

VOLVO  
**OWNERS MANUAL** XC90

**VOLVO**  
for life



WEB EDITION

2006

---

## **Dear Volvo owner**

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

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

**Thank you for choosing Volvo!**

# Introduction

## Owner's Manual

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



### **WARNING!**

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

### **IMPORTANT!**

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

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

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

**© Volvo Car Corporation**

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

# Volvo Car Corporation and the environment



## Volvo Cars' environmental philosophy

Environmental care, safety and quality are the three core values which influence all operations of the Volvo Car Corporation. 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 certification to the ISO 14001 environmental standard, which leads to continuous improvements within the area of the environment.

EPI (Environmental Product Information) environmental product declarations are supplied for all Volvo models. You can now compare the environmental impact of different models and engines.

Read more at [www.volvocars.com/EPI](http://www.volvocars.com/EPI).

## Fuel consumption

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

It is possible for the driver to influence fuel consumption, see page 4.

## 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.

In addition there is a special radiator coating, PremAir®<sup>1</sup>, which can convert hazardous ground-level ozone into pure oxygen.

1. PremAir® is a registered trademark of Engelhard Corporation.

# Volvo Car Corporation and the environment

## Clean air in the passenger compartment

A sophisticated air cleaning system, IAQS<sup>1</sup> (Interior Air Quality System) ensures that the air in the passenger compartment is cleaner than the air outside.

The system consists of an electronic sensor and a carbon filter. The air intake is closed if the level of reducing gases and oxidising gases, e.g. carbon monoxide, becomes too high, for example in heavy town traffic, queues and tunnels. The entry of nitrous oxides, ground-level ozone and hydrocarbons is prevented by the carbon filter.

## Textile standard

The interior of a Volvo is designed to be healthy and safe - even for people with contact allergies and for asthma sufferers. Extreme attention has been given to choosing environmentally-compatible materials. This means that they also fulfil the requirements of the Öko-Tex 100 ecological standard - a major advance towards a healthier cabin environment.

Öko-Tex certification covers seatbelts, carpets, thread and fabrics for example. Even the leather upholstery undergoes chromium-

free tanning with natural plant substances and meets the requirements.

## Volvo workshops and the environment

Regular maintenance carried out by an authorised Volvo workshop creates the conditions for long service life and low fuel consumption, and contributes to a cleaner environment. When Volvo's workshops are entrusted with the repair and maintenance of the car, it becomes part of our system. We make clear environmental demands regarding the way in which workshops are designed in order to prevent spills and discharges into the environment, and this includes the thorough collection and sorting of the gaseous, liquid and solid waste that arises in our workshops. Our workshop staff have the knowledge and the tools required to guarantee good environmental care.

## Reducing environmental impact

You can help reduce environmental impact, for example, by purchasing eco-labelled car care products and by servicing and maintaining the car according to the instructions in the owner's manual.

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

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

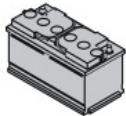


1. Option.

## **Volvo Car Corporation and the environment**

---

- Drive in the highest gear possible. Low engine speeds result in lower fuel consumption.
- Ease back on the accelerator on downhill gradients.
- Use engine braking. Take your foot off the accelerator and change down.
- Avoid idling. Switch off the engine in traffic queues.
- Always dispose of environmentally hazardous waste, such as batteries and oils, in an environmentally safe manner. If uncertain, consult an authorised Volvo workshop for advice.
- Service your car regularly.



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



---

<b>Safety</b>	<b>9</b>
<b>Instruments and controls</b>	<b>37</b>
<b>Climate control</b>	<b>67</b>
<b>Interior</b>	<b>79</b>
<b>Locks and alarm</b>	<b>99</b>
<b>Starting and driving</b>	<b>111</b>
<b>Wheels and tyres</b>	<b>147</b>
<b>Car care</b>	<b>163</b>
<b>Maintenance and service</b>	<b>169</b>
<b>Infotainment system</b>	<b>197</b>
<b>Technical data</b>	<b>235</b>



---

## **Safety**

<b>Seatbelts</b>	<b>10</b>
<b>Airbag system</b>	<b>13</b>
<b>Airbags (SRS)</b>	<b>14</b>
<b>Activating/deactivating the airbag (SRS)</b>	<b>17</b>
<b>Side airbags (SIPS bags)</b>	<b>19</b>
<b>Inflatable Curtain (IC)</b>	<b>21</b>
<b>WHIPS</b>	<b>22</b>
<b>ROPS</b>	<b>24</b>
<b>When are the safety systems activated?</b>	<b>25</b>
<b>Inspecting the airbags and inflatable curtains</b>	<b>26</b>
<b>Child safety</b>	<b>27</b>

## Seatbelts



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

### Always use a seatbelt

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

### Putting on a seatbelt:

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

### Releasing the belt:

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

### The belt locks and cannot be withdrawn:

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

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

### Keep the following in mind:

- do not use clips or anything else that can prevent the belt from fitting properly
- ensure the belt is not 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!

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

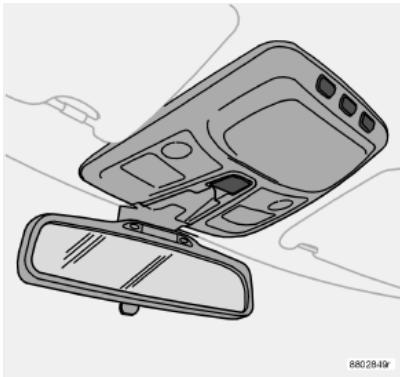
If the belt has been subjected to a major load, such as in a collision, the entire belt must be replaced. Some of the protective characteristics of the belt may have been lost, even if it appears to be undamaged. Replace the seatbelt if the belt is worn or damaged. The new seatbelt must be type-approved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



### WARNING!

Each belt is intended for one person only.

## Seatbelts



### Seatbelt reminder

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

If the seatbelt is released, the function reactivates when speed exceeds 10 km/h.

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

### Seatbelts and pregnancy

The seat belt 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 belly. The lap section should lay flat over the thighs and as low as possible under the belly. It must never be allowed to ride upward. Remove all slack from the belt and insure that it fits close to the body without any twists.

As a 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 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 their belly and the steering wheel.



*Seatbelts and pregnancy.*

### Seatbelts

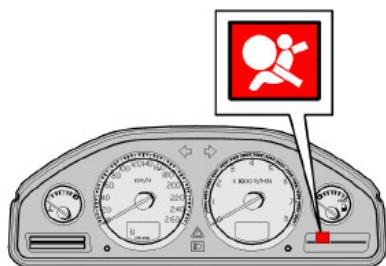


*Label on seatbelts with seatbelt tensioner.*

#### Seatbelt tensioner

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

## Airbag system



As well as the warning symbol, a message appears in the information display. If the warning symbol malfunctions, the warning triangle comes on and the message SRS AIRBAG SERVICE URGENT appears in the display. Contact an authorised Volvo workshop immediately.



### WARNING!

If the warning symbol for the Airbag system remains on or comes on while driving, it means that the Airbag system is not functioning fully. The symbol can indicate a fault in the seatbelt buckle, SIPS, SRS or IC system. Contact an authorised Volvo workshop immediately.

#### Warning symbol in combined instrument panel

The Airbag system<sup>1</sup> is monitored continuously by the control module and there is a warning lamp in the combined instrument panel. This lamp comes on when the ignition key is turned to position I, II or III. The symbol goes out after about seven seconds if the Airbag system<sup>1</sup> is working correctly.

1. Includes SRS and seatbelt tensioner, SIPS and IC.

## Airbags (SRS)



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

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



#### **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!**

Never place a child in a child seat or on a booster cushion in the front seat if the airbag (SRS) is activated<sup>1</sup>.

Never allow a child to stand or sit in front of the front passenger seat.

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

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

1. For information on activated/deactivated airbag (SRS) see page 17.

### Passenger airbag (SRS)

The passenger airbag<sup>1</sup> is fitted behind a panel above the glovebox. This panel is marked SRS AIRBAG

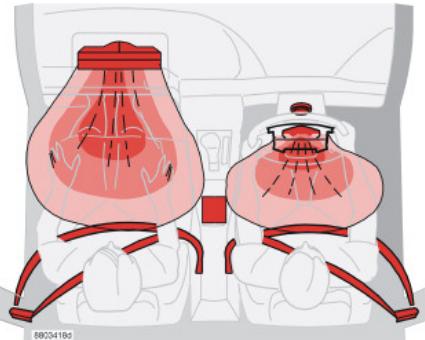
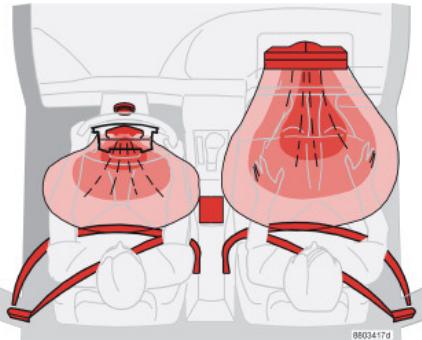


#### **WARNING!**

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

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

## Airbags (SRS)



*SRS system, left-hand drive.*

### SRS system

The airbag is equipped with a gas generator. A sufficiently violent collision trips sensors and ignites the gas generator, inflating the airbag with hot gas. To cushion the impact, the airbag deflates when compressed. When this occurs, smoke escapes into the car. This is completely normal. The entire process, including inflation and deflation of the airbag, occurs within tenths of a second.

*SRS system, right-hand drive.*

**NOTE!** The sensors react differently depending on the course of the collision and whether the seatbelts on the driver and passenger side are used. It is therefore possible that only one (or none) of the airbags may inflate in a collision. The SRS system senses the force of the collision on the car and adapts accordingly so that one or more airbags is deployed.

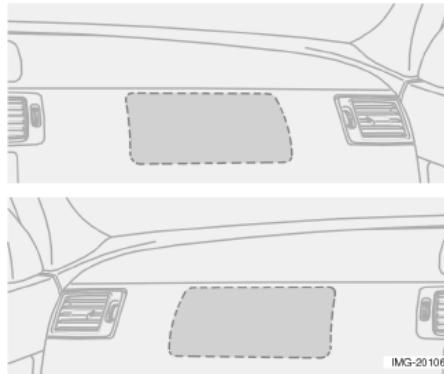
**NOTE!** The airbags have a function whereby their capacities are adapted to the collision force to which the vehicle is subjected.



### WARNING!

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

### Airbags (SRS)



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

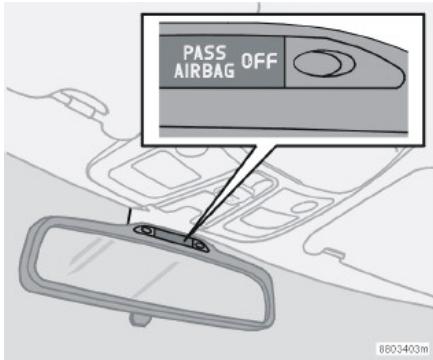


#### **WARNING!**

Never interfere with SRS components in the steering wheel or the panel above the glovebox.

Objects and accessories must not be positioned or glued on or near the SRS AIRBAG panel (above the glovebox) or in the area affected by a deployed airbag.

## Activating/deactivating the airbag (SRS)



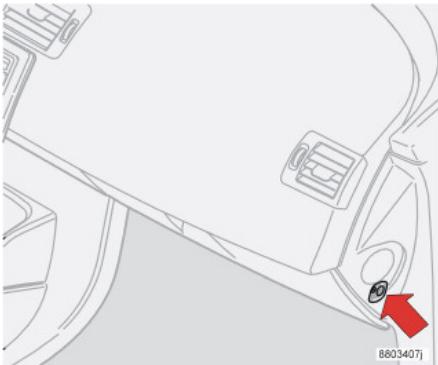
*Indicator showing that the passenger airbag (SRS) is deactivated.*

### PACOS (option)

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

#### Indicator

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



*Switch for PACOS (Passenger Airbag Cut Off Switch).*

#### Activating/deactivating

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

### WARNING!

#### Activated airbag (passenger seat):

Never place a child in a child seat or on a booster cushion in the front passenger seat when the airbag is activated. This also applies to anyone 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.

### WARNING!

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

### Activating/deactivating the airbag (SRS)



*Switch for SRS in ON position.*

#### Switch position

ON = Airbag (SRS) activated. With the switch in this position, persons taller than 140 cm can sit in the front passenger seat, but never children in a child seat or on a booster cushion.

*Switch for SRS in OFF position.*

OFF = Airbag (SRS) is deactivated. With the switch in this position, children in a child seat or on a booster cushion can sit in the front passenger seat, but never persons taller than 140 cm.



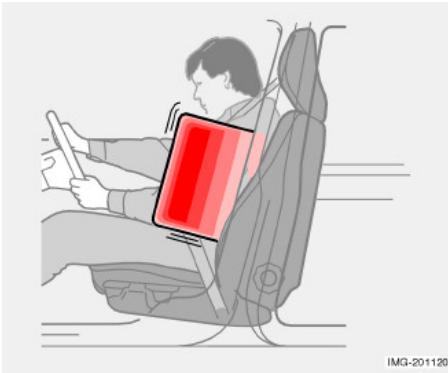
#### WARNING!

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

## Side airbags (SIPS bags)



*Side airbag locations*



*Inflated side airbag*

### Side airbags - (SIPS bags)

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

#### **WARNING!**

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.

#### **WARNING!**

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

#### **WARNING!**

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

#### **WARNING!**

Repairs must only be performed by an authorised Volvo workshop. Work on the SIPS system can cause malfunction and result in serious personal injury.

### Child seats and side airbags

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

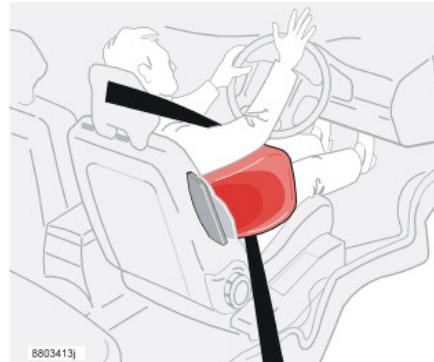
A child seat or booster cushion can be placed on the front passenger seat provided that the car does not have an activated<sup>1</sup> passenger airbag.

1. For information on activated/deactivated airbag (SRS) see page 17.

### Side airbags (SIPS bags)



*Left-hand drive.*

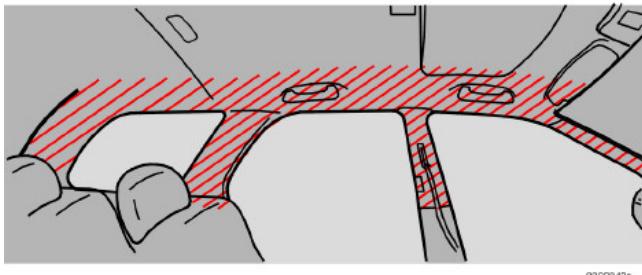
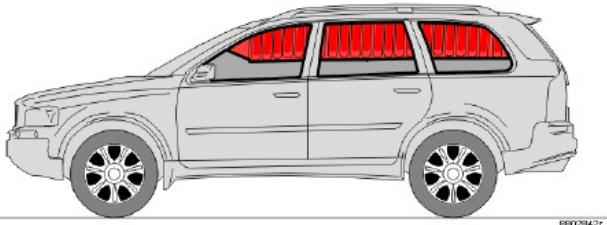


*Right-hand drive.*

### **SIPS bags**

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

## Inflatable Curtain (IC)



### Properties

The inflatable curtain, IC (Inflatable Curtain), is a supplement to the SIPS system. It is concealed in the headlining along both sides of the roof and protects both front and rear seat passengers. The inflatable curtain is activated by sensors in a sufficiently violent collision or if the car is at risk from overturning. When deployed, the inflatable curtain inflates. The inflatable curtain helps to prevent the driver and passengers from striking their heads on the inside of the car during a collision.

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

#### **⚠️ WARNING!**

Never hang or fasten anything on the roof handles. The hook is only intended for light outer garments (not for hard objects such as umbrellas).

Do not screw or fit anything to the headlining, door pillars or side panels. This could compromise the intended protection. Only use Volvo genuine parts that are approved for placement in these areas.

#### **⚠️ WARNING!**

Do not load the car higher than 50 mm under the top edge of the rear passenger 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.

## WHIPS



### Protection against whiplash injury - WHIPS

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



#### **WARNING!**

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

### Properties of the seat

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



#### **WARNING!**

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

### WHIPS system and child seats/booster cushions

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

### 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



### WARNING!

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

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

## Do not obstruct the WHIPS system



### WARNING!

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



### 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.

### ROPS

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

The system consists of:

- A stabiliser system, RSC (Roll Stability Control) that minimises the risk of overturning during sudden evasive manoeuvres or the like or if the car skids.
- Increased protection for the driver and passengers through a reinforced body, inflatable curtains and seatbelt tensioners in all seats. See also page 12 and page 21.



#### **WARNING!**

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

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

For more information on the DSTC system, see page 46 and page 124.

## When are the safety systems activated?

System	Triggered
Seatbelt tensioner	In a frontal collision and/or side-impact accident.
Airbags (SRS)	In the event of a head-on collision <sup>1</sup> .
Side airbags	In the event of a side impact <sup>1</sup> .
Inflatable Curtain (IC)	In a side collision and/or overturning <sup>1</sup> .
WHIPS	In a rear-end collision <sup>1</sup> .
RSC	During sudden evasive manoeuvres or the like or if the car skids.

1. The bodywork of the car could be greatly deformed in a collision without airbag deployment. 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 been deployed, the following is recommended:

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

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



### WARNING!

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



### WARNING!

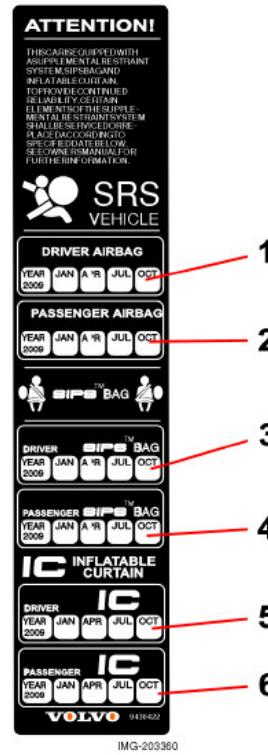
Never drive with deployed airbags. They can make steering difficult. Other safety systems may also be damaged. The smoke and dust created when the airbags are deployed can cause skin and eye irritation after intensive exposure. In case of irritation, wash with cold water. The rapid deployment sequence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

## Inspecting the airbags and inflatable curtains

### Inspection intervals

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

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



*This decal is located in the rear left door opening.*

## Child safety



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

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

You may place:

- a child seat or booster cushion on the front passenger seat, provided the passenger airbag is not activated<sup>1</sup>
- a rear-facing child seat in the rear seat that uses the back of the front seat as support.

### Children should sit comfortably and safely

The position of a child in the car and the choice of equipment is dictated by the child's height and size, for more information, see page 30.

Children who are shorter than 150 cm must be carried in adequate child protection.

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

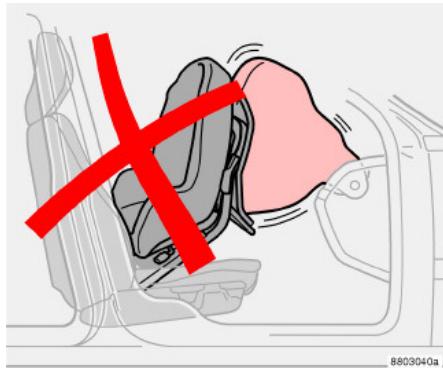
### Child seat and seatbelt reminder

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

---

1. For information on activated/deactivated airbag (SRS) see page 17.

### Child safety



*Child seats and airbags are not compatible.*

### Child seats and airbags

Always place a child in the rear seat if the passenger airbag is activated<sup>1</sup>. A child in a child seat on the front passenger seat may suffer serious injury if the airbag deploys.

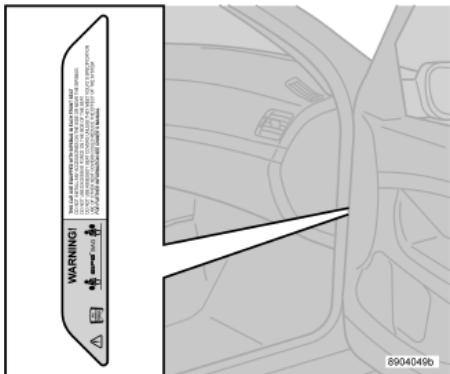


#### **WARNING!**

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

1. For information on activated/deactivated airbag (SRS) see page 17.

## Child safety



Location of airbag decal in door opening on front passenger side.



Decal located on dashboard end face.



Decal located on dashboard end face.  
(Australia only).



### WARNING!

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

**Child safety****Placement of children in the car**

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

1. For information on activated/deactivated airbag (SRS) see page 17.

2. Suitable for certain child seats as listed in the specified type approval. Child seats may be vehicle-specific, limited, semi-universal or universal.

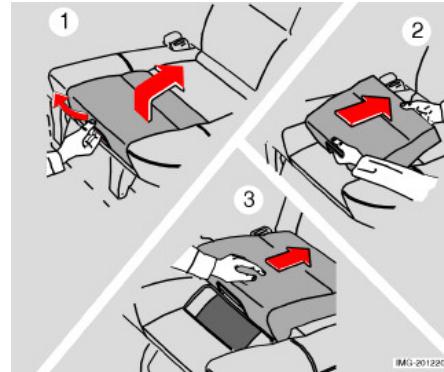
## Child safety

### Placement of children in the car

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

1. In cars seating seven, the seat row must be in its rearmost position when using a child seat.
2. Suitable for certain child seats as listed in the specified type approval. Child seats may be vehicle-specific, limited, semi-universal or universal.
3. Integrated and approved child safety equipment for this age group.

## Child safety



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 belt is positioned correctly across the shoulder
- the lap belt is low over the pelvis for optimum protection
- the belt does not touch the child's throat or lie below the shoulder
- carefully adjust the position of the head restraint to suit the child

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

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

#### Raising the booster cushion

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



#### WARNING!

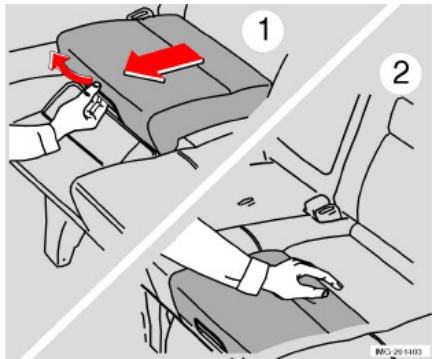
The booster cushion must be in the locked position before the child is placed there.

#### ⚠️ WARNING!

Repair or replacement should only be performed by an authorised Volvo workshop. Do not make any modifications or additions to the booster cushion.

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

## Child safety



### Lowering the booster cushion

- Pull the handle (1).
- Lower the seat and press until it locks (2).

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

### Child safety

#### Fitting a child seat

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



#### WARNING!

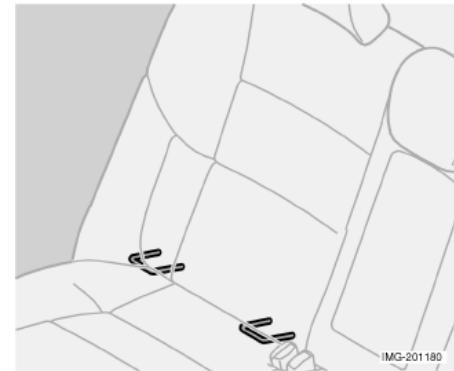
Support cushions/child seats with steel frames or another design that can lie against the seatbelt release button must not be used because they can cause accidental release of the seatbelt.

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



#### WARNING!

Never place the child seat in the front seat if the car is equipped with an activated front passenger airbag. If problems arise when fitting child safety products, contact the manufacturer for clearer instructions.



IMG-201180

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

- Do not attach the straps for the child seat to the horizontal adjustment bar, springs, rails or beams under the seat. Sharp edges can damage the straps.
- Allow the back of the child seat to rest against the dashboard. This applies to cars without a passenger airbag, or where the airbag is deactivated.

#### ISOFIX fixture system for child seats (option)

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

## Child safety

### Extra locking function in seatbelt

#### (ALR/ELR<sup>1</sup>)

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

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

- Secure the seatbelt in the child seat following the instructions of the child seat manufacturer.
- Pull out the entire seatbelt.
- Lock the belt by inserting the locking tab in the buckle. A loud "click" indicates that the belt is locked.
- Allow the seatbelt mechanism to retract the belt while stretching it around the 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.

---

1. Automatic Locking Retractor/  
Emergency Locking Retractor.

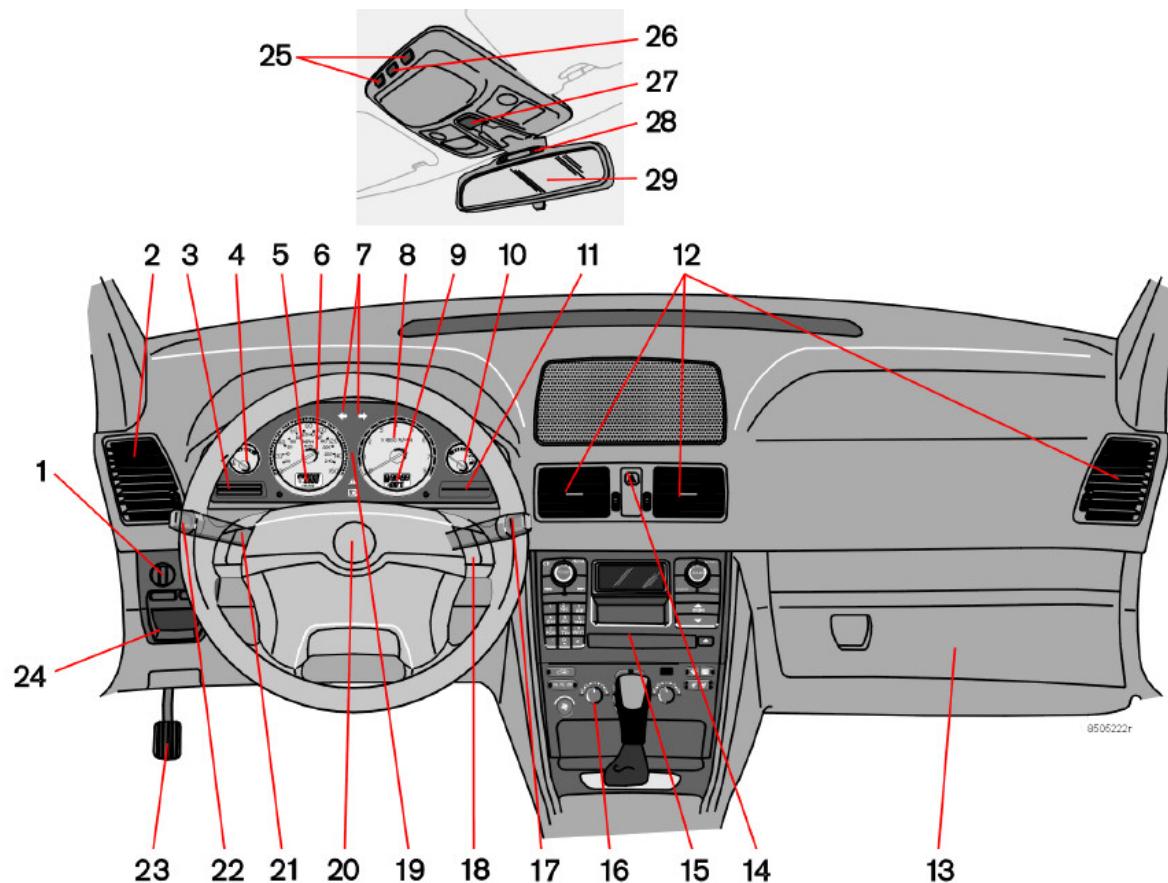


---

## **Instruments and controls**

<b>Overview, left-hand drive car</b>	<b>38</b>
<b>Overview, right-hand drive car</b>	<b>40</b>
<b>Driver's door control panel</b>	<b>42</b>
<b>Combined instrument panel</b>	<b>43</b>
<b>Indicator and warning symbols</b>	<b>44</b>
<b>Information display</b>	<b>47</b>
<b>Switches in the centre console</b>	<b>49</b>
<b>Lighting panel</b>	<b>52</b>
<b>Left-hand stalk switch</b>	<b>53</b>
<b>Right-hand stalk switch</b>	<b>54</b>
<b>Trip computer</b>	<b>56</b>
<b>Cruise control</b>	<b>57</b>
<b>Parking brake, bonnet, electric socket, etc.</b>	<b>58</b>
<b>Power windows</b>	<b>61</b>
<b>Rearview mirror, door mirrors and side windows</b>	<b>63</b>
<b>Power sunroof (option)</b>	<b>65</b>

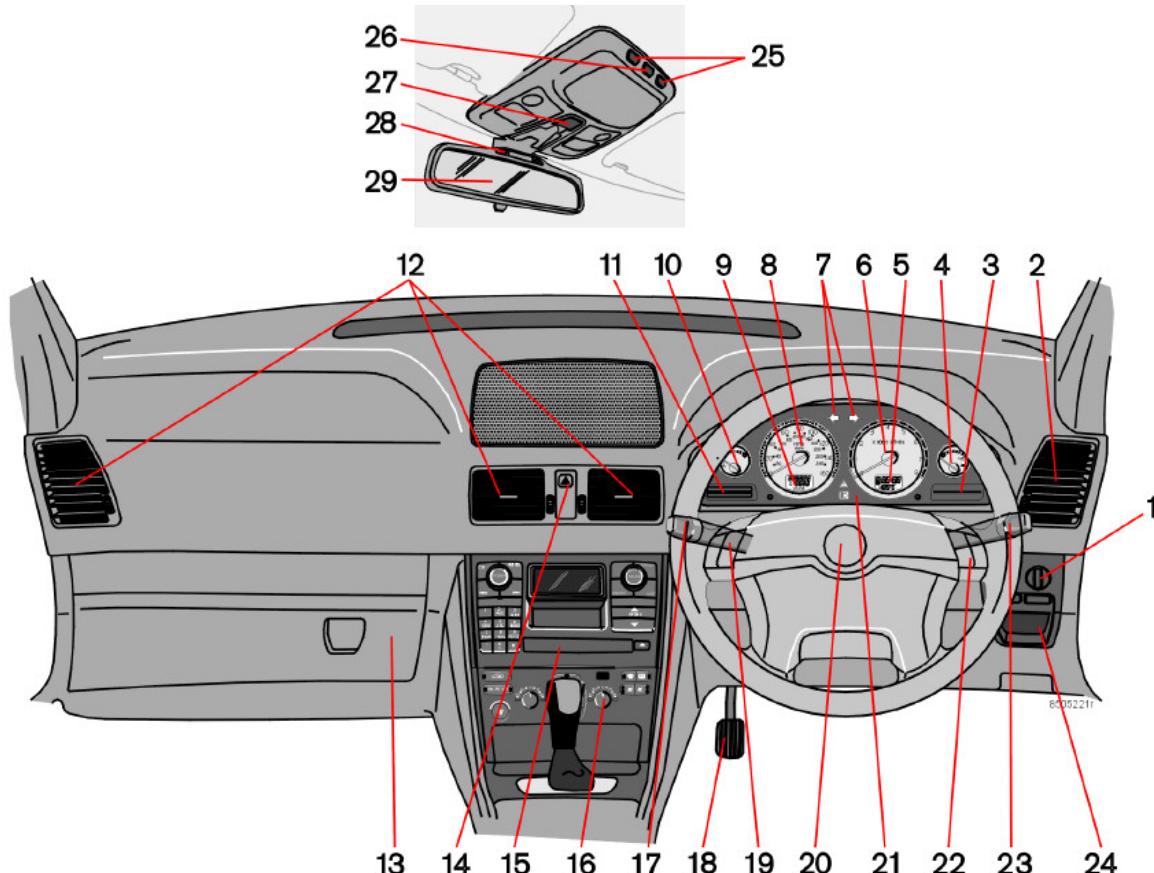
## Overview, left-hand drive car



## Overview, left-hand drive car

1. Lighting panel .....	page 52
2. Air vent.....	page 69
3. Display.....	page 47
4. Temperature gauge.....	page 43
5. Odometer, trip odometer, cruise control .....	page 43
6. Speedometer .....	page 43
7. Direction indicators.....	page 43
8. Tachometer.....	page 43
9. Outside temperature, clock, gear position .....	page 43
10. Fuel gauge.....	page 43
11. Indicator and warning symbols .....	page 44
12. Panel vents .....	page 69
13. Glovebox .....	page 86
14. Hazard warning flashers .....	page 51
15. Audio system.....	page 208
16. Climate control .....	page 70, 73
17. Windscreen wipers.....	page 54
18. Keypad for telephone/audio.....	page 200
19. Combined instrument panel .....	page 43
20. Horn .....	–
21. Cruise control .....	page 57
22. Direction indicators, dipped-main beam switch, READ button .....	page 53
23. Parking brake .....	page 58
24. Parking brake release.....	page 58
25. Switches, reading lamps .....	page 83
26. Interior lighting .....	page 83
27. Sunroof control .....	page 65
28. Seatbelt reminder .....	page 11
29. Rearview mirror.....	page 63

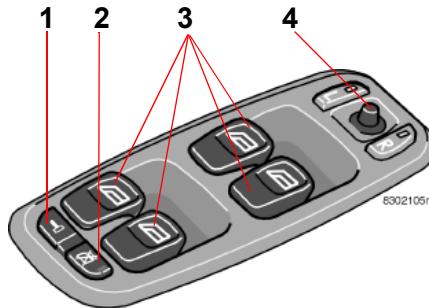
## Overview, right-hand drive car



## Overview, right-hand drive car

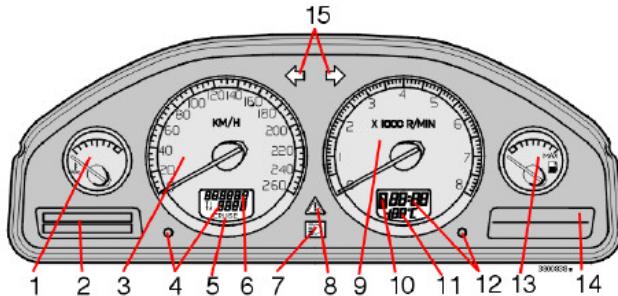
1. Lighting panel .....	page 52
2. Air vent.....	page 69
3. Indicator and warning symbols .....	page 44
4. Fuel gauge.....	page 43
5. Outside temperature, clock, gear position .....	page 43
6. Tachometer .....	page 43
7. Direction indicators.....	page 43
8. Speedometer .....	page 43
9. Odometer, trip odometer, cruise control .....	page 43
10. Temperature gauge.....	page 43
11. Display .....	page 47
12. Panel vents .....	page 69
13. Glovebox .....	page 86
14. Hazard warning flashers .....	page 51
15. Audio system.....	page 208
16. Climate control .....	page 70, 73
17. Direction indicators, dipped-main beam switch, READ button .....	page 53
18. Parking brake .....	page 58
19. Cruise control .....	page 57
20. Horn .....	-
21. Combined instrument panel .....	page 43
22. Telephone/Audio keypad .....	page 200
23. Windscreen wipers.....	page 54
24. Parking brake release.....	page 58
25. Switches, reading lamps .....	page 83
26. Interior lighting .....	page 83
27. Sunroof control .....	page 65
28. Seatbelt reminder .....	page 11
29. Rearview mirror.....	page 63

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

### 2. Display

The display shows information and warning messages.

### 3. Speedometer

Shows the speed of the car.

### 4. Trip odometer, T1 and T2

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

between trip odometers by briefly pressing the button once.

### 5. Cruise control indicator

See page 57.

### 6. Odometer

The odometer indicates the total distance the car has travelled.

### 7. Main beam, On/Off

### 8. Warning symbol

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

### 9. Tachometer

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

### 10. Automatic gearbox indicator

The selected gearshift programme is displayed here.

### 11. Outside temperature gauge

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

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

### 12. Clock

Turn the button to set the clock.

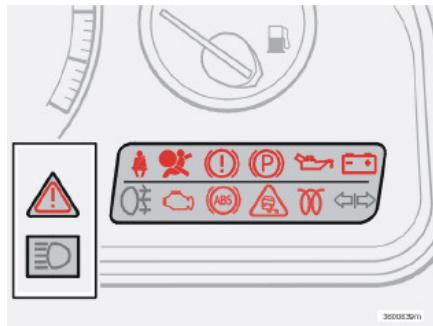
### 13. Fuel gauge

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

### 14. Indicator and warning symbols

### 15. Direction indicators - left/right

### Indicator and warning symbols



pressure. Certain symbols may have no function, depending on the car's specifications.

#### Warning symbol in the centre of the instrument panel



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

#### Red symbol

- Stop the car. Read the message in the display.

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

#### Yellow symbol

- Read the message in the display.  
Remedy!

The message text is cleared using the READ button, see page 47, or disappears automatically after 2 minutes.



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

### Indicator and warning symbols

All indicator and warning symbols<sup>1</sup> light up when the ignition key is turned to position II before starting. This is to check that the symbols/lights are working. When the engine starts, all the symbols should go out except the handbrake symbol, which extinguishes when the handbrake is released.



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



1. With certain engine variants the symbol for low oil pressure is not lit.

## Indicator and warning symbols

### ABS fault



If the ABS symbol lights, the ABS system is not functioning. The car's normal braking system continues to work, but without the ABS function.

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

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

### Fault in brake system



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

- Stop the car in a safe place and check the brake fluid reservoir level.

If the reservoir level is below MIN the car should not be driven further. Have it towed to an authorised Volvo workshop to have the brake system checked.



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



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

### **WARNING!**

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

### Seatbelt reminder



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

### Low oil pressure



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

oil level is normal, stop the car and contact an authorised Volvo workshop.

### Fault in car's emissions system



Contact an authorised Volvo workshop to have the system checked.

### Fault in SRS



If a fault in the SRS system is detected the warning symbol will remain lit or light up while driving. Drive to an authorised Volvo workshop to have the system checked.

### Alternator not charging



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

### Engine preheater (diesel)



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

### Indicator and warning symbols

#### Parking brake applied



The lamp comes on when the parking brake is depressed. Always depress the parking brake to the bottom position.

**NOTE!** The lamp comes on irrespective of how hard the parking brake is depressed.

#### Rear fog lamp



This lamp lights when the fog lamp is on.

#### Trailer indicator lamp

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

#### Stability system and DSTC

The DSTC system contains several different functions that are described in more detail on page 124.

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



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

#### The symbol flashes



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

The AYC function acts to prevent skidding.

The RSC function acts to prevent overturning.

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



TRACTION CONTROL

TEMPORARILY OFF is shown on the information display together with the symbol.

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

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

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



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

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

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

- Restart the engine.

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

#### Fault in DSTC system

If the warning symbol lights and shines with a constant glow even though you did not switch off the system, it indicates a fault in one of the systems. The text "ANTI-SKID SERVICE REQUIRED" is shown in the display.

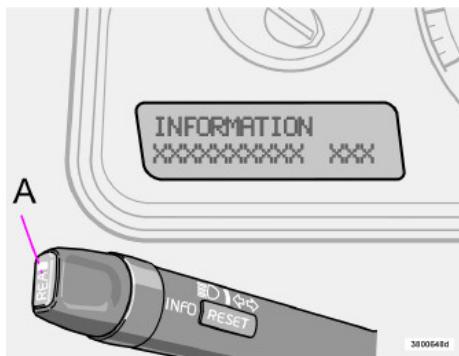
- Stop the car in a safe place and switch off the engine. Restart the engine.
- If the warning symbol goes out, the fault was temporary and it is not necessary to visit a workshop.
- If the warning symbol remains lit, drive to an authorised Volvo workshop to have the system checked.



#### WARNING!

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

## Information display



messages stored in the memory by pressing the READ button. Press the READ button to return read messages to the memory.

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

### Messages on the display

Any warning or indicator symbol that appears is accompanied by a message in the display. Once you have read and understood the message, press the READ button (A).

Messages which have been read are cleared from the display and stored in the car's memory. Fault messages will remain in the memory until the fault has been remedied.

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

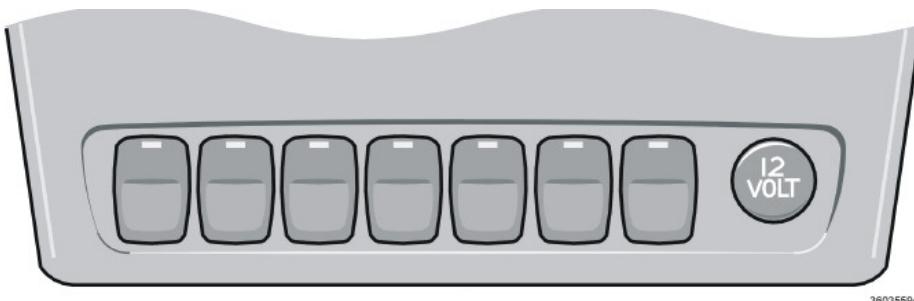
Messages stored in the memory can be read again. Press the READ button (A) to see stored messages. Scroll through the

## Information display

<b>Message</b>	<b>Specification</b>
STOP SAFELY	Stop and switch off the engine. Serious risk of damage.
STOP ENGINE	Stop and switch off the engine. Serious risk of damage.
SERVICE URGENT	Take your car in for service immediately.
SEE MANUAL	Consult your owner's manual.
SERVICE REQUIRED	Take your car in for service as soon as possible.
FIX NEXT SERVICE	Have your car checked at the next service interval.
TIME FOR REGULAR SERVICE	When this message is shown, the car is due for a service. When the message is displayed is affected by the distance travelled, number of months since last service and engine running time.
OIL LEVEL LOW <sup>1</sup> – FILL OIL <sup>3</sup>	Low engine oil level. Check and remedy as soon as possible. See page 174 for more information.
OIL LEVEL LOW <sup>2</sup> – STOP SAFELY <sup>3</sup>	Low engine oil level. Stop the car safely and check the oil level. See page 174.
OIL LEVEL LOW <sup>2</sup> – STOP ENGINE <sup>3</sup>	Low engine oil level. Stop the car safely, switch off the engine and check the oil level. See page 174.
OIL LEVEL LOW <sup>2</sup> – SEE MANUAL <sup>3</sup>	Low engine oil level. Stop the car safely, switch off the engine and check the oil level. See page 174.
SOOT FILTER FULL – SEE MANUAL <sup>1</sup>	Diesel particle filter requires regeneration. See page 115.

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

## Switches in the centre console



3603559d

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

### DSTC system



This button is used to reduce or reactivate the functions of the DSTC system. When the LED in the button is lit, the DSTC system is activated (assuming there is no fault).

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

The DSTC system is reactivated when the engine is restarted.



### WARNING!

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

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



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

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



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

### Switches in the centre console

#### Retractable door mirrors (option)



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

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

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

#### Parking assistance (option)



The system is always activated when the car is started. Press the button to deactivate/reactivate the parking assistance system. See also page 125.

#### Deactivation of the deadlocks<sup>1</sup> 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<sup>2</sup> movement and tilt detectors. The LED lights when these systems are deactivated.

#### Auxiliary lamps (accessory)



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

#### Electric socket, (standard)/Cigarette lighter (option)



The electric socket can be used for various 12 V accessories, e.g. mobile phone or a cooler box.

The ignition 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. Once the lighter has been heated, the button pops out again. Pull out the lighter to use it. For safety reasons, always keep the cover in place when the socket is not in use. Maximum current tap 10 A.

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



Press the button to deactivate or reactivate the function. See page 143 for further information.

1. Certain markets  
2. Option

## Switches in the centre console

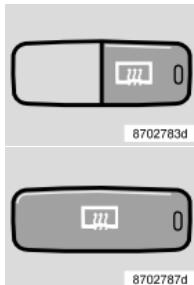


### Hazard warning flashers

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

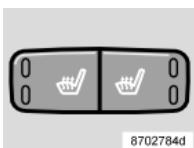
**NOTE!** Regulations regarding the use of hazard warning flashers vary from country to country.

### Rear window and door mirror defrosters



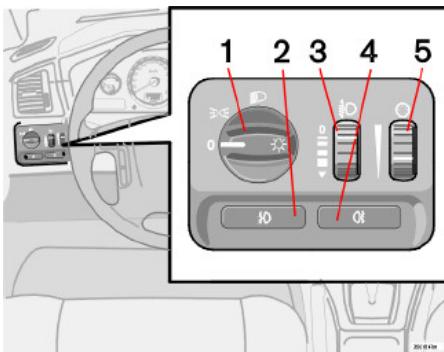
Use the defroster to remove ice and misting from the rear window and door mirrors. Press the switch to start defrosting the rear window and door mirrors. The LED in the switch comes on. Defrosting is automatically disconnected after about 12 minutes.

### Heated front seats



See page 71 or 75 for further information.

### Lighting panel



### 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.

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

Cars with Bi-Xenon headlamps<sup>1</sup> have automatic headlamp levelling, so there is no control (3).

1. Option.

### Position/parking lamps

The position lamps/parking lamps can be switched on irrespective of ignition key position.

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

In ignition key position **II** the position lamps/parking lamps are always on. The number plate lighting is switched on at the same time as the position lamps/parking lamps.

### Headlamps

#### Automatic dipped beam

Dipped beam comes on automatically when the ignition 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 by an authorised Volvo workshop.

#### Manual dipped beam (certain countries)

- Turn the ignition key to position **II**.
- Turn the headlamp control (1) clockwise to the end position.

#### Main beam

- Turn the ignition key to position **II**.
- Turn the headlamp control (1) clockwise to the end position.
- Move the left-hand stalk switch towards the steering wheel to the end position and release it, see page 53.

### Fog lamp

**NOTE!** Regulations for use of fog lamps vary from country to country.

#### Front fog lamps (option)

The front fog lamps can be switched on along with the headlamps or the position lamps/parking lamps.

- Press the button (2).

The LED in the button (2) lights when the front fog lamps are switched on.

#### Rear fog lamp

The rear fog lamp can only be switched on with the headlamps or the front fog lamps.

- Press the button (4).

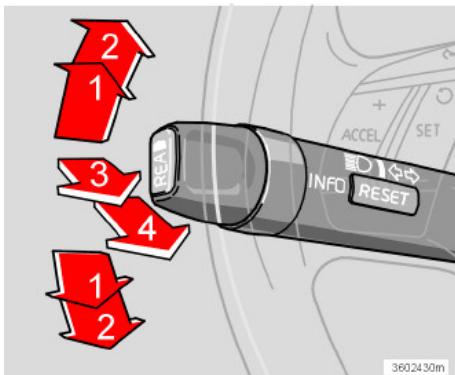
The rear fog lamp indicator symbol in the combined instrument panel and the LED in the button (4) come on when the rear fog lamp is switched on.

### Instrument lighting

The instrument lighting is switched on when the ignition 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 control up or down (5) for brighter or dimmer lighting.

## Left-hand stalk switch



### Short flash sequence

- Move the stalk switch up or down to position (1) and release.

When the stalk switch is released it returns to its start position and the direction indicators are switched off.

- Remove the key from the ignition.
- Move the stalk switch towards the steering wheel to the end position (4) and release.
- Get out of the car and lock the door.

### Switching, main and dipped beam

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

- Turn the headlamp control clockwise to the end position, see page 52.
- Move the stalk switch towards the steering wheel to the end position (4) and release.

### Main beam flash

- Move the stalk switch gently towards the steering wheel to position (3).

Main beam comes on until the stalk switch is released.

### Home safe lighting

Some of the exterior lighting can be kept switched on and works as home safe lighting after the car has been locked. The time delay is 30 seconds<sup>1</sup>, but can be changed to 60 or 90 seconds by an authorised Volvo workshop.

## Stalk switch positions

1. Short flash sequence, direction indicators
2. Continuous flash sequence, direction indicators
3. Main beam flash
4. Switching, main and dipped beam, and home safe lighting

## Direction indicators

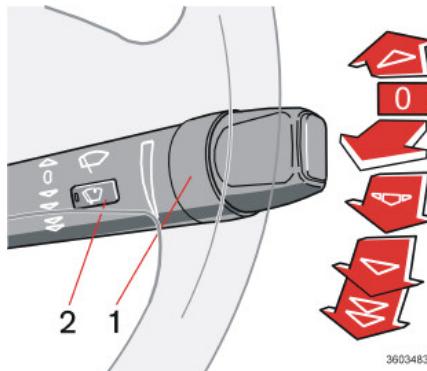
### Continuous flash sequence

- Move the stalk switch up or down to end position (2).

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

1. Factory settings.

### Right-hand stalk switch



*Wiper/washer function – windscreen.*

#### Windscreen wipers

Windscreen wipers off.



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

#### Intermittent wiping

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

Rotate the ring (1) clockwise to increase wiper stroke frequency. Rotate the ring anticlockwise to decrease wiper stroke frequency.

-  Wipers operate at "normal" speed.
-  Wipers operate at "high" speed.

#### 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 (option)

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 ring (1).

- Turn the ring clockwise to increase sensitivity or anticlockwise to decrease sensitivity. (There is an extra swipe when the ring is turned clockwise).

#### On/Off

When activating the rain sensor, the ignition key must be in position **I** or **II** and the windscreen wiper stalk switch must be in position **0**.

To activate the rain sensor:

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

To turn the rain sensor off, either:

- press the button (2) or
- press the stalk switch downward to another wiper programme. 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 back to position **0**.

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

#### IMPORTANT!

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

## Right-hand stalk switch

### Windscreen washer

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

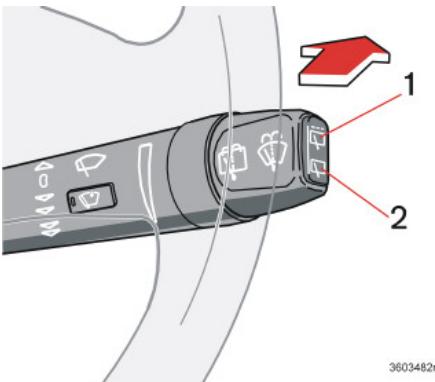
### Headlamp washer

(option on certain markets)

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

### Reduced washing

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



3603482m

*Wiper/washer function – rear window.*

### Rear window washer and wiper

Move the lever forward to start the rear window washer.

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

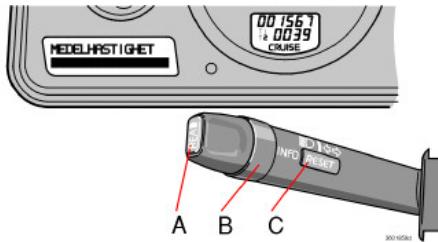
### Wiper – reversing

If you engage reverse gear when the windscreen wipers are already activated, the rear window wipers will go into intermittent wiping mode<sup>1</sup>. If the rear window wiper is already engaged at normal speed, there is no change to the selected function.

---

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

### Trip computer



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

#### Average speed

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

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

Current speed is displayed in mph.

#### Current fuel consumption

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

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

#### Average fuel consumption

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

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

#### Range to empty fuel tank

The range to empty is calculated based on the average fuel consumption over the last 30 km. When the range to empty is shorter than 20 km then "----" is shown on the display.

**NOTE!** There may be a slight error in the reading if fuel consumption is changed due to a change in driving style or if a fuel-driven heater is used for example.

## Controls

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

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

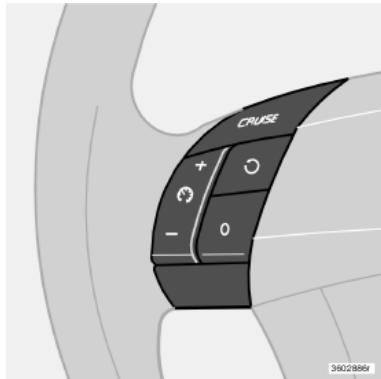
## Functions

The trip computer displays the following information:

- AVERAGE SPEED

1. Certain countries

## Cruise control



### Activating

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

Setting the desired speed:

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

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

### Increasing or decreasing speed

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

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

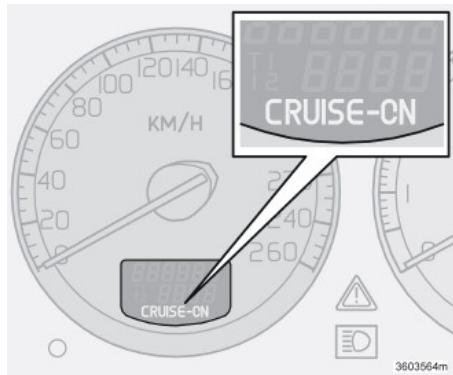
**NOTE!** A temporary increase in speed (less than one minute) using the accelerator, such as while overtaking, does not affect the cruise control setting. When you release the accelerator, the car will return to the programmed speed.

### Temporary disengagement

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

The cruise control is also temporarily disengaged when:

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



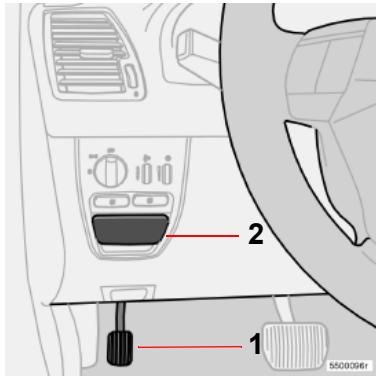
### Return to the set speed

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

### Disengaging

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

### Parking brake, bonnet, electric socket, etc.



*Parking brake, LHD car.*

#### Parking brake

The parking brake is located to the left at floor height and acts on the rear wheels when it is depressed.

The warning symbol in the combined instrument panel comes on irrespective of how hard the parking brake is depressed. So always depress the parking brake to the end position.

#### Activate the parking brake:

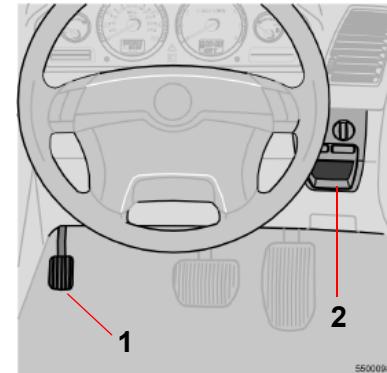
- Press the foot brake down firmly.
- Depress the parking brake to the end position (1).
- Release the foot brake and make sure that the car is stationary.
- Move the gear selector into position:  
**1** for manual gearbox  
**P** for automatic transmission.

#### Parking on a hill

- If the car is parked uphill, turn the wheels away from the kerb.
- If the car is parked downhill, turn the wheels toward the kerb.

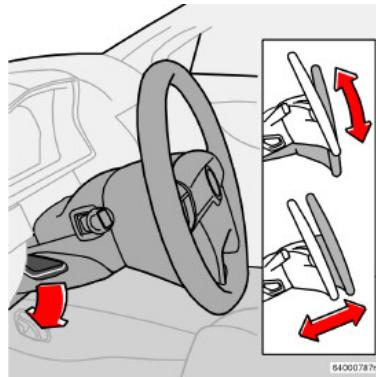
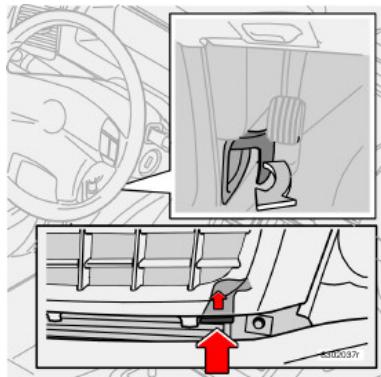
#### Release the parking brake:

- Press the foot brake down firmly.
- Pull out the handle (2).



*Parking brake, RHD car.*

## Parking brake, bonnet, electric socket, etc.



### Opening the bonnet

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



#### WARNING!

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

### Electrical socket for rear seat passengers (option)

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

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

### Steering wheel adjustment

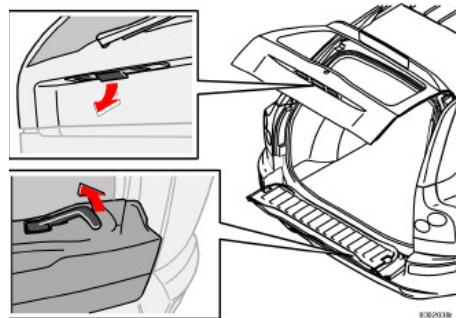
The steering wheel can be adjusted both vertically and front-rear. Press down the control on the left-hand side of the steering column. Then adjust the steering wheel to the position that suits you best. Press the control back into place to lock the steering wheel. If this is difficult, press the steering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



#### WARNING!

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

## Parking brake, bonnet, electric socket, etc.



8302038r

### Opening the tailgate

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

## Power windows

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

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

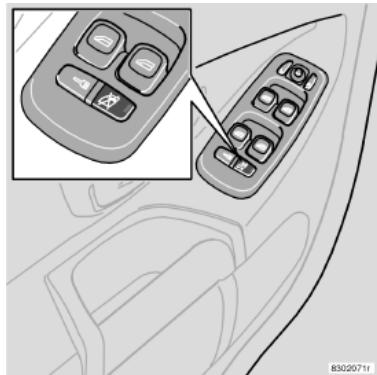
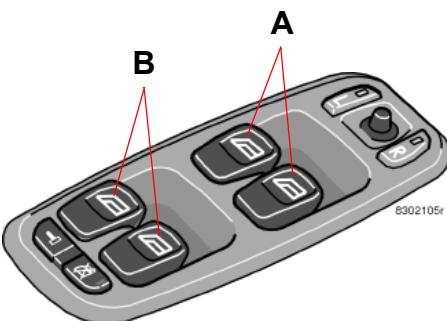
### **WARNING!**

If there are children in the car:

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

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

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



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

### Power windows in the front doors

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

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

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

### Blocking power windows in the rear doors

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

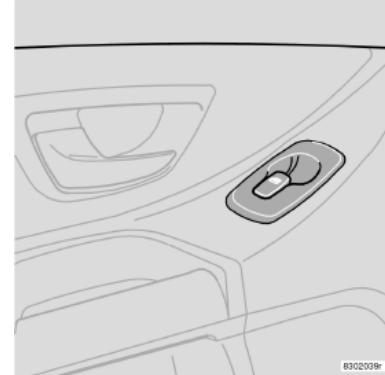
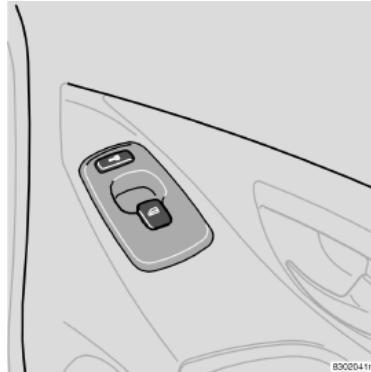
### LED in the switch is unlit

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

### Power windows

#### LED in the switch is lit

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



#### Power window in the front passenger seat

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

#### Power windows in the rear doors

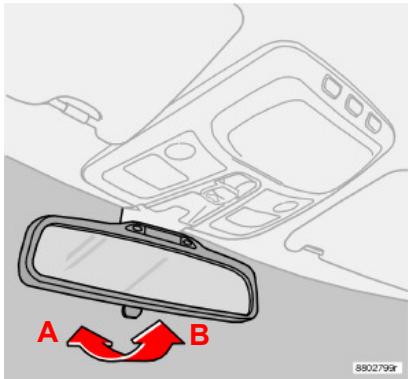
The rear door windows can be operated with the controls on the doors and the switch on the driver's door. If the LED in the switch for blocking power windows in the rear doors (located in the driver's door control panel) is lit, the rear door windows can only be operated from the driver's door.



#### WARNING!

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

## Rearview mirror, door mirrors and side windows



### Interior rearview mirror

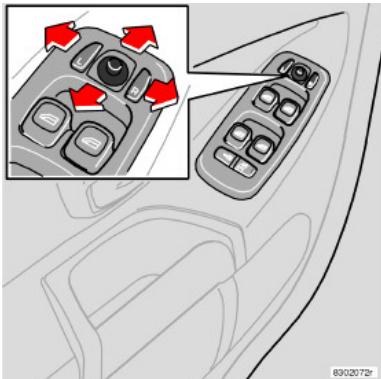
- A. Normal position.
- B. Dimming position. Use this if headlamps from the car behind are irritating you.

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



#### **WARNING!**

Adjust the mirrors before you begin driving!



### Door mirrors

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

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

#### **IMPORTANT!**

Use the defroster (see page 51) to remove ice from the mirrors, not an ice scraper. The scraper could scratch the mirror glass.

### Door mirrors with memory function (option)

If the car has door mirrors with memory function, they work together with the memory setting of the seat, see page 81.

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

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 (option)**

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

### Rearview mirror, door mirrors and side windows

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

The front windows and/or door mirrors are treated with a coating that ensures that the view through the windows or in the mirrors is good even if it is raining. For information on glass care, see page 165.



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

#### IMPORTANT!

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

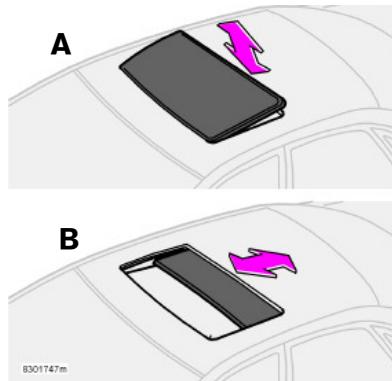
#### Rearview and door mirrors

In certain weather conditions, the function of the dirt-repellent coating is improved if the door mirror defrosters are used, see page 51.

Defrost the door mirrors:

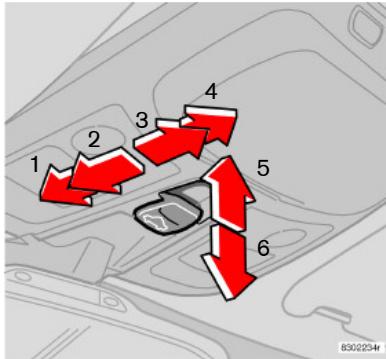
- if they are covered with ice or snow
- in heavy rain and dirty road conditions
- if they are misted.

## Power sunroof (option)



### **WARNING!**

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



## Open positions

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

- Raise/lower trailing edge – ventilation position
- Rearwards/forwards – opening position/comfort position<sup>1</sup>. The ignition key must be in position I or II.

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

- Automatic closing
- Closing, manual
- Opening, manual
- Opening, automatic
- Opening, ventilation position
- Closing, ventilation position

### Ventilation position

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

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

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

### Power sunroof (option)

#### Automatic operation

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

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

#### Manual operation

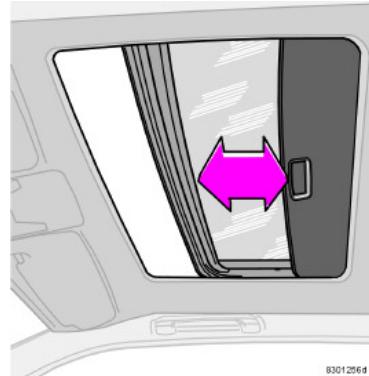
Open: Pull the control rearwards to the resistance point position (3). The sunroof will move towards maximum opening position as long as the control is held in this position.

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



#### WARNING!

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



#### WARNING!

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

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

#### Sunscreen

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

#### Pinch protection

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

---

## **Climate control**

<b>General information on climate control</b>	<b>68</b>
<b>Manual climate control, A/C</b>	<b>70</b>
<b>Electronic Climate Control, ECC</b>	<b>73</b>
<b>Parking heater (option)</b>	<b>76</b>

# General information on climate control

## Misting windows

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

## Particle filter

Make sure the particle filter is replaced regularly. Consult 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).

## Fault tracing

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

## Refrigerant

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

## Ventilation fan function

When the engine is off (and if the ignition 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.

## Cars with ECC

### Actual temperature

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

### Sensors

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

### Side windows and sunroof

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

### Acceleration

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

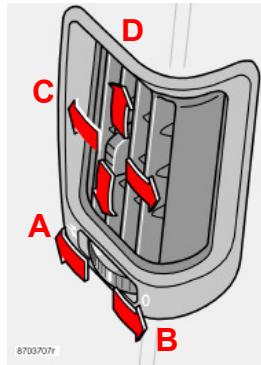
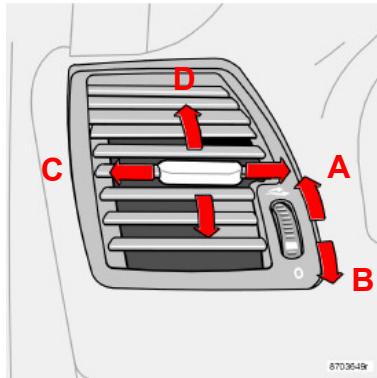
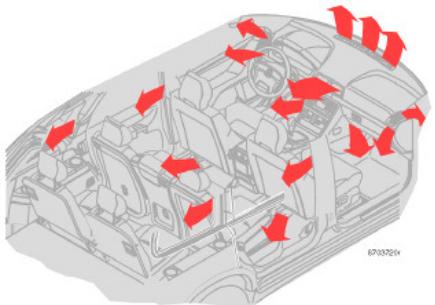
## Condensation

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

## Fuel economy

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

## General information on climate control



### Air distribution

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

### Air vents in the dashboard

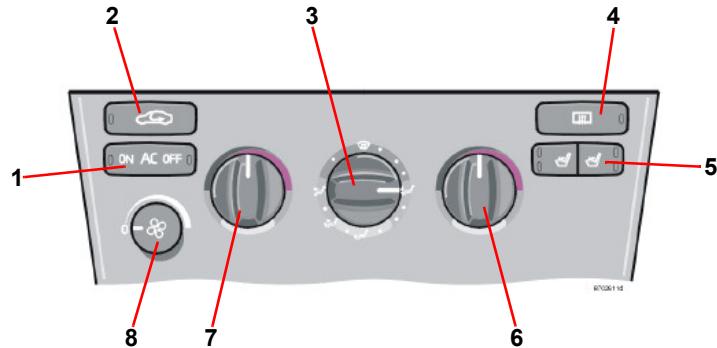
- A. Open
  - B. Closed
  - C. Lateral airflow
  - D. Vertical airflow
- Aim the outer vents towards the side windows to remove misting.
  - In cold climates: close the centre vents for the most comfortable climate and best demisting.

### Air vents in the door pillars

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

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

## Manual climate control, A/C



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

You must turn the fan knob (8) from the **0** position to connect the air conditioning. Use the air conditioning at low temperatures too (0–15 °C) in order to dehumidify incoming air.

### 1. A/C – ON/OFF

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

### 2. Recirculation

Recirculation can be used to shut out bad air, exhaust, etc. from the passenger compartment. The air in the passenger

compartment is then recirculated, i.e. no air from outside the car is taken into the car when this function is activated. Recirculation (together with the air conditioning system) cools the passenger compartment more quickly in a warm climate.

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

Activate the function as follows:

- Press  for more than 3 seconds. The LED flashes for 5 seconds. The air recirculates in the car for 3 – 12 minutes depending on the outside temperature.

## Manual climate control, A/C

- The timer function is activated each time you press .

To switch off the timer function:

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

### 3. Air distribution

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

#### Defroster

The defroster  on the air distribution control is used to quickly remove misting and ice from the windscreen and side windows. Air flows to the windows at high speed.

When the function is selected the following also takes place to provide maximum dehumidification of the air in the passenger compartment:

- the air conditioning (A/C) is automatically engaged (if the fan is not in position **0**)
- recirculation is automatically disengaged.

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

### 4. Rear window and door mirror defroster

Use this button to quickly remove misting and ice from the rear window and door mirrors, see page 51 for further information about this function.

### 5. Heated front seats

Do as follows for heated front seat(s):

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

An authorised Volvo workshop can adjust the temperature.

### 6. and 7. Heating/Cooling – left/right-hand side

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

### 8. Fan

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

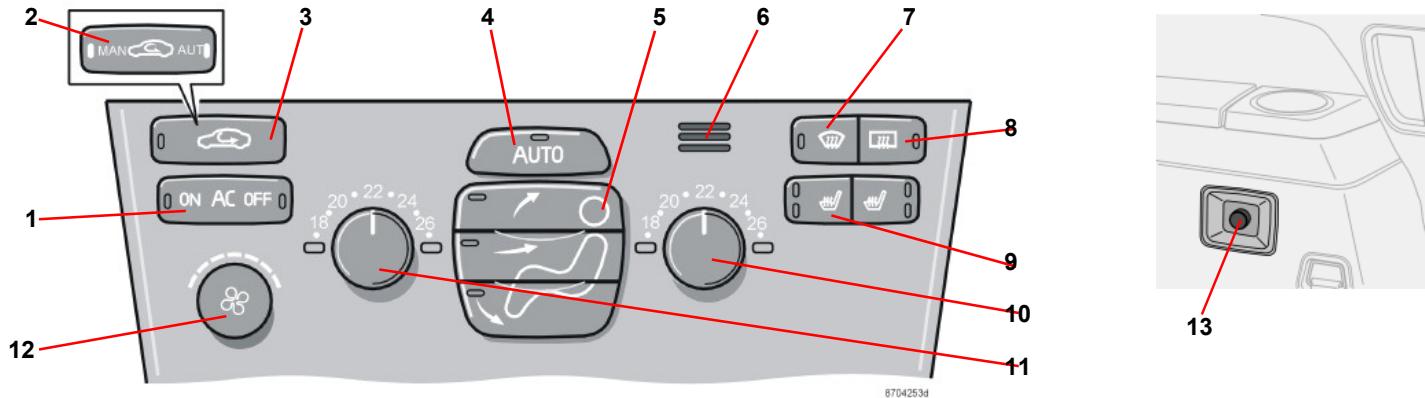
If the knob is set to **0** then the air conditioning is not engaged.

## Manual climate control, A/C

Air distribution	Use
 Air through front and rear air vents.	When you want good cooling in a warm climate.
 Air to windows. Air is not recirculated in this position. The air conditioning is always connected. There is a certain amount of airflow to the air vents.	When you want to remove ice and misting. High fan speed is good for this.
 Air to both floor and windows. There is a certain amount of airflow to the air vents.	When you want comfortable conditions and good demisting in a cold climate. Not too low a fan speed.
 Air to floor. There is a certain amount of airflow to the air vents and the defroster vents for the windscreen and side windows.	When you want to warm your feet.

Air distribution	Use
 Air to floor and air vents.	In sunny weather with cool outside temperatures.

## Electronic Climate Control, ECC



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

### 1. A/C – ON/OFF

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

### 2. Air quality system (option in certain markets)

Certain cars are equipped with a "Multifilter" and air quality sensor. The Multifilter separates gases and particles, thus reducing the volume of odours and pollutants. 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.

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

#### Operation

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

## Electronic Climate Control, ECC

Or:

Select one of the following three functions by pressing  repeatedly.

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

### Keep in mind the following:

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

### 3. Recirculation

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

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

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

Activate the function as follows:

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

you press .

To switch off the timer function:

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

### 4. AUTO

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

### 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.

## Electronic Climate Control, ECC

### 7. Defroster, windscreen and side windows

Used to quickly remove misting and ice from the windscreen and side windows. Air flows to the windows at high speed. The LED in the defroster button comes on when this function is engaged.

When the function is selected the following also takes place to provide maximum dehumidification of the air in the passenger compartment:

- the air conditioning (A/C) is automatically engaged (if the fan knob is in final anticlockwise position then the air conditioning is not engaged).
- recirculation is automatically disengaged.

When the defroster  is switched off the climate control 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 51 for further information about this function.

### 9. Heated front seats

Do as follows for heated front seat(s):

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

An authorised Volvo workshop can adjust the temperature.

### 10 and 11. Temperature

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

### 12. Fan

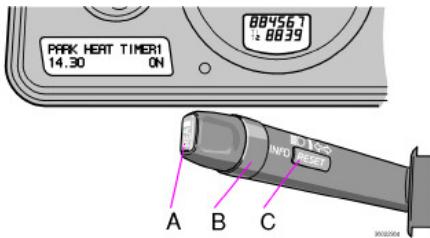
Fan speed can be increased or decreased by turning the knob. If AUTO is selected, fan speed is controlled automatically. The previously set fan speed is disconnected.

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

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

Fan speed can be increased or decreased by turning the knob. This only applies if A/C is selected for both front (1) and rear passenger compartment. The button for rear passenger compartment is in the centre console switch panel, see page 49.

## Parking heater (option)



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

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



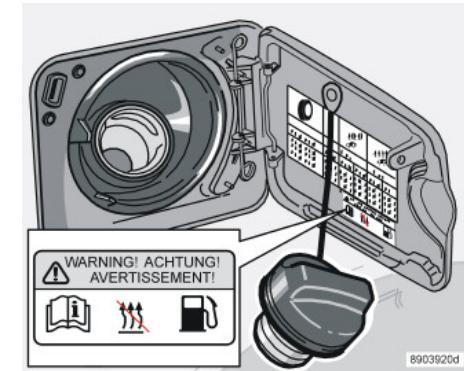
### WARNING!

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



### WARNING!

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



*Warning decal on fuel filler flap.*

### Messages on the display

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

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

### Parking on a hill

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

## General

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

This is most easily done by:

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

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

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

## Parking heater (option)

### Car clock/timer

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

### Setting TIMER 1 and 2

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

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

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

### Deactivating timer-started heating

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

- Press the READ button (A).

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

### Direct start

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

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

### Deactivating heater after direct start

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

### Battery and fuel

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

### IMPORTANT!

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

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

### Additional heater (diesel) (certain countries)

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

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



---

## **Interior**

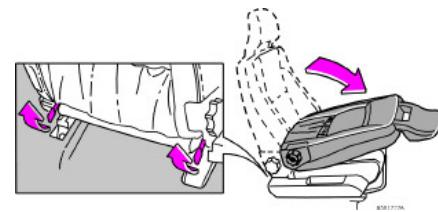
<b>Front seats</b>	<b>80</b>
<b>Interior lighting</b>	<b>83</b>
<b>Storage spaces in the passenger compartment</b>	<b>85</b>
<b>Rear seat</b>	<b>90</b>
<b>Cargo compartment</b>	<b>92</b>

## Front seats



### **WARNING!**

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



## Seating position

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

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

## Lowering the front seat backrest

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

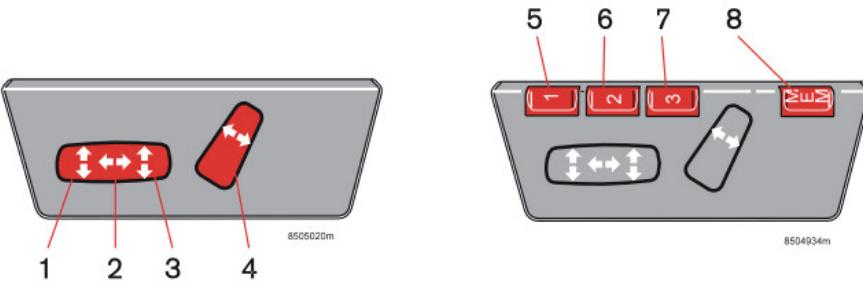
- Move the seat as far back as possible.
- Adjust the backrest to the upright position.
- Lift the catches on the rear of the backrest.
- Fold the backrest forward.
- Slide the seat forward so that the head restraint is "locked in place" under the glovebox.

## Front seats

### Power seat (option)

#### Preparations

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



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

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

#### Seat adjustment

The switches can be used to make the following adjustments:

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

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

#### Seat with memory function

5. Setting seat and door mirrors, program 1
  6. Setting seat and door mirrors, program 2
  7. Setting seat and door mirrors, program 3
  8. Storing preset positions
- Three positions can be stored. After adjusting the seat, hold the MEM (8) button depressed while pressing the button (5). Further seat and door mirror settings can be stored using memory buttons (6) and (7).

## **Front seats**

### **Setting preset positions**

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

### **Emergency stop**

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



#### **WARNING!**

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

Ensure that none of the backseat passengers will be trapped.

To avoid injury, ensure that children do not play with the switches.

## Interior lighting



### General lighting

General lighting is activated and deactivated by pressing the centre button. A brief press on this button will switch general lighting on or off in any situation. Activate and deactivate general lighting by pressing the centre button. General lighting comes on automatically<sup>1</sup> and remains lit for either 30 seconds or 10 minutes when the engine is off.

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

- when you unlock the car from the outside using the key or remote control

- stop the engine and turn the ignition key to position **0**.

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

- one of the doors is open
- unless general lighting is switched off.

General lighting switches off:

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

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

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

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

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

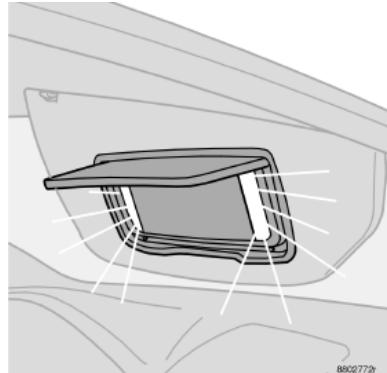


### Reading lamps

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

<sup>1</sup> The function is light-dependent and is only activated when it is dark.

## **Interior lighting**



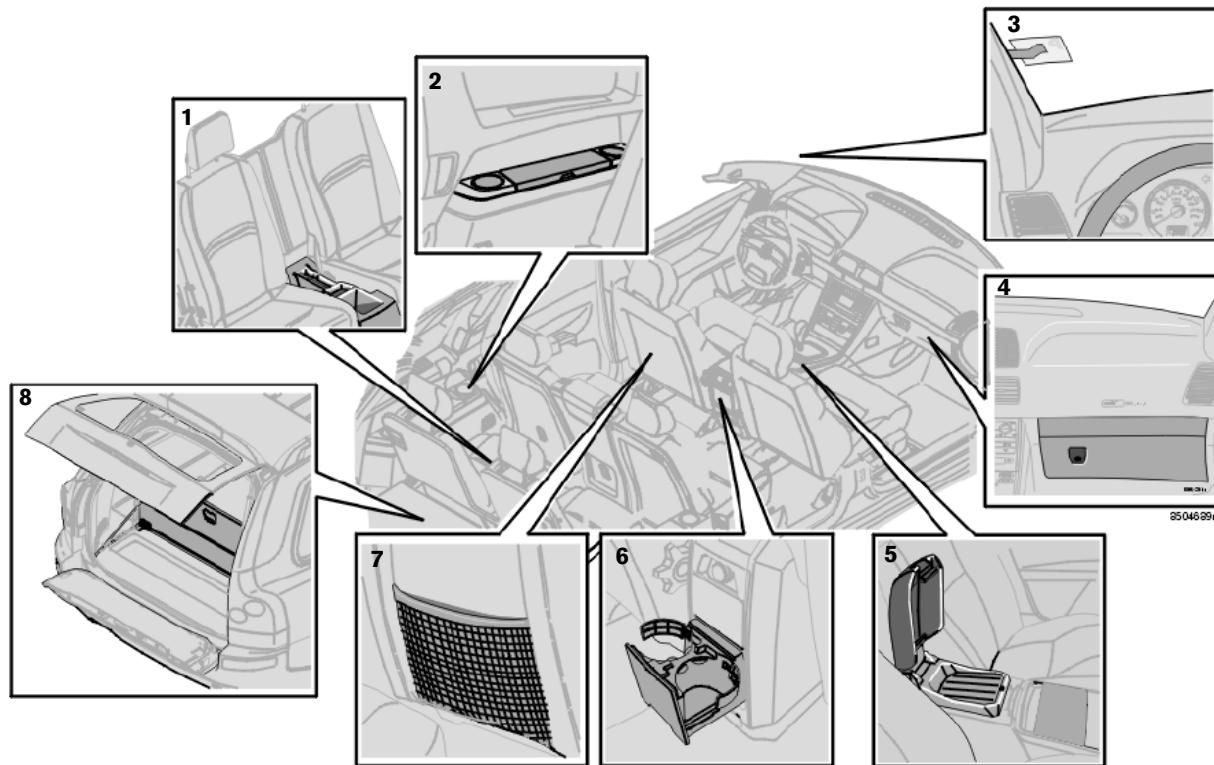
### **Vanity mirror<sup>1</sup>**

The light comes on automatically when the cover is lifted.

---

1. Option on certain markets.

## Storage spaces in the passenger compartment



## Storage spaces in the passenger compartment

### Storage spaces

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 front edge of the front seat cushions).
8. Grocery bag holder.



### WARNING!

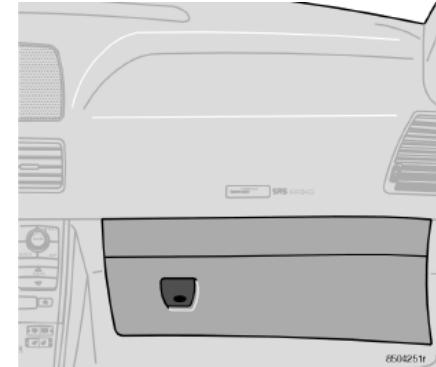
Ensure that no hard, sharp or heavy objects lie or protrude in such a way that they could cause injury during heavy braking.

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



### Pen holder

The centre console contains a pen holder.



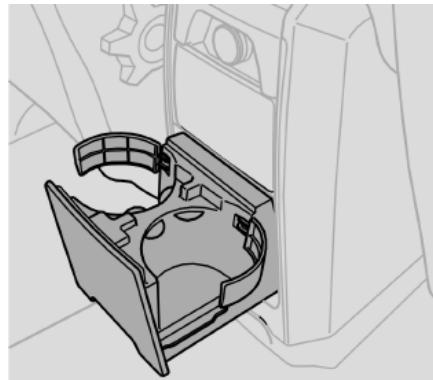
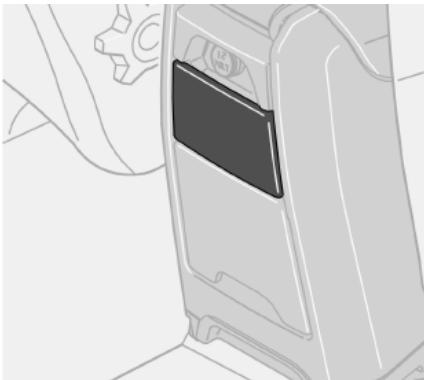
### Glovebox

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

### Floor mats (option)

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

## Storage spaces in the passenger compartment



### Coat hanger

The coat hanger is only intended for light garments.

### Ashtray for rear seat passengers (option)

Open the ashtray by pulling the top edge outward.

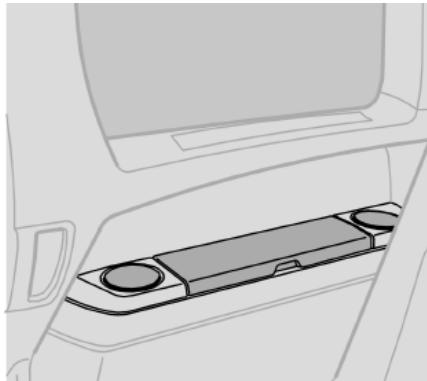
To empty:

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

### Cup/bottle holder for rear seat passengers

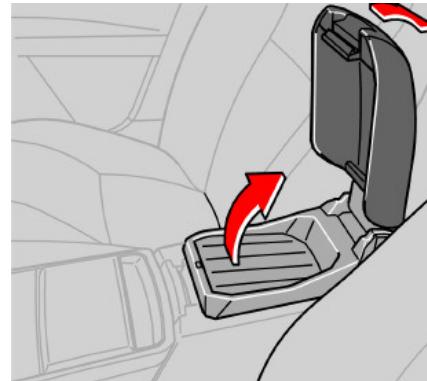
Pull the bottom edge of the insert to open. The cup holder insert can be removed: Detach the two clips so the holder can be used for large bottles.

## Storage spaces in the passenger compartment



### Storage compartment and cup holder (cars seating seven)

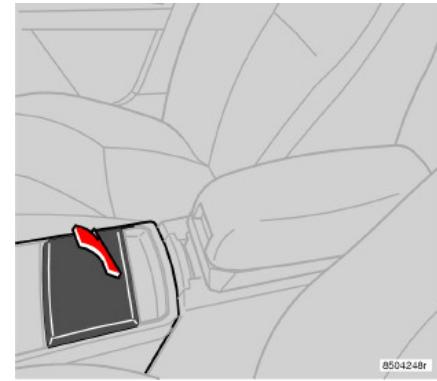
This storage compartment can be used for CDs, books and the like.



### Storage tray in centre console

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

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



### Cup holder

Cup holder for front seat passengers.

### Ashtray (option)

Pull out the insert to empty the astray.

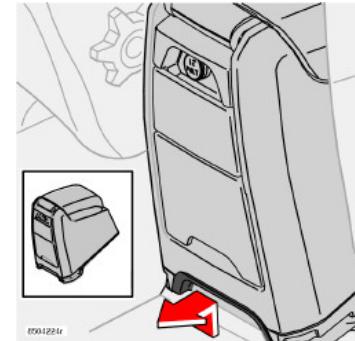
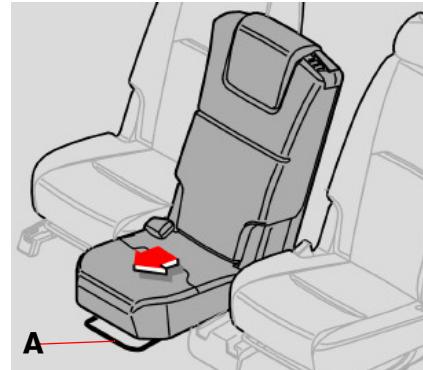
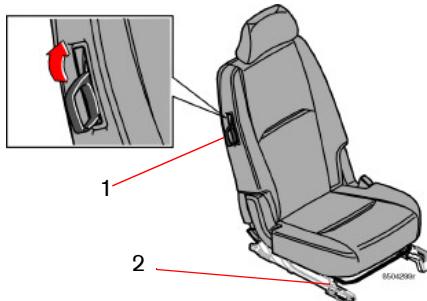
## Storage spaces in the passenger compartment



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

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

## 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 backrest forward. Do the reverse to return the seat to its original position.

#### Adjusting the seat front - rear

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

### Sliding seat (cars seating seven)

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

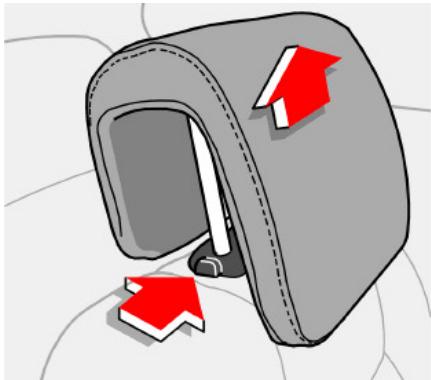
Lift the bracket (A) to move the seat front or back.

### Removing the rear section of the centre console

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

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

## Rear seat



### WARNING!

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

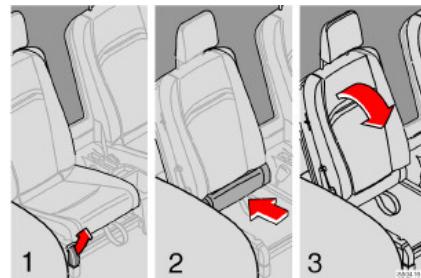
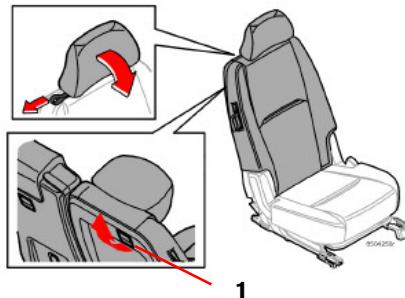
After raising the backrests in the second and third row, it is important to make sure that the backrests have locked into position. Otherwise the protective system of the seats may be compromised.

## Head restraint, rear seat - centre seat

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

Note that the head restraint cannot be removed completely!

## Cargo compartment



### Repositioning the seats in the third row

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

The seat is now ready for use.

### Extending the cargo compartment - second row of seats

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



#### WARNING!

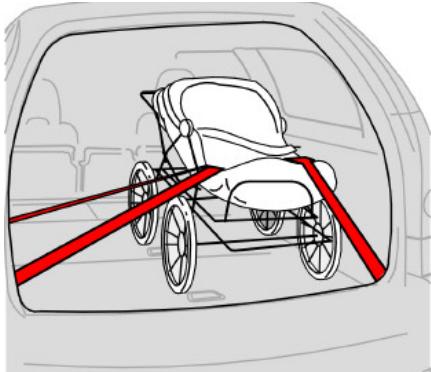
For reasons of safety, no passengers should sit in the third row of seats if the outer head restraints in the second row are lowered.

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

Push the rear seats to the entrance/exit position, see page 90.

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).

## Cargo compartment



### General

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

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

### Loading the cargo compartment

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

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

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

Think about the following when loading:

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

### **WARNING!**

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

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

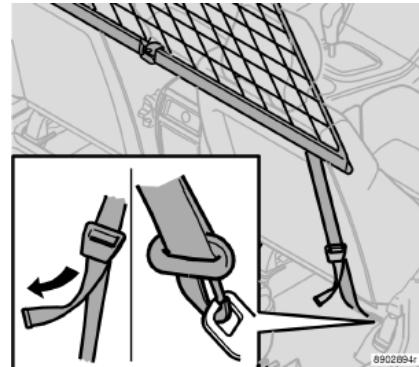
Always secure the load. During heavy braking the load may otherwise shift, causing personal injury.

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

### **WARNING!**

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

## Cargo compartment



Only applies to cars seating seven:

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

### 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:

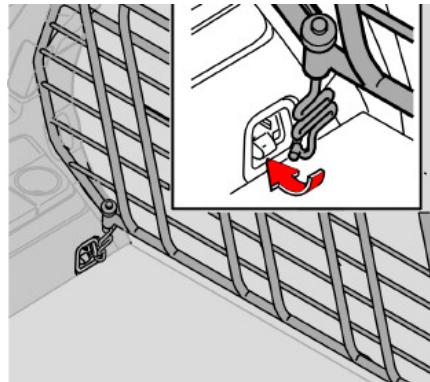
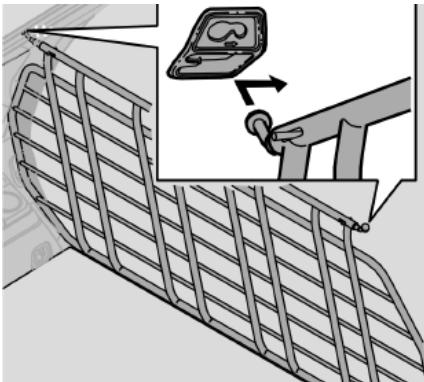
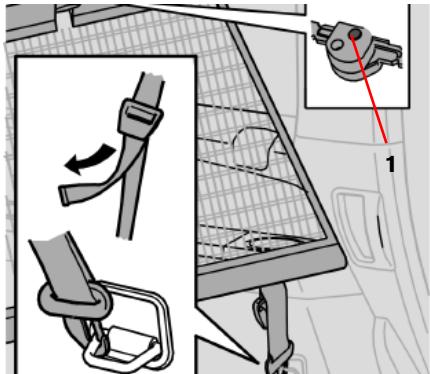
- Behind the rear seat backrest.
- Behind the front seats if the rear seat is lowered.

### Fitting the safety net

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

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

## Cargo compartment



### Folding up the safety net

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

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



### WARNING!

Make sure that the upper mountings of the safety net are correctly fitted and that the anchoring straps are securely fastened. Do not use a damaged net.

### Steel safety grille (option)

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

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

Fit the protective grille as follows:

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

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

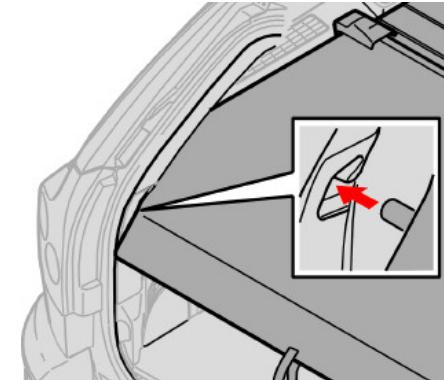
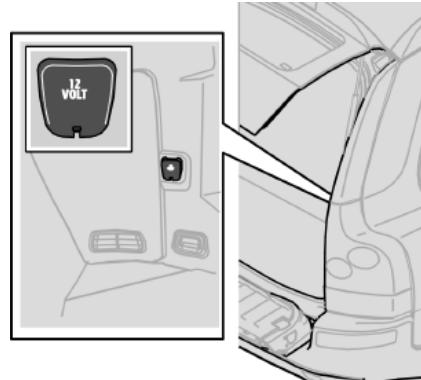
## Cargo compartment

- Fit the attaching brace hook in the load anchorage and tighten the knob until the attaching brace takes hold in the load anchorage.
- Do the same on the other side.
- Tighten both attaching braces alternately.
- Fit protective caps on the exposed screw threads above the knobs.



### **WARNING!**

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



### **Electric socket in the cargo compartment**

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

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

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

### **Cargo cover (option)**

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

### **Removing the cargo area cover**

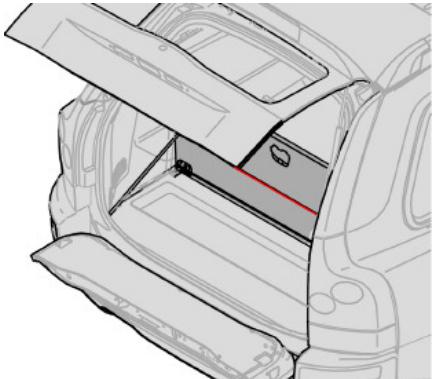
Press the end pieces of the cargo area cover inwards, pull up and release. When fitting, press the end pieces of the cargo area cover down into the holders.



### **WARNING!**

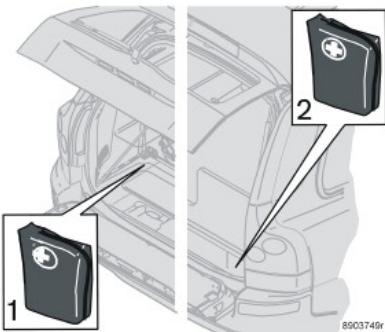
Do not place objects on the cargo area cover. They could injure passengers during braking or evasive manoeuvres.

## Cargo compartment



### Grocery bag holder

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



*1. Cars seating five 2. Cars seating seven*

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

- Lift up the cover in the cargo compartment floor.

If the car is equipped with a grocery bag holder:

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

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

- Lift up the cover.

If the car is equipped with a grocery 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 the cushions fold into. The cushions and seat mechanisms could be damaged.

### Cargo area compartment, contents

The following is housed in the floor compartment:

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

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

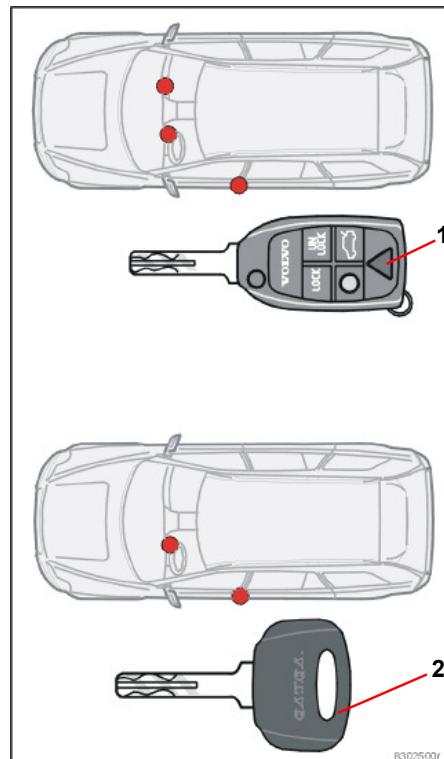


---

## **Locks and alarm**

<b>Keys and remote controls</b>	<b>100</b>
<b>Locking and unlocking</b>	<b>103</b>
<b>Child safety locks</b>	<b>106</b>
<b>Alarm (option)</b>	<b>108</b>

## Keys and remote controls



### 1. Master key

Key for all locks.

### 2. Service key<sup>1</sup>

Key to front door, ignition switch and steering wheel lock.

### Keys - Immobiliser

Your car is delivered with two master keys and one service key<sup>1</sup>. One of the master keys is collapsible and equipped with an integrated remote control.

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

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

A maximum of six remote controls/key blades can be programmed and used for one single car.

### Immobiliser

The keys are equipped with coded chips.

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

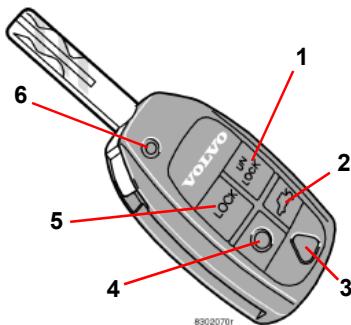
**NOTE!** The master key blade (1) must be fully extended (as illustrated) when starting the car. Otherwise there is a risk that the immobiliser function will prevent the car from starting.

### Ignition keys and electronic immobiliser

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

1. Certain markets only.

## Keys and remote controls



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

### Remote control functions

#### Unlocking

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

#### Tailgate

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

**NOTE!** The function does not open the tailgate.

#### Alarm function

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

#### Approach lighting

Do as follows when approaching your car:

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

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

To switch off the home safe lighting:

- Press the yellow button again.

#### Locking

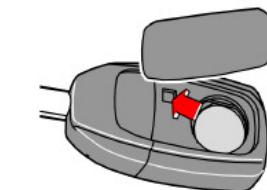
Lock all doors, tailgate and fuel filler flap with button 5. There is a delay of approx. 10 minutes for the fuel filler flap.

#### Folding/opening key

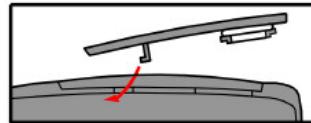
The key can be folded by pressing button 6 while folding the key blade into the keypad.

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

## **Keys and remote controls**



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



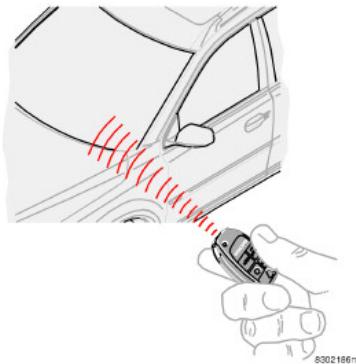
8302195m

### **Changing the remote control battery**

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

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

## Locking and unlocking



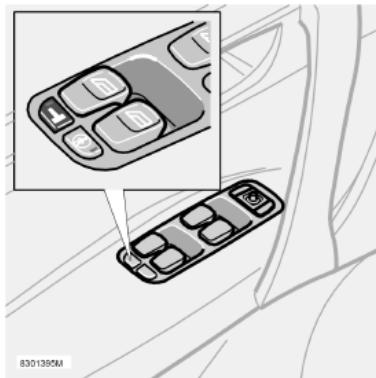
### Automatic relocking

If none of the doors or the tailgate are opened within two minutes of unlocking from the outside with the remote control, all locks re-lock automatically. This function prevents you from unintentionally leaving the car unlocked.

For cars with alarm, see page 108.

### Automatic locking

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



## Locking and unlocking the car from the outside

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

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

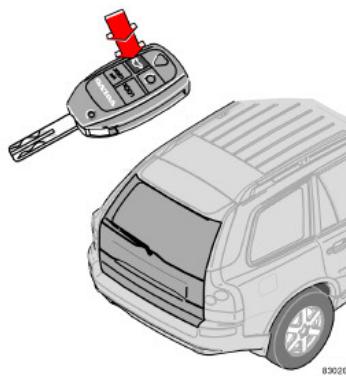
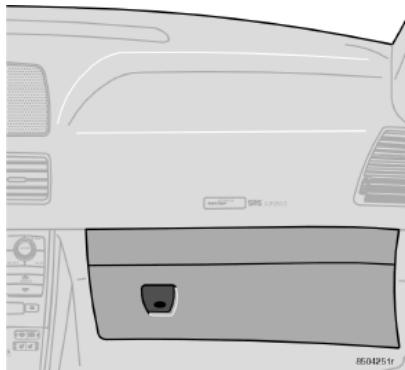
## Locking and unlocking the car from the inside

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

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

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

### Locking and unlocking



#### Locking the glovebox

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

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

Do as follows to unlock the tailgate only:

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

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

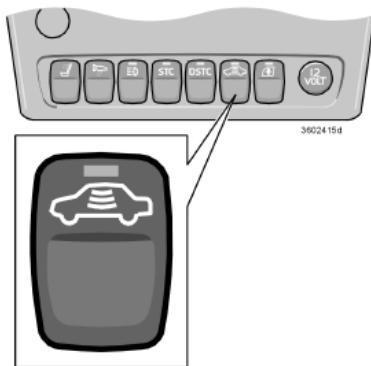
#### Deadlocks<sup>1</sup>

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

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

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

## Locking and unlocking



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



### WARNING!

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

### Temporary deactivation of the deadlocks and any detectors

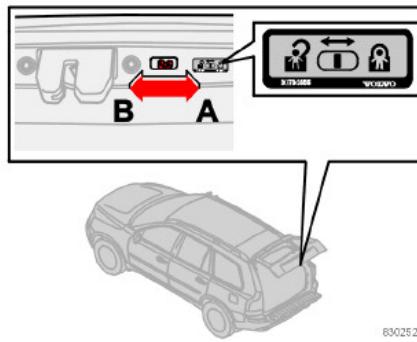
If others prefer to remain seated in the car with the doors locked from the outside, e.g. during transport by ferry, it is possible to deactivate the deadlocks.

- Insert the key into the ignition switch, turn it to position **II** and then back to position **I** or **0**.
- Press the button (see illustration).

If the car is equipped with an alarm, movement and tilt detectors are also deactivated. See page 108.

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

## Child safety locks

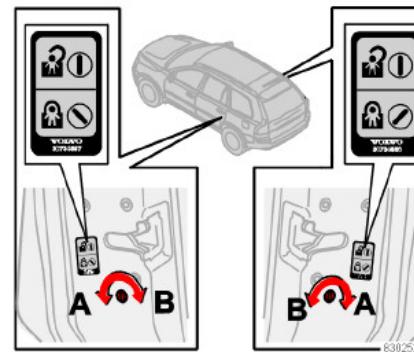


*Control for child safety lock – tailgate.*

### Mechanical child safety locks – tailgate and rear doors

The controls for the child safety locks are in the bottom edge of the tailgate<sup>1</sup> and in the rear edge of the rear doors. The controls are only accessible when the tailgate is open or the rear doors are open.

- Adjust the tailgate control by sliding it sideways between the outer positions (use a flat metal object, such as a screwdriver):



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

- A. Child-safe position – the tailgate cannot be opened from inside.
- B. Not child-safe position – the tailgate can be opened from inside.
  - 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.

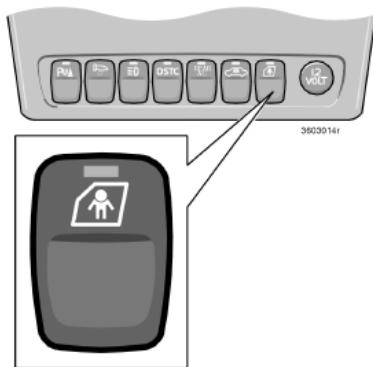
### WARNING!

Remember that in the event of an accident, rear seat passengers cannot open the rear doors from the inside if the child safety locks are activated.

Therefore, keep the doors unlocked while driving! In the event of an accident, rescue personnel will then be able to enter the car from the outside.

1. Certain markets only.

## Child safety locks



When the alarm is armed, it continually monitors all alarm inputs. The alarm is triggered if:

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

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

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

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

### Alarm (option)

#### Activating the alarm

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

#### Deactivating the alarm

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

#### Automatic alarm activation

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

#### Automatic alarm activation

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

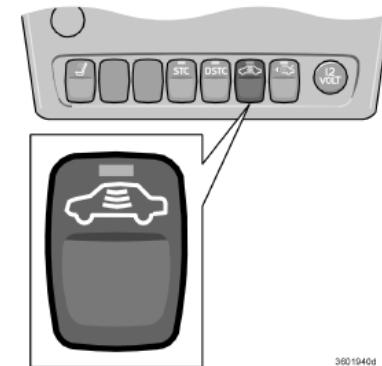
#### Deactivating a triggered alarm

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

#### Alarm signals

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

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



3601946d

#### Temporary deactivation of detectors and deadlocks

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

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

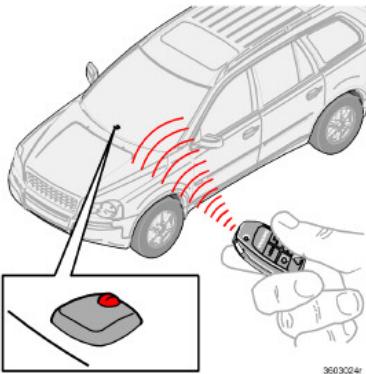
The LED in the button lights until you lock the car with the key or remote control.

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

## Alarm (option)

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

If your car has deadlocks, they are reactivated at the same time. See page 104.



### IMPORTANT!

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

### Alarm LED on the dashboard

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

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

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



---

## **Starting and driving**

<b>General</b>	<b>112</b>
<b>Refuelling</b>	<b>114</b>
<b>Starting the car</b>	<b>115</b>
<b>Manual gearbox</b>	<b>117</b>
<b>Automatic gearbox</b>	<b>118</b>
<b>All-wheel drive</b>	<b>121</b>
<b>Brake system</b>	<b>122</b>
<b>Stability system</b>	<b>124</b>
<b>Parking assistance (option)</b>	<b>125</b>
<b>Towing and recovery</b>	<b>127</b>
<b>Start assistance</b>	<b>129</b>
<b>Driving with a trailer</b>	<b>130</b>
<b>Detachable towbar -mounting</b>	<b>134</b>
<b>Detachable towbar -removing</b>	<b>136</b>
<b>Loading</b>	<b>138</b>
<b>Adjusting headlamp pattern</b>	<b>140</b>
<b>BLIS (Blind Spot Information System) -option</b>	<b>143</b>

### General

#### Economical driving

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

Keep in mind the following:

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

#### Your new car - slippery road surfaces

Driving on a slippery road may feel different depending on whether you choose a car with a manual or an automatic gearbox. Practice

skid driving under controlled conditions so that you know how your new car reacts.

#### Driving on rough roads

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

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

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

#### Wading

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

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

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

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

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

## General

### Do not overload the battery

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

Examples of functions that use a lot of power:

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

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

Charge the battery by starting the engine.

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

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

#### To avoid the cooling system overheating

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

#### To avoid the engine overheating

Do not exceed engine speeds of 4500 rpm (diesel engine: 3500 rpm) if driving with a trailer or caravan in hilly terrain. The oil temperature can become too high.

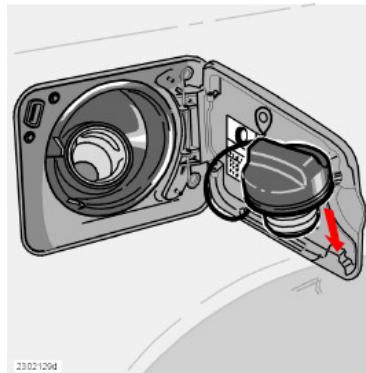
### Do not drive with the tailgate open

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

- Close all windows.

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

### Refuelling



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

#### Opening the fuel filler flap

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

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

#### Fuel filler flap

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

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

#### **WARNING!**

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

#### Refuelling with petrol

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

#### **IMPORTANT!**

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

#### Refuelling with diesel

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

## Starting the car

### Starting the engine (Petrol)

- Depress the parking brake.
- Automatic gearbox: Gear selector in position **P** or **N**.  
Manual gearbox: Gear lever in neutral and the clutch pedal completely depressed.  
This is especially important in severe cold.

**NOTE!** The master key blade must be fully extended (as illustrated on page 100) when starting the car. Otherwise there is a risk that the immobiliser function will prevent the car from starting.

- Turn the ignition key to start position. If the engine does not start within 5–10 seconds, release the key (see also "Autostart", page 116) and try again.

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

### Starting the engine (Diesel)

- Depress the parking brake.
- Automatic gearbox: Gear selector in position **P** or **N**.  
Manual gearbox: Gear lever in neutral and

the clutch pedal completely depressed. This is especially important in severe cold.

**NOTE!** The master key blade must be fully extended (as illustrated on page 100) when starting the car. Otherwise there is a risk that the immobiliser function will prevent the car from starting.

- Turn the ignition key to the driving position. A symbol in the combined instrument panel will come on indicating that engine preheating is activated. Turn the key to the start position when the indicator symbol goes out.

### Diesel particle filter (certain models)

Certain diesel cars are equipped with a particle filter which results in additionally effective emission control. When the engine reaches its normal operating temperature (the engine is warm) a so-called "regeneration" of the filter takes place automatically, which means that the particles collected in the filter are burned away and the filter is emptied.

Regeneration takes between 10 and 15 minutes. During this time fuel consumption may increase slightly.

### Winter driving

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 approx. 80 % full of particles then a yellow warning triangle in the dashboard display is shown along with the warning text SOOT FILTER FULL SEE MANUAL.

Regeneration should be carried out regularly if the car is frequently driven short distances in cold weather in order to avoid impaired function of the filter.

- 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 20 minutes more.
- To clear the warning text when regeneration is complete, switch off the ignition, remove the key, wait for at least three minutes and switch the ignition on again.
- Use the parking heater (option) in cold weather so that the engine reaches normal operating temperature more quickly.

### Starting the car

#### IMPORTANT!

If the filter fills up with particles then it can be difficult to start the engine and the filter will be incapable of functioning and must then be replaced.

### Ignition keys and electronic immobiliser

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

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



#### WARNING!

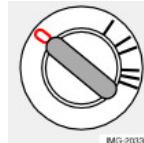
Never switch off the ignition (position 0 or 1) or remove the ignition key when the vehicle is in motion. This could activate the steering wheel lock, making the car impossible to steer.

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

### Ignition switch and steering lock

#### 0 – Locked position

The steering wheel locks when the ignition key is removed.



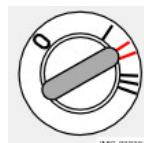
IMG-203301



IMG-203303

#### I – Intermediate position - "radio position"

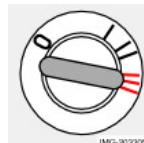
Certain electrical components can be switched on. The engine's electrical system is not activated.



IMG-203304

#### II – Driving position

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



IMG-203305

#### III – Start position

The starter motor is connected. Release the key once the engine has started. The key automatically springs back to the driving position. If the key is hard to turn, the front wheels may be turned in such a way that there is tension in the steering wheel lock. Turn the wheel back and forth to make it easier to turn the key.

### Autostart (V8 AWD)

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

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

## Manual gearbox



### Gear positions

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

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

### Reverse gear inhibitor

Only engage reverse gear when the car is stationary.

# Automatic gearbox

## Cold start

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

## Turbo engine

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

## Adaptive system

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

## Lock-up function

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

## Safety systems

Cars with an automatic gearbox have special safety systems:

## Keylock

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

## Parking position (**P** position)

Stationary car with engine running:

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

## Electric gear inhibitor - Shiftlock

## Parking position (**P** position)

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

## Kick-down

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

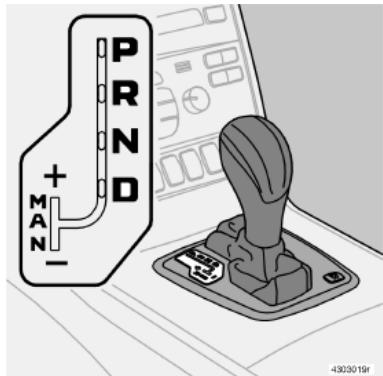
When maximum speed for this gear is reached, or if the accelerator is released from the kick-down position, the gearbox automatically changes up.

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

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

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

## Automatic gearbox



### P - Park

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

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

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

### R - Reverse

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

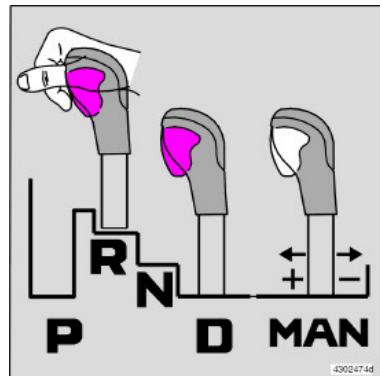


### N - Neutral

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

### D - Drive

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



### Gear selector inhibitor

The gear selector can always be moved freely between **N** and **D**<sup>1</sup>. Other positions are locked with a catch 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**.

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

### Automatic gearbox

#### Gear selector manual positions

##### Manual positions

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

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

##### While driving

Manual gear positions can be selected at anytime during your trip. The engaged gear is locked until you select another gear. The car will only shift if you slow to a very low speed.

If you move the gear selector to minus (-), the car downshifts automatically one gear at a time while engine braking. If you move the gear selector to plus (+), the car upshifts one gear at a time.

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

#### W - Winter



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

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

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

---

1. 5th gear also has lock-up on the 5-speed automatic gearbox.  
2nd and 6th gear also have lock-up on the 6-speed automatic gearbox.

## All-wheel drive

### All-wheel drive - AWD

All-wheel drive is always engaged.

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

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

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

# Brake system

## Brake servo

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

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



## WARNING!

The brake servo only works when the engine is running.

## Brake circuits



This symbol lights if a brake circuit is not 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 braking surfaces and dries off any water. It is also recommended to do this before parking the car for a long period in such weather conditions.

## If the brakes are used heavily

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

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

So as not to overload the brakes, shift down when driving downhill instead of using the foot brake. Use the same gear driving downhill as you would use driving uphill. This

using engine braking more efficiently and requires the foot brake for only brief periods.

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

## Anti-lock braking system (ABS)



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

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

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

To get the most out of the ABS:

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

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

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

## Brake system

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

If the brake fluid is under the MIN level in the brake fluid reservoir, do not drive further before topping up the brake fluid. The reason for the loss of brake fluid must be investigated.

### Emergency brake assistance - EBA

(Emergency brake assistance) In case of sudden braking, full-strength braking is provided instantaneously. The EBA function senses when heavy braking is underway by registering how quickly the brake pedal is depressed. Continue braking without easing off on the brake pedal. The function is suspended when the pressure on the brake pedal eases. This function is always active and cannot be disengaged.

### Stability system

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

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

Function/ system	STC	DSTC <sup>1</sup>
TC	X	X
SC	X	X
AYC		X

1. Option on certain markets.

#### Traction Control - (TC)

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

#### Spin Control (SC)

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

#### Active Yaw Control (AYC)

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

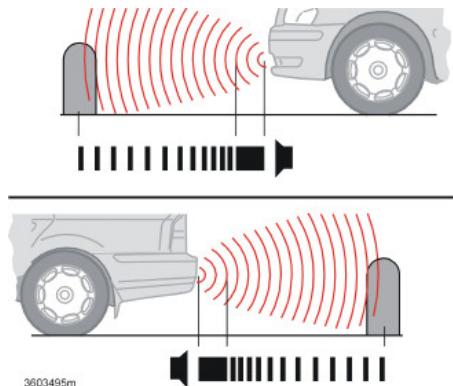
The AYC function is always active and cannot be deactivated.



#### WARNING!

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

## Parking assistance (option)



*Parking assistance front and rear*

### General

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

The frequency of the signal increases as you come closer to an object<sup>1</sup> in front of or behind the car.

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

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

The system is always activated when the car is started.

towbar or the like as they would trigger the sensors.

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



### WARNING!

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

### Front parking assistance

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

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

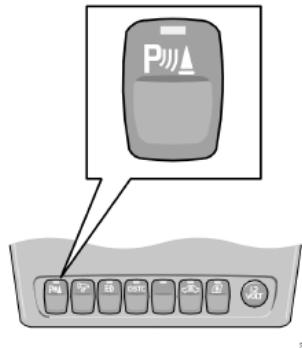
### Rear parking assistance

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

The system must be deactivated when driving with a trailer, bike carrier on the

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

### Parking assistance (option)



#### Rear parking assistance

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

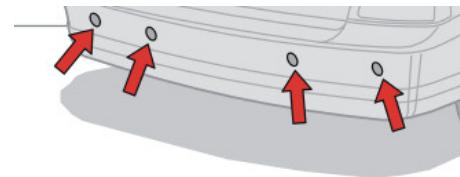
#### Fault indicator



**The information symbol comes on and stays lit**

PARK ASSIST SERVICE

REQUIRED is shown in the information display in the centre of the combined instrument panel together with the symbol.



36003603m

*Parking assistance sensors*

#### Cleaning the sensors

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

The sensors can react if covered by ice and snow.

#### **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 motorcycle exhaust pipes. This does not indicate any fault in the system.

### Deactivating and reactivating the parking assistance

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

#### Front parking assistance

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

## Towing and recovery

### Do not bump start the engine

If you bump start a car with manual gearbox, the catalytic converter may be damaged.

Cars with automatic gearbox cannot be bump started. Use a booster battery if the battery is flat.

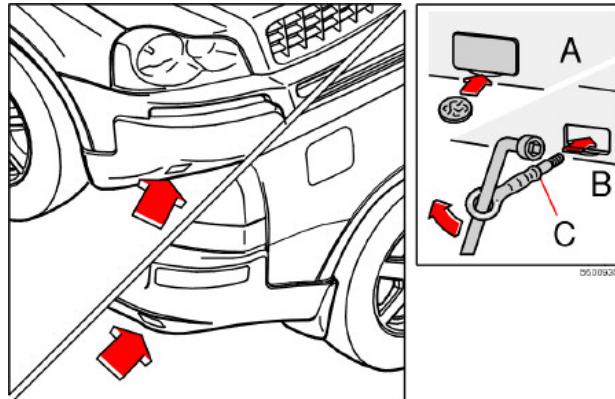
### If the car must be towed

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

### For automatic gearboxes

- The gear selector should be in position **N**.
- The maximum permissible speed when towing a car with automatic gearbox is 80 km/h.
- Only tow with the car facing forward.
- The engine cannot be bump started. "Jump starting", see page 129.

### Towing and recovery



#### Towing eye

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

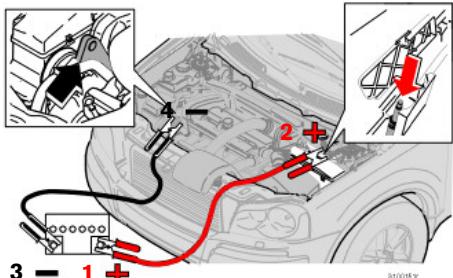
The towing eye may only be used for towing on roads, not for recovery after driving into a ditch or the like. Professional help should be called for recovery.

Remove the cover as follows:

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

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

## Start assistance



### Starting with a booster battery

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

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

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

the red connection in your car's engine compartment (2+).

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

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

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

### WARNING!

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

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

### Driving with a trailer

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



#### WARNING!

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

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

- Clean the towing bracket regularly and grease the towball<sup>1</sup> and all moving parts to prevent unnecessary wear.
- Do not drive with a heavy trailer when your car is brand new! Wait until it has gone at least 1000 km.
- The brakes are loaded much more than usual on long and steep downhill slopes. Downshift to a lower gear and adjust your speed.
- If the car is driven with a heavy load in a hot climate, the engine and gearbox may overheat. The temperature gauge in the combined instrument panel goes into the red zone when the car overheats. Stop and let the engine idle a few minutes.
- If the car overheats, the air conditioning system can be temporarily switched off.
- The gearbox reacts with a built-in protection function if the car overheats. See the message in the display!
- The engine is loaded more heavily than usual when driving with a trailer.
- For reasons of safety, you should not drive faster than 80 km/h, even if the laws of certain countries permit higher speeds.
- The maximum permissible trailer weight for a trailer without brakes is 750 kg.
- Select position **P** (automatic gearbox) or engage a gear (manual gearbox) when parking with a trailer and always apply the parking brake. If you are parking on a steep incline, place chocks behind the wheels.

### Trailer weights

See page 237 for permitted trailer weights.

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



#### WARNING!

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

1. Does not apply to ball hitch with vibration damper.

## Driving with a trailer

### Driving with trailer and automatic gearbox

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

- Select a low gear in the gearbox when driving on steep inclines or when driving slowly. This prevents the gearbox from upshifting. The gearbox oil will be cooler.
- Do not use a higher manual gear than the engine can "handle". It is not always economical to drive in high gears.
- Avoid driving with trailer and automatic gearbox on inclines exceeding 15 %.

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

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

### Assisted starting with a trailer

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

#### Activating

To activate, the cables from the trailer must be connected to the trailer socket which is fitted beside the towbar, see page 132.

#### Deactivating

Unplug the cables from the electrical socket.

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



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

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

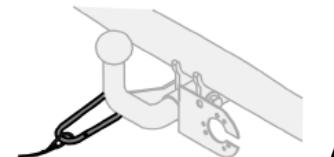
### Driving with a trailer

#### Towing bracket (option)

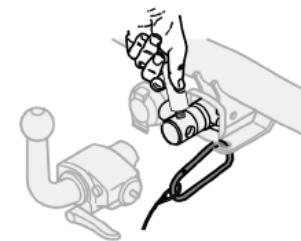
**NOTE!** Check that the car is equipped with transmission oil cooling if the towing bracket is retrofitted.

##### Fixed towbar (A)

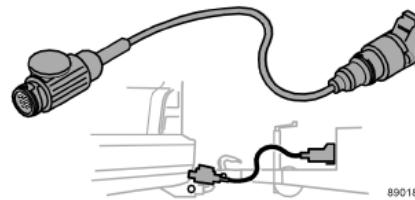
Always remember to fasten the trailer's safety cable to the attachment. See the illustration!



A



B



##### Detachable towbar (B)

Always follow mounting instructions carefully.

See description on page 134.

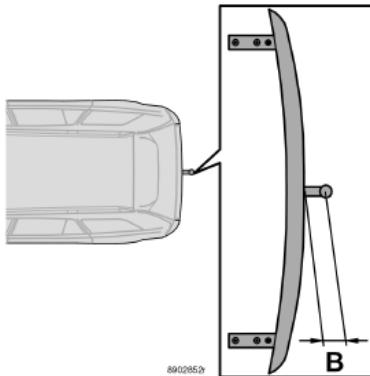
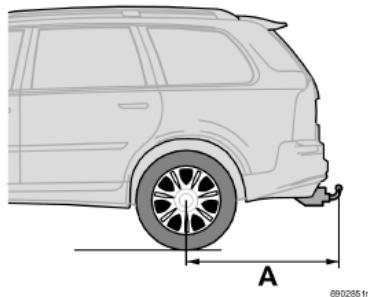
Always remember to fasten the trailer's safety cable to the attachment. See the illustration!

Always remember to clean and grease the connector pin regularly.

Use recommended grease 8624203.

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

## Driving with a trailer



### Specifications

#### Distance A above:

Fixed towbar: 1124 mm

Detachable towbar: 1124 mm

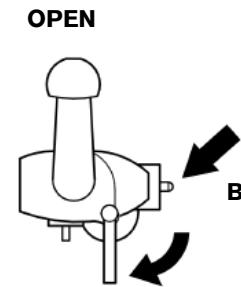
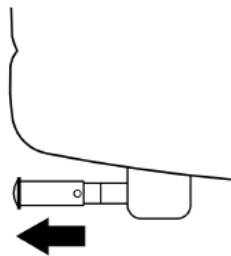
Max. permissible ball pressure: 90 kg

#### Distance B above:

Fixed towbar: 80 mm

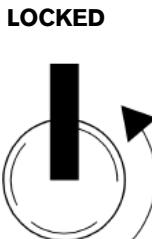
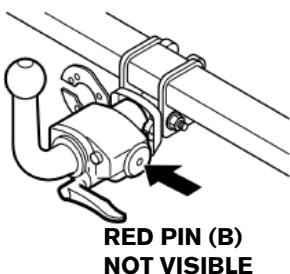
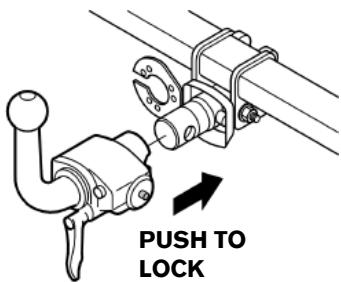
Detachable towbar: 80 mm

## Detachable towbar - mounting



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

## Detachable towbar - mounting



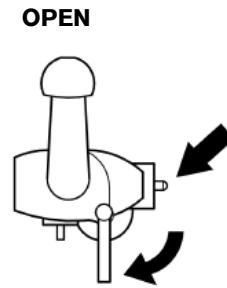
- Push the towball to the locked position.  
Do not hold the lever.
- Check that the signal pin (B) is pushed in.
- Turn the key anticlockwise to the locked position and remove it from the lock.

**NOTE!** The lever changes position quickly.

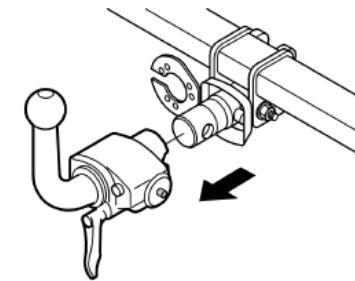
## Detachable towbar - removing



OPEN



OPEN



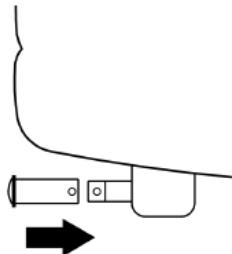
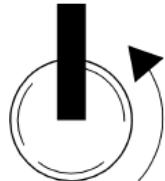
- Insert the key into the detachable part and turn it clockwise to the unlocked position.
- Turn the lever clockwise to the locked position and grip the towball.
- Pull the towball from the connector pin.  
Do not hold the lever.

### IMPORTANT!

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

## Detachable towbar - removing

**LOCKED**



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

# Loading

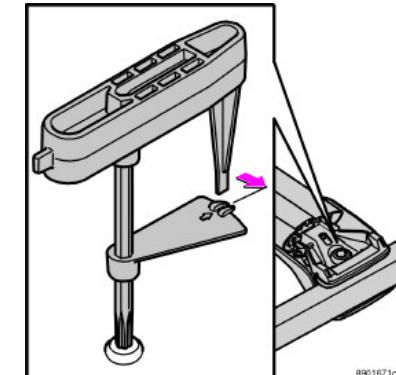
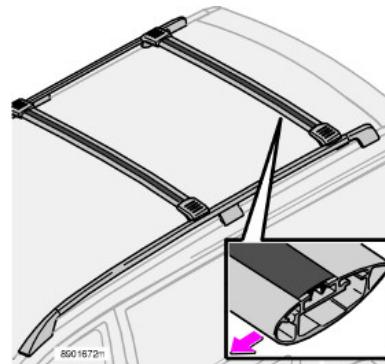
## General

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



### WARNING!

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



8901671d

## Load on the roof

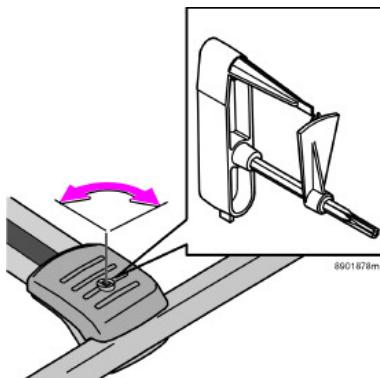
Load carrier position (accessory)

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

## Fitting load carriers

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

## Loading



- Distribute the load evenly over the load carriers. Do not load lopsidedly! Place the heaviest items at the bottom.
- Remember that the car's centre of gravity and driving characteristics change if you have a load on the roof.
- Keep in mind that the car's wind resistance and fuel consumption increase in proportion to the size of the load.
- Drive gently! Avoid quick accelerations, heavy braking and taking curves hard.



### **WARNING!**

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

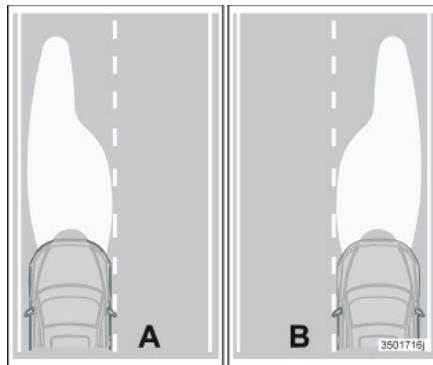
#### **Load carrier cover**

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

#### **Load carriers**

- To avoid damaging your car and to achieve the best level of safety when driving, we recommend that you only use load carriers that Volvo has specially designed for your car.
- Check periodically that the load carriers and load are properly secured. Lash the load securely with retaining straps!

### Adjusting headlamp pattern



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

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

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

#### Headlamp masking

Copy the templates found on page 142. Transfer the pattern to a self-adhesive, waterproof material such as opaque tape or similar. The mask is positioned using the dot (5) in the headlamp lens as a reference point, which should align with the red dot on the respective template. The long red line on the

illustrations corresponds to the line in the headlamp lens that the template should be matched to.

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

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

#### Halogen headlamps

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

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

#### Reference measurements:

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

#### Bi-Xenon headlamps

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

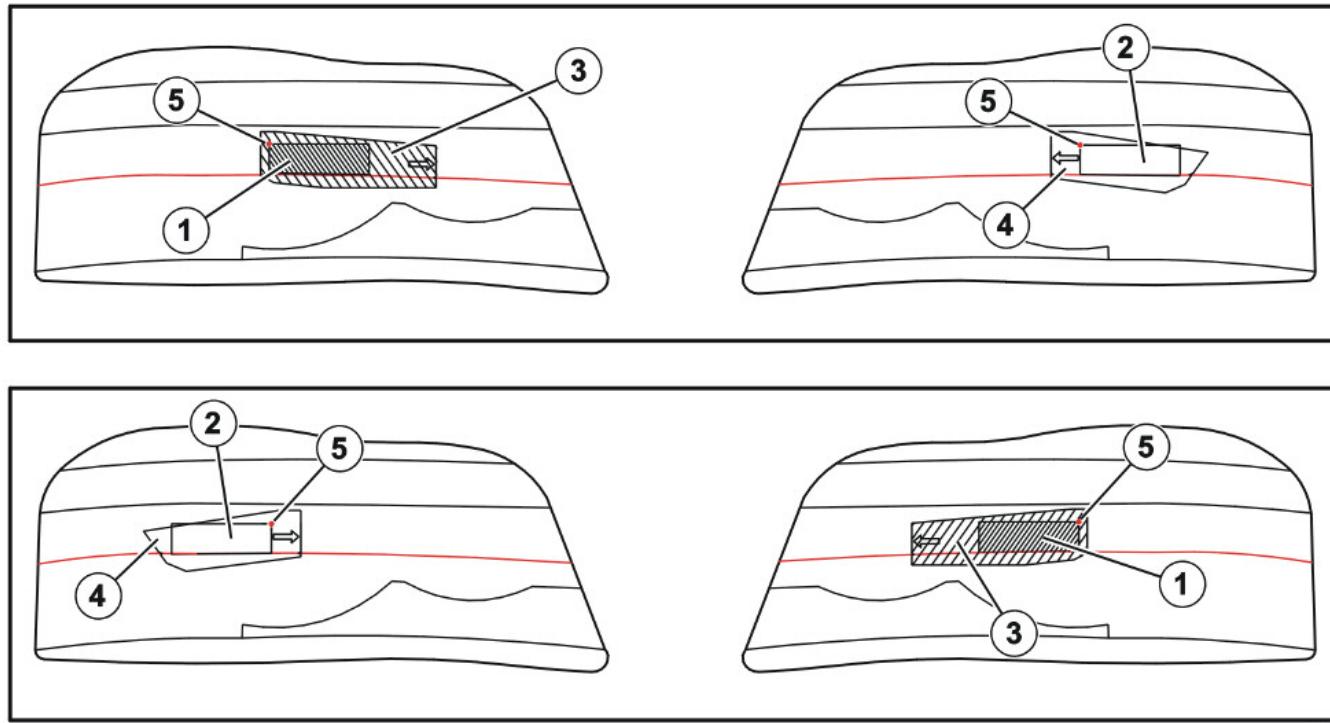
Position each template so that the arrows point towards the centre and the dot on the template matches the dot on the headlamp lens. The template marking >< should be aligned with the line on the headlamp lens.

#### Reference measurements:

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

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

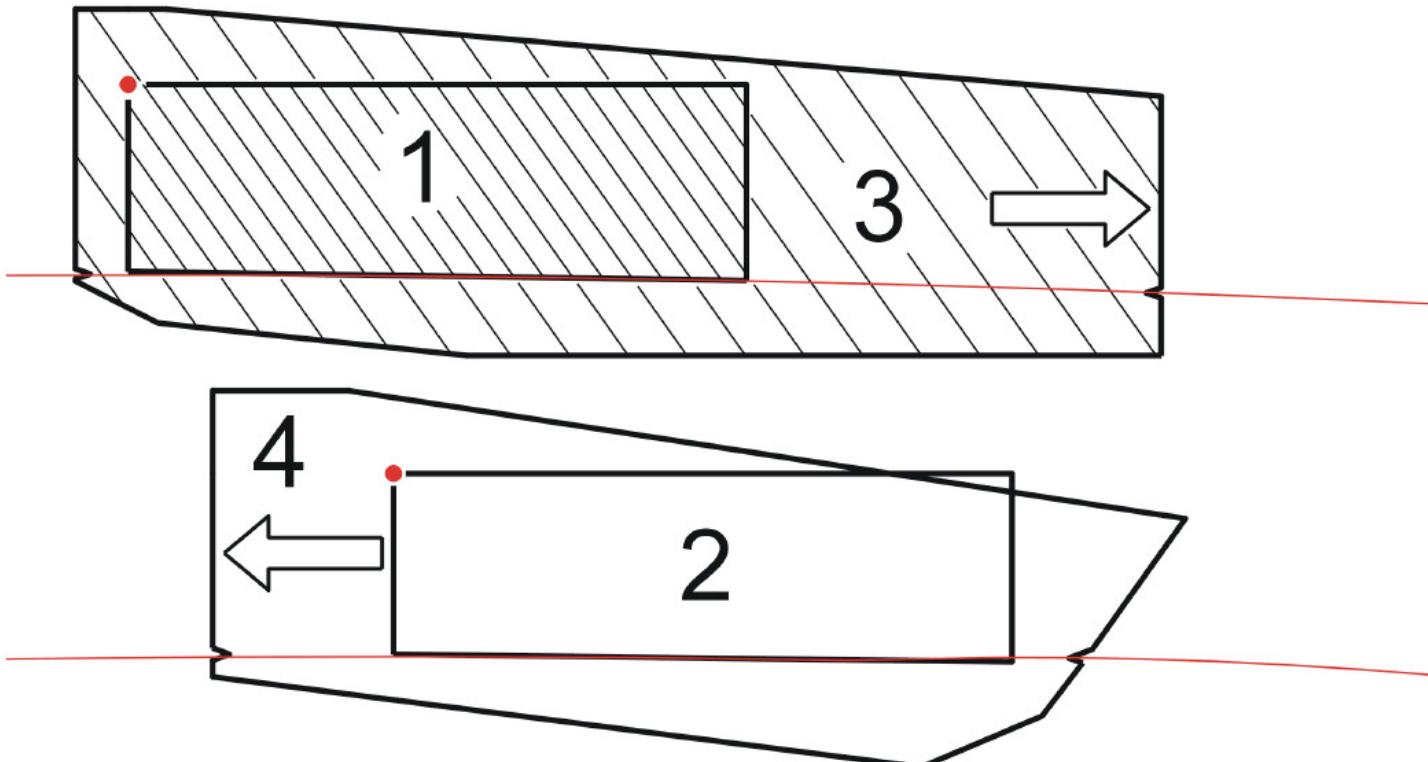
## Adjusting headlamp pattern



3501796r

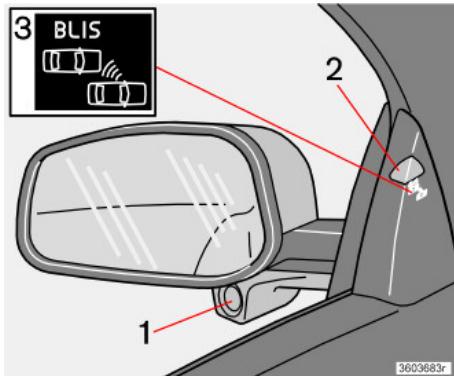
Fitting the mask to the headlamps. The upper illustration is for LHD variants and the lower illustration is for RHD variants. Templates 1 and 2 are for halogen headlamps, 3 and 4 are for Bi-Xenon headlamps.

## Adjusting headlamp pattern



*Masking templates*

## BLIS (Blind Spot Information System) - option



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

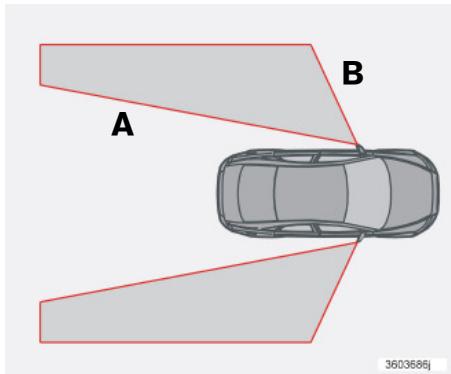
### BLIS

BLIS is an information system which indicates whether there is another vehicle moving in the same direction in the so-called "blind spot".



### WARNING!

The system is a supplement to, and not a replacement for, the existing rearview mirrors. It can never replace the awareness and responsibility of the driver. The responsibility for changing lanes safely rests with the driver.



"Blind spots" covered by BLIS

Distance A = approx. 9.5 m

Distance B = approx. 3 m

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 fitted under the door mirrors.

When a camera has detected a vehicle inside the blind spot zone then an indicator lamp is lit in the door panel (2). The light comes on with a constant glow to draw the driver's attention to a vehicle in the blind spot.

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

BLIS also has an integrated function which warns the driver if a fault should arise 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 dashboard display (see the table on page 145). In such cases, check and clean the lenses. If necessary, the system can be switched off temporarily by pressing the BLIS button (see page 145).

### When BLIS operates

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

### When you overtake another vehicle:

- The system reacts if you overtake another vehicle at a speed of **up to 10 km/h faster** than the other vehicle.

### When you are overtaken by another vehicle:

- The system reacts if you are overtaken by a vehicle travelling **up to 70 km/h faster** than you are travelling.

## BLIS (Blind Spot Information System) - option

### **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.

### **System function in daylight and darkness**

#### **Daylight**

In daylight the system reacts to the **shape** of the surrounding vehicles. The system is designed to detect motor vehicles such as cars, trucks, buses and motorcycles.

#### **Darkness**

In darkness the system reacts to the **headlamps** of surrounding vehicles. If its headlamps are not switched on then the system does not detect the vehicle. 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 bicycles or mopeds.
- The BLIS cameras can be disrupted by intensive light or when driving in the dark when there are no light sources (e.g. street lighting or other vehicles). The system may then interpret the lack of light as if the cameras have been blocked.

In both cases a message is shown in the dashboard display.

When driving in such conditions the system can be temporarily switched off (see the information on the next page).

When the text message has faded the system returns to full functionality.

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

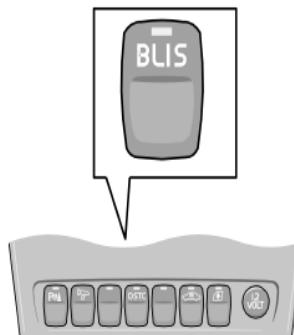
### **Cleaning**

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.

### **WARNING!**

- The lenses are electrically heated to melt ice or snow. If necessary, brush snow away from the lenses.

## BLIS (Blind Spot Information System) - option



3603682r

door panels flash three times. Press the READ button, see page 47, to clear the text message.

<b>BLIS system messages</b>	
<b>System status</b>	<b>Text in the display</b>
BLIS not functioning	BLIND-SPOT SYST SERVICE REQUIRED
Right-hand camera blocked	BLIND-SPOT SYST R CAMERA BLOCKED
Left-hand camera blocked	BLIND-SPOT SYST L CAMERA BLOCKED
Both cameras blocked	BLIND-SPOT SYST CAMERAS BLOCKED
BLIS system off	BLIND-SPOT INFO SYSTEM OFF
BLIS system on	BLIND-SPOT INFO SYSTEM ON
BLIS function reduced	BLIS FUNCTION REDUCED

### Switching off and reactivating BLIS

- BLIS is activated automatically each time the ignition is switched on. The indicator lamps in the door panels flash three times when the ignition is switched on.
- The system can be switched off by pressing the BLIS button in the switch panel in the centre console (see illustration above). The LED in the button goes out when the system is switched off and a text message is shown in the display in the dashboard.
- BLIS can be reactivated by pressing the button. An LED in the button then comes on, a new text message is shown in the display and the indicator lamps in the

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



---

## **Wheels and tyres**

<b>General</b>	<b>148</b>
<b>Tyre pressure</b>	<b>151</b>
<b>Warning triangle and spare wheel</b>	<b>152</b>
<b>Changing wheels</b>	<b>154</b>
<b>Emergency puncture repair</b>	<b>157</b>

### 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 151.

#### Designation of dimensions

The dimensions are stated on all car tyres.

Example:

225/70R16 102H.

225 Section width (mm)

70 Ratio between section height and width (%)

R Radial ply

16 Rim diameter in inches (")

102 Tyre load index (in this case 615 kg)

H Speed rating (in this case 210 km/h).

#### Speed ratings

The car is approved as a whole, which means that dimensions and speed ratings must not differ from those specified on the vehicle's registration document. The only exception to

these conditions is winter tyres (both those with studs and those without). If such a tyre is chosen, the car must not be driven faster than the speed rating of the tyre (for example, class Q can be driven at a maximum of 160 km/h).

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

Note! Maximum permitted speeds indicated.

Q 160 km/h (used only on winter tyres)

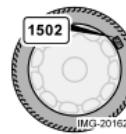
T 190 km/h

H 210 km/h

V 240 km/h

W 270 km/h

#### New tyres



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

as fresh tyres as possible when you replace them. This is especially important with regard to winter tyres. The week and year of manufacture, the tyre's DOT marking (Department of Transportation), are stated with four digits, for example 1502. The tyre in

the illustration was manufactured in week 15 of 2002.

#### Tyre age

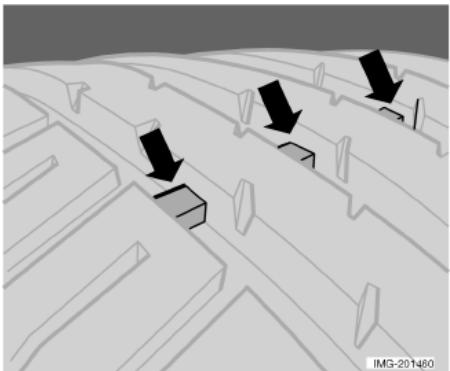
All tyres older than six years should be checked by an expert even if they seem undamaged. The reason for this is that tyres age and decompose, even if they are hardly ever or never used. The function can therefore be affected due to the tyre's constituent materials being broken down, and it should then 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 discolouration.

The age of the tyre can be determined by the DOT marking, see illustration above.

## General



on the engine variant. When driving on winter tyres, these must be fitted to all four wheels.

**NOTE!** Ask a Volvo dealer which rim and tyre types are most suitable.

### Studded tyres

Studded winter tyres should be run in gently for 500-1000 km so the studs settle properly into the tyre. This gives the tyre, and especially the studs, a longer lifespan.

**NOTE!** The legal provisions for the use of studded tyres vary from country to country.

### IMPORTANT!

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

## Tyres with tread wear indicators

Tread wear indicators are narrow treadless bands across the width of the tread. On the side of the tyre are the letters TWI (tread wear indicator). When only 1.6 mm of tread remains, this band is clearly visible. Change the tyres as soon as possible. Remember that tyres with little tread depth provide very poor grip in rain and snow.

## Winter tyres

Volvo recommends winter tyres with particular dimensions. These are stated on the tyre pressure label, see page 151 for its location. The tyre dimensions are dependent

### Tread depth

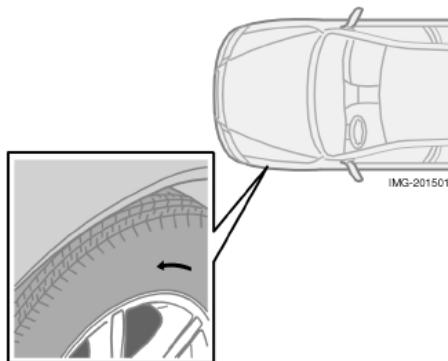
Road conditions with ice, slush and low temperatures place considerably higher demands on tyres than summer conditions. It is therefore not recommended to drive on winter tyres that have a tread depth of less than four millimetres.

### Snow chains

Snow chains may only be used on the front wheels. This also applies to all-wheel-drive cars.

Never drive faster than 50 km/h with snow chains. Avoid driving on bare ground as this wears out both the snow chains and tyres. Never use quick-fit snow chains as the space between the brake disks and the wheels is too small.

### General



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

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

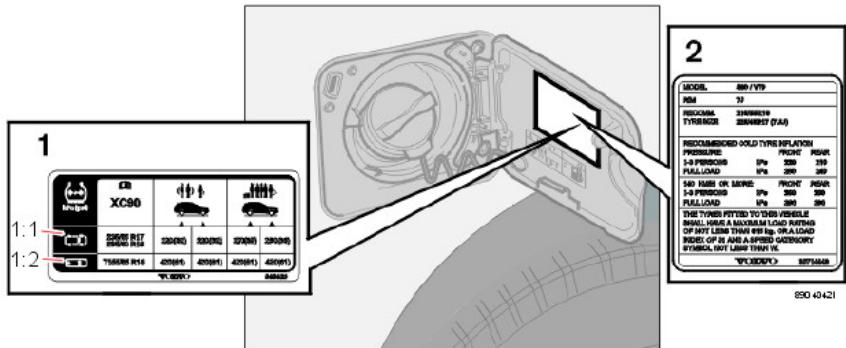
Contact an authorised Volvo workshop if you are uncertain about tread depth.

*The arrow shows the tyre's direction of rotation.*

### Summer and winter wheels

When summer and winter wheels are changed they should be marked with which side of the car they were mounted on, for example **L** for left and **R** for right. Tyres with a tread pattern which are designed to only turn in one direction have the direction of rotation marked with an arrow on them. The tyre should always rotate in the same direction throughout its lifespan. Tyres should only be switched between front and rear positions, never between left and right-hand sides, or vice versa. If the tyre is mounted incorrectly, the car's braking characteristics and capacity to force rain, snow and slush out of the way

## Tyre pressure



### Recommended tyre pressure

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

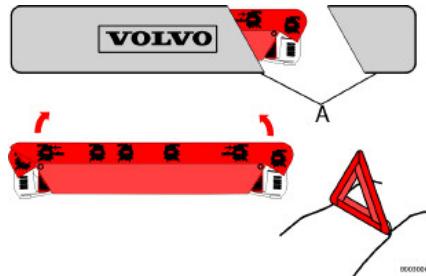
1. Other markets (not USA, Canada)
  - 1:1. Volvo original tyre
  - 1:2. Spare tyre
2. Australia

### Checking the tyre pressure

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

Driving with the wrong tyre pressure adversely affects the car's driving characteristics and can increase tyre wear. After just a few kilometres of driving, the tyres warm up and the pressure increases. Therefore air should not be released if the pressure is checked when the tyres are warm. However the pressure should be increased if it is too low.

## Warning triangle and spare wheel



location that is appropriate for the traffic situation.

After use:

- Pack everything in reverse order.

Make sure that the warning triangle with case is securely fastened in the compartment.

### IMPORTANT!

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

### Temporary spare

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

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

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

Remember also that this tyre combined with the normal tyres will affect driving characteristics. On four wheel drive vehicles excess speed may also damage the transmission.

### Warning triangle (certain countries)

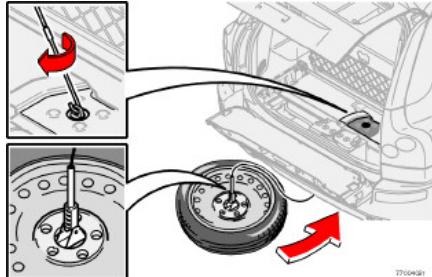
Follow the warning triangle regulations of the country you are in.

Use the warning triangle as follows:

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

1. Certain variants and markets

## Warning triangle and spare wheel



1. Cars seating seven
2. Cars seating five

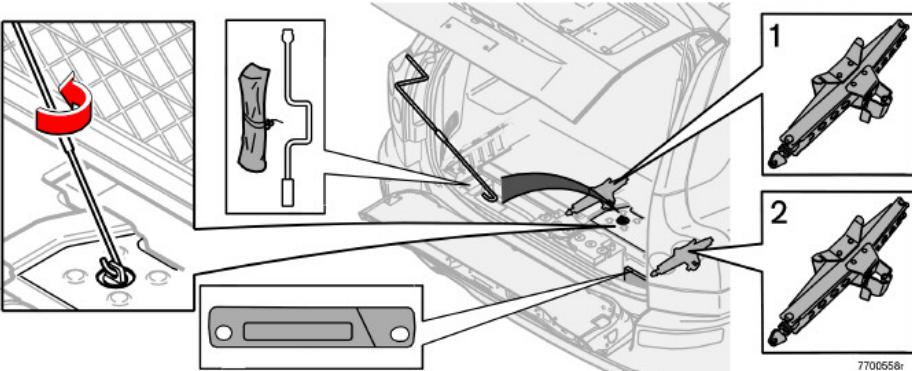
### Spare wheel - removing

The spare wheel<sup>1</sup> is located under the car. Jack, tool kit and crank are under the floor hatch. The crank is in two parts. One part is in the tool kit and the other part is located under the toolkit.

**NOTE!** There is a puller spanner in the tool kit to remove the hub cap<sup>2</sup>.

The location of the jack depends on whether the car seats seven (1) or five (2).

Proceed as follows to release the spare wheel:



- Lower the bottom of the tailgate.
  - Lift up the floor hatch in the cargo compartment.
  - Take the two parts of the crank and assemble.
  - Fit the crank in the winch.
  - Loosen the tyre by cranking anticlockwise until you reach the stop.
  - Release the wheel from the cable.
  - Rewind up the cable (clockwise).
- NOTE!** The cable could damage the car if it hangs free while driving.

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

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

---

1. Certain variants and markets.  
2. Certain wheel options.

# Changing wheels

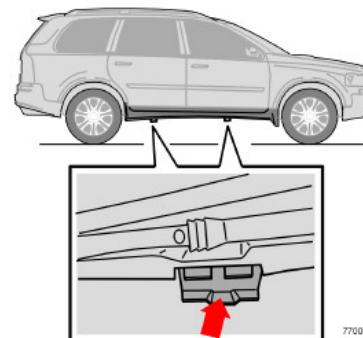
## Spare wheel - refitting

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

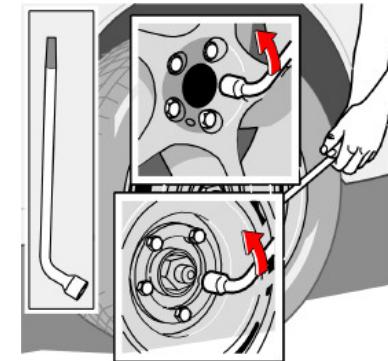
- Crank out the cable and place its anchor in the centre hole of the wheel.
- Slowly crank (clockwise) the cable in a bit.
- Angle the wheel so that it comes in over the exhaust system.
- Hold down the rear edge of the wheel while cranking it in.
- Place the wheel above the rear axle, against the floor.

Crank to the stop point.

Check that the wheel is firmly secured.



7700397r



7700401r

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

## Removing wheels

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



## WARNING!

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

- Park the car on an even, firm surface with no incline.
- Apply the parking brake and engage 1st gear (manual gearbox) or move the gear selector to P (automatic gearbox). Place chocks on either side of the wheels remaining on the ground - use stones or wooden blocks.
- Take out the jack, wheelbrace and crank, see location page 153.
- Use the wheelbrace to loose the wheel bolts ½-1 turn. Turn anticlockwise.

## Changing wheels



### WARNING!

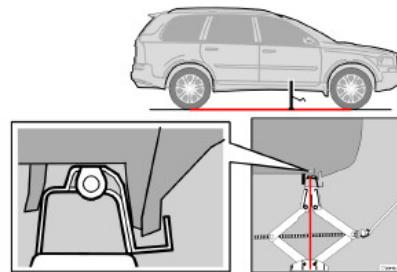
Never crawl under the car when it is raised on a jack! The car could fall, causing injuries.

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

The jack screw should be kept well lubricated.

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

### Changing wheels



- Remove the wheel bolts and lift off the wheel.

#### Fitting the wheel

- Clean the contract surfaces on the wheel and hub.
- Fit the wheel. Screw the wheel nuts.
- Lower the car so that the wheel cannot rotate.
- Tighten the wheel bolts alternately and in torque steps. Tightening torque:  
140 Nm (14.0 kpm). It is important that they are tightened to the correct torque. Check with a torque wrench.
- Screw the jack all the way down before returning it to the cargo compartment. Then secure it in place.
- Check that the new tyre has the correct amount of pressure.

**NOTE!** There are two different types of wheel bolts depending on whether or not your car has steel or aluminium rims; bolts used with aluminium rims have a loose, rotating ring. Bolts used with steel rims have no rotating ring.

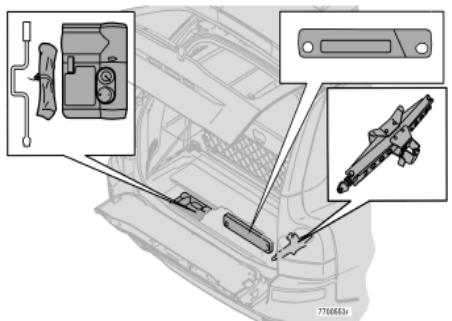
Make sure to use the correct type of bolt. If you are unsure, check with the nearest Volvo workshop.

#### **WARNING!**

If the jack is positioned incorrectly, the car could fall. Risk of injury!

- Lift the car until the wheel is free.

## Emergency puncture repair

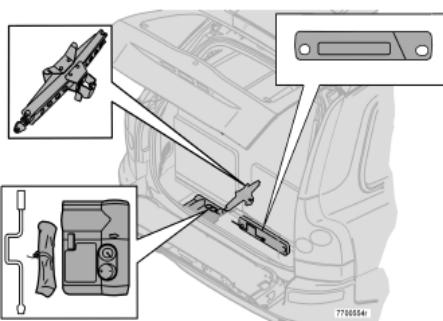


Cars seating five

### General

Cars which do not have a spare wheel are instead equipped with an emergency puncture repair kit. This kit can be used to both seal the puncture and to check and adjust the tyre pressure. The kit consists of an electric air compressor and an integrated canister with sealing liquid.

**NOTE!** The jack is optional on cars equipped with the emergency puncture repair kit.



Cars seating seven

### Emergency puncture repair kit

The emergency puncture repair kit<sup>1</sup> is only intended to work as a temporary repair so that the car can be driven a further 200 km (max.) or to the nearest tyre centre. The sealing fluid has the ability to effectively seal tyres which have punctures in the tread.

The canister with the sealing fluid should be replaced before the best-before date has expired or after the emergency puncture repair kit has been used.

The best-before date is located on the front of the compressor, see illustration on page 161.

Re placement of emergency puncture repair kit, see page 161 for information on replacing the canister.

**NOTE!** The emergency puncture repair kit is only intended for sealing tyres with a puncture in the tread.

The emergency puncture repair kit has limited abilities to seal tyres which have punctures in the wall of the tyre. Do not seal tyres with the emergency puncture repair kit if they have larger slits, cracks or similar damage.

The emergency puncture repair kit with compressor and tools are found under the floor in the cargo area.

12 V sockets for the compressor are located by the centre console in the front, by the rear seat and in the cargo area. Choose the electrical socket that is nearest the punctured tyre.



### WARNING!

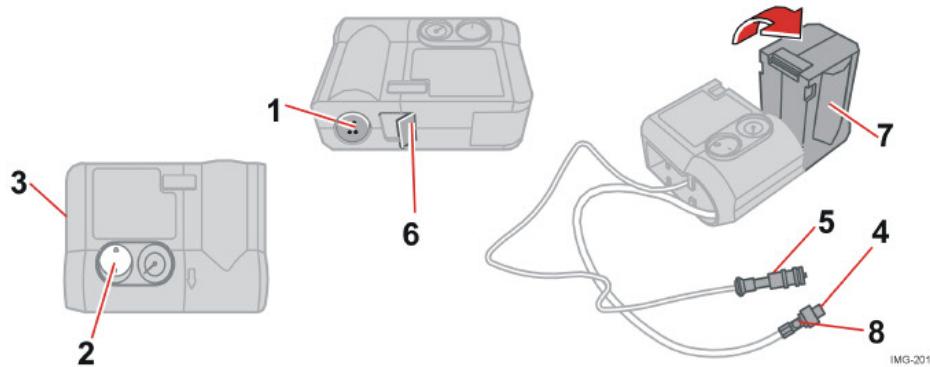
The sealing fluid may cause irritation if it comes into direct contact with skin. In the case of contact with skin, wash away the fluid with soap and water.

### Taking out the emergency puncture repair kit

- Fold the rear edge of the floor mat forward.
- Lift up the emergency puncture repair kit.

1. Certain variants and markets

## Emergency puncture repair



IMG-201540

### Inflating tyres

Set up the warning triangle if a tyre must be inflated in an area close to traffic.

- Ensure that the orange switch (2) is in position **0** and take out the lead (5) and air hose (4) from the side compartment (3).
- Screw the air hose's valve connection to the bottom of the thread on the tyre's air valve.
- Connect the lead (5) to one of the car's 12 V sockets.
- Start the engine. The car must be in a well-ventilated place.
- Start the compressor by flicking the switch (2) to position **I**.
- Pump up the tyre to the pressure specified on the tyre pressure label.
- Turn off the compressor, the switch (2) should be in position **0**. Detach the air hose and unplug the lead. Replace the valve's dust cap.
- Put the lead (5) and air hose (4) into the side compartment (3).
- Put the puncture repair kit back under the floor in the cargo area.
- The compressor should not run for more than ten minutes at a time. Let it cool afterwards as there is a risk of overheating.

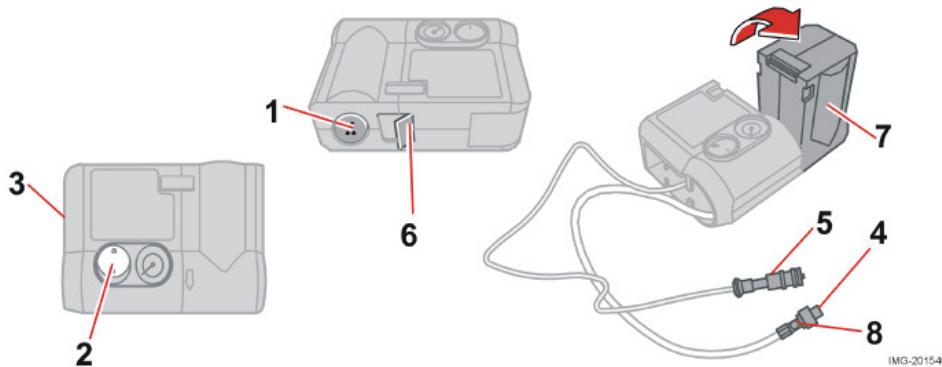
- Objects with a volume of up to 50 litres can be pumped up with the compressor.



### WARNING!

Inhaling car exhaust fumes can result in danger to life. Never leave the engine running in sealed areas or areas that lack sufficient ventilation.

## Emergency puncture repair



IMG-2015-40

### Sealing punctured tyres

Set up the warning triangle if emergency tyre repairs must be carried out in an area where there is other traffic.

- Remove the decal (1) regarding the highest permitted speed from the emergency puncture repair kit and stick it on the steering wheel where it can be clearly seen by the driver.
- Ensure that the orange switch (2) is in position 0 and take out the lead (5) and air hose (4) from the side compartment (3).
- Screw the air hose's valve connection to the bottom of the thread on the tyre's air valve.

- Connect the lead (5) to one of the car's 12 V sockets.
- Release the safety catch (6) and turn the orange-coloured part (7) 90 degrees to the vertical position, until a click is heard.
- Start the engine. The car must be in a well-ventilated place.



#### WARNING!

Inhaling car exhaust fumes can result in danger to life. Never leave the engine running in sealed areas or areas that lack sufficient ventilation.

- Start the compressor by flicking the switch (2) to position I. The pressure may increase temporarily up to a maximum of 4 bar while the sealing liquid is being pumped in. After about one minute, the pressure will drop and the pressure gauge show a more correct tyre pressure.
- Pump the tyre to a pressure of between 1.8 bar and 3.5 bar. If the pressure does not reach 1.8 bar after ten minutes of pumping, the compressor should be turned off so it does not overheat.
- Undo the air hose (4) from the air valve and put the dust cap back on. Unplug the lead (5) from the electrical socket. Fold the orange-coloured part (7) back into its

### Emergency puncture repair



#### WARNING!

Never stand next to the tyre when the compressor is running. Be particularly observant of the tyre walls. If cracks, irregularities or other damage appears, turn off the compressor immediately. Under these circumstances your journey should not continue. Contact an authorised tyre centre.

original position and secure the catch (6). Keep the emergency repair kit in a safe place in the car.

- Immediately drive about 3 km, at a maximum speed of 80 km/h, to allow the sealing fluid to seal the tyre well.



#### WARNING!

You should not drive faster than 80 km/h after the emergency tyre repair kit has been used. The temporarily sealed tyre must be changed as soon as possible (maximum driving distance: 200 km).

- Check the tyre pressure again:

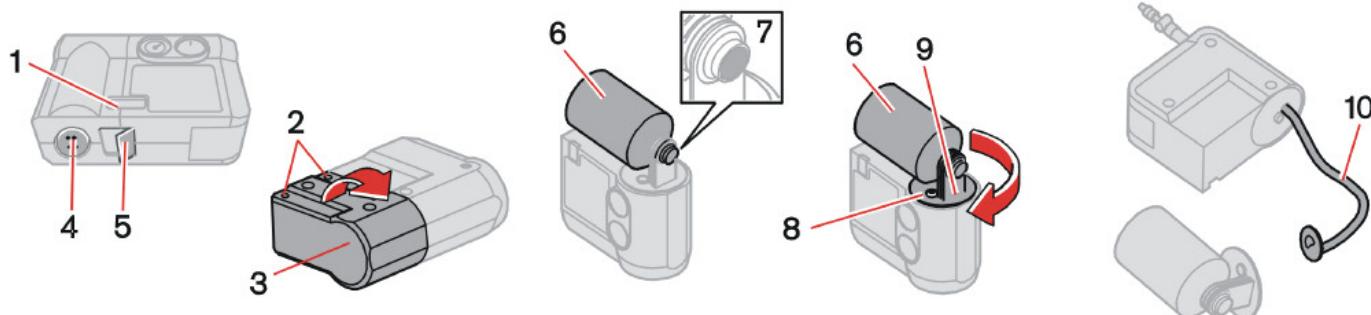
**NOTE!** Do not raise the orange-coloured part (7) when only the compressor is to be used for inflation.

- Connect the air hose (4) to the air valve on the tyre.
- Connect the lead (5) to the 12 V power point. Read the pressure on the compressor. If the tyre pressure is below 1.3 bar, the tyre has not been sufficiently well sealed. The journey should not be continued under these circumstances. Contact a tyre centre.
- If the tyre pressure is higher than 1.3 bar, the tyre should be pumped up to the pressure stated on the tyre pressure label, see page 151 for its location. Release pressure with the reduction valve (8) if the tyre pressure is too high.
- Turn off the compressor, the switch (2) should be in position **0**. Detach the air hose and unplug the lead. Replace the valve's dust cap.
- Put the lead (5) and air hose (4) into the side compartment (3).
- Put the puncture repair kit back under the floor in the cargo area.

The compressor should not run for more than ten minutes at a time. Let it cool afterwards as there is a risk of overheating.

**NOTE!** The canister with sealant and hose should be replaced after use.

## Emergency puncture repair



### Changing the sealing fluid canister

The canister of sealing fluid should be changed before the best-before date has expired, see date label (1), or after the tyre has been sealed. After use, the canister (6) with holder (8) and air hose (10) should be changed.

#### IMPORTANT!

Read the safety instructions on the bottom of the canister.

#### **WARNING!**

Ensure the compressor is not connected to the 12 V socket when the canister is changed.

#### Before the best-before date has expired

- Undo the two screws (2) on the orange-coloured case (3).
- Remove the speed label (4) and date label (1), and open the safety catch (5). Loosen the case (3) and take it off.
- Unscrew and remove the canister (6).
- Check that the seal (7) on the new canister is not damaged. Screw the canister into place.

- Refit the case (3). Check that the case is correctly fitted. Screw it on with the screws (2).
- Affix the speed label (4) and new date label (1) to the tyre repair kit.

Treat the removed canister as hazardous waste.

#### Changing the canister and hose after use

- Undo the two screws (2) on the orange-coloured case (3).
- Remove the speed label (4) and date label (1), and open the safety catch (5). Loosen the case (3) and take it off.

## **Emergency puncture repair**

- Push down the button (8) while turning the canister (6) and the holder (9) clockwise. Remove them.
- Pull out the air hose (10).
- Wipe off remaining sealing fluid with a rag or scrape it away if it is has already dried.
- Fit a new air hose (10). Check that it is fitted correctly.
- Check that the seal (7) on the new canister is not damaged. Screw the holder (9) onto the canister (6) and turn it anticlockwise until a click is heard.
- Refit the case (3). Check that the case is correctly fitted. Screw it on with the screws (2).
- Affix the speed label (4) and new date label (1) to the tyre repair kit.

The empty canister and air hose can be treated as normal waste.

---

## **Car care**

<b>Cleaning</b>	<b>164</b>
<b>Touching up paintwork</b>	<b>166</b>
<b>Rustproofing</b>	<b>168</b>

## Cleaning

### Washing the car

Wash the car as soon as it becomes dirty. Use car shampoo. Dirt and road salt can lead to corrosion.

- Do not park the car in direct sunshine. Washing a car with hot paintwork can cause permanent paintwork damage. Wash the car in a car wash with waste water separator.
- Thoroughly rinse dirt off the underbody of the car.
- Rinse the entire car to remove loose dirt. When using a pressure washer: Make sure that the nozzle of the pressure washer is not closer than 30 cm to the bodywork. Do not spray directly at the locks.
- Wash using a sponge, car shampoo and plenty of lukewarm water.
- If the dirt is difficult to dislodge, wash the car using a cold degreasing agent.
- Dry the car using a clean, soft chamois or a water scraper.
- Clean the wiper blades with a lukewarm soap solution or car shampoo.

### Removing bird droppings

Wash bird droppings off the paintwork as soon as possible. Bird droppings contain chemicals that affect and discolour paintwork very quickly. This discolouration can only be removed by a specialist.



### WARNING!

Always have the engine cleaned by a workshop. There is a risk of fire if the engine is hot.

### Automatic car washes

An automatic car wash is a simple and quick way of washing the car. Bear in mind, however, that an automatic car wash can never replace a proper handwashing – the brushes of a car wash cannot reach everywhere.

### IMPORTANT!

Washing by hand is gentler to the paintwork than an automatic car wash. The paintwork is also more sensitive when it is new. For this reason, handwashing is recommended during the first few months with a new car.



### WARNING!

Always test the brakes after washing the car to ensure that moisture and corrosion do not attack the brake pads and reduce braking performance.

Press the brake pedal lightly from time to time if driving for long periods in rain or slush. This heats and dries the brake pads. You should also do this when you begin driving in extremely damp or cold weather.

### Exterior plastic parts

A special cleaning agent, available from Volvo dealers, is recommended for cleaning exterior plastic parts. Never use strong stain removers.

## Cleaning

### Cleaning the interior

#### Treating spots on fabric upholstery

A special cleaning agent, available from Volvo dealers, is recommended for cleaning the fabric upholstery. Other chemicals can impair the fire retardant qualities of the upholstery.

#### IMPORTANT!

Sharp objects and Velcro may damage the fabric upholstery.

#### Treating spots on leather upholstery

A special cleaning agent, available from Volvo dealers, is recommended when cleaning leather upholstery. Treat the leather upholstery once or twice a year using Volvo's leather care kit. Never use strong solvents. Such products may damage fabric, vinyl and leather upholstery.

#### Treating spots on interior plastic parts and surfaces

A special cleaning agent, available from Volvo dealers, is recommended for cleaning interior plastic parts and surfaces. Do not scrape or rub spots. Never use strong stain removers.

### Cleaning seatbelts

Use water and a synthetic detergent. A special textile cleaning agent is available from

you Volvo dealer. Make sure the seatbelt is dry before allowing it to retract.

### Polishing and waxing

Polish and wax the car when you feel the paintwork is matte and when you wish to give the paintwork extra protection, such as before winter.

The car does not usually need polishing until after one year. It can be waxed earlier.

Wash and dry the car thoroughly before you begin polishing and/or waxing. Clean off asphalt and tar stains with white spirit. More stubborn marks can be removed with fine rubbing paste designed for paintwork. Polish first with a polish and then wax with liquid or solid wax. Carefully follow the instructions on the package. Many preparations contain both polish and wax.

Do not polish or wax surfaces warmer than 45 °C.

### Cleaning door mirrors and front door windows with water-repellent coating (option)

Never use products such as car wax, degreaser or the like on mirror/ glass surfaces as this could ruin their water-repelling properties.

Take care when cleaning so as not to damage the glass surface.

To avoid damaging glass surfaces when removing ice, only use plastic ice scrapers.

There is natural wear of the water-repellent coating.

**NOTE!** Treatment with a special finishing agent available from Volvo dealers is recommended in order to maintain the water-repellent properties. This should be used first after three years and then each year.

## Touching up paintwork

### Paintwork

Paint is an important part of the car's rustproofing and should therefore be checked regularly. Repair paintwork damage immediately so that it does not start to rust.

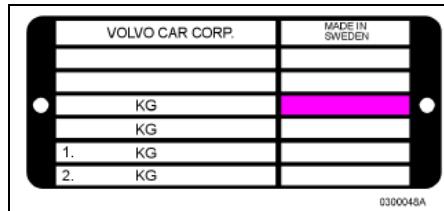
The most common types of paintwork damage that you can repair yourself are:

- minor stone chips and scratches
- damage to wing edges and door

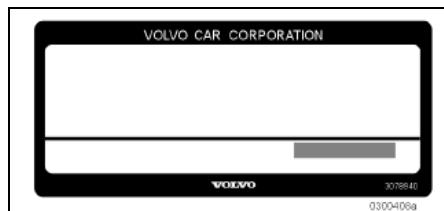
When repairing paintwork, the car should be clean and dry with a temperature above 15 °C.

### Colour code

Make sure you have the right colour. The colour code number is on the data plate in the engine compartment.



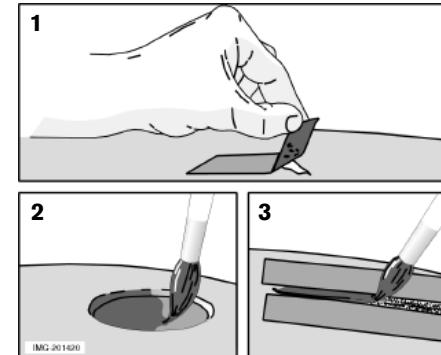
Variant 1



Variant 2



Only China



Remove any paint residue with tape. Mask if necessary.

### Minor stone chips and scratches

Material:

- Primer in a can
- Paint in a can or a touch-up pen
- Brush
- Masking tape
- If the stone chip has not gone down to the bare metal and an unpainted colour coat remains, you can add paint immediately after removing dirt.

## Touching up paintwork

### Do as follows if the stone chip went down to the bare metal:

- Fasten a piece of masking tape over the damaged surface. Then remove the tape, removing any paint residue (illustration 1).
- Stir the primer thoroughly and apply using a fine brush or matchstick (illustration 2).
- When the primer is dry, apply the surface coat with a brush.
- Make sure the paint is well stirred and apply several thin coats; allowing it to dry between coats.
- The procedure is the same for scratches, but masking tape can be used to protect undamaged paintwork (illustration 3).
- Wait a day or so and then finish the repair by polishing. Use a soft rag and apply lapping paste sparingly.

## Rustproofing

### Rustproofing - check and repair

Your car received a thorough and complete rustproofing at the factory. Parts of the body are made of galvanised sheet metal. The underbody is protected by a wear-resistant anti-corrosion compound. Members, cavities and enclosed sections are sprayed with a thin, penetrating rust inhibitor.

The car's rustproofing is maintained by doing the following:

- Keep the car clean! Hose down the underbody. When high pressure washing, hold the nozzle at least 30 cm from painted surfaces!
- Check and repair the rustproofing regularly.

The car's rustproofing does not normally require treatment for approximately 8 years. After that time, it should be treated at three year intervals. If your car requires treatment, consult your Volvo workshop.

### Repair

If you want to repair the rustproofing yourself, make sure the area is clean and dry. Hose down, wash and dry the car thoroughly. Use a rustproofing agent in a spray can or one that is intended for brush application.

There are two different types of rustproofing agents:

- thin (colourless), for visible areas
- thick, for areas prone to wear on the underbody

Possible repair areas with these agents:

- Visible welds and sheet metal joints; thin fluid
- Underbody; thick fluid
- Door hinges; thin fluid
- Bonnet hinges and catch - thin fluid.

Once you have finished treatment, excess rustproofing can be wiped off with a rag dipped in a recommended cleaning agent. Parts of the engine and suspension strut mountings in the engine compartment are treated at the factory with a wax-based, colourless rustproofing. This withstands normal detergents without dissolving and losing its rustproofing ability.

If you wash the engine using aromatic solvents, such as turpentine or white spirit (especially those that do not contain emulsifiers), the protective wax should be renewed after washing. Your Volvo dealer handles such waxes.

---

## **Maintenance and service**

<b>Volvo service</b>	170
<b>Self-maintenance</b>	171
<b>Bonnet and engine compartment</b>	172
<b>Diesel</b>	173
<b>Oils and fluids</b>	174
<b>Wiper blades</b>	178
<b>Battery</b>	179
<b>Replacing bulbs</b>	182
<b>Fuses</b>	190

# Volvo service

## Volvo service programme

Before the car left the factory, it was thoroughly test driven. It was checked again in accordance with Volvo Car Corporation regulations before it was handed over to you.

To keep your Volvo as safe and reliable as possible, follow the Volvo service programme specified in the Service and Warranty Booklet. Have an authorised Volvo workshop carry out service and maintenance work.

Volvo workshops have the personnel, special tools and service literature to guarantee the highest quality of service.

### IMPORTANT!

For the Volvo warranty to apply, check and follow the instructions in the Service and Warranty Booklet.

## Special service measures

Certain service measures, which affect the car's electrical system, can only be performed using electronic equipment specially developed for your car. Always contact an authorised Volvo workshop before beginning or performing service work that affects the electrical system.

## Installing accessories

The incorrect connection and installation of accessories can negatively affect the car's electrical system. Certain accessories only function when the appropriate software has been programmed into the car's electrical system. Always contact an authorised Volvo workshop before installing accessories which are connected to or affect the electrical system.

## Recording vehicle data

One or more of the computers in your Volvo are capable of recording detailed information. This information is intended for use in research to enhance safety and for diagnosing faults in some of the in-car systems. The data may include details regarding seatbelt use by the driver and passengers, the functions of various vehicle systems and modules, and status information about the engine, throttle, steering, brakes and other systems. This data can also include details of the way the car is driven. This type of information can include, without being limited to, specific details such as vehicle speed, the use of the brake and accelerator pedals and steering wheel position. This latter type of data can be stored for a limited period while the car is being driven and subsequently during a collision or a near-

collision. Volvo Car Corporation will not disclose the stored information without consent. However, Volvo Car Corporation may be forced to disclose the information due to national legislation. Volvo Car Corporation and its workshops may also read and use the information.

## Self-maintenance

### Before starting work on the car

#### Battery

Check that the battery cables are correctly connected and tightened.

Never disconnect the battery when the engine is running (e.g. if replacing the battery).

Never use a quick charger to charge the battery. The battery cables must be disconnected when charging the battery.

The battery contains acid that is both corrosive and toxic. Handle the battery in an environmentally-suitable way. Let your Volvo dealer assist you.



#### WARNING!

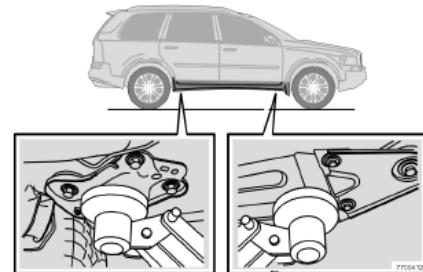
High voltage output from the ignition system. The voltage in the ignition system is dangerous. The ignition must therefore always be switched off for work in the engine compartment.

Do not touch the spark plugs or ignition coils when the ignition is on or the engine is hot.

### Check regularly

Check the following at regular intervals, for example, when refuelling:

- Coolant - The level must be between the MIN and MAX marks on the expansion tank.
- Engine oil - The level must be between the MIN and MAX marks.
- Power steering fluid - The level must be between the MIN and MAX marks.
- Washer fluid - The reservoir should be well filled. Use washer antifreeze at temperatures around freezing.
- Brake and clutch fluid - The level must be between the MIN and MAX marks.



### Lifting the car

If the car is lifted with a workshop jack; position the jack with the front edge on the subframe.

Do not damage the splashguard under the engine. Ensure that the jack is positioned so that the car cannot slide off. Always use axle stands or the like.

If you lift the car using a two pillar workshop lift, ensure that the front and rear lift arms are fixed under the lifting points on the door sill. See the illustration.

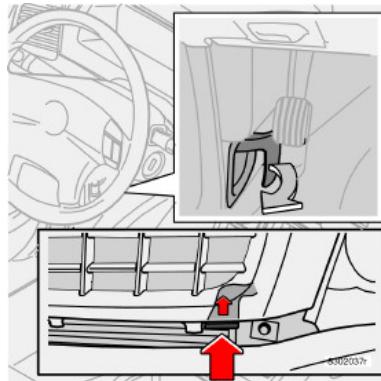


#### WARNING!

Bear in mind that the radiator fan may start automatically some time after the engine has been switched off.

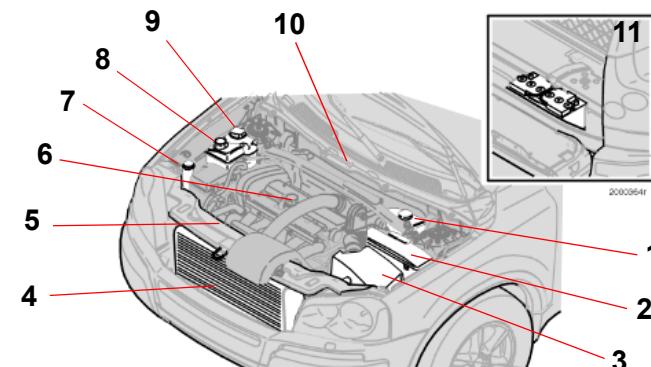
Always have the engine cleaned by a workshop. There is a risk of fire if the engine is hot.

## Bonnet and engine compartment



### Opening the bonnet

- Pull the handle on the far left (or right if the car is RHD) under the dashboard. You will hear when the lock releases.
- Insert your hand to the right under the front edge of the bonnet (below the grille).
- Press up the safety catch handle.
- Release the handle and open the bonnet.



### Engine compartment

The appearance of the engine compartment may vary slightly due to engine variant. However, the components listed are in the same positions.

1. Clutch and brake fluid reservoir
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. Power steering fluid reservoir
9. Expansion tank, cooling system

10. Chassis data plate

11. Battery (in cargo compartment)



### WARNING!

Check that the bonnet locks properly when you close it!

# Diesel

## Fuel system

Diesel engines are sensitive to contaminants. Only use diesel fuel from a well-known oil company that fulfils the requirements for recommended fuel grade as described on page 244. Never use diesel of dubious quality. Special diesel fuel designed for outside temperatures around freezing point is available from the major oil companies. This fuel is less viscous at low temperatures and reduces the risk of wax building up in the fuel system.

The risk of condensation building up in the tank is reduced if the tank is kept well filled.

Make sure that the area around the filler pipe is clean when refuelling.

Avoid spilling onto the paintwork. Wash off any spills with detergent and water.

## Empty tank

No special procedures are required if the tank is run dry. The fuel system is bled automatically if the ignition switch is kept in position **II** for approx. 60 seconds before the start attempt.

### IMPORTANT!

Diesel type fuels which must not be used: special additives, Marine Diesel Fuel, fuel oil, RME (Rape Methyl Ester), vegetable oil.

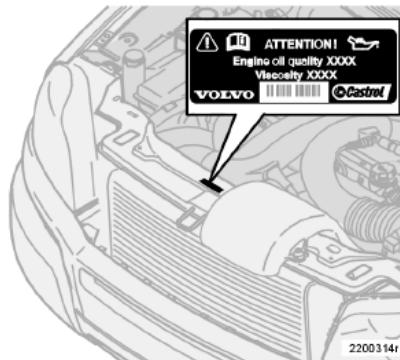
These fuels do not fulfil the requirements in accordance with Volvo recommendations and generate increased wear and engine damage that is not covered by the Volvo warranty.

## Draining condensation from the fuel filter

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

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

# Oils and fluids



Engine compartment decal for oil grade

### IMPORTANT!

Always use oil of the prescribed grade, see the engine compartment decal. Check the oil level frequently and change the oil regularly. The engine will be damaged if lower grade oil is used or if the car is driven with the oil level too low.

Volvo recommends **Castrol** oil products. Using oil of a higher than specified grade is permitted. Volvo recommends using an oil of a higher grade than that specified on the

decal for adverse driving conditions. See page 239.

### 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.
- shorter driving distances (shorter than 10 km) at low temperatures (under 5 °C).

This may result in abnormally high oil temperature or oil consumption.

### Checking and changing the engine oil and oil filter

Change the oil and oil filter in accordance with the intervals specified in the Service and Warranty Booklet.

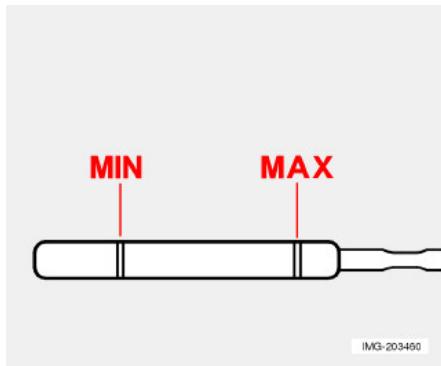
### IMPORTANT!

When filling oil to top up a low oil level, the oil being filled must be of the same grade and viscosity as the oil in the engine.

Checking the oil level in a new car is especially important before the first scheduled oil change. The Service and Warranty Booklet specifies the odometer readings for oil changes.

Volvo recommends checking the oil level every 2500 km. The most accurate measurements are made on a cold engine before starting. The measurement will be inaccurate if taken immediately after the engine is switched off. The dipstick will indicate that the level is too low because the oil has not had time to flow down into the oil sump.

## Oils and fluids



*The oil level must be within the area marked on the dipstick*

### **Checking the oil in a cold engine:**

- Wipe the dipstick clean before checking the level.
- Check the oil level using the dipstick. The oil level must be between the MIN and MAX marks.
- If the level is close to the MIN mark, start by topping up with 0.5 litres of oil. Top up until the oil level is nearer the MAX than the MIN mark on the dipstick. See page 240 for capacities.

- Wipe the dipstick clean before checking the level.
- Check the oil level using the dipstick. The oil level must be between the MIN and MAX marks.
- If the level is close to the MIN mark, start by topping up with 0.5 litres of oil. Top up until the oil level is nearer the MAX than the MIN mark on the dipstick. See page 240 for capacities.

### **IMPORTANT!**

Never fill above the MAX mark. Oil consumption may increase if too much oil is poured into the engine.

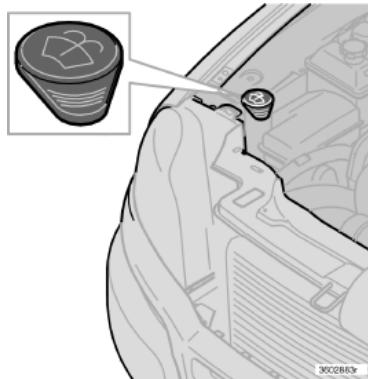
### **WARNING!**

Do not spill oil onto the hot exhaust manifold due to the risk of fire.

### **Checking the oil in a warm engine:**

- Park the car on a level surface, switch off the engine and wait 10 – 15 minutes to allow the oil time to run back to the sump.

### Oils and fluids

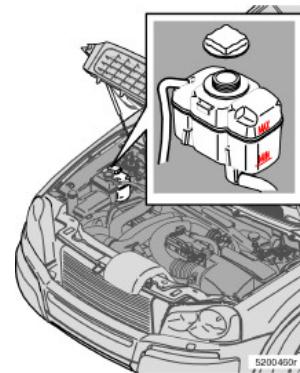


#### Washer fluid reservoir

The windscreen and headlamp washers have the same reservoir. See capacities and recommended grade for fluids and oils on page 242.

Add frost protection in the winter so that the fluid does not freeze in the pump, reservoir and hoses.

Tip: clean the wiper blades when topping up washer fluid.



#### Checking and topping up the coolant

When topping up the coolant, follow the instructions on the packaging. It is important that the mixture of coolant concentrate and water is correct for the prevailing weather conditions. Never top up with water only. The risk of freezing increases with both too little and too much coolant concentrate.

See capacities on page 242.

#### Check the coolant regularly

The level should lie between the MIN and MAX marks on the expansion tank. If the system is not filled sufficiently, high local temperatures could occur, causing a risk of damage (cracks) to the cylinder head.

damage (cracks) to the cylinder head. Top up the coolant when the level falls to the MIN mark.

**NOTE!** The engine must only be run with a well-filled cooling system. High temperatures can occur, causing a risk of damage (cracks) to the cylinder head.

#### IMPORTANT!

Always use coolant with anti-corrosion agent as recommended by Volvo. New cars are filled with coolant that can withstand temperatures down to approximately -35 °C.

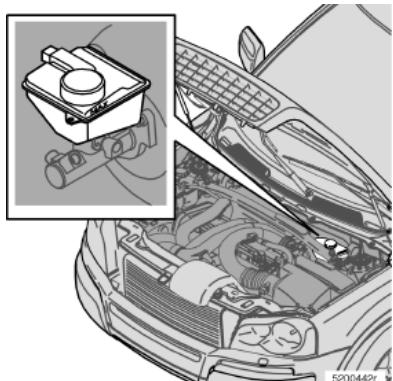
#### WARNING!

The coolant may be very hot. If the coolant requires topping up when the engine is at operating temperature, unscrew the expansion tank cap slowly to gently release the overpressure.

#### IMPORTANT!

The engine must only be run with a well-filled cooling system. High temperatures can occur, causing a risk of damage (cracks) to the cylinder head.

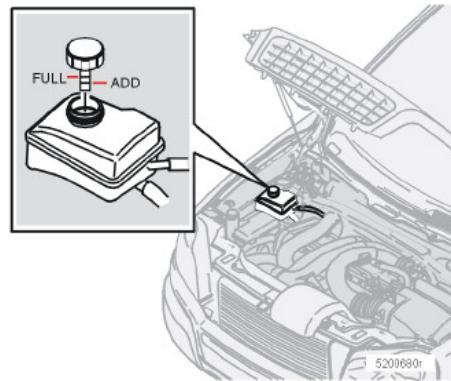
## Oils and fluids



**NOTE!** The fluid should be changed annually for 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 brake and clutch fluid

The brake and clutch fluid have a common reservoir<sup>1</sup>. The fluid level must be between the MIN and MAX marks. Check the level regularly. Change the brake fluid every other year or at every other regular service.

See the capacities and recommended brake fluid grade on page 242.

## Checking and topping up the power steering fluid

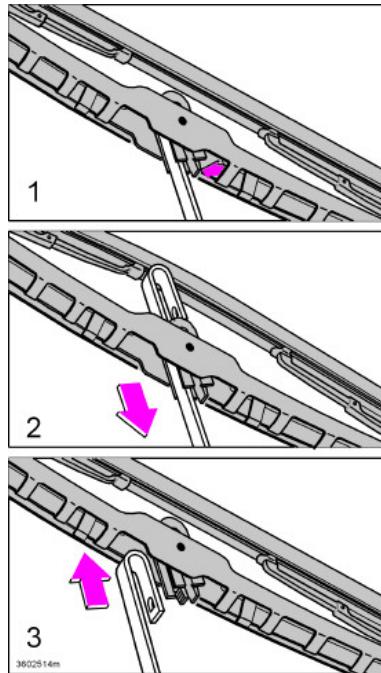
Check the level at every service. It is not necessary to change the fluid. The level should lie between the ADD and FULL marks.

See the capacities and recommended grade on page 242.

**NOTE!** If a fault should arise in the power steering system or if the car is without power and must be towed, it can still be steered. However the steering will be much heavier than normal and it will require more effort to turn the wheel.

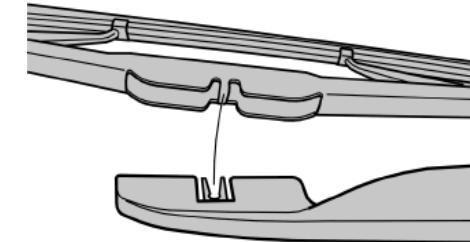
1. Location dependent on whether car is left or right-hand drive.

## Wiper blades



- Press the entire wiper blade down so that the wiper arm eye passes through the hold in the wiper blade mounting.
- Then pull the blade up so that the wiper arm eye passes beside the wiper blade mounting. Fit the new blade in reverse order and check that it is securely in place.

**NOTE!** Keep in mind that the wiper blade on the driver's side is straight and has a spoiler while the one on the passenger side is curved. The spoiler on the driver's side should sit on the lower side of the blade. The curve of the blade should follow the curve of the bottom edge of the windscreen.



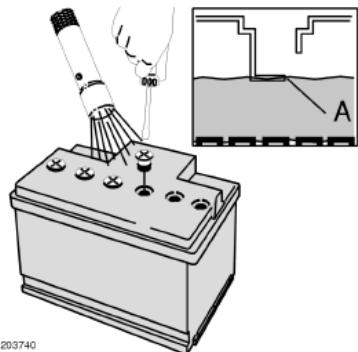
### Replacing rear window wiper blades

- Fold out the wiper arm.
- Remove the wiper blade by pulling it outwards towards the tailgate.
- Press the new wiper blade into position. Check that the blade fits securely!

### Changing the wiper blades

- Fold out the wiper arm and hold the wiper blade at 45° to the wiper arm. Press in the spring on the wiper blade.

## Battery



- Check all cells. Use a screwdriver to remove the caps. Each cell has its own maximum level mark.
- If necessary, top up with distilled water to the battery's maximum mark.
- Never fill above the maximum mark (A).

### IMPORTANT!

Always use distilled or deionised water (battery water).

## Battery care

The function and life of the battery is affected by number of starts, number of times discharged, driving style, driving conditions, climate conditions, etc.

Repeated use of the parking heater and similar large power consumers combined with short driving distances could lead to a discharged battery and thereby problems starting.

For the battery to function satisfactorily, consider the following:

- Regularly check that the battery fluid level is correct (A).

- Tighten the caps properly.

**NOTE!** The life of the battery is shortened if it becomes discharged repeatedly.

## Symbols on the battery

These symbols displayed on the battery.

Use protective goggles.



0300348a



0300352a

Further information in the owner's manual.



Store the battery out of the reach of children.



The battery contains corrosive acid.

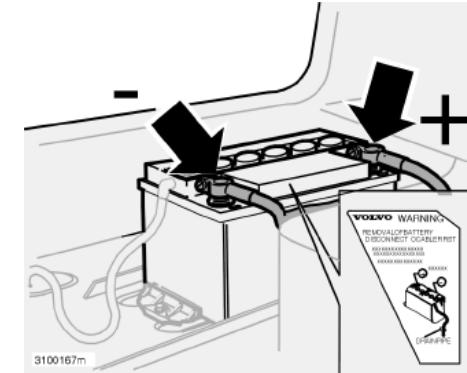
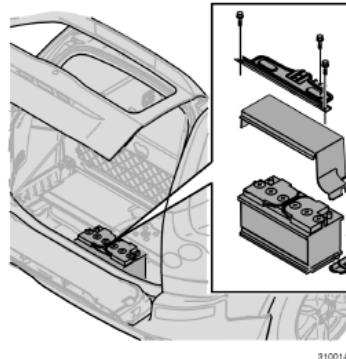
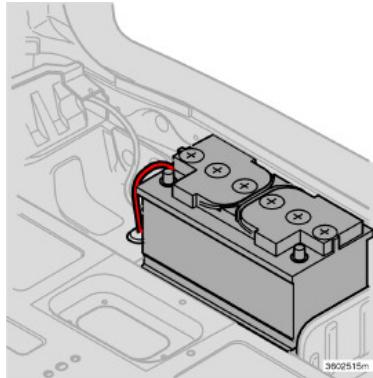


Avoid sparks and naked flames.



Risk of explosion.

### Battery



#### Draining oxyhydrogen gas

The battery can develop oxyhydrogen, which is highly explosive. An evacuation hose draws any oxyhydrogen gas from around the battery out of the car and prevents gas from accumulating in the passenger and cargo compartments. If you must change the battery for some reason, it is imperative that the evacuation hose is connected to the new battery and that it is routed to the outlet in the bodywork.

#### Changing the battery

Do as follows once you have unscrewed the console and battery cover and wish to remove the battery:

- Check that the ignition is switched off.
- Wait at least 5 minutes before touching any electrical terminals (so that the information in the car's electrical system can be stored in the different control modules).
- Disconnect the negative lead first.
- Then disconnect the positive lead and the evacuation hose for the oxyhydrogen.

Do as follows when installing the battery:

- Set the battery in place.
- Connect the positive lead first.
- Then connect the negative lead.
- Make sure the evacuation hose is correctly connected to both the battery and the outlet in the bodywork.

## Battery



### **WARNING!**

The battery contains oxyhydrogen, which is highly explosive. Be sure that the evacuation hose is correctly connected!



### **WARNING!**

Batteries can generate oxyhydrogen gas, which is highly explosive. A spark, which can be generated if you connect the jump leads incorrectly, is sufficient to make the battery explode. The battery also contains sulphuric acid, which can cause serious burns. If the acid comes into contact with eyes, skin or clothing, flush with large quantities of water. If acid splashes into the eyes, seek medical advice immediately.

## Replacing bulbs

### General

All bulb specifications are given on page 247.

The following list contains bulbs and point-source lamps that are specialised or unsuitable for changing except at a workshop:

- General interior lighting in the roof
- Roof lighting
- Reading lamp
- Glovebox lighting
- Lamps, Bi-Xenon headlamps.

### IMPORTANT!

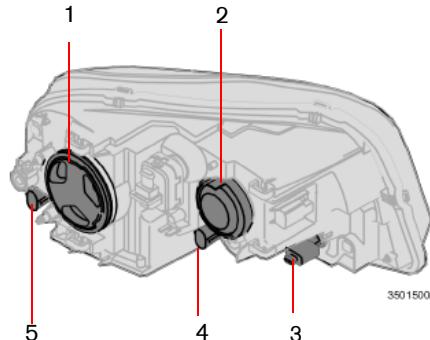
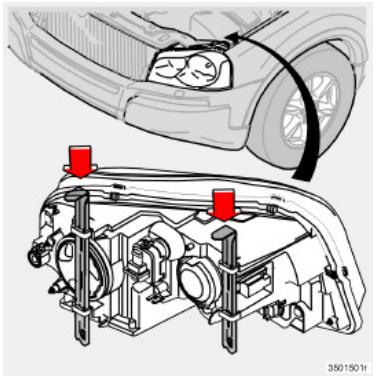
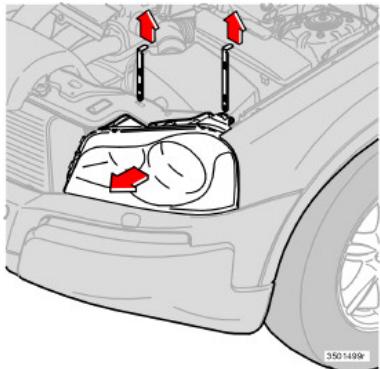
Never touch the bulbs' glass with your fingers. Grease and oils from your fingers are vaporised by the heat, coating and damaging the reflector.



### WARNING!

On cars with Bi-Xenon headlamps, all work on the lights should be carried out at an authorised Volvo workshop. Bi-Xenon headlamps must be handled with extreme care due to the high-voltage unit.

## Replacing bulbs



### Dipped beam, main beam, direction indicator, parking lamp and side marker light

The entire lamp insert must first be removed when replacing dipped beam, main beam and parking lamp bulbs. To replace one of these bulbs, do the following and then consult the instructions for the specific lamp.

- Switch off all lights and turn ignition key to position **0**.
- Open the bonnet.
- Release the insert by pulling up the two lock pins holding it in place.
- Lift the insert straight out.

- Unplug the connector by first pressing in the catch from underneath and then pulling it up a bit from above.

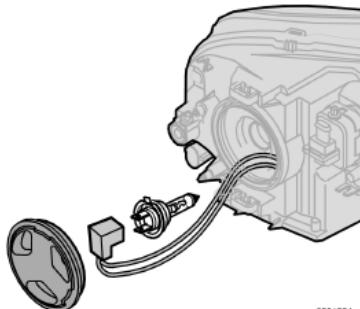
- Lift out the entire headlamp insert and place it on a soft surface so as not to damage the lens.

Refit the headlamp insert in reverse order. Check that the lock pins are correctly situated.

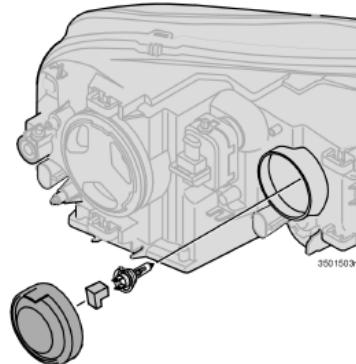
### Location of bulbs in front lamp

1. Dipped beam
2. Main beam
3. Direction indicator
4. Parking lamp
5. Side marker lamps

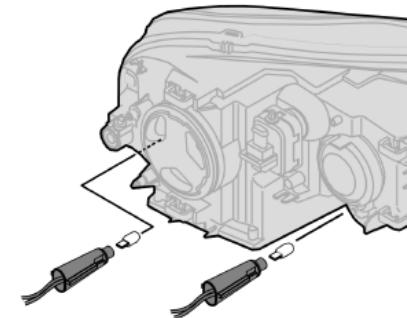
## Replacing bulbs



3501524r



3501503r



3501504r

### Dipped beam lamp

- Undo the outer cover by turning it anticlockwise.
- Unplug the connector.
- Disconnect the spring clamp. First push to the right so that the spring clamp disconnects, then out and down.
- Pull out the bulb.
- Fit the new bulb. It can only be fitted in one position.
- Press the spring clamp up and a little to the left so that it fastens in its catch.
- Press the connector back in place.
- Screw the cover back into place; the marking "HAUT" should be at the top.

### Main beam lamp

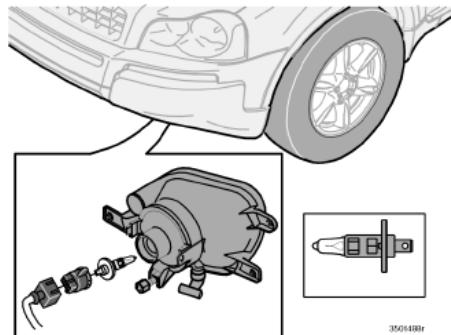
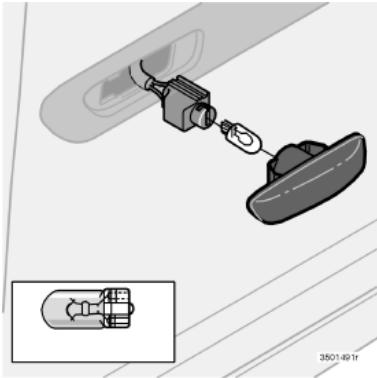
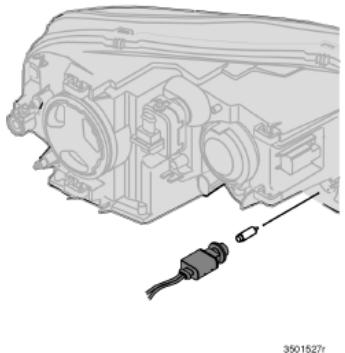
- Undo the outer cover by pulling it straight out.
- Unplug the connector.
- Disconnect the spring clamp. First push to the right so that the spring clamp disconnects, then out and down.
- Pull out the bulb.
- Fit the new bulb. It can only be fitted in one position.
- Press the spring clamp up and a little to the left so that it fastens in its catch.
- Press the connector back in place.
- Refit the cover.

### Side marker lamps and position/parking lamps

The bulbs are housed in bayonet holders.

- Turn the bulb holder anticlockwise and remove.
- Pull the bulb straight out.
- Fit the new bulb by carefully pressing it into the recess.
- Fit the bulb holder back in place and turn clockwise.

## Replacing bulbs



### Direction indicators

The bulbs are housed in bayonet holders.

- Turn the bulb holder anticlockwise and remove.
- Press in the bulb, turn anticlockwise and remove.
- Fit the new bulb by pressing it into the recess and then turning clockwise.

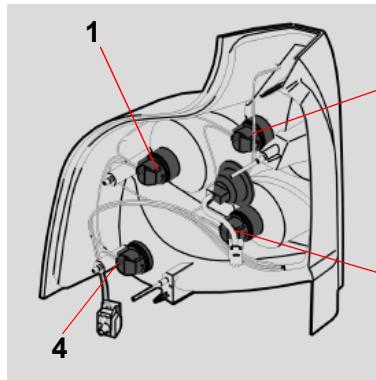
### Side indicator lamp

- Switch off all lights and turn ignition key to position **0**.
- Prie out the lamp housing from underneath using a small slotted screwdriver.
- Turn the bulb holder  $\frac{1}{4}$ turn anticlockwise and pull straight out.
- Pull the defective bulb straight out.
- Replace with a new bulb and press the lamp straight in.

### Fog lamps

- Switch off all lights and turn ignition key to position **0**.
- Turn the bulb holder slightly anticlockwise.
- Remove the lamp.
- Put the new bulb in place. The profile of the bulb holder matches the one on the foot of the lamp.
- Refit the bulb holder by turning slightly clockwise. "TOP" should be up!

## Replacing bulbs

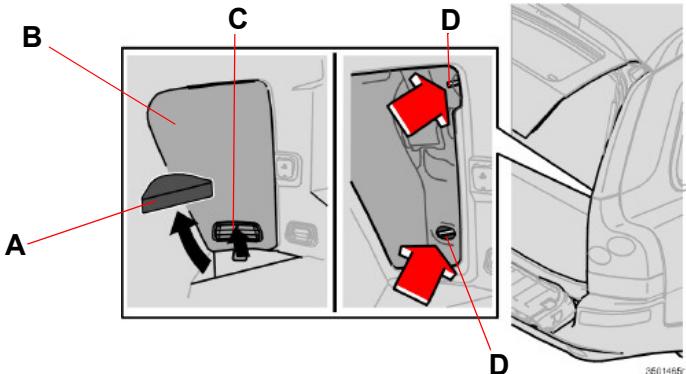


### Location of bulbs in rear lamp cluster

1. Direction indicator
2. Brake light
3. Reversing lamp
4. Position lamps

**NOTE!** If the error message "BULB FAILURE"/"CHECK BRAKE LIGHT" remains after a faulty bulb has been replaced then an authorised Volvo workshop needs to be consulted to rectify the fault.

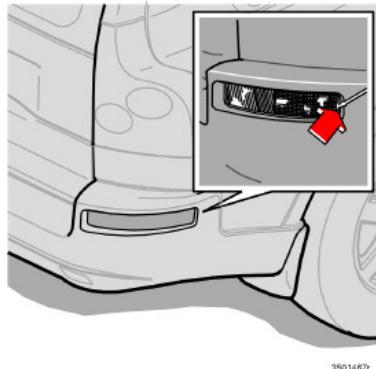
## Replacing bulbs



### Bulbs in rear lamp cluster

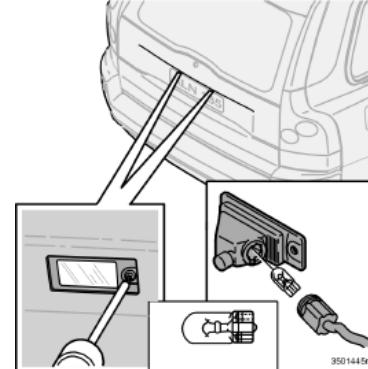
- Switch off all lights and turn the ignition key to position **0**.
- Lower the bottom of the tailgate and open the floor hatch.
- If the car is equipped with a grocery bag holder (option), loosen the holder's retaining straps.
- Remove the corner piece (A).
- Open the hatch (B) in the side panel by pulling the catch (C) up and towards you.
- Take spanner no. 10 out of the tool kit.
- Loosen the nuts (D).
- Pull the entire insert straight back.
- Loosen the extra length of cable for better accessibility.
- Place the insert on a soft surface so as not to scratch the glass.
- Turn the bulb holder anticlockwise and pull it out.
- Turn the bulb anticlockwise to loosen it.
- Replace the bulb.
- Refit the bulb holder in the recess and turn clockwise.
- Press back the extra length of cable.
- Refit the insert against the bolt holes. Press the insert into place.
- Tighten the nuts.
- Refit the side panel and corner piece.

## Replacing bulbs



### Rear fog lamp

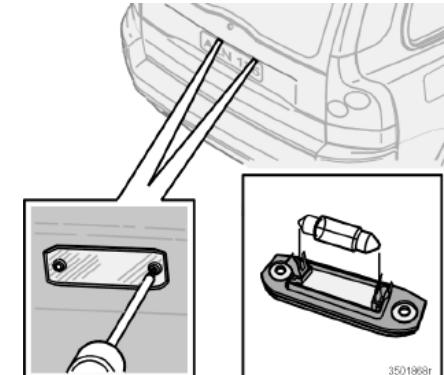
- Insert a slotted screwdriver as indicated by the arrow in the illustration.
- Prie out the lamp insert.
- Turn the lamp insert anticlockwise and pull out the bulb.
- Replace the bulb.



### Number plate lighting

**NOTE!** Applies to vehicles manufactured before week 9, 2006.

- Switch off all lights and turn the ignition key to position **0**.
- Remove the screw with a screwdriver.
- Carefully detach the entire lamp housing and withdraw it. Turn the connector anticlockwise and pull out the bulb.
- Replace the bulb.
- Refit the contact and turn clockwise.
- Refit the entire lamp housing and screw it into place.

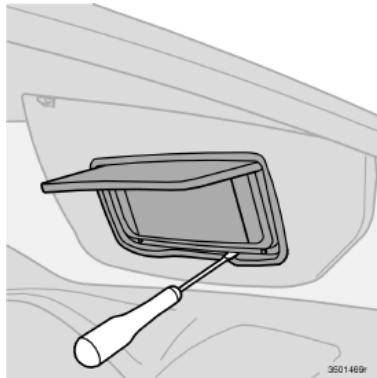
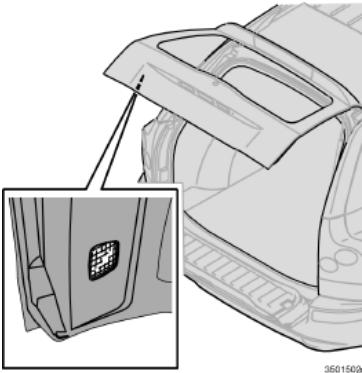
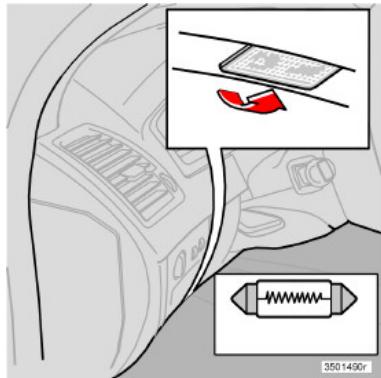


### Number plate lighting

**NOTE!** Applies to vehicles manufactured from and including week 9, 2006.

- Switch off all lights and turn the ignition key to position **0**.
- Remove the screws with a screwdriver.
- Loosen the whole lamp housing carefully and pull it out.
- Replace the bulb.
- Refit the entire lamp housing and screw it into place.

## Replacing bulbs



### Courtesy lighting

Courtesy lighting is found under the dashboard on the driver and passenger sides. Do as follows to replace the bulb:

- Insert a screwdriver and gently turn so that the lamp housing comes loose.
- Remove the blown bulb.
- Replace the bulb. Check that the bulb lights.
- Refit the lamp housing.

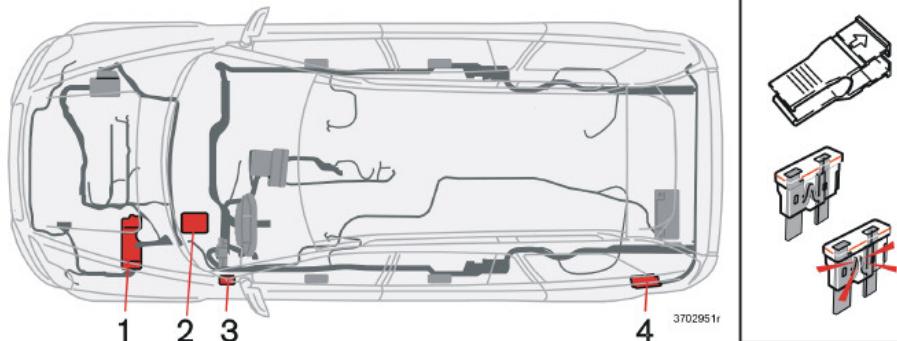
### Bulbs in the cargo compartment

- Insert a screwdriver and gently turn so that the lamp housing comes loose.
- Remove the blown bulb.
- Replace the bulb. Check that the bulb lights.
- Refit the lamp housing.

### Vanity mirror

- Insert a slotted screwdriver at the side of the centre clip in the bottom edge of the mirror. Lift up so the centre clip releases.
- Slide the screwdriver from side to side so that the outer clips release.
- Lift out the mirror insert.
- Replace the bulbs.
- Refit the insert top edge first. Be sure that the upper clips are properly depressed before pressing the insert back.

### Fuses



*Cable routing may vary slightly due to engine variant. However, the components 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.

Fuses are housed in four 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 compartment.

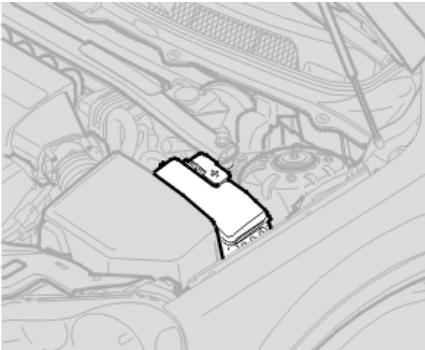
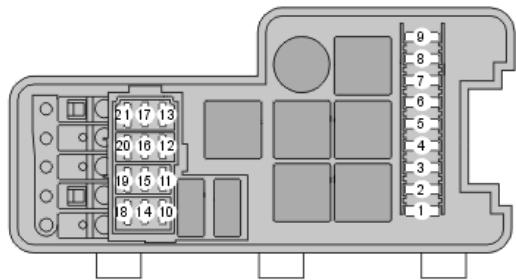
If an electrical component or function does not work, this may be because the component's fuse was temporarily overloaded and blew.

- Look in the fuse diagram to locate the fuse.
- Pull out the fuse and check from the side to see whether the curved wire has blown.
- If this is the case, replace it with a new fuse of the same colour and amperage.

There are a number of spare fuses in the cover on the end of the dashboard. There are also pliers which facilitate the removal and fitting of fuses.

If the same fuse blows repeatedly, there is a fault in the component and you should contact an authorised Volvo workshop to have it checked.

## Fuses



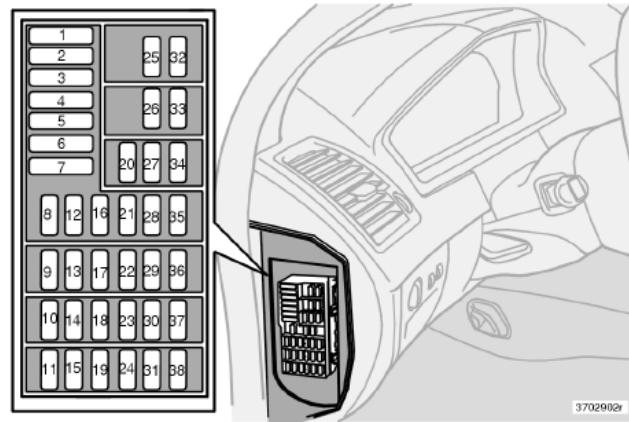
*Press in the plastic catches on the short sides of the box and pull the cover upward.*

### 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 (option) ..... 25 A
5. Auxiliary lamps (option) ..... 20 A
6. Starter motor relay ..... 35 A
7. Windscreen wipers ..... 25 A
8. Transmission control module (TCM), (V8, diesel) ..... 15 A
9. Fuel pump ..... 15 A
10. Ignition coils (petrol), engine control module (ECM), injection valves, (diesel) ..... 20 A
11. Accelerator pedal sensor (APM), AC compressor, fan electronics box ..... 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. Electronic throttle module (ETM) (diesel), solenoid valve, SWIRL (air mixing valve), fuel pressure regulator (diesel) ..... 10 A
14. Lambda-sond (petrol) ..... 20 A
- Lambda-sond (diesel) ..... 10 A
15. Solenoid valves, glow plugs (diesel) ..... 10 A
- crankcase ventilation heater, solenoid valves mass air flow sensor (V8), petrol ..... 15 A
16. Dipped beam (left) ..... 20 A
17. Dipped beam (right) ..... 20 A
18. - ..... -
19. Engine control module (ECM) supply, engine relay ..... 5 A
20. Position lamps ..... 15 A
21. - ..... -

## Fuses



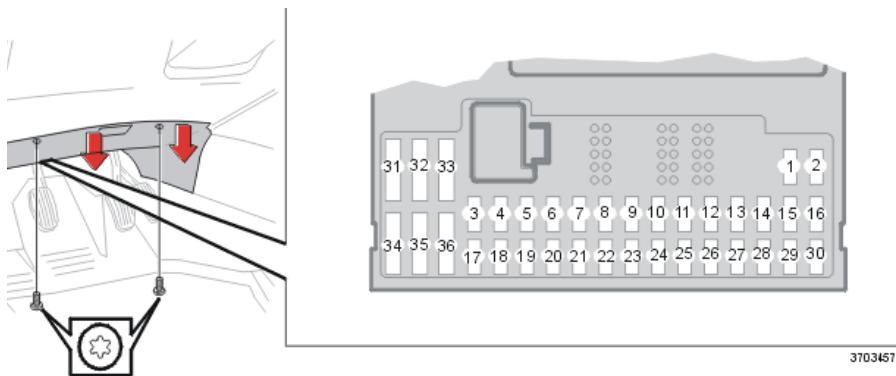
A decal which indicates the positions and amperages of the fuses is located in the end box cover.

### Fuses in the passenger compartment at dashboard end on driver's side

1. Climate control system fan..... 30 A
2. Amplifier ..... 30 A
3. Power driver's seat..... 25 A
4. Power passenger seat ..... 25 A
5. Control module, left front door ..... 25 A
6. Control module, right front door ..... 25 A
7. - .....
8. - .....
9. Infotainment, RTI display, CD, MD ..... 10 A
10. OBDII, light switch (LSM), Steering Angle Sensor (SAS), Steering Wheel Module (SWM) ..... 5 A

11. Ignition switch, SRS system, engine control module (ECM) SRS deactivation passenger side (PACOS), immobiliser (IMMO), Transmission control module TCM (V8), diesel ..... 7,5 A
12. General lighting, ceiling (RCM), upper electronic module (UEM) ..... 10 A
13. Sunroof..... 15 A
14. Telephone ..... 5 A
- 15-38 - .....

## Fuses



### Fuses in the passenger compartment within the sound barrier on the driver's side

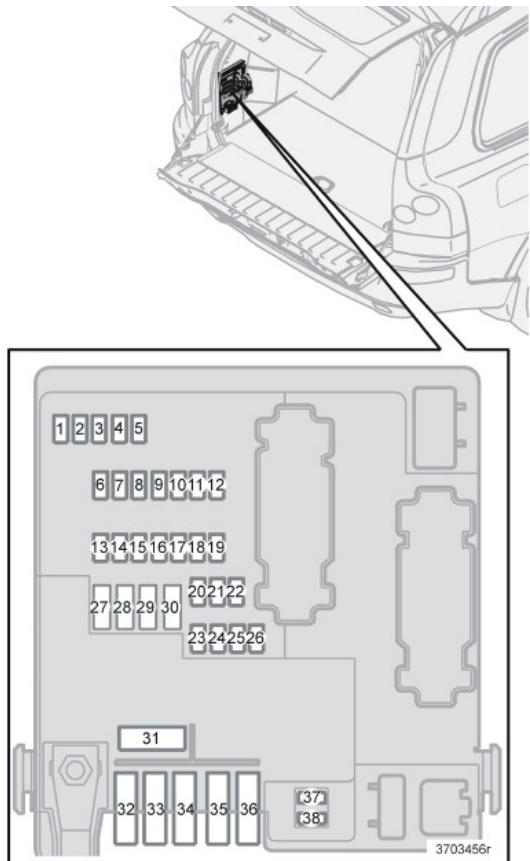
1. Seat heating, right side ..... 15 A
2. Seat heating, left side ..... 15 A
3. Horn ..... 15 A
4. - ..... -
5. Infotainment system ..... 10 A
6. Reserve.....-
7. Reserve.....-
8. Siren ..... 5 A
9. Brake lamp switch feed ..... 5 A
10. Combined instrument panel (DIM), climate control (CCM), parking heater, power driver's seat ..... 10 A
11. Front and rear seat socket ..... 15 A
12. - ..... -

13. Reserve .....
14. - .....
15. ABS, STC/DSTC ..... 5 A
16. Electronic power steering (ECPS), Bi-Xenon, headlamp levelling ..... 10 A
17. Fog lamp, front left ..... 7,5 A
18. Fog lamp, front right ..... 7,5 A
19. Reserve .....
20. Coolant pump (V8) ..... 5 A
21. Transmission Control Module (TCM), reverse gear inhibitor (M66) ..... 10 A
22. Main beam, left ..... 10 A
23. Main beam, right ..... 10 A
24. - .....
25. - .....
26. Reserve .....

## **Fuses**

27. Reserve.....	-
28. Power passenger seat .....	5 A
29. Reserve.....	-
30. BLIS .....	5 A
31. Reserve.....	-
32. Reserve.....	-
33. Vacuum pump .....	20 A
34. Washer pump .....	15 A
35. - .....	-
36. - .....	-

## Fuses



### Fuses in the cargo compartment

- |   |       |
|---|-------|
| 1. Reversing lamp .....   | 10 A  |
| 2. Position lamps, fog lamps, cargo area lighting,<br>number plate lighting, LEDs in brake lighting ..... | 20 A  |
| 3. Accessories (AEM) .....  | 15 A  |
| 4. Reserve .....  | -     |
| 5. REM electronics.....   | 10 A  |
| 6. RTI, radio receiver, RSE.....  | 7,5 A |
| 7. Towing bracket wiring (30-feed) .....  | 15 A  |
| 8. Cargo compartment socket.....  | 15 A  |
| 9. Rear right door: power window, power window lock.....  | 20 A  |
| 10. Rear left door: power window, power window lock .....   | 20 A  |
| 11. Reserve .....   | -     |
| 12. Reserve .....   | -     |
| 13. Diesel filter heater .....  | 15 A  |
| 14. Subwoofer, rear air conditioning (AC) .....   | 15 A  |
| 15. Reserve .....   | -     |
| 16. Reserve .....   | -     |
| 17. Infotainment system accessories .....   | 5 A   |
| 18. Reserve .....   | -     |
| 19. Rear wiper .....  | 15 A  |
| 20. Towing bracket wiring (15-feed) .....   | 20 A  |
| 21. Reserve .....   | -     |
| 22. - .....   | -     |
| 23. AWD .....   | 7,5 A |
| 24. Reserve .....   | -     |
| 25. - .....   | -     |
| 26. Parking assistance.....   | 5 A   |

**Fuses**

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 lamp, rear fog lamp,  
direction indicator ..... 25 A
31. Main fuse: Fuse 37, 38 ..... 40 A
32. - ..... -
33. - ..... -
34. - ..... -
35. - ..... -
36. - ..... -
37. Heated rear window ..... 20 A
38. Heated rear window ..... 20 A

---

## **Infotainment system**

<b>Infotainment system</b>	<b>198</b>
<b>Control panels, audio</b>	<b>199</b>
<b>Audio system functions</b>	<b>204</b>
<b>Radio functions</b>	<b>208</b>
<b>CD/MD (option)</b>	<b>216</b>
<b>CD changer (option)</b>	<b>218</b>
<b>Menu structure - Audio</b>	<b>220</b>
<b>Telephone (option)</b>	<b>222</b>
<b>Telephone functions</b>	<b>224</b>
<b>Menu settings and options - Telephone</b>	<b>231</b>

### **Infotainment system**

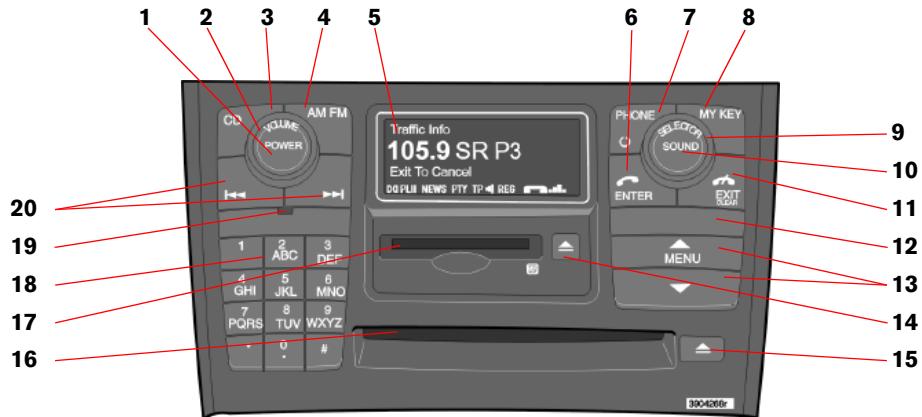
#### **Information - Entertainment**

Infotainment is a system with integrated audio and telephone functions. You can easily and conveniently use your Infotainment system by means of the joint control panel or the steering wheel keypad. The control panel display indicates the current function.

XC90 can be equipped with Dolby Surround Pro Logic II (Premium Sound), which offers an optimal sound experience very close to being there with a broad, natural sound profile.

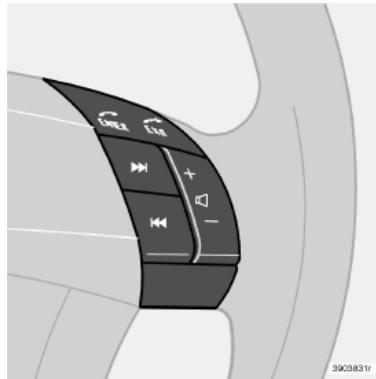
The system also allows your passengers to use headphones (option) with separate sound sources.

## Control panels, audio



1. On/Off – Audio
2. Volume
3. CD – shortcut button
4. AM/FM -shortcut button to switch between FM1, FM2 and AM
5. Display
6. ENTER – select in the menu, activate a selection or activate the telephone from standby mode
7. On/Off/Standby – Telephone
8. MY KEY – programmable shortcut key for your favourite function
9. SELECTOR – select sound source
10. SOUND – make sound settings
11. EXIT/CLEAR – scroll back in the menu, cancel a selection, put the telephone in standby mode, or erase the previous character when entering text and numbers
12. SIM card holder
13. Menu selection buttons
14. MD eject
15. CD and CD changer eject
16. CD player and CD changer (option)
17. MD player (option)
18. Station setting buttons/selecting CD changer position (1-6), number/character buttons for the telephone and menu shortcuts
19. IR receiver for remote controls (option)
20. Seek/change tracks/stations or scroll forward and back when entering text and digits

## Control panels, audio



### Steering wheel keypad

#### Audio - Telephone

The four buttons at the bottom of the steering wheel keypad control both the radio and the telephone. The function of the respective button depends on which system is active. The steering wheel keypad can be used to adjust volume, shift between preset stations and change CD/MD tracks.



By holding the or button depressed you can fast forward or rewind in a song or search for a radio station.

To use these buttons for the telephone functions, the telephone must be active, see page 225.

To make audio system settings with these buttons, the telephone must be in standby mode (deactivated).

### Menus

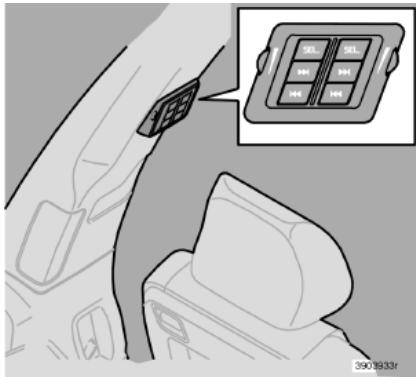
In menu mode, you can check or modify settings and programme new functions in the system. The different menu alternatives are shown in the display. Menu alternatives followed by periods indicate that there are several submenus.

Press the MENU button (1) to activate menu mode.

The following applies in menu mode:

- The menu selection buttons are used to scroll up or down in the menu.
- A long press on EXIT/CLEAR allows you to leave menu mode.
- A brief press on EXIT/CLEAR allows you to clear, cancel, decline an alternative or go back one step in the menu structure.
- A press on ENTER allows you to confirm, select or scroll from a submenu to the next submenu.

## Control panels, audio



### Headphone sockets (option)

The door panels behind the second row of seats contain headphone sockets. This means that several passengers can listen to different sound sources, such as CDs or the radio, at the same time without disturbing each other.

Two sets of headphones can be connected to each socket.

- Switch sound source with the SEL button.
- Use the arrow keys, or , to change CD/MC tracks or switch between preset stations.

- Hold the or button depressed to fast forward/rewind or search for the next strong station.
- Hold the SEL button depressed to switch off the system.
- Use the volume control button to adjust the volume of the respective headphones.

All headphones are switched off automatically when the audio system is switched off with the ignition key and must be activated manually when the car is restarted.

For the best sound reproduction, we recommend headphones with impedance between 16–32 ohm. The sensitivity of these should be equal to or greater than 102 dB. The headphone socket is intended for 3.5 mm contacts and is located on the bottom of the headphone panel (1).

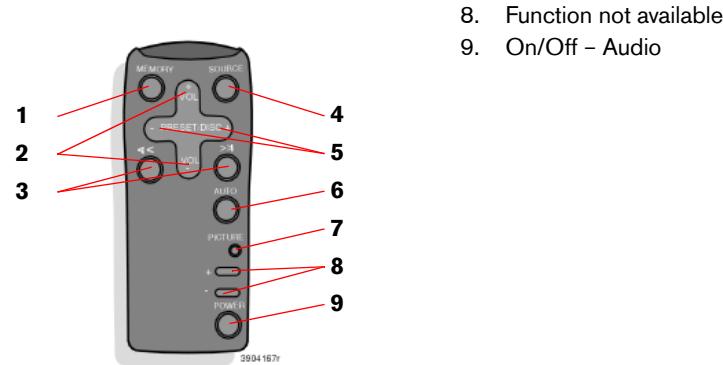
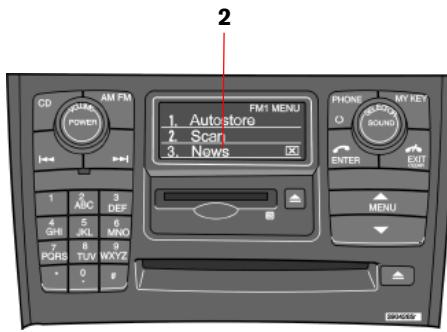
### Headphones - limitations

- If a set of headphones is connected to the same source that is being sent through the speakers, the headphones controls cannot be used to change track or station. This is so the driver is not surprised by an unexpected change in music.
- If the driver uses the control panel to select the same sound source as

someone wearing headphones, the driver takes control of the sound source.

- Headphone users can choose from among the presets of the frequency (AM, FM1, FM2) previously set by the driver. In some cases, this means that the driver will not receive NEWS - or traffic information even if TP/NEWS is selected.
- The CD changer can only play one disc and one song at a time.

## Control panels, audio



### Display

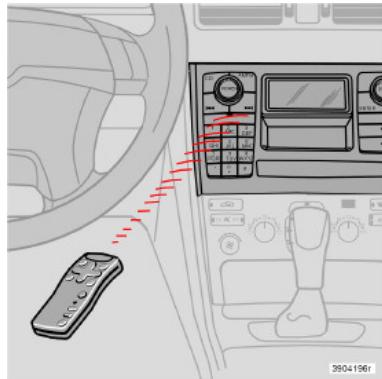
The display (2) shows the current function, such as menu alternatives, messages, telephone numbers, or settings.

Clean the display with a soft, dry cloth. Do not use cleaning agent.

### Remote control (option)

1. Memory – Stores radio stations. To store a station:
  - Press the Memory button
  - Select Preset using Preset/Disc (5)
  - Confirm your selection using the Memory button
2. Volume
3. Seek/change tracks forward or back
4. Source – switch sound source
5. Preset/Disc – select CD changer position or preset radio station
6. Auto – find and store the strongest stations
7. Function not available

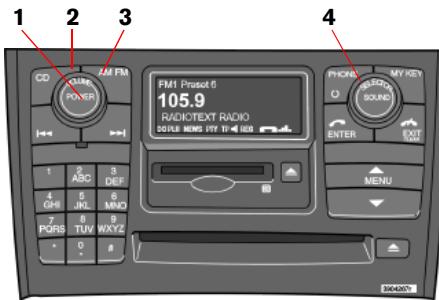
## Control panels, audio



Direct the remote control towards the IR receiver (see illustration) that is located in the dashboard.

**NOTE!** The remote control contains AAA batteries (R03). If the remote control does not work, first try replacing the batteries.

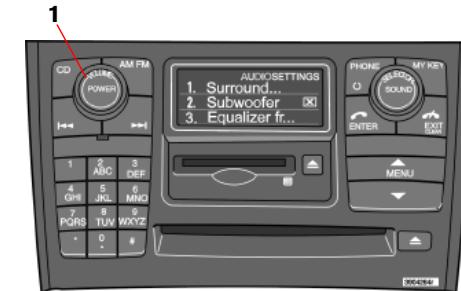
## Audio system functions



- Press the AM/FM button repeatedly to scroll between FM1, FM2 and AM.

The selected sound source is shown on the display.

MD can only be chosen using the SELECTOR knob.



### On/Off switch - Audio

Press the POWER button (1) to switch the audio system on or off.

If the audio system is active when the ignition is switched off, it will reactivate automatically when the car is restarted.

### Selecting the sound source

There are two ways to select sound source:

By using the shortcut buttons CD (2), AM/FM (3) or by using the SELECTOR knob (4):

- Turn the SELECTOR knob to select Radio (FM1, FM2 or AM), CD/CD changer (option) or MD (option).

### Volume control

Turn the knob (1) clockwise or anticlockwise to raise or lower the volume, respectively. The volume control is electronic and has no end position. Volume can also be raised (+) or lowered (-) using the steering wheel keypad.

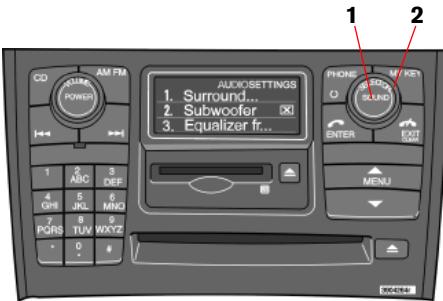
### Pause mode

When volume is in position zero, the CD/MD player is put in pause mode. Reactivate the player by turning up the volume.

## Audio system functions

### Volume control - TP/PTY/ NEWS/ALARM

If a CD or the like is playing when the radio receives a traffic bulletin, the CD player is put in pause mode. The message is played at the volume selected for that type of message. Playback of the originally selected sound source is then resumed at the previous volume. If volume is adjusted while the bulletin is played, the new volume is saved and used for the next bulletin.



### Audio settings

- Press the SOUND button (1).
- Press the SOUND button repeatedly until you come to the function you wish to set. Choose BASS, TREBLE, FADER, BALANCE, SUBWOOFER (option), CENTRE (option) or SURROUND (option).
- Use the SELECTOR knob (2) to adjust the level. The display shows a scale from min. to max. position. The middle indicates the normal position.

**NOTE!** The level for the centre speaker can only be set if Dolby Pro Logic II (DPL II) or

three-channel stereo (3-CH) has been selected from the menu.

The level for Surround can only be set if Dolby Pro Logic II has been selected in the menu.

The level for Subwoofer can only be set if Subwoofer is activated.

Audio settings	Shown on the display
Bass	BASS
Treble	TREBLE
Balance between the left and right-hand speakers	BALANCE
Balance between the front and rear speakers	FADER
Level for subwoofer	SUBWOOFER (option)
Level for centre speaker	CENTRE (Premium Sound)
Level for surround sound	SURROUND (Premium Sound)

## Audio system functions



**NOTE!** If FM radio reception deteriorates then two or three channel stereo can provide better sound quality than surround sound.

- Select AUDIO SETTINGS in the menu and press ENTER.
- Select SURROUND and press ENTER.
- Select Dolby FM or Dolby CD/MD and press ENTER.
- Select PRO LOGIC II, 3 CHANNEL or OFF and press ENTER.
- The symbol PL II is shown in the display if Pro Logic II has been selected.
- 3 CH is shown in the display if 3 CHANNEL has been selected.
- OFF means the audio system is in normal stereo mode.

Dolby Surround Pro Logic II<sup>1</sup> together with a centre speaker in the dashboard offers a sound experience very close to being there. The normal left-right stereo channels are divided into left-centre-right. In addition, surround sound is produced by the rear speaker channels. Surround sound can be described as the types of residual tones which are audible in a concert hall. Settings for FM radio and CD/MD player are stored individually.



### SURROUND (option)

#### Dolby Surround Pro Logic II

Dolby Surround Pro Logic II<sup>1</sup> together with a centre speaker in the dashboard offers a sound experience very close to being there. The normal left-right stereo channels are divided into left-centre-right. In addition, surround sound is produced by the rear speaker channels. Surround sound can be described as the types of residual tones which are audible in a concert hall. Settings for FM radio and CD/MD player are stored individually.

1. Premium Sound.

### Bass speaker - SUBWOOFER (option)

The subwoofer helps the system provide fuller sound and deeper bass.

- Select AUDIO SETTINGS in the menu and press ENTER.
- Select SUBWOOFER and press ENTER. A check in the box indicates that SUBWOOFER is activated.

### Equalizer FR (certain models)

This function is used to fine-tune the sound from the front speakers.

- Select AUDIO SETTINGS in the menu and press ENTER.

## Audio system functions

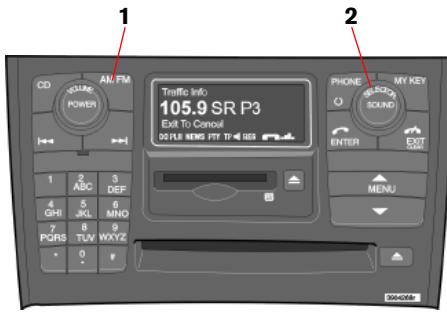
- Select Equalizer FR and press ENTER.
- Use the menu selection buttons or the SELECTOR knob to set the level.
- Press ENTER to select the next frequency. You can select five frequencies.
- Press ENTER until you come to menu mode to save any changes.

### Equalizer RR (certain models)

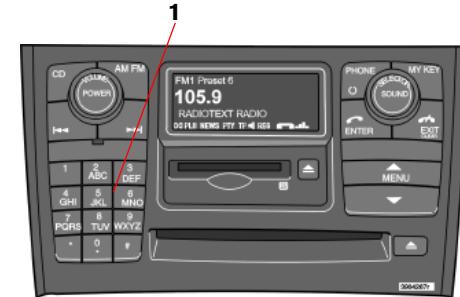
This function is used to fine-tune the sound from the rear speakers.

- Select AUDIO SETTINGS in the menu and press ENTER.
- Select Equalizer RR and press ENTER.
- Use the menu selection buttons or the SELECTOR knob to set the level.
- Press ENTER to select the next frequency. You can select five frequencies.
- Press ENTER until you come to menu mode to save any changes.

## Radio functions



- Release the button when the desired frequency shows in the display.
- Frequency can be adjusted with a short press on one of the arrow keys, or .
- Manual adjustment mode stays in effect five seconds after the last press.



## Tuning

- Choose radio mode AM/FM1/FM2 using the SELECTOR knob (2) or the AM/FM button (1).
- A short press on the or button is used to search for the next strong station.
- Press one of the buttons again to search again.

## Manually seek a known frequency

- Hold the or button depressed. MAN is shown in the display. The radio scans slowly in the selected direction and increases tempo after a few seconds.

## Storing stations

To store a selected station under one of the station setting buttons 0-9 (1):

- Set the desired station.
- Press the button under which the station is to be stored and keep it depressed. The sound will disappear for a few seconds and STATION STORED will be shown in the display. The station is now stored.

## Radio functions

You can store up to 10 stations each for AM, FM1 and FM2, i.e. a total of 30 stations.

Radio	Frequency band
FM	87.5 – 108 MHz
AM(LW)	153 – 279 kHz
AM(MW)	522 – 1611 kHz



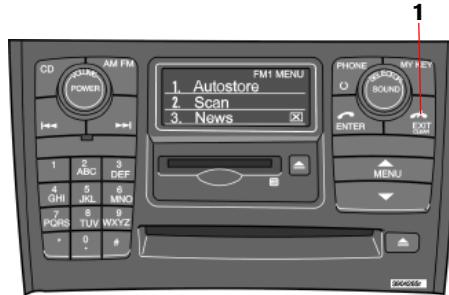
### Storing stations automatically - AUTOSTORE

This function automatically finds and stores up to ten strong AM or FM stations in a separate memory. If more than ten stations are found, the ten strongest are stored. This function is especially beneficial in areas in which you are not acquainted with radio stations or their frequencies.

- Choose radio mode using the SELECTOR knob or the AM/FM button.
- Select AUTOSTORE in the menu and press ENTER.
- Select AST SEARCH and press ENTER.

- AUTOSTORING is shown in the display and a number of strong stations (max. 10) from the set frequency band are now stored in the autostore memory. If there are no stations with sufficient signal strength, NO AST FOUND is shown.
- The preset stations can be selected with buttons 0–9.
- When the radio is in autostore mode, AUTO is shown in the display. AUTO disappears when you return to the ordinary radio mode.
- Return to the ordinary radio mode by pressing the AM/FM button or EXIT/ CLEAR.
- In order to gain access to a previously stored setting, follow steps 1–2, and select AST MODE in step 3 and press ENTER.

## Radio functions



### Scanning - SCAN

The scan function automatically searches for AM or FM station signals. When the radio finds a station, scanning stops for approx. 8 seconds and then resumes.

- Choose radio mode using the SELECTOR knob or the AM/FM button.
- Select SCAN in the menu and press ENTER.
- SCAN is shown in the display.
- Press the EXIT/CLEAR button to exit.

### Radio Data System - RDS

RDS is a system which links specific network transmitters together and is used, for example, to assist motorists by setting the

correct frequency irrespective of the transmitter to which the car occupants are listening or the active audio source (e.g. CD). The system can also be used for receiving traffic information and for finding broadcasts of a specific type. Radio text, which is also a part of RDS, is used by radio stations to send information regarding broadcasts already in progress.

**NOTE!** Some radio stations do not use RDS or only use a limited range of its features.

### Automatic search for program information - PI Seek

When listening to an RDS transmitter, various information, such as traffic information, is stored in the radio.

When a preselected RDS transmitter is later selected, the radio updates the transmitter's RDS information. If the radio is in the boundary area or just outside of the transmitter's range, the radio automatically searches for the strongest possible transmitter for this station.

If there is no transmitter within "listening distance", the radio becomes silent and "PI SEEK PRESS EXIT TO CANCEL" is shown in the display until a station is found.

If you press EXIT (1), the radio begins to play the selected transmitter, but without updated RDS information.

### News - NEWS

This function interrupts other sound sources, e.g. CD, when a news broadcast starts.

- Choose radio mode using the SELECTOR knob or the AM/FM button.
- Select NEWS in the menu and press ENTER.
- NEWS is shown in the display.
- Select NEWS again and press ENTER to deactivate the NEWS function.

With this function, programmes from RDS stations that are news-coded will interrupt other audio sources using the volume setting for this specific purpose. As soon as the news broadcast is finished, the audio system returns to the previous audio source and resumes the previous volume setting.

- If you do not wish to listen to a news item in progress, press the EXIT button. The NEWS function remains active and the radio waits for the next news programme.

## Radio functions



information will only interrupt the sound source if TP))) is shown in the display.

- If you do not wish to listen to a traffic bulletin, press the EXIT button. The TP function, however, remains active and the radio waits for the next traffic bulletin.

### TP Search

This function allows you to listen to traffic information when travelling between different countries and states in Europe without needing to select a station.

- Select RADIO SETTINGS in the menu and press ENTER.
- Select TP and press ENTER.
- Select TP Search and press ENTER.
- To deactivate the function, select TP Search again and press ENTER.



### Traffic information - TP

This function interrupts other audio sources in order to broadcast traffic information from RDS stations; the message is heard at the volume set for this specific purpose. As soon as the message ends, the audio system returns to the previous audio source and resumes the previous volume setting.

- Select TP in the menu and press ENTER.
- TP is shown in the display.
- Select TP again and press ENTER to deactivate the TP function.

TP is shown in the display when this function is active. If the set station can send traffic information, ))) is shown in the display. Traffic

### Radio text

Some RDS stations send information on programme content, artists, etc. This information can be indicated with text in the display.

- Press the MENU button.
- Select Radio text on the menu and press ENTER.
- Select RADIOTEXT again and press ENTER to deactivate.

## Radio functions

### Alarm

Alarms are transmitted automatically and the function cannot be deactivated.

"Alarm!" is shown in the radio display when an alarm message is sent. This function is used to warn motorists of major accidents and catastrophes, such as a bridge collapse or an accident at a nuclear plant.



### Programme type - PTY

The PTY function allows you to select programmes that fit your taste. Use the PTY function to select from among the different programme types shown in the list.

#### Show PTY

#### Which PTY does the set station have?

- Select RADIO SETTINGS in the menu and press ENTER.
- Select PTY in the menu and press ENTER.
- Select SHOW PTY and press ENTER. The PTY of the selected station is now shown in the display.

**NOTE!** Not all radio stations have a PTY designation.

Programme type	Shown on the display
Current affairs	CURRENT AFFAIRS
Information	INFORMATION
Sport	SPORT
Education	EDUCATION
Drama	DRAMA
Culture and Art	CULTURES
Science	SCIENCE
Varied discussions	VARIED SPEECH
Pop music	POP MUSIC
Rock music	ROCK MUSIC
Easy listening	EASY LISTENING
Light classic	LIGHT CLASSIC
Serious classic	SERIOUS CLASSIC
Other music	OTHER MUSIC
Weather & Metro	WEATHER
Finance	FINANCE
Children's progs	CHILDREN
Social affairs	SOCIAL AFFAIRS
Religion	RELIGION
Phone In	PHONE IN
Travel and holiday	TRAVEL
Leisure and hobby	LEISURE & HOBBY
Jazz music	JAZZ MUSIC

## Radio functions

Programme type	Shown on the display
Country music	COUNTRY MUSIC
National music	NATIONAL MUSIC
Oldies music	OLDIES MUSIC
Folk music	FOLK MUSIC
Documentary	DOCUMENTARY



### Search for a specific programme type - PTY

This function helps you find programmes with a specific focus by searching the entire frequency band.

- Select FM 1 or FM2 and press the MENU button.
- Select RADIO SETTINGS and press ENTER.
- Select PTY and press ENTER.
- Choose SELECT PTY and press ENTER.
- Press ENTER for one or more of the listed programme types you desire. The PTY symbol in the display lights up when the

first selection is made and the radio continues in standby for PTY.

- Once you have selected all desired types, select EXIT/CLEAR to exit the PTY list.
- Select SEARCH PTY and press ENTER. If the radio finds a station with the selected programme type, it is played through the speakers.
- If the radio finds a station that is unsuitable, continue the search with the and buttons.
- If no stations with the selected programme type are found, the radio resumes its previous frequency. PTY then remains in standby mode until the selected programme type is aired, at which time the radio automatically switches to the station sending the selected programme type.
- In order to deactivate PTY standby, enter the menu and select CLEAR ALL PTY. The symbol PTY disappears from the display and the radio resumes normal mode.

#### PTY standby

To continue with the radio in PTY standby, repeat steps 1-6.

## Radio functions



### Traffic information - TP STATION

Here, you set from which station traffic information is to be heeded.

Note that ))) must be shown in the display for this to work.

- Listen to the station from which traffic information is to be heeded.
- Select RADIO SETTINGS in the menu and press ENTER.
- Select TP and press ENTER.
- Select TP Station and press ENTER.
- Select SET CURRENT and press ENTER.

**NOTE!** Now only traffic information from the stored station will be played.

### News - NEWS STATION

Here, you set from which station news is to be heeded.

Note that the set station in question must be an RDS station for this to work.

- Listen to the station from which news is to be heeded.
- Select RADIO SETTINGS in the menu and press ENTER.
- Select NEWS STATION and press ENTER.
- Select SET CURRENT and press ENTER.

**NOTE!** Now only news from the stored station will be played.

### Deactivate TP STATION/NEWS STATION

- Select RADIO SETTINGS in the menu and press ENTER.
- Select TP/NEWS STATION and press ENTER.
- Select RESET STATION and press ENTER.

### Automatic frequency updating - AF

The AF function is usually active and makes sure that the strongest available transmitter for a radio station is used.

- Select RADIO SETTINGS in the menu and press ENTER.

- Select AF and press ENTER.
- To deactivate AF, select AF and press ENTER.

### Regional radio programme - REG

The REG function is usually deactivated. It makes it possible to stay tuned to a regional transmitter even if signals are weak.

- Select RADIO SETTINGS in the menu and press ENTER.
- Select Regional and press ENTER.
- REG is shown on the display.
- To deactivate REG, select REG again and press ENTER.

## Radio functions

- Select LOCAL, DISTANT or OFF and press ENTER.



### Resetting RDS functions - RESET ALL

This function restores all radio settings to the original factory settings.

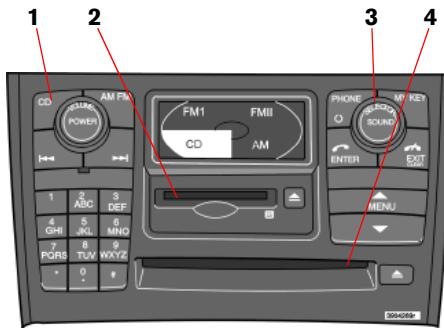
- Select RADIO SETTINGS in the menu and press ENTER.
- Select RESET ALL in the menu and press ENTER.
- Press ENTER again to confirm your selection.

### EON - LOCAL/DISTANT (Enhanced Other Networks)

Normally, the EON function is in DISTANT mode and determines if it is necessary to interrupt the radio station you are listening to for traffic bulletins, news broadcasts or the like from other channels (if these functions are selected). The function has two levels: LOCAL only interrupts if the signal is strong. DISTANT will even interrupt with weaker signals. No interruptions occur if OFF is selected.

- Select RADIO SETTINGS in the menu and press ENTER.
- Select EON and press ENTER.

## CD/MD (option)



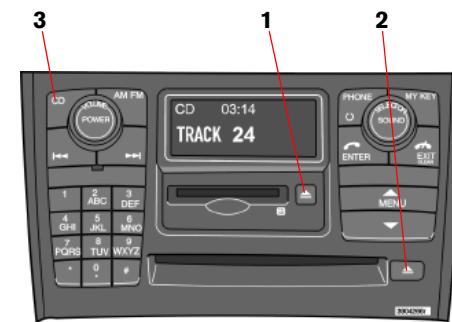
### Fast forward/reverse

Press and hold down or to search within a track or the whole disc. The search continues as long as the button is depressed. If you have a keypad in the steering wheel, you can also use the corresponding buttons.

### Random - RANDOM

This function chooses a CD track in no particular order (shuffle).

- Select RANDOM in the menu and press ENTER.
- RND is shown on the display as long as the function is activated.
- Select RANDOM OFF or press the EXIT button to exit.



### Starting the CD/MD player

- Start the CD player with the SELECTOR knob (3) or by pressing the CD button (1). Insert a disc in the CD player (4).
- Start the MD player with the SELECTOR knob (3). Insert a disc in the MD player (2).

### Changing tracks

Press to skip to the next track or to skip to the previous track. The track number is shown in the display. If you have a keypad in the steering wheel, you can also use the corresponding buttons.

### Scan

This function plays the first ten seconds of each song or track.

- Select SCAN in the menu and press ENTER.
- Press EXIT/CLEAR when you find a song or track you wish to listen to.

### Disc text (MD only)

Certain discs contain information on album and song titles. This information is shown in the display in text form if the function DISCTEXT is activated.

- Select DISCTEXT in the menu and press ENTER.

## CD/MD (option)

- If information is stored on the disc, it is shown in the display.
- To deactivate the function, select DISCTEXT and press ENTER.

### MD eject

If you press the button (1), the MD player stops and ejects the disc.

### CD eject

If you press the button (2), the CD player stops and ejects the disc.

For reasons of traffic safety, the ejected CD remains out no more than 12 seconds. The CD player then pulls it back in. To reactivate the CD player, press the CD button (3).

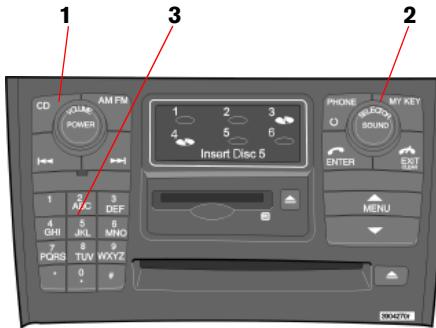
### CD discs

Using CD discs burned at home could result in poor or non-existent sound. Music CD discs complying with the ISO 60908 standard provide the best sound quality.

#### **IMPORTANT!**

Only use standard discs (12 cm in diameter). Do not use CDs with that have disc labels. The heat from the CD player could cause the label to come loose from the disc. The CD player could then be damaged.

## CD changer (option)



### Starting the CD changer

The CD changer can hold up to six discs.

- Choose CD mode using the SELECTOR knob (2) or the CD button (1).
- Select an empty position using the numbered buttons 1-6 (3). The display shows which are empty.
- Insert a disc into the changer.

Make sure INSERT DISC is shown before you insert a new disc.

### Selecting discs

Select which disc is to be played using numbered buttons 1-6 (3). The number of the disc and track are shown in the display.

### Changing tracks

Press to skip to the next track or to skip to the previous track. The track number is shown in the display. If you have a keypad in the steering wheel, you can also use the corresponding buttons.

### Fast forward/reverse

Press and hold down or to search within a track or the whole disc. The search continues as long as the button is depressed. If you have a keypad in the steering wheel, you can also use the corresponding buttons.

### Scan

This function plays the first ten seconds of each song or track.

- Press the MENU button.
- Select SCAN and press ENTER.
- Press EXIT/CLEAR when you find a song or track you wish to listen to.

Scan only works on the selected disc.

### Random - RANDOM

This function chooses a CD track in no particular order.

- Select RANDOM in the menu and press ENTER.

- Select SINGLE DISC or ALL DISCS for the player to randomly choose from one or all discs in the CD changer.
- RND or RND ALL is shown on the display while the function is active.
- Press EXIT to exit.

Press to select the next random track.

**NOTE!** You can only select the next random track on the disc in question.

### Disctext

Certain discs contain information on album and song titles. This information is shown in the display in text form if the function DISCTEXT is activated.

- Press the MENU button.
- Select DISCTEXT in the menu and press ENTER.
- If information is stored on the disc, it is shown in the display instead of the current track.
- To deactivate the function, select DISCTEXT and press ENTER.

## CD changer (option)



### CD eject

If you press the button (1) the CD player stops and ejects the disc.

For reasons of traffic safety, you have 12 seconds to handle the ejected disc or it will be re-fed into the CD player.

### Eject All

A long press on the EJECT button (1) starts EJECT ALL. This empties the entire magazine disc by disc. The text EJECTING ALL is shown in the display.

The function can only be activated when the car is stationary and is interrupted if the car begins to move.

For reasons of traffic safety, the ejected disc remains out for 12 seconds. If it is not taken care of, the function is interrupted.

### CD discs

Using CD discs burned at home could result in poor or non-existent sound. Music CD discs complying with the ISO 60908 standard provide the best sound quality.

#### **IMPORTANT!**

Only use standard discs (12 cm in diameter). Do not use CDs with that have disc labels. The heat from the CD player could cause the label to come loose from the disc. The CD player could then be damaged.

## Menu structure - Audio

### AM/FM Menu

#### 1. Autostore<sup>1</sup>

- 1. AST Search
- 2. AST Mode

#### 2. Scan<sup>1</sup>

#### 3. News<sup>1</sup> (On/Off<sup>2</sup>)

#### 4. TP<sup>1</sup> (On/Off<sup>2</sup>)

#### 5. Radio Text<sup>1</sup> (On/Off<sup>2</sup>)

#### 6. Radio Settings

##### 1. PTY

- 1. Select PTY
  - 1. Clear All PTY
  - 2. PTY List
- 2. Search PTY<sup>2</sup>
- 3. Show PTY (On/Off<sup>2</sup>)

##### 2. TP

- 1. TP Station
  - 1. Set Current/Reset Current
  - 2. TP Search (On/Off<sup>2</sup>)

##### 3. NEWS Station

- 1. Set Current /Reset Current

##### 4. AF<sup>2</sup> (On<sup>2</sup>/Off)

##### 5. Regional<sup>2</sup> (On/Off<sup>2</sup>)

##### 6. EON

- 1. Off

- 2. Local

1. Programmable with MY KEY, see page 221.  
2. Default/factory settings.

- 3. Distant<sup>2</sup>
- 7. Reset All

#### 7. Audio Settings<sup>3</sup>

- 1. Dolby FM
  - 1. Pro Logic II
  - 2. 3 Channel
  - 3. Off<sup>2</sup>
- 2. Dolby CD/MD
  - 1. Pro Logic II<sup>2</sup>
  - 2. 3 Channel
  - 3. Off
- 3. Subwoofer<sup>2,4</sup> (On<sup>2</sup>/Off)
- 4. Equalizer Fr
- 5. Equalizer Rr
- 6. Reset All

### CD Menu

#### 1. Random<sup>1</sup>

#### 2. Scan<sup>1</sup>

#### 3. News<sup>1</sup> (On/Off<sup>2</sup>)

#### 4. TP<sup>1</sup> (On/Off<sup>2</sup>)

#### 5. Audio Settings<sup>3</sup>

See Audio Settings in AM/FM Menu.

### CD Menu (CD changer)

#### 1. Random<sup>1</sup>

- 1. Off<sup>2</sup>
- 2. Single Disc
- 3. All Discs

#### 2. Scan<sup>1</sup>

#### 3. News<sup>1</sup> (On/Off<sup>2</sup>)

#### 4. TP<sup>1</sup> (On/Off<sup>2</sup>)

#### 5. Disc Text<sup>1</sup> (On/Off<sup>2</sup>)

#### 6. Audio Settings<sup>3</sup>

See Audio Settings in AM/FM Menu.

### MD Menu

#### 1. Random<sup>1</sup>

#### 2. Scan<sup>1</sup>

#### 3. News<sup>1</sup>

#### 4. TP<sup>1</sup>

#### 5. Disc Text<sup>1</sup> (On/Off<sup>2</sup>)

#### 6. Audio Settings<sup>3</sup>

See Audio Settings in AM/FM Menu.

## Menu structure - Audio

- Repeat steps 1-4 to store a new function for the button.

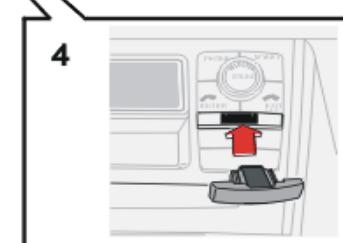
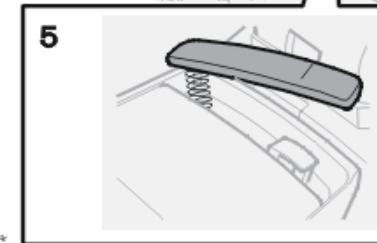
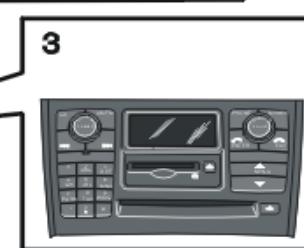
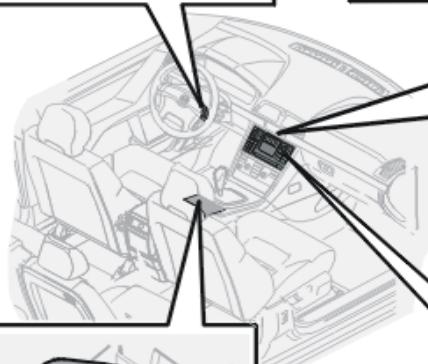
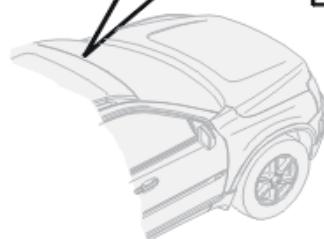
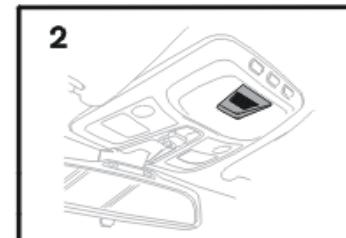
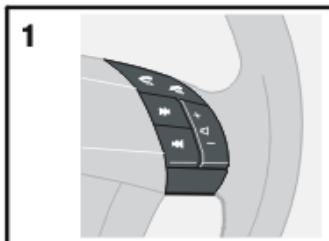
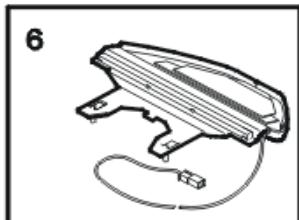


## My own shortcut button - MY KEY

The MY KEY button (1) can be used to store your favourite menu functions, such as SCAN, AUTOSTORE or TP.

- Use the menu selection buttons to scroll among the functions.
- Select the function to be stored by holding the MY KEY button depressed for more than two seconds.
- When MY KEY STORED is shown in the display, the function has been stored.
- Activate the function by briefly pressing the MY KEY button.

## Telephone (option)



3905 08-4

## Telephone (option)

### Telephone system components

#### 1. Steering wheel keypad

You can control the majority of telephone functions using the steering wheel keypad.

When the telephone is active, the steering wheel keypad can only be used for telephone functions. When in active mode, telephone information is always shown in the control panel display.

#### 2. Microphone

The handsfree microphone is integrated in the ceiling panel.

#### 3. Control panel

All telephone system functions, except call volume, can be controlled from the control panel keypad. The display shows menu functions, messages, telephone numbers, etc.

#### 4. SIM card

The SIM card is inserted into the front of the control panel.

#### 5. Privacy handset

The privacy handset can be used when you do not wish to be disturbed.

#### 6. Antenna

The antenna is mounted against the windscreen in front of the rearview mirror.

### General rules

- Put traffic safety first! If as the driver you need to use the privacy handset, park the car in a safe place first.
- Switch off the system when refuelling the car.
- Switch off the system near blasting work.
- Let only authorised personnel service your telephone system.

### Emergency calls

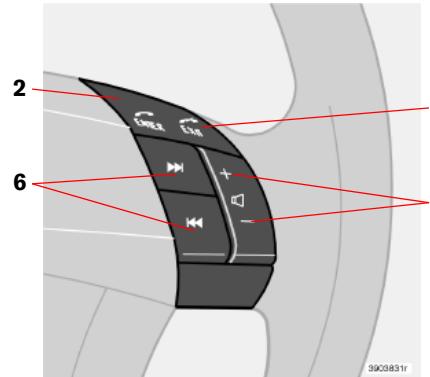
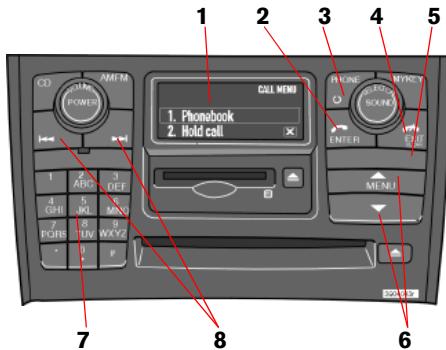
Emergency calls to alarm centres can be made without a SIM card as long as there is coverage by a GSM operator.

- Activate the telephone.
- Ring the emergency number that applies to your region (within EU: 112).
- Press the ENTER button on the control panel or steering wheel.

### Loudspeaker

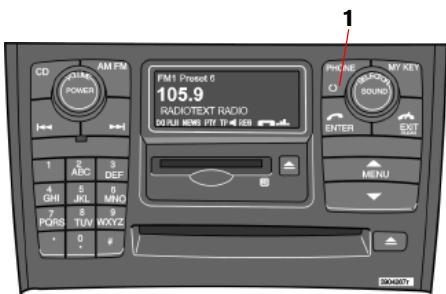
The telephone uses the speaker in the driver's door or the centre speaker of the audio system (if there is one).

## Telephone functions



1. Display
2. ENTER – accept a call, make a menu selection or activate the telephone 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
7. Number/character buttons and menu shortcuts
8. Seek – scroll forward or back when entering text and numbers
9. Increase/decrease call volume during a call

## Telephone functions



When the telephone is active or in standby mode, a handset is shown in the display.

**NOTE!** With the Performance audio system (standard level), it is not possible to listen to the radio, CD, MD or receive traffic messages during a telephone call.

If you switch off the car's ignition with the telephone system on, it will be on the next time you switch on the ignition. No calls can be received when the telephone system is switched off.

### Volume reduction during telephone call

If the telephone rings when the radio is switched on, the volume is lowered when the call is answered. When the call is concluded, the volume returns to the previously set level. Radio volume can also be adjusted during a telephone call, whereby the newly selected level will resume when the call is concluded. Audio system volume can be switched off completely during a telephone call. See menu 5.5.3, page 231.

This function only applies to the Volvo integrated telephone system.

### Switch, On/Off/Standby - Telephone

To activate the system:

- Press the PHONE button (1) to activate the telephone system.

To switch off the system:

- Hold the PHONE button depressed to switch off the telephone system

Continuing with system in standby mode:

- The telephone will continue in standby mode with a brief press of the PHONE button or if you press EXIT/CLEAR.
- Reactivate the system with the PHONE button.



### Standby mode

In standby mode, you can receive calls while the audio system is active and information from audio system sources is shown in the display.

To use other functions of the telephone system, the phone must be in active mode.

### Menu shortcuts

Once you have used the menu button to enter the menu system, you can use numbers instead of the arrows and the ENTER button to select the right menu in the main menu level. Each menu selection is numbered. The numbers are shown in the display together with the menu alternative.

# Telephone functions

## Traffic safety

For reasons of safety, parts of the telephone menu system cannot be accessed at speeds in excess of 8 km/h. You may only complete menu system activities that have already been started.

The speed limiter can be disconnected using menu function 5.6.



## SIM card

The telephone can only be used with a valid SIM card (Subscriber Identity Module). Your network operator supplies this card.

Always insert the SIM card when you wish to use the telephone.

- Switch off the telephone.
- Open the SIM card holder with a short press.
- Insert the card with the metallic surface down.
- Make sure that the bevelled corner of the SIM card matches the bevel of the holder.
- Press in the holder.

Contact your network operator if you experience difficulties with the SIM card.

## Making and receiving calls

To call:

- Dial the number and press ENTER on the steering wheel or the control panel keypad (or lift the handset).

To receive an incoming call:

- Press ENTER (or lift the handset). You can also use Automatic Answer. See menu function 4.3.

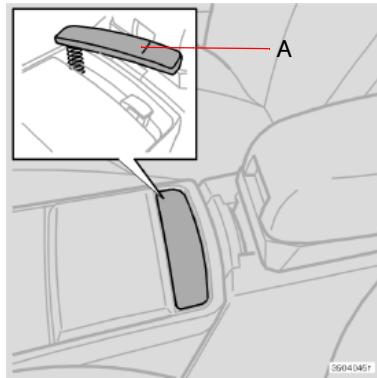
The car's audio system can be muted automatically while a telephone conversation is in progress. See menu option 5.6.3.

## Ending a call

Press EXIT/CLEAR on the steering wheel or control panel keypad or hang up the handset. The audio system resumes its previous activity.

Refuse an incoming call by pressing EXIT/CLEAR.

## Telephone functions



### Privacy handset

If you wish to speak without disruptions, use the privacy handset. Lift the handset and press (A).

- Select the desired telephone number using the centre console keypad and lift the handset to place the call. Adjust the volume with the dial on the side of the handset.
- The call is ended when you replace the handset in its holder.
- If you wish to switch to a handsfree unit without ending the call: press on the steering wheel keypad (or control panel menu buttons) and select Handsfree.

Press ENTER and replace the handset in its cradle. If the handset is already removed from its cradle when a call is started, the ringing party will be audible in the handsfree system. Press the MENU button, scroll to Handset and press ENTER in order to transfer to the handset.

### Last number called

The telephone automatically stores the last telephone numbers/names called.

- Press ENTER in the steering wheel or control panel keypad.
- Use the menu buttons to scroll forward or back through the last numbers dialled. They are shown in the display.
- Press ENTER.

### Speed dial

#### Storing speed dial numbers

A number stored in the phone book can be linked to a speed dial button (1–9) as follows:

- Select Phone book on the menu and press ENTER.
- Scroll to Speed dial, menu 3.3, and press ENTER.
- Select which number is to be the speed dial number. Press ENTER to confirm.

- Search for the desired name or phone number in the phone book. Press ENTER to select.

### Using speed dial

To make a call, press and hold the desired speed dial button for two seconds or press the button briefly and then press ENTER.

**NOTE!** Once you switch on the telephone, wait a moment before using speed dial. If you wish to use a speed dial number, Menu 3.3.1 must be activated.

### Call waiting

If you hear two beeps in your speaker during a phone call, someone else is calling. This function can be selected or deselected in the menu.

In this mode, you can choose to either take the call or refuse it. If you do not wish to take the call, press EXIT/CLEAR or do nothing.

If you do wish to take the call, press ENTER. Your current call will be put in "park mode". If you press EXIT/CLEAR, both calls will be terminated.

### Functions during a call

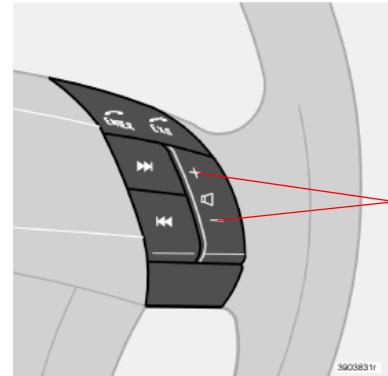
The following functions are available during a call (scroll with the arrows and press ENTER to make a selection):

## Telephone functions

Secret mode/ Secret mode off	Secret mode
Hold/Resume	Choose if the call is to be parked or resumed.
Handset/ Handsfree	Use the handset or handsfree
Phone book	Show phone book

The following functions are available when you have a current call and a parked call (scroll with the arrows and press ENTER to make a selection):

Secret mode/ Secret mode off	Secret mode
Handset/ Handsfree	Use the handset or handsfree
Phone book	Show phone book
Three-way calling	Speak with both parties simultaneously (conference call)
Switch	Switch between the two calls



### Call volume

Increase or decrease call volume by pressing the + or - button (1) of the steering wheel keypad during a call.

When the telephone is activated, the steering wheel keypad only controls the telephone functions.

The telephone must be in standby mode in order to adjust the audio system with these buttons, see page 225.

### Phone book

Telephone numbers and names can be stored in either the telephone memory or the SIM card memory.

If the number of the person calling is found in the phone book, his or her name is shown in the display.

The telephone memory can store up to 255 names.

### Storing telephone numbers with names

- Press the MENU button, select Phone book and press ENTER.
- Scroll to Enter item and press ENTER.
- Enter a name and press ENTER.
- Enter a number and press ENTER.
- Choose in which memory to save and press ENTER.

### Enter a name (or message)

Press the button with the desired character: once for the first character, twice for the second, etc. Press 1 to enter a space.

## Telephone functions

	space 1 - ? ! , . : " ' ( )
	a b c 2 ä å à á â æ ç
	d e f 3 è é ê
	g h i 4 i ï ñ
	j k l 5
	m n o 6 ñ ö ò ó Ø
	p q r s 7 ß
	t u v 8 ü ù ú û
	w x y z 9
	if you enter two letters in a row from the same button, press * between them or wait a few seconds
	+ 0 @ * # & \$ £ / %
	switch between upper and lower case
	delete the last letter or number entered. If you press for a long time, the enter number or text is deleted.



1

### Calling from the memory

- Press the MENU button's down arrow (1) or in the steering wheel to search in the phone book.
- Choose from the following alternatives:
  - Press ENTER and scroll with the arrows until you find the desired name.
  - Press the key for the first letter of the name (or enter the entire name) and press ENTER.
  - Press ENTER to call the selected number.

### Quitting text input:

- Clear all entered characters with a long press on the EXIT/CLEAR button.
- Return to the menu with an additional long press on the EXIT/CLEAR button.

## Telephone functions



### Specifications

Output	2 W
SIM card	Small, 3 V
Memory entries	255 <sup>1</sup>
SMS (Short Message Service)	Yes
Data/Fax	No
Dualband	Yes (900/ 1800)

1. The telephone memory contains 255 positions. The number of SIM card memory positions varies depending on your subscription.

### Double SIM cards

Many network operators offer double SIM cards - one for your car and one for another telephone. A double SIM card allows you to have the same number for two different telephones. Ask your network operator about the offers available and the use of double SIM cards.

### IMEI number

In order to block the telephone, you must provide your network operator with the telephone's IMEI number which is a 15-digit serial number that is programmed in the phone. To display this number, press \*#06#. Make a note of this number and keep it in a safe place.

## Menu settings and options - Telephone

### 1. Call log - CALL

- 1.1. Missed calls
- 1.2. Received calls
- 1.3. Outgoing calls
- 1.4. Erase list
  - 1.4.1. All calls
  - 1.4.2. Missed calls
  - 1.4.3. Received calls
  - 1.4.4. Outgoing calls
- 1.5. Call duration
  - 1.5.1. Last call
  - 1.5.2. Number of calls
  - 1.5.3. Total time
  - 1.5.4. Reset time

### 2. Messages

- 2.1. Read
- 2.2. New
- 2.3. Message settings
  - 2.3.1. SMSC number
  - 2.3.2. Validity period
  - 2.3.3. Message type

### 3. Phone book

- 3.1. Enter item
- 3.2. Search
- 3.3. Copy all
  - 3.3.1. SIM to telephone
  - 3.3.2. Telephone to SIM
- 3.4. Speed dial
  - 3.4.1. Active
  - 3.4.2. Select number

### 3.5. Empty SIM

- 3.6. Empty telephone
- 3.7. Memory status

### 4. Call options

- 4.1. Transmit number
- 4.2. Call waiting
- 4.3. Automatic answer
- 4.4. Call back
- 4.5. Call divert
  - 4.5.1. All calls
  - 4.5.2. When busy
  - 4.5.3. When not answered
  - 4.5.4. If unreachable
  - 4.5.5. Fax calls
  - 4.5.6. Data calls
  - 4.5.7. Cancel all diverts

### 5. Tel. settings

- 5.1. Network selection
  - 5.1.1. Automatic
  - 5.1.2. Manual
- 5.2. Language
  - 5.2.1. Dansk
  - 5.2.2. Deutsch
  - 5.2.3. English UK
  - 5.2.4. English US
  - 5.2.5. Español
  - 5.2.6. Français CAN
  - 5.2.7. Français FR
  - 5.2.8. Italiano
  - 5.2.9. Nederlands
  - 5.2.10. Português BR

### 5.2.11. Português P

- 5.2.12. Suomi
- 5.2.13. Svenska

### 5.3. SIM security

- 5.3.1. On
- 5.3.2. Off
- 5.3.3. Automatic
- 5.4. Change codes
  - 5.4.1. PIN code
  - 5.4.2. Telephone code
- 5.5. Volume
  - 5.5.1. Ringer volume
  - 5.5.2. Ringer tone
  - 5.5.3. Mute radio
  - 5.5.4. Message beep

### 5.6. Traffic safety

### 5.7. Factory settings

## Menu settings and options - Telephone

### 1. Call log

#### 1.1. Missed calls

A list of missed calls is shown here. You can choose to call, erase or store the number in the phone book.

#### 1.2. Received calls

A list of received calls is shown here. You can choose to call, erase or store the number in the phone book.

#### 1.3. Outgoing calls

A list of dialled numbers is shown here. You can choose to call, erase or store the number in the phone book.

#### 1.4. Erase list

This option can be used to erase the list of menus 1.1, 1.2 and 1.3 as follows.

1.4.1. All

1.4.2. Missed

1.4.3. Received

1.4.4. Outgoing

#### 1.5. Call duration

Here you can see the duration of all your calls or the most recent. You can also see the number of calls and clear the call timer.

1.5.1. Last call

1.5.2. Number of calls

1.5.3. Total time

1.5.4. Reset time.

Resetting the call timer requires the telephone code (see Menu 5.5).

### 2. Messages

#### 2.1. Read

Here you can read received text messages. You can then choose to erase the message, forward it, change or save the entire message or parts of it.

#### 2.2. New

You can write a text message using the keypad. Then choose to save or send it.

#### 2.3. Message settings

Enter the number (SMSC number) of the message centre to which you want your messages transferred as well as how long they are to be saved at the message centre.

2.3.1. SMSC number

2.3.2. Validity period

2.3.3. Message type

Contact your service provider for information on these settings and for an SMSC number. Normally, these settings should not be altered.

### 3. Phone book

#### 3.1. Enter item

You can store names and telephone numbers in the phone book. See the section on phone book functions for more information.

### 3.2. Search

#### 3.3. Copy all

Copy telephone numbers and names from the SIM card to the telephone memory.

3.3.1. From SIM to telephone memory

3.3.2. From telephone to SIM memory

#### 3.4. Speed dial

A number stored in the telephone book can be stored as a speed dial number.

#### 3.5. Empty SIM

The entire memory of the SIM card can be erased.

#### 3.6. Empty telephone

The entire memory of the phone can be erased.

#### 3.7. Memory status

See how many places in the SIM card or telephone memory are occupied by names and numbers.

### 4. Call options

#### 4.1. Transmit number

Choose whether or not your own number should be displayed to the person you call. Contact your network operator regarding ex-directory numbers.

## Menu settings and options - Telephone

### 4.2. Call waiting

Choose whether or not you want to be alerted during a phone call that there is another call coming in.

### 4.3. Automatic answer

Choose to automatically accept incoming calls.

### 4.4. Call back

Choose to call a previously dialled number that was busy.

### 4.5. Call divert service

Choose when and what type of calls are to be diverted to a specified telephone number.

4.5.1. All calls (this setting only applies during the call in progress).

4.5.2. When busy

4.5.3. When not answered

4.5.4. If unreachable

4.5.5. Fax calls

4.5.6. Data calls

4.5.7. Cancel all diverts

## 5. Telephone settings

### 5.1. Network selection

Choose a network automatically or manually. The selected operator is shown in the display in the telephone's basic mode.

5.1.1. AUTO

5.1.2. Manual

### 5.2. Language

Here you can choose which language the telephone is to display.

5.2.1. Dansk

5.2.2. Deutsch

5.2.3. English UK

5.2.4. English US

5.2.5. Español

5.2.6. Français CAN

5.2.7. Français FR

5.2.8. Italiano

5.2.9. Nederlands

5.2.10. Português BR

5.2.11. Português P

5.2.12. Suomi

5.2.13. Svenska

### 5.3. SIM security

Select if the PIN code should be on, off or if the telephone should automatically give the PIN code.

5.3.1. On

5.3.2. Off

5.3.3. Automatic

### 5.4. Change codes

Change the PIN code or telephone code.

5.4.1. PIN code

5.4.2. Telephone code (use 1234 until you change to your own code). The telephone code is used to reset the call timer.

**NOTE!** Make a note of your code as save it in a safe place.

### 5.5. Volume

5.5.1. Ringer volume: Here you can choose the volume of the ringer for incoming calls.

5.5.2. Ringer tone: There are eight different ringer tones to choose from.

5.5.3. Mute radio: On/Off

5.5.4. Speed volume: Choose whether the volume should be adjusted according to speed.

5.5.5. Message beep

### 5.6. Traffic safety

Here you can choose to disengage the speed limiter, i.e. have access to the entire menu system even while driving.

### 5.7. Factory settings

Function to return to the system's factory settings.

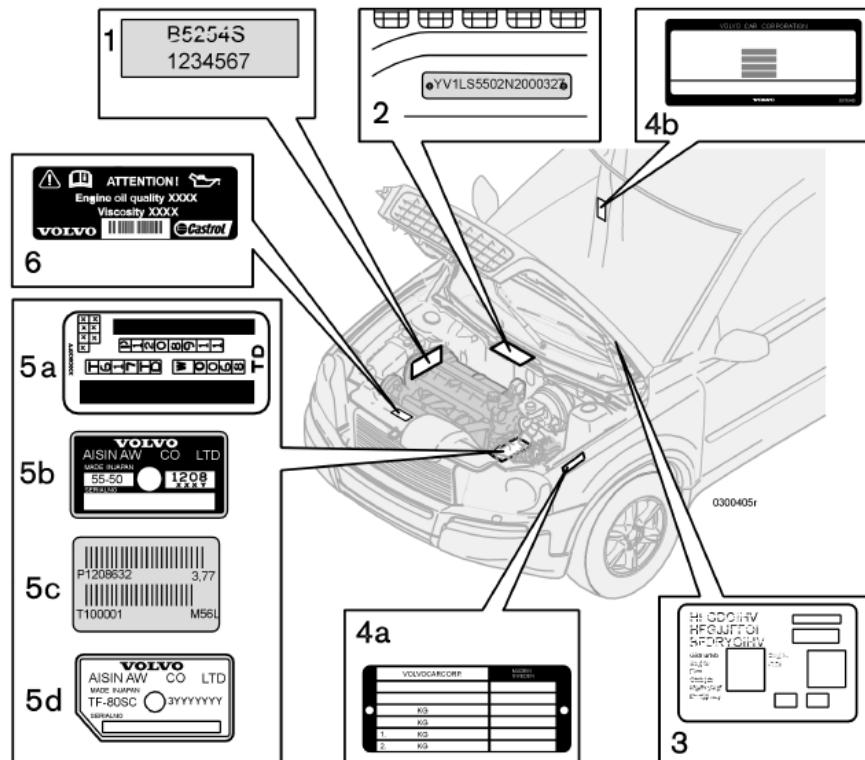


---

## **Technical data**

<b>Type designation</b>	<b>236</b>
<b>Dimensions and weights</b>	<b>237</b>
<b>Engine specifications</b>	<b>238</b>
<b>Engine oil</b>	<b>239</b>
<b>Other fluids and lubricants</b>	<b>242</b>
<b>Fuel</b>	<b>243</b>
<b>Catalytic converter</b>	<b>245</b>
<b>Electrical system</b>	<b>246</b>

## Type designation



1. Certain engine variants.

Whenever contacting your Volvo dealer and when ordering spare parts and accessories for your car, it makes things easier if you know your car's type designation, vehicle identification number and engine number.

1. Engine type designation, component and serial number.
  2. Decal for parking heater.
  3. VIN.
  4. Type designation, vehicle identification number, maximum permissible weights, codes for colour and upholstery and type approval number.
    - a. variant 1
    - b. variant 2
  5. Gearbox type designation and serial number.
    - a: Automatic gearbox GM.
    - b: Automatic gearbox AW.
    - c: Manual gearbox.
    - d: Automatic gearbox.
  6. Engine oil decal<sup>1</sup>
- The decal specifies oil grade, viscosity and volume.

## Dimensions and weights

### Dimensions

**Length:** 480 cm

**Width:** 190 cm

**Height:** 178 cm

**Wheelbase:** 286 cm

**Front track:** 163 cm

**Rear track:** 162 cm

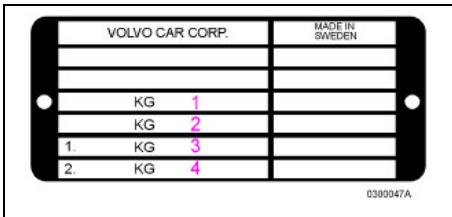
### Weights

The kerb weight includes the driver, the fuel tank 90 % full and all fluids such as washer fluid and coolant. The weight of passengers and accessories, such as a towbar, towball load (when a trailer is hitched, see table), load carriers, and space box etc. influence the payload and must not be included in the kerb weight. Permitted weight (in addition to driver) = Gross vehicle weight-Kerb weight.

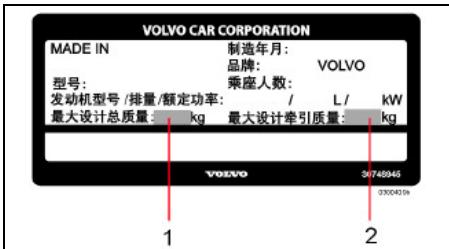


#### WARNING!

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



Variant 1

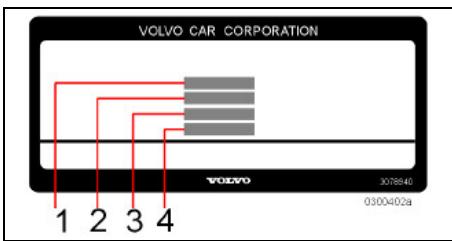


Only China

1. Max. total weight
2. Maximum trailer weight

**Maximum load:** See registration document.

**Maximum roof load:** 100 kg



Variant 2

1. Max. total weight
2. Max. train weight (car+trailer)
3. Max. front axle load
4. Max. rear axle load

See decal location on page 236.

### Trailer with brakes

Maximum trailer weight	Maximum towball load
0-1200 kg	50 kg
2250 kg	90 kg

### Trailer without brakes

Maximum trailer weight 750 kg

## Engine specifications

Specification	Engine designation			
	<b>2.5T B5254T2</b>	<b>T6 B6294T</b>	<b>V8 AWD B8444S</b>	<b>D5 AWD D5244T4</b>
Output (kW/rps) (hp/rpm)	154/83	200/85	232/98	136/67
	210/5000	272/5100	315/5850	185/4000
Torque (Nm/rps) (kpm/rpm)	320/25-75	380/30-83	440/65	400/33-46
	32.6/1500-4500	38.8/1800-5000	44.9/3900	40.8/2000-2750
No. of cylinders	5	6	8	5
Bore (mm)	83	83	94	81
Stroke (mm)	93.2	90	79.5	93.2
Swept volume (dm <sup>3</sup> or litres)	2.521	2.922	4.414	2.40
Compression ratio	9.0:1	8.5:1	10.4:1	17.0:1
<b>Spark plugs:</b>				
Electrode gap (mm)	0.7	0.7	1.1	-
Tightening torque (Nm)	30	30	30	-

Engine type designation, component and serial number can be read on the engine, see page 236.

## 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.
- shorter driving distances (shorter than 10 km) at low temperatures (under 5 °C).

This may result in abnormally high oil temperature or oil consumption.

Choose a fully synthetic engine oil for adverse driving conditions. It provides extra protection for the engine.

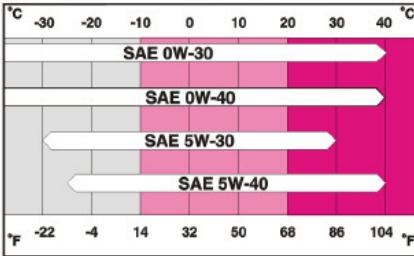
Volvo recommends  oil products.

### IMPORTANT!

Always use the prescribed oil grade and viscosity.

If an oil other than that prescribed has been used, contact the local authorised Volvo workshop immediately for service.

Do not use extra oil additives. They could damage the engine.



Viscosity chart

### Engine oil



When the oil decal shown alongside here is in the car's engine compartment, the following applies. See location on page 236.

**Oil grade: ACEA A1/B1**

**Viscosity: SAE 5W-30**

When driving under adverse conditions, use ACEA A5/B5 SAE 0W-30.

*Oil decal*

### Capacities

Engine variant	Volume between MIN - MAX (litres)	Volume <sup>1</sup> (litres)
T6	1.5 litres	6.6
B6294T		

1. Including filter change.

## Engine oil



When the oil decal shown alongside here is in the car's engine compartment, the following applies. See location on page 236.

**Oil grade: ACEA A5/B5**

**Viscosity: SAE 0W-30**

*Oil decal*

### Capacities

Engine variant		Volume between MIN - MAX (litres)	Volume <sup>1</sup> (litres)
2.5T	B5254T2	1.2	5.5
V8 AWD	B8444S		6.7
D5 AWD	D5244T4	2.0	6.2

1. Including filter change.

## Other fluids and lubricants

### IMPORTANT!

The recommended transmission fluid must be used to prevent damage to the gearbox. Do not mix with any other transmission fluid. If the transmission is topped up with a different fluid, contact an authorised Volvo workshop for servicing.

Fluid	System	Volume	Recommended oil grade:
Gearbox oil	Manual 6-speed (M66)	2.0 litres	Transmission fluid MTF 97309
	Automatic gearbox (AW55-51)	7.2 litres	Transmission fluid JWS 3309
	Automatic gearbox (GM4T65)	12.7 litres	Transmission fluid Dexron III G
	Automatic gearbox (TF-80SC)	7.0 litres	Transmission fluid JWS 3309
Coolant	Petrol engine 2.5T	9.0 litres	Coolant with corrosion inhibitor mixed with water, see packaging. The thermostat starts opening at: 90 °C in petrol engines and at 82 °C in diesel engines.
	Petrol engine T6	10.5 litres	
	Petrol engine V8	10.2 litres	
	Diesel engine D5	12.5 litres	
Air conditioning		1000 gr	Oil: PAG
	with AC in rear passenger compartment	1300 gr	Refrigerant R134a (HFC134a)
Brake fluid		0.6 litres	DOT 4+
Power steering	System:	1.0 litre	Power steering fluid: WSS M2C204-A or equivalent product with same specifications.
	of which reservoir	0.2 litres	
Washer fluid		6.5 litres	Use a washer antifreeze recommended by Volvo, mixed with water for temperatures below freezing.

**Fuel****Consumption, emissions**

Engine		Gearbox	Consumption litre/100 km	Emissions of carbon dioxide (CO <sub>2</sub> ) g/km	Tank volume litres
2.5T	B5254T2	Manual 6-speed (M66)	11.1(11.2) <sup>1</sup>	266(269) <sup>1</sup>	80
		Automatic gearbox (AW 55-51)	11.7(11.8) <sup>1</sup>	280(282) <sup>1</sup>	
T6	B6294T	Automatic gearbox (GM4T65)	12.7	304	80
V8 AWD	B8444S	Automatic gearbox (TF-80SC)	13.3(13.5) <sup>1</sup>	317(322) <sup>1</sup>	80
D5 AWD	D5244T4	Automatic gearbox (TF-80SC)	9.0(9.0) <sup>1</sup>	239(239) <sup>1</sup>	68
		Manual 6-speed (M66)	8.2(8.3) <sup>1</sup>	217(219) <sup>1</sup>	

1. Applies to the variant seating seven.

### Fuel

#### Fuel consumption and emissions of carbon dioxide

Official fuel consumption figures are based on a standard driving cycle in accordance with EU Directive 80/1268 comb. Fuel consumption figures may change if the car is equipped with extra equipment that affects the car's weight. The manner in which the car is driven and other non-technical factors can affect fuel consumption. Consumption is higher and power output lower for fuel with an octane rating of 91 RON.

#### Petrol

Most engines can be run with octane ratings of 91, 95 and 98 RON.

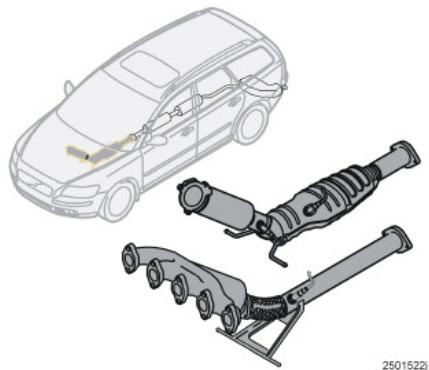
- 91 RON must **not** be used in 4 cylinder engines.
- 95 RON can be used for normal driving.
- 98 RON is recommended for optimum performance and minimum fuel consumption.

When driving in temperatures above +38 °C, it is recommended to use fuel with the highest possible octane rating for optimum performance and fuel economy.

Petrol: Standard EN 228

Diesel: Standard EN 590

## Catalytic converter



2501522

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

### General

The purpose of the catalytic converter is to purify exhaust gases. It is located in the flow of exhaust gasses 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 platinum/rhodium/palladium. These metals act as catalysts, i.e. they 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.

## Electrical system

### General

12 V system with a voltage-regulated alternator. Single pole system in which the chassis and engine block are used as conductors. The negative terminal is connected to the chassis.

### Battery

Performance	Engine			
	<b>2.5T</b>	<b>T6</b>	<b>V8 AWD</b>	<b>D5 AWD</b>
Voltage	12 V	12 V	12 V	12 V
Cold start capacity (CCA)	600 A <sup>1</sup>	600 A <sup>1</sup>	600 A <sup>1</sup>	800 A
Reserve capacity (RC)	120 min	120 min	120 min	170 min

1. Cars with a parking heater have an 800 A battery.

If the battery is changed, replace it with a battery of the same cold start capacity and reserve capacity as the original (see the decal on the battery).

### Alternator

Performance	Engine			
	<b>2.5T</b>	<b>T6</b>	<b>V8 AWD</b>	<b>D5 AWD</b>
Max. current A	140	160	170	140

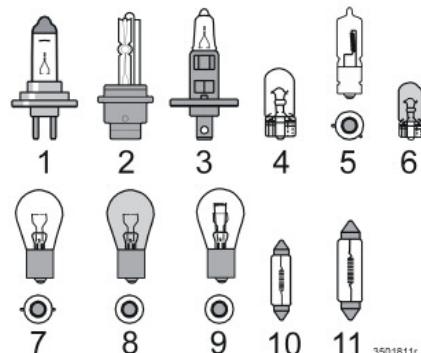
### Starter motor

Performance	Engine			
	<b>2.5T</b>	<b>T6</b>	<b>V8 AWD</b>	<b>D5 AWD</b>
Output (kW)	1.4	1.7	2.0	2.2

## Electrical system

### Bulbs

Lighting	Output W	Socket
1. Main beam/dipped beam	55	H7
2. Bi-Xenon	35	D2R
3. Fog lamp, front	55	H1
4. Front position lamps, front parking lamps, front side marker lamps, number plate lighting, rear courtesy lighting	5	W 2.1 x 9.5d
5. Front direction indicators, rear fog lamp	21	BAY9s
6. Side direction indicators	5	W 2.1 x 9.5d
7. Brake lamp, reversing lamp	21	BAY15d
8. Rear direction indicators	21	BA15s
9. Rear position lamps,	4	BAZ15s
10. Vanity mirror	1.2	SV5.5
11. Front courtesy lighting, cargo compartment lighting	5	SV8.5
Glovebox lighting	3	BA9



3501611r



**A**

ABS .....	45
Adaptive system .....	118
Additional heater .....	77
Air conditioning, rear of passenger compartment .....	49
Air distribution, A/C .....	71
Air distribution, ECC .....	74
Air quality system, ECC .....	73
Airbag, passenger side .....	14
Airbags .....	26
Alarm .....	212
Alarm LED .....	109
Alternator .....	246
Audio settings .....	205
Audio system functions .....	204
Auto, ECC .....	74
Automatic gearbox .....	118
Automatic locking .....	103
Auxiliary lamps .....	50
Average fuel consumption .....	56

**B**

Battery .....	129, 171, 179, 246
Battery, overloading .....	113
Bird droppings .....	164
Blind spot (BLIS) .....	143
BLIS .....	50, 143
Bonnet .....	172
Bonnet, opening .....	59

Booster cushion, integrated .....	32
Brake fluid .....	177
Brake system .....	45
Bulbs .....	182

**C**

Call volume .....	228
Carbon dioxide .....	244
Cargo area .....	189
Cargo compartment, extension .....	92
Cargo cover .....	96
Catalytic converter .....	245
CD changer .....	218
CD/MD .....	216
Changing tracks, CD/MD .....	216
Child safety equipment .....	27
Child safety locks .....	49, 106
Child seat, fitting .....	34
Child seats and airbags .....	28
Child seats and side airbags .....	19
Children in the car, placement .....	30
Cigarette lighter socket .....	50
Clean inside and out .....	3
Cleaning seatbelts .....	165
Cleaning the upholstery .....	165
Cleaning, Car washing .....	164
Clock .....	43
Clutch fluid .....	177
Cold start .....	118
Collision sensors .....	21

Colour code, paint .....	166
Condensation .....	173
Control panels, audio .....	199
Coolant .....	176
Courtesy lighting .....	189

**D**

Deadlocks .....	50, 104
Detachable towbar .....	134
Detectors .....	50
Diesel particle filter .....	115
Dimensions .....	237
Dipped beam .....	52, 184
Direction indicators .....	43, 53, 185
DiscText .....	216
Display .....	47
Door mirrors, heated .....	51
Door mirrors, retractable .....	50
DSTC .....	46, 49, 124

**E**

Economical driving .....	112
Ejecting a CD .....	219
Electric child safety locks .....	107
Electrical system .....	246
Emergency puncture repair .....	157
Emissions system .....	45
Engine compartment .....	172
Engine oil .....	174, 240
Engine oil decal .....	236

Environmental philosophy .....	3
EON .....	215
Equalizer .....	207
Expectant mothers .....	11

## F

Fan .....	71
Fan, ECC .....	75
Fast forward/reverse .....	216
Floor mats .....	86
Fluids .....	242
Fog lamp .....	52
Fog lamps .....	185
Frequency updating, automatic .....	214
Front lamp .....	183
Front seats, heated .....	51
Fuel consumption .....	244
Fuel consumption, current .....	56
Fuel filler flap .....	114
Fuel gauge .....	43
Fuel system .....	173
Fuel, refuelling .....	114
Functions during a call .....	227

## G

Gear positions, six-speed .....	117
Gear selector inhibitor .....	119
Gear selector, manual positions .....	120
Glovebox .....	86, 104
Gross vehicle weight .....	237

## H

Handbrake .....	58
Hazard warning flashers .....	51
Head restraints, rear .....	91
Headlamp levelling .....	52
Headlamp pattern .....	140
Headlamp washer .....	55
Headlamps .....	52
Headphone sockets .....	201
Heated door mirrors .....	71
Heated front seats .....	71
Heated rear window .....	71
Home safe lighting .....	53

## I

Ignition key .....	116
IMEI number .....	230
Immobiliser .....	100, 116
Important dialogue boxes .....	2
"Important!" texts .....	2
Indicator and warning symbols .....	43
Inflatable curtain .....	26
Inflatable curtains .....	21
Information display .....	47
Infotainment system .....	198
Instrument lighting .....	52
Integrated booster cushion .....	32
Interior lighting .....	83
Intermittent wiping .....	54
ISOFIX fixture system .....	34

## K

Kerb weight .....	237
Key .....	100
Kick-down .....	118

## L

Lambda-sond .....	245
Lighting .....	182
Loading the cargo compartment .....	93
Locking .....	103
Lock-up function .....	118
Lowering the backrest, front .....	80
Lowering, rear seats .....	90
Lubricants .....	242

## M

Main beam .....	43, 52, 184
Main beam "flash" .....	53
Main beam, switching, flash .....	53
Menu structure, audio .....	220
Menus .....	200
Message, display .....	47
Misting .....	68
MY KEY .....	221

## N

News, setting .....	210
"Note" texts .....	2
Number plate lighting .....	188

**O**

Odometer .....	43
Oil filter .....	174
Oil grade .....	240
Oil pressure .....	45
Outside temperature gauge .....	43
Oxyhydrogen gas .....	180

**P**

PACOS .....	17
Paint, colour code .....	166
Paintwork, touching up .....	166
Panel vents .....	69
Parking assistance .....	50, 125
Parking brake .....	58
Parking heater, battery and fuel .....	77
Parking heater, parking .....	76
Parking lamps .....	52, 184
Particle filter, diesel .....	115
Petrol grade .....	244
Phone book .....	228
PI seek .....	210
Pinch protection .....	66
Polishing and waxing .....	165
Position lamps .....	52, 184
Power steering fluid .....	177
Privacy handset .....	227
PTY - programme type .....	212
PTY, search .....	213

**R**

Radio text .....	211
Rain sensor .....	54
Random .....	216, 218
RDS .....	210
RDS, resetting .....	215
Rear fog lamp .....	188
Rear lamp cluster .....	186
Rear window washer and wiper .....	55
Recirculation .....	70
Recovery .....	127
Refrigerant .....	68
Regional radio programmes .....	214
Relay/fuse box .....	191
Remote control .....	100, 202
Remote control functions .....	101
Remote control, battery replacement .....	102
Rustproofing, touching up .....	168

**S**

Safety grille .....	95
Safety net .....	94
Safety systems, automatic gearbox .....	118
Scan, CD/MD .....	216
Scanning .....	210
Seat, power seat .....	81
Seat, seating position .....	80
Seatbelt reminder .....	11
Seatbelt tensioner .....	12
Seatbelts .....	10
Service programme .....	170
Shortcuts, telephone .....	225
Side airbags .....	19
Side direction indicators .....	185
Side indicator lamp .....	185
Side lamps .....	184
SIM card .....	226
SIM cards, double .....	230
SIPS bag system .....	20
Sliding seat .....	90
Slippery driving conditions .....	112
Spare wheel .....	153
Speed dial .....	227
Speedometer .....	43
Spots .....	165
SRS system .....	15
SRS, switch .....	18
Stability system .....	124
Standby mode .....	225
Start assistance .....	129
Starter motor .....	246
STC .....	124
Steering lock .....	116
Steering wheel adjustment .....	59
Steering wheel keypad .....	200
Storage spaces in the passenger compartment .....	85
Storing stations .....	208, 209
Subwoofer .....	206
Sunscreen .....	66
Surround .....	206

Switch, telephone ..... 225

### T

Tachometer ..... 43

Tailgate, opening ..... 60

Telephone functions ..... 224

Telephone system, overview ..... 223

Temperature gauge ..... 43

Temporary spare ..... 152

Timer ..... 70

Towbar ..... 132

Towing ..... 127

Towing eye ..... 128

TP, traffic information ..... 211

Traction control ..... 124

Trailer ..... 130

Trailer weight ..... 237

Trip computer ..... 56

Trip odometer ..... 43

Tuning ..... 208

Tyre pressures, recommended ..... 151

Tyres

  designation of dimensions ..... 148

  driving characteristics ..... 148

  speed ratings ..... 148

  tread wear indicators ..... 149

### V

Vanity mirror ..... 189

Vehicle data ..... 170

Viscosity ..... 240

Volume control ..... 204

Volume control, programme types ..... 205

Volume reduction, telephone call ..... 225

Volvo Car Corporation and  
the environment ..... 3

### W

Wading ..... 112

Warning dialogue boxes ..... 2

"Warning!" texts ..... 2

Warning triangle ..... 152

Washer fluid ..... 176

Washing the car ..... 164

Waxing and polishing ..... 165

Weights ..... 237

Wheels

  direction of rotation ..... 150

  fitting ..... 156

  removal ..... 154

Whiplash injury ..... 22

Whiplash protection ..... 22

WHIPS ..... 22

Windscreen washer ..... 55

Windscreen wipers ..... 54

Winter tyres ..... 149

Wiper blades ..... 178

### U

Unlocking ..... 103



Volvo Car Corporation

TP 8193 (English). AT 0540. Printed in Sweden, Elanders Infologistics Väst AB, Mölnlycke 2005