button for more than 2 seconds to reset. Switch between trip meters with one quick press of the button.
5. Cruise control indicator.
6. Odometer – The odometer indicates the total distance the car has travelled.
7. Main beam indicator
8. Warning symbol – If a fault arises, the symbol illuminates and a message is shown in the display.
9. Tachometer – Indicates engine speed in thousands of revolutions per minute (rpm). Do not allow the tachometer gauge to enter the red zone.
10. Automatic gearbox indicator – The selected gear position is displayed here.
11. Outside temperature gauge – When the temperature lies between +2 °C to -5 °C, a snowflake symbol illuminates in the display. This warns of icy roads. If the car has been stationary, the gauge may display a reading that is too high.
12. Knob for clock – Turn the knob to adjust the time.
13. When the lamp in the instrument illuminates the level in the fuel tank is low, refuel as soon as possible. See also Trip computer page 68.

Combined instrument panel

14 Indicator and warning symbols

15 Direction indicators – left/right

Functionality check, symbols

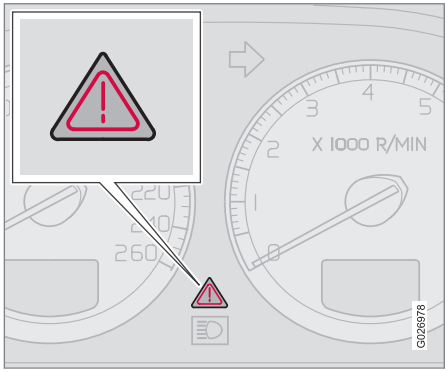


All indicator and warning symbols[1] illuminate when the remote control key is turned to position **II** before starting. This is to check that the symbols are working. When the engine starts, all the symbols should go out except the parking brake symbol, which only goes out when the brake is disengaged.

If the engine does not start within 5 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.

Symbols in the centre of the instrument panel



These symbols illuminate with a red or amber glow depending on the severity of the fault.

Red symbol

1. Stop the car in a safe place. Do not drive the car further. Do not drive the car further.
2. Read the information on the display.
3. Rectify in accordance with the instructions in the display or contact a workshop. Volvo recommends that you seek assistance from an authorised Volvo workshop.

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

Yellow symbol

– Read the message in the display. Action.

The message text is cleared using the **READ** button, see page 60, or it disappears automatically after 2 minutes.

NOTE

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

[1] For certain engine variants, the symbol for low oil pressure is not used. Warnings are given via display text, see page 213.

Indicator and warning symbols

Indicator symbols

ABS fault

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

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

Fault in brake system

If this symbol illuminates, the brake fluid level may be too low.

1. Stop the car in a safe place and check the level in the brake fluid reservoir, see page 216.
2. If the reservoir level is below **MIN** then the car should not be driven further, but recovered instead. Volvo recommends that the car is transported to an authorised Volvo workshop to have the brake system checked.

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

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

- If both symbols extinguish, continue driving.
- If the symbols remain illuminated, check the level in the brake fluid reservoir, see page 216.
- If the brake fluid reservoir's level is normal but the symbols are still illuminated, the car can be driven, with great care, to an authorised workshop recommended by Volvo to have the brake system checked.
- If the level in the brake fluid reservoir is below **MIN** then the car should not be driven any further. Have the car transported to an authorised workshop recommended by Volvo to have the brake system checked.

WARNING

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

Seatbelt reminder

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

Low oil pressure[2]

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

[2] For certain engine variants, the symbol for low oil pressure is not used. Warnings are given via display text, see page 213.

Emissions system

If the symbol illuminates then it may be due to a fault in the car's emissions system. Volvo recommends that you drive to an authorised Volvo workshop for inspection.

Airbags – SRS

If this symbol remains illuminated or illuminates while driving, it means a fault has been detected in the seatbelt buckle, SRS, SIPS or IC system. Volvo recommends that drive directly to an authorised Volvo workshop for inspection.

Alternator not charging

If this symbol illuminates while driving, a fault has occurred in the electrical system. Volvo recommends that you visit an authorised Volvo workshop.

Engine preheater (diesel)

This symbol illuminates during engine preheating. Preheating occurs when the temperature is below -2 °C. The car can be started once the symbol is extinguished.

Parking brake applied

The symbol illuminates when the parking brake is depressed. Always depress the parking brake to its lowest position.

NOTE

The symbol illuminates irrespective of how hard the parking brake is depressed.

Rear fog lamp

This symbol is lit when the rear fog lamp is on.

Indicator symbol for trailer

This symbol flashes when the direction indicators are used and the trailer is connected. If the symbol does not flash then one of the lamps on the trailer or the car is faulty.

Stability system DSTC

For information on the system's functions and symbols, see page 154.

Reminder – doors not closed

If one of the doors or the tailgate is not properly closed the driver will be reminded of this.

Low speed

If the car moves at a speed less than about 7 km/h, the information symbol illuminates and **DRIVER DOOR OPEN** , **PASSENGER DOOR OPEN** ,**LEFT REAR DOOR OPEN** or **RIGHT REAR DOOR OPEN** is shown in the display at the same time. Stop the car safely as soon as possible and close the door or bonnet.

High speed

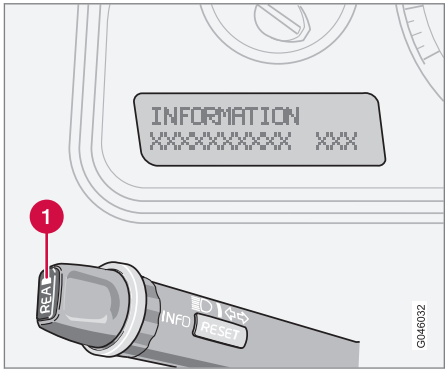
If the car is moving faster than about 7 km/h then the symbol illuminates and one of the texts indicated in the previous paragraph appears in the display at the same time.

Tailgate reminder

If the tailgate is open, **TAILGATE OPEN** will appear on the display.

Information display

Messages



When a warning or indicator symbol illuminates, it is supplemented by a message appearing on the display.

– Press the **READ** button (1).

Switch between messages with the **READ** button. Fault messages are stored in the memory until the fault is rectified.

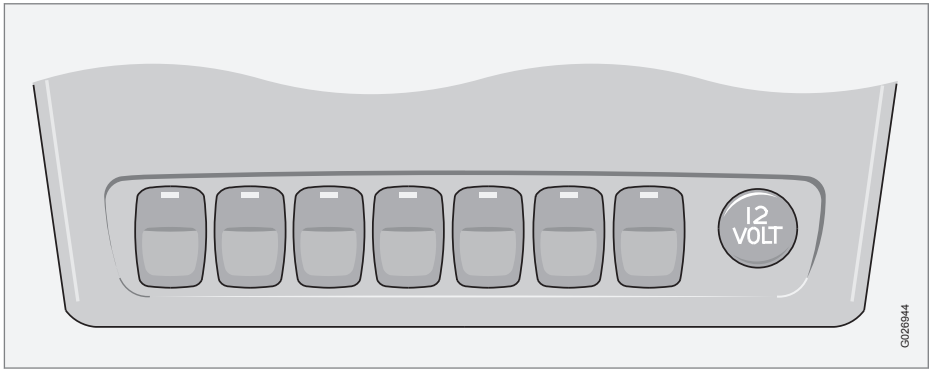
NOTE

If a warning message appears while you are using the trip computer, the message must be read (press **READ**) before the previous activity can be resumed.

Message	Specification
STOP SAFELY[A]	Stop the car in a safe manner and turn off the engine. Serious risk of damage.
STOP ENGINE[A]	Stop the car in a safe manner and turn off the engine. Serious risk of damage.
SERVICE URGENT[A]	Volvo recommends that you engage an authorised Volvo workshop to check the car immediately.
SEE MANUAL[A]	Read the owner's manual.
SERVICE REQUIRED[A]	Volvo recommends that you engage an authorised Volvo workshop to check the car as soon as possible.
TIME FOR REGULAR SERVICE	Time for regular service. Volvo recommends that you engage an authorised Volvo workshop to carry out the service. The timing is determined by the number of kilometres driven, number of months since the last service and engine running time.
SOOT FILTER FULL SEE MANUAL	Diesel particle filter requires regeneration, see page 143.
DSTC SPIN CONTROL OFF	The function of the stability and traction control system is reduced, see page 153 for more variants.

[A] Part of message, shown together with information on where the problem has arisen.

Switch



NOTE

The order of the buttons may vary.

Air conditioning in the rear of the passenger compartment*

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

Child safety locks in the rear doors*

Activating or deactivating the electric child safety locks in the rear doors. The remote control key must be in position **I** or **II**. When the child safety locks are activated, the lamp in the button illuminates. A message is shown in the display when the child safety locks are activated or deactivated, see page 130.

Retractable power door mirrors*

Used to fold in the door mirrors if they are folded out or to fold them out if they are folded in.

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

1. Manually adjust the appropriate door mirror to its normal position.
2. Turn the remote control key to position **II**.

Switches in the centre console

3. Fold the door mirror inward and then outward using the button.

The door mirrors have now returned to their original fixed positions.

Park Assist*

The system is always activated when the car is started. Press the button to deactivate/reactivate the parking assistance system. See also page 155.

Deactivation of the deadlocks* and detectors

Use this button when you wish to switch off the deadlock function (doors cannot be opened from the inside when locked). This button can also be used when deactivating the alarm system's movement and tilt detectors*. The lamp illuminates when these systems are shut down/deactivated, see pages 129 and 132.

Auxiliary lamps*

Use this button to switch the auxiliary lamps on with main beam or to switch them off.

Active Xenon headlamps*

If the car is equipped with active Xenon headlamps (Active Bending Lights, ABL) the light from the headlamps follows the steering wheel movement during driving. The function is activated automatically when the car is started and can be deactivated/activated by pressing the button. The lamp in the button illuminates when the function is activated

Shifting headlamp pattern for right/left-hand traffic

Hold the button depressed for at least 5 seconds. The car must be stationary when the headlamp pattern is adjusted. The message **HEADLIGHTS SET FOR RH TRAFFIC** or **HEADLIGHTS SET FOR LH TRAFFIC** is shown in the display. For more information and adapting headlamp pattern for halogen or Dual Xenon headlamps, see page 173.

Electric socket/Cigarette lighter*

The electrical socket can be used for 12 V accessories, such as mobile phone chargers and coolers.

The remote control key must be at least in position **I** so that the socket can supply power.

The cigarette lighter is activated by pushing in the button. The button pops out when the lighter is hot. Pull out the lighter and light a cigarette on the heated coils. For safety reasons, always keep the cover in place when the socket is not in use. Max. current tap 10 A.

WARNING

Always leave the plug in the socket when the socket is not in use.

IMPORTANT

Max. socket is 10 A (120 W) if one socket is used at a time. If both sockets (in the centre console and by the rear seat) are used at the same time then 7.5 A (90 W) per socket applies.

If the compressor for emergency puncture repair is connected to one of the two sockets then no other current consumers may be connected to the other one.

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

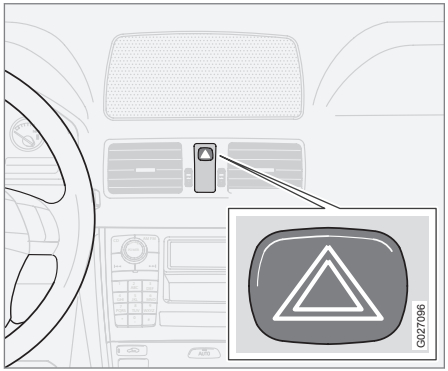
NOTE

The compressor for emergency puncture repair is tested and approved by Volvo. For information about using Volvo's recommended temporary mobility kit (TMK) for emergency puncture repair, see page 190.

BLIS - Blind Spot Information System*

Press the button to deactivate or reactivate the function. see page 157 for further information.

Hazard warning flashers

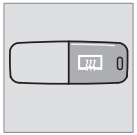


Use the hazard warning flashers (all direction indicators flash) when the car is stopped where it could be a traffic hazard or obstruction. Press the button to activate the function.

NOTE

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

Rear window and door mirror defrosters



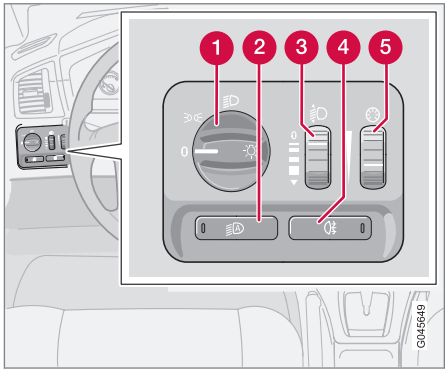
Heating is used to quickly remove misting and ice from the rear window and door mirrors. Press the switch to start defrosting the rear window and door mirrors. The lamp in the switch illuminates. The light in the switch is lit. Defrosting is automatically disconnected after about 12 minutes.

Heated front seats

For heated front seats, see page 91 or 93 for further information.

Lighting panel

General



1. Light switches
2. Automatic daytime running lights during the day.
3. Thumbwheel for headlamp levelling
4. Rear fog lamp
5. Thumbwheel for adjusting instrument lighting

Position	Specification
0	Automatic/deactivated dipped beam. Only main beam flash.
≡D⊂≡	Daytime running lights when the car is being driven. Automatic switching to parking lights when the car is parked.
≡D	Automatic dipped beam. Main beam and main beam flash work in this position.

Headlamps

Automatic dipped beam*

Dipped beam comes on automatically when the remote control key is turned to position **II**, except when the headlamp control (1) is in the centre position. If necessary, the automatic dipped beam can be deactivated. Volvo recommends that you engage an authorised Volvo workshop to have it deactivated.

Automatic dipped beam, main beam

1. Turn the remote control key to position **II**.
2. Dipped beam is activated by means of turning the headlamp control (1) clockwise to the end position.
3. Main beam is activated by means of moving the left-hand stalk switch towards the steering wheel to the end position and releasing it, see page 67.

The lamps are switched off automatically when the remote control key is turned to position **I** or **0**.

Position/parking lamps

Position/parking lamps can be switched on irrespective of remote control key position.

– Turn the headlamp control (1) to the centre position.

When the remote control key is in position **II** the position/parking lamps and number plate lighting are always on.

Headlamp levelling

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

1. Turn the remote control key to position **II**.
2. Turn the headlamp control (1) to one of the end positions.
3. Roll the thumbwheel (3) up or down respectively to raise or lower beam alignment.

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

Cars with Xenon headlamps* have automatic headlamp levelling, so there is no thumbwheel (3).

Instrument lighting

The instrument lighting is switched on when the remote control key is in position **II** and the headlamp control (1) is in one of the end positions. The lighting is automatically dimmed during the day and can be controlled manually at night.

Roll the thumbwheel (5) up or down for brighter or dimmer lighting.

Rear fog lamp

The rear fog lamp can only be switched on in combination with the headlamps.

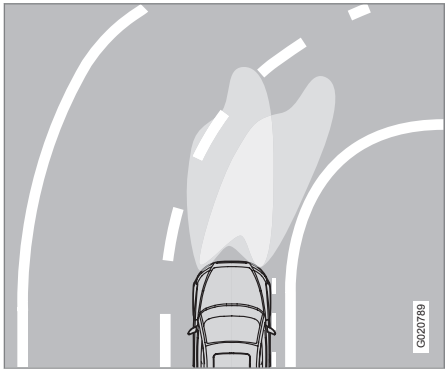
– Press the button (4).

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

NOTE

Regulations for use of fog lamps vary from country to country.

Active Xenon headlamps*



Headlamp pattern for active/non-active headlamps.

If the car is equipped with active Xenon headlamps (Active Bending Lights, ABL) the light from the headlamps follows the steering wheel movement during driving. The function is activated automatically when the car is started and can be deactivated/activated using the button in the centre console, see page 62.

Daytime running lights during the day.

To save fuel, daytime running lights (Daytime Running Light) can be selected during the day instead of the more energy-intensive dipped beam. The daytime running lights mounted in the spoiler use bright, low-energy diode technology.

Press the button (2) and turn the headlamp control (1) clockwise to the end position in order to activate the daytime running lights during daytime. This is regulated by a light sensor which switches from daytime running lights to dipped beam off the main headlamps at dusk or when the daylight becomes too weak. The light in the button illuminates when the daytime running lights are activated.

NOTE

To achieve minimal energy consumption, the rear lights are also switched off when switching automatically from dipped beam to daytime running lights.

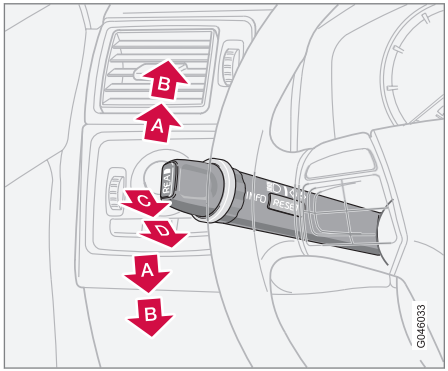
Lighting panel

WARNING

This system help to save energy - it cannot determine in all situations when daylight is too weak or sufficiently strong, e.g. in mist and rain.

The driver is always responsible for ensuring that the car is driven with its lights in a correct state and in accordance with applicable traffic regulations.

Stalk switch positions



A Short flash sequence, direction indicators

B Continuous flash sequence, direction indicators

C Main beam flash

D Home safe lighting and switching of dipped and main beam

Direction indicators

Continuous flash sequence

– Move the stalk switch up or down to end position (B).

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

Short flash sequence

– Move the stalk switch up or down to position (A) and release, the stalk switch then returns to its home position, or move the stalk switch to position (B) and move it directly back to the home position.

The direction indicators flash three times. Short flash sequence interrupted immediately if indicating is started in the opposite direction.

Switching, main and dipped beam

The remote control key must be in position **II** for main beam to be switched on.

1. Turn the headlamp control clockwise to the end position, see page 64.
2. Move the stalk switch towards the steering wheel to the end position (D) and release.

Main beam flash

– Move the stalk switch gently towards the steering wheel to position (C).

Main beam comes on until the stalk switch is released.

Home safe light duration

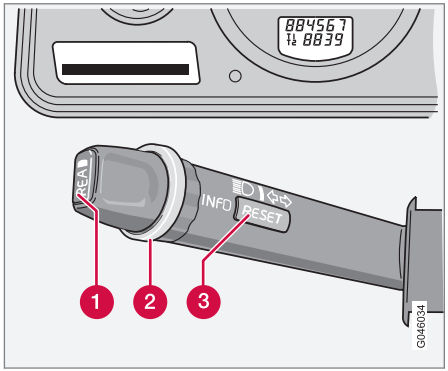
Some of the exterior lighting can be kept switched on to work as home safe lighting after the car has been locked. The standard delay is 30 seconds[1], but can be changed to 60 or 90 seconds.

1. Remove the remote control key from the ignition switch.
2. Move the stalk switch towards the steering wheel to the end position (D) and release.
3. Get out of the car and lock the door.

1 Factory settings.

Trip computer*

General



1. **READ** - confirms
2. Thumbwheel - browse between menus and options in the trip computer list
3. **RESET** – resets

Controls

To scroll through trip computer information, turn the thumbwheel (2) either up or down in steps. Continue turning to return to the starting point.

NOTE

If a warning message interrupts while you are using the trip computer, this message must be acknowledged. Acknowledge by pressing the **READ** button and revert to the trip computer function.

Functions

The trip computer displays the following information:

- --- KM/H AVERAGE SPEED
- --.- KM/L INSTANTANEOUS
- --.- KM/L AVERAGE
- --- KILOMETRES TO EMPTY TANK
- DSTC ON , see page 153
- --- MPH ACTUAL SPEED [1]*

AVERAGE SPEED

When the ignition is switched off, the average speed is stored and used as the basis of the new value when you continue driving. Reset using the **RESET** button.

INSTANTANEOUS

Current fuel consumption is calculated every second. The information on the display is updated every couple of seconds. When the car is stationary, "----" appears on the display. During the period for regeneration[2] fuel consumption may increase, see page 143.

AVERAGE

The average fuel consumption since the last reset. Reset using **RESET**.

NOTE

There may be a slight error in the reading if a fuel-driven parking heater* has been used.

KILOMETRES TO EMPTY TANK

The calculation is based on the average fuel consumption over the last 30 km and the remaining driveable fuel quantity. The display shows the approximate distance that can be driven with the fuel quantity remaining in the tank. No guaranteed range remains when the display shows "--- KILOMETRES TO EMPTY TANK ". Refuel as soon as possible.

NOTE

There may be a slight error in the reading if a fuel-driven parking heater* has been used or if driving style has been changed.

[1] Only in certain markets.
[2] Only applies to diesel cars with particle filter.

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

MPH ACTUAL SPEED.*[1]
Current speed is displayed in mph if the speedometer is graduated in km/h. If it is graduated in mph then the current speed is shown in mph.

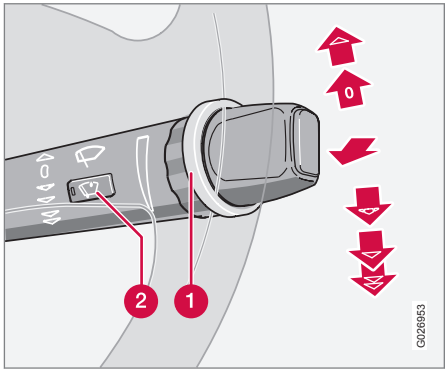
Resetting

1. Select **--- KM/H AVERAGE SPEED** or **--.- KM/L AVERAGE**
2. Press and hold the **RESET** button (3) for at least five seconds to reset the average speed and average consumption at the same time.

[1] Only in certain markets.

Right-hand stalk switch

Windscreen wipers



Wiper/washer function – windscreen.

1. Thumbwheel
2. Rain sensor - On/Off

Windscreen wipers off

The windscreen wipers are off when the stalk switch is in position **0**.

Single sweep

Raise the stalk switch to make a single sweep.

Intermittent wiping

You can set a suitable delay between the sweeps. Turn the thumbwheel up for a shorter interval between sweeps. Turn it down to increase the delay.

Continuous wiping

The wipers sweep at normal speed.

The wipers sweep at high speed.

IMPORTANT

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

IMPORTANT

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

Rain sensor*

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

Turn the thumbwheel upwards for higher sensitivity and downwards for lower sensitivity, (an extra sweep is made when the thumbwheel is turned upwards).

On/Off

When activating the rain sensor, the remote control key must be in position **I** or **II** and the windscreen wiper stalk switch must be in position **0** (not activated).

To activate the rain sensor:

– Press the button. A lamp in the button illuminates to indicate that the rain sensor is active.

To turn the rain sensor off, either:

- Press the button. The lamp in the button goes out.
- 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 switch is released to position **0**.

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

The rain sensor is automatically deactivated when the remote control key is removed from the ignition switch or 5 minutes after the ignition is switched off.

IMPORTANT

The windscreen wipers could start and be damaged in an automatic car wash. Deactivate the rain sensor by depressing button (2) while the remote control key is in position **I** or **II**.

Windscreen/headlamp washer

Move the stalk switch toward the steering wheel to start the windscreen and headlamp washers. The wipers will make several more sweeps once the stalk switch is released.

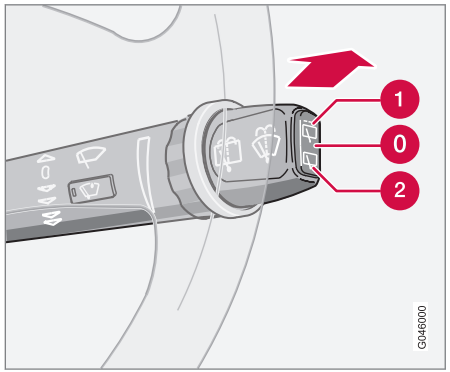
High-pressure headlamp washing*

High-pressure headlamp washing consumes a large quantity of washer fluid. To save fluid, the headlamps are only washed every fifth wash cycle (within a 10 minute period). When 10 minutes have elapsed following the latest windscreen washing, the headlamps are again washed with high-pressure with the first windscreen washing. Turn the stalk switch toward the steering wheel to wash the windscreen only.

Reduced washing

If only approx. 1 litre of washer fluid remains in the reservoir and the message that you should fill the washer fluid is shown in the combined instrument panel's display, then the supply of washer fluid to the headlamps and rear window is switched off. This is in order to prioritise cleaning the windscreen and the visibility through it.

Wiper and washer, rear window



Wiper/washer function – rear window.

1. Intermittent wiping: Depress the top of the button.
2. Constant speed: Depress the bottom of the button.

Move the stalk switch forward to start rear window washing and wiping. The wiper blade makes several extra sweeps once washing has finished.

Wiper – reversing

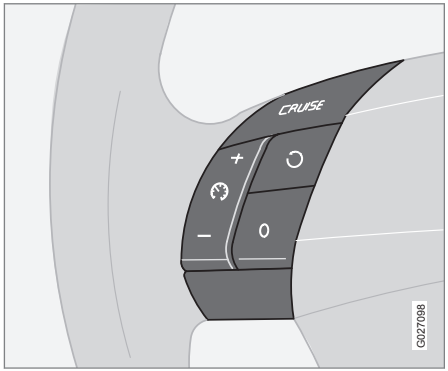
Engaging reverse gear while the windscreen wipers are on initiates intermittent rear window wiping.[1]. If the rear window wiper is

[1] This function (intermittent wiping when reversing) can be deactivated. Volvo recommends that you visit an authorised Volvo workshop to have it deactivated.

Right-hand stalk switch

already on at normal speed, no change is made.

Activating



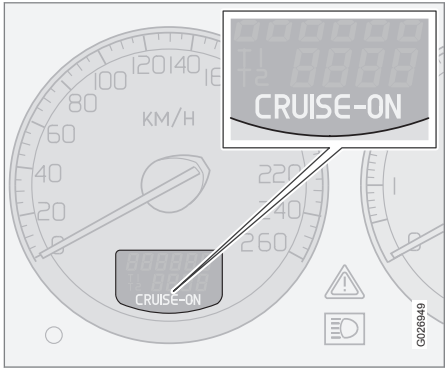
The controls for cruise control are to the left of the steering wheel.

Setting the desired speed:

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

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 1 km/h or 1 mph[1].

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 is depressed
- speed falls when travelling uphill to below 25-30 km/h
- the gear selector is moved to position **N**
- wheel spin or wheel lock-up occurs.

Return to the set speed

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

[1] Depending on engine type.

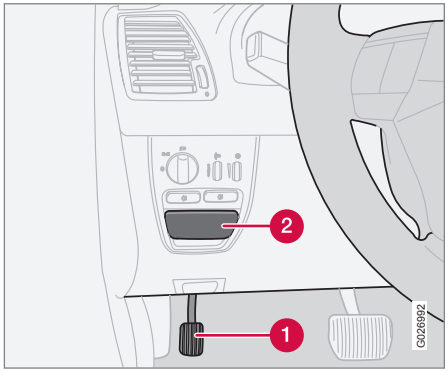
Cruise control*

Disengaging

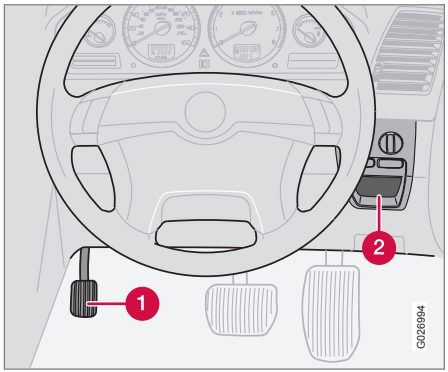
– Press **CRUISE** to disengage the cruise control. **CRUISE ON** clears on the combined instrument panel.

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

Parking brake



Parking brake, LHD car.



Parking brake, RHD car.

1 Parking brake pedal

2 Handle for releasing parking brake

The parking brake is at floor level, see illustration, and acts on the rear wheels when depressed.

NOTE

The warning symbol in the combined instrument panel illuminates irrespective of how hard the parking brake pedal is depressed.

How to apply the parking brake

1. Press the foot brake pedal down firmly.
2. Depress the parking brake pedal firmly as far as possible.
3. Release the foot brake pedal and make sure that the car is at a standstill position.
4. If the vehicle rolls, the parking brake pedal must be depressed further.
5. When parking the vehicle - select the transmission's **P** position.

Parking on a hill

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

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

WARNING

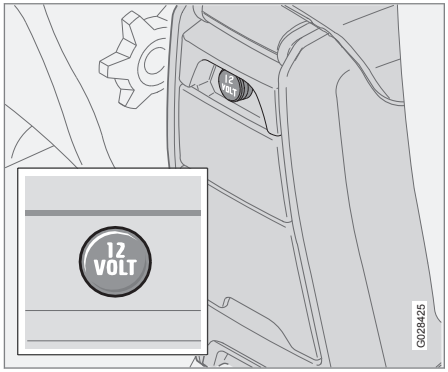
Always use the parking brake when parking on a slope - the automatic transmission's **P** position is not sufficient to hold the car in all situations.

How to release the parking brake

1. Press the foot brake pedal down firmly.
2. Pull the handle.

Parking brake, electrical socket, etc.

Electrical socket in the rear seat



The electrical socket can be used for various accessories, such as mobile phone chargers and coolers. It is designed for 12 V. For the socket to supply current, the remote control key must be in at least position **I**.

IMPORTANT

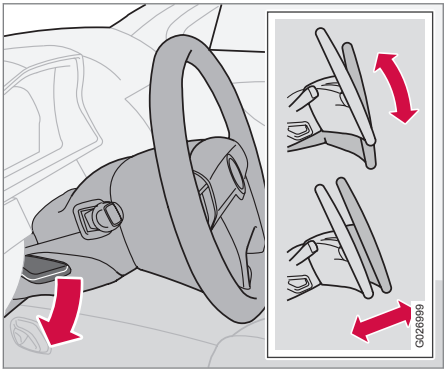
Max. socket is 10 A (120 W) if one socket is used at a time. If both sockets (in the centre console and by the rear seat) are used at the same time then 7.5 A (90 W) per socket applies.

If the compressor for emergency puncture repair is connected to one of the two sockets then no other current consumers may be connected to the other one.

NOTE

The compressor for emergency puncture repair is tested and approved by Volvo. For information about using Volvo's recommended temporary mobility kit (TMK) for emergency puncture repair, see page 190.

Steering wheel adjustment



The steering wheel can be adjusted for both height and reach. 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 off, never while driving. Check that the steering wheel is fixed in position.

Operating

The power windows are operated using the controls in the doors. The key position must be **I** or **II** for the power windows to operate. The windows continue to work when the car has stopped and the remote control key has been removed, provided none of the doors is opened. Operate the windows with caution.

To open a window:

– Depress the front of the control.

To close a window:

– Raise the front of the control.

NOTE

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

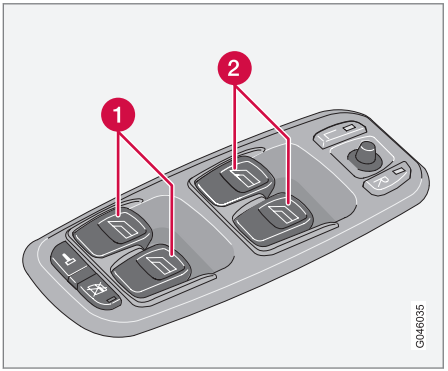
WARNING

If there are children in the car:

- Always remember to switch off the power supply to the power windows by removing the remote control key if the driver leaves the car.
- Make sure that children or other passengers cannot be trapped in any way when closing the windows.

If the rear door windows are operated from the driver's door - check that none of the rear seat passengers is in danger of getting their hands caught when closing the windows.

Driver's door



Controls, power windows.

1 Front window controls

2 Rear window controls

The driver can operate all power windows from the driver's seat. The windows can be opened and closed in two ways:

- Depress one of the controls (1) or (2) gently or raise them. The power windows go up or down as long as the switch is actuated.
- Fully depress one of the controls (1) or (2) or raise it, then release. The side window will then open or close automatically. If

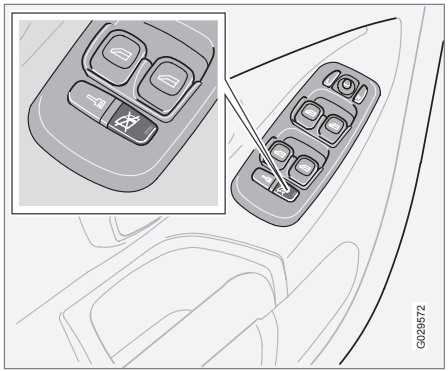
Power windows

the window is obstructed by an object, the movement will stop.

NOTE

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

Blocking power windows in the rear doors



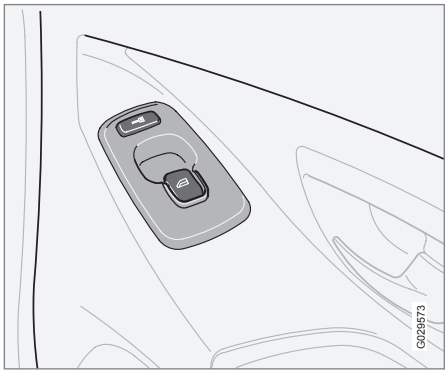
Blocking rear power windows and electric child safety locks.*

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 remote control key) if you leave children in the car unattended.

The light in the switch is illuminated
The rear door windows can only be operated from the driver's door.

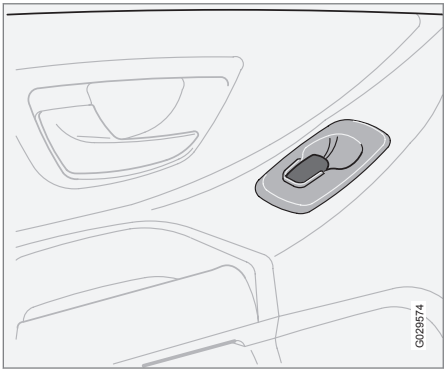
The light in the switch is extinguished
The rear door windows can be operated both with the controls on each rear door and with the controls on the driver's door.

Front passenger seat



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

Rear power windows



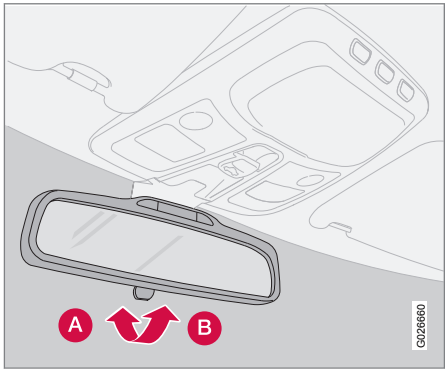
The rear door windows can be operated with the controls on the doors and the switch on the driver's door. If the light in the switch for blocking power windows in the rear doors (located in the driver's door control panel) is illuminated, the rear door windows can only be operated from the driver's door.

WARNING

If the rear door windows are operated from the driver's door, check that none of the rear seat passengers are in danger of becoming trapped in any way when they are closed.

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

Interior rearview mirror



Dipping

A Normal position

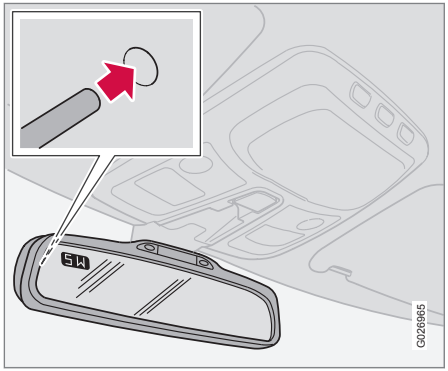
B Dimmed position.

Bright light from behind could be reflected in the rearview mirror and dazzle the driver. Use dimming when disturbed by light from behind.

Automatic dimming*

Bright light from behind is automatically dimmed by the rearview mirror.

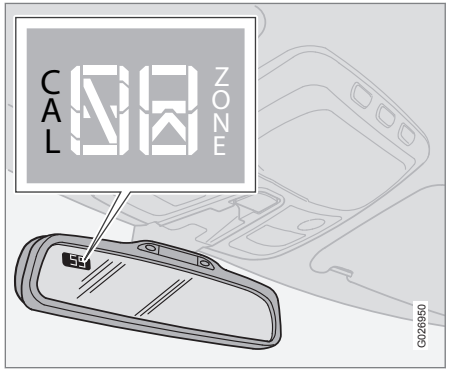
Interior rearview mirror with compass*



The upper left-hand corner of the rearview mirror has an integrated display that shows the compass direction in which the front of the car is pointing. Eight different directions are shown with English abbreviations: **N** (north), **NE** (north east), **E** (east), **SE** (south east), **S** (south), **SW** (south west), **W** (west) and **NW** (north west).

If the compass is activated then it starts automatically in key position **II** or when the engine is running. Switch the compass on or off by pressing the button set into the rear of the mirror. Use a straightened paper clip for example. The button is countersunk approximately 2.5 centimetres in the mirror.

Correct zone on compass

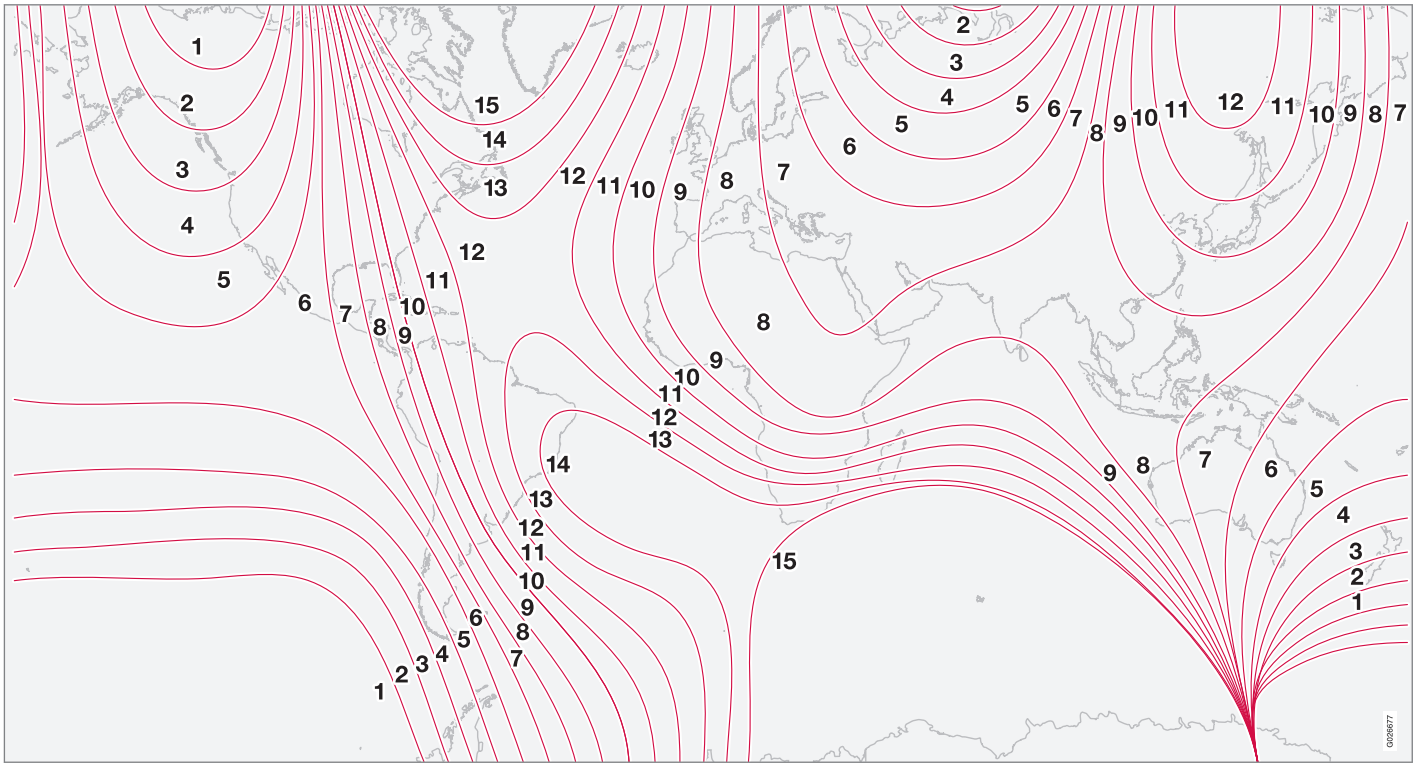


The earth is divided into 15 magnetic zones. The compass is set for the geographic area to which the car was delivered. The compass should be calibrated if the car is moved across several magnetic zones.

1. Key position **II**.
2. Press and hold the button on the rear of the mirror for approximately 3 seconds until ZONE is shown (use a straightened paper clip for example). The number for the current area is shown.

Windows, rearview and door mirrors

3. Press the button several times until the number for the required geographic area (1–15) is shown. After several seconds the display returns to show the compass direction, this means that the change of zone is complete.



Magnetic zones for the compass.

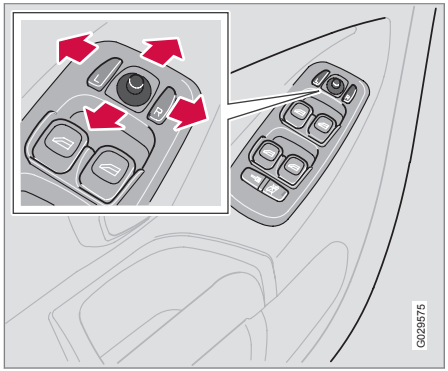
Windows, rearview and door mirrors

Calibration

The compass may need calibrating to work correctly. For best results, switch off all major power consumers such as interior lighting, ventilation fan, heated rear window etc. and avoid having metal objects and magnetic objects close to the mirror.

1. Stop the car in a wide open area with the engine running.
2. Press and hold the button on the rear of the rearview mirror (use a paper clip or similar) until **CAL** is shown again (approx. 6 seconds).
3. Drive slowly in a circle at a speed of no more than 8 km/h until **CAL** disappears from the display. Which is when calibration is complete.
4. Alternative calibration method: Drive off as usual. **CAL** disappears from the display when calibration is complete.

Door mirrors



The controls for adjusting the two door mirrors are at the front of the driver's door armrest. The rearview mirrors can be operated in key position **I** and **II**.

1. Press the **L** button for the left-hand door mirror or the **R** button for the right-hand door mirror. The light on the button illuminates.
2. Adjust the position with the joystick in the centre.
3. Press the **L** or **R** button again. The light goes out.

Folding in the door mirrors, see page 61.

WARNING

Adjust the mirrors before you begin driving.

Door mirrors with memory function*

If the car has door mirrors with memory function, they work together with the memory setting of the seat, see page 101.

Memory function in remote control*

When you unlock the car with one of the remote controls 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 five minutes, the mirrors will assume their stored positions.

Laminated side windows*

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

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

Water and dirt-repellent coating on the front side windows*

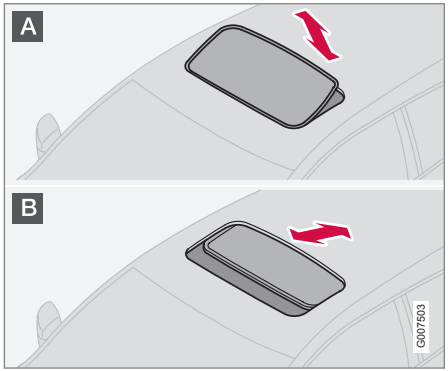
Side windows treated with the water and dirt-repellent coating are marked with a small symbol. For information on glass care, see page 200.

IMPORTANT

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

Power sunroof*

Open positions



The sunroof controls are located in the roof panel. The sunroof can be opened in two positions:

A Ventilation position, up at the rear edge

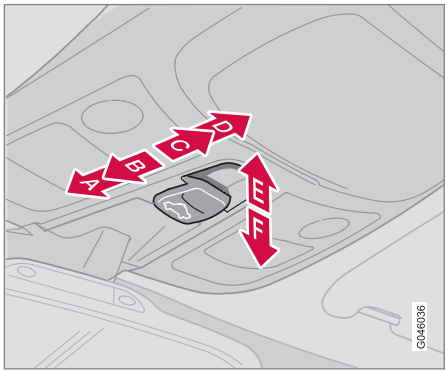
B Sliding position, backwards/forwards

The remote control key must be in position **I** or **II**.

WARNING

If there are children in the car:

Switch off the supply to the power sunroof by removing the remote control key if the driver leaves the car.



A Closing, automatic

B Closing, manual

C Opening, manual

D Opening, automatic

E Opening, ventilation position

F Closing, ventilation position

Ventilation position

Open:

– Press the rear edge of the control (E) upward.

Close:

– Pull the rear edge of the control (F) downward.

Switch from ventilation position to comfort position; pull the control rearward to its end position (D) and release.

Automatic operation

Move the control over the resistance point position (C) to the rearmost end position (D) or over the resistance point position (B) to the front end position (A) 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 (D) and release.

Manual operation

Open:

– Pull the control rearward to the point of resistance (C). The sunroof moves to maximum open position as long as the button is kept depressed.

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

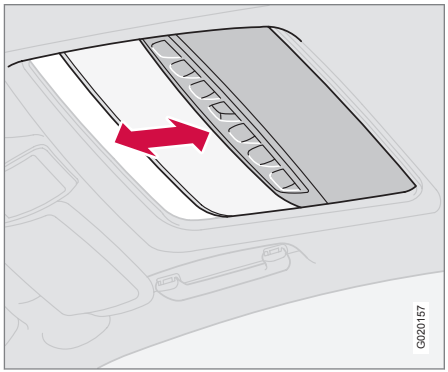
Close:

– Press the control forward to the point of resistance (B). The sunroof moves to closed position as long as the button is kept depressed.

WARNING

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

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 forward to close it.

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 that nobody is in danger of becoming trapped in any way when closing the sunroof.

General information on climate control..... 88
Electronic Climate Control, ECC..... 91
Fuel-driven parking heater*..... 94

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

03

CLIMATE CONTROL

General information on climate control

Air conditioning

The climate control system cools or heats as well as dehumidifies the air in the passenger compartment. The car is equipped with electronic climate control (ECC).

NOTE

The air conditioning can be switched off, but to ensure the best possible air in the passenger compartment and prevent the windows from misting, it should always be on.

Misting windows

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

Multi-filter

Make sure that the multi-filter/pollen filter is replaced regularly. Volvo recommends you consult an authorised Volvo workshop.

Ice and snow

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

Ventilation fan function

When the engine is off (and if the remote control key is in position **I** or **II**), the ventilation fan is automatically switched off. This is to prevent the battery from becoming discharged.

To activate the ventilation fan, turn the fan control and set the desired speed.

ECC (electronic climate control)

Actual temperature

The temperature you select corresponds to the physical experience with reference to factors such as air speed, humidity and solar radiation etc. in and around the car.

Sensor location

- The sun sensor is on the top side of the dashboard.
- The temperature sensor for the passenger compartment is behind the climate control panel.

NOTE

Do not cover or block the sensors with clothing or other objects.

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 throttle. You may briefly feel a temporary rise in temperature.

Condensation

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

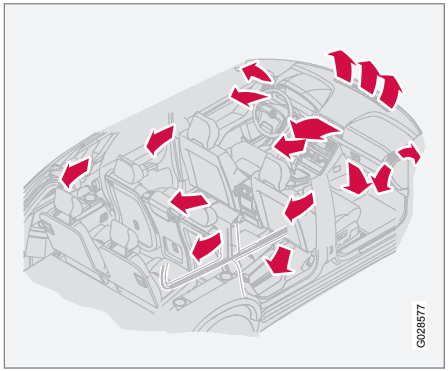
To ventilate the climate system's control system the ventilation fan can be started up to 50 minutes after the car's ignition has been switched off. The fan is then switched off automatically after approx. 15 minutes.

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

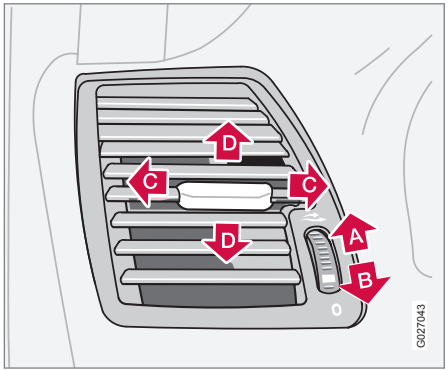
conventional systems where the air conditioning cools the air to just above freezing point.

Air distribution



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

Air vents in the dashboard



A Open

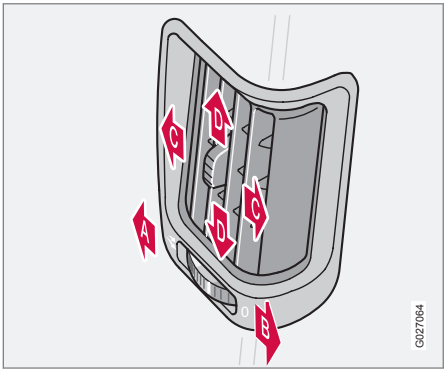
B Closed

C Lateral airflow

D Vertical airflow.

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

Panel vents in the door pillar



A Open

B Closed

C Lateral airflow

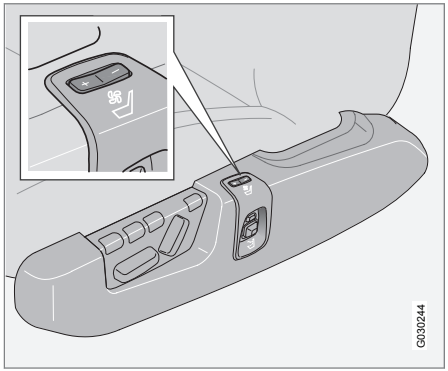
D Vertical airflow.

1. Aim the outer vents toward the rear side windows to remove misting.
2. Aim the vents inwards for a comfortable climate in the rear seat.

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

General information on climate control

Ventilated front seats (Executive)



Control for front seat ventilation.

The ventilation system consists of fans in the seat and backrest that draw air through the seat upholstery. The cooling effect increases the cooler the passenger compartment air becomes.

The ventilation is regulated from a control on the control panel on the side of the front seats which has three steps for the fan speed.

To start seat ventilation:

- Press briefly on +.

To increase the ventilation in steps:

- Press briefly on +.

To obtain maximum ventilation:

- Hold + depressed for about 2 seconds.

To decrease the ventilation in steps:

- Press briefly on −.

To switch off the ventilation:

- Hold − depressed for about 2 seconds.

The ventilation can be used at the same time as front seat heating. For example, the function can be used to dry damp from clothing.

The ventilation system can be activated when the engine is running.

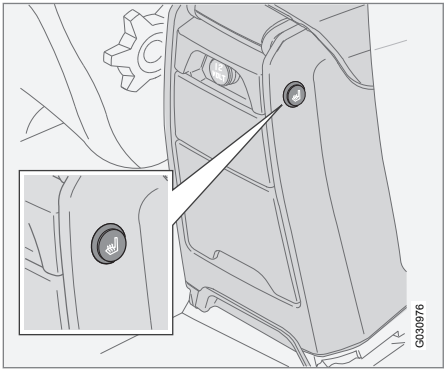
NOTE

The seat ventilation should be used carefully by people sensitive to draughts. Comfort level **I** is recommended for long-term use.

IMPORTANT

Seat ventilation cannot be started when the passenger compartment temperature is below 5 °C. This is in order to avoid cooling down the seat occupant.

Seat heating, outer rear seats (Executive)



Button for rear seat heating, On/Off.

The seat heating in the rear seats is controlled with a button control in accordance with the illustration above. There is one control on each side of the rear centre console for each respective rear seat.

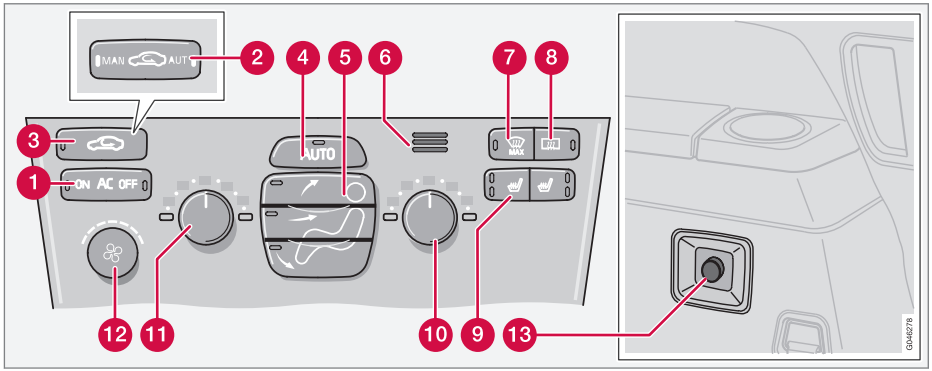
To start seat heating:

- Press the button.
  > The symbol in the button illuminates.

To stop the heating:

- Press the button.
  > The lamp goes out.

Control panel



1. **AC** – On/off (**ON**/**OFF**)
2. Recirculation/Multifilter with sensor*
3. Recirculation
4. **AUTO**
5. Air distribution
6. Passenger compartment temperature sensor
7. Defroster, windscreen and side windows
8. Rear window and door mirror defrosters
9. Heated front seats
10. Temperature, right-hand side
11. Temperature, left-hand side
12. Fan
13. Fan, rear passenger compartment*

Functions

1. AC – ON/OFF

ON: The air conditioning is on. It is controlled by the system's AUTO function. This way, incoming air is cooled and dehumidified.

OFF: When the defroster function is activated the air conditioning is switched on automatically (can be switched off using the **AC** button).

2. Air quality system, recirculation/ multifilter*

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. 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 passenger compartment is recirculated. The Multifilter also cleans the air recirculating in the passenger compartment.

Electronic Climate Control, ECC

A green light (**AUT**) illuminates in the button when the air quality sensor is active.

Operation:

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

Or:

Select one of the following three functions by repeatedly pressing :

- The lamp for **MAN** illuminates. Recirculation is now activated.
- No lamp illuminates. Recirculation is not activated unless needed to cool in a warm climate.
- The lamp for **AUT** illuminates. Recirculation is now activated.

Keep the following in mind:

- 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.
- Follow the Volvo service programme for the recommended replacement interval of the Multifilter. If the car is used in environments where more contaminants are present, 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 recirculated, i.e. no outside air 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:

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

To switch off the timer function:

– Press again for more than 3 seconds. The lamp illuminates for 5 seconds to confirm your selection.

4. AUTO

The **AUTO** function automatically regulates climate control and maintains the selected temperature. The automatic function controls heating, air conditioning, air quality sensor, fan speed, recirculation and air distribution. If you select one or more manual functions, the other functions continue to be controlled 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 window

Used to quickly remove misting and ice from the windscreen and side windows. Air flows to the windows at high fan speed. The light in the defroster button illuminates when the function is active.

The following also takes place in order to provide maximum dehumidification in the passenger compartment:

- the air conditioning (AC) is automatically engaged (can be switched off with the **AC** button).
- recirculation is automatically disengaged.

When the defroster function is switched off the climate control system returns to the previous settings.

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 63 for further information about this function.

9. Heated front seats

To activate front seat heating:

1. Press once: High heat – both lamps illuminate.
2. Press once more: Low heat – one lamp illuminates.
3. Press once more: Heating switched off – no lamps illuminate.

Volvo recommends that an authorised Volvo workshop adjusts the temperature.

10 and 11. Temperature selector

The two knobs can be used to set the temperature for the passenger and driver's sides of the car.

NOTE

Heating or cooling cannot be hastened by selecting a higher or lower temperature than the actual desired temperature.

12. Fan

Turn the knob to increase or decrease fan speed. If **AUTO** is selected then fan speed is regulated automatically. The previously set fan speed is disengaged.

NOTE

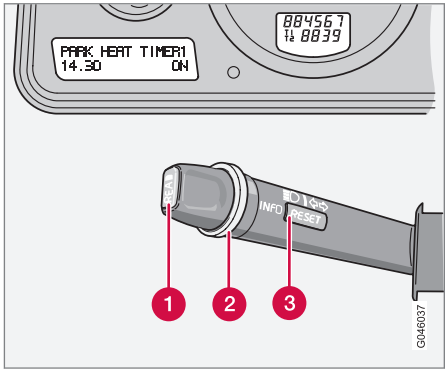
If the knob is turned anticlockwise and the fan indicator in the display goes out, the fan and the air conditioning are switched off.

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

Fan speed can be increased or decreased by turning the knob. This only applies if AC is selected for both front and rear* passenger compartment. The button for rear passenger compartment is in the centre console switch panel, see page 61.

Fuel-driven parking heater*

General information about heaters



1. **READ** button
2. Thumbwheel
3. **RESET** button

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

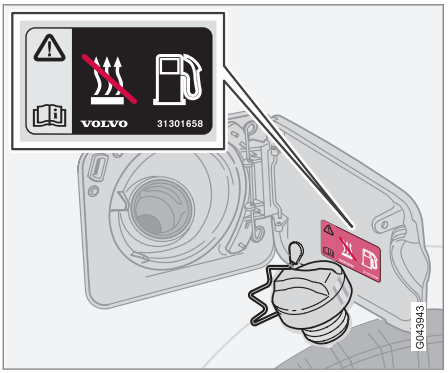
This is done by:

- pressing the **READ** button or
- activating main beam or
- turn the remote control key to key position **I**.

The parking heater can be started immediately or set with two different start times using **TIMER 1** and **TIMER 2**. Here, time refers to the time when the car is heated and ready. The car's electronic system calculates when heating should be started based on the outside temperature.

The heater is not run if the outside temperature exceeds 25 °C. At -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, Volvo recommends that you contact an authorised Volvo workshop. A message is shown in the display.



Warning label on fuel filler flap.

WARNING

The car must be outdoors when the parking heater is used.

Switch off the parking heater before refuelling. Fuel which spills out could be ignited.

Check in the display that the parking heater is off. (When the parking heater is running, **PARK HEAT ON** is shown in the display.)

Messages in the display

Once the settings for **TIMER 1, TIMER 2** and **Direct Start is activated** are activated, the amber warning symbol in the combined

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

instrument panel illuminates and explanatory text is shown in the display.

When you leave the car, you will receive a message regarding the current settings of the system. The message disappears when the car is locked from the outside using the remote control key.

Parking on a hill

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

Clock/timer

If the car clock is reset after the heater timers are programmed, the selected times will be cancelled.

Setting the TIMER

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

1. Scroll using the thumbwheel until **TIMER 1** or **2** is shown in the display.
2. Briefly press **RESET** so that the hours setting starts to flash.
3. Scroll with the thumbwheel to the desired hour.
4. Briefly press **RESET** to move to the flashing minutes setting.
5. Scroll with the thumbwheel to the desired minute.
6. Briefly press **RESET** to confirm the setting.
7. Press **RESET** to activate the timer.

Deactivating timer-started parking heater

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

1. Press **READ**.
2. Use the thumbwheel to scroll to the text **PARK HEAT TIMER 1** or **2**. The text **ON** flashes on the display.
3. Press **RESET**. The text **OFF** is shown with a constant glow and the parking heater is switched OFF.

Direct start

1. Scroll with the thumbwheel until **DIRECT START** is shown in the display.
2. Press **RESET** to access the options **ON** or **OFF**.
3. 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 a temperature of 30 °C.

Immediate stop of heater

1. Scroll with the thumbwheel until **DIRECT START** is shown in the display.
2. Press **RESET** to access options **ON** or **OFF**.
3. Select **OFF**.

NOTE

The car can be started and driven while the parking heater is still running.

Fuel-driven parking heater*

Battery and fuel

If the battery has insufficient charge or the fuel level is too low, the parking heater will be switched off automatically. A message is shown in the display. Acknowledge the message by pressing **READ** once.

IMPORTANT

Repeated use of the parking heater combined with short journeys may discharge the battery and impair starting. The car should be driven for the same time as the heater is used to ensure that the car's battery is recharged adequately to replace the energy consumed by the heater when it is used on a regular basis. The heater is used for a maximum of 60 minutes each time.

Additional heater (diesel)*

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.

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

Front seats..... 100
Front seats - Executive 103
Interior lighting..... 104
Storage spaces in the passenger compartment..... 106
Storage spaces in the passenger compartment - Executive 111
Rear seat..... 112
Loading..... 114
Cargo area..... 115

04

INTERIOR

Front seats

Seating position

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

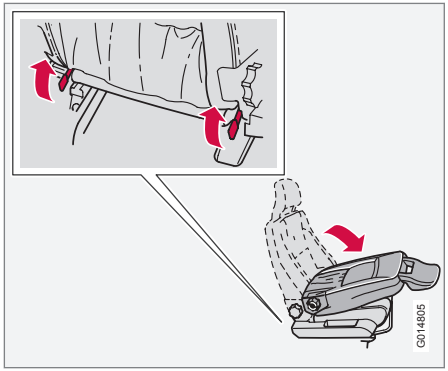
1. Forward/backward: lift the handle to adjust the distance to the steering wheel and pedals. Check that the seat is locked after changing position.
2. Raise/lower the front of the seat cushion, pump up/down, (driver's and passenger side*).
3. Raise/lower the seat, pump up/down, (driver's and passenger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

WARNING

Adjust the position of the driver's seat before setting off, never while driving.

Check that the seat is locked in position.

Tipping the front seat backrest*



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

1. Move the seat as far back as possible.
2. Adjust the backrest to an upright position 90 degrees.
3. Lift the catches on the rear of the backrest while folding it forwards.
4. Slide the seat forward so that the head restraint is "locked in place" under the glovebox.

Raising takes place in reverse order.

WARNING

Grasp the backrest and make sure that it is properly locked after being folded up in order to avoid personal injury in the event of sudden braking or an accident.

[1] Also applies to power seat.

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

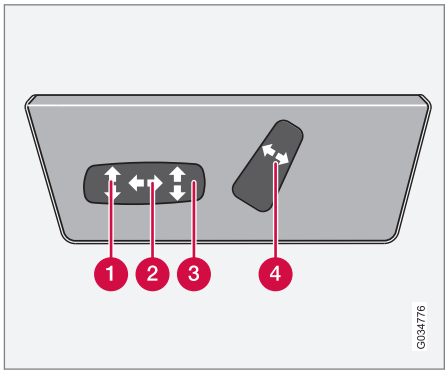
Inlay mats*

Volvo supplies inlay mats which are especially produced for your car.

WARNING

Before setting off check that the inlaid mat in the driver area is firmly affixed and secured in the bosses in order to avoid getting caught adjacent to and under the pedals.

Power seat*

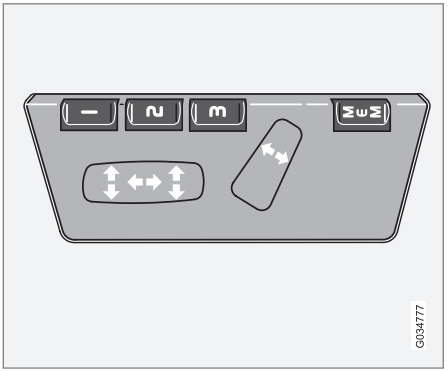


The seats can be adjusted for a certain time after unlocking the door with the remote control key without the key being inserted into the ignition switch. The seat can always be adjusted in ignition position **I** or **II**.

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

An overload protection is deployed if one of the seats is blocked. If this happens, turn off the ignition and wait a short time before adjusting the seat again. Only one of the seat's settings can be adjusted at a time.

Memory function*



Buttons for memory function.

Store setting

1. Adjust seat.
2. Press and hold button **MEM** while pressing button **1**, **2** or **3** simultaneously.

Using a stored setting

Press one of the memory buttons **1**–**3** until the seat stops. If you release the button then the movement of the seat will stop.

Front seats

Key memory in remote control key

All remote control keys can be used by different drivers to store the settings for the driver's seat and door mirrors[2]. Proceed as follows:

- Adjust the seat as you want it.
- Lock the car by pressing the lock button on the remote control key that you normally use. This stores the positions of the seat and door mirrors in the remote control key's memory[3].
- Unlock the car (by pressing the unlock button on the **same** remote control key) and open the driver's door. The driver's seat and door mirrors will automatically adopt the positions that are stored in the remote control key's memory (if the seat has been moved since you locked the car).

Emergency stop

If the seat accidentally begins to move, press one of the setting buttons for the seat or memory buttons in order to stop the seat.

WARNING

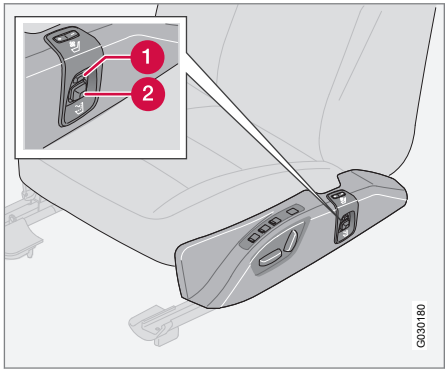
Risk of crushing. Make sure that children do not play with the controls.

Check that there are no objects in front of, behind or under the seat during adjustment.

Ensure that none of the backseat passengers will be trapped.

[2] Only if the car is equipped with power seat with memory and retractable power door mirrors.
[3] This setting does not affect settings that have been stored in the power seat's memory function.

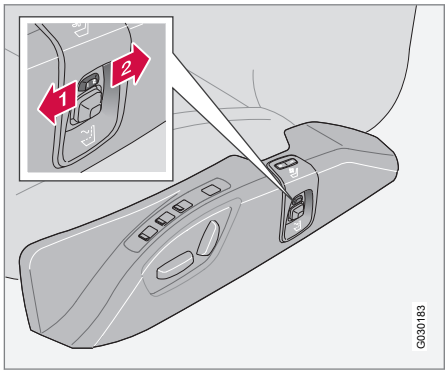
Comfort seats, front



1 Massage

2 Lumbar

Massage



Button for activating massage.

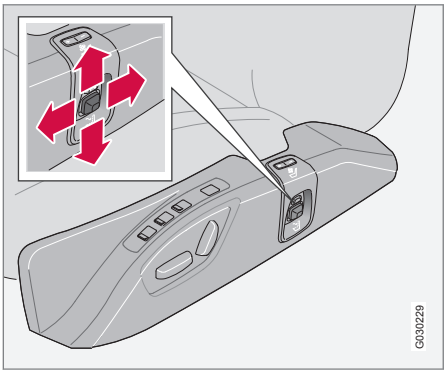
1 Hard massage

2 Soft massage

Each front seat has massage in the backrest. The massage is performed by air cushions that can massage with either a hard or soft setting. When one of the settings is selected the massage is carried out in accordance with the cycle: massage 6 minutes - pause 4 minutes - massage 6 minutes etc.

When the button is in the centre position, or when the remote control key is in position **0**, massage is not activated.

Setting lumbar



Button for setting lumbar.

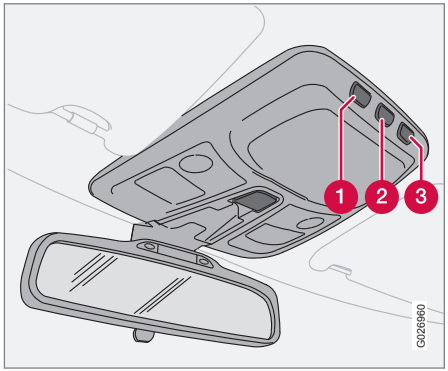
The lumbar support is set with the same air cushions used for massage. Adjustment can be made steplessly both in terms of depth and height using the control button, see the illustration above.

Lumbar support can be set when massage is not active.

A memory function recalls the lumbar setting when massage is stopped or when the pressure in the air cushions has decreased, e.g. after a longer period of parking.

Interior lighting

Reading lamps and interior lighting



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

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

Passenger compartment lighting[1] is switched on with a short press on button (2), at the same time automatic lighting is activated, see page 105. Passenger compartment lighting is switched off with a short press on button (2).

All lighting in the passenger compartment can be switched on in ignition position **I** and **II** as well as when the engine is running. The lighting can also be activated within 10 minutes after:

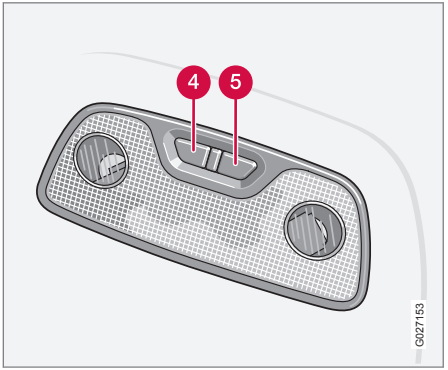
- the engine has been switched off and the ignition is in position **0**
- the car has been unlocked but the engine has not been started

Following which, it is switched off automatically.

Front roof lighting

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

Rear roof lighting



Rear reading lamps

4. Reading lamp left-hand rear, On/Off
5. Reading lamp right-hand rear, On/Off

The lamps are switched on or off by pressing the relevant button.

There are also reading lamps for the third row of seats in cars that seat seven.

Courtesy lighting

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

1 Courtesy lighting follows passenger compartment lighting.

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

Cargo area lighting

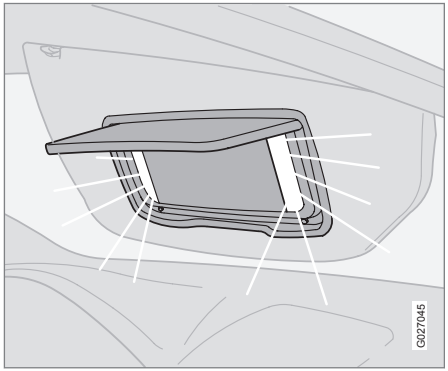
The cargo area has a lamp on the inside of the tailgate.

The rear lamp in the passenger compartment and the lamp in the tailgate are switched on and off respectively when the tailgate is opened or closed.

Glovebox lighting

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

Vanity mirror*



The light illuminates automatically when the cover is lifted.

Automatic lighting

Automatic lighting can be disengaged by pressing button (2), see page 104, and holding it depressed for more than 3 seconds. A short press on the button re-engages automatic lighting.

When automatic lighting is activated the passenger compartment lighting is switched on automatically[2] and remains on for 30 seconds:

- the car is unlocked with the key or remote control key
- the engine is switched off and the key is turned to the **0** position.

Passenger compartment lighting is switched on and remains on for 10 minutes if one of the doors is open and the passenger compartment lighting is not switched off.

Passenger compartment lighting is switched off when:

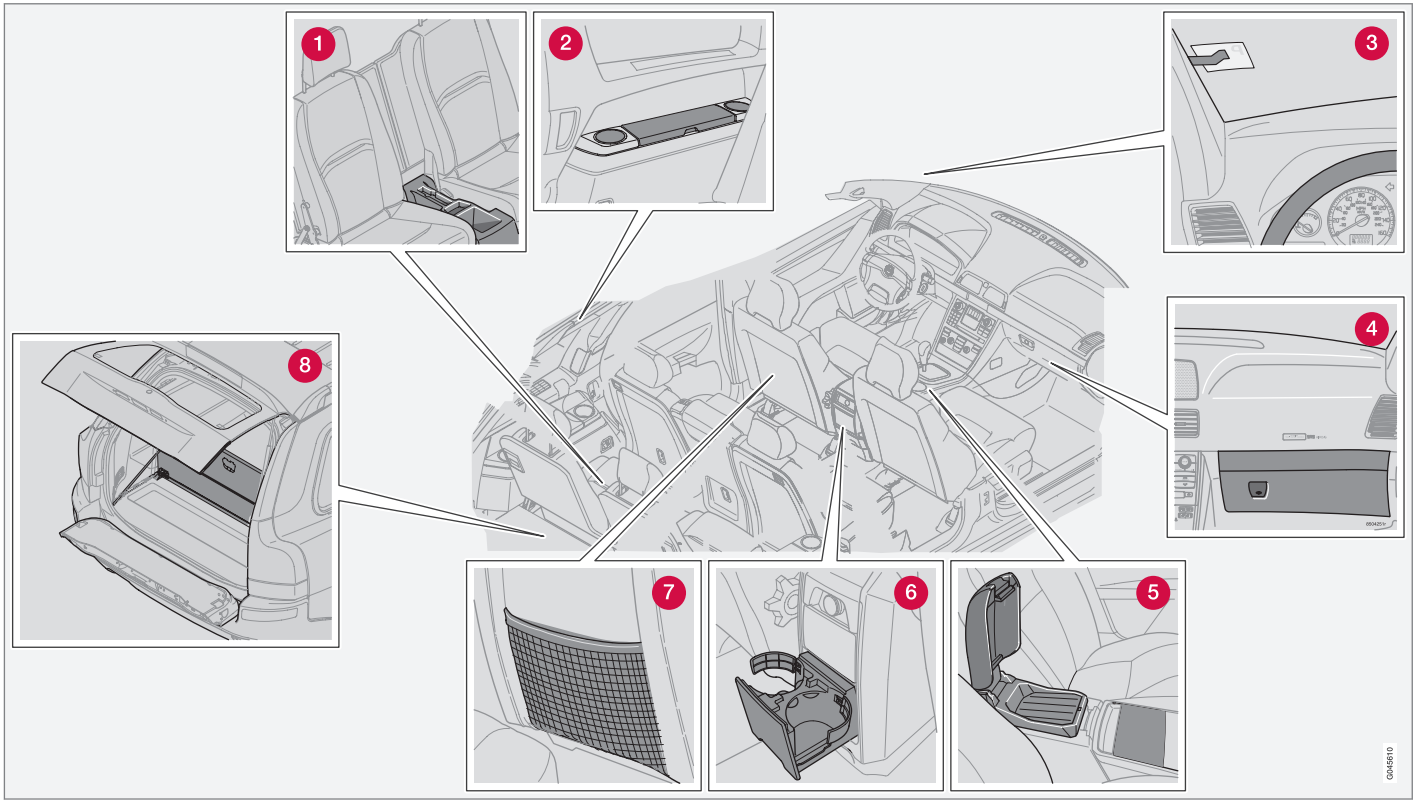
- the engine is started
- the car is locked with the key or remote control key.

The programmed times, 30 seconds and 10 minutes, can be changed by a Volvo workshop.

[2] The function is light-dependent and is only activated when it is dark.

Storage spaces in the passenger compartment

Storage spaces



Storage spaces in the passenger compartment

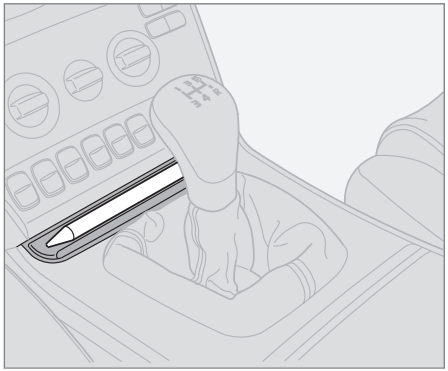
1. Storage compartment in third row of seats
2. Storage compartment and cup holder
3. Ticket clip
4. Glovebox
5. Storage tray in centre console
6. Cup holder for rear seat passengers
7. Storage pocket (also on the front edge of the front seat cushions)
8. Bag holder

WARNING

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

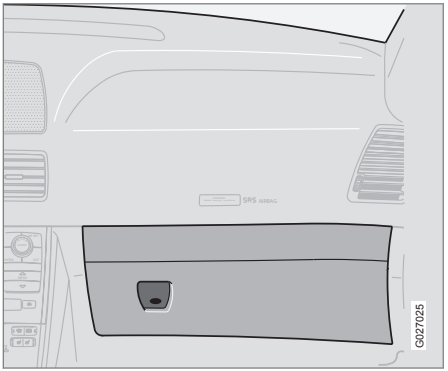
Always secure large and heavy objects with a seatbelt or cargo retaining straps.

Pen holder



The centre console contains a pen holder.

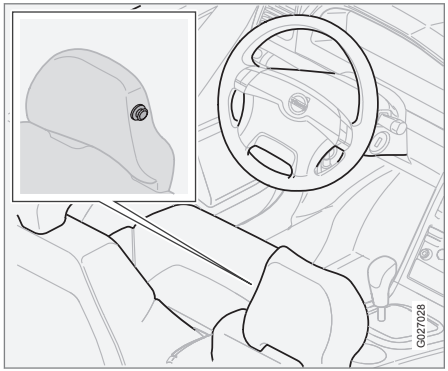
Glovebox



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

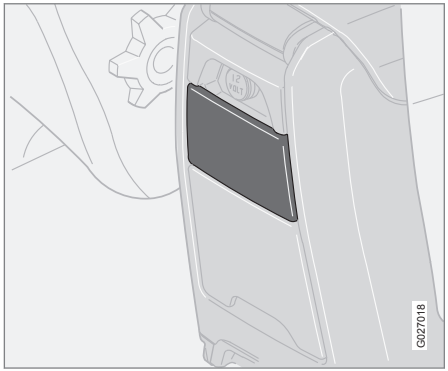
Storage spaces in the passenger compartment

Coat hanger



The coat hanger is only intended for light garments.

Ashtray for rear seat passengers*

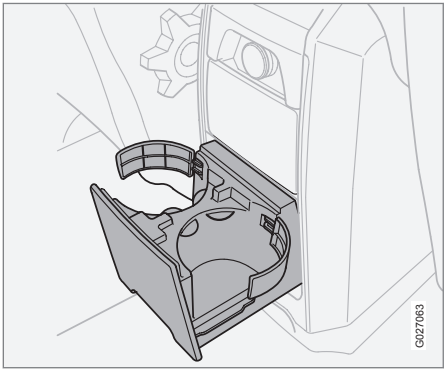


Open the ashtray by pulling the top edge outward.

To empty:

1. Open the ashtray.
2. Press the cover outwards and tip it back.
3. Then lift it out.

Cup holder/bottle holder for rear seat passengers



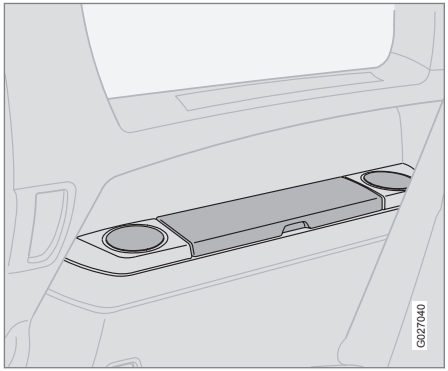
Pull the bottom edge of the insert to open.

The cup holder insert can be removed:

– Detach the two clips so the holder can be used for large bottles.

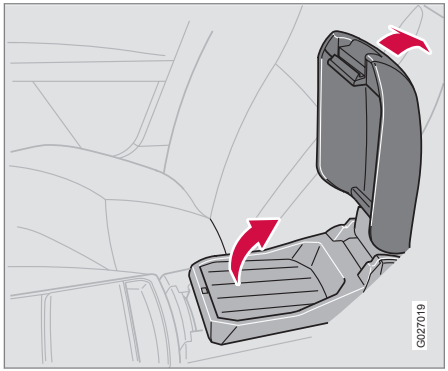
* Option/accessory, for more information, see Introduction.

Storage compartment and cup holder (cars seating seven)



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

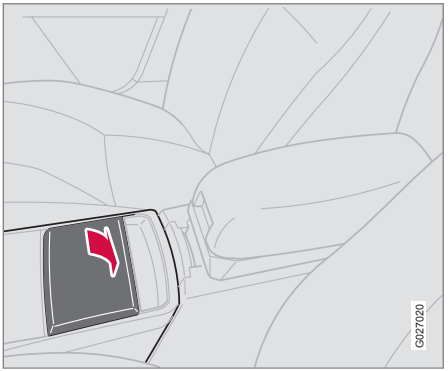
Storage tray in centre console



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.

Under the storage tray is a storage compartment, e.g. for CD discs.

Cup holder



Cup holder for front seat passengers.

Ashtray*

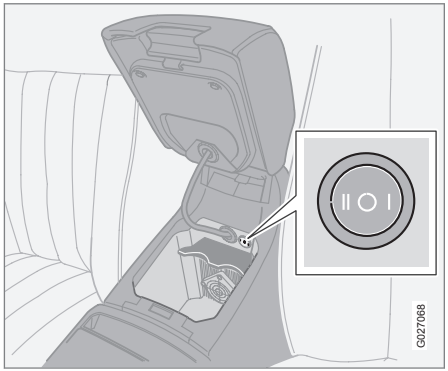
– Pull out the insert to empty the astray.

Storage spaces in the passenger compartment

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

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

Cooler box



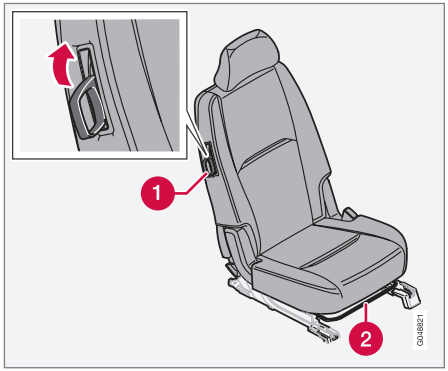
There is a cooler box under front seat's folding armrest. Adjust the cooling level with the button (see illustration). The cooler box works when the engine is running or in key position **II**.

WARNING

Store bottles well sealed in the cooler box and make sure that the door is closed for the journey.

Rear seat

Rear seats – second row (cars seating seven)



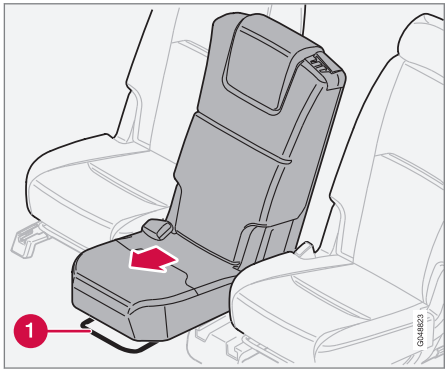
Lowering the backrest for entry into the car

Lift the handle (1) up while pushing the seat 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 forwards or backwards.

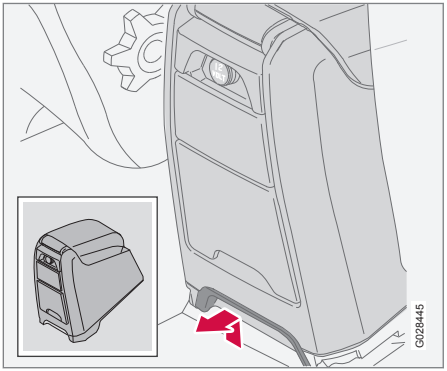
Sliding seat (cars seating seven)



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 (1) to move the seat forwards or backwards.

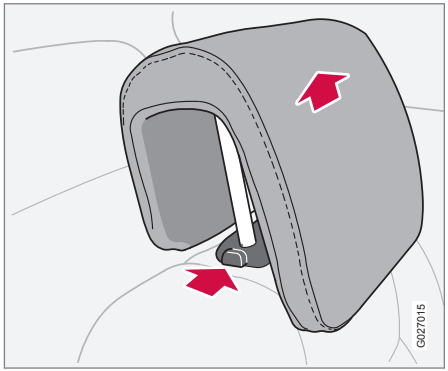
Removing the rear section of the centre console



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

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

Head restraint, rear seat – centre seat



The centre seat head restraint can be adjusted to four different heights. Raise the head restraint as necessary.

– To lower the head restraint again, the button by the right-hand shaft must be pressed in while the head restraint is pressed down carefully. See illustration.

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.

NOTE

The head restraint cannot be removed completely.

Loading

General

Payload depends on the car's kerb weight. The total of the weight of the passengers and all accessories reduces the car's payload by a corresponding weight. For more detailed information on weights, see page 288.

WARNING

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

Load on the roof

Load carriers

Load carriers designed by Volvo are recommended in order to avoid damaging the car and for maximum possible safety while driving.

Carefully follow the mounting instructions enclosed with the load carriers.

- Check periodically that the load carriers and load are properly secured. Lash the load securely with retaining straps.
- Distribute the load evenly over the load carriers. Put the heaviest objects at the bottom.
- The size of the area exposed to the wind, and therefore fuel consumption, increase with the load's size.
- Drive gently. Avoid quick acceleration, heavy braking and hard cornering.

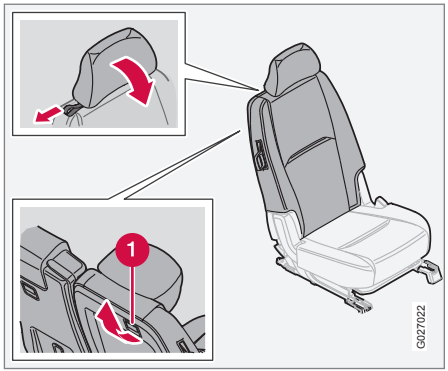
WARNING

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

Extension, cargo area - seat row 2

IMPORTANT

There must be no objects on the rear seat when the backrest is to be folded down. The seat belts must not be connected either. Otherwise there is a risk of damaging the rear seat upholstery.

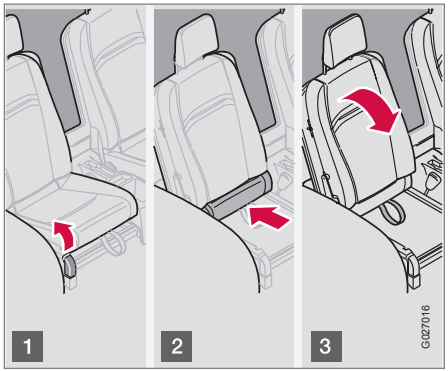


1. Set the seats in their rearmost positions[1].
2. Lower the head restraint.
3. Release the catch (1) and fold down the backrest. Press down to lock the backrest in its folded position.

WARNING

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.

Extension, cargo area - seat row 3[1]



IMPORTANT

There must be no objects on the rear seat when the backrest is to be folded down. The seat belts must not be connected either. Otherwise there is a risk of damaging the rear seat upholstery.

Push the second row of seats to its front position - see page 100.

1 Lift the handle upward.

2 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.

3 Fold down the backrest. (The head restraint folds in automatically when the backrest is folded.)

Resetting seat row 3

1. Raise the backrest to its normal position.
2. Take hold of the eyes and pull out the seat cushion until a "click" sounds.
3. Raise the head restraint.
   > The seat is now ready for use.

[1] Only cars seating seven

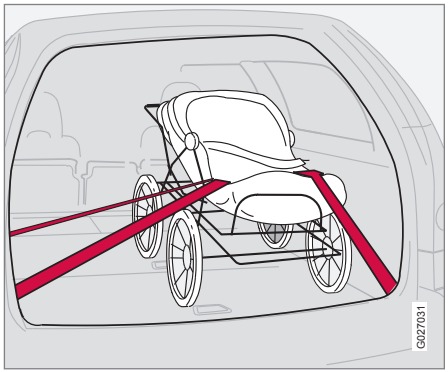
Cargo area

General

Opening the tailgate

For information about how the tailgate is opened - see page 128.

Loading the cargo area



The seatbelts and airbags provide the driver and passengers substantial protection, especially in frontal 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 area 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 frontal 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

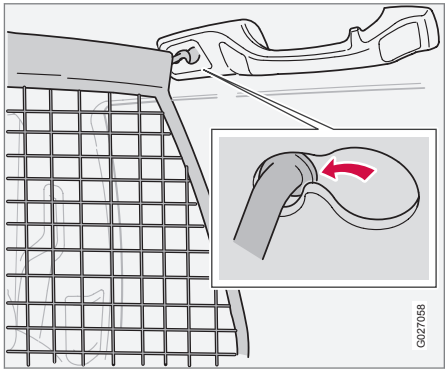
Never load cargo above the backrests! If you do so, the load could be thrown forward in the event of sudden braking or a collision and severely injure you or your passengers. Remember to always secure (bind) the load properly.

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. Always secure the load. During heavy braking the load may otherwise shift, causing personal injury to the car's occupants.

Turn off the engine and apply the parking brake when loading or unloading long objects! Otherwise you may accidentally knock the gear lever or gear selector with the load and cause a gear to engage and the car to move off.

Safety net

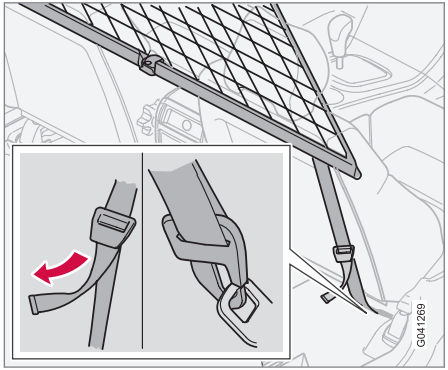


The safety net prevents luggage and cargo from being thrown forward in the passenger compartment during heavy braking.

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



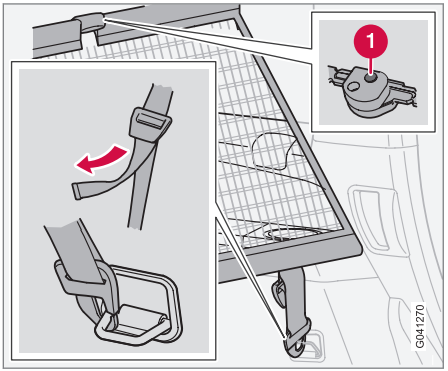
If the car is equipped with a cargo area cover, remove it before fitting the safety net.

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

Only applies to cars seating seven:

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

Folding up the safety net



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

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

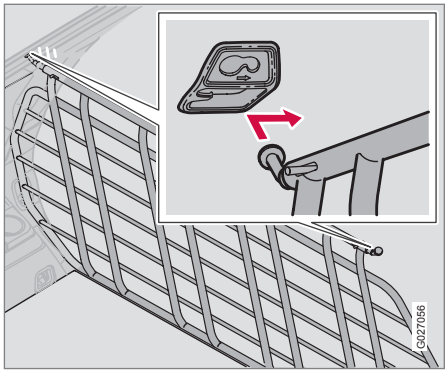
Cargo area

WARNING

It is necessary to ensure that the upper securing points of the safety net are fitted correctly and that the tensioning straps are secured properly.

Damaged nets must not be used.

Steel safety grille*

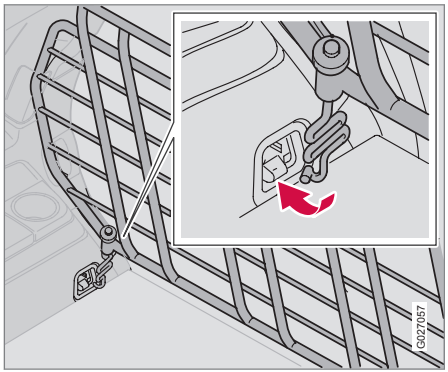


The protective grille in the cargo area prevents cargo or pets from being thrown forward in the passenger compartment in the event of heavy braking.

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

Fit the protective grille as follows:

1. 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).
2. Insert one of the protective grille mountings in its bracket above the rear door behind the second row of seats.



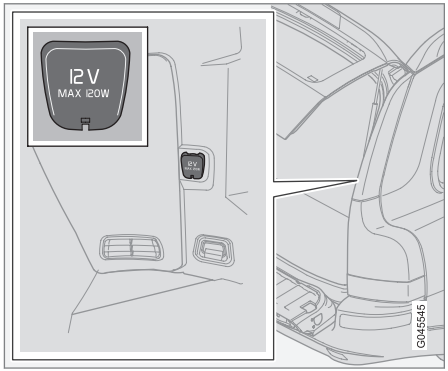
3. Slide the protective grille mounting to the front position of the bracket.
4. Place the other protective grille mounting in its bracket above the other rear door and slide it to the front position.
5. Insert the attaching brace through the lower mounting in the protective grille from underneath, as indicated in the illustration.
6. Fit the spring on the attaching brace and screw in the knob.
7. Fit the hook from the attaching brace in the load securing eyelet and tighten the knob until the attaching brace takes hold in the load securing eyelet.
8. Do the same on the other side.
9. Tighten both attaching braces alternately.
10. 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.

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

Electrical socket in cargo area



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 in the display.

IMPORTANT

Max. power takeoff is 10 A (120 W).

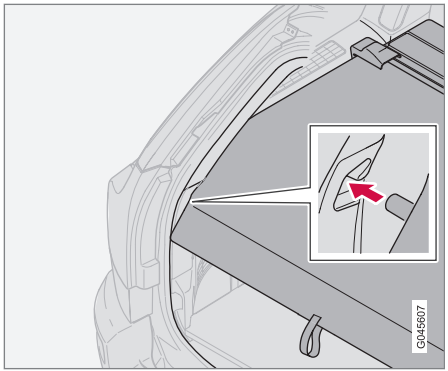
NOTE

Remember that using the electrical socket with the engine switched off involves the risk of discharging the car's battery.

NOTE

The compressor for emergency puncture repair is tested and approved by Volvo. For information about using Volvo's recommended temporary mobility kit (TMK) for emergency puncture repair, see page 190.

Cargo cover*



Pull out the cargo area cover, pull it over the cargo and hook it into the holes in the rear pillars of the cargo area.

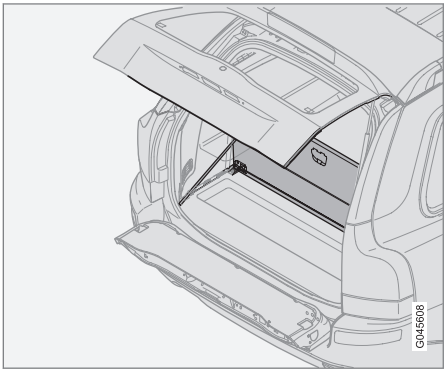
Removing the cargo area cover

Press the end pieces of the cargo area cover inwards, pull up and release. When fitting, press the end pieces of the cargo area cover down into the holders.

WARNING

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

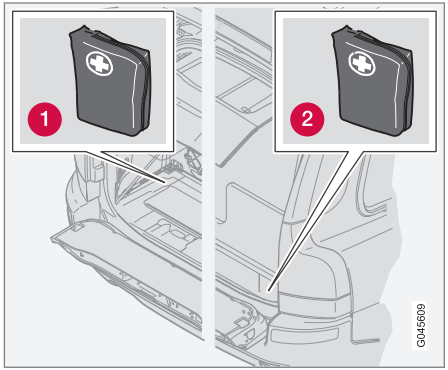
Bag holder*



Cargo area

Open the hatch in the cargo area. Hang or secure your grocery bags using the tensioning straps or holders.

Cargo area compartment, contents



1. Location of first aid kit in cars seating five.
2. Location of first aid kit in cars seating seven.

The following is housed in the floor compartment:

- Warning triangle*
- Tool kit
- First aid kit*
- Jack (alternative location)

NOTE

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

Opening the compartment in the cargo area floor (cars seating five)

– Lift up the cover in the cargo area floor.

If the car is equipped with a carrier bag holder:

– Lift the cover, detach the tensioning straps to the grocery bag holder.

Opening the compartment in the cargo area floor (cars seating seven)

– Lift up the cover.

If the car is equipped with a carrier bag holder:

– Open the upper cover, detach the tensioning straps to the grocery bag holder, if fitted, and open the lower cover.

IMPORTANT

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

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

Remote control key - key with remote control..... 124
Locking and unlocking..... 126
Child safety locks..... 130
Alarm*..... 131

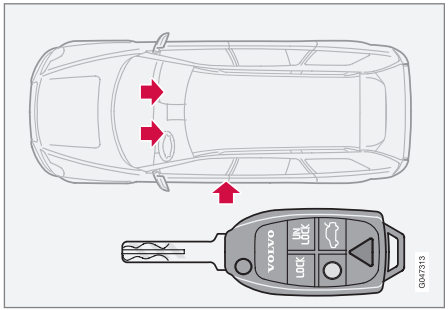
* Option/accessory, for more information, see Introduction.

05

LOCKS AND ALARM

Remote control key - key with remote control

Keys – Electronic immobiliser



Remote control key. This key opens all locks.

The car is supplied with two remote control keys - they are collapsible and equipped with built on remote control.

Loss of key

If you should lose one of your remote control keys, you are recommended to bring the remaining keys to an authorised Volvo workshop. The code of the missing key must be erased from the system as a theft prevention measure. The other keys must be re-coded in the system at the same time.

The key blade's unique code is provided by authorised Volvo workshops, which are recommended when ordering new key blades.

A maximum of six remote control keys can be programmed and used for one single car.

Immobiliser

The keys are fitted with coded chips. The code must be accepted by the reader (receiver) in the ignition switch. The car can only be started if the correct key with the correct code is used.

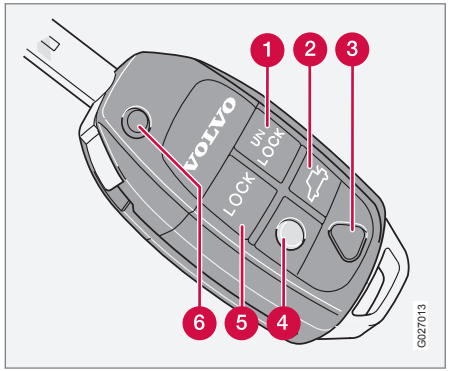
NOTE

The key blade on the remote control key must be fully extended (as illustrated) when starting the car. Otherwise there is a risk that the immobiliser function will prevent the car from starting.

Ignition keys and electronic immobiliser

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

Remote control functions



1 Unlocking

– Press the button once to unlock all doors, the tailgate and the fuel filler flap simultaneously.

2 Tailgate

– Press the button once to unlock the tailgate.

3 Panic function

Panic function - Can be used to attract attention in an emergency. Press and hold the red button for at least 3 seconds or press it 2 times within the same space of time to activate the direction indicators and the horn.

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

The panic alarm is deactivated automatically after 25 seconds or by pressing any of the buttons on the remote control key.

4 Approach light duration

Do the following when you approach the car:

– Press the yellow button on the remote control key.

The interior lighting, position/parking lamps, number plate lighting, door mirror lamps* will now switch on. The lighting on a coupled trailer will also switch on. These lamps remain lit for 30, 60 or 90 seconds. A suitable time setting can be made at a workshop - an authorised Volvo workshop is recommended.

To extinguish the approach lighting:

– Press the yellow button again.

5 Locking

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

6 Folding/opening key

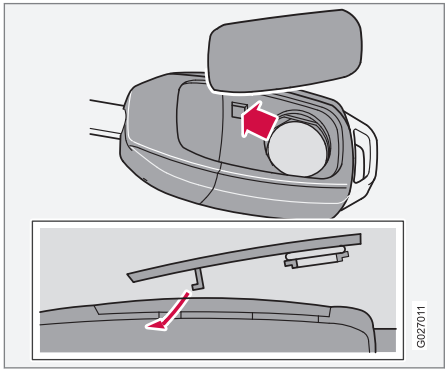
The remote control key can be folded by pressing the button and folding the key blade section into the keypad at the same time.

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

Replacing the remote control key's battery

NOTE

Volvo recommends that the batteries to be used in the remote control key/PCC fulfil UN Manual of Test and Criteria, Part III, sub-section 38.3. Batteries fitted in the factory or replaced by an authorised Volvo workshop fulfil the above criteria.

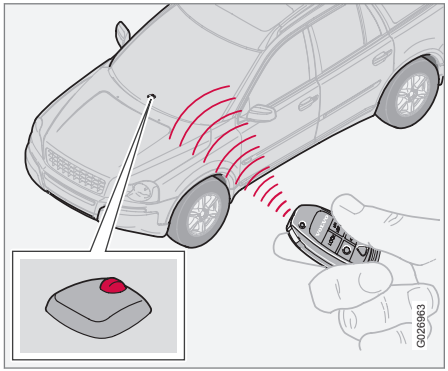


Replace the battery after repeated failure by the locks to respond when remote control key signals are transmitted within a normal distance.

1. Remove the cover by carefully prising up the rear edge of with a small screwdriver.
2. Replace the battery (type CR 2032, 3 V) – with the plus side facing up. Avoid touching the battery and its terminals with your fingers.
3. Refit the cover. Make sure the rubber seal is properly fitted and free from damage to prevent water from entering.
4. Return the old battery to your Volvo workshop so that it is disposed of in an environmentally safe manner.

Locking and unlocking

From the outside



The remote control key locks/unlocks all doors and the tailgate simultaneously.

The fuel filler flap can be opened when the car is unlocked. It remains unlocked for 10 minutes after the car has been locked - this is in order to enable refuelling with the car locked and the alarm armed.

NOTE

The car can be locked even if a door or the tailgate is open[1] - when the door/tailgate is then closed there is a risk that the keys will be locked in.

WARNING

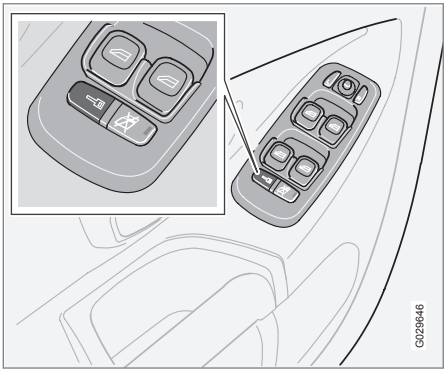
Be aware of the risk of being locked in the car when it is locked from the outside using the remote control key - it is then not possible to open any of the doors from the inside with the door controls. Read more about this in the section "Deadlocks" later on.

Automatic relocking

If none of the doors or the tailgate is opened within 2 minutes of unlocking with the remote control key then all are locked again automatically. This function prevents the car from being left unlocked unintentionally.

For cars with alarms, see page 131.

Automatic locking



Automatic locking is activated and deactivated from the driver's door control panel. The function operates by locking the doors automatically when the speed of the car exceeds 7 km/h. They remain locked until a door is opened from the inside or when all doors are unlocked from the control panel.

Activation/Deactivation

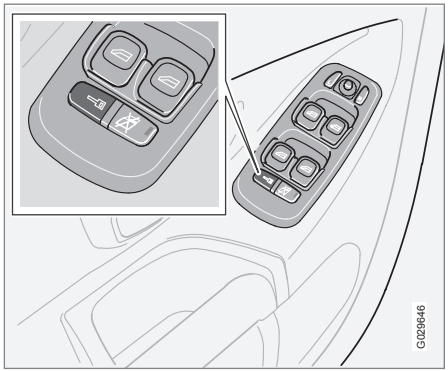
The remote control key must be in key position **I** or **II**, see page 145.

[1] Not in all markets.

- Press the left-hand stalk switch **READ** button to acknowledge any messages on the display.
- Press and hold the button for central locking until a new message for lock status is shown in the display.

The messages **AUTOLOCK ON** (the car is also locked when it moves) and **AUTOLOCK OFF** respectively are shown on the display.

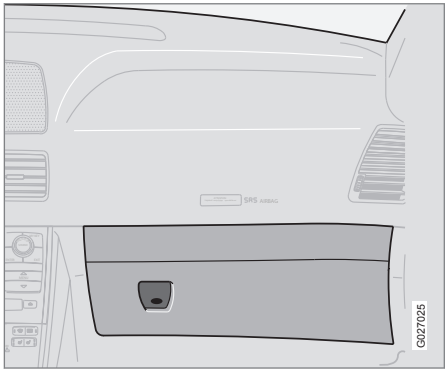
From the inside



All the doors and the tailgate can be locked or unlocked simultaneously using the control panel in the driver's door (or passenger door).

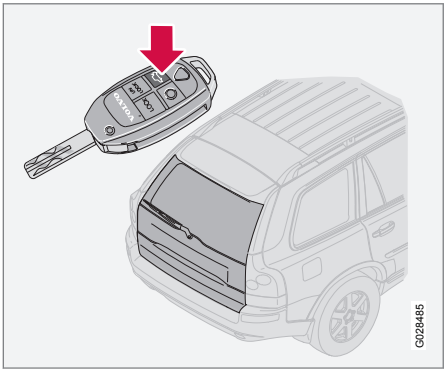
All doors can be locked using the lock button on the control panel by each respective door.

Glovebox



The glovebox can be locked with the remote control key's key blade.

Tailgate



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

1. Press the remote control key's button - the tailgate is unlocked and can then be opened.
   > The alarm's* level and movement sensors and the sensor for opening the tailgate are disconnected. The doors continue to remain locked and their alarms armed.

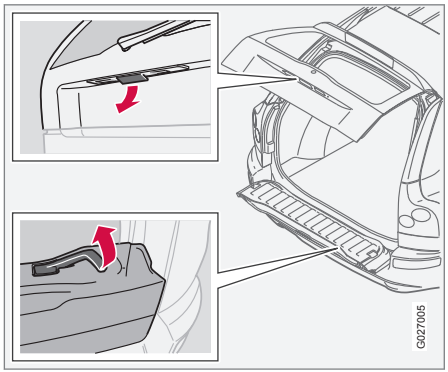
Locking and unlocking

2. If all doors continue to be locked when you re-close the tailgate, the tailgate remains unlocked and its alarm is not armed after being closed. The other doors continue to remain locked with their alarms armed.
3. To lock the tailgate and arm the alarm as well - press the remote control key's **LOCK** button.

NOTE

If the button is used to unlock the tailgate without it being opened then it is relocked automatically after about 2 minutes.

Opening the tailgate



1. Open the tailgate by pulling down its handle as illustrated.
2. The rear flap is folded down when its handle is lifted up.

Deadlocks*[2]

Deadlocks means that the opening handles for the doors in the passenger compartment are mechanically disengaged - the doors cannot therefore be opened from the inside.

The deadlocks function is activated from the outside with the remote control key's **LOCK** button, or by locking the driver's door with the key blade, and is set after a 10-25 second delay after the doors have been locked. All doors must be closed before deadlocks can be activated.

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

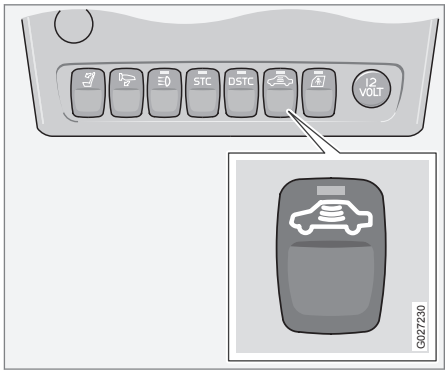
WARNING

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

2 Not in all markets and only in combination with alarm.

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

Temporary deactivation



Button for temporary disengagement of deadlocks.

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

1. Insert the remote control key into the ignition switch, turn it to key position **II** and then back to position **I** or **0**.
2. Press the button. Note that the alarm's* movement and tilt detectors are switched off at the same time, see page 132.

The lamp in the button illuminates until the car is locked with the remote control key. A message is shown on the display as long as the remote control key remains in the ignition switch.

Next time the engine is started the system is reset to zero and the deadlocks function and the alarm's movement and tilt detectors are then re-engaged.

NOTE

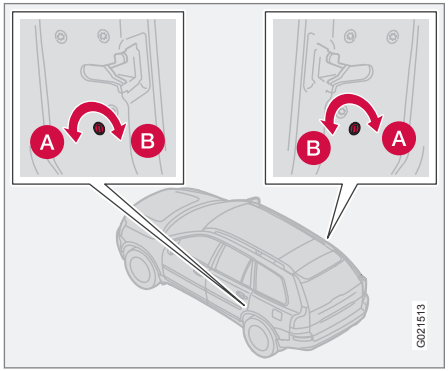
- Remember that the alarm is activated when the car is locked.
- If any of the doors are opened from the inside then the alarm is triggered.

Child safety locks

Manual child safety locks – rear doors

The controls for the child safety locks are located in the rear edge of the rear doors. The controls are only accessible when the rear doors are open.

Controls

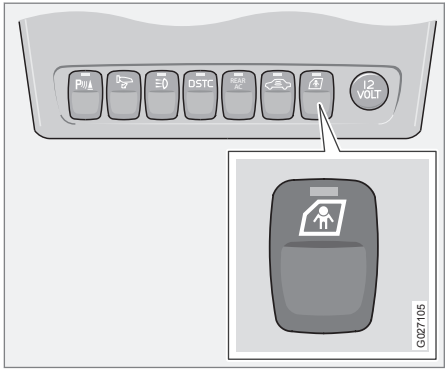


Controls for the child safety locks – left and right-hand rear doors.

Adjust the control in the respective rear door by turning it between the outer positions (use a flat metal object, such as a screwdriver).

- **A** Child-safe position – the rear doors cannot be opened from inside: Turn outwards.
- **B** Not child-safe position – the rear doors can be opened from inside: Turn inwards.

Electric child safety locks – rear side doors*



Use the button in the centre console to activate/deactivate the child safety locks in the rear doors.

1. Turn the ignition key to position **I** or **II**, see page 145.
2. Press the button.

When the light in the button illuminates, the rear power windows and rear doors are locked.

A message appears on the display, the child safety locks are activated/deactivated.

NOTE

As long as the child safety lock is activated the rear doors cannot be opened from the inside.

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

Alarm system

When the alarm is armed, it continually monitors all alarm inputs.

The alarm is triggered if:

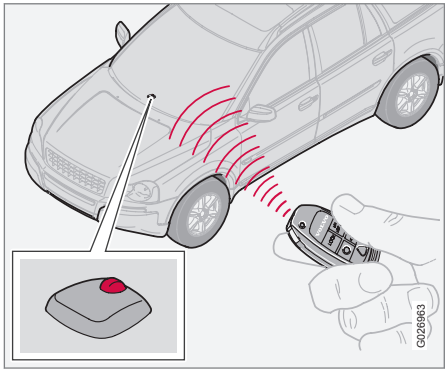
- a door, the bonnet or tailgate opens
- a non-approved key is used in the ignition or if an attempt is made to force the lock
- a movement is detected in the passenger compartment (if fitted with a movement detector)
- the car is raised or towed away (if fitted with a tilt detector)
- a battery cable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

NOTE

The movement sensors trigger an alarm in the event of movement in the passenger compartment - air currents are also registered. For this reason the alarm is triggered if the car is left with a window or the sunroof open or if the passenger compartment heater is used.

To avoid this: Close the window/sunroof when leaving the car. If the car's integrated passenger compartment heater (or a portable electric heater) shall be used - direct the airflow from the air vents so that they are not pointing upwards in the passenger compartment.

Alarm indicator



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

- LED not lit – the alarm is not armed.
- The LED flashes once every other second – Alarm is armed.
- The LED flashes rapidly after disarming the alarm and until the remote control key is turned to key position **II** – the alarm has been triggered.

If there is a fault in the alarm system, a message appears on the display. In which case, contact a workshop - an authorised Volvo workshop is recommended.

NOTE

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

Arming the alarm

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

IMPORTANT

The alarm is fully armed when the car's direction indicators have made one long flash and the LED on the instrument panel flashes once every other second.

Disarming the alarm

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

> For manual disarming - see the following section "Deactivating a triggered alarm".

Alarm*

Automatic alarm activation

This function prevents you accidentally leaving the car without the alarm on.

If none of the doors or the tailgate is opened within two minutes of disarming the alarm (and the car has been unlocked with the remote control key), the alarm is automatically rearmed. The car is locked at the same time.

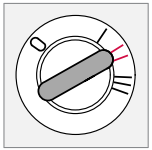
Automatic alarm activation
In certain countries the alarm is activated after a certain delay if the driver's door was opened and closed but the car was not relocked.

Deactivating a triggered alarm

– Press the remote control key's **UNLOCK** button or insert it into the ignition switch.

Confirmation is given by two short flashes from the direction indicators.

Remote control key not working



If the alarm cannot be deactivated with the remote control key, e.g. if the key's battery is discharged - the car can be unlocked, disarmed and the engine started as follows:

1. Unlock the driver's door manually and open it - The alarm is triggered and the siren sounds.
2. Insert the remote control key in the ignition switch - The alarm is deactivated.
   > The alarm indicator flashes rapidly until the remote control key is turned to key position **II**.

Alarm signals

When the alarm is triggered, the following happens:

- A siren sounds for 25 seconds or until the alarm is switched off. The siren has its own battery and works independently of the car battery.
- The direction indicators flash for 5 minutes or until the alarm is switched off.

Reduced alarm level

To avoid accidental triggering of the alarm - e.g. if a dog is left in a locked car or during transport on a car train or car ferry - temporarily deactivate the movement and tilt detectors.

The procedure is the same as with the temporary disengaging of deadlocks - see page 128.

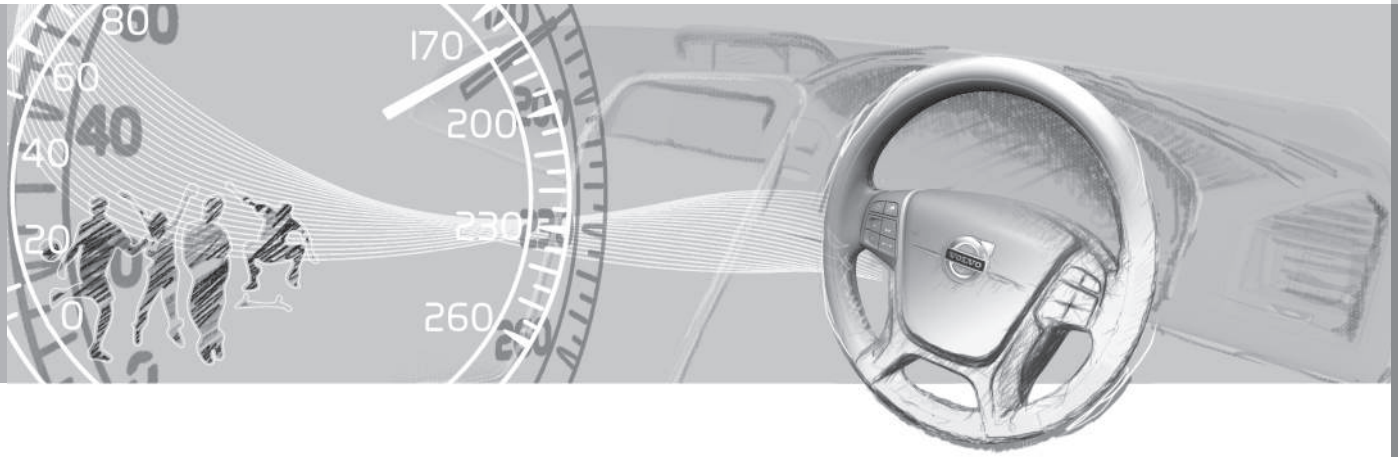
* Option/accessory, for more information, see Introduction.

General..... 136
Refuelling..... 139
Starting the engine..... 145
Automatic gearbox..... 147
All-wheel drive*..... 150
Brake system..... 151
Stability and traction control system*..... 153
Park assist syst*..... 155
Blind Spot Information System - BLIS*..... 157
Towing and recovery..... 161
Jump starting..... 163
Driving with a trailer..... 165
Towing equipment*..... 167
Detachable towbar*..... 169
Adjusting headlamp pattern..... 173

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

06

STARTING AND DRIVING



General

Economical driving

Driving economically means driving smoothly while thinking ahead and adjusting your driving style and speed to the prevailing conditions.

- Avoid driving with open windows.
- Do not use winter tyres when the winter season is over.
- Avoid sudden unnecessary acceleration and heavy braking.
- Drive with the correct air pressure in the tyres and check this regularly - select ECO tyre pressure for best results, see page 183
- Drive in the highest gear possible, adapted to the current traffic situation and road - lower engine speeds result in lower fuel consumption[1].
- Remove unnecessary items from the car - the greater the load the higher the fuel consumption.
- Use engine braking to slow down, when it can take place without risk to other road users.
- Choice of tyres can affect fuel consumption - seek advice on suitable tyres from a dealer.
- A roof load and ski box increase air resistance, leading to higher fuel consumption - remove the load carriers when not in use.
- Do not run the engine to operating temperature at idling speed, but rather drive with a light load as soon as possible - a cold engine consumes more fuel than a warm one.
- High speed results in increased fuel consumption - doubling speed increases wind resistance four times.

For more information and further advice, see the pages 13 and 296.

WARNING

Never switch off the engine while moving, such as downhill, this deactivates important systems such as the power steering and brake servo.

Driving in water

The car can be driven through water at a maximum depth of 40 cm at a maximum speed of 10 km/h. Extra caution should be exercised when passing through flowing water.

IMPORTANT

Engine damage can occur if water enters the air filter.

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

During driving in water, maintain a low speed and do not stop the car. When the water has been passed, depress the brake pedal lightly and check that full brake function is achieved. Water and mud for example can make the brake linings wet resulting in delayed brake function.

NOTE

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

[1] Manual gearbox

IMPORTANT

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

In the event of engine stop in water do not try restart. Tow the car from the water.

Engine, gearbox and cooling system

Under special conditions, for example hard driving in hilly terrain and hot climate, there is a risk that the engine and drive system may overheat - in particular with a heavy load.

- Remove any auxiliary lamps from in front of the grille when driving in hot climates.
- In the event of a risk of overheating a built-in protection function in the gearbox is activated which, amongst other things, illuminates the instrument panel's yellow information lamp and there is a text message displayed there regarding appropriate action - follow the recommendation given.
- If the temperature gauge for the engine's cooling system goes into the red zone - stop and let the engine idle for a few minutes.
- If the car overheats, the air conditioning may be switched off temporarily.
- Do not turn the engine off immediately you stop after a hard drive.

For supplementary information about overheating when driving with a trailer - see page 165.

NOTE

It is normal for the engine's cooling fan to operate for a while after the engine has been switched off.

IMPORTANT

To prevent damage to any drive system components, the working temperature of the gearbox is checked. If there is a risk of overheating, a warning symbol in the combined instrument lights up and a text message is shown. Follow the recommendation given in the text message.

Open tailgate

WARNING

Do not drive with the tailgate open. Toxic exhaust fumes can be drawn into the car through the cargo area.

Do not overload the battery

The electrical functions in the car load the battery to varying degrees. Avoid having the remote control key in key position **II** when the engine is switched off. Instead use the **I** mode - which uses less power.

Note that the 12 volt outlet in the cargo area supplies power even when the remote control key has been removed from the ignition switch.

Also, be aware of different accessories that load the electrical system. Do not use functions which use a lot of power when the engine is switched off. Examples of such functions are:

- ventilation fan
- windscreen wiper
- audio system (high volume)
- headlamps.

If the battery voltage is low the information display shows the text **LOW BATTERY POWER SAVE MODE**. The energy-saving function then shuts down certain functions or reduces certain functions such as the ventilation fan and/or audio system.

General

– In which case, charge the battery by starting the engine and then running it for at least 15 minutes - battery charging is more effective during driving than running the engine at idling speed while stationary.

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 - this avoids damaging 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 instead.
- Do not drive diagonally across an incline - drive in the direction of the incline.

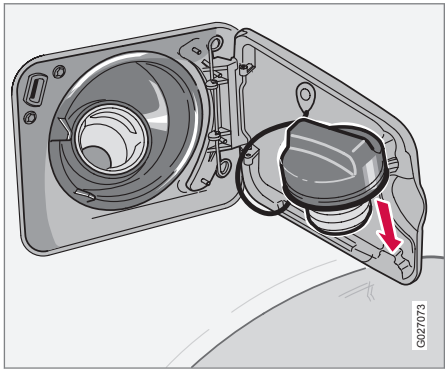
NOTE

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.

Slippery driving conditions

Practise driving on slippery surfaces under controlled conditions to learn how the car reacts.

Opening the fuel filler flap



The fuel filler cap is inside the fuel filler flap on the right-hand rear wing and hangs up on the inside of the fuel filler flap.

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

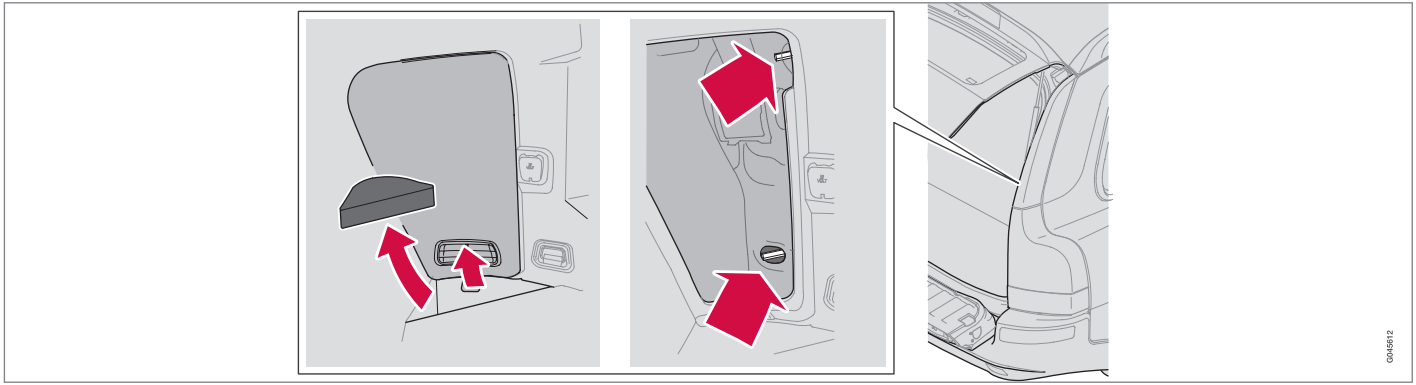
NOTE

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

Emergency unlocking of the fuel filler flap

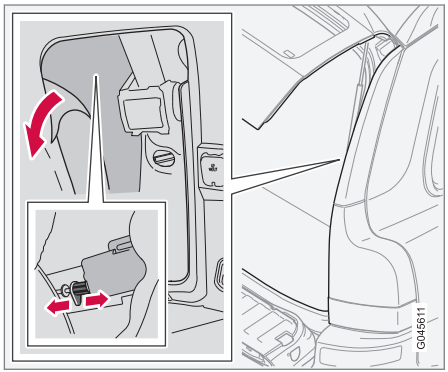
Manual unlocking of the fuel filler flap may be necessary if it cannot be opened normally. Proceed as follows:

Refuelling



Steps 1–3.

1. Lift up the corner piece from the floor in the rear right-hand corner of the cargo area.
2. Open the fuel filler flap by lifting up the handle and pulling it out.
3. Fold aside the insulation in order to access the flap's electrical lock.



Steps 4–5.

4. Insert your hand and locate the lock. Its location is approximately inside the rear edge of the fuel filler flap.
5. Carefully pull the lock plunger straight back - the flap can then be folded out.

After refuelling the flap can be relocked by first closing it and then pushing the lock plunger forward.

WARNING

There are sharp edges behind the panel so move your hands slowly and carefully.

Fuel cap

A certain overpressure may arise in the tank in the event of high outside temperatures. Open the cap slowly

NOTE

Put the petrol cap back on after refuelling. Turn until one or more clear clicks are heard.

Filling with fuel

Do not overfill the tank but fill until the pump nozzle cuts out.

NOTE

Excess fuel in the tank can overflow in hot weather.

Fuel of a quality lower than that specified in this chapter should not be used as engine power and fuel consumption could otherwise be negatively affected.

Filling with a fuel can[1]

When filling with a fuel can, use the funnel located under the floor hatch in the cargo area. The funnel is located by the spare wheel or in the well under the floor hatch.

Make sure you insert the funnel's pipe firmly into the filler pipe. The filler pipe has an openable cap and the funnel's pipe must be moved past the cap before filling can begin.

General information on fuel

WARNING

Always avoid inhaling fuel vapour and getting fuel splashes in the eyes.

In the event of fuel in the eyes, remove any contact lenses and rinse the eyes in plenty of water for at least 15 minutes and seek medical attention.

Never swallow fuel. Fuels such as petrol, bioethanol and mixtures of them and diesel are highly toxic and could cause permanent injury or be fatal if swallowed. Seek medical attention immediately if fuel has been swallowed.

WARNING

Fuel which spills on to the ground can be ignited by the exhaust fumes.

Switch off the fuel-driven heater before starting to refuel.

Never carry an activated mobile phone when refuelling. The ring signal could cause spark build-up and ignite petrol fumes, leading to fire and injury.

IMPORTANT

Mixing different types of fuel or the use of fuel not recommended invalidates Volvo's guarantees, and any associated service agreement. This applies to all engines. NOTE: It does not apply to cars with engines that are adapted to run on ethanol fuel (E85).

For detailed information on fuel consumption and tank volume - see page 296.

[1] Only applies to cars with diesel engine.

Refuelling

Petrol

Petrol must fulfil the EN 228 standard. Most engines can be run with octane ratings of 91, 95 and 98 RON.

- 91 RON must not be used for 4-cylinder engines and should only be used in exceptional cases with other 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, fuel with the highest possible octane rating is recommended for optimum performance and fuel economy.

IMPORTANT

- Always refuel with unleaded petrol so as not to damage the catalytic converter.
- Do not use additives not recommended by Volvo.

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/palladium. These metals act as catalysts, i.e. they participate in and accelerate a chemical reaction without being used up themselves.

Lambda-sond™ oxygen sensor

The Lambda-sond is part of a control system intended to reduce emissions and improve fuel economy.

An oxygen sensor monitors the oxygen content of the exhaust gases leaving the engine. This value is fed into an electronic system that continuously controls the injectors. The ratio of fuel to air directed to the engine is continuously adjusted. These adjustments create optimal conditions for efficient combustion of harmful emissions (hydrocarbons, carbon monoxide and nitrous oxides) using the three-way catalytic converter.

Diesel

Diesel must meet the EN 590 or JIS K2204 standards.

IMPORTANT

Only ever use fuel that fulfils the European diesel standard.

IMPORTANT

Diesel type fuels which must not be used: special additives, Marine Diesel Fuel, fuel oil, RME[2] (Rape Methyl Ester) and vegetable oil. These fuels do not fulfil the requirements in accordance with Volvo recommendations and generate increased wear and engine damage that is not covered by the Volvo warranty.

Diesel engines are sensitive to contaminants, such as excessively high volumes of sulphur particles for example. Only use diesel fuel from well-known producers. Never use diesel of dubious quality.

At low temperatures (-40 °C to -6 °C), a paraffin precipitate may form in the diesel fuel, which may lead to ignition problems. Special diesel fuel designed for low temperatures around freezing point is available from the

[2] Diesel fuel may contain a certain amount of RME, but further amounts must not be added.

major oil companies. This fuel is less viscous at low temperatures and reduces the risk of paraffin precipitate.

IMPORTANT

Use special winter grade fuel during cold months.

The risk of condensation in the fuel tank is reduced if the tank is kept well filled. When refuelling, check that the area around the fuel filler pipe is clean. Avoid spilling fuel onto the paintwork. Wash off any spillage with detergent and water.

IMPORTANT

The sulphur content must be a maximum of 50 ppm.

Empty tank

The design of the fuel system in a diesel engine means that if the vehicle runs out of fuel, the tank may need to be vented in the workshop in order to restart the engine after fuelling.

Once the engine has stopped due to fuel starvation, the fuel system needs a few moments to carry out a check. Do this before starting the engine, once the fuel tank has been filled with diesel:

1. Insert the remote control key in the ignition switch and turn to key position **II** (see page 145).
2. Wait approx. 1 minute.
3. To start the engine: Depress the brake and/or clutch pedal, and turn the remote control key to start position **III**.

Draining condensation from the fuel filter

The fuel filter separates condensation from the fuel. Condensation can disrupt engine operation.

The fuel filter must be drained at the intervals specified in the Service and Warranty Booklet or if you suspect that the car has been filled with contaminated fuel.

IMPORTANT

Certain special additives remove the water separation in the fuel filter.

Diesel particle filter (DPF)

Diesel cars may be equipped with a particle filter, which results in more efficient emission control. The particles in the exhaust gases are collected in the filter during normal driving. So-called "regeneration" is started in order to burn away the particles and empty the filter. This requires the engine to have reached normal operating temperature.

Regeneration of the filter takes place automatically and normally takes 10-20 minutes. It may take a little longer at a low average speed. Fuel consumption may increase slightly during regeneration.

The rear window heating may be activated automatically to increase the load on the engine during regeneration without warning.

Regeneration in cold weather

If the car is frequently driven short distances in cold weather then the engine does not reach normal operating temperature. This means that regeneration of the diesel particle filter does not take place and the filter is not emptied.

When the filter has become approximately 80% full of particles, the yellow information symbol on the instrument panel illuminates, and the message **SOOT FILTER FULL SEE MANUAL** is shown on the instrument panel display.

Start regeneration of the filter by driving the car until the engine reaches normal operating temperature, preferably on a main road or motorway. The car should then be driven for approximately ca 20 minutes more.

Refuelling

NOTE

The following may arise during regeneration:

- a smaller reduction of engine power may be noticed temporarily
- fuel consumption may increase temporarily
- a smell of burning may arise.

When regeneration is complete the message is cleared automatically.

Use the parking heater* in cold weather so that the engine reaches normal operating temperature more quickly.

IMPORTANT

If the filter fills up it may be incapable of functioning. Then it can be difficult to start the engine and there is a risk that the filter will have to be replaced.

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

Before starting the engine

– Apply the parking brake.

Automatic gearbox

– Gear selector in position **P** or **N**.

WARNING

Never remove the remote control key from the ignition switch while driving or when the car is being towed. The steering lock could otherwise be activated, making it impossible to steer the car.

The remote control key must be in key position **II** when the car is being towed.

NOTE

The remote control key's key blade must be fully extended when starting the car, see page 124. Otherwise there is a risk that the immobiliser function will prevent the car from starting.

NOTE

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

Starting the engine

IMPORTANT

If the engine fails to start after 3 attempts - wait for 3 minutes before making a further attempt. Starting capacity increases if the battery is allowed to recover.

Petrol

– Turn the remote control key to key position **III**. If the engine does not start within 5–10 seconds, release the key and try again.

Diesel

1. Turn the remote control key to key position **II**.

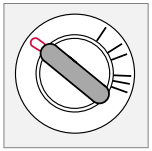
   An indicator symbol in the combined instrument panel shows that engine preheating is underway, see page 59.

2. Turn the ignition key to position **III** when the indicator symbol goes out.

   > The starter motor is activated.

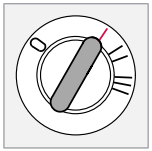
Ignition switch and steering lock

0 – Locked position



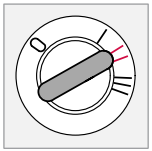
The steering lock is activated when the remote control key is removed from the ignition switch.

I – Radio position



Steering lock deactivated. Certain functions can be used. The engine's electrical system is not activated.

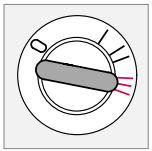
II – Driving position



The remote control key's position when driving. The whole electrical system is engaged.

Starting the engine

III – Start position



The starter motor is activated. The remote control key is released when the engine has started and then springs back automatically to drive 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. In which case, turn the wheel back and forth to make it easier to turn the key.

Autostart (3.2)

Using the autostart function, the remote control key does not need to be kept in key position **III** until the engine has started.

- Turn the key to the start position and then release it - the starter motor then operates automatically (up to 10 seconds) until the engine has started.

NOTE

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

Remote control keys and electronic immobiliser

The remote control key must not hang with other keys or metal objects on the same key ring. The electronic immobiliser could be activated accidentally.

Never rev up the engine hard immediately after a cold start!

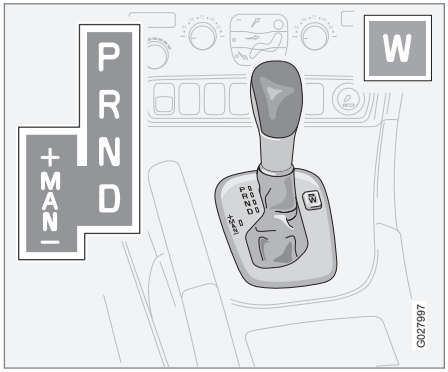
If the engine does not start or misfires, contact a workshop - a Volvo workshop is recommended.

WARNING

You must **never** turn the remote control key to key position **I** or **0** and **never** remove the remote control key from the ignition switch while the car is moving. The steering lock could otherwise be activated, making it impossible to steer the car.

Always remove the remote control key from the ignition switch when leaving the car – especially if children are left alone in the car.

Gear positions



P – Parking position
Select position **P** when you wish to start the engine or park the car.

IMPORTANT

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

NOTE

The brake pedal must be depressed to move the gear lever from the **P** position.

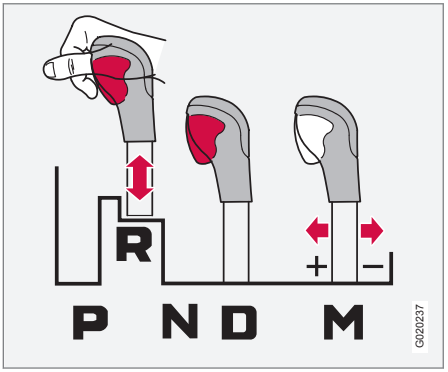
The gearbox is mechanically blocked when the **P** position is engaged. Always apply the parking brake when parking the car.

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

N – Neutral
N is the neutral position. No gear is engaged and the engine can be started. Apply the parking brake when the car is stationary with the gear selector in position **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 must be stationary when the gear selector is moved to position **D** from position **R**.

Gear selector inhibitor

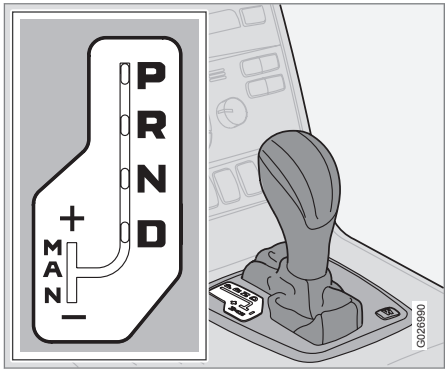


The gear selector can always be moved freely between **N** and **D**. Other positions are locked with a latch that is released with the inhibitor button on the gear selector.

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

Automatic gearbox

Manual positions



To move from the automatic driving position **D** to a manual position, move the gear selector to position **M**. To go from position **M** to the automatic driving position **D**, move the selector to position **D**.

On the 5-speed automatic gearbox, gears **3**, **4** and **5**[1] have the Lock-up function (locked gears), which provides better engine braking and lower fuel consumption.

While driving

The manual gearshift mode can be selected at any time while driving. The engaged gear is locked until you choose another gear.

If the gear selector is moved to **–** (minus) the car changes down a gear and engine brakes at the same time as the accelerator pedal is released. If the gear selector is moved to **+** (plus) the car changes up a gear.

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

W – Winter

Press the **W** button to activate and deactivate the winter program. Display of the W symbol in the combined instrument panel indicates that the winter program is active.

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

The W program can be selected regardless of the position of the gear selector, but is only operational when the selector is in position **D**.

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 reduce 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.

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.

[1] 2nd and 6th gear also have lock-up on the 6-speed automatic gearbox.

Kick-down

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

If the accelerator is released from the kick-down position, the gearbox automatically changes up.

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

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

The kick-down function cannot be used in manual gear position.

Safety systems

Cars with an automatic gearbox have special safety systems:

Keylock

To remove the remote control key from the ignition switch, 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:

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

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. The power is automatically distributed between the 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.

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

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 depressed 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).

WARNING

The brake servo only works when the engine is running.

NOTE

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

Brake circuits

This symbol illuminates if a brake circuit is not working.

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 brake pads and dries off any water. This precaution is also recommended before parking the car for a long period in such weather conditions.

Maintenance

To keep the car as safe and reliable as possible, follow the Volvo service intervals as specified in the Service and Warranty Booklet, see page 208.

IMPORTANT

The wear on the brake system's components must be checked regularly.

Contact a workshop for information about the procedure or engage a workshop to carry out the inspection - an authorised Volvo workshop is recommended.

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 uses engine braking more efficiently so the foot brake is only required for brief periods.

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

Brake system

Anti-lock braking system (ABS)

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

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

The ABS symbol illuminates for 2 seconds when the engine is started in connection with an automatic function check.

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:

1. Depress the brake pedal with full force. Pulses will be felt.
2. 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.

Electronic brake force 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.

WARNING

If the BRAKE and ABS warning symbols illuminate at the same time, there may be a fault in the brake system. If the level in the brake fluid reservoir is normal at this stage, drive carefully to the nearest workshop and have the brake system checked - an authorised Volvo workshop is recommended.

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) For sudden braking, full-strength braking is provided instantaneously. The EBA function senses when heavy braking is underway by 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. It cannot be disengaged.

NOTE

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

General

The Dynamic Stability and Traction Control system DSTC (Dynamic Stability and Traction Control) improves the car's traction and helps the driver to avoid skidding.

A pulsing sound may be noticed during braking or acceleration when the system is in action. The car may accelerate slower than expected when the accelerator pedal is depressed.

Active Yaw Control

The function limits the driving and brake force of the wheels individually in order to stabilise the car.

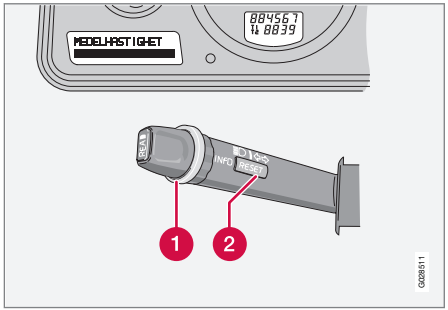
Spin Control

The function prevents the driving wheels from spinning against the road surface during acceleration.

Traction control system

The function is active at low speed and transfers power from the driving wheel that is spinning to the one that is not.

Reduced operation



1 Thumbwheel

2 **RESET** button

System operation during skidding and acceleration can be partially deactivated.

Operation during skidding is then delayed and so allows more skidding which provides greater freedom for dynamic driving. Traction in deep snow or sand is improved at the same time as acceleration is no longer limited.

Operation

1. Turn the thumbwheel (1) until the DSTC menu appears.

   DSTC ON means that the system function is unchanged.

   DSTC SPIN CONTROL OFF means that system operation is reduced.

2. Press and hold **RESET** (2) until the menu is changed.

   The system remains reduced until the driver reactivates it or until the engine is switched off - after the engine is started the next time DSTC is back in its normal mode again.

WARNING

Suppressing system function may alter the driving characteristics of the car.

NOTE

DSTC ON is shown for several seconds on the display each time the engine is started.

Stability and traction control system*

Messages on the display

ANTI-SKID TEMPORARILY OFF means that the system has been temporarily reduced due to excessive brake temperature.

– The function is reactivated automatically when the brakes have cooled.

ANTI-SKID SERVICE REQUIRED system disabled due to a fault.

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

> If the message remains when the engine is restarted, drive to a workshop. An authorised Volvo workshop is recommended.

Symbols in the combined instrument panel

DSTC system

The symbol illuminates and goes out again after approx. 2 seconds when the engine is started

- Indicates system check.

The symbol flashes

- Indicates that the system is operating.

The symbol illuminates and stays lit

At the same time the display shows **ANTI-SKID SERVICE REQUIRED**.

- Indicates a fault in the **DSTC** system.

1. Stop the car in a safe place and turn off the engine.
2. 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 illuminated then a workshop should check the system - an authorised Volvo workshop is recommended.

The symbol illuminates with a constant yellow glow

Symbol for Warning

At the same time the display shows **TRACTION CONTROL TEMPORARILY OFF** .

- Indicates that the system has been temporarily reduced due to excessive brake temperature.

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

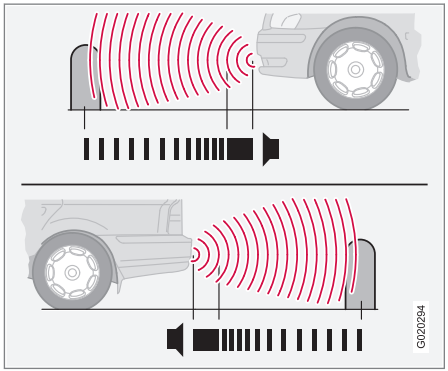
WARNING

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 road surfaces.

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

General[1]



Parking assistance front and rear.

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

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.

Variants

Parking assistance is available in two variants:

- Rear only
- Both front and rear

Function

The system is switched on automatically when the car is started at which point the lamp in the switch for parking assistance illuminates.

The display shows the text message **PARK ASSIST ACTIVE** if reverse gear is engaged or if the front sensors detect an object.

Parking assistance is active at speeds below 15 km/h. The system is deactivated at higher speeds. When the speed is below 10 km/h the system is reactivated.

The frequency of the signal increases as you come closer to an object in front of or behind the car. If the volume of another audio source from the audio system is high, then this is automatically lowered.

The tone becomes constant at a distance of about 30 cm. If there are objects within this distance behind or in front of the car, the signal alternates between left and right-hand speakers.

Rear parking assistance

The distance covered to the rear of the car is about 1.5 m. Rear parking assistance is activated when reverse gear is engaged. The signal comes from the rear loudspeakers.

The system must be deactivated when reversing with a trailer, or bike carrier on the towbar or similar. Otherwise the trailer or bike carrier would trigger the sensors.

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

Front parking assistance

The distance covered to the front of the car is about 0.8 metres. The signal comes from the front loudspeakers.

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

Fault indicator

If the information symbol illuminates with constant glow and the display shows **PARK ASSIST SERVICE REQUIRED** then parking assistance is disengaged.

[1] Depending on the market, the **Parking assistance** system may be either Standard, Option or Accessory.

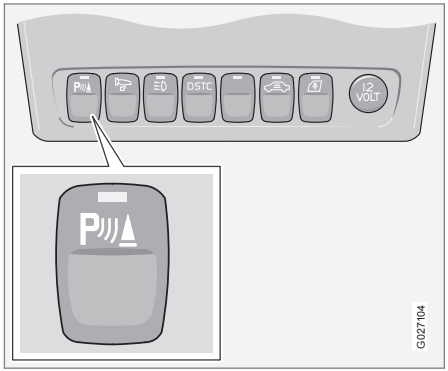
Park assist syst*

IMPORTANT

In certain conditions the parking assistance system may produce incorrect warning signals that are caused by external sound sources that emit the same ultrasonic frequencies that the system works with.

Examples of such sources include horns, wet tyres on asphalt, pneumatic brakes and exhaust noises from motorcycles etc.

Off/On



Button position in the row may vary.

Parking assistance can be deactivated with the button in the switch panel. The lamp in the switch goes out. Parking assistance is switched on again with the switch and the lamp illuminates.

Cleaning the sensors

Parking assistance sensors.

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

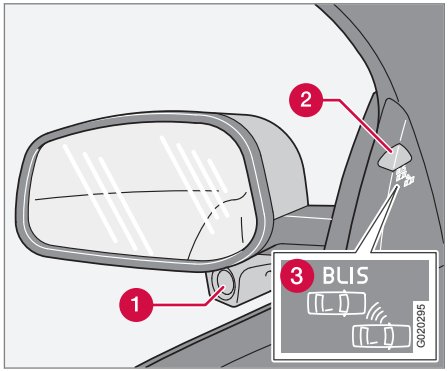
NOTE

Dirt, ice and snow covering the sensors may cause incorrect warning signals.

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

Blind Spot Information System - BLIS*

General



Rearview mirror with BLIS system.

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

WARNING

The system is a supplement to, not a replacement for, a safe driving style and use of the rearview mirrors. It can never replace the driver's attention and responsibility. The responsibility for changing lanes safely always rests with the driver.

BLIS is an information system that under certain conditions can help to draw the driver's attention to vehicles moving in the same direction in the so-called "blind spot".

The system is designed to work most effectively when driving in dense traffic on multi-lane highways.

BLIS is based on digital camera technology. The cameras (1) are located under the door mirrors.

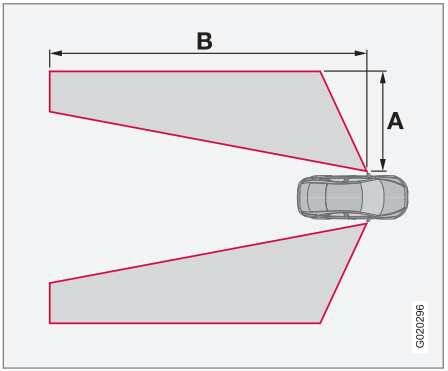
When a camera has detected a vehicle inside the blind spot zone the indicator lamp (2) illuminates with a constant glow.

NOTE

The lamp illuminates on the side of the car where the system has detected the vehicle. If the car is overtaken on both sides at the same time then both lamps illuminate.

BLIS advises the driver with a message if a fault arises in the system. If for example the system's cameras are obscured then the BLIS indicator lamp flashes and a message is shown in the information display. In such cases, check and clean the lenses. If necessary, the system can be switched off temporarily by pressing the BLIS button, see page 158.

Blind spots



"Blind spots" intended to be covered by BLIS cameras.

Distance A = approx. 3.0 m

Distance B = approx. 9.5 m

Cleaning

In order to work most effectively the BLIS camera lenses must be clean. The lenses can be cleaned with a soft cloth or damp sponge. Clean the lenses carefully so that they are not scratched.

Blind Spot Information System - BLIS*

IMPORTANT

The lenses are electrically heated to melt ice or snow. If necessary, brush snow away from the lenses.

When BLIS operates

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

Overtaking

The system is designed to react if you overtake another vehicle at a speed of up to 10 km/h faster than the other vehicle.

The system is designed to react if you are overtaken by a vehicle travelling up to 70 km/h faster than your vehicle.

WARNING

BLIS does not work in sharp bends.

BLIS does not work when the car is reversing.

A wide trailer coupled to the car can conceal other vehicles in adjacent lanes. It can prevent the vehicle in the screened area from being detected by BLIS.

Daylight and darkness

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

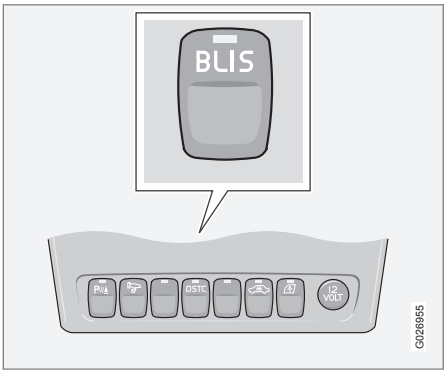
In darkness the system reacts to the headlamps of surrounding vehicles. Vehicles with headlamps that are switched off are not detected by the system. This means for example that the system does not react to a trailer without headlamps which is towed behind a car or truck.

WARNING

The system does not react to cyclists or moped riders.

The BLIS cameras have limitations similar to those of the human eye, i.e. they do not see as well in e.g. heavy snowfall, strong oncoming light or thick fog.

Activate/deactivate



Button for activating/deactivating.

BLIS is activated when the engine is started. The indicator lamps in the door panels flash three times when BLIS is activated.

The system can be deactivated/activated by pressing **BLIS**.

When BLIS is deactivated the light in the button goes out and a text message is shown on the instrument panel display.

When BLIS is activated the light in the button illuminates, a new text message is shown on the display and the indicator lamps in the door panels flash three times. Press the **READ** button to clear the text message. For more information on messages, see page 60.

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

BLIS system message

Text on the display[A]	Specification
BLIND-SPOT INFO SYSTEM ON	The BLIS system is activated.
BLIND-SPOT SYST SERVICE REQUIRED	Blind spot syst. disengaged - contact a workshop.
BLIND-SPOT SYST FUNCTION REDUCED	Reduced function in the data transmission between the BLIS system's camera and the car's electrical system. The camera resets itself when the data transmission between the BLIS system's camera and the car's electrical system returns to normal.
BLIND-SPOT SYST R CAMERA BLOCKED	Right camera blocked - clean the lens.
BLIND-SPOT SYST L CAMERA BLOCKED	Left camera blocked - clean the lens.
BLIND-SPOT SYST CAMERAS BLOCKED	One or both cameras blocked - clean the lenses.
BLIND-SPOT INFO SYSTEM OFF	The BLIS system is deactivated.

A Messages above are only shown if the remote control key is in key position **II** (or if the engine is running) and **BLIS** is active (i.e. if the driver has not switched off the system).

IMPORTANT

Repair of the BLIS system components must only be performed by a workshop - an authorised Volvo workshop is recommended.

Limitations

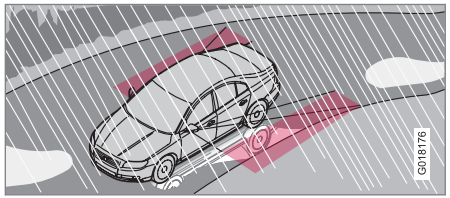
In some situations the BLIS indicator lamp may illuminate despite there being no other vehicle within the blind spot.

NOTE

If the BLIS indicator lamp illuminates on isolated occasions despite there being no other vehicle within the blind spot then this does not mean that a fault has arisen in the system.

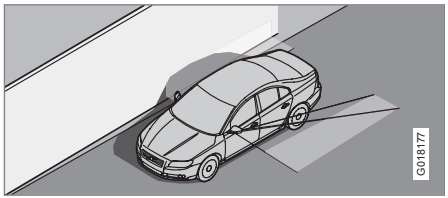
In the event of a fault in the BLIS system the display shows the text **BLIND-SPOT SYST SERVICE REQUIRED**.

Here are some examples of situations where the BLIS indicator lamp may illuminate even if there is no other vehicle within the blind spot.

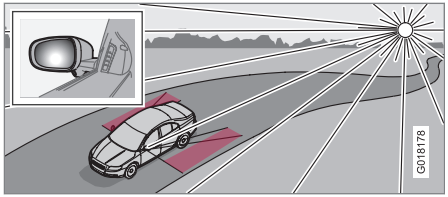


Reflection from shiny wet road surface.

Blind Spot Information System - BLIS*



Own shadow on large light smooth surface, e.g. noise barrier or concrete road surface.



Low stationary sunlight shining into the camera.

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

Jump starting

Use a donor battery if the battery is discharged and the engine does not start. Do not tow the car to bump start it, see page 163.

IMPORTANT

Bump starting the car can damage the catalytic converter.

Towing

Find out the highest legal speed for towing before towing the car.

The car must always be towed facing forward.

1. Unlock the steering wheel lock so that the car can be steered.
2. For the driver of the towing vehicle: Drive gently.

   For the driver of the vehicle being towed: Keep the towline taut by holding your foot gently pressed on the brake pedal in order to avoid unnecessary jerking.

WARNING

The steering lock remains in the position it was in when the power was cut off. The steering lock must be unlocked before towing.

The remote control key must be in key position **II**. Never remove the remote control key from the ignition switch while driving or when the car is being towed.

WARNING

The brake servo and power steering do not work when the engine is switched off. The brake pedal must be pressed about five times harder than normal, and the steering will be considerably heavier than normal.

Automatic gearbox

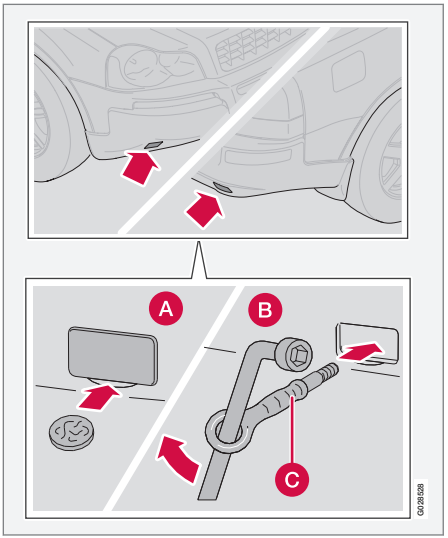
– Move the gear selector to **N** position and release the parking brake.

Cars with automatic gearbox must not be towed at speeds above 80 km/h or further than 80 km.

Towing eye

Before towing the towing eye must be bolted securely onto the bumper. The socket and cover for the towing eye are on the right-hand side of each bumper.

The towing eye is in the tool kit in the cargo area.



Proceed as follows:

1. Release the bottom edge of the cover (A) with a screwdriver or a coin.
2. Screw in the towing eye (B).

Towing and recovery

3. Screw the eye securely into place right up to the flange (C). You can use a wheel wrench.

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

IMPORTANT

On certain cars with fitted towbar the towing eye cannot be secured in the rear mounting. In which case, secure the tow rope in the towbar. For this reason, it is advisable to always store the detachable towbar in the car.

Recovery

The car must always be towed with the wheels rolling forward.

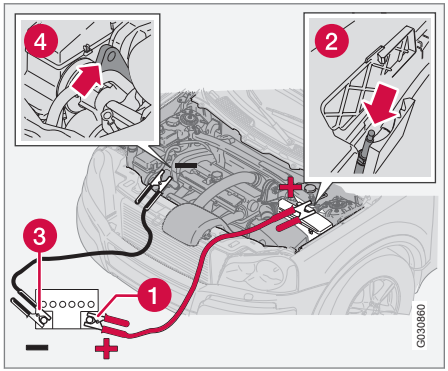
IMPORTANT

- An all-wheel drive car (AWD) with raised front suspension must not be towed at speeds above 70 km/h. It should not be towed further than 50 km.

WARNING

The towing eye is only designed for towing on roads - not for recovering the car. Call a recovery service for recovery assistance.

Starting with a donor battery



The battery is fitted in the rear of the car (see page 221) but there are also connection points under the bonnet.

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

When jump starting the car, the following steps are recommended to avoid short circuits or other damage:

1. Turn the remote control key to key position **0**.
2. Check that the donor battery has a voltage of 12 V.
3. If the donor battery is installed in another car - switch off the donor car's engine and make sure that the two cars do not touch each other.
4. Connect one of the red jump lead's clamps to the donor battery's positive terminal (1).

IMPORTANT

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

5. Connect the red jump lead's other clamp onto the car's positive terminal (2).
   > A spring-loaded cover over the car's extra positive terminal must first be folded up!
6. Connect one of the black jump lead's clamps to the donor battery's negative terminal (3).
7. Fit the second clamp on a grounding point e.g. one of the engine's lifting eyes (4).
8. Check that the jump lead clamps are affixed securely so that there are no sparks during the starting procedure.
9. Start the engine of the "donor car" and allow it to run a few minutes at a speed slightly higher than idle approx. 1500 rpm.
10. Start the engine in the car with the discharged battery.

IMPORTANT

Do not touch the crocodile clips during the start procedure. There is a risk of sparks forming.

11. Remove the jump leads in reverse order - first the black and then the red.
    > Make sure that none of the black jump lead's clamps comes into contact with the battery's positive terminal or the clamp connected to the red jump lead!

Jump starting

WARNING

- The battery can generate oxyhydrogen gas, which is highly explosive. A spark can be formed if a jump lead is connected incorrectly, and this can be enough for the battery to explode.
- The battery contains sulphuric acid, which can cause serious burns.
- If sulphuric acid comes into contact with eyes, skin or clothing, flush with large quantities of water. If acid splashes into the eyes - seek medical attention immediately.

For more information on the car's battery, see page 220.

General

Payload depends on the car's kerb weight. The total of the weight of the passengers and all accessories, e.g. towbar, reduces the car's payload by a corresponding weight. For more detailed information on weights, see page 288.

If the towing bracket is fitted by an authorised Volvo workshop, then the car is delivered with the necessary equipment for driving with a trailer.

- The car's towing bracket must be of an approved type.
- If the towbar is retrofitted, check with your Volvo dealer that the car is fully equipped for driving with a trailer.
- Distribute the load on the trailer so that the weight on the towing bracket follows the specified maximum towball load.
- Increase the tyre pressure to the recommended pressure for a full load. For tyre pressure label location, see page 183.
- The engine is loaded more heavily than usual when driving with a trailer.
- Do not tow a heavy trailer when the car is brand new. Wait until it has been driven at least 1000 km.
- The brakes are loaded much more than usual on long and steep downhill slopes. Downshift to a lower gear and adjust your speed.
- For safety reasons, the maximum permitted speed for the car when coupled with a trailer should not be exceeded. Follow the regulations in force for the permitted speeds and weights.

Trailer weights

For information on Volvo's permitted trailer weights, see page 288.

WARNING

Follow the stated recommendations for trailer weights. Otherwise, the car and trailer may be difficult to control in the event of sudden movement and braking.

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.

Automatic gearbox

NOTE

Some models require an oil cooler for the automatic gearbox when driving with a trailer. Check with your nearest Volvo dealer as to what applies to your car if you have a retrofitted towbar.

Overheating

When driving with a trailer in hilly terrain in a hot climate there may be a risk of overheating.

- An automatic gearbox selects the optimum gear related to load and engine speed.
- In the event of overheating a warning symbol illuminates on the instrument panel combined with a text message - follow the recommendation given.

Steep inclines

- Do not lock the automatic transmission in a higher gear than the engine "can cope with" - it is not always a good idea to drive at a high gear with low engine revolutions.
- Maintain a low speed when driving with a trailer up long, steep ascents.
- Avoid driving with a trailer on inclines of more than 12%.

Driving with a trailer

Parking on a hill

1. Depress the foot brake.
2. Activate the parking brake.
3. Move the gear selector to position **P**.
4. Release the foot brake.

- Move the gear selector to park position **P** after parking a car with an automatic gearbox and with a trailer hitched. Always use the parking brake.
- Block the wheels with chocks when parking a car with hitched trailer on a hill.

Starting on a hill

1. Depress the foot brake.
2. Move the gear selector to driving position **D**.
3. Release the parking brake.
4. Release the foot brake and start driving off.

Levelling

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.

Towbar

If the car is equipped with a detachable towbar, the installation instructions for the loose section must be followed carefully, see page 169.

WARNING

If the car is fitted with a Volvo detachable towbar:

- Follow the installation instructions carefully.
- The detachable section must be locked with the key before setting off.
- Check that the indicator window shows green.

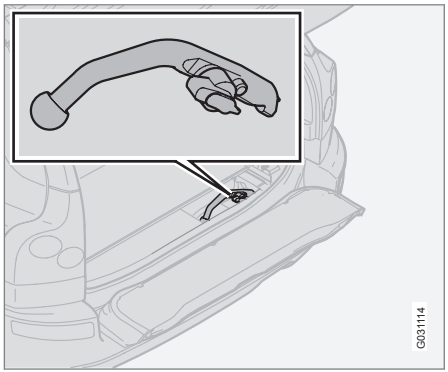
Important checks

- The towbar's towball must be cleaned and greased regularly.

NOTE

When a hitch with a vibration damper is used, the towball must not be lubricated.

Storing the towbar

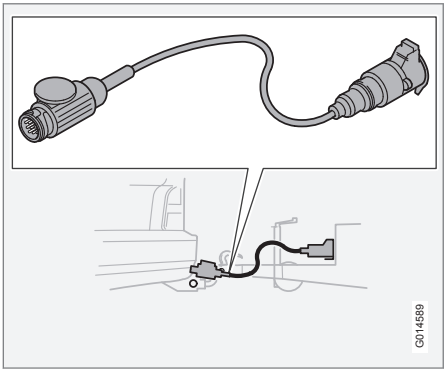


Towbar storage space.

IMPORTANT

Always remove the towbar after use and store it in the appointed location in the car, firmly fastened with its strap.

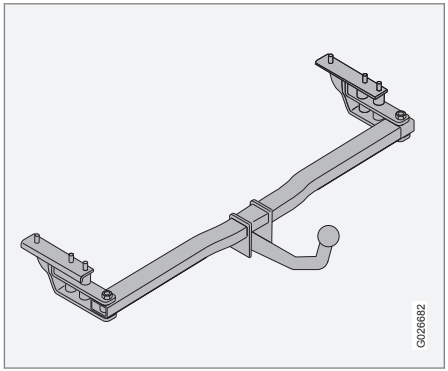
Trailer cable

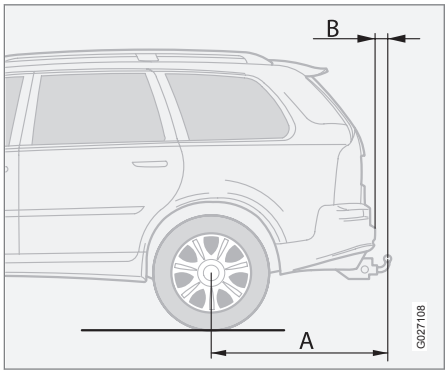


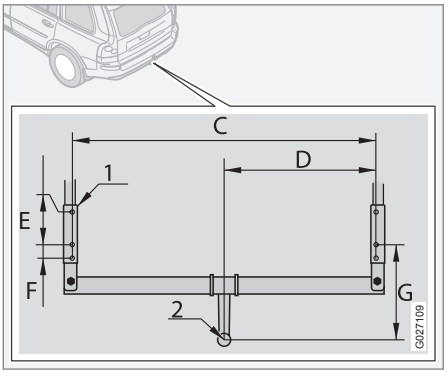
An adapter is required if the car's towing bracket has 13 pin electrics and the trailer has 7 pin electrics. Use an adapter cable approved by Volvo. Make sure the cable does not drag on the ground.

Towing equipment*

Specifications





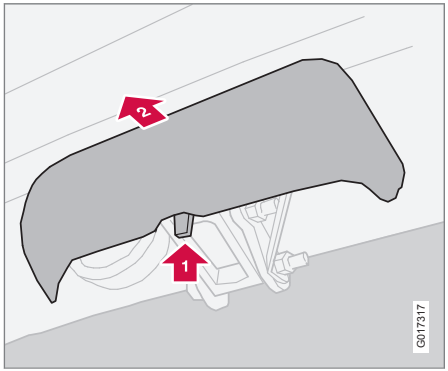


Dimensions for mounting points (mm)

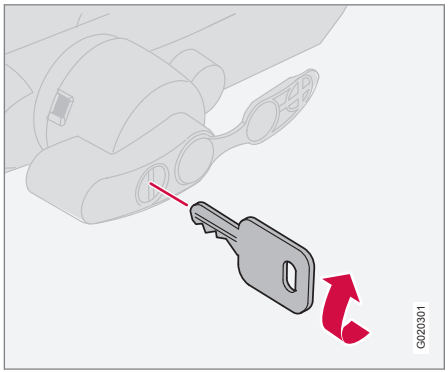
	A	B	C	D	E	F	G
Fixed or detachable towbar	1110	85	1081	541	122	50	354
1	Side member						
2	Ball centre						

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

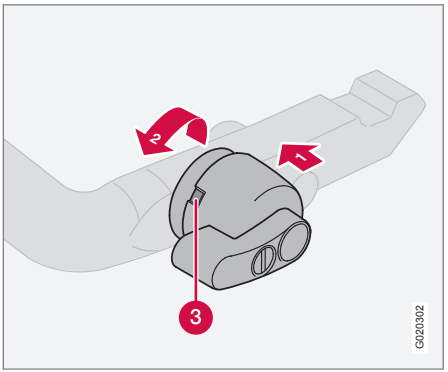
Fitting the towbar



1. Remove the protective cover by first pressing in the catch 1 and then pulling the cover straight back 2.

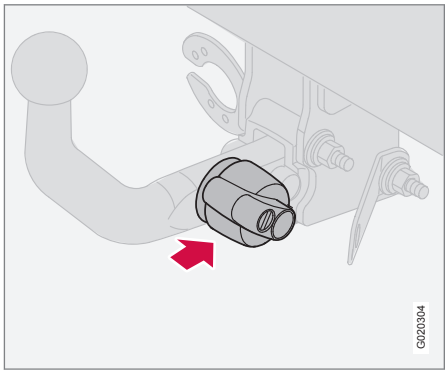


2. Ensure that the mechanism is in the unlocked position by turning the key clockwise.

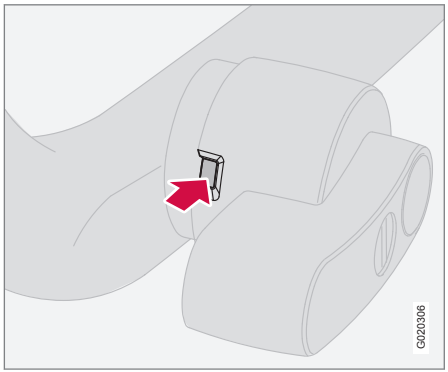


3. Check that the indicator window (3) shows red. If the window does not show red, press in (1) and turn the locking wheel anticlockwise (2) until you hear a click.

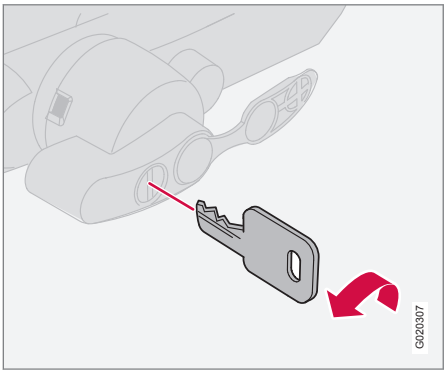
Detachable towbar*



4. Insert the towbar until you hear a click.



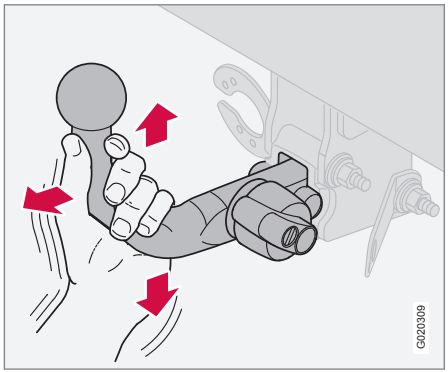
5. Check that the indicator window shows green.



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

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

Detachable towbar*



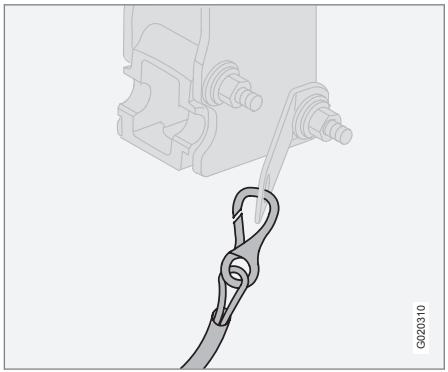
7. Check that the towbar is secure by pulling it up, down and back.

WARNING

If the towbar is not fitted correctly then it must be detached and reattached in accordance with the previous instructions.

IMPORTANT

Only grease in the ball for the towing hitch, the remainder of the towbar should be clean and dry.

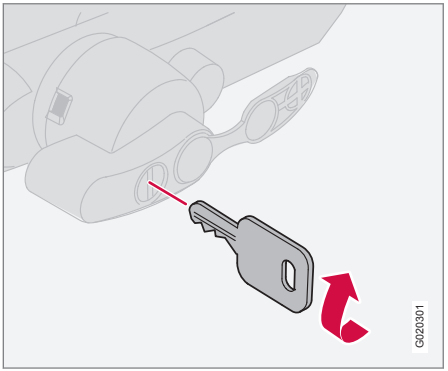


8. Safety cable.

WARNING

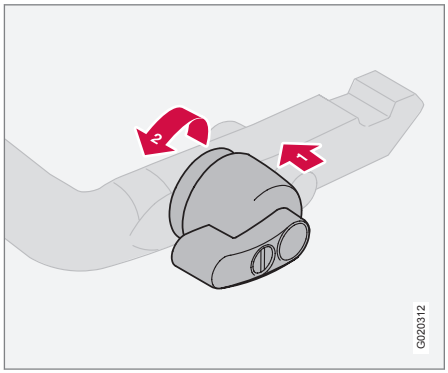
Take care to secure the trailer's safety cable in the intended bracket.

Removing the towbar

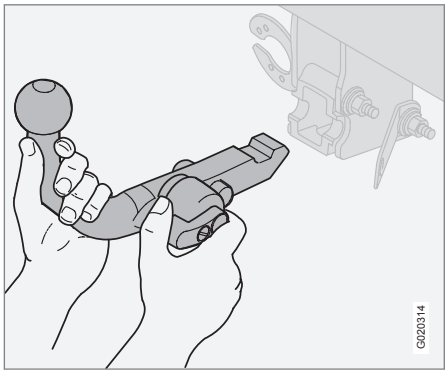


1. Insert the key and turn it clockwise to the unlocked position.

Detachable towbar*



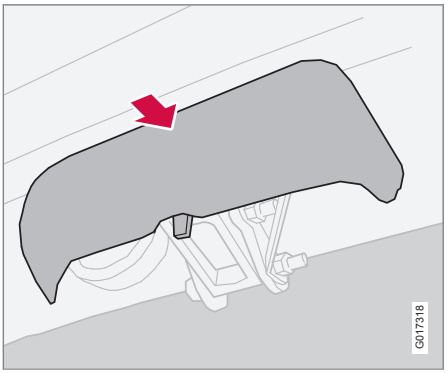
2. Push in the locking wheel (1) and turn it anticlockwise (2) until you hear a click.



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

WARNING

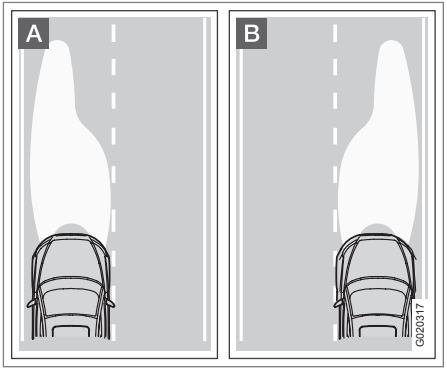
Secure the towbar safely if it is stored in the car, see page 167.



4. Push on the protective cover.

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

Correct light pattern for left or right-hand traffic



A Headlamp pattern for left-hand traffic.

B Headlamp pattern for 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, see page 176. Transfer the pattern to a self-adhesive, waterproof material such as opaque tape for example.

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 to which the template should be matched.

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.

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

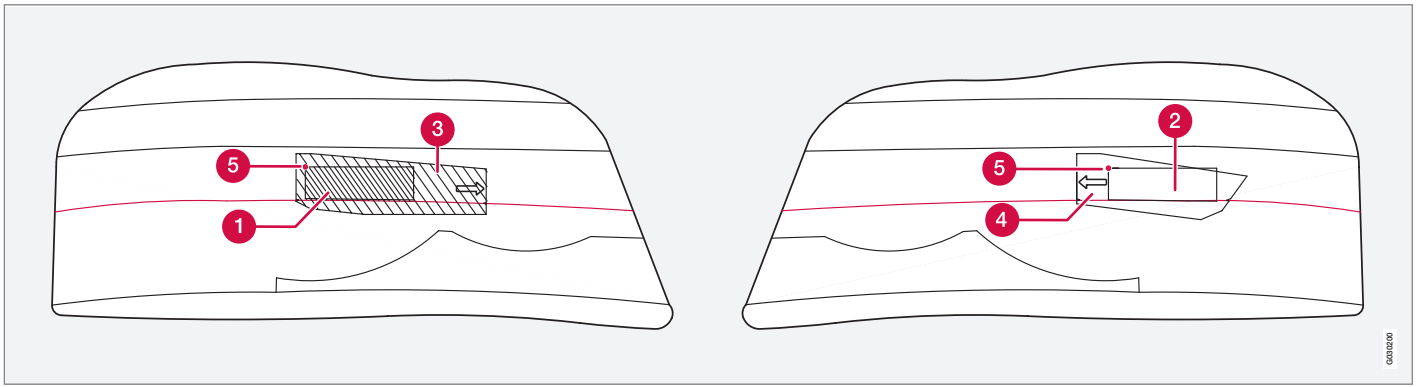
The line between the > < markings on the templates should be approx. 140 mm.

Reference measurements template 4

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

Adjusting headlamp pattern for Active Xenon headlamps (ABL), see page 62.

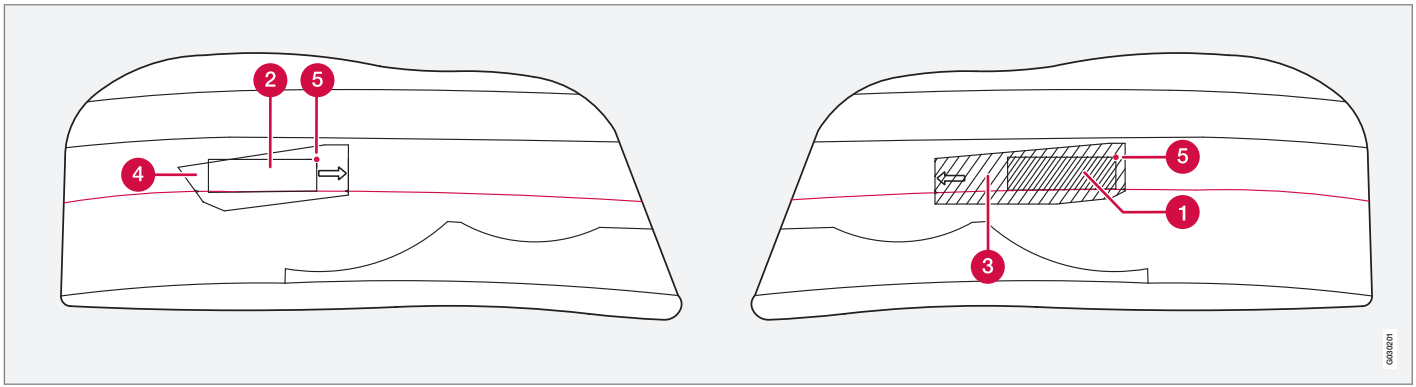
Adjusting headlamp pattern



Left-hand drive car in left-hand traffic.

1. Masking on right-hand halogen lens
2. Masking on left-hand halogen lens
3. Masking on right-hand Xenon lens
4. Masking on left-hand Xenon lens
5. Control point in headlamp lens.

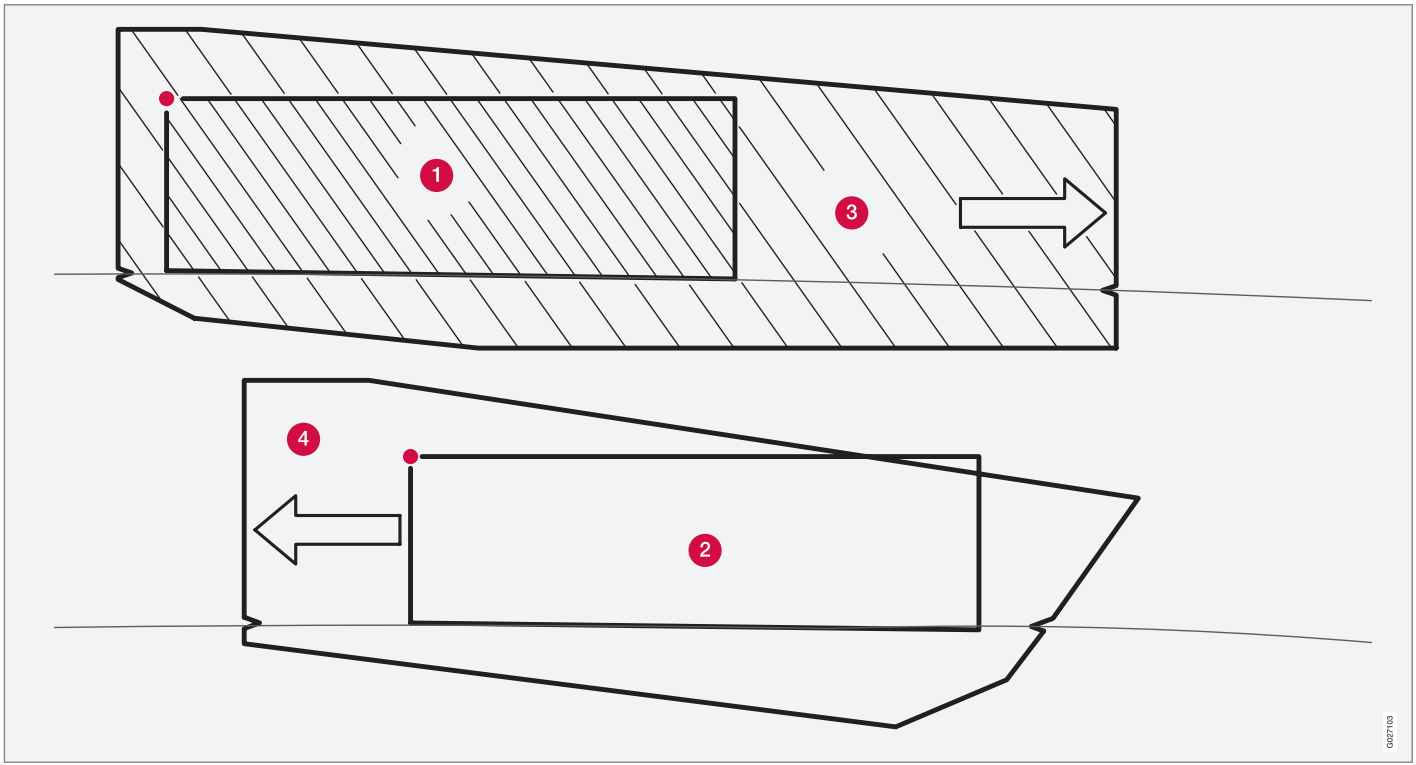
Adjusting headlamp pattern



Right-hand drive car in right-hand traffic.

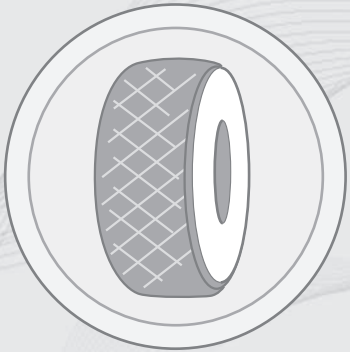
1. Masking on left-hand halogen lens
2. Masking on right-hand halogen lens
3. Masking on left-hand Xenon lens
4. Masking on right-hand Xenon lens
5. Control point in headlamp lens.

Adjusting headlamp pattern



Templates for masking.

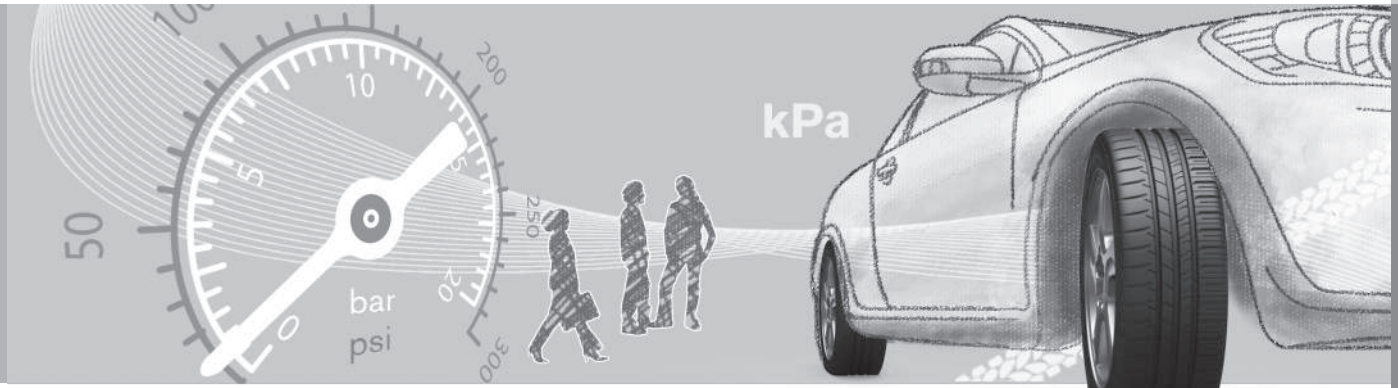
General..... 180
Tyre pressure..... 183
Warning triangle* and spare wheel *..... 184
Changing wheels..... 187
Emergency puncture repair*..... 190



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

07

WHEELS AND TYRES



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 297.

Designation of dimensions

The dimensions are stated on all car tyres. Example of designation:

235/60R18 103 V.

235	Tyre width (mm)
60	Ratio between tyre wall height and tyre width (%)
R	Radial ply
18	Rim diameter in inches (")
103	Tyre load index (in this case 615 kg)
V	Speed rating for maximum permitted speed (in this case 240 km/h).

Speed ratings

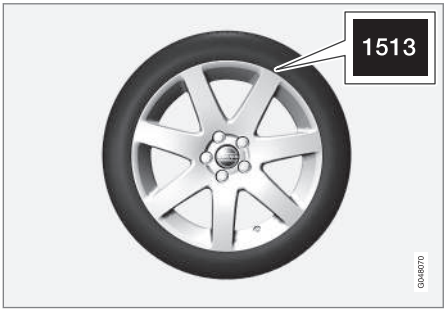
The car is approved as a whole, which means that dimensions and speed ratings must not differ from those specified on the vehicle registration document. The only exception to these conditions is winter tyres (both those with metal studs and those without). If such a tyre is chosen, the car must not be 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
Y	300 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. For this reason, aim to get as fresh tyres as possible when you replace them. This is especially important with regard to winter tyres. The last four digits in the sequence mean the week and year of manufacture. This is the tyre's DOT marking (Department of Transportation), and this is stated with four digits, for example 1510. The tyre in the illustration was manufactured in week 15 of 2010.

Tyre age

All tyres older than six years should be checked by an expert even if they seem undamaged. The reason for this is that tyres

age and decompose, even if they are hardly ever or never used. The function can therefore be affected due to the tyre's constituent materials being broken down. In such a case the tyre should then not be used.This also applies to spare tyres, winter tyres and tyres saved for future use. Examples of external signs which indicate that the tyre is unsuitable for use are cracks or discoloration.

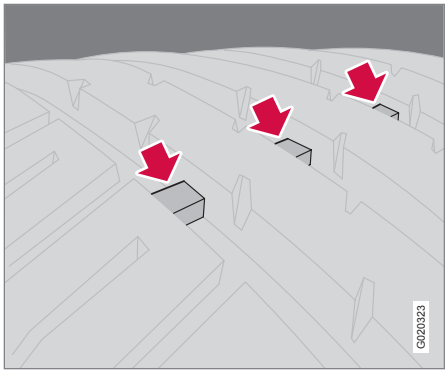
The age of the tyre can be determined by the DOT marking, see illustration above.

More even wear and maintenance

The correct tyre pressure results in more even wear, see page 297. Driving style, tyre pressure, climate and road condition affect how quickly your tyres age and wear. To avoid differences in tread depth and to prevent wear patterns arising, the front and rear wheels can be switched with each other. A suitable distance for the first change is approx. 5000 km and then at 10 000 km intervals. Volvo recommends that you contact an authorised Volvo workshop for checking if you are uncertain about tread depth. If significant differences in wear (>1 mm difference in tread depth) between tyres have already occurred, the least worn tyres must always be placed on the rear. Understeer is normally easier to correct than oversteer, and leads to the car continuing forwards in a straight line rather than having the rear end skidding to one side, resulting in possible complete loss of control over the car. This is why it is important for the rear wheels never to lose grip before the front wheels.

Wheels must be stored lying down or hanging up - never standing up.

Tyres with tread wear indicators



Tread wear indicators.

Tread wear indicators are narrow treadless bands across the width of the tread. On the side of the tyre are the letters TWI (Tread Wear Indicator). When the tyre's tread depth is down to 1.6 mm, the tread depth will be level in height with the tread wear indicators. Change to new tyres as soon as possible. Remember that tyres with little tread depth provide very poor grip in rain and snow.

Winter tyres

Volvo recommends winter tyres with specific winter tyre dimensions. Tyre dimensions are dependent on engine variant. When driving on winter tyres, they 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 service life.

NOTE

The legal provisions for the use of studded tyres vary from country to country.

Tread depth

Road conditions with ice, slush and low temperatures place considerably higher demands on tyres than summer conditions. It is therefore recommended not to drive on winter

General

tyres that have a tread depth of less than four millimetres.

Snow chains

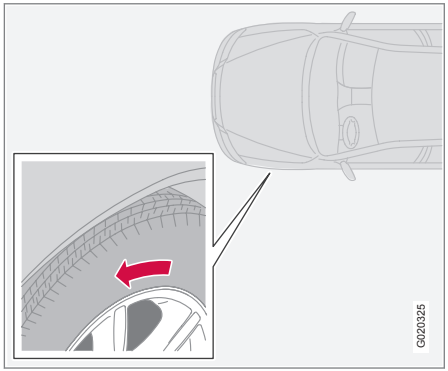
Snow chains may only be used on the front wheels. This also applies to all-wheel-drive cars.

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. Check that the snow chain does not make contact anywhere and that it is correctly fitted and well tensioned.

WARNING

Use Volvo genuine snow chains or equivalent chains designed for the car model, and tyre and rim dimensions. In the event of uncertainty Volvo recommends that you consult an authorised Volvo workshop. The wrong snow chains may cause serious damage to your car and lead to an accident.

Summer and winter wheels

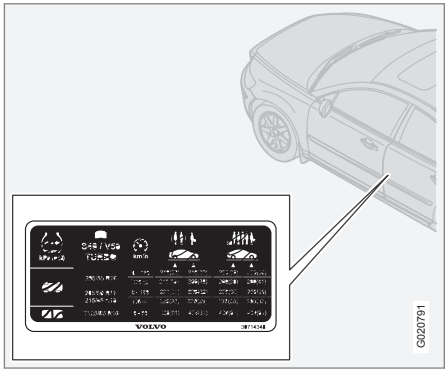


The arrow shows the tyre's direction of rotation

When summer and winter wheels are changed, see page 187, the wheels 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 must always rotate in the same direction throughout its lifespan. Tyres should only be switched between front and rear positions, never between left and right-hand sides, or vice versa. If the tyre is mounted incorrectly, the car's braking characteristics and capacity to force rain, 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).

Volvo recommends that you contact an authorised Volvo workshop for checking if you are uncertain about tread depth.

Recommended tyre pressure



The tyre pressure label on the driver's side door pillar shows which pressures the tyres should have at different loads and speed conditions.

Stated on the decal:

- Tyre pressures for the car's recommended tyre size
- ECO pressure[1]
- Spare wheel tyre pressure (Temporary Spare).

Checking the tyre pressure

Check the tyre pressure regularly.

NOTE

Tyre pressure decreases over time, this is a natural phenomenon. Tyre pressure also varies depending on ambient temperature.

Even after several kilometres of driving, the tyres warm up and the pressure increases. So air must not be released if the pressure is checked when the tyres are warm. While the pressure must be increased if it is too low. Inadequately inflated tyres increase fuel consumption, shorten tyre lifespan and impair the car's roadholding. Driving on tyres with tyre pressure that is too low can also result in the tyres overheating and disintegrating.

For information on the correct tyre pressure, see page 297. The specified tyre pressures refer to "cold tyres". ("Cold tyres" means the tyres are the same temperature as the ambient temperature.)

Fuel economy, ECO pressure

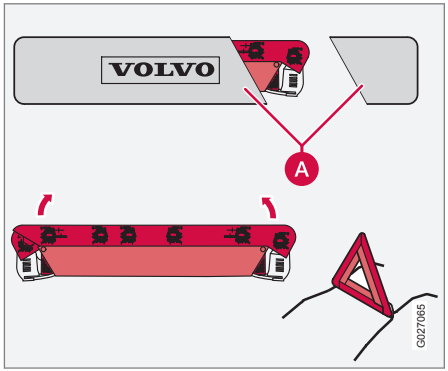
At speeds under 160 km/h, the general tyre pressure for full load is recommended in order to obtain optimum fuel economy.

Tyre pressure affects travelling comfort, road noise and steering characteristics.

[1] ECO pressure results in improved fuel economy.

Warning triangle* and spare wheel *

Warning triangle



Follow the regulations in force for the use of a warning triangle* in the country in which you are driving.

Use the warning triangle as follows:

1. Detach the warning triangle case. It is held in place with a Velcro strap.
2. Remove the warning triangle from its case (A).
3. Fold out the four support legs on the warning triangle.
4. Fold out both red sides of the warning triangle. Position the warning triangle in a suitable place with regard to traffic.

After use:

– Pack everything in reverse order.

Make sure that the warning triangle with case is securely fastened in the compartment.

Spare wheel Temporary Spare*

The spare wheel (Temporary spare) is only intended for use temporarily and must be replaced by an ordinary wheel as soon as possible. The car's handling may be altered by the use of the spare wheel. The spare wheel is smaller than the normal wheel. The car's ground clearance is affected accordingly. Pay attention to high kerbs and do not machine wash the car. If the spare wheel is fitted on the front axle, you cannot use snow chains at the same time. On all-wheel drive cars the drive on the rear axle can be disconnected. The spare wheel must not be repaired. The correct tyre pressure for the spare wheel is stated in the tyre pressure table, see page 297.

IMPORTANT

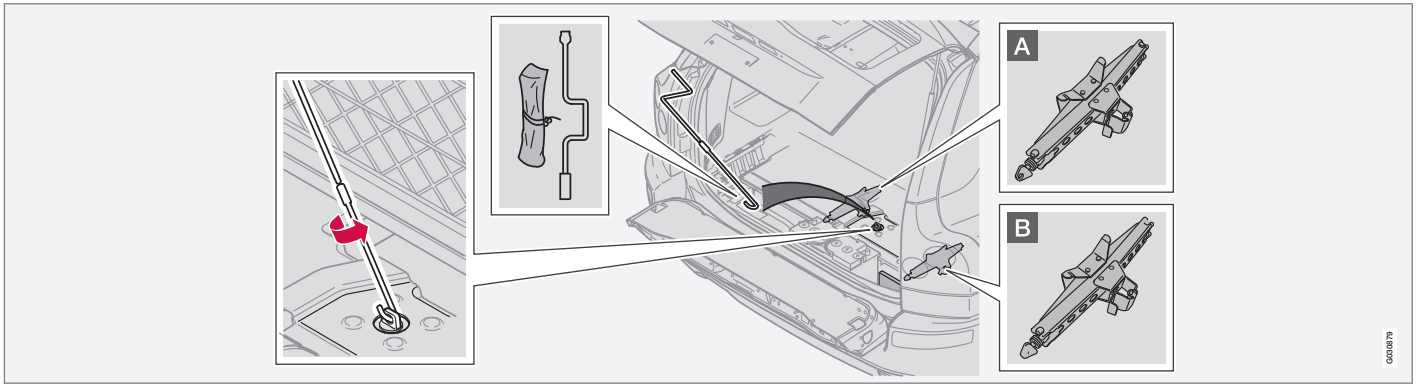
Never drive faster than 80 km/h with a spare wheel on the car.

IMPORTANT

The car must never be driven fitted with more than one "Temporary Spare" wheel.

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

Spare wheel – removing



The spare wheel is located under the car. The jack*, tool kit* and crank are located under the floor hatch. The crank is in two parts. One part is in the tool kit, and the other is under the tool kit.

NOTE

There is a puller spanner in the tool kit to remove the hub cap (certain wheel options).

The location of the jack varies:

A Cars seating seven

B Cars seating five

Proceed as follows to release the spare wheel:

1. Lower the bottom of the tailgate and lift up the floor hatch in the cargo area.
2. Take the two parts of the crank and assemble.
3. Fit the crank in the winch.
4. Loosen the tyre by cranking anticlockwise until you reach the stop.

NOTE

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

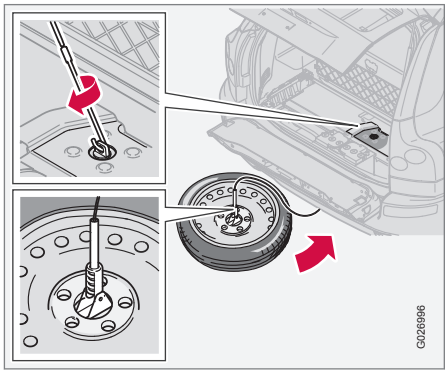
5. Release the wheel from the cable and wind up the cable clockwise.
6. Place the punctured tyre in the cargo area. The tool kit contains a plastic bag for the tyre.

Warning triangle* and spare wheel *

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.

1. Crank out the cable and place its anchor in the centre hole of the wheel.
2. Slowly crank (clockwise) the cable in a bit.
3. Angle the wheel so that it comes in over the exhaust system.
4. Hold down the rear edge of the wheel while cranking it in.
5. Place the wheel above the rear axle, against the floor.
6. Crank to the stop point.
7. Check that the wheel is properly secured.

WARNING

Check that the right mounting 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, Volvo recommends that you contact an authorised Volvo workshop. An incorrectly fitted jack could damage the door and body.

Tools - returning into place

The tools and jack* must be returned to their correct places after use. The jack must be cranked to the correct position, see the preceding illustration, in order to have space.

IMPORTANT

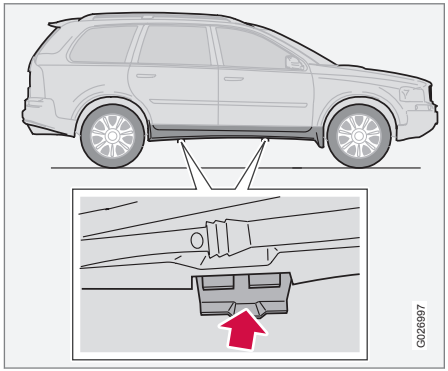
The tools and jack* must be stored in the intended location in the car's cargo area when not in use.

First aid*

A case with first aid equipment is located in the cargo area.

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

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

1. Park the car on level and firm ground.
2. Move the gear selector to the **P** position and apply the parking brake.
3. Place chocks in front of and behind the wheels which will remain on the ground to prevent them from rolling. Use stones or wooden blocks for example.

WARNING

Check that the jack is not damaged, that the threads are thoroughly lubricated and that it is free from dirt.

NOTE

Volvo recommends only using the jack* that belongs to the car model in question, which is indicated on the jack's label.

The label also indicates the jack's maximum lift capacity at a specified minimum lifting height.

4. Take out the jack*, wheel wrench and crank, see location see page 185. If another jack is selected, see page 209.

WARNING

Never crawl under the car when it is raised on the 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.

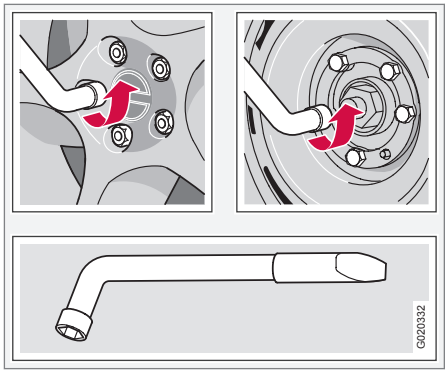
If the surface is too soft, the jack could slide to the side and the car could fall. No one should be in the car when the wheel is being changed.

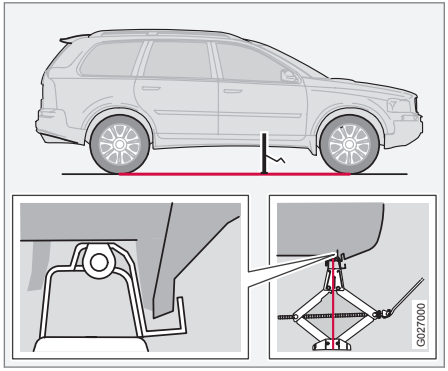
NOTE

The car's regular jack is designed only for use occasionally and for a short time, such as when changing a wheel with a punctured tyre, switching between summer tyres and winter tyres, etc. Only the jack belonging to the specific model is to be used to jack up the car. If the car is to be jacked up more often, or for a longer time than is required just to change a wheel, use of a garage jack is recommended. In this instance, follow the instructions for use that come with the equipment.

Changing wheels

5. Use the wheel brace to loosen the wheel bolts ½-1 turn. Turn anticlockwise.





WARNING

Never position anything between the ground and the jack, nor between the jacking point and the jack.

WARNING

If the jack is positioned incorrectly, the car could fall. Risk of injury.

6. Place the jack under the jacking point and crank it up towards the car floor. There is an recess in the plastic cover at each anchorage point. 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.

IMPORTANT

The ground must be firm, smooth and level.

7. Lift the car until the wheel is free.
8. Remove the wheel bolts and lift off the wheel.

Fitting the wheel

1. Clean the contract surfaces on the wheel and hub.
2. Put on the wheel. Screw in the wheel bolts.
3. Lower the car so that the wheel cannot rotate.
4. 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.
5. Screw the jack all the way down before returning it to the cargo area. Then secure it in place.
6. Check that the new tyre has the correct amount of pressure.

NOTE

This wheel bolt may also be used for steel wheel rims.

Make sure to use the correct type of bolt. Volvo recommends that you contact the nearest Volvo workshop if you are in any doubt.

Emergency puncture repair*

General

The emergency puncture repair kit is used to seal a puncture as well as to check and adjust the tyre pressure. It consists of a compressor and a bottle with sealing fluid. The kit works as a temporary repair. The sealing fluid bottle must be replaced before its expiration date and after use.

The sealing fluid effectively seals tyres punctured in the tread.

NOTE

The emergency puncture repair kit is only intended for sealing tyres with a puncture in the tread.

NOTE

The jack is an option on cars equipped with emergency puncture repair kit.

The emergency puncture repair kit has limited capacity to seal tyres which have punctures in the wall. Do not seal tyres with the emergency puncture repair kit if they have larger slits, cracks or similar damage.

12 V-sockets for the compressor are located by the centre console in the front, by the rear seat and in the cargo area, see pages 62, 76 and 119. Choose the electrical socket that is nearest the punctured tyre.

IMPORTANT

If the compressor for emergency puncture repair is connected to one of the two sockets - see pages 62 and 76 - no other current consumer must be connected to the other one.

NOTE

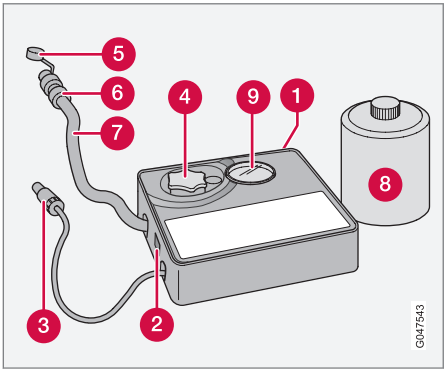
The compressor for temporary emergency puncture repair has been tested and approved by Volvo.

Taking out the emergency puncture repair kit

The emergency puncture repair kit, with compressor and tools, is located under the floor in the cargo area.

1. Fold away the rear edge of the floor mat, forward from the back.
2. Lift up the emergency puncture repair kit.

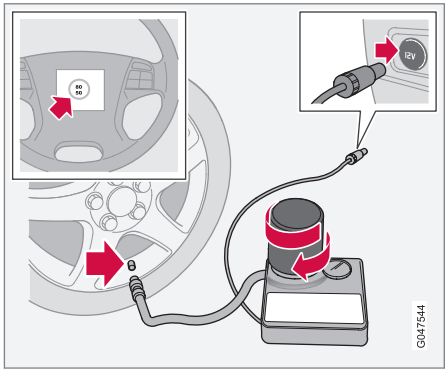
Overview



1. Label, maximum permitted speed
2. Switch
3. Cable
4. Bottle holder (orange cap)
5. Protective cap
6. Pressure reducing valve
7. Air hose
8. Sealing fluid bottle
9. Pressure gauge

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

Sealing punctured tyres



For information on the function of the parts, see preceding illustration.

1. Detach the label for maximum permitted speed (which is fitted on one side of the compressor) and affix it to the steering wheel.

WARNING

You should not drive faster than 80 km/h after the emergency tyre repair kit has been used. Volvo recommends that you visit an authorised Volvo workshop for inspection of the sealed tyre (maximum driving distance is 200 km). The staff there can determine whether or not the tyre can be repaired or if it needs to be replaced.

WARNING

The sealing fluid can irritate the skin. In the case of contact with skin, wash away the fluid with soap and water.

2. Check that the switch is in position **0** and locate the cable and the air hose.

NOTE

Do not break the bottle's seal before use. The seal is broken automatically when the bottle is screwed in.

3. Unscrew the orange cap and unscrew the bottle's stopper.
4. Screw the bottle into its holder.

WARNING

Do not unscrew the bottle, it is equipped with a reverse catch to prevent leakage.

5. Unscrew the wheel's dust cap and screw in the air hose valve connection to the bottom of the thread on the tyre's air valve.

Emergency puncture repair*

WARNING

Do not leave children in the car without supervision when the engine is running.

6. Plug the cable into the 12 V socket and start the car.

NOTE

If the compressor is connected to one of the two 12 V sockets, no other current consumer must be connected to the other one.

NOTE

When the compressor starts, the pressure can increase up to 6 bar but the pressure drops after approximately 30 seconds.

7. Flick the switch to position **I**.

WARNING

Never stand next to the tyre when the compressor is running. If cracks or unevenness arise then the compressor must be switched off immediately. The journey should not be continued. Contacting an authorised tyre centre is recommended.

8. Inflate the tyre for 7 minutes.

IMPORTANT

Risk of overheating. The compressor must not run for more than 10 minutes.

9. Switch off the compressor to check the pressure on the pressure gauge. Minimum pressure is 1.8 bar and maximum is 3.5 bar.

WARNING

If the pressure is below 1.8 bar then the hole in the tyre is too big. The journey should not be continued. Contacting an authorised tyre centre is recommended.

10. Switch off the compressor and unplug the cable from the 12 V socket.
11. Detach the hose from the tyre valve and fit the valve cap.
12. As soon as possible, drive approximately 3 km at a maximum speed of 80 km/h so that the sealing fluid can seal the tyre.

Rechecking the repair and pressure

1. Reconnect the equipment.
2. Read the tyre pressure on the pressure gauge.
3. If it is below 1.3 bar then the tyre is insufficiently sealed. The journey should not be continued. Contact a tyre centre.
4. If the tyre pressure is higher than 1.3 bar then the tyre must be inflated to the pressure specified on the tyre pressure label. Release air using the pressure reducing valve if the tyre pressure is too high.

WARNING

Do not unscrew the bottle, it is equipped with a reverse catch to prevent leakage.

5. Switch off the compressor. Detach the air hose and cable. Refit the dust cap.

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

NOTE

The sealing fluid bottle and the hose must be replaced after use. Volvo recommends that this replacement is performed by an authorised Volvo workshop.

WARNING

Check the tyre pressure regularly.

6. Return the emergency puncture repair kit to the cargo area.
7. Volvo recommends that you drive to the nearest authorised Volvo workshop for the replacement/repair of the damaged tyre. Advise the workshop that the tyre contains sealing fluid.

WARNING

You should not drive faster than 80 km/h after the emergency tyre repair kit has been used. Volvo recommends that you visit an authorised Volvo workshop for inspection of the sealed tyre (maximum driving distance is 200 km). The staff there can determine whether or not the tyre can be repaired or if it needs to be replaced.

Inflating the tyres

The car's original tyres can be inflated by the compressor.

1. The compressor must be switched off. Make sure that the switch is in position **0** and locate the cable and air hose.
2. Unscrew the wheel's dust cap and screw in the air hose valve connection to the bottom of the thread on the tyre's air valve.

WARNING

Do not leave children in the car without supervision when the engine is running.

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.

3. Connect the cable to one of the car's 12 V sockets and start the car.
4. Start the compressor by flicking the switch to position **I**.

IMPORTANT

Risk of overheating. The compressor must not run for more than 10 minutes.

5. Inflate the tyre to the pressure specified on the tyre pressure label. (Release air using the pressure reducing valve if the tyre pressure is too high.)
6. Switch off the compressor. Detach the air hose and cable.
7. Refit the dust cap.

Changing the sealing fluid canister

Replace the bottle when the expiration date has passed. Treat the old bottle as environmentally hazardous waste.

WARNING

The bottle contains 1.2-Ethanol and natural rubber-latex.

Harmful if ingested. Could result in allergic reaction in the event of skin contact.

Avoid contact with the skin and eyes.

Store out of the reach of children.

Emergency puncture repair*

NOTE

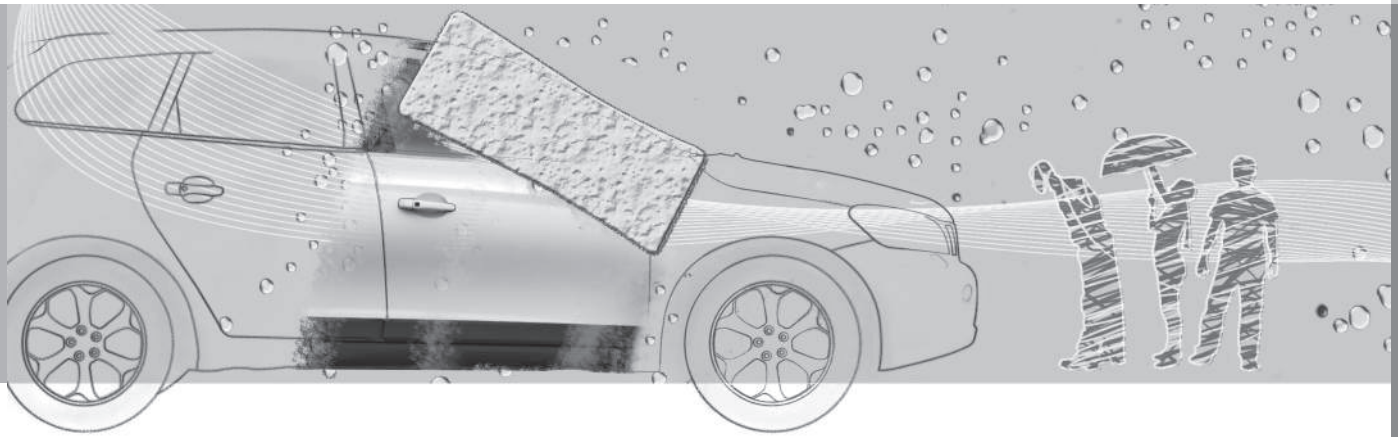
Leave the container at a collection point for storing dangerous waste.

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

Cleaning..... 198
Touching up paintwork..... 202
Rustproofing..... 204

08

CAR CARE



Cleaning

Washing the car

Wash the car as soon as it becomes dirty. Wash the car in a car wash with oil separator. Use car shampoo.

- Remove bird droppings from the paintwork as soon as possible. Bird droppings contain chemicals that affect and discolour paintwork very quickly. An authorised Volvo workshop is recommended for the removal of any discoloration.
- Hose down the underbody.
- Rinse the whole car until the loose dirt has been removed in order to reduce the risk of scratches from washing. Do not spray directly onto the locks.
- If necessary, use cold degreasing agent on very dirty surfaces. Note that the surfaces must not then be warmed up by the sun!
- Wash using a sponge, car shampoo and plenty of lukewarm water.
- Clean the wiper blades with a lukewarm soap solution or car shampoo.
- Dry the car using a clean, soft chamois or a water scraper. If you avoid allowing water droplets to dry in strong sunlight then the risk of water stains that may need to be polished away is reduced.

WARNING

Always have the engine cleaned by a workshop. There is a risk of fire if the engine is hot.

IMPORTANT

Dirty headlamps have impaired functionality. Clean them regularly, when refuelling for example.

Do not use any corrosive cleaning agents but use water and a non-scratching sponge instead.

NOTE

Outside lighting such as headlamps, fog lamps and rear lamps may temporarily have condensation on the inside of the lens. This is a natural phenomenon, all outside lighting is designed to withstand this. Condensation is normally vented out of the lamp when it has been switched on for a time.

Cleaning the wiper blades

Asphalt, dust and salt residue on wiper blades, as well as insects, ice etc. on the windscreen, impair the service life of wiper blades.

NOTE

Wash the wiper blades and windscreen regularly with lukewarm soap solution or car shampoo.

Do not use any strong solvents.

Removing bird droppings

Wash away bird droppings from 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.

Chromed wheels

IMPORTANT

Rim cleaning agents can cause stains on chrome-plated wheels. Wash using a sponge, car shampoo and plenty of lukewarm water.

Automatic car washes

An automatic car wash is a simple and quick way of washing the car, but it can never replace a proper handwashing. The brushes of an automatic car wash cannot reach everywhere.

IMPORTANT

Washing by hand is gentler to the paintwork than an automatic car wash. Paintwork is also more sensitive when it is new. For this reason, handwashing is recommended during the first few months with a new car.

High-pressure washing

When using high-pressure washing, use sweeping movements and make sure that the nozzle does not come closer than 30 cm to the surface of the car (the distance applies to all exterior parts).

IMPORTANT

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 onto the locks.

Testing the brakes

WARNING

Always test the brakes after washing the car, including the parking brake, to ensure that moisture and corrosion do not attack the brake linings and reduce braking performance.

Lightly depress the brake pedal now and then when driving long distances in rain or slush. This heats and dries the brake pads. Do the same thing after starting in very damp or cold weather.

Exterior plastic, rubber and trim components

A special cleaning agent available from Volvo dealers is recommended for the cleaning and care of coloured plastic parts, rubber and trim components (such as glossy trim mouldings). When using such a cleaning agent the instructions must be followed carefully.

IMPORTANT

Avoid waxing and polishing on plastic and rubber.

When using degreasant on plastic and rubber, only rub with light pressure if it is necessary. Use a soft washing sponge.

Polishing glossy trim mouldings could wear away or damage the glossy surface.

Polishing agent that contains abrasive must not be used.

Polishing and waxing

Polish and wax the car if the paintwork is dull or to give the paintwork extra protection.

The car does not need to be polished until it is at least one year old. However, the car can be waxed before this time. Do not polish or wax the car in direct sunlight.

Wash and dry the car thoroughly before you begin polishing or waxing. Clean off asphalt and tar stains using tar remover or white spirit. More stubborn stains can be removed using fine rubbing paste designed for car paintwork.

Polish first with a polish and then wax with liquid or solid wax. Follow the instructions on the packaging carefully. Many preparations contain both polish and wax.

Cleaning

IMPORTANT

Only paint treatment recommended by Volvo should be used. Other treatment such as preserving, sealing, protection, lustre sealing or similar could damage the paintwork. Paintwork damage caused by such treatments is not covered by Volvo warranty.

Water-repellent coating*

Never use products such as car wax, degreaser or similar on glass surfaces as this could ruin their water-repellent properties.

Take care when cleaning so as not to damage the glass surface.

To avoid damaging glass surfaces when removing ice – only use plastic ice scrapers.

There is natural wear of the water-repellent coating.

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.

Cleaning the interior

Only use cleaning agents and car care products recommended by Volvo. Clean regularly and follow the instructions included with the car care product.

Vacuuming is important prior to using cleaning agents.

Carpets and cargo area

Remove inlaid carpets for separate cleaning of the floor carpet and the inlaid carpets. Use a vacuum cleaner to remove dust and dirt.

Each inlay mat is secured with pins.

– Take hold of the inlay mat at each pin and lift the mat straight up.

Fit the inlay mat in place by pressing it in at each pin.

WARNING

Before setting off check that the inlaid mat in the driver area is firmly affixed and secured in the bosses in order to avoid getting caught adjacent to and under the pedals.

A special textile cleaner is recommended for stains on the floor mat after vacuuming. Floor mats should be cleaned with agents recommended by your Volvo dealer!

Treatment of stains on textile upholstery and headliner

A special fabric cleaning agent, available from authorised Volvo dealers, is recommended to avoid impairing the fire retardant qualities of the upholstery.

IMPORTANT

Sharp objects and Velcro may damage the fabric upholstery.

Treating stains on leather upholstery

Volvo's leather upholstery is chromium-free and is treated to preserve its original appearance.

Leather upholstery ages and acquires a beautiful patina over time. The leather is refined and processed so that it retains its natural characteristics. It is given a protective coating, but regular cleaning is required in order to maintain both characteristics and appearance. Volvo offers a comprehensive product for the cleaning and treatment of leather upholstery which, when used in accordance with the instructions, preserves the leather's protective coating. After a period of use the natural appearance of the leather will nevertheless emerge, depending more or less on the surface texture of the leather. This is a

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

natural maturing of the leather and shows that it is a natural product.

To achieve best results Volvo recommends cleaning and the application of protective cream once to four times per year (or more if necessary). The Volvo Leather Care kit is available from your Volvo dealer.

IMPORTANT

- Certain items of coloured clothing (for example, jeans and suede garments) may stain the upholstery.
- Never use strong solvents. Such products may damage fabric, vinyl and leather upholstery.

Washing instructions for leather upholstery

1. Pour the leather cleaner on the dampened sponge and squeeze out a strong foam.
2. Work the dirt away with gentle circular movements.
3. Dab accurately with the sponge on the stains. Allow the sponge to absorb the stain. Do not rub.
4. Wipe off with soft paper or a cloth and allow the leather to dry completely.

Protective treatment of leather upholstery

Vacuuming is important prior to using leather care agents.

1. Pour a small amount of the protective cream on the felted cloth and massage in a thin layer of cream with gentle circular movements on the leather.
2. Allow the leather to dry for 20 minutes before use.

The leather has now been given improved protection against stains and improved UV protection.

IMPORTANT

Sharp objects may damage the leather, (e.g. rings).

Washing instructions for the leather steering wheel

- Remove dirt and dust with a soft premoistened sponge and neutral soap.
- Leather needs to breathe. Never cover the leather steering wheel with protective plastic.
- Use natural oils. Volvo's leather care agents are recommended for best results.

If the steering wheel has stains:

Group 1 (ink, wine, coffee, milk, sweat and blood)

– Use a soft cloth or sponge. Mix a 5% ammonia solution. (For blood stains, use a solution of 2 dl water and 25g salt.)

Group 2 (fats, oils, sauces and chocolate)

1. Same procedure as for group 1.
2. Polish with an absorbent paper or cloth.

Group 3 (dry dirt, dust)

1. Use a soft brush to remove the dirt.
2. Same procedure as for group 1.

Treating stains on interior plastic, metal and wood parts

A special cleaning agent, available from Volvo dealers, is recommended for cleaning interior parts and surfaces. Do not scrape or rub stains. Never use strong stain removers.

Cleaning seatbelts

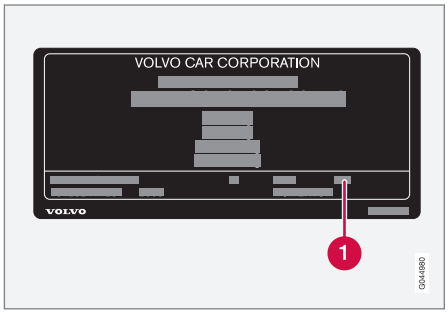
Use water and a synthetic detergent. A special textile cleaning agent is available from your Volvo dealer. Make sure the seatbelt is dry before allowing it to retract.

Touching up paintwork

Paintwork

Paint is an important part of the car's rust-proofing and should therefore be checked regularly. To avoid the onset of rust, damaged paintwork should be rectified immediately. The most common types of paintwork damage are stone chips, scratches, and marks on the edges of wings, doors and bumpers.

Colour code (Paint code)

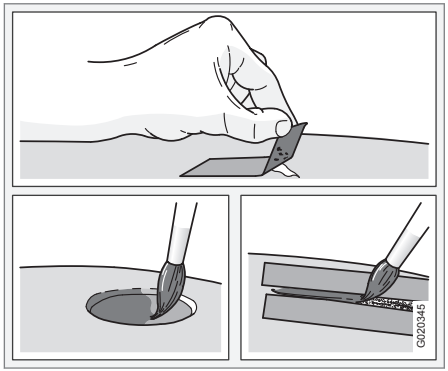


Data plate.

1 Code for car's colour

It is important that the correct colour is used. For product decal location, see page 286.

Stone chips and scratches



Before work is started, the car must be clean and dry as well as at a temperature above 15 °C.

Materials

- primer[1] - for e.g. plastic-clad bumpers there are special adhesive primers available in spray cans
- base coat and clear coat - are available in spray cans or as touch-up pens/sticks[2]
- masking tape
- fine sand paper[1].

Repairing minor paint damage such as stone chips and scratches

1. Apply a piece of masking tape over the damaged surface. Then remove the tape to remove any loose paint.

   If the damage has reached down to a metal surface (sheet steel), it is preferable to use a primer. In the event of damage to a plastic surface, an adhesive primer should be used for better results - spray into the spray can's cap and brush thinly.
2. A light sanding with very fine abrasive material can be performed locally before painting if necessary (e.g. if there are rough edges). Clean the surface thoroughly and allow to dry.
3. Stir the primer well and apply using a fine brush, matchstick or similar. Finish with base coat and clear coat once the primer has dried.
4. For scratches, proceed as above, but mask around the damaged area to protect the undamaged paintwork.

[1] If required.
[2] Follow the instructions that are included with the package for the touch-up pen/stick.

Touching up paintwork

NOTE

If the stone chip has not penetrated down to the meal and an undamaged layer of paint remains in place, fill in with base coat and clear coat as soon as the surface has been cleaned.

Rustproofing

Inspection and maintenance

Your car has already received a thorough and complete rustproofing at the factory. Parts of the body are made of galvanised sheet metal. The underbody is protected by a wear-resistant anti-corrosion compound. A thin, penetrating rustproofing fluid was sprayed into the members, cavities and closed sections.

Maintain the car's rustproofing.

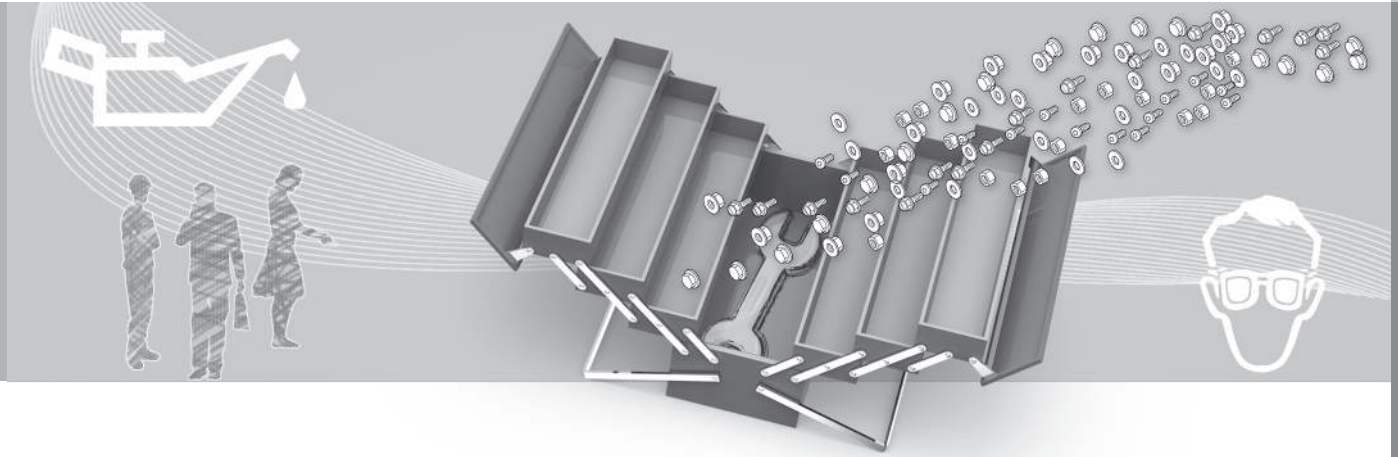
- Keep the car clean. Hose down the underbody. If using a pressure washer, keep the nozzle at least 30 cm from the painted surfaces.
- Regularly check and touch-up the rustproofing treatment as necessary.

The car's rustproofing does not normally require treatment for approximately 12 years. After this period, it should be treated at three-year intervals. If the car needs further treatment, Volvo recommends that you engage an authorised Volvo workshop for assistance.

Volvo service..... 208
Self-maintenance..... 209
Bonnet and engine compartment..... 211
Oils and fluids..... 213
Wiper blades..... 218
Battery..... 220
Replacing bulbs..... 223
Fuses..... 230

09

MAINTENANCE AND SERVICE



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. Volvo also recommends that you engage an authorised Volvo workshop to perform the 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. Similarly, Volvo recommends that you contact an authorised Volvo workshop before starting or performing service work that affects the electrical system.

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. It is therefore important to handle the battery in an environmentally correct manner. Let your Volvo dealer assist you.

WARNING

The ignition system has very high voltage and output. The voltage in the ignition system is highly 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. Fill washer fluid with antifreeze at temperatures around freezing point.
- Brake and clutch fluid – The level must be between the **MIN** and **MAX** marks.

WARNING

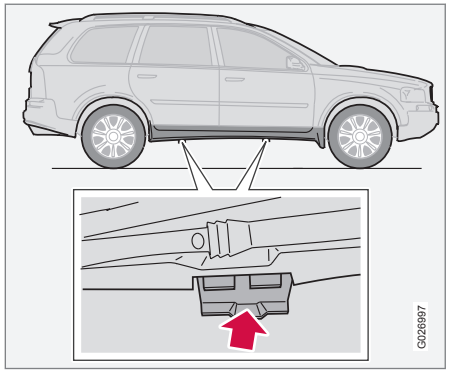
Remember that the radiator fan (located at the front of the engine compartment, behind the radiator) may start automatically some after the engine has been switched off.

Always have the engine cleaned by a workshop. There is a risk of fire if the engine is hot.

Lifting the car

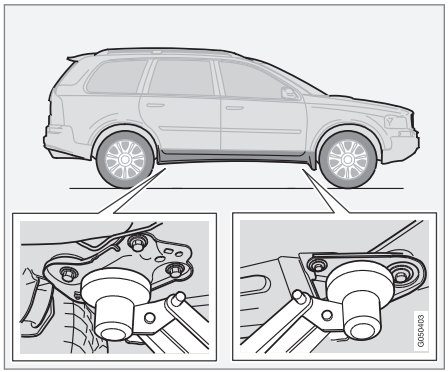
NOTE

Volvo recommends only using the jack that belongs to the car model in question. If a jack is selected other than the one recommended by Volvo, follow the instructions supplied with the equipment.



Jacking points for the jack that belongs to the car.

Self-maintenance

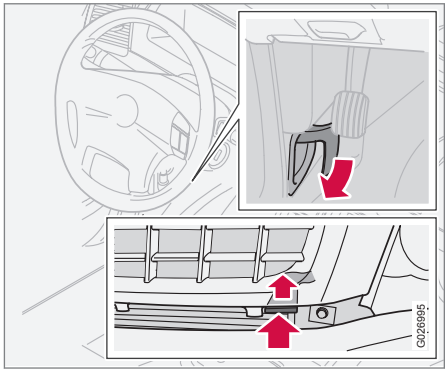


Lifting points.

If the car is raised with a workshop jack then it must be positioned under one of the lifting points. Ensure that the jack is positioned so that the car cannot slide off the jack. Always use axle stands or the like.

If the car is raised with a two-pillar workshop lift, ensure that the front and rear lift arms are fixed under the lifting points.

Opening the bonnet



1. Pull the handle on the far left (or right if the car is RHD) under the instrument panel. You will hear when the lock releases.
2. Insert your hand to the right under the front edge of the bonnet (below the grille).
3. Press up the safety catch handle.
4. Release the handle and open the bonnet.

WARNING

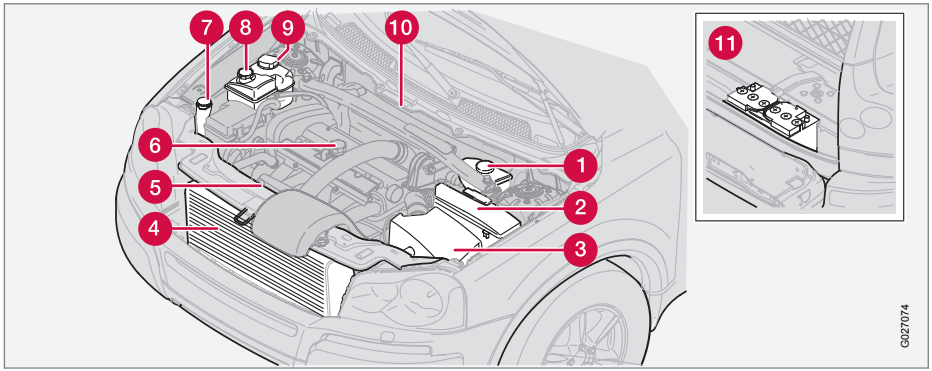
Check that the bonnet locks properly when closed.

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.

Bonnet and engine compartment

Engine compartment



1. Reservoir for brake and clutch fluid (located on the driver's side)
2. Relay and fuses
3. Air filter. (The cover has a different design depending on engine variant.)
4. Radiator
5. Engine oil dipstick
6. Engine oil filling
7. Washer fluid reservoir
8. Reservoir for power steering fluid (location depends on engine variant.)
9. Expansion tank, cooling system
10. Chassis data plate
11. Battery (in the cargo area)

Air conditioning system
Troubleshooting and repair

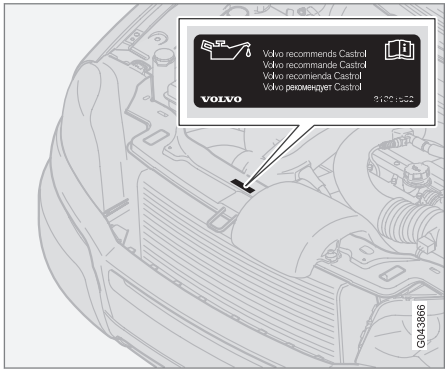
The air conditioning system contains fluorescent tracing agents. Use ultraviolet light when looking for leaks.

Volvo recommends that you contact an authorised Volvo workshop.

WARNING

The air conditioning system contains pressurised refrigerant R134a. This system must only be serviced and repaired by an authorised workshop.

Checking the engine oil



Volvo recommends:

When driving under adverse conditions, see page 292.

IMPORTANT

In order to fulfil the requirements for the engine's service intervals all engines are filled with a specially adapted synthetic engine oil at the factory. The choice of oil has been made very carefully with regard to service life, starting characteristics, fuel consumption and environmental impact.

An approved engine oil must be used in order that the recommended service intervals can be applied. Only use a prescribed grade of oil for both filling and oil change, otherwise you will risk affecting service life, starting characteristics, fuel consumption and environmental impact.

Volvo Car Corporation disclaims all warranty liability if engine oil of the prescribed grade and viscosity is not used.

Volvo recommends that oil changes are carried out at an authorised Volvo workshop.

Volvo uses different systems for warning of low/high oil level or low/high oil pressure. Certain engine variants have an oil pressure sensor, and then the combined instrument panel's warning symbol for low oil pressure is used. Other variants have an oil level sensor, and then the driver is informed via the warning symbol in the centre of the instrument unit as well as by display texts. Certain variants

Oils and fluids

have both systems. Contact a Volvo dealer for more information.

Change the engine oil and oil filter in accordance with the intervals specified in the Service and Warranty Booklet.

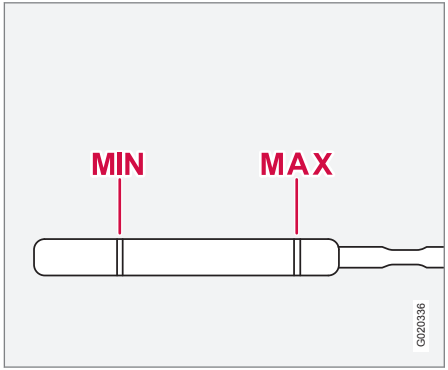
Using oil of a higher than specified grade is permitted. If the car is driven in adverse conditions, Volvo recommends using an oil of a higher grade, see page 292.

For capacities, see page 293 and onwards.

Checking the oil level in a new car is especially important before the first scheduled oil change.

Volvo recommends checking the oil level every 2 500 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.

Checking the oil



The oil level must be within the area marked on the dipstick.

Measurement and filling if required

1. Ensure that the car is level. After switching off the engine it is important to wait 5 minutes to allow the oil time to run back to the sump.
2. Pull up and wipe the dipstick.
3. Re-insert the dipstick.
4. Pull it out and check the level.
5. If the level is close to **MIN** then 0.5 litres should be added. If the level is significantly below, then an additional amount is required.
6. If required, check the level again, do it after driving a short distance. Then repeat steps 1 - 4.

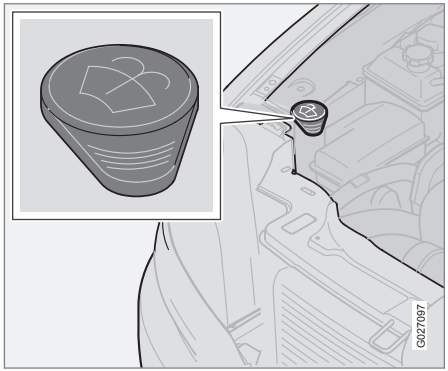
WARNING

Never fill above the **MAX** mark. The level should never be above **MAX** or below **MIN** as this could lead to engine damage.

WARNING

Do not spill oil onto the hot exhaust manifold due to the risk of fire.

Washer fluid, topping up



Location of washer fluid reservoir.

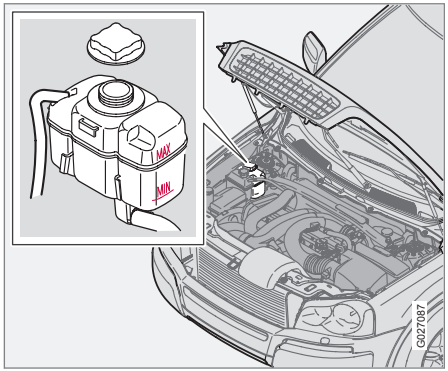
The windscreen and headlamp washers have the same reservoir. Use washer fluid with antifreeze during the winter to avoid freezing in the pump, reservoir and hoses. See capacities on page 294.

NOTE

Mix concentrated washer fluid with water **before** filling.

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.

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 ca -35 °C.

See capacities on page 294.

Check the coolant regularly

The level must be 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 damage (cracks) to the cylinder head. Top up the coolant when the level falls to the **MIN** mark.

WARNING

Coolant can be very hot. If the coolant requires topping up when the engine is at operating temperature, unscrew the expansion tank cap slowly to gently release the overpressure.

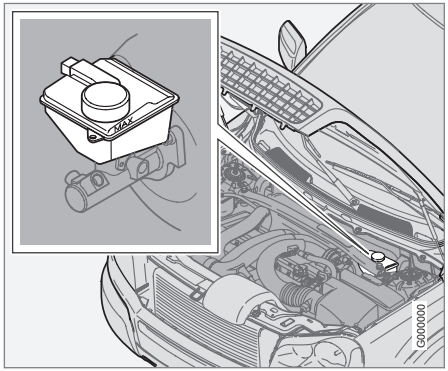
Oils and fluids

IMPORTANT

- A high content of chlorine, chlorides and other salts may cause corrosion in the cooling system.
- Always use coolant with anti-corrosion agent as recommended by Volvo.
- Ensure that the coolant mixture is 50% water and 50% coolant.
- Mix the coolant with approved quality tap water. In the event of any doubt about water quality, used ready-mixed coolant in accordance with Volvo recommendations.
- When changing coolant/replacing cooling system components, flush the cooling system clean with approved quality tap water or flush with ready-mixed coolant.
- The engine must only be run with a well-filled cooling system. Otherwise, temperatures that are too high may occur resulting in the risk of damage (cracks) in the cylinder head.

For capacities and for standards regarding water quality, see the table under Fluids and lubricants on page 294.

Checking and topping up the brake and clutch fluid



Brake and clutch fluid have a common reservoir[1]. 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 294.

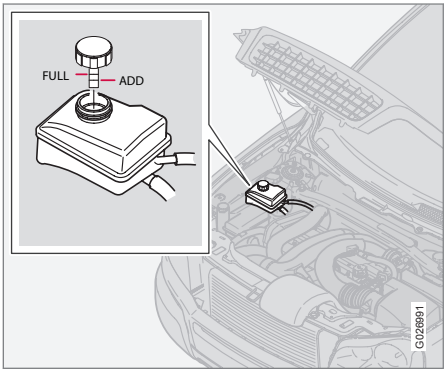
The fluid should be changed annually on cars driven in conditions requiring hard, frequent braking, such as driving in mountains or tropical climates with high humidity.

WARNING

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

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

Checking and topping up the power steering fluid



NOTE

Check the level frequently.

[1] Location dependent on whether car is left or right-hand drive.

Check the level frequently. The fluid does not require changing. The level must lie between the **ADD** and **FULL** marks. See the capacities and recommended grade on page 294.

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 steering wheel.

Wiper blades

Wiper blades

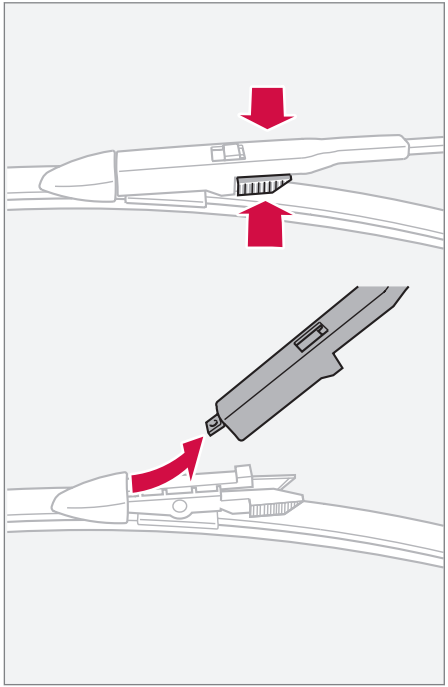
Cleaning

For cleaning wiper blades and windscreen, see page 198.

IMPORTANT

Check the wiper blades regularly. Neglected maintenance shortens the service life of the wiper blades.

Replacing the wiper blades, windscreen

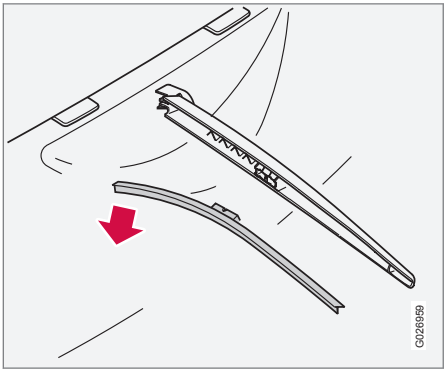


NOTE

The wiper blades are different lengths. The blade on the driver's side is longer than on the other side.

1. Fold out the wiper arm and grasp the wiper blade.
2. Press in the ribbed spring catch on the wiper blade while lifting it off at the arm extension.
3. Fit the new blade in reverse order and check that it is properly secured.

Changing the rear window wiper blade



1. Fold out the wiper arm.

Wiper blades

2. Remove the wiper blade by moving it up/out (see illustration) towards the tailgate.
3. Press the new wiper blade into position.
4. Check that the blade is firmly installed.

Battery

Operation

The starter battery is a traditional 12 V battery.

The service life and function of the battery is influenced by factors such as the number of starts, discharging, driving style, driving conditions and climatic conditions.

- Never disconnect the battery when the engine is running.
- Check that the cables to the battery are correctly connected and properly tightened.

WARNING

- The battery can generate oxyhydrogen gas, which is highly explosive. A spark can be formed if a jump lead is connected incorrectly, and this can be enough for the battery to explode.
- The battery contains sulphuric acid, which can cause serious burns.
- If sulphuric acid comes into contact with eyes, skin or clothing, flush with large quantities of water. If acid splashes into the eyes - seek medical attention immediately.

NOTE

The life of the battery is shortened if it becomes discharged repeatedly.

The life of the battery is affected by several factors, including driving conditions and climate. Battery starting capacity decreases gradually with time and therefore needs to be recharged if the car is not used for a longer time or when it is only driven short distances. Extreme cold further limits starting capacity.

To maintain the battery in good condition, at least 15 minutes of driving/week is recommended or that the battery is connected to a battery charger with automatic trickle charging.

A battery that is kept fully charged has a maximum service life.

IMPORTANT

Only a traditional battery charger should ever be used when charging the battery.

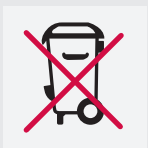
Symbols on the battery

Use protective goggles.

Further information in the owner's manual for the car.

Store the battery out of the reach of children.

The battery contains corrosive acid.

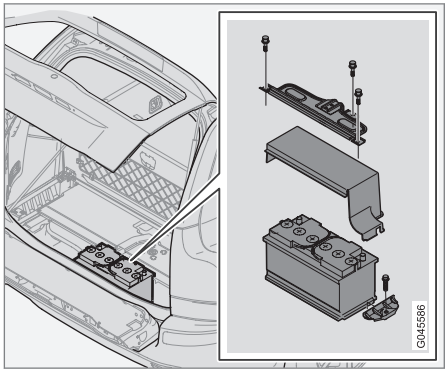
	Avoid sparks and naked flames.
	Risk of explosion.
	Must be taken for recycling.

NOTE

An expended battery must be recycled in an environmentally safe manner as it contains lead.

Replacing the main battery

Removal



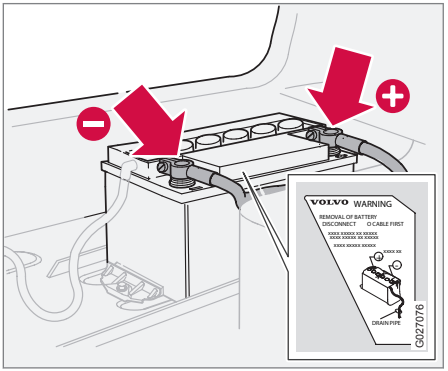
1. Remove the remote control key from the ignition switch.
2. Wait at least 5 minutes before touching any electrical terminals.
   > The car's electrical system needs to store the necessary information to the control modules.
3. Unscrew the bracket and cover over the battery
4. Detach the black negative cable.

WARNING

Connect and remove the positive and negative cables in the correct order.

5. Detach the red positive cable.
6. Detach the ventilation hose from the battery.
7. Release the clamp securing the battery.
8. Remove the battery.

Fitting



1. Fit the battery into position.

Battery

2. Tighten the clamp that holds the battery.
3. Connect the ventilation hose.
   > Check that it is correctly connected to both battery and outlet in the body.
4. Connect the red positive cable.
5. Connect the black negative cable.
6. Fit the cover and bracket.

General

Bulb specifications can be found on page 299.

The following list contains locations of bulbs and other light sources that are specialised, or are unsuitable for changing for some other reason, except at a workshop:

- active xenon headlamps - ABL (xenon lamps)
- Daytime running lights (DRL) in the bumper
- Direction indicators, door mirror and approach lighting
- Reading lamps and glovebox lighting
- General interior lighting in the roof
- Position lamps, rear
- Brake light
- high-level brake light.

In the event of a fault in the daytime running lights (DRL) in the bumper the whole lamp insert is replaced.

In the event of a fault in the rear position lamps or brake lights the whole rear light cluster is replaced.

WARNING

On cars with Xenon headlamps, the replacement of Xenon lamps must be carried out at a workshop - an authorised Volvo workshop is recommended. Working with Xenon lamps demands extreme caution because the headlamp is equipped with a high voltage unit.

IMPORTANT

Never touch the glass part of the bulbs with your fingers. Grease and oil from your fingers are vaporised by the heat, coating the reflector and then causing damage.

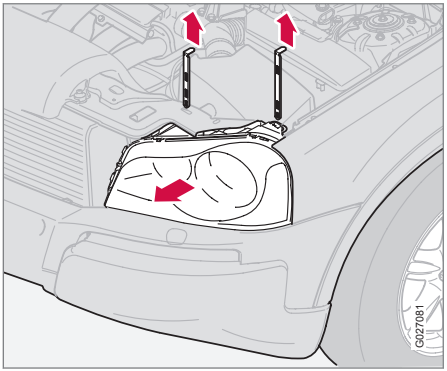
NOTE

If an error message remains after the broken bulb has been replaced then we recommend that you visit an authorised Volvo workshop.

NOTE

Outside lighting such as headlamps, fog lamps and rear lamps may temporarily have condensation on the inside of the lens. This is a natural phenomenon, all outside lighting is designed to withstand this. Condensation is normally vented out of the lamp when it has been switched on for a time.

Changing front bulbs



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.

Removing the lamp housing:

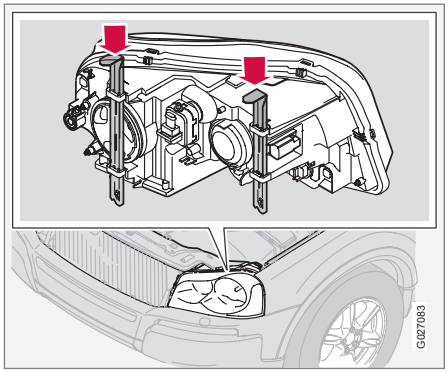
1. Switch off all lights and turn the remote control key to position **0**.
2. Open the bonnet.
3. Release the insert by pulling up the two lock pins holding it in place.
4. Lift the insert straight out.

Replacing bulbs

IMPORTANT

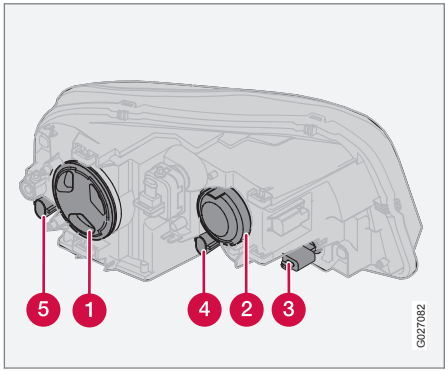
Do not pull the electrical cable, only the connector

5. Unplug the connector by first pressing in the catch from underneath and then pulling it up a bit from above.
6. Lift out the entire headlamp insert and place it on a soft surface so as not to damage the lens.



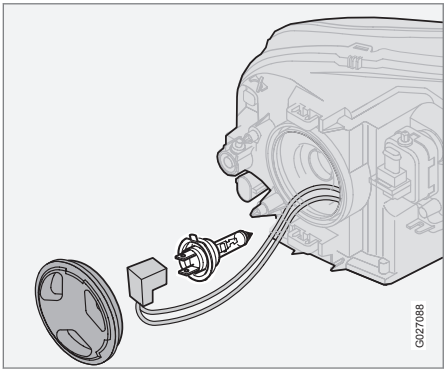
Refit the headlamp insert in reverse order. Check that the lock pins are correctly situated.

Location of bulbs in front lamp



1. Dipped beam
2. Main beam
3. Direction indicators
4. Parking/position lamps
5. Side marker lamps

Dipped beam, halogen

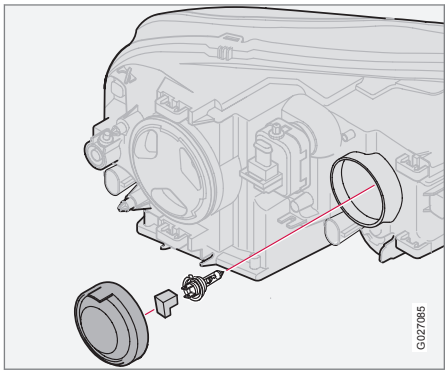


1. Undo the outer cover by turning it anticlockwise.
2. Unplug the connector.
3. Disconnect the spring clamp. First push to the right so that the spring clamp disconnects, then out and down.
4. Pull out the lamp.
5. Fit the new bulb. It can only fit in one position.
6. Press the clamp spring upwards and a little to the left so that it secures in its catch.
7. Press the connector back in place.

8. Screw the cover back into place; the marking **HAUT** should be at the top.

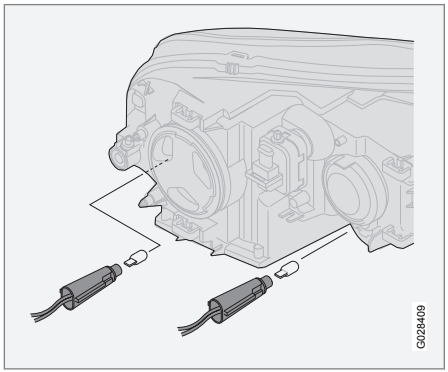
Main beam

Halogen headlamps



1. Undo the outer cover by pulling it straight out and then unplug the connector.
2. Disconnect the spring clamp. First push to the right so that the spring clamp disconnects, then out and down.
3. Pull out the lamp.
4. Fit the new bulb. It can only fit in one position.
5. Press the clamp spring upwards and a little to the left so that it secures in its catch.
6. Press the connector back in place and refit the cover.

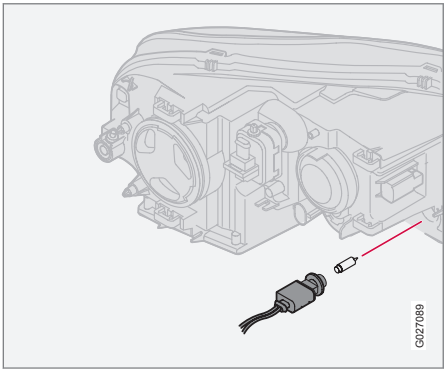
Side marker lamps and position/ parking lamps



The bulbs are housed in bayonet holders.

1. Turn the bulb holder anticlockwise and remove.
2. Pull the bulb straight out.
3. Fit the new bulb by carefully pressing it into the recess.
4. Fit the bulb holder back in place and turn clockwise.

Direction indicators

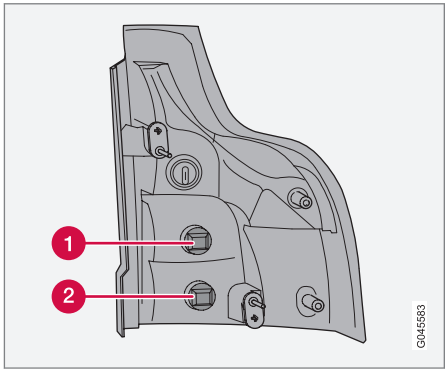


The bulbs are housed in bayonet holders.

1. Turn the bulb holder anticlockwise and remove.
2. Press in the bulb, turn anticlockwise and remove.
3. Fit the new bulb by pressing it into the recess and then turning clockwise.

Replacing bulbs

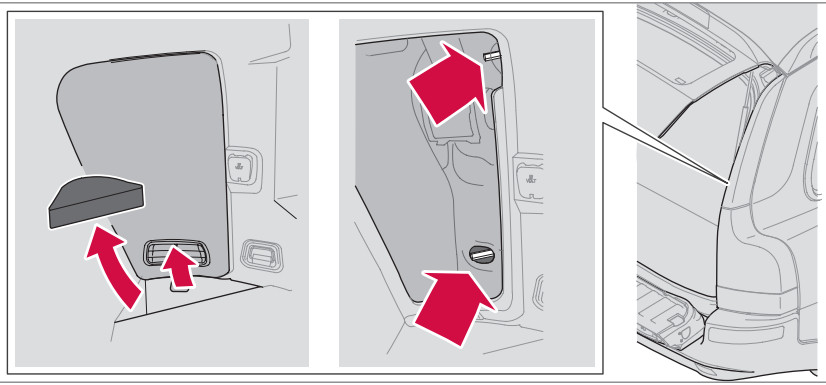
Bulbs in rear lamp cluster



1. Direction indicators
2. Reversing lamp

Replacing bulbs

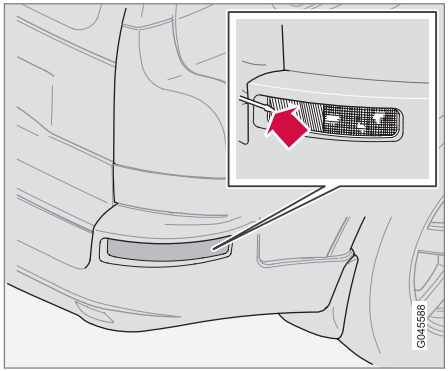
Bulb replacement



1. Switch off all lights and turn the remote control key to position **0**.
2. Lower the bottom of the tailgate and open the floor hatch. (If the car is equipped with a grocery bag holder* undo the holder's retaining straps.)
3. Remove the corner piece.
4. Open the hatch in the side panel by pulling the catch up and towards you.
5. Take spanner no. 10 out of the tool kit and undo the nuts.
6. Pull the entire insert straight back.
7. Loosen the extra length of cable for better accessibility.
8. Place the insert on a soft surface so as not to scratch the glass.
9. Turn the bulb holder anticlockwise and pull it out.
10. Turn the bulb anticlockwise in order to loosen it.
11. Replace the bulb.
12. Refit the bulb holder in the recess and turn clockwise.
13. Press back the extra length of cable.
14. Refit the insert against the bolt holes. Press the insert into place.
15. Tighten the nuts.
16. Refit the side panel and corner piece.

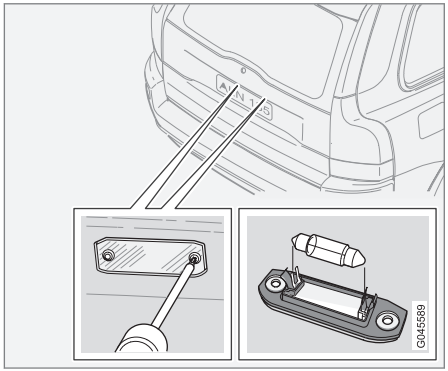
Replacing bulbs

Rear fog lamp



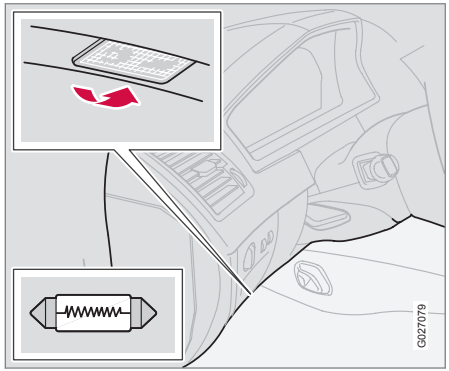
1. Insert a slotted screwdriver as indicated by the arrow in the illustration.
2. Prise out the lamp insert.
3. Turn the bulb holder anticlockwise to loosen it.
4. Turn the bulb anticlockwise and lift the bulb out.
5. Replace the bulb.

Number plate lighting



1. Switch off all lights and turn the remote control key to position **0**.
2. Remove the screws with a screwdriver.
3. Carefully detach the entire lamp housing and withdraw it.
4. Replace the bulb.
5. Refit the entire lamp housing and screw it into place.

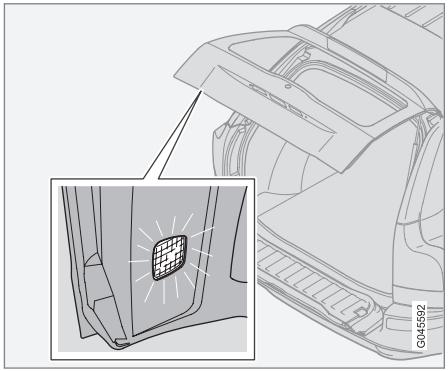
Courtesy lighting



There is courtesy lighting under the instrument panel on the driver and passenger sides.

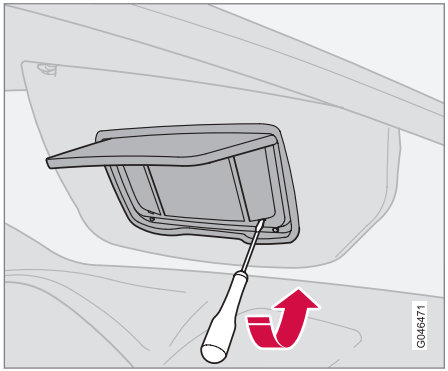
1. Insert a screwdriver and gently turn so that the lens detaches.
2. Remove the blown bulb.
3. Fit a new bulb.
4. Refit the lens.

Bulb in cargo area



1. Insert a screwdriver and gently turn so that the lamp housing comes loose.
2. Remove the blown bulb.
3. Fit a new bulb. Check that the bulb lights.
4. Refit the lamp housing.

Vanity mirror lighting



Removal of lamp lens

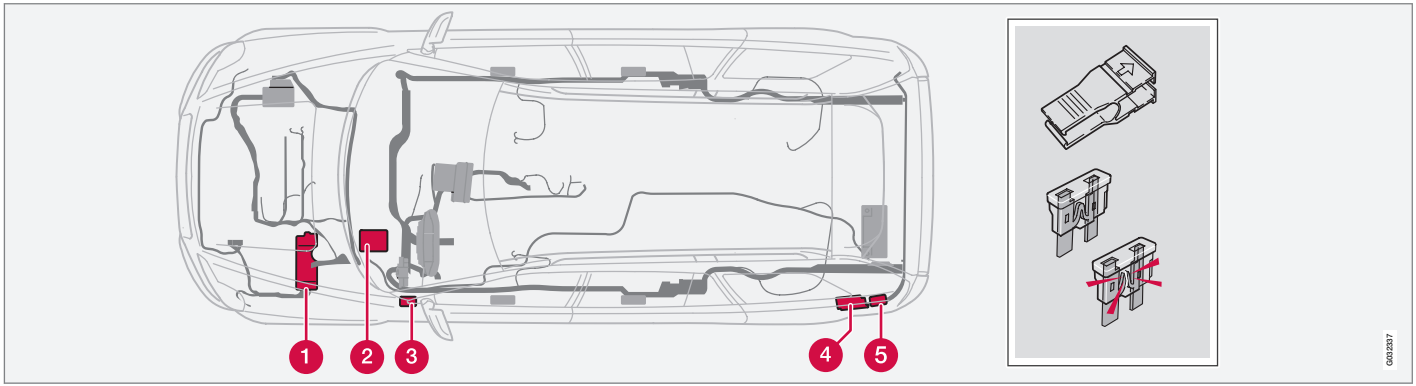
1. Insert a screwdriver under the lamp lens and gently prize up the lock lugs on the edge.
2. Snap off the lamp lens.
3. Use needle-nose pliers to pull the bulb straight out to the side and replace with a new one. Note! - Do not pinch hard with the pliers. Otherwise the lamp lens could then be crushed.

Attaching the lamp lens

1. Refit the lamp lens.
2. Press it into place.

Fuses

General



Cable routing may vary slightly due to engine variant. However, the fuse boxes listed are in the same positions.

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.

The fuses are in five different locations in the car:

1. Relay/fuse box in the engine compartment.
2. Fuse box in the passenger compartment within the sound barrier on the driver's side.
3. Fuse box in the passenger compartment at dashboard end on driver's side.
4. Fuse box in cargo area.
5. Fuse box in cargo area - Executive*.

If an electrical component or function does not work, this may be because the component's fuse was temporarily overloaded and blew.

1. Look in the fuse diagram to locate the fuse.
2. Pull out the fuse and check from the side to see whether the curved wire has blown.
3. If this is the case, replace it with a new fuse of the same colour and amperage.

WARNING

Never use a foreign object, or a fuse with an amperage higher than that specified when replacing a fuse. This could cause significant damage to the electrical system and possibly lead to fire.

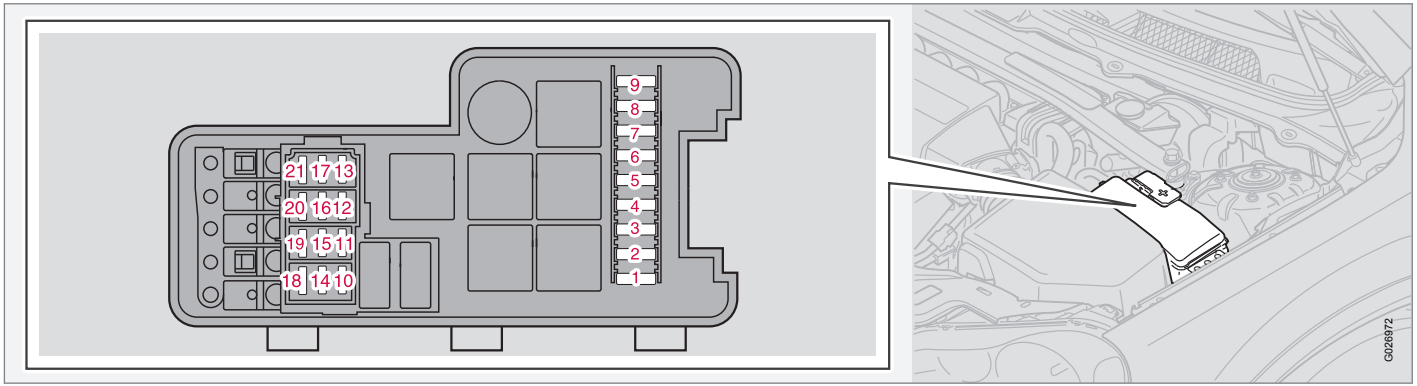
Fuses

There are a number of spare fuses in the cover on the end face of the instrument panel. There are also pliers which facilitate the removal and fitting of fuses.

If the same fuse fails repeatedly then there is a fault in the component. In which case, Volvo recommends that you visit an authorised Volvo workshop for this to be checked.

Fuses

Relay/fuse box in the engine compartment



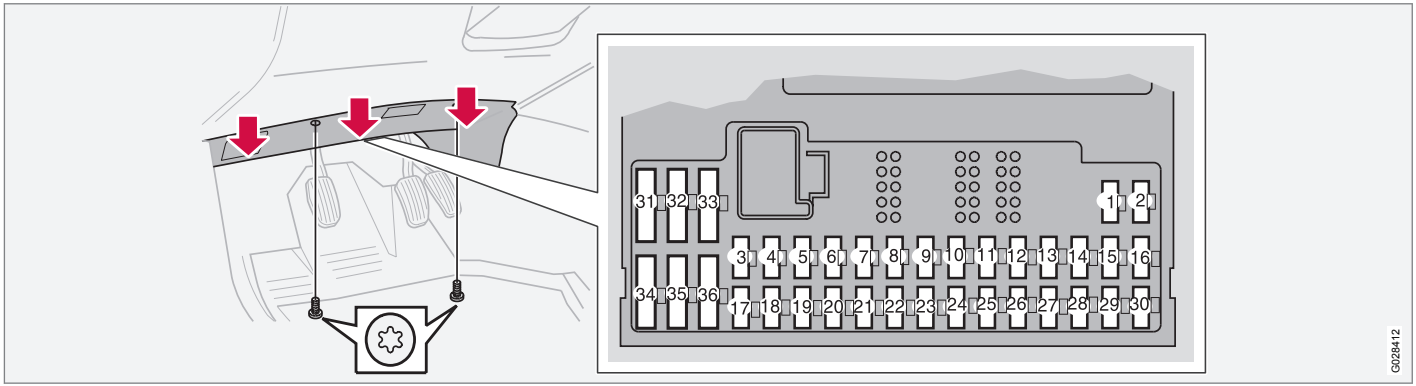
1.	ABS	30 A
2.	ABS	30 A
3.	High-pressure washer, headlamps	35 A
4.	Parking heater*	25 A
5.	Auxiliary lamps*	20 A
6.	Starter motor relay	35 A
7.	Windscreen wipers	25 A
8.	Fuel pump	15 A
9.	Transmission control module (TCM)	15 A
10.	Ignition coils (petrol), engine control module (ECM), injection valves, (diesel)	20 A
11.	Accelerator pedal sensor (APM), AC compressor	10 A
12.	Engine control module (ECM) (petrol), injection valves (petrol), mass air flow sensor (petrol)	15 A
	mass air flow sensor (diesel)	5 A
13.	Actuator motors, intake manifold (6-cyl.)	10 A
	Electronic throttle module (ETM), solenoid valve, SWIRL (air mixing valve), fuel pressure regulator (diesel)	15 A

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

14.	Lambda-sond (petrol)	20 A
	Lambda-sond (diesel)	10 A
15.	Crankcase ventilation heater (petrol), AC connection (petrol), solenoid valves, ECM, (petrol), glow heating control (diesel)	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 lamp	15 A
21.	Vacuum pump (petrol)	20 A

Fuses

Relay/fuse box in the passenger compartment within the sound barrier on the driver's side



1.	Seat heating, right side	15 A
2.	Seat heating, left side	15 A
3.	Horn	15 A
4.	-	-
5.	Infotainment system	10 A
6.	-	-
7.	-	-
8.	Siren*	5 A

9.	Brake lamp switch feed	5 A
10.	Combined instrument panel (DIM), climate control (CCM), parking heater, power driver's seat	10 A
11.	Front seat, rear seat and refrigerator socket*	15 A
12.	-	-
13.	-	-
14.	-	-

15.	ABS, DSTC	5 A
16.	Electronic power steering (ECPS)*, Active Xenon headlamps - ABL*, headlamp levelling*	10 A
17.	Daytime running lights (DRL) left	7.5 A
18.	Daytime running lights (DRL) right	7.5 A
19.	-	-

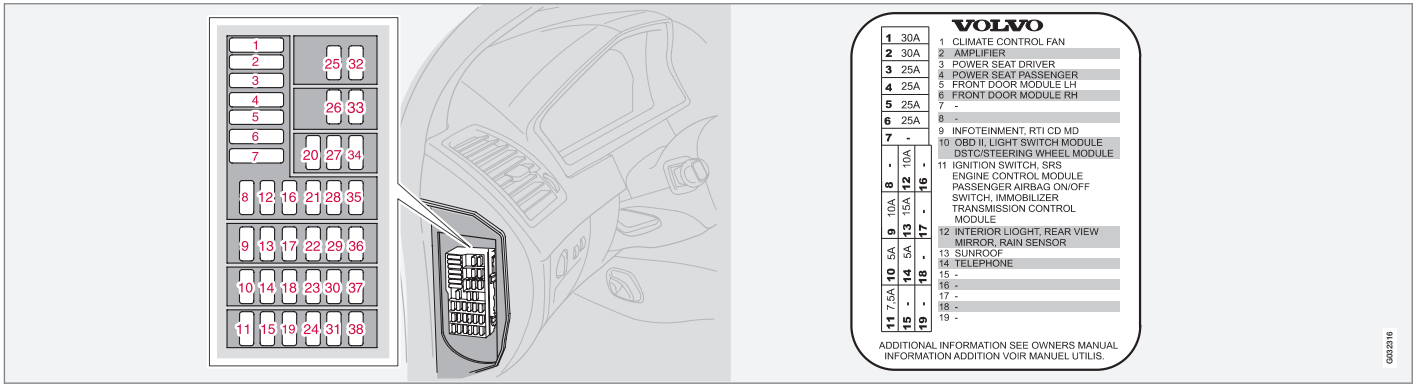
* Option/accessory, for more information, see Introduction.

20.	-	-
21.	Transmission control module (TCM)	10 A
22.	Main beam, left	10 A
23.	Main beam, right	10 A
24.	-	-
25.	-	-
26.	-	-
27.	-	-
28.	Power passenger seat*, Rear Seat Entertainment (RSE)*[A]	5 A
29.	Fuel pump	7.5 A
30.	BLIS*	5 A
31.	-	-
32.	-	-
33.	Vacuum pump (petrol)	20 A
34.	Washer pump	15 A
35.	-	-
36.	-	-

[A] See also fuse 8 in the section entitled "Relay/fuse box in the passenger compartment at dashboard end on driver's side".

Fuses

Relay/fuse box in the passenger compartment at dashboard end on driver's side



A decal which specifies the positions and amperages of the fuses is located in the end box cover.

1.	Climate control system fan	30 A
2.	Audio (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.	Radio, CD player, Rear Seat Entertainment (RSE)*A	15 A
9.	Navigation display*, Navigation device MMM*	10 A
10.	OBDII, light switch (LSM), Steering Angle Sensor (SAS), Steering Wheel Module (SWM)	5 A

11.	Ignition switch, SRS-system, engine control module ECM (petrol) SRS deactivation passenger side (PACOS), electronic immobiliser (IMMO), Transmission control module (TCM)	7.5 A
12.	General lighting, ceiling (RCM) Upper electronic module (UEM)	10 A

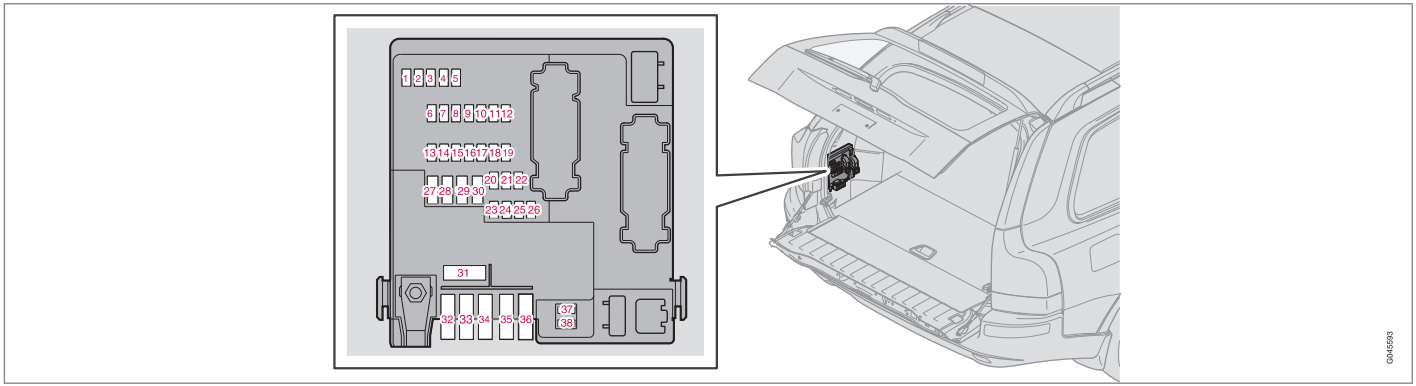
* Option/accessory, for more information, see Introduction.

13.	Sunroof*	15 A
14.	Telematics*, Bluetooth*	5 A
15–38.	-	-

A See also fuse 28 in the section entitled "Relay/fuse box in the passenger compartment within the sound barrier on the driver's side".

Fuses

Fuses in the cargo area



1.	Reversing lamp	10 A
2.	Position lamps, rear fog lamp, cargo area lighting, number plate lighting, lamps in brake lighting	20 A
3.	Accessories (AEM)*	15 A
4.	-	-
5.	REM electronics	10 A
6.	-	-

7.	Towing bracket wiring* (30-feed)	15 A
8.	Electrical socket, cargo area	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.	-	-
12.	-	-
13.	Diesel filter heater	15 A

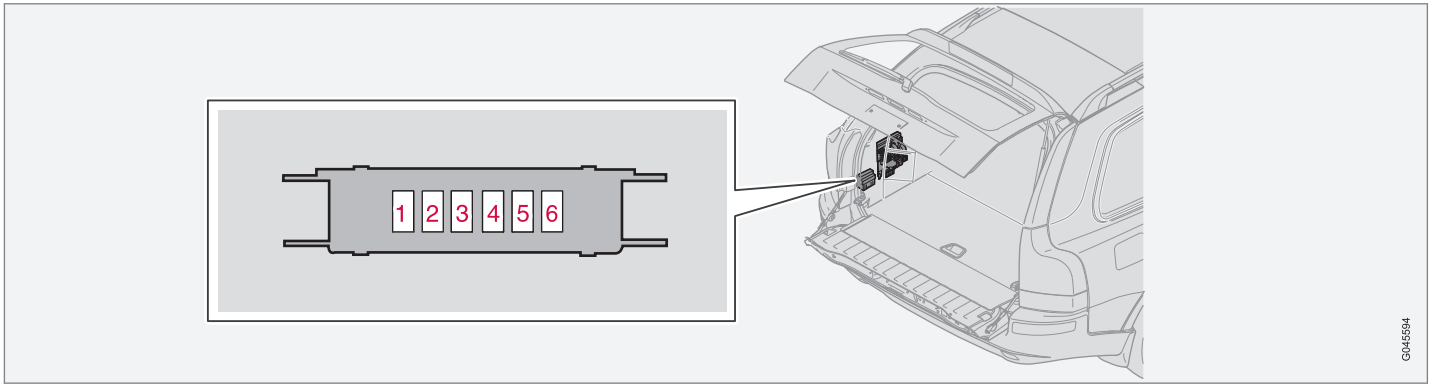
14.	Rear air conditioning (A/C)*	15 A
15.	-	-
16.	-	-
17.	Infotainment system accessories*	5 A
18.	-	-
19.	Rear wiper	15 A
20.	Towing bracket wiring* (15-feed)	20 A

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

21.	-	-
22.	-	-
23.	AWD	7.5 A
24.	-	-
25.	-	-
26.	Park Assist*	5 A
27.	Main fuse: Towing bracket wiring, parking assistance, AWD	30 A
28.	Central locking system (PCL)	15 A
29.	Trailer lighting, left: Position lamps, direction indicator*	25 A
30.	Trailer lighting, right: Brake light, rear fog lamp, direction indicator*	25 A
31.	Main fuse: Fuse 37, 38	40 A
32.	-	-
33.	-	-
34.	-	-
35.	-	-
36.	-	-
37.	Rear window defroster	20 A
38.	Rear window defroster	20 A

Fuses

Fuses in the cargo area - Executive*



The fuse box is located behind the cover panel on the left-hand side.

1.	Relay, seat heating, rear seat, Relay, massage seat, front	5 A
2.	Seat heating, rear seat, left	15 A
3.	Seat heating, rear seat, right	15 A
4.	Ventilated seat front, Massage seat front	10 A
5.	-	-
6.	-	-

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

General..... 244
Control panels, audio..... 245
Audio system functions..... 248
Radio functions..... 253
CD functions..... 259
Menu structure – audio system..... 262
Phone functions*..... 263
Menu structure – phone..... 270
Bluetooth handsfree*..... 274
RSE - Rear Seat Entertainment system - Dual Screen* 280

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

10

INFOTAINMENT SYSTEM

General

Infotainment system

Infotainment is a system that integrates the audio system and phone functions.

You can easily and conveniently use your Infotainment system by means of the joint control panel or the steering wheel keypad.

XC90 can be equipped with Dolby Surround Pro Logic II[1]. This 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* with separate audio sources.

Dolby Surround Pro Logic II[1]

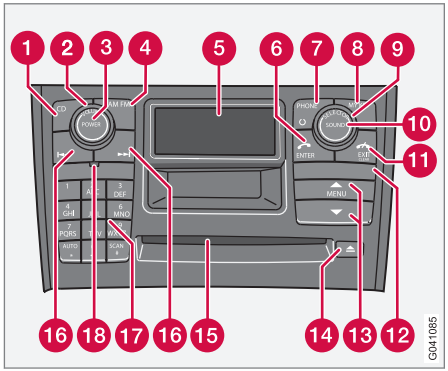
Dolby Surround Pro Logic II distributes the two stereo audio channels to left, centre, right and rear speakers. This provides a more realistic sound quality than that provided by standard two-channel stereo.

Dolby Surround Pro Logic II and the Dolby icon are trademarks of Dolby Laboratories Licensing Corporation. Dolby Surround Pro Logic II System is manufactured under license from Dolby Laboratories Licensing Corporation.

1 Applies to Premium Sound.

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

Audio controls

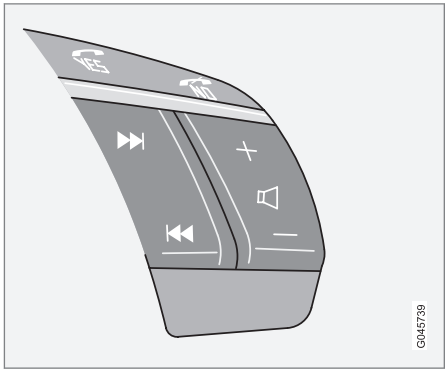


1. **CD** – shortcuts
2. **VOLUME** - Volume (knob control)
3. **POWER** - Audio On/Off
4. **AM/FM**-shortcut between **FM1, FM2** and **AM**
5. Display
6. **ENTER** - select in the menu, activate a selection or access the folder structure and start playback of audio files if there is a disc containing audio files in the CD player. For more information, see page 259.
7. **PHONE** - Phone On/Off/Standby
8. **MY KEY** – programmable shortcut key for your favourite function
9. **SELECTOR** - select audio source (rotary control)
10. **SOUND** – audio settings
11. **EXIT/CLEAR** – scroll back in the menu, cancel a selection, put the phone in standby mode, or erase the previous character when entering text and numbers
12. SIM card holder
13. **MENU** – menu selection buttons
14. CD and CD changer eject*
15. CD player and CD changer*
16. Seek/change tracks/stations or scroll forward and back when entering text and digits
17. Station setting buttons/selecting CD changer position* (**1-6**), number and character buttons for the phone and menu shortcuts
18. **IR*** - receiver for remote controls

Control panels, audio

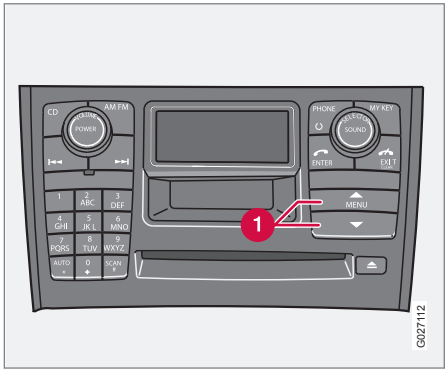
Steering wheel keypad

Audio – Phone*



The four buttons at the bottom of the steering wheel keypad control both the radio and the phone. The function of the respective button depends on which system is active. The steering wheel keypad can be used to adjust volume, switch between preset stations and change CD tracks. The two upper buttons in the keypad (**Yes** and **No**) are used to answer and end phone calls respectively. To change between audio menu and phone menu, press **No**.

Menus



Some infotainment system functions are controlled via a menu system. The current menu level is shown at the top right of the display. Menu options are shown in the middle of the display.

- **MENU** leads to the menu system. Up/down with the buttons 1 scrolls between menu options.
- **ENTER** selects or activates/deactivates a menu option.
- **EXIT** leads back one step in the menu structure. A long press on **EXIT** will exit the menu system.

Shortcuts

Menu options are numbered and can also be selected directly with the keypad **1-6**.

My own shortcut button – MY KEY

Use **MY KEY** to store a favourite function in the menu, e.g. **TP**.

– Select the function in the menu to be stored by holding **MY KEY** depressed for more than two seconds.

When **My Key stored.** is shown in the display, the function has been stored.

– Activate the function with a short press on **MY KEY**.

Functions that can be stored with MY KEY

Random

Disc text

TP

News

Radio text

PTY scan

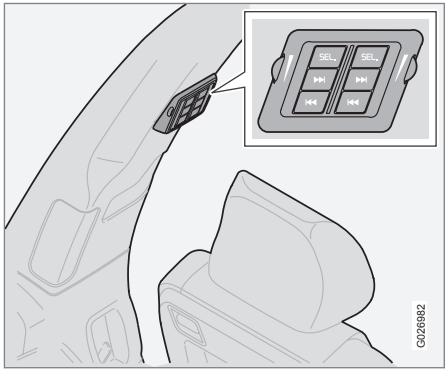
AF

Regional

Surround

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

Control panel with headphones socket*



Headphones with an impedance of 16 – 32 ohm and sensitivity of 102 dB or higher are recommended for best sound reproduction.

Activate/deactivate

The control panel is activated with **SEL** when the audio system is active. Deactivation is automatic when the audio system is deactivated or with a long press on **SEL**.

Scroll/search forward and backward

Short presses on / are used to scroll between CD tracks or preset radio stations. Long presses are used to fast-wind CD tracks or to search for radio stations automatically.

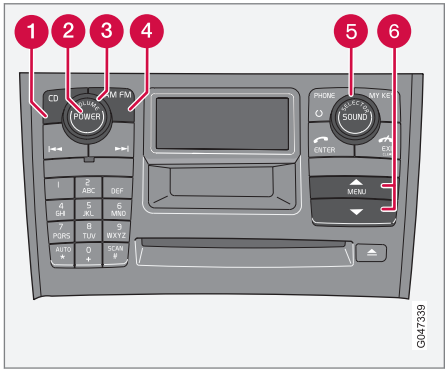
Limitations

The audio source (FM, AM, CD etc.) played back in the speakers cannot be controlled from the rear control panel.

RDS messages may not appear if the radio is playing back in the headphones while another audio source is playing back in the speakers.

Audio system functions

On/Off switch – Audio



Press the **POWER** button 2 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.

Volume control

Turn the knob 3 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.

Selecting the audio source

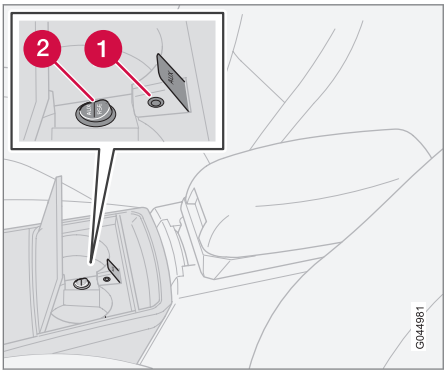
Press the **AM/FM** 4 button repeatedly to toggle between FM1, FM2 and AM. The **CD** button 1 activates the CD player/changer.

Turn **SELECTOR** 5 to toggle between the external audio sources - **AUX**, **USB*** and **BT*** and the internal audio sources CD and CD changer*.

External audio sources

AUX

The **AUX** AUX input can be used for connecting an iPod® or an MP3 player.



AUX input and audio switch for AUX/RSE.*

1 AUX input (3.5 mm)

2 Audio switch **AUX**/**RSE***

If the car is equipped with RSE* then there is a switch for audio from **AUX** and **RSE**. The switch can be in two positions:

- **AUX** - The audio from an external audio source is played back through the audio system.
- **RSE** - The audio from the RSE is played back through the audio system.

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

IMPORTANT

The cover for the cup holders must be open when the connector is in the **AUX** input.

NOTE

The audio quality may be impaired if the player is charged while the audio system is in AUX mode. In which case, avoid charging the player.

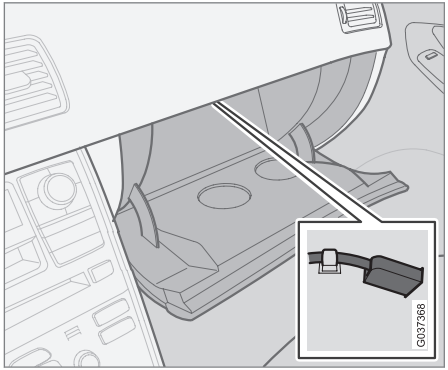
Sometimes the external **AUX** audio source can be heard at a different volume to the internal audio sources. The audio quality may be impaired if the audio volume from the external audio source is too high or too low. Prevent this by adjusting the input volume of the external audio source:

1. Select **AUX input volume** in the menu and press **ENTER**.
2. Control the volume with **SELECTOR** or up/down with the buttons 6. Finish with **ENTER**.

NOTE

Does not work for the steering wheel keypad.

USB*



USB connection.*

If you choose to connect an iPod®, MP3 player or a USB memory stick to the USB connection* then you can control the media via the car's audio controls.

NOTE

Connect the media player/USB memory stick to the cable and the port, put in the parts, and close the glovebox.

1. Select USB using the **SELECTOR** button.
   > **Connect device** appears on the display.
2. Connect your iPod®, MP3 player or USB memory stick to the USB connection*, see preceding illustration.
   > The text **Loading** appears on the display when the system loads the file structure on the storage media. This takes a while.

When the loading is finished the track information is shown on the display.

Now it is possible to fast-wind/change tracks using the buttons ⏮ / ⏭ :

- Short presses are used to scroll between tracks.
- Long presses are used to fast-wind tracks.

The steering wheel keypad can also be used for this purpose.

NOTE

The system supports the playback of music files in the MP3, WMA and WAV file formats. However, there are variants of these file formats that are not supported by the system. The system also supports most iPod® models produced in 2005 or later. iPod® Shuffle is not supported.

Audio system functions

USB memory stick

To facilitate the use of a USB memory stick, avoid storing any files other than music files in the memory. It takes considerably longer for the system to load storage media that contains items other than compatible music files.

NOTE

The system supports removable media which is compatible with USB 2.0 and the FAT32 file system, and can handle a maximum of 500 folders and 64 000 files. The memory must have a capacity of at least 256 Mb.

iPod®

An iPod® is charged and supplied with power by the USB connection via the player's connection cable. However, if the player's battery is fully discharged then it must be charged before being connected.

Streaming audio via Bluetooth®*

General

If the car is equipped with Bluetooth® hands-free* and a mobile phone is connected then the audio system can wirelessly play back streaming audio files from the mobile phone. Navigation and control of the sound can be carried out via the centre console buttons or via the steering wheel keypad*. In some mobile phones it is also possible to change tracks from the phone.

To be able to play back the audio a device must first be paired and connected to the car. For information about pairing and connection, see page 275. **BT** must also be selected as audio source, see page 248.

NOTE

The Bluetooth® mobile phone must support the Audio/Video Remote Control Profile (AVRCP) and Advanced Audio Distribution Profile (A2DP). The phone should use AVRCP version 1.3, A2DP 1.2. Otherwise some functions may not work.

NOTE

Not all mobile phones available in the market are fully compatible with the Bluetooth® function in the car's audio system. Volvo recommends that you contact an authorised Volvo dealer or visit www.volvocars.com for information on compatible phones and external media players.

Playback

Turn **SELECTOR** in order to select **BT** as audio source.

Now it is possible to fast-wind/change audio file using the buttons / :

- Short presses are used to scroll between audio files.
- Long presses are used to fast-wind audio files.

The steering wheel keypad can also be used for this purpose.

Optimum sound reproduction

The audio system is calibrated for optimum sound reproduction by means of digital signal processing.

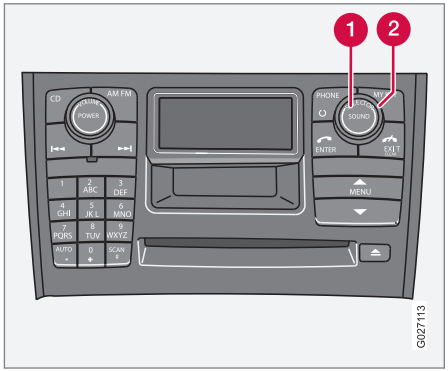
This calibration takes into account loudspeakers, amplifiers, passenger compartment acoustics, listener position etc. for each combination of car model and audio system.

There is a also a dynamic calibration that takes into account the level set for the volume control, radio reception and vehicle speed.

The controls that are explained in this owner's manual, e.g. Bass, Treble and Equalizer, are only intended for the user to be able to adapt the sound reproduction according to personal taste.

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

Audio settings



1. Press the **SOUND** button 1.
2. Press the **SOUND** button repeatedly until you come to the function you wish to set. Choose between **BASS**, **TREBLE**, **FADER**, **BALANCE**, **CENTRE*** or **SURROUND***.
3. 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**) is selected in the menu.

Programme type	Display shows
Bass	BASS
Treble	TREBLE
Balance between the left and right-hand speakers	BALANCE
Balance between the front and rear speakers	FADER
Level for centre speaker	CENTRE*
Level for surround sound	SURROUND*

Surround*

Surround settings govern the spatial perception of the sound. The settings, including activating and deactivating for each respective audio source, are made separately.

The DD symbol in the display indicates that Dolby Pro Logic II is active. There are three different settings for surround sound:

- **Pro Logic II**
- **3 channels**
- **Off** (two channel stereo)

Activating/deactivating surround sound

1. Press **MENU**, scroll to **AUDIO MODE** and press **ENTER**.
2. Select **SURROUND** and press **ENTER**.
3. Select **Pro Logic II**, **3 channels** or **Off** and press **ENTER**.

DD 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.

Audio system functions

Equalizer front[1]

This function is used to fine-tune the sound from the front speakers.

1. Select **AUDIO MODE** in the menu and press **ENTER**.
2. Select **Equalizer front** and press **ENTER**.
3. Use the menu selection buttons or the **SELECTOR** knob to set the level.
4. Press **ENTER** to select the next frequency. You can select five frequencies.
5. Press **ENTER** until you come to menu mode to save any changes.

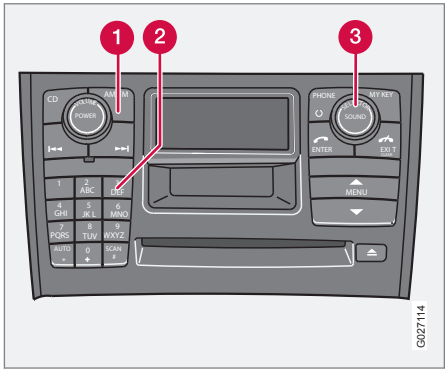
Equalizer rear[1]

This function is used to fine-tune the sound from the rear speakers.

1. Select **AUDIO MODE** in the menu and press **ENTER**.
2. Select **Equalizer rear** and press **ENTER**.
3. Use the menu selection buttons or the **SELECTOR** knob to set the level.
4. Press **ENTER** to select the next frequency. You can select five frequencies.
5. Press **ENTER** until you come to menu mode to save any changes.

1 Certain audio systems.

Tuning



1. Select radio mode **AM/FM1/FM2** using the **SELECTOR** knob (3) or the **AM/FM** button (1).
2. A short press on the ⏭ or ⏮ button is used to search for the next strong station.
3. Press one of the buttons again to search again.

Manually seek known frequency

1. Hold the ⏭ or ⏮ button depressed. **MAN** is shown in the display. The radio slowly scrolls in the desired direction, increasing its tempo after a few seconds.
2. Release the button when the desired frequency shows in the display.
3. 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.

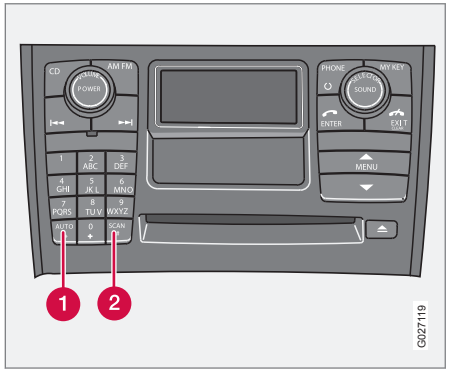
Storing stations

To store a selected station under one of the station setting buttons **0** – **9** (2):

1. Set the desired station.
2. Press and hold the required station storage button. The sound mutes a few seconds. **Channel stored** is 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.

AUTOSTORE – autostoring stations



AUTO (1) seeks out the ten strongest radio stations and stores them automatically in a separate memory. The function is especially useful in areas where the radio stations and their frequencies are unfamiliar.

Start autostoring

1. Select wavelength using **AM/FM**.
2. Hold **AUTO** (1) depressed until **Autostoring** appears on the display.

Once **Autostoring** disappears from the display, the stations are stored. The radio continues in Auto mode and **AUTO** appears on the display. The automatically stored stations can now be selected using the **0** - **9** buttons.

Radio functions

If there is no station with an adequately strong signal then the display shows **No station found**.

Cancelling automatic storage of stations

– Press **EXIT**.

Selecting an autostored preset

Allowing the radio to remain in Auto mode provides access to the autostored presets.

1. Briefly press **AUTO** (1). **AUTO** appears in the display.
2. Press one of the **0** - **9** buttons.
3. The radio remains in Auto mode until it is exited by a brief press on **AUTO** (1), **EXIT** or **AM/FM**.

Scanning

SCAN (2) automatically searches through a wavelength for strong stations. When a station is found, it is played for approx. 8 seconds before scanning is resumed.

Activating/deactivating Scan

1. Select wavelength using **AM/FM**.
2. Press **SCAN** (2) to activate. **SCAN** appears in the display.
3. Close using **SCAN** or **EXIT**.

Storing a station

A selected station can be stored as a preset while **SCAN** is active.

– Press one of the **0** - **9** buttons and hold it depressed until the message **Station stored** appears on the display.

SCAN is interrupted and the stored station can be selected as a preset.

RDS functions[1]

RDS (Radio Data System) links FM transmitters into a network. An FM transmitter in such a network sends information that gives an RDS radio the following functions:

- Automatically switches to a stronger transmitter if reception in the area is poor.
- Searches for programme form, such as traffic information or news.
- Receives text information on the current radio programme.

NOTE

Some radio stations do not use RDS or only a selected range of its functions.

Volume control – NEWS/TP/ALARM

NOTE

If a CD for example 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 audio 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.

News – NEWS

This function interrupts other sound sources, e.g. CD, when a news broadcast starts.

1. Select radio mode using the **SELECTOR** knob or the **AM/FM** button.
2. Select **News** in the menu and press **ENTER**.
3. **News** appears on the display.
4. 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

[1] The RDS functions available vary in the different markets.

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 radio returns to the previous audio source and volume setting.

1. Select TP in the menu and press **ENTER**.
2. TP appears on the display.
3. 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 then TP appears on 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 in progress:

– Press the **EXIT** button. The TP function 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.

1. Select RADIO SETTINGS in the menu and press **ENTER**.
2. Select TP and press **ENTER**.
3. Select TP search and press **ENTER**.

To deactivate the function, select TP search again and press **ENTER**.

Radio text

Some RDS stations transmit information on programme content, artists, etc. This information can be indicated with text in the display.

1. Press the **MENU** button.
2. Select Radio text in the menu and press **ENTER**.
3. Select Radio text again and press **ENTER** to deactivate.

Alarm

Alarms are transmitted automatically and the function cannot be deactivated. Alarm! is shown in the radio display when an alarm message is broadcast. This function is used to warn motorists of major accidents and catastrophes, such as a bridge collapse or an accident at a nuclear plant.

Programme types – PTY

The PTY function can be used to select different programme types, such as pop or classical music. Use the PTY function to select from among the different programme types shown in the list below.

Display of programme type

1. Select RADIO SETTINGS in the menu and press **ENTER**.
2. Select PTY in the menu and press **ENTER**.
3. 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.

Radio functions

Programme types
Current affairs
Religion
Varied speech
Country music
Documentary
Finance
Folk music
Leisure & hobby
Children's progs
Oldies music
Information
Jazz music
Serious classic
Culture
Light classic
Easy listening
National music

Programme types
Pop music
Travel
Rock music
Social affairs
Sport
Drama
Phone in
Education
Science
Weather & Metro
Other music

Searching for a specific programme type

This function helps you find programmes with a specific focus by searching the entire frequency band.

1. Select **FM 1** or **FM 2** and press the **MENU** button.
2. Select **RADIO SETTINGS** and press **ENTER**.
3. Select **PTY** and press **ENTER**.
4. Select **Select PTY** and press **ENTER**.
5. Press **ENTER** for one or more of the listed programme types you select. The PTY symbol in the display illuminates when the first selection is made and the radio continues in standby for PTY.
6. Once you have selected all desired types, select **EXIT/CLEAR** to exit the PTY list.
7. Select **PTY scan** and press **ENTER**. If the radio finds a station with the selected programme type, it is played through the speakers.
8. If the radio finds a station that is unsuitable, continue the search with the / buttons.
9. 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 broadcast, 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 **PTY** disappears from the display and the radio resumes normal mode.

Traffic information – TP STATION

Here, you set from which station traffic information is to be heeded.

Note that TP must be shown in the display for this to work.

Activating/deactivating TP STATION

Listen to the station from which traffic information is to be heeded.

1. Select RADIO SETTINGS in the menu and press **ENTER**.
2. Select TP and press **ENTER**.
3. Select TP-STATION and press **ENTER**.
4. Select Set current to activate or RESET to deactivate 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.

Activating/deactivating NEWS STATION

Listen to the station from which news is to be heeded.

1. Select RADIO SETTINGS in the menu and press **ENTER**.
2. Select NEWS STATION and press **ENTER.**
3. Select TP-STATION and press **ENTER**.
4. Select Set current to activate or RESET to deactivate and press **ENTER**.

NOTE

Now only news from the stored station will by played.

Automatic frequency update – AF

The AF function selects one of the strongest transmitters for a set station. The radio may sometimes need to search through the entire FM wavelength to find a strong transmitter. If this occurs, the radio mutes and PI Seek Press EXIT to cancel appears in the display.

Activating/deactivating AF

1. Select RADIO SETTINGS in the menu and press **ENTER**.
2. Select AF and press **ENTER**.

To reactivate AF, select AF and press **ENTER**.

Regional radio programmes – REG

This function causes the radio to continue with a regional transmitter even if its signal strength is low.

1. Select RADIO SETTINGS in the menu and press **ENTER**.
2. Select Regional and press **ENTER**.
3. REG appears on the display.
4. To deactivate REG, select **REG** again and press **ENTER**.

Radio functions

Enhanced Other Networks – EON

The EON function is especially useful in urban areas with many regional radio stations. It allows the distance between the car and the radio station transmitter to determine when programme functions should interrupt the current audio source.

- **Local** – interrupts only if the radio station transmitter is close.
- **Distant**[2] – interrupts if the station transmitter is far away, even if there is a lot of static.
- **Off** – no interruption for programmes from other transmitters.

Activating/deactivating EON

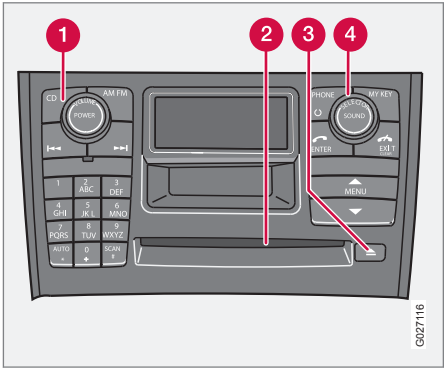
1. Select **RADIO SETTINGS** in the menu and press **ENTER**.
2. Select **EON** and press **ENTER**.
3. Select **Local**, **Distant** or **Off** and press **ENTER**.

Resetting RDS functions

Resets all radio settings to the original factory settings.

1. Select **RADIO SETTINGS** in the menu and press **ENTER**.
2. Select **Reset all** and press **ENTER**.
3. Press **ENTER** again to confirm.

[2] Default/factory settings.



Start playback (CD player)

If a music CD is in the player when the audio system is in CD mode then playback is started automatically. Otherwise, load a disc and change to CD mode using **SELECTOR** (4) or **CD**(1).

Start playback (CD changer)

If a CD position with a music CD is already selected when the audio system is activated then playback starts automatically. Otherwise change to CD changer mode using **SELECTOR** (4) or **CD** (1) and select a disc with the number buttons **1 - 6**.

Insert a CD (CD changer)

– Select an empty position with the number buttons **1** - **6** or Up/Down on the navigation button.

An empty position is marked on the display. The text **Insert disc** shows that a new disc can be inserted. The CD changer can hold up to six CDs.

– Insert a CD into the CD changer slot (2).

CD eject

A CD will stay in the ejected position for max. 12 seconds. Following which it is re-inserted in the player and playback continues.

Single discs (CD player)

Eject individual discs by pressing the eject button (3).

All discs (CD changer)

Eject all discs with a long press on the eject button. The entire magazine is emptied disc by disc. The message **EJECT** is shown in the display.

This function can only be activated if the car is stationary. Eject is interrupted if the car begins to move.

Pause

If the volume is turned down completely, the CD player is stopped. The player is restarted when volume is increased.

Audio files

Apart from normal music CDs, the CD player supports MP3 and WMA format audio files.

NOTE

Certain types of copy-protected audio files cannot be read by the player.

When a CD containing audio files is inserted into the player the disc's directory structure is read in. It may take a while before playback starts due to the quality of the disc.

Navigation and playback

If a disc containing audio files is inside the CD player then **ENTER** leads to the disc's directory structure. The directory structure is navigated in the same way as the audio system's menu structure. Audio files have the symbol and directories have the symbol . Before playback starts / can be used to show the audio file's name if the display is too narrow. Start playback of the selected audio file with **ENTER.**

When the playback of a file is finished the playback of the other files in the same directory continues. Directory change takes place automatically when all files in the current directory have been played back.

CD functions

Fast-wind/change CD tracks and audio files

Short presses right/left on the / buttons are used to scroll between CD tracks/audio files. Long presses are used to fast-wind CD tracks/audio files. The steering wheel keypad can also be used for this purpose.

Scan CD

This function plays the first ten seconds of each CD track/audio file. Press **SCAN** to activate. Interrupt with **EXIT** or **SCAN** to continue playback of the current CD track/audio file. Scan only works on the selected disc. The text **SCAN** is shown in the display when the function is active.

NOTE

If disc text is activated then **SCAN** is not shown in the display.

Random

This function plays the tracks in random order. The random CD tracks/audio files can be scrolled through in the normal way.

NOTE

It is only possible to scroll between random CD tracks on the current disc.

Activating/deactivating (CD player)

If a normal music CD is being played:

– Select **RANDOM** in the menu and press **ENTER**.

If a disc with audio files is being played:

– Select **Disc** or **Folder** in the menu and press **ENTER**.

Activating/deactivating (CD changer)

If a normal music CD is being played:

1. Select **Random** in the menu and press **ENTER**.
2. Scroll to **Single disc** or **All discs** and press **ENTER**.

The option **All discs** only applies to the music CDs in the changer.

If a CD with audio files is being played:

1. Select **Single disc** or **Folder** in the menu and press **ENTER**.
2. Scroll to the required CD or folder and press **ENTER**.

When you select another CD the function is deactivated.

Different messages appear depending on which random function is active:

- **RANDOM** means that the tracks from only one music CD are played.
- **RANDOM ALL** means that all tracks on all music CDs in the CD changer are played.
- **RANDOM Folder** means that the audio files in a directory on the current CD are played.

NOTE

If disc text is activated then these messages are not displayed.

Disc text

If title information is stored on a CD then it can be shown in the display.

Activate/deactivate

Start CD playback.

– Select **Disc text** in the menu and press **ENTER**.

CDs

Using CD discs burned at home could result in poor or non-existent sound.

WARNING

Only use standard discs (12 cm in diameter). Do not use CDs with adhesive disc labels. The heat in the CD player may cause the label to come off, damaging the CD player.

Menu structure – audio system

FM-MENU[1]

1. News

2. TP

3. Radio text

4. RADIO SETTINGS

- 4.1. PTY
- 4.2. TP
- 4.3. NEWS STATION
- 4.4. AF
- 4.5. Regional
- 4.6. EON
- 4.7. Reset all

5. AUDIO SETTINGS*

- 5.1. Surround
- 5.2. Equalizer front
- 5.3. Equalizer rear
- 5.4. Reset all

AM MENU

1. AUDIO SETTINGS*[2]

CD MENU

1. Random

2. News

3. TP

4. Disc text

5. AUDIO SETTINGS*[2]

AUX MENU

1. AUX input volume

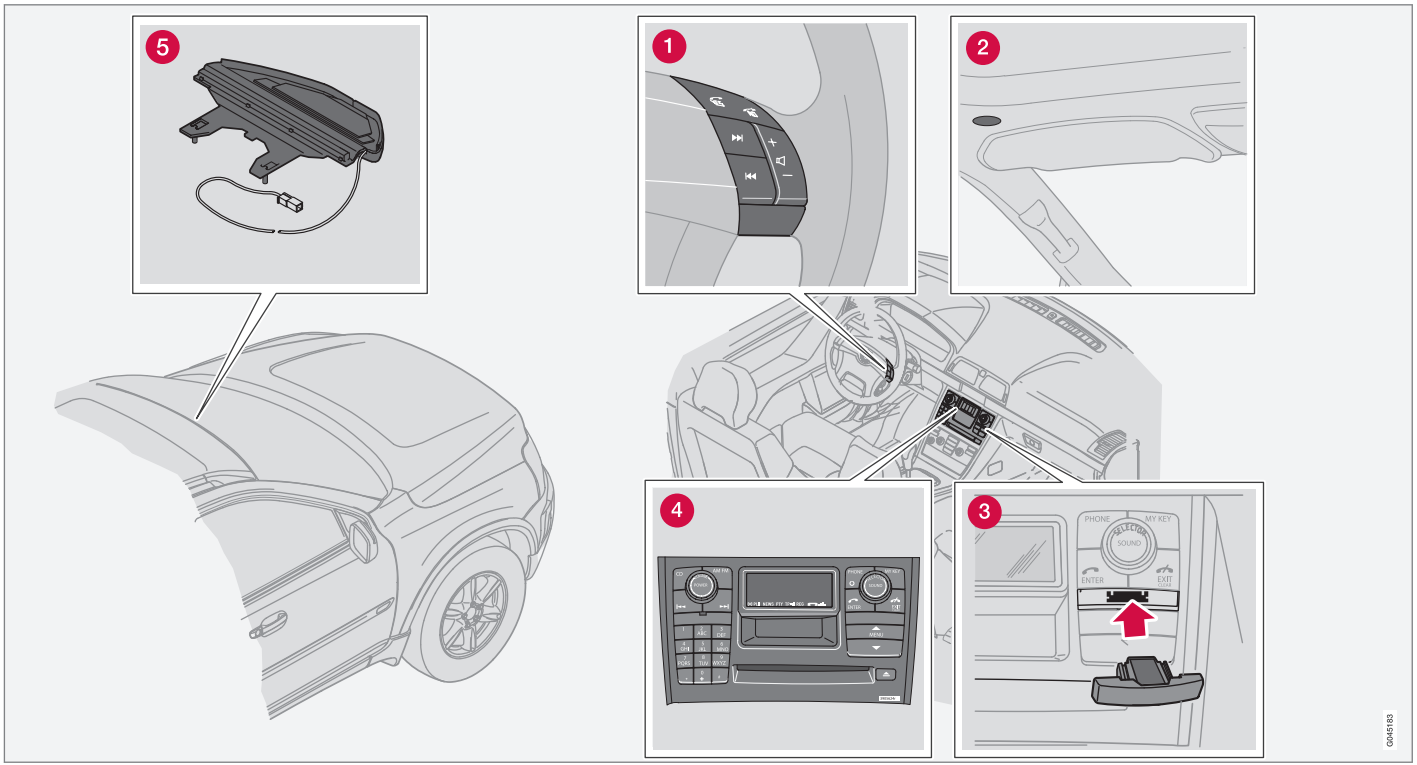
2. News

3. TP

4. AUDIO SETTINGS*[2]

[1] The RDS functions available vary in the different markets.
[2] See FM MENU.

Phone functions*



Phone system components

Phone functions*

Phone system components

1. **Steering wheel keypad*** - You can control the majority of phone functions using the steering wheel keypad. When the phone is active, the steering wheel keypad can only be used for phone functions. When in active mode, phone information is always shown in the control panel display.
2. **Microphone** - The microphone for handsfree is fitted in the roof by the sun visor.
3. **SIM card reader** - The SIM card is inserted into the front of the control panel.
4. **Centre console control panel** - All phone functions (except call volume) can be regulated via the control panel.
5. **Antenna** - The antenna is mounted against the windscreen, in front of the rearview mirror.

General

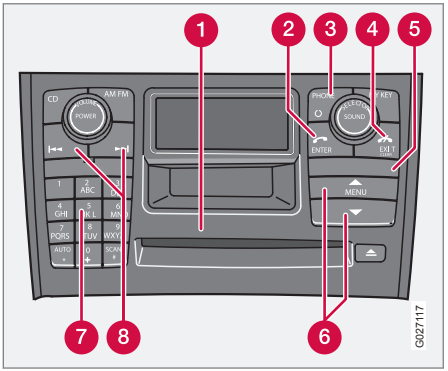
- Always put traffic safety first.
- Switch off the phone system when refuelling the car.
- Switch off the system near blasting work.
- Volvo recommends that an authorised Volvo workshop carries out phone system servicing.

Emergency calls

Emergency calls to alarm centres can be made without a SIM card as long as there is coverage by a GSM operator.

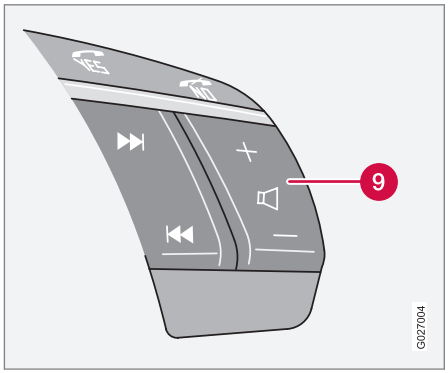
1. Activate the phone.
2. Ring the emergency number that applies to your region (within EU: 112).
3. Press **ENTER** in the control panel or in the steering wheel keypad.

Controls



1. Display
2. **ENTER** – accept a call, make a menu selection or activate the phone from standby mode
3. On/Off/Standby
4. **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

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



7 Number/character buttons and menu shortcuts

8 Seek – scroll forward or back when entering text and numbers

9 Increase/decrease call volume during calls. The phone does not use the centre speaker*

On/Off/Standby switch

To activate the system:

– Press the **PHONE** button (3) to activate the phone system.

To switch off the system:

– Hold the **PHONE** button depressed to switch off the phone system

Continuing with system in standby mode:

1. The phone will continue in standby mode with a brief press of the **PHONE** button or if you press **EXIT/CLEAR**.
2. Reactivate the system with the **PHONE** button.

When the phone is activated or in standby mode, a handset is shown in the display.

If you switch off the car's ignition with the phone system on, it will be on the next time you switch on the ignition. No calls can be received when the phone system is switched off.

Volume reduction during phone call

If the phone 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 phone call, whereby the newly selected level will resume when the call is concluded. Audio system volume can also be switched off completely during a phone call, see page 272.

This function only applies to the Volvo integrated phone 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 phone system, the phone must be in active mode.

Phone functions*

Menu shortcuts

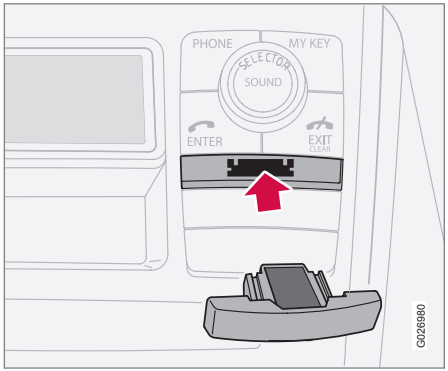
Once you have used the menu button to enter the menu system, you can use numbers instead of the arrows and the **ENTER** button to select the right menu in the main menu level. Each menu selection is numbered. The numbers are shown in the display together with the menu alternative.

Traffic safety

For reasons of safety, parts of the phone 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 phone 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 phone.

1. Switch off the phone.
2. Open the SIM card holder with a short press.
3. Insert the SIM card with the metallic surface down.
4. Make sure that the bevelled corner of the SIM card matches the bevel of the holder.
5. 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 keypad or control panel keypad.

To receive an incoming call:

– Press **ENTER**. You can also use Automatic Answer, see page 272.

The car's audio system can be muted automatically while a phone call is in progress, see page 272.

Ending a call

– Press **EXIT/CLEAR** on the steering wheel keypad or control panel keypad.

The audio system resumes its previous activity.

Refuse an incoming call by pressing **EXIT/CLEAR**.

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

Last dialled numbers

The phone automatically stores the last phone numbers/names called.

1. Press **ENTER** on the steering wheel or control panel keypad.
2. Use the menu buttons to scroll forward or back through the last numbers dialled. They are shown in the display.
3. 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**).

Proceed as follows:

1. Select **Phone book** in the menu and press **ENTER**.
2. Scroll to **Speed dial** (see page 272) and press **ENTER**.
3. Select which number is to be the speed dial number. Press **ENTER** to confirm.
4. Search for the desired name or phone number in the phone book. Press **ENTER** to select.

Using speed dial

1. To make a call, press and hold the desired speed dial button for about two seconds or press the button briefly and then press **ENTER**.
2. Once you switch on the phone, wait a moment before using speed dial.

NOTE

If you wish to use a speed dial number then Menu 3.4 must be activated. See Speed dial under Description of menu options on page 271.

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.

When this occurs, you may accept or decline the call. 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.

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	Mute mode
Hold/Resume	Choose if the call is to be parked or resumed
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	Mute mode
Phone book	Show phone book
Join	Speak with both parties simultaneously (conference call)
Swap	Switch between the two calls

Phone functions*

Phone call volume

Increase or decrease call volume during calls by pressing the **+** or **-** buttons in the steering wheel keypad.

When the phone is active, the steering wheel keypad is locked to phone functions.

The phone must be in standby mode in order to adjust the audio system with these buttons, see page 265.

Phone book

Phone numbers and names can be stored in either the phone memory or the SIM card memory.

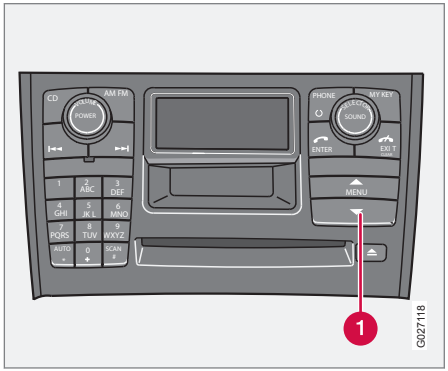
If the number of the person calling is found in the phone book, his or her name is shown in the display.

The phone memory can store up to 255 names.

Storing phone numbers with names

1. Press the **MENU** button, select **Phone book** and press **ENTER**.
2. Scroll to **New number** and press **ENTER**.
3. Enter a name and press **ENTER**.
4. Enter a number and press **ENTER**.
5. Choose in which memory to save and press **ENTER**.

Dialling 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:

1. Press **ENTER** and scroll with the arrows until you find the desired name.
2. Press the key for the first letter of the name (or enter the entire name) and press **ENTER**.
3. Press **ENTER** to call the selected number.

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.

1	space 1 - ? ! , . : " ' ( )
2	a b c 2 ä å à æ ç
3	d e f 3 è é
4	g h i 4 ì
5	j k l 5
6	m n o 6 ñ ö ò Ø
7	p q r s 7 ß
8	t u v 8 ü ù
9	w x y z 9

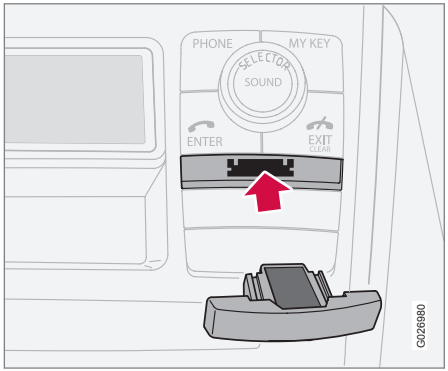
* Option/accessory, for more information, see Introduction.

*	Used if two characters are to be ended with the same button.
0	+ 0 @ * # & $ £ / %
#	Switch between upper and lower case.
EXIT	Delete the last letter or number entered. If you press for a long time, the entire number and text is deleted.

Quitting text input:

1. Clear all entered characters with a long press on the **EXIT**/**CLEAR** button.
2. Return to the menu with an additional long press on the **EXIT**/**CLEAR** button.

Double SIM cards



Many network operators offer double SIM cards - one for your car and one for another phone. A double SIM card allows you to have the same number for two different phones. Ask your network operator about the options available and the use of double SIM cards.

Specifications

Output	2 W
SIM card	small, 3 V
Memory entries	255[A]
SMS	yes
Data/fax	no
Dualband	yes (900/1800)

A The phone memory contains 255 positions. The number of SIM card memory positions varies depending on your subscription.

IMEI number

To block the phone, you must provide your network operator with the phone's IMEI number. This is a 15 digit serial number that is programmed into the phone. Dial ***#06#** to show this number in the display. Write it down and keep it in a safe place.

Menu structure – phone

Overview

1. Call register

- 1.1. Missed calls
- 1.2. Received calls
- 1.3. Dialled no.
- 1.4. Erase list
  - 1.4.1 All calls
  - 1.4.2 Missed calls
  - 1.4.3 Received calls
  - 1.4.4 Dialled no.
- 1.5. Call duration
  - 1.5.1 Last call
  - 1.5.2 Call count
  - 1.5.3 Total time
  - 1.5.4 Reset timer

2. Phone book

- 2.1. Search
- 2.2. New number
- 2.3. Copy all
  - 2.3.1 SIM to phone
  - 2.3.2 Phone to SIM
- 2.4. Speed dial
  - 2.4.1 Active
  - 2.4.2 Select numbers
- 2.5. Erase SIM
- 2.6. Erase phone
- 2.7. Memory status

3. Messages

- 3.1. Read
- 3.2. Write
- 3.3. Message settings
  - 3.3.1 SMSC number
  - 3.3.2 Validity time
  - 3.3.3 Message type

4. Call options

- 4.1. Send my no.
- 4.2. Call waiting
- 4.3. Automatic answer
- 4.4. Automatic redial
- 4.5. Voice mail number
- 4.6. Diversions
  - 4.6.1 All calls
  - 4.6.2 When engag.
  - 4.6.3 Not answered
  - 4.6.4 Not reachable
  - 4.6.5 Fax calls
  - 4.6.6 Data calls
  - 4.6.7 Cancel all

5. Change phone

- 5.1. Car phone
- 5.2. Add phone
- 5.3. Added phones[1]

NOTE

The menu above only applies to cars with Bluetooth™ handsfree.

6. Tel. settings

- 6.1. Network
  - 6.1.1 Automatic
  - 6.1.2 Manual select
- 6.2. SIM security
  - 6.2.1 On
  - 6.2.2 Off

[1] Max. 3 phones.

6.2.3 Automatic

6.3. Change PIN code

6.4. Audio

6.4.1 Ring volume

6.4.2 Ring signal

6.4.3 Mute radio

6.4.4 Msg. beep

6.5. Factory settings

Description of menu options

1. Call register

1.1. Missed calls
List of missed calls. You can choose to call, erase or store the number in the phone book.

1.2. Received calls
List of received calls. You can choose to call, erase or store the number in the phone book.

1.3. Dialled no.
List of dialled numbers. You can choose to call, erase or store the number in the phone book.

1.4. Erase list
Erase the lists found in the menus 1.1, 1.2 and 1.3 as below.

1.4.1. All

1.4.2. Missed

1.4.3. Received

1.4.4. Dialled

1.5. Call duration
Duration of all calls or of the most recent call. The phone code is required to reset the call timer (see menu 5.4).

1.5.1. Last call

1.5.2. Call count

1.5.3. Total time

1.5.4. Reset timer

2. Phone book

2.1. Search
Search for a name in the phone book.

2.2. New number
Store names and phone numbers in the phone book, see page 267.

2.3. Copy all
Copy phone numbers and names from the SIM card to the phone memory.

2.3.1. From SIM to phone memory

2.3.2. From phone to SIM memory

2.4. Speed dial
A number stored in the phone book can be stored as a speed dial number.

2.5. Erase SIM
Erase the entire SIM card memory.

2.6. Erase phone
Erase the entire phone memory.

2.7. Memory status
Shows how many positions are occupied in the SIM card and phone memory. The table shows how many of the total number of positions are occupied, e.g. 100 (250).

3. Messages

3.1. Read
Received text messages. Select whether to erase, forward, change or save the entire message or parts of it.

3.2. Write
Write a message using the keypad. Choose whether to save or send it.

3.3. Message sett
Enter the number (SMSC number) of the message centre to which messages are to be transferred as well as how long they are to be saved at the message centre. Contact your network operator for information on message

Menu structure – phone

settings. Normally, these settings should not be altered.

3.3.1. SMSC number

3.3.2. Validity time

3.3.3. Message type

4. Call options

4.1. Send my no.
Displays or hides your phone number to/from the person you call. Contact your network operator regarding ex-directory numbers.

4.2. Call waiting
Be alerted during a phone call that there is another incoming call.

4.3. Auto answer
Automatically answers incoming calls.

4.4. Call back
Calls a previously engaged number.

4.5. Voice mail number
Stores voice mail number.

4.6. Diversion
Choose when and what type of calls are to be diverted to a specified phone number.

4.6.1. All calls

This setting only applies during the call in progress.

4.6.2. When engag.

4.6.3. Not answered

4.6.4. Not reachable

4.6.5. Fax calls

4.6.6. Data calls

4.6.7. Cancel all

5. Change phone

5.1. Car phone
Select the built-in phone.

5.2. Add phone
Add mobile phones to the list Added phones.

5.3. Added phones
Select to connect to one of the added phones (up to 3 phones).

NOTE

The menu above only applies to cars with Bluetooth™ handsfree.

6. Phone settings

6.1. Network
Choose a network automatically or manually. The selected network is shown in the display in the phone's basic mode.

6.1.1. Auto

6.1.2. Manual select

6.2. SIM security
Select if the PIN code should be on, off or if the phone should automatically give the PIN code.

6.2.1. On

6.2.2. Off

6.2.3. Automatic

6.3. Change PIN code
Change PIN code. Write down and save the code in a safe place.

6.4. Sounds
6.4.1. Volume

Adjust the ring tone volume.

6.4.2. Ring signal

There are five different ring signals.

6.4.3. On/off

Mute radio.

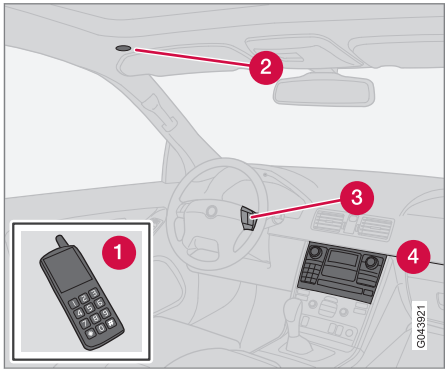
6.4.4. Msg. beep

6.5. Factory default

Reset the system's factory settings.

Bluetooth handsfree*

General



System overview.

1. Mobile phone
2. Microphone
3. Steering wheel keypad*
4. Centre console control panel

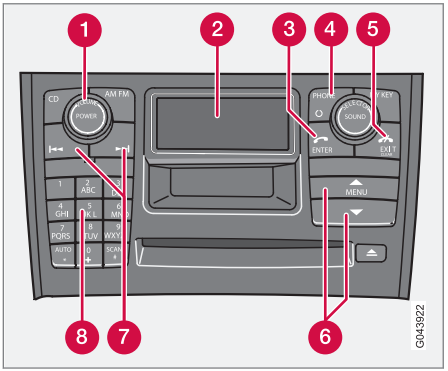
Bluetooth™

A mobile phone equipped with Bluetooth™ can be connected wirelessly to the audio system. The audio system then works handsfree, with the option to control a range of the mobile phone's functions remotely. The microphone is fitted in the headlining by the sun visor (2). The mobile phone can be operated by its own keys irrespective of whether or not it is connected.

NOTE

Only a selection of mobile phones are fully compatible with the handsfree function. Volvo recommends that you seek assistance from an authorised Volvo dealer or visit www.volvocars.com for information on compatible phones.

Phone functions, controls overview



Centre console control panel.

1. **VOLUME** - volume, same functionality available in steering wheel keypad*.
2. Display
3. **ENTER** – accept a call, make a menu selection or activate the phone from standby mode.
4. **PHONE** – on/off/standby.
5. **EXIT** – terminate/refuse a call, scroll back in the menu, cancel a selection or erase entered digits/characters.

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

6. **MENU** - leads to the menu system. Up/down with the buttons scrolls between menu options.
7. Seek – scroll forward or back when entering text and numbers.
8. Number/character buttons and menu shortcuts.

Remember

The menus are controlled from the centre console and the steering wheel keypad. For general information on menus, see page 246.

NOTE

If the car is equipped with both Bluetooth™ handsfree and built-in phone then there is an additional menu in the phone menu, see page 278.

Activate/deactivate

A short press on **PHONE** activates the handsfree function. The text **PHONE** at the top of the display shows that it is in phone mode. The symbol shows that the handsfree function is active.

One long press on **PHONE** deactivates the handsfree function and disconnects a connected phone.

Connect mobile phone

A mobile phone is connected in different ways depending on whether or not it has been connected previously. To connect a mobile phone for the first time, follow the instructions below:

Alternative 1 - via the car's menu system

1. Make the mobile phone detectable/visible via Bluetooth™, see the mobile phone's manual or www.volvocars.com.
2. Activate the handsfree function with **PHONE**.
   > Menu option **Add phone** appears on the display. If one or more mobile phones have already been registered then these are also shown.
3. Select **Add phone**.
   > The audio system searches for mobile phones in the vicinity. The search takes approximately 30 seconds. The mobile phones detected are specified with their respective Bluetooth™ name in the display. The handsfree function's Bluetooth™ name is shown in the mobile phone as **My Volvo Car**.
4. Choose one of the mobile phones in the audio system display.
5. Enter the number series shown in the audio system display via the mobile phone keypad.

Alternative 2 - via the phone's menu system

1. Activate the handsfree function with **PHONE**. If there is a phone connected, disconnect the connected phone.
2. Search with the phone's Bluetooth™, see the mobile phone's manual.
3. Select **My Volvo Car** in the list of units detected in your mobile phone.
4. Enter the PIN code '1234' into the mobile phone when prompted for the PIN code.
5. Select to connect to **My Volvo Car** from the mobile phone.

The mobile phone is registered (paired) and connected automatically to the audio system while the text **Synchronising** is shown in the display. For more information on how mobile phones are registered, see page 277.

When the connection is established the symbol is shown and the mobile phone's Bluetooth™ name is shown in the display. Now the mobile phone can be controlled from the audio system.

Bluetooth handsfree*

To call

1. Make sure that the text PHONE is shown at the top of the display and that the symbol is visible.
2. Dial the number or use the phone book, see page 277.
3. Press **ENTER**.

The call is interrupted with **EXIT**.

Disconnecting the mobile phone

Automatic disconnection takes place if the mobile phone moves out of the audio system's range. For more information on connection, see page 277.

Manual disconnection takes place by deactivating the handsfree function with one long press on **PHONE**. The handsfree function is also deactivated when the engine is switched off.

When the mobile phone has been disconnected an ongoing call can continue with the mobile phone's built-in microphone and speaker.

NOTE

Some mobile phones require that the transfer from handsfree is confirmed from the mobile phone's keypad.

Making and receiving calls

Incoming call

Calls are accepted with **ENTER** even if the audio system is in CD or FM mode for example. Refuse or end with **EXIT**.

Automatic answer

The automatic answer function means that calls are accepted automatically. Activate/deactivate under PHONE MENU ➔ CALL OPTIONS ➔ Automatic answer.

In call menu

Press **MENU** or **ENTER** during an ongoing call to access the following functions:

- Mute microphone - audio system microphone is muted.
- Move call to mobile - the call is transferred to the mobile phone.

NOTE

With certain mobile phones the connection is terminated when the privacy function is used. This is normal. The handsfree function asks if you want to reconnect.

- Phone book – searching in the phone book.

NOTE

A new call cannot be started during an ongoing call.

Audio settings

Phone call volume

Call volume can be adjusted during calls. Use the steering wheel keypad*.

Audio system volume

In phone mode (PHONE) the audio system volume can be adjusted as usual with **VOLUME**.

The audio source can be automatically muted for incoming calls under PHONE MENU ➔ PHONE SETTINGS ➔ SOUNDS AND VOLUME ➔ Mute radio.

Ring volume

Go to PHONE MENU ➔ PHONE SETTINGS ➔ SOUNDS AND VOLUME ➔ Ring signal volume and adjust with ▲ / ▼ on the control panel in the centre console.

Ring signals

The handsfree function has integrated ring signals that can be selected under PHONE MENU ➔ PHONE SETTINGS ➔ SOUNDS

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

AND VOLUME ➔ Ring signals ➔ Ring signal 1 etc.

NOTE

The connected mobile phone's ring signal is not deactivated when one of the hands-free system's integrated signals is used.

In order to select the connected phone's ring signal[1], go to PHONE MENU ➔ PHONE SETTINGS ➔ SOUNDS AND VOLUME ➔ RING SIGNALS ➔ Use mobile phone signal.

More on registering and connecting

A maximum of 3 mobile phones can be registered. Registration is performed once per phone. After registration the mobile phone is in the list of added phones. Not more than one mobile phone can be connected at a time. Phones can be deregistered under PHONE MENU ➔ BLUETOOTH ➔ Remove phone.

Automatic connection

When the handsfree function is active and the last mobile phone connected is in range it is connected automatically. When the audio system searches for the last phone connected its name is shown in the display. To change over to manual connection of another phone, press **EXIT**.

Manual connection

If you want to connect a mobile phone other than the last connected or change the connected mobile phone, proceed as follows:

Set the audio system in phone mode (PHONE) and follow the instructions on the display or change the connected mobile phone by using the menu system as described below.

The menu structure is available in two variants depending on whether the car only has Bluetooth™ or if the car also has a built-in phone.

- For cars with only Bluetooth™ the connection is made under PHONE MENU ➔ BLUETOOTH ➔ Change phone ➔ Add phone or select one of the previously connected phones.
- For cars with built-in phone and Bluetooth™ the connection is made under PHONE MENU ➔ Change phone ➔ Add phone or select one of the previously connected phones.

Phone book

All use of the phone book presupposes that the text PHONE is shown at the top of the display and that the symbol is visible.

The audio system stores a copy of the phone book from each registered mobile phone. The phone book is copied automatically to the audio system during each connection. Deactivate the function under PHONE SETTINGS ➔ Synch. phone book. Searching for contacts is only performed in the connected mobile phone's phone book.

NOTE

If the mobile phone does not support copying of the phone book then The list is empty is shown when copying is finished.

If the phone book contains a ringing caller's contact information then this is shown in the display.

Searching for contacts

The easiest way to search in the phone book is with long presses on the keys **2–9**. This starts a search in the phone book based on the key's first letter.

[1] Not supported by all mobile phones.

Bluetooth handsfree*

The phone book can also be reached with the ▼ button on the control panel in the centre console or with on the steering wheel keypad. Scroll between contacts with the ▼ / ▲ buttons or with / . The search can also be carried out from the phone book's Search menu under PHONEBOOK ➔ Search:

1. Enter the first few letters of the contact and press **ENTER**. Or simply press **ENTER**.
2. Scroll to a contact and press **ENTER** to call.

Voice recognition

The mobile phone's voice recognition function for dialling can be used by holding in **ENTER**.

NOTE

Only a selection of mobile phones are fully compatible with the voice recognition function. Volvo recommends that you contact an authorised Volvo dealer or visit www.volvocars.com for information on compatible phones.

Voice mail number

Voice mail number can be changed under CALL OPTIONS ➔ Voice mail no.:. If there is no number stored then this menu can be reached with one long press on **1**. Press **1** for a long time to use the stored number.

Call lists

The call lists are copied to the handsfree function at each new connection and are then updated during the connection. Press **ENTER** to show the last dialled. Other call lists are available under CALL REGISTER.

NOTE

Certain mobile phones show a list of the last dialled numbers in reverse order.

Inputting text

Input text using the keypad in the centre console. Press once for the key's first character, twice for the second etc. Continue pressing for more characters, see the table on page 268.

A short press on **EXIT** deletes an input character. One long press on **EXIT** clears all input characters. ▲ / ▼ on the control panel in the centre console scrolls between the characters.

Menu structure - Bluetooth™handsfree

NOTE

The menu for Bluetooth™ handsfree is available in two variants. For cars with only Bluetooth™ handsfree and for cars with built-in phone and Bluetooth™ handsfree.

1. CALL REGISTER

- 1.1. Last 10 missed
- 1.2. Last 10 received
- 1.3. Last 10 dialled

2. PHONEBOOK

- 2.1. Search
- 2.2. Copy to phone

3. BLUETOOTH

- 3.1. Change phone
  - 3.1.1. Add phone
  - 3.1.2. Added phones[2]
- 3.2. Remove phone
- 3.3. Connect fr. mobile phone
- 3.4. Bluetooth info. for the car

[2] A maximum of 3 phones.

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

4. CALL OPTIONS

4.1. Automatic answer

4.2. Voice mail no.:

5. PHONE SETTINGS

5.1. SOUNDS AND VOLUME

5.1.1. Ring signal volume

5.1.2. Ring signals

5.1.3. Mute radio

5.2. Synch. phone book

Menu structure - Bluetooth™ handsfree with built-in phone

1. CALL REGISTER

1.1. Last 10 missed

1.2. Last 10 received

1.3. Last 10 dialled

2. PHONEBOOK

2.1. Search

2.2. Copy to phone

3. BLUETOOTH

3.1. Remove phone

3.2. Connect fr. mobile phone

3.3. Bluetooth info. for the car

4. CALL OPTIONS

4.1. Automatic answer

4.2. Voice mail no.:

5. Change phone

5.1. Car phone

5.2. Add phone

5.3. Added phones[2]

6. PHONE SETTINGS

6.1. SOUNDS AND VOLUME

6.1.1. Ring signal volume

6.1.2. Ring signals

6.1.3. Mute radio

6.2. Synch. phone book

[2] A maximum of 3 phones.

RSE - Rear Seat Entertainment system - Dual Screen*

General

The RSE system can be used at the same time as the car's infotainment system.

When the rear seat passengers are using DVD or RSE-AUX while listening with headphones, the driver and front seat passenger can still use the car's radio or CD player.

Power consumption, ignition positions

The system can be activated in ignition position **I** or **II** and while the engine is running. When the car is being started the film stops temporarily and continues when the engine has started.

When the system has been used once without the ignition in position **I** it is blocked. To restart, ignition position **I** must be activated.

NOTE

In the event of extended use (more than 10 minutes) with the engine switched off - the capacity of the car's battery may decrease to such a low level that the engine cannot be started.

In which case a message will appear on the screen.

Music

Playing back a CD disc

1. Insert the CD with the label side turned from the buttons.
   > The disc starts to play back automatically.
2. Switch on the wireless headphones, select **CH A** for left-hand screen or **CH B** for right-hand screen.
   > The sound is directed to the headphones.
3. Adjust the audio volume in the headphones using the volume control/wheel on the headphones.

   Alternatively - activate the car's audio system in **MODE-AUX** and press A|B on the remote control to listen via the speakers.

Selecting within a disc directory

1. Load the disc.
2. Press ▶II.
3. Scroll using the navigation buttons to select a file.
4. Press **OK** to select the subdirectory.

Different playback options

The disc can be played back in different ways, scroll with the navigation buttons to select playback option.

When the dialogue box appears:

1. Press the right-hand navigation button to move over in the right-hand menu.
2. Scroll using the navigation buttons to select playback options.
3. Confirm with **OK**.

Change CD track

– Change CD track with ▶▶| or |◀◀ fast-wind by holding the buttons depressed.

Pause

1. Pause and restart the disc with ▶II.
2. Stop the disc with ■/⏏.
3. Press ■/⏏ again to eject the disc.

Discs copied privately can be used.

However, playback and quality depend on the quality of the source file, format and disc quality.

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

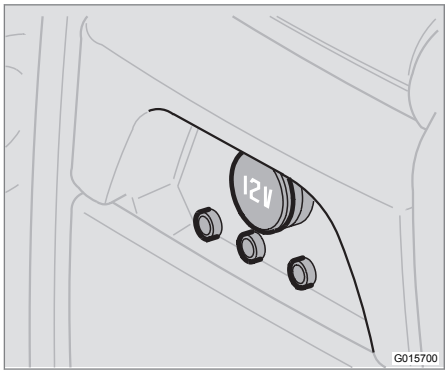
AUX input, Electrical socket 12 V

The input allows you to connect other equipment. Always follow the instructions included with the external equipment, or from the manufacturer or reseller, when connecting. Equipment connected via the RSE AUX input can use the screens, wireless headphones, headphones sockets and the car's speakers.

NOTE

To be able to play back the audio from the RSE in the car's audio system the audio switch **AUX**/**RSE** must be in position **RSE**, see page 248.

Connecting the RSE AUX input



The RSE-AUX input is located in the centre console under the DVD player.

1. Connect the video cable to the yellow socket.
2. Connect the left-hand audio cable to the white socket and the right-hand one to the red socket.
3. Connect the power cable to the power socket if your equipment is designed for 12 V.

System

Formats supported by the system.

Audio format	CD-DA, DVD Audio Playback, MP3, WMA
Video format	DVD video, VCD, SVCD, DivX/MPEG-4, WMA video, Photo CD Kodak, Photo CD JPG
Disc format	DVD-RAM, DVD-ROM, DVD-RW, DVD+RW, DVD-R, DVD+R, CD-R, CD-ROM, CD-RW, CD-3, HDCD

Advanced system settings

These settings can only be accessed when the DVD player is empty.

– Press **MEDIA MENU**.

GENERAL SETUP	ANGLE MARK CAPTION
AUDIO SETUP	COMPRESSION

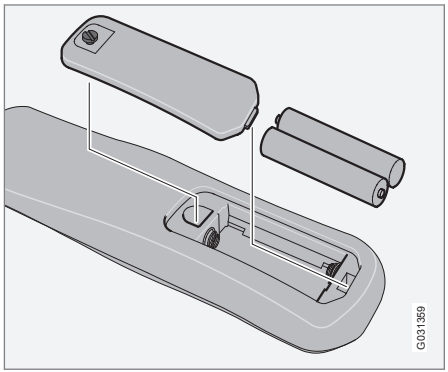
RSE - Rear Seat Entertainment system - Dual Screen*

DVX(R) REGISTRATION	
PREFERENCES	TV TYPE AUDIO SUBTITLE DEFAULTS

Changing the battery in the remote control and wireless headphones

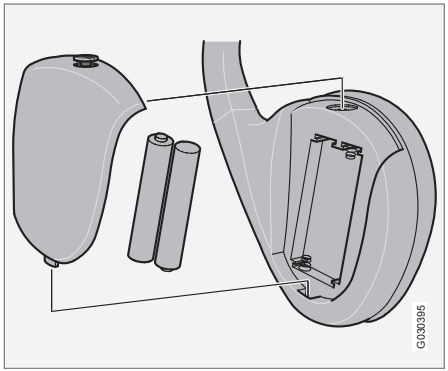
The remote control and headphones are powered by 2 AAA batteries.

Take along extra batteries for a long journey.



Remote control

1. Unscrew the screw and detach the battery cover.
2. Remove the used batteries, turn the new batteries in accordance with the symbols in the battery compartment and insert them.
3. Fit the cover and screw in the screw.



Wireless headphones

1. Unscrew the screw and detach the battery cover.
2. Remove the used batteries, turn the new batteries in accordance with the symbols in the battery compartment and insert them.
3. Fit the cover and screw in the screw.

NOTE

If the system is too hot to be used or if battery voltage is too low then an information message appears on the screen.

Environmental care

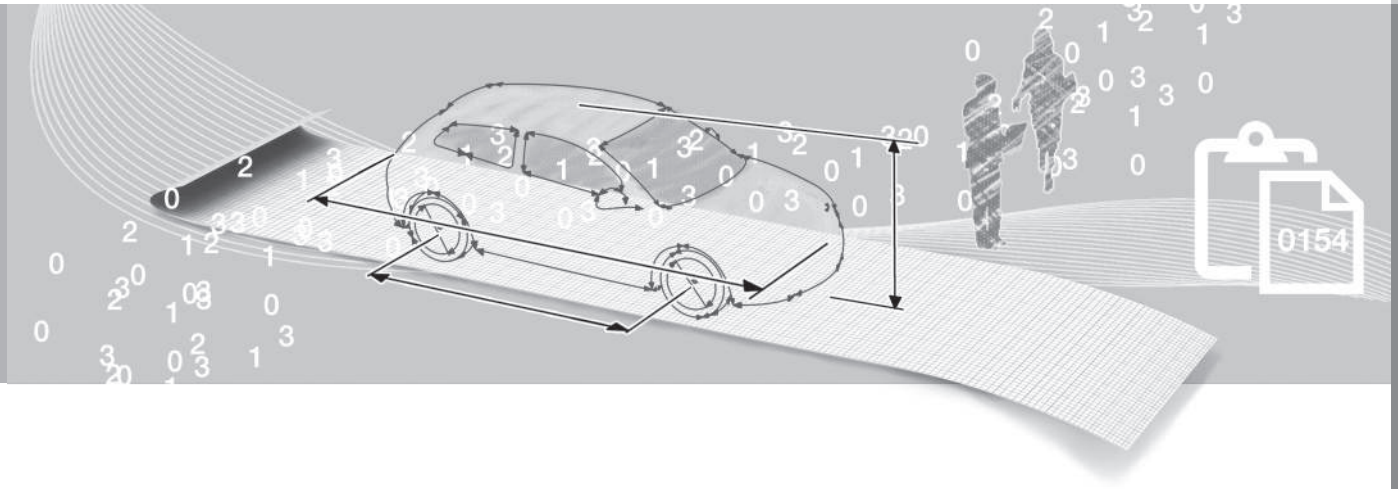
Be sure to dispose of the exhausted batteries in an environmentally safe manner.

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

Type designation..... 286
Dimensions and weights..... 288
Engine specifications..... 291
Engine oil..... 292
Fluids and lubricants..... 294
Fuel..... 296
Wheel and tyres, dimensions and pressure 297
Catalytic converter..... 298
Electrical system..... 299
Type approval..... 301
Symbols in the display..... 302

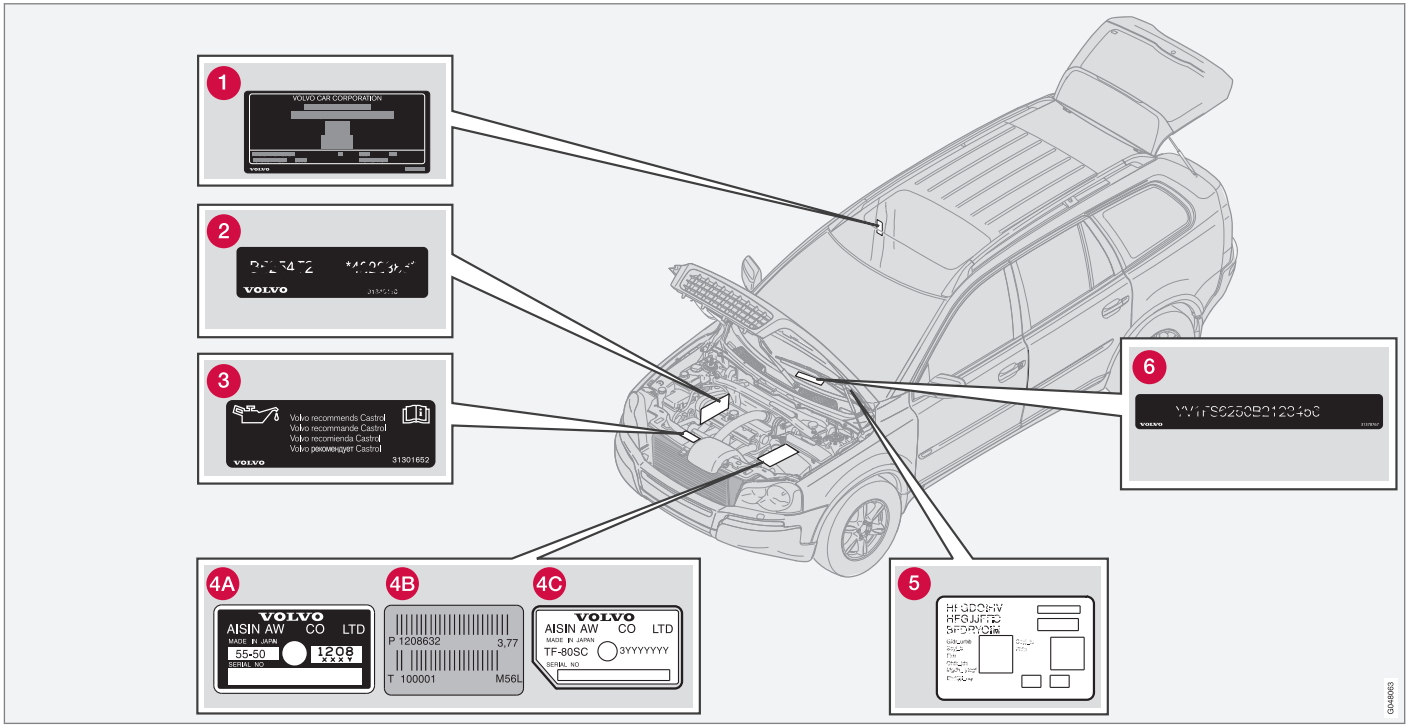
11

SPECIFICATIONS



Type designation

Label location



Type designation

Knowing the car's type designation, vehicle identification and engine numbers can facilitate all contact with an authorised Volvo dealer regarding the car and when ordering spare parts and accessories.

1. Type designation, vehicle identification number, maximum permissible weights, codes for colour and upholstery and type approval number. The label is visible when the right rear door is opened.
2. Engine code and engine serial number.
3. Label for engine oil.
4. Gearbox type designation and serial number:
   - A automatic gearbox AW
   - B manual gearbox
   - C automatic gearbox
5. Label for parking heater.
6. The car's identification number (VIN – Vehicle Identification Number).

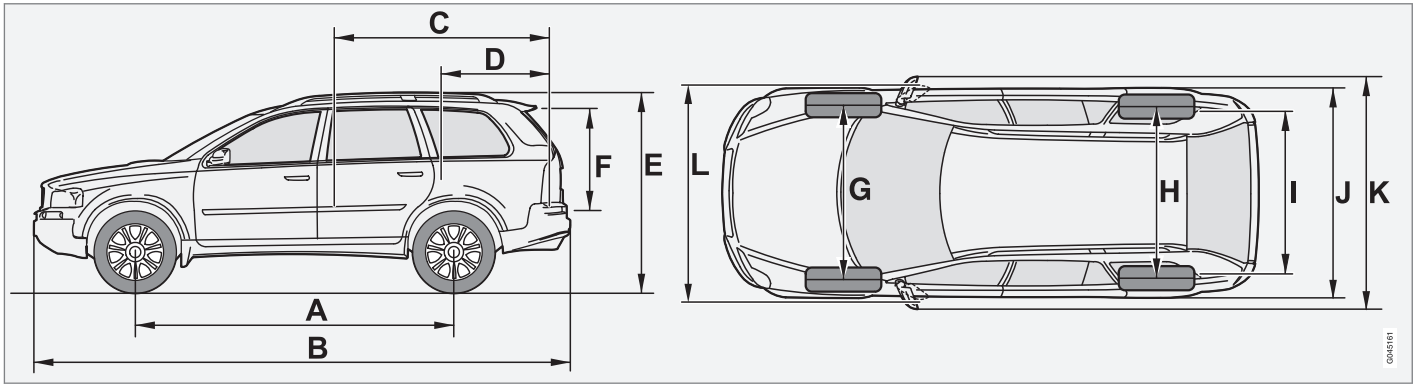
Further information on the car is presented in the registration document.

NOTE

It is not intended that the decals illustrated in the owner's manual should be exact replicas of those in the car. They are included to show their approximate appearance and location in the car. The information that applies to your particular car is available on the respective decals for your car.

Dimensions and weights

Dimensions



	Dimensions	mm
A	Wheelbase	2857
B	Length	4807
C	Load length, floor, folded seat	2018
D	Load length, floor	1118
E	Height	1784
F	Load height, floor	872
G	Front track	1634

	Dimensions	mm
H	Rear track	1624
I	Load width, floor	1064
J	Width	1936
K	Width including door mirrors	2112
L	Width including folded-in door mirrors	1936

Weights

Kerb weight includes the driver, the fuel tank 90% full and all fluids.

The weight of passengers and accessories, and towball load (when a trailer is hitched, see table) influences the payload and is not included in the kerb weight.

Permitted maximum load = Gross vehicle weight - Kerb weight.

NOTE

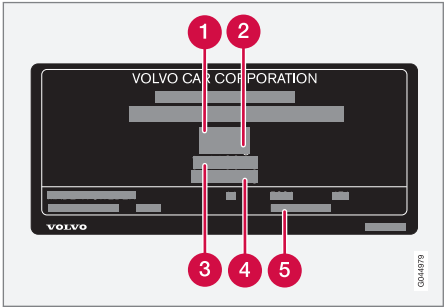
The documented kerb weight applies to cars in the standard version - i.e. a car without extra equipment or accessories. This means that for every accessory added the loading capacity of the car is reduced correspondingly by the weight of the accessory.

Examples of accessories that reduce loading capacity are the Kinetic/Momentum/Summum equipment levels, as well as other accessories such as Towbar, Load carriers, Space box, Audio system, Auxiliary lamps, GPS, Fuel-driven heater, Safety grille, Carpets, Cargo cover, Power seats, etc.

Weighing the car is a certain way of ascertaining the kerb weight of your own particular car.

WARNING

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



For decal location, see page 286.

1. Gross vehicle weight
2. Max. train weight (car+trailer)
3. Max. front axle load
4. Max. rear axle load
5. Equipment level

Max. load: See registration document.

Maximum roof load: 100 kg

Towing capacities and towball load

Engine	Max. weight braked trailer, kg	Max. towball load, kg
D4 FWD	1800	90
other	2250	90

Dimensions and weights

Max. weight unbraked trailer, kg	Max. towball load, kg
750	50

Engine specifications

NOTE

Not all engines are available in all markets.

Engine	Engine code[A]	Output (kW/rpm)	Output (hp/rpm)	Torque (Nm/rpm)	No. of cylinders	Bore (mm)	Stroke (mm)	Swept volume (litres)	Com-pression ratio
T5	B5254T9	154/5000	210/5000	320/1500-4500	5	83	92,3	2,497	9.0:1
3.2	B6324S5	179/6400	243/6400	320/3200	6	84	96	3.192	10.8:1
D5	D5244T18	147/3900	200/3900	420/1900-2800	5	81.0	93.15	2.400	17.3:1
D4[B]	D5244T5	120/4000	163/4000	340/1750-3000	5	81.0	93.15	2.400	17.3:1

[A] Engine code, component and serial number can be read on the engine, see page 286.
[B] Certain markets

Engine oil

Adverse driving conditions

Check the oil level more frequently for long journeys:

- towing a caravan or trailer
- in mountainous regions
- at high speeds
- in temperatures colder than -30 °C or hotter than +40 °C.

This can produce abnormally high oil temperature or oil consumption.

Also check the oil level more often if the car is often driven short distances (less than 10 km) when temperatures are low (below +5 °C).

Choose a fully synthetic engine oil for adverse driving conditions. It provides extra protection for the engine.

Volvo recommends:

IMPORTANT

In order to fulfil the requirements for the engine's service intervals all engines are filled with a specially adapted synthetic engine oil at the factory.The choice of oil has been made very carefully with regard to service life, starting characteristics, fuel consumption and environmental impact.

An approved engine oil must be used in order that the recommended service intervals can be applied. Only use a prescribed grade of oil for both filling and oil change, otherwise you will risk affecting service life, starting characteristics, fuel consumption and environmental impact.

Volvo Car Corporation disclaims all warranty liability if engine oil of the prescribed grade and viscosity is not used.

Volvo recommends that oil changes are carried out at an authorised Volvo workshop.

Engine oil

Engine oil grade

Engine	Engine code	Recommended oil grade	Volume, incl. oil filter (litres)
T5	B5254T9	**Oil grade: ACEA A5/B5** **Viscosity: SAE 0W–30**.	approx 5.5
3.2	B6324S5		approx 6.8
D5	D5244T18		approx. 5.7
D4[A]	D5244T5		approx. 5.7

A Certain markets

For filling engine oil, see page 213.

Fluids and lubricants

Automatic gearbox	Volume (litres)	Prescribed transmission fluid
TF-80SC	7.0	AW1
AW55-51	7.7	JWS 3309

Fluids

Fluid	System	Volume (litres)	Recommended oil grade
Coolant	T5	8.7	Coolant recommended by Volvo mixed with 50% water[A], see the packaging. The thermostat starts opening at: 90 °C in petrol engines and at 82 °C in diesel engines
	3.2	9.7	
	D4 and D5	8.7	
Refrigerant	Air conditioning	[B]	R134a (HFC134a) Oil: PAG
Brake fluid	Brake system	0.6	DOT 4
Power steering fluid	Power steering	1.0	WSS M2C204-A or equivalent product with same specifications.
	of which reservoir	0.2	
Washer fluid		6.5	Washer fluid recommended by Volvo - with frost protection during cold weather and below freezing point.
Fuel	Petrol engine	approx. 80	Petrol: see page 139
	Diesel engine	approx. 68	Diesel: see page 139

A Water quality must fulfil the standard STD 1285.1.
B Refrigerant quantity varies depending on engine variant. Volvo recommends that you contact an authorised Volvo workshop for the correct information.

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 a workshop nearby for servicing. Volvo recommends that you contact the nearest authorised Volvo workshop.

NOTE

Under normal driving conditions the gearbox oil does not need changing during its service life. However, it may be necessary under adverse driving conditions, see page 292.

Fuel

Fuel consumption

There are several causes that can affect fuel consumption negatively. Examples of this are:

- The driver's driving style.
- If the customer has specified wheels larger than those fitted as standard on the model's basic version, then resistance increases.
- High speed results in increased wind resistance.
- Fuel quality, road and traffic conditions, weather and the condition of the car.

Even a combination of the above-mentioned examples can result in significantly improved consumption.

To bear in mind

Tips that the driver can use in order to reduce consumption:

- Drive gently and avoid unnecessary acceleration as well as braking too hard.
- Drive with the correct air pressure in the tyres and check this regularly - select ECO tyre pressure for best results, see the tyre pressure table on page 297.
- Choice of tyres can affect fuel consumption - seek advice on suitable tyres from a dealer.

See further information and more advice on pages 13 and 136.

See page 141 for general information on fuel.

Wheel and tyres, dimensions and pressure

Approved tyre pressures

Engine	Tyre size	Speed (km/h)	Load, 1-3 persons		Max. load		ECO pressure[A]
			Front (kPa)[B]	Rear (kPa)	Front (kPa)	Rear (kPa)	
All	235/65R17	0-160	220	220	270	270	270
	235/60R18	160+	220	220	270	270	-
	255/50R19	0-160	240	240	270	270	270
	255/45R20	160 +	240	240	270	270	-
Temporary Spare Tyre		0–80	420	420	420	420	-

A Economical driving, see page 183.
B In certain countries there is the "bar" unit beside the SI unit "Pascal": 1 bar = 100 kPa (270 kPa = 2.70 bar).

NOTE

All engines, tyres or combinations of these are not always available in all markets.

Catalytic converter

General

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-sond™ oxygen sensor

The Lambda-sond is part of a control system intended to reduce emissions and improve fuel economy.

An oxygen sensor monitors the oxygen content of the exhaust gases leaving the engine. This value is fed into an electronic system that continuously controls the injectors. The ratio of fuel to air directed to the engine is continuously adjusted. Together with the three-way catalytic converter, these adjustments create optimal conditions for efficient combustion of the harmful emissions (hydrocarbons, carbon monoxide and nitrous oxides).

General

The car has a voltage-regulated AC alternator. The electrical system is single-pole and uses the chassis and engine casing as a conductor.

The battery capacity is dependent upon the equipment level in the vehicle.

IMPORTANT

If the battery is replaced, take care to replace it with a battery with the same cold starting capacity and reserve capacity as the original battery (see the label on the battery).

Battery

Voltage, V	Cold start capacity, CCA (Cold Cranking Amperes), A	Reserve capacity, minutes	Capacity, Ah
12	600	120	70
12	800[A]	150	90

[A] Cars equipped with diesel engine or parking heater

Bulbs

Lighting	Output (W)	Type
Dipped beam, halogen	55	H7 LL
Main beam, halogen	55	H7 LL
Extra main beam, ABL	65	H9
Front direction indicators	21	HY21W

Electrical system

Lighting	Output (W)	Type
Position/Parking lamps, front; Side marker lamps, front; Courtesy lighting, rear	5	W5W LL
Side direction indicators, door mirrors	5	WY5W LL
Front courtesy lighting	5	Socket SV8.5 Length 38 mm
Glovebox lighting	5	Socket SV8.5 Length 43 mm
Vanity mirror lighting	2	T5 Socket W2x4.6d
Cargo area lighting	10	Socket SV8.5 Length 43 mm
Number plate lighting	5	C5W LL
Rear direction indicators	21	PY21WSV
Reversing lamp	21	P21W LL
Rear fog lamp	21	H21W LL

Type approval

Remote control key system

Country/Area	
EUROPE	CE 0682 ! G046212

Symbols in the display

General

There are a variety of different symbols in the display in the car. The symbols are divided into warning, indicator and information symbols. Shown below are the most common symbols with their meanings and a reference to where in the manual further information can be found. For more information on symbols and text messages, see pages 57 and 60.

The ⚠ symbol illuminates with a red or amber glow depending on the severity of the fault. An explanatory text is shown on the information display at the same time.

Symbols in the display

Indicator and warning symbols in the combined instrument panel

Symbol	Meaning	Page
	Warning	21, 57, 59, 154, 155
	Emissions system	57, 59
	Fault in the ABS system	58, 152
	Rear fog lamp	59
	Stability system DSTC	59, 154
	Engine preheater (diesel)	59
	Indicator symbol for trailer	59
	Parking brake applied	59
	Airbags - SRS	21, 59
	Low oil pressure	57, 58
	Seatbelt reminder	18, 58
	Alternator not charging	59
	Fault in brake system	58, 151

Other information symbols in the combined instrument panel

Symbol	Meaning	Page
	Cruise control*	73

Information symbols in the centre console display

Symbol	Meaning	Page
	Audio files	259
	Directory in CD disc	259
	Traffic information	255, 257

Information symbol in rearview mirror

Symbol	Meaning	Page
	Airbag, passenger seat, deactivated	25

A

ABS fault ... 58
Active Xenon headlamps ... 62, 65
Active Yaw Control ... 153
Adaptive system ... 148
Additional heater ... 96
Adjusting headlamp pattern ... 173
Adjusting the steering wheel ... 76
AF – automatic frequency update ... 257
Airbag
- activating/deactivating, PACOS ... 24
- driver's and front passenger side ... 23
- key switch off ... 24

AIRBAG ... 22
Airbag system ... 22
Air conditioning ... 88
- ECC ... 91
- rear of passenger compartment ... 61

Air conditioning system
- repair ... 212

Air distribution ... 89
Air distribution, A/C ... 92
Air quality system, ECC ... 91
Air vents
- instrument panel ... 89

Alarm
- alarm indicator ... 131
- alarm signals ... 132
- arming ... 131
- automatic alarm activation ... 132
- deactivating a triggered alarm ... 132
- disarming ... 131
- general ... 131
- reduced alarm level ... 132

All Wheel Drive, (AWD) ... 150
Audio
- headphones socket ... 247
- surround ... 251

Audio, see also Sound ... 245
Audio files ... 259
audio system
- functions ... 248

Audio volume
- phone ... 265, 276
- phone/media player ... 276
- ring signal, phone ... 276

Auto, ECC ... 92
Automatic car washes ... 198
Automatic gearbox ... 147, 148
- lock-up function ... 148
- safety systems ... 149
- towing and recovery ... 161
- trailer ... 165
- W button ... 148

Automatic locking ... 126
Auxiliary lamps ... 62
AUX input ... 248
Average fuel consumption ... 68
AWD, All Wheel Drive ... 150

B

Backrest
- front seat, lowering ... 100

Backrest rear seat, lowering ... 112
Bag holder ... 119
Battery ... 220, 299
- jump starting ... 163
- maintenance ... 209, 220
- overload ... 137
- specifications ... 299
- symbols on the battery ... 220

Blind spot (BLIS) ... 157

BLIS..... 63, 157
Bluetooth
handsfree..... 274
mute microphone..... 276
transfer call to mobile..... 276
Bluetooth®
media..... 250
streaming audio..... 250
Boarding
rear seat..... 112
Bonnet..... 211
Bonnet, opening..... 211
Booster cushion
folding up..... 42
lowering..... 43
Booster cushion, integrated..... 42
Bottle holder for rear seat passengers.... 108
Brakes
Anti-lock braking system, ABS..... 152
handbrake..... 75
Brake system..... 151
Bulbs, see Lighting..... 223, 299

C

Calls
functions during a call..... 267
incoming..... 276
operation..... 276
Car care..... 198
Car care, leather upholstery..... 200
Cargo area..... 115
bag holder..... 119
cargo area compartment..... 120
cargo cover..... 119
electrical socket..... 119
lighting..... 105
loading..... 116
protective net..... 117
safety grille..... 118
Cargo area compartment..... 120
Cargo cover..... 119
Car upholstery..... 200
Car washing..... 198
Catalytic converter..... 142, 298
Recovery..... 162
CD
changer..... 259
functions..... 259
Checking the engine oil level..... 213
Children..... 34
child safety locks..... 43, 61, 130
child seats and airbags..... 34
child seats and side airbags..... 26
location in the car..... 34
location in the car, table..... 35
safety..... 34
Child safety locks..... 61
Child seats..... 34
extra locking function in seatbelt..... 47
ISOFIX fixture system for child seats... 43
recommended..... 35
size classes for child seats with the ISOFIX fixture system..... 43
upper mounting points for child seats.. 47
Cigarette lighter socket..... 62
Cleaning
automatic car wash..... 198
car washing..... 198
rims..... 198
seatbelts..... 201
upholstery..... 200
water-repellent surface..... 83
Clock, adjustment..... 55
Clutch fluid, checking & topping up..... 216

Cold start
automatic gearbox..... 148
Collision
inflatable curtain, IC..... 28
Colour code, paint..... 202
Combined instrument panel..... 55
Compass..... 79
calibration..... 82
setting the zone..... 79
Condensation in headlamps..... 198
Coolant, checking and filling..... 215
Cooler box..... 111
Cooling system..... 137
Cruise control..... 73
Cup holder..... 108, 109

D

Deadlock
temporary deactivation..... 129
Deadlocks
temporary deactivation of the alarm detectors..... 132
Defroster..... 93
Detectors..... 62
Diesel..... 142
Diesel: engine preheater..... 59
Diesel particle filter..... 143
Direction indicators..... 67
Display, messages..... 60
Dolby Surround Pro Logic II..... 244
Door mirrors..... 82
Driver's door control panel..... 54, 77
Driving
cooling system..... 137
economical..... 136
in water..... 136
slippery driving conditions..... 138
with a tailer..... 165
with the tailgate open..... 137
Driving in water..... 136
Driving with a trailer
towball load..... 288
towing capacity..... 165, 288
DSTC, see also Stability control system..... 59, 153
operation..... 153

E

ECC, electronic climate control..... 88, 91
Ecolabelling, FSC, owner's manual..... 13
Economical driving..... 136
ECO pressure..... 183
table..... 297
Electrical socket
cargo area..... 119
centre console..... 62
rear seat..... 76
Electrical system..... 299
Emergency calls..... 264
Emergency equipment
warning triangle..... 184
Emergency puncture repair..... 190
Emission control
fault indicator..... 59
Engine compartment..... 212
oil..... 213
Engine oil..... 213, 292
adverse driving conditions..... 292
capacities..... 292
filter..... 213

oil grade ... 292
oil pressure ... 58
Engine preheater ... 59
Engine specifications ... 291
EON - Enhanced Other Networks ... 258
Equalizer ... 252
Expectant mothers, seatbelt ... 19
External audio source
AUX-socket ... 248
USB connection ... 249
External dimensions ... 288

F

Fan
ECC ... 93
First aid equipment ... 186
Fluids, capacities ... 294
Fluids and oils ... 294
Fluids and oils, checks, engine compartment ... 213
Fluids and oils general ... 209
Fog lamps
rear ... 65
Front seat
Lumbar ... 103
Massage ... 103
FSC, ecolabelling ... 13
Fuel
fuel consumption, display ... 68
fuel economy ... 183
fuel filter ... 143
parking heater ... 94
refuelling ... 139
Fuelling
filling ... 141
fuel cap ... 141
Fuses ... 230
box in cargo area ... 238
box in cargo area - Executive ... 240
box in passenger compartment ... 234
box in the engine compartment ... 232
changing ... 230
end box ... 236
General ... 230

G

Gearbox
automatic ... 147
General information on fuel ... 141
Glovebox ... 107
Gross vehicle weight ... 288

H

Handbrake ... 75
Hazard warning flashers ... 63
Headlamp levelling ... 64
Headlamp pattern, adjusting ... 173
Headlamp pattern adjustment
Active Bending Lights (ABL) ... 173
Halogen headlamp ... 173
Headlamps
ABL ... 65
off/on ... 64
Headlamp washers ... 71
Headphones socket ... 247
head restraint
centre seat, rear ... 113

Heater
fuel-driven ... 94
Heating
front seats ... 63
rearview and door mirrors ... 63, 93
rear window ... 63, 93
High-pressure headlamp washing ... 71
Home safe lighting
setting ... 67

I

Ignition keys ... 146
IMEI number ... 269
Immobiliser ... 124, 146
Inflatable Curtain ... 28
Information display ... 60
Infotainment system ... 244
Inlaid mats ... 101
Instrument lighting ... 65
Instrument overview
left-hand drive car ... 50
right-hand drive car ... 52
Integrated booster cushion ... 42
Interior lighting ... 104
Interior rearview mirror ... 79
automatic dimming ... 79
Intermittent wiping ... 70
ISOFIX fixture system for child seats ... 43

J

Jack ... 185
Jacket holder ... 108
Jump starting ... 163

K

Kerb weight ... 288
Key ... 124
remote control key ... 124
Keypad in the steering wheel ... 73, 246
Kick-down
automatic gearbox ... 149

L

Lambda-sond ... 142, 298
Lamps, see Lighting ... 223
Leather upholstery, washing instructions 200
Lighting ... 223
Active Xenon headlamps ... 62, 65
automatic lighting, dipped beam ... 64
automatic lighting, passenger compartment ... 105
bulbs, specifications ... 299
cargo area ... 105
exterior ... 64
headlamp levelling ... 64
home safe lighting ... 67
in passenger compartment ... 104
instrument lighting ... 65
lighting panel, passenger compartment ... 64
main/dipped beam ... 64
position/parking lamps ... 64
reading lamps ... 104
rear fog lamp ... 65
switching headlamp pattern right/left-hand traffic, ABL ... 62, 173
Lighting, bulb replacement ... 223
bulb holder, rear ... 226

bulb location front lamp..... 224
cargo area..... 229
courtesy lighting..... 228
dipped beam halogen..... 224
direction indicators..... 225
front..... 223
main beam..... 225
main beam halogen..... 225
number plate lighting..... 228
parking lamps..... 225
position lamps..... 225
rear fog lamp..... 228
side marker lamps..... 225
Vanity mirror..... 229

Loading
cargo area..... 116
General..... 114, 116
load capacity..... 114
load carriers..... 114
roof load..... 114

Load on the roof..... 114

Locking/unlocking
glovebox..... 127
inside..... 127
outside..... 126
tailgate..... 127

Lubricants..... 294

Lubricants, capacities..... 294

M

Main and dipped beam
switching..... 67

Main beam "flash"..... 67

maintenance
Rustproofing..... 204

Maintenance..... 209
self-maintenance..... 209

Making calls..... 276

Massage
front seat..... 103

Master key..... 124

Menus
audio system..... 246

Menu structure
audio system..... 262
phone, menu options..... 271
phone, overview..... 270

Messages in BLIS..... 159

Messages in the information display..... 60

Meters in the combined instrument panel
fuel gauge..... 55
outside temperature gauge..... 55
speedometer..... 55
tachometer..... 55
trip meter..... 55

Misting..... 88
condensation in headlamps..... 198
rear window..... 63
removing with defroster function..... 93

Mobile phone
connect..... 277
handsfree..... 274
register phone..... 275

Mp3 functions..... 259

Multi-filter..... 88, 143

MY KEY..... 246

N

News..... 254, 257

O

Oil, see also Engine oil ... 58, 292
Oil level low ... 213
One-key dial ... 267
Owner's manual, ecolabelling ... 13
Oxyhydrogen gas ... 163

P

PACOS ... 24
PACOS, switch ... 24
Paintwork
- colour code ... 202
- damage and touch-up ... 202

Panel vents in the door pillar ... 89
Park Assist ... 62, 155
- parking assistance sensors ... 156

Parking brake ... 59, 75
Parking heater
- battery and fuel ... 96
- general ... 94
- symbols and display messages ... 94
- time setting ... 95

Parking lamps ... 64
Petrol grade ... 142
Phone
- call volume ... 268
- connect ... 277
- controls ... 264
- ending a call ... 266
- handsfree ... 274
- incoming call ... 276
- last dialled numbers ... 267
- making calls ... 266, 276
- memory ... 268
- messages ... 268
- on/off ... 265
- one-key dial ... 267
- phone book ... 268, 277
- phone book, shortcut ... 277
- receiving a call ... 266, 276
- register phone ... 275
- shortcuts ... 266
- SIM card ... 266
- traffic safety ... 266
- volume reduction during phone call ... 265

Phone book ... 268
Phone system ... 263
Pinch protection, sunroof ... 85
Polishing ... 199
Position lamps ... 64
Power seat ... 101
Power steering fluid, checking and topping up ... 216
Power sunroof ... 84
Power windows ... 77
- blocking ... 78
- passenger seat ... 78
- rear seat ... 78

Protective grille ... 118
Protective net ... 117
PTY – Programme type ... 255
Puncture, see Tyres ... 185, 187

R

Radio
- alarm ... 255
- AUTOSTORE ... 253
- EON ... 258
- frequency update ... 257
- news ... 254, 257
- PTY ... 255
- radio settings ... 253
- radio stations ... 253

radio text ... 255
regional ... 257
storing stations ... 253
traffic information ... 255
tuning ... 254
volume control, programme types ... 254
Radio functions ... 253
Radio text ... 255
Rain sensor ... 70
Random, CD and audio files ... 260
RDS functions ... 254
resetting ... 258
Reading lamps ... 104
Rear centre console, removal ... 112
Rear seat
boarding ... 112
Rear seat, lowering ... 112
Rearview and door mirrors
compass ... 79
door ... 82
electrically retractable ... 82
heating ... 63
interior ... 79
retractable ... 61
Rear window, defrosting ... 63
Recirculation
ECC ... 92
Refrigerant ... 212
REG - Regional radio programmes ... 257
Relay/fuse box, see Fuses ... 230
Remote control ... 124
replacing the battery ... 125
Remote control key
functions ... 124
Remote control key system, type approval ... 301
Retractable power door mirrors (option) ... 61
RND – Random ... 260
Roll-over protection
ROPS (Roll Over Protection System) ... 31
Roof load ... 114
ROPS (Roll Over Protection System) ... 31
Rustproofing ... 204

S

Scan
radio stations ... 254
Seatbelt
pregnancy ... 19
Seatbelt reminder ... 19
Seatbelts ... 18
seatbelt tensioner ... 19
Seats
heating ... 63
lowering the front backrest ... 100
lowering the rear backrest ... 112
manual setting ... 100
power seat ... 101
Service programme ... 208
Side airbag, SIPS ... 26
SIM card ... 266
double ... 269
SIPS bag – decal ... 26
SIPS bags ... 26
Sliding seat ... 112
SMS ... 268
write ... 268
Soot filter ... 60, 143

SOOT FILTER FULL..... 143
Sound
audio settings..... 245, 251
audio source..... 245, 248
spare wheel..... 185
Spare wheel
temporary spare..... 184
Speed dial numbers..... 267
Spin control..... 153
Spin Control..... 153
SRS system
general..... 22
Stability system..... 153
deactivation..... 153
indicator..... 59
symbols..... 153
Stains..... 200
Standby mode, phone..... 265
Starting the engine..... 145
Steering lock..... 145
Steering wheel
cruise control..... 73
keypad..... 73, 246
steering wheel adjustment..... 76
Stone chips and scratches..... 202
Storage compartment..... 109, 110
Storage spaces in the passenger compartment..... 106
Storing radio stations..... 253
Streaming audio..... 250
Sunroof..... 84
opening and closing..... 84
pinch protection..... 85
sunscreen..... 85
ventilation position..... 84
Sunscreen, sunroof..... 85
surround..... 251
Switching
main and dipped beam..... 67
Symbols
indicator symbols..... 58
stability system..... 153
warning symbols..... 57

T

Tailgate
driving with open tailgate..... 137
Locking/unlocking..... 124
Open..... 128
Technical data, engine..... 291
Temperature
actual temperature..... 88
Temperature control..... 93
Tools..... 185
Towbar..... 165, 169
Towbar, see Towing equipment..... 167
Towing..... 161
towing eye..... 161
Towing bracket..... 165
specifications..... 168
Towing capacity..... 165, 288
Towing equipment
general..... 165, 167
installation..... 169
removing..... 171
Towing eye..... 161
TP – Traffic information..... 255, 257
Traction control..... 153

Traction control system..... 153
Traffic information..... 255, 257
Trailer..... 165
cable..... 167
driving with a trailer..... 165
Trip computer..... 68
Type approval, remote control key system..... 301
Type designation..... 286
Tyres
direction of rotation..... 182
driving characteristics..... 180
general..... 180
maintenance..... 180
pressure..... 183, 297
puncture repair..... 190
specifications..... 180
speed ratings..... 180
tread wear indicators..... 181
winter tyres..... 182

U

USB, connection..... 249

V

Ventilation fan function..... 88
Vibration damper..... 167
Volume control..... 248

W

Warning lamp
stability and traction control system.. 153
Warning symbol, airbag system..... 21
Warning triangle..... 184
Washers
headlamps..... 71
rear window..... 71
washer fluid, filling..... 215
windscreen..... 71
Water and dirt-repellent coating..... 83
Water-repellent surface, cleaning..... 200
Waxing..... 199
Weights
kerb weight..... 288
trailer weight..... 165
Wheel rims
cleaning..... 198
Wheels
changing..... 187
installation..... 189
removal..... 187
snow chains..... 182
spare wheel..... 185
Whiplash injury..... 29
WHIPS
child seat/booster cushion..... 29
whiplash injury..... 29
Windscreen washing..... 71
Windscreen wiper
rain sensor..... 70
Windscreen wipers..... 70
Winter tyres..... 182
Wiper
rear window..... 71
Wiper blades..... 218
Cleaning..... 218
replacing, rear window..... 218
replacing, windscreen..... 218

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