V60 Cross Country 2015 (14w46) User Manual

Version 2026-04-17

Disclaimer

Due to the dynamic nature of our software-based product, the content of this PDF represents the most up-to-date version of the user manual as of the time of printing. As we continuously update and improve our product, certain content may not reflect the most up-to-date information in a future instance. Therefore, we strongly recommend utilizing the digital user manual app in your car's center display for the most accurate and up-to-date information. You can also access information in the Volvo Cars mobile app.

Please note that if you choose to print the manual, we cannot guarantee the validity of the information in future instances, as updates may have occurred since the time of printing. To ensure the highest level of safety and optimal product usage, we strongly advise relying on the digital user manual, which can be easily accessed through your car's center display.

This printable version is generic and does not correspond to your car. If there are discrepancies between this printable manual and the manual you see in your car's center display, the latter takes precedence.

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1. Introduction

1.1. Important information

1.1.1. Important warnings

Please keep the following warnings in mind when operating/servicing your vehicle.

Driver distraction

A driver has a responsibility to do everything possible to ensure his or her own safety and the safety of passengers in the vehicle and others sharing the roadway. Avoiding distractions is part of that responsibility.

Driver distraction results from driver activities that are not directly related to controlling the vehicle in the driving environment. Your new Volvo is, or can be, equipped with many feature-rich entertainment and communication systems. These include hands-free cellular telephones, navigation systems, and multipurpose audio systems. You may also own other portable electronic devices for your own convenience. When used properly and safely, they enrich the driving experience. Improperly used, any of these could cause a distraction.

For all of these systems, we want to provide the following warning that reflects the strong Volvo concern for your safety. Never use these devices or any feature of your vehicle in a way that distracts you from the task of driving safely. Distraction can lead to a serious accident. In addition to this general warning, we offer the following guidance regarding specific newer features that may be found in your vehicle:

- Never use a hand-held cellular telephone while driving. Some jurisdictions prohibit cellular telephone use by a driver while the vehicle is moving.
- If your vehicle is equipped with a navigation system, set and make changes to your travel itinerary only with the vehicle parked.
- Never program your audio system while the vehicle is moving. Program radio presets with the vehicle parked, and use your programmed presets to make radio use quicker and simpler.
- Never use portable computers or personal digital assistants while the vehicle is moving.

Accessory installation

- We strongly recommend that Volvo owners install only genuine, Volvo-approved accessories, and that accessory installations be performed only by a trained and qualified Volvo service technician.
- Genuine Volvo accessories are tested to ensure compatibility with the performance, safety, and emission systems in your vehicle. Additionally, a trained and qualified Volvo service technician knows where accessories may and may not be safely installed in your Volvo. In all cases, please consult a trained and qualified Volvo service technician before installing any accessory in or on your vehicle.
- Accessories that have not been approved by Volvo may or may not be specifically tested for compatibility with your vehicle. Additionally, an inexperienced installer may not be familiar with some of your car's systems.

- Any of your car's performance and safety systems could be adversely affected if you install accessories that Volvo has not tested, or if you allow accessories to be installed by someone unfamiliar with your vehicle.
- Damage caused by unapproved or improperly installed accessories may not be covered by your new vehicle warranty. See your Warranty and Service Records Information booklet for more warranty information. Volvo assumes no responsibility for death, injury, or expenses that may result from the installation of non-genuine accessories.

1.1.2. Crash event data

This vehicle is equipped with an event data recorder (EDR). The main purpose of an EDR is to record, in certain crash or near crash-like situations, such as an air bag deployment or hitting a road obstacle, data that will assist in understanding how a vehicle's systems performed. The EDR is designed to record data related to vehicle dynamics and safety systems for a short period of time, typically 30 seconds or less. The EDR in this vehicle is designed to record such data as:

- How various systems in your vehicle were operating;
- Whether or not the driver and passenger safety belts were buckled/fastened;
- How far (if at all) the driver was depressing the accelerator and/or brake pedal; and,
- How fast the vehicle was traveling.

These data can help provide a better understanding of the circumstances in which crashes and injuries occur.

> **Note**
>
> EDR data are recorded by your vehicle only if a non-trivial crash situation occurs; no data are recorded by the EDR under normal driving conditions and no personal data (e.g., name, gender, age, and crash location) are recorded. However, other parties, such as law enforcement, could combine the EDR data with the type of personally identifying data routinely acquired during a crash investigation.

To read data recorded by an EDR, special equipment is required, and access to the vehicle or the EDR is needed. In addition to the vehicle manufacturer, other parties, such as law enforcement, that have the special equipment, can read the information if they have access to the vehicle or the EDR.

Furthermore, your vehicle is equipped with a number of computers whose task is to continuously control and monitor the vehicle’s operation. They can also register information during normal driving conditions if they detect a fault relating to the vehicle’s operation and functionality. Some of the stored information is required by technicians when carrying out service and maintenance to enable them to diagnose and rectify any faults that have occurred in the vehicle and to enable Volvo to fulfill legal and other regulatory requirements. This information may be stored in the vehicle’s computers for a certain period of time.

Volvo will not contribute to spreading the above-mentioned information to third parties without the consent of the vehicle’s owner. However, due to national legal requirements and regulations, Volvo may be compelled to provide information of this type to authorities such as law enforcement agencies or others who may assert a legal right to obtain such information.

Volvo and service and repair facilities with agreements with Volvo have access to the special technical equipment required in order to read and interpret the information stored by the vehicle’s computers. Volvo is responsible for ensuring that the information transmitted to Volvo during service and maintenance is stored and handled in a secure manner and that this handling is done in accordance with applicable legal requirements. For additional information, contact:

For additional information, contact:

In the United States

Volvo Cars of North America, LLC

Customer Care Center

1 Volvo Drive, P.O. box 914

Rockleigh, New Jersey 07647

1-800-458-1552

www.volvocars.com/us

In Canada

Volvo Cars of Canada

National Customer Service

9130 Leslie Street

Richmond Hill, Ontario L4B 0B9

1-800-663-8255

www.volvocars.com/ca

1.1.3. Contacting Volvo

In the USA:

Volvo Cars of North America, LLC

Customer Care Center

1 Volvo Drive,

P.O. Box 914

Rockleigh, New Jersey 07647

1-800-458-1552

www.volvocars.com/us

In Canada:

Volvo Cars of Canada

National Customer Service

9130 Leslie Street, Suite 101

Richmond Hill, Ontario L4B 0B9

1-800-663-8255

www.volvocars.com/ca

1.1.4. Information on the Internet

Additional information regarding your vehicle can be found at www.volvocars.com.

In order to read a QR code, a QR reader is necessary, which is available as an app for a number of different cell phones and can be downloaded from the App Store or Google Play.



1.1.5. Open Source Software Notice

The systems in your Volvo contain certain free/open source and other software.

This product uses certain free / open source and other software originating from third parties, that is subject to the GNU General Public License version 2 and 3 (GPLv2/GPLv3), GNU Lesser General Public License version 3 (LGPLv3), The FreeType Project License (“FreeType License”) and other different and/or additional copyright licenses, disclaimers and notices. The links how to access the exact terms of GPLv2, GPLv3, LGPLv3, and the other open source software licenses, disclaimers, acknowledgements and notices are provided to you below. Please refer to the exact terms of the relevant License, regarding your rights under said licenses. Volvo Car Corporation (VCC) offers to provide the source code of said free/open source software to you for a charge covering the cost of performing such distribution, such as the cost of media, shipping and handling, upon written request. Please contact your nearest Volvo retailer.

This offer is valid for a period of at least three (3) years from the date of the distribution of this product by VCC / or for as long as VCC offers spare parts or customer support.

Portions of this product uses software copyrighted © v2.4.3/2010 The FreeTypeProject (www.freetype.org). All rights reserved.

This product includes software under following licenses:

GPL v2 : http://www.gnu.org/licenses/old-licenses/gpl-2.0.html

- Linux kernel (merge between MontaVista 2.6.31 kernel and kernel from L2.6.31_MX51_ER_1007 BSP)
- uBoot (based on v2009.08)
- busybox (based on version 1.13.2.)

GCC runtime library exception: http://www.gnu.org/licenses/gcc-exception.html

- libgcc_s.so.1

LGPL v3: http://www.gnu.org/licenses/lgpl.html

- Libc.so.6, libpthread.so.0, Librt.so.1

The FreeType Project License: http://www.freetype.org/FTL.TXT

- libfreetype.so.6 (version 2.4.3)

1.1.6. Volvo Structural Parts Statement

Volvo has always been and continues to be a leader in automotive safety.

Volvo engineers and manufactures vehicles designed to help protect vehicle occupants in the event of a collision.

Volvos are designed to absorb the impact of a collision. This energy absorption system including, but not limited to, structural components such as bumper reinforcement bars, bumper energy absorbers, frames, rails, fender aprons, A-pillars, B-pillars and

body panels must work together to maintain cabin integrity and protect the vehicle occupants.

The supplemental restraint system including but not limited to air bags, side curtain air bags, and deployment sensors work together with the above components to provide proper timing for air bag deployment.

Due to the above, Volvo Cars of North America does not support the use of aftermarket, alternative or anything other than original Volvo parts for collision repair.

In addition Volvo does not support the use or re-use of structural components from an existing vehicle that has been previously damaged. Although these parts may appear equivalent, it is difficult to tell if the parts have been previously replaced with non-OE parts or if the part has been damaged as a result of a prior collision. The quality of these used parts may also have been affected due to environmental exposure.

1.1.7. About this manual

Reading your owner's manual is a good way to familiarize yourself with the features and systems in your vehicle.

- Before you operate your vehicle for the first time, we recommend that you look through the information found in the chapters "Your Driving Environment" and "During Your Trip."
- Information contained in the balance of the manual is extremely useful and should be read after operating the vehicle for the first time.

On-board owner's manual

When the printed manual refers to the on-board owner's manual, this pertains to the information displayed on the center console screen.

There are four ways of finding information articles in the on-board owner's manual:

- **Searching**: search for an article.
- **Categories**: All of the articles are sorted by category.
- **Favorites**: Quick access to frequently read articles.
- **Quick Guide**: A selection of articles covering commonly used functions.

Select the symbol in the lower right-hand corner for additional information about the on-board owner's manual.

> **Note**
>
> - The on-board owner's manual cannot be accessed while the vehicle is moving.
> - Specifications regarding your vehicle are not found in the on-board information. This information is listed in the printed owner's manual.

The owner's manual in mobile devices



Note

The owner's manual mobile app can be downloaded at www.volvocars.com.

The mobile app also contains videos and searchable content, and provides easy navigation between the various articles.

Footnotes

Certain pages of this manual contain information in the form of footnotes at the bottom of the page. This information supplements the text that the footnote number refers to (a letter is used if the footnote refers to text in a table).

Display texts

There are several displays in the driver's field of vision that show messages generated by various systems and functions in the vehicle. These texts are indicated in the Owner's Manual by being in slightly larger type than the surrounding text and are printed in gray, (for example: **Change doors unlock setting**).

Decals

There are various types of decals in the vehicle whose purpose is to provide important information in a clear and concise way. The importance of these decals is explained as follows, in descending order of importance.



Black ISO symbols on a yellow warning background, white text/image on a black background. Decals of this type are used to indicate potential danger. Ignoring a warning of this type could result in serious injury or death.

The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.



White ISO symbols and white text/image on a black or blue warning background and space for a message. If the information on decals of this type is ignored, damage to the vehicle could result.

The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.

Information



White ISO symbols and white text/image on a black background. These decals provide general information.

> **Note**
>
> The decals shown in the Owner's Manual are examples only and are not intended to be reproductions of the decals actually used in the vehicle. The purpose is to give an indication of how they look and their approximate location in the vehicle. The applicable information for your particular vehicle can be found on the respective decals in the vehicle.

Types of lists used in the owner's information

Procedures

Procedures (step-by-step instructions), or actions that must be carried out in a certain order, are arranged in numbered lists in this manual.

1. If there is a series of illustrations associated with step-by-step instructions, each step in the procedure is numbered in the same way as the corresponding illustration.

A. Lists in which letters are used can be found with series of illustrations in cases where the order in which the instructions are carried out is not important.

- Arrows with or without numbers are used to indicate the direction of a movement.

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Arrows containing letters are used to indicate movement.

If there are no illustrations associated with a step-by-step list, the steps in the procedure are indicated by ordinary numbers.

Position lists

Red circles containing a number are used in general overview illustrations in which certain components are pointed out. The corresponding number is also used in the position list's description of the various components.

Bullet lists

Bullets are used to differentiate a number of components/functions/points of information that can be listed in random order.

For example:

- Coolant
- Engine oil

Options and accessories

Optional or accessory equipment described in this manual is indicated by an asterisk.

Optional or accessory equipment may not be available in all countries or markets. Please note that some vehicles may be equipped differently, depending on special legal requirements.

Contact your Volvo retailer for additional information.

Note

- Do not export your Volvo to another country before investigating that country's applicable safety and exhaust emission requirements. In some cases it may be difficult or impossible to comply with these requirements. Modifications to the emission control system(s) may render your Volvo not certifiable for legal operation in the U.S., Canada and other countries.
- All information, illustrations and specifications contained in this manual are based on the latest product information available at the time of publication. Please note that some vehicles may be equipped differently, depending on special legal requirements. Optional equipment described in this manual may not be available in all markets.
- Some of the illustrations shown are generic and may not depict the exact model for which this manual is intended.
- Volvo reserves the right to make model changes at any time, or to change specifications or design without notice and without incurring obligation.

Warning

If your vehicle is involved in an accident, unseen damage may affect its drivability and safety.

Warning

CALIFORNIA proposition 65

Engine exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the state of California to cause cancer, and birth defects or other reproductive harm. In addition, certain fluids contained in vehicles and certain products of component wear contain or emit chemicals known to the State of California to cause cancer, and birth defects or other reproductive harm.

Warning

Certain components of this vehicle such as air bag modules, seat belt pretensioners, adaptive steering columns, and button cell batteries may contain Perchlorate material. Special handling may apply for service or vehicle end of life disposal.

See www.dtsc.ca.gov/hazardouswaste/perchlorate.

Shiftlock

When your vehicle is parked, the gear selector is locked in the **P** (Park) position. To release the selector from this position, the ignition must be in mode II or the engine must be running. Depress the brake pedal, press the button on the front side of the gear selector and move the selector from **P** (Park).

Anti-lock Brake System (ABS)

The ABS system performs a brief self-diagnostic test when the engine has been started and driver releases the brake pedal. Another automatic test may be performed when the vehicle first reaches a speed of approximately 6 mph (10 km/h). The brake pedal will pulsate several times and a sound may be audible from the ABS control module. This is normal.

Fuel filler door

Press the button on the light switch panel (see the illustration in Refueling – opening/closing fuel filler door) when the vehicle is at a standstill to unlock the fuel filler door. It will relock when closed and there will be an audible click.

Points to keep in mind

- Do not export your Volvo to another country before investigating that country's applicable safety and exhaust emission requirements. In some cases it may be difficult or impossible to comply with these requirements. Modifications to the emission control system(s) may render your Volvo not certifiable for legal operation in the U.S., Canada and other countries.
- All information, illustrations and specifications contained in this manual are based on the latest product information available at the time of publication. Please note that some vehicles may be equipped differently, depending on special legal requirements. Optional equipment described in this manual may not be available in all markets.
- Some of the illustrations shown are generic and may not depict the exact model for which this manual is intended.
- Volvo reserves the right to make model changes at any time, or to change specifications or design without notice and without incurring obligation.

1.1.8. Technician certification

In addition to Volvo factory training, Volvo supports certification by the National Institute for Automotive Service Excellence (A.S.E.).

Certified technicians have demonstrated a high degree of competence in specific areas. Besides passing exams, each technician must also have worked in the field for two or more years before a certificate is issued. These professional technicians are best able to analyze vehicle problems and perform the necessary maintenance procedures to keep your Volvo at peak operating condition.

1.1.9. Volvo On Call Roadside Assistance

Your new Volvo comes with a four year ON CALL roadside assistance.

Additional information, features, and benefits of this program are described in a separate information package in your glove compartment.

If you require assistance, dial:

In the U.S. 1-800-638-6586 (1-800-63-VOLVO)

In Canada 1-800-263-0475

> **Note**
>
> Some vehicles may be equipped with **Volvo On Call with Sensus Connect**, which will allow access to the call center and additional features directly from the vehicle. This is in addition to the Volvo On Call Roadside Assistance program mentioned above.
>
> **Volvo On Call with Sensus Connect** will be a customer pay subscription offer after an initial complimentary trial period.

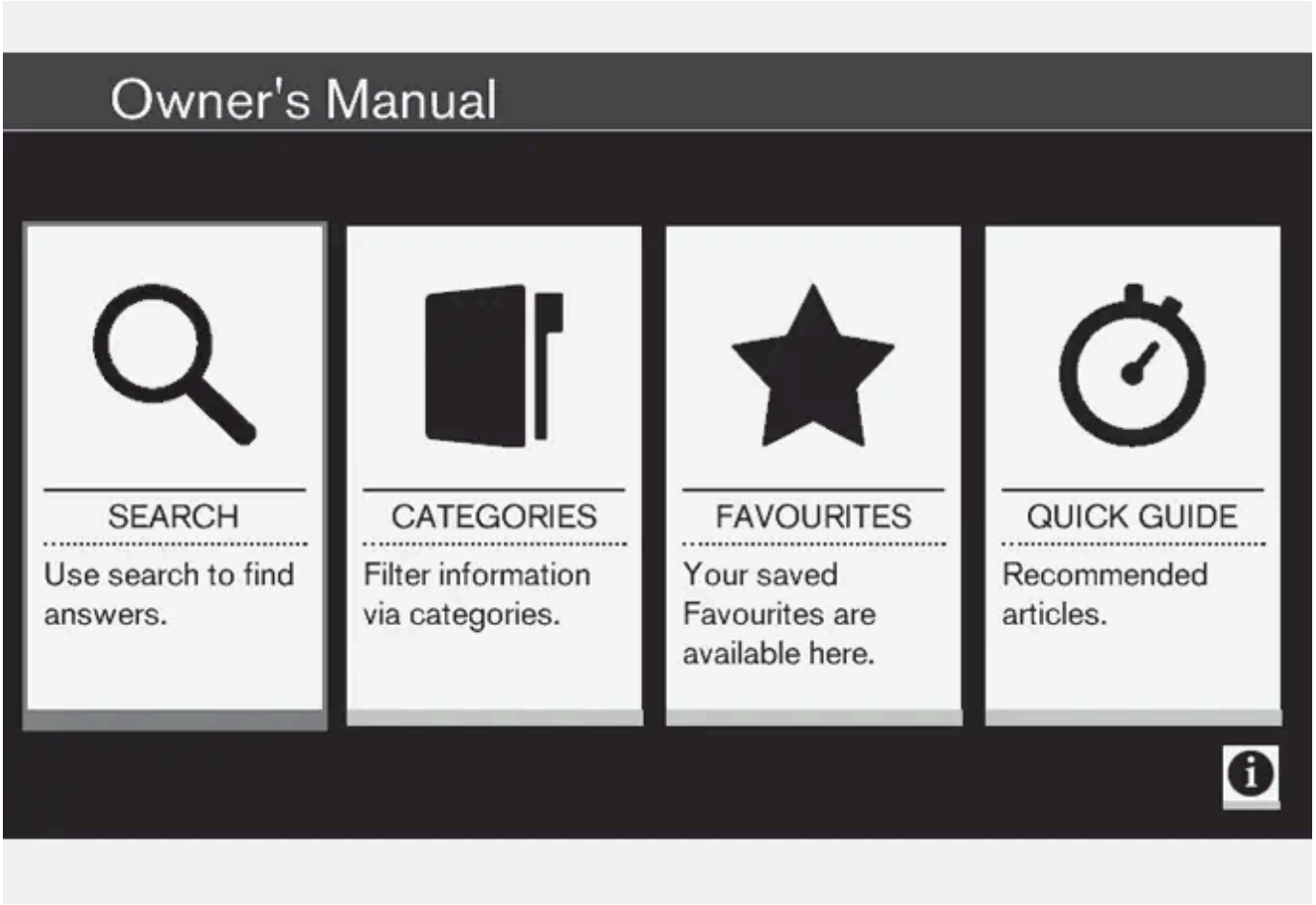
1.2. On-board owner's manual

The owner's manual can be displayed on the center console screen and you can carry out searches for the information that you require.



To open the owner's manual, press the MY CAR button on the center console, press OK/MENU and select **Owner's manual**.

For basic information about navigating in the on-board information. The following sections also provide more detailed information.



The on-board owner's manual start page

There are four ways of finding information articles in the on-board owner's manual:

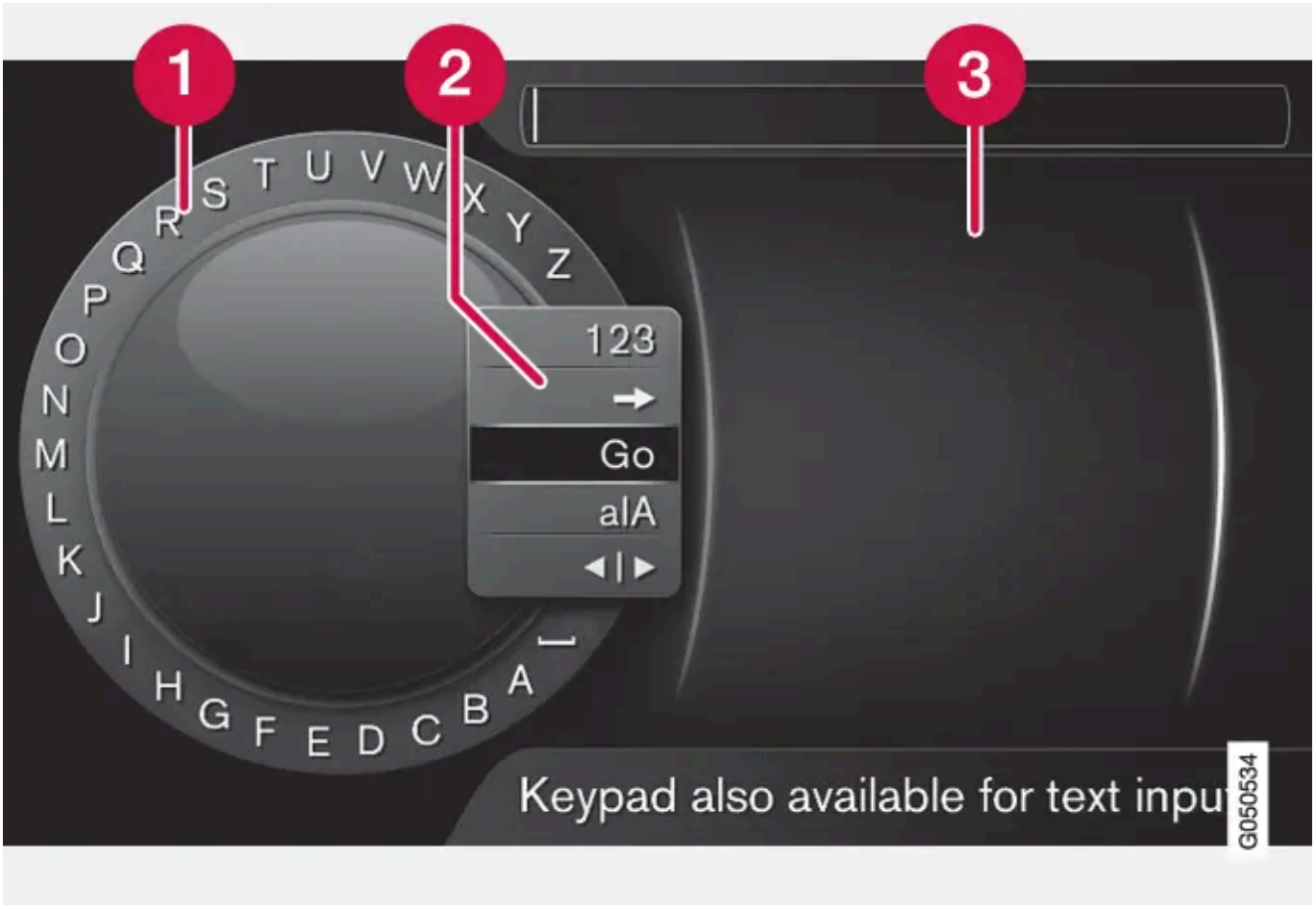
- **Searching**: search for an article.
- **Categories**: All of the articles are sorted by category.
- **Favorites**: Quick access to frequently read articles.
- **Quick Guide**: A selection of articles covering commonly used functions.

Select the symbol in the lower right-hand corner for additional information about the on-board owner's manual.

Note

- The on-board owner's manual cannot be accessed while the vehicle is moving.
- Specifications regarding your vehicle are not found in the on-board information. This information is listed in the printed owner's manual.

Searching for information



Searching using the text wheel

1 List of characters

2 Switching between character entry modes (see the following table)

3 Surf history

Use the text wheel to enter a web address.

1. Turn TUNE to the desired letter and press OK/MENU to confirm. The number/letter keys on the center console can also be used.
2. Continue to the next letter, etc. The results of the search will be displayed in the phone book.
3. To switch from letter entry mode to the entry mode for numbers or special characters, or to go view surf history, turn TUNE to one of the selections (see the explanation in the following table) in the list for switching character entry mode (2) and press OK/MENU.

123/ABC	Toggle between letters and numbers by pressing OK/MENU.
=>	This leads to surf history. Turn TUNE to select a web address and press OK/MENU to go to the website.
Go	Go to the website by pressing OK/MENU.

The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.

a|A	Toggle between upper and lower case letters by pressing OK/MENU.
{ | }	Switch from the text wheel to the **Address:** field. Use TUNE to move the cursor and erase characters by pressing EXIT. Press OK/MENU to return to the text wheel. The number/letter keys on the center console can also be used to edit the **Address:** field.

Press EXIT briefly to erase a single character. Press and hold EXIT to erase all characters.

Pressing a number key on the center console while the text wheel is displayed (see the previous illustration) will display a list of characters. Press the desired key repeatedly to enter the desired letter and continue to the next letter, etc.

To enter a number, press and hold the button.

Categories

The articles in the on-board owner's manual are divided into main categories and sub-categories. The same article may be listed in several applicable categories to help make searches easier.

Turn TUNE to navigate in the category structure and press OK/MENU to open a category (indicated by the symbol) or an article (indicated by the symbol). Press EXIT to return to the previous view.

Favorites

Articles that have been marked as favorites can be found here. For information about marking an article as a favorite, see "Navigating in an article" below.

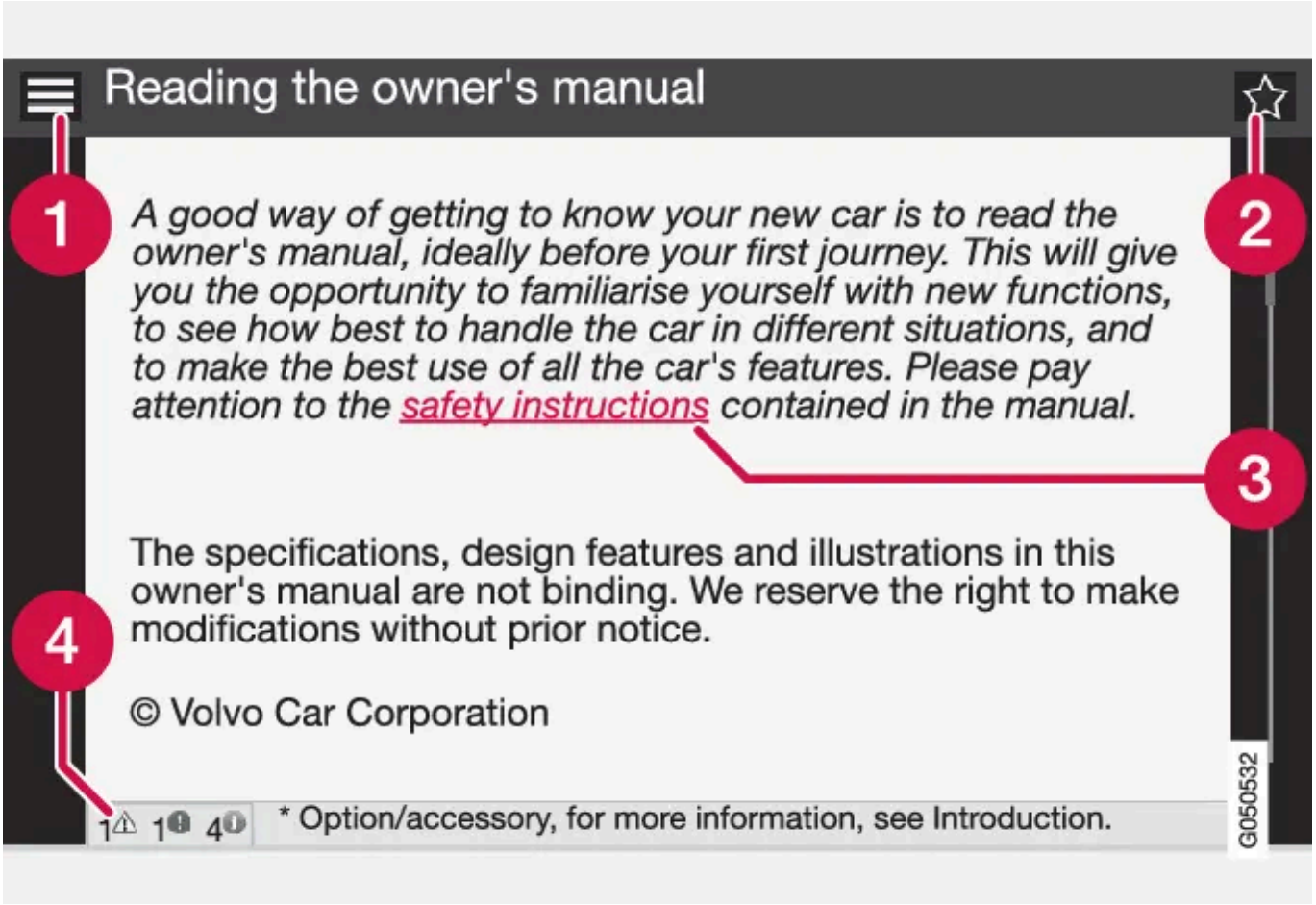
Turn TUNE to navigate in the list of favorites and press OK/MENU to open an article. Press EXIT to return to the previous view.

Quick Guide

This is a selection of articles that will help you become familiar with some of the vehicle's most common functions. These articles can also be found in their respective categories but are listed here for quick access.

Turn TUNE to navigate in the Quick Guide and press OK/MENU to open an article. Press EXIT to return to the previous view.

Navigating in an article



1. **Home**: Returns you to the owner's manual start page.
2. **Favorites**: Add/remove an article from the list of favorites. This can also be done by pressing the FAV button on the center console keypad.
3. **Highlighted link**: takes you to the linked article.
4. **Important information**: if the article contains warnings, cautions or notes, symbols for these types of information and the number of such texts in the article will be displayed here.

Turn TUNE to navigate among the links or scroll in an article. When you have scrolled to the beginning/end of an article, you can return to the start page or a favorite by scrolling one additional step up/down. Press OK/MENU to activate a selection or highlighted link. Press EXIT to return to the previous view.

1.3. Volvo ID

This is your personal ID that can be used to access a number of services [1]

Creating a Volvo ID



To create a Volvo ID, provide your personal email address and then follow the instructions provided in the email that you will receive from Volvo. This can be done from:

- From an Internet-connected vehicle: Enter your email address in the app that requires a Volvo ID and follow the instructions provides or press the Internet connect (🌐) button on the center console and select **Apps**, **Settings** and follow the instructions provided.
- Volvo On Call (VOC*): download the latest version of the VOC app and create a Volvo ID on the start page.

[1] These services vary and may be subject to change. Consult your Volvo retailer.

* Option/accessory.

1.4. Volvo and the environment

Volvo is committed to the well being of its customers. As a natural part of this commitment, we care about the environment in which we all live. Concern for the environment means an everyday involvement in reducing our environmental impact.

Volvo's environmental activities are based on a holistic view, which means we consider the overall environmental impact of a product throughout its complete life cycle. In this context, design, production, product use, and recycling are all important considerations. In production, Volvo has partly or completely phased out several chemicals including CFCs, lead chromates, asbestos, and cadmium; and reduced the number of chemicals used in our plants 50% since 1991.

Volvo was the first in the world to introduce into production a three-way catalytic converter with a Lambda sond, now called the heated oxygen sensor, in 1976. The current version of this highly efficient system reduces emissions of harmful substances

(CO, HC, NOx) from the exhaust pipe by approximately 95 – 99% and the search to eliminate the remaining emissions continues. Volvo is the only automobile manufacturer to offer CFC-free retrofit kits for the air conditioning system of all models as far back as the 1975 model 240. Advanced electronic engine controls and cleaner fuels are bringing us closer to our goal. In addition to continuous environmental refinement of conventional gasoline-powered internal combustion engines, Volvo is actively looking at advanced technology alternative-fuel vehicles.

When you drive a Volvo, you become our partner in the work to lessen the car's impact on the environment. To reduce your vehicle's environmental impact, you can:

- Maintain proper air pressure in your tires. Tests have shown decreased fuel economy with improperly inflated tires.
- Follow the recommended maintenance schedule in your Warranty and Service Records Information booklet.
- Drive at a constant speed whenever possible.
- See a trained and qualified Volvo service technician as soon as possible for inspection if the check engine (malfunction indicator) light illuminates, or stays on after the vehicle has started.
- Properly dispose of any vehicle-related waste such as used motor oil, used batteries, brake pads, etc.
- When cleaning your vehicle, please use genuine Volvo car care products. All Volvo car care products are formulated to be environmentally friendly.

FSC®



The FSC® (Forest Stewardship Council®) symbol indicates that the wood pulp used in this publication comes from FSC® certified forests and other responsible sources.

1.5. Owner's information

Your vehicle is equipped with a screen on which you can display information about your vehicle's features and functions. The printed owner's manual supplements the on-board information and contains important texts,

the latest updates and instructions that can be useful in situations when it is not practical to read the information on the screen.
Changing the language used for the on-board information could mean that some of the information displayed may not comply with national or local statutes and regulations.

> **Warning**
>
> The driver is always responsible for operating the vehicle in a safe manner and for complying with current statutes and regulations.
>
> It is also essential to maintain and service the vehicle according to Volvo's recommendations as stated in the owner's information and the service and warranty booklet.
>
> If the on-board information differs from the printed owner's manual, the printed information always takes precedence.

1.6. Change of ownership

When the vehicle changes owners, all personal settings should be reset to the factory defaults.

To reset, press the MY CAR button in the center console followed by OK/MENU and select **Settings → Reset to factory settings**.

User data e.g., for apps, the web browser and for personal settings in menus such as the climate system and vehicle settings should be reset to factory defaults.

For vehicles equipped with the optional Volvo On Call with Sensus Connect (VOC), personal settings stored in the vehicle should be deleted, see Changing ownership of a vehicle with Volvo On Call.

---

2. Safety

2.1. Airbags

2.1.1. Occupant Weight Sensor

The Occupant Weight Sensor (OWS) is designed to meet the regulatory requirements of Federal Motor Vehicle Safety Standard (FMVSS) 208 and is designed to disable (will not inflate) the passenger's side front airbag under certain conditions.



Occupant Weight Sensor (OWS) indicator light

Disabling the passenger's side front airbag

Volvo recommends that ALL occupants (adults and children) shorter than 4 feet 7 inches (140 cm) be seated in the back seat of any vehicle with a front passenger side airbag, and be properly restrained for their size and weight. For child safety recommendations, see Child safety.

The OWS works with sensors that are part of the front passenger's seat and seat belt. The sensors are designed to detect the presence of a properly seated occupant and determine if the passenger's side front airbag should be enabled (may inflate) or disabled (will not inflate).

The OWS will disable (will not inflate) the passenger's side front airbag when:

- the front passenger's seat is unoccupied, or has small/medium objects in the front seat,
- the system determines that an infant is present in a rear-facing infant seat that is installed according to the manufacturer's instructions,
- the system determines that a small child is present in a forward-facing child restraint that is installed according to the manufacturer's instructions,
- the system determines that a small child is present in a booster seat,
- a front passenger takes his/her weight off of the seat for a period of time,
- a child or a small person occupies the front passenger's seat.

The OWS uses a PASSENGER AIRBAG OFF indicator lamp which will illuminate and stay on to remind you that the passenger's side front airbag is disabled. The PASSENGER AIRBAG OFF indicator lamp is located in the overhead console, near the base of the rearview mirror.

Note

When the ignition is switched on, the OWS indicator light will go on for up to 10 seconds while the system performs a self-diagnostic test.

However, if a fault is detected in the system:

- The OWS indicator light will stay on
- The SRS warning light will come on and stay on
- The message **Pass. Airbag OFF Service urgent** will be displayed in the information display.

Warning

If a fault in the system is detected and indicated as described, be aware that the passenger's side front airbag will not deploy in the event of a collision. In this case, the SRS system and Occupant Weight Sensor should be inspected by a trained and qualified Volvo service technician as soon as possible.

Warning

- Never try to open, remove, or repair any components in the OWS system. This could result in system malfunction. Maintenance or repairs should only be carried out by an a trained and qualified Volvo service technician.
- The front passenger's seat should not be modified in any way. This could reduce pressure on the seat cushion, which might interfere with the OWS system's function.

Passenger's seat occupancy status	OWS indicator light status	Passenger's side front airbag status
Seat unoccupied	OWS indicator light lights up.	Passenger's side front airbag disabled
Seat occupied by low weight occupant/object [1]	OWS indicator light lights up	Passenger's side front airbag disabled
Seat occupied by heavy occupant/object	OWS indicator light is **not** lit	Passenger's side front airbag enabled

The OWS is designed to enable (may inflate) the passenger's side front airbag in the event of a collision anytime the system senses that a person of adult size is sitting properly in the front passenger's seat. The PASSENGER AIRBAG OFF indicator lamp will be off and remain off.

If a person of adult size is sitting in the front passenger's seat, but the PASSENGER AIRBAG OFF indicator lamp is on, it is possible that the person isn't sitting properly in the seat. If this happens:

- Turn the vehicle off and ask the person to place the seatback in an upright position.
- Have the person sit upright in the seat, centered on the seat cushion, with the person's legs comfortably extended.
- Restart the vehicle and have the person remain in this position for about two minutes. This will allow the system to detect that person and enable the passenger's frontal airbag.
- If the PASSENGER AIRBAG OFF indicator lamp remains on even after this, the person should be advised to ride in the rear seat.

This condition reflects limitations of the OWS classification capability. It does not indicate OWS malfunction.

Modifications

If you are considering modifying your vehicle in any way to accommodate a disability, for example by altering or adapting the driver's or front passenger's seat(s) and/or airbag systems, please contact Volvo at:

In the USA

Volvo Cars of North America, LLC

Customer Care Center

1 Volvo Drive

P.O. Box 914

Rockleigh, New Jersey 07647

1-800-458-1552

In Canada

Volvo Cars of Canada Corp.

National Customer Service

9130 Leslie Street, Suite 101

Richmond Hill, Ontario L4B 0B9

1-800-663-8255

Warning

- No objects that add to the total weight on the seat should be placed on the front passenger's seat. If a child is seated in the front passenger's seat with any additional weight, this extra weight could cause the OWS system to enable the airbag, which might cause it to deploy in the event of a collision, thereby injuring the child.
- The seat belt should never be wrapped around an object on the front passenger's seat. This could interfere with the OWS system's function.
- The front passenger's seat belt should never be used in a way that exerts more pressure on the passenger than normal. This could increase the pressure exerted on the weight sensor by a child, and could result in the airbag being enabled, which might cause it to deploy in the event of a collision, thereby injuring the child.

Warning

- Keep the following points in mind with respect to the OWS system. Failure to follow these instructions could adversely affect the system's function and result in serious injury to the occupant of the front passenger's seat:
- The full weight of the front seat passenger should always be on the seat cushion. The passenger should never lift him/herself off the seat cushion using the armrest in the door or the center console, by pressing the feet on the floor, by sitting on the edge of the seat cushion, or by pressing against the backrest in a way that reduces pressure on the seat cushion. This could cause OWS to disable the front, passenger's side airbag.

Warning

- Do not place any type of object on the front passenger's seat in such a way that jamming, pressing, or squeezing occurs between the object and the front seat, other than as a direct result of the correct use of the Automatic Locking Retractor/Emergency Locking Retractor (ALR/ELR) seat belt (Child restraints).
- No objects should be placed under the front passenger's seat. This could interfere with the OWS system's function.

[1] Volvo recommends that children always be properly restrained in appropriate child restraints in the rear seats. Do not assume that the passenger's side front airbag is disabled unless the PASSENGER AIRBAG OFF indicator lamp is lit. Make sure the child restraint is properly installed. If there is any doubt as to the status of the passenger's side front airbag, move the child restraint to the rear seat.

2.1.2. Side impact protection (SIPS) airbags

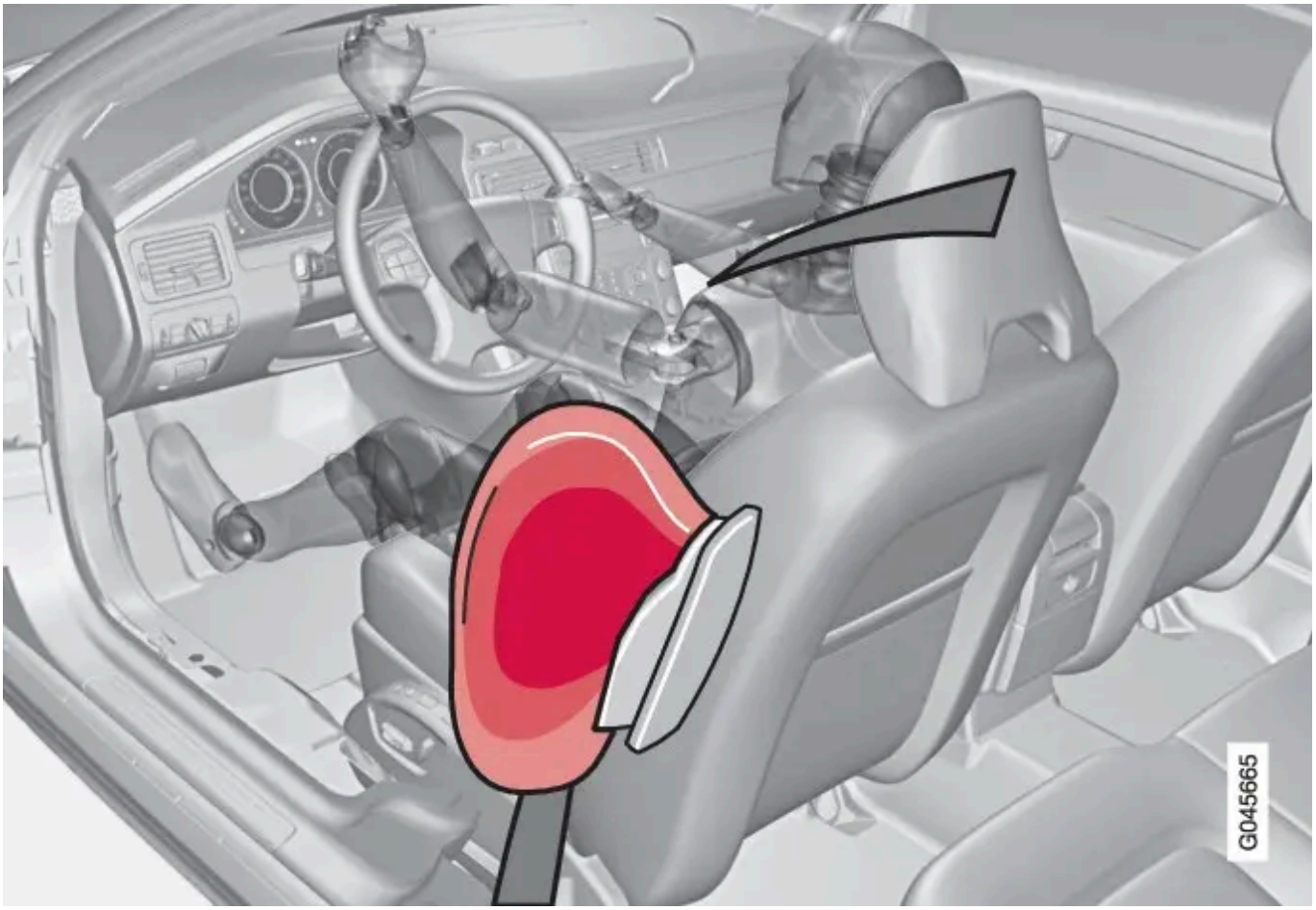
As an enhancement to the structural side impact protection built into your vehicle, it is also equipped with Side Impact Protection System (SIPS) airbags.



Location of the side impact (SIPS) airbags (front seats only)

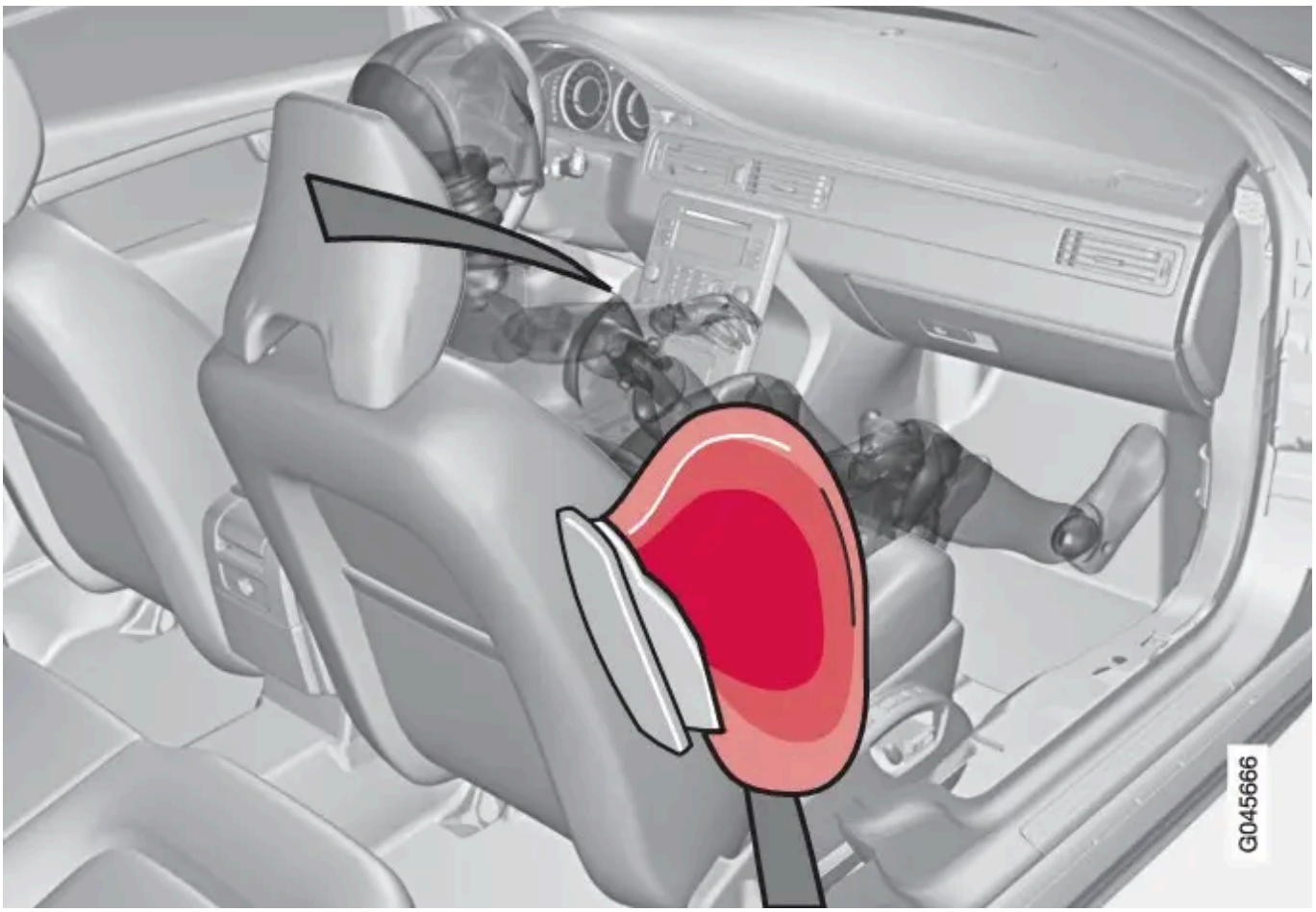
The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.

The SIPS airbag system is designed to help increase occupant protection in the event of certain side impact collisions. The SIPS airbags are designed to deploy only during certain side-impact collisions, depending on the crash severity, angle, speed and point of impact.



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Driver's side SIPS airbag



Passenger's side SIPS airbag

> **Note**
>
> SIPS airbag deployment (one airbag) occurs only on the side of the vehicle affected by the impact. The airbags are not designed to deploy in all side impact situations.

Components in the SIPS airbag system

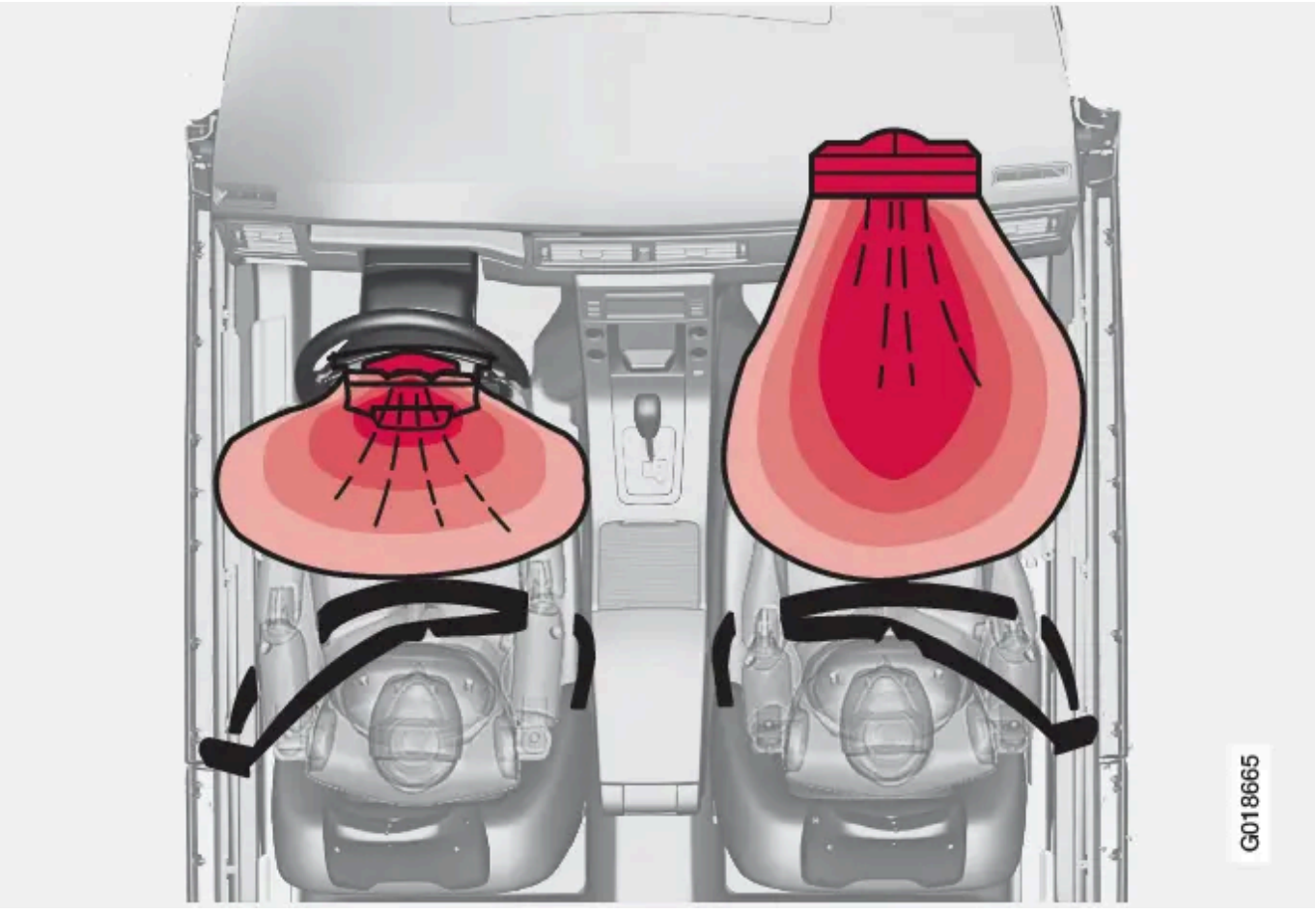
This SIPS airbag system consists of a gas generator, the side airbag modules built into the outboard sides of both front seat backrests, and electronic sensors/wiring.

Warning

- The SIPS airbag system is a supplement to the structural Side Impact Protection System and the three-point seat belt system. It is not designed to deploy during collisions from the front or rear of the vehicle or in rollover situations.
- The use of seat covers on the front seats may impede SIPS airbag deployment.
- No objects, accessory equipment or stickers may be placed on, attached to or installed near the SIPS airbag system or in the area affected by SIPS airbag deployment.
- Never try to open or repair any components of the SIPS airbag system. This should be done only by a trained and qualified Volvo service technician.
- In order for the SIPS airbag to provide its best protection, both front seat occupants should sit in an upright position with the seat belt properly fastened.
- Failure to follow these instructions can result in injury to the occupants of the vehicle in the event of an accident.

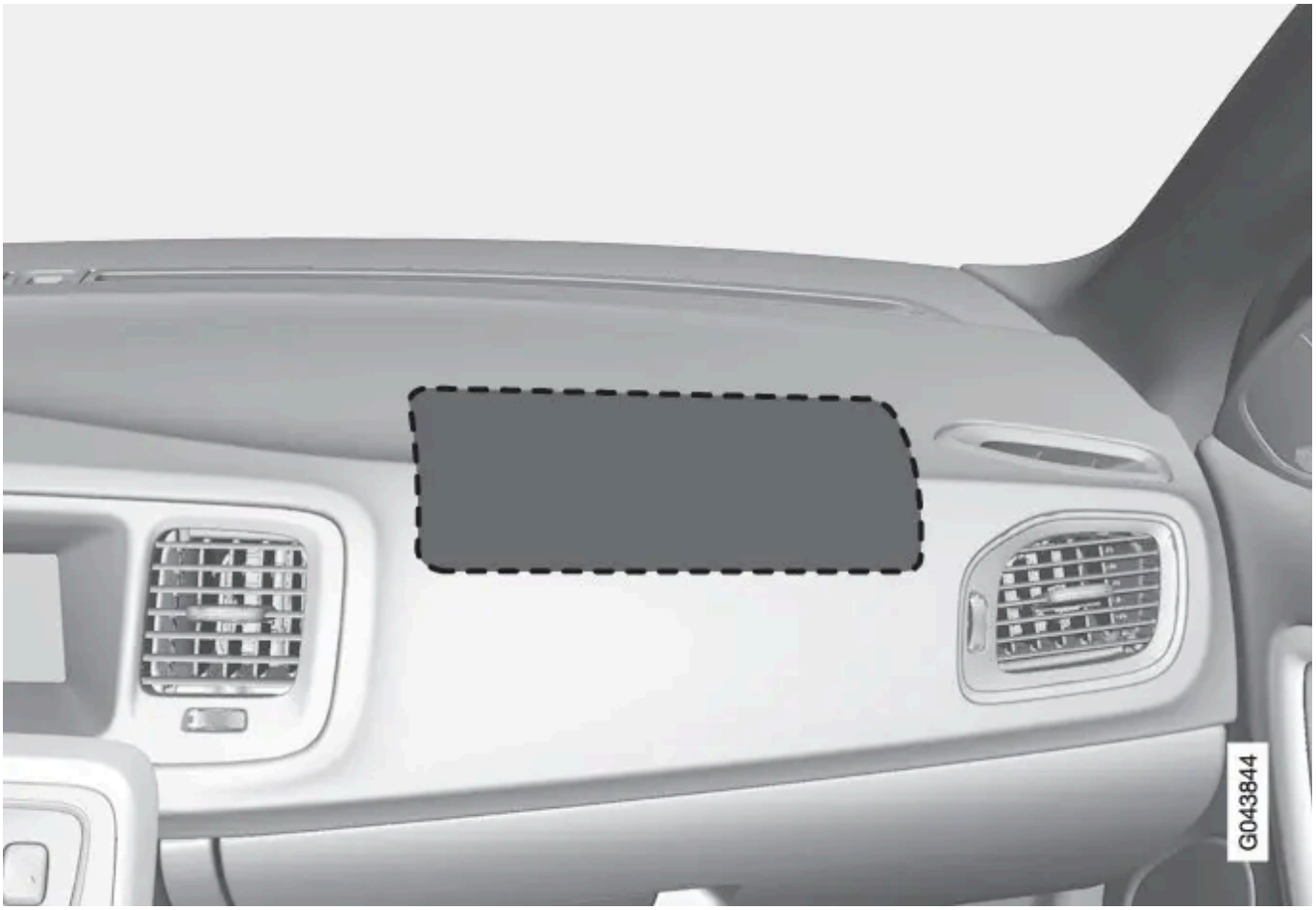
2.1.3. Front airbags

The front airbags supplement the three-point seat belts. For these airbags to provide the protection intended, seat belts must be worn at all times.



The front airbag system

The front airbag system includes gas generators surrounded by the airbags, and deceleration sensors that activate the gas generators, causing the airbags to be inflated with nitrogen gas.



Location of the passenger's side front airbag

As the movement of the seats' occupants compresses the airbags, some of the gas is expelled at a controlled rate to provide better cushioning. Both seat belt pretensioners also deploy, minimizing seat belt slack. The entire process, including inflation and deflation of the airbags, takes approximately one fifth of a second.

The location of the front airbags is indicated by SRS AIRBAG embossed on the steering wheel pad and above the glove compartment, and by decals on both sun visors and on the front and far right side of the dash.

The driver's side front airbag is folded and located in the steering wheel hub.

The passenger's side front airbag is folded behind a panel located above the glove compartment.

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Warning

- The airbags in the vehicle are designed to be a SUPPLEMENT to—not a replacement for—the three-point seat belts. For maximum protection, wear seat belts at all times. Be aware that no system can prevent all possible injuries that may occur in an accident.
- Never drive with your hands on the steering wheel pad/airbag housing.
- The front airbags are designed to help prevent serious injury. Deployment occurs very quickly and with considerable force. During normal deployment and depending on variables such as seating position, one may experience abrasions, bruises, swellings, or other injuries as a result from deployment of one or both of the airbags.
- When installing any accessory equipment, make sure that the front airbag system is not damaged. Any interference in the system could cause malfunction.

Front airbag deployment

- The front airbags are designed to deploy during certain frontal or front-angular collisions, impacts, or decelerations, depending on the crash severity, angle, speed and object impacted. The airbags may also deploy in certain non-frontal collisions where rapid deceleration occurs.
- The SRS sensors, which trigger the front airbags, are designed to react to both the impact of the collision and the inertial forces generated by it, and to determine if the intensity of the collision is sufficient for the seat belt pretensioners and/or airbags to be deployed.

However, not all frontal collisions activate the front airbags.

- If the collision involves a nonrigid object (e.g., a snow drift or bush), or a rigid, fixed object at a low speed, the front airbags will not necessarily deploy.
- Front airbags do not normally deploy in a side impact collision, in a collision from the rear or in a rollover situation.
- The amount of damage to the bodywork does not reliably indicate if the airbags should have deployed or not.

Warning

If any of the airbags have deployed:

- Do not attempt to drive the vehicle. Have it towed to a qualified repair facility.
- If necessary seek medical attentIon.

Warning

- Do not use child safety seats or child booster cushions/backrests in the front passenger's seat. We also recommend that occupants under 4 feet 7 inches (140 cm) in height who have outgrown these devices sit in the rear seat with the seat belt fastened[1].
- Never drive with the airbags deployed. The fact that they hang out can impair the steering of your vehicle. Other safety systems can also be damaged.
- The smoke and dust formed when the airbags are deployed can cause skin and eye irritation in the event of prolonged exposure.

Should you have questions about any component in the SRS system, please contact a trained and qualified Volvo service technician or Volvo customer support:

In the USA

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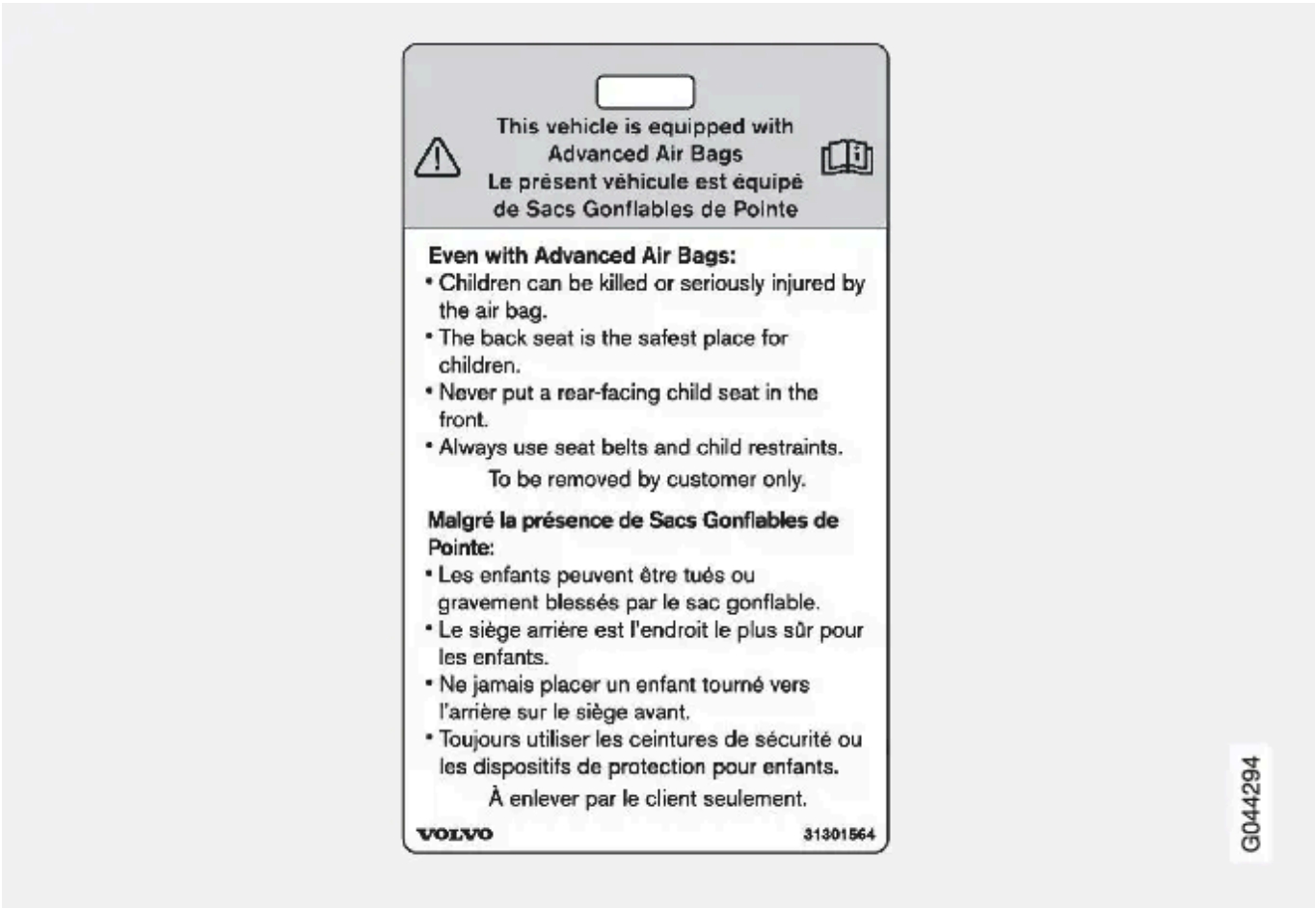
Note

- Deployment of front airbags occurs only one time during an accident. In a collision where deployment occurs, the airbags and seat belt pretensioners activate. Some noise occurs and a small amount of powder is released. The release of the powder may appear as smoke-like matter. This is a normal characteristic and does not indicate fire.
- Volvo's front airbags use special sensors that are integrated with the front seat buckles. The point at which the airbag deploys is determined by whether or not the seat belt is being used, as well as the severity of the collision.
- Collisions can occur where only one of the airbags deploys. If the impact is less severe, but severe enough to present a clear injury risk, the airbags are triggered at partial capacity. If the impact is more severe, the airbags are triggered at full capacity.

Airbag decals



Airbag decal on the outside of both sun visors



Passenger's side airbag decal

Warning

- Children must never be allowed in the front passenger's seat.
- Occupants in the front passenger's seat must never sit on the edge of the seat, sit leaning toward the instrument panel or otherwise sit out of position.
- The occupant's back must be as upright as comfort allows and be against the seat back with the seat belt properly fastened.
- Feet must be on the floor, e.g., not on the dash, seat or out of the window.

Warning

- No objects or accessory equipment, e.g. dashboard covers, may be placed on, attached to, or installed near the air bag hatch (the area above the glove compartment) or the area affected by airbag deployment.
- There should be no loose articles, such as coffee cups on the floor, seat, or dashboard area.
- Never try to open the airbag cover on the steering wheel or the passenger's side dashboard. This should only be done by a trained and qualified Volvo service technician.
- Failure to follow these instructions can result in injury to the vehicle occupants.

[1] See also the Occupant Weight Sensor information, Occupant Weight Sensor.

2.2. Child safety

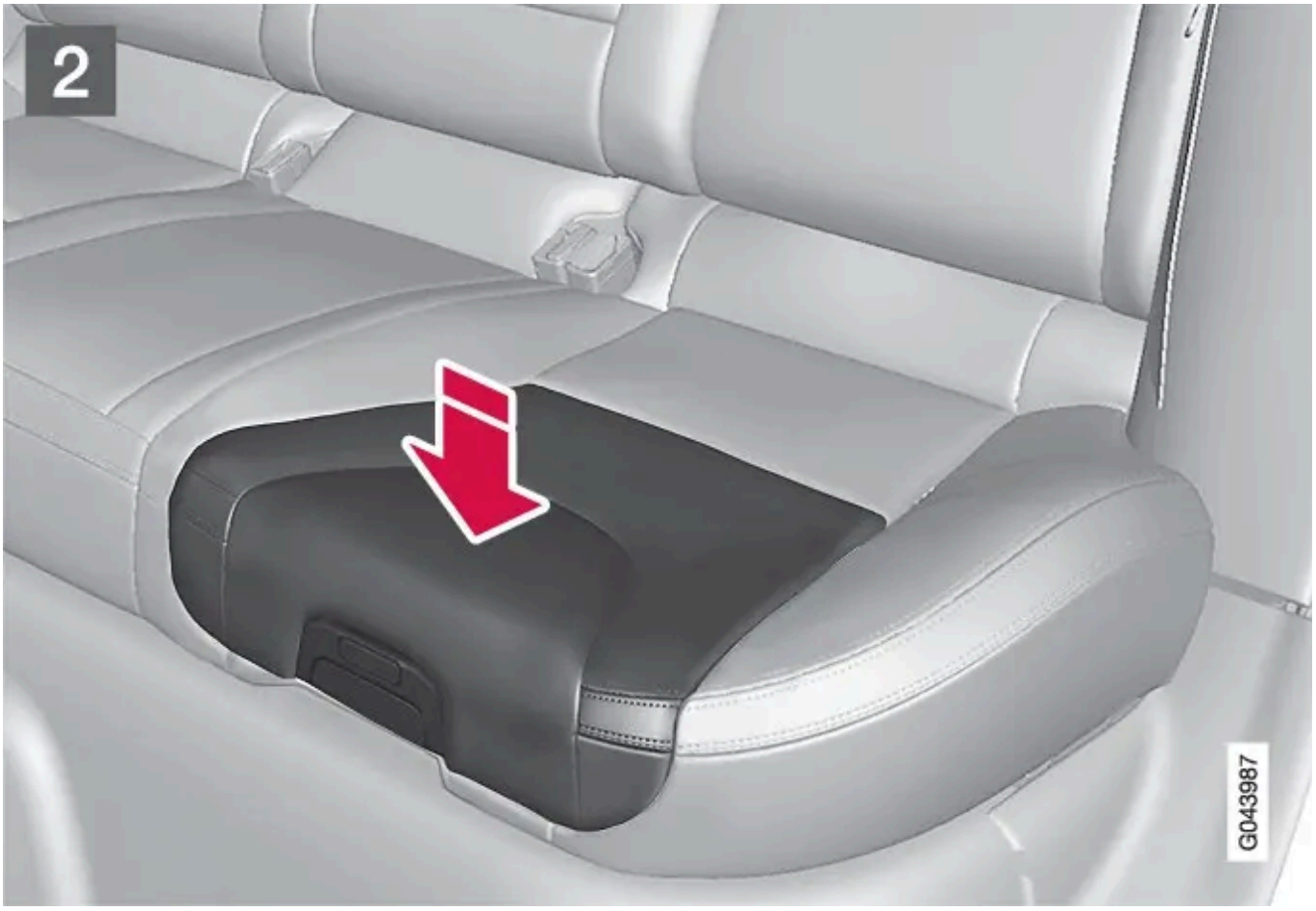
2.2.1. Integrated booster cushion – stowing

The integrated booster cushion can be folded down completely (stowed) from either the stage 1 or stage 2

positions.



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Note

The booster cushion cannot be moved from the stage 2 (upper) position to the stage 1 (lower) position. It must first be folded down completely to the stowed position, and then adjusted to stage 1.

1. 1
   Pull the handle forward to release the booster cushion.

2. 2
   Press down on the center of the booster cushion to return it to the stowed position.

Note

The booster cushion must be in the stowed position before the rear seat backrests are folded down.

Important

Be sure there are no loose objects under the booster cushion before it is stowed.

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Warning

DEATH or SERIOUS INJURY can occur

Follow all instructions on the booster cushion and in the vehicle's owner's manual.

MAKE SURE THE BOOSTER CUSHION IS SECURELY LOCKED BEFORE THE CHILD IS SEATED.

- In the event of a collision while the integrated booster cushion was occupied, the entire booster cushion and seat belt must be replaced. The booster cushion should also be replaced if it is badly worn or damaged in any way. This work should be performed by a trained and qualified Volvo service technician only.

2.2.2. ISOFIX/LATCH lower anchors

Lower anchors for ISOFIX/LATCH-equipped child seats are located in the rear, outboard seats, hidden below the backrest cushions.

Using the ISOFIX/LATCH lower child seat anchors



Symbols on the seat back upholstery mark the ISOFIX/LATCH anchor positions as shown. To access the anchors, kneel on the seat cushion and locate the anchors by feel. Always follow your child seat manufacturer's installation instructions, and use both ISOFIX/LATCH lower anchors and top tethers whenever possible.

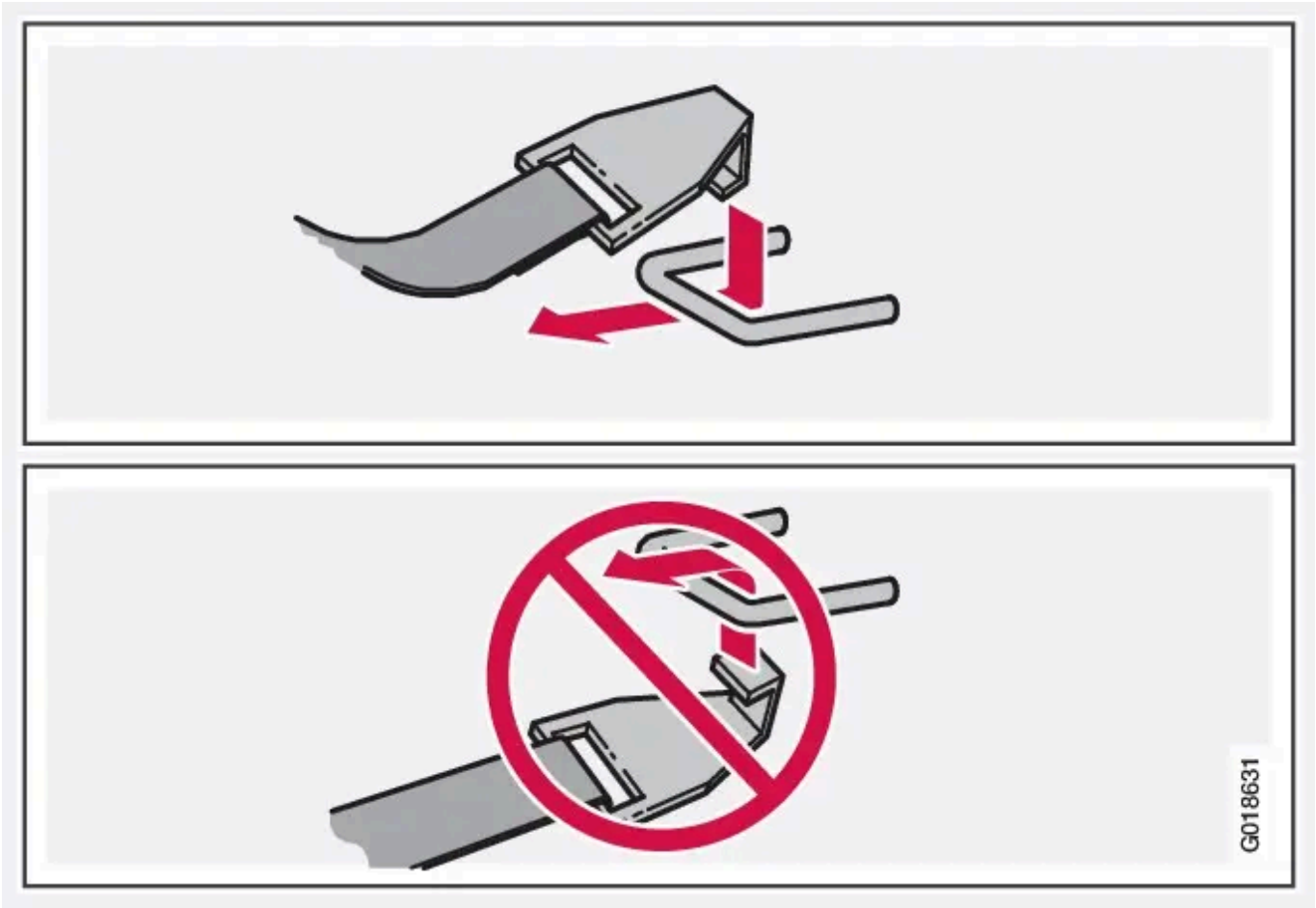
To access the anchors

1. Put the child restraint in position.
2. Kneel on the child restraint to press down the seat cushion and locate the anchors by feel.
3. Fasten the attachment on the child restraint's lower straps to the ISOFIX/LATCH/LATCH lower anchors.
4. Firmly tension the lower child seat straps according to the manufacturer's instructions.

> **Warning**
>
> Volvo's ISOFIX/LATCH anchors conform to FMVSS/CMVSS standards. Always refer to the child restraint system's manual for weight and size ratings.

Note

- The rear seat's center position is not equipped with ISOFIX/LATCH lower anchors. When installing a child restraint in this position, attach the restraint's top tether strap (if it is so equipped) to the top tether anchorage point and secure the restraint with the vehicle's center seat belt.
- Always follow your child seat manufacturer's installation instructions, and use both ISOFIX/LATCH lower anchors and top tethers whenever possible.



Fasten the attachment correctly to the ISOFIX/LATCH lower anchors

Warning

- Be sure to fasten the attachment correctly to the anchor (see the illustration). If the attachment is not correctly fastened, the child restraint may not be properly secured in the event of a collision.
- The ISOFIX/LATCH lower child restraint anchors are only intended for use with child seats positioned in the outboard seating positions. These anchors are not certified for use with any child restraint that is positioned in the center seating position. When securing a child restraint in the center seating position, use only the vehicle's center seat belt.

2.2.3. Convertible seats

Suitable child restraints should always be used when children (depending on their age/size) are seated in the vehicle.

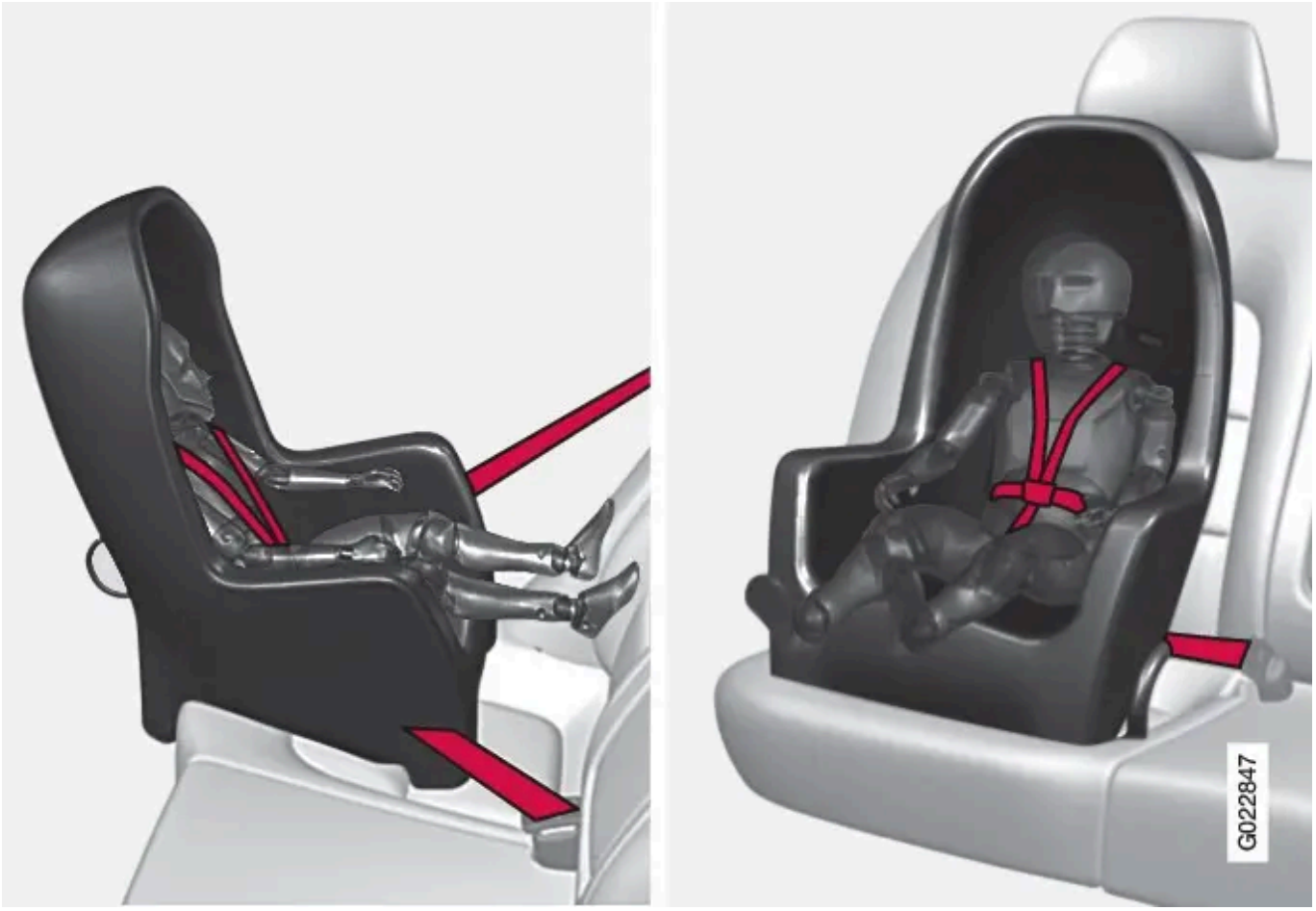
Securing a convertible seat with a seat belt



Do not place the convertible seat in the front passenger's seat

> **Note**
>
> Refer to ISOFIX/LATCH lower anchors and Top tether anchors for information on securing a child restraint using ISOFIX/LATCH lower anchors and/or top tether anchorages.

Convertible seats can be used in either a forward or rearward-facing position, depending on the age and size of the child.



Route the seat belt through the convertible seat

> **Warning**
>
> Always use a convertible seat that is suitable for the child's age and size. See the convertible seat manufacturer's recommendations.

1. Place the convertible seat in the rear seat of the vehicle.
2.
   > **Warning**
   >
   > - A small child's head represents a considerable part of its total weight and its neck is still very weak. Volvo recommends that children up to age 4 travel, properly restrained, facing rearward. In addition, Volvo recommends that children should ride rearward facing, properly restrained, as long as possible.
   > - Convertible child seats should be installed in the rear seat only.
   > - A rear-facing convertible seat should not be positioned behind the driver's seat unless there is adequate space for safe installation.

Attach the seat belt to the convertible seat according to the manufacturer's instructions.



Fasten the seat belt

3. Fasten the seat belt by inserting the latch plate into the buckle (lock) until a distinct click is audible.
4. Pull the shoulder section of the seat belt out as far as possible to activate the belt's automatic locking function.
5.

> **Note**
>
> The locking retractor will automatically release when the seat belt is unbuckled and allowed to retract fully.

Press the convertible seat firmly in place, let the seat belt retract and pull it taut. A sound from the seat belt retractor's auto-

matic locking function will be audible at this time and is normal. The seat belt should now be locked in place.



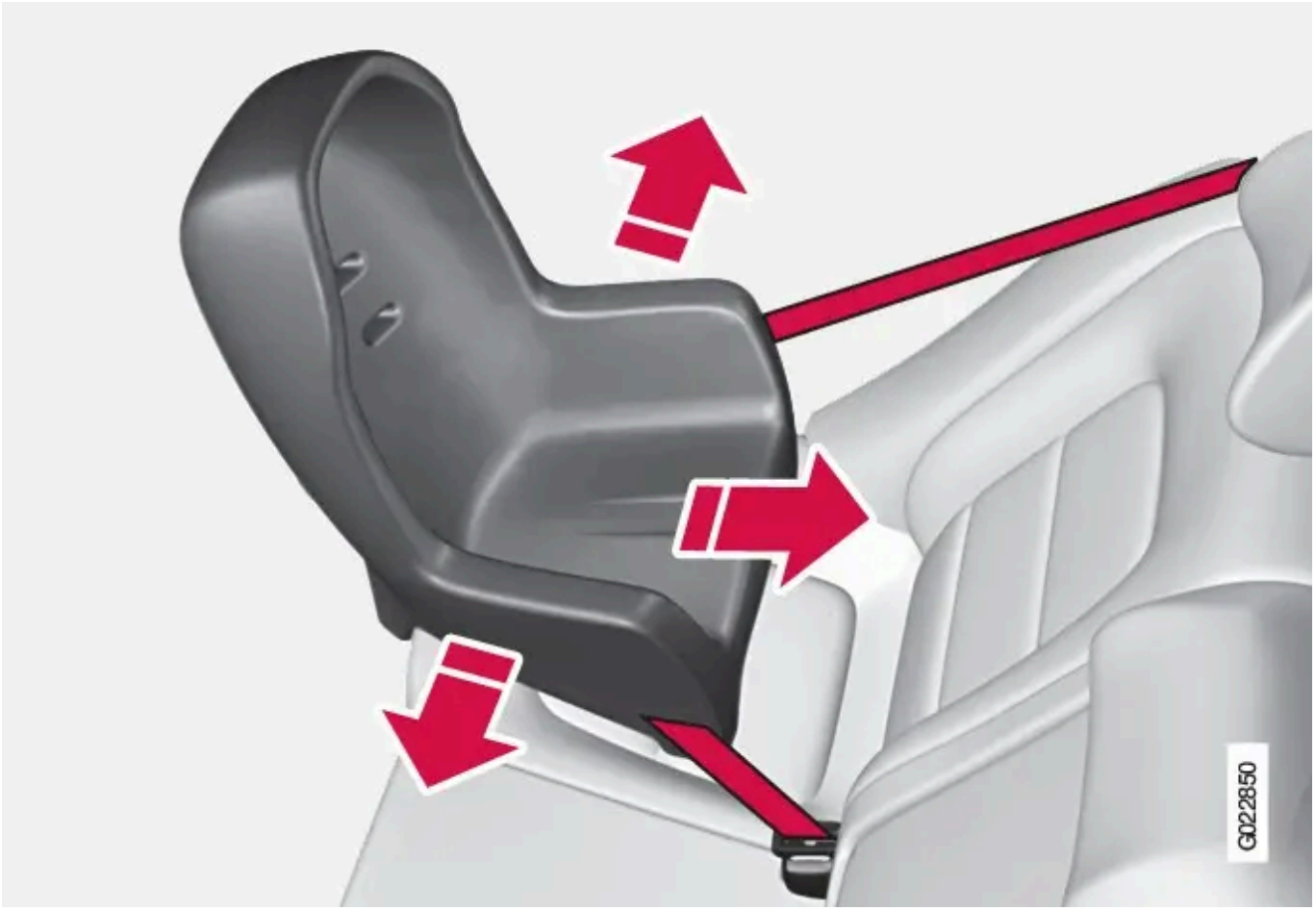
Pull out the shoulder section of the seat belt

6. Push and pull the convertible seat along the seat belt path to ensure that it is held securely in place by the seat belt.

Warning

It should not be possible to move the child restraint (child seat) more than 1 in. (2.5 cm) in any direction along the seat belt path.

The convertible seat can be removed by unbuckling the seat belt and letting it retract completely.



Ensure that the seat is securely in place

> **Warning**
>
> A child seat should never be used in the front passenger seat of any vehicle with a front passenger airbag – not even if the "Passenger airbag off" symbol near the rear-view mirror is illuminated. If the severity of an accident were to cause the airbag to inflate, this could lead to serious injury or death to a child seated in this position.

2.2.4. Occupant Weight Sensor

The Occupant Weight Sensor (OWS) is designed to meet the regulatory requirements of Federal Motor Vehicle Safety Standard (FMVSS) 208 and is designed to disable (will not inflate) the passenger's side front airbag under certain conditions.



Occupant Weight Sensor (OWS) indicator light

Disabling the passenger's side front airbag

Volvo recommends that ALL occupants (adults and children) shorter than 4 feet 7 inches (140 cm) be seated in the back seat of any vehicle with a front passenger side airbag, and be properly restrained for their size and weight. For child safety recommendations, see Child safety.

The OWS works with sensors that are part of the front passenger's seat and seat belt. The sensors are designed to detect the presence of a properly seated occupant and determine if the passenger's side front airbag should be enabled (may inflate) or disabled (will not inflate).

The OWS will disable (will not inflate) the passenger's side front airbag when:

- the front passenger's seat is unoccupied, or has small/medium objects in the front seat,
- the system determines that an infant is present in a rear-facing infant seat that is installed according to the manufacturer's instructions,
- the system determines that a small child is present in a forward-facing child restraint that is installed according to the manufacturer's instructions,
- the system determines that a small child is present in a booster seat,
- a front passenger takes his/her weight off of the seat for a period of time,

- a child or a small person occupies the front passenger's seat.

The OWS uses a PASSENGER AIRBAG OFF indicator lamp which will illuminate and stay on to remind you that the passenger's side front airbag is disabled. The PASSENGER AIRBAG OFF indicator lamp is located in the overhead console, near the base of the rearview mirror.

> **Note**
>
> When the ignition is switched on, the OWS indicator light will go on for up to 10 seconds while the system performs a self-diagnostic test.

However, if a fault is detected in the system:

- The OWS indicator light will stay on
- The SRS warning light will come on and stay on
- The message **Pass. Airbag OFF Service urgent** will be displayed in the information display.

> **Warning**
>
> If a fault in the system is detected and indicated as described, be aware that the passenger's side front airbag will not deploy in the event of a collision. In this case, the SRS system and Occupant Weight Sensor should be inspected by a trained and qualified Volvo service technician as soon as possible.

> **Warning**
>
> - Never try to open, remove, or repair any components in the OWS system. This could result in system malfunction. Maintenance or repairs should only be carried out by an a trained and qualified Volvo service technician.
> - The front passenger's seat should not be modified in any way. This could reduce pressure on the seat cushion, which might interfere with the OWS system's function.

Passenger's seat occupancy status	OWS indicator light status	Passenger's side front airbag status
Seat unoccupied	OWS indicator light lights up.	Passenger's side front airbag disabled
Seat occupied by low weight occupant/object[1]	OWS indicator light lights up	Passenger's side front airbag disabled
Seat occupied by heavy occupant/object	OWS indicator light is **not** lit	Passenger's side front airbag enabled

The OWS is designed to enable (may inflate) the passenger's side front airbag in the event of a collision anytime the system senses that a person of adult size is sitting properly in the front passenger's seat. The PASSENGER AIRBAG OFF indicator lamp will be off and remain off.

If a person of adult size is sitting in the front passenger's seat, but the PASSENGER AIRBAG OFF indicator lamp is on, it is possible that the person isn't sitting properly in the seat. If this happens:

- Turn the vehicle off and ask the person to place the seatback in an upright position.
- Have the person sit upright in the seat, centered on the seat cushion, with the person's legs comfortably extended.

- Restart the vehicle and have the person remain in this position for about two minutes. This will allow the system to detect that person and enable the passenger's frontal airbag.
- If the PASSENGER AIRBAG OFF indicator lamp remains on even after this, the person should be advised to ride in the rear seat.

This condition reflects limitations of the OWS classification capability. It does not indicate OWS malfunction.

Modifications

If you are considering modifying your vehicle in any way to accommodate a disability, for example by altering or adapting the driver's or front passenger's seat(s) and/or airbag systems, please contact Volvo at:

In the USA

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P.O. Box 914

Rockleigh, New Jersey 07647

1-800-458-1552

In Canada

Volvo Cars of Canada Corp.

National Customer Service

9130 Leslie Street, Suite 101

Richmond Hill, Ontario L4B 0B9

1-800-663-8255

Warning

- No objects that add to the total weight on the seat should be placed on the front passenger's seat. If a child is seated in the front passenger's seat with any additional weight, this extra weight could cause the OWS system to enable the airbag, which might cause it to deploy in the event of a collision, thereby injuring the child.
- The seat belt should never be wrapped around an object on the front passenger's seat. This could interfere with the OWS system's function.
- The front passenger's seat belt should never be used in a way that exerts more pressure on the passenger than normal. This could increase the pressure exerted on the weight sensor by a child, and could result in the airbag being enabled, which might cause it to deploy in the event of a collision, thereby injuring the child.

Warning

- Keep the following points in mind with respect to the OWS system. Failure to follow these instructions could adversely affect the system's function and result in serious injury to the occupant of the front passenger's seat:
- The full weight of the front seat passenger should always be on the seat cushion. The passenger should never lift him/herself off the seat cushion using the armrest in the door or the center console, by pressing the feet on the floor, by sitting on the edge of the seat cushion, or by pressing against the backrest in a way that reduces pressure on the seat cushion. This could cause OWS to disable the front, passenger's side airbag.

Warning

- Do not place any type of object on the front passenger's seat in such a way that jamming, pressing, or squeezing occurs between the object and the front seat, other than as a direct result of the correct use of the Automatic Locking Retractor/Emergency Locking Retractor (ALR/ELR) seat belt (Child restraints).
- No objects should be placed under the front passenger's seat. This could interfere with the OWS system's function.

[1] Volvo recommends that children always be properly restrained in appropriate child restraints in the rear seats. Do not assume that the passenger's side front airbag is disabled unless the PASSENGER AIRBAG OFF indicator lamp is lit. Make sure the child restraint is properly installed. If there is any doubt as to the status of the passenger's side front airbag, move the child restraint to the rear seat.

2.2.5. Child safety

Children should always be seated safely when traveling in the vehicle.

General information

Volvo recommends the proper use of restraint systems for all occupants including children. Remember that, regardless of age and size, a child should always be properly restrained in a vehicle.

Your vehicle is also equipped with ISOFIX/LATCH attachments, which make it more convenient to install child seats.

Some restraint systems for children are designed to be secured in the vehicle by lap belts or the lap portion of a lap-shoulder belt. Such child restraint systems can help protect children in vehicles in the event of an accident only if they are used properly. However, children could be endangered in a crash if the child restraints are not properly secured in the vehicle. Failure to follow the installation instructions for your child restraint can result in your child striking the vehicle's interior in a sudden stop.

Holding a child in your arms is NOT a suitable substitute for a child restraint system. In an accident, a child held in a person's arms can be crushed between the vehicle's interior and an unrestrained person. The child could also be injured by striking the interior, or by being ejected from the vehicle during a sudden maneuver or impact. The same can also happen if the infant or child rides unrestrained on the seat. Other occupants should also be properly restrained to help reduce the chance of injuring or increasing the injury of a child.

All states and provinces have legislation governing how and where children should be carried in a vehicle. Find out the regulations existing in your state or province. Recent accident statistics have shown that children are safer in rear seating positions

than front seating positions when properly restrained. A child restraint system can help protect a child in a vehicle. Here's what to look for when selecting a child restraint system:

It should have a label certifying that it meets applicable Federal Motor Vehicle Safety Standards (FMVSS 213) – or in Canada, CMVSS 213.

Make sure the child restraint system is approved for the child's height, weight and development – the label required by the standard or regulation, or instructions for infant restraints, typically provide this information.

In using any child restraint system, we urge you to carefully look over the instructions that are provided with the restraint. Be sure you understand them and can use the device properly and safely in this vehicle. A misused child restraint system can result in increased injuries for both the infant or child and other occupants in the vehicle.

When a child has outgrown the child safety seat, you should use the rear seat with the standard seat belt fastened. The best way to help protect the child here is to place the child on a cushion so that the seat belt is properly located on the hips (see Booster cushions for illustration). Legislation in your state or province may mandate the use of a child seat or cushion in combination with the seat belt, depending on the child's age and/or size. Please check local regulations.

A specially designed and tested booster cushion and backrest can be obtained from your Volvo retailer.

USA: for children weighing 33 – 80 lbs. (15 – 36 kg) and 38 – 54 inches (97 – 137 cm) in height

Canada: for children weighing 40 – 80 lbs. (18 – 36 kg) and 40 – 54 inches (102 – 137 cm) in height

Warning

- Do not use child safety seats or child booster cushions/backrests in the front passenger's seat. We also recommend that children under 4 feet 7 inches (140 cm) in height who have outgrown these devices sit in the rear seat with the seat belt fastened.
- On hot days, the temperature in the vehicle interior can rise very quickly. Exposure to these high temperatures for even a short period of time can cause heat-related injury or death. Small children are particularly at risk.

Child seat should always be registered. See Child restraints for more information.

Volvo's recommendations

Why does Volvo believe that no child should sit in the front seat of a car? It's quite simple really. A front airbag is a very powerful device designed, by law, to help protect an adult.

Because of the size of the airbag and its speed of inflation, a child should never be placed in the front seat, even if he or she is properly belted or strapped into a child safety seat. Volvo has been an innovator in safety for over seventy-five years, and we'll continue to do our part. But we need your help. Please remember to put your children in the back seat, and buckle them up.

Volvo has some very specific recommendations:

- Always wear your seat belt.
- Airbags are a SUPPLEMENTAL safety device which, when used with a three-point seat belt can help reduce serious injuries during certain types of accidents. Volvo recommends that you do not disconnect the airbag system in your vehicle.
- Volvo strongly recommends that everyone in the vehicle be properly restrained.
- Volvo recommends that ALL occupants (adults and children) shorter than 4 feet 7 inches (140 cm) be seated in the back seat of any vehicle with a front passenger side airbag.

- Drive safely!

2.2.6. Integrated booster cushion – using

The Integrated booster cushion in the rear seat can be folded up in two stages, depending on the child's height and weight.

Stage 1



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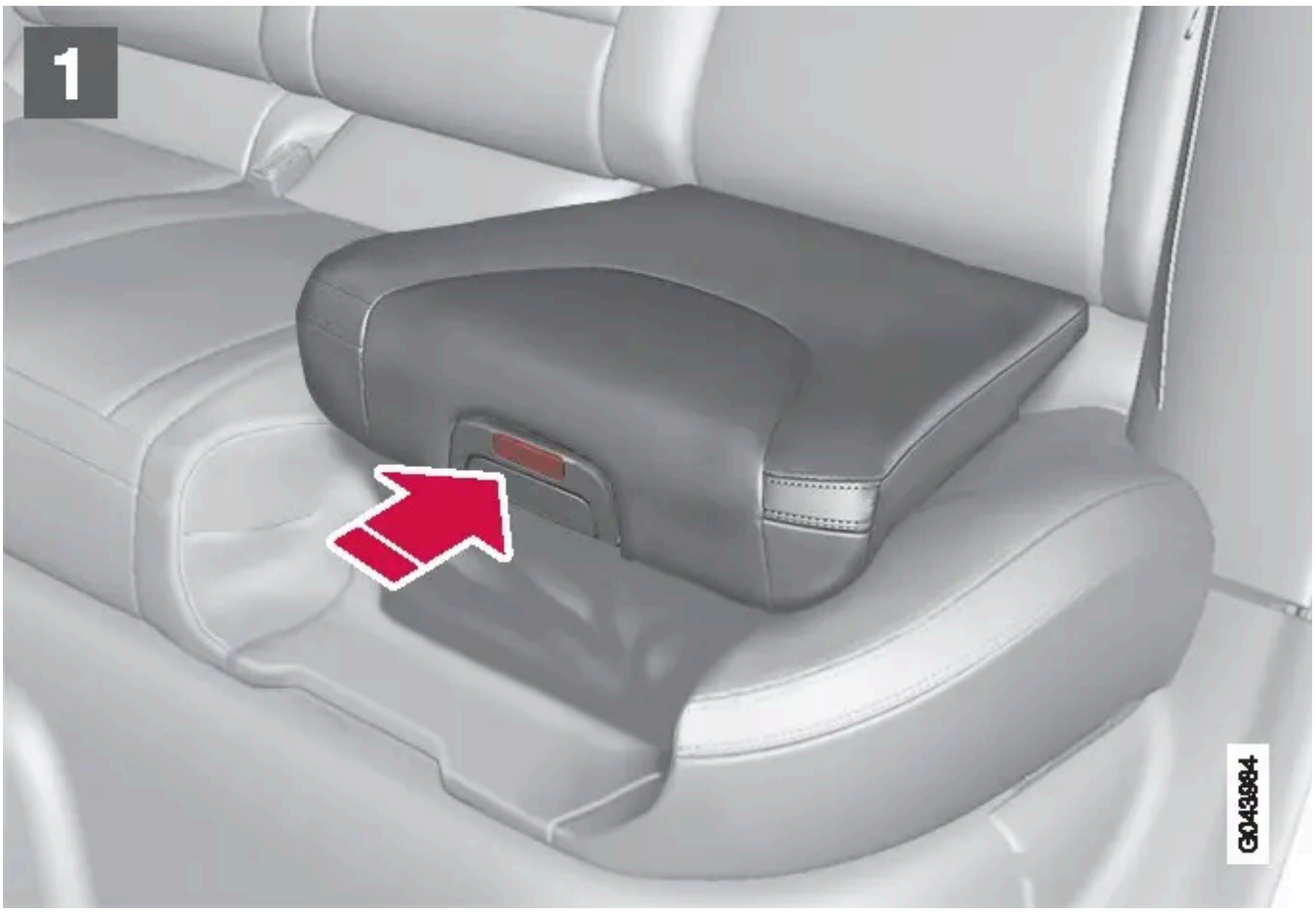


1. 1
   Pull the handle (1) forward and upward (2) to release the booster cushion.

2. 2
   Press the booster cushion rearward to lock it in position.

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Stage 2



The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.



1. 1
   With the booster cushion in the stage 1 position, press the button (see the arrow in illustration 1).

2. 2
   Lift the front edge of the booster cushion and press it rearward toward the backrest to lock it in position.

Warning

DEATH or SERIOUS INJURY can occur

Follow all instructions on the booster cushion and in the vehicle's owner's manual.

MAKE SURE THE BOOSTER CUSHION IS SECURELY LOCKED BEFORE THE CHILD IS SEATED.

- In the event of a collision while the integrated booster cushion was occupied, the entire booster cushion and seat belt must be replaced. The booster cushion should also be replaced if it is badly worn or damaged in any way. This work should be performed by a trained and qualified Volvo service technician only.

2.2.7. Infant seats

Suitable child restraints should always be used when children (depending on their age/size) are seated in the vehicle.

Securing an infant seat with a seat belt

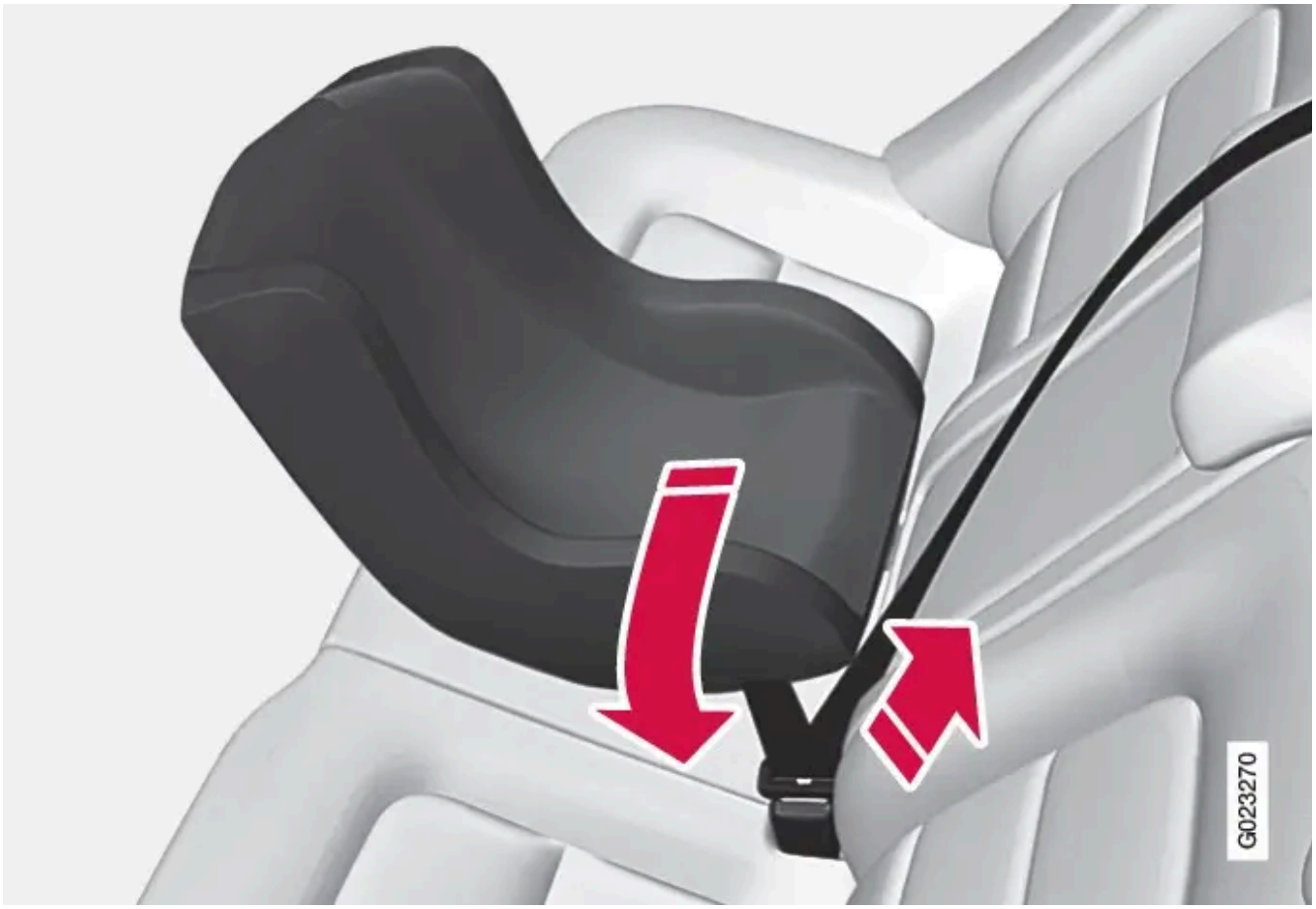


Do not place the infant seat in the front passenger's seat

> **Note**
>
> Refer to ISOFIX/LATCH lower anchors and Top tether anchors for information on securing a child restraint using ISOFIX/LATCH lower anchors and/or top tether anchorages.

1. Place the infant seat in the rear seat of the vehicle.

2. Attach the seat belt to the infant seat according to the manufacturer's instructions.

3. 

Positioning the seat belt through the infant seat

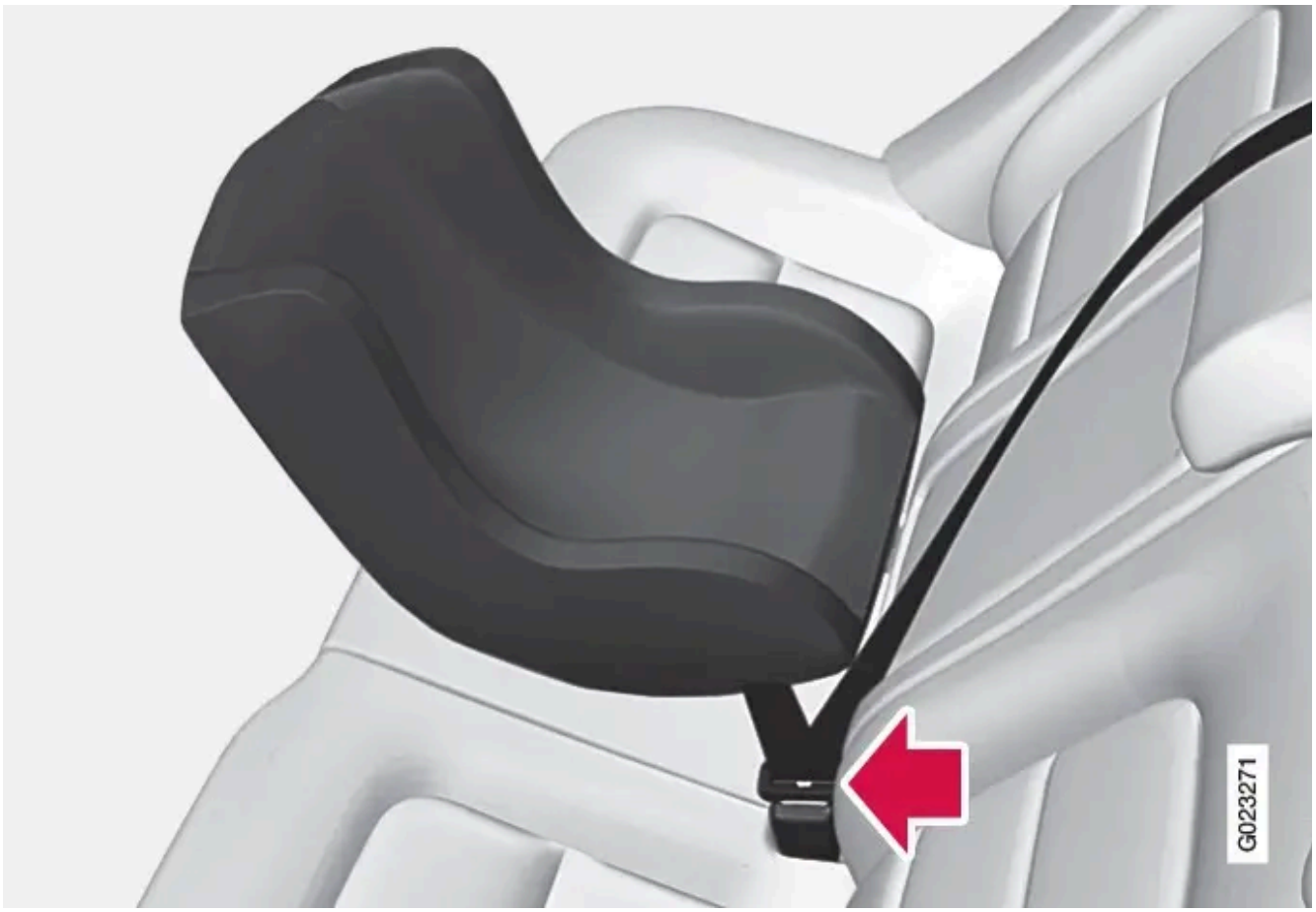
Warning

- An infant seat must be in the rear-facing position only.
- The infant seat should not be positioned behind the driver's seat unless there is adequate space for safe installation.

Warning

A child seat should never be used in the front passenger seat of any vehicle with a front passenger airbag – not even if the "Passenger airbag off" symbol near the rear-view mirror is illuminated (on vehicles equipped with Occupant Weight Sensor). If the severity of an accident were to cause the airbag to inflate, this could lead to serious injury or death to a child seated in this position.

Fasten the seat belt by inserting the latch plate into the buckle (lock) until a distinct click is audible.



Fasten the seat belt



Pull out the shoulder section of the seat belt

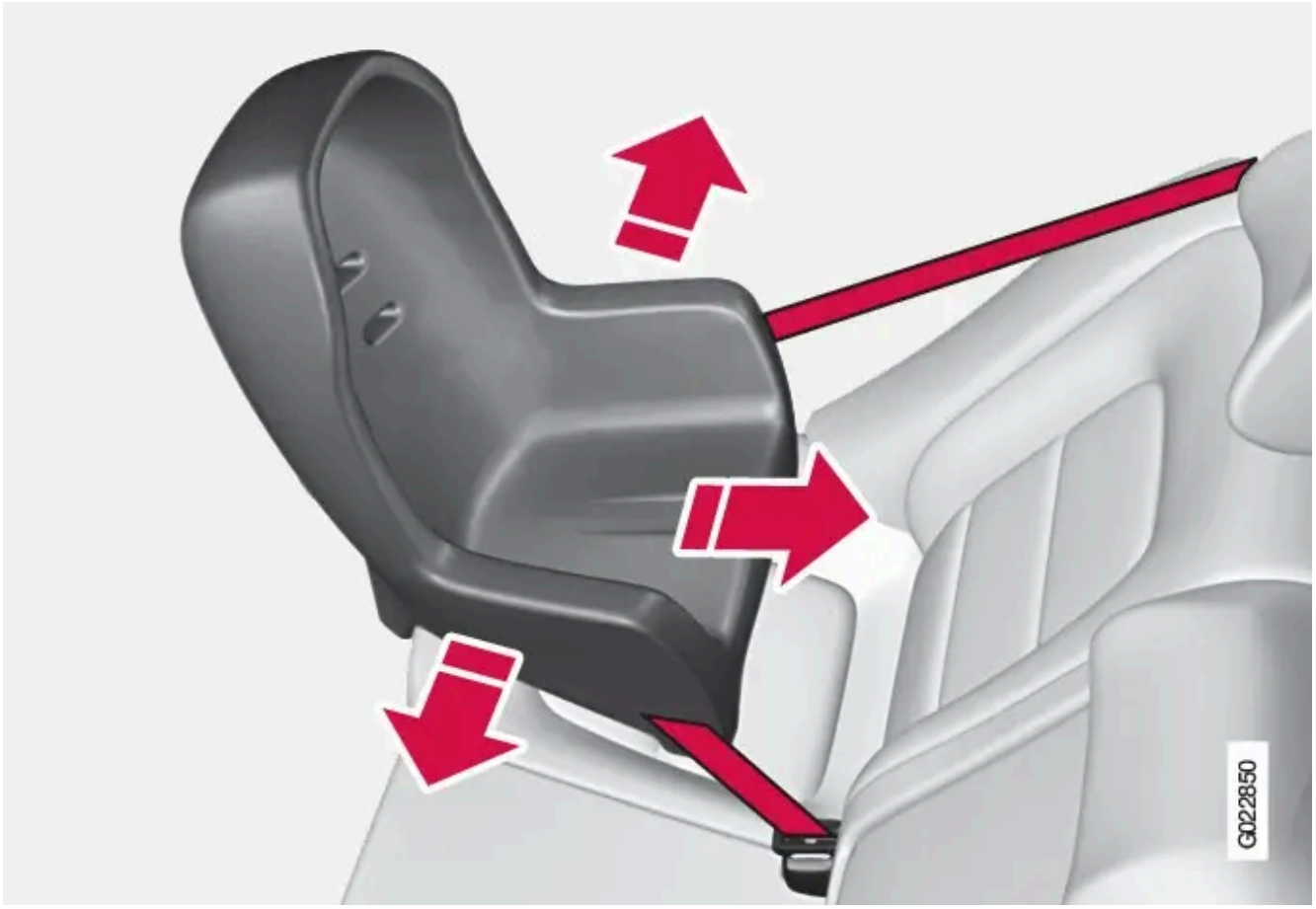
The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.

4. Pull the shoulder section of the seat belt out as far as possible to activate the belt's automatic locking function.

5. **Note**

   The locking retractor will automatically release when the seat belt is unbuckled and allowed to retract fully.

   Press the infant seat firmly in place, let the seat belt retract and pull it taut. A sound from the seat belt retractor's automatic locking function will be audible at this time and is normal. The seat belt should now be locked in place.



Ensure that the seat is securely in place

6. Push and pull the infant seat along the seat belt path to ensure that it is held securely in place by the seat belt.

Warning

It should not be possible to move the child restraint (child seat) more than 1 in. (2.5 cm) in any direction along the seat belt path.

The infant seat can be removed by unbuckling the seat belt and letting it retract completely.

2.2.8. Integrated booster cushion – general information

The booster cushions are designed to raise the child higher so that the shoulder strap crosses over the child's collarbone, not over the neck.

Integrated two-stage booster cushion [1]

Volvo's optional integrated booster cushions are located in the outboard seating positions. These booster cushions have been specially designed to help safeguard children in the rear seat. They should be stowed (folded down into the seat cushion) when not in use. When using an integrated booster cushion, the child must be secured with the vehicle's three-point seat belt.

Use these booster cushions only with children whose weight is between:

- Stage 1: 48 – 80 lbs (22 – 36 kg)
- Stage 2: 33 – 55 lbs (15 – 25 kg)

and whose height is between:

- Stage 1: 45 – 55 in. (115 – 140 cm)
- Stage 2: 37 – 47 in. (95 – 120 cm)

In Canada, Transport Canada's weight recommendation is 40 – 80 lbs (18 – 36 kg).

If using a booster cushion does not result in proper positioning of the shoulder strap, then the child should be placed in a properly secured child restraint (see Child restraints). The shoulder belt must never be placed behind the child's back or under the arm.



Correct seating position: child's head is below the head restraint and the shoulder belt is across the collarbone



Incorrect seating position: the child's head is above the head restraint and the shoulder belt is not across the collarbone

Before driving, check that:

- The integrated two-stage booster cushion is set in the correct position according to the child's height and weight (see the table below) and is locked in position.

	Stage 1	Stage 2
Weight	48 – 80 lbs 22 – 36 kg	33 – 55 lbs 15 – 25 kg
Height	45 – 55 in. 115 – 140 cm	37 – 47 in. 95 – 120 cm

- That the seat belt is properly positioned and is taut.
- The shoulder section of the seat belt is across the child's collarbone, not over the neck.
- The lap section of the seat belt is across the child's hips and not the abdomen.

Warning

DEATH or SERIOUS INJURY can occur

Follow all instructions on the booster cushion and in the vehicle's owner's manual.

MAKE SURE THE BOOSTER CUSHION IS SECURELY LOCKED BEFORE THE CHILD IS SEATED.

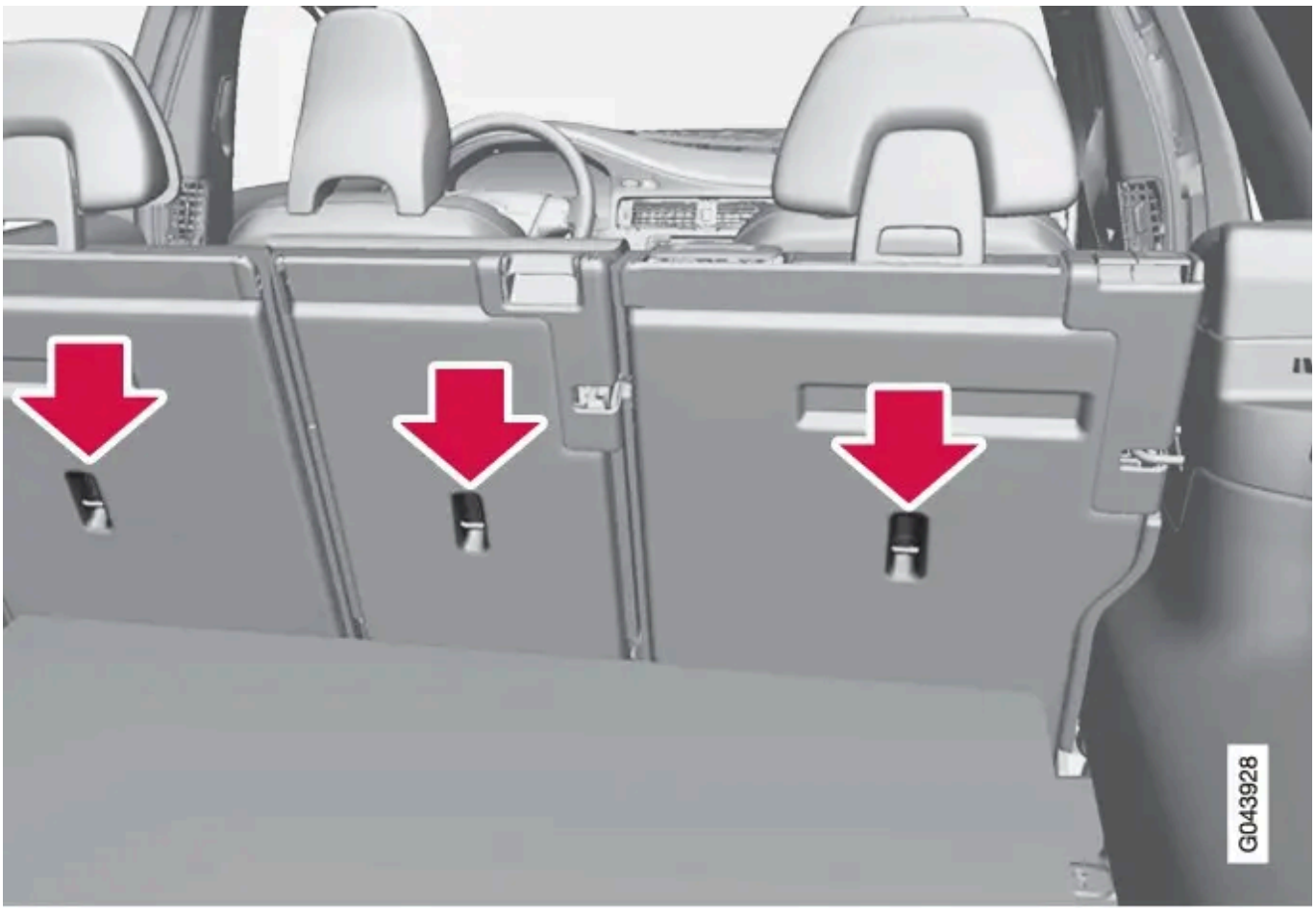
- In the event of a collision while the integrated booster cushion was occupied, the entire booster cushion and seat belt must be replaced. The booster cushion should also be replaced if it is badly worn or damaged in any way. This work should be performed by a trained and qualified Volvo service technician only.

[1] Canada only: This cushion may be referred to as a built-in booster cushion.

2.2.9. Top tether anchors

Your Volvo is equipped with child restraint top tether anchorages in the rear seat. They are located on the rear side of the backrests.

Child restraint anchorages



1. Place the child restraint on the rear seat.
2. Route the top tether strap under the head restraint and attach it to the anchor.
3. Attach lower tether straps to the lower ISOFIX/LATCH anchors. If the child restraint is not equipped with lower tether straps, or the restraint is used in the center seating position, follow instructions for securing a child restraint using the Automatic Locking Retractor seat belt (see Child restraints).
4. Firmly tension all straps.

Refer also to the child seat manufacturer's instructions for information on securing the child seat.

Note

On models equipped with the optional cargo area cover, this cover should be removed before a child seat is attached to the child restraint anchors.

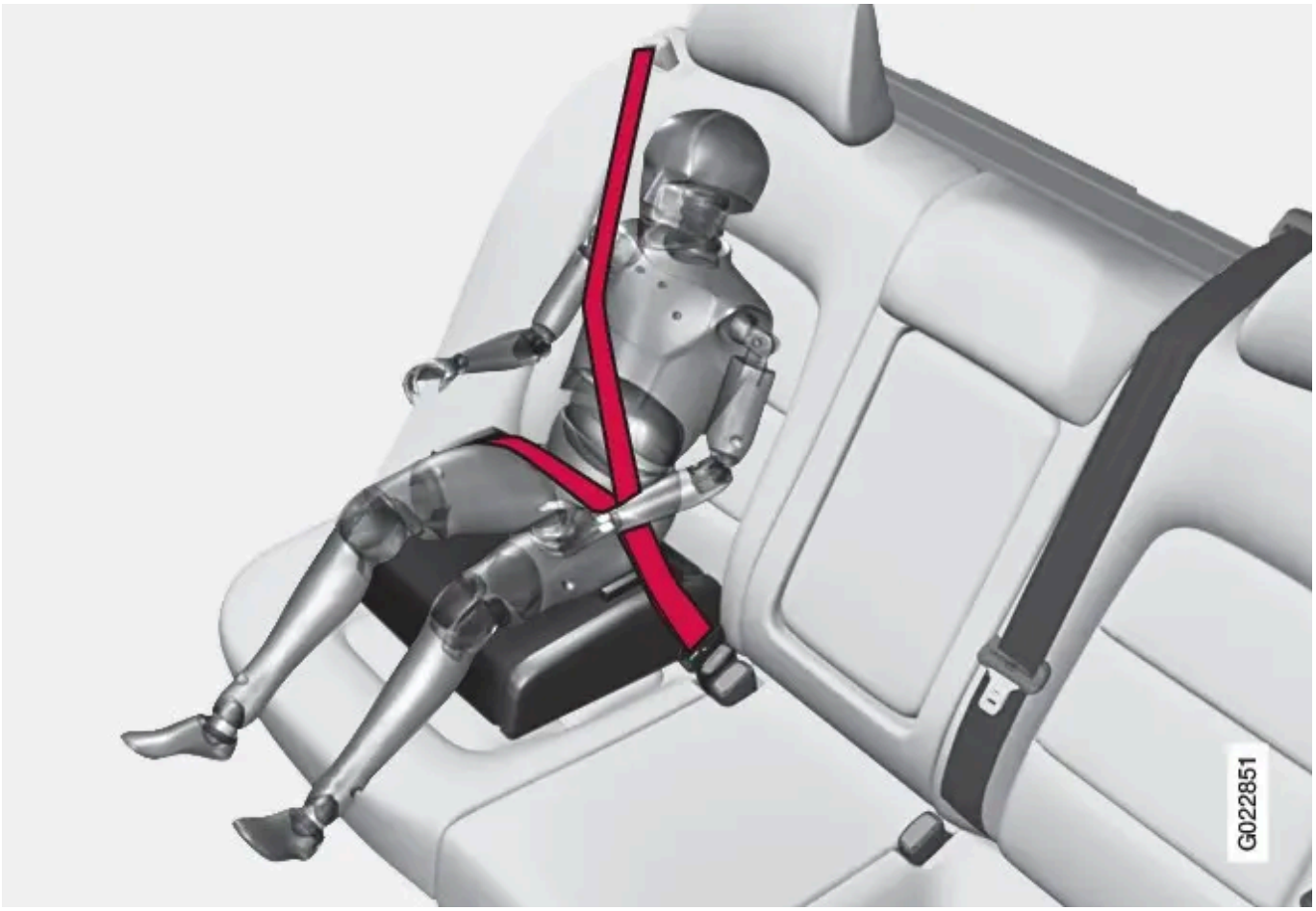
Warning

- Always refer to the recommendations made by the child restraint manufacturer.
- Volvo recommends that the top tether anchors be used when installing a forward-facing child restraint.
- Never route a top tether strap over the top of the head restraint. The strap should be routed beneath the head restraint.
- Child restraint anchorages are designed to withstand only those loads imposed by correctly fitted child restraints. Under no circumstances are they to be used for adult seat belts or harnesses. The anchorages are not able to withstand excessive forces on them in the event of collision if full harness seat belts or adult seat belts are installed to them. An adult who uses a belt anchored in a child restraint anchorage runs a great risk of suffering severe injuries should a collision occur.
- Do not install rear speakers that require the removal of the top tether anchors or interfere with the proper use of the top tether strap.

2.2.10. Booster cushions

Booster cushions should be properly positioned in the vehicle.

Securing a booster cushion



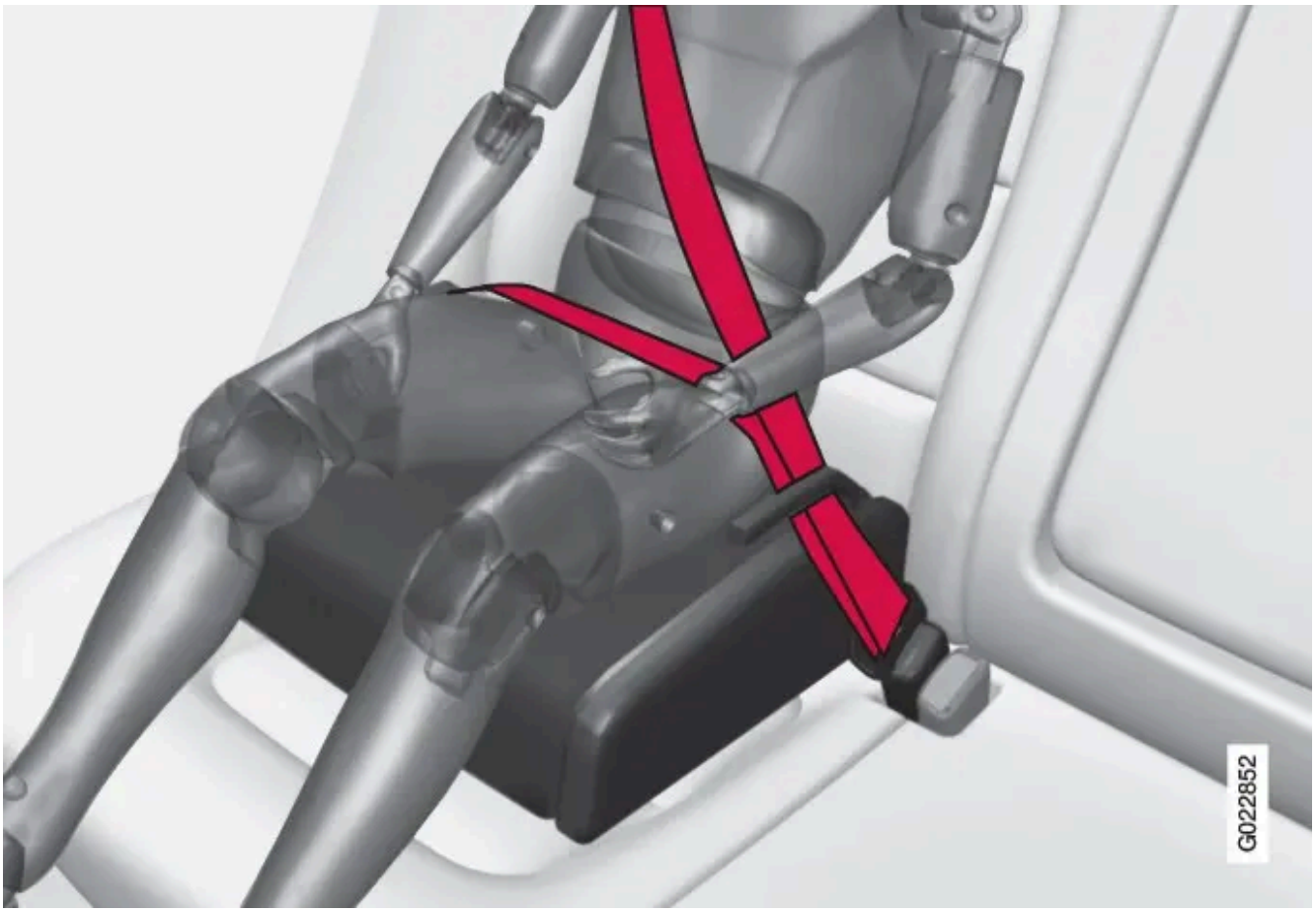
Position the child correctly on the booster cushion

Booster cushions are recommended for children who have outgrown convertible seats.

1. Place the booster cushion in the rear seat of the vehicle.
2. With the child properly seated on the booster cushion, attach the seat belt to or around the cushion according to the manufacturer's instructions.

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3. Fasten the seat belt by inserting the latch plate into the buckle (lock) until a distinct click is audible.



Positioning the seat belt

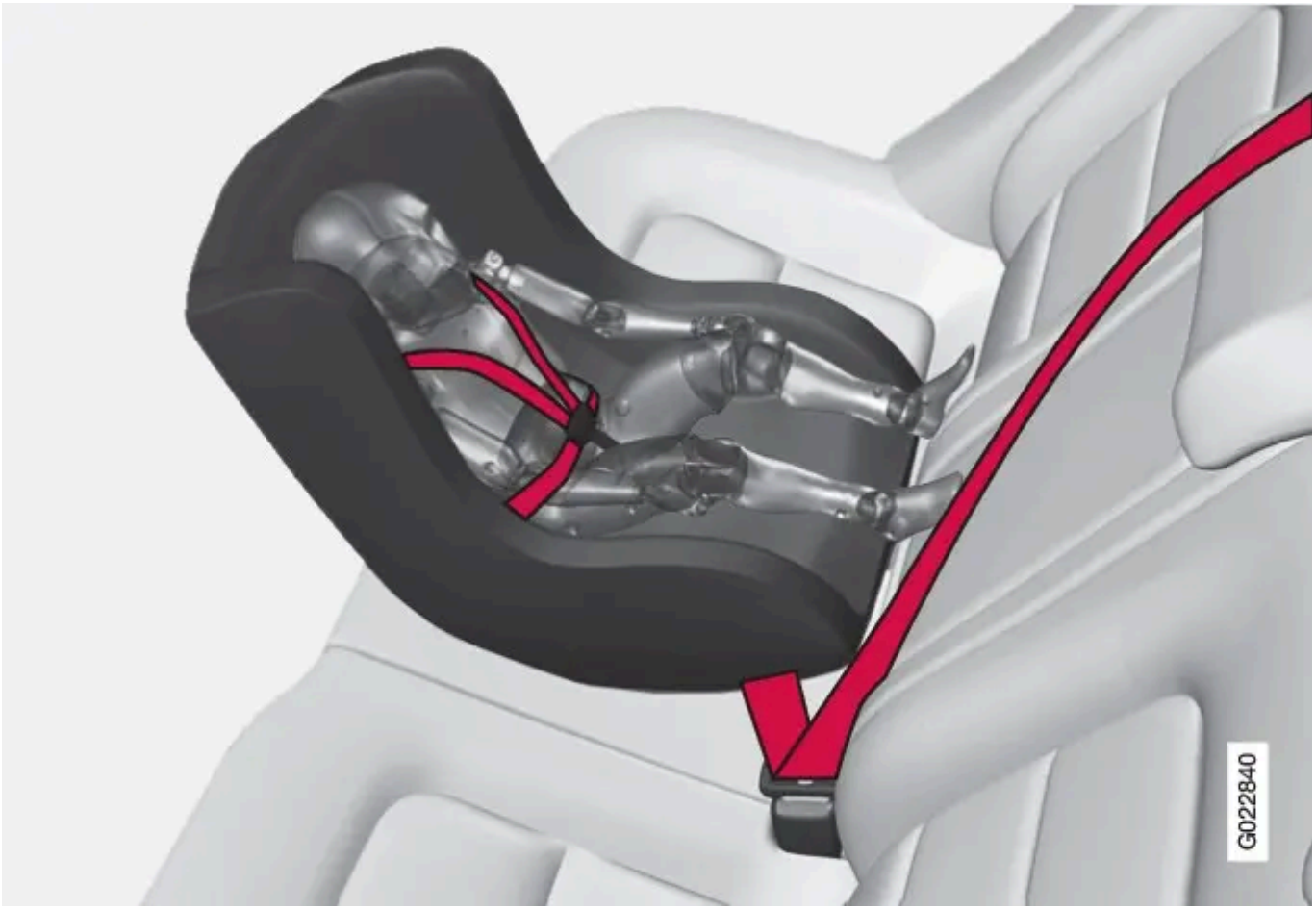
4. Ensure that the seat belt is pulled taut and fits snugly around the child.

> **Warning**
>
> - The hip section of the three-point seat belt must fit snugly across the child's hips, not across the stomach.
> - The shoulder section of the three-point seat belt should be positioned across the chest and shoulder.
> - The shoulder belt must never be placed behind the child's back or under the arm.

2.2.11. Child restraints

Suitable child restraints should always be used when children travel in the vehicle.

Child restraint systems

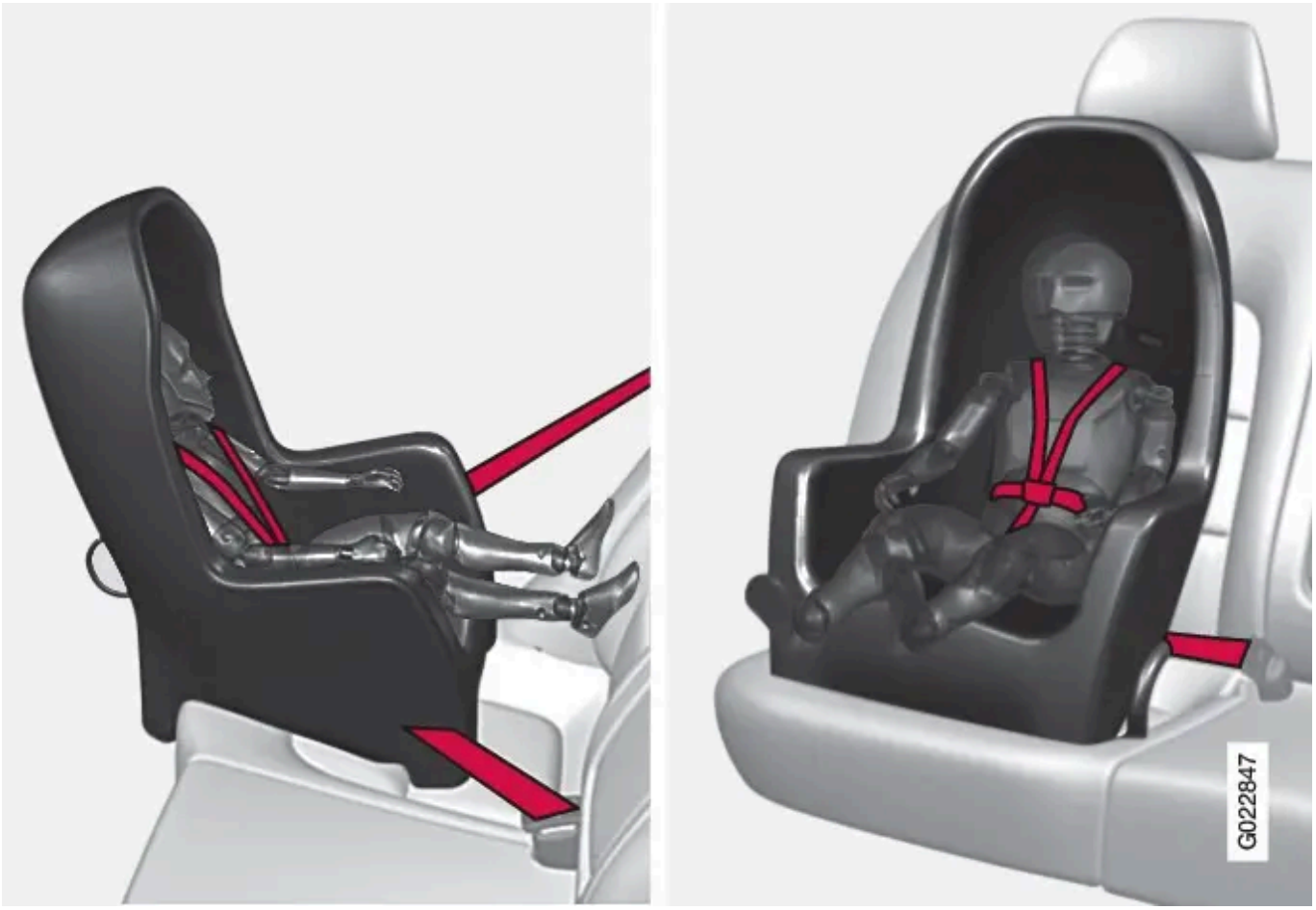


Infant seat

There are three main types of child restraint systems: infant seats, convertible seats, and booster cushions. They are classified according to the child's age and size.

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The following section provides **general information** on securing a child restraint using a three-point seat belt. Refer to ISOFIX/LATCH lower anchors and Top tether anchors for information on securing a child restraint using ISOFIX/LATCH lower anchors and/or top tether anchorages.

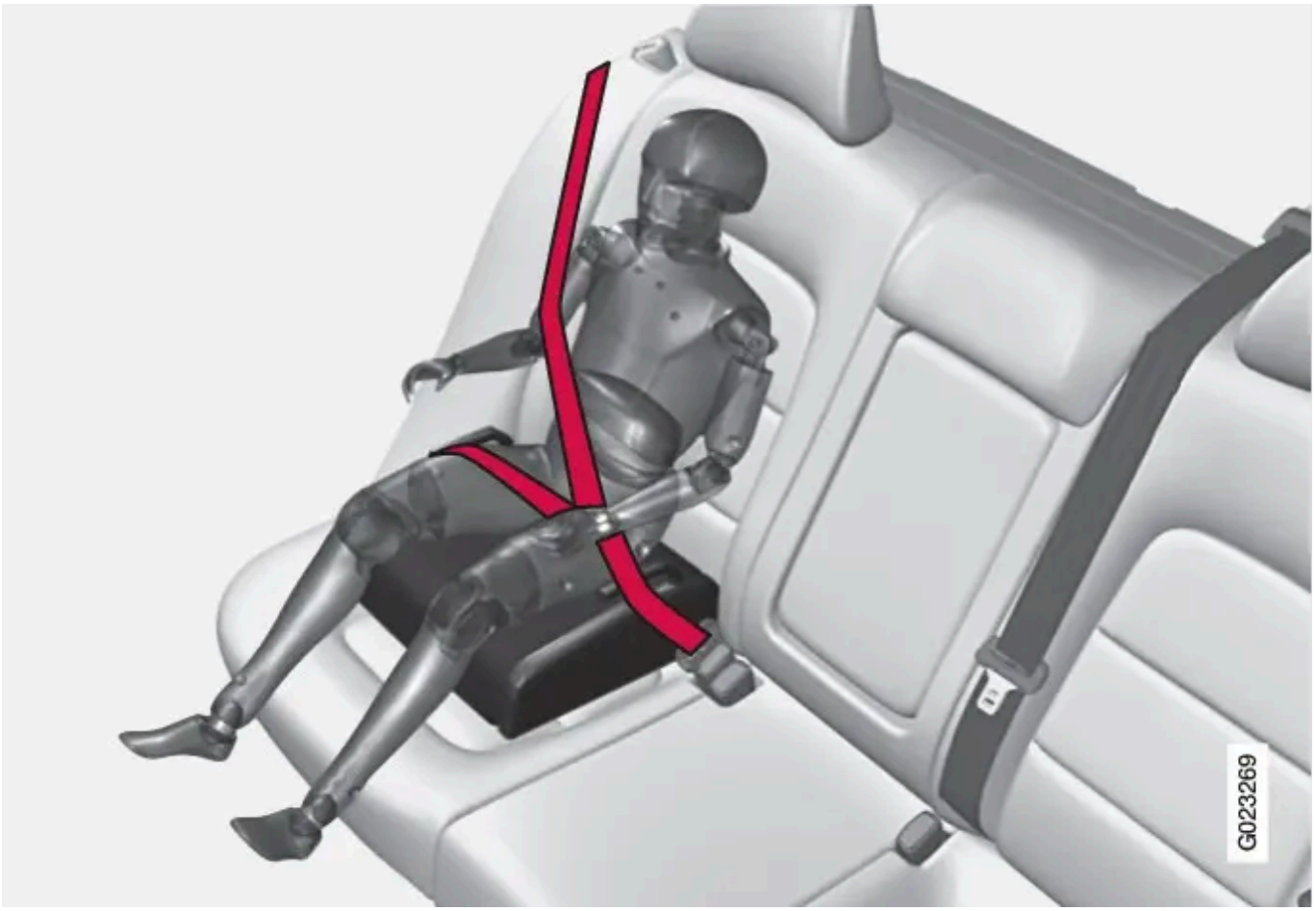


Convertible seat

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Warning

A child seat should never be used in the front passenger seat of any vehicle with a front passenger airbag – not even if the "Passenger airbag off" symbol near the rear-view mirror is illuminated (on vehicles equipped with Occupant Weight Sensor). If the severity of an accident were to cause the airbag to inflate, this could lead to serious injury or death to a child seated in this position.



Booster cushion

Warning

Always refer to the child restraint manufacturer's instructions for detailed information on securing the restraint.

Warning

- When not in use, keep the child restraint system secured or remove it from the passenger compartment to help prevent it from injuring passengers in the event of a sudden stop or collision.
- A small child's head represents a considerable part of its total weight and its neck is still very weak. Volvo recommends that children up to age 4 travel, properly restrained, facing rearward. In addition, Volvo recommends that children should ride rearward facing, properly restrained, as long as possible.

Automatic Locking Retractor/Emergency Locking Retractor (ALR/ELR)

To make child seat installation easier, each seat belt (except for the driver's belt) is equipped with a locking mechanism to help keep the seat belt taut.

When attaching the seat belt to a child seat:

1. Attach the seat belt to the child seat according to the child seat manufacturer's instructions.
2. Pull the seat belt out as far as possible.
3. Insert the seat belt latch plate into the buckle (lock) in the usual way.
4. Release the seat belt and pull it taut around the child seat.

A sound from the seat belt retractor will be audible at this time and is normal. The belt will now be locked in place. This function is automatically disabled when the seat belt is unlocked and the belt is fully retracted.

> **Warning**
>
> Do not use child safety seats or child booster cushions/backrests in the front passenger's seat. We also recommend that children who have outgrown these devices sit in the rear seat with the seat belt properly fastened.

Child restraint registration and recalls

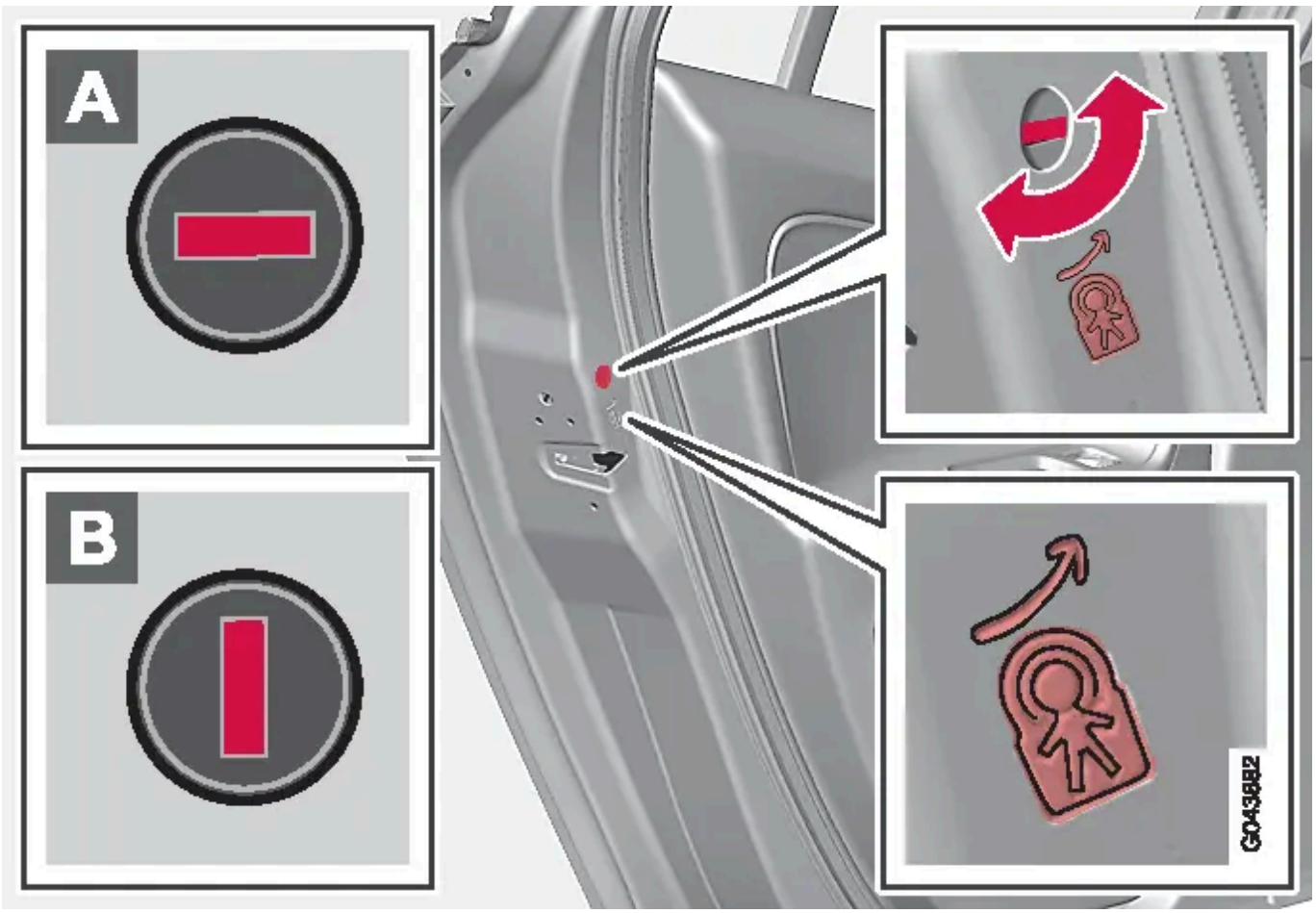
Child restraints could be recalled for safety reasons. You must register your child restraint to be reached in a recall. To stay informed about child safety seat recalls, be sure to fill out and return the registration card that comes with new child restraints.

Child restraint recall information is readily available in both the U.S. and Canada. For recall information in the U.S., call the U.S. Government's Auto Safety Hotline at 1-800-424-9393 or go to http://www-odi.nhtsa.dot.gov/cars/problems/recalls/register/childseat/index.cfm. In Canada, visit Transport Canada's Child Safety website at http://www.tc.gc.ca/roadsafety/childsafety/menu.htm.

2.2.12. Child safety locks

Power child safety locks* help prevent children from inadvertently opening one of the rear doors or windows from inside the vehicle.

Manual child safety locks



Child safety locks – rear doors

The controls are located on the rear door jambs. Use the remote control's key blade or a screwdriver to adjust these controls.

A The rear doors can only be opened from the outside when the slot is in the horizontal position.

B The rear doors can be opened from the inside when the slot is in the vertical position.

Power child safety locks and disengaging rear door windows *



Driver's door control panel

The power child safety locks can be activated/deactivated when the remote key is in mode I or higher. Activation/deactivation can be done up to 2 minutes after the engine has been switched off (if no door has been opened).

To activate the child safety locks:

1. Put the ignition in mode **I** or higher, or start the engine.
2. Press the button on the driver's door control panel (see the illustration).

> **Rear child locks Activated** will be displayed in the instrument panel and the indicator light in the button will illuminate when the function is activated.

When the child safety locks are activated:

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

The child safety locks' current setting is stored when the engine is switched off. If these locks were activated when the engine was switched off, they will also be active when the engine is restarted.

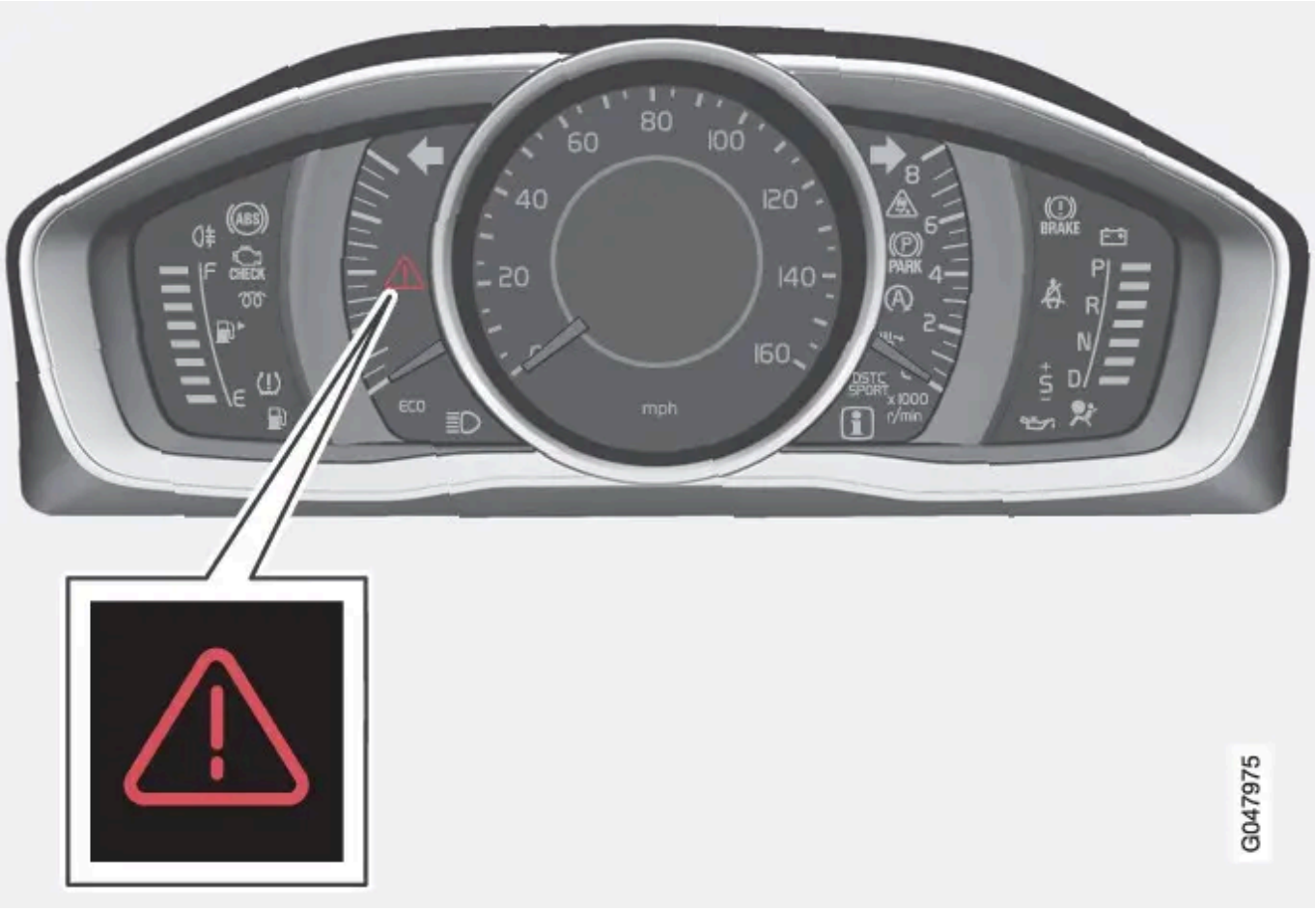
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* Option/accessory.

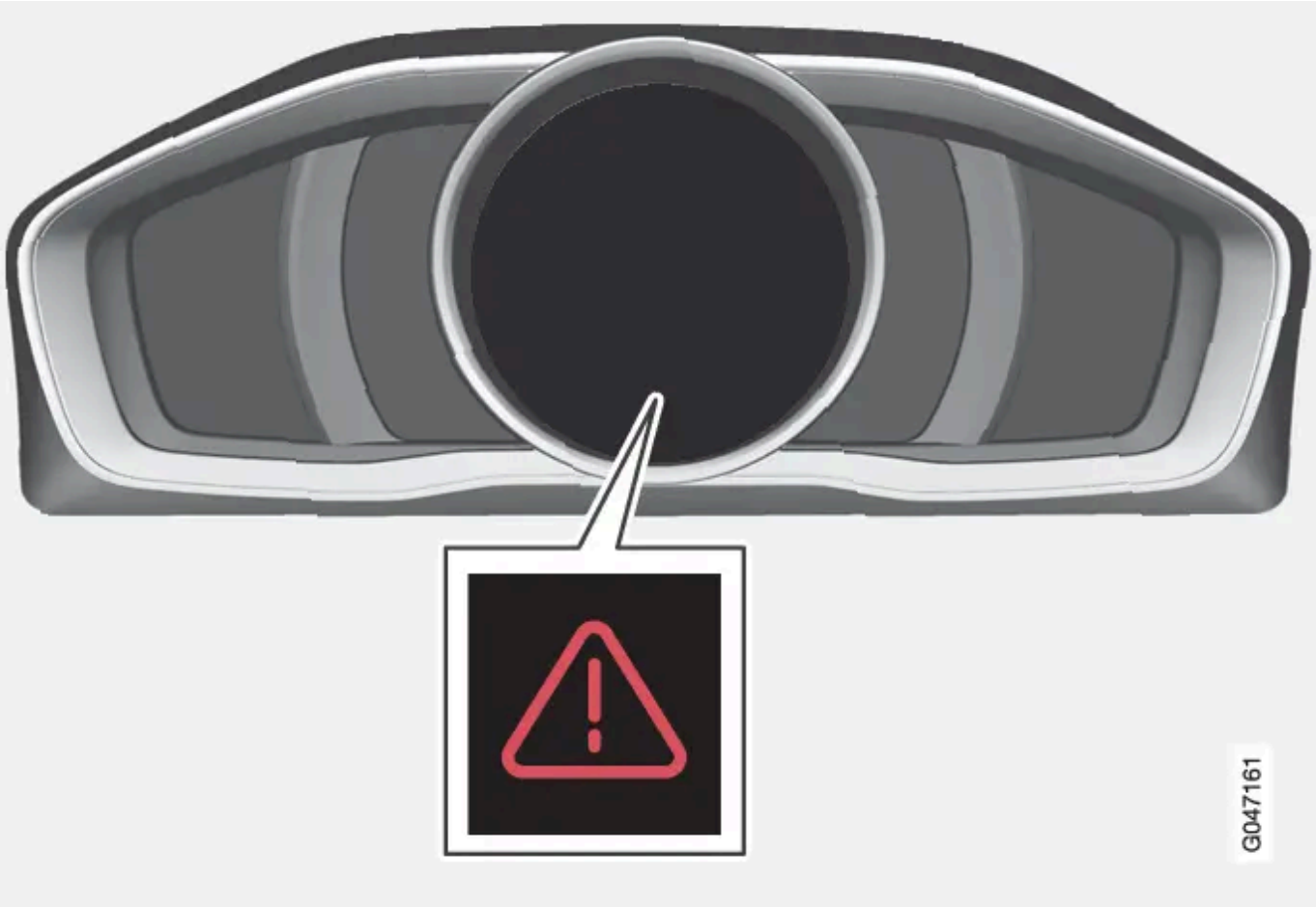
2.3. Crash mode

2.3.1. Crash mode – general information

After a collision, the functionality of some of the vehicle's systems may be reduced as a safety precaution.



Warning symbol: analog instrument panel



Warning symbol: digital instrument panel*

If the vehicle has been involved in a collision, the text **Safety mode See manual** may appear in the information display.

> **Note**
>
> This text can only be shown if the display is undamaged and the vehicle's electrical system is intact.

Crash mode is a feature that is triggered if one or more of the safety systems (e.g. front or side airbags, an inflatable curtain, or one or more of the seat belt pretensioners) has deployed. The collision may have damaged an important function in the vehicle, such as the fuel lines, sensors for one of the safety systems, the brake system, etc.

> **Warning**
>
> - Never attempt to repair the vehicle yourself or to reset the electrical system after the vehicle has displayed **Safety mode See manual**. This could result in injury or improper system function.
> - Restoring the vehicle to normal operating status should only be done by a trained and qualified Volvo service technician.
> - After **Safety mode See manual** has been displayed, if you detect the odor of fuel vapor, or see any signs of fuel leakage, do not attempt to start the vehicle. Leave the vehicle immediately.

* Option/accessory.

2.3.2. Crash mode – starting the vehicle

If Crash mode has been set (Crash mode) and damage to the vehicle is minor and there is no fuel leakage, you may attempt to start the engine.

To do so:

1. Remove the remote key from the ignition slot and open the driver's door. If a message is displayed that the ignition is on, press the start button.
2. Close the driver's door and reinsert the remote key in the ignition slot.
3. Try to start the vehicle.

> **Warning**
>
> If the message **Safety mode See manual** is still displayed, the vehicle should not be driven and must be towed. Concealed faults may make the vehicle difficult to control.

2.3.3. Crash mode – moving the vehicle

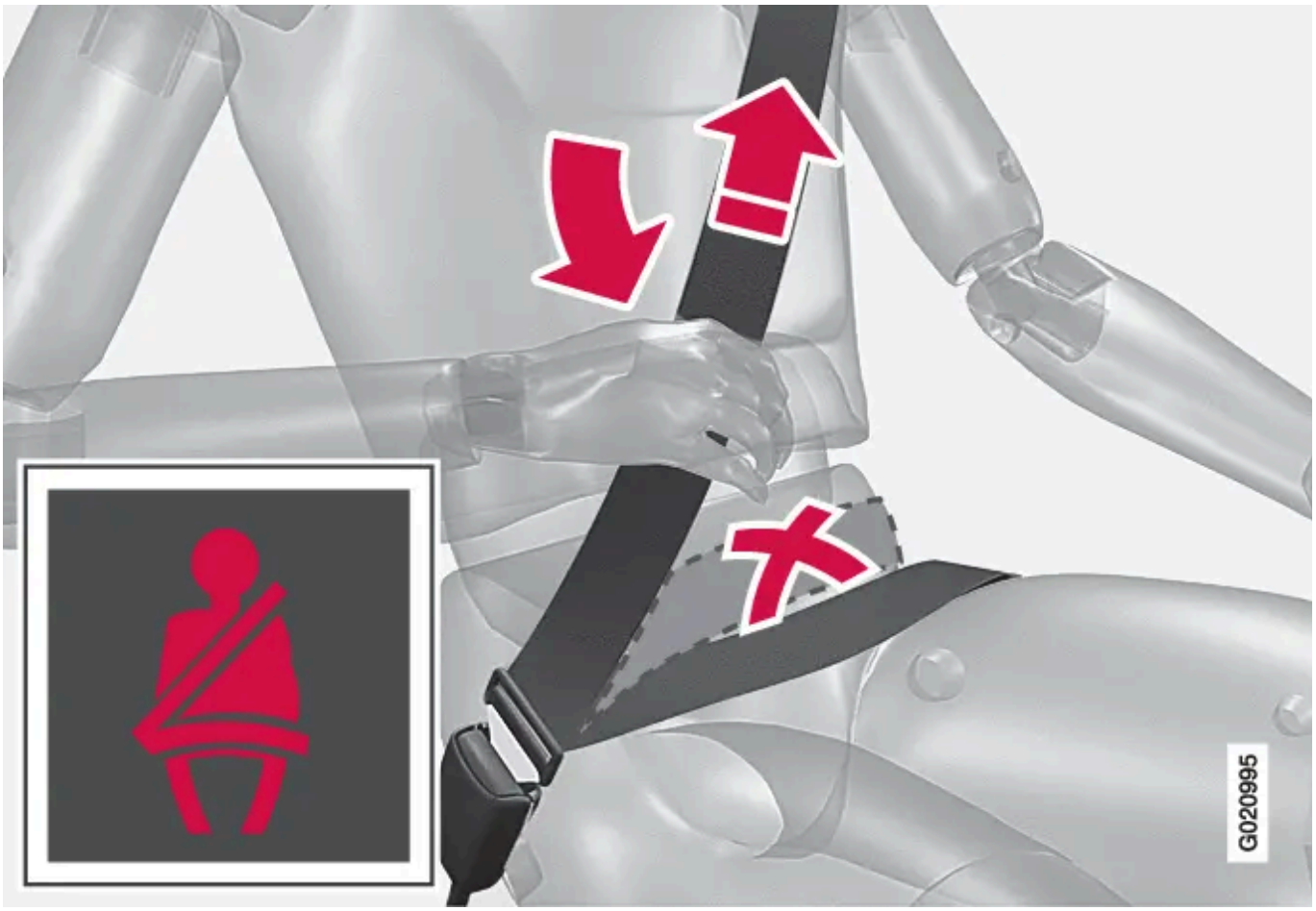
If the message **Normal mode** appears after an attempt has been made to start the engine, Starting the vehicle after a crash, the vehicle may be moved carefully from its present position, if for example, it is blocking traffic. It should, however, not be moved farther than is absolutely necessary.

> **Warning**
>
> Even if the vehicle appears to be drivable after Crash mode has been set, it should not be driven or towed (pulled by another vehicle). There may be concealed damage that could make it difficult or impossible to control. The vehicle should be transported on a flatbed tow truck to a trained and qualified Volvo service technician for inspection/repairs.

2.4. Seat belts

2.4.1. Seat belts – general

Seat belts should always be worn by all occupants of your vehicle. Children should be properly restrained, using an infant, car, or booster seat determined by age, weight and height.
Volvo also believes no child should sit in the front seat of a vehicle.



Adjusting the seat belt

Most states and provinces make it mandatory for occupants of a vehicle to use seat belts.

Seat belt pretensioners

All seat belts are equipped with pretensioners that reduce slack in the belts. These pretensioners are triggered in situations where the front or side impact airbags deploy, and in certain impacts from the rear. The front seat belts also include a tension reducing device which, in the event of a collision, limits the peak forces exerted by the seat belt on the occupant.

Seat belt maintenance

Check periodically that the seat belts are in good condition. Use water and a mild detergent for cleaning. Check seat belt mechanism function as follows: attach the seat belt and pull rapidly on the strap.

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Warning

Never use a seat belt for more than one occupant. Never wear the shoulder portion of the belt under the arm, behind the back or otherwise out of position. Such use could cause injury in the event of an accident. As seat belts lose much of their strength when exposed to violent stretching, they should be replaced after any collision, even if they appear to be undamaged.

Warning

- Never repair the belt yourself; have this work done by a trained and qualified Volvo service technician only.
- Any device used to induce slack into the shoulder belt portion of the three-point belt system will have a detrimental effect on the amount of protection available to you in the event of a collision.
- The seat back should not be tilted too far back. The shoulder belt must be taut in order to function properly.
- Do not use child safety seats or child booster cushions/backrests in the front passenger's seat. We also recommend that children who have outgrown these devices sit in the rear seat with the seat belt properly fastened.

2.4.2. Seat belt reminder

The seat belt reminder is intended to alert all occupants of the vehicle that their seat belts should be fastened before the vehicle begins to move.



The seat belt reminder consists of an audible signal, an indicator light near the rearview mirror and a symbol in the instrument panel that alert all occupants of the vehicle to fasten their seat belts. The indicator light will be on for several seconds from the time the ignition is switched on. There will also be an audible signal if the driver's seat belt is not fastened.

If the front seat belts are unbuckled while the vehicle is in motion, the audible signal and warning light will be active for a several seconds.

Rear seats

The seat belt reminder in the rear seat has two additional functions:

- It provides information about which seat belts are fastened in the rear seat. A message will appear in the information display when a belt is being used. This message will disappear after several seconds or can be erased by pressing the OK button on the left steering wheel lever.
- It also provides a reminder if one of the occupants of the rear seat has unbuckled his/her seat belt while the vehicle is in motion. A visual and audible signal will be given. These signals will stop when the seat belt has been re-buckled or can be stopped by pressing the OK button.
- The message **Unbelted in rear seat** will appear in the information display if one of the rear doors has been opened.

The message in the information display can always be accessed, even if it has been erased, by pressing the OK button to display stored messages.

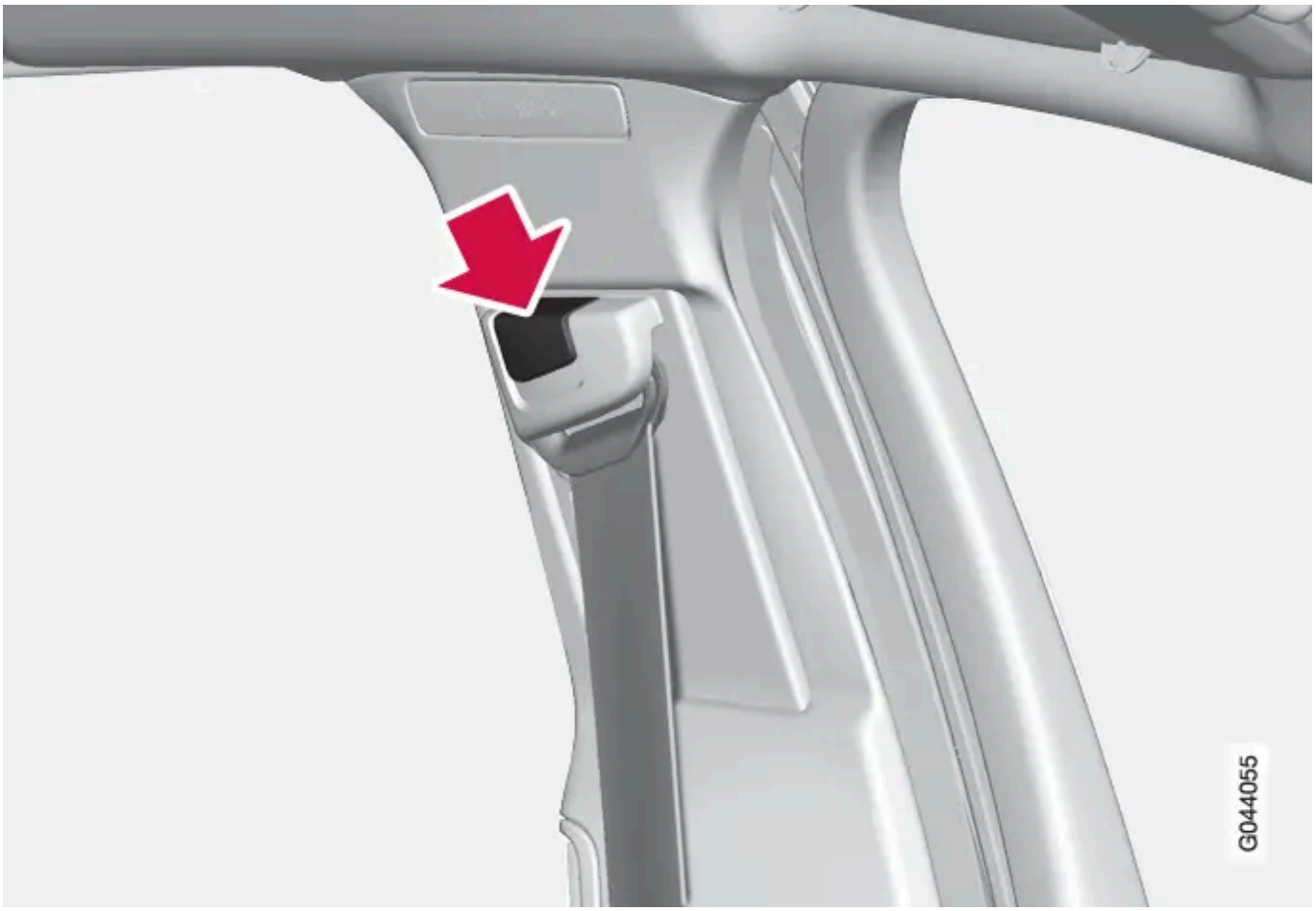
2.4.3. Seat belts – buckling/unbuckling

Seat belts should be used by all occupants in the vehicle when it is in motion.

Buckling a seat belt

Pull the belt out far enough to insert the latch plate into the receptacle until a distinct click is heard. The seat belt retractor is normally "unlocked" and you can move freely, provided that the shoulder belt is not pulled out too far.

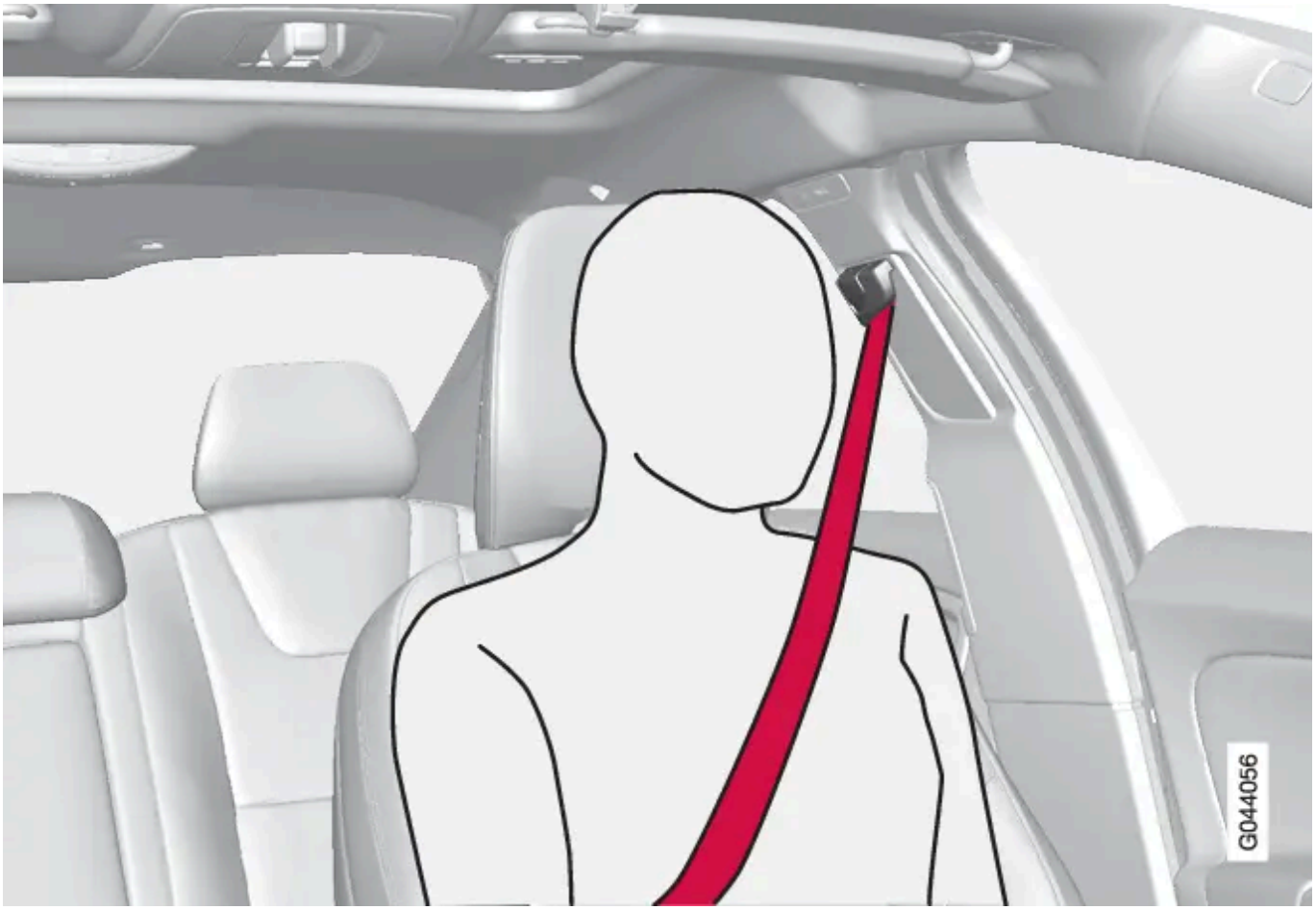
Adjusting seat belt height (front seat belts only)



Adjusting seat belt height

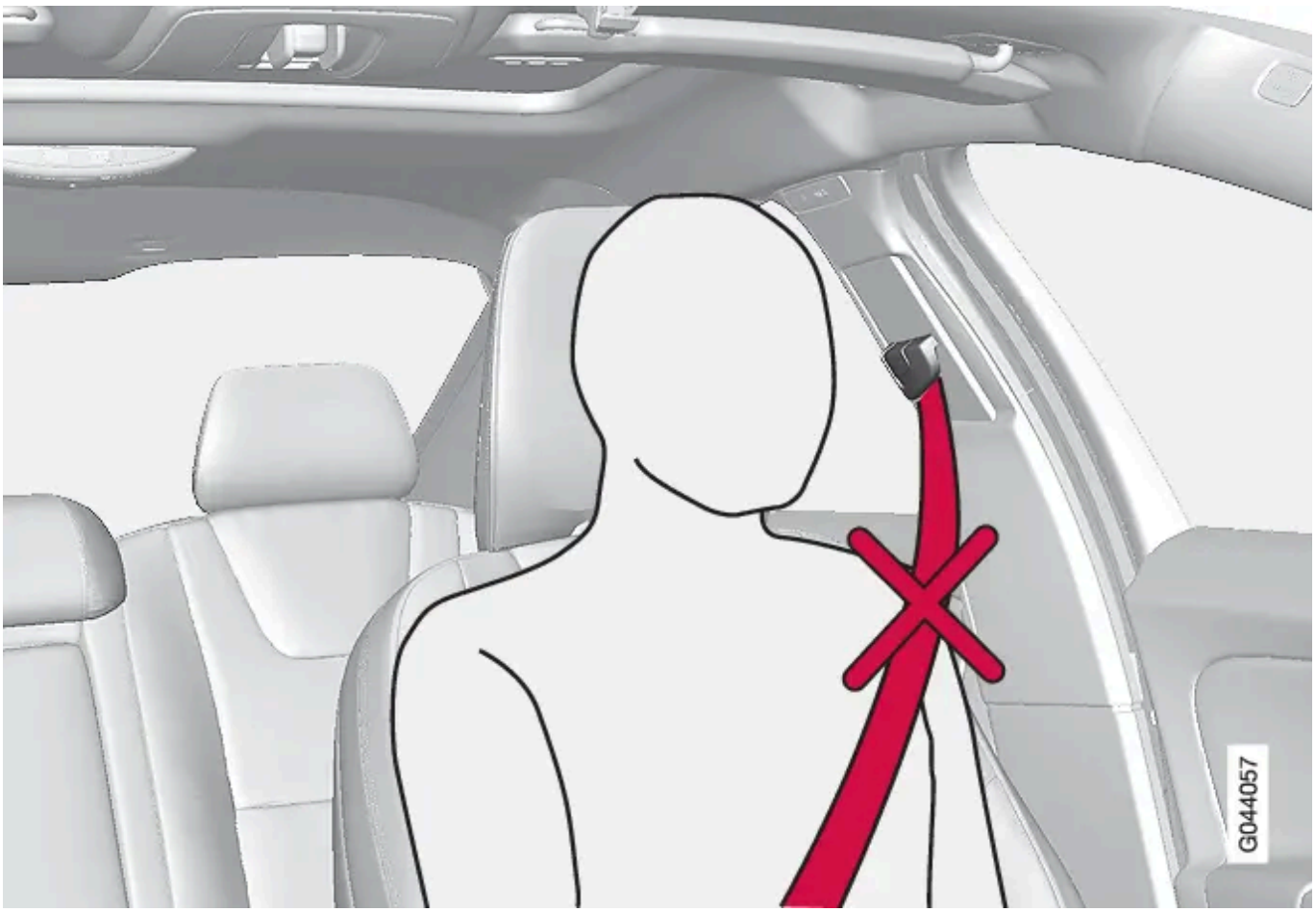
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The height of the shoulder section of the seat belt must be correctly adjusted. Press the button and move the upper seat belt anchor to position it as high as possible so that the shoulder section of the belt is across the seat occupant's collarbone and not across the throat.



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Correct height adjustment



Incorrect height adjustment

Seat belt retractor

The seat belt retractor will lock up in the following situations:

- if the belt is pulled out rapidly
- during braking and acceleration
- if the vehicle is leaning excessively
- when driving in turns
- if the Automatic Locking Retractor/Emergency Locking Retractor (ALR/ELR) is activated

> **Note**
>
> Each seat belt (except for the driver's belt) is equipped with the ALR/ELR function, which is designed to help keep the seat belt taut. ALR/ELR activates if the seat belt is pulled out as far as possible. If this is done, a sound from the seat belt retractor will be audible, which is normal, and the seat belt will be pulled taut and locked in place. This function is automatically disabled when the seat belt is unbuckled and fully retracted.

See also Child restraints for information about using a seat belt's ALR/ELR function to anchor a child seat.

When wearing the seat belt remember:

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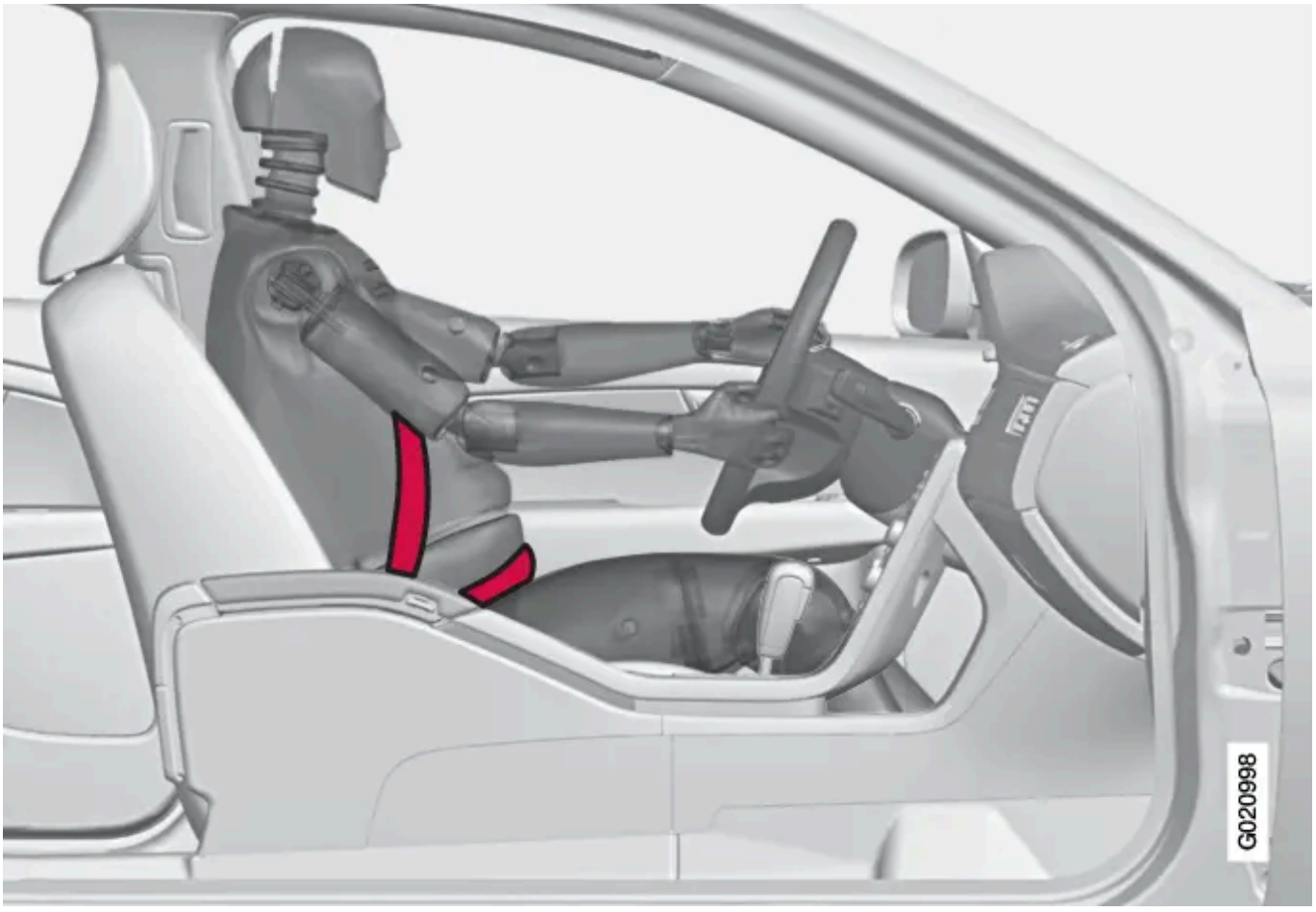
- The belt should not be twisted or turned.
- The lap section of the belt must be positioned low on the hips (not pressing against the abdomen).
- Make sure that the shoulder belt is rolled up into its retractor and that the shoulder and lap belts are taut.

Unbuckling the seat belt

To remove the seat belt, press the red section on the seat belt receptacle. Before exiting the vehicle, check that the seat belt retracts fully after being unbuckled. If necessary, guide the belt back into the retractor slot.

2.4.4. Seat belts – pregnancy

The seat belt should always be worn during pregnancy. However, it is crucial that it be worn correctly.



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 ensure 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.

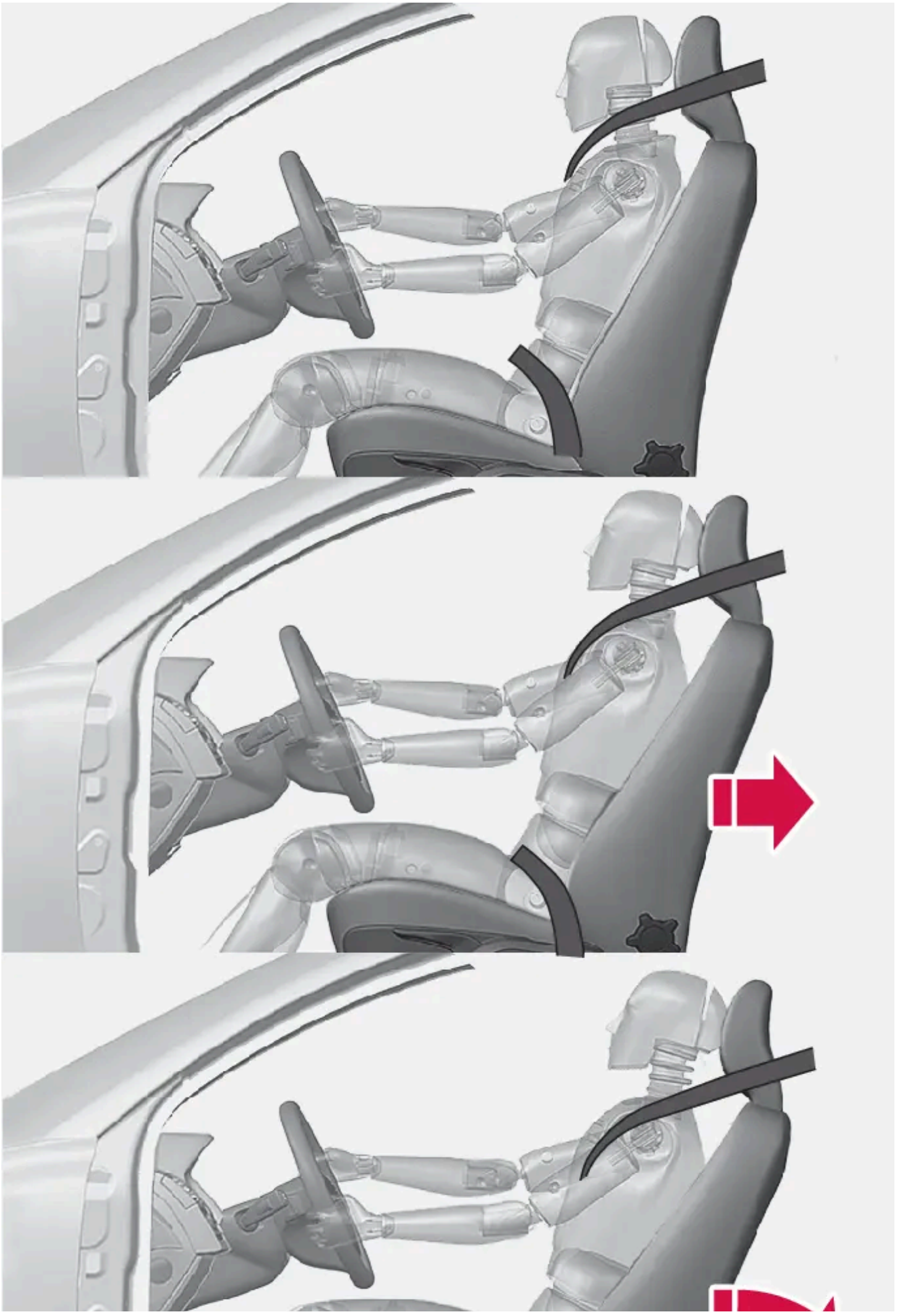
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2.5. Whiplash Protection System (WHIPS)

2.5.1. Whiplash Protection System (WHIPS)

The WHIPS system consists of specially designed hinges and brackets on the front seat backrests designed

to help absorb some of the energy generated in a collision from the rear (when the vehicle is rear-ended).



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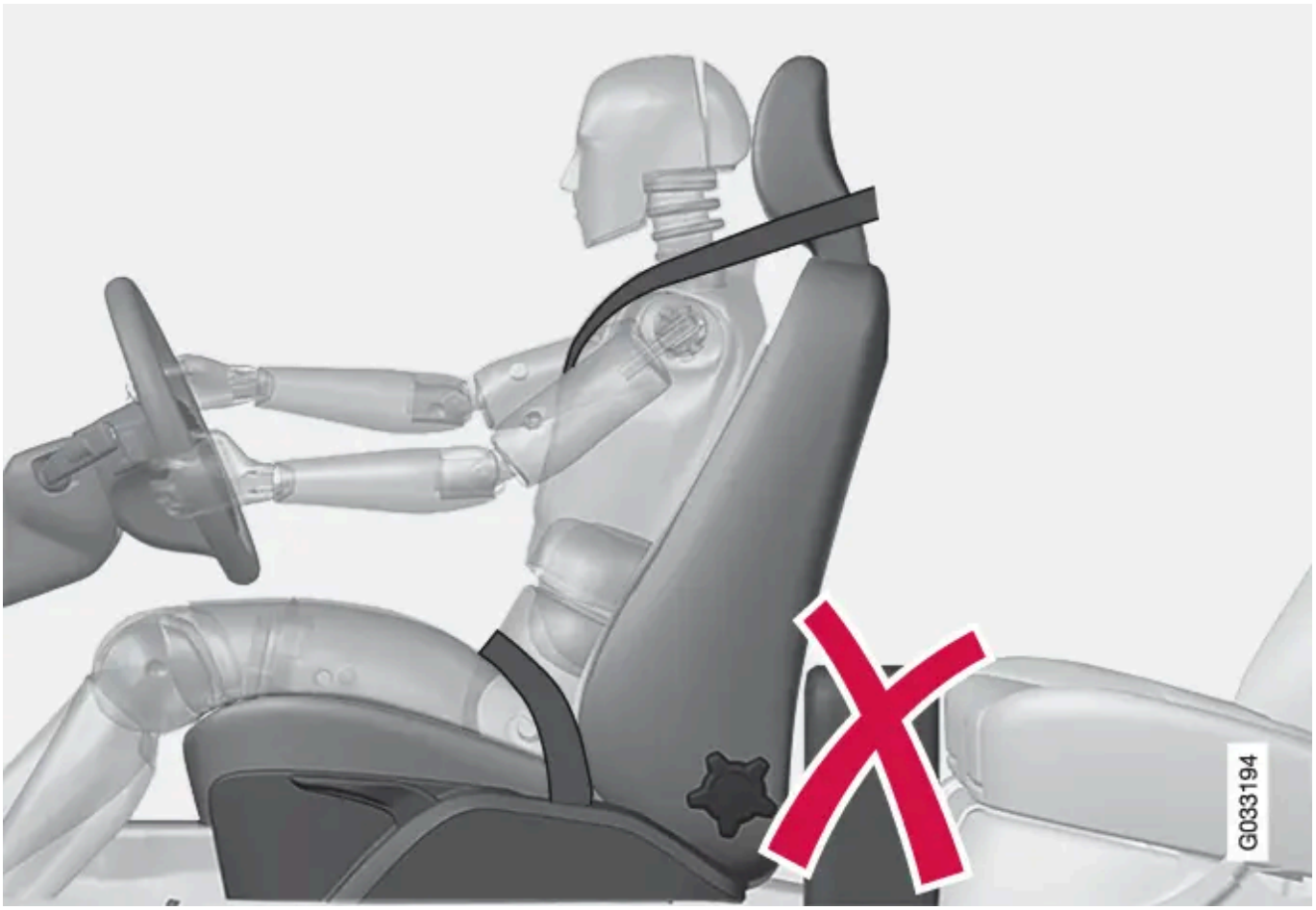
In the event of a rear-end collision, the hinges and brackets of the front seat backrests are designed to change position slightly to allow the backrest/head restraint to help support the occupant's head before moving slightly rearward. This movement helps absorb some of the forces that could result in whiplash.

Warning

- The WHIPS system is designed to supplement the other safety systems in your vehicle. For this system to function properly, the three-point seat belt must be worn. Please be aware that no system can prevent all possible injuries that may occur in an accident.
- The WHIPS system is designed to function in certain collisions from the rear, depending on the crash severity, angle and speed.

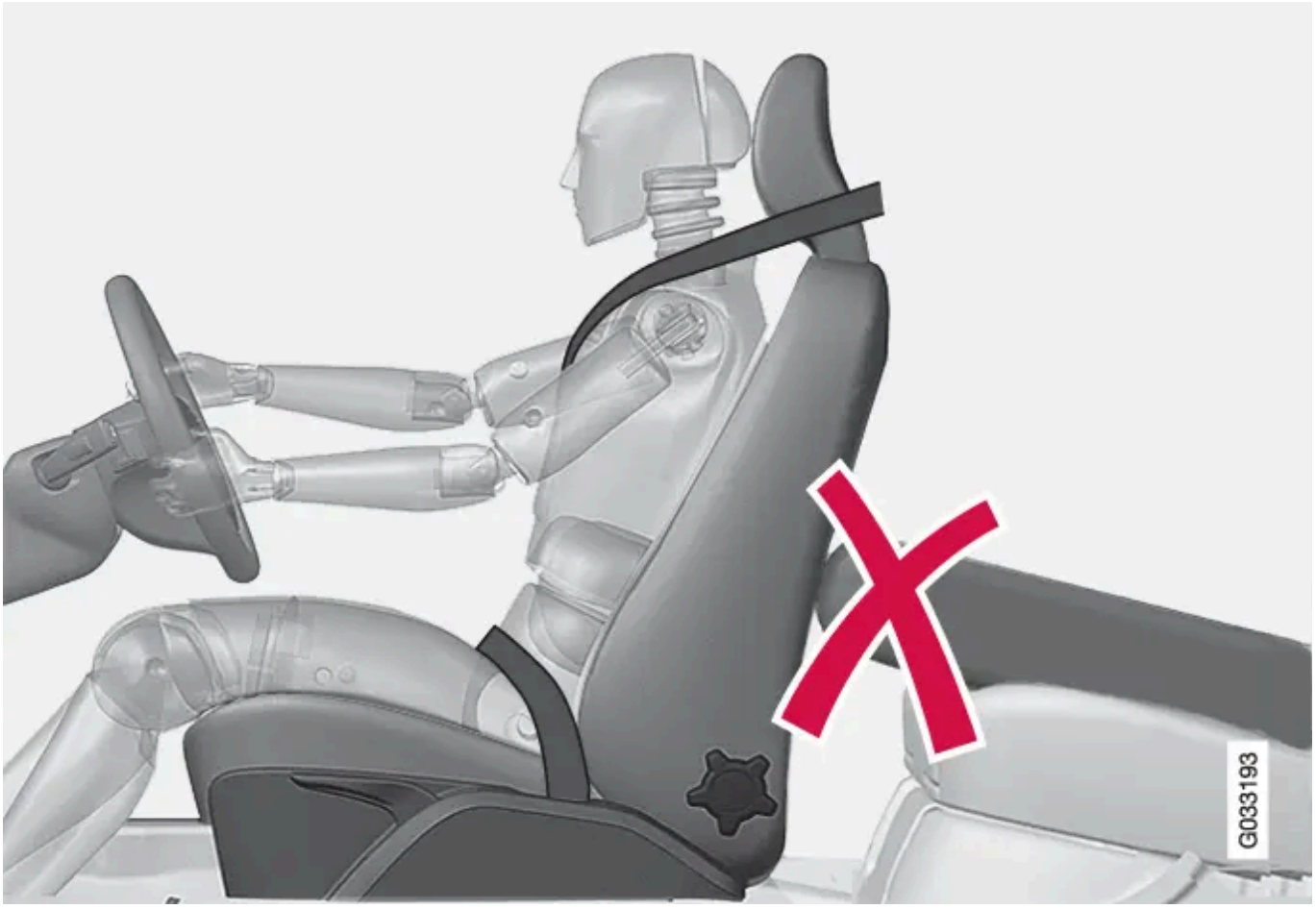
Warning

- Occupants in the front seats must never sit out of position. The occupant's back must be as upright as comfort allows and be against the seat back with the seat belt properly fastened.
- If your vehicle has been involved in a rear-end collision, the front seat backrests must be inspected by a trained and qualified Volvo service technician, even if the seats appear to be undamaged. Certain components in the WHIPS system may need to be replaced.
- Do not attempt to service any component in the WHIPS system yourself.



Warning

- Boxes, suitcases, etc. wedged behind the front seats could impede the function of the WHIPS system.
- If the rear seat backrests are folded down, cargo must be secured to prevent it from sliding forward against the front seat backrests in the event of a collision from the rear. This could interfere with the action of the WHIPS system.



Warning

Any contact between the front seat backrests and the folded rear seat or a rear-facing child seat could impede the function of the WHIPS system. If the rear seat is folded down, the occupied front seats must be adjusted forward so that they do not touch the folded rear seat.

2.6. Inflatable Curtain (IC)

The inflatable curtain is designed to help protect the heads of the occupants of the front seats and the occupant of the outboard rear seating positions in certain side impact collisions.



This system consists of inflatable curtains located along the sides of the roof liners, stretching from the center of both front side windows to the rear edge of the rear side door windows.

In certain side impacts, **both** the Inflatable Curtain (IC) and the Side Impact Airbag System (SIPS airbag) will deploy. The IC and the SIPS airbag deploy simultaneously.

Note

If the inflatable curtain deploys, it remains inflated for approximately 6 seconds.

Warning

- The IC system is a supplement to the Side Impact Protection System. It is not designed to deploy during collisions from the rear of the vehicle.
- Never try to open or repair any components of the IC system. This should be done only by a trained and qualified Volvo service technician.
- Never hang heavy items from the ceiling handles. This could impede deployment of the Inflatable Curtain.
- The cargo area and rear seat should not be loaded to a level higher than 2 in. (5 cm) below the upper edge of the rear side windows. Objects placed higher than this level could impede the function of the Inflatable Curtain.

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> **Warning**
>
> In order for the IC to provide its best protection, both front seat occupants and both outboard rear seat occupants should sit in an upright position with the seat belt properly fastened; adults using the seat belt and children using the proper child restraint system. Only adults should sit in the front seats. Children must never be allowed in the front passenger seat, Child safety for guidelines. Failure to follow these instructions can result in injury to the vehicle occupants in an accident.

2.7. Occupant safety

Safety is Volvo's cornerstone.

Volvo's concern for safety

Our concern for safety dates back to 1927 when the first Volvo rolled off the production line. Three-point seat belts (a Volvo invention), safety cages, and energy-absorbing impact zones were designed into Volvo vehicles long before it was fashionable or required by government regulation.

We will not compromise our commitment to safety. We continue to seek out new safety features and to refine those already in our vehicles. You can help. We would appreciate hearing your suggestions about improving automobile safety. We also want to know if you ever have a safety concern with your vehicle. Call us in the U.S. at: 1-800-458-1552 or in Canada at: 1-800-663-8255.

Occupant safety reminders

How safely you drive doesn't depend on how old you are but rather on:

- How well you see.
- Your ability to concentrate.
- How quickly you make decisions under stress to avoid an accident.

The following suggestions are intended to help you cope with the ever changing traffic environment.

- Never drink and drive.
- If you are taking any medication, consult your physician about its potential effects on your driving abilities.
- Take a driver-retraining course.
- Have your eyes checked regularly.
- Keep your windshield and headlights clean.
- Replace wiper blades when they start to leave streaks.
- Take into account the traffic, road, and weather conditions, particularly with regard to stopping distance.
- Never send text messages while driving.
- Refrain from using or minimize the use of a cell phone while driving.

2.8. Reporting safety defects

The following information will help you report any perceived safety-related defects in your vehicle.

Reporting safety defects in the U.S.

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying Volvo Cars of North America, LLC. If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your retailer, or Volvo Cars of North America, LLC. To contact NHTSA, you may either call the Auto Safety Hotline toll-free at

1-888-327-4236

(TTY: 1-800-424-9153) or write to: NHTSA, U.S. Department of Transportation, Washington D.C. 20590.

You can also obtain other information about motor vehicle safety from:

http://www.safercar.gov

Volvo strongly recommends that if your vehicle is covered under a service campaign, safety or emission recall or similar action, it should be completed as soon as possible. Please check with your local retailer or Volvo Cars of North America, LLC if your vehicle is covered under these conditions.

NHTSA can be reached at:

Internet:

http://www.nhtsa.gov

Telephone:

1-888-DASH-2-DOT (1-888-327-4236).

Reporting safety defects in Canada

If you believe your vehicle has a defect that could cause a crash or could cause injury or death, you should immediately inform Transport Canada in addition to notifying Volvo Cars of Canada Corp.

Transport Canada can be contacted at:

1-800-333-0510

Teletypewriter (TTY): 613 990-4500

Fax: 1-819-994-3372

Mailing Address: Transport Canada - Road Safety, 80 rue Noël, Gatineau, (Quebec) J8Z 0A1

2.9. Recall information

Information regarding recalls or other service campaigns is available on our website at www.volvocars.com/us/.

On our website, select the tab YOUR VOLVO and the heading RECALL INFORMATION will be displayed at the lower left side of the screen. Enter your Vehicle Identification Number for your vehicle (found at the base of the windshield). If your vehicle has any open Recalls, they will be displayed on this page.

Volvo customers in Canada

For any questions regarding open recalls for your vehicle, please contact your authorized Volvo retailer. If your retailer is unable to answer your questions, please contact Volvo Customer Relations at 905 695-9626, Monday through Friday, 8:30 A.M. to 5:00 P.M. EST or by e-mail at vclcust@volvocars.com. You may also write us at:

Volvo Cars of Canada

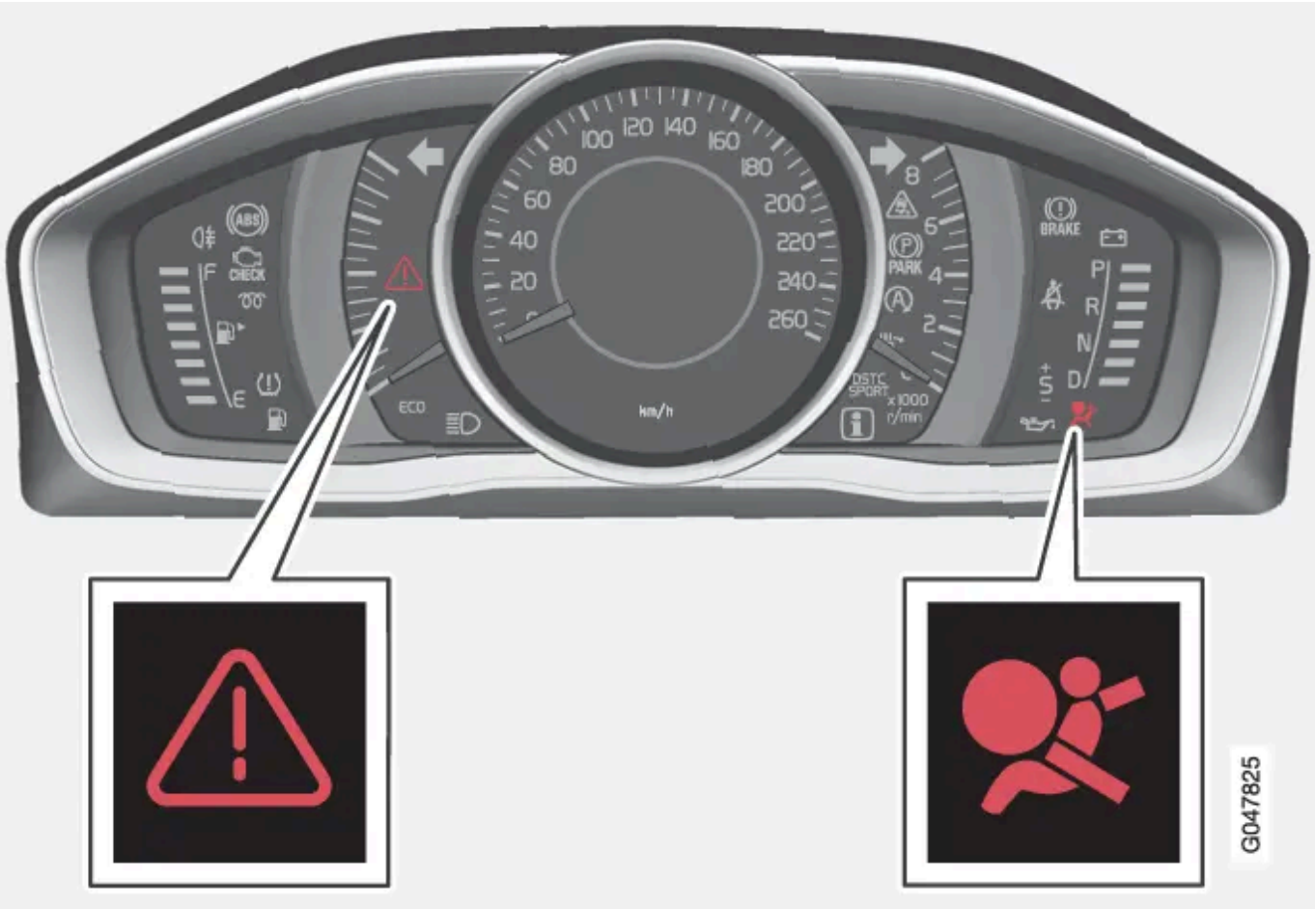
National Customer Service

9130 Leslie Street, Suite 101

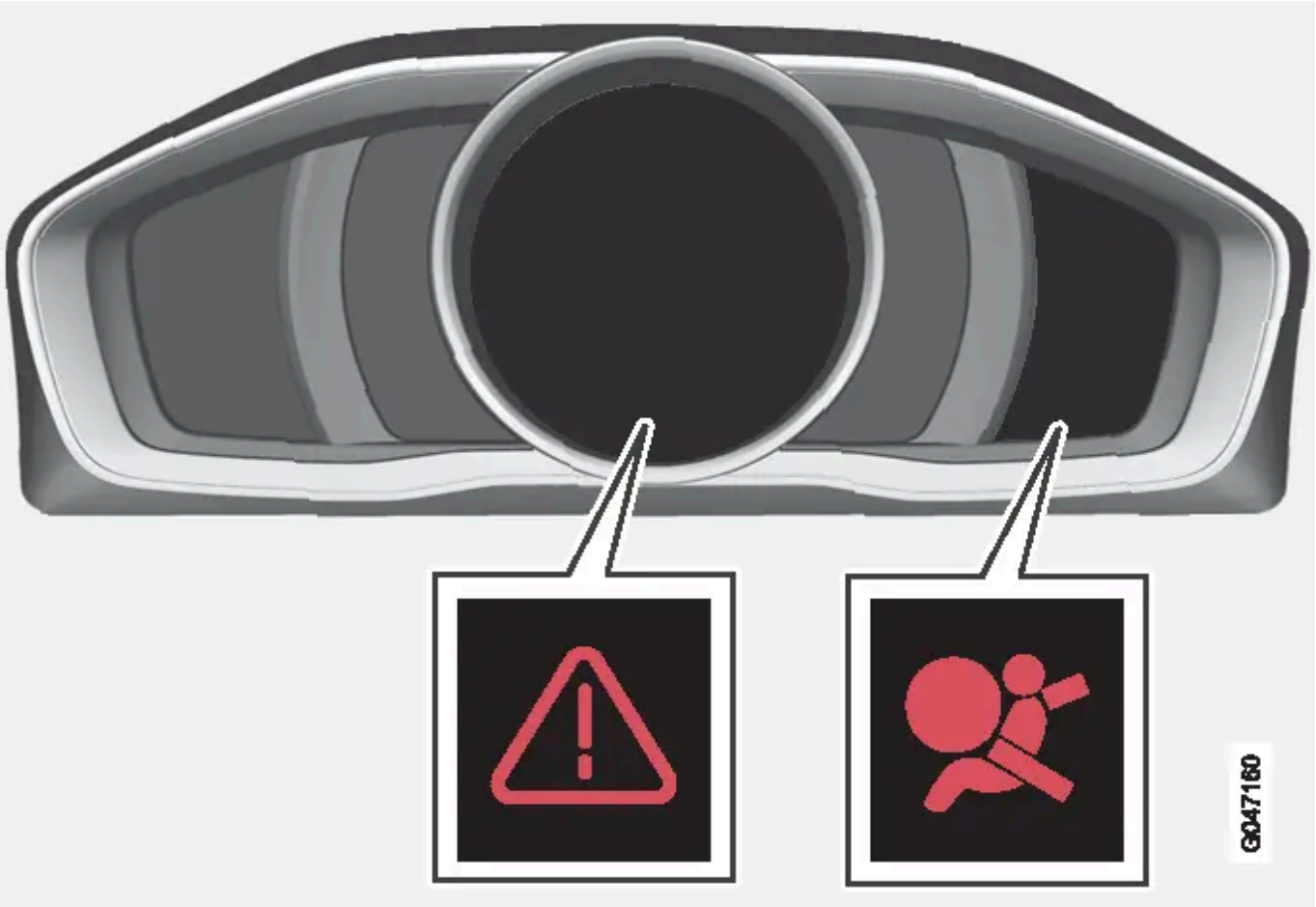
Richmond Hill, Ontario L4B 0B9

2.10. Supplemental Restraint System (SRS)

As an enhancement to the three-point seat belts, your Volvo is equipped with a Supplemental Restraint System (SRS).



Models with an analog instrument panel



Models with an digital instrument panel*

Volvo's SRS consists of seat belt pretensioners, front airbags, side impact airbags, a front passenger occupant weight sensor, and inflatable curtains. All of these systems are monitored by the SRS control module. An SRS warning light in the instrument panel (see the illustration) illuminates when the ignition is in modes I or II, and will normally go out after approximately 6 seconds if no faults are detected in the system.

Where applicable, a text message will also be displayed when the SRS warning light illuminates. If this warning symbol is not functioning properly, the general warning symbol illuminates and a text message will be displayed.

See also Information displays – indicator symbols and Information displays – warning symbols for more information about indicator and warning lights.

Warning

- If the SRS warning light stays on after the engine has started or if it illuminates while you are driving, have the vehicle inspected by a trained and qualified Volvo service technician as soon as possible.
- Never try to repair any component or part of the SRS yourself. Any interference in the system could cause malfunction and serious injury. All work on these systems should be performed by a trained and qualified Volvo service technician.

Warning

If your vehicle has become flood-damaged in any way (e.g., soaked carpeting/standing water on the floor of the vehicle), do not attempt to start the vehicle or insert the remote key into the ignition slot before disconnecting the battery (see below). This may cause airbag deployment which could result in serious injury. Have the vehicle towed to a trained and qualified Volvo service technician for repairs.

Before attempting to tow the vehicle:

- Switch off the ignition for at least 10 minutes and disconnect the battery.
- Follow the instructions for manually overriding the shiftlock system Transmission – shiftlock override.

* Option/accessory.

3. Instruments and controls

3.1. Controls

3.1.1. Tunnel detection (models with the rain sensor* only)

For models without automatic low beams, tunnel detection activates the low beams when the vehicle enters a tunnel. The low beams are switched off approx. 20 seconds after the vehicle leaves the tunnel.

The rain sensor reacts to the change in lighting conditions when, for example, the vehicle enters a tunnel and the tunnel detection feature will then activate the low beam headlights. The low beams will be switched off approx. 20 seconds after the vehicle leaves the tunnel.

The rain sensor does not have to be activated for tunnel detection to function.

* Option/accessory.

3.1.2. Auxiliary lights*

If the vehicle is fitted with auxiliary lights, the driver can use the MY CAR menu system to choose to deactivate and turn these lights on and off along with the high beam headlights.

The auxiliary lights must be connected to the vehicle's electrical system, which should only be done by a trained and authorized Volvo service technician. See My Car – introduction for more information about the menu system.

* Option/accessory.

3.1.3. Windshield washer

Move the lever toward the steering wheel to start the windshield and headlight washers. After the lever is released the wipers make several extra sweeps.



Washing function

Heated washer nozzles*

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

High-pressure headlight washing*

High-pressure headlight washing consumes a large quantity of washer fluid. To save fluid, the headlights are washed using two alternatives:

- **Low/high beam headlights on.** The headlights will be washed the first time the windshield is washed. Thereafter, the headlights will only be washed once for every five times the windshield is washed within a 10-minute period.
- **Parking lights on.** Optional Active Bending Lights will be washed once for every five times the windshield is washed. Normal halogen headlights will not be washed.

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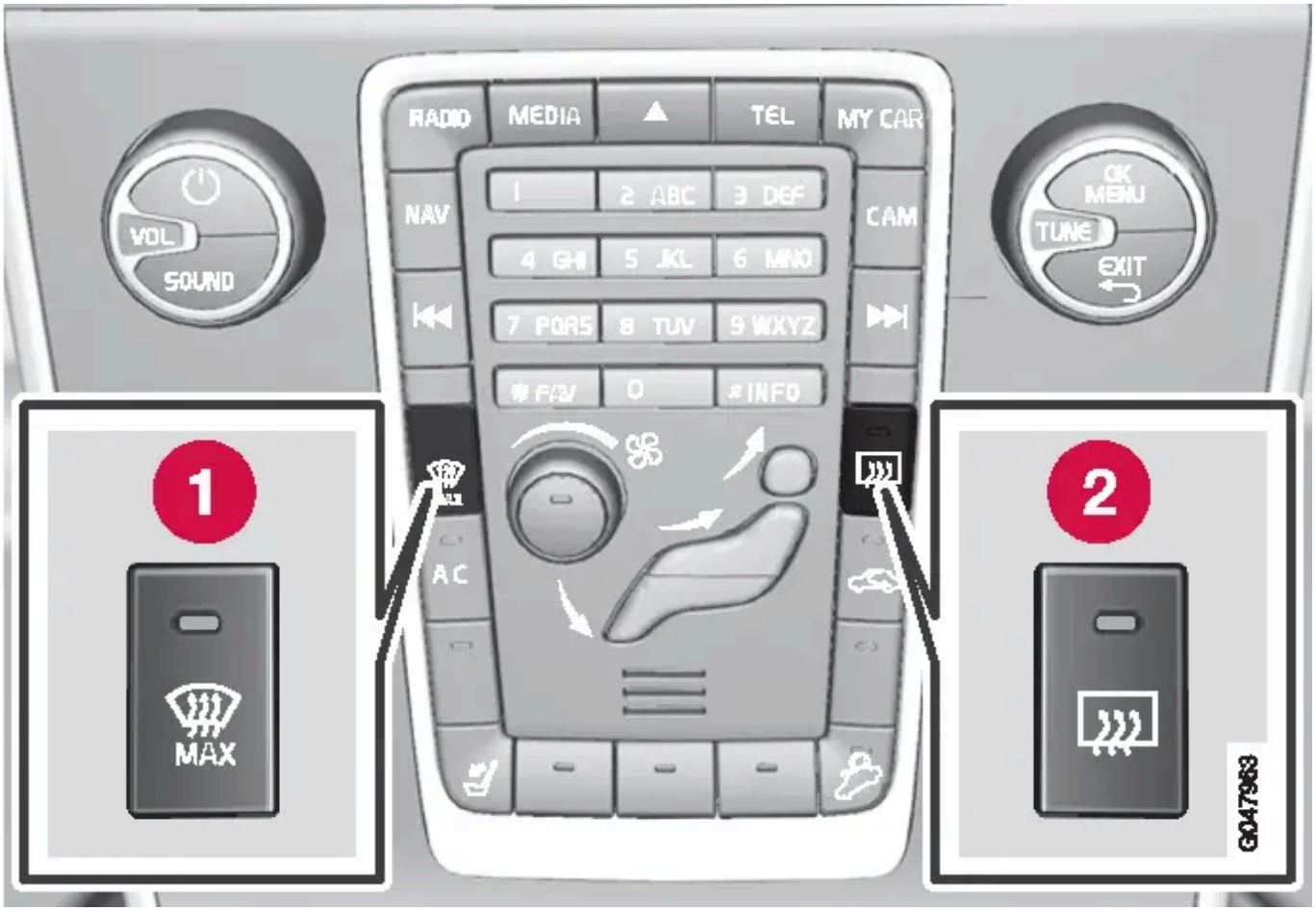
Important

- Use ample washer fluid when washing the windshield. The windshield should be thoroughly wet when the wipers are in operation.
- When approx. 1 US quart (1 liter) of washer fluid remains in the reservoir, the headlights will no longer be washed. A text message will also be displayed to remind the driver to fill the washer fluid reservoir.

* Option/accessory.

3.1.4. Heated windshield*, rear window and door mirror defrosters

The heating function is used to defrost/de-ice the windshield and/or the rear window and door mirrors.



Max. defroster/heated windshield (1), rear window and door mirror defroster (2)

Press button (1) to defrost/de-ice the windshield and/or button (2) to defrost the rear window and door mirrors. The indicator lights in the respective buttons indicate that the function is active. Switch the function off when then windshield/rear window/mirrors have cleared to help avoid battery drain. The heating function will also switch off automatically after a certain amount of time.

Auto-defrosting for the rear window and door mirrors (if the vehicle is started when the ambient temperature is below 45 °F (7 °C) can be selected in MY CAR under **Settings → Climate settings → Automatic rear defroster**. See My Car – introduction for a description of the menu system.

* Option/accessory.

3.1.5. High/low beam headlights

When the engine is started, the low beams are activated automatically if the headlight control is in position .



Headlight switch and steering wheel lever

1 High beam flash

2 Toggle between high and low beams

Continuous high beam headlights

With the headlight switch in the AUTO (in dark conditions only, when the daytime running lights have automatically switched off and the low beam headlights have switched on) or position:

- Pull the lever toward the steering wheel to position 2 and release it to toggle between low and high beams.

High beam flash

Pull the lever toward the steering wheel to position 1. The high beams come on until the lever is released.

3.1.6. Power windows

All power windows can be operated using the control panel in the driver's door. The control panels in the other doors only operate the window in the respective doors.



Driver's door control panel

1. Switch for disengaging rear door power window buttons
2. Rear door window controls
3. Front door window controls.

Warning

- Always remove the ignition key when the vehicle is unattended to put the ignition in mode **0** (see Ignition modes for information about the ignition modes).
- Never leave children unattended in the vehicle.
- Make sure that the windows are completely unobstructed before they are operated.



Operating the power windows

1 Manual up/down

2 Auto up/down.

For the power windows to function, the ignition must be in at least mode I. When the vehicle has been running, the power windows can be operated for several minutes after the remote key has been removed from the ignition slot, or until a door has been opened.

Note

- Movement of the windows will stop if they are obstructed in any way.
- To reduce buffeting wind noise if the rear windows are opened, also open the front windows slightly.

Manual up/down

1. Move one of the controls up/down slightly.

> The power windows move up/down as long as the control is held in position.

1. Move one of the controls up/down as far as possible and release it.

> The window will open or close completely.

Resetting

If the battery has been disconnected, the auto open function must be reset so that it will work properly.

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

3.1.7. Power moonroof* – introduction

The moonroof controls are located in the ceiling console near the rearview mirror.
The moonroof's sun visor opens automatically but has to be closed manually.
There is a wind blocker in the moonroof's front edge.

The moonroof controls are located in the ceiling console near the rearview mirror. The moonroof can be opened vertically and horizontally. The vehicle's ignition must be in mode I or II for the moonroof to be operated.

> **Important**
>
> - Remove ice and snow before opening the moonroof.
> - Do not operate the moonroof if it is frozen closed.
> - Never place heavy objects on the moonroof.

Visor

The moonroof features a sliding visor. The visor slides open automatically when the moonroof is opened, and must be closed manually.

Wind blocker



The moonroof is equipped with a wind blocker that folds up when the moonroof is open.

* Option/accessory.

3.1.8. Active Bending Lights (ABL)*

With ABL activated, the headlight beams adjust laterally to help light up a curve according to movements of the steering wheel (see the right-pointing beam in the following illustration).



Headlight pattern with the Active Bending Light function deactivated (left) and activated (right)

ABL is activated automatically[1] when the engine is started.

The function can be deactivated/reactivated in the MY CAR menu system under **My V60 → Active Bending Lights** or under **Settings → Car settings → Light settings → Active Bending Lights**.

See My Car – introduction for a description of the menu system.

> **Note**
>
> This function is only active in twilight or dark conditions, and only when the vehicle is in motion.

If a fault should occur in the system, the symbol will illuminate and a message will be displayed as shown in the table.

Symbol	Display	Explanation
	Headlamp failure Service required	The system is not functioning properly and should be inspected/repaired by a trained and qualified Volvo service technician.

Cornering lights[2]

Models equipped with ABL also have front cornering lights that temporarily provide extra light to the front left or right of the vehicle at low speeds when making a sharp turn (for example, when turning into a parking space) or when the turn signals are

used.

This feature is activated when:

- High or low beam headlights are on

and

- The vehicle's speed is below 20 mph (30 km/h)

The feature is also activated when the vehicle is backing up.

The cornering lights are deactivated when the vehicle's speed exceeds approx. 25 mph (40 km/h).

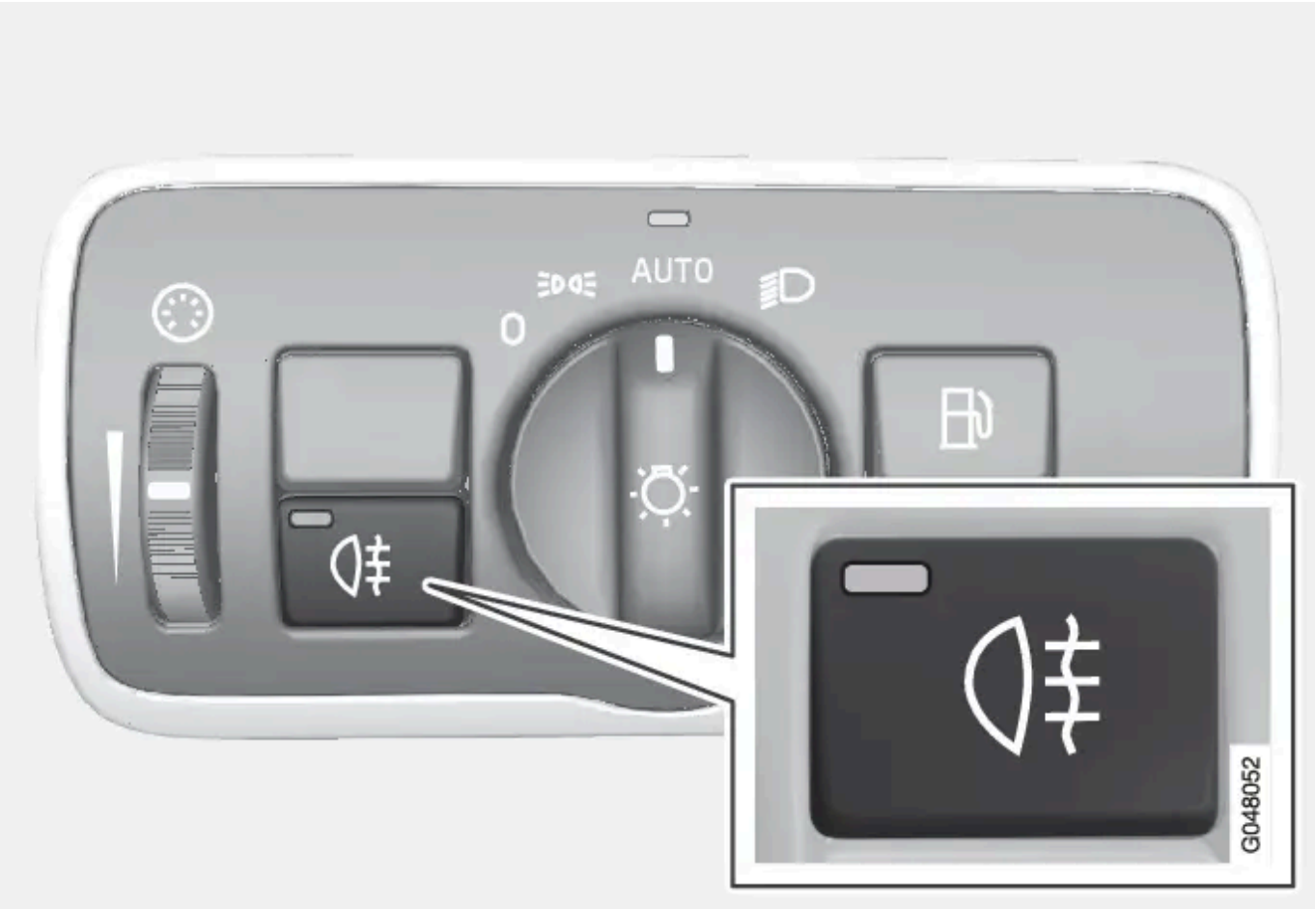
* Option/accessory.

[1] The factory default setting is on.

[2] Certain models only

3.1.9. Rear fog lights

The rear fog lights are considerably brighter than the normal taillights and should be used only when conditions such as fog, rain, snow, smoke or dust reduce visibility for other vehicles to less than 500 ft. (150 meters).



The rear fog lights will only function in combination with the high/low beam headlights.

1. Press the button to switch the rear fog lights on/off.

> The rear fog light indicator symbol on the instrument panel and the light in the button illuminate when the rear fog lights are switched on.

Note

- The rear fog lights are considerably brighter than the normal taillights and should be used only when conditions such as fog, rain, snow, smoke or dust reduce visibility for other vehicles to less than 500 ft. (150 meters).
- Condensation may form temporarily on the inside of the lenses of exterior lights such as headlights, fog lights, or taillights. This is normal and the lights are designed to withstand moisture. Normally, condensation will dissipate after the lights have been on for a short time.

3.1.10. Front interior lighting

The lighting in the front part of the passenger compartment is controlled with the buttons in the ceiling console.



Light switches, front roof lighting

1 Drivers side front reading light, on/off

2 Passenger's side front reading light, on/off

3 Overhead courtesy lighting.

Switch (3) has three positions for all passenger compartment lighting:

- **Off**: right side depressed, automatic lighting off.
- **Neutral position**: automatic lighting is on.
- **On** – left side depressed, passenger compartment lighting on.

Overhead courtesy lighting

The passenger compartment lighting is switched on and off automatically when button (3) is in the neutral position.

The lighting comes on and remains on for 30 seconds if:

- the vehicle is unlocked from the outside with the key or remote control
- the engine is switched off and the ignition is in mode 0.

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The lighting switches off when:

- the engine is started
- the vehicle is locked from the outside.

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

The passenger compartment lighting can be switched on and off manually within 30 minutes after the vehicle has been unlocked.

If the lighting is switched on manually and the vehicle is locked, the courtesy lighting will switch off automatically after one minute.

Courtesy lights/door step lighting*

The courtesy lights/door step lighting switch on/off automatically when one of the front doors is opened/closed.

Glove compartment lighting

The glove compartment lighting switches on/off automatically when the lid is opened/closed.

* Option/accessory.

3.1.11. Power door mirrors

The control on the driver's door is used to adjust the position of the door mirrors.



Door mirror controls

Adjusting

1. Press the L button for the left door mirror or the R button for the right door mirror. The light in the button comes on.
2. Adjust the position with the joystick in the center.
3. Press the L or R button again. The light should no longer be on.

> **Warning**
>
> Objects seen in the mirrors may appear further away than they actually are.

Retractable power door mirrors*



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

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

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

Storing the position*

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

The function can be activated/deactivated in MY CAR under **Settings → Car settings → Car key memory → Personal settings in key memory**. See My Car – introduction for a description of the menu system.

Tilting the door mirrors when parking*

The door mirrors can be tilted down to help give the driver a better view along the sides of the vehicle, for example when parallel parking.

To activate this function, select reverse gear and press the L or R mirror control button to tilt the mirror down.

The function can be activated/deactivated in MY CAR under **Settings → Car settings → Side mirror settings → Tilt left mirror** or **Tilt right mirror**. See My Car – introduction for a description of the menu system.

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The door mirror will reset to its normal position:

- after 10 seconds when reverse is disengaged and the car remains stopped.
- immediately when reverse is disengaged and the vehicle's forward speed exceeds approximately 6 mph (10 km/h).
- immediately if you press the corresponding L or R button again.
- when the engine is turned off.
- when the side mirrors are folded in.

> **Note**
>
> Only one mirror can be tilted down at a time.

Home safe and approach lighting

The light on the door mirrors comes on when approach lighting or home safe lighting is selected, see Approach lighting and Home safe lighting.

* Option/accessory.

3.1.12. Turn signals

The turn signals are controlled by the left steering wheel lever.



Turn signals

When changing lanes

1 The driver can automatically flash the turn signals 3 times by moving the turn signal lever up or down to the first position and releasing it.

When turning

2 Move the lever as far up or down as possible to start the turn signals. The turn signals will be cancelled automatically by the movement of the steering wheel, or the lever can be returned to its initial position by hand.

Note

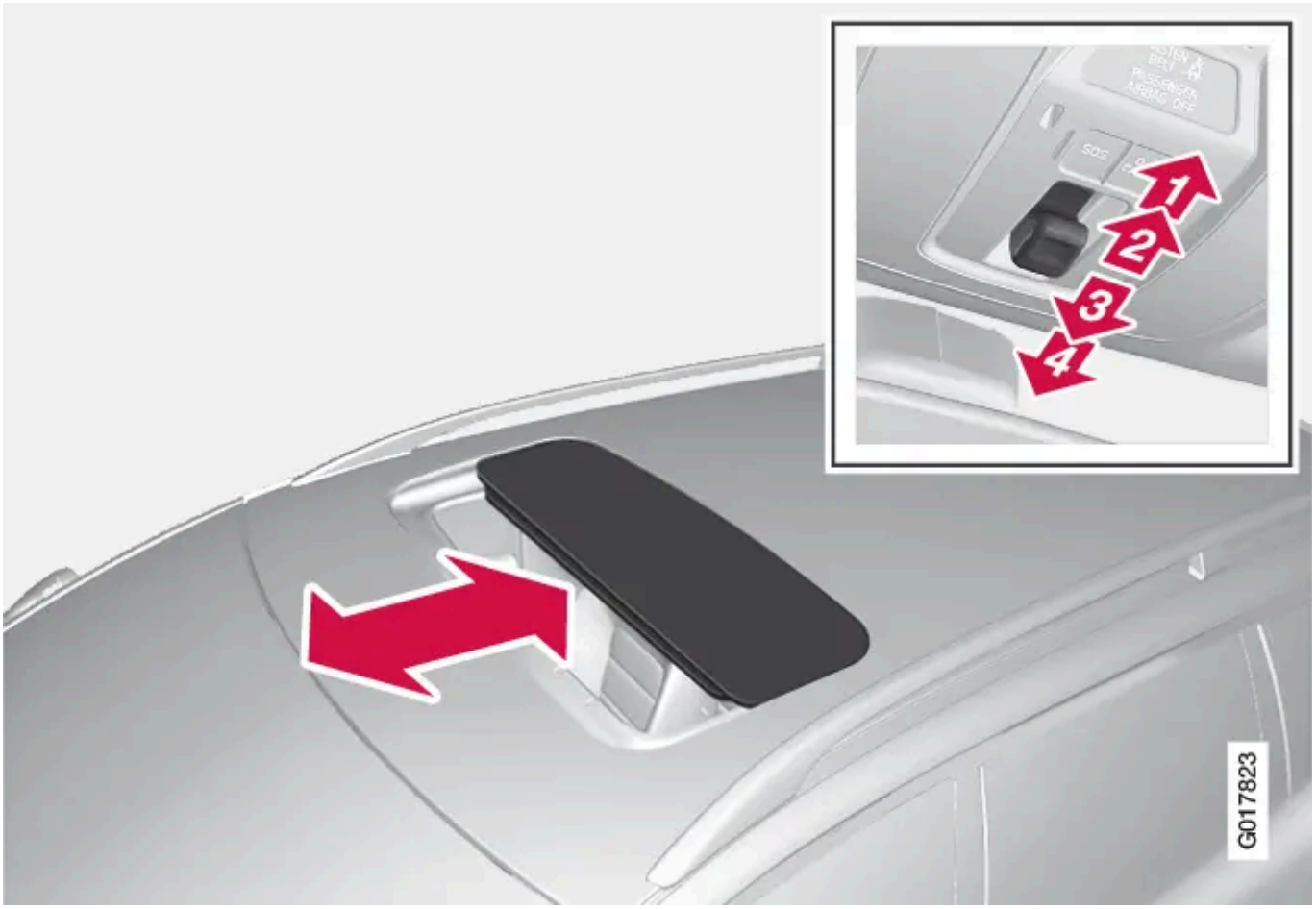
- This automatic flashing sequence can be interrupted by immediately moving the lever in the opposite direction.
- If the turn signal indicator flashes faster than normal, check for a burned-out turn signal bulb.

3.1.13. Power moonroof* – operation

The moonroof controls are located in the ceiling console near the rearview mirror.

The moonroof's sun visor opens automatically but has to be closed manually.
There is a wind blocker in the moonroof's front edge.

Sliding moonroof



Sliding moonroof, forward/rearward

1 Opening, automatic

2 Opening, manual

3 Closing, manual

4 Closing, automatic

Automatic opening

1. Pull the switch as far back as possible (to the position for automatic opening) and release it to automatically fully slide open the moonroof.

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Manual opening

1. Pull the switch back to the first stop (the position for manual opening) and hold it until the moonroof has opened to the position of your choice.

Manual closing

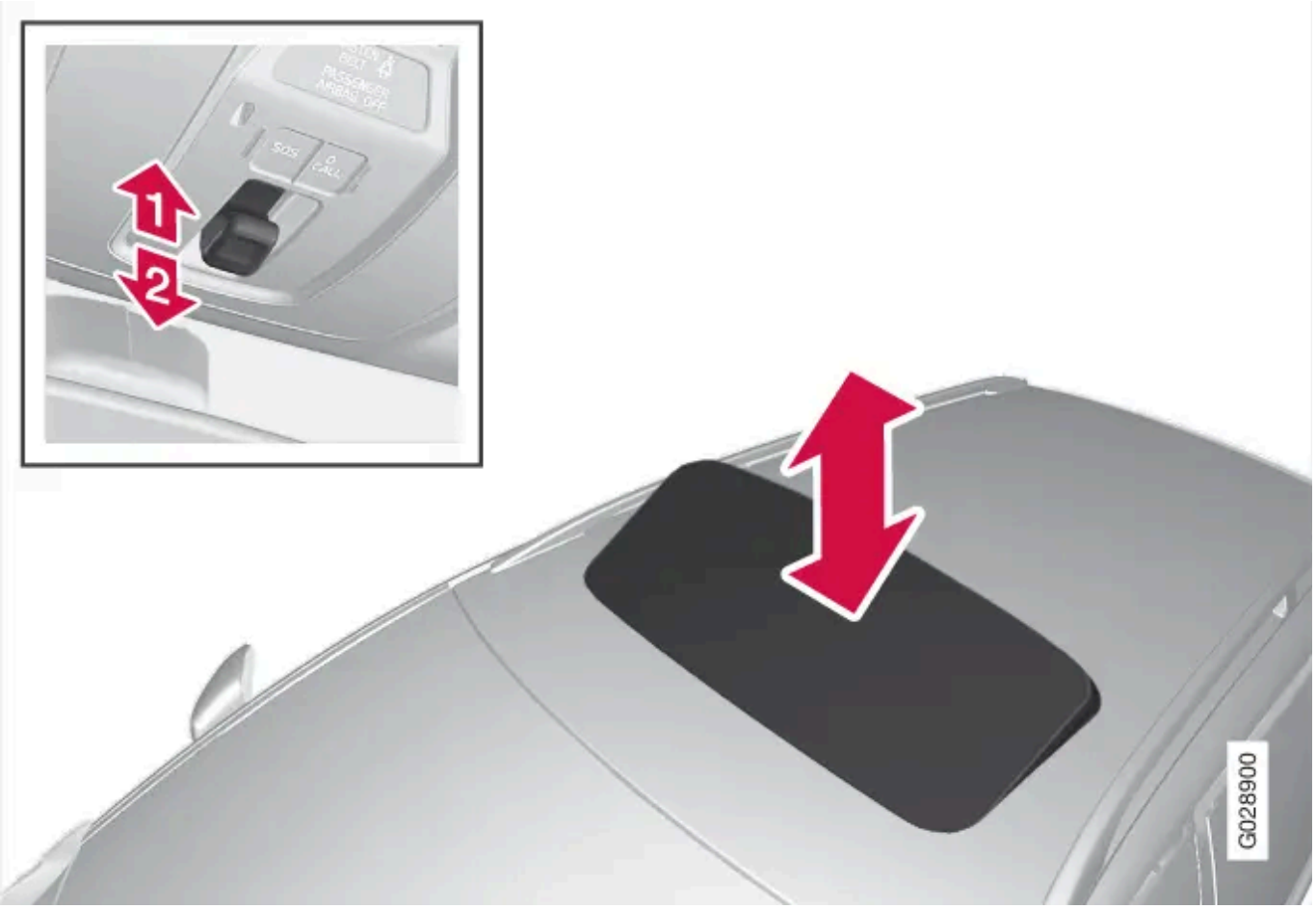
1. Push the switch forward to the first stop (the position for manual closing) and hold it until the moonroof has closed to the position of your choice, or has closed completely.

Automatic closing

1. Push the switch as far forward as possible (the position for automatic closing) and release it to automatically close the moonroof.

> **Warning**
>
> - During manual closing, if the moonroof is obstructed, immediately open it again.
> - Never open or close the moonroof if it is obstructed in any way.
> - Never allow a child to operate the moonroof.
> - Never leave a child alone in a vehicle.
> - When leaving the vehicle, ensure that the ignition is in mode 0 (see Ignition modes for information about the various ignition modes) to disable the moonroof. Never leave the remote key in the vehicle.
> - Never extend any object or body part though the open moonroof, even if the vehicle's ignition is completely switched off.

Tilt position



Tilt position, raised at the rear edge

1. Open by pressing the rear edge of the control upward.
2. Close by pulling the rear edge of the control downward and hold it until the moonroof has closed completely.

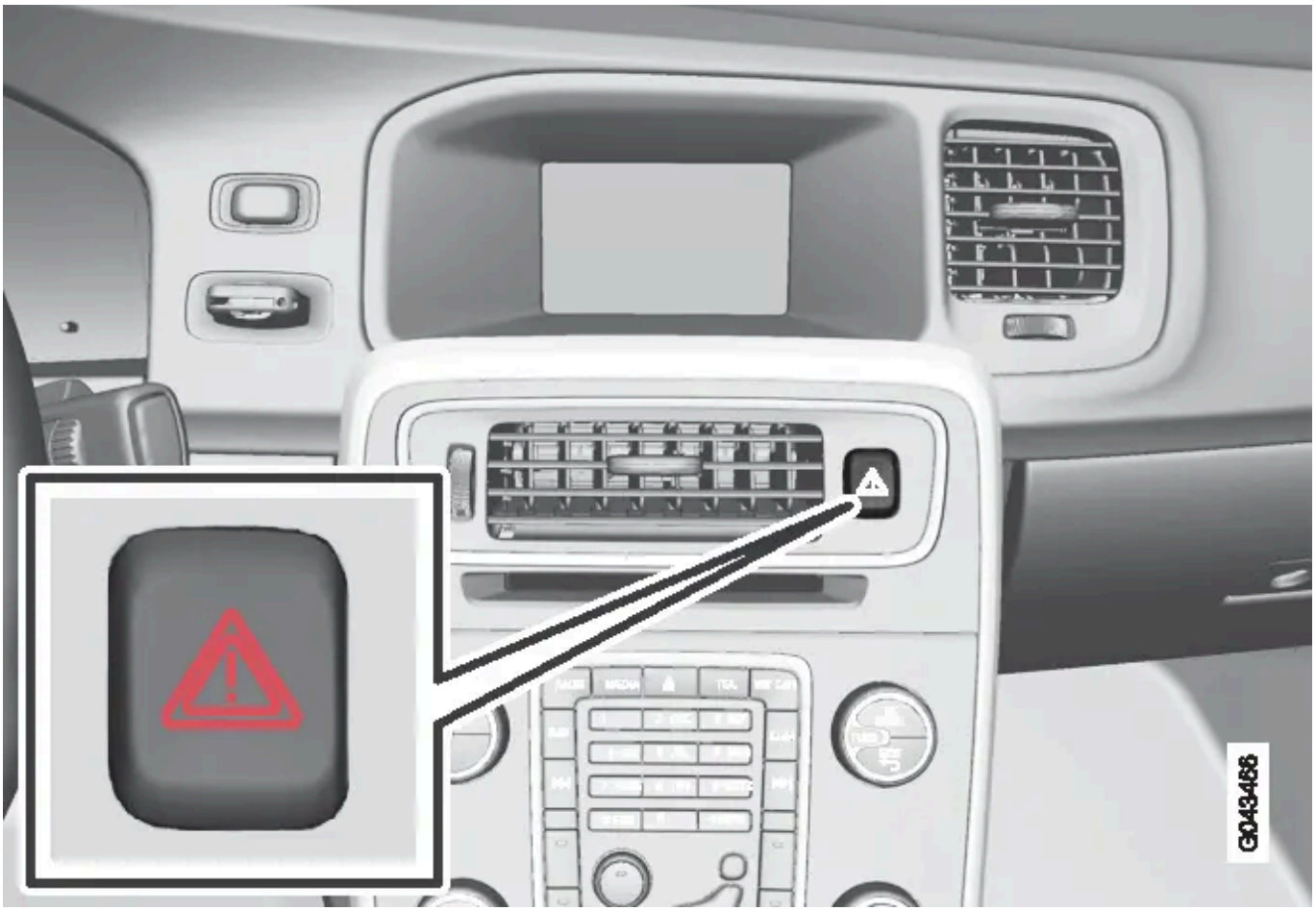
* Option/accessory.

3.1.14. Hazard warning flashers

The hazard warning flasher should be used to indicate that the vehicle has become a traffic hazard.

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When the function is activated, both turn signal indicators in the instrument panel will flash.



Location of the hazard warning flasher button

1. To activate the flashers, press the button in the center dash. Press the button again to turn off the flashers.

Note

- Regulations regarding the use of the hazard warning flasher may vary, depending on where you live.
- The hazard warning flashers will be activated automatically if an airbag deploys.

3.1.15. Lighting panel

The lighting panel is used to control the daytime running lights, parking lights, etc., and to adjust the instrument panel lighting and "theater" lighting.





Lighting panel overview

1 Thumb wheel for adjusting display, instrument and "theater" lighting (see Instrument and "theater" lighting)

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2 Rear fog lights (see Rear fog lights)

3 Headlight switch

Volvo recommends using the AUTO position whenever possible.

Headlight switch positions

Daytime running lights function as follows:

With the headlight switch in the 0 position:

- In the **US**: the daytime running lights will be **off**
- In **Canada**: the daytime running lights will be **on**

With the headlight switch in the [1] position and the ignition in mode II or if the engine is running (see Ignition modes)

- In the **US**: the daytime running lights will be **off**
- In **Canada**: the daytime running lights will be **on**

With the headlight switch in the AUTO position:

- The daytime running lights will be **on** (the low beam headlights will automatically switch on in dark conditions)

US models only: The daytime running lights in AUTO mode can be switched on or off in the MY CAR menu system under **Settings → Car settings → Light settings → Daytime running lights**.

> **Note**
>
> The use of daytime running lights is recommended in the United States and is **mandatory in Canada**.

With the headlight switch in the position:

- The daytime running lights will be **off** and the low beam headlights will be **on**

[1] The parking lights will be on in this position, even if the ignition is switched off.

3.1.16. Power door mirrors – automatic tilting/retraction

The control on the driver's door is used to adjust the position of the door mirrors.

Automatically tilting the door mirrors when parking



The door mirrors can tilt down automatically to help give the driver a better view along the sides of the vehicle, for example when parallel parking. When the transmission is no longer in reverse, the mirrors will automatically return to their original position.

This function can be activated/deactivated in MY CAR under **Settings** → **Car settings** → **Side mirror settings** → **In reverse gear tilt left mirror** or **In reverse gear tilt right mirror**. See My Car – introduction for information about the MY CAR menu system.

Automatic retraction when locking

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

The function can be activated/deactivated in MY CAR under **Settings** → **Car settings** → **Side mirror settings** → **Retract side mirrors when locking**. See My Car – introduction for a description of the menu system.

Resetting to neutral

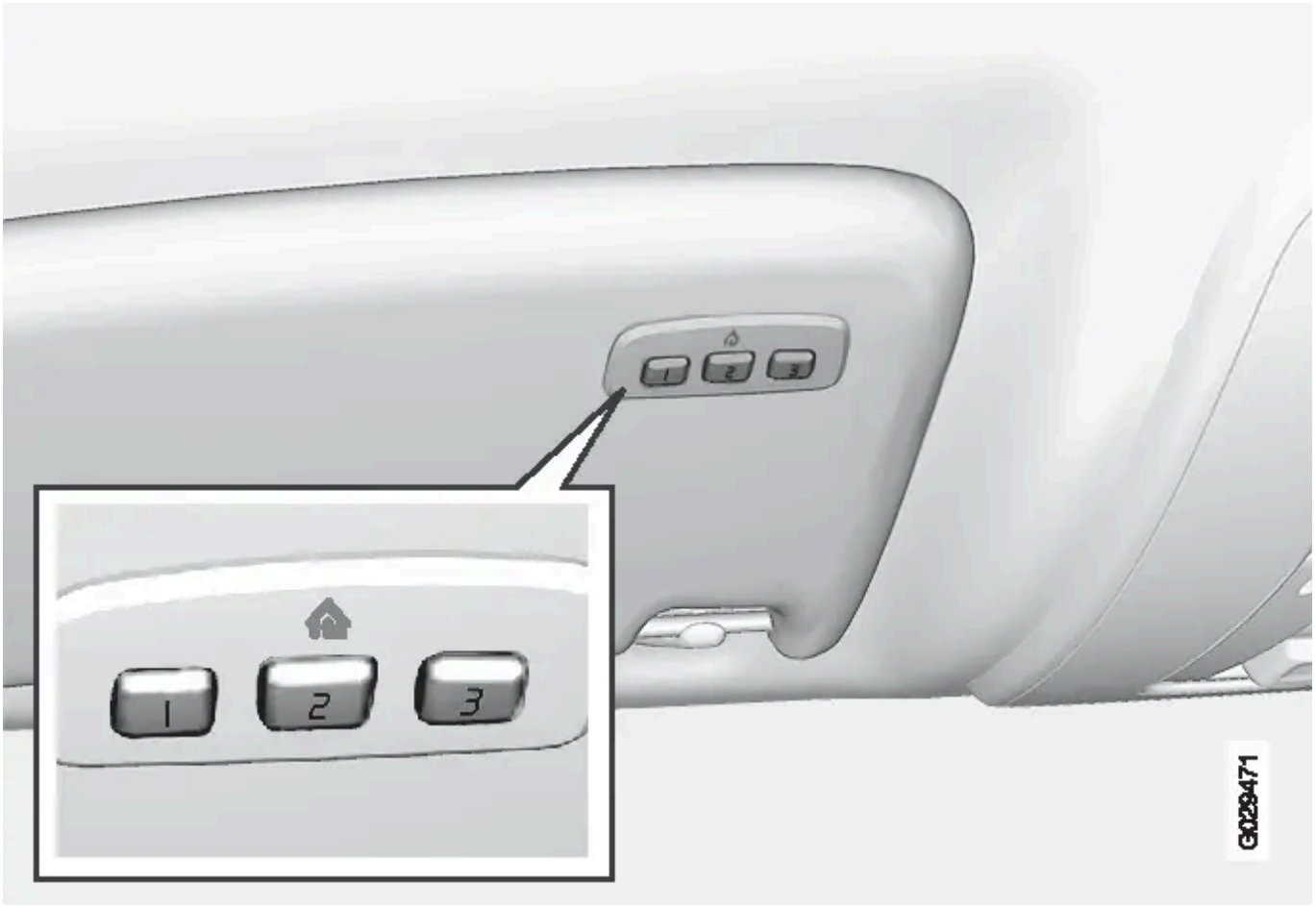
Mirrors that have been moved out of position by an external force must be electrically reset to the neutral position for electric retracting/extending to work.

- Retract the mirrors with the L and R buttons.
- Fold them out again with the L and R buttons.

The mirrors are now reset in neutral position.

3.1.17. HomeLink® Wireless Control System* – introduction

The HomeLink[1] Wireless Control System provides a convenient way to replace up to three hand-held radio-frequency (RF) transmitters used to activate devices such as gate operators, garage door openers, entry door locks, security systems, even home lighting. Additional information can be found on the Internet at www.homelink.com or by phoning the hotline at 1–800–355–3515.



Warning

- If you use HomeLink to open a garage door or gate, be sure no one is near the gate or door while it is in motion.
- When programming a garage door opener, it is advised to park outside of the garage.
- Do not use HomeLink with any garage door opener that lacks safety stop and reverse features as required by U.S. federal safety standards (this includes any garage door opener model manufactured before April 1, 1982). A garage door that cannot detect an object - signaling the door to stop and reverse - does not meet current U.S. federal safety standards. For more information, contact HomeLink at: www.homelink.com.

Retain the original transmitter of the RF device you are programming for use in other vehicles as well as for future HomeLink programming. It is also suggested that upon the sale of the vehicle, the programmed HomeLink buttons be erased for security purposes. Refer to “Resetting HomeLink Buttons” in HomeLink® Wireless Control System – programming.

Using HomeLink

To operate, simply press and hold the programmed HomeLink button until the trained device begins to operate (this may take several seconds). Activation will now occur for the trained device (i.e., garage door opener, gate operator, security system, entry door lock, home/office lighting, etc.). For convenience, the hand-held transmitter of the device may also be used at any time. In

the event that there are still programming difficulties or questions, contact HomeLink at: www.homelink.com or by phoning the hotline at 1–800–355–3515.

> **Note**
>
> If the ignition is switched off, HomeLink will function for 30 minutes after the driver's door has been opened.

* Option/accessory.

[1] HomeLink and the HomeLink house are registered trademarks of Johnson Controls, Inc.

3.1.18. Instrument and "theater" lighting

Instrument lighting



Illumination of the display and instrument lights will vary, depending on ignition mode.

The display lighting is automatically subdued in darkness and the sensitivity is set with the thumb wheel.

The intensity of the instrument lighting is adjusted with the thumb wheel.

"Theater" lighting

When the overhead courtesy lighting has gone out and the engine is running, several LEDs located near the roof console illuminate to provide faint lighting for the occupants of the front seats. This lighting goes out just after the overhead courtesy lighting when the vehicle is locked.

3.1.19. Windshield wipers

Move the lever toward the steering wheel to start the windshield and headlight washers. After the lever is released the wipers make several extra sweeps.



Windshield wipers and washers

1 Rain sensor* on/off

2 Thumb wheel sensitivity/frequency

> **Important**
>
> - Use ample washer fluid when washing the windshield. The windshield should be thoroughly wet when the wipers are in operation.
> - Before using the wipers, ice and snow should be removed from the windshield/rear window. Be sure the wiper blades are not frozen in place.

Windshield wipers off

0 Move the lever to position 0 to switch off the windshield wipers.

Single sweep



Move the lever upward from position 0 to sweep the windshield one stroke at a time for as long as the lever is held up.

Intermittent wiping

INT With the lever in this position, you can set the wiper interval by twisting the thumb wheel upward to increase wiper speed or downward to decrease the speed.

Continuous wiping



The wipers operate at normal speed.



The wipers operate at high speed.

Windshield wiper service position

The windshield wipers must be in the service position before the wiper blades can be cleaned or replaced. See Wiper blades – service position for additional information.

* Option/accessory.

3.1.20. Approach lighting

Approach lighting activates the parking lights, door mirror lights, license plate lighting, dome lighting and door step lighting when you approach the vehicle.

This function is activated by pressing the approach light button on the remote key (see the illustration in Remote key – functions).

The time interval for this lighting can be set by pressing MY CAR and going to **Car settings → Light settings → Approach light duration**. See My Car – introduction for a description of the menu system.

3.1.21. Rain sensor*

The rain sensor automatically regulates wiper speed according to the amount of water on the windshield.



The sensitivity of the rain sensor can be adjusted moving the thumb wheel up (the wipers will sweep the windshield more frequently) or down (the wipers will sweep the windshield less frequently).

> **Note**
>
> The wipers will make an extra sweep each time the thumb wheel is adjusted upward.

When the rain sensor is activated, the symbol will illuminate in the instrument panel.

Activating and setting the sensitivity

When activating the rain sensor, the vehicle must be running or in ignition mode II and the windshield wiper lever must be in position 0 or in the single sweep position.

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

Press the lever up for the wipers to make an extra sweep. The rain sensor returns to active mode when the stalk is released back to position 0.

Deactivating

Deactivate the rain sensor by pressing the button or press the lever down to another wiper position.

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

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> **Important**
>
> The rain sensor should be deactivated when washing the car in an automatic car wash, etc. If the rain sensor function is left on, the wipers will start inadvertently in the car wash and could be damaged.

* Option/accessory.

3.1.22. Electrically heated* steering wheel

The steering wheel can be heated electrically.



Button for steering wheel heating

With the engine running, press this button once to begin warming the steering wheel (press again to switch off). The indicator light in the button will illuminate when the function is active.

This function can also be started automatically (the setting can be activated/deactivated in the MY CAR menu) if the vehicle is cold and the ambient temperature is below approximately 50° F (10° C).

* Option/accessory.

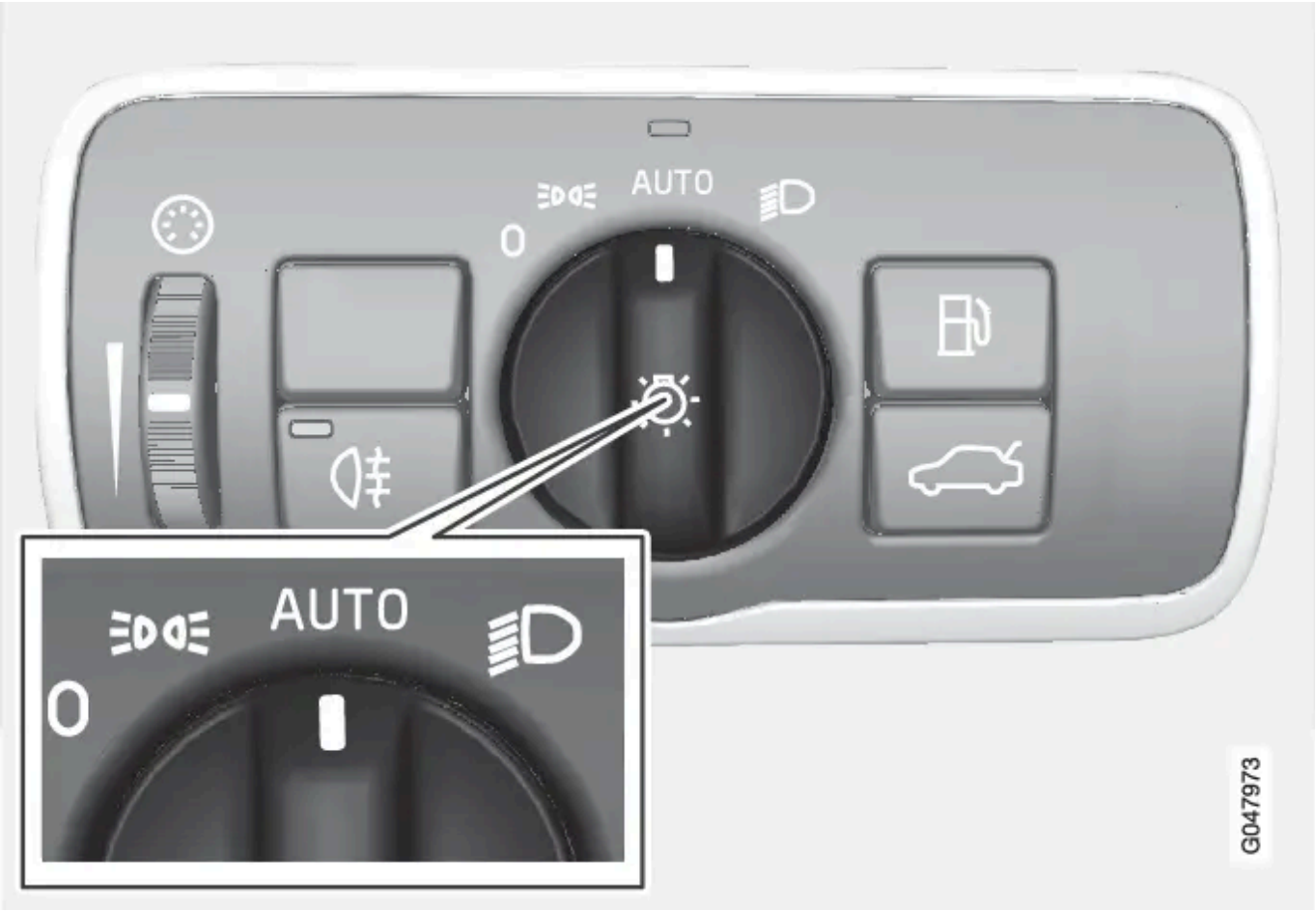
3.1.23. Active high beams (AHB)*

AHB uses a camera at the upper edge of the windshield to detect the headlights of oncoming vehicles or the taillights of a vehicle directly ahead. When this happens, the headlights will automatically switch from high beams to low beams. When the camera no longer detects the headlights/taillights of other vehicles, your headlights will switch back to high beams after several seconds.

To activate AHB:

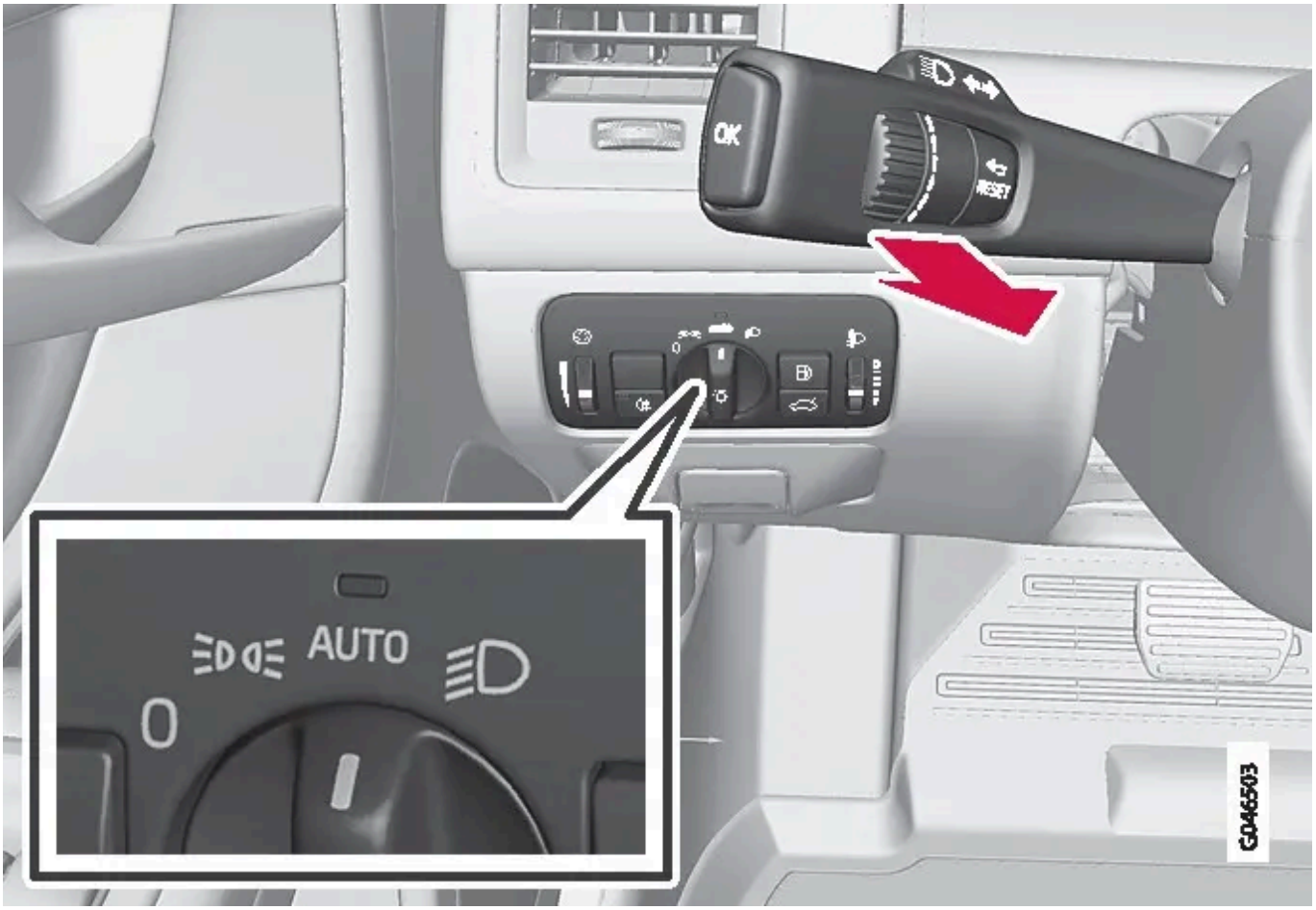
- Turn the headlight control to the AUTO position.

The feature will begin functioning if the engine has been running for at least 20 seconds and the vehicle's speed is at least 12 mph (20 km/h).



Headlight switch in the AUTO position

Switch AHB on or off by pulling the left steering wheel lever rearward (toward the steering wheel) as far as possible and releasing it. If AHB is switched off while the high beams are on, the headlights will change to low beams.



Models with an analog instrument panel

When AHB is activated, the symbol will illuminate in the instrument panel. The high beam indicator ( ) in the instrument panel will also illuminate when the high beams are on.

Models with a digital instrument panel

When AHB is activated, will illuminate as a **white** symbol in the instrument panel. When the high beams are on, the symbol will change to **blue.**

> **Note**
>
> - Keep the windshield in front of the camera free of ice, snow, dirt, etc.
> - Do not mount or in any way attach anything on the windshield that could obstruct the camera.

If **Active high beam Temporary unavailable Switch manually** is displayed in the instrument panel, switching between high and low beams will have to be done manually. However, the light switch can remain in the AUTO position. The same applies if **Windscreen Sensors blocked** is displayed and the symbol is displayed. The symbol will go out when these messages are displayed.

AHB may be temporarily unavailable (e.g., in heavy fog or rain). When AHB becomes active again or if the sensors in the windshield are no longer obscured, the messages will disappear and the symbol will illuminate.

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Important

In the following situations, it may be necessary to switch between high and low beams manually:

- In heavy fog or rain
- In blowing snow or slush
- In bright moonlight
- In freezing rain
- In areas with dim street lighting
- When oncoming vehicles have dim front lighting
- If there are pedestrians on or near the road
- If there are reflective objects, such as signs, near the road
- When oncoming vehicles' lights are obscured by e.g., fences, bushes, etc.
- When there are vehicles on connecting roads
- At the top of hills or in dips in the road
- In sharp curves

See The camera's limitations for more information about the camera's limitations.

* Option/accessory.

3.1.24. Interior rearview mirror

The interior rearview mirror has an auto-dim function that helps reduce glare from following vehicle's headlights.

Auto-dim function

The interior rearview mirror's auto-dim function is controlled by two sensors: one pointing forward (located on the forward-facing side of the mirror, which monitors the amount of ambient light) and one pointing rearward (located on the side of the mirror facing the driver at the upper edge, which senses the strength of following vehicles' headlights), and work together to help eliminate glare.[1]

Note

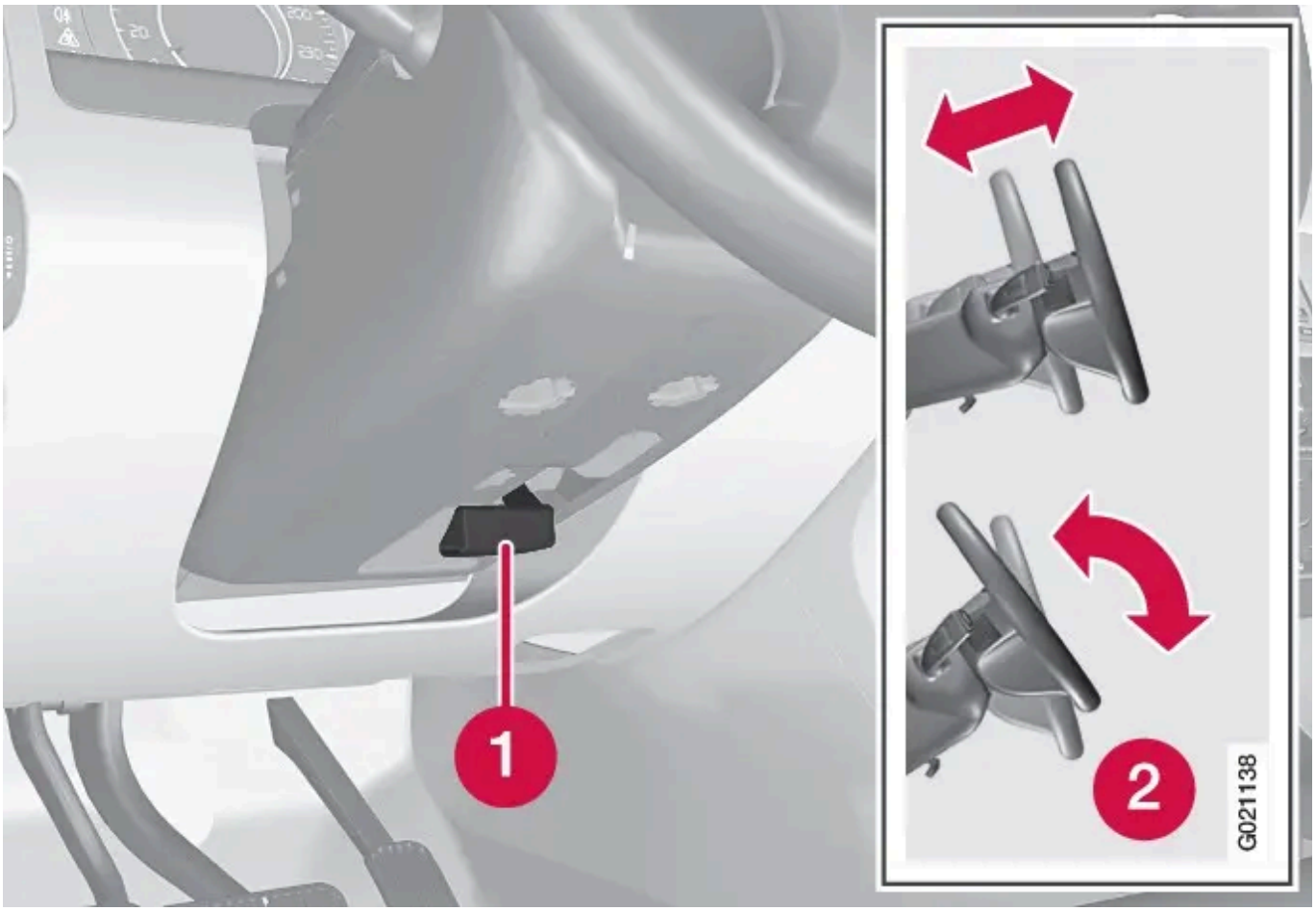
Obstructing the forward sensor with e.g., parking stickers, transponders, etc., or the rear sensor by loading the cargo area or the rear seat in such a way that light is prevented from reaching the sensor will reduce the auto-dim function in the interior rearview mirror and optional auto-dim function in the door mirrors.

[1] The auto-dim function is also available as an option on the door mirrors.

3.1.25. Steering wheel

The steering wheel can be adjusted to various positions and has controls for the horn, cruise control*, menus, the infotainment system and Bluetooth®-connected cell phone.

Adjusting



Adjusting the steering wheel

1 Lever for releasing/locking the steering wheel

2 Possible positions

To adjust the steering wheel's height and reach:

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

Warning

Never adjust the steering wheel while driving.

With the optional speed-dependent power steering the level of steering force can be adjusted, see Active chassis (Four C).

Keypads and steering wheel paddles*



Steering wheel keypads and paddles*

1. Cruise control, see Cruise control (CC) – introduction. Adaptive cruise control*, see Adaptive Cruise Control – introduction.
2. Paddles for manually shifting gears (Geartronic), see Transmission – Geartronic.
3. Infotainment system controls, see Infotainment – operating the system.

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Horn



Horn

1. Press the steering wheel hub to sound the horn.

* Option/accessory.

3.1.26. HomeLink® Wireless Control System* – programming

The HomeLink[1] Wireless Control System provides a convenient way to replace up to three hand-held radio-frequency (RF) transmitters used to activate devices such as gate operators, garage door openers, entry door locks, security systems, even home lighting. Additional information can be found on the Internet at www.homelink.com or by phoning the hotline at 1–800–355–3515.

> **Note**
>
> Some vehicles may require the ignition to be switched on or be in the “accessories” position for programming and/or operation of HomeLink. It is also recommended that a new battery be placed in the hand-held transmitter of the device being programmed to HomeLink for quicker training and accurate transmission of the radio-frequency signal. The HomeLink buttons must be reset first. When this has been completed, Homelink is in learning mode so that you can perform programming.

1. Position the end of your hand-held transmitter 1–3 inches (5–14 cm) away from the HomeLink button you wish to program while keeping the indicator light in view.
2. Simultaneously press and hold both the chosen HomeLink and hand-held transmitter buttons until the HomeLink indicator light changes from a slow to a rapidly blinking light. Now you may release both the HomeLink and hand-held transmitter buttons.

   > **Note**
   >
   > Some devices may require you to replace this Programming Step 2 with procedures noted in the “Gate Operator / Canadian Programming” section. If the HomeLink indicator light does not change to a rapidly blinking light after performing these steps, contact HomeLink at www.homelink.com or by phoning the hotline at 1–800–355–3515.

3. Firmly **press, hold for five seconds and release** the programmed HomeLink button up to two separate times to activate the door. If the door does not activate, press and hold the just-trained HomeLink button and observe the indicator light.
   - If the indicator light **stays on constantly, programming is complete** and your device should activate when the HomeLink button is pressed and released.
   - If the indicator light blinks **rapidly for two seconds and then turns to a constant light continue with “Programming” steps 4-6** to complete the programming of a rolling code equipped device (most commonly a garage door opener).
4. At the garage door opener receiver (motor-head unit) in the garage, locate the “learn” or “smart” button. This can usually be found where the hanging antenna wire is attached to the motor-head unit.
5. Firmly press and release the “learn” or “smart” button. (The name and color of the button may vary by manufacturer.) There are 30 seconds to initiate step 6.
6. Return to the vehicle and firmly press, hold for two seconds and release the programmed HomeLink button. Repeat the “press/hold/release” sequence a second time, and, depending on the brand of the garage door opener (or other rolling code equipped device), repeat this sequence a third time to complete the programming process.

HomeLink should now activate your rolling code equipped device.

Gate Operator/Canadian Programming

Canadian radio-frequency laws require transmitter signals to “time-out” (or quit) after several seconds of transmission – which may not be long enough for HomeLink to pick up the signal during programming. Similar to this Canadian law, some U.S. gate operators are designed to “time-out” in the same manner.

If you live in Canada or you are having difficulties programming a gate operator or garage door opener by using the “Programming” procedures, **replace “Programming HomeLink” step 2 with the following**:

- Continue to press and hold the HomeLink button while you **press and release - every two seconds** (“cycle”) your hand-held transmitter until the HomeLink indicator light changes from a slow to a rapidly blinking light. Now you may release both the HomeLink and hand-held transmitter buttons.

Proceed with “Programming” step 3 to complete.

Resetting HomeLink Buttons

Use the following procedure to reset (erase programming) from the three HomeLink buttons (individual buttons cannot be reset but can be “reprogrammed” as outlined in the following section):

1. Press and hold the two outer HomeLink buttons until the indicator light begins to flash.
2. Release both buttons.

> HomeLink is now in the training (or learning) mode and can be programmed at any time beginning with “Programming” - step 1.

Reprogramming a Single HomeLink Button

To program a device to HomeLink using a HomeLink button previously trained, follow these steps:

1. Press and hold the desired HomeLink button. **DO NOT** release the button.
2. The indicator light will begin to flash after 20 seconds. Without releasing the HomeLink button, proceed with “Programming” - step 1.

For questions or comments, contact HomeLink at: www.homelink.com or phone 1–800–355–3515.

This device complies with FCC rules part 15 and Industry Canada (IC) RSS-210. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference that may be received including interference that may cause undesired operation.

> **Note**
>
> The transmitter has been tested and complies with FCC and IC rules. Changes or modifications not expressly approved by the party responsible for compliance could void the user’s authority to operate the device.[2]

* Option/accessory.

[1] HomeLink and the HomeLink house are registered trademarks of Johnson Controls, Inc.

[2] The term “IC:” before the certification/registration number only signifies that Industry Canada technical specifications were met.

3.1.27. Rear interior lighting

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



Rear reading lights

Cargo area lighting

The cargo area lighting comes on automatically when the tailgate is opened.

3.1.28. Tailgate wiper/washer

The tailgate wiper operates at two speeds: intermittent and continuous.



Move the lever forward to start the tailgate washer.

1 Intermittent wiping

2 Normal (continuous) wiping

> **Note**
>
> The rear wiper is equipped with a cut-off function, which means that it will not operate if its electric motor overheats. The wiper will function again after a cool-down period (30 seconds or longer, depending on the heat of the motor and ambient temperature conditions).

Tailgate wiper and reverse gear

If the windshield wipers are on and the transmission is put into reverse gear, the tailgate wiper will go into intermittent wiping function [1]. This function is deactivated when a different gear is selected.

> **Note**
>
> On vehicles with the optional rain sensor, the tailgate wiper will be activated when reverse is selected, if the rain sensor is activated and it is raining.

If the tailgate wiper is in the normal (continuous) wiping mode, selecting different gears will not affect its function.

[1] Consult your Volvo retailer if you would like to have this function deactivated.

3.1.29. Home safe lighting

When you leave your vehicle at night, you can make use of the home safe lighting function to illuminate the area in front of the vehicle.

This function illuminates the headlights, parking lights, lights in the door mirrors, license plate lights, front ceiling lighting and footwell lighting. These lights will remain on for 30 [1], 60 or 90 seconds. The time interval can be set in MY CAR under **Settings → Car settings → Light settings → Home safe light duration**. See My Car – introduction for a description of the menu system.

1. Remove the key from the ignition slot to put the ignition in mode **0** (see Ignition modes for information about the ignition modes).
2. Pull the turn signal lever as far as possible towards the steering wheel and release it.
3. Exit the vehicle and lock the doors.

[1] Factory setting

3.1.30. Parking lights

Turn the headlight switch to the position (the license plate lighting comes on at the same time).



Headlight switch in the parking light position

Canadian models: If the ignition is in position **II** or the engine is running, the daytime running lights will also be on.

With the headlight switch in this position, the parking lights will remain on even when the ignition is switched off.

In dark ambient lighting conditions, the rear parking lights also illuminate when the tailgate is opened to alert anyone traveling behind your vehicle. This happens regardless of the position that the headlight control is in or which mode the ignition is in.

3.2. Information displays

3.2.1. Information display – menu overview

The menus displayed depend on the current ignition mode.

The following menu alternatives may vary, depending on the equipment installed in the vehicle.

Analog instrument panel

Digital speed
Trip comp. opt.
Service status
Messages (##)[1]

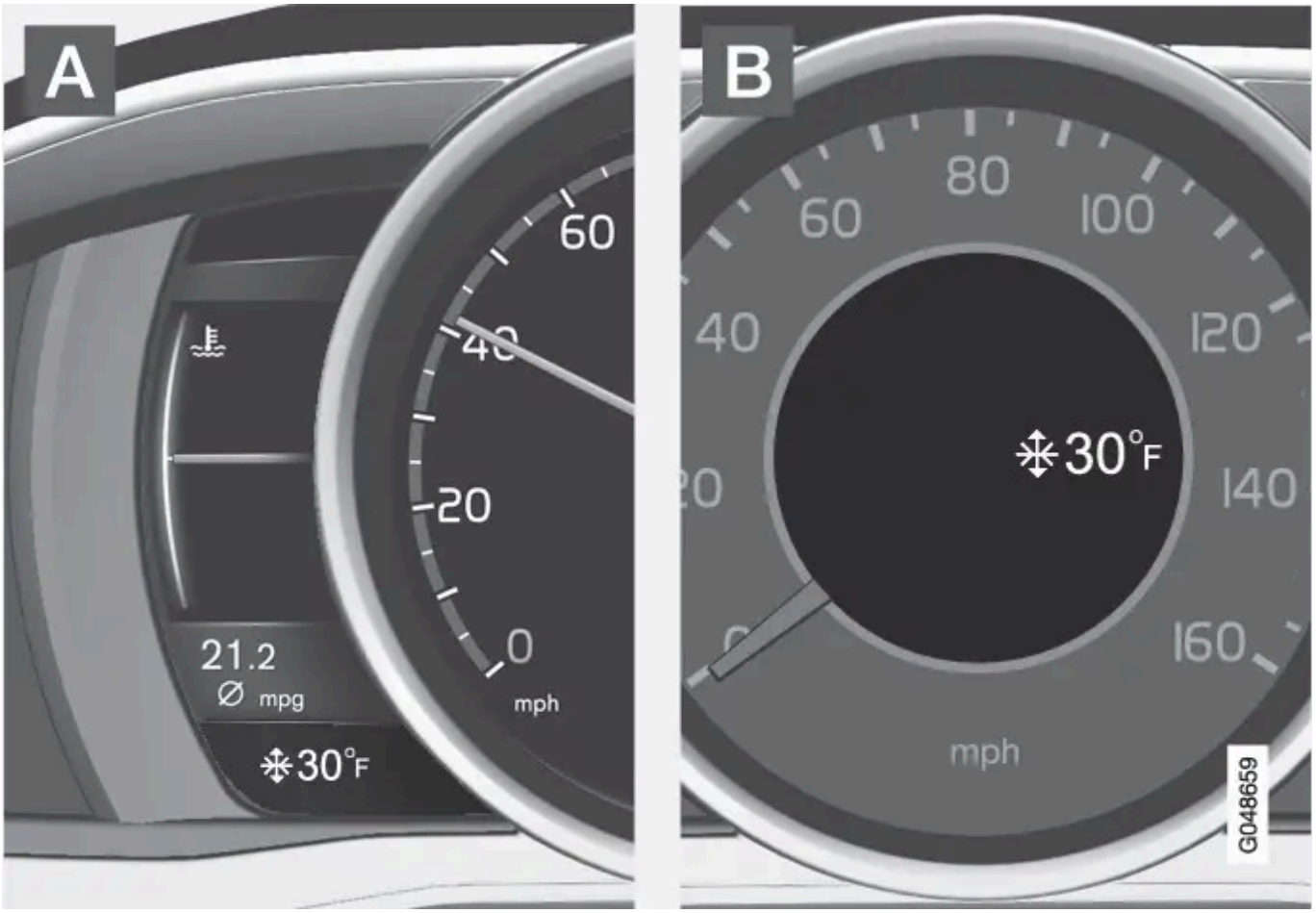
Digital instrument panel*

Settings
Themes
Contrast mode/Color mode
Service status
Messages
Trip computer reset

[1] Number of messages in parentheses

* Option/accessory.

3.2.2. Information displays – ambient temperature sensor



Location of the ambient temperature sensor, A: digital instrument panel*, B: analog instrument panel

Note

When the ambient temperature is between 23° and 36 °F (–5° and +2 °C), a snowflake symbol will be displayed next to the temperature. This symbol serves as a warning for possible slippery road surfaces. Please note that this symbol does **not** indicate a fault with your vehicle.

At low speeds or when the vehicle is not moving, the temperature readings may be slightly higher than the actual ambient temperature.

* Option/accessory.

3.2.3. Information display – messages

The controls on the left steering wheel lever are used to scroll among messages displayed in the instrument panel and to confirm selections.
When information, indicator or warning symbols illuminate, an explanatory message will be displayed in the instrument panel.

When a warning, information or indicator symbol comes on, a corresponding message appears in the information panel. An error message is stored in a memory list until the fault is rectified.

Press OK to acknowledge and scroll among the messages.

Note

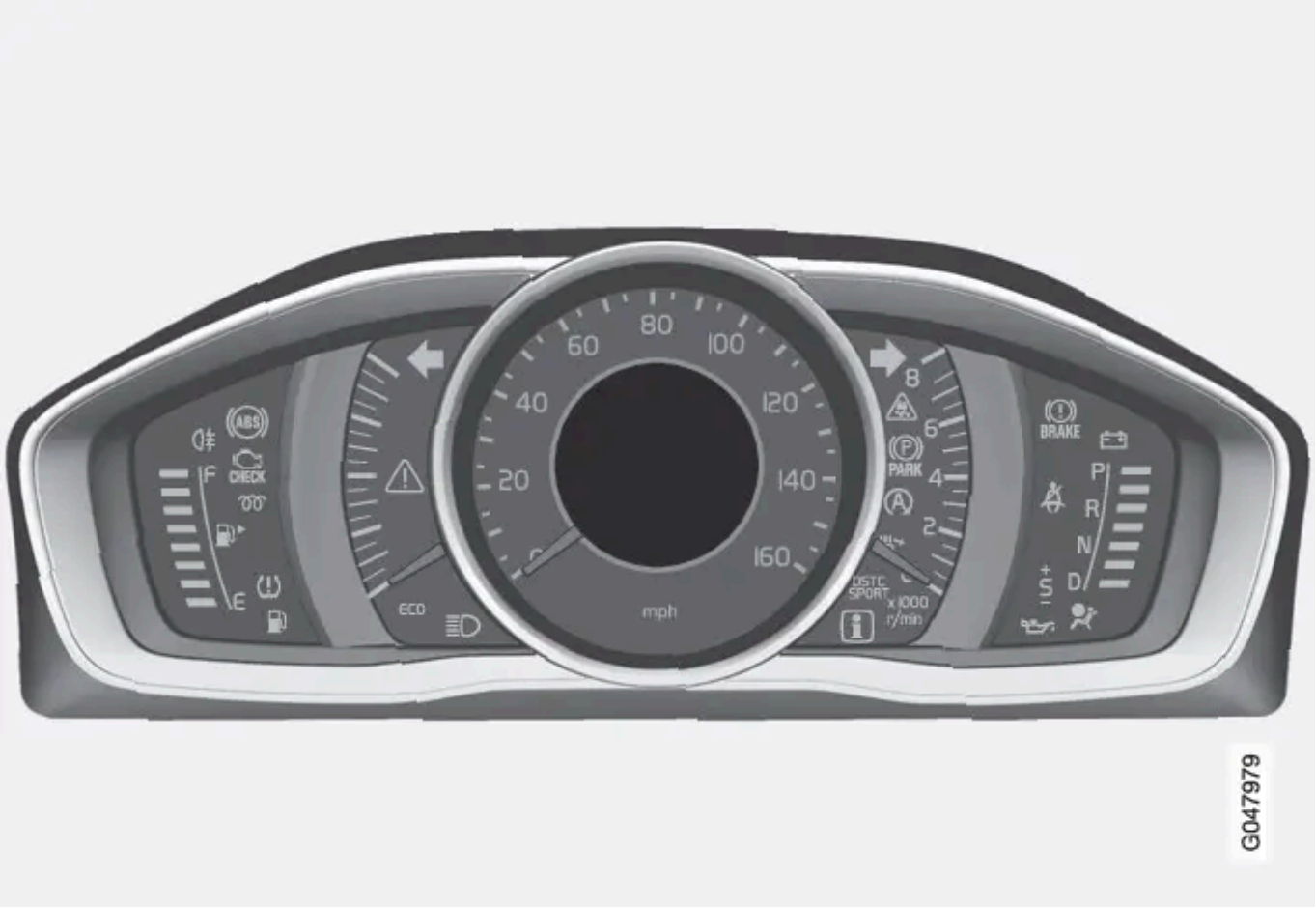
If a warning message appears while you are using the trip computer, the message must be read and confirmed by pressing OK before the previous activity can be resumed.

Message	Description
Stop engine[1]	Stop and switch off the engine as soon as possible. Serious risk of damage. Contact an authorized Volvo workshop.
Stop safely[1]	Stop and switch off the engine. Serious risk of damage. Contact an authorized Volvo workshop.
Service urgent[1]	Have the vehicle checked by an authorized Volvo workshop immediately.
Service required[1]	Have the vehicle checked by an authorized Volvo workshop as soon as possible.
See manual[1]	Read the owner's manual.
Book time for maintenance	Time to book service at an authorized Volvo retailer.
Time for regular maintenance	Time for regular service at an authorized Volvo workshop. The timing is determined by the number of miles driven, number of months since the last service, engine running time.
Maintenance overdue	If the service intervals are not followed, the warranty does not cover any damaged parts. Contact an authorized Volvo workshop for service.
Temporarily OFF[1]	A function has been temporarily switched off and is reset automatically while driving or after starting again.
Low battery Power save mode	The audio system is switched off to save current. Charge the battery.

[1] There will also be a system-specific part of this message

3.2.4. Information displays – introduction

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

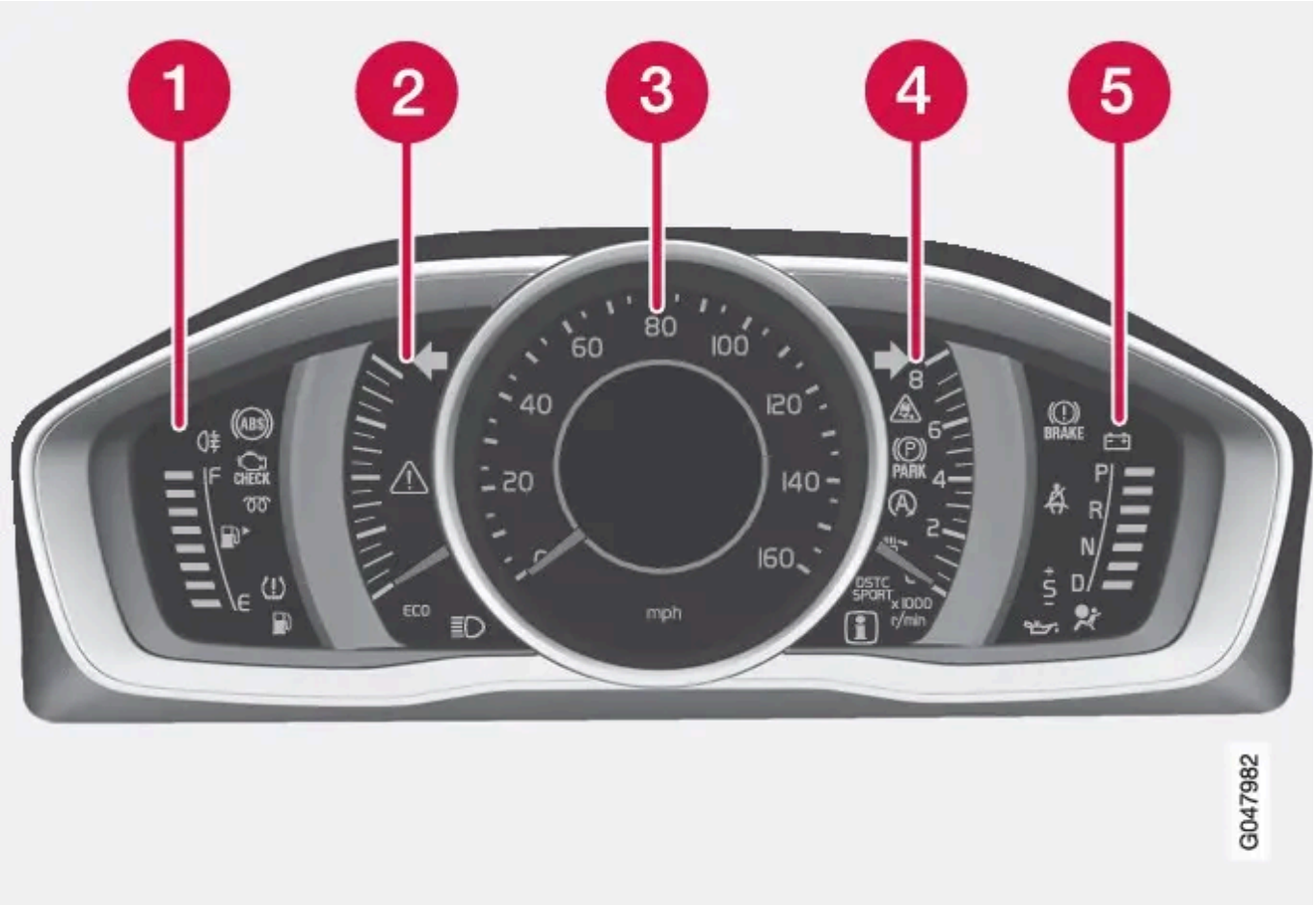




Information displays: digital instrument panel*

More detailed information can be found in the descriptions of the functions that use the information displays.

Gauges and indicators: analog instrument panel



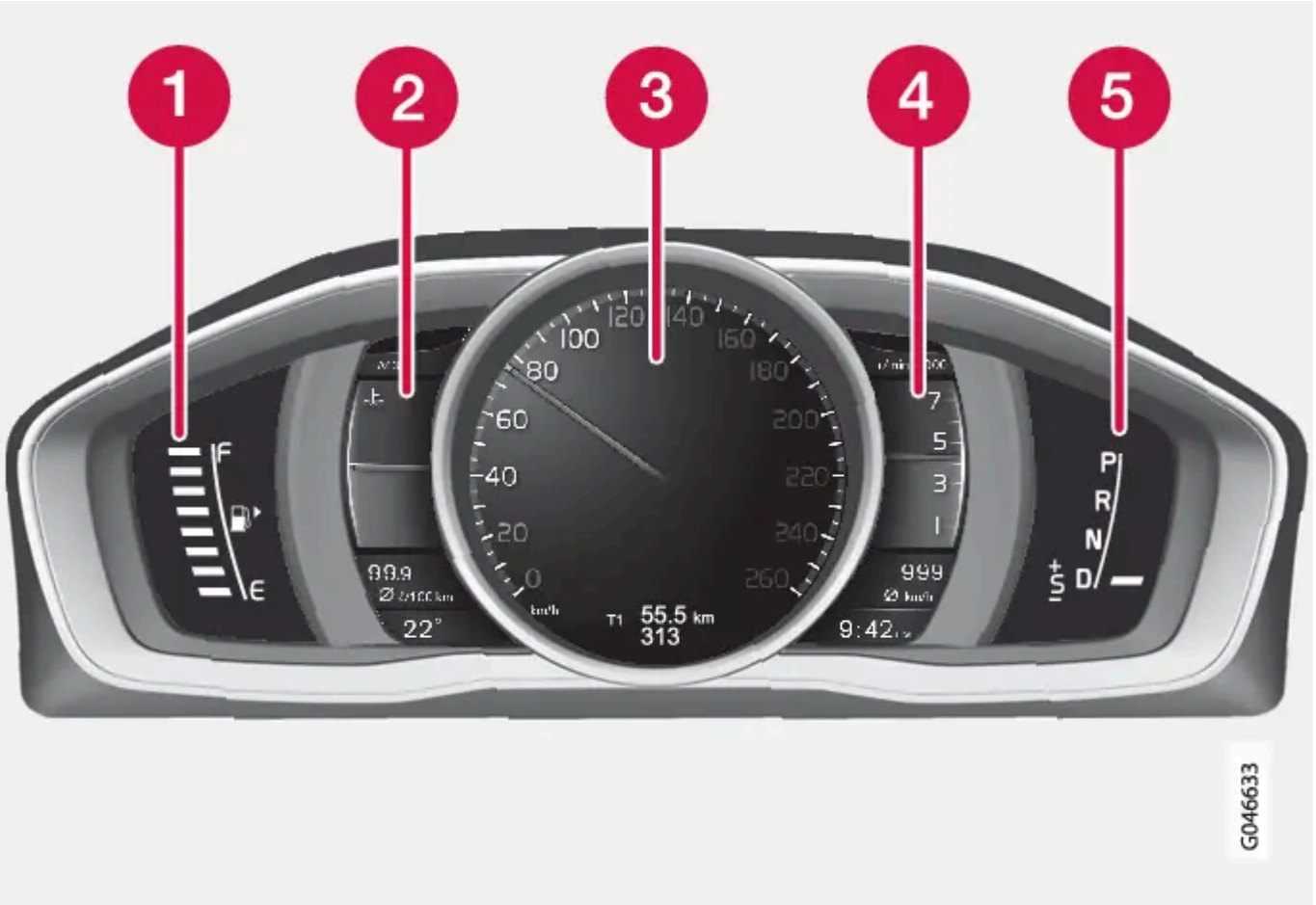
1. Fuel gauge: When the indicator shows one white marking[1], a yellow indicator light will illuminate to indicate a low fuel level. See also Trip computer – introduction and Refueling – fuel requirements for additional information.
2. Eco meter: Indicates how economically the vehicle is being driven. The higher the needle moves on the scale, the more economically the vehicle is being driven.
3. Speedometer
4. Tachometer: Shows engine speed in thousands of revolutions per minute (rpm)
5. Gear indicator: Shows the currently selected gear

Gauges and indicators: digital instrument panel*

Different themes (display alternatives) can be selected for the digital instrument panel:

- Elegance
- Eco
- Performance

To change themes, press the OK button on the left steering wheel lever and use the thumb wheel to scroll to **Themes**. Press OK to confirm your choice.



Theme **Elegance**: gauges and indicators

1. Fuel gauge. When the indicator shows one white marking, a yellow indicator light will illuminate to indicate a low fuel level. See also Trip computer – introduction and Refueling – fuel requirements for additional information.
2. Coolant temperature gauge
3. Speedometer
4. Tachometer (engine speed in thousands of revolutions per minute (rpm))

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5 Gear indicator: Shows the currently selected gear



Theme **Eco**: gauges and indicators

1 Fuel gauge. When the indicator shows a white marking, a yellow indicator light will illuminate to indicate a low fuel level. See also Trip computer – introduction and Refueling – fuel requirements for additional information.

2 Eco Guide (see Eco Guide and Power Meter)

3 Speedometer

4 Tachometer (engine speed in thousands of revolutions per minute (rpm))

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5 Gear indicator: Shows the currently selected gear



Theme **Performance**: gauges and indicators

1 Fuel gauge. When the indicator shows a white marking, a yellow indicator light will illuminate to indicate a low fuel level. See also Trip computer – introduction and Refueling – fuel requirements for additional information.

2 Coolant temperature gauge

3 Speedometer

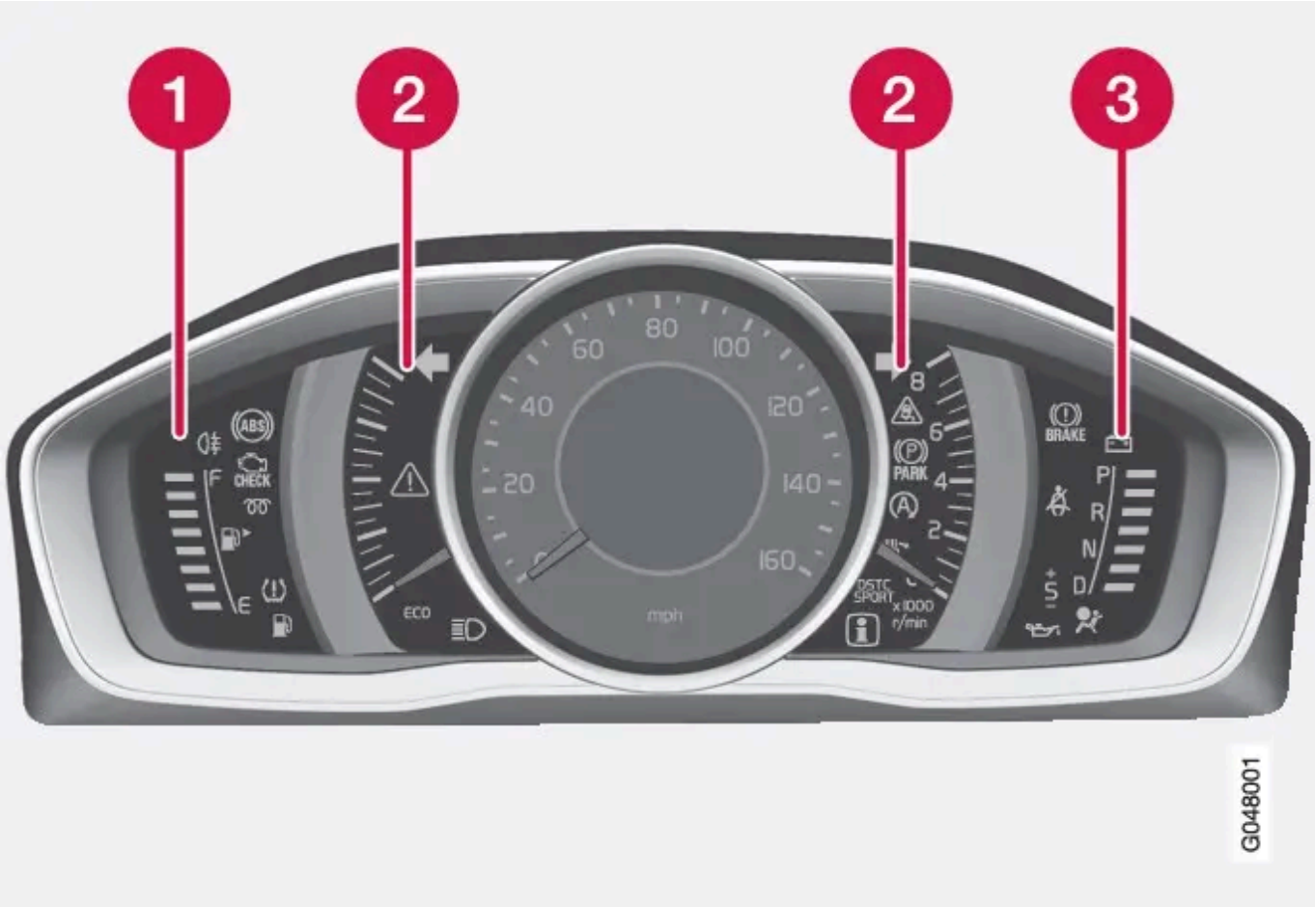
4 Tachometer (shows engine speed in thousands of revolutions per minute (rpm))

5 Power Meter (see Eco Guide and Power Meter).

6 Gear indicator: Shows the currently selected gear

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Indicator and warning symbols



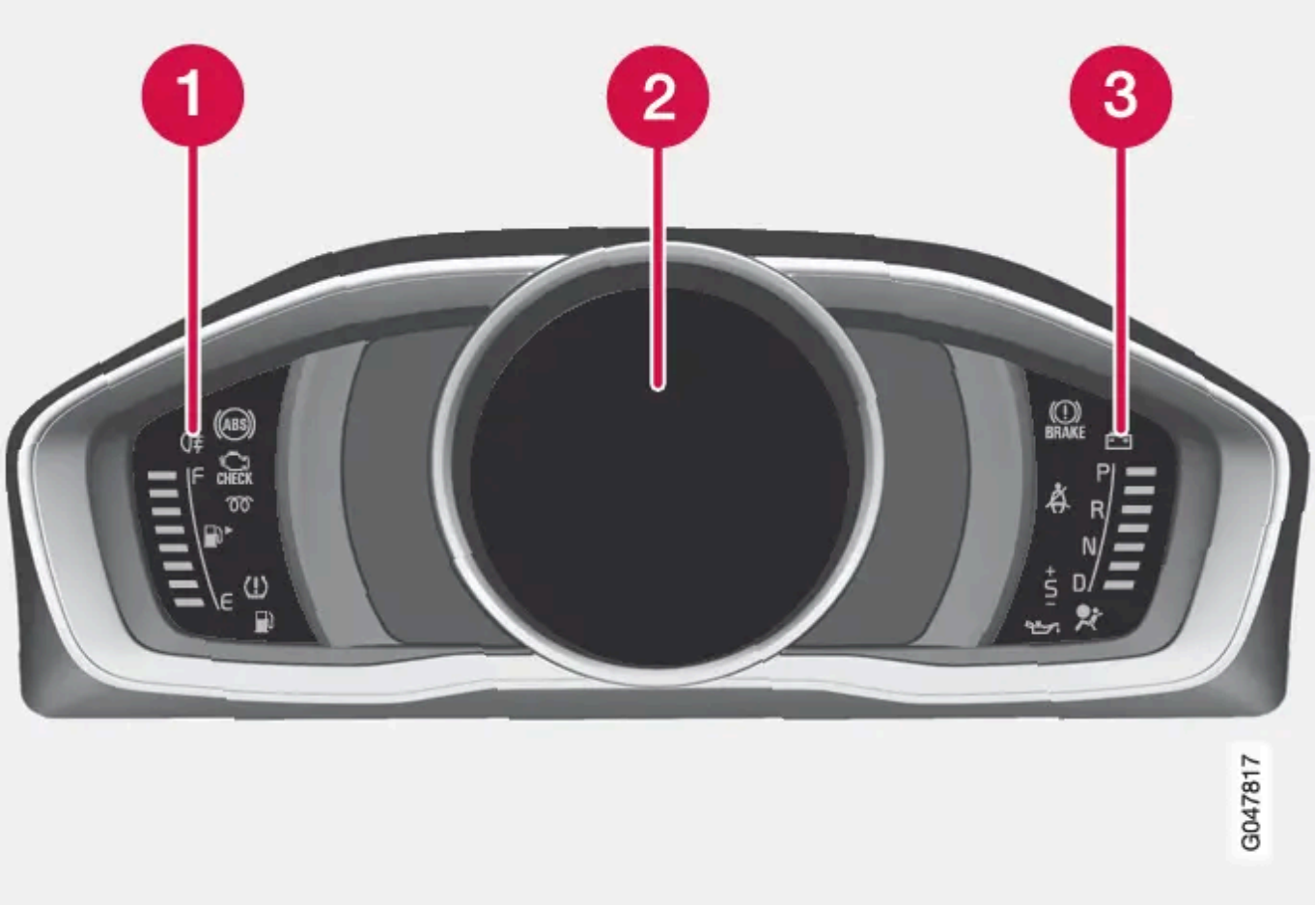
Indicator and warning symbols: analog instrument panel

1 Indicator symbols

2 Indicator and warning symbols

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❸ Warning symbols



Indicator and warning symbols: digital instrument panel

❶ Indicator symbols

❷ Indicator and warning symbols

❸ Warning symbols

Function check

All indicator and warning symbols light up in ignition mode II or when the engine is started. When the engine has started, all the symbols should go out except the parking brake symbol, which only goes out when the brake is disengaged.

If the engine does not start or if the function check is carried out in ignition mode II, all symbols go out after 5 seconds except the malfunction indicator light, which may indicate a fault in the vehicle's emissions system, and the symbol for low oil pressure.

Some of the symbols shown may not be available in all markets or models.

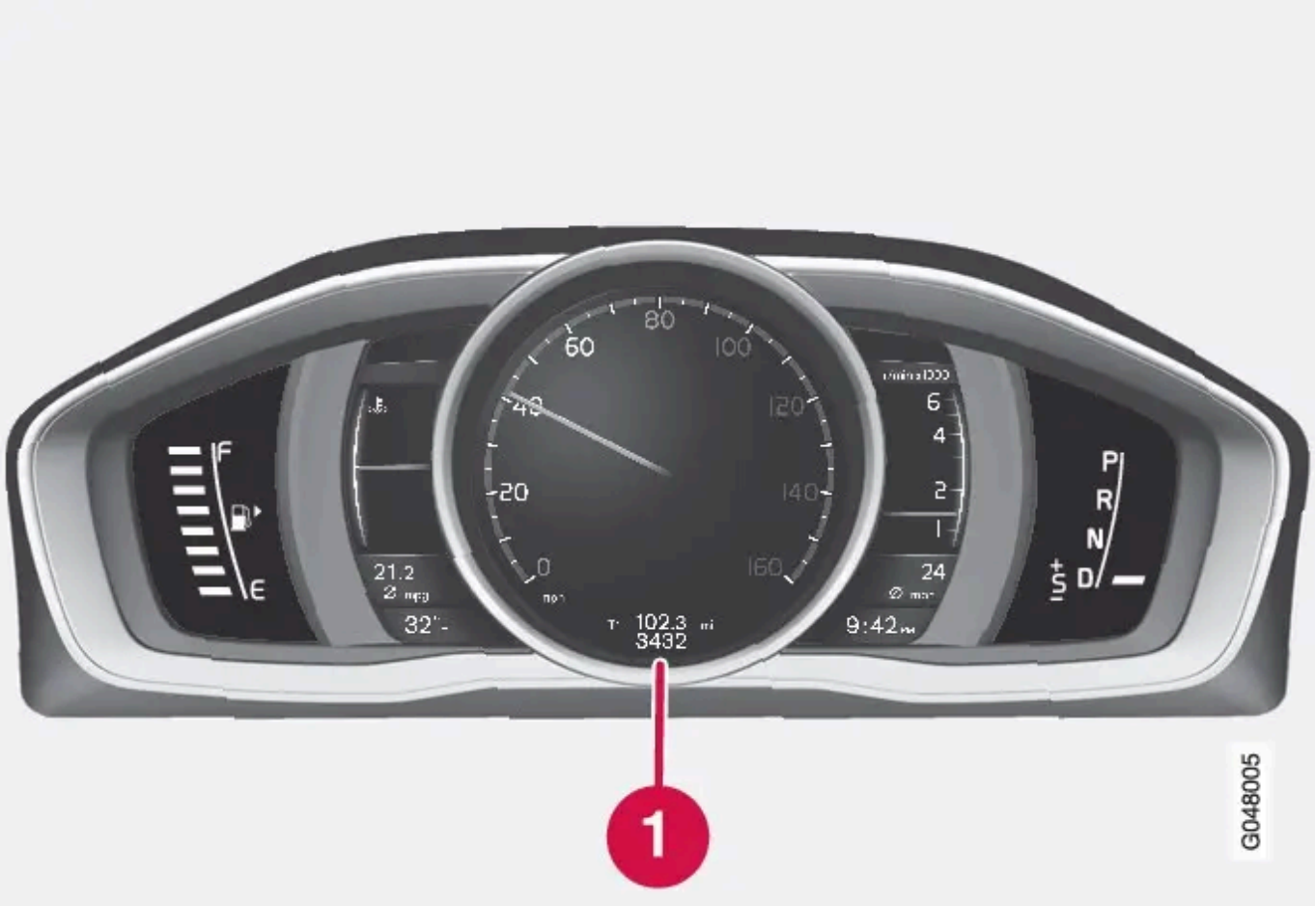
* Option/accessory.

[1] When the message **Distance to empty fuel tank:** shows "----", the marker turns red

3.2.5. Information displays – trip odometer and clock

The trip odometers **T1** and **T2** and clock are displayed in the instrument panel.

Trip odometers



Trip odometer[1]

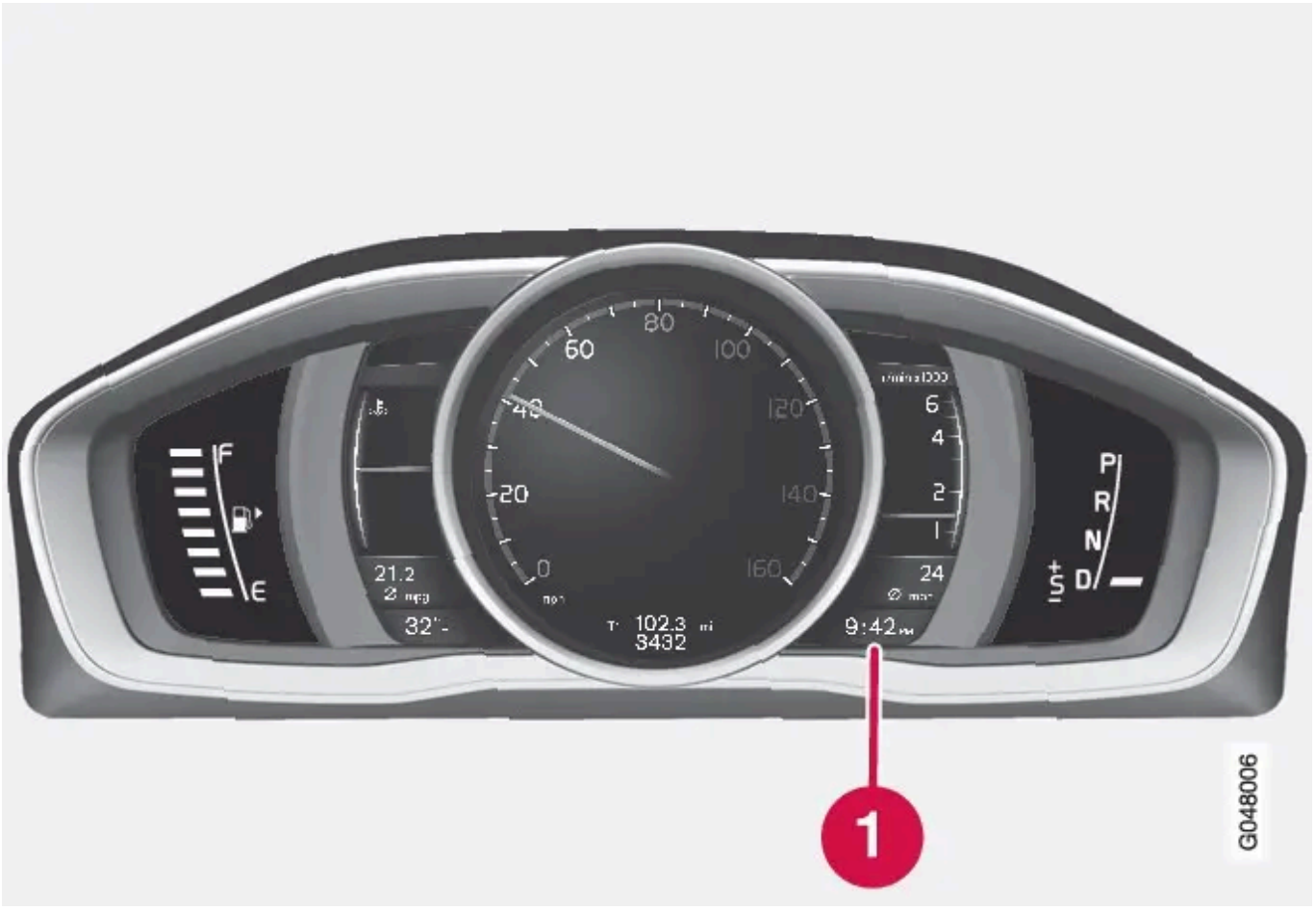
1 Odometer display

Turn the thumb wheel on the left steering wheel lever to display the desired trip odometer.

Press and hold the RESET button on the left steering wheel lever for at least 1 second to reset the selected trip odometer[2].

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Clock



Clock, digital instrument panel*

1 Display [3]

Setting the clock

The clock can be set in the MY CAR menu system. See My Car – introduction for additional information about these menus.

Go to **Settings** → **System options** → **Time settings**. Set **Auto time** to ON (check the box) and select the correct time zone under **Location**.

[1] The trip odometer will be displayed differently in analog and digital instrument panels

[2] Models with a digital information panel: press and hold RESET for more than approximately 4 seconds to reset all trip computer information

* Option/accessory.

[3] Models with an analog instrument panel: the time will be displayed in the center of the instrument panel

---

3.2.6. Information displays – warning symbols

The warning lights alert the driver that an important function is activated or that a serious fault has occurred.

Symbol	Description
	Low oil pressure [1]
	Parking brake applied [2]
	SRS airbags
	Seat belt reminder
	Generator not charging
	Fault in the brake system
	Warning symbol, read the text displayed in the instrument panel

Low oil pressure

If the light comes on while driving, stop the vehicle, stop the engine immediately, and check the engine oil level. Add oil if necessary. If the oil level is normal and the light stays on after restart, have the vehicle towed to the nearest trained and qualified Volvo service technician.

Parking brake applied

This symbol flashes while the brake is being applied and then glows steadily when the parking brake has been set.

See Parking brake – general information for more information about using the parking brake.

Airbags – SRS

If this light comes on while the vehicle is being driven, or remains on for longer than approximately 10 seconds after the vehicle has been started, the SRS system's diagnostic functions have detected a fault in a seat belt lock or pretensioner, a front airbag, side impact airbag, and/or an inflatable curtain. Have the system(s) inspected by a trained and qualified Volvo service technician as soon as possible.

See Supplemental Restraint System (SRS) for more information about the airbag system.

Seat belt reminder

This symbol comes on for approximately 6 seconds if the driver has not fastened his or her seat belt.

Generator not charging

This symbol comes on during driving if a fault has occurred in the electrical system. Contact an authorized Volvo workshop.

Engine temperature

Engine overheating can result from low oil or coolant levels, towing or hard driving at high heat and altitude, or mechanical malfunction. Engine overheating will be signaled with text and a red warning triangle in the middle of the instrument display. The exact text will depend on the degree of overheating. It may range from **High engine temp Reduce speed** to **High engine temp Stop engine**. If appropriate, other messages, such as **Coolant level low, Stop safely** will also be displayed. If your engine does overheat so that you must stop the engine, always allow the engine to cool before attempting to check oil and coolant levels.

See Engine compartment – coolant for more information.

Fault in brake system

If this symbol lights, the brake fluid level may be too low. Stop the vehicle in a safe place and check the level in the brake fluid reservoir, see Engine compartment – brake fluid. If the level in the reservoir is below MIN, the vehicle should be transported to an authorized Volvo workshop to have the brake system checked.

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

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

- If both symbols extinguish, continue driving.
- If the symbols remain on, check the level in the brake fluid reservoir, see Engine compartment – brake fluid. If the brake fluid level is normal but the symbols are still lit, the vehicle can be driven, with great care, to an authorized Volvo workshop to have the brake system checked.
- If the level in the reservoir is below MIN, the vehicle should be transported to an authorized Volvo workshop to have the brake system checked.

Warning

- If the fluid level is below the MIN mark in the reservoir or if a warning message is displayed in the text window: **DO NOT DRIVE**. Have the vehicle towed to a trained and qualified Volvo service technician and have the brake system inspected.
- If the BRAKE and ABS symbols are on at the same time, there is a risk of reduced vehicle stability.

Warning symbol

The red warning symbol lights up to indicate a problem related to safety and/or drivability. A message will also appear in the instrument panel. The symbol remains visible until the fault has been rectified but the text message can be cleared with the OK button, see Information display – menu controls. The warning symbol can also come on in conjunction with other symbols.

Action:

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

Reminder – doors not closed

If one of the **doors** is not closed properly, the **information** or **warning** symbol illuminates (depending on the vehicle's speed), a graphic will be displayed in instrument panel and an explanatory text message[3] will also be displayed in the instrument panel. Stop the vehicle in a safe place as soon as possible and close the door.



If the vehicle is driven at a speed lower than approximately 5 mph (7 km/h), the information symbol illuminates.



If the vehicle is driven at a speed higher than approximately 5 mph (7 km/h), the warning symbol illuminates.

If the **hood** is not closed properly, the **warning** symbol illuminates, a graphic will be displayed in instrument panel and an explanatory text message[3] will also be displayed in the instrument panel. Stop the vehicle in a safe place as soon as possible and close the hood.

If the **tailgate** is not closed properly, the **information** symbol illuminates and a graphic will be displayed in instrument panel. Stop the vehicle in a safe place as soon as possible and close the tailgate.

[1] Certain engines do not use this symbol to indicate low oil pressure. On these models, a text message will be displayed on the instrument panel instead, see Engine compartment – engine oil.

[2] The symbol is Park only on models with the optional digital instrument panel.

[3] Text message applies only to models with the optional digital instrument panel

---

3.2.7. Eco Guide* and Power Meter*

Eco guide and Power guide are two gauges in the instrument panel that help improve driving economy. The vehicle also stores driving-related statistics in the form of a bar graph, see .

Introduction

To display or remove these functions from the instrument panel, select the "Eco" theme (see Information displays – introduction).

Driving statistics are also stored and can be displayed in the form of a bar chart (see Trip computer – Trip statistics).

Eco Guide

This gauge gives an indication of how economically the vehicle is being driven.



1 Current (instantaneous) reading

2 Average

Current (instantaneous) reading

This is the current level of economical driving; the higher the reading, the more economically the vehicle is being driven.

This value is calculated based on the vehicle's speed, engine speed (rpm), engine load and brake use.

The optimal speed range is between approximately 30–50 mph (50–80 km/h), preferably at as low rpm as possible. The markers fall when the brake or accelerator pedal is pressed.

If the current reading is very low, the red field in the gauge will illuminate after a slight delay, indicating low driving economy.

Average

The average reading changes gradually according to changes in the current reading to indicate how economically the vehicle has been driven recently. The higher the average reading, the more economically the vehicle has been driven.

Power Meter

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This gauge indicates the engine power that has been utilized and the amount of power remaining.



1 Available power
2 Utilized power

Available power

The smaller, upper indicator shows the engine's available power[1]. The higher the reading on the scale, the greater the amount of power remaining in the current gear.

Utilized power

The larger, lower indicator shows the amount of engine power that has been utilized[1]. The higher the reading on the scale, the greater the amount of power that is being utilized.

The larger the gap between the two indicators, the greater the amount of power remaining.

* Option/accessory.

[1] Depending on rpm

3.2.8. Information displays – indicator symbols

The indicator symbols alert the driver when certain functions are activated, that a system is actively working or that a fault may have occurred in a system or function.

Symbol	Description
	Fault in the Active Bending Light (ABL)*system
	Malfunction indicator light
	Anti-lock brake system (ABS)
	Rear fog lights on
	Stability system
	The stability system's Sport mode is activated
	Low fuel level
	Information symbol, read the text displayed in the instrument panel
	High beam indicator
	Left turn signal indicator
	Right turn signal indicator
	Tire pressure monitoring sensor (TPMS)[1]
ECO	The Eco function is on.
	TheStart/Stop function is active (the engine has auto-stopped)

Fault in the Active Bending Light (ABL) system

This symbol will illuminate if there is a fault in the ABL system. See Active Bending Lights (ABL) for more information about this system.

Malfunction Indicator Light

As you drive, a computer called On-Board Diagnostics II (OBDII) monitors your vehicle's engine, transmission, electrical and emission systems.

The malfunction indicator light will illuminate if the computer senses a condition that potentially may need correcting. When this happens, please have your vehicle checked by a trained and qualified Volvo service technician as soon as possible.

A malfunction indicator light may have many causes. Sometimes, you may not notice a change in your car's behavior. Even so, an uncorrected condition could hurt fuel economy, emission controls, and drivability. Extended driving without correcting the cause could even damage other components in your vehicle.

This light may illuminate if the fuel filler cap is not closed tightly or if the engine was running while the vehicle was refueled.

Anti-lock Brake System (ABS)

If the warning light comes on, there may be a malfunction in the ABS system (the standard braking system will still function). Check the system by:

1. Stopping in a safe place and switching off the ignition.
2. Restart the engine.
3. If the warning light goes off, no further action is required.

If the indicator light remains on, the vehicle should be driven to a trained and qualified Volvo service technician for inspection, see Brakes – general for additional information.

Rear fog lights

This symbol indicates that the rear fog lights are on.

Stability system

This indicator symbol flashes when the stability system is actively working to stabilize the vehicle, see Stability system – introduction for more detailed information.

Stability system - Sport mode

This symbol illuminates to indicate that the stability system's Sport mode has been activated to help provide maximum tractive force, for example when driving with snow chains, or driving in deep snow or loose sand.

Low fuel level

When this light comes on, the vehicle should be refueled as soon as possible. See Refueling – fuel requirements for information about fuel and refueling.

Information symbol

The information symbol lights up and a text message is displayed to provide the driver with necessary information about one of the vehicle's systems. The message can be erased and the symbol can be turned off by pressing the OK button (see Information display – menu controls for information) or this will take place automatically after a short time (the length of time varies, depending on the function affected).

The information symbol may also illuminate together with other symbols.

High beam indicator

This symbol illuminates when the high beam headlights are on, or if the high beam flash function is used.

Left turn signal indicator

Right turn signal indicator

Note

- Both turn signal indicators will flash when the hazard warning flashers are used.
- If either of these indicators flash faster than normal, the direction indicators are not functioning properly.

Tire pressure monitoring system (TPMS)*

This symbol illuminates to indicate that tire pressure in one or more tires is low, see Tire Pressure Monitoring System (TPMS) – general information for detailed information.

Eco* function on

The symbol will illuminate when the Eco function is activated.

Start/stop*

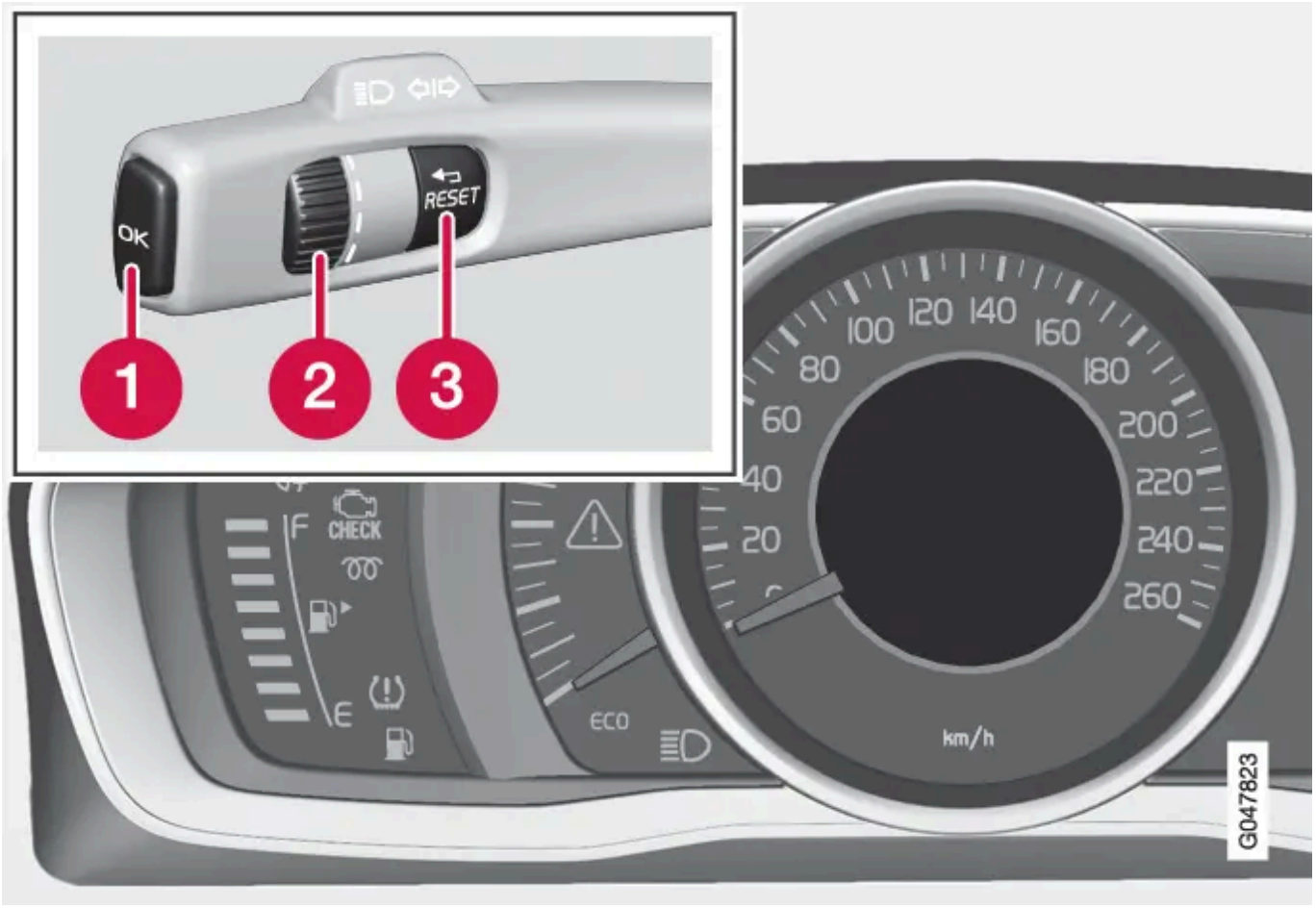
The symbol illuminates when the engine has auto-stopped.

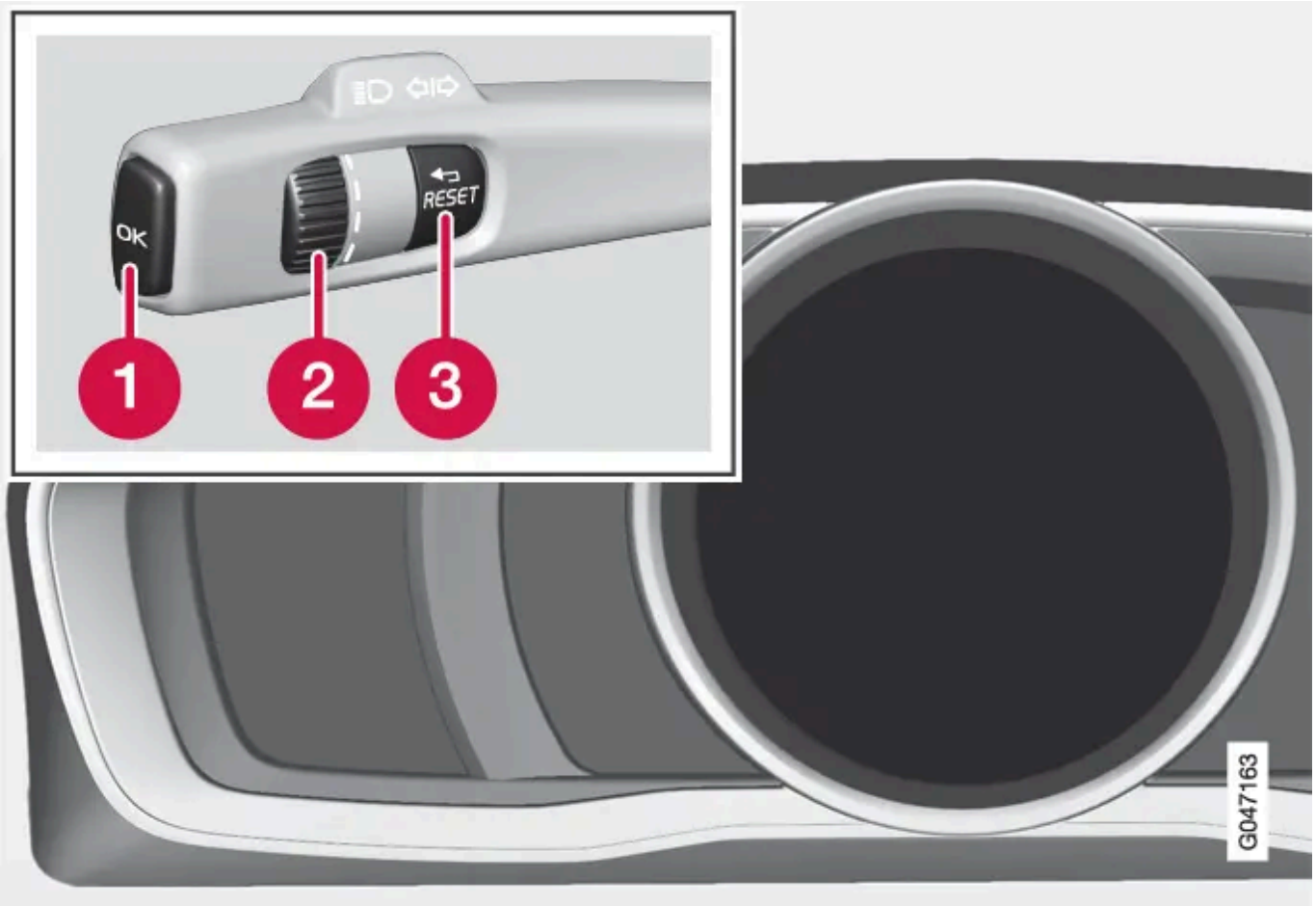
* Option/accessory.

[1] Option in Canada

3.2.9. Information display – menu controls

The controls on the left steering wheel lever are used to access the menus that are displayed in the instrument panel. The menus displayed depend on the current ignition mode.





Digital Instrument panel* and menu controls

1 OK: access to the list of messages and message confirmation.

2 Thumb wheel: browse among menus and options in the list of functions.

3 RESET: reset the active function. Used in certain cases to select/activate a function, see the explanation under each respective function.

The menus shown on the information displays in the instrument panel are controlled with the left lever. The menus displayed depend on ignition mode. Press OK to erase a message and return to the menus.

* Option/accessory.

3.3. My Car

3.3.1. MY CAR driver support settings

The driver support settings in the MY CAR menus control functions such as collision warning, driver alert, etc.

Driver support system	Read about
Collision warning	
Collision warning On Off	Collision warning – operation
Warning distance Short Normal Long	Collision warning – operation
Warning sound On Off	Collision warning – operation
Lane Departure Warning	
Lane Departure Warning On Off	Lane Departure Warning (LDW) – operation
On at startup On Off	Lane Departure Warning (LDW) – operation
Increased sensitivity On Off	Lane Departure Warning (LDW) – operation
Lane Keeping Aid	
Lane Keeping Aid On Off	Lane Keeping Aid (LKA) – operation
Assistance mode Full function Steering assist only Vibration only	Lane Keeping Aid (LKA) – operation
Road sign information	
Road sign information On Off	
Speed alert On Off	
ESC OFF On Off	Stability system – operation
City Safety On Off	City Safety – operation
BLIS On Off	BLIS – operation
Distance alert On Off	Distance Alert – operation

Driver Alert On Off	Driver Alert Control (DAC) – operation

3.3.2. My Car – introduction

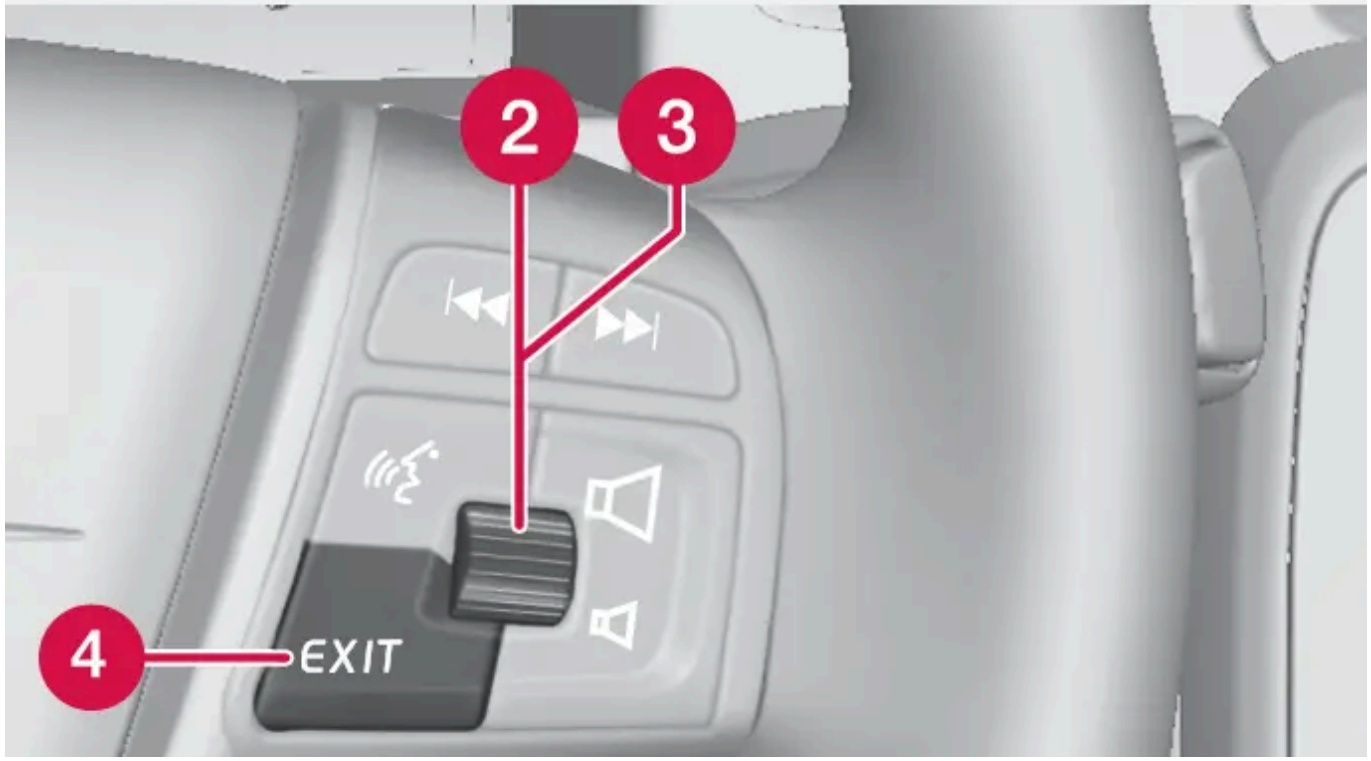
The MY CAR menu system provides access to menus for operating many of the vehicle's functions, such as setting the clock, door mirrors, lock and alarm settings, etc.

Some of the features or functions are standard; others are optional and vary according to model/market.

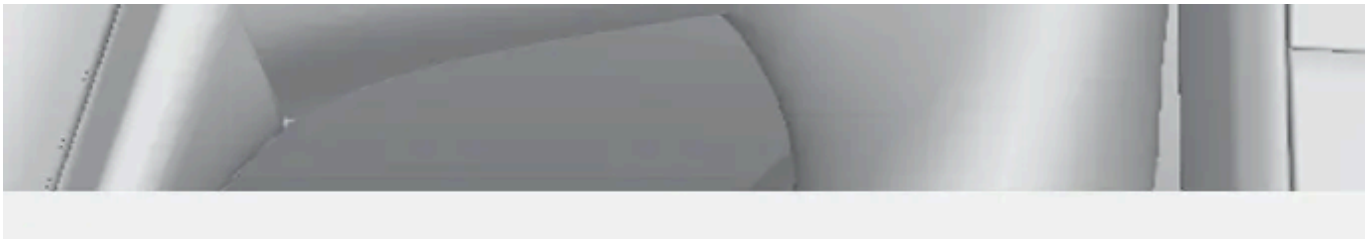
Operation

Use the buttons on the center console or the steering wheel keypad to navigate in the menus.





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The center console control panel and the steering wheel keypad. The illustration is generic and the appearance/location of the buttons may vary.

1. MY CAR: opens the MY CAR menu system.
2. OK/MENU: Press the button on the center console or the thumb wheel on the steering wheel keypad to select a menu alternative or to store a selected function in the system's memory.
3. TUNE: Turn this control on the center console or the thumb wheel on the steering wheel keypad to navigate up/down in a menu.
4. EXIT

EXIT functions

Depending on which function the cursor is pointing to and the menu level, briefly pressing EXIT will result in:

- An in-coming phone call will be rejected
- The current function will be cancelled
- Characters entered will be erased
- The most recent selection will be cancelled
- Go back/up in the menu system

Pressing and holding EXIT takes you to the normal view for MY CAR. If you are already in normal view, this will take you to the main source menu.

3.3.3. MY CAR information settings

The information settings in the MY CAR menus provide information about the number of keys and the VIN number.

Information	Read about
Number of keys	Remote key – loss
VIN number	Label information

3.3.4. MY CAR Internet settings

The Internet settings in the MY CAR menus control functions such as Bluetooth® and Wi-Fi.

Internet settings	Read about
Connect through Car modem Bluetooth Wi-Fi None	Internet connection, Car modem and Connecting a Bluetooth® device
Car modem Data usage Current network operator Data roaming Lock SIM card Access Point Name	Car modem
Bluetooth	Connecting a Bluetooth® device
Wi-Fi	Internet connection
Car Wi-Fi hotspot	Car modem
Car Wi-Fi hotspot On Off	
Name	
Password	

3.3.5. MY CAR voice control settings

The voice control settings in the MY CAR menus control functions such as giving voice commands, the list of voice commands, etc.

Voice control settings	Read about
Tutorial	Voice control help functions
Command list Global commands Navigation commands Radio commands Media commands Phone commands Navigation commands only apply if Volvo's navigation system * is installed.	Voice control command shortcuts
User setting Default Trained user	Voice control settings
Speaker adaptation	Voice control help functions
Read out speed Fast Medium Slow	Voice control settings

* Option/accessory.

3.3.6. MY CAR climate system settings

The climate system settings in the MY CAR menus control functions such as air conditioning, recirculation, etc.

Climate settings	Read about
Auto fan Normal High Low	Automatic climate control
Recirculation timeout On Off	Air distribution – recirculation
Auto rear defrost On Off	Heated windshield, rear window and door mirror defrosters
Auto driver seat heater On Off	Heated seats
Auto steering wheel heater On Off	Electrically heated steering wheel
Interior air quality system On Off	Interior Air Quality System (IAQS)
Reset climate settings Reset all Climate settings to their factory defaults.	

3.3.7. MY CAR system settings

The system settings in the MY CAR menus control functions such as setting the clock, changing display languages, etc.

System options	Read about
Time settings This is the setting for adjusting the clock.	
24-hour clock On Off	Information displays – trip odometer and clock
Daylight savings time Auto On Off	
Auto time On Off	
Location	

Language Select that language to be used in the instrument panel and center console screen.	
Language: Driver display Select the language to be used in the instrument panel.	
Distance and fuel units MPG(US) km/l l/100km	Trip computer – functions, analog instrument panelTrip computer – functions, digital instrument panel
Temperature unit Celsius Fahrenheit Select the temperature unit to be used for showing the ambient temperature and in the climate system.	
Screen saver On Off The screen will go black after several minutes of inactivity if this setting is selected. The information on the screen will reappear if any screen-related buttons are pressed or controls are used.	
Show help text On Off Help texts for the current information on the screen will be displayed if this setting is selected.	
Reset system options All System options will be reset to their factory settings.	

3.3.8. MY CAR vehicle settings

The vehicle settings in the MY CAR menus control many of the vehicle functions such as car key memory, lock settings, etc.

Vehicle settings	Read about
Car key memory On Off	Front seats – power seat and Power door mirrors
Lock settings	
Automatic door locking On Off	Locking/unlocking – from inside
Doors unlock All doors Driver door, then all	Remote key – functions
Keyless entry unlock All doors unlock Any door Doors on same side Both front doors	Keyless drive– locking/unlocking
Audible confirmation On Off	Locking/unlocking confirmation

Door lock confirmation light On Off	Locking/unlocking confirmation
Unlock confirmation light On Off	Locking/unlocking confirmation
Side mirror settings	
Fold mirrors when locking On Off	Power door mirrors
Tilt left mirror on reverse gear On Off	Power door mirrors
Tilt right mirror on reverse gear On Off	Power door mirrors
Light settings	
Interior light Floor lights Ambiance lights Ambiance colors	Front interior lighting
Approach light duration Off 30 sec 60 sec 90 sec	Remote key – functions and Approach lighting
Home safe light duration Off 30 sec 60 sec 90 sec	Home safe lighting
Triple indicator On Off	Turn signals
Daytime running lights On Off	Lighting panel
Active bending lights On Off	Active Bending Lights (ABL)
Auxiliary lights On Off	Auxiliary lights
Active high beam On Off	Active high beams (AHB)
Cornering lights On Off	Active Bending Lights (ABL)
Tire pressure	
Calibrate tire pressure	Tire Pressure Monitoring System (TPMS) – recalibrating

Tire monitoring On Off	Tire Pressure Monitoring System (TPMS) – general information
Steering force level Low Medium High	Steering wheel
Speed in infotainment display On Off	
Location service On Off	
Reset vehicle settings All Vehicle settings will be reset to the factory defaults.	

3.3.9. MY CAR menus

MY CAR is a group of menus where settings can be made for many of the vehicle's functions such as setting the clock, door mirror settings, locks, etc.



Example of a normal view in MY CAR

Press the MY CAR button on the center console to display the normal view for MY CAR. This view shows the status of some of the vehicle's driver support systems in the upper section of the screen along with the status for the Start/Stop* function in the screen's lower section.

Pressing OK/MENU gives you access to the **My Car** menus with the following alternatives:

- **My S60** [1]
- **Trip statistics**
- **Drive-E**
- **Tire pressure**
- **Settings**
- **Maintenance & repair**
- **Owner's manual**

My S60 [1]

My CarMy S60 [1]

The screen displays all of the driver support systems installed in the vehicle. This is where they can be activated/deactivated.

Trip statistics

My Car → Trip statistics

This shows a bar graph with average fuel consumption.

Drive-E

My Car → Drive-E

This section provides a description of Volvo's Drive-E concept. Choose among the following:

- **Start/Stop**

Information about the Start/Stop function.

- **ECO driving guide**

Provides tips on driving economically.

Tire pressure

My Car → Tire pressure/Tire monitoring, depending on the version of this system installed in your vehicle.

General information about the tire pressure monitoring function in your vehicle.

Settings

My Car → Settings

The structure of the menus is as follows:

Menu level 1
Menu level 2 Menu level 3 Menu level 4

These are the first four menu levels found under **Settings**. Some of these functions are standard; others are optional.

A box will be displayed in cases where a function can be activated/turned **On** or deactivated/turned **Off**:

On: the box is marked

Off: the box is empty

- Choose **On**/**Off** by pressing OK/MENU, exit by pressing **EXIT**.

Submenus found under the heading Settings

- **Vehicle settings**, see MY CAR vehicle settings
- **Driver support system**, see MY CAR driver support settings
- **System options**, see MY CAR system settings
- **Voice control settings**, see MY CAR voice control settings
- **Climate settings**, see MY CAR climate system settings
- **Internet settings**, see MY CAR Internet settings
- **Volvo On Call**, see Menu options for Volvo On Call .
- **FAV key options**: store a commonly used function in MY CAR for the FAV button, see Favorites
- **Information**, see MY CAR information settings
- **Reset to factory settings**: reset all menus to their original factory settings.

Maintenance and repairs

My Car → Maintenance & repair

This displays service and workshop information about the vehicle and any workshop appointments that may have been booked.

Owner's manual

My Car → Owner's manual

The screen will display the on-board owner's manual.

* Option/accessory.

[1] Differs according to model.

3.3.10. MY CAR paths

MY CAR is a menu source where settings can be made for many of the vehicle's functions such as setting the clock, door mirror settings, locks, etc.

The current menu level (path) is shown at the top of the center console screen. The following is an example of how the paths to the menu system's functions are displayed:

Settings → Vehicle settings → Lock settings → Doors unlock → Driver door, then all.

The following is an example of how to search for a function and change a setting using the steering wheel keypad:

1. Press the MY CAR button on the center console.
2. Press the thumb wheel on the steering wheel keypad.
3. **Turn** the thumb wheel to scroll to e.g., **Settings** and then **press** the thumb wheel to open a list of sub-menus.
4. Scroll to the desired sub-menu, e.g., **Vehicle settings** and press the thumb wheel to open a new list of sub-menus.
5. Scroll to **Lock settings** and press the thumb wheel to open a new sub-menu.
6. Scroll to **Doors unlock** and press the thumb wheel to open a drop-down menu with settings that can be selected.
7. Turn the thumb wheel to scroll among the settings **All doors** and **Driver door, then all** and press the thumb wheel to select a setting.
8. Conclude by backing out of the menus one at a time by briefly pressing EXIT or by pressing and holding EXIT.

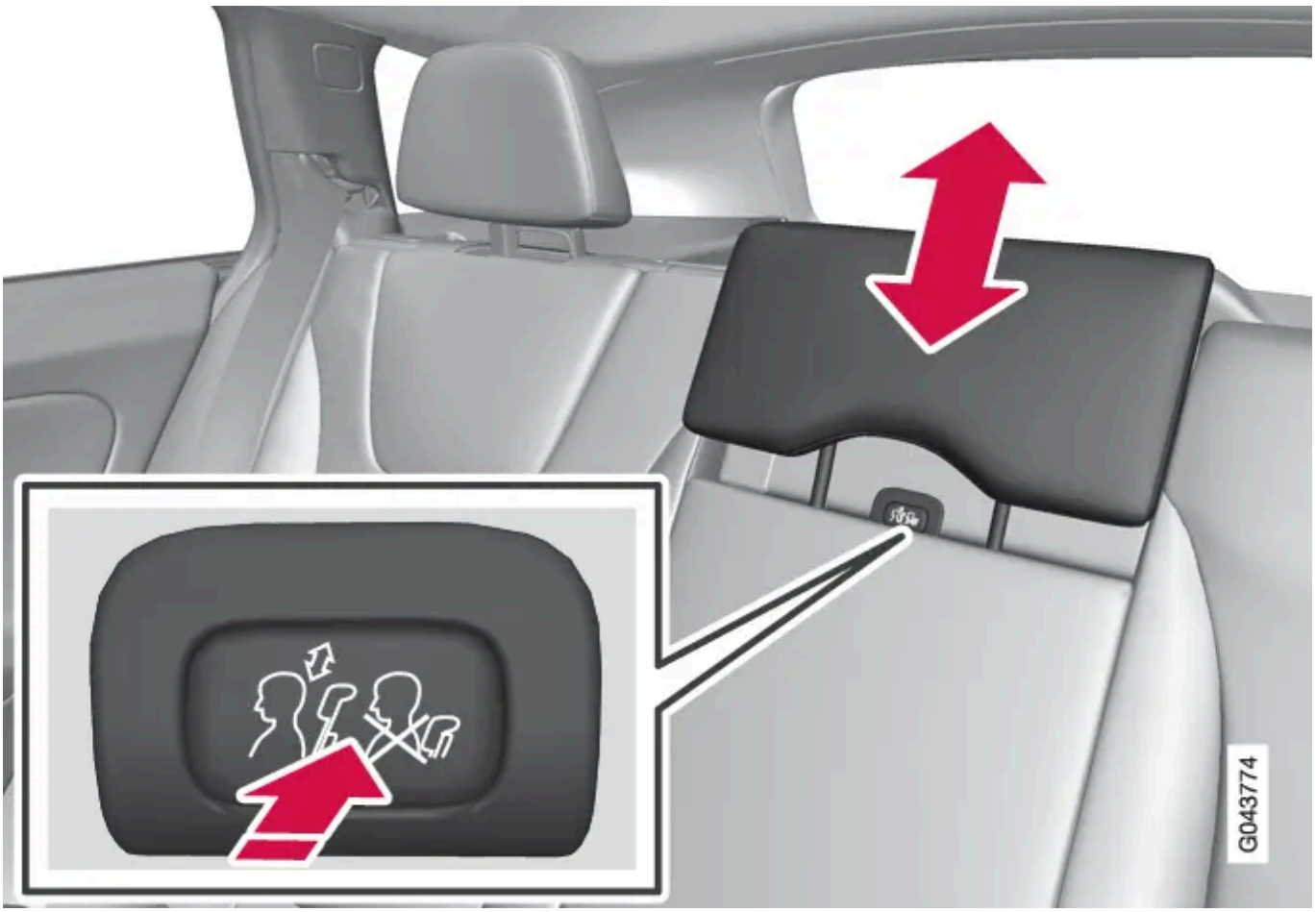
The procedure is the same using the center console controls OK/MENU, EXIT and **TUNE**.

3.4. Seats

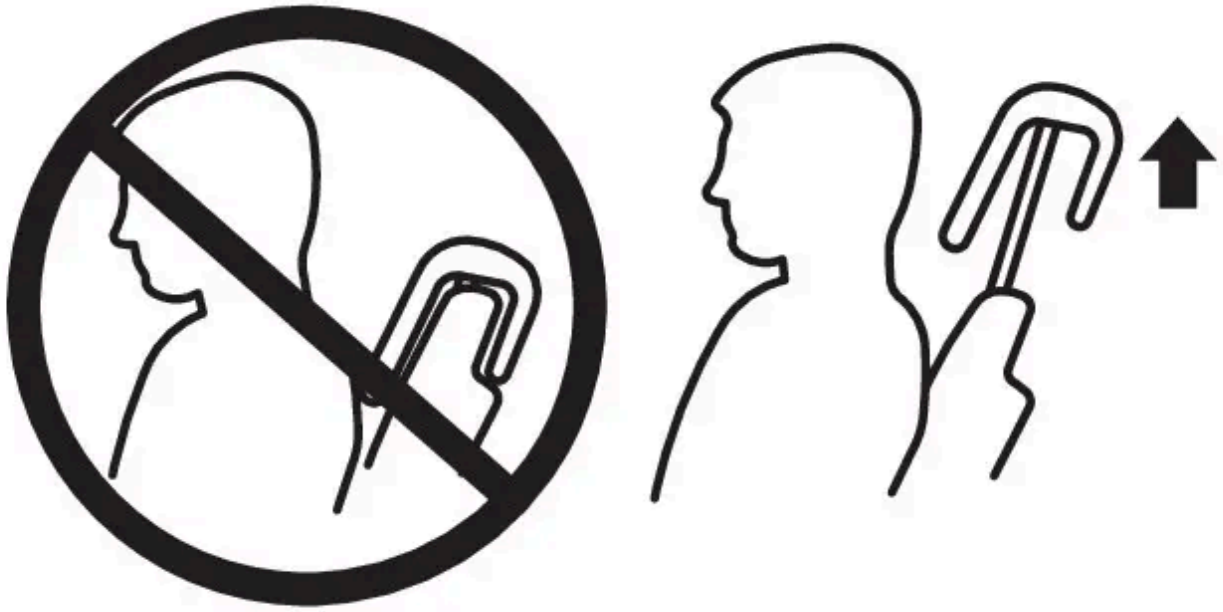
3.4.1. Rear seats – head restraints

The rear seat head restraints can be folded down. The center head restraint can be raised/lowered according to the passenger's height.

Rear center head restraint



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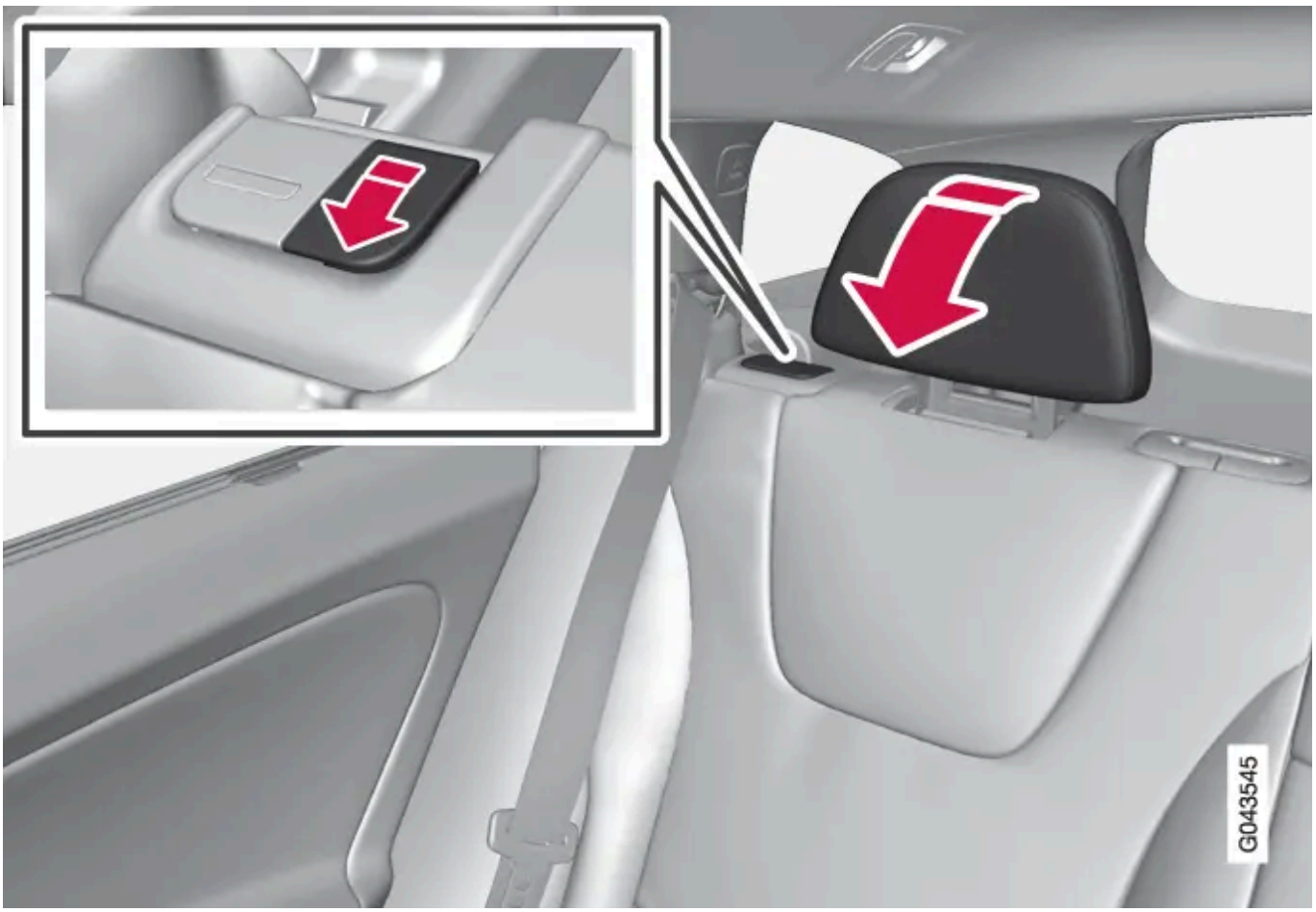
The center head restraint should be adjusted according to the passenger's height. The restraint should be carefully adjusted to support the occupant's head.

- Pull the head restraint up as required.
- To lower, press and hold the button (located at the center, between the backrest and the head restraint) while pressing the head restrain down carefully.

Warning

The center rear seat head restraint should only be in its lowest position when this seat is NOT occupied. When the center position is occupied, the head restraint should be correctly adjusted to the passenger's height. The upper edge of the head restraint should be at least on a level with the upper-most point of the seat occupant's ear.

Manually folding down the rear seat's outboard head restraints



- Pull the handle closest to the head restraint to fold it down.
- To return the head restraint to the upright position, push it up until it clicks into place.

Note

- The head restraint must be returned to the upright position manually.
- The outboard head restraints cannot be folded down on models that are not equipped with this button.

Important

The rear head restraints should not be kept folded down for prolonged periods. This could result in pressure marks in leather upholstery.

Warning

For safety reasons, no one should be allowed to sit in the outboard rear seat positions if the head restraints are folded down. If these positions are occupied, the head restraints should be in the upright (fixed) position.

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Automatically folding down the rear seat's outboard head restraints



1. The ignition must be in mode II.
2. Press the button to lower the rear head restraints for improved visibility.

Note

- The head restraint must be returned to the upright position manually.
- The outboard head restraints cannot be folded down on models that are not equipped with this button.

Important

The rear head restraints should not be kept folded down for prolonged periods. This could result in pressure marks in leather upholstery.

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Warning

For safety reasons, no one should be allowed to sit in the outboard rear seat positions if the head restraints are folded down. If these positions are occupied, the head restraints should be in the upright (fixed) position.

3.4.2. Rear seats – folding backrest

The rear seat head restraints and backrests can be folded down. The center head restraint can be raised/lowered according to the passenger's height.

Folding down the rear seat backrests

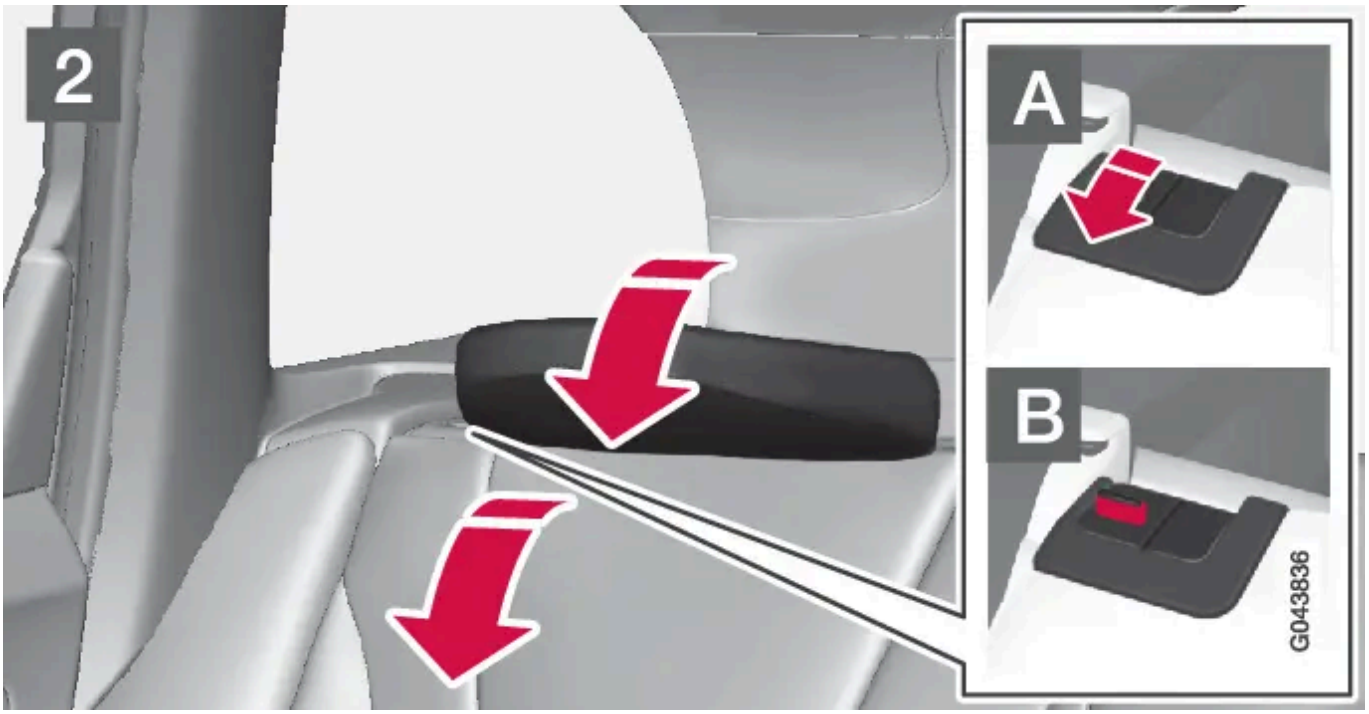


The three sections of the rear seat backrest can be folded down in different combinations to make it easier to transport long objects.

- The left (driver's side) section can be folded down separately.
- The center section can be folded down separately.
- The right (passenger's side) section can only be folded down together with the center section.
- All three sections can be folded down together.

> **Important**
>
> To help avoid damage to the upholstery, there should be no objects on the rear seat and the seat belt should not be buckled when the backrest is folded down.





1. 1

   Release and lower the center head restraint (see Rear seats – head restraints) if the center and/or right section of the backrest is to be lowered. The outboard head restraints fold down automatically.

2. 2

Pull up the backrest release control on the respective section(s) (A) and fold the section(s) down. A red indicator (B) shows that the backrest is not locked in the upright position.

> **Note**
>
> It may be necessary to move the front seats forward or put their backrests in a more upright position before folding down the rear seat backrests.

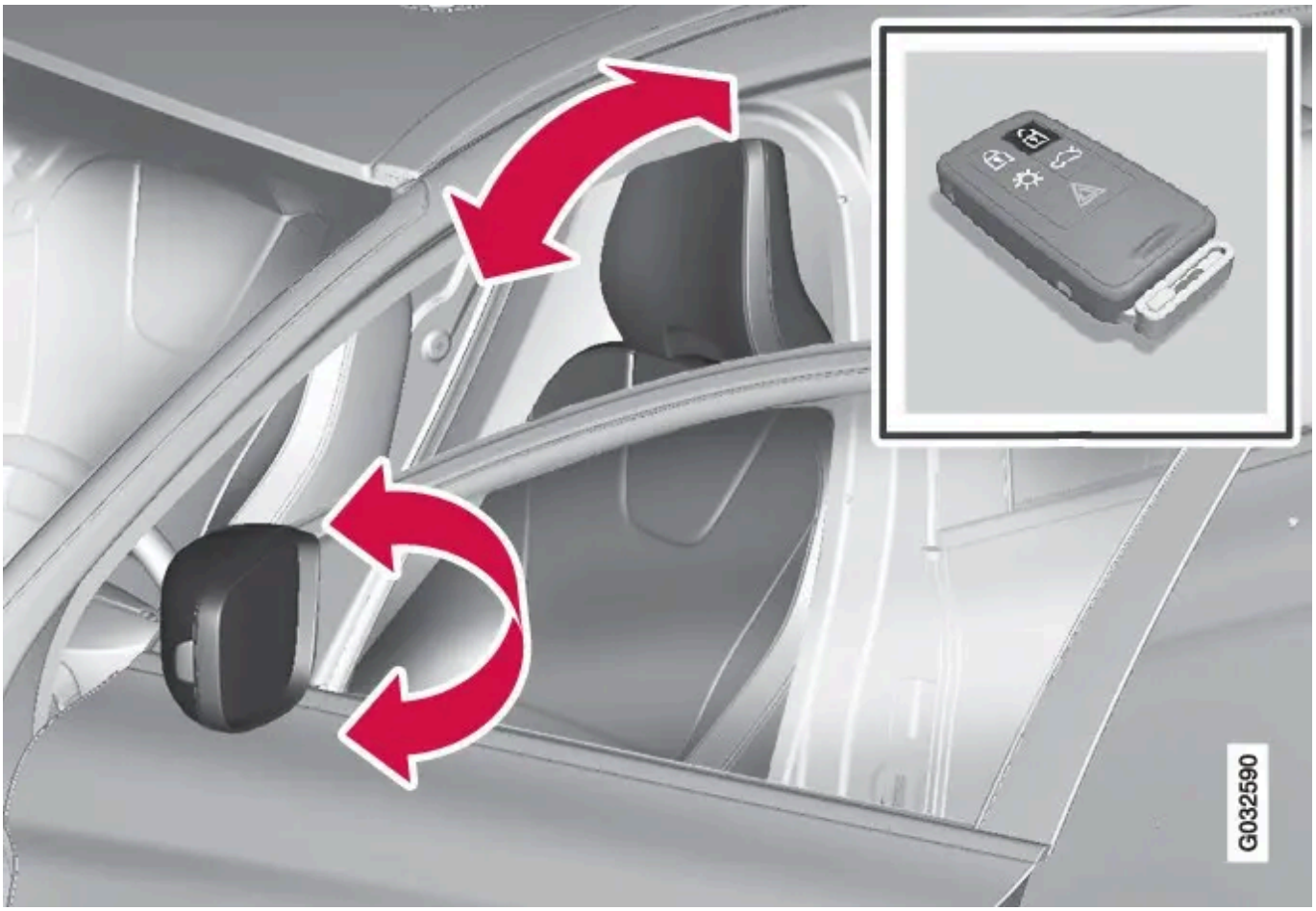
> **Warning**
>
> - When one or more sections of the backrest is returned to the upright position, check that it is properly locked in place by pushing and pulling it. The red indicators should also not be visible.
> - Return the outboard head restraints to the upright position.
> - Long loads should always be securely anchored to help avoid injury in the event of a sudden stop.
> - Always turn the engine off and apply the parking brake when loading/unloading the vehicle.
> - Place the transmission in the Park (P) position to help prevent inadvertent movement of the gear selector.
> - On hot days, the temperature in the vehicle interior can rise very quickly. Exposure of people to these high temperatures for even a short period of time can cause heat-related injury or death. Small children are particularly at risk.

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

Each remote key has a memory that enables it to store (remember) the position of the power driver's seat and door mirrors when the vehicle is locked with that remote key.

Remote key memory and the power driver's seat* and door mirrors [1]





The key memory has to be activated **for each of the remote keys used in the vehicle** as follows:

1. Insert a remote key in the ignition slot.
2. Go into the MY CAR menu and go to **Settings → Car settings → Car key memory**
3. To activate the remote key memory feature, press ENTER (check the box).

> The remote key is now ready to store the position of the power driver's seat and door mirrors.

Repeat this procedure for each of the vehicle's remote keys.

See My Car – introduction for a description of the menu system.

Storing the positions of the power driver's seat/mirrors in the remote key

1. Move the seat and door mirrors to the desired position using the seat and mirror adjustment controls.
2. Exit the vehicle and lock the doors with the remote key (or close the driver's door and press the lock button on the door handle with the remote key in your possession on vehicles with the optional keyless drive).

> The positions of the power driver's seat and door mirrors are now stored in the remote key's memory.

> **Note**
>
> The remote key's memory feature and the power driver's seat memory function (the settings made using the buttons on the side of the seat, see the section "Power seat memory function" in Front seats – power seat) work independently of each other.

Returning the seat/mirrors to the stored positions

To move the seat and door mirrors to the position stored in the remote key:

1. Unlock the driver's door with the **same** remote key (the one used to lock the doors). For models equipped with the optional keyless drive, you must have the same remote key in your possession.
2. Open the driver's door within 2 minutes.

The driver's seat and door mirrors will automatically move to the position in which you left them (if the vehicle has been unlocked with one of the other keys and new seat/mirror adjustments have been made).

> **Note**
>
> - The seat will move to this position even if someone else has moved it to a different position and locked the vehicle with a **different** remote key.
> - This feature will work in the same way with all of the remote keys that you use with your vehicle.

Emergency stop

> **Warning**
>
> - Because the driver's seat can be adjusted with the ignition off, children should never be left unattended in the vehicle.
> - Movement of the seat can be STOPPED at any time by pressing any button on the power seat control panel.
> - Do not adjust the seat while driving. The seat should be adjusted so that the brake pedal can be depressed fully. In addition, position the seat as far rearward as comfort and control allow.
> - The seat rails on the floor must not be obstructed in any way when the seat is in motion.

* Option/accessory.

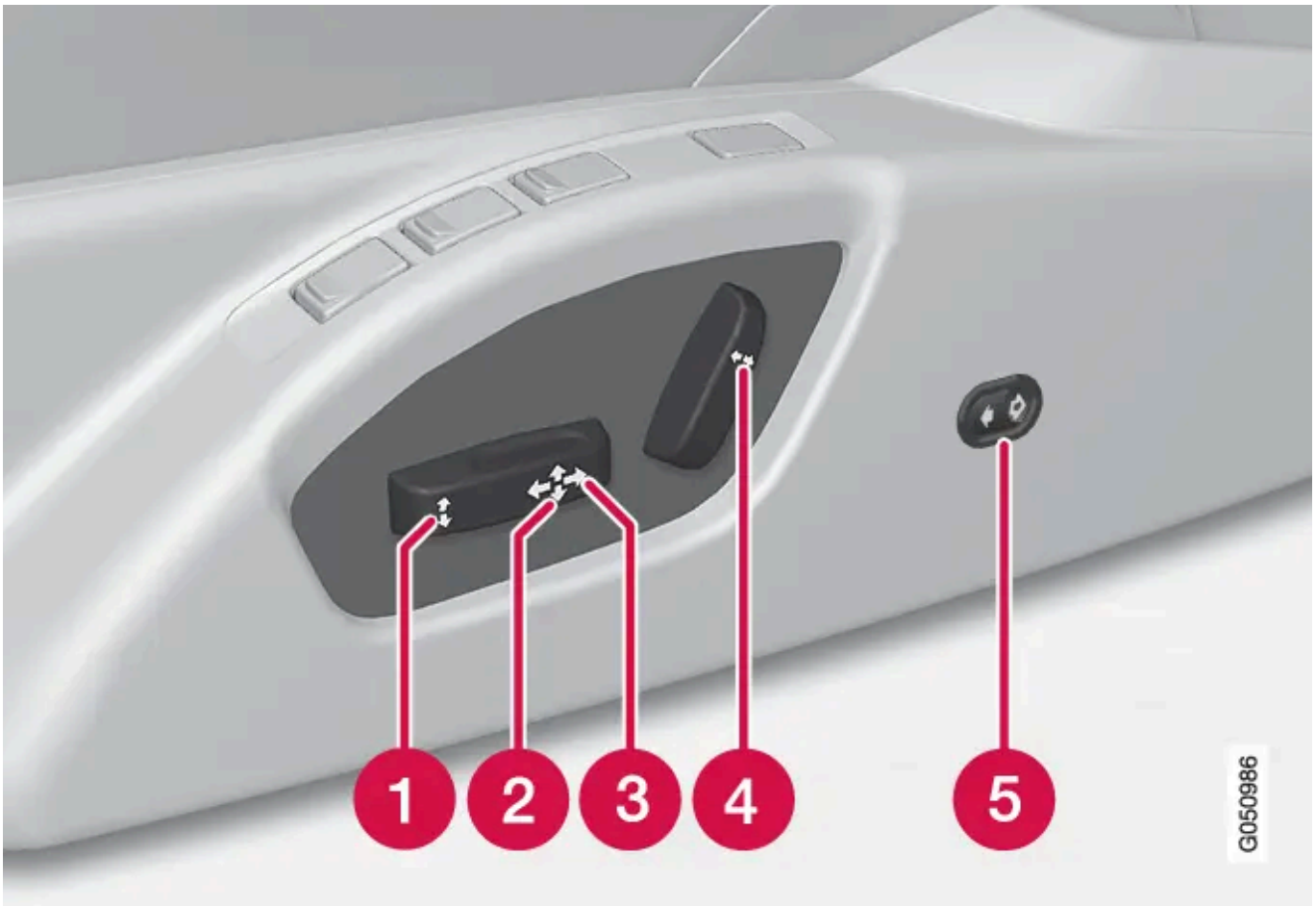
[1] This information also applies to vehicles with the optional keyless drive.

3.4.4. Front seats – power seat[1]

The power seat(s) can be adjusted for a short period after unlocking the door with the remote control without the key in the ignition slot. Seat adjustment is normally made when the ignition is on and can always be made when the engine is running.

Power seat





Power seat adjustment controls

1 Front edge of seat cushion up/down

2 Raise/lower the seat

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3 Seat forward/rearward

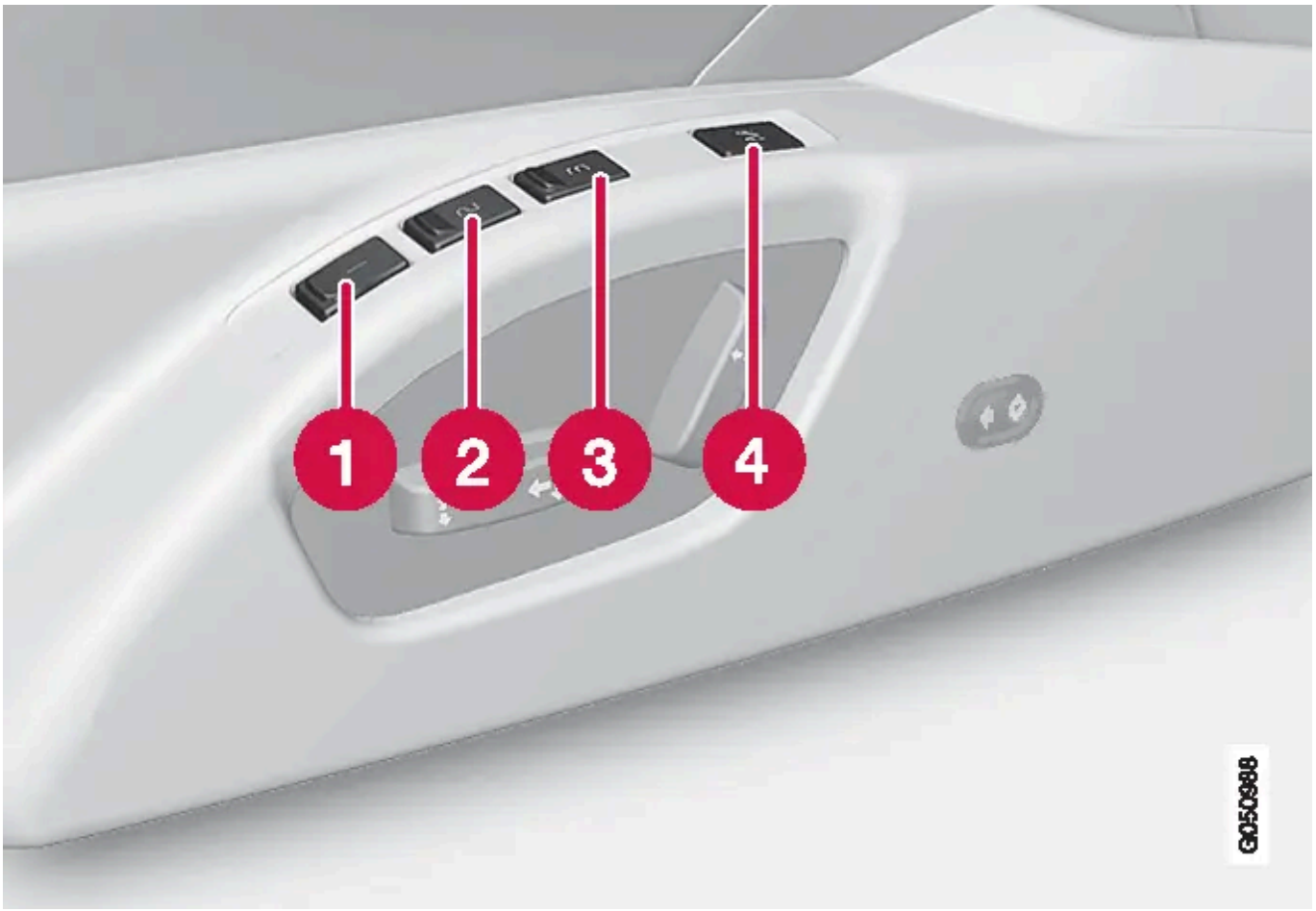
4 Backrest tilt

5 Electronic lumbar support*

Operation

> **Note**
>
> - Only one of the power seat's controls can be used at the same time.
> - The power seats have an overload protector that activates if a seat is blocked by any object. If this occurs, switch off the ignition (key in position 0) and wait for a short period before operating the seat again.

Power seat memory function



Power seat memory buttons

1 Button for storing a position

2 Button for storing a position

3 Button for storing a position

4 M (memory) button

Programming the seat's memory

Three different seating and door mirror positions can be stored in the driver seat's memory.

The following example explains how button (1) can be programmed. Buttons (2) and (3) are programmed in the same way.

To program (store) a seat and door mirror position in button (1):

1. Move the seat (and door mirrors) to the desired positions using the seat and mirror adjustment controls.
2. Press and hold down the M (memory) button (4).
3. With the memory button depressed, press button (1) briefly to store the current position for the seat/mirrors.

To move the seat and mirrors to the position that they were in when a button was programmed:

1. Press and hold down button (1) until the seat and mirrors stop moving.

> **Note**
>
> As a safety precaution, the seat will stop automatically if the button is released before the seat has reached the preset position.

Heated seats*

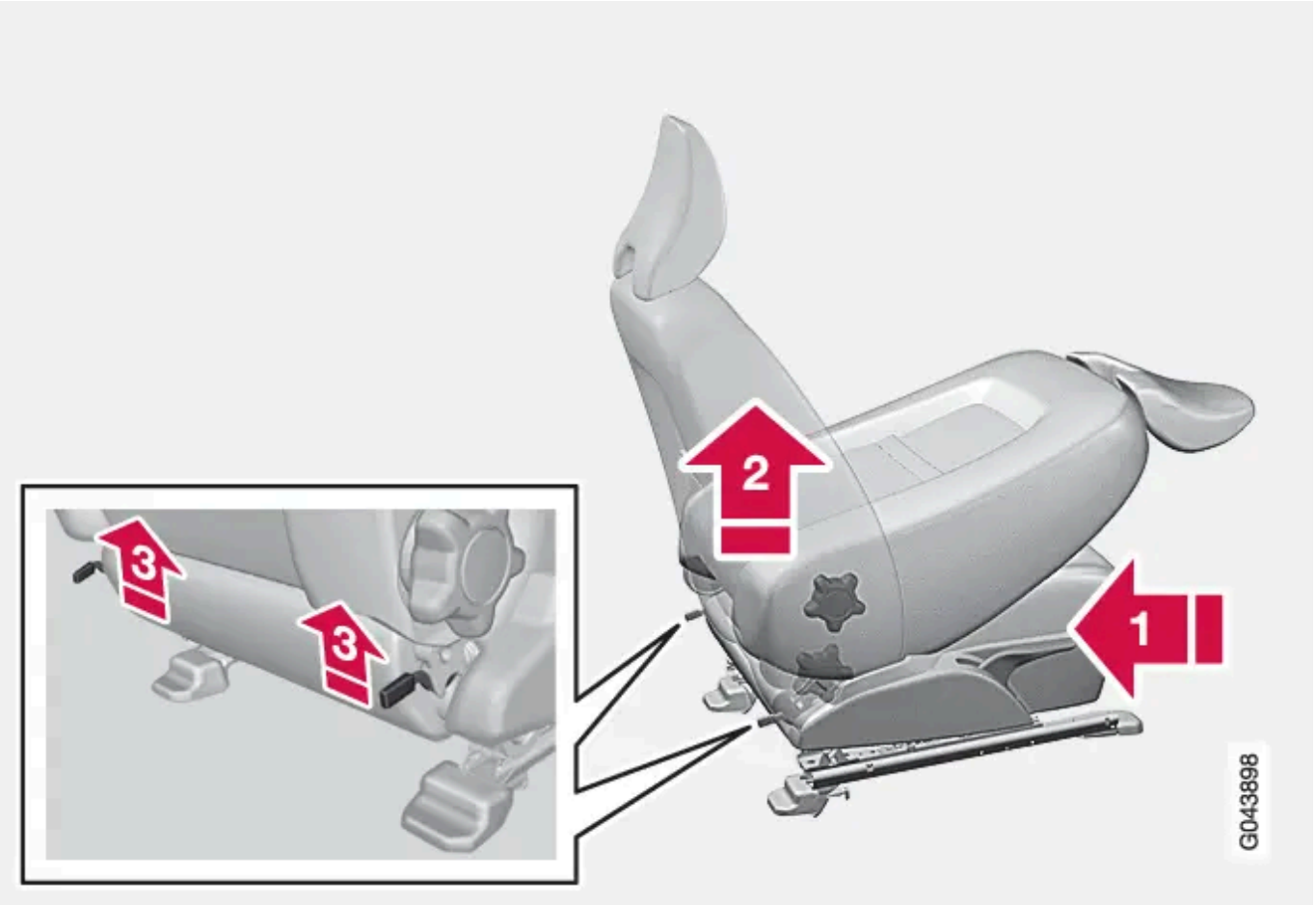
See Heated seats.

[1] Optional on certain models

* Option/accessory.

3.4.5. Front seats – folding backrest* [1]

The front passenger's seat backrest can be folded down to make it easier to transport long objects.



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

1. 1
   Move the seat as far back and down as possible.

2. 2
   Adjust the backrest to an upright position.

3. 3
   Lift the catches on the rear of the backrest.

4. 4
   Without releasing the catches, push the backrest forward.

   Move the seat as far forward as possible so that the head restraint slides under the glove compartment.

Return the seat to its upright position in the reverse order.

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Warning

- When transporting long objects, cover sharp edges on the load to help prevent injury to occupants. Secure the load to help prevent shifting during sudden stops.
- When the seat's backrest is returned to the upright position, push and pull it to be sure that it is securely locked in this position.

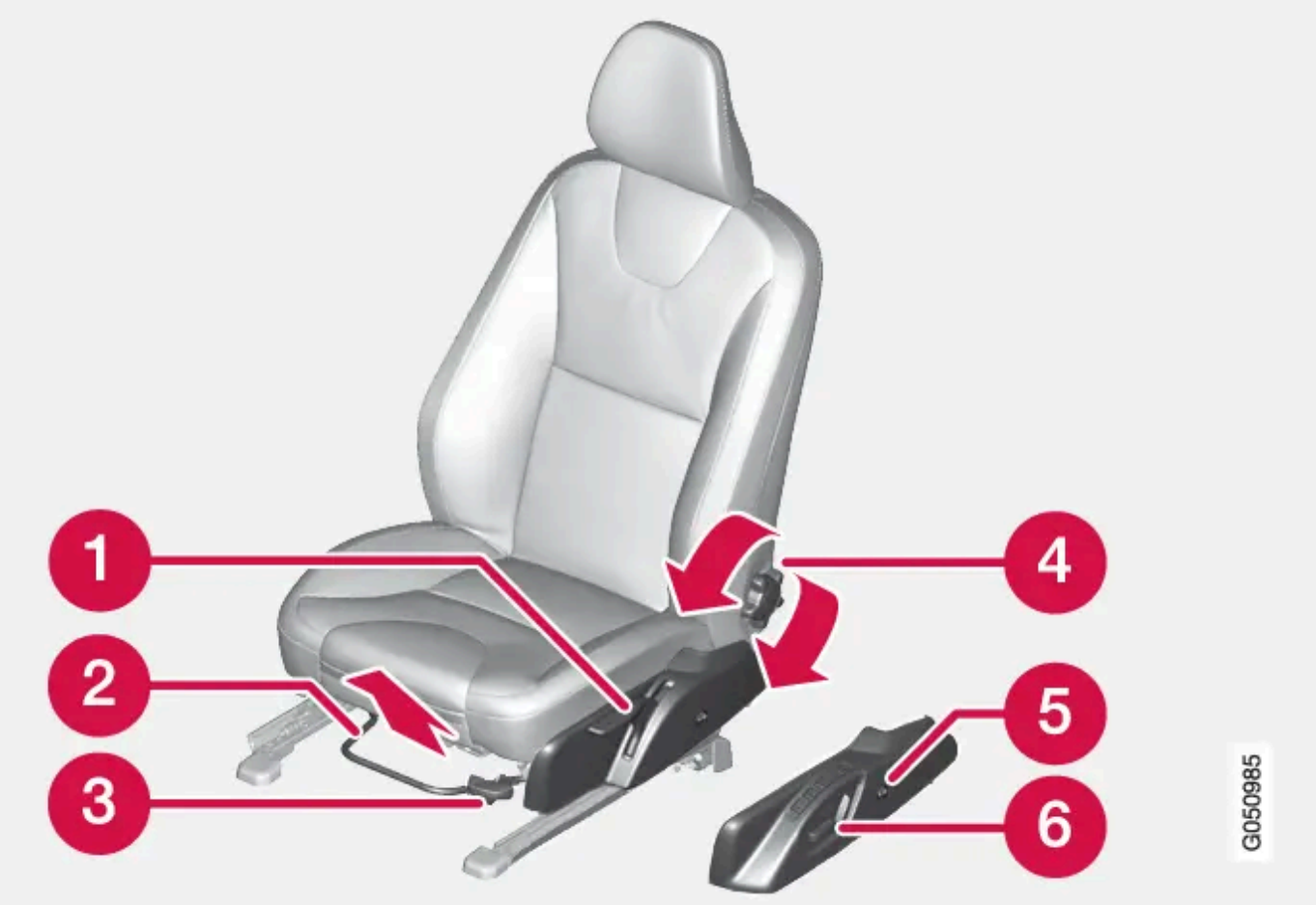
* Option/accessory.

[1] The front passenger's seat backrest on models equipped with the optional sport seat cannot be folded down

---

3.4.6. Front seats

The front seats can be adjusted in a number of ways to help provide the most comfortable seating position.



1 Raise/lower the seat, pump up/down.

2 Front-rear adjustment: lift the bar and move the seat to the position of your choice.

3 Raise/lower front edge of seat cushion, pump up/down.

4 Backrest tilt: turn the control to adjust the angle of the backrest.

5 Electronic lumbar support*. Press the button to adjust.

6 Control panel for power seat*, see Front seats – power seat.

> **Warning**
>
> - Do not adjust the seat while driving. The seat should be adjusted so that the brake pedal can be depressed fully. In addition, position the seat as far rearward as comfort and control allow.
> - Check that the seat is securely locked into position after adjusting.

* Option/accessory.

3.4.7. Key memory

The memory in the remote key makes it possible to store certain personal settings.



The position of the side door mirrors, power driver's seat* and the selected instrument panel theme[1] are stored in the remote keys when the vehicle **is locked**. The next time the driver's door is unlocked with the **same** remote key and the door is opened within **2 minutes**, the power driver's seat and side door mirrors will automatically move to the position that they were in when the doors were most recently locked with the same remote key. If the seat/mirrors have not been readjusted since the vehicle was locked, they will already be in the position stored in that particular remote key and will not move. For more information on this feature, see Front seats – power seat.

This feature can be activated or deactivated in the vehicle's menu by pressing MY CAR and going into **Settings** → **Car settings** → **Car key memory**. For a description of the menu system, see My Car – introduction.

Note

If the vehicle is locked with the remote key or is left unlocked for more than 30 minutes, the key memory function will be deactivated.

To reactivate the key's memory:

- Press the unlock button on the remote key.

For information regarding vehicles with the optional keyless drive, see Keyless drive– locking/unlocking.

* Option/accessory.

[1] Optional digital instrument panel only

3.5. Symbols and messages

3.5.1. Information symbols – ceiling console

The following tables list the most common warning and indicator lights and symbols and a reference to where more detailed information can be found.

: The red warning symbol illuminates to indicate a problem related to safety and/or drivability. A message will also appear in the main instruments panel's display.

: The information symbol illuminates and a text message is displayed to provide the driver with necessary information about one of the vehicle's systems.

Symbol	Description	See
	Seat belt reminder	Seat belt reminder
	Occupant Weight Sensor	Occupant Weight Sensor

3.5.2. Stability system – symbols and messages

The Electronic Stability Control (ESC) system consists of a number of functions designed to help reduce wheel spin, counteract skidding and to generally help improve directional stability.

Symbols and messages in the main instrument panel

A text message can be erased by pressing briefly the OK button on the turn signal lever.

Symbol	Message	Description
	ESC Temporarily OFF	The ESC system function has been temporarily reduced due to high brake disc temperature. The function reactivates automatically when the brakes have cooled.
	ESC Service required	The ESC system is not functioning properly. • Stop the vehicle in a safe place, turn off the engine and restart it. • If the message is still displayed when the engine has restarted, drive to an authorized Volvo workshop to have the system inspected.
and	"Message"	Read the message in the instrument panel.
	Steady glow for 2 seconds.	The system is performing a self-diagnostic test.
	Flashing symbol.	ESC is actively functioning to help counteract wheel spin and/or a skid.
	Steady glow.	Sport mode has been activated. Please note that ESC is not deactivated at this time but its functionality is reduced.

Warning

The stability system is intended to help improve driving safety. It supplements, but can never replace, the driver's judgment and responsibility when operating the vehicle. Speed and driving style should always be adapted to traffic and road conditions.

3.5.3. Indicator symbols

The following tables list the most common warning and indicator lights and symbols and a reference to where more detailed information can be found.

: The red warning symbol illuminates to indicate a problem related to safety and/or drivability. A message will also appear in the main instruments panel's display.

: The information symbol illuminates and a text message is displayed to provide the driver with necessary information about one of the vehicle's systems.

Indicator symbols in the instrument panel

Symbol	Description	See
	Fault in the Active Bending Light (ABL)*system	Information displays – indicator symbols
	Malfunction indicator light	Information displays – indicator symbols
	Anti-lock brake system (ABS)	Information displays – indicator symbols
	Rear fog lights on	Information displays – indicator symbols
	Stability system, Hill Descent Control, Trailer Stability Assist*	Information displays – indicator symbols
	Tire pressure monitoring sensor (TPMS)	Information displays – indicator symbols
	Low fuel level	Information displays – indicator symbols
	Information symbol, see text in information display	Information displays – indicator symbols
	High beam indicator	Information displays – indicator symbols

Symbol	Description	See
	Left turn signal indicator	Information displays – indicator symbols
	Right turn signal indicator	Information displays – indicator symbols
	Stability system , Sport mode	Stability system – operation

* Option/accessory.

3.5.4. City Safety – symbols and messages

City Safety™ [1] is a support system designed to help the driver avoid low speed collisions when driving in slow-moving, stop-and-go traffic.

Symbols and messages in the display

When City Safety™ automatically applies the brakes, one or more of the symbols in the main instrument panel may illuminate and its associated message will be displayed.

A text message can be erased by pressing briefly on the OK button on the turn signal lever.

Symbol	Message	Meaning/action required
	Auto braking by City Safety	City Safety™ is applying/has applied the brakes automatically.
	Windscreen Sensors blocked	The laser sensor is temporarily not functioning due to an obstruction. • Remove the obstruction and/or clean the windshield in front of the sensor(s). For more information on the sensor's limitations, see City Safety – limitations.
	City Safety Service required	City Safety™ is not functioning. • If this message remains in the display, have the system checked by a trained and qualified Volvo service technician.

[1] City Safety is a registered trademark of the Volvo Car Corporation

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3.5.5. Information display – messages

The controls on the left steering wheel lever are used to scroll among messages displayed in the instrument panel and to confirm selections.
When information, indicator or warning symbols illuminate, an explanatory message will be displayed in the instrument panel.

When a warning, information or indicator symbol comes on, a corresponding message appears in the information panel. An error message is stored in a memory list until the fault is rectified.

Press OK to acknowledge and scroll among the messages.

Note

If a warning message appears while you are using the trip computer, the message must be read and confirmed by pressing OK before the previous activity can be resumed.

Message	Description
Stop engine[1]	Stop and switch off the engine as soon as possible. Serious risk of damage. Contact an authorized Volvo workshop.
Stop safely[1]	Stop and switch off the engine. Serious risk of damage. Contact an authorized Volvo workshop.
Service urgent[1]	Have the vehicle checked by an authorized Volvo workshop immediately.
Service required[1]	Have the vehicle checked by an authorized Volvo workshop as soon as possible.
See manual[1]	Read the owner's manual.
Book time for maintenance	Time to book service at an authorized Volvo retailer.
Time for regular maintenance	Time for regular service at an authorized Volvo workshop. The timing is determined by the number of miles driven, number of months since the last service, engine running time.
Maintenance overdue	If the service intervals are not followed, the warranty does not cover any damaged parts. Contact an authorized Volvo workshop for service.
Temporarily OFF[1]	A function has been temporarily switched off and is reset automatically while driving or after starting again.
Low battery Power save mode	The audio system is switched off to save current. Charge the battery.

[1] There will also be a system-specific part of this message

3.5.6. Parking brake – symbols and messages

A text message can be erased by pressing briefly on the OK button on the turn signal lever.

Symbol and messages in the instrument panel

Symbol	Message	Description/action
(P)!	"Message"	Read the message in the information display
(P)		A flashing symbol indicates that the parking brake is being applied. If the symbol flashes in any other situation then this means that a fault has arisen. Read the message on the information display.
-	Park brake not fully released	A fault is preventing the parking brake from being released. Try to apply the parking brake and release it several times. If the problem persists, contact an authorized Volvo workshop. If you drive off with this error message showing, a warning signal sounds.
-	Parking brake not applied	A fault is preventing the parking brake from being applied. Try to apply the parking brake and release it several times. If the problem persists, contact an authorized Volvo workshop. If you drive off with this error message showing, a warning signal sounds.
-	Parking brake Service required	A fault has occurred. Try to apply and release. Contact a Volvo workshop if the fault remains

> **Warning**
>
> If the vehicle must be parked before the fault has been corrected, always put the gear selector in P and turn the wheels so that they point away from the curb if the vehicle is pointing uphill or toward the curb if it is pointing downhill.

3.5.7. Information symbols – center console

The following tables list the most common warning and indicator lights and symbols and a reference to where more detailed information can be found.

 : The red warning symbol illuminates to indicate a problem related to safety and/or drivability. A message will also appear in the main instruments panel's display.

 : The information symbol illuminates and a text message is displayed to provide the driver with necessary information about one of the vehicle's systems.

Symbol	Description	See
	Audio files	CD/DVD
	CD folder	CD/DVD
	Video files	CD/DVD
	Bluetooth-connected cell phone	Bluetooth® hands-free system
	Bluetooth™ hands-free	Connecting a Bluetooth® device
	HD radio	HD Radio™reception (U.S. models only)
	Park Assist*	Park assist – introduction

* Option/accessory.

3.5.8. Distance Alert – symbols and messages

Distance Alert is part of Adaptive Cruise Control and is a function that provides information about the time interval to the vehicle ahead.

Symbols and text messages

A text message can be erased by pressing briefly on the OK button on the turn signal lever.

Symbol	Message	Description
	Radar blocked See manual	Distance Alert has been temporarily disconnected because the radar is obstructed in some way and cannot detect other vehicles. See Adaptive Cruise Control – limitations for information on the radar sensor's limitations.
	Collision warn. Service required	Distance Alert or Collision Warning with Full Auto-brake and Pedestrian Detection is not functioning properly. Contact a trained and qualified Volvo service technician.

3.5.9. Lane Keeping Aid (LKA) – symbols and messages

The LKA function is designed to help reduce the risk of accidents in situations where the vehicle unintentionally leaves its lane and there is a risk of driving off the road or into the opposite lane.

A text message can be erased by pressing briefly on the OK button on the turn signal lever.

Symbol	Message	Description
-	Lane Keeping Aid Unavailable at this speed	The function has gone into standby mode because the vehicle's speed is below 40 mph (65 km/h).
-	Lane Keeping Aid Unavailable for current markings	The road lacks clear marker lines or the camera is not functioning properly. See The camera's limitations for information on the camera's limitations.
-	Lane Keeping Aid Available	The function is monitoring the road's marker lines.
	Windscreen sensors blocked See manual	The camera is temporarily not functioning, due to snow, ice, or dirt on the windshield. Clean the area of the windshield in front of the camera. See The camera's limitations for information on the camera's limitations.
	Lane Keeping Aid Service required	The system is not functioning. Contact a trained and qualified Volvo service technician if the message remains in the display.
	Lane Keeping Aid Interrupted	The function has gone into standby mode. The lines in the LKA symbol in the instrument panel will indicate when the function is active again.

3.5.10. Symbols – general information

The following tables list the most common warning and indicator lights and symbols and a reference to where more detailed information can be found.

Introduction

The symbols in the vehicle's various displays are divided into three main categories:

- Warning symbols
- Indicator symbols
- Information symbols

The following tables list the most common symbols, their meaning and the pages in this manual that provide more detailed information.

> **Note**
>
> Not all of the symbols shown in the related articles are available in all models or on all markets. Local variations may occur.

Warning symbol

: The red warning symbol illuminates to indicate a problem related to safety and/or drivability. A message will also appear in the main instruments panel's display.

Information symbol

: The information symbol illuminates and a text message is displayed to provide the driver with necessary information about one of the vehicle's systems.

3.5.11. Driver Alert Control (DAC) – symbols and messages

Depending on the situation, DAC may display certain symbols and text messages in the instrument panel or center console screen.

Symbols and messages

Instrument panel

Symbol	Message	Description
	Driver Alert Time for a break	The vehicle has been driven erratically. The driver receives an audible signal and a text message.
	Windscreen Sensors blocked	The camera is temporarily not functioning, due to snow, ice, or dirt on the windshield. Clean the area of the windshield in front of the camera. See The camera's limitations for information on the camera's limitations.
	Driver Alert Sys Service required	The system is not functioning. Contact a trained and qualified Volvo service technician if the message remains in the display.

Center console display

Symbol	Message	Description
-	Driver Alert OFF	The function is not switched on.
-	Driver Alert Available	The function is active.
-	Driver Alert Standby <65 km/h	The function has gone into standby mode because the vehicle's speed is below 40 mph (65 km/h).
-	Driver Alert Unavailable	The camera is temporarily not functioning, due to snow, ice, or dirt on the windshield. Clean the area of the windshield in front of the camera. See The camera's limitations for information on the camera's limitations.

3.5.12. Lane Departure Warning (LDW) – symbols and messages

The LDW function is designed to help reduce the risk of accidents in situations where the vehicle unintentionally leaves its lane and there is a risk of driving off the road or into the opposite lane.

Symbols and messages

A text message can be erased by pressing briefly on the OK button on the turn signal lever.

Symbol	Message	Description
	Lane departure warning ON/Lane departure warning OFF	The function is switched on or off. The text disappears after 5 seconds.
-	Lane Depart Warn Available	The function is monitoring the road's marker lines.
-	Lane Depart. Warning Unavailable at this speed	The function has gone into standby mode because the vehicle's speed is below 40 mph (65 km/h).
-	Lane Depart Warn Unavailable	The road lacks clear marker lines or the camera is not functioning properly. See The camera's limitations for information on the camera's limitations.
	Windscreen Sensors blocked	The camera is temporarily not functioning, due to snow, ice, or dirt on the windshield. Clean the area of the windshield in front of the camera. See The camera's limitations for information on the camera's limitations.
	Driver Alert Sys Service required	The system is not functioning. Contact a trained and qualified Volvo service technician if the message remains in the display.

3.5.13. Information symbols

The following tables list the most common warning and indicator lights and symbols and a reference to where more detailed information can be found.

 : The red warning symbol illuminates to indicate a problem related to safety and/or drivability. A message will also appear in the main instruments panel's display.

 : The information symbol illuminates and a text message is displayed to provide the driver with necessary information about one of the vehicle's systems.

Information symbols in the instrument panel

Symbol	Description	See
	Adaptive Cruise Control *	Adaptive Cruise Control – introduction
	Adaptive Cruise Control *	Adaptive Cruise Control – introduction
	Adaptive Cruise Control *	Adaptive Cruise Control – introduction
	Adaptive Cruise Control * (Distance alert)	Adaptive Cruise Control – introduction
	Radar sensor*	Radar sensor
	Camera sensor, laser sensor	Collision warning – limitationsCity Safety – Laser sensor
	Collision Warning with Full Auto-brake and Pedestrian Detection*	Collision warning – symbols and messages
	Active Bending Lights (ABL)*	Active Bending Lights (ABL)
	Driver Alert System*	Driver Alert System
	Driver Alert System*	Driver Alert System
(P)!	Parking brake	Parking brake – general information
	Rain sensor*	Rain sensor

Symbol	Description	See
	Active High Beams (AHB)*	Active high beams (AHB)
	Windshield sensor*	Active high beams (AHB)
	Driver Alert System* (Lane Departure Warning/Lane Keeping Aid)	Lane Departure Warning (LDW) – introduction
	Driver Alert System* (Lane Departure Warning/Lane Keeping Aid)	Lane Departure Warning (LDW) – introduction
	Driver Alert System* (Lane Departure Warning/Lane Keeping Aid)	Lane Departure Warning (LDW) – introduction
	Fuel tank on passenger's side of the vehicle	Refueling – opening/closing fuel filler door

* Option/accessory.

3.5.14. Warning symbols

The following tables list the most common warning and indicator lights and symbols and a reference to where more detailed information can be found.

 : The red warning symbol illuminates to indicate a problem related to safety and/or drivability. A message will also appear in the main instruments panel's display.

 : The information symbol illuminates and a text message is displayed to provide the driver with necessary information about one of the vehicle's systems.

Symbols in the main instrument panel

Warning symbols in the instrument panel

Symbol	Description	See
	Low oil pressure	Information displays – warning symbols
	Parking brake [1]	Information displays – warning symbols
	SRS airbags	Information displays – warning symbols
	Seat belt reminder	Information displays – warning symbols
	Generator not charging	Information displays – warning symbols
	Fault in the brake system	Information displays – warning symbols
	Warning symbol	Information displays – warning symbols

[1] The symbol is Park only on models with the optional digital instrument panel.

3.5.15. Collision warning – symbols and messages

The table lists possible causes for collision warning-related messages being displayed, and suitable actions.

A text message can be erased by pressing briefly on the OK button on the turn signal lever.

Symbol	Message	Description
	Collis'n warning OFF	Pedestrian and Cyclist Detection with Full Auto Brake is switched off. This message is displayed when the engine is started and will disappear after approx. 5 seconds. It can also be erased by pressing the OK button.
	Collision Warning Unavailable	Pedestrian and Cyclist Detection with Full Auto Brake cannot be activated. This message is displayed when the driver attempts to activate the function. It will disappear after approx. 5 seconds or can be erased by pressing the OK button.
	Auto braking was activated	Auto-braking has been active. This message can be erased by pressing the OK button.
	Windscreen Sensors blocked	The camera is temporarily not functioning. This message is displayed if the camera is obstructed by snow, ice, dirt, etc., on the windshield. Clean the area of the windshield in front of the camera, see The camera's limitations for more information on the camera's limitations.
	Radar blocked See manual	Pedestrian and Cyclist Detection with Full Auto Brake is temporarily not functioning. The radar sensor is blocked, for example by heavy rain or snow that has accumulated in front of the sensor, and cannot detect other vehicles, see Adaptive Cruise Control – limitations for more information on the radar sensor's limitations.
	Collision warn. Service required	Pedestrian and Cyclist Detection with Full Auto Brake is partially or completely not functioning. Contact a trained and qualified Volvo service technician if the message remains in the display.

3.5.16. Brakes – symbols

Symbols in the instrument panel

Symbol	Specification
	Steady glow – Check the brake fluid level. If the level is low, fill with brake fluid and check for the cause of the brake fluid loss.
	Automatic function check: steady glow for two seconds when the engine is started.

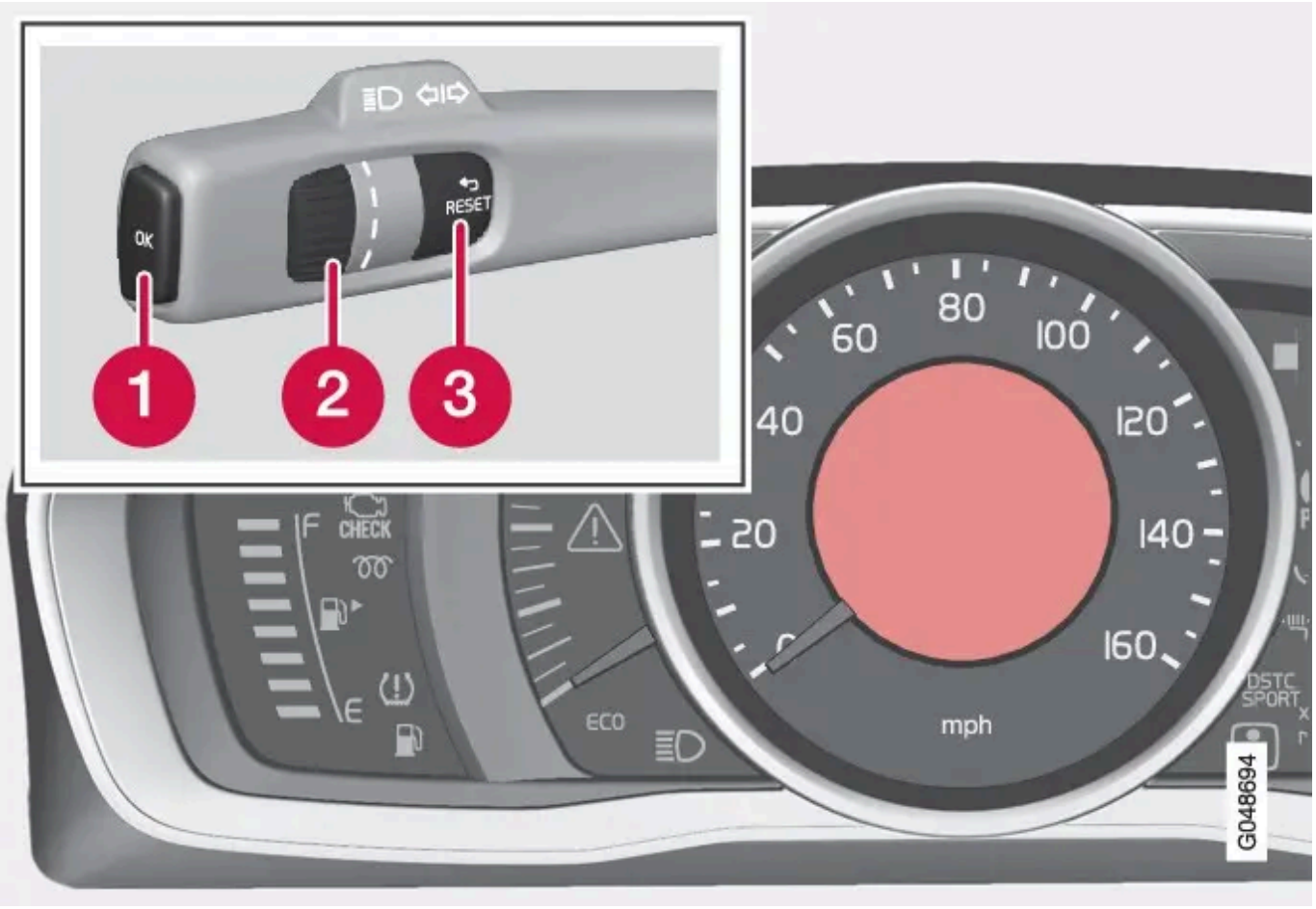
Warning

If and come on at the same time and the brake level is below the MIN mark in the reservoir or if a brake system-related message is shown in the information display: **DO NOT DRIVE**. Have the vehicle towed to a trained and qualified Volvo service technician and have the brake system inspected.

3.6. Trip computer

3.6.1. Trip computer – functions, analog instrument panel

The content and appearance of the trip computer varies depending on whether the vehicle is equipped with an **Analog** or **Digital** instrument panel.



Information display and controls

1 OK–press to access the trip computer's **functions** or acknowledge/confirm/erase a message

2 **Thumb wheel**–turn to access the list of trip computer **information headings** and to scroll among the alternatives

3 RESET–press to cancel/reset/exit a function after a selection has been made

The trip computer has two different menu groups:

- Trip computer functions
- Trip computer information headings in the instrument panel

Functions

To open and make settings in the trip computer functions:

1. Ensure that none of the trip computer controls are being used in a command sequence; reset them by pressing RESET twice.
2. Press OK to open the list of functions.
3. Use the **thumb wheel** to scroll among the functions and select/confirm your choice by pressing OK.

4. After completing your selection, exit by pressing RESET twice.

The following table lists the analog trip computer's functions:

Function	Description
Digital speed – km/h – mph – None	This displays the vehicle's speed digitally in the center of the instrument panel • Open by pressing **OK**, scroll using the **thumb wheel**, confirm by pressing **OK** and exit by pressing ENTER.
Trip comp. opt. – **Distance to empty** – **Fuel consumption** – **Average speed** – Trip odometer **T1 and total dist.** – Trip odometer **T2 and total dist.**	Selections among the trip computer information headings are made here. The symbols that have already been selected have a check mark and are displayed in **white**. Those not selected are not checked and are displayed in **gray**: • Open the function by pressing **OK** and scroll to the desired heading using the **thumb wheel**. • Confirm by pressing **OK**. The symbol will change colors from gray to white and will be checked. • Continue this procedure or exit by pressing RESET.
Service status	Shows the number of months and mileage until the next scheduled service.
Messages (##)	For additional information, see Information display – menu controls.

Information headings

Any of the information headings in the following table can be displayed. To do so:

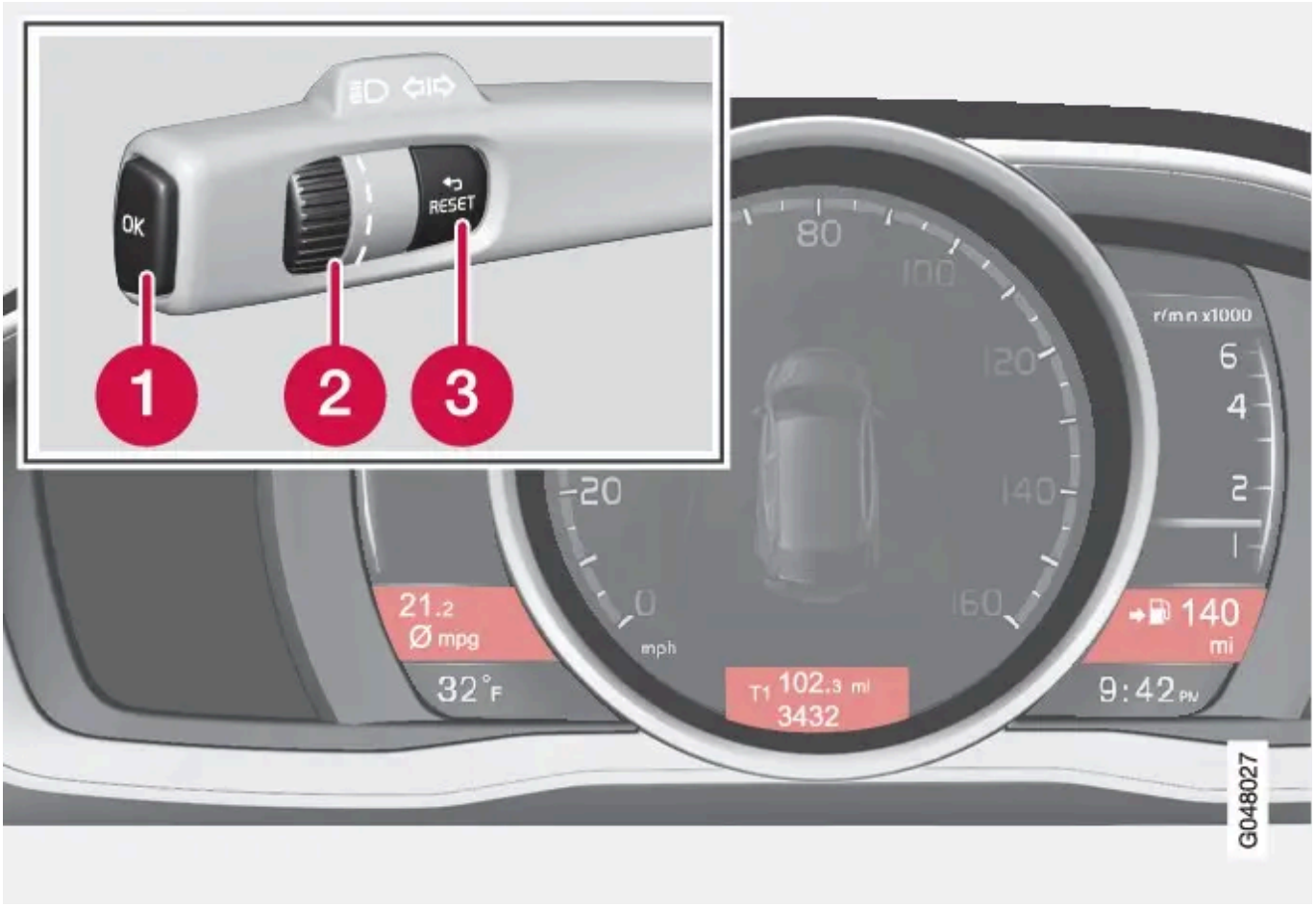
1. Ensure that none of the trip computer controls are being used in a command sequence; reset them by pressing RESET twice.
2. Turn the **thumb wheel** to begin displaying the information headings. Stop on the desired heading.
3. See the table for an explanation of the heading or the actions that can be taken.

Information headings in the instrument panel	Description
Trip odometer **T1 and total dist.**	• Press and hold RESET to reset trip odometer T1.
Trip odometer **T2 and total dist.**	• Press and hold RESET to reset trip odometer T2.
Distance to empty	See **Distance to empty** in Trip computer – Supplementary information.
Fuel consumption	Current fuel consumption.
Average speed	Press and hold RESET to reset **Average speed**.
-	No information will be displayed. This also indicates the beginning/end of the list of information headings.

Scroll among the trip computer information headings at any time by turning the **thumb wheel** until the desired heading is displayed.

3.6.2. Trip computer – functions, digital instrument panel

The content and appearance of the trip computer varies depending on whether the vehicle is equipped with an **Analog** or **Digital** instrument panel.



Information displays and controls

1 OK–press to access the trip computer's **functions** or to activate a selection

2 **Thumb wheel**–turn to access the list of trip computer **information headings** and to scroll among the alternatives

3 RESET–press to cancel/reset/exit a function after a selection has been made

The trip computer has two different menu groups:

- Trip computer functions
- Trip computer information headings in the instrument panel

Functions

To open and make settings in the trip computer functions:

1. Ensure that none of the trip computer controls are being used in a command sequence; reset them by pressing RESET twice.
2. Press OK to open the list of functions.

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3. Use the **thumb wheel** to scroll among the functions and select/confirm your choice by pressing OK.

4. After completing your selection, exit by pressing RESET twice.

The following table lists the digital trip computer's functions:

Function	Description
Trip computer reset – Average fuel consumption – Average speed	**NOTE:** This function does not reset the trip odometers, see Trip computer – Supplementary information for a description of how this is done.
Messages	For additional information, see Information display – menu controls.
Themes	Set the way in which information is displayed in the instrument panel, see Information displays – introduction.
Settings*	Select **Auto On** or **Off**.
Contrast mode/Color mode	Adjust the instrument panel's contrast and color.
Service status	Shows the number of months and mileage until the next scheduled service.

Information headings

Three trip computer headings can be displayed at the same time; one in each of the displays (see the previous illustration). One of the combinations of information headings in the following table can be displayed. To do so:

1. Ensure that none of the trip computer controls are being used in a command sequence; reset them by pressing RESET twice.

2. Turn the **thumb wheel** to begin displaying the combinations of information headings. Stop on the desired combination.

3. See the table for an explanation of the heading or the actions that can be taken.

Scroll among the combinations of trip computer information headings at any time by turning the **thumb wheel** until the desired combination is displayed.

Heading combinations			Description
Average fuel consumption	Trip odometer T1 + mileage	Average speed	• Press and hold RESET to reset trip odometer T1.
Current fuel consumption	Trip odometer T2 + mileage	Distance to empty	• Press and hold RESET to reset trip odometer T2.
Current fuel consumption	Mileage	mph<>km/h	Change between mph<>km/h – see "Digital speed display" in Trip computer – Supplementary information.
-	No trip computer information displayed	-	No information will be displayed. This also indicates the beginning/end of the list of information headings.

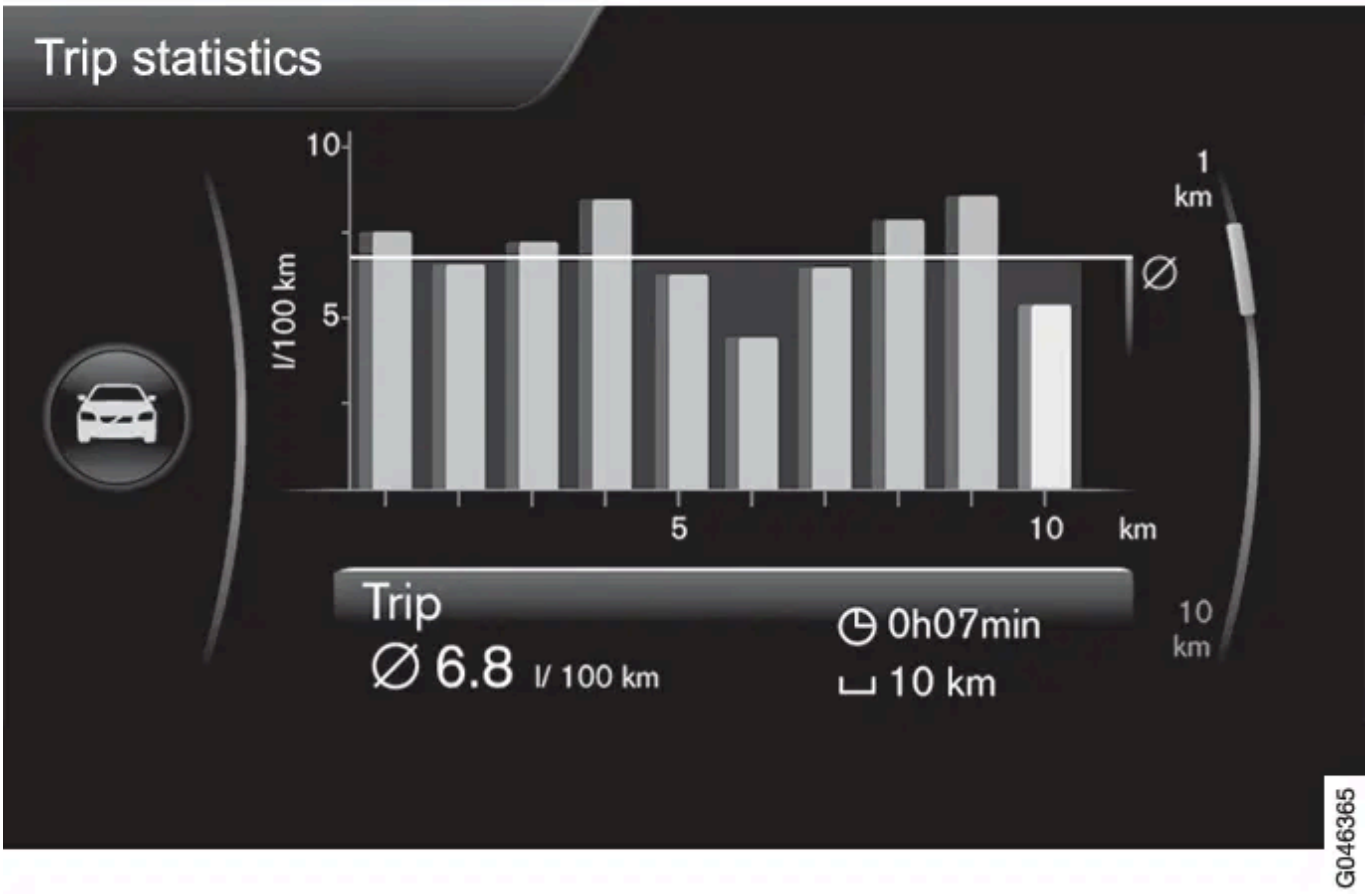
Scroll among the trip computer information headings at any time by turning the **thumb wheel** until the desired heading is displayed.

* Option/accessory.

3.6.3. Trip computer – Trip statistics

Trip information from previous trips regarding average fuel consumption and average speed is stored and can be displayed in the form of a bar chart.

Function



Trip statistics [1]

Each bar represents a driving distance of 1 mile or 10 miles, depending on the current scale; the bar at the far right shows the value for the current mile/10 miles.

Use TUNE to change between 1 mile and 10 miles; the marker at the right will also change according to the scale selected.

Settings

Settings can be made in the MY CAR menu system as follows:

MY CAR → My V60 → Trip statistics:

- **Start new trip**: press ENTER to erase all pervious statistics. Exit the menu by pressing EXIT.

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- **Reset for every driving cycle**: select by pressing ENTER. Exit the menu by pressing EXIT.

Selecting **Reset for every driving cycle** erases all trip statistics automatically if the ignition is switched off for at least 4 hours. When the engine is restarted, new statistics will be stored.

To get new statistics if the engine is restarted before 4 hours have elapsed, the existing ones have to be erased manually by selecting **Start new trip**.

For additional information, see Information display – menu controls.

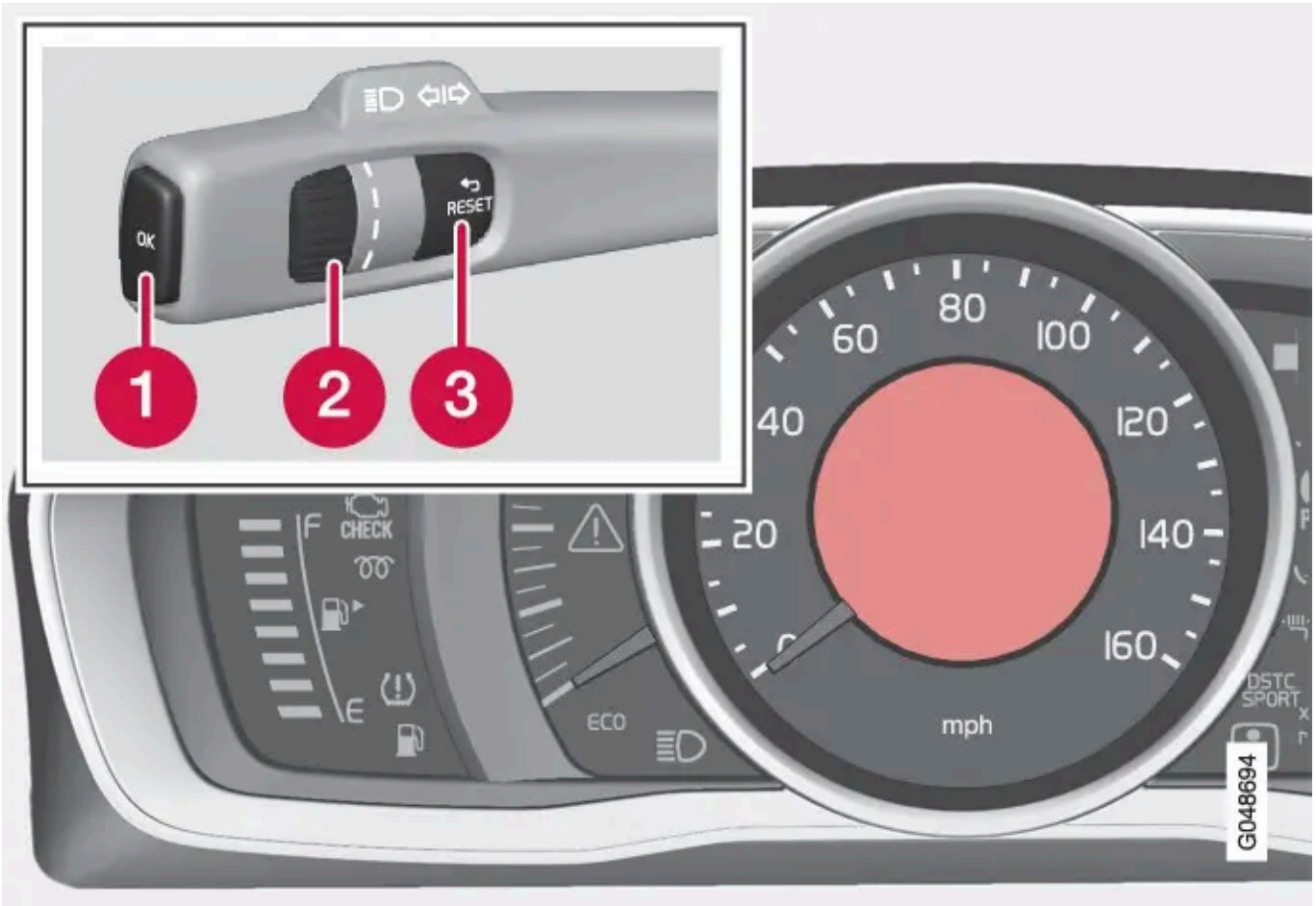
See also the information about Eco Guide in Eco Guide and Power Meter.

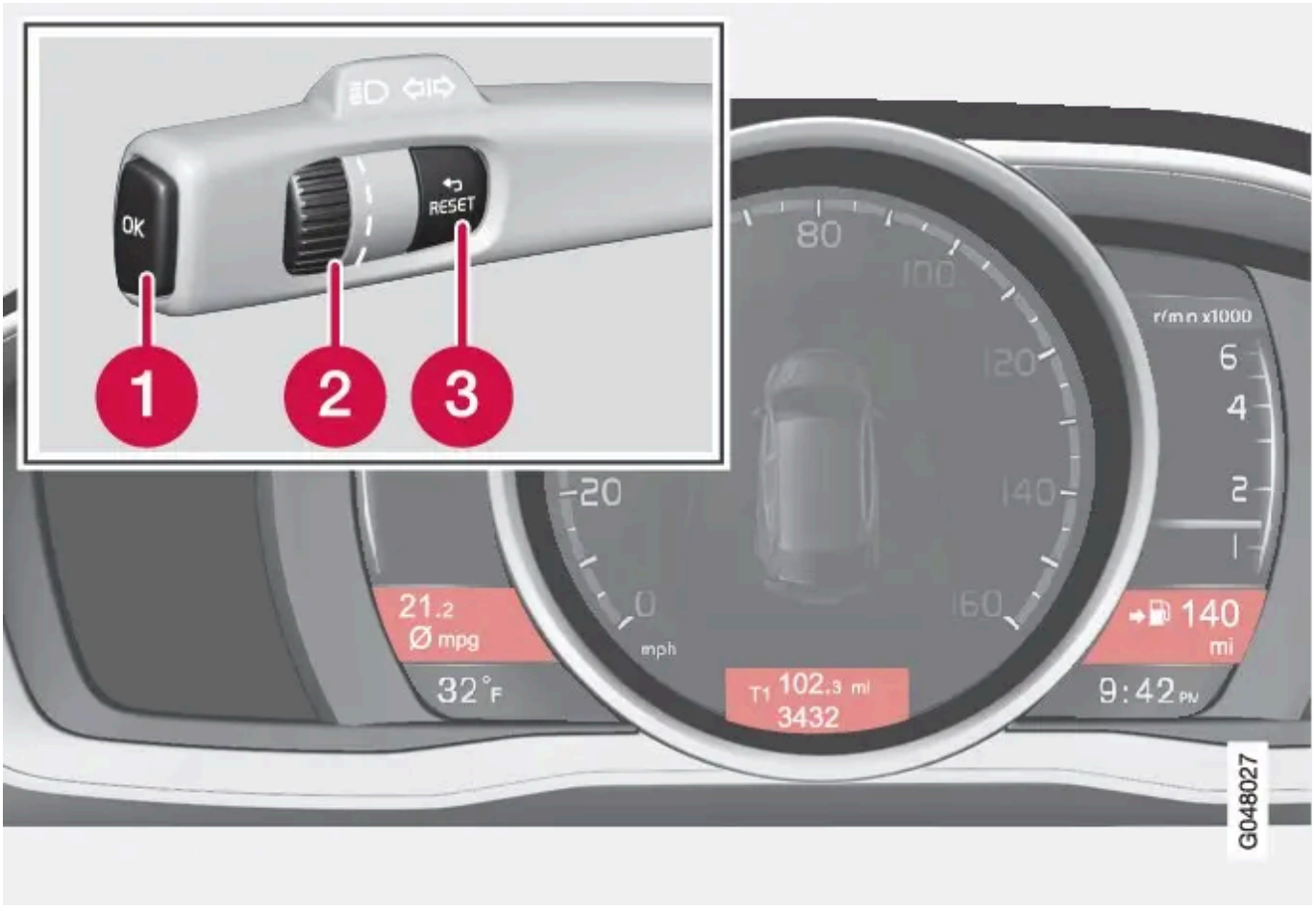
[1] The illustration is generic; certain details may vary from model to model

---

3.6.4. Trip computer – introduction

The content and appearance of the trip computer varies depending on whether the vehicle is equipped with an **Analog** or **Digital** instrument panel.





Digital information displays and controls

The instrument panel illuminates as soon as the vehicle is unlocked and trip computer settings can be made. If none of the trip computer's controls are used within 30 seconds after the driver's door has been opened, the instrument panel lighting will go out and the trip computer cannot be used again until:

- the ignition is put in mode **II** [1]
- the engine is started

> **Note**
>
> If a warning message appears while you are using the trip computer, this message must be acknowledged in order to return to the trip computer function. Acknowledge a message by pressing OK.

[1] See Ignition modes for information about the various ignition modes.

3.6.5. Trip computer – Supplementary information

General information for both Analog and Digital trip computer functions.

Average fuel consumption

Fuel consumption since the last time this function was reset.

Average speed

The vehicle's average speed since the last time this function was reset.

Current fuel consumption

Current fuel consumption is calculated approximately once a second. When the vehicle is moving at low speed, fuel consumption is displayed per unit of time. At higher speeds, it is displayed in terms of distance.

Miles or kilometers can be displayed, see the heading "Changing units".

Distance to empty



This function shows the approximate distance that can be driven on the fuel remaining in the tank. When **Distance to empty** shows "----", there is very little useable fuel remaining in that tank; refuel as soon as possible. The calculation is based on average fuel consumption during the last 20 miles (30 km) of driving and the amount of fuel remaining in the tank (the accuracy of this figure may vary if your driving style changes). An economical driving style will generally increase this distance.

See Economical driving for information about driving economically.

Digital speed display*

Speed is expressed in the unit not used by the instrument panel's speedometer e.g., if the normal speedometer is in mph, the trip computer will display in the speed in km/h and vice versa.

Resetting an analog instrument panel

Trip odometer(s) and average speed

1. Display trip odometer T1 or T1, or Average speed.
2. Press and hold RESET until selected function is reset.

Each trip computer heading must be reset individually.

Resetting a digital instrument panel

Trip odometer

1. Turn the **thumb wheel** to select the combination of headings containing the trip odometer to be reset.
2. Press and hold RESET until selected trip odometer is reset.

Average speed and fuel consumption

1. Select **Trip computer reset** and press OK.
2. Select one of the following alternatives using the **thumb wheel** and press OK:
   - mpg
   - mph
   - Reset both
3. Finish by pressing RESET.

Changing units

To change the unit (miles/km) used to measure distance and speed, go to **MY CAR → Settings → System options → Distance and fuel units**.

> **Note**
>
> In addition to changing units in the trip computer, this also changes the units used in the Volvo Navigation System (VNS)*.

* Option/accessory.

3.7. Volvo Sensus

Volvo Sensus is the core of the contact interface with your vehicle. Sensus provides information, entertainment and offers access to functions that make owning and operating a Volvo easier.



G048166

Volvo Sensus is the operating system in your vehicle and it enables you to interact intuitively with the vehicle's various features and functions, including accessing the Internet, when it suits you.

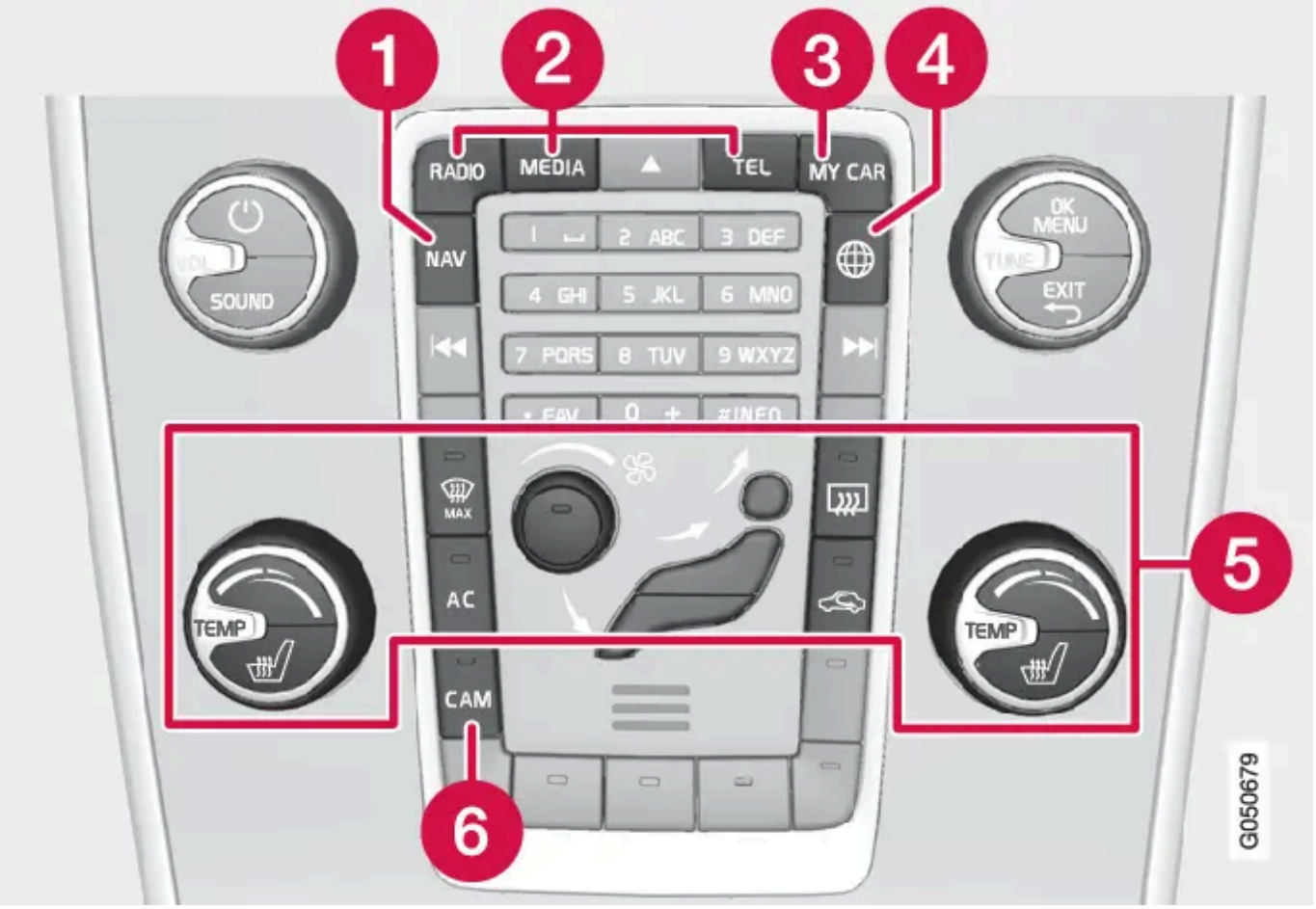
Volvo Sensus uses the center console screen to display information and menus, and to offer a user interface that enables you to make personalized settings for e.g., vehicle, infotainment and climate system functions.

The buttons on the center console or the steering wheel keypad are used to activate/deactivate functions and change numerous settings.

Pressing the MY CAR button on the center console displays all of the settings related to driving and operating the vehicle, such as City Safety, lock and alarm functions, automatic blower speed, setting the clock, etc.

Pressing the source buttons on the center console (RADIO, MEDIA, TEL, , NAV* and CAM*, etc.) make it possible to select e.g., AM or FM radio, play a CD or DVD, use the Bluetooth® hands-free feature, the navigation system* or the park assist camera*.

See your on-board owner's manual or the separate printed supplements for detailed information about the functionality offered by Volvo Sensus.



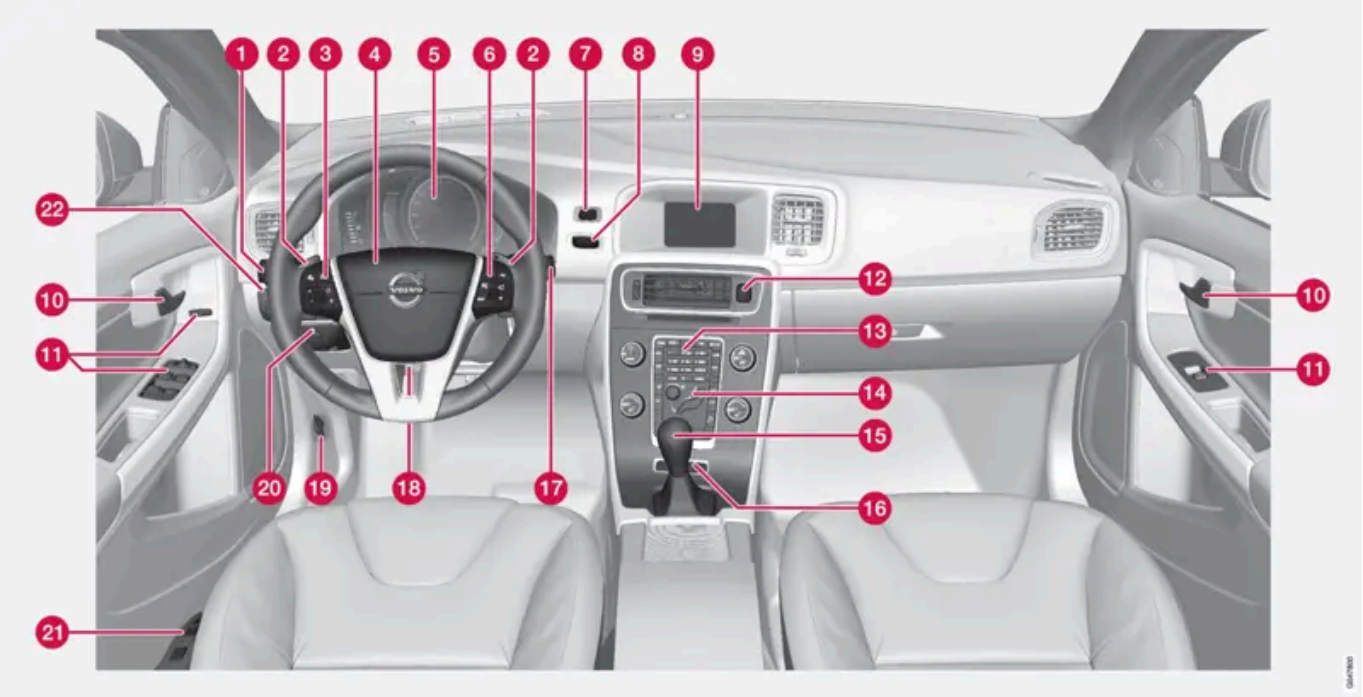
Center console control panel

1. Volvo Navigation System (VNS)* – NAV: see the separate VNS manual for operating instructions.
2. Infotainment (RADIO, MEDIA, TEL)
3. Vehicle-related settings - MY CAR.
4. Internet connected vehicle.
5. Climate system.
6. Park assist camera - CAM*.

* Option/accessory.

3.8. Instrument overview

This overview shows the location of the instrument panel and center console displays, and controls/buttons/switches.



	Function	See
1	Controls for menus and messages, turn signals, high/low beams, trip computer	My Car – introduction, Turn signals, Lighting panel, Trip computer – introduction
2	Paddles for manually shifting gears*	Transmission – Geartronic
3	Cruise control	Cruise control (CC) – introduction
4	Horn, airbag	Steering wheel, Front airbags
5	Main instrument panel	Information displays – introduction
6	Infotainment system/Bluetooth hands-free controls	Infotainment, Bluetooth® hands-free system – overview
7	START/STOP ENGINE button	Inserting/removing remote key
8	Ignition slot	Inserting/removing remote key
9	Display for infotainment system functions and menus	Infotainment, Information display – menu controls
10	Door handle	-
11	In-door control panels (power windows, mirrors, central locking button)	Power windows, Power door mirrors, Locking/unlocking – from inside
12	Hazard warning flashers	Hazard warning flashers
13	Controls for the infotainment system and menus	My Car – introduction,Infotainment, Electronic climate control (ECC)
14	Climate system controls	Electronic climate control (ECC)
15	Gear selector	Transmission – general information
16	Controls for active chassis (Four-C)*	Active chassis (Four C)
17	Wipers and washers	Windshield wipers, Windshield washer
18	Steering wheel adjustment	Steering wheel
19	Hood opening control	Maintenance – opening/closing hood
20	Parking brake	Parking brake – general information
21	Power seat* adjustment controls	Front seats – power seat

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	Function	See
22	Lighting panel, buttons for opening fuel filler door and unlocking the tailgate	Lighting panel, Refueling – opening/closing fuel filler door, Locking/unlocking – tailgate

* Option/accessory.

3.9. Digital compass*

The rear-view mirror has an integrated display that shows the compass direction in which the vehicle is traveling.

Operation



Rearview mirror with compass.

Eight different directions are shown with the abbreviations: **N** (north), **NE** (north east), **E** (east), **SE** (southeast), **S** (south), **SW** (southwest), **W** (west) and **NW** (northwest).

The compass is displayed automatically when the vehicle is started or in ignition mode II. To switch the compass on/off use a pen, paperclip or similar object and press in the button on the underside of the mirror.

Calibration

North America is divided into 15 magnetic zones and the compass will need to be calibrated if the vehicle is driven into a new one (see the magnetic zones on the map in the following section "Selecting a magnetic zone"). To do so:

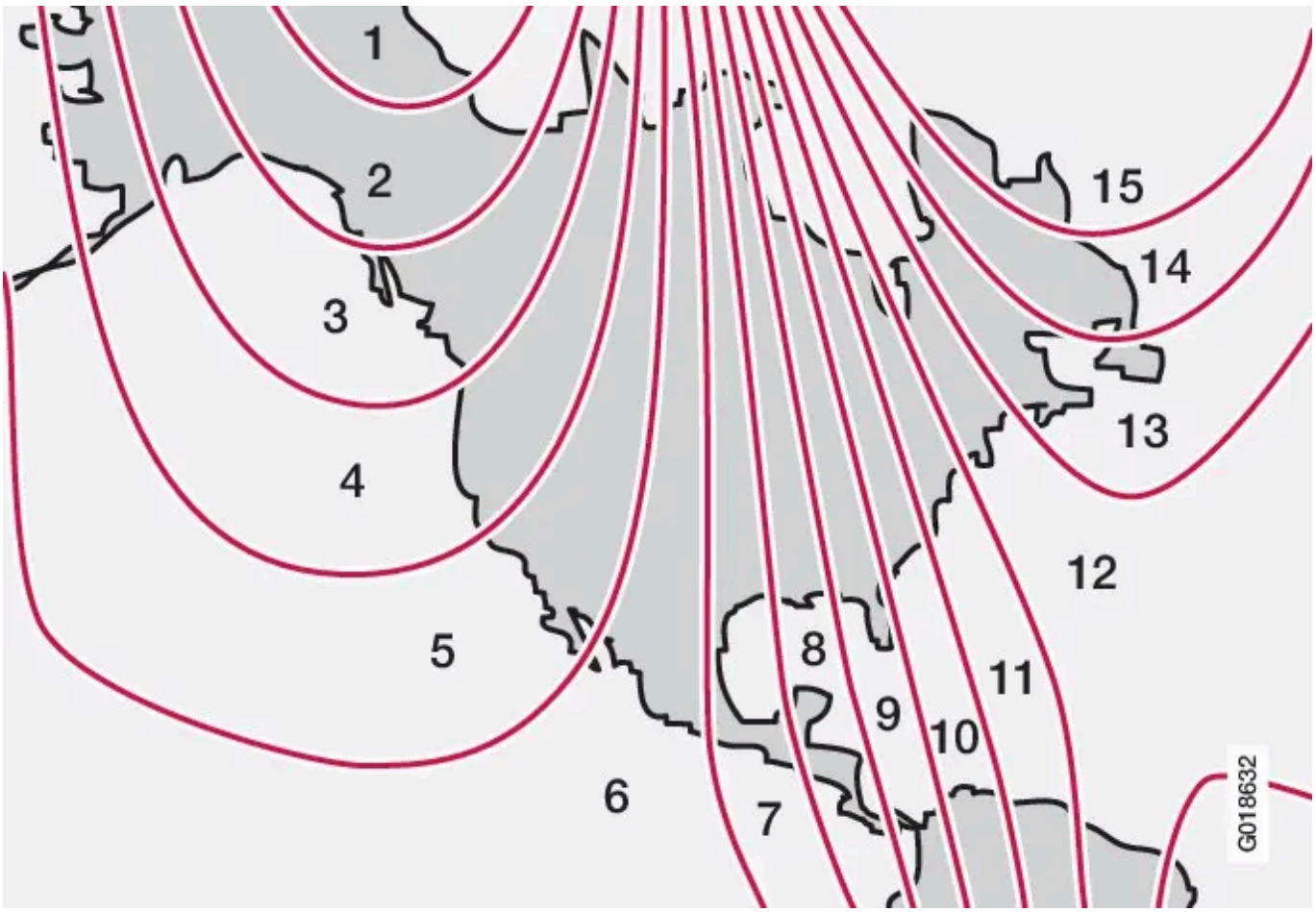
1. Stop the vehicle in a large open area, safely out of traffic and away from steel structures and high-tension electrical wires.
2. Start the vehicle.

> **Note**
>
> - For best calibration results, switch off all electrical equipment in the vehicle (climate system, windshield wipers, audio system, etc.) and make sure that all doors are closed.
> - Calibration may not succeed or be incorrect if the vehicle's electrical equipment is not switched off.

3. Using a pen, paperclip or similar object, press and hold the button on the underside of mirror for approx. 6 seconds until **C** is displayed in the mirror.
4. Press and hold the button for 3 seconds until the number of the current magnetic zone is displayed.
5. Press the button repeatedly until the number of the desired magnetic zone (**1-15**) is displayed. See the magnetic zones on the map in the following section "Selecting a magnetic zone").
6. Wait until **C** is again displayed in the mirror.
7. Drive slowly in a circle at a speed of no more than 6 mph (10 km/h) until a direction is displayed. This indicates that calibration is complete.
8. Drive around in a circle an additional two times to fine-tune the calibration.
9. **Vehicles with an electrically heated windshield:** * if **C** is displayed when the heating function is activated, perform step 7 with the heating function on. See also Max. defroster and electrically heated windshield for additional information about the heated windshield.

Repeat the calibration procedure if necessary.

Selecting a magnetic zone



Magnetic zones.

The earth is divided into 15 magnetic zones. The correct zone must be selected for the compass to work correctly.

1. Put the ignition in mode II.
2. Using a pen or similar object, press and hold the button on the rear side of mirror for at least 3 seconds. The number for the current area will be shown.
3. Press the button repeatedly until the number for the required geographic area (1 – 15) is shown.
4. The display will revert to showing the compass direction after several seconds.

* Option/accessory.

3.10. Inserting/removing remote key

The remote key is used to start the engine or to use various electrical functions without starting the engine.

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Inserting and removing the remote key



Ignition slot with remote key and START/STOP ENGINE button.

Inserting the remote key [1]

Holding the end of the remote key with the base of the key blade, insert the remote key into the ignition slot as shown in the illustration and press it in as far as possible.

> **Important**
>
> Foreign objects in the ignition slot can impair function or cause damage.

Removing the remote key

The remote key can be removed from the ignition slot by pulling it out.

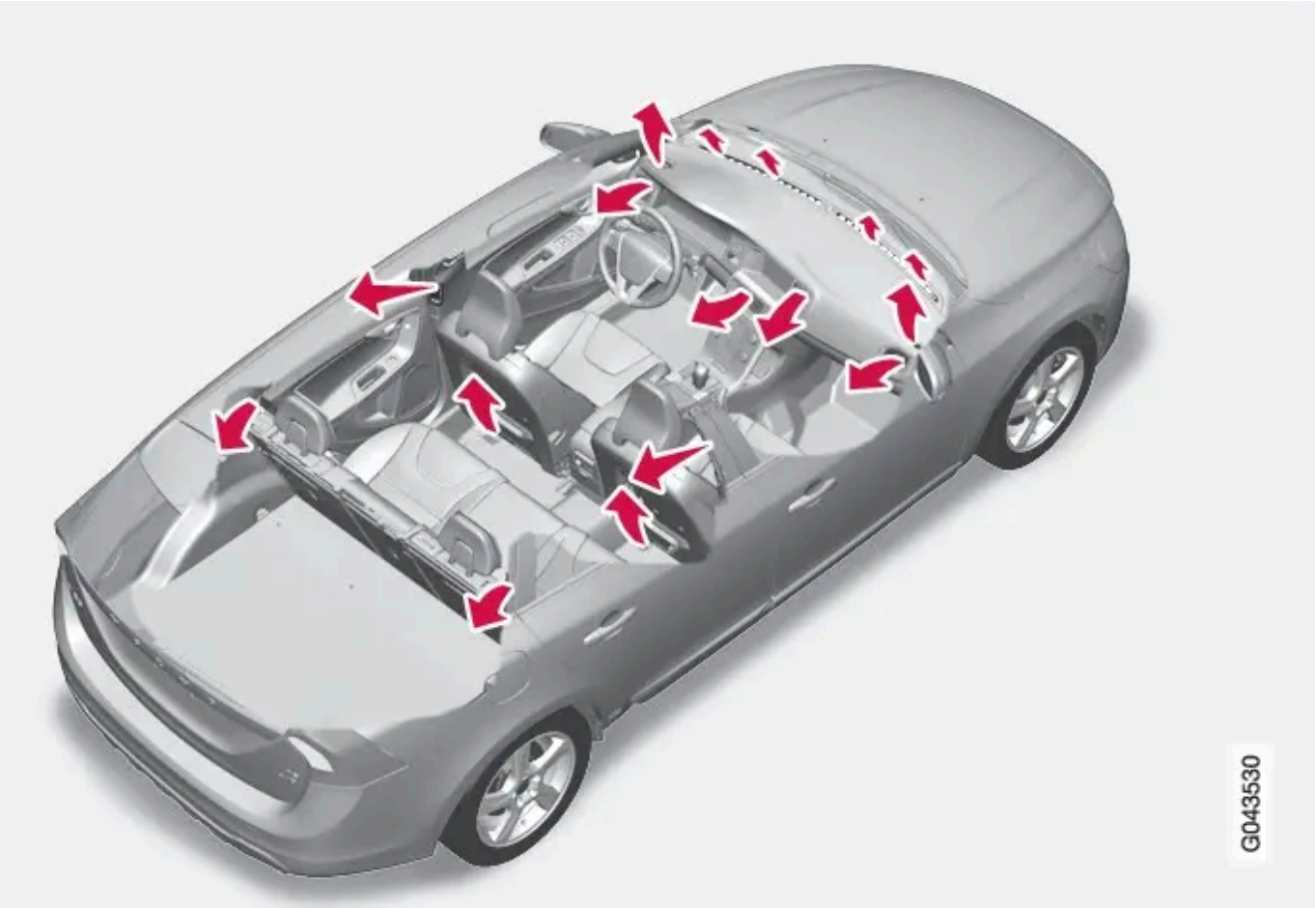
[1] Not necessary in vehicles with the optional keyless drive.

4. Climate

4.1. Air distribution

4.1.1. Air distribution – general

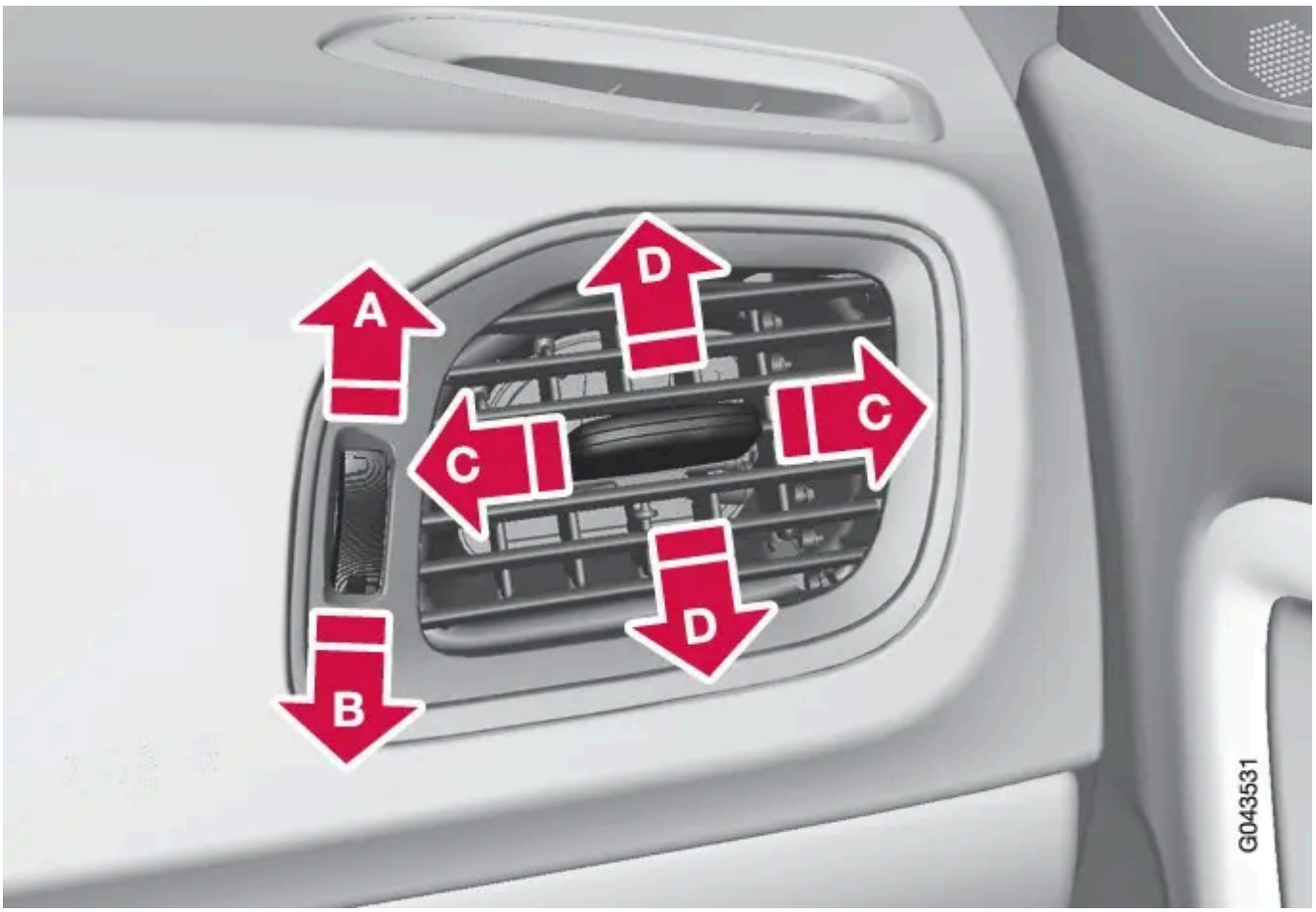
The incoming air is distributed through a number of different vents in the passenger compartment.



Air distribution is fully automatic in AUTO mode.

If desired, air distribution can be controlled manually, see Air distribution – function.

Air vents in the dashboard



A Open

B Closed

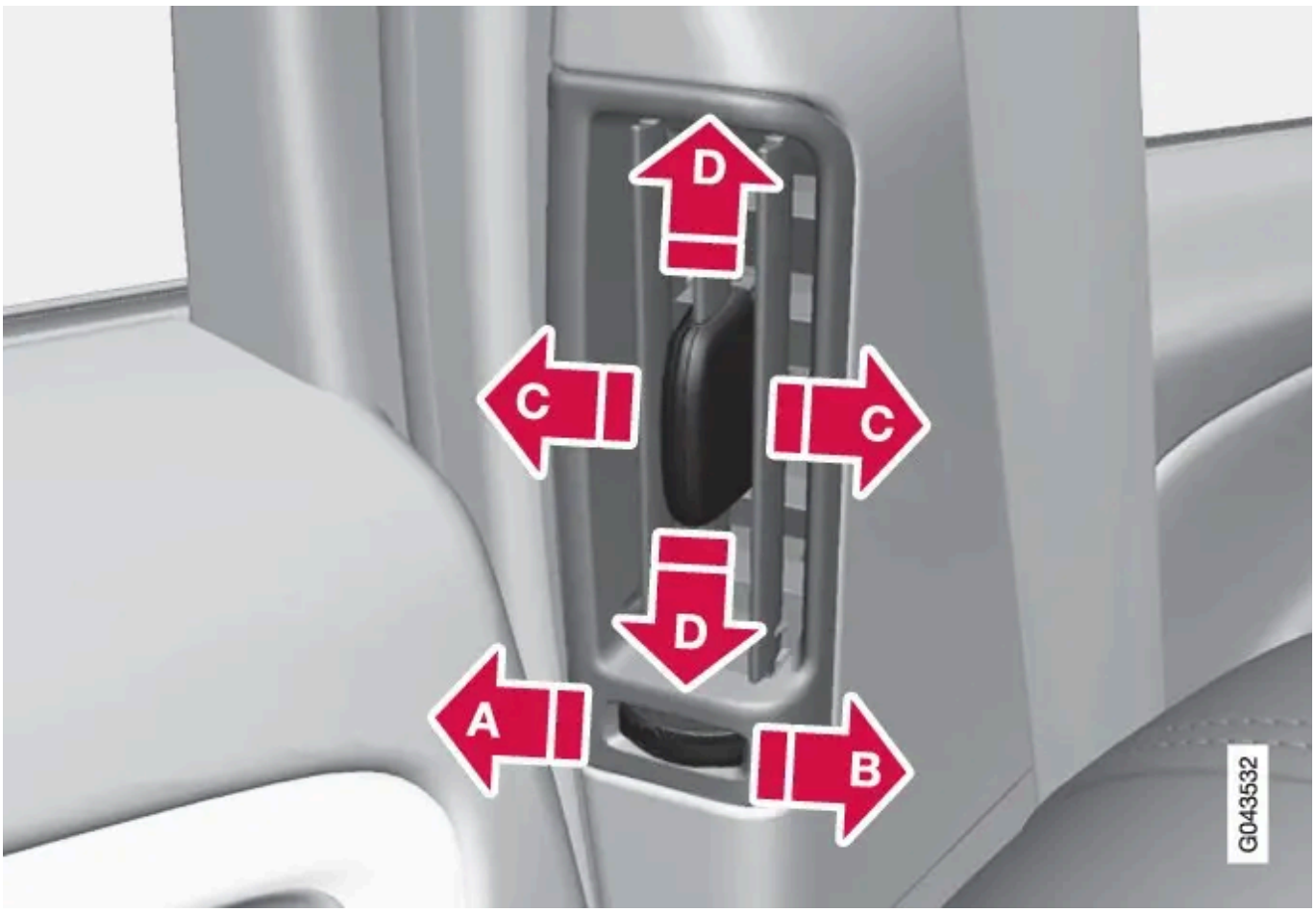
C Horizontal airflow

D Vertical airflow

Direct the outer air vents toward the side windows to defrost.

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Air vents in the door pillars



A Closed

B Open

C Horizontal airflow

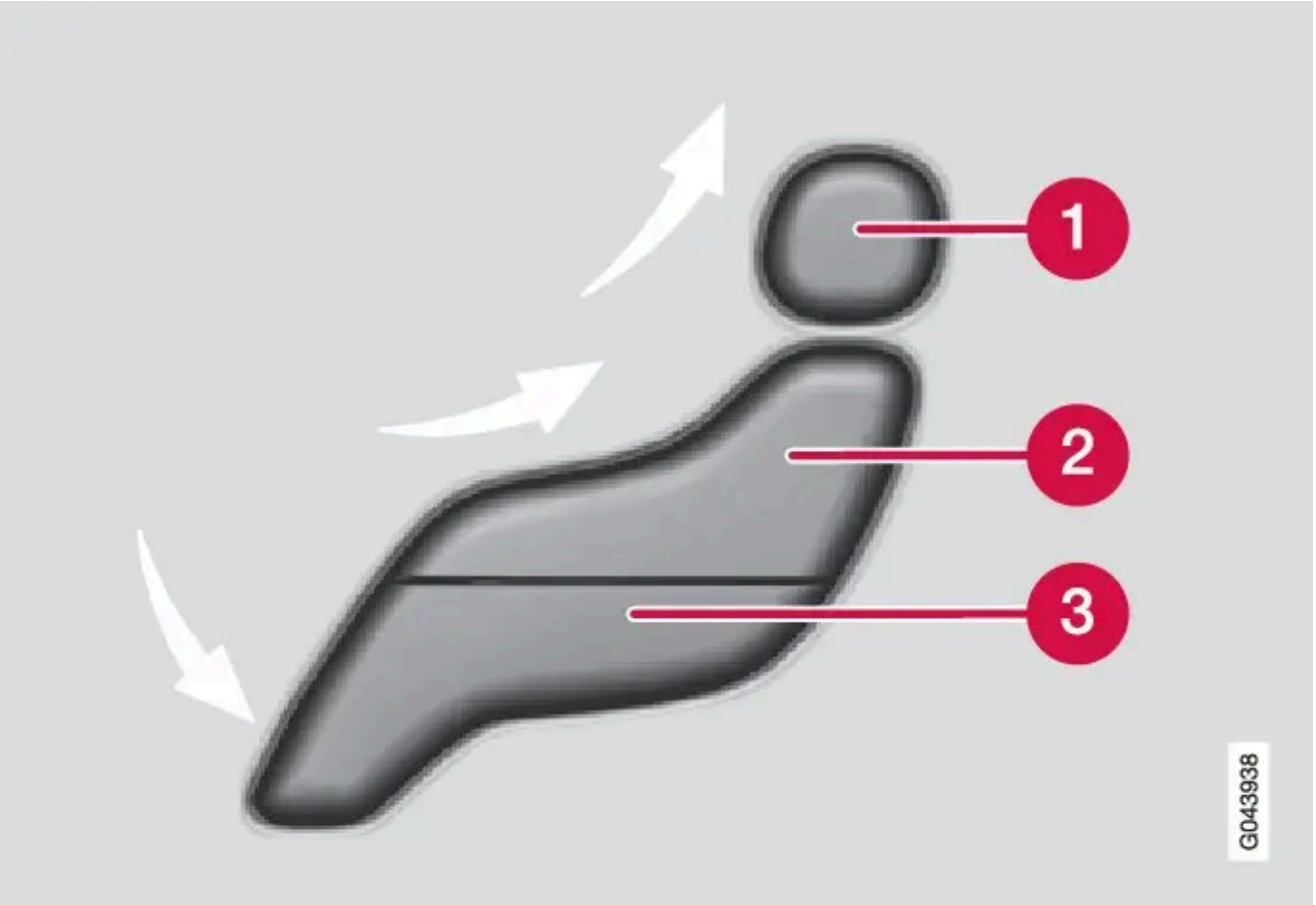
D Vertical airflow

Direct the outer air vents toward the side windows to defrost.

Direct the vents into the passenger compartment to help maintain the desired temperature in the rear seat.

4.1.2. Air distribution – function

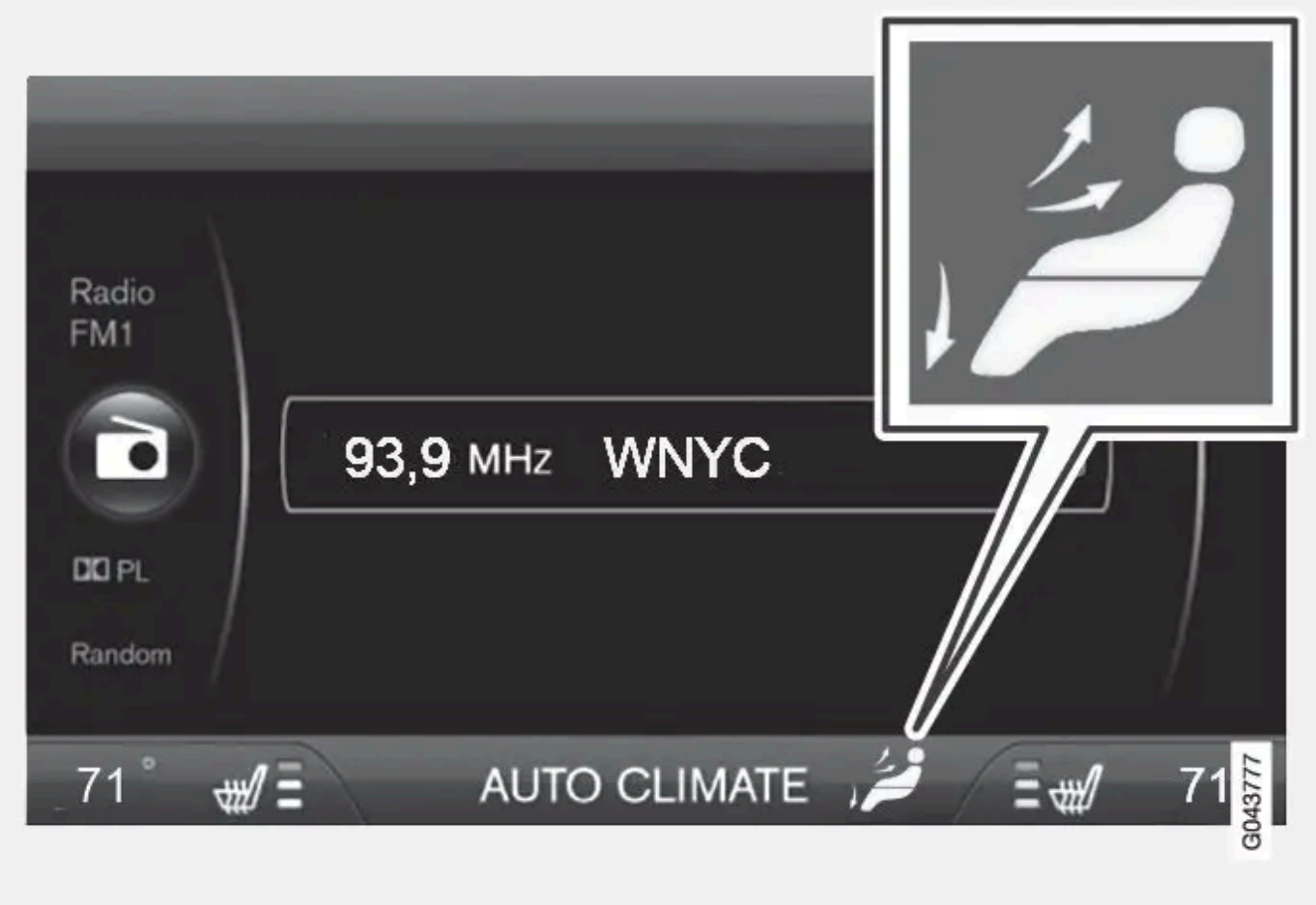
The air distribution function consists of three buttons.



1. Manual air distribution—defroster
2. Manual air distribution—dashboard air vents
3. Manual air distribution—floor

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When a button is pressed, the corresponding figure will appear in the display with an arrow indicating which manual air flow has been selected (see the following illustration). See also the air distribution chart.



Air distribution is shown in the center console display

4.1.3. Air distribution – table

Air distribution is selected using the buttons in the center console climate panel.

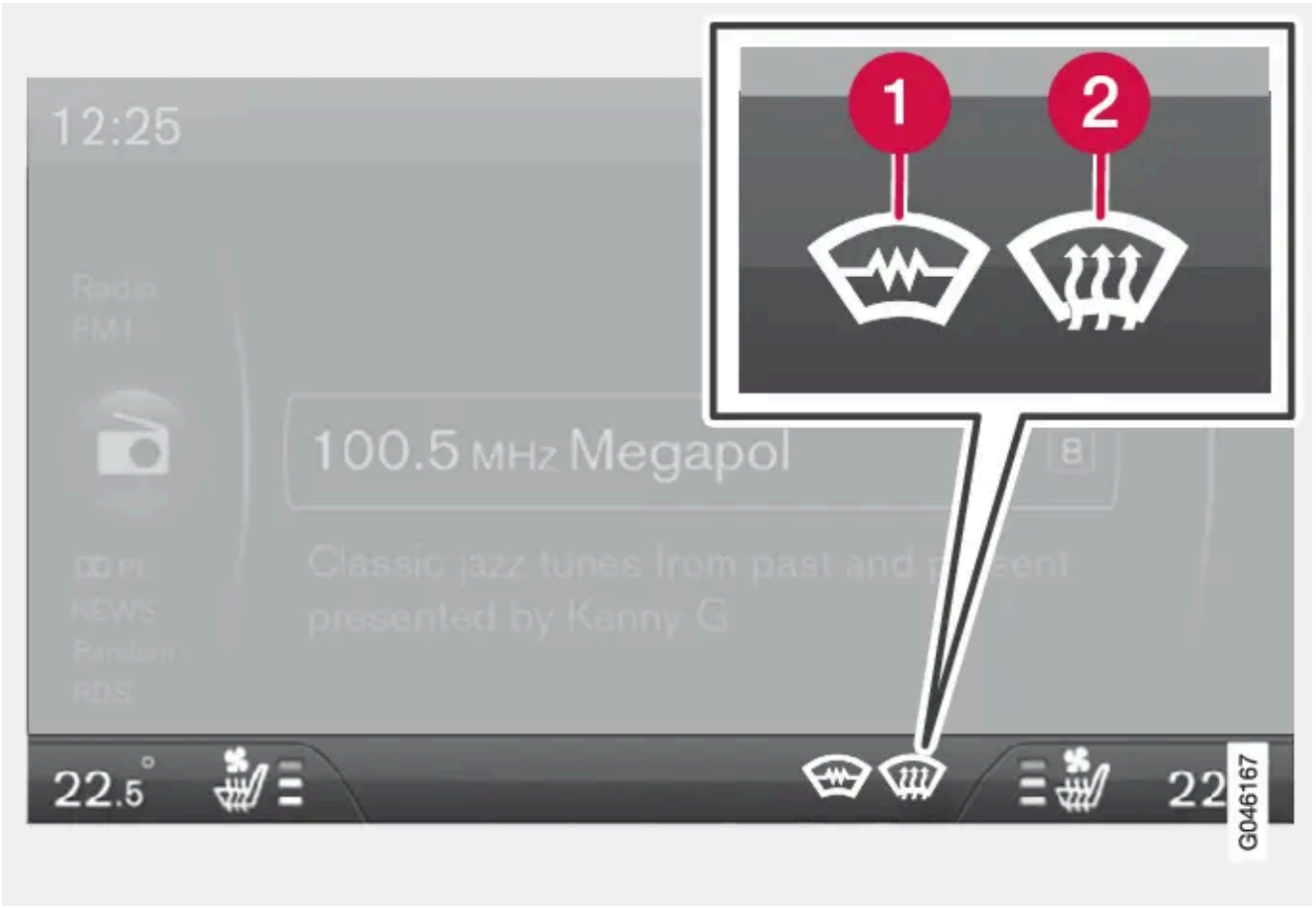
	Air distribution	Use		Air distribution	Use
	Air to windows. Some air flows from the dashboard air vents. The air is not recirculated. Air conditioning is always engaged.	To remove de-fog/de-ice the front side windows and windshield quickly.		Air to the floor and windows. Some air flows from the dashboard air vents.	To ensure comfortable conditions and good de-fogging in cold or humid weather.
	Air to windshield and side windows. Some air flows from the air dashboard vents.	In cold or humid weather (blower speed should be moderate to high).		Air to floor and from dashboard air vents.	In sunny weather with cool outside temperatures.
	Airflow to windows and from dashboard air vents.	To ensure good comfort in warm, dry weather.		Air to floor. Some air flows to the dashboard air vents and windows.	To warm or cool the feet.
	Airflow to the head and chest from the dashboard air vents.	To ensure efficient cooling in warm weather.		Airflow to windows, from dashboard air vents and to the floor.	To cool the feet or provide warmer air to the upper body in cold weather or hot, dry weather.

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4.1.4. Max. defroster and electrically heated windshield*

The heated windshield and max. defroster functions are used to clear the windshield and front side windows of condensation and ice as quickly as possible.





The selected settings are shown in the center console display

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1 Electrical heating*

2 Max. defroster



Models **without** an electrically heated windshield

- Press the button once to start defrosting/de-icing the windshield and front side windows. The indicator light (2) in the defroster button illuminates when the function is active.
- Press the button twice to switch off the defroster (the indicator light will switch off).

Models **with** an electrically heated windshield*

- If this feature is switched off, press the button once to start heating the windshield[1]. Symbol (1) will illuminate in the center console display.
- Press the button twice to start both the defroster and the windshield heating. Symbols (1) and (2) will illuminate in the center console display.
- If these features are on, press the button to switch them off. The symbols will no longer be displayed.

> **Note**
>
> - Triangular areas at the far sides of the windshield are not heated electrically and will take slightly longer to defrost/de-ice.
> - The heated windshield may affect the performance/range of e.g., transponders used to automatically pay highway tolls or other communication equipment.

The following occurs when the defroster/windshield heating functions have been activated:

- Blower speed increases automatically and the air conditioning will switch on (if not already on and if the passenger compartment blower is not turned off) to dehumidify the air in the passenger compartment. Air conditioning can be switched off by pressing the AC button.
- Recirculation will not function while defrost is engaged.

The climate system will return to its previous settings when the defroster/windshield heating function is switched off.

See also Heated windshield, rear window and door mirror defrosters for additional information.

* Option/accessory.

[1] If a "C" appears in the rear-view mirror when the button is pressed, the compass* has to be recalibrated, see Digital compass.

4.1.5. Air conditioning

The air conditioning function cools and dehumidifies the air in the passenger compartment.



When the indicator light in the button is on, the air conditioning is controlled automatically. This cools/heats and dehumidifies the incoming air. When the indicator light in the button is off, the air conditioning is disengaged. Other functions are still controlled automatically. When maximum defroster is selected, the air conditioning system is set for maximum blower speed and dehumidifies the cabin as quickly as possible.

4.1.6. Air distribution – recirculation

Recirculation can be used to shut out exhaust fumes, smoke, 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. The indicator light in the button will illuminate when recirculation is selected.

If the air in the car recirculates for too long, there is a risk of condensation forming on the insides of the windows, especially in winter.

Timer

The timer function minimizes the risk of fogging, or stale air when the recirculation function is selected by automatically switching off the function after a certain length of time, depending on the ambient temperature. Activate/deactivate the function under **Climate settings** → **Recirculation timer**. See My Car – introduction for a description of the menu system.

> **Note**
>
> When Defroster is selected, recirculation is always deactivated.

4.2. Air quality system

4.2.1. Interior Air Quality System (IAQS)*

The Air Quality System (IAQS) consists of a multifilter and an air quality sensor. The filter helps remove gases and particles from the incoming air, thereby reducing the amounts of odors and contaminants entering the vehicle.

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 closes and the air inside the passenger compartment is recirculated, i.e., no outside air enters the vehicle. The filter also cleans recirculated passenger compartment air. When the AUTO button is depressed the air quality sensor is always engaged.

Activate or deactivate this function in **Climate settings → Interior air quality system**.

> **Note**
>
> - The air quality sensor should always be engaged in order to obtain the best air in the passenger compartment.
> - Recirculation is limited in cold weather to avoid fogging.
> - If the insides of the windows start fogging, disengage the air quality sensor. Use the defroster function to increase airflow to the front, side, and rear windows.

* Option/accessory.

4.2.2. Air quality

The passenger compartment has been designed to be pleasant and comfortable, even for people with asthma and contact allergies.

Passenger compartment filter

Replace the cabin air filter with a new one at the recommended intervals. Please refer to your Warranty and Service Records Information booklet, or consult a trained and qualified Volvo service technician for these intervals. The filter should be replaced more often when driving under dirty and dusty conditions. The filter cannot be cleaned and therefore should always be replaced with a new one.

> **Note**
>
> There are different types of cabin air filters. Ensure that the correct type is installed.

Interior Air Quality System (IAQS)

A multifilter helps reduce gases and particles in the incoming air, thereby reducing the levels of odors and contaminants entering the vehicle. 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 closes and the air inside the passenger compartment is recirculated, i.e., no outside air enters the vehicle. The filter also cleans recirculated passenger compartment air.

> **Note**
>
> Contact your Volvo retailer for IAQS air filter replacement intervals.

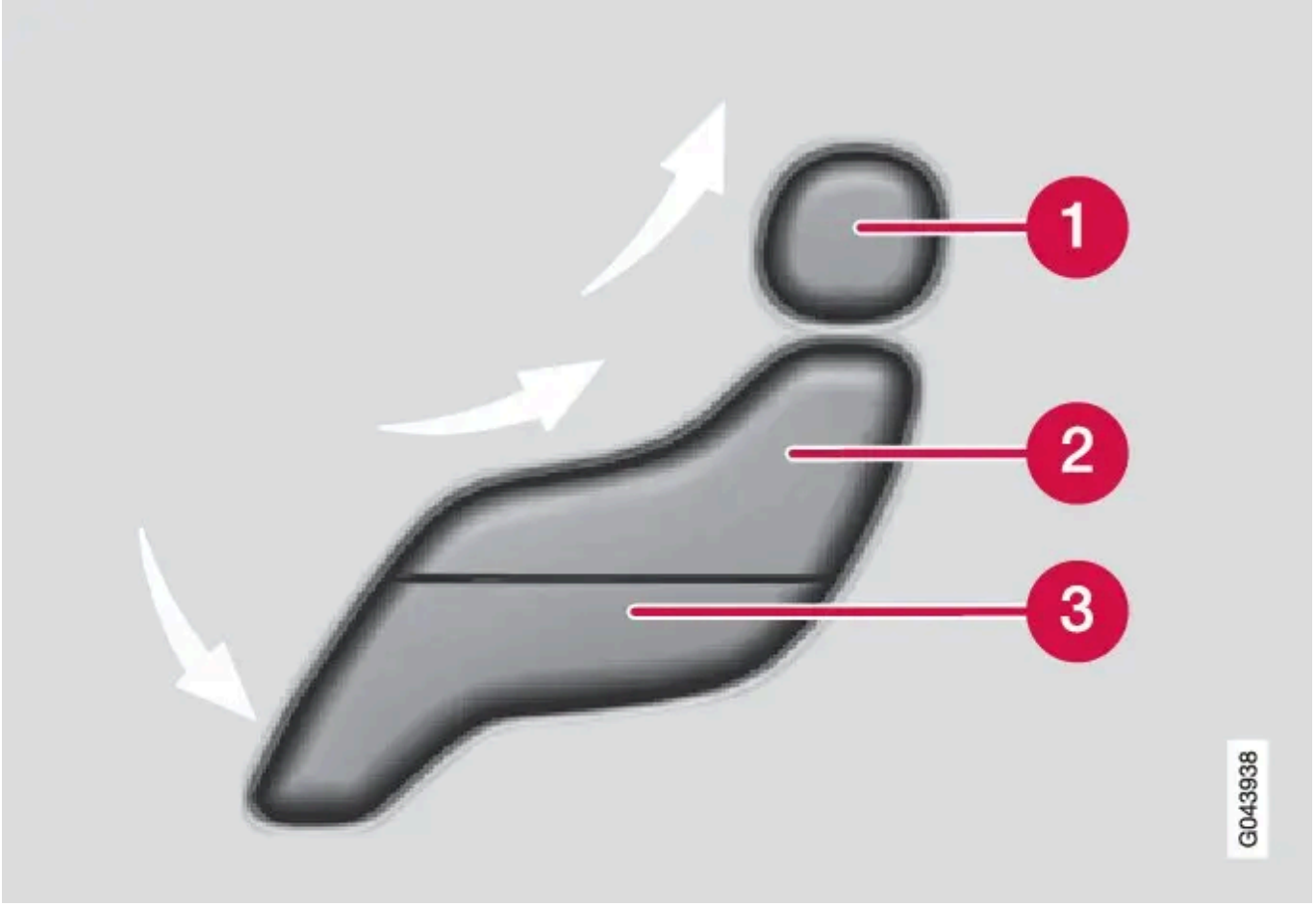
Materials used in the cabin

The materials used in the cabin have been developed to help minimize the amount of dust and make the cabin easier to keep clean. All floor mats can be easily removed for cleaning. Use car cleaning products recommended by Volvo. See also the information in Cleaning the interior.

4.3. Climate controls

4.3.1. Air distribution – function

The air distribution function consists of three buttons.



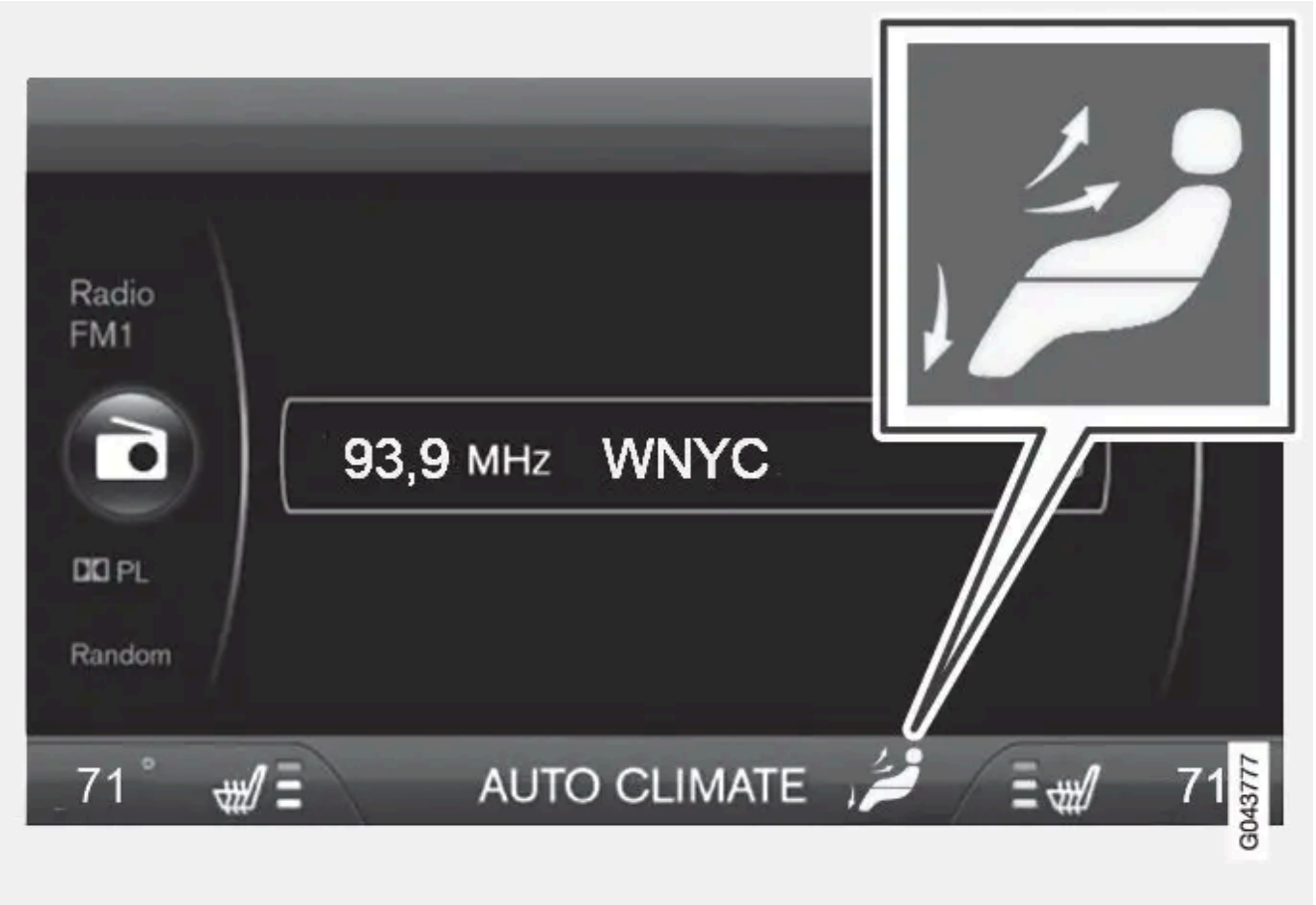
1 Manual air distribution—defroster

2 Manual air distribution—dashboard air vents

3 Manual air distribution—floor

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When a button is pressed, the corresponding figure will appear in the display with an arrow indicating which manual air flow has been selected (see the following illustration). See also the air distribution chart.

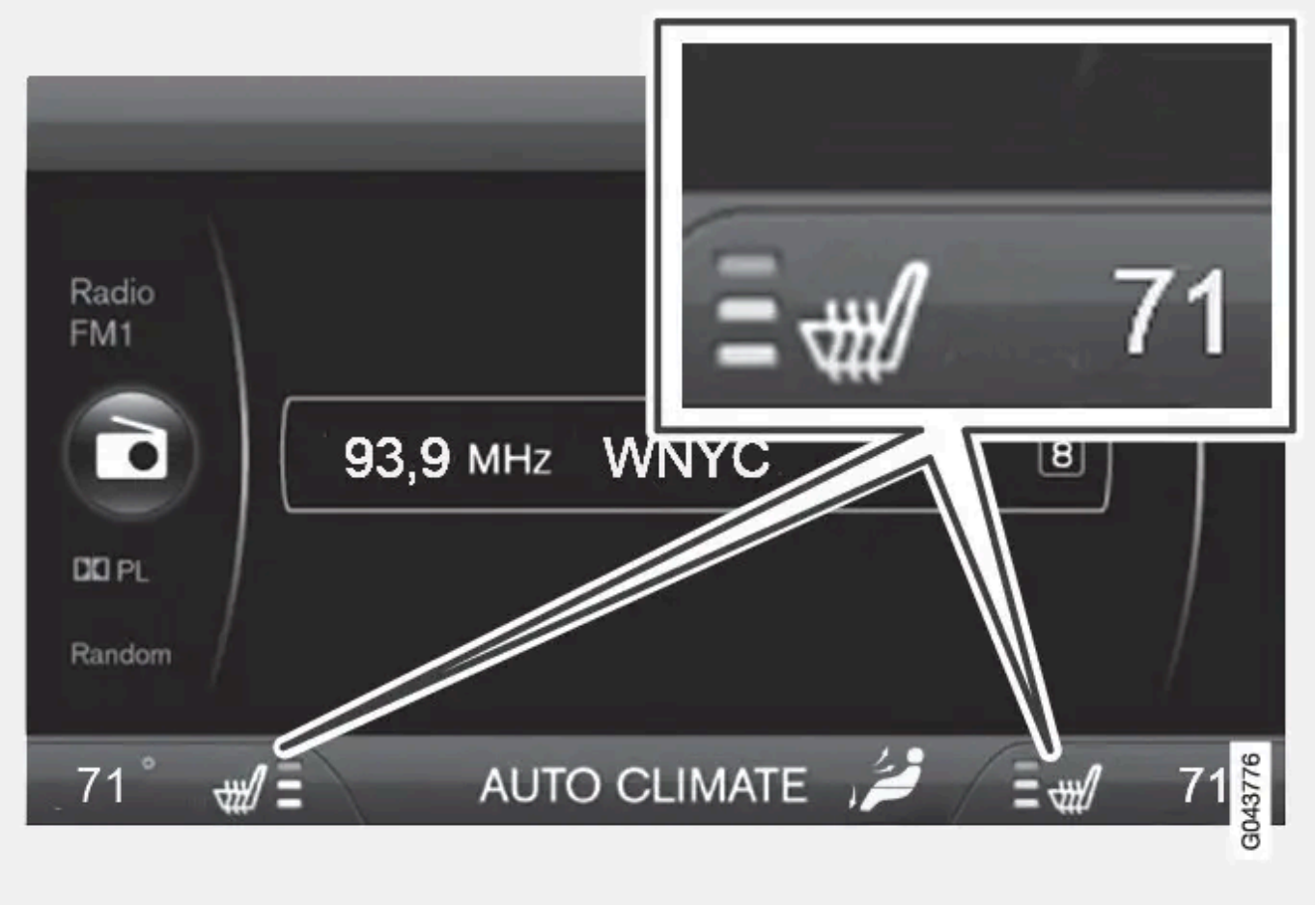


Air distribution is shown in the center console display

4.3.2. Heated seats

The front seat heating has three levels to increase comfort for the driver and passenger in cold weather.
The rear outboard seat heating has three levels to increase comfort for the passengers in cold weather.

Heated front seats*



The current seat temperature setting is shown in the center console display



Press the lower section of the button repeatedly until the desired number of indicator lights illuminate:

Highest heat level – three indicator lights.

Medium heat level – two indicator lights.

Lowest heat level – one indicator light.

If no indicator lights are illuminated, the seat heating is switched off.

Seat heating will automatically switch off when the engine is switched off.

Starting the seat heating automatically

This setting starts heating the driver's seat (at the highest level) automatically when the engine is started if the ambient temperature is below approx. 50° F (10° C).

Activate/deactivate this function in the MY CAR menu system, under **Settings → Climate settings → Auto start driver seat heater**.

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Heated rear seats*



Heat control for the outboard seating positions is done in the same way as for the front seats.

* Option/accessory.

4.3.3. Temperature and blower control

When the vehicle is started, the most recent setting is resumed.
The blower should always be activated to help avoid condensation and fogging on the windows.

Temperature control



The temperatures on the driver and passenger sides can be set separately.

> **Note**
>
> Heating or cooling cannot be speeded up by selecting a higher/lower temperature than the actual temperature required.

Blower control



Turn the control clockwise to increase or counterclockwise to decrease the blower speed. If AUTO is selected, blower speed will be regulated automatically and this will override manual adjustment.

> **Note**
>
> If the blower is turned off completely, the air conditioning is disengaged, which may result in fogging on the windows.

4.3.4. Automatic climate control

The Auto function automatically controls temperature, air conditioning, blower speed, recirculation and air distribution.



If you select one or more manual functions, the other functions continue to be controlled automatically. The air quality sensor is engaged and all manual settings are switched off when AUTO is pressed. The display shows **AUTO CLIMATE**.

Blower speed in automatic mode can be set under **Climate settings → Automatic blower adjustment**. Choose between **Low**, **Normal** or **High**.

> **Note**
>
> Selecting the lowest blower speed may increases the risk of fog forming on the windows.

4.3.5. Climate – sensors

The climate system utilizes a number of sensors to help regulate the temperature and humidity level in the passenger compartment.

Sensor location

- The sunlight sensor is located on the top side of the dashboard.

> **Note**
>
> The sunlight sensor monitors which side of the car that is most exposed to sunlight. This can mean that the temperature may differ between the right and left-side air vents, even if the temperatures set for both sides of the passenger compartment are the same.

- The temperature sensor for the passenger compartment is located below the climate control panel.

- The outside (ambient) temperature sensor is located on the door mirror.
- The humidity sensor* is located in the interior rearview mirror.

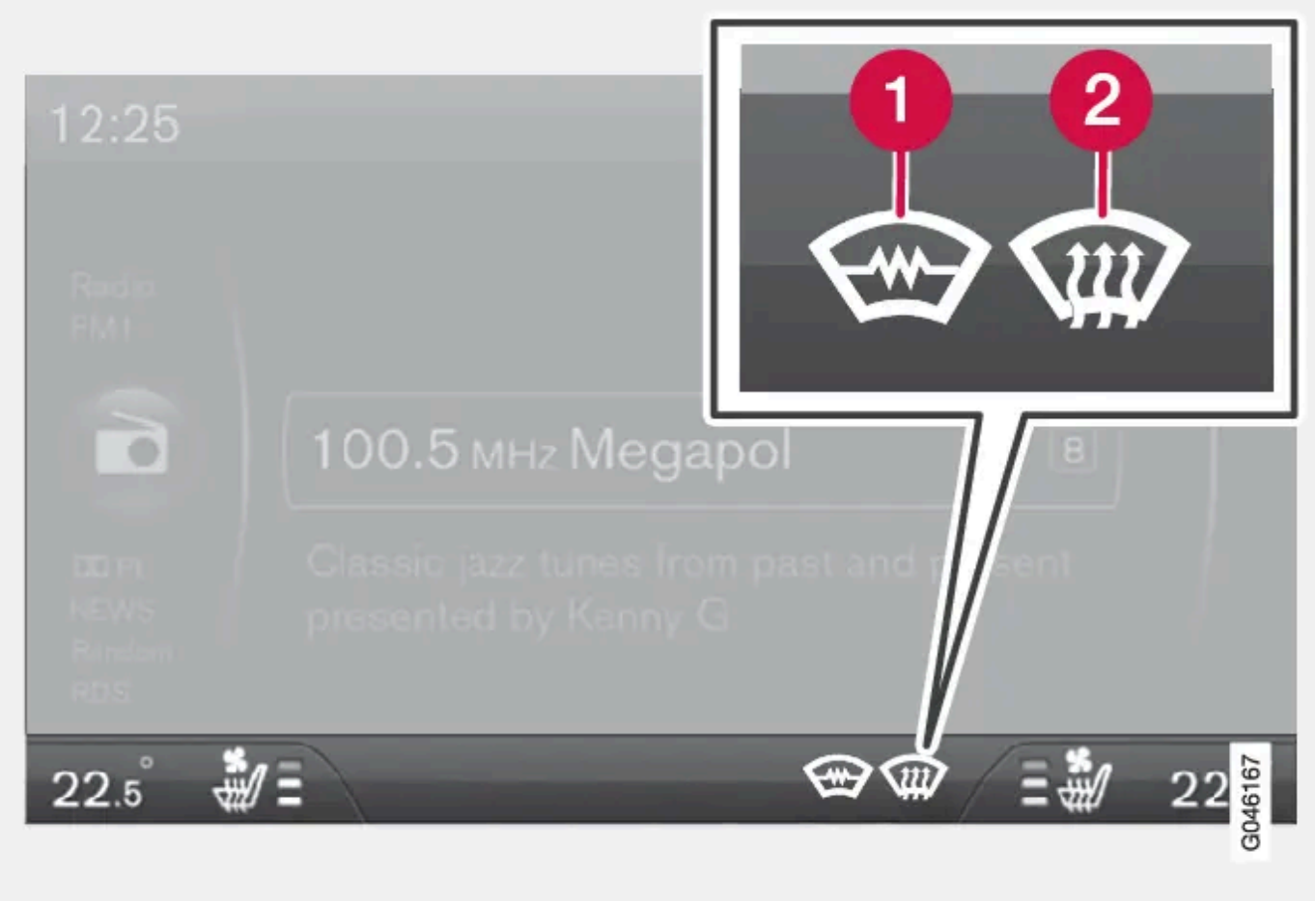
> **Note**
>
> Do not cover or block the sensors with clothing or other objects.

* Option/accessory.

4.3.6. Max. defroster and electrically heated windshield*

The heated windshield and max. defroster functions are used to clear the windshield and front side windows of condensation and ice as quickly as possible.





The selected settings are shown in the center console display

1 Electrical heating*

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2 Max. defroster



Models **without** an electrically heated windshield

- Press the button once to start defrosting/de-icing the windshield and front side windows. The indicator light (2) in the defroster button illuminates when the function is active.
- Press the button twice to switch off the defroster (the indicator light will switch off).

Models **with** an electrically heated windshield*

- If this feature is switched off, press the button once to start heating the windshield[1]. Symbol (1) will illuminate in the center console display.
- Press the button twice to start both the defroster and the windshield heating. Symbols (1) and (2) will illuminate in the center console display.
- If these features are on, press the button to switch them off. The symbols will no longer be displayed.

> **Note**
>
> - Triangular areas at the far sides of the windshield are not heated electrically and will take slightly longer to defrost/de-ice.
> - The heated windshield may affect the performance/range of e.g., transponders used to automatically pay highway tolls or other communication equipment.

The following occurs when the defroster/windshield heating functions have been activated:

- Blower speed increases automatically and the air conditioning will switch on (if not already on and if the passenger compartment blower is not turned off) to dehumidify the air in the passenger compartment. Air conditioning can be switched off by pressing the AC button.
- Recirculation will not function while defrost is engaged.

The climate system will return to its previous settings when the defroster/windshield heating function is switched off.

See also Heated windshield, rear window and door mirror defrosters for additional information.

* Option/accessory.

[1] If a "C" appears in the rear-view mirror when the button is pressed, the compass* has to be recalibrated, see Digital compass.

4.3.7. Air conditioning

The air conditioning function cools and dehumidifies the air in the passenger compartment.



When the indicator light in the button is on, the air conditioning is controlled automatically. This cools/heats and dehumidifies the incoming air. When the indicator light in the button is off, the air conditioning is disengaged. Other functions are still controlled automatically. When maximum defroster is selected, the air conditioning system is set for maximum blower speed and dehumidifies the cabin as quickly as possible.

4.4. Climate – general information

The vehicle is equipped with Electronic Climate Control (ECC) that cools, heats or dehumidifies the air in the passenger compartment.

Air conditioning

> **Note**
>
> - The air conditioning can be switched off, but to ensure the best possible climate comfort in the passenger compartment and to prevent the windows from misting, it should always be on.
> - In warm weather, a small amount of water may accumulate under the car when it has been parked. This water is condensation from the A/C system and is normal.

Side windows and moonroof

To ensure that the air conditioning works optimally, the side windows, and the optional moonroof should be closed.

Fog on the inside of the windows

The defroster function should be used to remove fog or mist from the inside of the windows. Keeping the windows clean with a commercially available window washing spray will also help prevent fogging or misting.

Temporary shut-off of the air conditioning

The air conditioning is momentarily disengaged during full acceleration or when driving uphill with a trailer. This may result in a temporary increase in cabin temperature.

Ice and snow

Always keep the air intake grille at the base of the windshield free of snow.

Climate system maintenance

Special tools and equipment are required to maintain and carry out repairs on the climate system. Work of this type should only be done by a trained and qualified Volvo service technician.

Refrigerant

Volvo cares about the environment. The air conditioning system in your car contains a CFC-free refrigerant – R134a. This substance will not deplete the ozone layer. The air conditioning system contains 1.76 lbs (800 g) of R134a. The systems uses PAG oil.

4.5. Climate – menu settings

The default settings for four of the climate system's functions can be changed in the menu system.

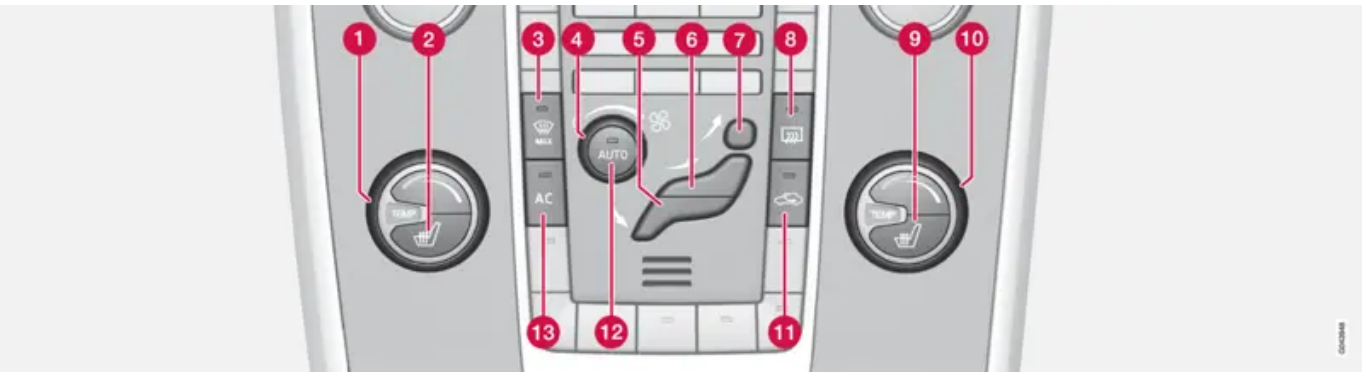
- Blower speed in automatic mode.
- Recirculation timer for passenger compartment air.
- Automatic rear window defrosting.
- The optional Interior Air Quality System (IAQS).

The functions can also be returned to factory settings in the menu system.

See My Car – introduction for a description of the menu system.

4.6. Electronic climate control (ECC)

ECC (Electronic Climate Control) helps maintain the selected temperature in the passenger compartment and the temperature can be set separately on the driver's and passenger's sides.
The AUTO function automatically regulates the temperature, air conditioning, blower speed, recirculation and air distribution.



1. Temperature control, driver's side
2. Heated driver's seat
3. Defroster (maximum effect), electrically heated windshield
4. Blower
5. Manual air distribution—floor
6. Manual air distribution—dashboard air vents
7. Manual air distribution—defroster
8. Heated rear window and door mirrors

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9 Heated front passenger's seat

10 Temperature control, passenger's side

11 Recirculation

12 AUTO

13 A/C on/off

---

5. Locks and alarm

5.1. Alarm

5.1.1. Alarm – general information

The alarm system provides a warning if an attempt is made to break into the vehicle.
The alarm is automatically armed whenever the vehicle is locked with the remote key.
When armed, the alarm continuously monitors a number of points on the vehicle. The following conditions will trigger the alarm:

- The hood is forced open.
- The tailgate is forced open.
- A door is forced open.
- The ignition slot is tampered with.
- An attempt is made to start the vehicle with a non-approved key (a key not coded to the car's ignition).
- The battery is disconnected (while the alarm is armed).
- The siren is disconnected when the alarm is disarmed.

A message will appear in the information display if a fault should occur in the alarm system. Contact a trained and qualified Volvo service technician.

> **Note**
>
> Do not attempt to repair any of the components in the alarm system yourself. This could affect the insurance policy on the vehicle.

5.1.2. Alarm – arming/disarming

The alarm system provides a warning if an attempt is made to break into the vehicle.

Arming the alarm

1. Press the Lock button on the remote key. One long flash of the turn signals will confirm that the alarm is armed.

Alarm confirmation settings can be changed in MY CAR, under **Car settings** → **Lock settings** → **Keyless entry**. For a description of the menu system, see My Car – introduction.

USA FCC ID: MAYDA 5823(3)

This device complies with part 15 of the FCC rules. Operation is subject to the following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Canada IC: 4405A-DA 5823(3)

This device is subject to the following conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

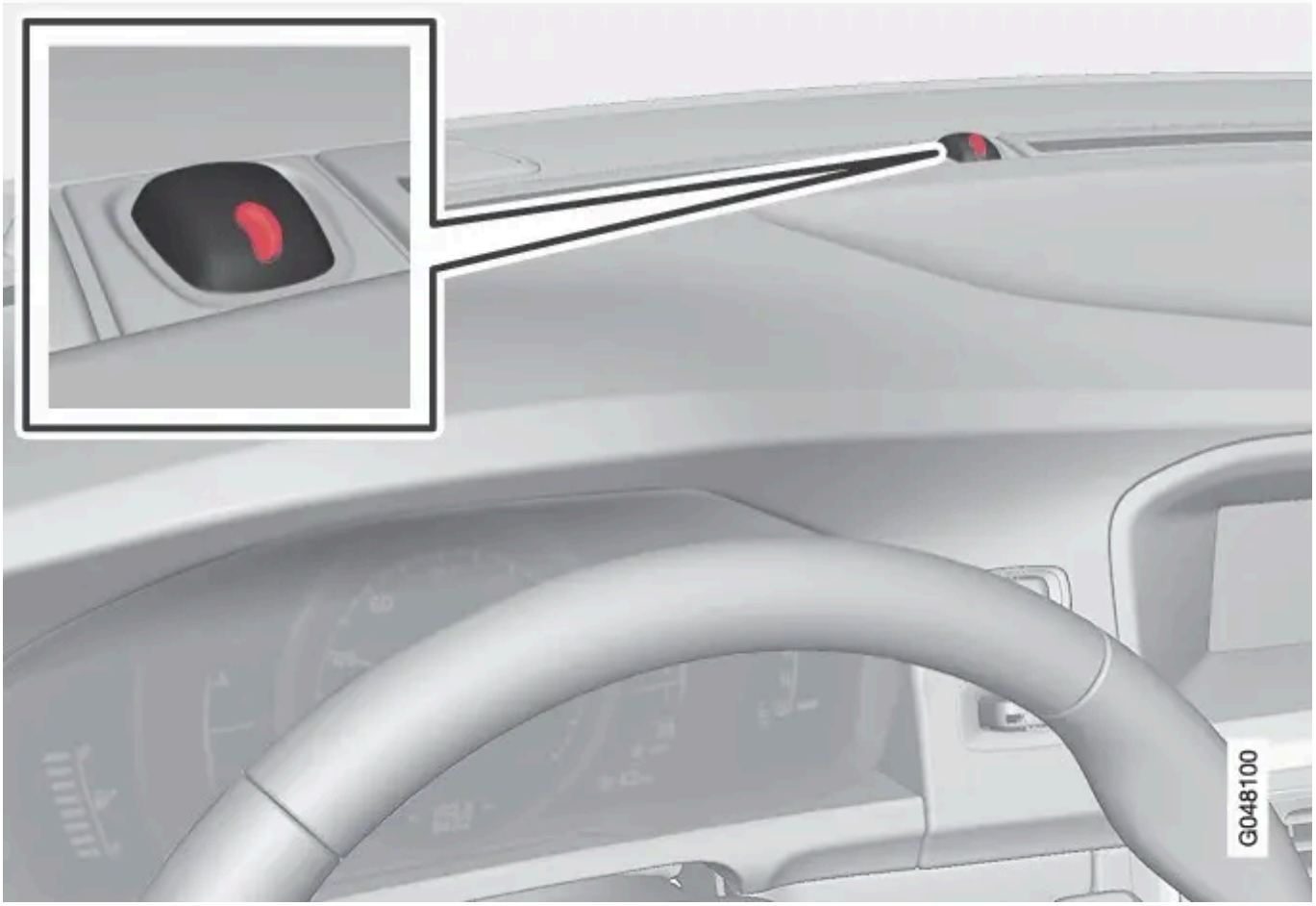
Disarming the alarm

1. Press the Unlock button on the remote key.

> Two short flashes from the car's direction indicators confirm that the alarm has been deactivated and that all doors are unlocked.

5.1.3. Alarm indicator

The status of the alarm system is indicated by the red indicator light on the dashboard (see illustration):



- Indicator light off: the alarm is not armed
- The indicator light flashes at one-second intervals: the alarm is armed
- The indicator light flashes rapidly before the remote key is inserted in the ignition slot and the ignition is put in mode I: the alarm has been triggered.

5.1.4. Alarm-related functions

The following is general information regarding the alarm system in your vehicle.

Automatic re-arming

If the doors are unlocked, the locks will automatically re-engage (re-lock) and the alarm will re-arm after 2 minutes unless a door or the tailgate has been opened.

Remote key not functioning

If the remote key is not functioning properly, the alarm can be turned off and the vehicle can be started as follows:

1. Open the driver's door with the key blade.

> **This will trigger the alarm.**

2. 

   To turn off the alarm, insert the remote key into the ignition slot (also on vehicles with the optional keyless drive).

3. Start the engine.

5.1.5. Alarm signal

An audible alarm signal is given by a battery powered siren. The alarm cycle lasts for 30 seconds.

The visual alarm signal is given by flashing all turn signals for approximately 5 minutes or until the alarm is turned off.

5.1.6. Alarm – turning off

The alarm system provides a warning if an attempt is made to break into the vehicle.

If the alarm is sounding, it can be stopped by pressing the Unlock button on the remote key or by inserting the remote key in the ignition slot. Two short flashes from the car's turn signals confirm that the alarm has been turned off.

5.2. Detachable key blade

5.2.1. Detachable key blade – detaching/reinserting

The detachable key blade can be removed or reinserted in the remote key as follows:

Removing the key blade



1. Slide the spring loaded catch to the side.
2. Pull the key blade straight out of the remote key.

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Reinserting the blade

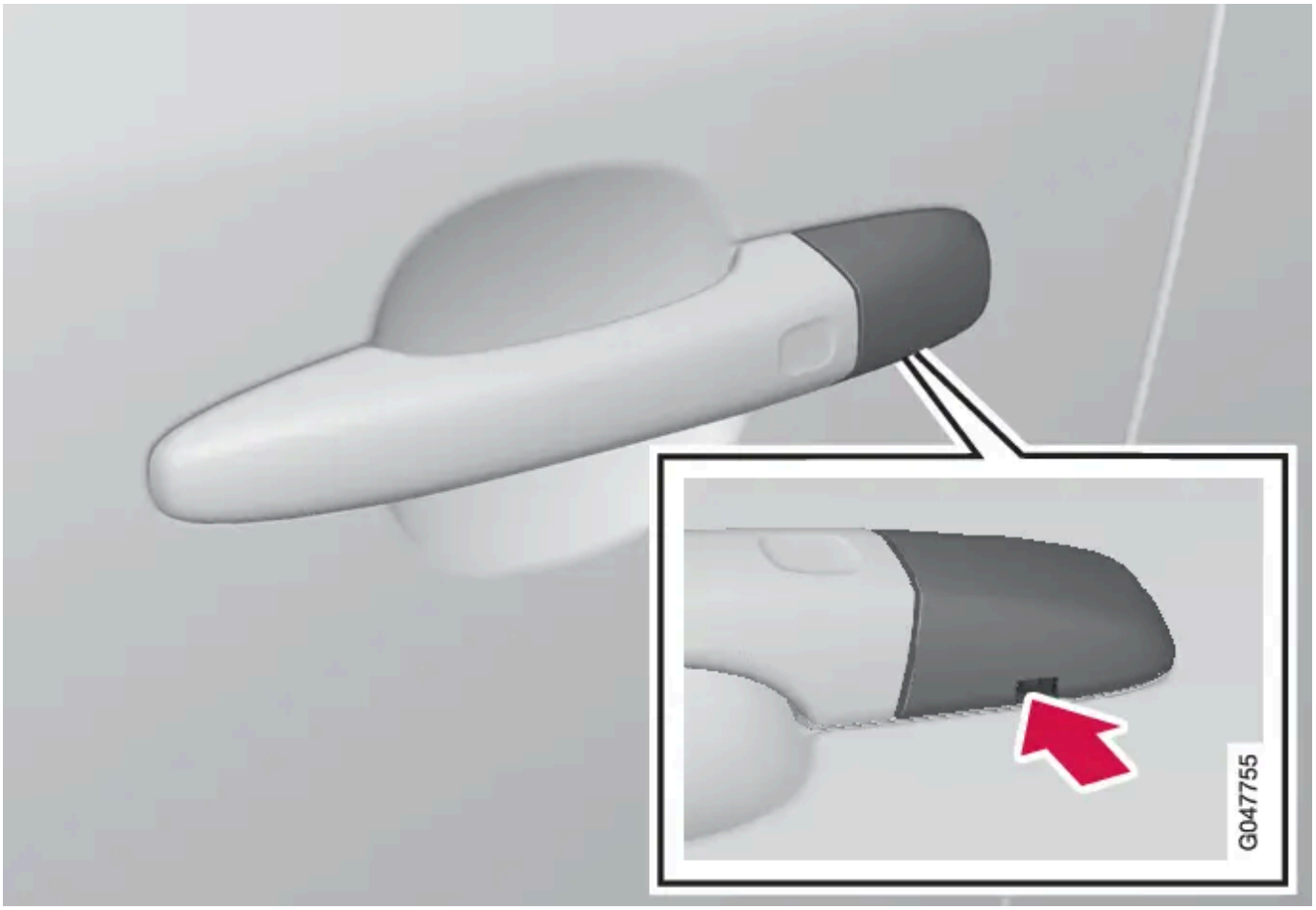
1. Hold the remote key with the slot for the key blade up.
2. Carefully slide the key blade into its groove.
3. Gently press the key blade in the groove until it clicks into place.

5.2.2. Detachable key blade – general information

Each remote key contains a detachable metal key blade for mechanically locking or unlocking the driver's door and the glove compartment, and to enable the private locking function. For more information on the key blade. The key blades have a unique code, which is used if new ones need to be produced. This code is available at an authorized Volvo retailer.
The visible ends of these key blades are unique to make it easier to identify "your" remote key.

5.2.3. Detachable key blade – unlocking

Your vehicle's remote key contains a metal, detachable key blade that can be used to unlock the driver's door, lock the glove compartment, etc.



Driver's door keyhole cover

If the remote key does not function normally (weak battery, etc.), the vehicle can be unlocked with the detachable key blade.

1. Remove the detachable key blade from the remote key.
2. Press the key blade approx. 0.5 in. (1 cm) straight up in the hole on the underside of the keyhole cover.

> The cover will come off due to the pressure exerted when the key blade is pushed upward.

3. Insert the key blade as far as possible in the driver's door lock. Turn the key blade to unlock the driver's door. **This will trigger the alarm**.
4. **To turn off the alarm**, insert the remote key in the ignition slot. This also applies to vehicles equipped with the optional keyless drive.
5. Press the cover back into place after the door has been unlocked.

5.3. Keyless drive

The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.

5.3.1. Keyless drive* – key memory

When you leave the vehicle with a remote key in your possession and lock any door, the position of the driver's seat[1] and door mirrors will be stored in the remote key's memory.

The next time a door is opened by a person with the **same** remote key in his/her possession, the driver's seat and door mirrors will automatically move to the position that they were in when the door was most recently locked.

> **Note**
>
> If several people carrying remote keys approach the vehicle at the same time, the driver's seat and door mirrors will assume the positions they were in for the person who opens the driver's door.

See also power seats for information on adjusting and storing the seat's position in the seat memory.

> **Note**
>
> If the vehicle is locked by pressing the button on one of the door handles or by pressing the lock button on the remote key, or if it is left unlocked for more than 30 minutes, the key memory function will be deactivated.
>
> To reactivate the key's memory:
>
> - Unlock the vehicle by pulling a door handle with the remote key in your possession or by pressing the unlock button on the remote key.

* Option/accessory.

[1] Power seats only

5.3.2. Keyless drive* – messages

If all of the remote keys are removed from the vehicle while the engine is running or if the ignition modes is in mode II and all of the doors are closed, a message will appear in the instrument panel display and an audible signal will sound.

When at least one remote key has been returned to the car, the message will be erased in the display and the audible signal will stop when:

- A door has been opened and closed
- The remote key has been inserted in the ignition slot
- The OK button has been pressed. For the location of this button, see Information display – menu controls

Important

- Keyless drive remote keys should never be left in the vehicle. In the event of a break-in, a remote found in the vehicle could make it possible to start the engine.
- Electromagnetic fields or metal obstructions can interfere with the keyless drive system. The remote key should never be placed closer than approximately 4-6 in. (10-15 cm) to cell phones, metallic objects or e.g., stored in a metal briefcase.

USA – FCC ID:KR55WK48952, KR55WK48964

NOTE

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept interference received, including interference that may cause un-desired operation.

CAUTION

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

Siemens VDO

5WK48891

Tested To Comply With FCC Standards

For Automobile Use

Canada – IC:267T-5WK48952, 267T-5WK48964, 267T-5WK48891

NOTE

This device complies with RSS -210 of Industry Canada. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept interference received, including interference that may cause undesired operation.

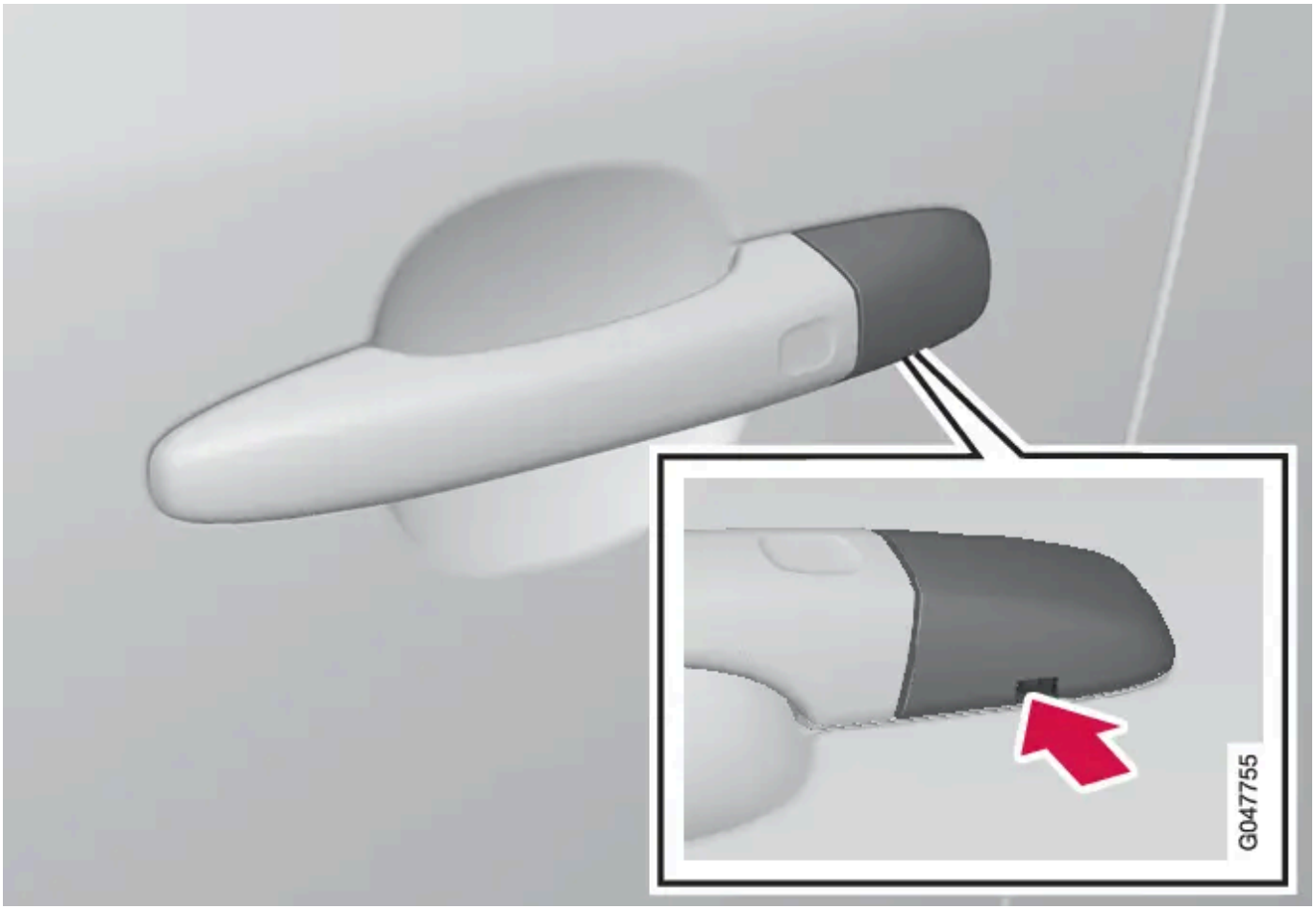
CAUTION

Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

* Option/accessory.

5.3.3. Keyless drive* – unlocking with key blade

If the remote key does not function normally (weak battery, etc.), the vehicle can be unlocked with the detachable key blade.



Driver's door keyhole cover

1. Remove the key blade from the remote key (see Detachable key blade – detaching/reinserting for instructions).
2. Press the key blade approx. 0.5 in. (1 cm) straight up in the hole on the underside of the keyhole cover.

> The cover will come off due to the pressure exerted when the key blade is pushed upward.

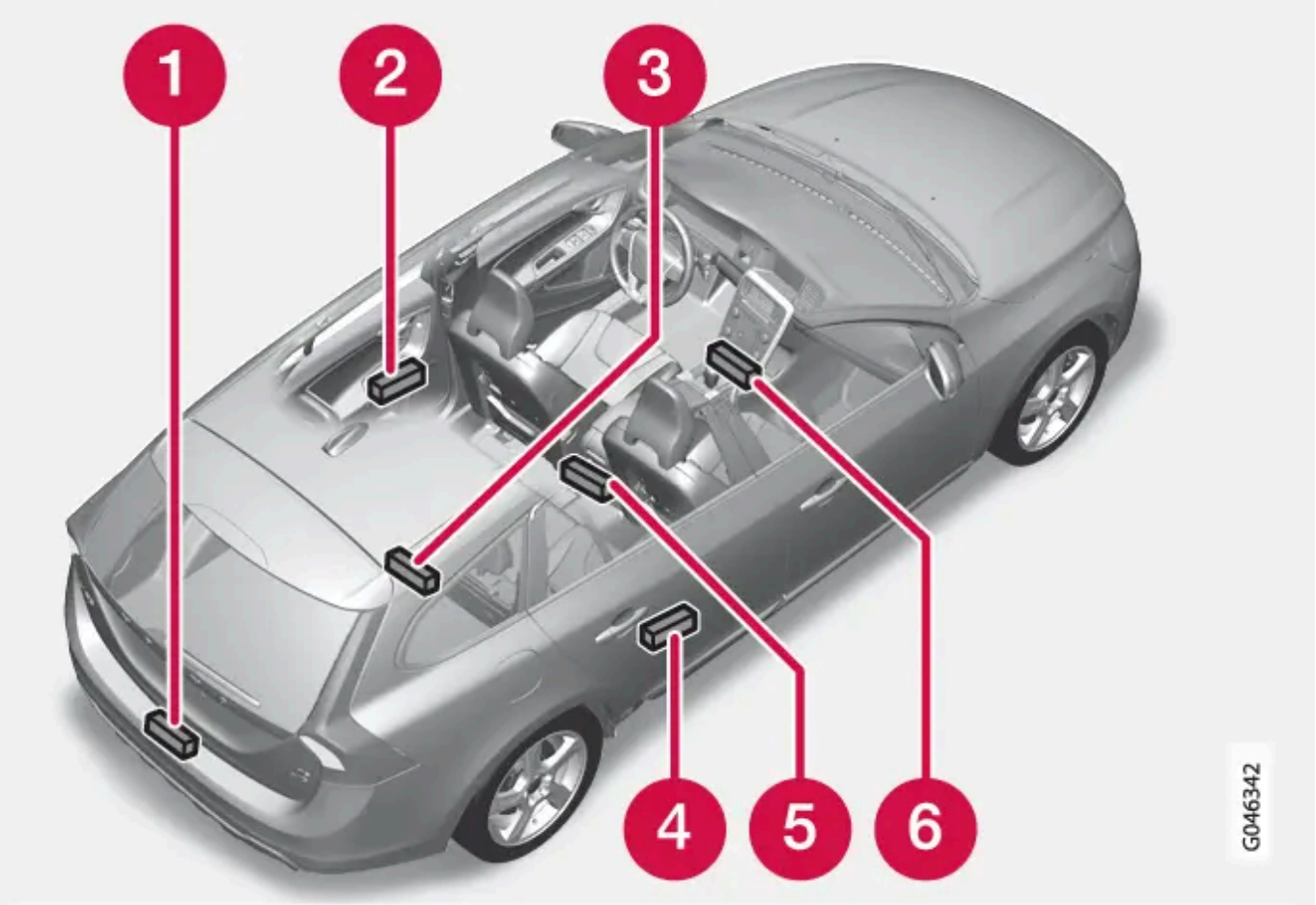
3. Insert the key blade as far as possible in the driver's door lock. Turn the key blade to unlock the driver's door. **This will trigger the alarm**.
4. **To turn off the alarm**, insert the remote key in the ignition slot. This also applies to vehicles equipped with the optional keyless drive.
5. Press the cover back into place after the door has been unlocked.

* Option/accessory.

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5.3.4. Keyless drive* – antenna locations

The keyless drive system has a number of antennas located at various points in the vehicle.



1. On the inside center of the rear bumper
2. Left rear door handle
3. Under the floor of the cargo area, near the rear seat
4. Right rear door handle
5. Under the rear section of the center console
6. Under the front section of the center console

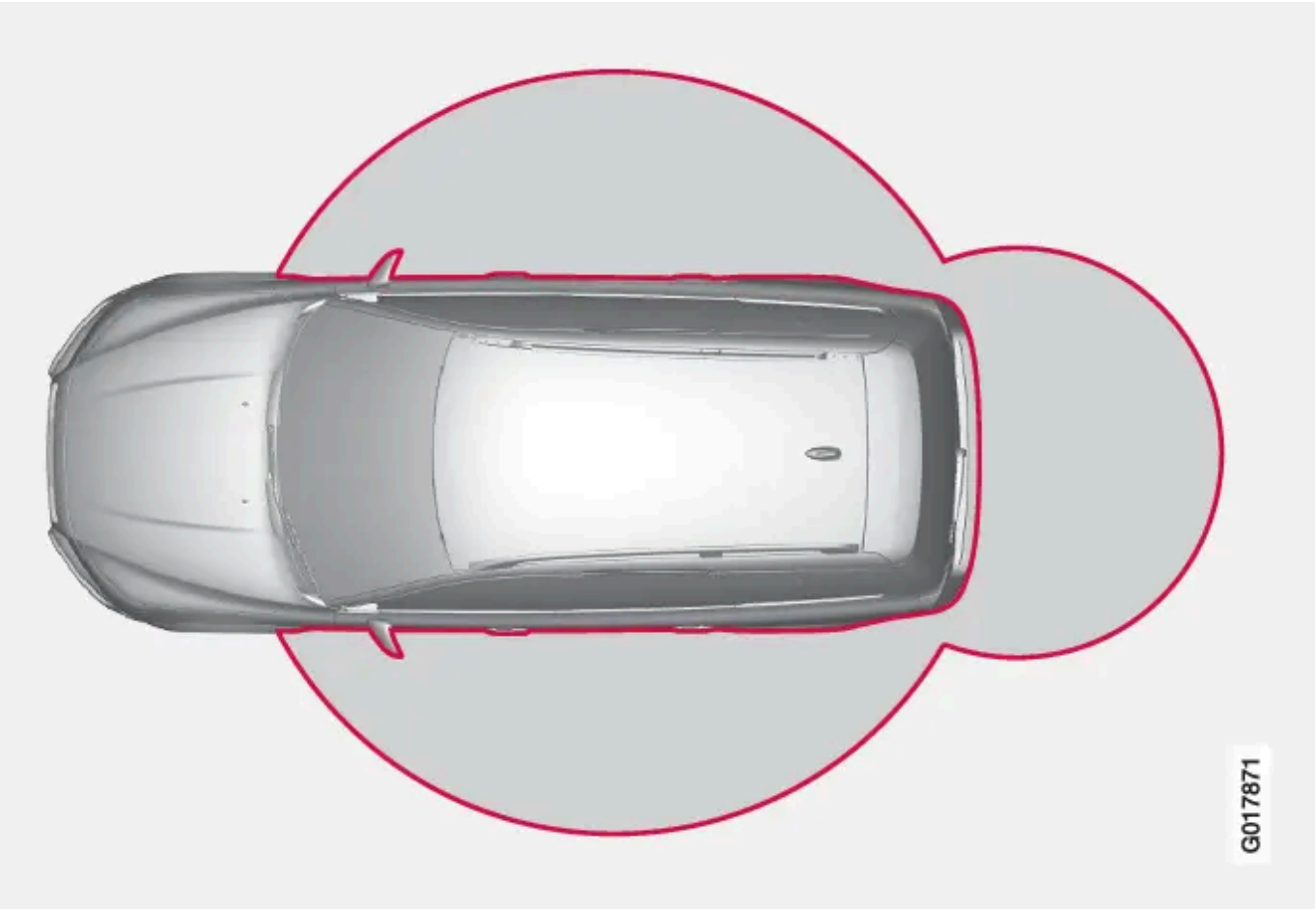
Warning

People with implanted pacemakers should not allow the pacemaker to come closer than 9 inches (22 cm) to any of the keyless drive system's antennas. This is to help prevent interference between the pacemaker and the keyless drive system.

* Option/accessory.

5.3.5. Keyless drive*– locking/unlocking

This system makes it possible to unlock and lock the vehicle without having to press any buttons on the remote key. It is only necessary to have a keyless drive remote key in your possession to operate the central locking system.



Range of the keyless drive remote key–5 ft (1.5 meters)

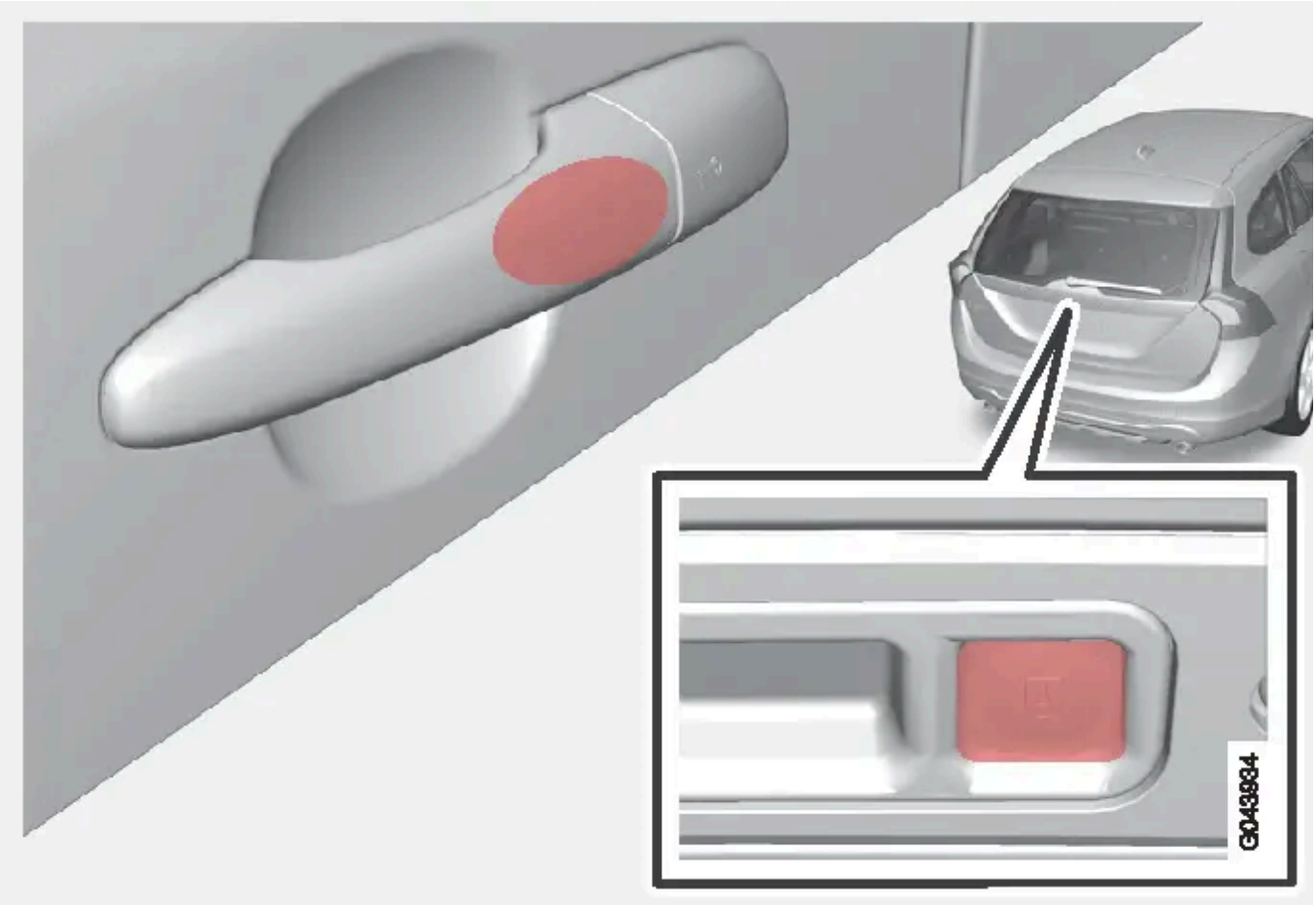
Note

- The gear selector must in the P position before the vehicle can be locked and the alarm can be armed.
- The buttons on the keyless drive remote key can also be used to lock and unlock the vehicle. For more information, see Remote key and key blade.

Both of the remote keys provided with the vehicle have the keyless function, and additional ones can be ordered. The system can accommodate up to six remote keys.

The red rings in the illustration indicate the area around the vehicle that is within range of the keyless drive antennas.

Locking the vehicle



Models with keyless drive have a pressure-sensitive area on the outside door handles and a rubber-covered button next to the tailgate opening control

The doors and the tailgate can be locked by pressing the pressure-sensitive area on each of the outside door handles or the rubber-covered button next to the tailgate opening control. The lock indicator on the dash will begin to flash.

> **Note**
>
> On keyless drive vehicles, the gear selector must be in the Park (P) position, all doors and the tailgate must be closed and the ignition must be switched off before the vehicle can be locked.

Unlocking the vehicle

- A keyless drive remote key must be on the same side of the vehicle as the door to be opened, and be within 5 feet (1.5 meters) of the door's lock or the tailgate (see the shaded areas in the illustration).
- Pull a door handle to unlock and open the door or pull the tailgate opening control.

The number of doors that are unlocked at the same time can be set in the vehicle's menu system. Press MY CAR and go to **Car settings → Lock settings → Keyless entry**. For a description of the menu system, see My Car – introduction.

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Note

In some cases, wearing thick gloves or pulling the door handle too quickly may affect the unlocking function. If this occurs, try pulling the door handle again or pull it after taking off the glove.

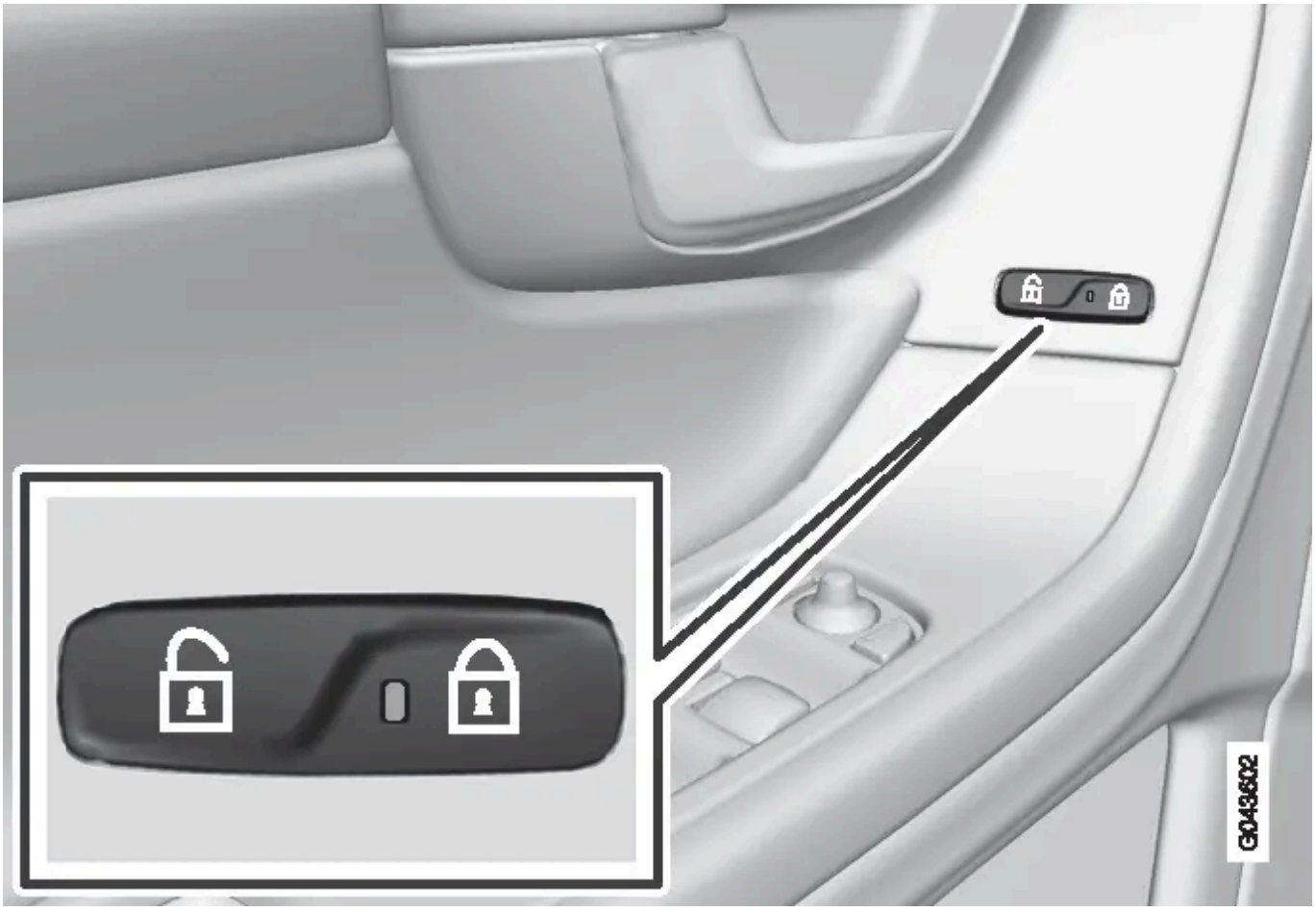
* Option/accessory.

5.4. Locking/unlocking

5.4.1. Locking/unlocking – from inside

The lock buttons on the door panel can be used to lock or unlock all doors and the tailgate at the same time. Press to lock and to unlock.

From inside the vehicle (central locking button)



Central locking button

The lock buttons on the door panel can be used to lock or unlock all doors and the tailgate at the same time. Press to lock and to unlock.

Unlocking

The vehicle can be unlocked from inside the vehicle in two ways:

- By pressing the unlock button .
- The **front doors** can be unlocked and opened by pulling the door handle once. The **rear doors** can be unlocked by pulling the door handle once and opened by pulling the handle again.

Locking

- Press the lock button after the front doors have been closed.
- Press the lock button : all of the doors that are closed will lock.
- Each door can be locked individually with the lock button on the respective doors. The door must be closed first.

Alternative locking when parking

The central locking button on the driver's door can also be used to lock the vehicle when you leave it. To do so:

1. Open the door.
2. Press the lock section of the button.
3. Close the door. This will lock the vehicle completely and arm the alarm.

> **Note**
>
> Please be aware that locking the vehicle in this way makes it possible to lock the remote key in the passenger compartment. To help avoid this, lock the vehicle from the outside by pressing the lock button on the remote key.
>
> If the vehicle is locked using the central locking button, be sure that the remote key is in your possession before closing the door.

Indicator light in the lock buttons

There are two versions of the central locking system that affect the indicator light in the driver's door central locking button.

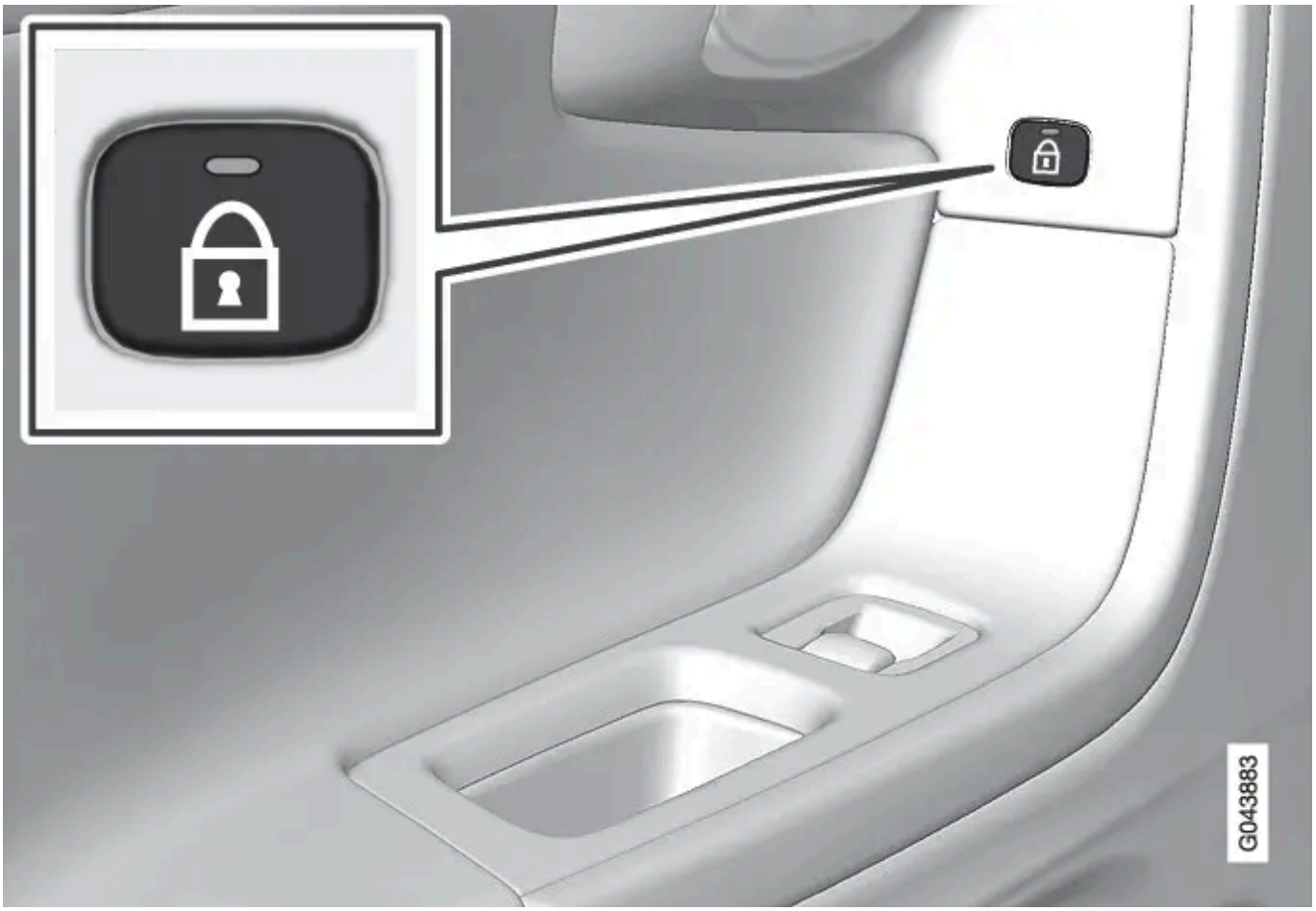
If **only** the driver's door has a central locking button:

- If the light is on, this indicates that all of the doors are locked.

If there are central locking buttons in both front doors and electric lock buttons in the rear side doors:

- If a light is on in one of the buttons, this means that only that door is locked. When the lights are on in all of the buttons, all of the doors are locked.

Lock buttons in the rear side doors



The indicator light in the button is on when the door is locked

The button in each of the rear side doors locks that door only.

To unlock the door:

- The door can be unlocked by pulling the door handle once and opened by pulling the handle again.

Automatic relocking

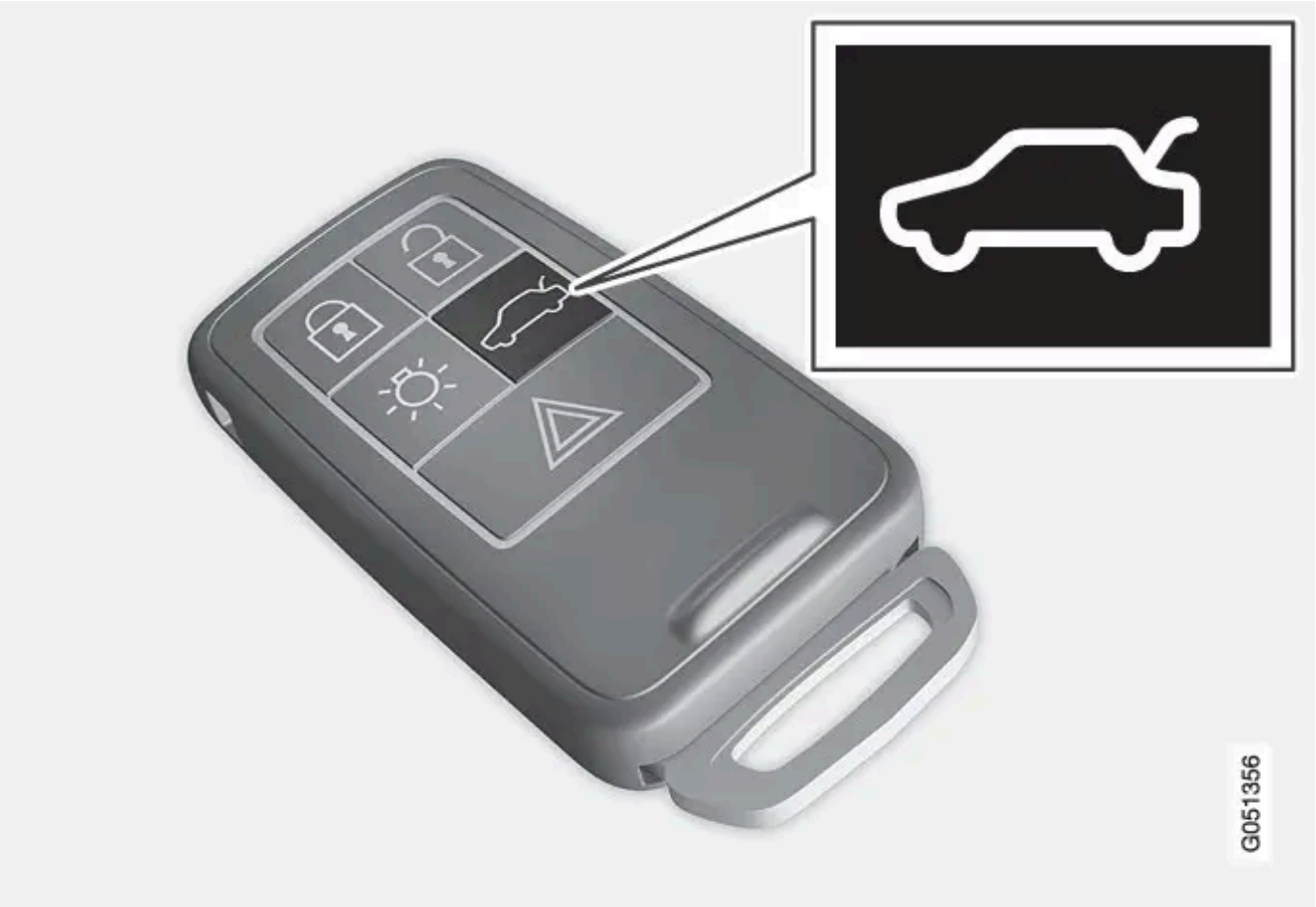
If the doors are unlocked, the locks will automatically reengage (re-lock) and the alarm will re-arm after 2 minutes unless a door or the tailgate has been opened.

Automatic locking

When the vehicle starts to move, the doors and tailgate can be locked automatically. This feature can be turned on or off by pressing MY CAR and going to **Car settings** → **Lock settings** → **Automatic door locking**.

5.4.2. Locking/unlocking – tailgate

The tailgate can be opened, locked and unlocked in several ways.



Tailgate unlock button on the remote key

Unlocking the tailgate with the remote key

1. Press the tailgate unlock button on the remote key to unlock (but not open) the tailgate. See Remote key and key blade for more information.

> The alarm indicator light on the dashboard will go out to indicate that the alarm is not monitoring the entire vehicle.

Note

- If the doors are locked while the tailgate is open, the tailgate will remain unlocked until the vehicle is relocked by pressing the Lock button on the remote key.
- On keyless drive vehicles, the gear selector must be in the Park (P) position, all doors and the tailgate must be closed and the ignition must be switched off before the vehicle can be locked.

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Unlocking the tailgate from the driver's seat



1. Press the button on the lighting panel (1) to unlock (but not open) the tailgate.

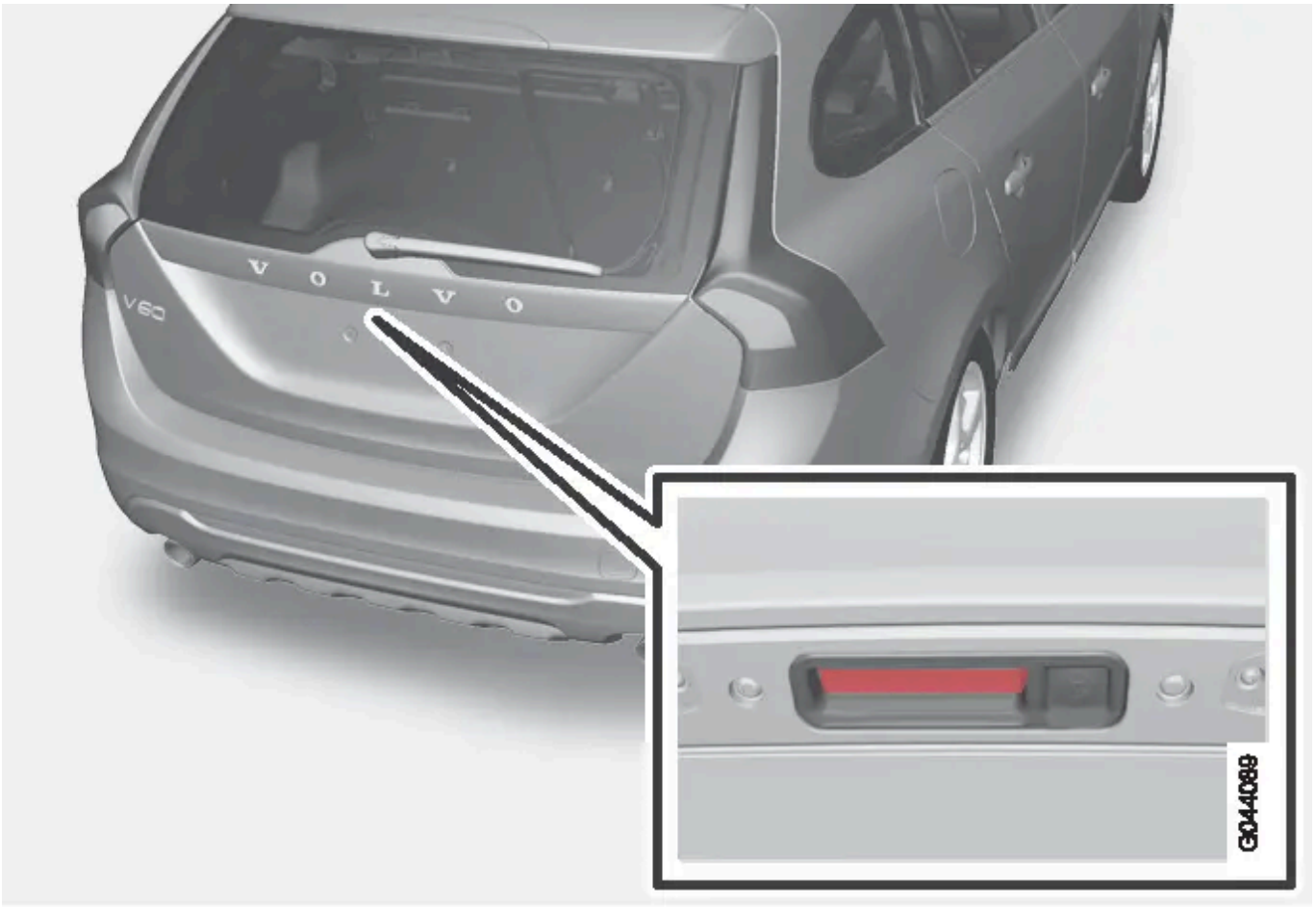
> **Note**
>
> The taillights will illuminate automatically for a short period when the tailgate has been opened.

Locking the tailgate with the remote key

Press the lock button ( ) on the remote. See also Remote key and key blade.

The alarm indicator on the dashboard will begin flashing to show that the vehicle is locked and that the alarm has been armed.

Opening that tailgate manually



The tailgate is held closed by an electronic locking mechanism. To open:

1. Press lightly on the wider rubberized plate under the handle to release the lock.
2. Lift the handle to open the tailgate.

> **Important**
>
> - When pressing the rubberized plate, only light pressure is necessary to release the tailgate's electronic locking mechanism.
> - When opening the tailgate, pull it up using the handle. Too much pressure on the rubberized plate can damage its electrical connections.

5.4.3. Locking/unlocking – from the outside

The remote key is used to lock/unlock all of the doors and the tailgate at the same time. Different settings for unlocking the vehicle can be selected, see .
Before the vehicle can be locked from the outside with the remote key, the driver's door must be closed. If the tailgate or any other door is open, it will be locked and the alarm will be armed.

> **Note**
>
> Be sure the remote key is outside of the vehicle before the other doors/tailgate are closed to help avoid locking the remote inside the vehicle.

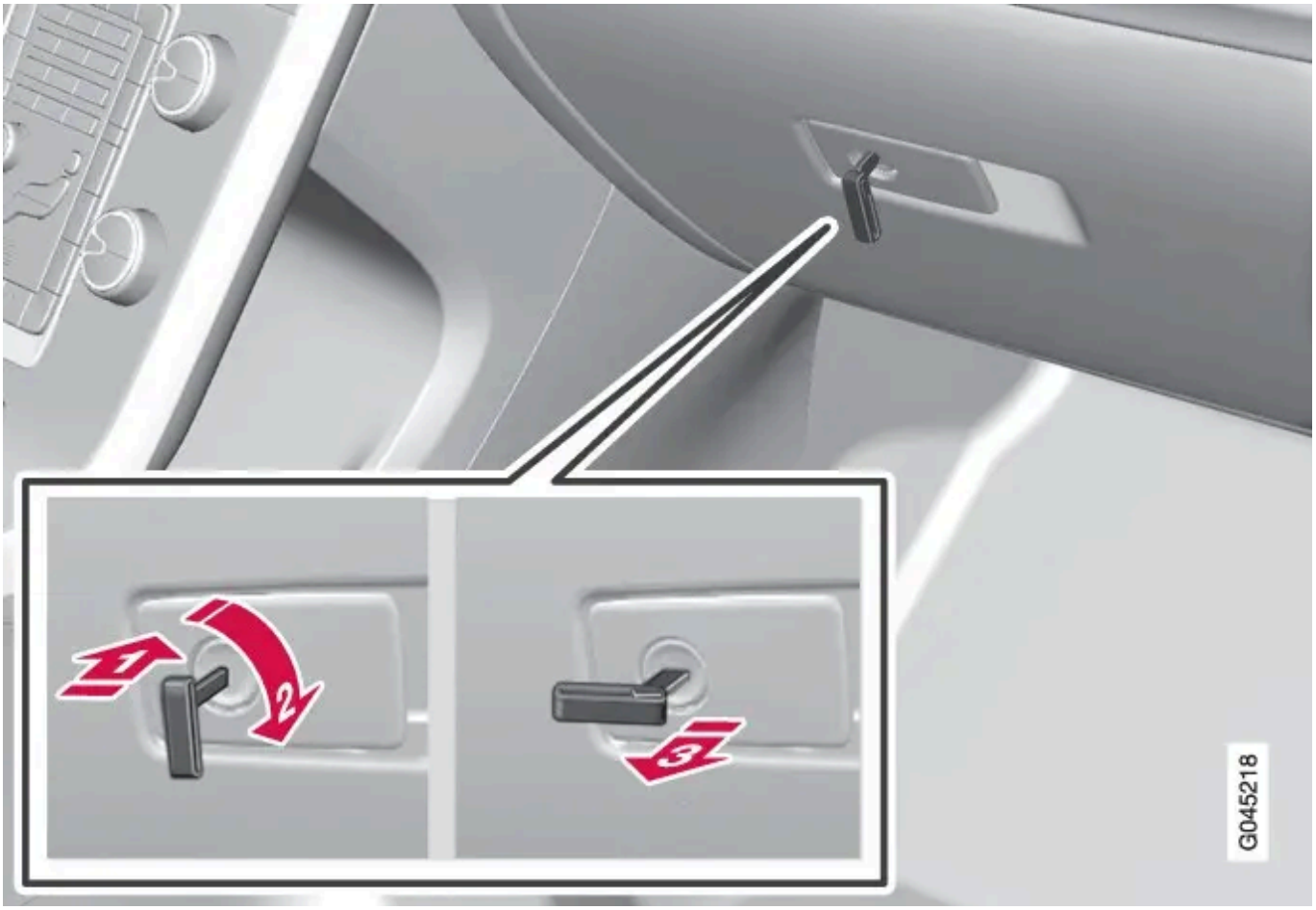
If the vehicle is equipped with the optional keyless drive system, all doors/tailgate must be closed before the vehicle can be locked.

The first press on the unlock button unlocks the driver's door and a second press unlocks the other doors and the tailgate (see also remote key and key blade). This setting can be changed in the menu system. See MY CAR for a description.

If the locks repeatedly do not react when the unlock button is pressed, it may be necessary to replace the battery in the remote, see Remote key – replacing the battery. In this case the vehicle can be unlocked with the detachable key blade.

5.4.4. Locking/unlocking – glove compartment

The glove compartment can only be locked and unlocked using the detachable key blade in the remote key. For information on removing the key blade from the remote key, see .



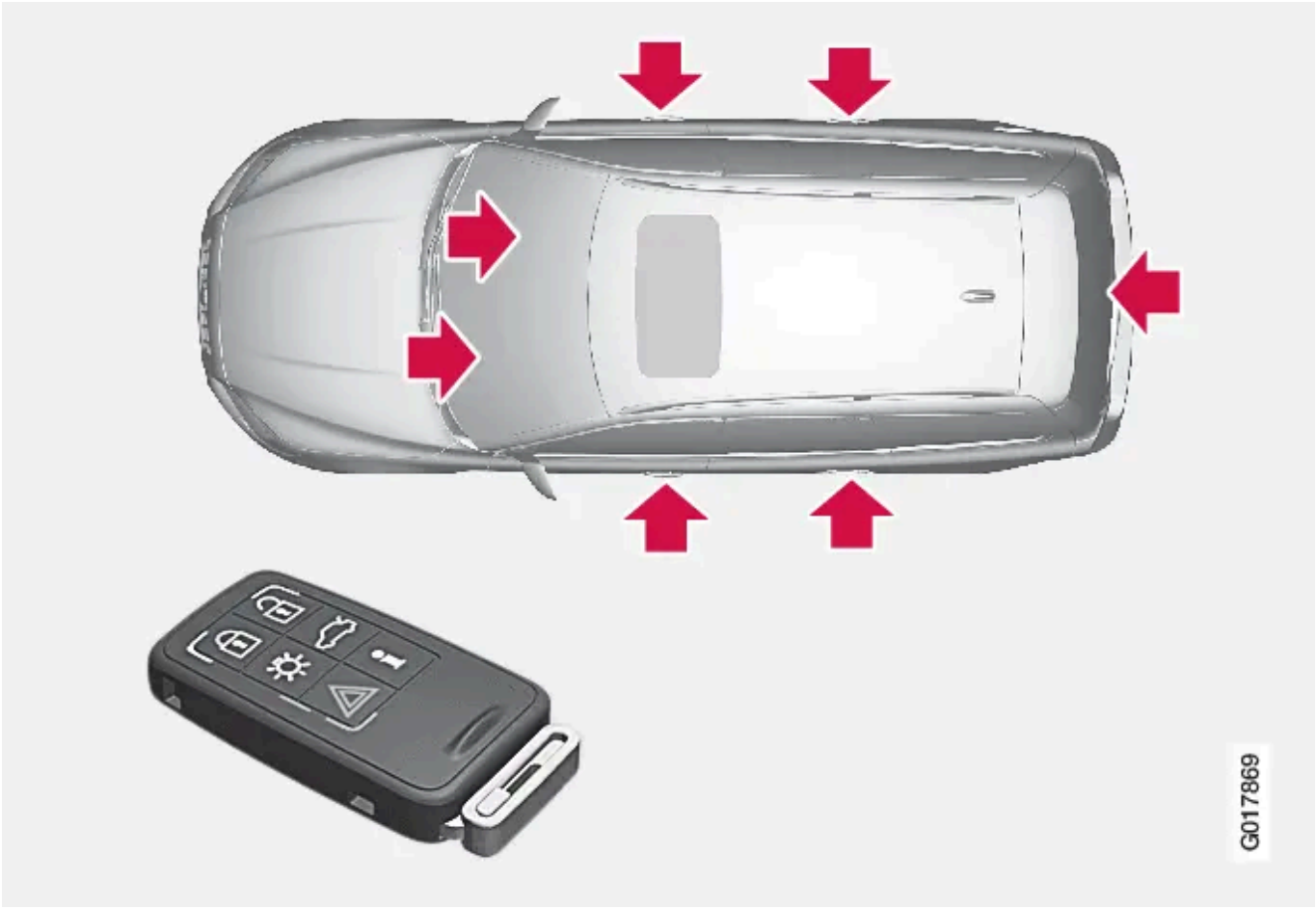
1. 1
   Insert the key blade in the glove compartment lock.

2. 2
   Turn the key blade 90 degrees clockwise.

3. 3
   Remove the key blade from the lock.

5.4.5. Private locking

By utilizing the remote key with the key blade removed, the private locking feature enables you to block access to the glove compartment and disconnect the tailgate from the central locking system for e.g., valet parking or when the vehicle is brought to the retailer for service.





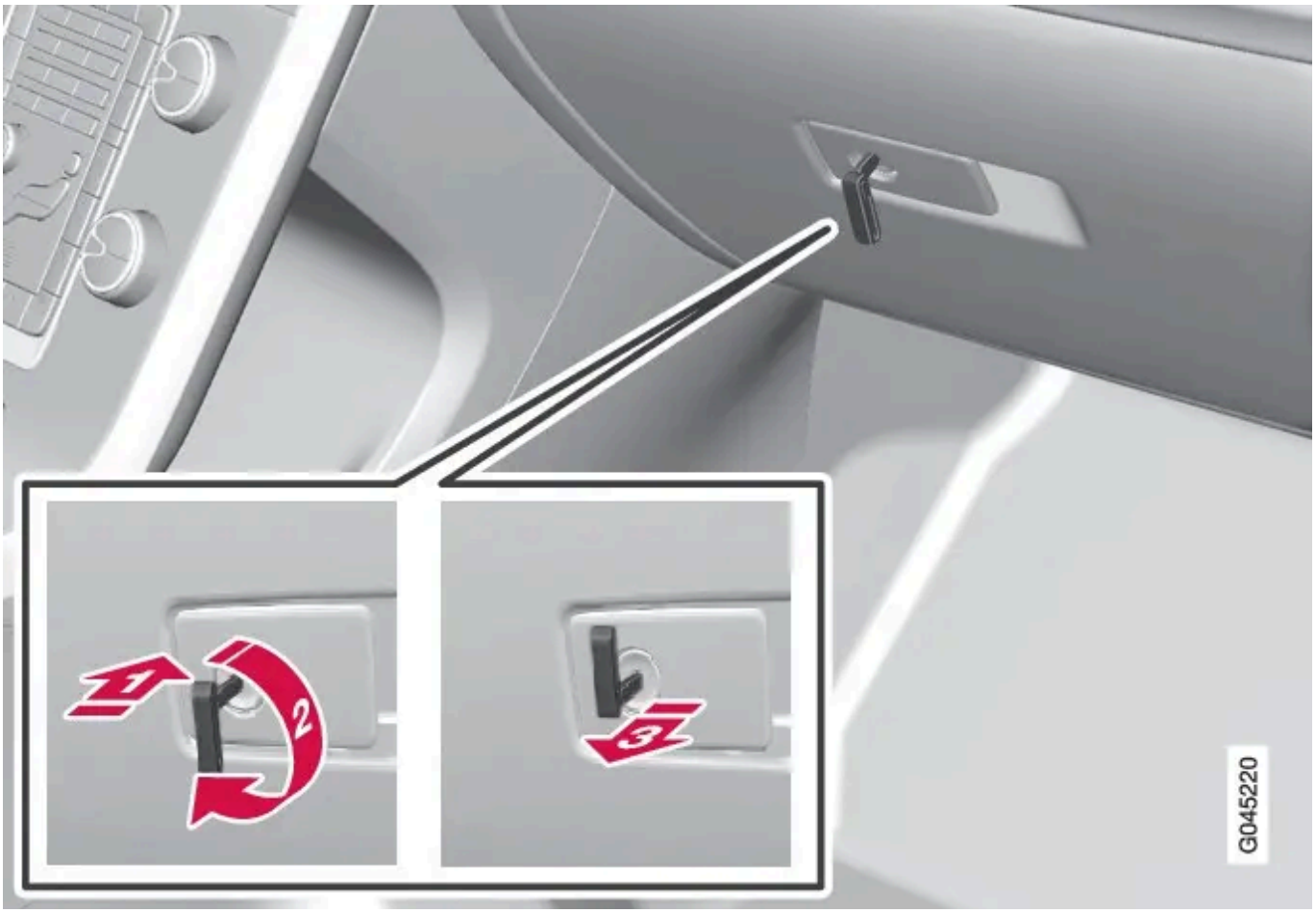
Locking/unlocking points with private locking activated.

With the private locking function activated:

- The vehicle's doors can be locked or unlocked with the remote
- The engine can be started
- The glove compartment cannot be unlocked
- The tailgate cannot be unlocked or opened with the remote
- The rear floor hatch cannot be opened

> **Note**
>
> The floor hatch must be closed completely before the tailgate can be closed.

Activating the private locking function



1. 1
   Insert the key blade in the glove compartment lock.

2. 2
   Turn the key blade180 degrees clockwise.

3. 3
   Remove the key blade from the lock. A message will appear in the instrument panel display.

Deactivating the private locking function

Turn the key blade 180 degrees counterclockwise in the glove compartment lock to deactivate private locking.

For information on locking the glove compartment normally, without activating the private locking function, see Locking/unlocking the glove compartment.

5.4.6. Locking/unlocking confirmation

Settings can be made in the menu system for audible and visual confirmation when the vehicle has been locked or unlocked. With these functions activated, the following will occur when the vehicle is locked/unlocked:

Locking confirmation

- The turn signals flash once, an audible signal sounds and the door mirrors will fold* in.

Confirmation will only be given when all doors and the tailgate are properly closed and locked.

> **Note**
>
> If you do not receive confirmation when locking the vehicle, check whether a door or the tailgate is ajar, or if this feature has been turned off in the menu.

Unlocking confirmation

- The turn signals will flash twice and the door mirrors will fold* out.

Making a setting

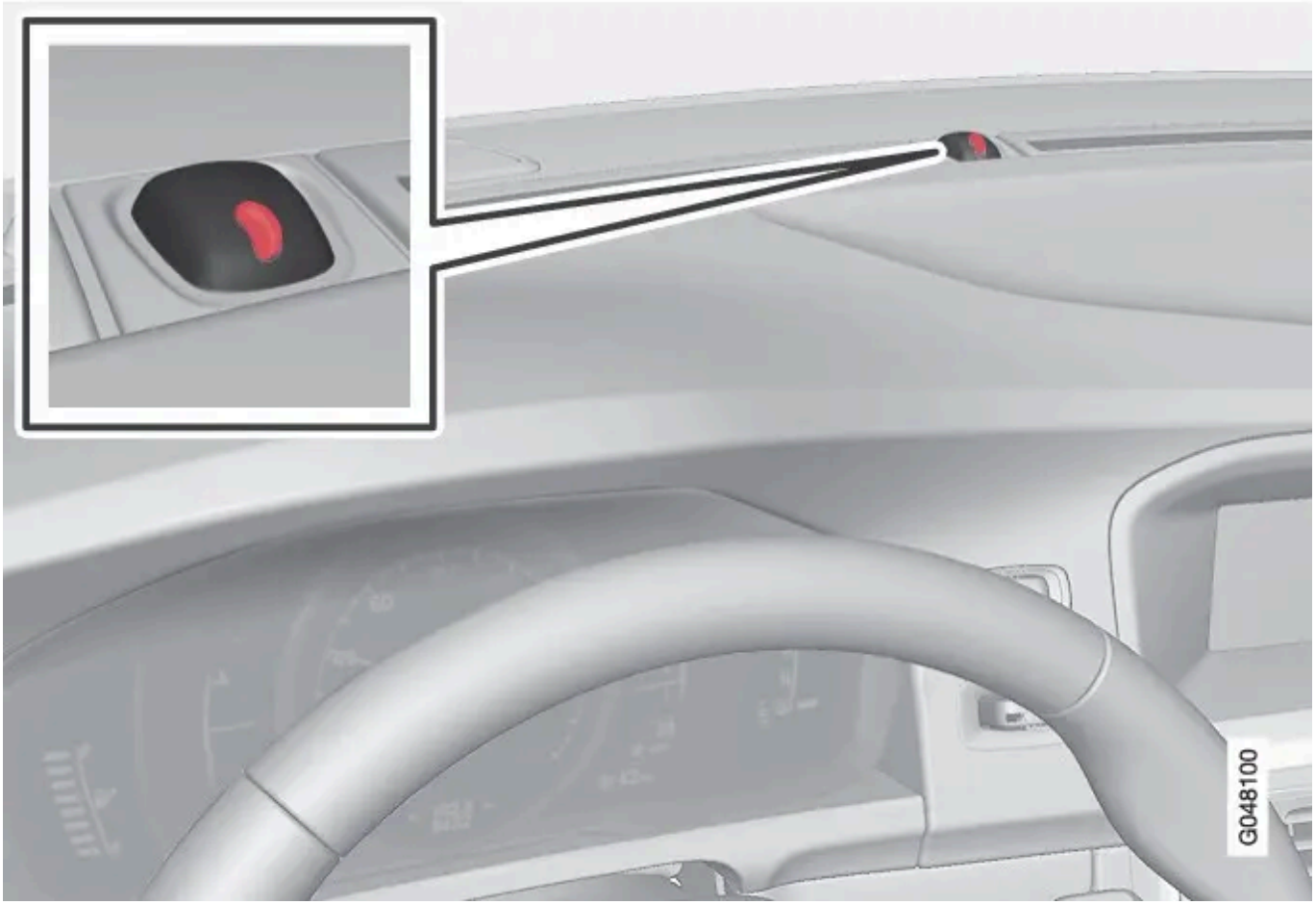
Different alternatives for locking/unlocking confirmation can be selected in the menus by pressing MY CAR on the center console control panel.

- To activate visual confirmation: go to **Settings** → **Car settings** → **Light settings** and select **Door lock confirmation light** and/or **Unlock confirmation light** by pressing OK/MENU.
- To activate audible confirmation: go to **Settings** → **Car settings** → **Lock settings** and select **Audible confirmation** by pressing OK/MENU.

For a description of the menu system, see My Car – introduction.

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Lock indicator



Lock/alarm indicator light

A flashing indicator light at the base of the windshield verifies that the vehicle is locked.

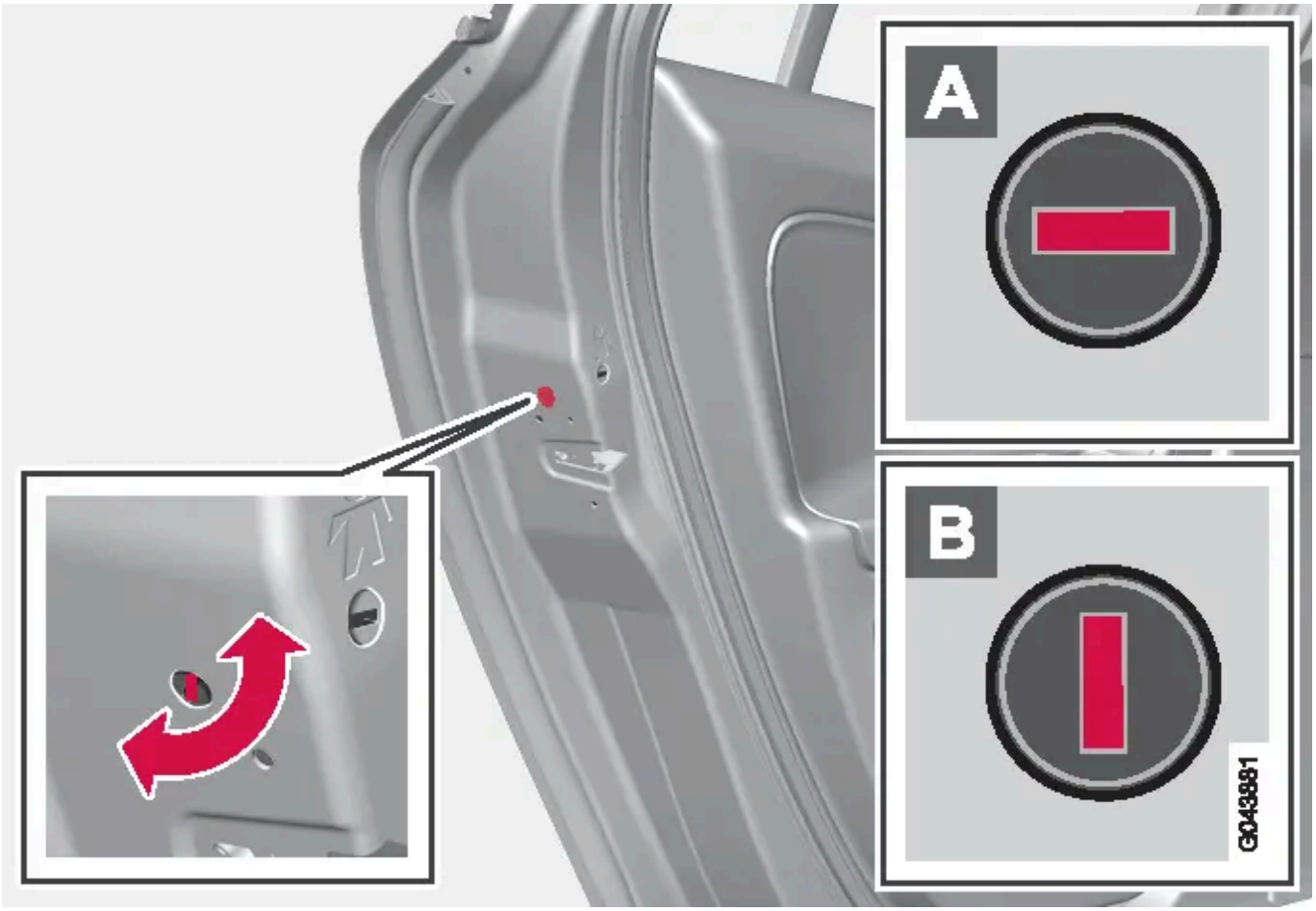
* Option/accessory.

5.4.7. Manual locking

In certain situations (e.g., if there is no electrical current in the vehicle), the doors can be locked manually.

The detachable key blade can be used in the lock cylinder in the driver's door to lock that door.

The other doors do not have lock cylinders and the slot on the rear edge of each door has to be used to lock it. This will lock the door from the outside but it can still be opened from inside the vehicle. To do so:



Manually locking a door

1. Insert the key blade into the slot and turn it 90 degrees to lock that door (the slot in a particular door locks that door only).

A In the horizontal position, the door cannot be opened from the outside.

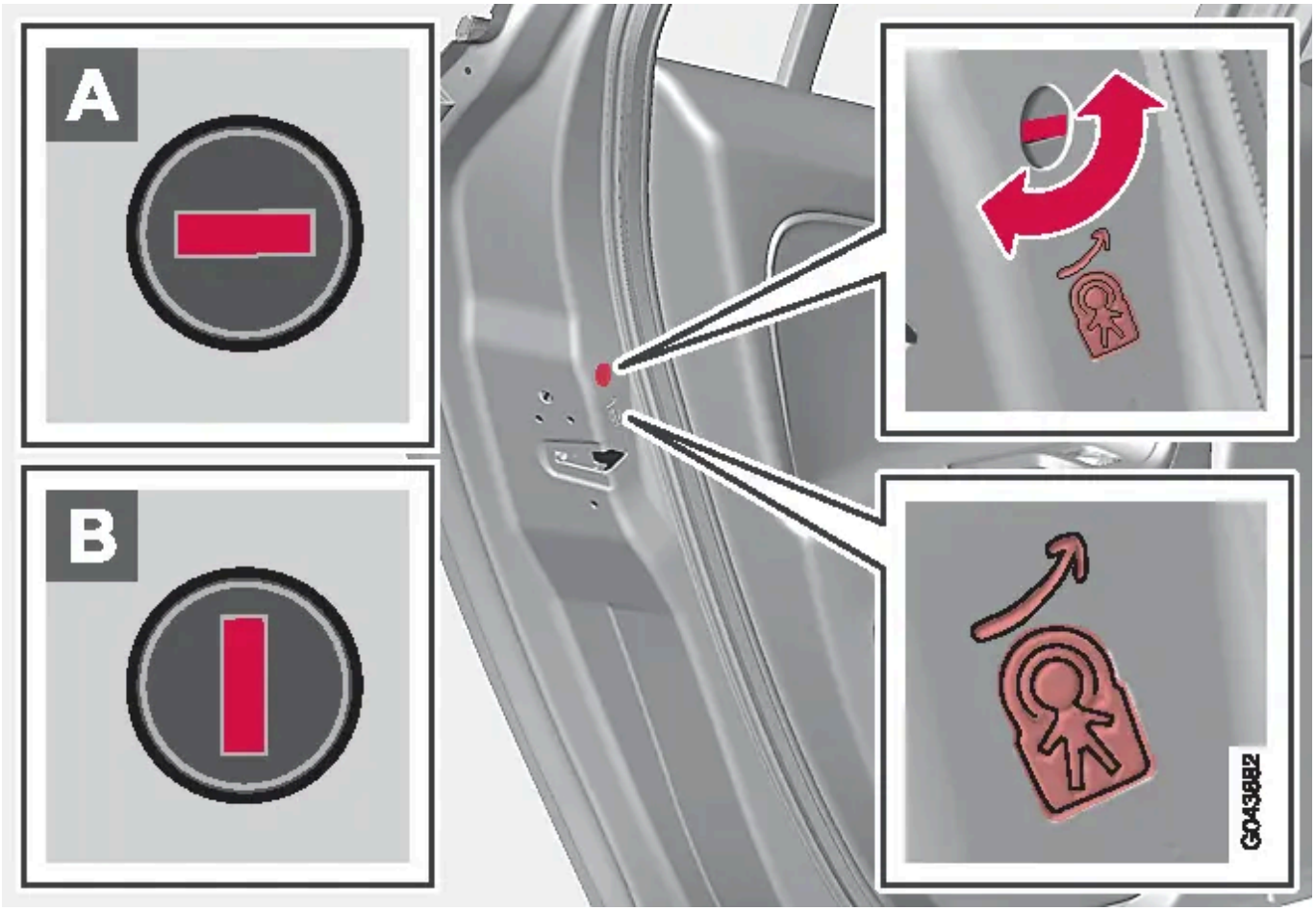
B In the vertical position, the door can be opened from the inside and the outside.

> **Note**
>
> If the manual child safety lock is activated for a rear side door and that door is also locked manually, the door cannot be opened from the outside or inside. The door can only be unlocked with the remote key or the central locking button.

5.4.8. Child safety locks

Power child safety locks* help prevent children from inadvertently opening one of the rear doors or windows from inside the vehicle.

Manual child safety locks



Child safety locks – rear doors

The controls are located on the rear door jambs. Use the remote control's key blade or a screwdriver to adjust these controls.

A The rear doors can only be opened from the outside when the slot is in the horizontal position.

B The rear doors can be opened from the inside when the slot is in the vertical position.

Power child safety locks and disengaging rear door windows *



Driver's door control panel

The power child safety locks can be activated/deactivated when the remote key is in mode I or higher. Activation/deactivation can be done up to 2 minutes after the engine has been switched off (if no door has been opened).

To activate the child safety locks:

1. Put the ignition in mode **I** or higher, or start the engine.
2. Press the button on the driver's door control panel (see the illustration).

> **Rear child locks Activated** will be displayed in the instrument panel and the indicator light in the button will illuminate when the function is activated.

When the child safety locks are activated:

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

The child safety locks' current setting is stored when the engine is switched off. If these locks were activated when the engine was switched off, they will also be active when the engine is restarted.

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* Option/accessory.

5.5. Remote key

5.5.1. Engine Remote Start (ERS)* – starting the engine

ERS is a feature that makes it possible to remotely start the engine using the remote key to cool or heat the passenger compartment before driving.



Remote key buttons used for remote engine start

1 Lock

2 Approach lighting

Starting the engine

The maximum range for ERS is approximately 100 ft (30 meters) if the view of the vehicle is unobstructed. **The vehicle must also be locked.**

To start the engine:

- Press the lock button (1) briefly.
- Immediately press the approach lighting button (2) for approximately 2 seconds.

If the requirements for ERS have been met, the following will occur:

- The turn signals will flash several times.
- The engine will start.
- The turn signals will illuminate for 3 seconds to indicate that the engine has started.

After the engine has started, the vehicle remains locked but the alarm is disarmed.

Active functions

When the engine is started with ERS, the following functions are activated:

- The climate control system
- The infotainment system.

Deactivated functions

When the engine is started with ERS, the following functions are deactivated:

- Headlights
- Parking lights
- License plate lights
- Windshield wipers

* Option/accessory.

5.5.2. Ignition modes

The vehicle's ignition has 3 modes: **0**, **I**, and **II** that can be used without starting the engine. The following table shows examples of which functions are available in the respective modes.

> **Note**
>
> To access ignition modes I or II without starting the engine, the brake pedal must **not** be depressed.

Mode	Function
0	The odometer, clock and temperature gauge are illuminated. Power seats* can be adjusted and the infotainment system can be used for a limited time (to minimize battery drain, see Infotainment).

Mode	Function
I	The Moonroof*, power windows,12-volt sockets in the passenger compartment, navigation system*, climate system blower, windshield wipers can be used.
II	The headlights/taillights illuminate. Warning/indicator lights illuminate for 5 seconds. Other systems are activated. However, the heated seats* and heated rear window function can only be activated when the engine is running. **Mode II should only be used for very short periods to help avoid draining the battery.**

Ignition modes

Ignition mode 0

1. The vehicle is unlocked.

Ignition mode I

1. With the remote key fully pressed into the ignition slot[1], press START/STOP ENGINE briefly.

Ignition mode II

1. With the remote key fully pressed into the ignition slot[1], press START/STOP ENGINE for approximately 2 seconds.

Returning to mode 0

To return to mode **0** from mode **II** or **I**, press START/STOP ENGINE briefly.

Starting and stopping the engine

See Starting the engine and Switching off the engine for information on starting the engine and switching it off.

Emergency towing

See Towing the vehicle for important information about the remote key when the vehicle is being towed.

* Option/accessory.

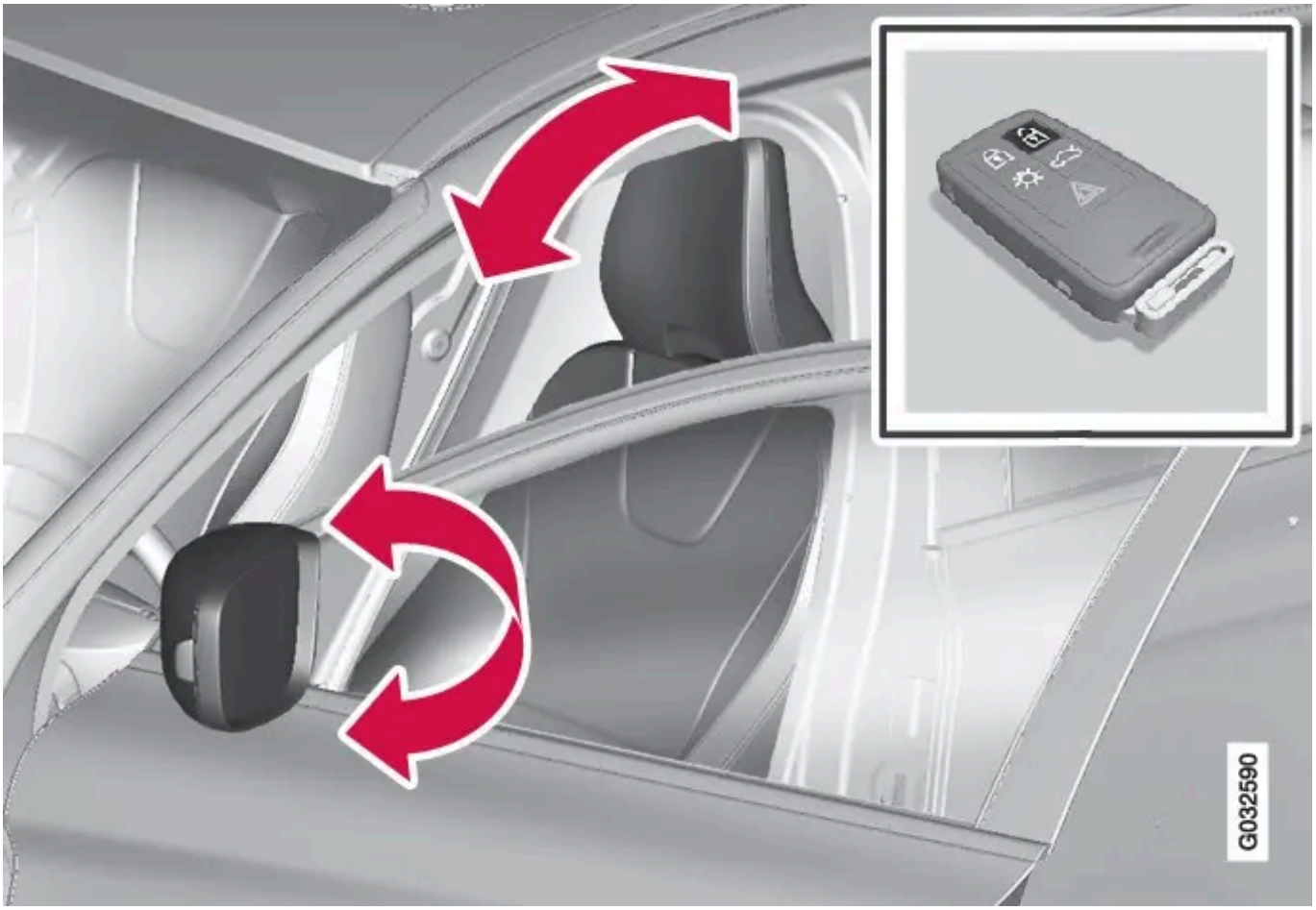
[1] Not necessary in vehicles with the optional keyless drive.

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

Each remote key has a memory that enables it to store (remember) the position of the power driver's seat and door mirrors when the vehicle is locked with that remote key.

Remote key memory and the power driver's seat* and door mirrors [1]





The key memory has to be activated **for each of the remote keys used in the vehicle** as follows:

1. Insert a remote key in the ignition slot.
2. Go into the MY CAR menu and go to **Settings → Car settings → Car key memory**
3. To activate the remote key memory feature, press ENTER (check the box).

> The remote key is now ready to store the position of the power driver's seat and door mirrors.

Repeat this procedure for each of the vehicle's remote keys.

See My Car – introduction for a description of the menu system.

Storing the positions of the power driver's seat/mirrors in the remote key

1. Move the seat and door mirrors to the desired position using the seat and mirror adjustment controls.
2. Exit the vehicle and lock the doors with the remote key (or close the driver's door and press the lock button on the door handle with the remote key in your possession on vehicles with the optional keyless drive).

> The positions of the power driver's seat and door mirrors are now stored in the remote key's memory.

> **Note**
>
> The remote key's memory feature and the power driver's seat memory function (the settings made using the buttons on the side of the seat, see the section "Power seat memory function" in Front seats – power seat) work independently of each other.

Returning the seat/mirrors to the stored positions

To move the seat and door mirrors to the position stored in the remote key:

1. Unlock the driver's door with the **same** remote key (the one used to lock the doors). For models equipped with the optional keyless drive, you must have the same remote key in your possession.
2. Open the driver's door within 2 minutes.

The driver's seat and door mirrors will automatically move to the position in which you left them (if the vehicle has been unlocked with one of the other keys and new seat/mirror adjustments have been made).

Note

- The seat will move to this position even if someone else has moved it to a different position and locked the vehicle with a **different** remote key.
- This feature will work in the same way with all of the remote keys that you use with your vehicle.

Emergency stop

Warning

- Because the driver's seat can be adjusted with the ignition off, children should never be left unattended in the vehicle.
- Movement of the seat can be STOPPED at any time by pressing any button on the power seat control panel.
- Do not adjust the seat while driving. The seat should be adjusted so that the brake pedal can be depressed fully. In addition, position the seat as far rearward as comfort and control allow.
- The seat rails on the floor must not be obstructed in any way when the seat is in motion.

* Option/accessory.

[1] This information also applies to vehicles with the optional keyless drive.

5.5.4. Remote key – replacing the battery

The remote key can be opened if the battery needs to be replaced.

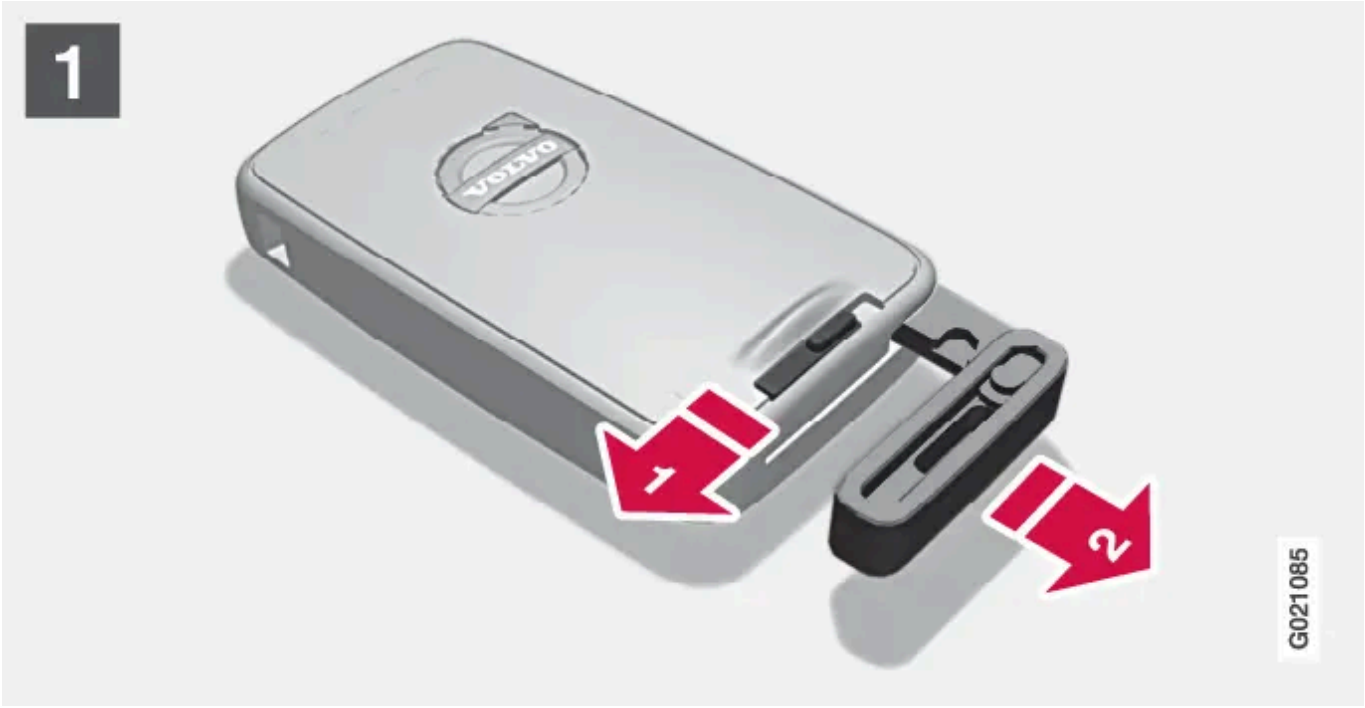
The battery should be replaced if:

- The information symbol illuminates and **Low battery in remote control. Please change batteries.** is shown in the display and/or
- if the locks do not react after several attempts to unlock or lock the vehicle.

Note

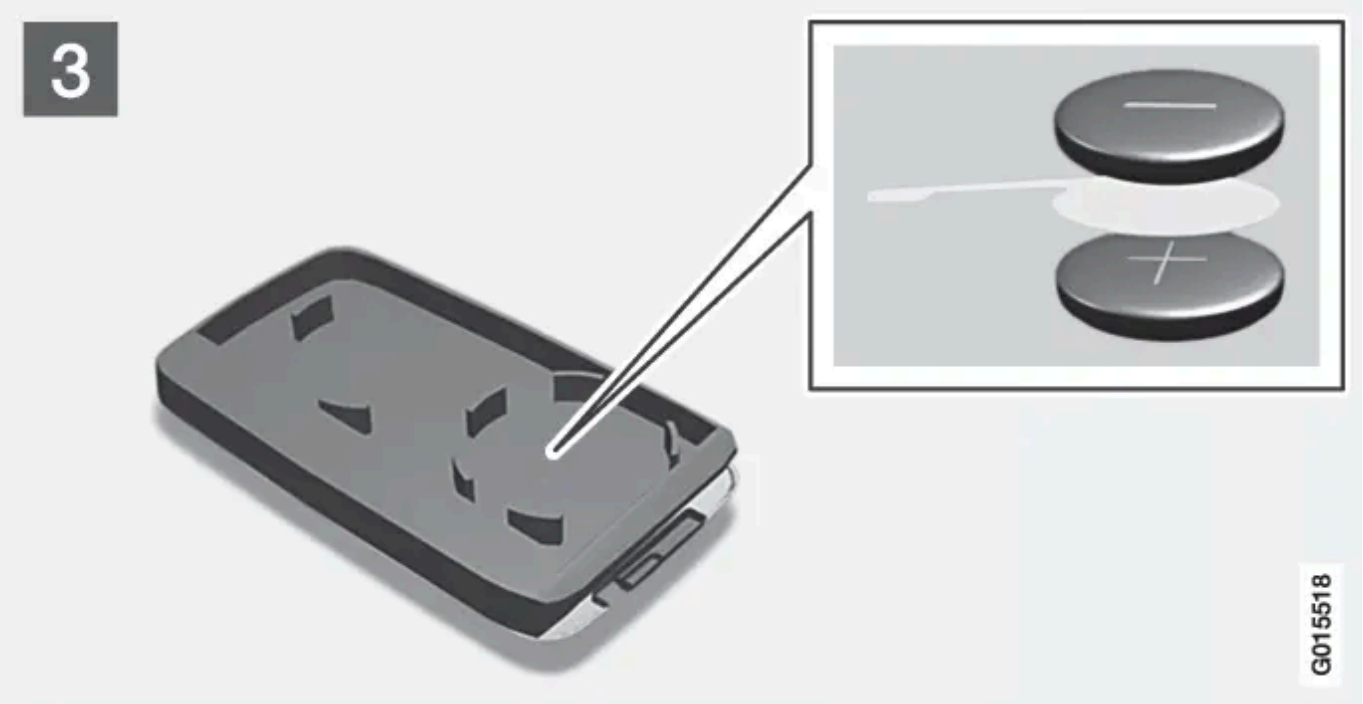
The remote key's range is normally approximately 60 ft (20 m) from the vehicle.

Opening the remote key





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The remote key has **one** CR 2430, 3V battery only

To open the remote key

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

2. 2 Pull the key blade straight out of the remote key.

3. 2
   3 Insert a small screwdriver in the hole behind the spring loaded catch and carefully pry up the cover. Turn the remote key with the buttons upward so that the battery does not fall out when the cover is removed.

Inserting a new battery

> ! **Important**
>
> When handling batteries, avoid touching their contact surfaces as this could result in poor battery function in the remote key.

Note the position of the battery's (+) or (–) sides.

1. Use a screwdriver to pry out the old battery.

2. Insert a new one with the (+) side downward.

1. Press the remote key's cover into place.
2. Hold the remote key with the slot for the key blade up.
3. Carefully slide the key blade into its groove.
4. Gently press the key blade in the groove until it clicks into place.

> **Note**
>
> Volvo recommends that the batteries used in the remote control meet the UN Manual of Test and Criteria, Part III, sub-section 38.3.
>
> Batteries installed in the key from the factory and batteries exchanged by an authorized Volvo workshop fulfill the above criteria.
>
> Old batteries should be disposed of properly at a recycling center or at your Volvo retailer.

5.5.5. Remote key – range

The remote key has a range of approximately 60 ft. (20 m) from the vehicle.

> **Note**
>
> Buildings or other obstacles may interfere with the function of the remote key. The vehicle can also be locked or unlocked with the key blade, see Alarm-related functions.

If the remote key is removed from the vehicle while the engine is running or if the ignition is in mode I or II and all of the doors are closed, a message will appear in the instrument panel display and there will be an audible signal.

When the remote key is returned to the vehicle, the message will be erased and the audible signal will stop after one of the following has been done:

- The remote key is inserted in the ignition slot
- The vehicle's speed exceeds 20 mph (30 km/h)
- The OK button on the left steering wheel lever is pressed

5.5.6. Remote key – loss

If either of the remote keys is lost, the other should be taken with the vehicle to a Volvo retailer. As an anti-theft measure, the code of the lost remote key must be erased from the system.

> **Note**
>
> Additional or duplicate remote control keys can be obtained from any authorized Volvo retailer.
>
> You can also obtain additional or duplicate remote control keys from certain independent repair facilities and locksmiths that are qualified to make remote control keys. Each key must be programmed to work with your vehicle.
>
> **California Only:**
>
> A list of independent repair facilities and/or locksmiths known to Volvo that can cut and code replacement keys can be found:
>
> - on the Volvo website at http://www.volvocars.com/us/keys
> - by calling Volvo Customer Care at 1-800-458-1552

The number of registered keys for the vehicle can be found by pressing MY CAR and going into **Settings → Information → Number of keys**. For a description of the menu system, see My Car – introduction.

USA-5WK49264

FCC ID:KR55WK49264 + Siemens VDO 5WK49236

FCC ID:KR55WK49236, 5WK49266

FCC ID:KR55WK49266 + Siemens VDO 5WK49233

FCC ID:KR55WK49233

This device complies with part 15 of the FCC rules and RSS-210. Operation is subject to the following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Canada-5WK49264

IC:267T-5WK49264 + Siemens VDO 5WK49236

IC:267T-5WK49236, 5WK49266

IC:267T-5WK49266 + Siemens VDO 5WK49233

IC:267T-5WK49233

Operation is subject to the following conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

5.5.7. Remote key – functions

The remote key is used e.g., to unlock the doors and start the engine.



Remote key

Lock

Unlock

Approach lighting

Tailgate unlock

Panic alarm

Buttons on the remote

Lock – Press the Lock button on the remote once to lock all doors and the tailgate. The turn signals will flash once to confirm locking.

Unlock – Press the Unlock button on the remote once to unlock the driver's door.

After a short pause, press the Unlock button a second time within 10 seconds to unlock the other doors and the tailgate.

This function can be changed so that all doors unlock at the same time by pressing My Car and going to **Settings → Car settings → Lock settings → Change doors unlock setting**. For a description of the menu system, see My Car – introduction.

Approach lighting – As you approach the vehicle, press the button on the remote key to light the interior lighting, parking lights, license plate lighting and the lights in the door mirrors*.

These lights will switch off automatically after 30, 60 or 90 seconds. For a description of the menu system, see My Car – introduction.

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Unlock tailgate – Press the button twice within several seconds to disarm the alarm system (the alarm indicator light on the dashboard will go out), and unlock only the tailgate.

> **Note**
>
> As an added safety precaution, the parking lights will come on automatically for a short period when the tailgate has been opened.

After closing, the tailgate will not automatically relock. Press Lock to relock it and rearm the alarm.

For information on opening the tailgate from the passenger compartment, see Locking/unlocking – tailgate

Panic alarm – This button can be used to attract attention during emergency situations.

To activate the panic alarm, press and hold this button for at least 3 seconds or press it twice within 3 seconds. The turn signals and horn will be activated. The panic alarm will stop automatically after 2 minutes and 45 seconds.

To deactivate, wait approximately 5 seconds and press the button again.

The Panic alarm button will not unlock the vehicle.

* Option/accessory.

5.5.8. Engine Remote Start (ERS)* – introduction

ERS is a feature that makes it possible to remotely start the engine using the remote key to cool or heat the passenger compartment before driving.

The climate/ and infotainment systems will start using the same settings as when the engine was switched off.

When the engine is started using ERS, it will run for a maximum of 15 minutes before automatically switching off again. After 2 ERS starts, the engine must be started in the normal way before ERS can be used again.

> **Note**
>
> - Always adhere to applicable State, Province and/or Local laws regarding engine idling when using ERS.
> - The service life of the remote key's battery is affected by ERS use. If this feature is used frequently, the battery should be replaced once a year, see Remote key – replacing the battery.

Warning

Keep the following in mind before using ERS:

- The vehicle should be in view.
- The vehicle should be unoccupied.
- The vehicle must not be parked indoors or in an enclosed area. Exhaust fumes are harmful to the health.

* Option/accessory.

5.5.9. Engine Remote Start (ERS)* – switching off the engine

ERS is a feature that makes it possible to remotely start the engine using the remote key to cool or heat the passenger compartment before driving.

Any of the following will switch off the engine if it has been started with ERS:

- Pressing the lock button (1) or the unlock button (2) on the remote key
- Unlocking the vehicle
- Opening a door
- Depressing the accelerator or brake pedal
- Moving the gear selector from the **P** position
- If there are less than approx. 2.5 gallons (10 liters) of fuel in the tank
- More than 15 minutes have elapsed.

If the engine has been started with ERS and switches off, the turn signals will illuminate for 3 seconds.

Message in the instrument panel display

If ERS is interrupted, a text message will be displayed in the instrument panel.

* Option/accessory.

5.5.10. Locking/unlocking confirmation

Settings can be made in the menu system for audible and visual confirmation when the vehicle has been locked or unlocked. With these functions activated, the following will occur when the vehicle is locked/unlocked:

Locking confirmation

- The turn signals flash once, an audible signal sounds and the door mirrors will fold* in.

Confirmation will only be given when all doors and the tailgate are properly closed and locked.

> **Note**
>
> If you do not receive confirmation when locking the vehicle, check whether a door or the tailgate is ajar, or if this feature has been turned off in the menu.

Unlocking confirmation

- The turn signals will flash twice and the door mirrors will fold* out.

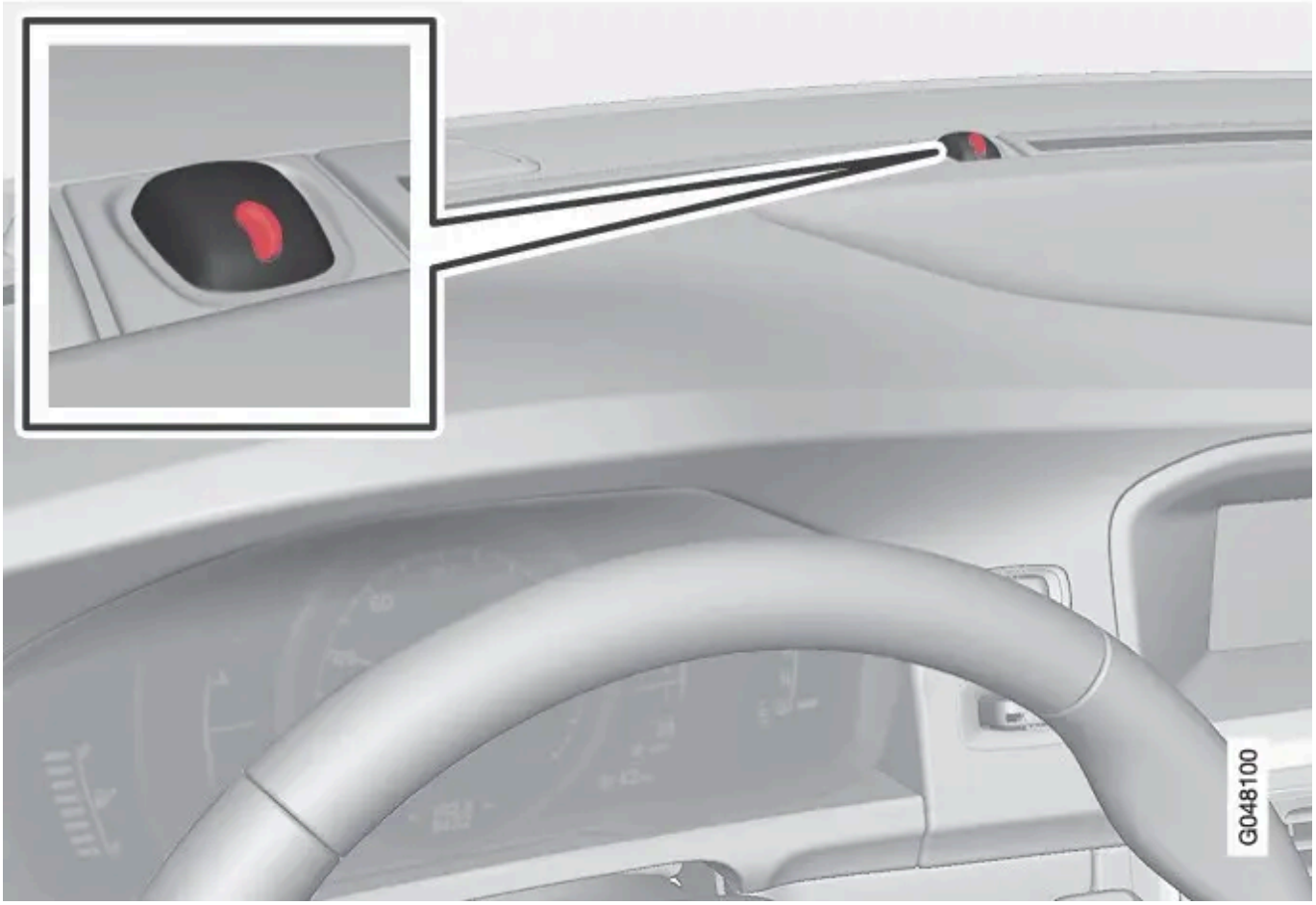
Making a setting

Different alternatives for locking/unlocking confirmation can be selected in the menus by pressing MY CAR on the center console control panel.

- To activate visual confirmation: go to **Settings** → **Car settings** → **Light settings** and select **Door lock confirmation light** and/or **Unlock confirmation light** by pressing OK/MENU.
- To activate audible confirmation: go to **Settings** → **Car settings** → **Lock settings** and select **Audible confirmation** by pressing OK/MENU.

For a description of the menu system, see My Car – introduction.

Lock indicator



Lock/alarm indicator light

A flashing indicator light at the base of the windshield verifies that the vehicle is locked.

* Option/accessory.

5.5.11. Remote key and key blade

Two remote keys are provided with your vehicle. They enable you to unlock the doors and tailgate, and also function as ignition keys to start the vehicle or operate electrical components. The remote keys contain detachable metal key blades for manually locking or unlocking the driver's door and the glove compartment. The visible ends of these key blades are unique to make it easier to identify "your" remote key. Up to six remotes can be programmed for use on the same vehicle.

Warning

Never leave the remote key in the ignition slot if children are to remain in the vehicle.

For more information on the various ignition modes, see Ignition modes.

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5.5.12. Key memory

The memory in the remote key makes it possible to store certain personal settings.



The position of the side door mirrors, power driver's seat* and the selected instrument panel theme[1] are stored in the remote keys when the vehicle **is locked**. The next time the driver's door is unlocked with the **same** remote key and the door is opened within **2 minutes**, the power driver's seat and side door mirrors will automatically move to the position that they were in when the doors were most recently locked with the same remote key. If the seat/mirrors have not been readjusted since the vehicle was locked, they will already be in the position stored in that particular remote key and will not move. For more information on this feature, see Front seats – power seat.

This feature can be activated or deactivated in the vehicle's menu by pressing MY CAR and going into **Settings** → **Car settings** → **Car key memory**. For a description of the menu system, see My Car – introduction.

Note

If the vehicle is locked with the remote key or is left unlocked for more than 30 minutes, the key memory function will be deactivated.

To reactivate the key's memory:

- Press the unlock button on the remote key.

For information regarding vehicles with the optional keyless drive, see Keyless drive– locking/unlocking.

* Option/accessory.

[1] Optional digital instrument panel only

5.5.13. Inserting/removing remote key

The remote key is used to start the engine or to use various electrical functions without starting the engine.

Inserting and removing the remote key



Ignition slot with remote key and START/STOP ENGINE button.

Inserting the remote key [1]

Holding the end of the remote key with the base of the key blade, insert the remote key into the ignition slot as shown in the illustration and press it in as far as possible.

> **Important**
>
> Foreign objects in the ignition slot can impair function or cause damage.

Removing the remote key

The remote key can be removed from the ignition slot by pulling it out.

[1] Not necessary in vehicles with the optional keyless drive.

5.6. Immobilizer (start inhibitor)

The immobilizer is a start inhibitor that helps prevent unauthorized persons from starting the engine.
Each of the keys supplied with your vehicle contains a coded transponder. The code in the key is transmitted to an antenna in the ignition slot where it is compared to the code stored in the start inhibitor module. The vehicle will start only with a properly coded key. If you misplace a key, take the other keys to a trained and qualified Volvo service technician for reprogramming as an anti-theft measure. The following messages (which may appear in the instrument panel display) are related to the immobilizer:

Message	Meaning
Insert car key	Remote key not recognized during start. Try to start the vehicle again.
Car key not found	Vehicles with keyless drive* only. Remote key not recognized during start. Try to start the vehicle again. If the problem continues, insert the remote key into the ignition slot and try to start the vehicle again.
Immobilizer Try start again	Remote key fault during start. Contact an authorized Volvo workshop.

Important

Never use force when inserting the remote key in the ignition slot. The vehicle cannot be started if the transponder is damaged.

USA–FCC ID: LTQWFS 125VO

This device complies with part 15 of the FCC rules. Operation is subject to the following condition: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause un-desired operation.

Canada–IC: 3659A-WFS125VO

Operation is subject to the following conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

For information on starting the vehicle, see Starting the engine.

* Option/accessory.

6. Driver support

6.1. Adaptive Cruise Control (ACC)

6.1.1. Adaptive Cruise Control – symbols and messages

ACC is an optional system designed to assist the driver by maintaining a set speed or a set time interval to the vehicle ahead. It is primarily intended for use on long straight roads in steady traffic, such as on highways and other main roads.

Symbols and messages in the display

A text message can be erased by pressing briefly on the OK button on the turn signal lever.

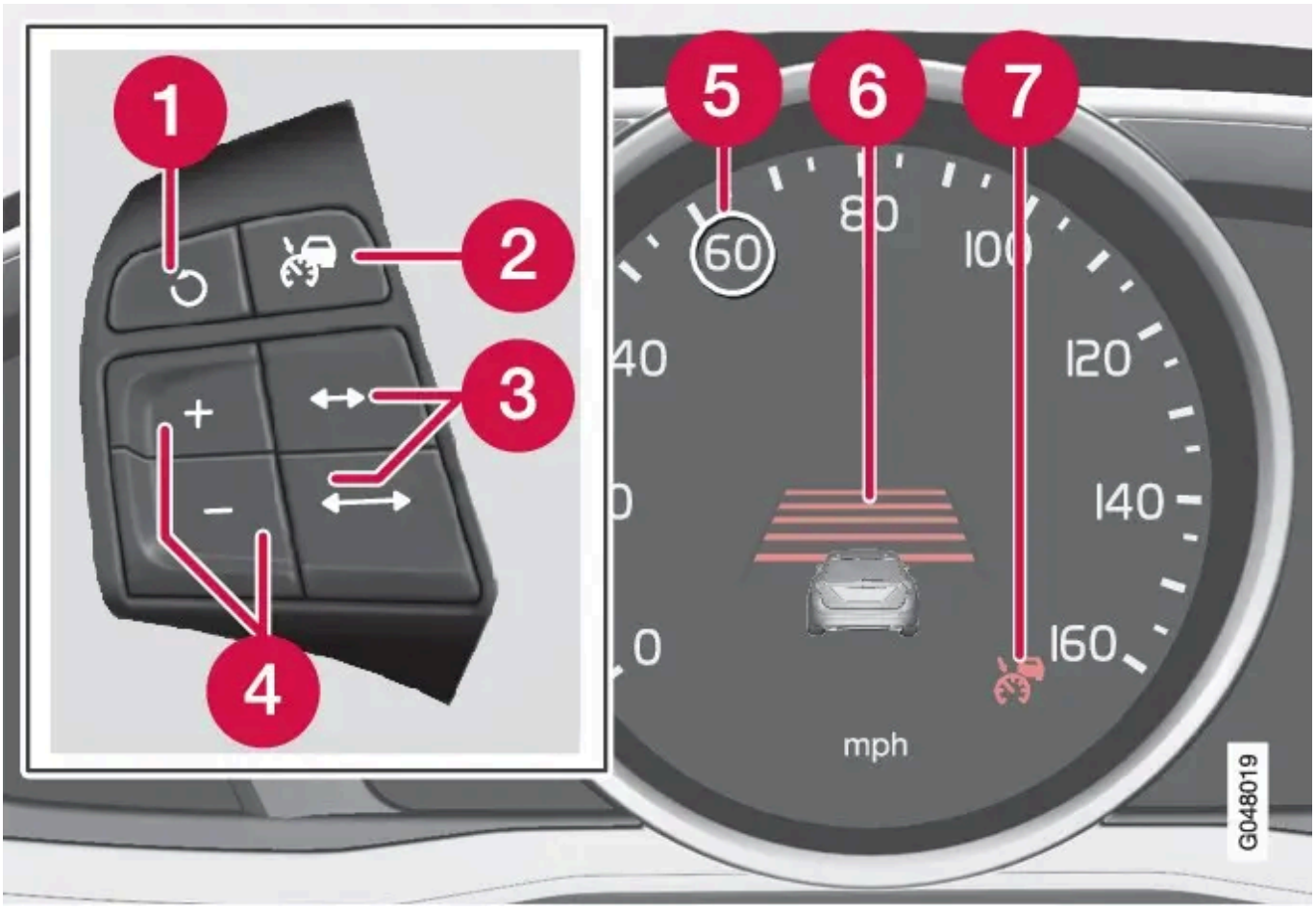
Symbol	Message	Description
	Green symbol	A speed has been set.
	White symbol	ACC is in standby mode but no speed has been set.
	-	Standard cruise control has been selected manually.
-	**Set ESC to Normal to enable Cruise**	ACC cannot be put in active mode until the stability system is switched normal operating mode, see Stability system – introduction for more information.
-	**Cruise control Cancelled**	ACC has been automatically switched off. The driver has to regulate the vehicle's speed/distance to the vehicle ahead.
-	**Cruise control Unavailable**	ACC cannot be put in active mode. This may be due to: • high brake temperature • the radar sensor is obstructed (by heavy rain, snow, etc.)
	**Radar blocked See manual**	ACC has been temporarily disconnected because the radar is obstructed in some way and cannot detect other vehicles. In this situation, the driver can switch to standard cruise control, see Toggling between ACC and CC (standard Cruise Control) See Adaptive Cruise Control – limitations for information on the radar sensor's limitations.
-	**Cruise control Service required**	ACC is not functioning. Contact a trained and qualified Volvo service technician.
-	**Press Brake To hold** + an audible signal	The vehicle is at a standstill and ACC will release the brakes before the parking brake engages to keep the vehicle stopped but a problem with the parking brake means that the vehicle may begin to roll. The driver will have to apply the brakes. The message will remain in the display and the audible signal will continue until the driver applies the brakes or presses the accelerator pedal.
-	**Below 30 km/h Only following**	This is displayed if you try to activate ACC at speeds below approx. 18 mph (30 km/h) without a vehicle ahead within range (approx. 100 ft/30 meters).

6.1.2. Adaptive Cruise Control – deactivating

ACC is an optional system designed to assist the driver by maintaining a set speed or a set time interval to the vehicle ahead. It is primarily intended for use on long straight roads in steady traffic, such as on highways and other main roads.

Standby mode (temporary deactivation)

To temporarily deactivate ACC (put it in standby mode):



Controls and display

1 Resume previous settings.

2 Off/On/Standby mode

- Press (2).

This symbol and the marking for the set speed with change colors from **green** to **white.**

The previously set speed and time interval are resumed by pressing (1).

Warning

The vehicle may accelerate quickly after has been pressed if its current speed is considerably lower than the set speed.

Standby mode due to action by the driver

ACC is temporarily deactivated and put in standby mode:

- if the brakes are applied
- if the gear selector is moved to N
- if the driver drives faster than the set speed for more than **1** minute.

In this happens, the driver will have to regulate the vehicle's speed.

> **Note**
>
> If the accelerator pedal is only depressed for a short time, such as when passing another vehicle, ACC is deactivated temporarily and is reactivated when the pedal is released.

Automatic standby mode

ACC is linked to other systems such as the stability system. If this system is not functioning properly, ACC will switch off automatically.

In the event of automatic deactivation, an audible signal will sound and the message **Cruise control Cancelled** is shown in the instrument panel. The driver must then intervene and adapt the vehicle's speed to the surrounding traffic and regulate the distance to the vehicle ahead.

An automatic switch to standby mode may be caused if:

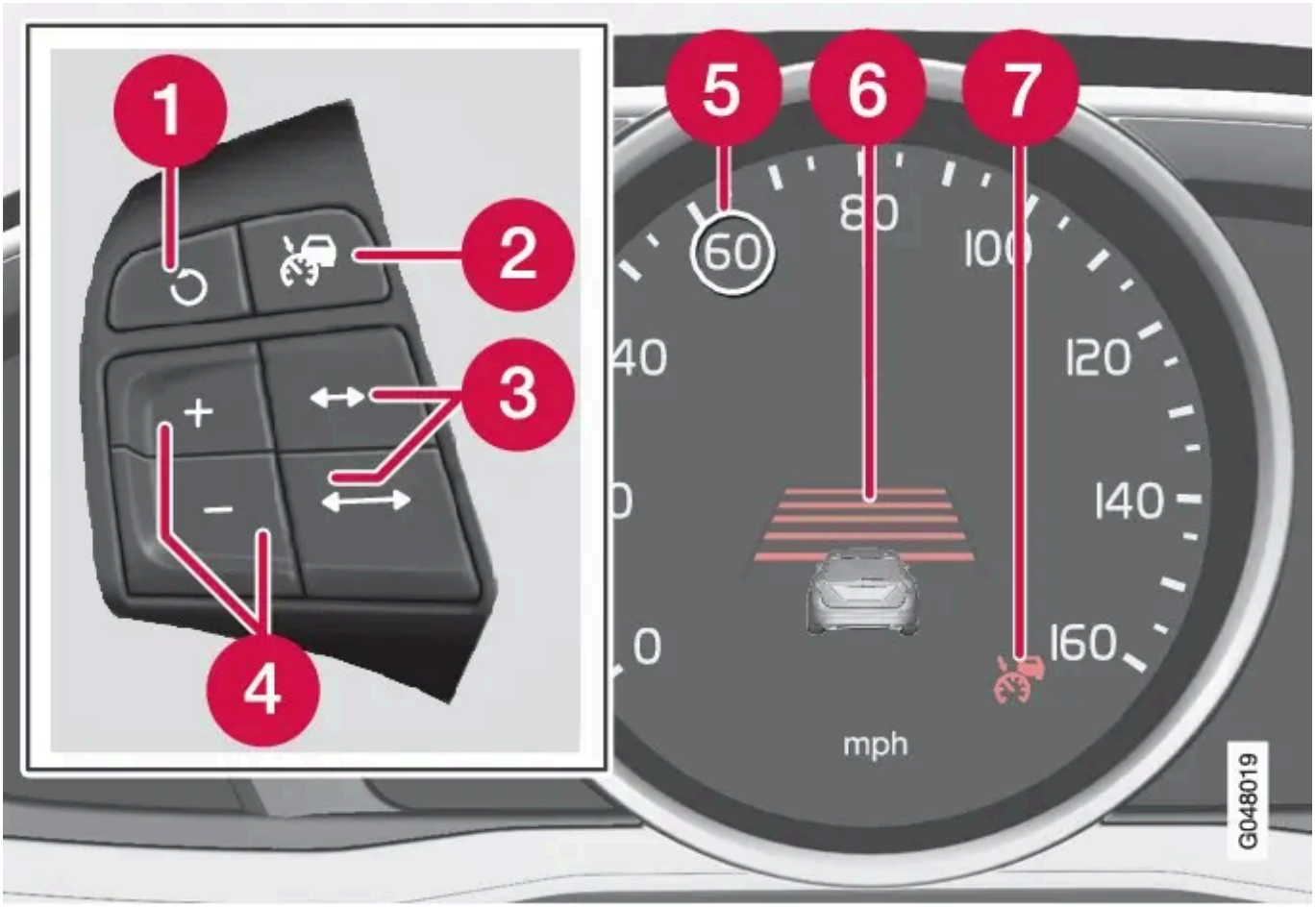
- engine speed (rpm) is too high/low
- The driver's door is opened
- The driver unbuckles his/her seat belt
- the vehicle's speed goes below 18 mph (30 km/h)
- the wheels lose traction
- brake temperature is high
- the radar sensor is obstructed by, for example, wet snow or rain.

Resuming the set speed

If ACC is in standby mode, it can be reactivated by pressing the button on the steering wheel keypad. The vehicle will return to the most recently set speed.

> **Warning**
>
> The vehicle may accelerate quickly after has been pressed if its current speed is considerably lower than the set speed.

Turning ACC off completely



Controls and display

1 Resume previous settings.

2 Off/On/Standby mode

- From standby mode, press (2) once.
- From active mode, press (2) twice.

The set speed and time interval are then cleared from the system's memory and cannot be resumed by pressing (1).

6.1.3. Adaptive Cruise Control – introduction

ACC is an optional system designed to assist the driver by maintaining a set speed or a set time interval to the vehicle ahead. It is primarily intended for use on long straight roads in steady traffic, such as on highways and other main roads.

When the driver has set the desired speed and the time interval to the vehicle ahead, ACC functions as follows:

- If there are no other vehicles in the lane ahead of you, your vehicle will travel at the set speed.

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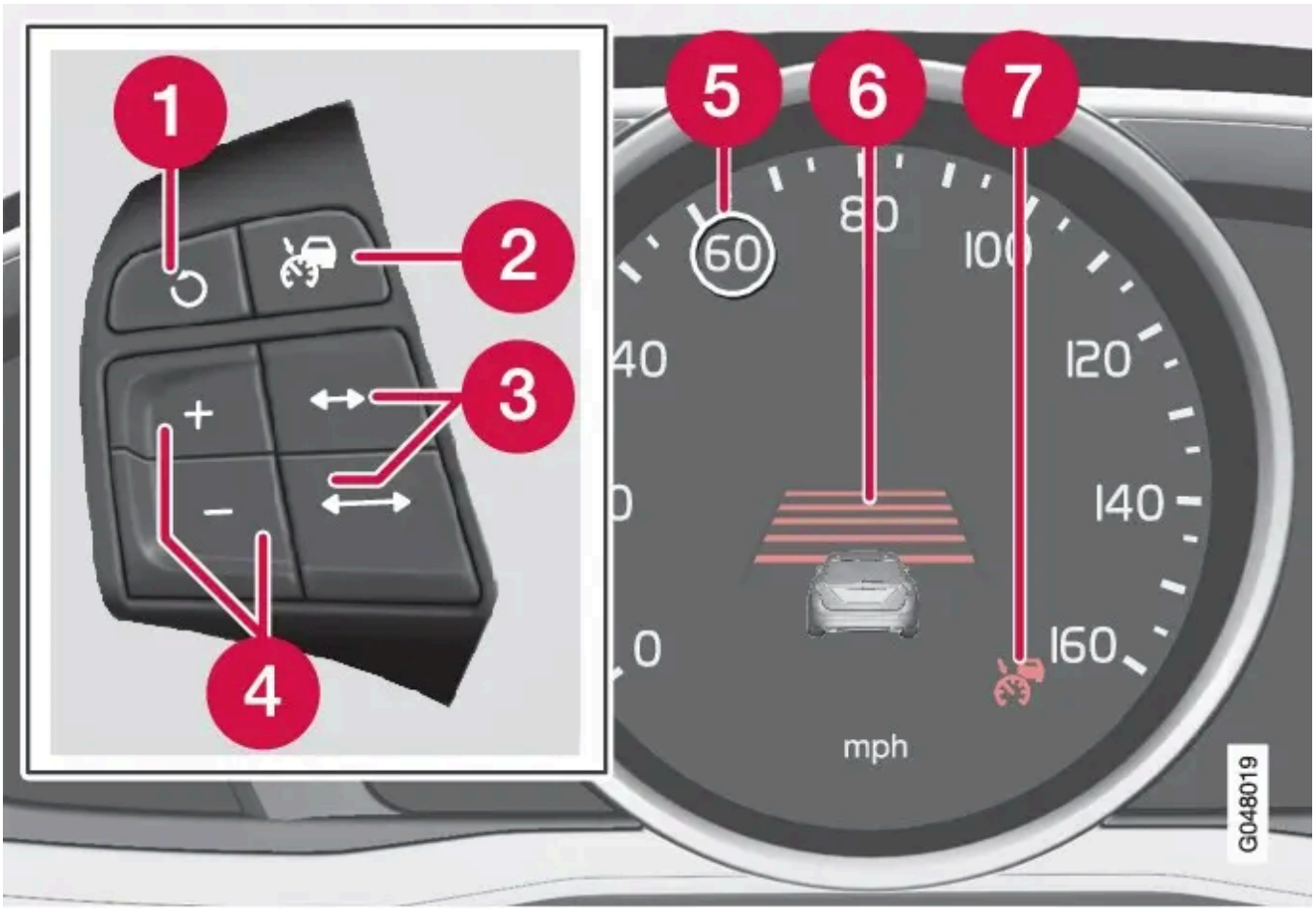
- If ACC's radar sensor detects a slower moving vehicle in the lane ahead, the system will adapt your vehicle's speed to help maintain the set time interval to the vehicle ahead. When there are no longer slower moving vehicles ahead, your vehicle will accelerate to resume the set speed.

If ACC is switched off completely or in standby mode and your vehicle comes too close to another vehicle ahead, the driver will be warned by the Distance Alert system (see Distance Alert – introduction).

Warning

- Adaptive Cruise Control cannot cover all driving situations and traffic, weather and road conditions. The "Function" section provides information about limitations that the driver must be aware of before using this feature.
- This system is designed to be a supplementary driving aid. It is not, however, intended to replace the driver's attention and judgement. The driver is responsible for maintaining a safe distance and speed and must intervene if Adaptive Cruise Control does not maintain a suitable speed or suitable distance to the vehicle ahead.
- Maintenance of ACC components may only be performed by a trained and qualified Volvo technician.

Operation



Controls and display

1 Resume previous settings.

2 Off/On/Standby mode

3 Decrease/increase time interval

4 Put in active mode and set a speed (each additional press increases/decreases speed by 1 mph (approximately 2 km/h))

5 Set speed (shown in **green** when active, shown in **white** when in standby mode)

6 Time interval

7 ACC active (**green** symbol) or in standby mode (**white** symbol)

6.1.4. Toggling between ACC and CC (standard Cruise Control)

Adaptive Cruise Control (ACC) helps the driver maintain a safe distance/time interval to the vehicle ahead.

Switching from ACC to CC

This may be useful if, for example, the radar sensor is obstructed in some way. See Adaptive Cruise Control – limitations for additional information.

- Press and hold the button; the symbol in the instrument panel will switch from to .

> This activates the standard cruise control function (see Cruise control (CC) – introduction).

Warning

Switching from ACC to CC means that:

- Your vehicle will **no longer** automatically maintain a set distance to a vehicle ahead.
- Only the set speed will be maintained and the driver will have to apply the brakes when needed.

Switching from CC to ACC

Switch off cruise control by pressing once or twice as needed according to the instructions in the previous section "Turning ACC off completely." The next time the system is switched on, ACC will be reactivated.

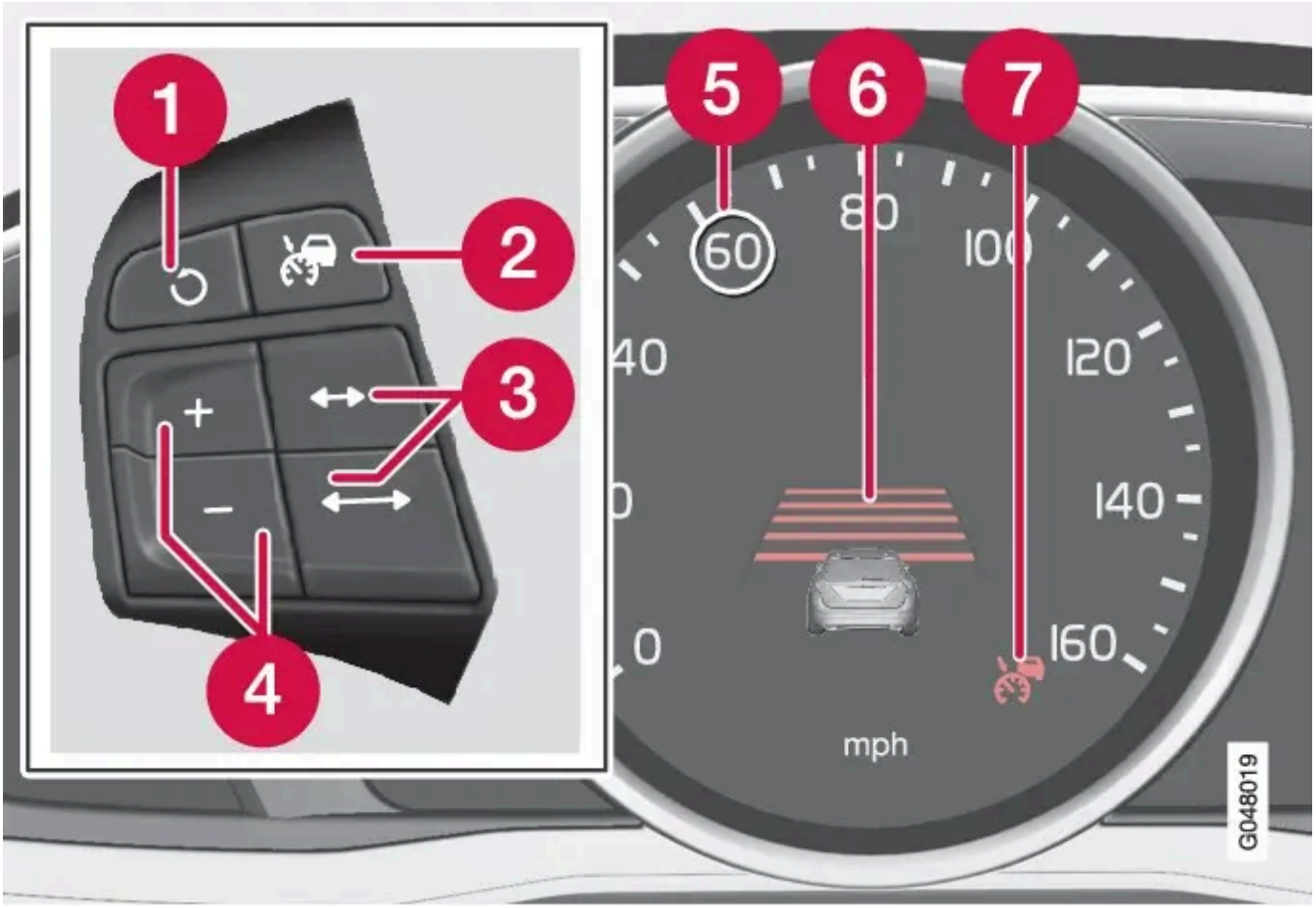
6.1.5. Adaptive Cruise Control – engaging

ACC is an optional system designed to assist the driver by maintaining a set speed or a set time interval to the vehicle ahead. It is primarily intended for use on long straight roads in steady traffic, such as on highways and other main roads.

Putting ACC in standby mode

Before ACC can be used to regulate speed and/or the distance to a vehicle ahead, it must first be put in standby mode.

To do so:



Controls and display

2 Off/On/Standby mode

- Press (2).

> The same symbol (7) appears (in **white**) in the instrument panel to indicate that ACC is in standby mode.

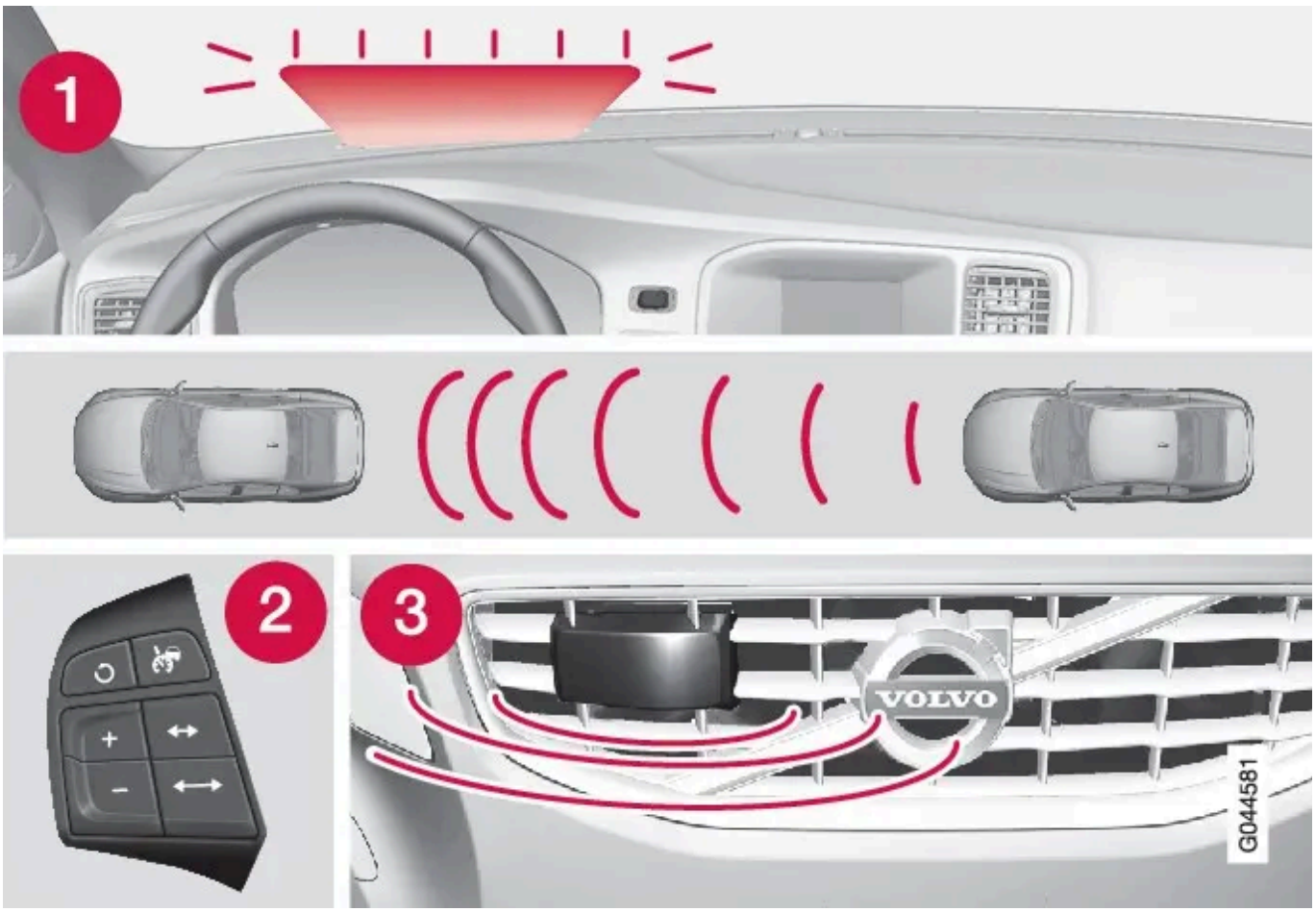
Note

The driver's door must be closed and the driver's seat belt must be fastened before ACC can be put in active mode. If the driver's seat belt is taken off or if the driver's door is opened, ACC will return to standby mode.

6.1.6. Adaptive Cruise Control – function

ACC is an optional system designed to assist the driver by maintaining a set speed or a set time interval to the vehicle ahead. It is primarily intended for use on long straight roads in steady traffic, such as on highways and other main roads.

Function



Function overview[1]

1 Warning light, braking by driver required

2 Controls in steering wheel

3 Radar sensor in front grille

Adaptive Cruise Control consists of:

- A cruise control system to maintain a set speed
- A system to maintain a set distance to the vehicle ahead, which is expressed as a time interval. For example, you can choose to remain approximately 2 seconds behind the vehicle ahead. The actual distance required to maintain a 2-second interval will vary according the speed of the vehicles.

Warning

- Adaptive Cruise Control is not a collision avoidance system. The driver is always responsible for applying the brakes if the system does not detect another vehicle.
- Adaptive Cruise Control does not react to people or animals, or small vehicles such as bicycles and motorcycles. It also does not react to slow moving, parked or approaching vehicles, or stationary objects.
- Do not use Adaptive Cruise Control in demanding driving conditions such as city driving or other heavy traffic situations, in slippery conditions, when there is a great deal of water or slush on the road, during heavy rain or snow, in poor visibility, on winding roads or on highway on- or off-ramps.

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The distance to the vehicle ahead (in the same lane) is monitored by a radar sensor. Your vehicle's speed is regulated by accelerating and braking. The brakes may emit a sound when they are being modulated by the adaptive cruise control system. This is normal.

> **Warning**
>
> The brake pedal moves when the adaptive cruise control system modulates the brakes. Do not rest your foot under the brake pedal.

The ACC system is designed to smoothly regulate speed. However, the driver must apply the brakes in situations that require immediate braking. This applies when there are great differences in speed between vehicles, or if the vehicle ahead brakes suddenly.

> **Warning**
>
> Due to limitations in the radar sensor, braking may occur unexpectedly or not at all, see Adaptive Cruise Control – limitations.

Adaptive Cruise Control can be put in active mode at any permitted speed. However, if the vehicle's speed falls below 18 mph (30 km/h) or if engine speed (rpm) becomes too low, ACC disengages (goes into standby mode) and will no longer modulate the brakes. The driver will then have to maintain a safe distance to the vehicle ahead.

> **Warning**
>
> When Adaptive Cruise Control is in standby mode or is switched off completely, the brakes will not be modulated automatically. The driver must assume full control over the vehicle.

Warning light—driver braking required

Adaptive Cruise Control can exert brake force that is equivalent to approximately 40% of the vehicle's total braking capacity. In situations requiring more brake force than ACC can provide and if the driver does not apply the brakes, an audible signal from the Collision Warning system will sound and warning light will illuminate (see Collision warning – function) in the windshield to alert the driver to react.

> **Note**
>
> Strong sunlight, reflections, extreme light contrasts, the use of sunglasses, or if the driver is not looking straight ahead may make the visual warning signal in the windshield difficult to see.

> **Warning**
>
> Adaptive Cruise Control only warns of vehicles detected by the radar sensor, see Adaptive Cruise Control – limitations. In some cases there may be no warning or the warning may be delayed. The driver should always apply the brakes when necessary.

Steep inclines and/or heavy loads

ACC is primarily intended for use on fairly level roads. The system may have difficulty maintaining the correct distance to a vehicle ahead on steep inclines, if the vehicle is carrying a heavy load or is towing a trailer. In these situations, the driver should always be prepared to apply the brakes if necessary.

[1] The illustration is generic; details will vary, depending on the model

---

6.1.7. Adaptive Cruise Control (ACC) – Queue Assist

Queue Assist is an added ACC feature that is linked to your vehicle's automatic transmission.

Introduction

Queue Assist is an added ACC feature that is linked to your vehicle's automatic transmission.

Queue Assist consists of the following functions:

- Enhanced speed interval (including when the vehicle is at a complete stop or is moving at speed below 18 mph (30 km/h))
- Automatic standby mode when ACC changes target vehicles
- No automatic braking when at a standstill
- The parking brake is applied automatically

Please note that the lowest speed that can be set is 18 mph (30 km/h), although ACC can maintain a set speed/distance to a vehicle ahead down to a standstill. Queue Assist consists of the following features:

Enhanced speed interval

> **Note**
>
> The driver's door must be closed and the driver's seat belt must be fastened before ACC can be put in active mode. If the driver's seat belt is taken off or if the driver's door is opened, ACC will return to standby mode.

Your vehicle can maintain the set time interval to the vehicle ahead at any permissible speed, including a complete stop.

In order to activate ACC at speeds below 18 mph (30 km/h):

- The vehicle ahead must be within a reasonable distance (not farther away than approx. 100 ft/30 meters)
- The lowest speed that can be selected is 18 mph (30 km/h), although ACC will also help maintain the set time interval to the vehicle ahead at lower speeds, including a complete stop.

During short stops (less than approximately 3 seconds) in slow-moving traffic, your vehicle will begin moving again automatically as soon as the vehicle ahead begins to move.

If it takes more than 3 seconds for the vehicle ahead to begin moving, ACC will be automatically go into standby mode.

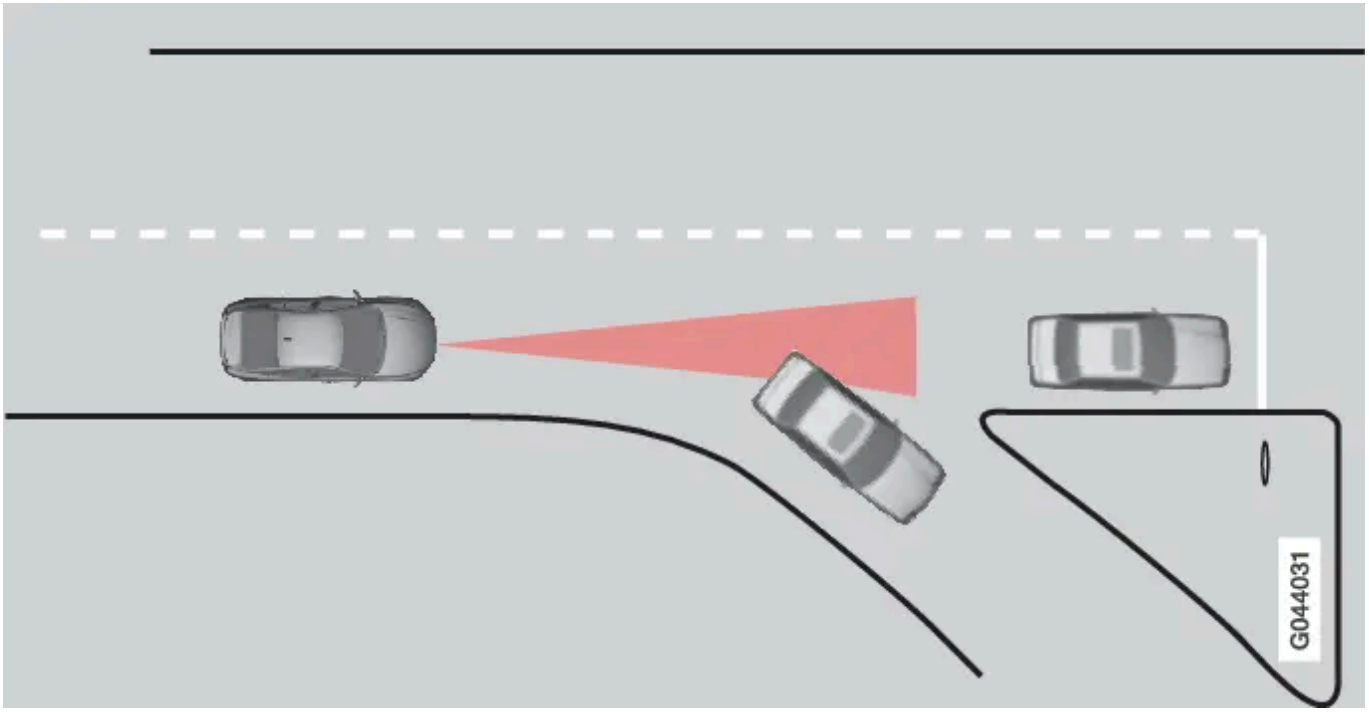
The driver will then have to reactivate ACC in one of the following ways:

- By pressing
- By accelerating up to at least 3 mph (4 km/h). ACC will then resume following the vehicle ahead.

Your vehicle will then resume following the vehicle ahead at the set time interval.

> **Note**
>
> ACC can remain active and keep your vehicle at a standstill for up to 4 minutes. After 4 minutes have elapsed, the parking brake will be engaged and ACC will go into standby mode.
>
> To reactivate ACC, the driver must release the parking brake (see Parking brake – general information).

Automatic standby mode when ACC changes target vehicles



If the vehicle ahead turns suddenly, there may be a stationary vehicle ahead

The following only applies at speeds below approximately 18 mph (30 km/h):

If ACC changes target vehicles (the vehicle that the radar sensor has detected) from a moving vehicle to a stationary one, the system will apply the brakes in your vehicle.

> **Warning**
>
> At speeds **above** 18 mph (30 km/h), ACC will not react to a stationary vehicle and apply the brakes but will instead accelerate to the previously set speed. The driver must actively apply the brakes to stop the vehicle.

ACC disengages and goes into standby mode if:

- Your vehicle's speed goes below 10 mph (15 km/h) and ACC cannot determine if the target object is a stationary vehicle or some other type of object such as e.g., a speed bump.
- Your vehicle's speed goes below 10 mph (15 km/h) and the vehicle ahead turns so that ACC no longer has a target vehicle to follow.

No automatic braking when at a standstill

In certain situations, ACC will no longer apply the brakes and go into standby mode while the vehicle is not moving. This means that the driver will have to apply the brakes.

This happens if:

- The driver presses the brake pedal
- The parking brake is activated
- The gear selected is moved to P, N or R
- The driver presses the button to put ACC in standby mode

The parking brake is applied automatically

In certain situations, ACC will apply the parking brake in order to continue keeping the vehicle at a standstill.

This happens if:

- The driver opens the door or takes off his/her seat belt
- The stability system is put in Sport mode (see Stability system – operation)
- ACC has kept the vehicle at a standstill for more than 2 minutes
- The engine has been switched off
- The brakes have overheated

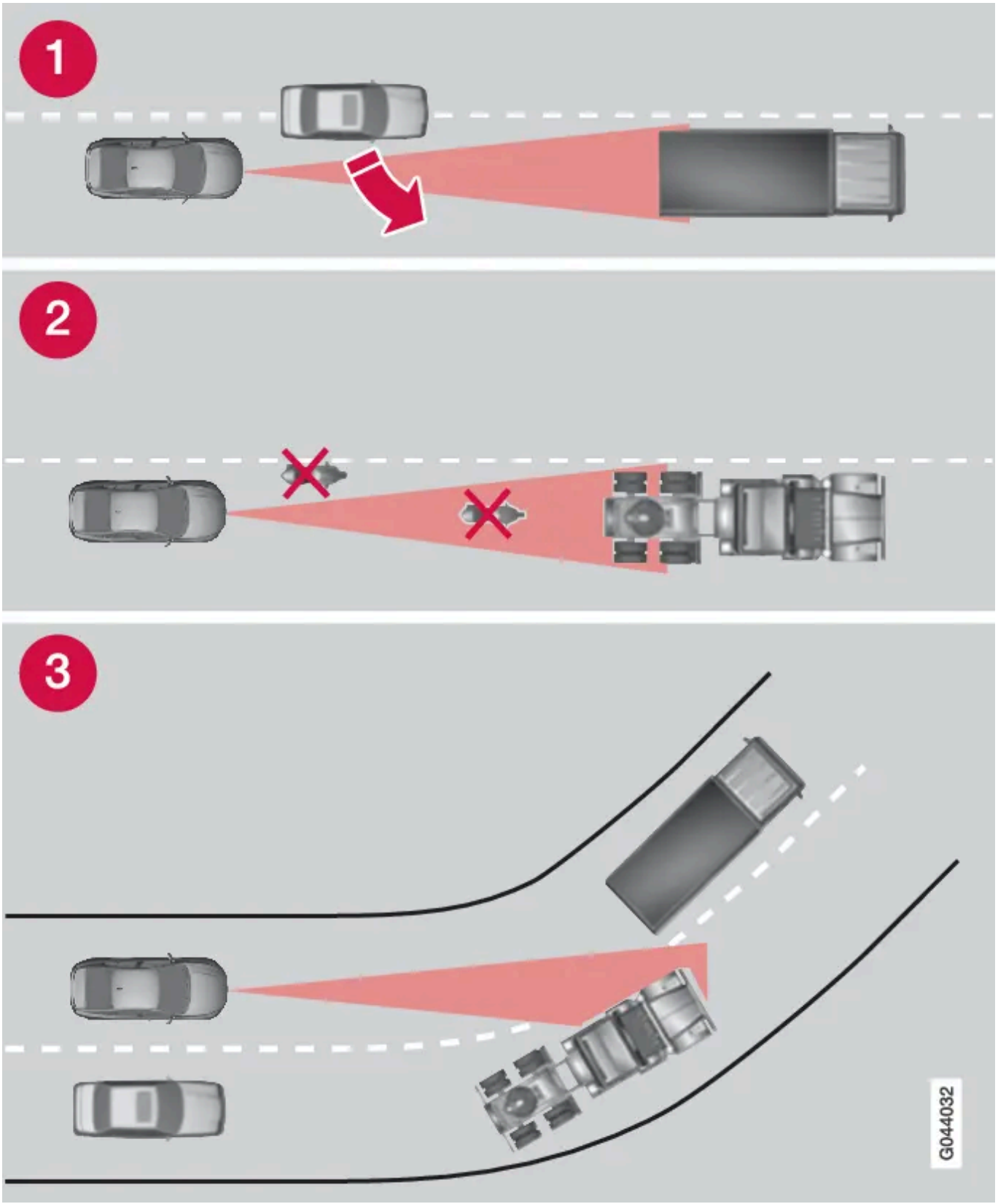
6.1.8. Adaptive Cruise Control – limitations

The ACC cannot cover all driving situations and traffic, weather and road conditions.

Situations where ACC may not function optimally

Warning

- The radar sensor has a limited field of vision. In some situations it may detect a vehicle later than expected or not detect other vehicles at all.
- If ACC is not functioning properly, cruise control will also be disabled.



Radar sensor's field of vision (shown in pink)

1. In certain situations, the radar sensor cannot detect vehicles at close quarters, for example a vehicle that suddenly enters the lane between your vehicle and the target vehicle.
2. Small vehicles, such as motorcycles, or vehicles not driving in the center of the lane may remain undetected.
3. In curves, the radar sensor may detect the wrong vehicle or lose sight of the target vehicle.

Warning

- Adaptive Cruise Control cannot cover all driving situations and traffic, weather and road conditions. The "Function" section provides information about limitations that the driver must be aware of before using this feature.
- This system is designed to be a supplementary driving aid. It is not, however, intended to replace the driver's attention and judgement. The driver is responsible for maintaining a safe distance and speed and must intervene if Adaptive Cruise Control does not maintain a suitable speed or suitable distance to the vehicle ahead.
- Maintenance of ACC components may only be performed by a trained and qualified Volvo technician.

Warning

- Adaptive Cruise Control is not a collision avoidance system. The driver is always responsible for applying the brakes if the system does not detect another vehicle.
- Adaptive Cruise Control does not react to people or animals, or small vehicles such as bicycles and motorcycles. It also does not react to slow moving, parked or approaching vehicles, or stationary objects.
- Do not use Adaptive Cruise Control in demanding driving conditions such as city driving or other heavy traffic situations, in slippery conditions, when there is a great deal of water or slush on the road, during heavy rain or snow, in poor visibility, on winding roads or on highway on- or off-ramps.

6.1.9. Adaptive Cruise Control – troubleshooting

ACC is an optional system designed to assist the driver by maintaining a set speed or a set time interval to the vehicle ahead. It is primarily intended for use on long straight roads in steady traffic, such as on highways and other main roads.

If the message **Radar blocked See manual** is displayed, this means that the radar signals from the sensor have been obstructed and that a vehicle ahead cannot be detected.

This, in turn, means that the functions of the ACC, Distance Alert, and Collision Warning System with Auto-brake and Pedestrian Detection will not function.

The table lists possible causes for this message being displayed, and suitable actions.

Cause	Action
The surface of the radar in the grille is dirty or obstructed in some way.	Clean the radar surface, or remove the object causing the obstruction.
Heavy rain or snow is interfering with the radar signals.	No action possible. Heavy precipitation may affect the function of the radar.
Swirling water or snow from the surface of the road may interfere with the radar signals.	No action possible. A very wet or snow-covered road surface may affect the function of the radar.

Cause	Action
The surface of the radar is clean but the message remains in the display.	Wait a short time. It may take several minutes for the radar to detect that it is no longer obstructed.

6.1.10. Radar sensor

The radar sensor is designed to help detect cars or larger vehicles driving in the same direction as your vehicle, in the same lane.

The radar sensor and its limitations

In addition to being used by the Adaptive Cruise Control (ACC), the radar sensor is also used by Distance Alert (see Distance Alert – introduction) and Collision Warning with Full Auto-brake and Pedestrian Detection (see Collision warning – introduction).

Warning

- If there is visible damage to the front grille or you suspect that the radar sensor may be damaged in any way, contact a trained and qualified Volvo service technician as soon as possible. The radar sensor may only function partially (or not at all) if it is damaged or is not securely fastened in place.
- Accessories or other objects, such as extra headlights, must not be installed in front of the grille.
- Modification of the radar sensor could make its use illegal.

The radar sensor's capacity to detect vehicles ahead is impeded:

- if the radar sensor is obstructed and cannot detect other vehicles, for example in heavy rain, or if snow or other objects are obscuring the radar sensor.

Note

Keep the area in front of the radar sensor clean.

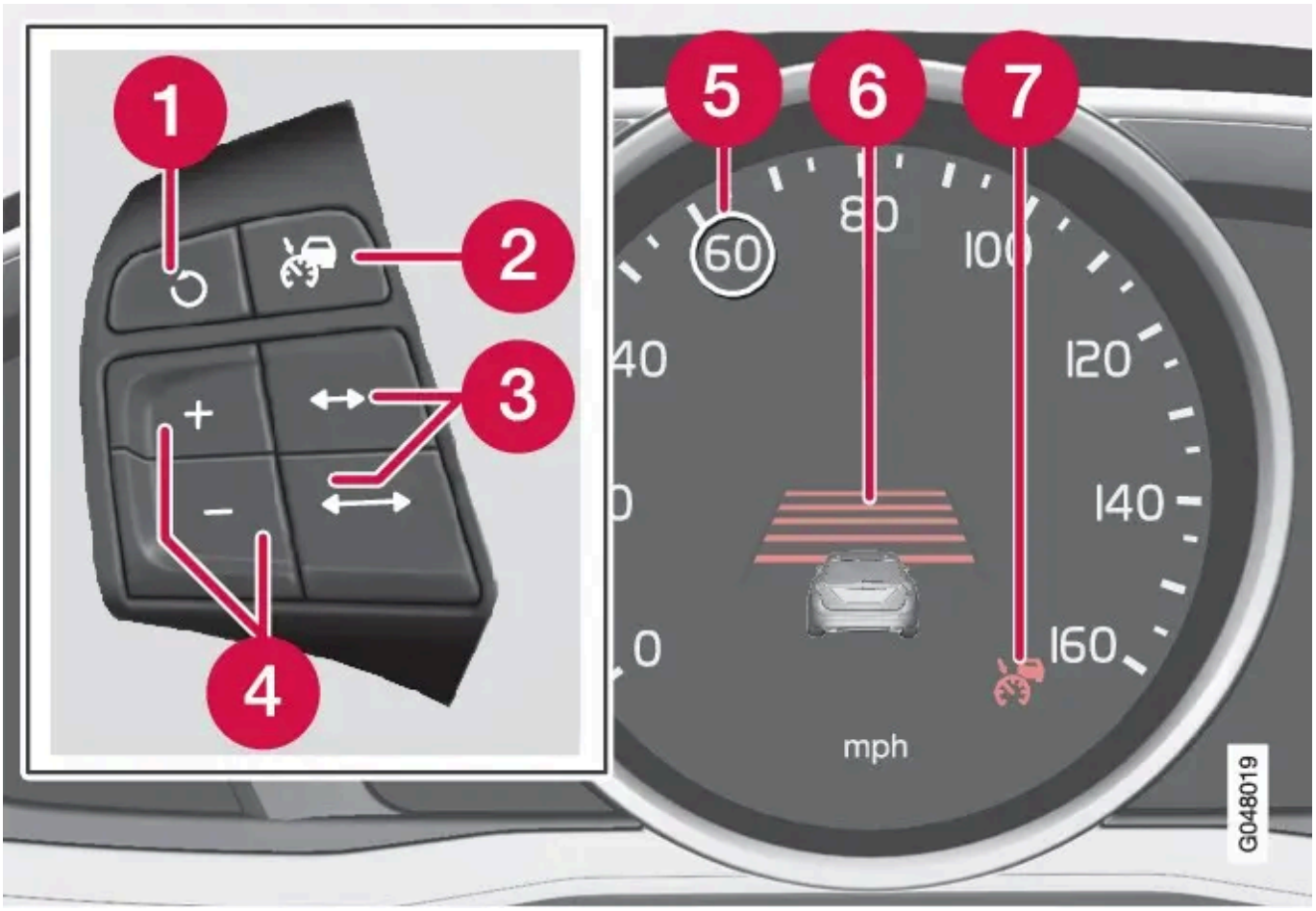
- if the speed of vehicles ahead is significantly different from your own speed.

6.1.11. Adaptive Cruise Control – setting speed

ACC is an optional system designed to assist the driver by maintaining a set speed or a set time interval to the vehicle ahead. It is primarily intended for use on long straight roads in steady traffic, such as on highways and other main roads.

Setting a speed

Once ACC has been put in standby mode:



Controls and display

4 Put in active mode and set a speed (each additional press increases/decreases speed by 1 mph (approximately 2 km/h))

- Press + or − (4).

> The set speed, for example 60 mph (5), will be magnified for several seconds and the frame around the speed will change colors from **white** to **green** to indicate that this speed has been stored (set).



When this symbol has changed colors from **white** to **green**, ACC is in active mode and the vehicle will maintain the set speed.



This symbol indicates that you are approaching a vehicle ahead.

ACC will switch from maintaining a **set speed** to maintaining a set **distance** from that vehicle.



When this happens, a speed **range** will be indicated on the speedometer:

The **higher** speed (the currently set speed (5)) will be marked in **green**.

The **lower** speed in the range is the speed of the vehicle ahead.

Changing the set speed

- After a speed has been set, it can be increased or decreased by briefly pressing the + or − buttons. Each time one of these buttons is pressed, the vehicle's speed changes by 5 mph or 5 km/h. If the speed is increased by pressing the accelerator

pedal, the vehicle's speed when the button is pressed will be set.

- Press and hold one of these buttons to increase/decrease the speed in 1-mph or 1-km/h increments. Release the button when you have reached the desired speed.

> **Note**
>
> - If one of the Adaptive Cruise Control buttons is pressed for more than approximately one minute, ACC will be deactivated. The engine must then be switched off and restarted to reset ACC.
> - In some situations Adaptive Cruise Control cannot be put in active mode. **Cruise control Unavailable** is shown in the display, see Adaptive Cruise Control – symbols and messages.

6.1.12. Adaptive Cruise Control – passing another vehicle

ACC is an optional system designed to assist the driver by maintaining a set speed or a set time interval to the vehicle ahead. It is primarily intended for use on long straight roads in steady traffic, such as on highways and other main roads.

Passing another vehicle

If your vehicle's speed is being regulated by ACC and the driver indicates that he/she would like to pass the vehicle ahead by using the **left** turn signal, ACC can assist by accelerating briefly.

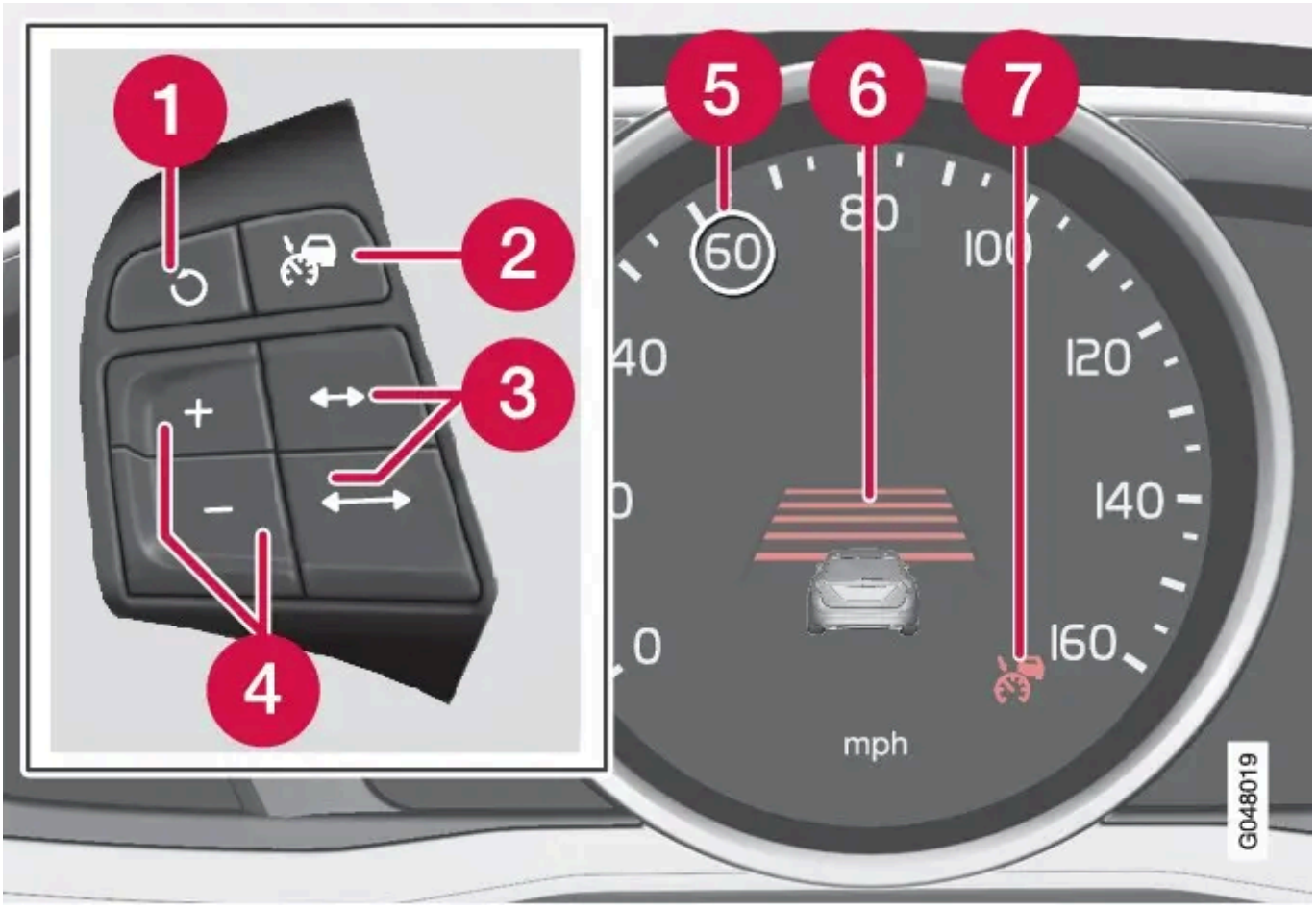
This function is active at speeds above approximately 45 mph (70 km/h).

> **Warning**
>
> Please be aware that this function will also cause the vehicle to accelerate briefly in certain situations other than passing another vehicle, for example using the left turn signal to indicate a lane change or a turn toward a highway exit at speeds above approximately 45 mph (70 km/h).

6.1.13. Adaptive Cruise Control – setting time interval

ACC is an optional system designed to assist the driver by maintaining a set speed or a set time interval to the vehicle ahead. It is primarily intended for use on long straight roads in steady traffic, such as on highways and other main roads.

Setting a time interval



Controls and display

3 Decrease/increase time interval

The set time interval to vehicles ahead can be increased by pressing ⟷ and decreased by pressing ↔. The current time interval is shown briefly in the display following adjustment.



Different time intervals can be selected and are shown in the instrument panel[1] as 1–5 horizontal bars. The greater the number of bars, the longer the time interval. One bar represents a time interval of approximately 1 second; 5 bars is approximately 3 seconds.

To set/change a time interval:

- Press the ⟷/↔ buttons (3).

At low speeds, when the distance to the vehicle ahead is short, ACC increases the time interval slightly. In order to follow the vehicle ahead as smoothly as possible, ACC allows the time interval to vary considerably in certain situations.

Warning

- Only use a time interval that is suitable in current traffic conditions.
- A short time interval gives the driver limited reaction time if an unexpected situation occurs in traffic.

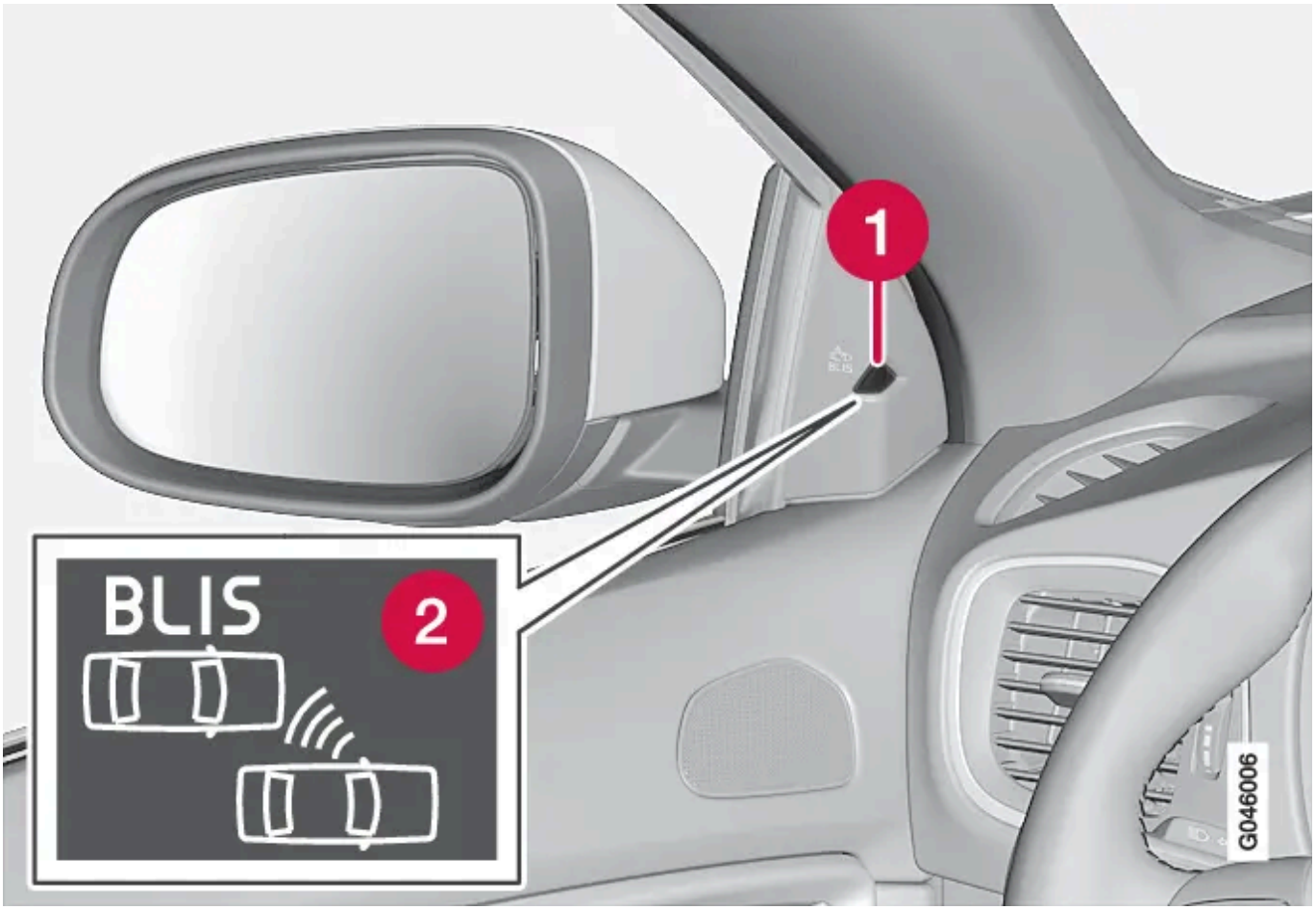
The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.

[1] The same symbol appears if Distance Alert (see Distance Alert – introduction) is activated

6.2. Blind Spot Information System (BLIS) and CTA

6.2.1. BLIS* – introduction

The Blind Spot Information System (BLIS) is an information system that indicates the presence of another vehicle moving in the same direction as your vehicle on roads with several lanes.



Location of the BLIS indicator light[1].

1 Indicator light

2 BLIS symbol

BLIS and CTA[2] are activated when the engine is started; this is confirmed when the indicator lights on the front door panels flash once.

> **Note**
>
> The door panel indicator light illuminates on the side of the vehicle where the system has detected another vehicle. If your vehicle is passed on both sides at the same time, both lights will illuminate.

The system helps provide information about:

- Other vehicles in your door mirrors' "blind area"
- Vehicles that are about to pass your vehicle in the left and/or right lanes
- **Cross Traffic Alert (CTA) is a supplementary BLIS function** intended to detect vehicles crossing behind your vehicle while you are backing up.

> **Warning**
>
> - BLIS and CTA are information systems, NOT warning or safety systems and do not function in all situations.
> - BLIS and CTA do not eliminate the need for you to visually confirm the conditions around you, and the need for you to turn your head and shoulders to make sure that you can safely change lanes or back up.
> - As the driver, you have full responsibility for changing lanes/backing up in a safe manner.

* Option/accessory.

[1] The illustration is generic; certain details may vary from model to model

[2] Cross Traffic Alert

6.2.2. BLIS* – limitations

The Blind Spot Information System (BLIS) is an information system that indicates the presence of another vehicle moving in the same direction as your vehicle on roads with several lanes.

Maintenance



Location of the BLIS/CTA sensors [1]

The BLIS/CTA [2] sensors are located on the inside of the rear fenders/bumper.

The surfaces in front of the sensors must be kept clean for the system to function optimally.

> **Important**
>
> Repairs to the BLIS/CTA systems and/or repainting the rear bumper should only be done by a trained and qualified Volvo service technician.

* Option/accessory.

[1] Generic illustration

[2] Cross Traffic Alert

6.2.3. BLIS* – messages

The Blind Spot Information System (BLIS) is an information system that indicates the presence of another vehicle moving in the same direction as your vehicle on roads with several lanes.

If BLIS/CTA[1] are not functioning normally, a symbol will illuminate in the instrument panel and a text message will be displayed. Follow any instructions that may be provided.

These messages include:

Message	System status
CTA OFF	CTA has been switched off manually. BLIS remains active.
BLIS and CTA OFF Trailer attached	BLIS and CTA are temporarily deactivated because a trailer's wiring has been connected to the vehicle's electrical system.
BLIS and CTA Service required	BLIS and CTA are not functioning normally. • If this message recurs, the systems should be inspected by a trained and qualified Volvo service technician.

Messages can be erased by pressing the OK button on the left steering wheel lever.

* Option/accessory.

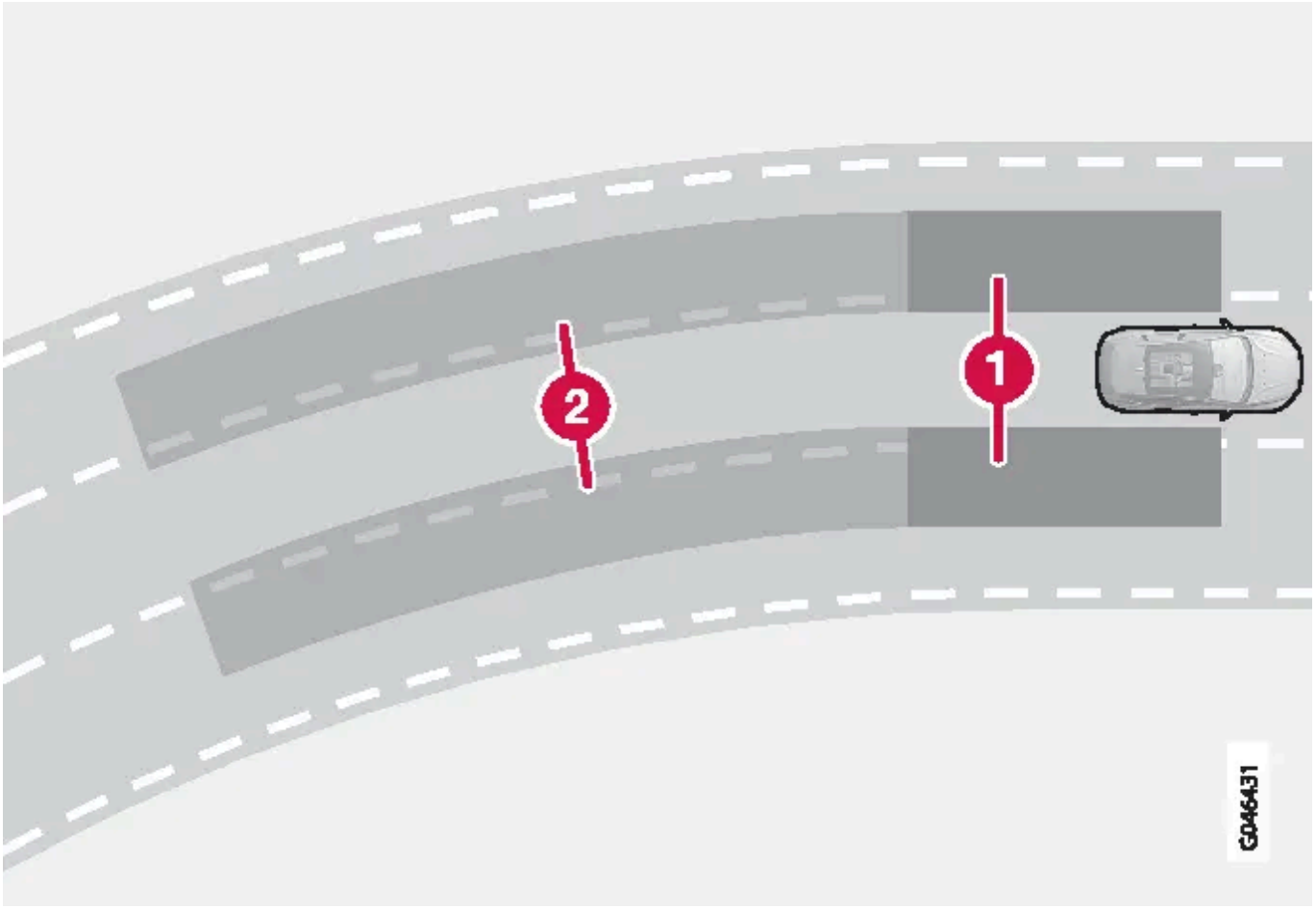
[1] Cross Traffic Alert

6.2.4. BLIS* – function

The Blind Spot Information System (BLIS) is an information system that indicates the presence of another vehicle moving in the same direction as your vehicle on roads with several lanes.

When does BLIS function

The system functions when your vehicle is moving at speeds above 6 mph (10 km/h).



Zone 1. Blind area, Zone 2. Area for passing vehicles

BLIS is designed to react to:

- Other vehicles in your door mirrors' "blind area"
- Vehicles that are passing your vehicle

When BLIS detects a vehicle in zone 1 or a passing vehicle in zone 2, the indicator light in the door panel will glow steadily. If the driver then uses the turn signal on the side on which the warning is given, the indicator light will flash and become brighter.

Warning

- BLIS does not function in sharp curves.
- BLIS does not function when your vehicle is backing up.

* Option/accessory.

6.2.5. BLIS* – Cross Traffic Alert (CTA)

Cross Traffic Alert (CTA) is a supplementary BLIS[1] function intended to detect vehicles crossing behind your vehicle while you are backing up.



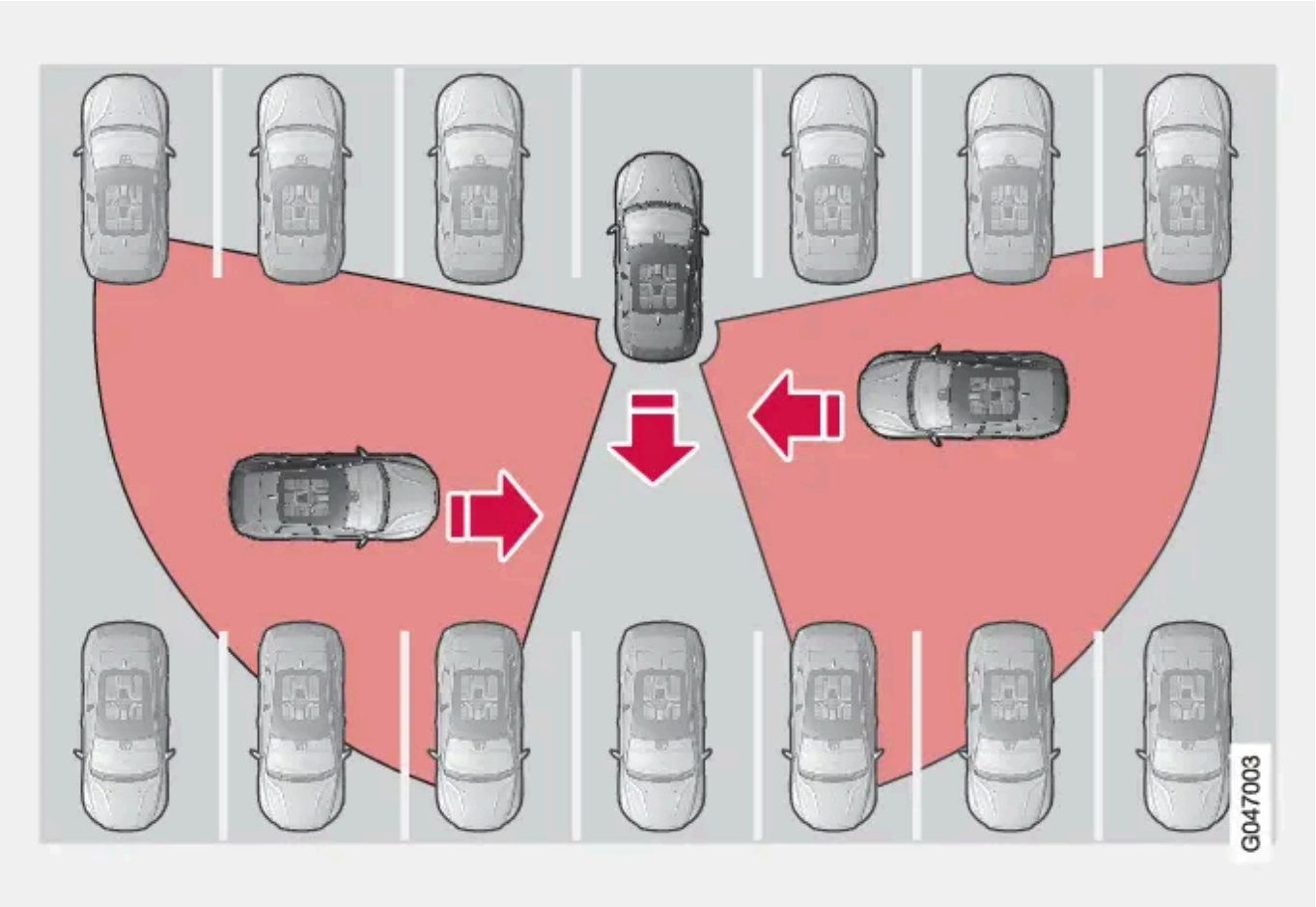
Park assist/CTA button

On vehicles equipped with the optional Park assist system, Cross Traffic Alert (CTA) can be deactivated/reactivated by pressing the Park assist button on the center console. The BLIS indicator lights on the front doors will flash when CTA is reactivated by pressing the button.

Warning

- BLIS and CTA are information systems, NOT warning or safety systems and do not function in all situations.
- BLIS and CTA do not eliminate the need for you to visually confirm the conditions around you, and the need for you to turn your head and shoulders to make sure that you can safely change lanes or back up.
- As the driver, you have full responsibility for changing lanes/backing up in a safe manner.

When does CTA function



How CTA works

CTA supplements BLIS by warning the driver of crossing traffic behind your vehicle, for example, when backing out of a parking space.

It is primarily designed to detect another vehicle but in certain cases may also detect pedestrians or smaller objects such as bicycles.

CTA is only activated when the vehicle is backing up and is activated automatically when the gear selector is put in reverse.

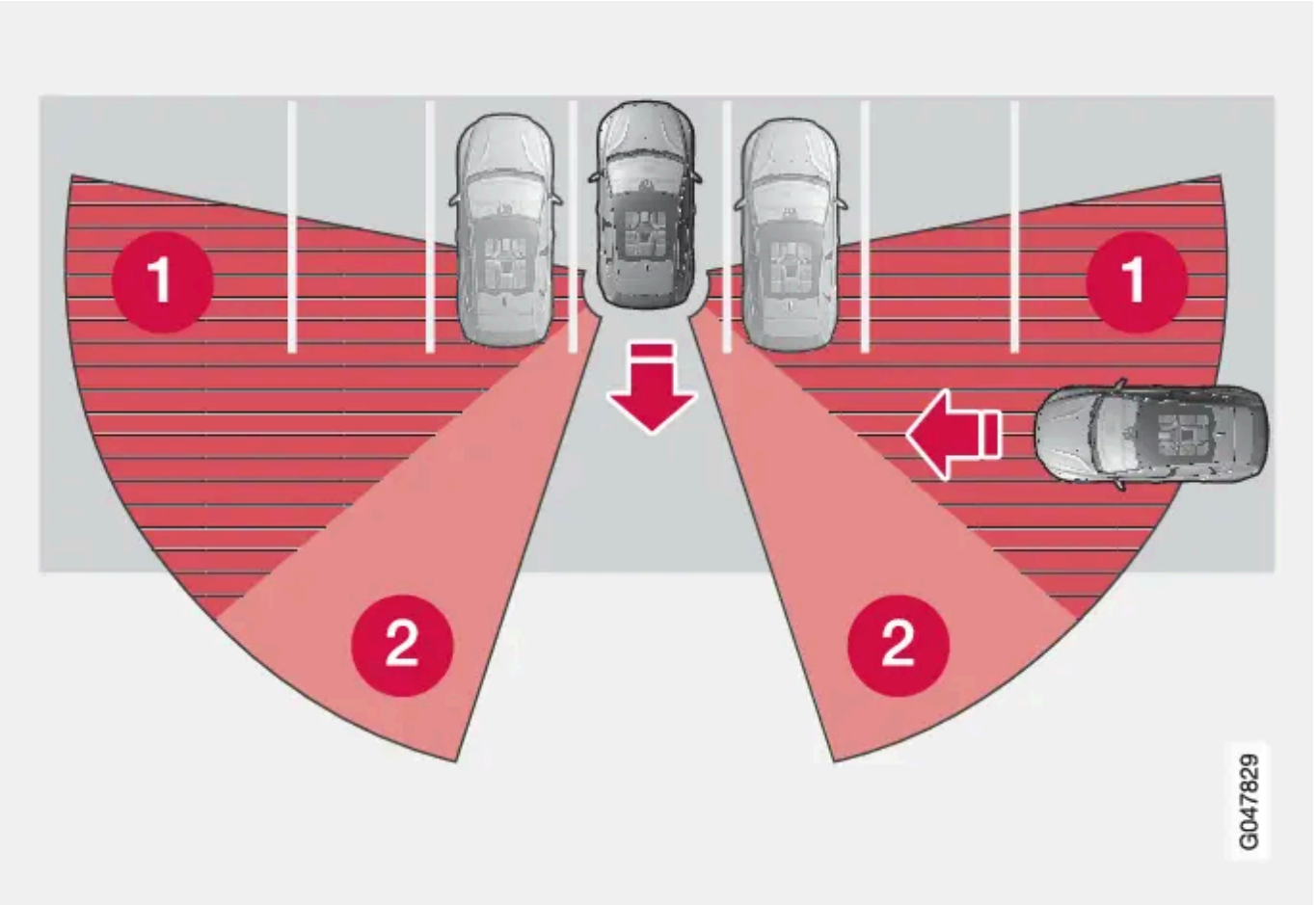
- An audible signal indicates that CTA has detected something that is approaching from the side. The signal will come from either the left or right audio system speakers, depending on which the side of your vehicle the approaching vehicle/object has been detected.
- CTA also provides a warning by illuminating the BLIS indicator lights.
- An icon will also illuminate in the Park assist graphic on the center console display.

Limitations

CTA has limitations in certain situations, for example, the CTA sensors cannot "see" through other parked vehicles or obstructions.

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The following are several examples where CTA's "field of vision" may initially be limited and approaching vehicles cannot be detected until they are too close:

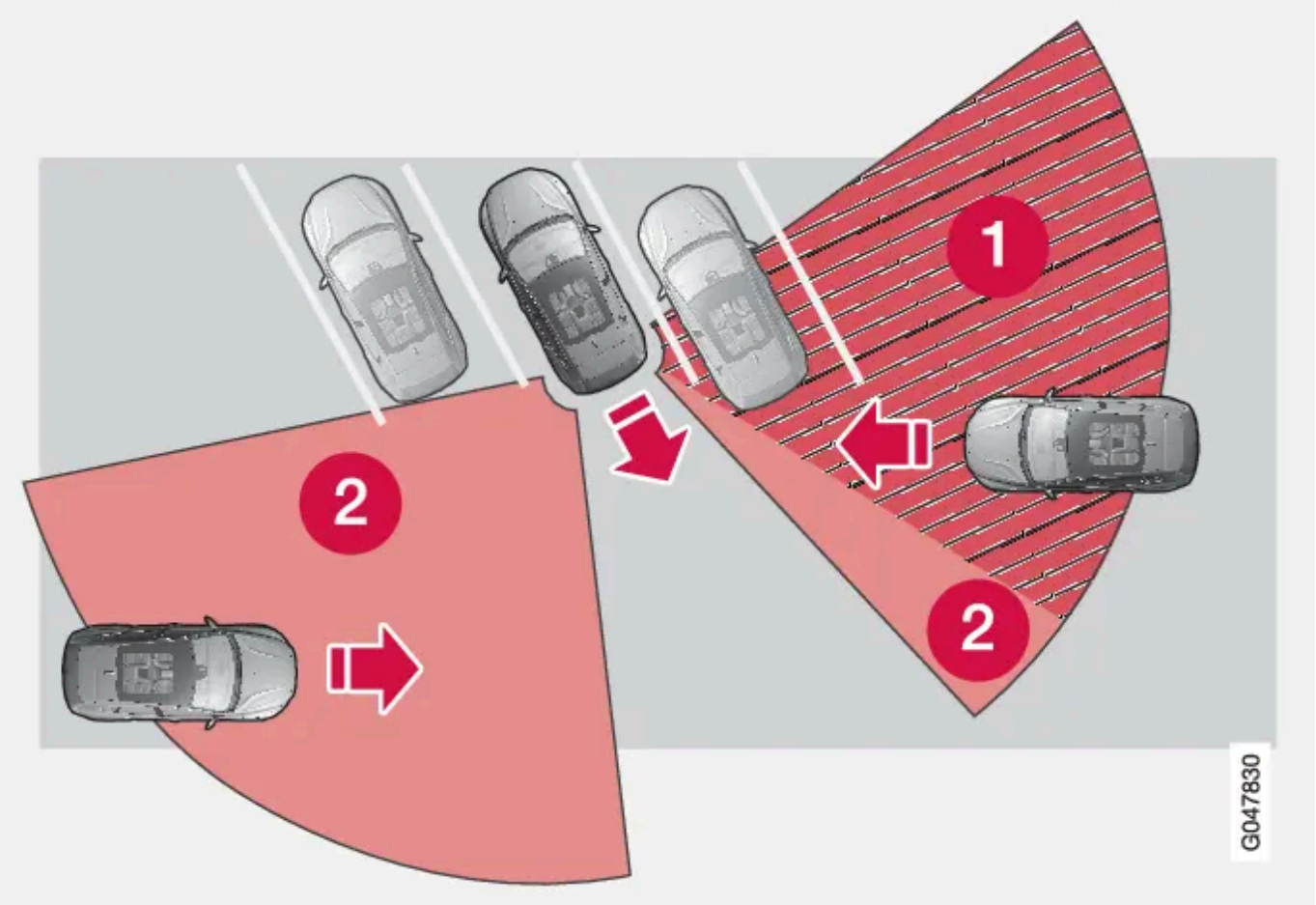


The vehicle is pulled far into a parking space

1 CTA's blind area

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2 CTA's "field of vision"



In angled parking spaces, CTA may be "blind" on one side

However, as you back your vehicle out of a parking space, CTA's "field of vision" expands.

Examples of other limitations include:

- Dirt, ice or snow obstructing the sensors may reduce the system's function or make it impossible to detect other vehicles or objects.
- Do not attach tape, decals, etc., on the surface of the sensors (see the illustration in the following "Maintenance" section).
- BLIS and CTA are deactivated if a trailer's wiring is connected to the vehicle's electrical system.

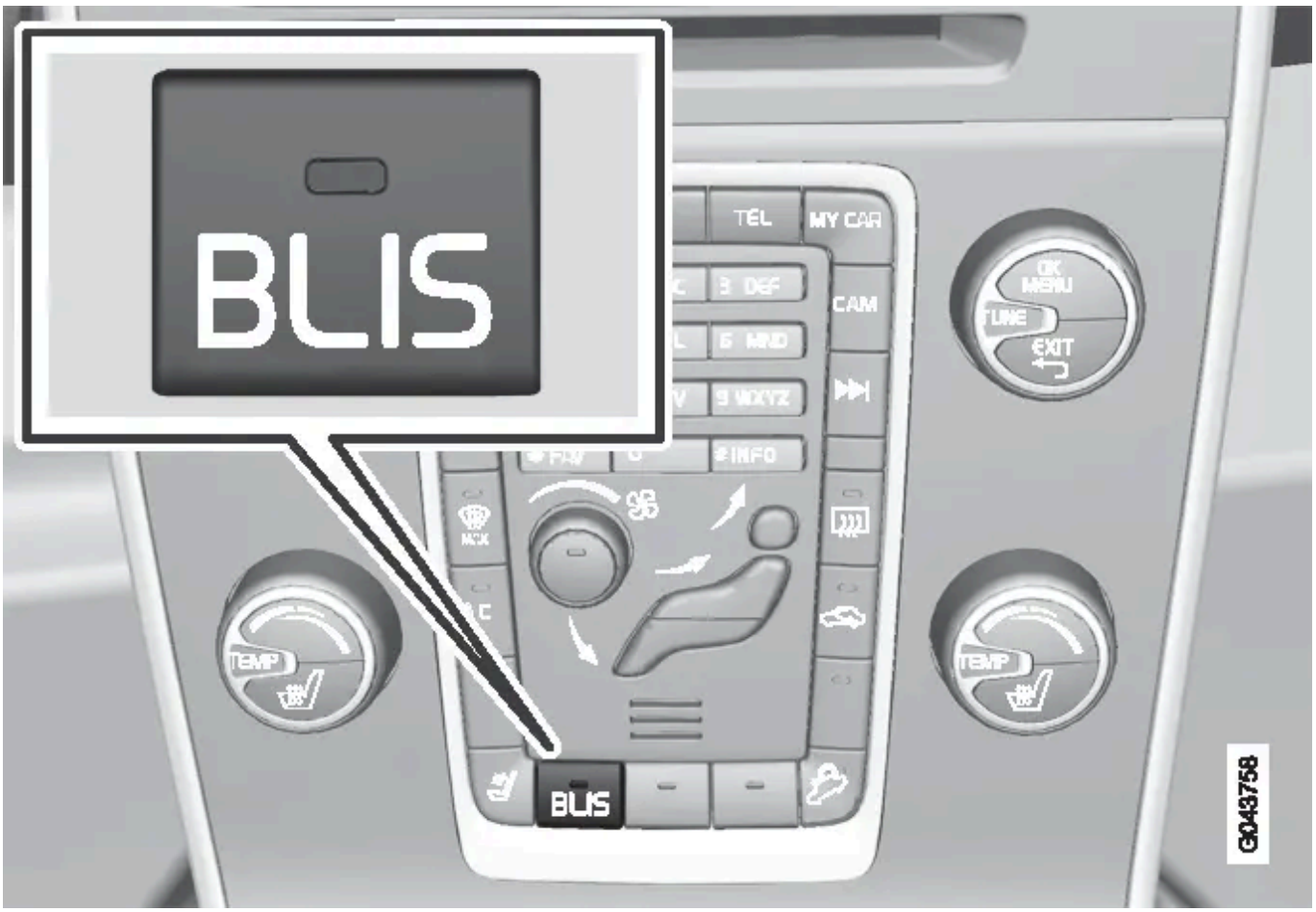
* Option/accessory.

[1] Blind Spot Information System

6.2.6. BLIS* – operation

The Blind Spot Information System (BLIS) is an information system that indicates the presence of another vehicle moving in the same direction as your vehicle on roads with several lanes.

Activating/deactivating BLIS



Button for activating/deactivating BLIS

BLIS and CTA [1] are activated when the engine is started; this is confirmed when the indicator lights on the front door panels flash once.

BLIS can be deactivated/reactivated by pressing the button on the center console.

The number or combinations of options on the vehicle may not leave a space available on the center console for the BLIS button. If this is the case, BLIS can be deactivated/reactivated in the MY CAR menu system, see My Car – introduction

- Select **Off** or **On** in **Settings → Car settings → BLIS**.

When BLIS is deactivated/reactivated, the indicator lights will go out/illuminate (the indicators will also flash once when the function is reactivated) and a message will appear in the instrument panel.

To erase the message:

- Press the OK button on the left steering wheel lever

or

- Wait for approx. 5 seconds for the message to disappear

* Option/accessory.

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[1] Cross Traffic Alert

6.3. City Safety

6.3.1. City Safety – limitations

City Safety™ [1] is a support system designed to help the driver avoid low speed collisions when driving in slow-moving, stop-and-go traffic.

Limitations

Warning

The laser sensor has certain limitations and its function may be reduced (or it may not function at all) in conditions such as heavy rain or snowfall, or by dense fog or thick, blowing dust or snow. Condensation, dirt, ice or snow on the windshield may also interfere with the sensor's function.

The sensor used by City Safety™ is designed to detect cars and other larger motor vehicles ahead of your vehicle in both daylight and darkness.

Objects such as warning flags hanging from long objects on the roof or accessories such as auxiliary lights or protective arches on the front of the vehicle that are higher than the hood may also impede the sensor's function.

Braking distance to the vehicle ahead increases on slippery road surfaces, which may reduce City Safety's capacity to avoid a collision. In situations like this, the stability system (see Stability system – introduction) will help provide the best possible braking capacity and stability.

City Safety™ emits a laser beam and measures the way in which the light is reflected. Therefore, vehicles or objects with low-reflective surfaces may not be detected. Normally, the license plate and taillight reflectors give the rear section of a vehicle ahead sufficient reflective surfaces to be detected.

Note

- Keep the windshield in front of the laser sensor free of ice, snow, dirt, etc., see City Safety – function.
- Snow or ice on the hood deeper than 2 inches (5 cm) may obstruct the sensor. Keep the hood free of ice and snow.
- Do not mount or in any way attach anything on the windshield that could obstruct the laser sensor.

[1] City Safety is a registered trademark of the Volvo Car Corporation

6.3.2. City Safety – symbols and messages

City Safety™ [1] is a support system designed to help the driver avoid low speed collisions when driving in slow-moving, stop-and-go traffic.

Symbols and messages in the display

When City Safety™ automatically applies the brakes, one or more of the symbols in the main instrument panel may illuminate and its associated message will be displayed.

A text message can be erased by pressing briefly on the OK button on the turn signal lever.

Symbol	Message	Meaning/action required
	Auto braking by City Safety	City Safety™ is applying/has applied the brakes automatically.
	Windscreen Sensors blocked	The laser sensor is temporarily not functioning due to an obstruction. • Remove the obstruction and/or clean the windshield in front of the sensor(s). For more information on the sensor's limitations, see City Safety – limitations.
	City Safety Service required	City Safety™ is not functioning. • If this message remains in the display, have the system checked by a trained and qualified Volvo service technician.

[1] City Safety is a registered trademark of the Volvo Car Corporation

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6.3.3. City Safety – troubleshooting

City Safety™ [1] is a support system designed to help the driver avoid low speed collisions when driving in slow-moving, stop-and-go traffic.

Troubleshooting

If **Windscreen Sensors blocked** appears in the information display, this indicates that the City Safety™ laser sensor is obstructed in some way and cannot detect vehicles ahead of you, which means that the system is not functioning.

However, this message will not be displayed in all situations in which the sensor is obstructed. For this reason, the driver must ensure that the area of the windshield in front of the sensor is always kept clean.

The following table shows some of the situations that can cause the message to be displayed and suggested actions.

Cause	Action
The area of the windshield in front of the sensor is dirty or covered by ice or snow.	Clean the windshield or remove the ice/snow.
The laser sensor's field of view is obstructed.	Remove the obstruction.

Note

If a crack, scratch or stone chip should occur in the section of the windshield in front the laser sensor, contact a trained and qualified Volvo service technician to repair or replace the windshield (see the illustration showing the location of the sensor in City Safety – function). Failing to do so may result in reduced City Safety™ functionality.

To help prevent limited or reduced functionality, please also observe the following:

- Volvo recommends that cracks, scratches or stone chips on the windshield in front of the laser sensor **should not** be repaired; in such cases, the entire windshield should be replaced.
- Before the windshield is replaced, contact a Volvo retailer to ensure that the correct windshield is ordered and installed. If the wrong type of windshield is used, this may cause City Safety™ to function improperly or not at all. Volvo recommends the use of only Genuine Volvo Replacement Windshields.
- When replacing windshield wipers, use the same type or ones approved by Volvo.

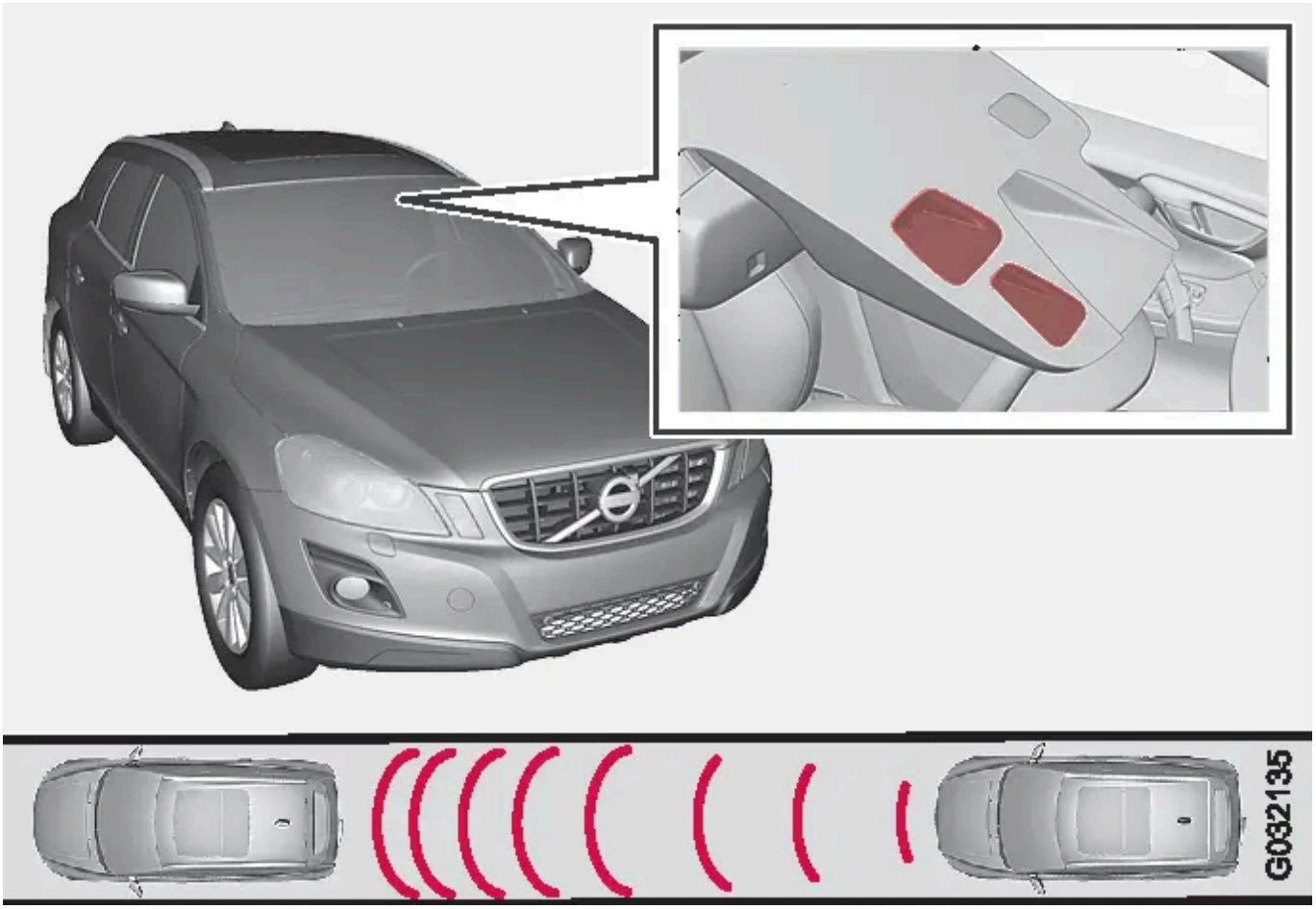
[1] City Safety is a registered trademark of the Volvo Car Corporation

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6.3.4. City Safety – function

City Safety™ [1] is a support system designed to help the driver avoid low speed collisions when driving in slow-moving, stop-and-go traffic.

Function



Location of the laser sensor in the windshield [2]

City Safety™ monitors traffic ahead of you using a laser sensor mounted in the upper section of the windshield. If a collision is imminent, City Safety™ will automatically apply the brakes, which may feel like hard braking.

If the difference in speed between your vehicle and the vehicle ahead is more than approximately 9 mph (15 km/h), City Safety™ alone cannot prevent a collision from taking place. The driver must apply the brakes to help avoid a collision or reduce its effect.

When the function activates and applies the brakes, a message will appear in the information display to indicate that the system is/has been active.

Note

- When City Safety™ applies the brakes, the brake lights will illuminate.
- In cases where City Safety™ has stopped the vehicle, the system will then release the brakes. The driver must apply the brakes to keep the vehicle at a standstill.

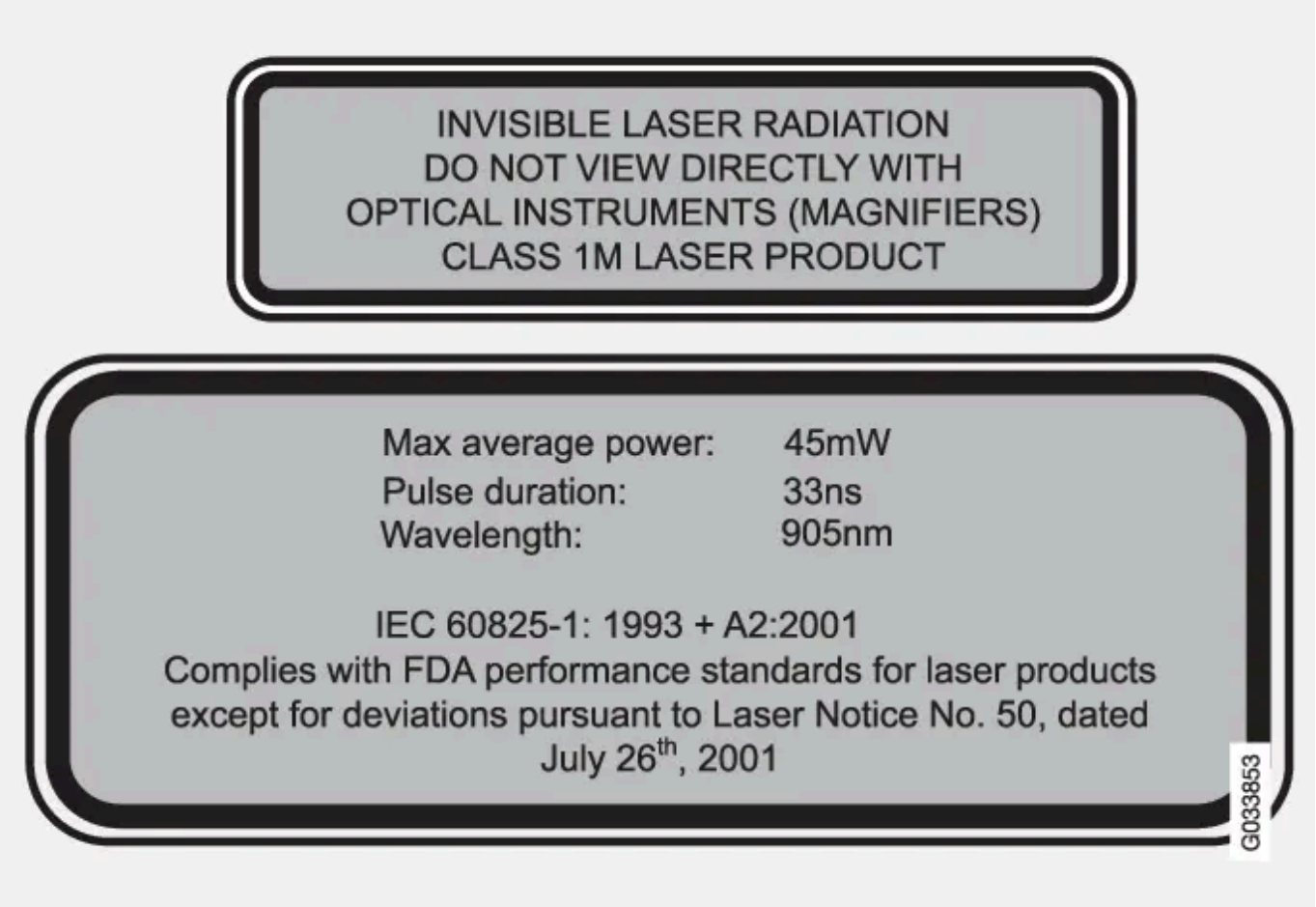
[1] City Safety is a registered trademark of the Volvo Car Corporation

[2] The illustration is generic; certain details may vary from model to model

6.3.5. City Safety – Laser sensor

City Safety™ [1] is a support system designed to help the driver avoid low speed collisions when driving in slow-moving, stop-and-go traffic.

The laser sensor



The upper decal describes the laser beam's classification and contains the following text:

Invisible Laser radiation – Do not view directly with optical instruments (magnifiers) – Class 1M laser product.

The lower decal describes the laser beam's physical data and contains the text:

IEC 60825-1:1993 + A2:2001. Complies with FDA performance standards for laser products except for deviations pursuant to Laser Notice No. 50, dated July 26th, 2001

The laser beam's physical data is listed in the following table:

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

Note

The function of aftermarket laser detectors may be affected by City Safety's laser sensor.

Warning

The laser sensor emits light when the ignition is in mode II or higher, even if City Safety™ has been switched off.

Warning

Eye injury may occur if any of the following points are not followed:

- It is essential that all pertinent instructions be followed when handling laser instruments. Testing, repairing, removing, adjusting and/or replacing any components in the laser sensor may only be done by a trained and qualified Volvo service technician.
- Do not remove the laser sensor (including removal of the lenses). A laser sensor that has been removed belongs to laser class 3B according to standard IEC 60825-1. Devices in laser class 3B present a risk of injury to the eyes.
- The laser sensor's connector must be disconnected before the sensor is removed from the windshield.
- The laser sensor must be mounted in place on the windshield before connecting the sensor's connector.
- Do not view the laser sensor (which emits spreading, invisible laser beams) with optical instruments from a distance of less than 4 inches (100 mm).

[1] City Safety is a registered trademark of the Volvo Car Corporation

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6.3.6. City Safety – operation

City Safety™ [1] is a support system designed to help the driver avoid low speed collisions when driving in slow-moving, stop-and-go traffic.

Using City Safety™

Note

The City Safety™ function is activated automatically each time the engine has been switched off and restarted.

On and Off

In certain situations, it may be desirable to switch City Safety™ off, such as when driving in close quarters where leaves, branches, etc. may obscure the hood and windshield.

When the engine is running, City Safety™ can be switched off as follows:

Press My Car in the center console control panel and go to **Settings** → **Car settings** → **Driver support systems** → **City Safety**. Select **Off**.

If the engine is switched off, City Safety™ will reactivate when the engine is restarted.

> **Warning**
>
> The laser sensor emits light when the ignition is in mode II or higher, even if City Safety™ has been switched off.

To switch City Safety™ on again:

- Follow the same procedure as for switching City Safety™ off but select **On**.

[1] City Safety is a registered trademark of the Volvo Car Corporation

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6.3.7. City Safety – introduction

City Safety™ [1] is a support system designed to help the driver avoid low speed collisions when driving in slow-moving, stop-and-go traffic.

City Safety™ is not active if your vehicle's speed is below approximately 2 mph (4 km/h). This means that City Safety™ will not react if your vehicle approaches another vehicle at very low speed, for example, when parking.

The function is active at speeds up to approximately 30 mph (50 km/h) and assists the driver by applying the brakes automatically, thereby avoiding or helping to reduce the effects of a collision.

City Safety™ is designed to intervene as late as possible to help avoid unnecessary activation.

City Safety™ triggers brief, forceful braking if a low-speed collision is imminent. However, the system will not intervene in situations where the driver actively steers the vehicle or applies the brakes, even if a collision cannot be avoided. This is done in order to always give the driver's actions highest priority.

City Safety™ activates in situations where the driver has not applied the brakes in time, which means that the system cannot help the driver in all situations.

City Safety™ should not be used to alter the way in which the driver operates the vehicle. The driver should never rely solely on this system to safely stop the vehicle.

Normally, the occupants of the vehicle will not be aware of City Safety™ except when the system intervenes when a low-speed collision is imminent.

If the vehicle is also equipped with the optional Collision Warning with Full Auto-brake and Pedestrian Detection system, the two systems interact. For more information about the Collision Warning with Auto-brake system, see Collision warning – introduction .

Warning

- City Safety™ is a supplemental aid to the driver. It can never replace the driver's attention to traffic conditions or his/her responsibility for operating the vehicle in a safe manner.
- City Safety™ does not function in all driving situations or in all traffic, weather or road conditions.

Warning

- City Safety™ only reacts to vehicles traveling in the same direction as your vehicle and does not react to small vehicles or motorcycles or to people or animals.
- City Safety™ is not activated when your vehicle is backing up.
- City Safety™ functions at speeds up to 30 mph (50 km/h). This system can help prevent a collision if the **difference in speed** between your vehicle and the vehicle ahead is less than 9 mph (15 km/h). If the difference in speed is greater, a collision cannot be avoided but the speed at which the collision occurs can be reduced. The driver must apply the vehicle's brakes for full braking effect.
- City Safety™ will not intervene in a potential collision situation if the vehicle is being driven actively. The driver is always responsible for maintaining a safe distance to a vehicle or object ahead.

[1] City Safety is a registered trademark of the Volvo Car Corporation

6.4. Collision warning

6.4.1. Collision warning – troubleshooting

Pedestrian and Cyclist Detection with Full Auto Brake is designed to assist the driver if there is a risk of a collision with a pedestrian, a cyclist, a vehicle ahead that is at a standstill or one that is moving in the same direction as your vehicle.

Fault tracing and actions

If the message **Windscreen Sensors blocked** is displayed, this means that the camera is obscured and cannot detect pedestrians, cyclists, vehicles or road marker lines in front of the vehicle.

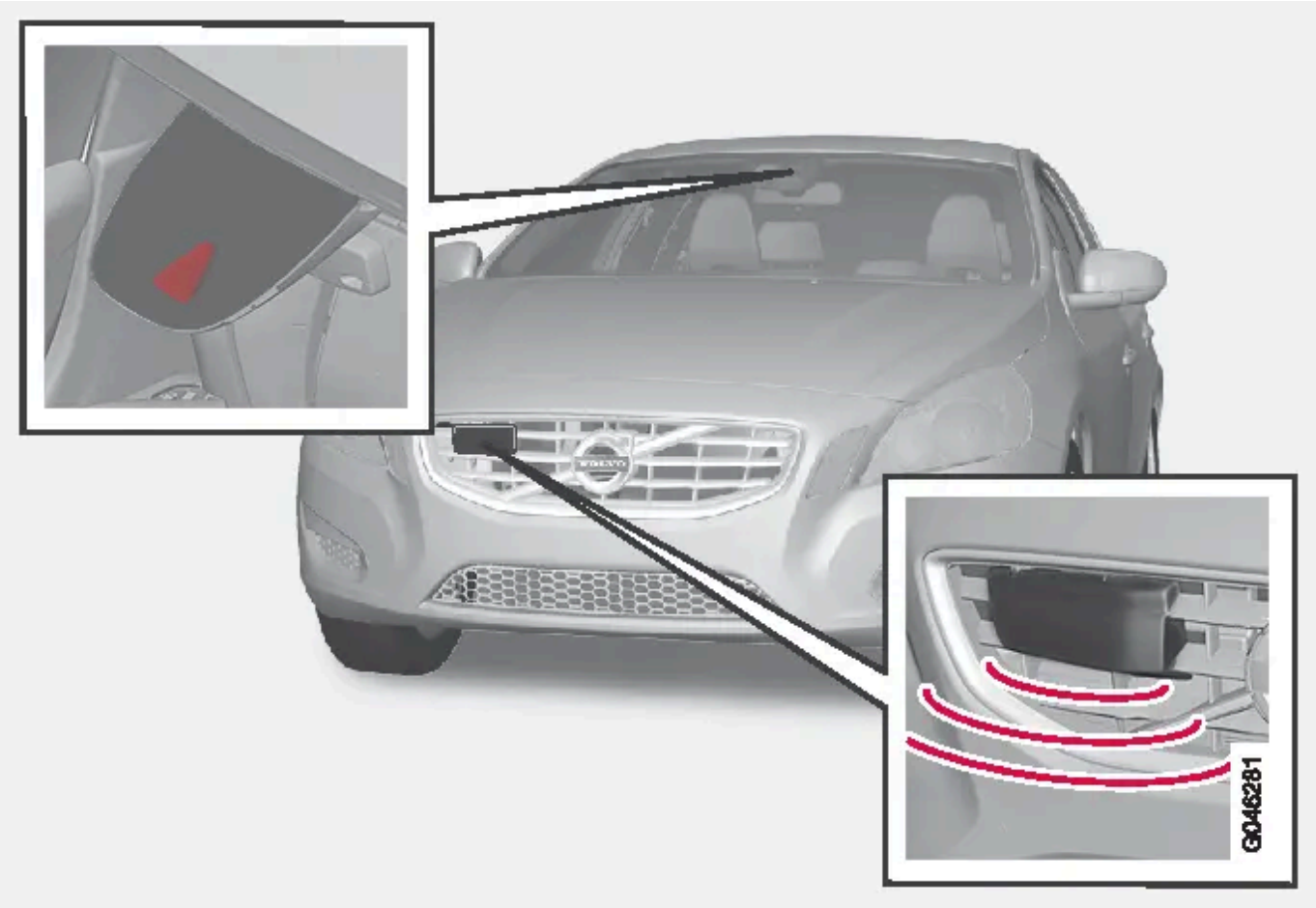
This, in turn, means that Pedestrian and Cyclist Detection with Full Auto Brake, Driver Alert Control, Lane Departure Warning or Lane Keeping Aid will not have full functionality.

The table lists possible causes for this message being displayed, and suitable actions.

Cause	Action
The surface of the windshield in front of the camera is dirty or covered with ice or snow.	Clean or clear the section of the windshield in front of the camera.

Cause	Action
Fog, heavy rain or snow is interfering with the function of the camera.	No action possible. Heavy precipitation may affect the function of the camera.
The surface of the windshield is clean but the message remains in the display.	Wait a short time. It may take several minutes for the camera to register visibility.
The surface between the inside of the windshield and the camera is dirty.	Contact an authorized Volvo retailer or service technician to have this surface cleaned.

Maintenance



Camera and radar sensor[1].

In order to function properly, the camera and radar sensor must be kept clean. Dirt, ice, snow, etc., will reduce the function of these components.

Remove ice and snow when necessary and wash these areas regularly with a suitable car washing liquid.

[1] The illustration is generic; details will vary, depending on the model

6.4.2. Collision warning – introduction

Pedestrian and Cyclist Detection with Full Auto Brake is designed to assist the driver if there is a risk of a collision with a pedestrian, a cyclist, a vehicle ahead that is at a standstill or one that is moving in the same

direction as your vehicle.

This system consists of the following three functions:

- **Collision Warning** warns the driver of a potential collision situation.
- **Brake Support** helps the driver brake efficiently in a critical situation.
- **Auto-brake** brakes the vehicle automatically if a collision with a pedestrian, a cyclist or another vehicle cannot be avoided and the driver does not apply the brakes in time or steer around the person/vehicle. Auto-brake can help prevent a collision or reduce the speed at which a collision occurs.

Since Pedestrian and Cyclist Detection with Full Auto Brake is activated in circumstances where the driver should have begun braking much sooner, the system will not be able to assist the driver in all situations.

This system is designed to activate as late as possible to help avoid unnecessary intervention.

The system should not be used in such a way that the driver changes his/her way of operating the vehicle. If the driver relies entirely on the system, the chances of an accident eventually occurring increase considerably.

The Pedestrian and Cyclist Detection with Full Auto Brake and City Safety™ systems supplement each other. See City Safety – introduction for detailed information about City Safety™.

Warning

No automatic system can be guaranteed to function 100% correctly in all situations. For that reason, never test the Auto-brake system by driving toward a person or object. This could result in serious injury or death.

Warning

- Pedestrian and Cyclist Detection with Full Auto Brake does not work in all driving, traffic, weather and road conditions. It does not react to vehicles not traveling in the same direction as your vehicle.
- Pedestrian and Cyclist Detection with Full Auto Brake does not react to animals.
- Warnings are only provided when the risk of collision is high. The "Function" section provides information about limitations that the driver must be aware of before using Collision Warning.
- Pedestrian and Cyclist Detection with Full Auto Brake will not provide a warning or brake the vehicle for pedestrians or cyclists at speeds above 50 mph (80 km/h).

Warning

- Pedestrian and Cyclist Detection with Full Auto Brake will not provide a warning or brake the vehicle for pedestrians in darkness or in tunnels, even if there is street lighting in the area.
- The auto-brake function can help prevent a collision or reduce the speed at impact but the driver should always apply the brakes for the best possible braking effect, even if auto-brake is actively applying the brakes.
- Never wait for a collision warning. This system is designed to be a supplementary driving aid. It is not, however, intended to replace the driver's attention and judgement. The driver is responsible for maintaining a safe distance and speed, even when the collision warning system is in use.
- Maintenance of the Pedestrian and Cyclist Detection with Full Auto Brake system's components must only be performed by a trained and qualified Volvo technician.

6.4.3. Collision warning* – operation

Pedestrian and Cyclist Detection with Full Auto Brake is designed to assist the driver if there is a risk of a collision with a pedestrian, a cyclist, a vehicle ahead that is at a standstill or one that is moving in the same direction as your vehicle.

Settings are made by pressing MY CAR on the center console control panel and using the menus displayed.

Activating/deactivating both warning signals

To switch the system's **audible** and **visual** signals on or off at the same time, press MY CAR on the center console control panel and go to **Settings** → **Car settings** → **Driver support systems** → **Collision Warning**. If Pedestrian and Cyclist Detection with Full Auto Brake is on, the system will perform a self-test each time the engine is started by briefly illuminating the warning light. See My Car – introduction for a description of the menu system.

When the engine is switched on, the system setting that was being used when it was switched off will be the default setting.

Note

The auto-brake and pedestrian/cyclist detection features are always on, even if the audible and visual warning signals have been deactivated.

Activating/deactivating the audible warning signal only

The audible warning signal can be activated/deactivated by pressing MY CAR on the center console control panel and going to **Settings** → **Car settings** → **Driver support systems** → **Warning sound if risk of collision**.

Setting a warning distance

This setting determines the distance at which the visual and audible warnings are triggered. Select **Long**, **Normal** or **Short** by pressing MY CAR on the center console control panel and going to **Settings** → **Car settings** → **Driver support systems** → **Collision Warning** → **Warning distance**.

The warning distance determines the level of sensitivity used by the system. The warning distance **Long** provides an earlier warning. Begin by using **Long** and if the system gives too many warnings, try changing to **Normal**.

Warning

- The setting **Short** should only be used in situations where traffic is light and moving at low speeds.
- Pedestrian and Cyclist Detection with Full Auto Brake alerts the driver to the risk of a collision but this function cannot reduce the driver's reaction time.
- For the system to be as effective as possible, it is recommended that Distance Alert be set to 4 or 5, see Distance Alert – operation.

Note

- When Adaptive Cruise Control is used, the warning light and signal will be used by that function, even if the warnings provided by Pedestrian and Cyclist Detection with Full Auto Brake have been deactivated by the driver.
- In situations where traffic is moving at considerably different speeds, or if the vehicle ahead brakes suddenly, warnings may be considered to be late, even if the setting **Long** has been selected.

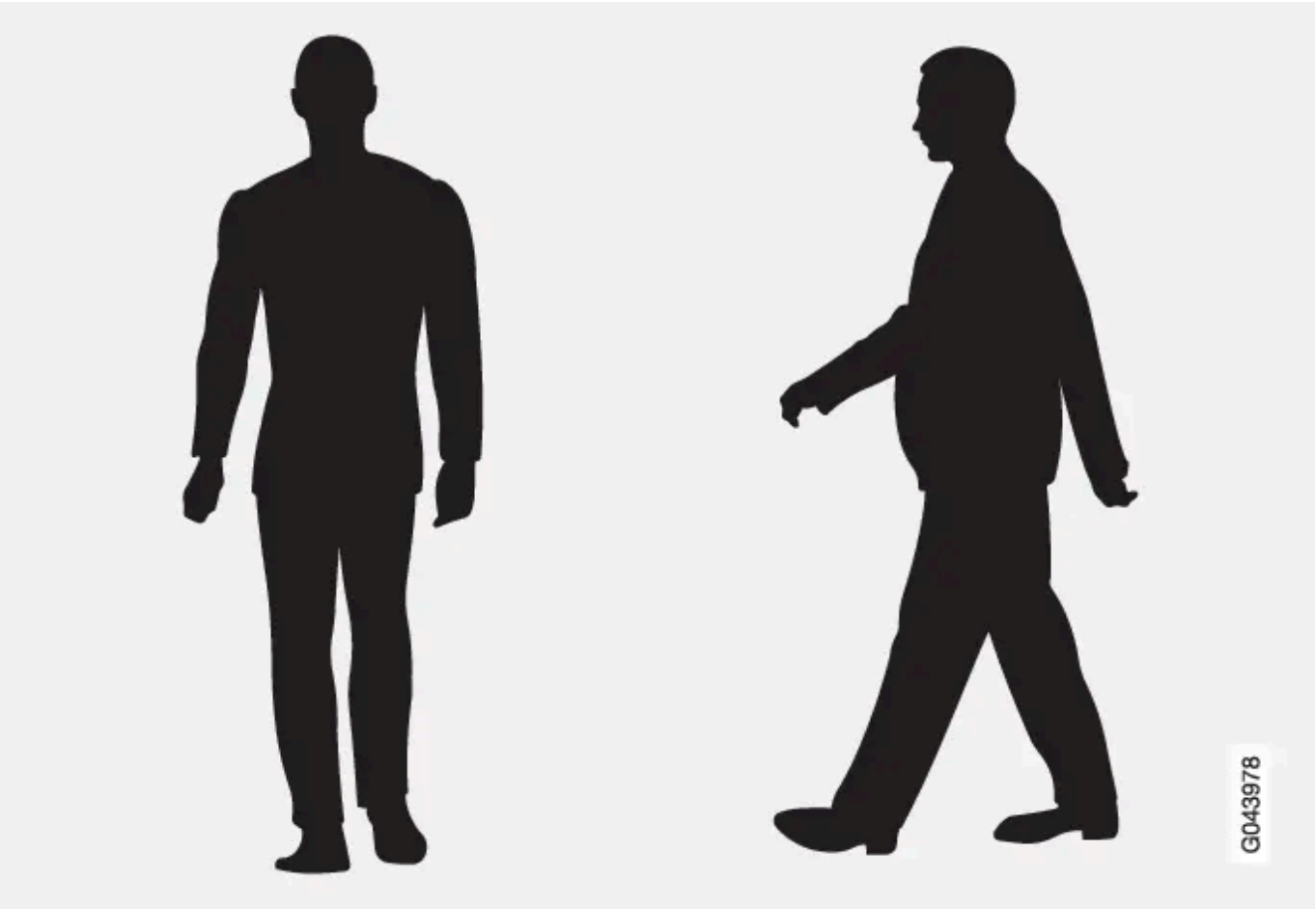
Checking settings

The current system settings can be checked by pressing MY CAR on the center console control panel and going to **Settings** → **Car settings** → **Driver support systems** → **Collision Warning**.

* Option/accessory.

6.4.4. Collision warning* – Pedestrian detection

Pedestrian and Cyclist Detection with Full Auto Brake is designed to assist the driver if there is a risk of a collision with a pedestrian, a cyclist, a vehicle ahead that is at a standstill or one that is moving in the same direction as your vehicle.



The system cannot identify all pedestrians

The Pedestrian and Cyclist Detection with Full Auto Brake system can only identify and detect a pedestrian who is standing upright. This person can be standing still, walking or running.

This means that the system has to be able to identify a person's head, arms, shoulders, legs, the upper and lower parts of the body and a person's pattern of movement when walking or running.

If parts of the body are not visible to the camera, the system cannot detect the pedestrian.

The following conditions apply:

- In order to detect a pedestrian, the system must have a full view of the person's entire body and the person must be at least 32 in. (80 cm) tall.
- The system cannot detect a pedestrian carrying a large object.
- The camera's capacity to see a pedestrian at dawn or dusk is limited, much as it is for the human eye.
- The camera's function is deactivated and will not detect a pedestrian in darkness or in tunnels, even if there is street lighting in the area.

Warning

- Pedestrian and Cyclist Detection with Full Auto Brake is designed to be a supplementary driving aid. It is not, however, intended to replace the driver's attention and judgement. The driver is always responsible for operating the vehicle in a safe manner.
- The system cannot detect all pedestrians in all situations, such as in darkness/at night and cannot detect partially hidden pedestrians, people who are less than approx. 32 in. (80 cm) tall, or people wearing clothing that obscures the contours of their bodies.

* Option/accessory.

6.4.5. The camera’s limitations

The camera has the same limitations as the human eye.

The camera is used by Pedestrian and Cyclist Detection with Full Auto Brake Collision warning – introduction, Active High Beams (Active high beams (AHB)), Road Sign Information (Road Sign Information (RSI) – introduction) and Driver Alert System (Driver Alert System) with Lane Departure Warning or Lane Keeping Aid.

Note

- To help protect the camera in very hot conditions, it may be temporarily switched off for approximately 15 minutes after the engine has been started.
- Keep the section of the windshield in front of the camera clean and free of ice, snow, or condensation.

Warning

- The camera has the same limitations as the human eye. In other words, its “vision is impaired” by adverse weather conditions such as heavy snowfall, dense fog, etc. These conditions may reduce the function of systems that depend on the camera or cause these systems to temporarily stop functioning.
- Never place any objects, decals, etc., on the windshield in front of the camera. This could reduce or block the camera’s function, and could cause one or more of the systems that utilize the camera to stop functioning.
- Strong sunlight, reflections from the road surface, ice or snow covering the road, a dirty road surface, or unclear lane marker lines may drastically reduce the camera’s capacity to detect the side of a lane, a pedestrian, a cyclist or another vehicle.

6.4.6. Radar sensor

The radar sensor is designed to help detect cars or larger vehicles driving in the same direction as your vehicle, in the same lane.

The radar sensor and its limitations

In addition to being used by the Adaptive Cruise Control (ACC), the radar sensor is also used by Distance Alert (see Distance Alert – introduction) and Collision Warning with Full Auto-brake and Pedestrian Detection (see Collision warning – introduction).

Warning

- If there is visible damage to the front grille or you suspect that the radar sensor may be damaged in any way, contact a trained and qualified Volvo service technician as soon as possible. The radar sensor may only function partially (or not at all) if it is damaged or is not securely fastened in place.
- Accessories or other objects, such as extra headlights, must not be installed in front of the grille.
- Modification of the radar sensor could make its use illegal.

The radar sensor's capacity to detect vehicles ahead is impeded:

- if the radar sensor is obstructed and cannot detect other vehicles, for example in heavy rain, or if snow or other objects are obscuring the radar sensor.

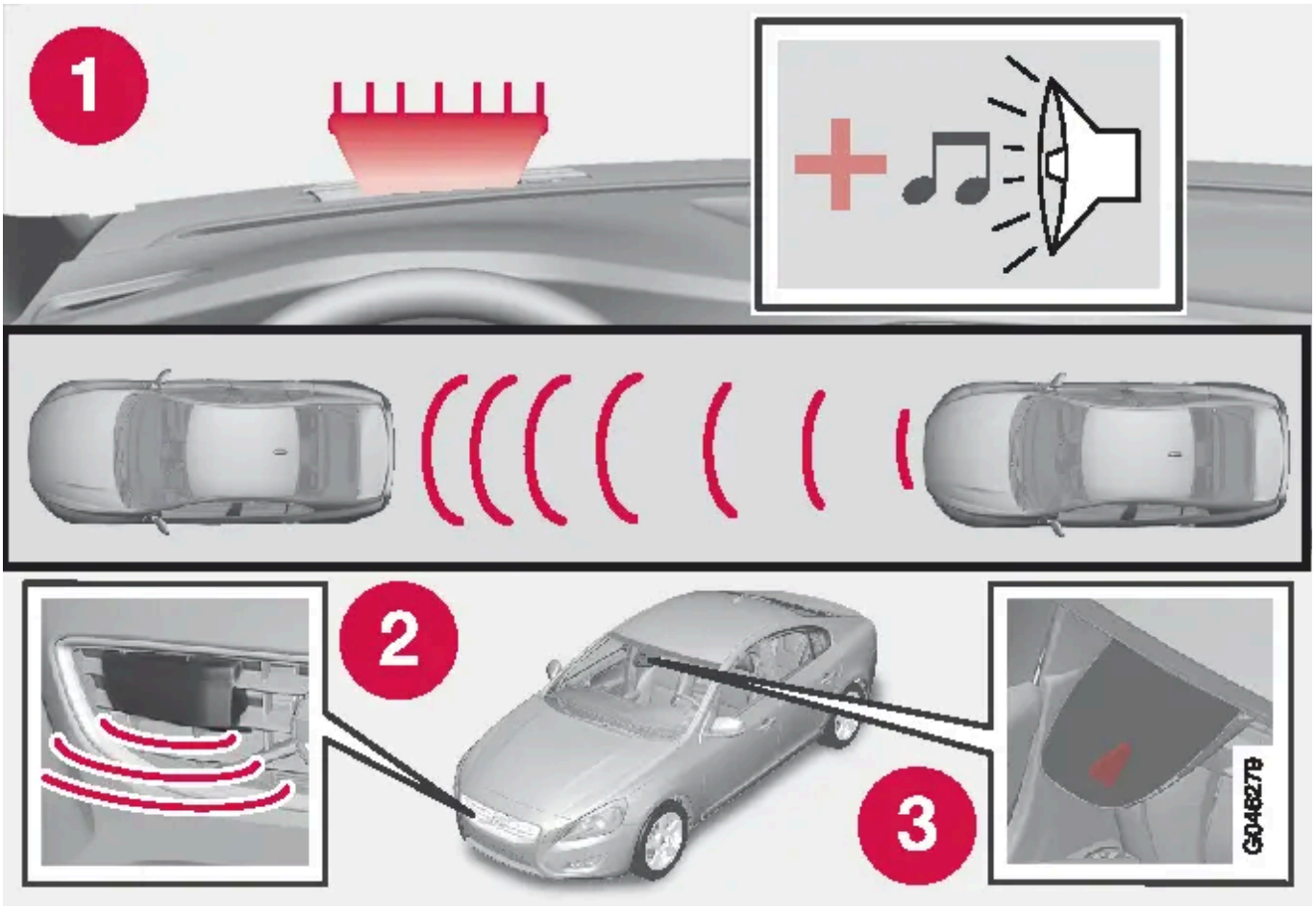
Note

Keep the area in front of the radar sensor clean.

- if the speed of vehicles ahead is significantly different from your own speed.

6.4.7. Collision warning* – function

Pedestrian and Cyclist Detection with Full Auto Brake is designed to assist the driver if there is a risk of a collision with a pedestrian, a cyclist, a vehicle ahead that is at a standstill or one that is moving in the same direction as your vehicle.



Function overview

1 Audio-visual warning signals, collision risk

2 Radar sensor

3 Camera

Collision Warning

The radar sensor and the camera work together to detect a pedestrian, a cyclist, stationary vehicles and vehicles that are moving in the same direction as your vehicle. If there is a risk of collision with a vehicle, a cyclist or a pedestrian, the driver is alerted by a flashing red warning light and an audible warning signal. The system is active at speeds above 3 mph (4 km/h).

Brake Support

If the risk of collision continues to increase after the collision warning has been given, Brake Support is activated. Brake Support prepares the brake system to react quickly, and the brakes are applied slightly. This may be experienced as a light tug.

If the brakes are applied quickly, full braking effect will be provided. Brake Support also increases brake force if the system determines that the driver has not applied adequate pressure on the brake pedal.

Auto-brake

If a collision is imminent and the driver has not applied the brakes or begun to steer around the vehicle, pedestrian or a cyclist, the auto-brake function is activated without the driver pressing the brake pedal. Full brake force is applied to help reduce the vehicle's speed when the collision occurs or limited brake force is applied if this is sufficient to avoid the collision.

Note

The auto-brake and brake support functions are always on and cannot be turned off.

* Option/accessory.

6.4.8. Collision warning* – limitations

Pedestrian and Cyclist Detection with Full Auto Brake is designed to assist the driver if there is a risk of a collision with a pedestrian, a cyclist, a vehicle ahead that is at a standstill or one that is moving in the same direction as your vehicle.

Strong sunlight, reflections, extreme light contrasts, the use of sunglasses, or if the driver is not looking straight ahead may make the visual warning signal in the windshield difficult to see. For this reason, always activate the audible warning signal.

Slippery driving conditions increase braking distance, which can reduce the system's capacity to avoid a collision. In these conditions, the ABS and stability systems provide the best possible braking effect while helping to maintain stability.

Note

The visual warning signal may be temporarily disengaged in the event of high passenger compartment temperature due to strong sunlight, etc. If this occurs, the audible warning signal will be used, even if it has been deactivated in the menu system.

Warning

- In certain situations, the system cannot provide warnings or warnings may be delayed if traffic conditions or other external factors make it impossible for the radar sensor or camera to detect a pedestrian, a cyclist or a vehicle ahead.
- Warnings may not be provided if the distance to the vehicle ahead is short, or if movements of the steering wheel/brake pedal are great, such as during active driving.
- The sensor system has a limited range for pedestrians/cyclists and provides warnings and braking effect most effectively at speeds up to 30 mph (50 km/h). For stationary or slow-moving vehicles, the system functions best if your vehicle's speed is below approximately 45 mph (70 km/h).
- Warnings for stationary or slow-moving vehicles may not be provided in dark conditions or in poor visibility.

The Pedestrian and Cyclist Detection with Full Auto Brake system uses the same radar sensors as Adaptive Cruise Control. For more information on the radar sensor and its limitations, see Adaptive Cruise Control – limitations.

The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.

Note

If warnings are given too frequently, the warning distance can be reduced (see Collision warning – operation). This causes the system to provide later warnings, which decreases the total number of warnings provided.

Warning

- The system is not activated at speeds under approx. 2 mph (4 km/h). Therefore, it will not brake your vehicle if you approach a vehicle ahead at very low speed, such as when parking.
- The driver's actions always have highest priority and override the Pedestrian and Cyclist Detection with Full Auto Brake system. This means that the system will not intervene in situations where the driver is actively steering, braking or pressing the accelerator pedal, even if a collision is imminent.
- When Auto-brake has prevented a collision with a stationary object, your vehicle will remain at a standstill for approx. 1.5 seconds. If your vehicle has been braked for a moving vehicle ahead, your vehicle's speed will be reduced to the same speed as that vehicle's.

* Option/accessory.

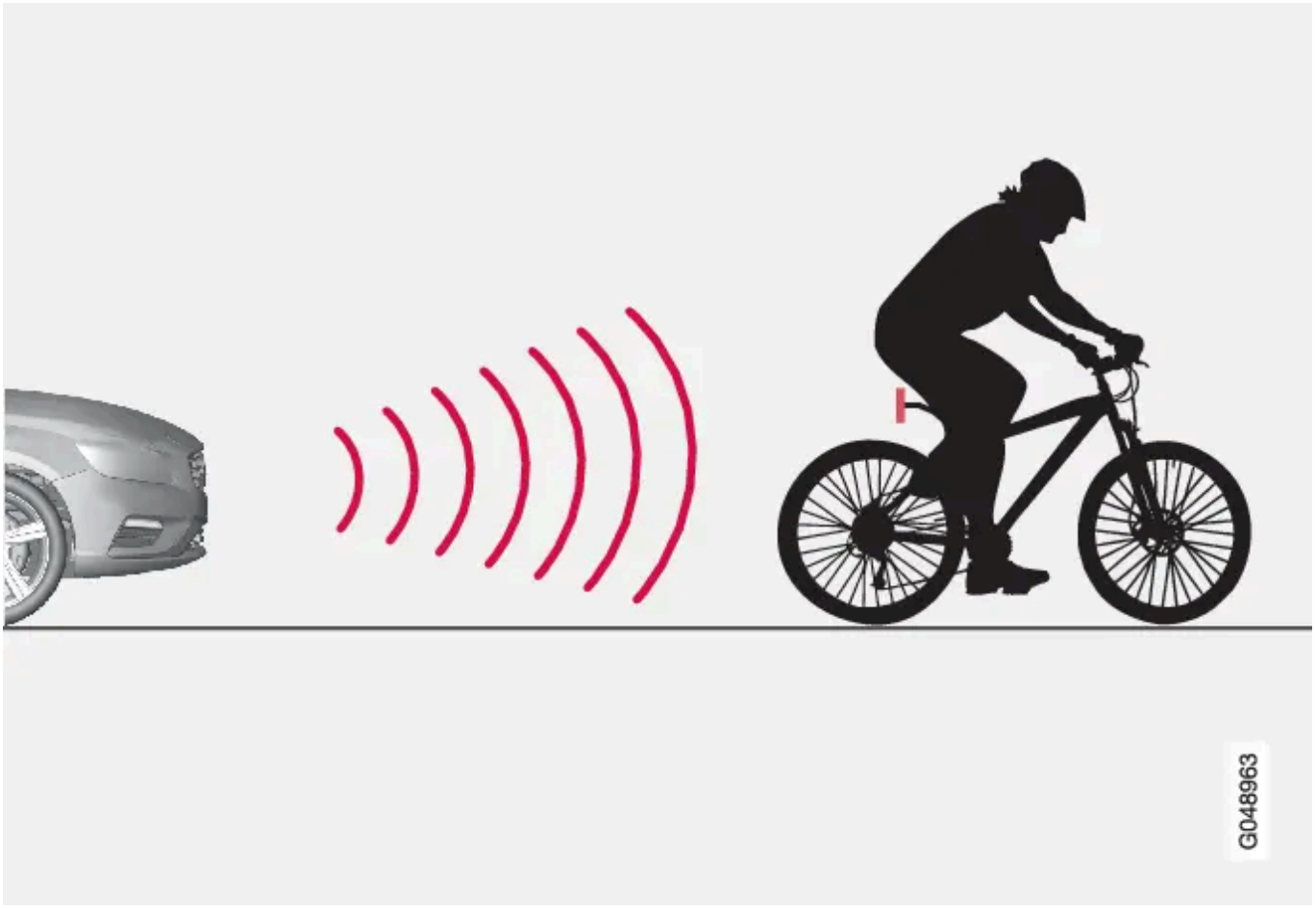
6.4.9. Collision warning* – Cyclist detection

The system can detect a cyclist and auto-brake if certain parameters are fulfilled.



Optimal example of what the system considers to be a cyclist: clear body/bike contours, straight from behind and directly in front of the vehicle

In order to help detect a cyclist, the system has to receive clear information about the contours of the cyclist's body and the bike. It has to able to clearly detect the bike, the cyclist's head, arms, shoulders, legs and upper and lower body combined with the person's pattern of movement when cycling.



The function only detects cyclists from behind who are moving in the same direction as your vehicle

The Cyclist Detection feature requires the following in order to function:

- The cyclist must be an adult riding an "adult-size" bike
- The bike must be equipped with an approved and clearly visible rear-facing red reflector that is mounted at least 27 in. (70 cm) above the road surface
- The feature can only detect a cyclist straight from behind and who is moving in the same direction as your vehicle
- A cyclist who is to the left or right of your vehicle may be detected late or not at all.
- The camera's capacity to see a cyclist at dawn or dusk is limited, much as it is for the human eye.
- The camera's function is deactivated and will not detect a cyclist in darkness or in tunnels, even if there is street lighting in the area.
- For optimal cyclist detection, City Safety™ must be activated.

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Warning

Pedestrian and Cyclist Detection with Full Auto Brake is designed to be a supplementary driving aid. It is not, however, intended to replace the driver's attention and judgement. The driver is always responsible for operating the vehicle in a safe manner.

The system cannot detect a bike/cyclist if:

- He/she is wearing loose-fitting clothing that may obscure body contours
- The bike is approaching your vehicle from the side
- The bike is not equipped with a rear-facing red reflector
- The bike is carrying large objects
- Most of the cyclist's body or the bike itself cannot be "seen" by the system's camera

* Option/accessory.

6.4.10. Collision warning – symbols and messages

The table lists possible causes for collision warning-related messages being displayed, and suitable actions.

A text message can be erased by pressing briefly on the OK button on the turn signal lever.

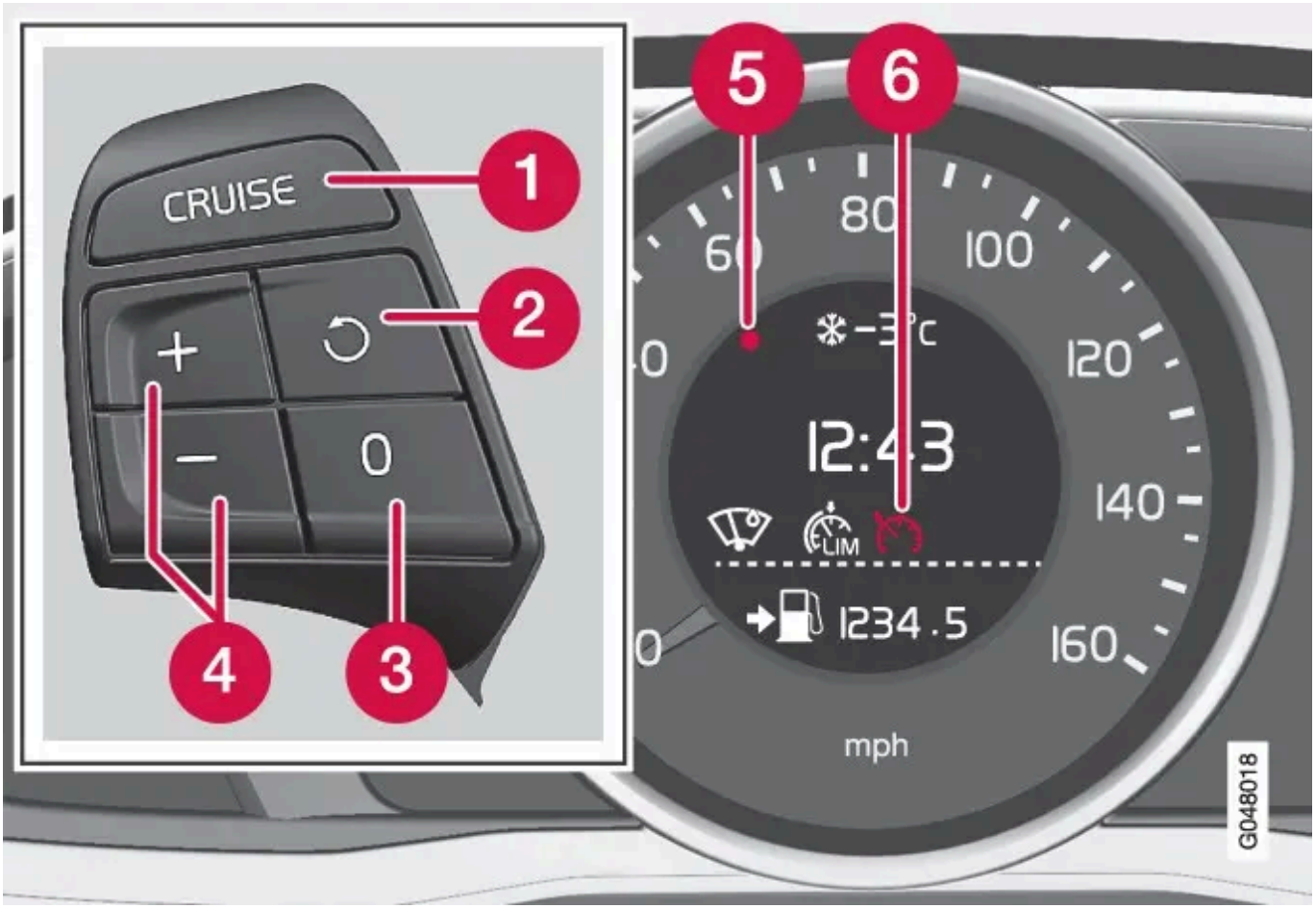
Symbol	Message	Description
	Collis'n warning OFF	Pedestrian and Cyclist Detection with Full Auto Brake is switched off. This message is displayed when the engine is started and will disappear after approx. 5 seconds. It can also be erased by pressing the OK button.
	Collision Warning Unavailable	Pedestrian and Cyclist Detection with Full Auto Brake cannot be activated. This message is displayed when the driver attempts to activate the function. It will disappear after approx. 5 seconds or can be erased by pressing the OK button.
	Auto braking was activated	Auto-braking has been active. This message can be erased by pressing the OK button.
	Windscreen Sensors blocked	The camera is temporarily not functioning. This message is displayed if the camera is obstructed by snow, ice, dirt, etc., on the windshield. Clean the area of the windshield in front of the camera, see The camera's limitations for more information on the camera's limitations.
	Radar blocked See manual	Pedestrian and Cyclist Detection with Full Auto Brake is temporarily not functioning. The radar sensor is blocked, for example by heavy rain or snow that has accumulated in front of the sensor, and cannot detect other vehicles, see Adaptive Cruise Control – limitations for more information on the radar sensor's limitations.
	Collision warn. Service required	Pedestrian and Cyclist Detection with Full Auto Brake is partially or completely not functioning. Contact a trained and qualified Volvo service technician if the message remains in the display.

6.5. Cruise control

6.5.1. Cruise control (CC) – introduction

Cruise control is designed to assist the driver by maintaining a set speed. It is primarily intended for use on long straight roads in steady traffic, such as on highways and other main roads.

Operation



Steering wheel-mounted controls and display

1. Standby mode
2. Resume set speed
3. Deactivating
4. Activate/set speed
5. Selected speed (**gray** symbol indicates standby mode)
6. Cruise control active: **white** symbol (**gray** symbol indicates standby mode)

6.5.2. Toggling between ACC and CC (standard Cruise Control)

Adaptive Cruise Control (ACC) helps the driver maintain a safe distance/time interval to the vehicle ahead.

Switching from ACC to CC

This may be useful if, for example, the radar sensor is obstructed in some way. See Adaptive Cruise Control – limitations for additional information.

- Press and hold the button; the symbol in the instrument panel will switch from to .

> This activates the standard cruise control function (see Cruise control (CC) – introduction).

Warning

Switching from ACC to CC means that:

- Your vehicle will **no longer** automatically maintain a set distance to a vehicle ahead.
- Only the set speed will be maintained and the driver will have to apply the brakes when needed.

Switching from CC to ACC

Switch off cruise control by pressing once or twice as needed according to the instructions in the previous section "Turning ACC off completely." The next time the system is switched on, ACC will be reactivated.

6.5.3. Cruise control (CC) – deactivating

Cruise control is designed to assist the driver by maintaining a set speed. It is primarily intended for use on long straight roads in steady traffic, such as on highways and other main roads.

Automatic deactivation

The cruise control is automatically deactivated **temporarily** if one of the following occurs:

- If the speed drops below approximately 20 mph (30 km/h).
- When the brake pedal is depressed.
- If the gear selector is moved to position N.
- During wheel spin or wheel lock-up.
- If the vehicle's speed is increased by using the accelerator pedal for more than 1 minute.

The currently set speed will be saved in the system's memory.

Temporary deactivation

The driver can temporarily deactivate the cruise control by pressing 0. The saved speed is shown in brackets in the information display.

Resume set speed

If the cruise control has been deactivated temporarily, it can be reactivated by pressing . The vehicle's speed returns to the most recently set speed.

> **Warning**
>
> There may be a significant increase in speed after the button has been pressed.

Deactivation

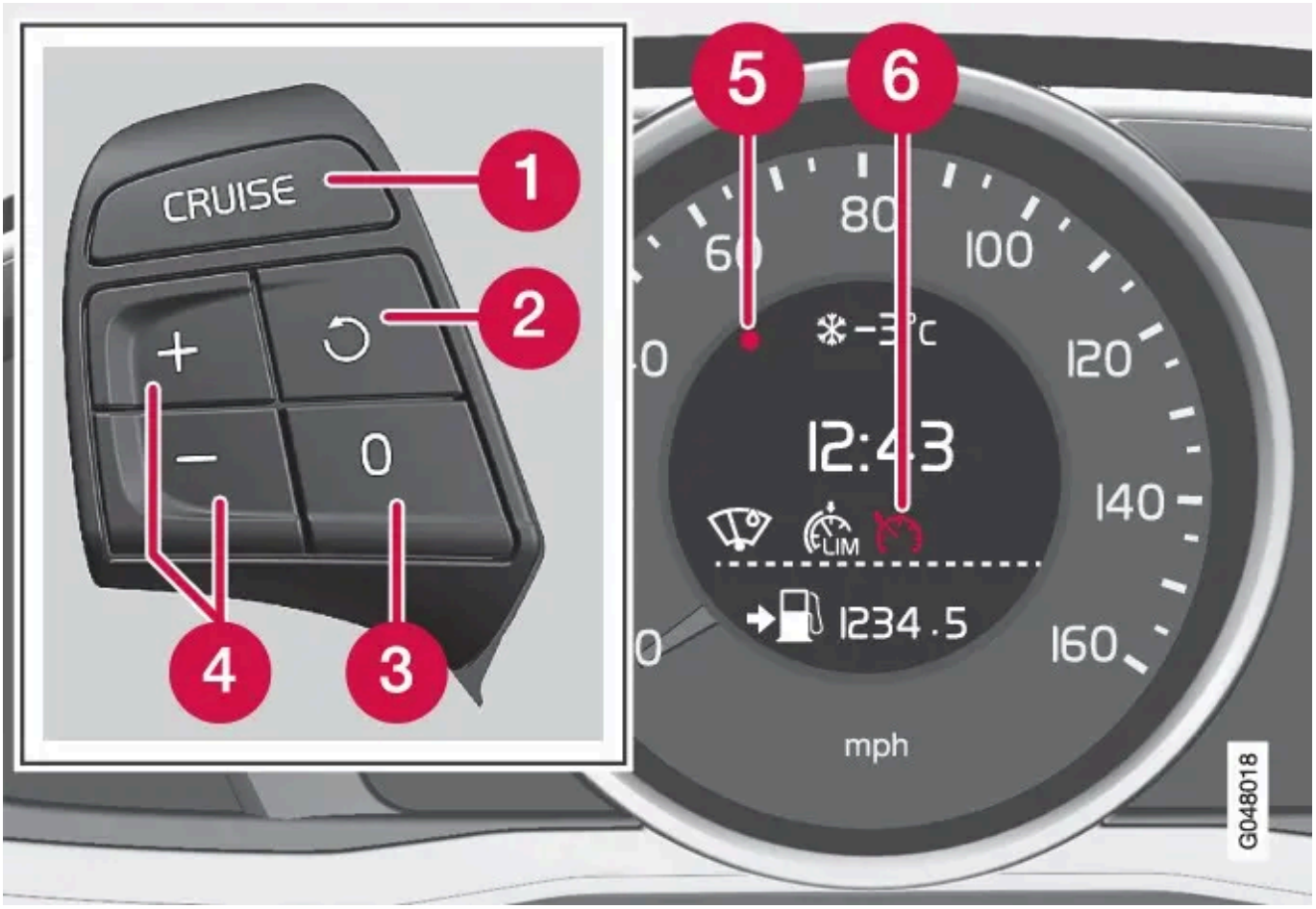
The Cruise control is disengaged by pressing or by switching off the engine. The set speed is cleared.

> **Warning**
>
> Cruise control should not be used in heavy traffic or when driving on wet or slippery roads. Cruise control may not maintain set speed on steep downgrades.

6.5.4. Cruise control (CC) – engaging and setting speed

Cruise control is designed to assist the driver by maintaining a set speed. It is primarily intended for use on long straight roads in steady traffic, such as on highways and other main roads.

Engaging the cruise control function



Steering wheel-mounted controls and display

1. Standby mode
2. Resume set speed
3. Deactivating
4. Activate/set speed
5. Selected speed (**gray** symbol indicates standby mode)
6. Cruise control active: **white** symbol (**gray** symbol indicates standby mode)

Before a speed can be set, the cruise control system must be engaged (put in standby mode).

1. Press the CRUISE button (1).

> The symbol illuminates and the text **(---) mph** (5) indicates that cruise control is in standby mode.

> **Note**
>
> Putting cruise control in standby mode does not set a cruising speed.

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Setting a speed

Use the + or − buttons set the vehicle's current speed. The set speed is shown in the display.

> **Note**
>
> Cruise control cannot be engaged at speeds below 20 mph (30 km/h).

Adjusting the set speed

After a speed has been set, it can be increased or decreased by using the + or − buttons.

1. Press + or − briefly and release the button to increase or decrease vehicle speed by approximately 1 mph or 1 km/h.

> This will become the set speed when the button is released.

2. Press and hold one of these buttons to increase/decrease the speed in 1-mph or 1-km/h increments. Release the button when you have reached the desired speed.

> **Note**
>
> - A temporary increase in speed by pressing the accelerator pedal, for less than 1 minute (e.g. when passing another car), does not affect the current cruise control setting. The vehicle will automatically return to the previously set speed when the accelerator pedal is released.
> - If one of the cruise control buttons is kept depressed for more than approx. 1 minute cruise control is disengaged. The engine must then be switched off in order to reset cruise control.

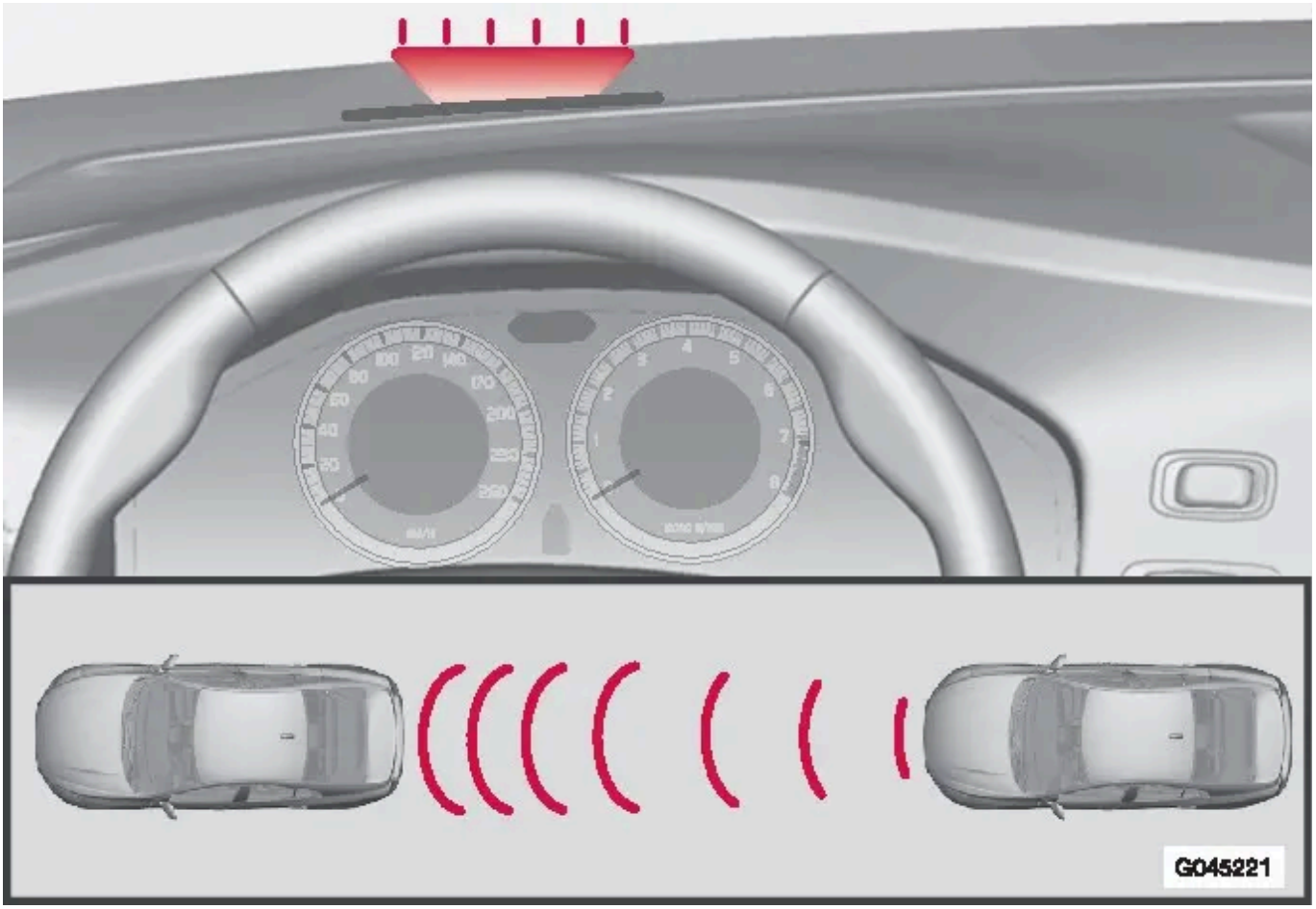
6.6. Distance Alert

6.6.1. Distance Alert – introduction

Distance Alert is part of Adaptive Cruise Control and is a function that provides information about the time interval to the vehicle ahead.

Introduction

Distance Alert is active at speeds above approximately 18 mph (30 km/h). Time interval information is only given for a vehicle that is driving ahead of your vehicle in the same direction. No information is provided for vehicles driving toward you, moving very slowly, or at a standstill.



Amber warning light[1].

An amber warning light in the windshield glows steadily if your vehicle is closer to the one ahead than the set time interval.

Note

Distance Alert only monitors distance to the vehicle ahead while Adaptive Cruise Control is in standby mode or off.

Warning

Distance Alert only indicates the distance to the vehicle ahead. It does not affect the speed of your vehicle.

[1] The illustration is generic; certain details may vary from model to model

6.6.2. Distance Alert – symbols and messages

Distance Alert is part of Adaptive Cruise Control and is a function that provides information about the time interval to the vehicle ahead.

Symbols and text messages

A text message can be erased by pressing briefly on the OK button on the turn signal lever.

Symbol	Message	Description
	Radar blocked See manual	Distance Alert has been temporarily disconnected because the radar is obstructed in some way and cannot detect other vehicles. See Adaptive Cruise Control – limitations for information on the radar sensor's limitations.
	Collision warn. Service required	Distance Alert or Collision Warning with Full Auto-brake and Pedestrian Detection is not functioning properly. Contact a trained and qualified Volvo service technician.

6.6.3. Radar sensor

The radar sensor is designed to help detect cars or larger vehicles driving in the same direction as your vehicle, in the same lane.

The radar sensor and its limitations

In addition to being used by the Adaptive Cruise Control (ACC), the radar sensor is also used by Distance Alert (see Distance Alert – introduction) and Collision Warning with Full Auto-brake and Pedestrian Detection (see Collision warning – introduction).

Warning

- If there is visible damage to the front grille or you suspect that the radar sensor may be damaged in any way, contact a trained and qualified Volvo service technician as soon as possible. The radar sensor may only function partially (or not at all) if it is damaged or is not securely fastened in place.
- Accessories or other objects, such as extra headlights, must not be installed in front of the grille.
- Modification of the radar sensor could make its use illegal.

The radar sensor's capacity to detect vehicles ahead is impeded:

- if the radar sensor is obstructed and cannot detect other vehicles, for example in heavy rain, or if snow or other objects are obscuring the radar sensor.

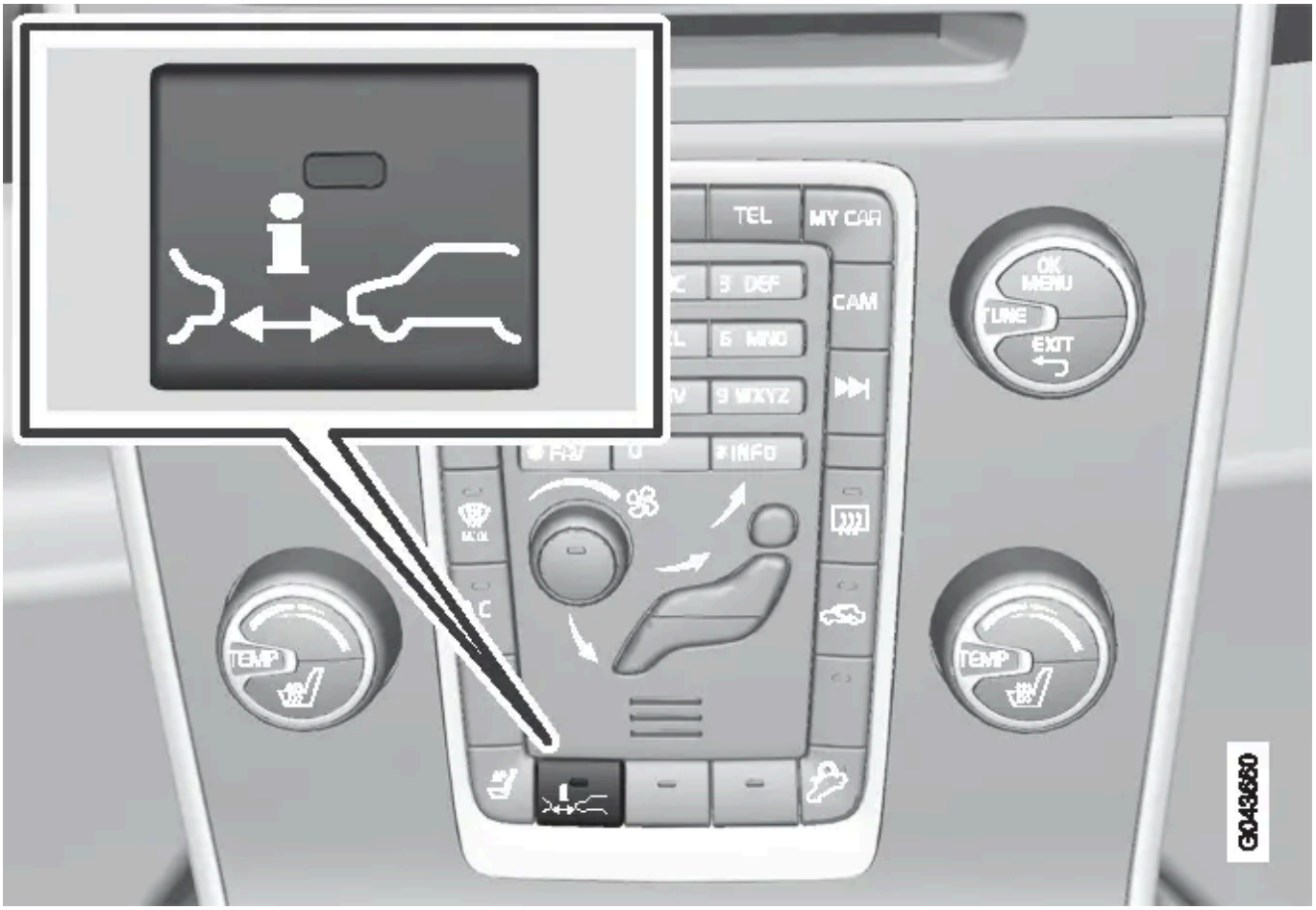
Note

Keep the area in front of the radar sensor clean.

- if the speed of vehicles ahead is significantly different from your own speed.

6.6.4. Distance Alert – operation

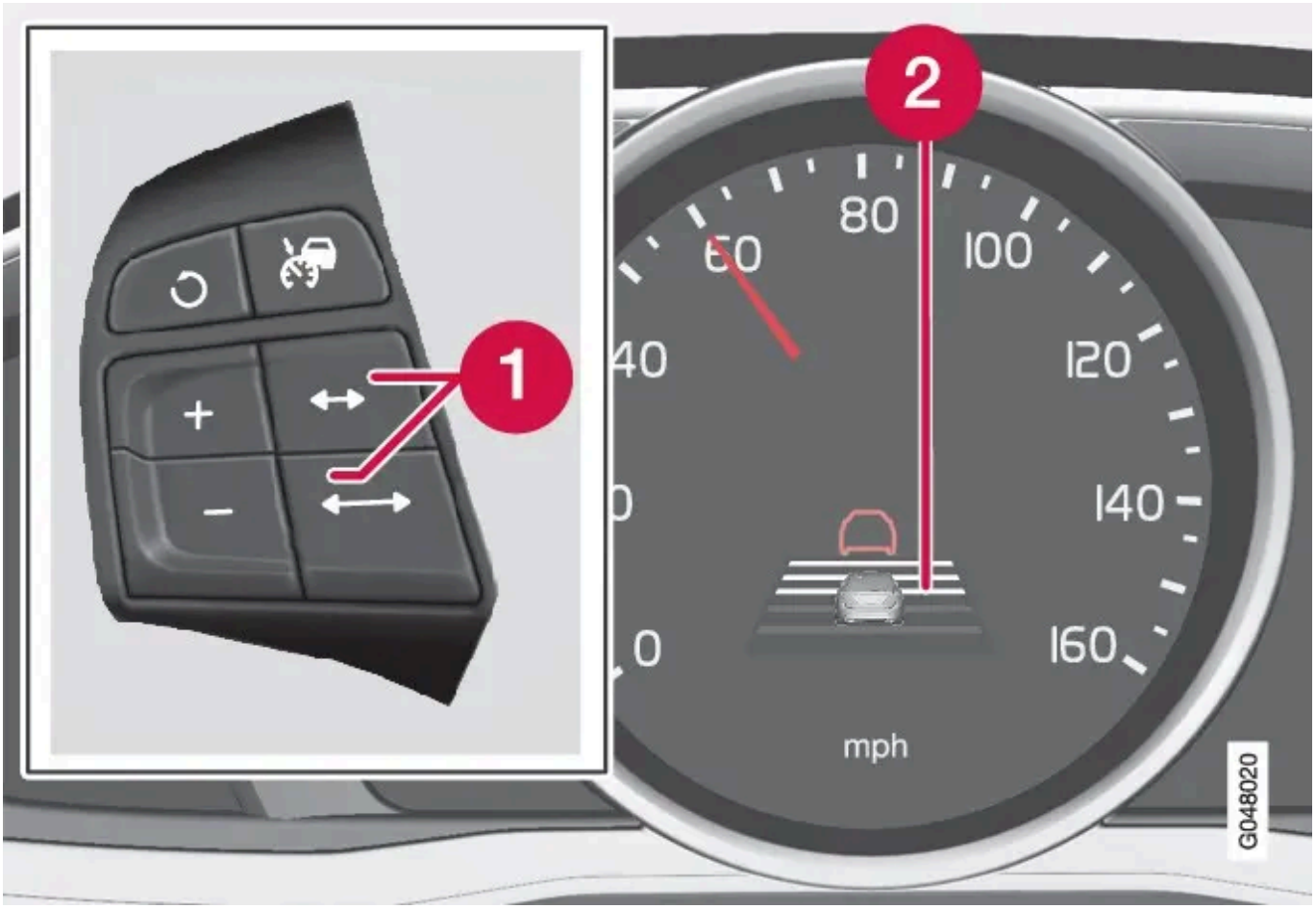
Distance Alert is part of Adaptive Cruise Control and is a function that provides information about the time interval to the vehicle ahead.



Press the button in the center instrument panel to switch this function on or off. The indicator light in the button illuminates when the function is on.

Depending on the optional equipment selected, there may not be room for a Distance Alert button in the center console. In this case, the function is controlled through the menu system. Press MY CAR and go to **Settings → Car settings → Distance alert → On/Off**.

Setting a time interval



Controls and display

1 Time interval: Increase/decrease

2 Time interval On

Press ⟷ to increase the interval or ↔ to decrease it.



Five different time intervals can be selected and are shown in the display as 1–5 horizontal bars. The greater the number of bars, the longer the time interval. One bar represents approximately 1 second to the vehicle ahead; 5 bars is approximately 3 seconds.

Note

- The higher your vehicle's speed, the greater the distance to the vehicle ahead, measured in feet (meters), for a given time interval.
- The set time interval is also used by Adaptive Cruise Control, see Adaptive Cruise Control – setting speed.

Warning

Only use a time interval that is suitable in current traffic conditions.

The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.

6.6.5. Distance Alert – limitations

Distance Alert is part of Adaptive Cruise Control and is a function that provides information about the time interval to the vehicle ahead.

Limitations

Distance Alert uses the same radar sensor used by Adaptive Cruise Control and the Collision Warning system. See Adaptive Cruise Control – limitations for more information on the radar sensor's limitations.

> **Note**
>
> Strong sunlight, reflections, extreme light contrasts, the use of sunglasses, or if the driver is not looking straight ahead may make the visual warning signal in the windshield difficult to see.

> **Warning**
>
> - Bad weather or winding roads may affect the radar sensor's capacity to detect vehicles ahead.
> - The size of the vehicle ahead, such as a motorcycle, may also make it difficult to detect. This may result in the warning light illuminating at a shorter distance than the one that has been set, or that the light will not come on at all.

6.7. Driver Alert System

6.7.1. Lane Keeping Aid (LKA) – limitations

The LKA function is designed to help reduce the risk of accidents in situations where the vehicle unintentionally leaves its lane and there is a risk of driving off the road or into the opposite lane.

The camera used by LKA has the same limitations as the human eye. See The camera's limitations for more information about the camera's limitations.

Note

In certain cases, it may be difficult for LKA to assist the driver correctly. In the following conditions, it may be preferable to turn LKA off:

- Road construction areas
- Winter road conditions
- Poor road surfaces
- A very sporty driving style
- Bad weather conditions with poor visibility

Warning

Hands on the steering wheel: In order for LKA to function correctly, the driver's hands have to be on the steering wheel, which LKA monitors steadily. If this is not the case, the driver will be alerted by a text message to actively steer the vehicle.

If this is not done, LKA will go into standby mode and will remain disengaged until the driver begins to actively steer the vehicle again.

6.7.2. Driver Alert System

The Driver Alert System is designed to help a driver who may be becoming fatigued or who is inadvertently leaving the lane.

Introduction

The Driver Alert System consists of two different functions that can be switched on together or separately.

- **Driver Alert Control (DAC)**, see Driver Alert Control (DAC) – introduction
- **Lane Departure Warning (LDW)**[1], see Lane Departure Warning (LDW) – introduction

or

- **Lane Keeping Aid (LKA)**[1], see Lane Keeping Aid (LKA) – introduction

When one or both of the functions has been switched on, it is in standby mode and is activated when the vehicle exceeds a speed of 40 mph (65 km/h).

The function deactivates if the vehicle's speed goes under 37 mph (60 km/h).

Both functions use a camera that is dependent on the road/lane being clearly marked by painted lines on each side.

> **Warning**
>
> The Driver Alert System does not function in all situations and is designed to be a supplementary aid. It is not, however, intended to replace the driver's attention and judgement.

[1] **Models with 5- or 6-cylinder engines only.**

6.7.3. Lane Keeping Aid (LKA) – operation

The LKA function is designed to help reduce the risk of accidents in situations where the vehicle unintentionally leaves its lane and there is a risk of driving off the road or into the opposite lane.

LKA is active at speeds above 40 mph (65 km/h) on highways or other major roads with clearly marked side/lane marker and center lines. On narrow roads where the distance between side/lane marker lines is less than approximately 8.5 feet (2.6 meters), LKA will be temporarily deactivated.



LKA monitors and follows the marker lines (the red lines in the illustration)

- **White** side marker lines: the function is active and "sees" one or both of the road's side marker lines.

- **Gray** side marker lines: the function is active but cannot "see" one or both of the road's side marker lines.

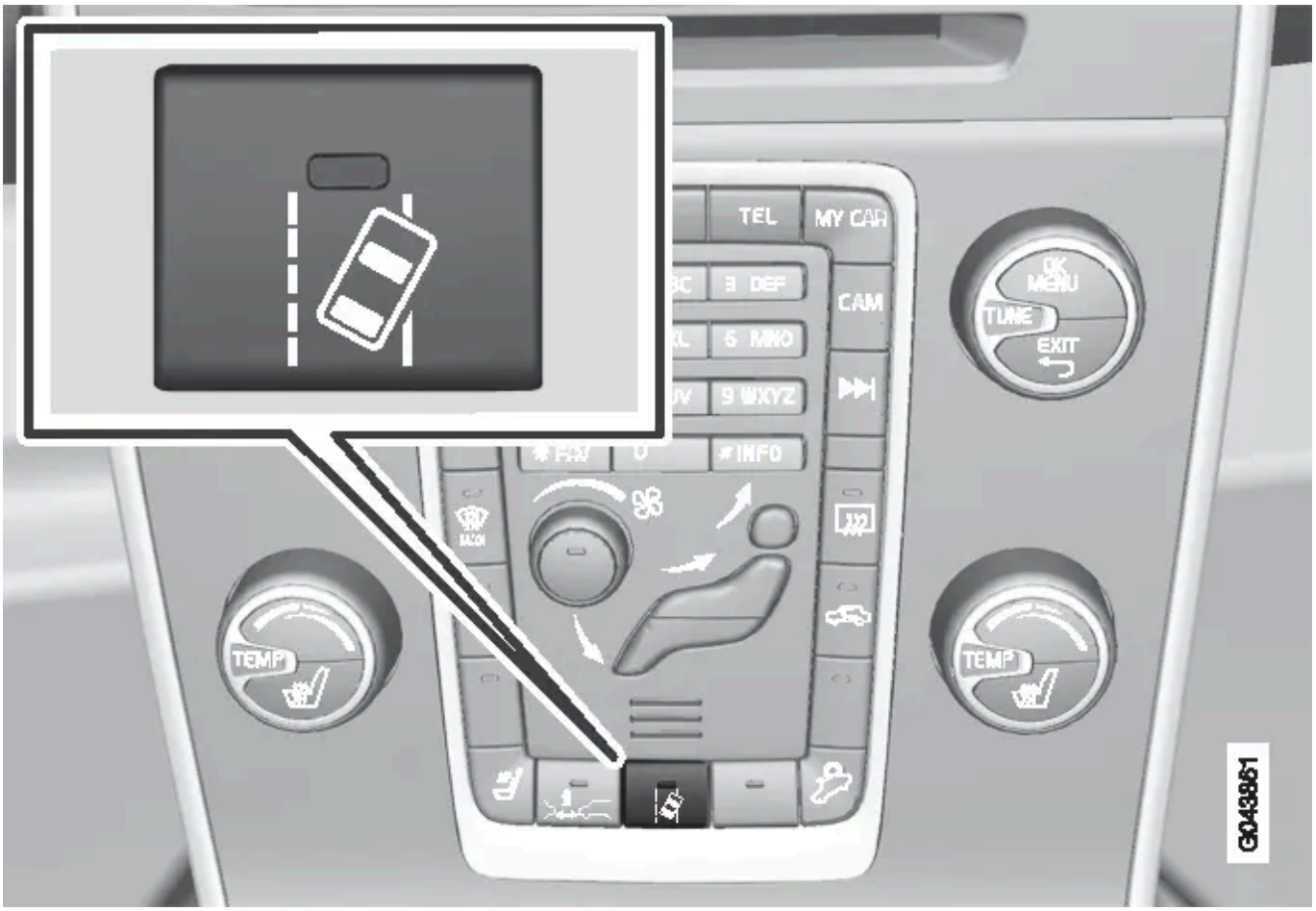


LKA intervening on the right side (the red line)

When LKA is working actively, this is indicated by:

- **Red** side marker line: the line being crossed.

On/Off



LKA can be switched on or off by pressing the button on the center console. A light in the button illuminates when the function is on.

Depending on the number of optional features installed in the vehicle, there may not be space for the On/Off button on the center console. If this is the case, LKA can be switched on or off in the MY CAR menu system.

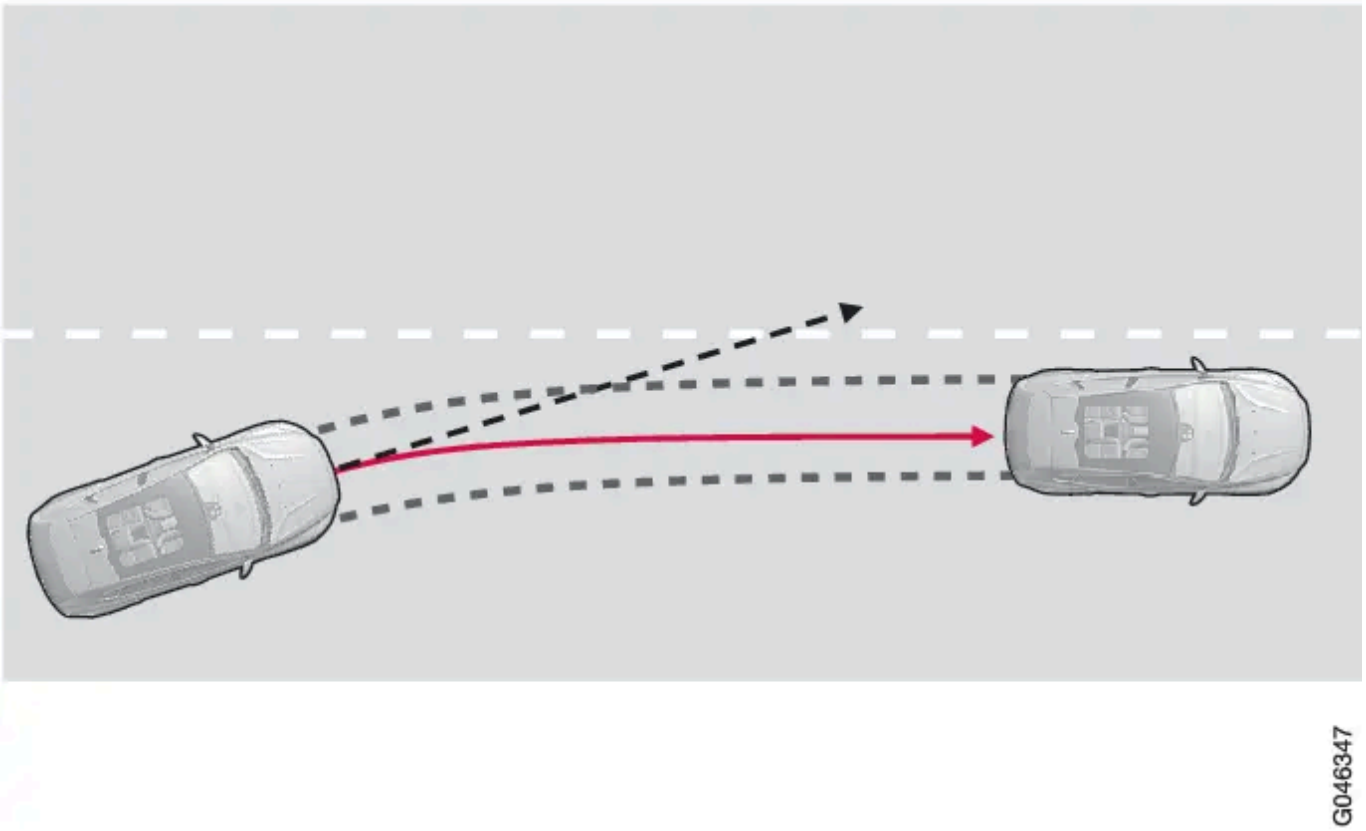
The following LKA-related settings can also be made in MY CAR, under **Settings → Lane Keeping Aid settings → Assistance mode**:

- **Vibration only**: Warning by vibrations in the steering wheel **On** or **Off**.
- **Steering assist only**: Active steering **On** or **Off**.
- **Full function**: Both vibrations and active steering **On** or **Off**.

Steering assist

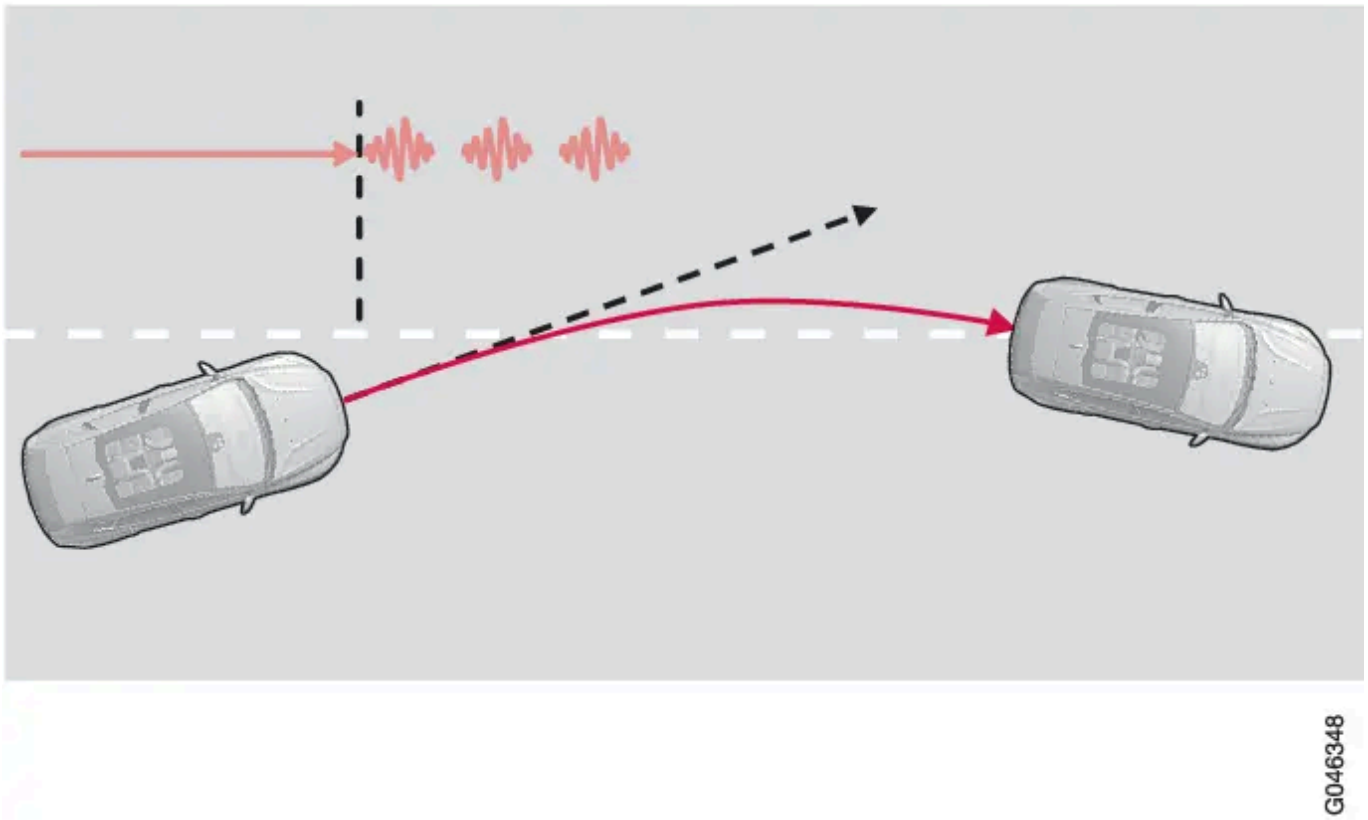
The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.

LKA attempts to keep the vehicle within the lane's side marker lines.



LKA provides steering assistance

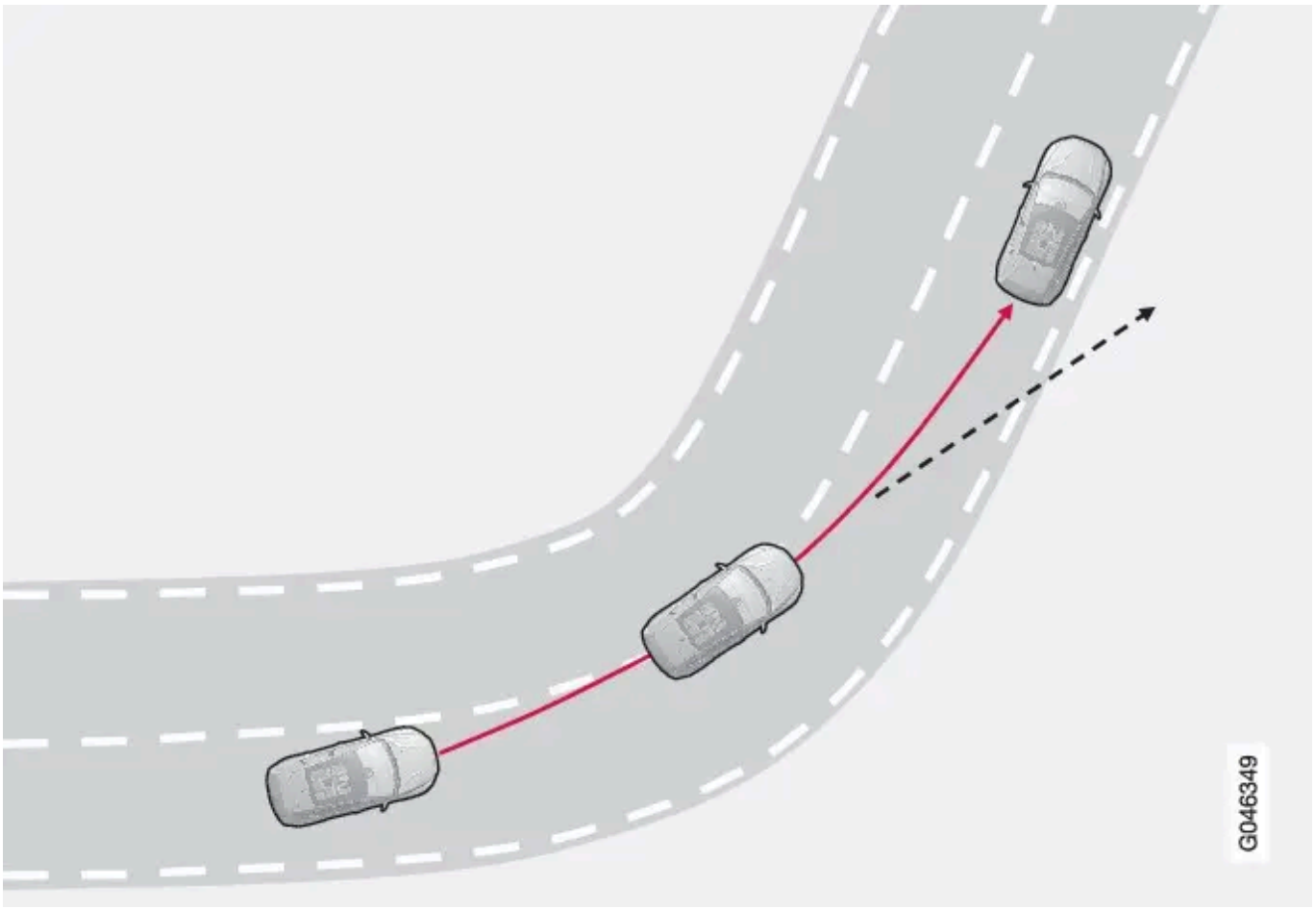
If the vehicle approaches one of the lane's side marker lines **and the turn signals are not being used**, LKA will attempt to steer the vehicle back into the lane.



LKA provides vibrations in the steering wheel and steering assistance[1].

If the vehicle crosses a marker line, LKA provides a warning in the form of vibrations in the steering wheel. This occurs even if the steering assist function has been deactivated.

The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.



LKA does not intervene in sharp left curves

In certain cases, LKA allows the vehicle to cross marker lines without providing a vibration warning or steering assistance, for example, during dynamic cornering as shown in the illustration where the driver's view of the road and traffic conditions make this possible.

[1] The illustration shows 3 vibration warnings when the vehicle crosses the marker line

---

6.7.4. Lane Departure Warning (LDW) - limitations

The LDW function is designed to help reduce the risk of accidents in situations where the vehicle unintentionally leaves its lane and there is a risk of driving off the road or into the opposite lane.

Limitations

The camera used by LDW has the same limitations as the human eye. See The camera's limitations for more information about the camera's limitations.

Note

No warning signal will be given in the certain situations, such as:

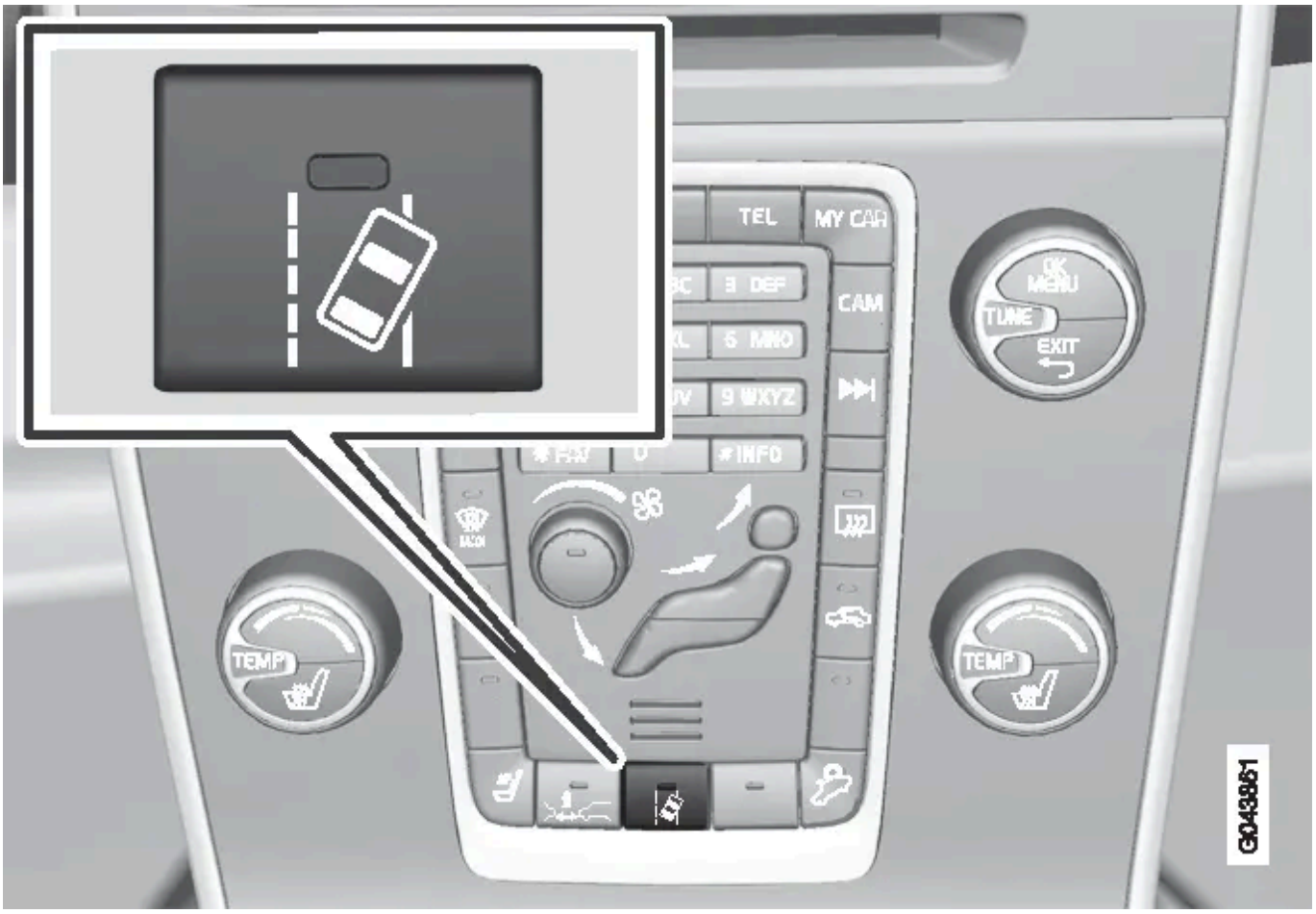
- If the turn signal is being used
- The driver's foot is on the brake pedal [1]
- The accelerator pedal is pressed quickly [1] [1]
- If the steering wheel is moved quickly [1] [1]
- In sharp turns that cause the vehicle's body to sway

[1] When **Increased sensitivity** has been selected, a warning will be issued if a side marker line is crossed in this situation.

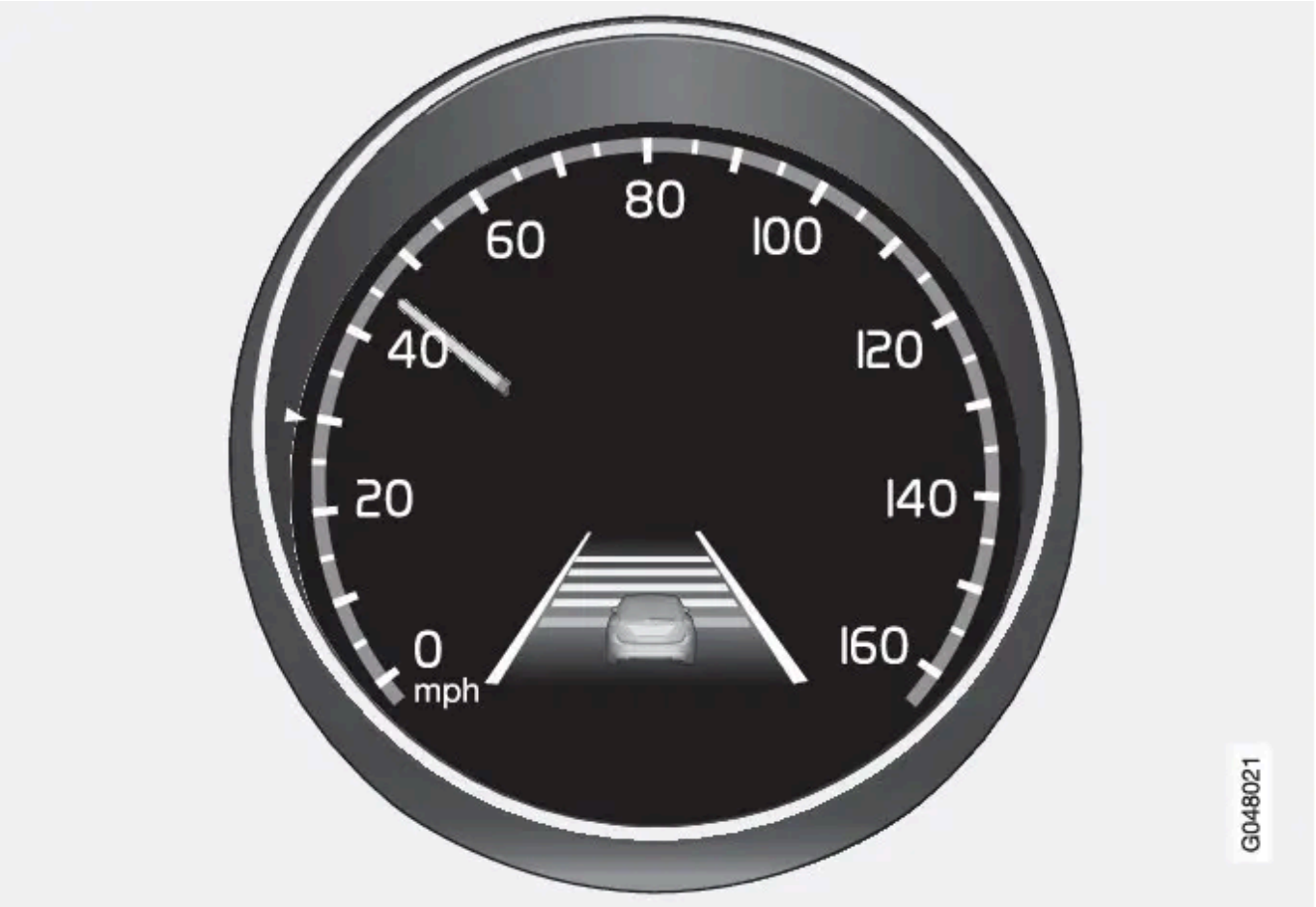
6.7.5. Lane Departure Warning (LDW) – operation

The LDW function is designed to help reduce the risk of accidents in situations where the vehicle unintentionally leaves its lane and there is a risk of driving off the road or into the opposite lane.

Operation and function



LDW can be switched on or off by pressing the button on the center console. A light in the button illuminates when the function is on. This is supplemented by graphic displays in the instrument panel, for example:



LDW displayed in the instrument panel

- The LDW symbol has **white** side marker lines: – the function is active and "sees" one or both of the road's side marker lines.
- The LDW symbol has **gray** side marker lines: – the function is active but cannot "see" one or both of the road's side marker lines.

or

- The LDW symbol has **gray** side marker lines: – the function is in standby mode because the vehicle's speed is below 40 mph (65 km/h).
- The LDW symbol has **no** side marker lines: – the function is deactivated.

Warning

The driver will only be warned once for each time the wheels cross a marker line. No alarm will be given if a marker line is between the wheels.

Settings

Settings for Lane Departure Warning can be made in the menu system by pressing My Car. Go to **Settings → Car settings → Driver support systems → Lane Departure Warning**.

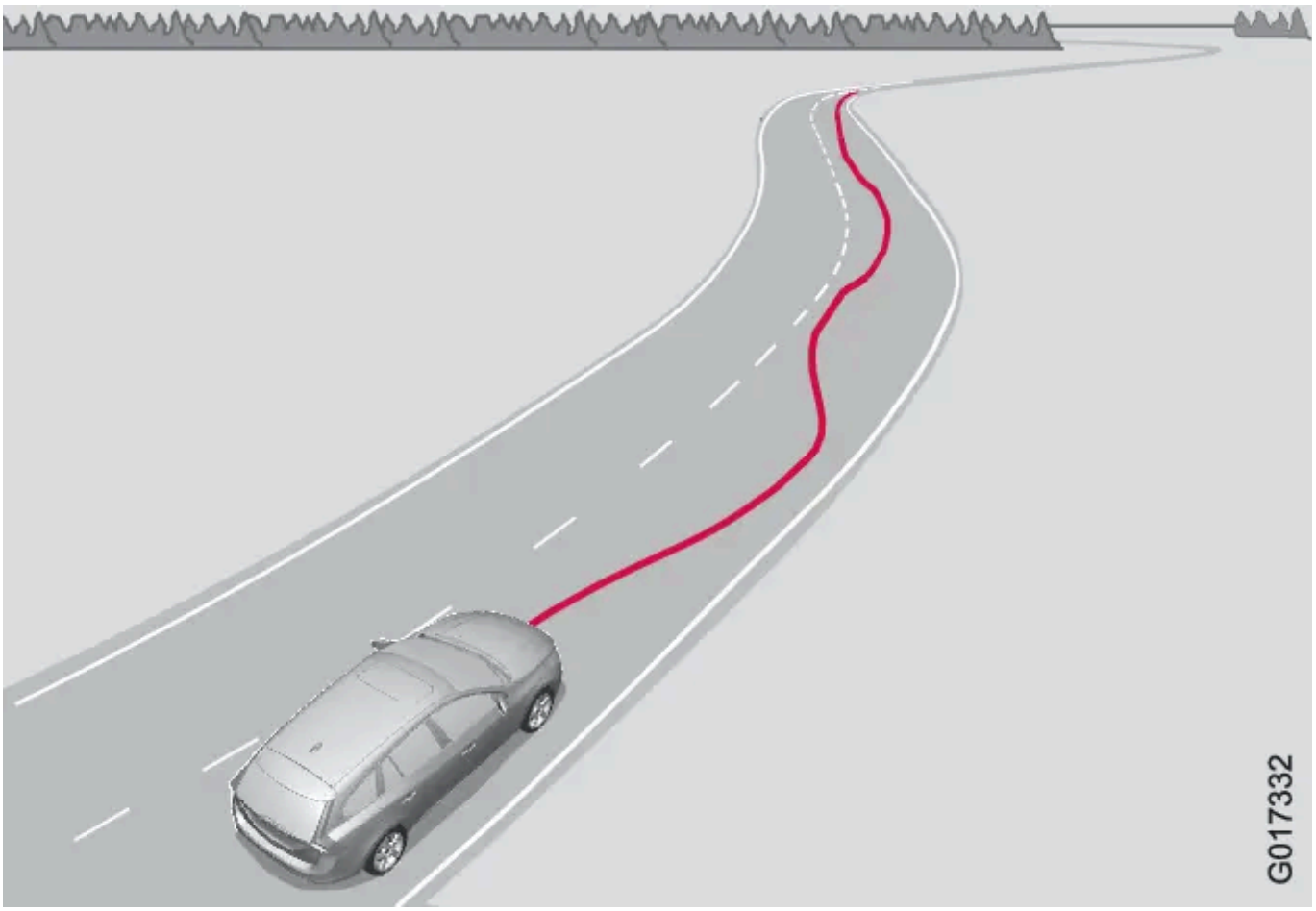
There are two alternatives:

- **On at start-up**: This selection switches LDW on each time the engine is started. Otherwise, the system will be in the mode that it was in when the engine was switched off.
- **Increased sensitivity**: This selection increases the function's sensitivity. Warnings will be given at an earlier stage and fewer limitations apply. When this setting is being used, the system only needs to monitor lane marker lines on one side of the vehicle to change status to **Lane Depart Warn Available**.

6.7.6. Driver Alert Control (DAC) – introduction

DAC is intended to alert the driver if his/her driving becomes erratic, such as if the driver is distracted or fatigued.

DAC is designed to help detect a slowly changing driving pattern. It is primarily intended to be used on main roads and is not meant for use in city traffic.



A camera monitors the painted lines marking the lane in which the vehicle is traveling and compares the direction of the road with the driver's movements of the steering wheel. The driver is alerted if the vehicle does not follow the lane smoothly.

Note

The camera has certain limitations, see Adaptive Cruise Control – limitations.

Warning

- DAC is not intended to extend the duration of driving. Always plan breaks at regular intervals to help remain alert.
- In certain cases, fatigue may not affect the driver's behavior. In situations of this type, no warning will be provided. Therefore, it is important to take breaks at regular intervals, regardless of whether or not DAC has given a warning.

6.7.7. Lane Keeping Aid (LKA) – symbols and messages

The LKA function is designed to help reduce the risk of accidents in situations where the vehicle unintentionally leaves its lane and there is a risk of driving off the road or into the opposite lane.

A text message can be erased by pressing briefly on the OK button on the turn signal lever.

Symbol	Message	Description
-	Lane Keeping Aid Unavailable at this speed	The function has gone into standby mode because the vehicle's speed is below 40 mph (65 km/h).
-	Lane Keeping Aid Unavailable for current markings	The road lacks clear marker lines or the camera is not functioning properly. See The camera's limitations for information on the camera's limitations.
-	Lane Keeping Aid Available	The function is monitoring the road's marker lines.
	Windscreen sensors blocked See manual	The camera is temporarily not functioning, due to snow, ice, or dirt on the windshield. Clean the area of the windshield in front of the camera. See The camera's limitations for information on the camera's limitations.
	Lane Keeping Aid Service required	The system is not functioning. Contact a trained and qualified Volvo service technician if the message remains in the display.
	Lane Keeping Aid Interrupted	The function has gone into standby mode. The lines in the LKA symbol in the instrument panel will indicate when the function is active again.

6.7.8. The camera's limitations

The camera has the same limitations as the human eye.

The camera is used by Pedestrian and Cyclist Detection with Full Auto Brake Collision warning – introduction, Active High Beams (Active high beams (AHB)), Road Sign Information (Road Sign Information (RSI) – introduction) and Driver Alert System (Driver Alert System) with Lane Departure Warning or Lane Keeping Aid.

Note

- To help protect the camera in very hot conditions, it may be temporarily switched off for approximately 15 minutes after the engine has been started.
- Keep the section of the windshield in front of the camera clean and free of ice, snow, or condensation.

Warning

- The camera has the same limitations as the human eye. In other words, its “vision is impaired” by adverse weather conditions such as heavy snowfall, dense fog, etc. These conditions may reduce the function of systems that depend on the camera or cause these systems to temporarily stop functioning.
- Never place any objects, decals, etc., on the windshield in front of the camera. This could reduce or block the camera’s function, and could cause one or more of the systems that utilize the camera to stop functioning.
- Strong sunlight, reflections from the road surface, ice or snow covering the road, a dirty road surface, or unclear lane marker lines may drastically reduce the camera’s capacity to detect the side of a lane, a pedestrian, a cyclist or another vehicle.

6.7.9. Driver Alert Control (DAC) – function

The DAC function is intended to alert the driver if his/her driving becomes erratic, such as if the driver is distracted or fatigued.

Function

Driver Alert is activated when the vehicle exceeds a speed of 40 mph (65 km/h) and will remain active as long as the speed is over approx. 37 mph (60 km/h).



If the vehicle is being driven erratically, the driver will be alerted by an audible signal and the message **Driver Alert Time for a break** is displayed. The warning will be repeated after a short time if the driving pattern remains the same.

Press the OK button to erase a message.

Warning

- An alert should be taken seriously since it is sometimes difficult for a driver to realize that he/she is fatigued.
- In the event of a warning or if the driver feels fatigued, stop as soon as possible in a safe place and rest.

6.7.10. Driver Alert Control (DAC) – symbols and messages

Depending on the situation, DAC may display certain symbols and text messages in the instrument panel or center console screen.

Symbols and messages

Instrument panel

Symbol	Message	Description
	Driver Alert Time for a break	The vehicle has been driven erratically. The driver receives an audible signal and a text message.
	Windscreen Sensors blocked	The camera is temporarily not functioning, due to snow, ice, or dirt on the windshield. Clean the area of the windshield in front of the camera. See The camera's limitations for information on the camera's limitations.
	Driver Alert Sys Service required	The system is not functioning. Contact a trained and qualified Volvo service technician if the message remains in the display.

Center console display

Symbol	Message	Description
-	Driver Alert OFF	The function is not switched on.
-	Driver Alert Available	The function is active.
-	Driver Alert Standby <65 km/h	The function has gone into standby mode because the vehicle's speed is below 40 mph (65 km/h).
-	Driver Alert Unavailable	The camera is temporarily not functioning, due to snow, ice, or dirt on the windshield. Clean the area of the windshield in front of the camera. See The camera's limitations for information on the camera's limitations.

6.7.11. Lane Departure Warning (LDW) – symbols and messages

The LDW function is designed to help reduce the risk of accidents in situations where the vehicle unintentionally leaves its lane and there is a risk of driving off the road or into the opposite lane.

Symbols and messages

A text message can be erased by pressing briefly on the OK button on the turn signal lever.

Symbol	Message	Description
	Lane departure warning ON/Lane departure warning OFF	The function is switched on or off. The text disappears after 5 seconds.
-	Lane Depart Warn Available	The function is monitoring the road's marker lines.
-	Lane Depart. Warning Unavailable at this speed	The function has gone into standby mode because the vehicle's speed is below 40 mph (65 km/h).
-	Lane Depart Warn Unavailable	The road lacks clear marker lines or the camera is not functioning properly. See The camera's limitations for information on the camera's limitations.

Symbol	Message	Description
	Windscreen Sensors blocked	The camera is temporarily not functioning, due to snow, ice, or dirt on the windshield. Clean the area of the windshield in front of the camera. See The camera's limitations for information on the camera's limitations.
	Driver Alert Sys Service required	The system is not functioning. Contact a trained and qualified Volvo service technician if the message remains in the display.

6.7.12. Driver Alert Control (DAC) – limitations

The DAC function is intended to alert the driver if his/her driving becomes erratic, such as if the driver is distracted or fatigued.

Limitations

In certain situations, DAC may provide warnings even if the driver's driving pattern has not become erratic:

- in strong crosswinds
- on grooved road surfaces.
- if the driver is testing the LDW function, see Lane Departure Warning (LDW) – introduction

or

- if the driver is testing the LKA function, see Lane Keeping Aid (LKA) – introduction

6.7.13. Driver Alert Control (DAC) – operation

The DAC function is intended to alert the driver if his/her driving becomes erratic, such as if the driver is distracted or fatigued.

Operating DAC

Settings are made using menu system and the display in the center console. See My Car – introduction for more information on the menu system.

On/Off

To put Driver Alert in standby mode:

- In the MY CAR menu, scroll to **Car settings** → **Driver support systems** → **Driver Alert** and check the box. If the box is not checked, the function is off.

6.7.14. Lane Departure Warning (LDW) – introduction

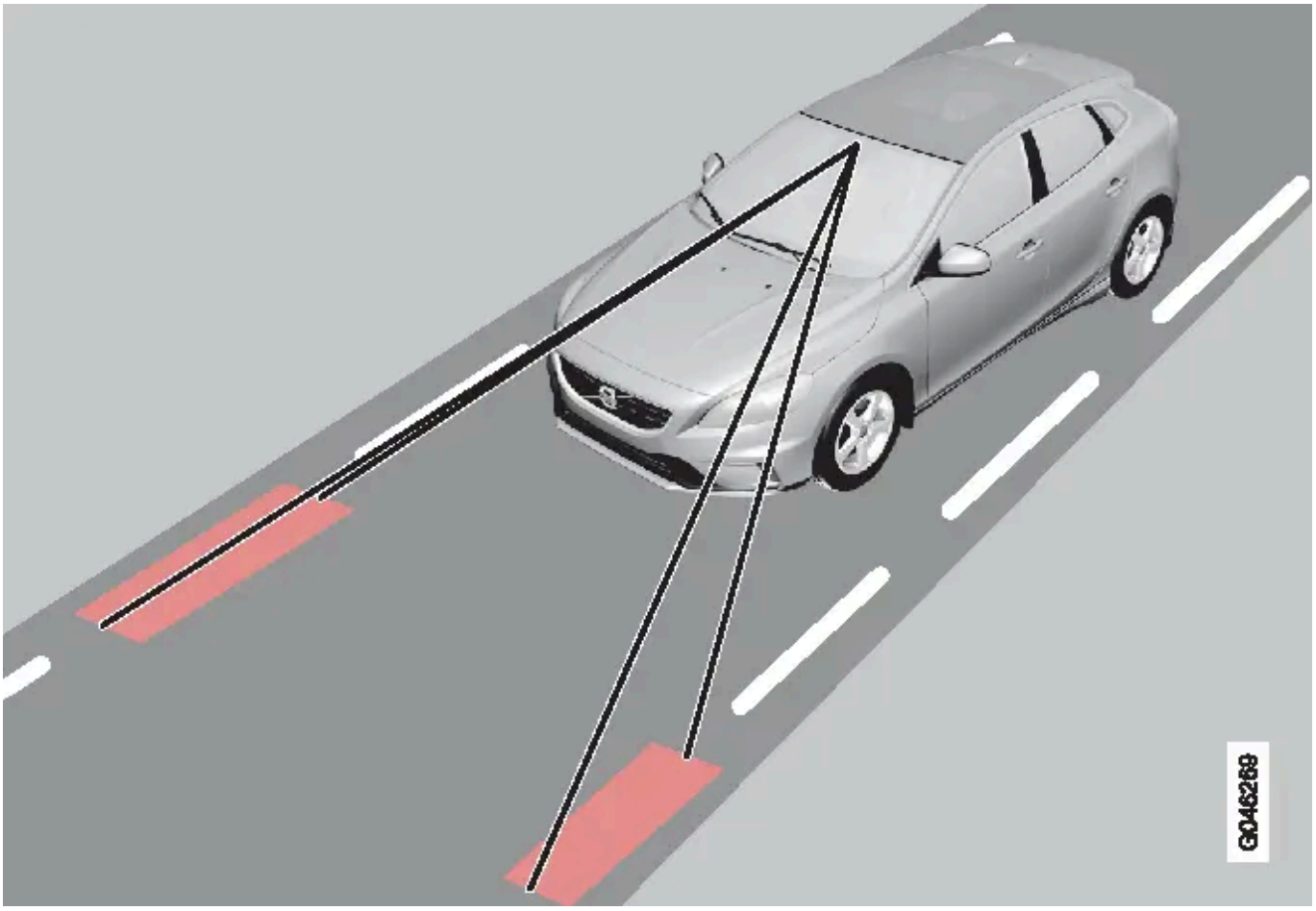
The LDW function is designed to help reduce the risk of accidents in situations where the vehicle unintentionally leaves its lane and there is a risk of driving off the road or into the opposite lane.

Lane Departure Warning (LDW) [1]

Your vehicle may be equipped with Lane Departure Warning (LDW) or Lane Keeping Aid (LKA), depending on your choice of engine. If you are uncertain as to which of these optional systems is in your vehicle:

- Press the MY CAR button on the center console to open the menu system. Scroll to **Settings** → **Driver support system**. The system in your vehicle (**Lane Departure Warning** or **Lane Keeping Aid**) will be displayed there.

If your vehicle is equipped with Lane Keeping Aid (LKA), see Lane Keeping Aid (LKA) – introduction for detailed information.



The illustration is generic

LDW uses the camera located at the center, upper edge of the windshield to monitor the road's/lane's side marker lines. If the vehicle crosses a side marker line or the road's center dividing line, the driver will be alerted by an audible signal.

> **Warning**
>
> This feature is only intended to assist the driver and does not function in all driving, weather, traffic or road conditions.
>
> As the driver, you have full responsibility for operating the vehicle in a safe manner.

[1] Models with 5- or 6-cylinder engines only.

6.7.15. Lane Keeping Aid (LKA) – introduction

The LKA function is designed to help reduce the risk of accidents in situations where the vehicle unintentionally leaves its lane and there is a risk of driving off the road or into the opposite lane.

LDW or LKA

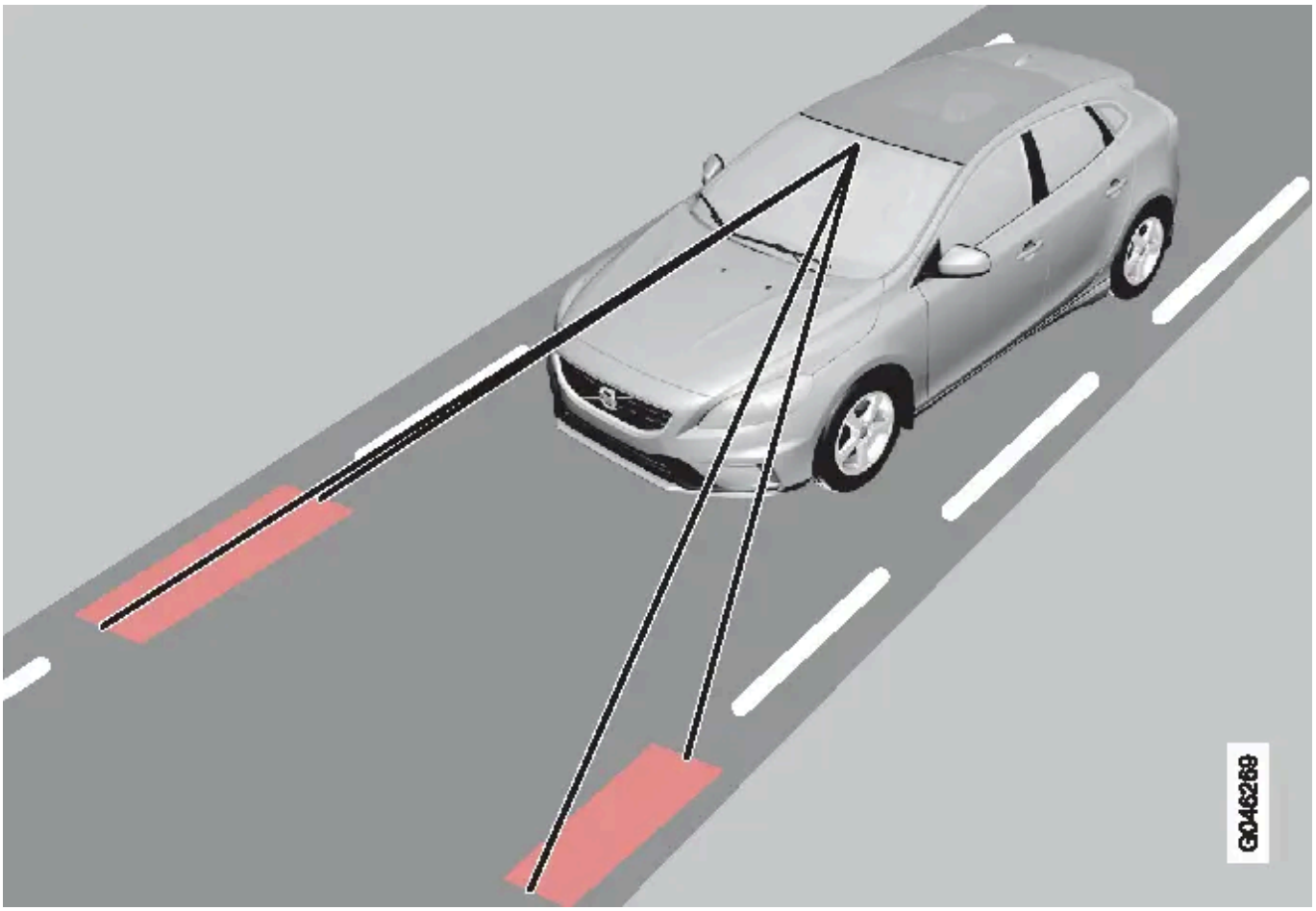
Your vehicle may be equipped with Lane Departure Warning (LDW) or Lane Keeping Aid (LKA), depending on your choice of engine. If you are uncertain as to which of these optional systems is in your vehicle:

- Press the MY CAR button on the center console to open the menu system. Scroll to **Settings** → **Driver support system**. The system in your vehicle (**Lane Departure Warning** or **Lane Keeping Aid**) will be displayed there.

If your vehicle is equipped with Lane Departure Warning (LDW), see Lane Departure Warning (LDW) – introduction for detailed information.

LKA function

The LKA function is primarily intended for use on highways or other major roads with clearly marked side marker and center lines.



The illustration is generic

LKA uses the camera located at the center, upper edge of the windshield to monitor the road's/lane's side marker lines.

If the vehicle crosses a side marker line or the road's center dividing line, LKA will provide active steering assistance to help steer it back into the lane.

The driver will also be alerted by vibrations in the steering wheel.

Warning

This feature is only intended to assist the driver and does not function in all driving, weather, traffic or road conditions.

As the driver, you have full responsibility for operating the vehicle in a safe manner.

6.8. Park assist

6.8.1. Rear Park Assist Camera (PAC) – introduction

The Park Assist Camera is designed to provide the driver with a view of the area behind the vehicle when backing up.

Introduction

PAC uses the display in the center console to show the area behind the car while you are backing up.

PAC also shows guiding lines in the on-screen image to indicate the direction that the vehicle will take as it moves rearward, which helps simplify parallel parking, backing into a tight space or when attaching a trailer to the vehicle.

The images of vehicles in this section are generic and may not depict your specific model.

Note

A trailer hitch whose wiring is integrated with the vehicle's electrical system will be included in the measurement of the available space behind the vehicle.

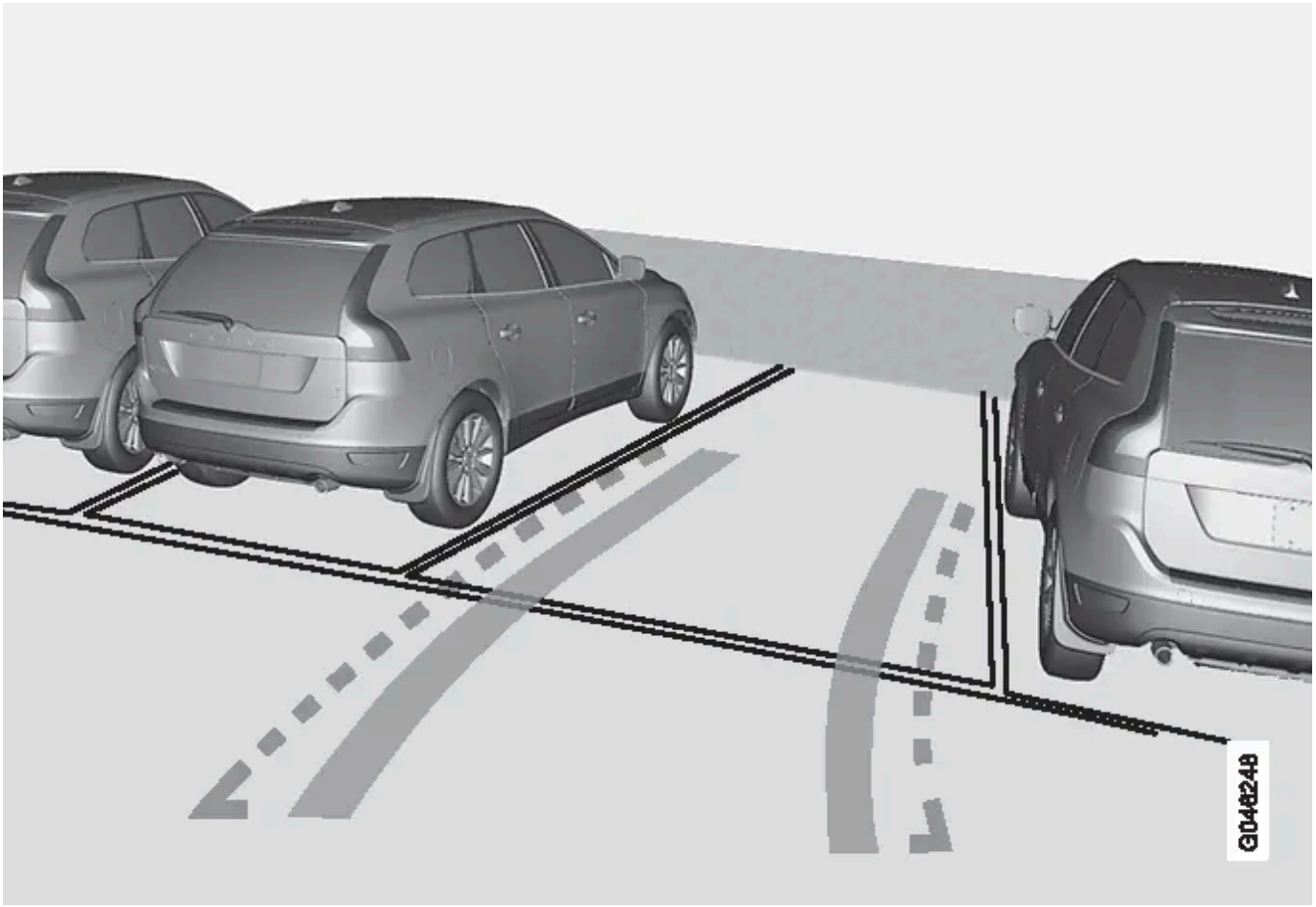
Warning

- PAC is designed to be a supplementary aid when parking the vehicle. It is not, however, intended to replace the driver's attention and judgment.
- The camera has blind spots where it cannot detect objects or people behind the vehicle.
- Pay particular attention to people or animals that are close to the vehicle.
- Objects seen on the screen may be closer than they appear to be.

6.8.2. Rear Park Assist Camera (PAC) – guiding and marker lines

The Park Assist Camera is designed to provide the driver with a view of the area behind the vehicle when backing up.

Guiding lines



The lines on the screen are projected as if they were a path on the ground behind the vehicle and are directly affected by the way in which the steering wheel is turned. This enables the driver to see path the vehicle will take, even if he/she turns the steering wheel while backing up.

Note

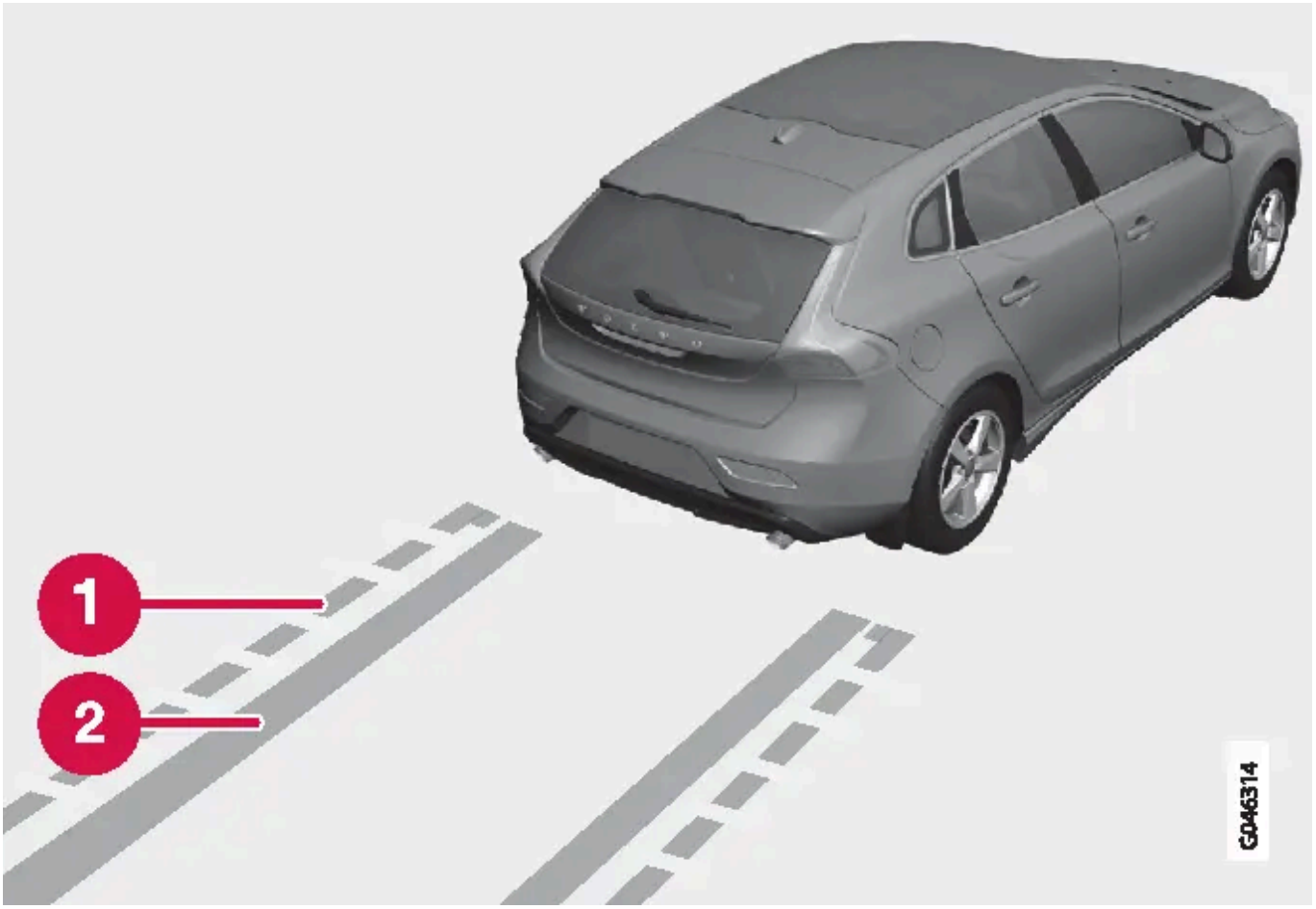
When backing up with a trailer, the guiding lines show the path that the **vehicle** will take, not the trailer.

Warning

Keep in mind that the image on the screen only shows the area behind the vehicle. The driver must always watch for people, animals, other vehicles, etc., near the sides of the vehicle when turning while backing up.

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Marker lines



The PAC system's lines

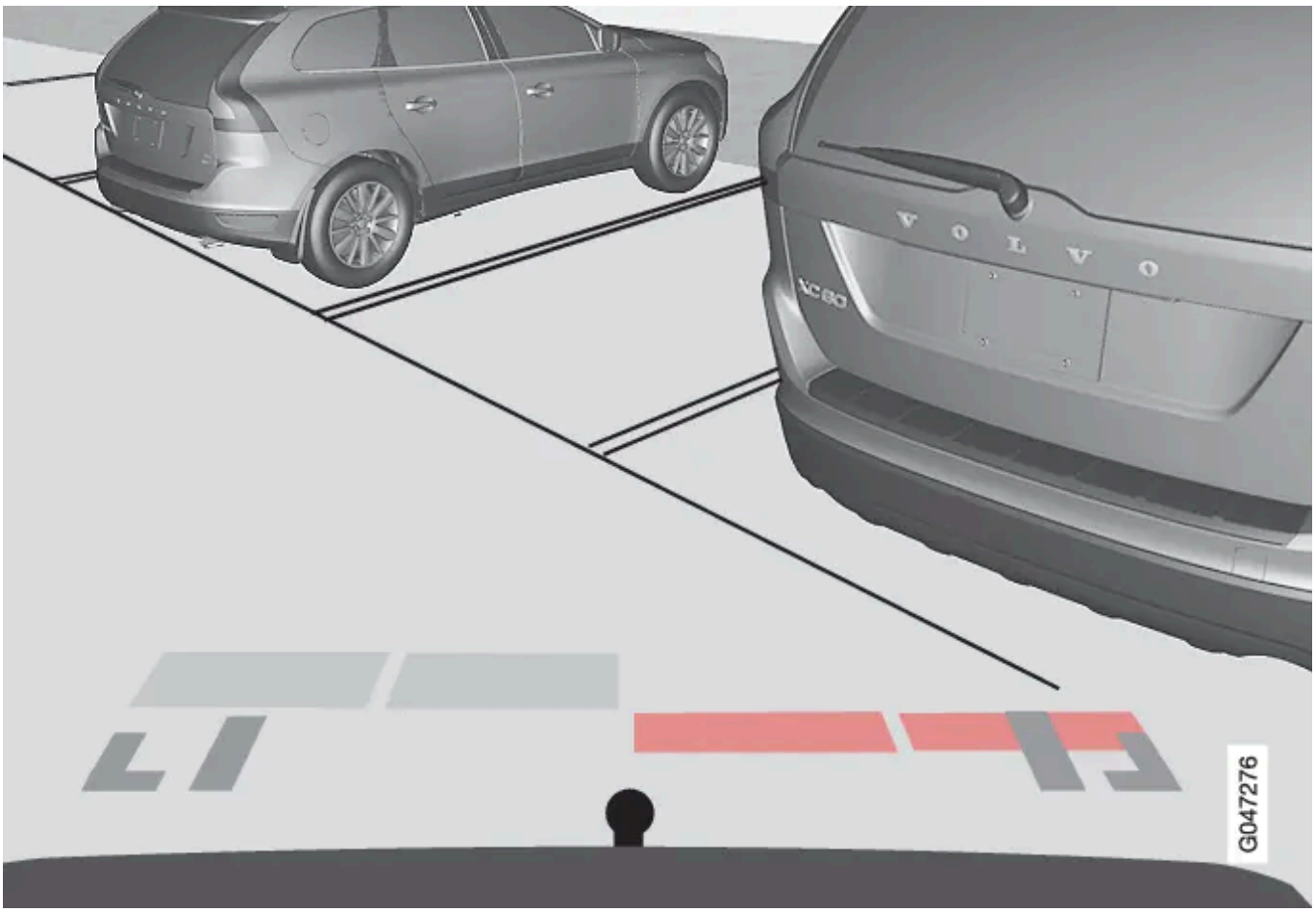
1. The unobstructed area behind the vehicle
2. "Wheel tracks"

The dashed line (1) indicates the clear zone of approximately 5 feet (1.5 m) behind the bumper. These lines also indicate the outermost limits that any object (door mirrors, corners of the body, etc.) extends out from the vehicle, even when it turns.

The "wheel tracks" (2) show where the wheels will roll and can extend up to approximately 10.5 ft (3.2 m) behind the bumper if there are no objects in the way.

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Vehicles equipped with Park Assist



Colored markers (one for each sensor) indicate distance

If the vehicle is equipped with the optional Park Assist system (see Park assist – introduction), the distance to an object will be indicated more exactly and colored markers in the display indicate which of the sensor(s) has detected the object.

Color	Distance to object
Pale yellow	2.3–5 ft (0.7–1.5 m)
Yellow	1.6–2.3 ft (0.5–0.7 m)
Orange	1–1.6 ft (0.3–0.5 m)
Red	0–1 ft (0–0.3 m)

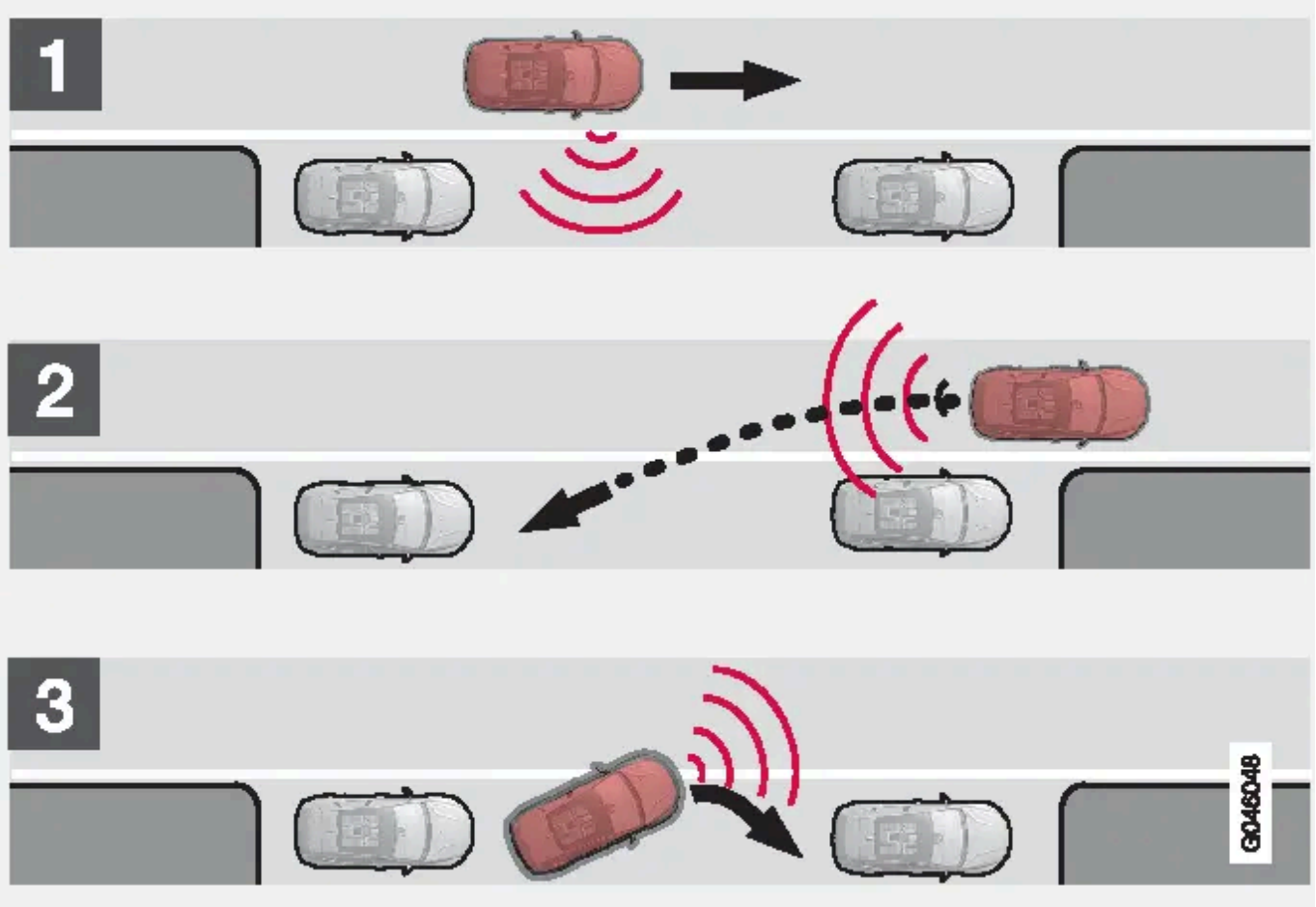
6.8.3. Park Assist Pilot (PAP)* – function

The Park Assist Pilot provides assistance when parallel parking by measuring the parking space and turning the steering wheel.

PAP's function is to measure the parking space and to turn the steering wheel during the parallel parking procedure. The driver is responsible for following the instructions shown in the instrument panel and for: shifting between R (Reverse) and D (Drive) when required, regulating the vehicle's speed, applying the brakes and stopping the vehicle.

PAP can be activated in the following conditions:

- When the stability or ABS systems are not working actively
- The vehicle is not towing a trailer
- The vehicle's speed is below 30 mph (50 km/h)



How PAP works

PAP helps park the vehicle by:

- Searching for and measuring a parking space. While this is taking place, the vehicle's speed must be below 20 mph (30 km/h). See also steps **A** and **B** in the illustration in the section "1: Searching and measuring" in Park Assist Pilot (PAP) – operation.
- Steering the vehicle as it backs into the parking space. See also steps **C** and **D** in the illustration in the section "2: Backing into the parking space" in Park Assist Pilot (PAP) – operation.
- Adjusting the vehicle's position in the parking space by moving forward and rearward. See also steps **E** and **F** in the illustration in the section "3: Adjusting the vehicle's position" in Park Assist Pilot (PAP) – operation.

* Option/accessory.

6.8.4. Park Assist Pilot (PAP)* – symbols and messages

The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.

The Park Assist Pilot provides assistance when parallel parking by measuring the parking space and turning the steering wheel.

Various PAP-related combinations of symbols, graphics and text messages are displayed in the instrument panel and sometimes also include suitable actions.

A text message can be erased by pressing briefly on the OK button on the turn signal lever.

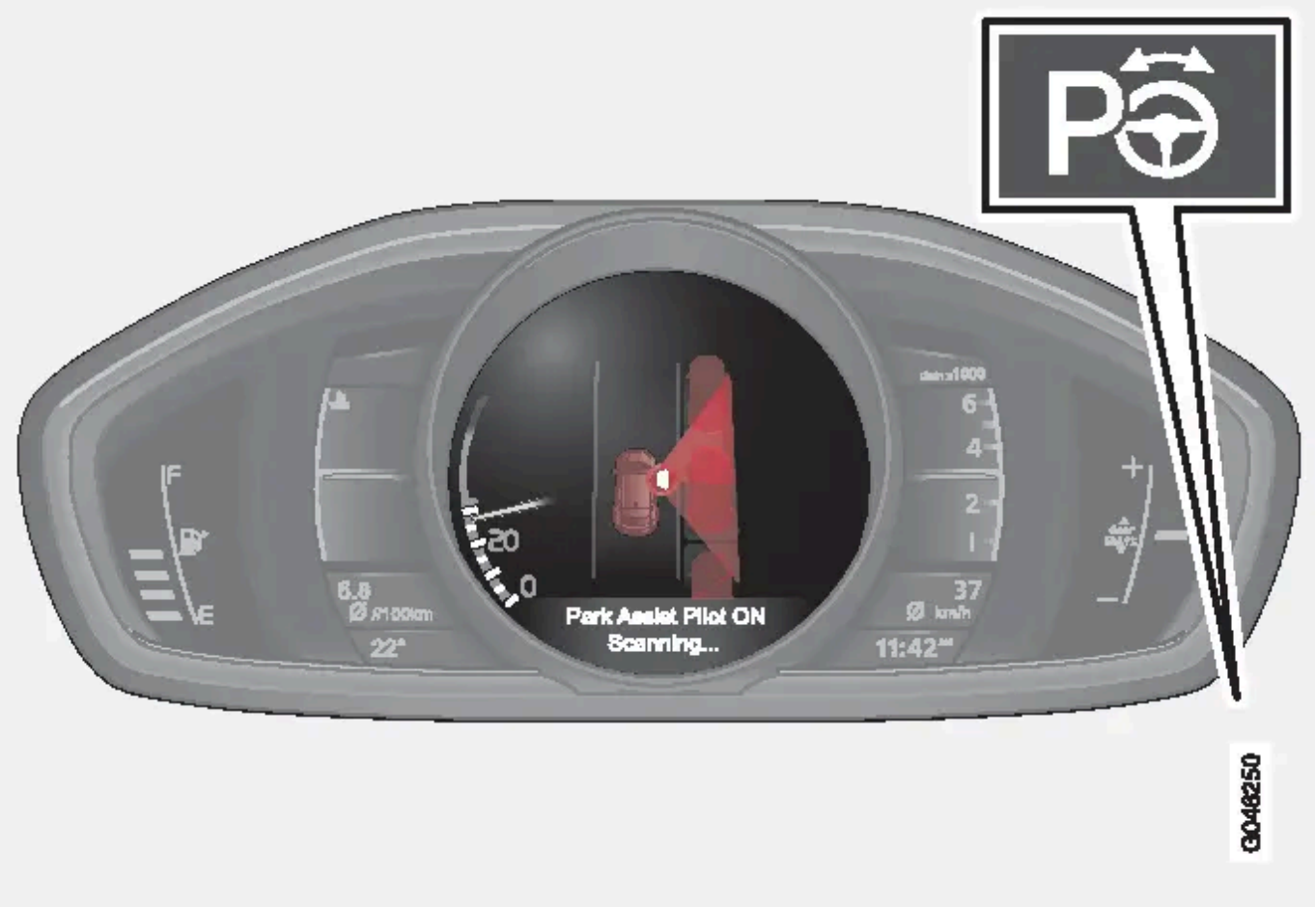
Contact a Volvo retailer or a trained and qualified Volvo service technician If a message indicating that PAP is not functioning properly is displayed.

* Option/accessory.

6.8.5. Park Assist Pilot (PAP)* – introduction

The Park Assist Pilot provides assistance when parallel parking by measuring the parking space and turning the steering wheel.

Introduction



The off/on button shown is located on the center console

Park Assist Pilot (PAP) is a semi-automatic system that provides assistance when parallel parking by:

- Finding a parking space and determining if it is big enough for the vehicle
- Helping to steer the vehicle into the parking space

Information about the actions required of the driver is provided in the instrument panel in the form of symbols, images and text.

> **Note**
>
> If a trailer hitch is configured in the vehicle's electrical system, PAP will take the trailer hitch into consideration when determining the necessary size of a parking space.

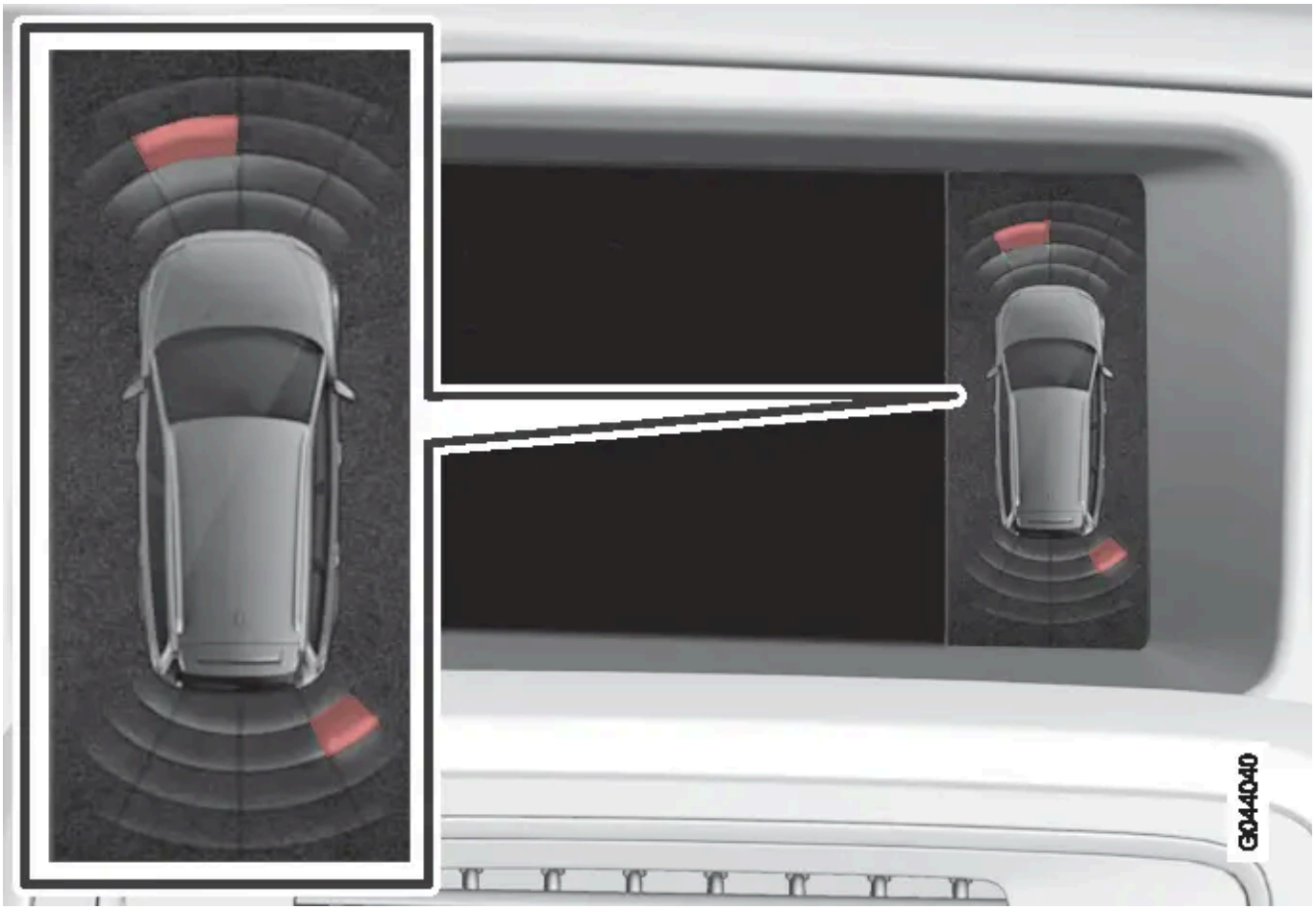
> **Warning**
>
> - PAP does not function in all situations and is only intended to assist the driver when parallel parking.
> - As the driver, you have full responsibility for parking the vehicle in a safe manner.

* Option/accessory.

6.8.6. Park assist – function

The park assist system is designed to assist you when driving into parking spaces, garages, etc. An audible signal and symbols in the audio system’s display indicate the distance to the object.

Signals from the park assist system



View in the display (warning for objects front left/right rear)

Visual indicator

The audio system's display gives an overview of the vehicle's position in relation to a detected object.

The marked sectors in the display indicate that one or more of the sensors has detected an object. The closer the car symbol comes to a sector, the closer the vehicle is to the object.

If the infotainment system is switched off, the park assist system will not be able to provide a visual indicator. An audible signal will still be provided.

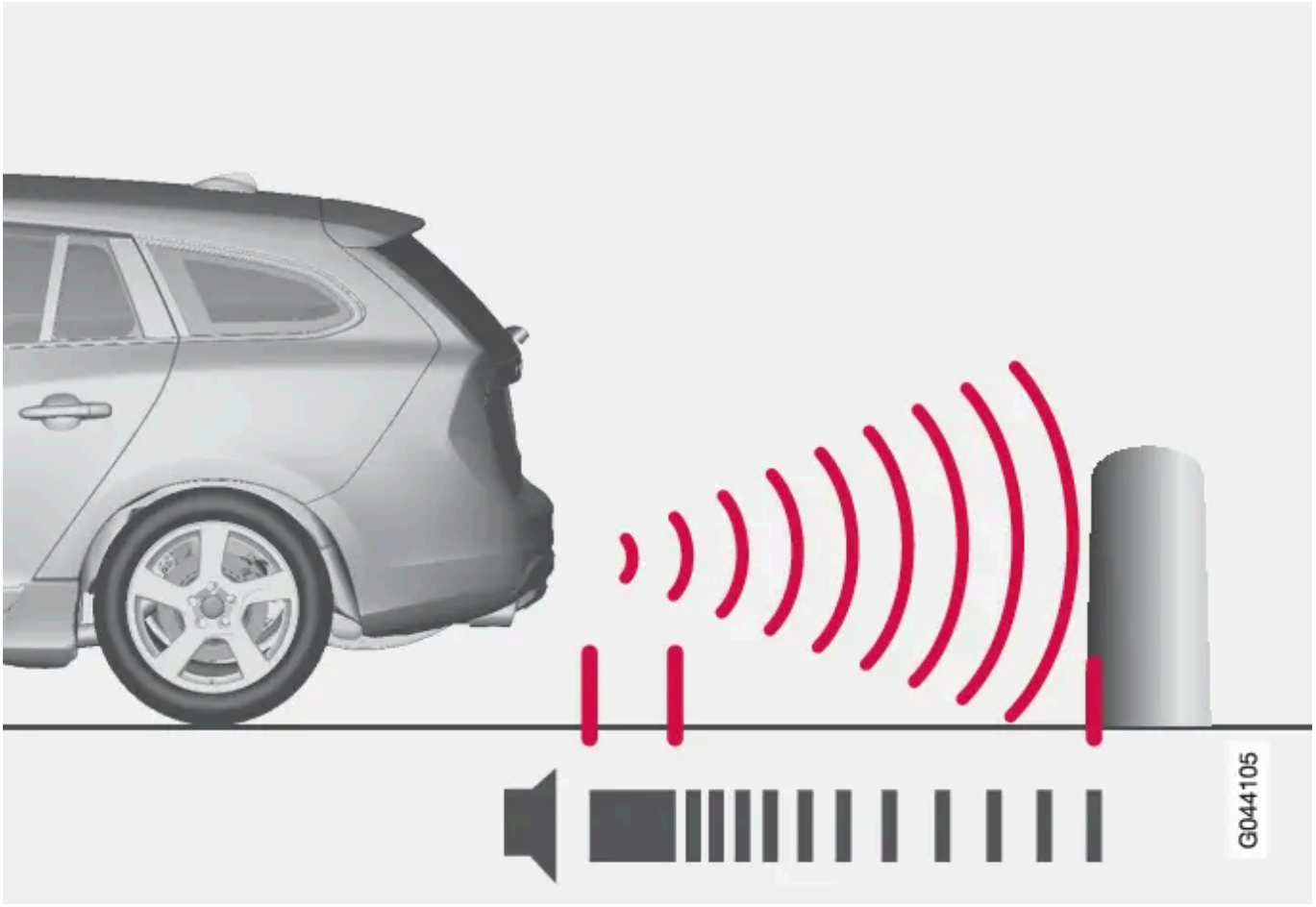
Audible signal

The Park Assist system uses an intermittent tone that pulses faster as you come close to an object, and becomes constant when you are within approximately 1 ft (30 cm) of an object in front of or behind the vehicle. If there are objects within this distance both behind and in front of the vehicle, the tone alternates between front and rear speakers.

> **Note**
>
> The level of the audible signal can be lowered/raised with the infotainment volume control. The level can also be set in the MY CAR menu system. See My Car – introduction for a description of the menu system.

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

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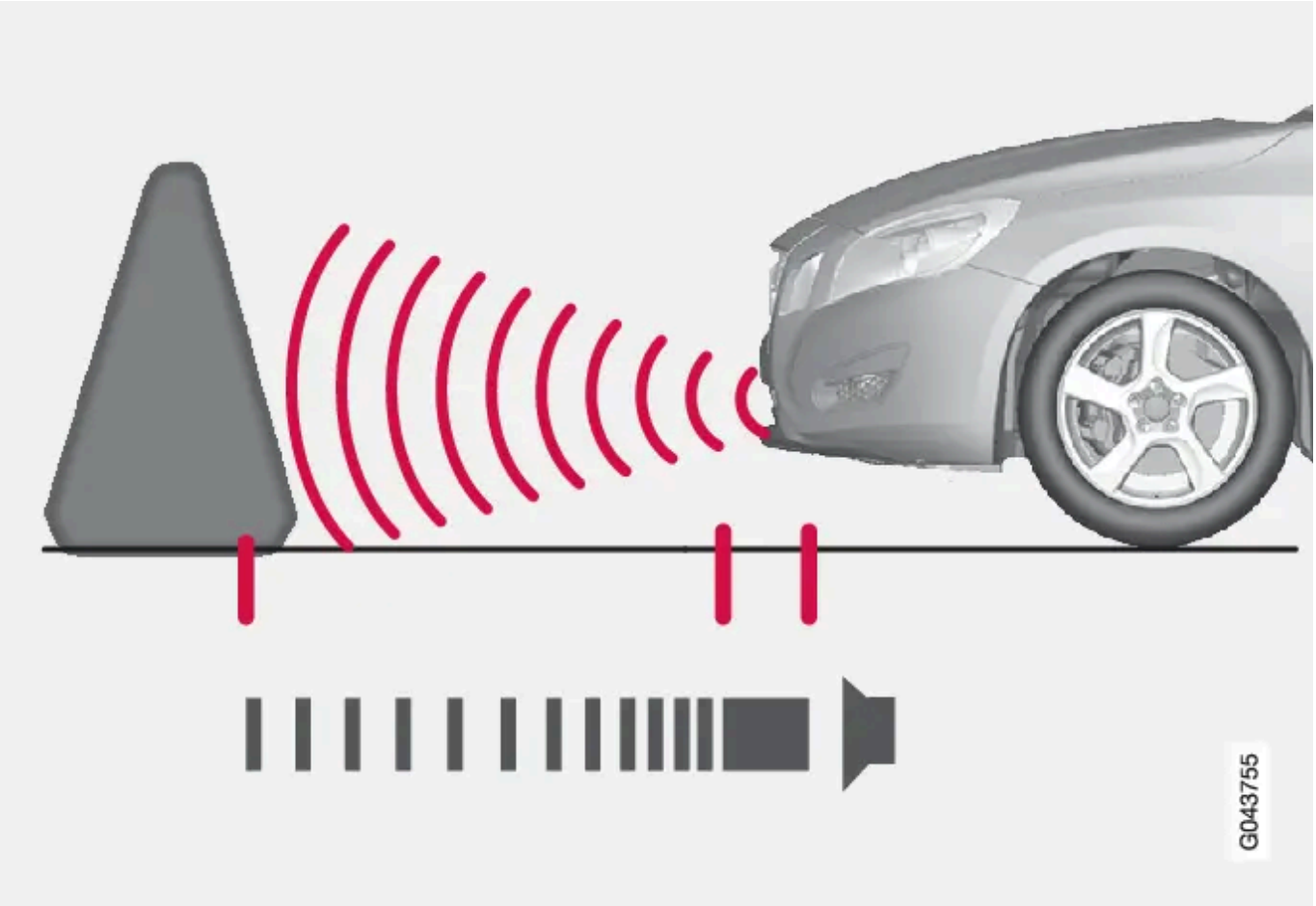
The distance monitored behind the vehicle is approximately 5 ft (1.5 m). The audible signal comes from the rear speakers.

The system must be deactivated when towing a trailer, carrying bicycles in a rear-mounted carrier, etc, which could trigger the rear park assist system's sensors.

Note

- Rear park assist is deactivated automatically when towing a trailer if Volvo genuine trailer wiring is used. If a non-Volvo trailer hitch is being used, it may be necessary to switch off the system manually, see Park assist – operation.
- The system will not detect high objects, such as a loading dock, etc.
- Objects such as chains, thin shiny poles or low objects may temporarily not be detected by the system. This may result in the pulsing tone unexpectedly stopping instead of changing to a constant tone as the vehicle approaches the object. In such cases, use caution when backing up or stop the vehicle to help avoid damage.

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The distance monitored in front of the vehicle is approximately 2.5 ft (0.8 m). The audible signal comes from the audio system's front speakers.

It may not be possible to combine auxiliary headlights and front park assist since these lights could trigger the system's sensors.

> **Note**
>
> Front park assist is deactivated when the parking brake is applied and or when the gear selector is in the P position.

6.8.7. Park assist – troubleshooting

The park assist system is designed to assist you when driving into parking spaces, garages, etc. An audible signal and symbols in the audio system’s display indicate the distance to the object.

Faults in the system

If the information symbol illuminates and **Park assist syst Service required** is shown on the information display, this indicates that the system is not functioning properly and has been disengaged. Consult a trained and qualified Volvo service technician.

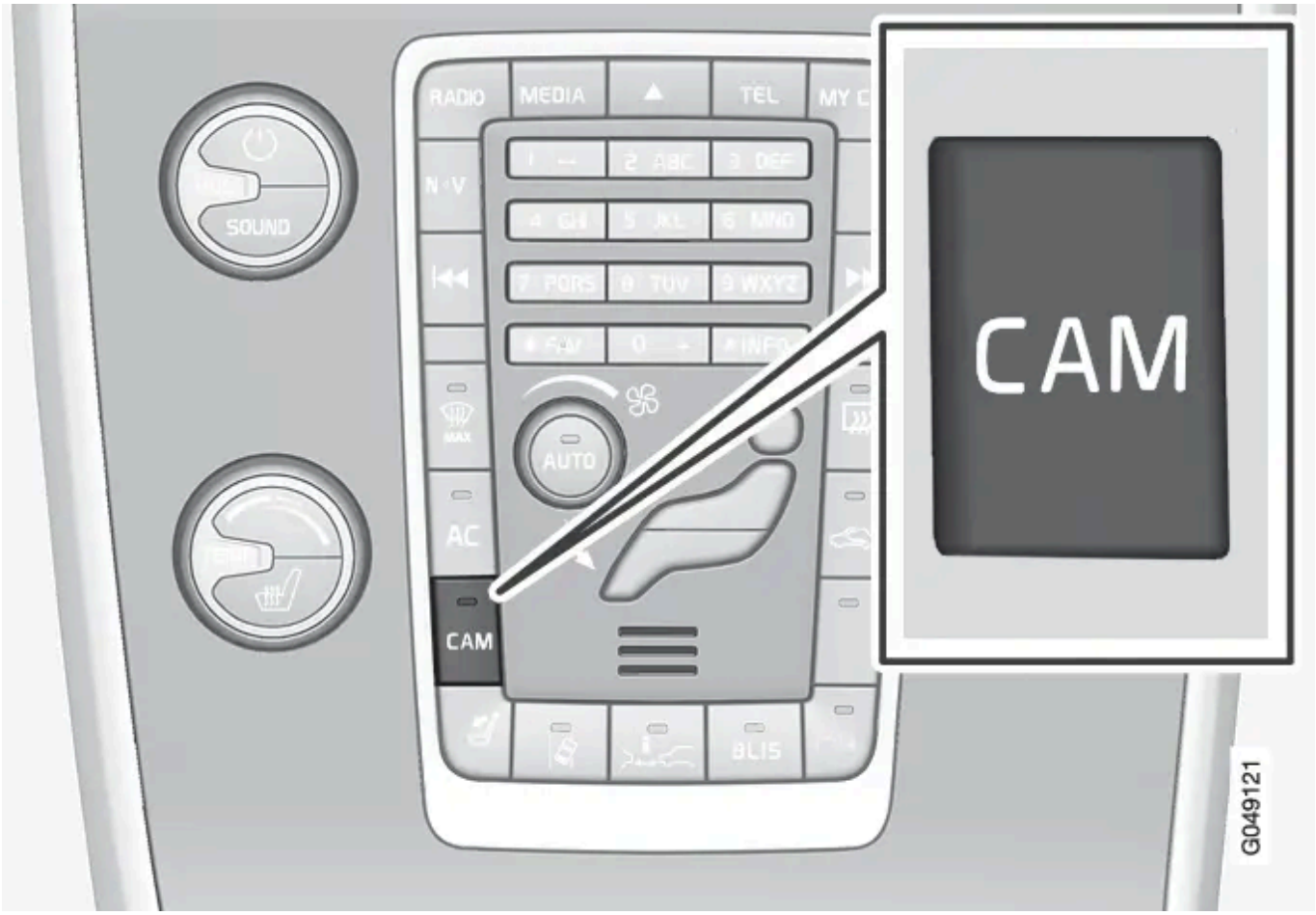
Important

In certain circumstances, the park assist system may give unexpected warning signals that can be caused by external sound sources that use the same ultrasound frequencies as the system. This may include such things as the horns of other vehicles, wet tires on asphalt, pneumatic brakes, motorcycle exhaust pipes, etc. This does not indicate a fault in the system.

6.8.8. Rear Park Assist Camera (PAC) – operation

The Park Assist Camera is designed to provide the driver with a view of the area behind the vehicle when backing up.

Activation



PAC is activated when the gear selector is moved to R if the system is selected in the MY CAR menu system or by pressing the CAM button in the center console. See My Car – introduction for a description of the menu system.

If PAC is not activated when the gear selector is moved to R, press the CAM button on the center console.

PAC will automatically override the view currently on the screen and will display the camera's view behind the vehicle.

Trailer hitches

The camera can be useful when attaching a trailer. With the camera zoomed in on the trailer hitch, a guiding line showing the hitch's path toward the trailer will be projected.

The guiding lines for the wheels and for the trailer hitch cannot be displayed at the same time. To select a view:

- Press OK/MENU when a camera view is displayed.
- Turn TUNE to scroll to **Tow bar trajectory guide line**.
- Confirm by pressing OK/MENU and press EXIT.

Zoom

When necessary, the camera view can be zoomed:

- PressCAM or turn TUNE. Pressing or turning again returns you to normal view.

If there are additional alternatives, press/turn until the desired camera view is displayed.

Automatic zoom

Automatic zoom is a feature that is available on models equipped with a trailer hitch and the optional Park assist system. With this alternative selected, the camera will zoom in on the trailer hitch automatically if the vehicle approaches an object/trailer.

See also the "Settings" section below.

Deactivation

Move the gear selector from R to another gear. The camera remains active for approx. 5 seconds after the gear selector has been moved from R or until the vehicle's forward speed exceeds 6 mph/10 km/h (21 mph/35 km/h in reverse). The screen will then revert to the view that was displayed before R was selected.

> **Note**
>
> If any button on the center console control panel is pressed, the camera image will disappear from the display. Pressing CAM will return the camera image to the display.

Settings

By default, PAC is set to activate when the gear selector is moved to R

To change PAC settings when a camera view is displayed:

- Press OK/MENU when a camera view is on the screen. A menu will be displayed.
- Turn TUNE to scroll to the desired setting.
- Press OK/MENU to make the setting and exit the menu by pressing EXIT.

Summary

- Pressing CAM will activate the camera even if the gear selector is not in Reverse.
- Toggle between normal view and zoom by pressing CAM or by turning TUNE.

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6.8.9. Park Assist Pilot (PAP)* – limitations

The Park Assist Pilot provides assistance when parallel parking by measuring the parking space and turning the steering wheel.

The PAP parking procedure will be cancelled if.

- The vehicle's speed goes above approximately 4 mph 7 km/h
- The driver moves the steering wheel
- If the stability or ABS systems are activated (e.g., if a wheel starts to spin because of a slippery road surface

If the system has been switched off, this will be indicated by a text message in the instrument panel.

> **Note**
>
> - PAP will not function correctly if its sensors are obstructed by dirt, snow, etc.
> - In certain situations, PAP may not be able to measure a parking space. This could be due to external sources of sound (e.g., a vehicle's horn, tires on wet asphalt, pneumatic brakes, noise from a motorcycle's exhaust, etc.) emitting ultrasound using approximately the same frequencies as PAP.

Information to keep in mind

PAP is only intended to provide parallel parking assistance but may not be able to function fully in all situations.

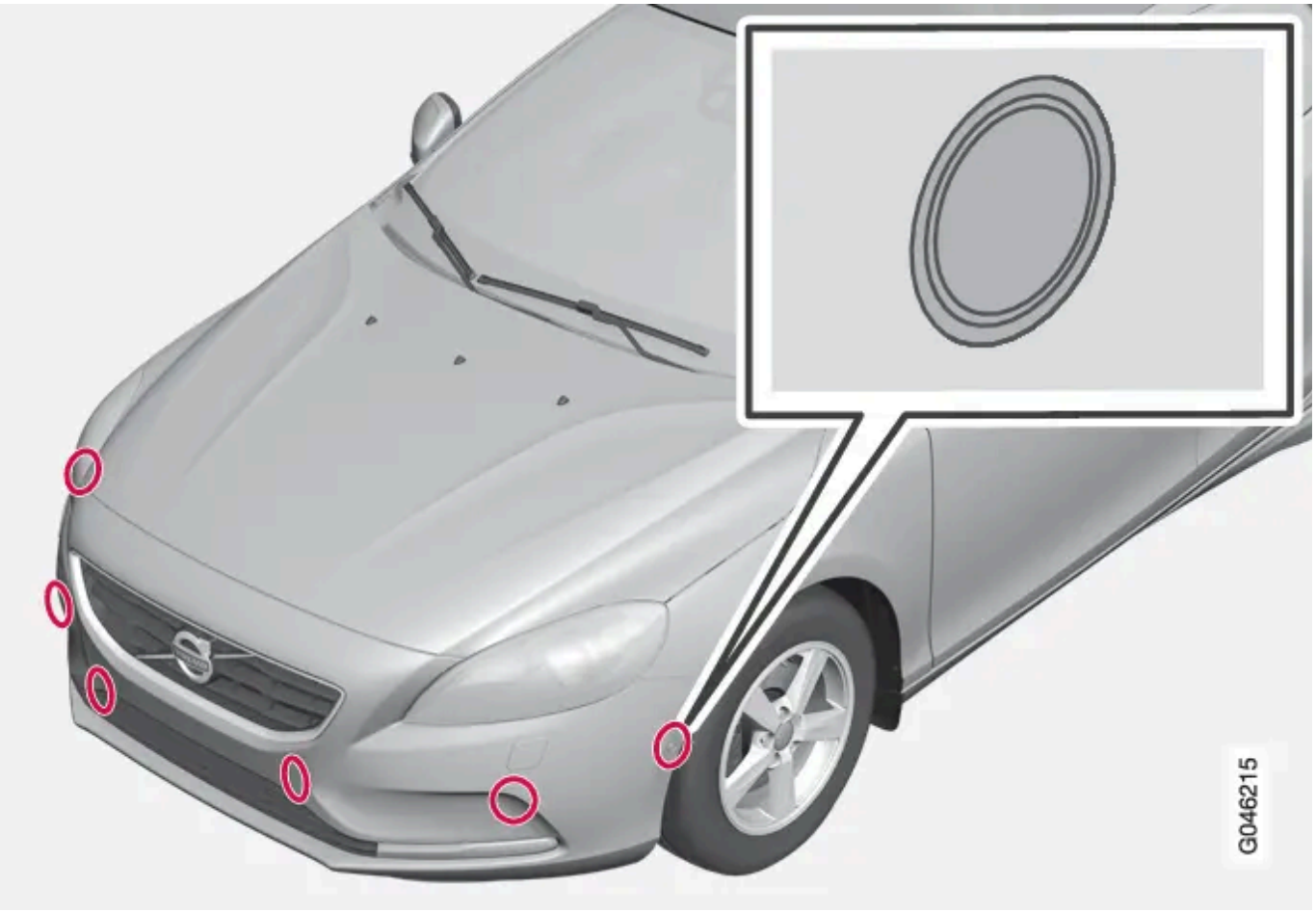
- PAP's function is based on the way that the vehicles are parked behind and in front of your parking space. If they are, for example, parked too close to the curb, there is a risk that your vehicle's tires or wheel rims could be damaged by the curb during the parking procedure.
- PAP is intended to provide parking assistance on straight streets, not sections of street with curved or irregular curbs. Be sure that your vehicle is parallel to the curb when PAP measures the parking space.
- PAP may not be able to provide parking assistance on narrow streets due to lack of space to maneuver the vehicle. In situations like this, it may help to drive as close to the side of the road as possible where the parking space is located.
- Use only approved tires with the correct inflation pressure because this affects PAP's capacity to provide parking assistance. See the table in Tire inflation – pressure table. Changing to a different approved tire size may affect PAP's parameters. Consult a trained and qualified Volvo service technician.
- Heavy rain or snow may inhibit PAP's capacity to correctly measure a parking space.
- Do not use PAP if snow chains or a temporary spare tire is being used.
- Do not use PAP if there are any objects protruding from the vehicle.

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Warning

- The front end of your vehicle may turn out toward oncoming traffic during the parking procedure.
- Objects located above the parking sensors' field of vision are not included when PAP measures a parking space. For this reason, PAP may turn into the parking space too soon. Avoid parking spaces of this type.
- The driver is always responsible for determining if PAP has selected a suitable parking space.

Maintenance



Generic illustration. The PAP sensors are located in the front and rear bumpers

PAP uses the same sensors as the Park assist system, see Park assist – limitations).

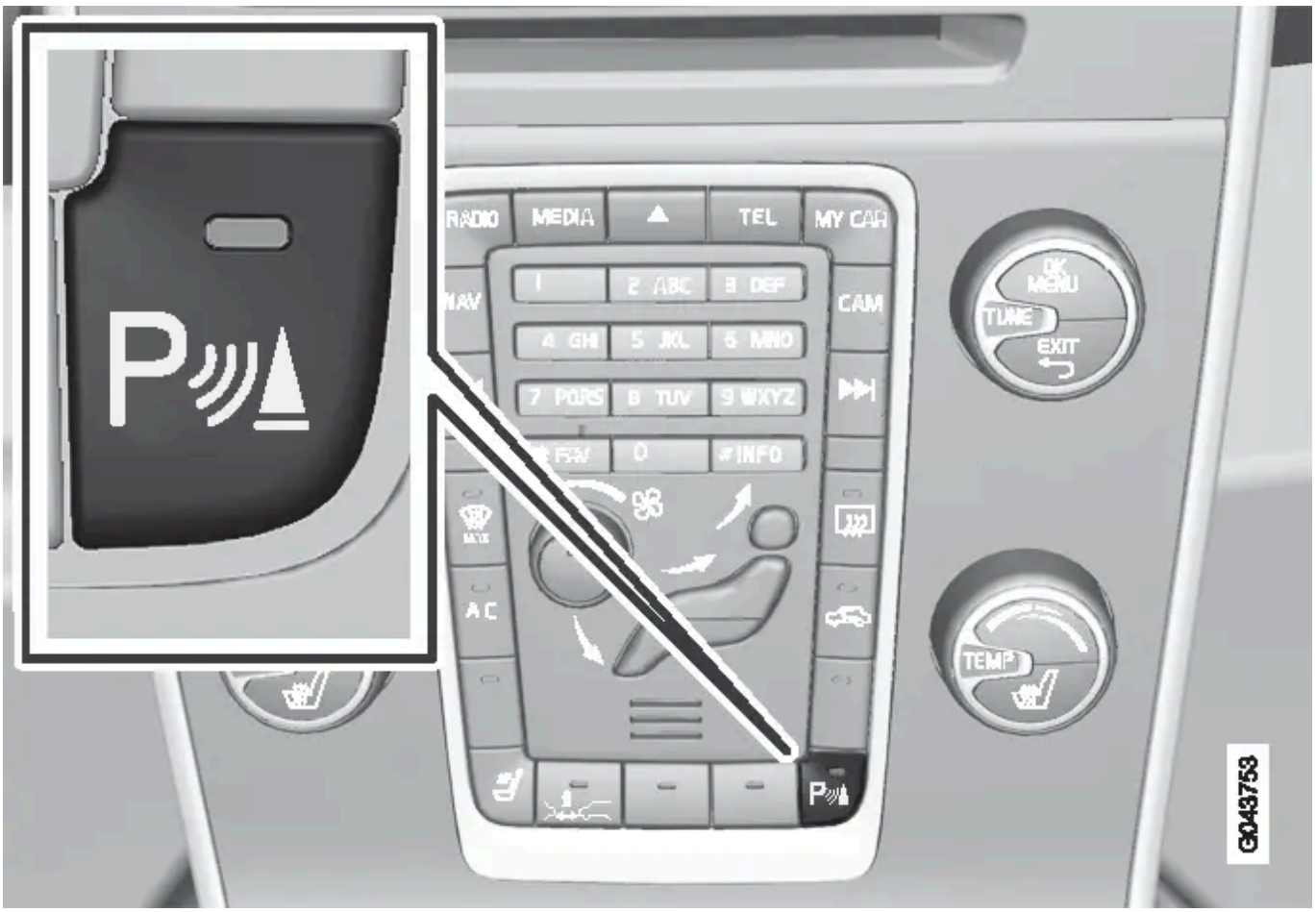
The sensors must be cleaned regularly to ensure that they work properly. Clean them with water and a suitable car washing detergent.

* Option/accessory.

6.8.10. Park assist – operation

The park assist system is designed to assist you when driving into parking spaces, garages, etc. An audible signal and symbols in the audio system's display indicate the distance to the object.

Function



Park assist and CTA* button

The system is activated automatically when the vehicle is started. The indicator light in the button in the center console illuminates when the system is on.

- The front park assist system is active from the time the engine is started until the vehicle exceeds a speed of approximately 6 mph (10 km/h). It is also active when the vehicle is backing up.
- Rear park assist is active when the engine is running and reverse gear has been selected.

Activating/deactivating

The system is activated automatically when the vehicle is started.

1. Press the Park assist button on the center console to temporarily deactivate the system(s).

> The indicator light in the button will go out when the system has been deactivated.

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Park assist will be automatically reactivated the next time the engine is started, or if the button is pressed (the indicator light in the button will illuminate).

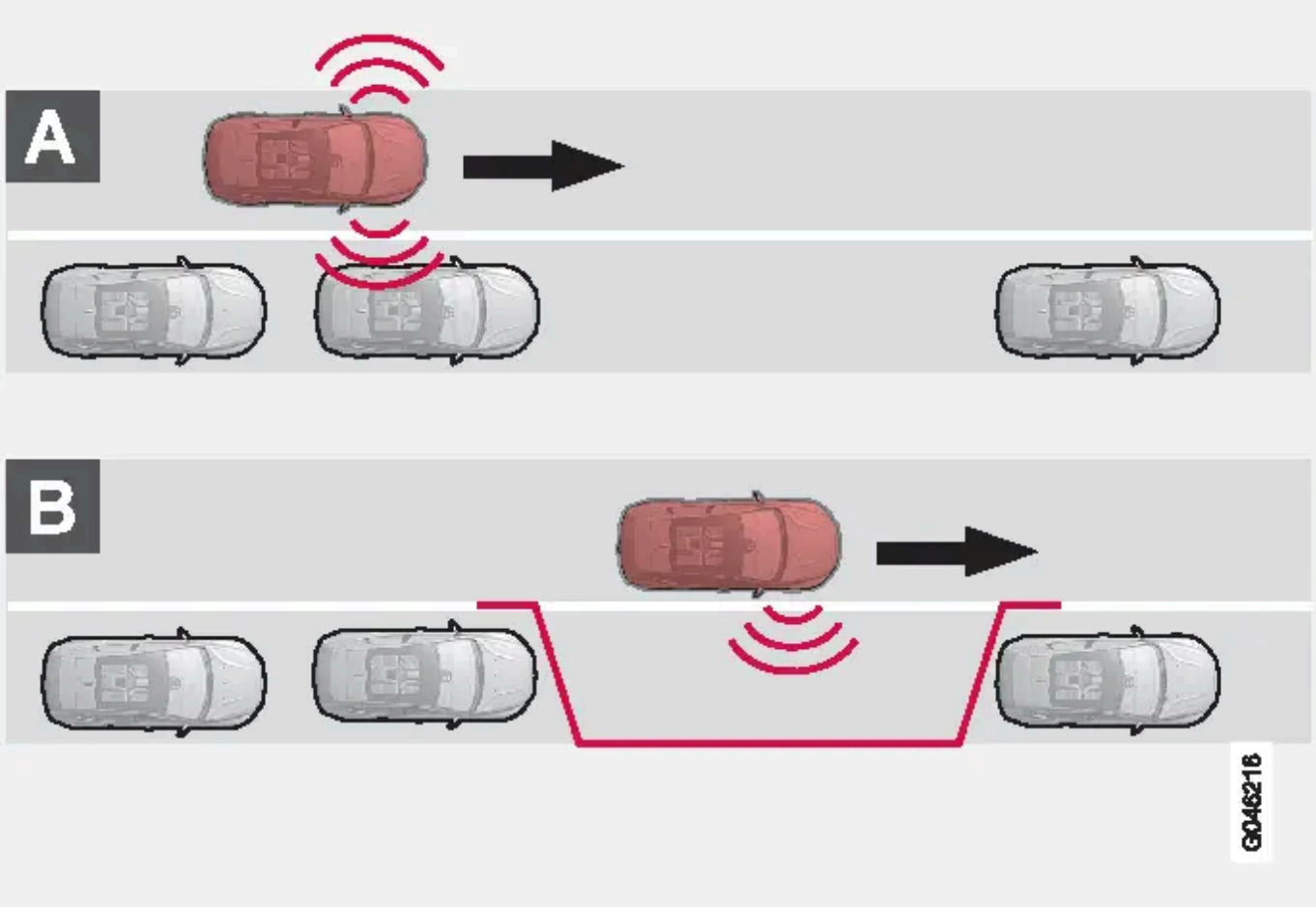
> **Note**
>
> Park assist is disengaged automatically when the parking brake is applied.

* Option/accessory.

6.8.11. Park Assist Pilot (PAP)* – operation

The Park Assist Pilot provides assistance when parallel parking by measuring the parking space and turning the steering wheel.

1: Searching and measuring



PAP searches for a potential parking space and measures it to see if there is sufficient space for your vehicle. To start this procedure:

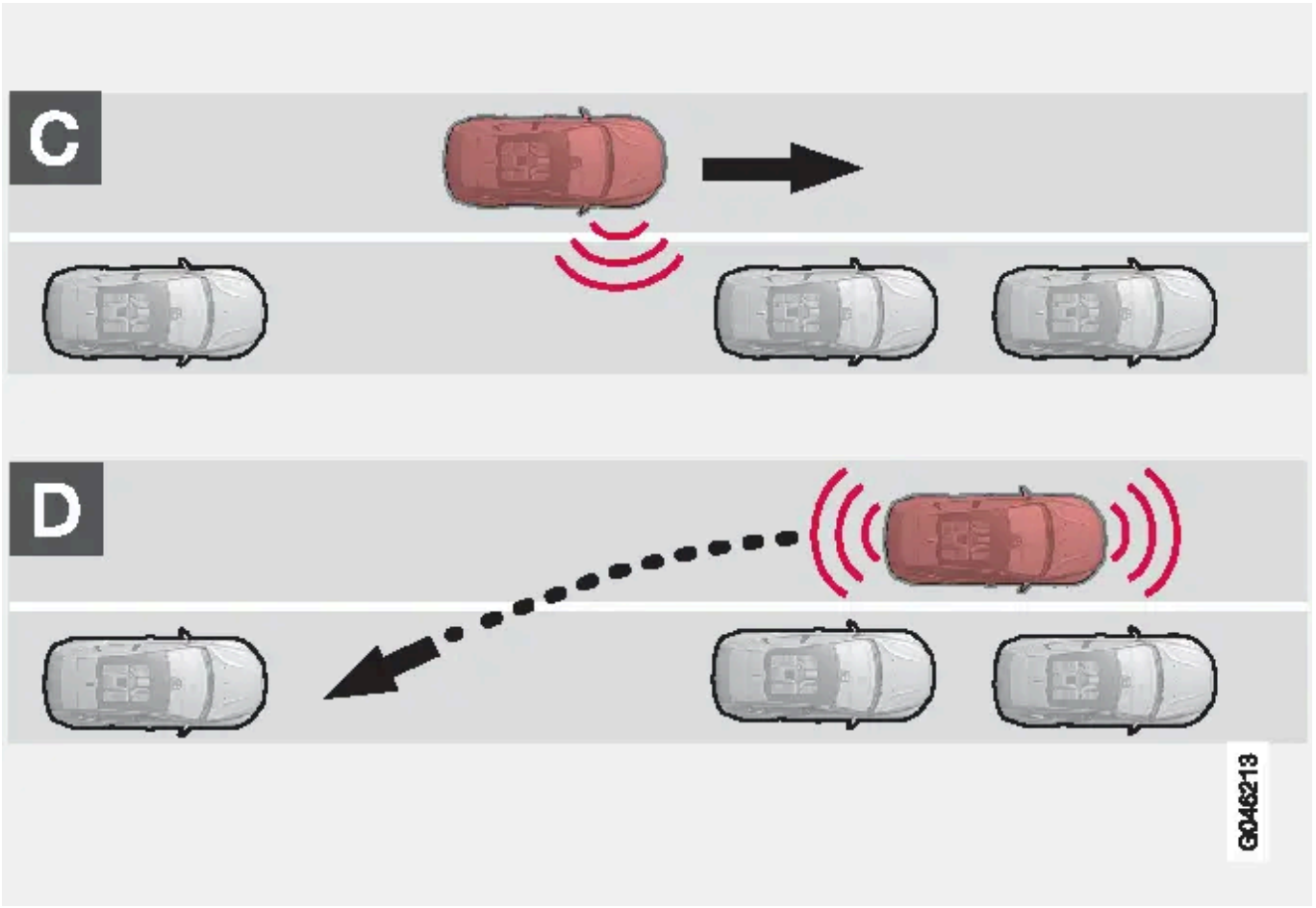


1. Activate PAP by pressing this button on the center console and if necessary slowing down to a speed below 20 mph (30 km/h).

2. Keep an eye on the instrument panel and be prepared to stop the vehicle when you are instructed by PAP to do so.

> **Note**
>
> PAP normally searches for available parking spaces along the curb on the right (passenger's) side of the vehicle. However, it can also assist in finding and parking in spaces on the driver's side. To do so:
>
> - Activate the left turn signal. PAP will then search for a parking space on the left side of the vehicle.

2: Backing into the parking space



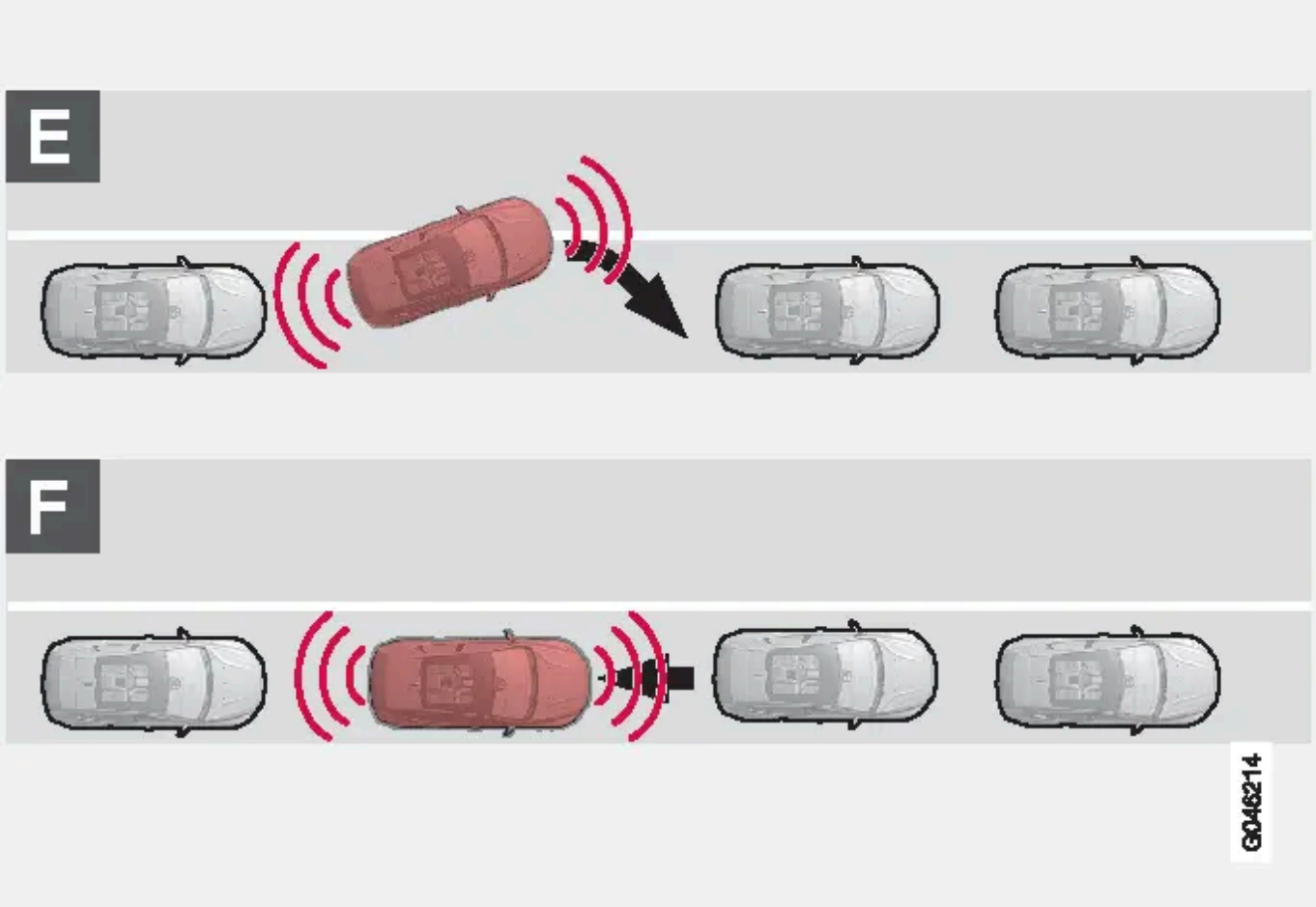
When the vehicle is backing up, PAP will steer it into the parking space.

- Check that the area behind the vehicle is clear and put the gear selector in R.
- Back up slowly without moving the steering wheel. The vehicle's speed must be below approximately 4 mph 7 km/h.
- Keep an eye on the instrument panel and be prepared to stop the vehicle when you are instructed by PAP to do so.

Note

- Release the wheel while PAP is steering the vehicle.
- The steering wheel must be able to turn freely.
- For PAP to function optimally, wait until the steering wheel is no longer turning before beginning the next phase of the parallel parking procedure.

3: Adjusting the vehicle's position



After the vehicle has backed into the parking space, its position in the space has to be adjusted by driving slightly forward and backing up.

- Put the gear selector in D, wait until the steering wheel has turned and drive forward slowly.
- Stop the vehicle when you are instructed by PAP to do so.
- Put the gear selector in R, back up slowly and stop when you are instructed by PAP to do so.

When the parking procedure is finished (this will be indicated by a text message and a graphic image in the instrument panel) , PAP switches off automatically. If necessary, the driver may need to make minor adjustments to ensure that the vehicle is parked correctly.

* Option/accessory.

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6.8.12. Rear Park Assist Camera (PAC) – limitations

The Park Assist Camera is designed to provide the driver with a view of the area behind the vehicle when backing up.

Limitations

Even if a fairly small section of the screen image appears to be obstructed, this may mean that a relatively large area behind the vehicle is hidden and objects there may not be detected until they are very near the vehicle.

> **Note**
>
> Bicycle carriers or other accessories mounted on the tailgate may obstruct the camera's field of view.

Keep in mind

- Keep the camera's lens free of dirt, ice and snow. Remove ice and snow carefully to avoid scratching the lens.
- Clean the lens regularly with warm water and a suitable car washing detergent.

6.8.13. Rear Park Assist Camera (PAC) – function

The Park Assist Camera is designed to provide the driver with a view of the area behind the vehicle when backing up.

Function



The driver sees what is behind the vehicle and if a person or animal should suddenly appear from the side.

PAC is mounted on the tailgate, near the opening handle.

The camera has built-in electronics that help reduce the “fish-eye” effect so that the image shown on the screen is as natural as possible. This may cause some objects on the screen to “lean,” which is normal.

Ambient lighting conditions

The camera automatically monitors the ambient lighting conditions behind the vehicle and constantly adjusts sensitivity to light. This may cause the brightness and quality of the image on the screen to vary slightly. Sensitivity to light is increased in dark conditions or in bad weather, which may affect image quality.

If the image on the screen seems too dark, brightness can be increased with the thumb wheel on the lighting panel.

> **Note**
>
> In order to function properly, the camera lens should always be kept clean. This is particularly important in bad weather. Keep the lens free of dirt, ice or snow.

6.8.14. Park assist – introduction

The park assist system is designed to assist you when driving into parking spaces, garages, etc. An audible signal and symbols in the audio system’s display indicate the distance to the object.

The park assist system utilizes ultrasound sensors in the front bumper and rear bumper(s) to measure the distance to a vehicle or an object that may be close to the front or rear of your vehicle.

> **Note**
>
> A trailer hitch whose wiring is integrated with the vehicle's electrical system will be included in the measurement of the available space behind the vehicle.

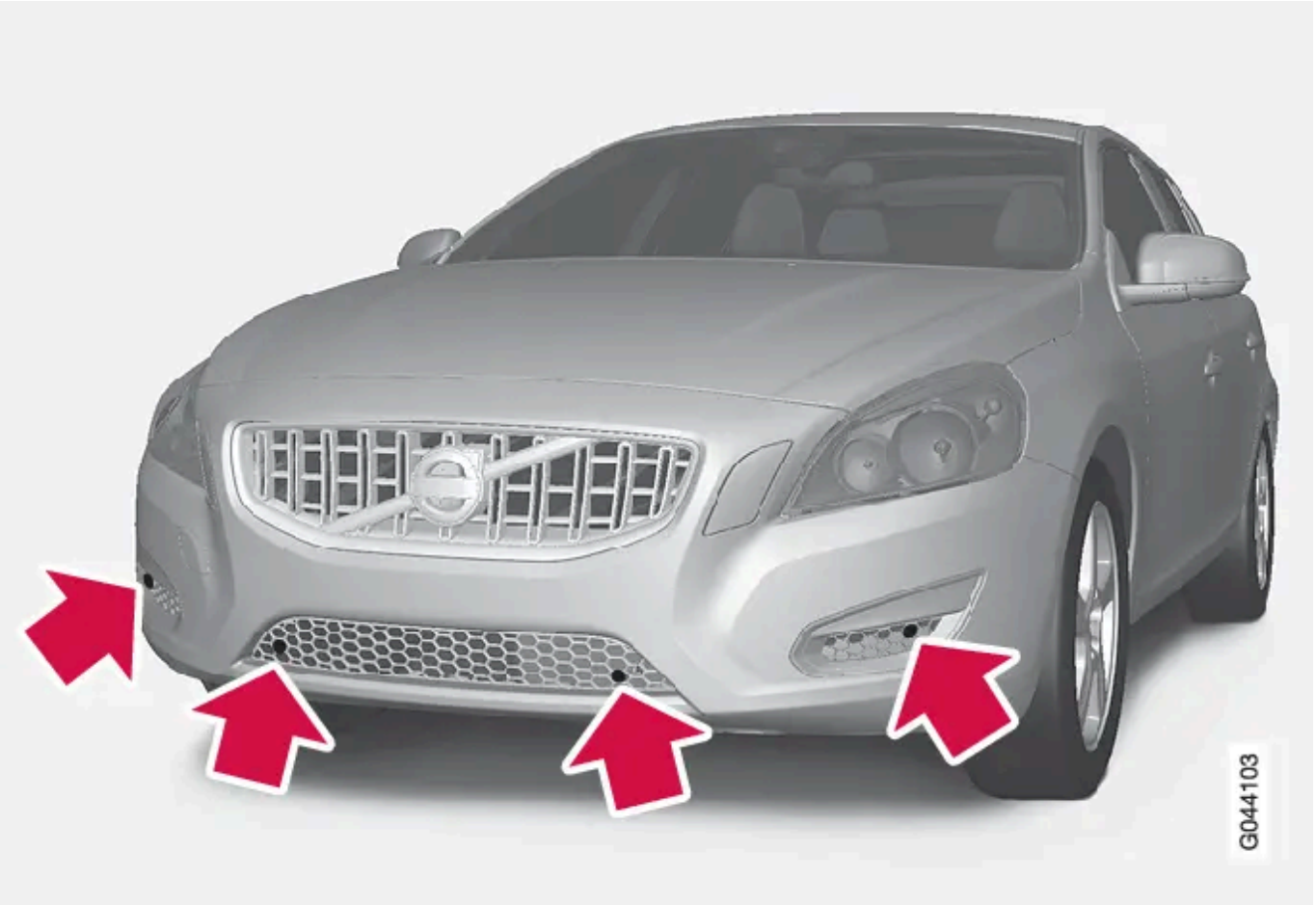
> **Warning**
>
> Park Assist is an information system, NOT a safety system. This system is designed to be a supplementary aid when parking the vehicle. It is not, however, intended to replace the driver's attention and judgement.

6.8.15. Park assist – limitations

The park assist system is designed to assist you when driving into parking spaces, garages, etc. An audible signal and symbols in the audio system’s display indicate the distance to the object.

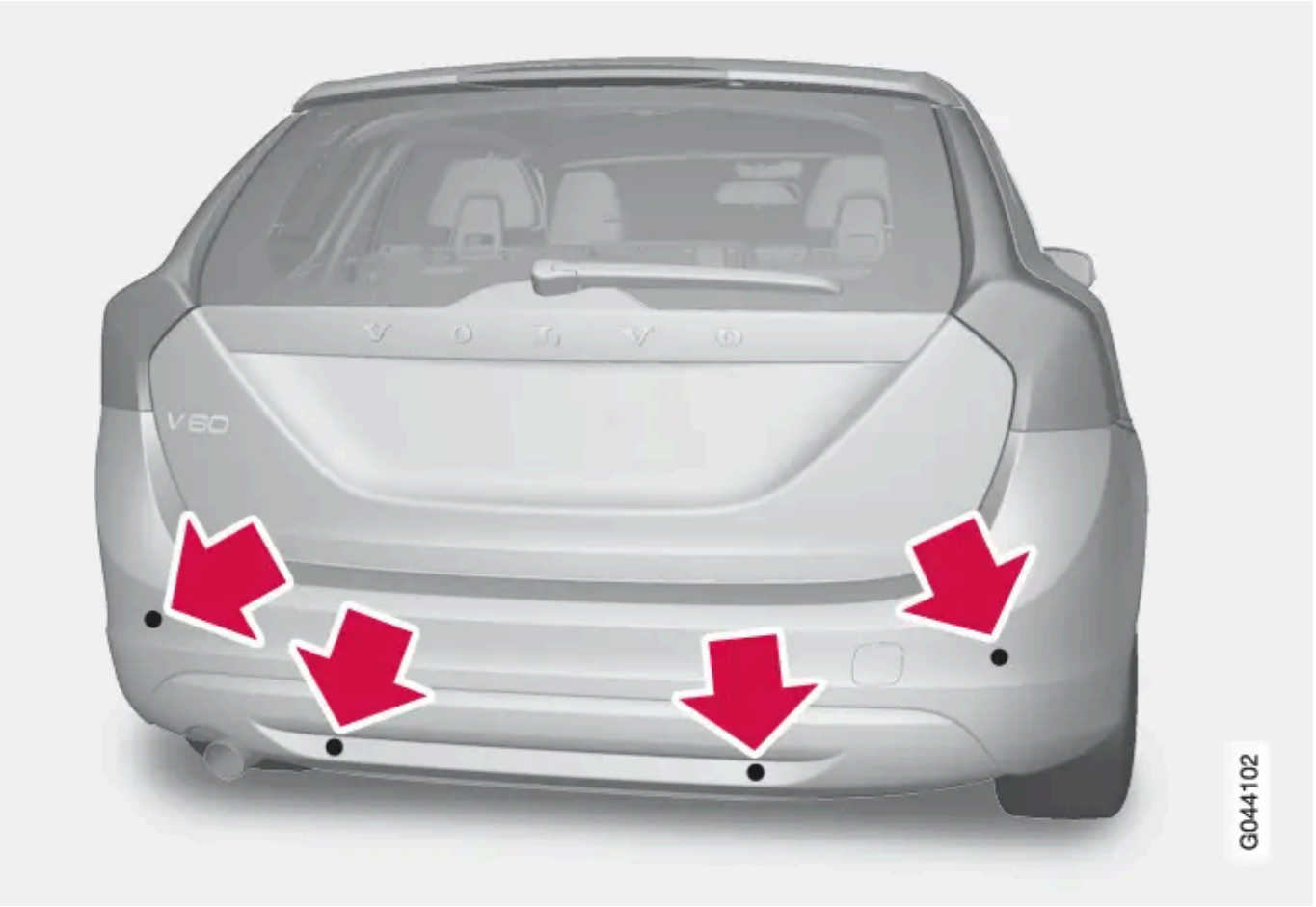
Cleaning the sensors

The sensors must be cleaned regularly to ensure that they work properly. Clean them with water and a suitable car washing detergent.



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Location of the front sensors



Location of the rear sensors

Ice and snow covering the sensors may cause incorrect warning signals.

> **Note**
>
> If the sensors are obstructed by e.g., dirt, snow, or ice, this could result in false warning signals from the park assist system.

6.9. Road Sign Information (RSI)

6.9.1. Road Sign Information (RSI) – limitations

RSI is a feature that helps the driver see road signs with the posted speed limit.

RSI's camera has the same limitations as the human eye. See The camera's limitations for more information about the camera's limitations.

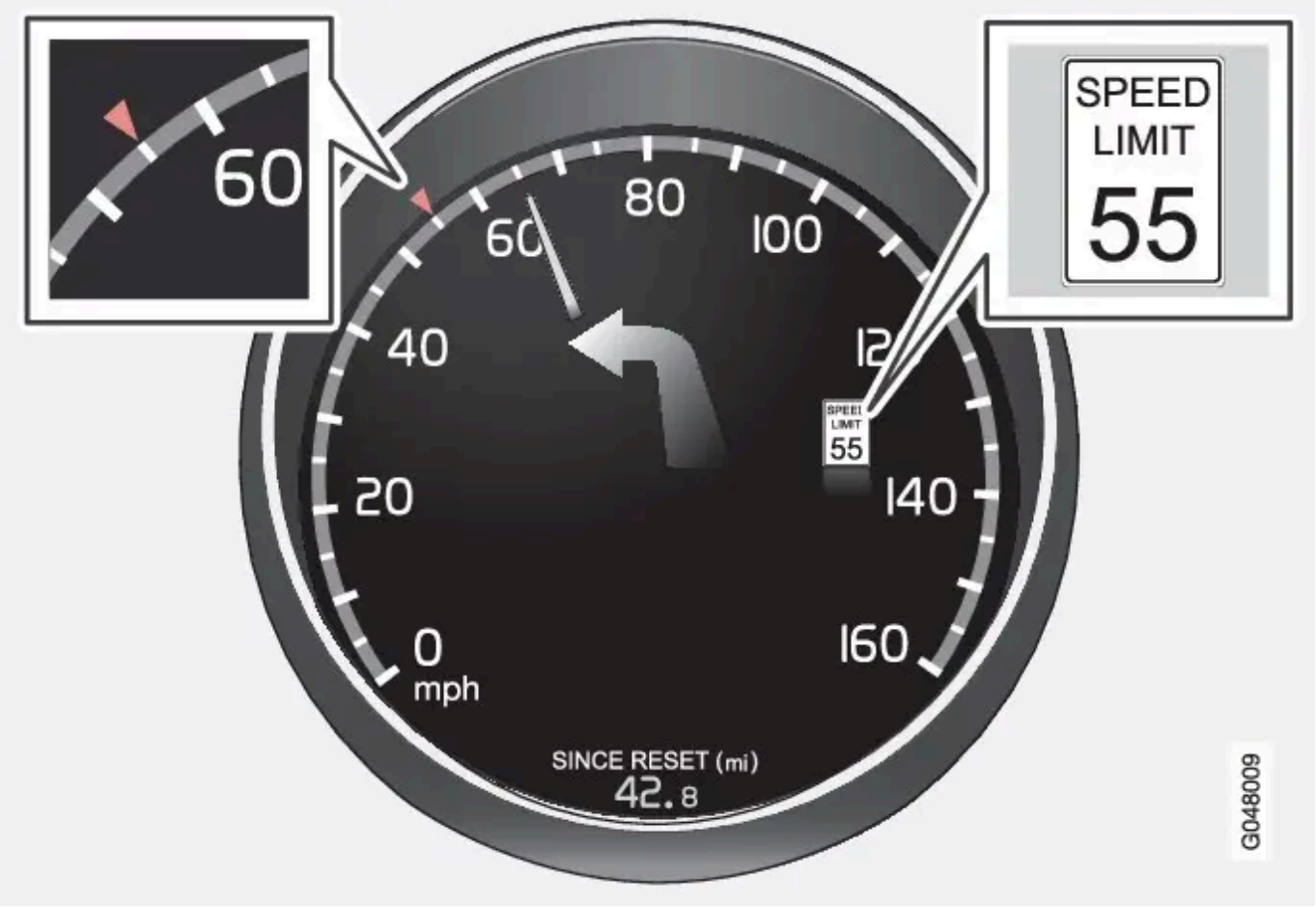
Signs that indirectly indicate the speed limit (such as a sign with a town's name and the permitted speed limit) will not be registered by RSI.

Other factors that may interfere with RSI include:

- Faded signs
- Signs located in a curve
- Twisted or damaged signs
- Obstructed signs
- Signs that are partially covered by snow, ice, etc.

6.9.2. Road Sign Information (RSI) – operation

RSI is a feature that helps the driver see road signs with the posted speed limit.



Speed limit information

When RSI registers a road sign showing the speed limit, this sign is displayed as a symbol on the instrument panel.

Settings in MY CAR



Possible settings in MY CAR

Displaying the speed limit indication can be deactivated. To do so:

- Deselect the alternative in MY CAR **Settings** → **Car settings** → **Road Sign Information** or cancel by pressing EXIT.

Speed alert

The driver can opt to be alerted if the vehicle exceeds the posted speed limit by more than 3 mph (5 km/h). The alert is given when the symbol with the posted speed limit in the instrument panel begins to flash.

To activate speed alert:

- Check the Speed alert box in MY CAR **Settings** → **Car settings** → **Speed alert** or cancel by pressing EXIT.

6.9.3. Road Sign Information (RSI)* – introduction

RSI is a feature that helps the driver see road signs with the posted speed limit.

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Examples of readable road signs

If the vehicle passes a sign showing the speed limit, this will be displayed in the center console.

> **Warning**
>
> RSI does not function in all situations and is only intended to provide supplementary information.
>
> The driver is always responsible for operating the vehicle safely.

* Option/accessory.

6.10. Stability system

6.10.1. Stability system – operation

The Electronic Stability Control (ESC) system consists of a number of functions designed to help reduce wheel spin, counteract skidding and to generally help improve directional stability.

Operation

Sport mode

The stability system is always activated and cannot be switched off.



However, the driver can select Sport mode, which offers more active driving characteristics.

Sport mode can be selected in the MY CAR menus, see My Car – introduction.

In Sport mode, the engine management system monitors movement of the accelerator pedal and steering wheel for sportier driving by allowing more lateral movement of the rear wheels before ESC is activated.

Under certain circumstances, such as when driving with snow chains, or driving in deep snow or loose sand, it may be advisable to temporarily use Sport mode for maximum tractive force.

If the driver releases pressure on the accelerator pedal, ETC will also activate to help stabilize the vehicle.

To switch to Sport mode:

Sport mode remains active until the driver switches it off in the menu or until the engine is switched off. ETC will return to normal mode when the engine is restarted.

6.10.2. Stability system – symbols and messages

The Electronic Stability Control (ESC) system consists of a number of functions designed to help reduce wheel spin, counteract skidding and to generally help improve directional stability.

Symbols and messages in the main instrument panel

A text message can be erased by pressing briefly the OK button on the turn signal lever.

Symbol	Message	Description
	ESC Temporarily OFF	The ESC system function has been temporarily reduced due to high brake disc temperature. The function reactivates automatically when the brakes have cooled.
	ESC Service required	The ESC system is not functioning properly. • Stop the vehicle in a safe place, turn off the engine and restart it. • If the message is still displayed when the engine has restarted, drive to an authorized Volvo workshop to have the system inspected.
and	"Message"	Read the message in the instrument panel.
	Steady glow for 2 seconds.	The system is performing a self-diagnostic test.
	Flashing symbol.	ESC is actively functioning to help counteract wheel spin and/or a skid.
	Steady glow.	Sport mode has been activated. Please note that ESC is not deactivated at this time but its functionality is reduced.

> **Warning**
>
> The stability system is intended to help improve driving safety. It supplements, but can never replace, the driver's judgment and responsibility when operating the vehicle. Speed and driving style should always be adapted to traffic and road conditions.

6.10.3. Stability system – introduction

The Electronic Stability Control (ESC) system consists of a number of functions designed to help reduce wheel spin, counteract skidding and to generally help improve directional stability.



A pulsating sound will be audible when the system is actively operating and is normal. Acceleration will also be slightly slower than normal.

> **Warning**
>
> ESC is a supplementary aid and cannot deal with all situations or road conditions.
>
> The driver is always responsible for operating the vehicle in a safe manner in accordance with current traffic regulations.

ESC consists of the following functions:

- Traction control
- Spin control
- Active Yaw Control
- Engine Drag Control
- Corner Traction Control

Traction Control (TC)

This function is designed to help reduce wheel spin at low speeds by transferring power from a drive wheel that begins to lose traction to the wheel on the opposite side of the vehicle (on the same axle).

Spin Control (SC)

The SC function is designed to help prevent the drive wheels from spinning while the vehicle is accelerating.

Active Yaw Control (AYC)

This function helps maintain directional stability, for example when cornering, by braking one or more of the wheels if the vehicle shows a tendency to skid or slide laterally.

Corner Traction Control (CTC)

CTC compensates for understeering and helps provide additional stability when accelerating through a curve by preventing the inside wheel from spinning. This is particularly useful when accelerating on a curving highway on-ramp.

CTC is most effective if the stability system's Sport mode is selected. See the section about Sport mode.

Engine Drag Control (EDC)

EDC helps keep the engine running if the wheels show a tendency to lock, e.g., when shifting down in the Geartronic manual shifting mode or while using the engine's braking function on a slippery surface. If the engine were to stop, power steering would not function, making the vehicle more difficult to steer.

Trailer Stability Assist (TSA)

The TSA helps stabilize a vehicle that is towing a trailer when the vehicle and trailer have begun to sway. See Trailer Stability Assist (TSA) for more information.

This system is automatically deactivated if the driver selects Sport mode.

6.10.4. Trailer Stability Assist (TSA)

Trailer Stability Assist is a system designed to help stabilize a vehicle that is towing a trailer when the vehicle and trailer have begun to sway and is part of the stability system. For information on the stability system, see

Function

A vehicle towing a trailer may begin to sway for various reasons. Normally this only occurs at high speeds but, for example, if the trailer is overloaded or if the load is unevenly distributed in the trailer, there is risk of swaying at speeds between approximately 45-55 mph (70-90 km/h).

Swaying may be caused by factors such as:

- The vehicle and trailer are hit by a sudden, strong crosswind
- The vehicle and trailer are traveling on an uneven road surface or drive over a bump
- Sudden movements of the steering wheel

Facts about TSA

- TSA intervenes at speeds above approximately 40 mph (60 km/h)
- The stability system symbol in the instrument panel will flash when TSA is working
- If the driver switches off the stability system's Spin Control function, TSA will also be switched off (but will be on again the next time the engine is started)
- TSA may not intervene when the vehicle and trailer begin to sway if the driver tries to compensate for the swaying motion by moving the steering wheel rapidly

How TSA works

Once swaying has begun, it can be very difficult to stop, which makes it difficult to control the vehicle and trailer.

The TSA system continuously monitors the vehicle's movements, particularly lateral movement. If the system detects a tendency to sway, the brakes are applied individually on the front wheels, which has a stabilizing effect on the vehicle and trailer. This is often enough to enable the driver to regain control of the vehicle.

If this is not adequate to stop the swaying motion, the brakes are applied to all of the wheels on the vehicle and on the trailer if it is equipped with brakes, and engine power is temporarily reduced. As the swaying motion begins to decrease and the vehicle-trailer have once again become stable, TSA will now stop regulating the brakes/engine power and the driver regains control of the vehicle.

6.11. Active chassis* (Four C)

Active chassis, Four-C (Continuously Controlled Chassis Concept), regulates the characteristics of the shock absorbers so that the vehicle's driving characteristics can be adjusted. There are three settings: Comfort, Sport and Advanced.

Operation



Chassis settings

Use the buttons in the center console to change setting. The setting in use when the engine is switched off is activated the next time the engine is started.

Comfort

Comfort mode offers a somewhat softer ride and the transmission shifts gears at lower rpm. This mode is particularly suitable for long-distance highway driving. The indicator light in the button will be on when this mode is selected.

Sport

In this mode, the vehicle's body sway is reduced during cornering and steering response is more immediate. The transmission shifts up at higher rpm for sportier driving. The indicator light in the button will be on to indicate that Sport mode has been selected.

Advanced

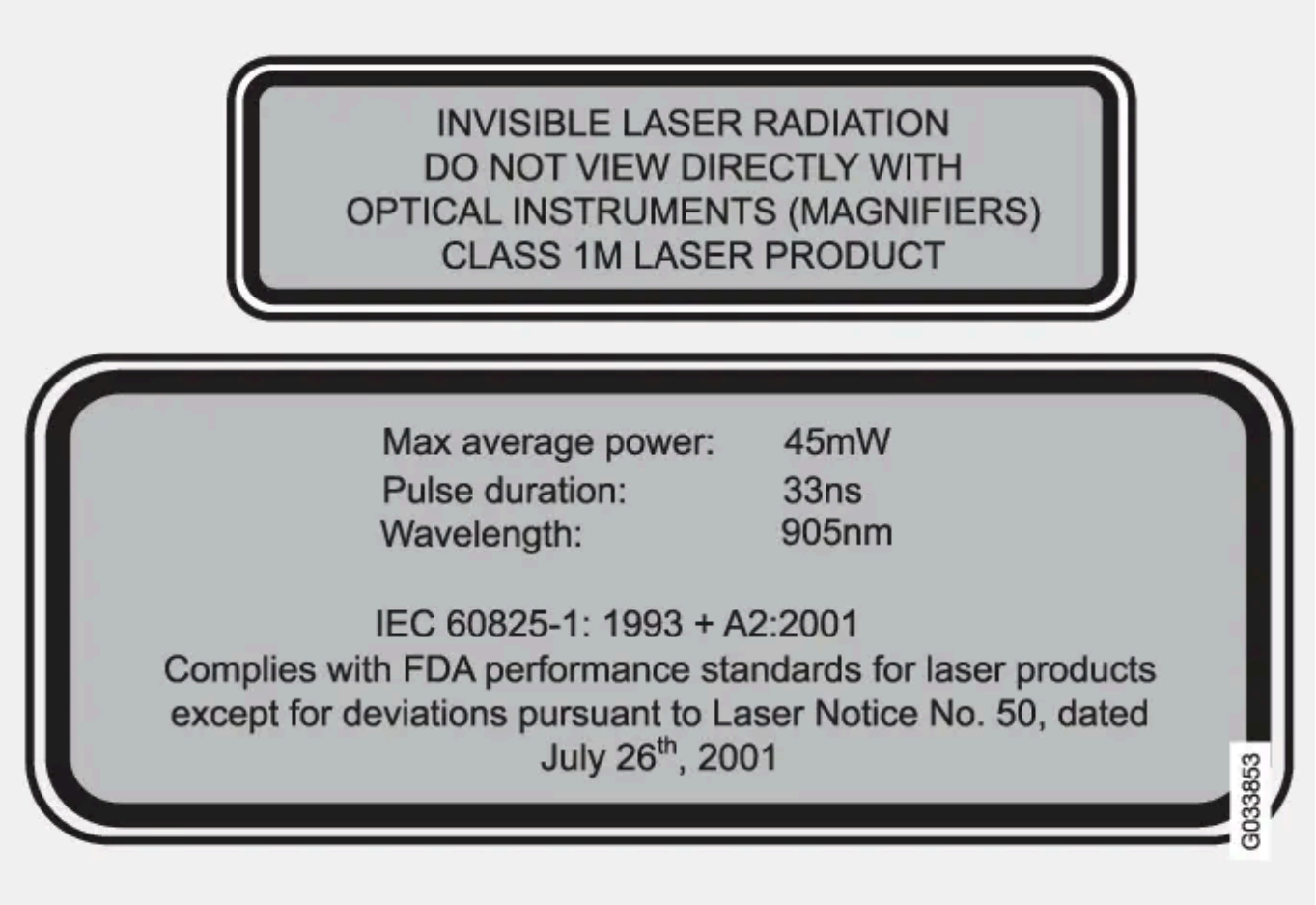
In this mode, body sway in curves is minimal and steering response is very direct. Gear shifting is done at high rpm in each gear for dynamic and active driving.

* Option/accessory.

6.12. City Safety – Laser sensor

City Safety™ [1] is a support system designed to help the driver avoid low speed collisions when driving in slow-moving, stop-and-go traffic.

The laser sensor



The upper decal describes the laser beam's classification and contains the following text:

Invisible Laser radiation – Do not view directly with optical instruments (magnifiers) – Class 1M laser product.

The lower decal describes the laser beam's physical data and contains the text:

IEC 60825-1:1993 + A2:2001. Complies with FDA performance standards for laser products except for deviations pursuant to Laser Notice No. 50, dated July 26th, 2001

The laser beam's physical data is listed in the following table:

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

Note

The function of aftermarket laser detectors may be affected by City Safety's laser sensor.

Warning

The laser sensor emits light when the ignition is in mode II or higher, even if City Safety™ has been switched off.

Warning

Eye injury may occur if any of the following points are not followed:

- It is essential that all pertinent instructions be followed when handling laser instruments. Testing, repairing, removing, adjusting and/or replacing any components in the laser sensor may only be done by a trained and qualified Volvo service technician.
- Do not remove the laser sensor (including removal of the lenses). A laser sensor that has been removed belongs to laser class 3B according to standard IEC 60825-1. Devices in laser class 3B present a risk of injury to the eyes.
- The laser sensor's connector must be disconnected before the sensor is removed from the windshield.
- The laser sensor must be mounted in place on the windshield before connecting the sensor's connector.
- Do not view the laser sensor (which emits spreading, invisible laser beams) with optical instruments from a distance of less than 4 inches (100 mm).

[1] City Safety is a registered trademark of the Volvo Car Corporation

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6.13. Adjustable steering force*

Steering force increases with the speed of the vehicle to give the driver enhanced sense of control and stability. At low speed the vehicle is easy to steer in order to facilitate parking, etc.

Adjustable steering force*

Steering force can be changed under **MY CAR → Car settings → Steering wheel force**. Select **Low**, **Medium** or **High**. For a description of the menu system, My Car – introduction.

Note

This steering force level menu function cannot be accessed when the vehicle is in motion.

Note

In certain situations, the power steering may become too warm and will have to be temporarily cooled down. While this is happening, the power steering effect will be reduced slightly and somewhat more effort may be required to turn the steering wheel.

If this occurs, a message will be displayed in the instrument panel.

* Option/accessory.

6.14. Radar sensor

The radar sensor is designed to help detect cars or larger vehicles driving in the same direction as your vehicle, in the same lane.

The radar sensor and its limitations

In addition to being used by the Adaptive Cruise Control (ACC), the radar sensor is also used by Distance Alert (see Distance Alert – introduction) and Collision Warning with Full Auto-brake and Pedestrian Detection (see Collision warning – introduction).

Warning

- If there is visible damage to the front grille or you suspect that the radar sensor may be damaged in any way, contact a trained and qualified Volvo service technician as soon as possible. The radar sensor may only function partially (or not at all) if it is damaged or is not securely fastened in place.
- Accessories or other objects, such as extra headlights, must not be installed in front of the grille.
- Modification of the radar sensor could make its use illegal.

The radar sensor's capacity to detect vehicles ahead is impeded:

- if the radar sensor is obstructed and cannot detect other vehicles, for example in heavy rain, or if snow or other objects are obscuring the radar sensor.

Note

Keep the area in front of the radar sensor clean.

- if the speed of vehicles ahead is significantly different from your own speed.

7. Starting and driving

7.1. Brakes

7.1.1. Brake lights

The brake lights come on automatically when the brakes are applied.

Adaptive brake lights

The adaptive brake lights activate in the event of sudden braking or if the ABS system is activated. This function causes an additional taillight on each side of the vehicle to illuminate to help alert vehicles traveling behind.

The adaptive brake lights activate if:

- The ABS system activates for more than approximately a half second
- In the event of sudden braking while the vehicle is moving at speeds above approximately 6 mph (10 km/h).

When the vehicle has come to a stop, the brake lights and additional taillights remain on for as long as the brake pedal is depressed or until braking force on the vehicle is reduced.

7.1.2. Brakes – general

The brake system is a hydraulic system consisting of two separate brake circuits. If a problem should occur in one of these circuits, it is still possible to stop the vehicle with the other brake circuit.

If the brake pedal must be depressed farther than normal and requires greater foot pressure, the stopping distance will be longer.

A warning light in the instrument panel will light up to warn the driver that a fault has occurred.

If this light comes on while driving or braking, stop immediately and check the brake fluid level in the reservoir.

> **Note**
>
> Press the brake pedal hard and maintain pressure on the pedal – do not pump the brakes.

Warning

If the fluid level is below the MIN mark in the reservoir or if a brake system message is shown in the information display: **DO NOT DRIVE**. Have the vehicle towed to a trained and qualified Volvo service technician and have the brake system inspected.

Brake pad inspection

On vehicles equipped with a jack*, the condition of the brake pads can be checked by raising the vehicle (see Changing a wheel – removing wheel for information about using the jack and removing a wheel) and performing a visual inspection of the brake pads.

Warning

- If the vehicle has been driven immediately prior to a brake pad inspection, the wheel hub, brake components, etc., will be very hot. Allow time for these components to cool before carrying out the inspection.
- Apply the parking brake and put the gear selector in the Park (P) position.
- Block the wheels standing on the ground, use rigid wooden blocks or large stones.

Warning

- Use the jack intended for the vehicle when changing a tire. For any other job, use stands to support the vehicle.
- The jack should be kept well-greased and clean, and should not be damaged.
- Be sure the jack is on a firm, level, non-slippery surface.
- No objects should be placed between the base of jack and the ground, or between the jack and the attachment bar on the vehicle.
- The jack must correctly engage the jack attachment.
- Never allow any part of your body to be extended under a vehicle supported by a jack.

Power brakes function only when the engine is running

The power brakes utilize vacuum pressure which is only created when the engine is running. Never let the vehicle roll to a stop with the engine switched off.

If the power brakes are not working, considerably higher pressure will be required on the brake pedal to compensate for the lack of power assistance. This can happen for example when towing your vehicle or if the engine is switched off when the vehicle is rolling. The brake pedal feels harder than usual.

Water on brake discs and brake pads affects braking

Driving in rain and slush or passing through an automatic car wash can cause water to collect on the brake discs and pads. This will cause a delay in braking effect when the pedal is depressed. To avoid such a delay when the brakes are needed, depress the pedal occasionally when driving through rain, slush, etc. This will remove the water from the brakes. Check that brake application feels normal. This should also be done after washing or starting in very damp or cold weather.

Severe strain on the brake system

The brakes will be subject to severe strain when driving in mountains or hilly areas, or when towing a trailer. Vehicle speed is usually slower, which means that the cooling of the brakes is less efficient than when driving on level roads. To reduce the strain on the brakes, shift into a lower gear and let the engine help with the braking. Do not forget that if you are towing a trailer, the brakes will be subjected to a greater than normal load.

Cleaning the brake discs

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

Cleaning the brake pads is advisable in wet weather, prior to long-term parking, and after the vehicle has been washed. Do this by braking gently for a short period while the vehicle is moving.

* Option/accessory.

7.1.3. Anti-lock braking system (ABS)

The ABS system helps to improve vehicle control (stopping and steering) during severe braking conditions by limiting brake lockup.

When the system "senses" impending lockup, braking pressure is automatically modulated in order to help prevent lockup that could lead to a skid.

The system performs a brief self-diagnostic test when the engine has been started and driver releases the brake pedal. Another automatic test may be performed when the vehicle first reaches a speed of approximately 6 mph (10 km/h). The brake pedal will pulsate several times and a sound may be audible from the ABS control module, which is normal.

7.1.4. Hill Descent Control (HDC)[1] – operation

HDC is a type of automatic engine brake and makes it possible to increase or decrease the vehicle's speed on downhill gradients using only the accelerator pedal, without applying the brakes. The brake system functions automatically to maintain a low and steady speed.

Function



- HDC can be switched on and off with the button in the center console. An indicator light in the button illuminates when HDC is activated.
- The indicator light in the instrument panel illuminates and a message is displayed when the system is controlling the vehicle's speed.
- HDC only functions when **first** or **reverse** gears are selected (**1** will be shown in the instrument panel display when first gear is selected).

> **Note**
>
> HDC cannot be activated if the gear selector is the D position.

Using HDC

HDC allows the car to roll forward at a maximum speed of 6 mph (10 km/h), and 4 mph (7 km/h) in reverse. However, the accelerator pedal can be used to select any speed that is possible in first or reverse gears. When the accelerator pedal is released, speed is quickly reduced again to 6 mph (10 km/h) or 4 mph (7 km/h), depending on the gear selected, regardless of the hill's gradient. It is not necessary to apply the brakes.

- The brake lights illuminate automatically when HDC is controlling the vehicle's speed.
- The driver can slow or stop the vehicle at any time by applying the brakes.

The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.

HDC is deactivated when:

- The button on the center console is pressed
- A gear higher than first gear is selected
- D is selected on vehicles with an automatic transmission

HDC can be deactivated at any time. If this is done while driving down a steep hill, the system's braking effect will decrease gradually.

> **Note**
>
> Engine response to pressure on the accelerator pedal may be slightly slower than normal when HDC is activated.

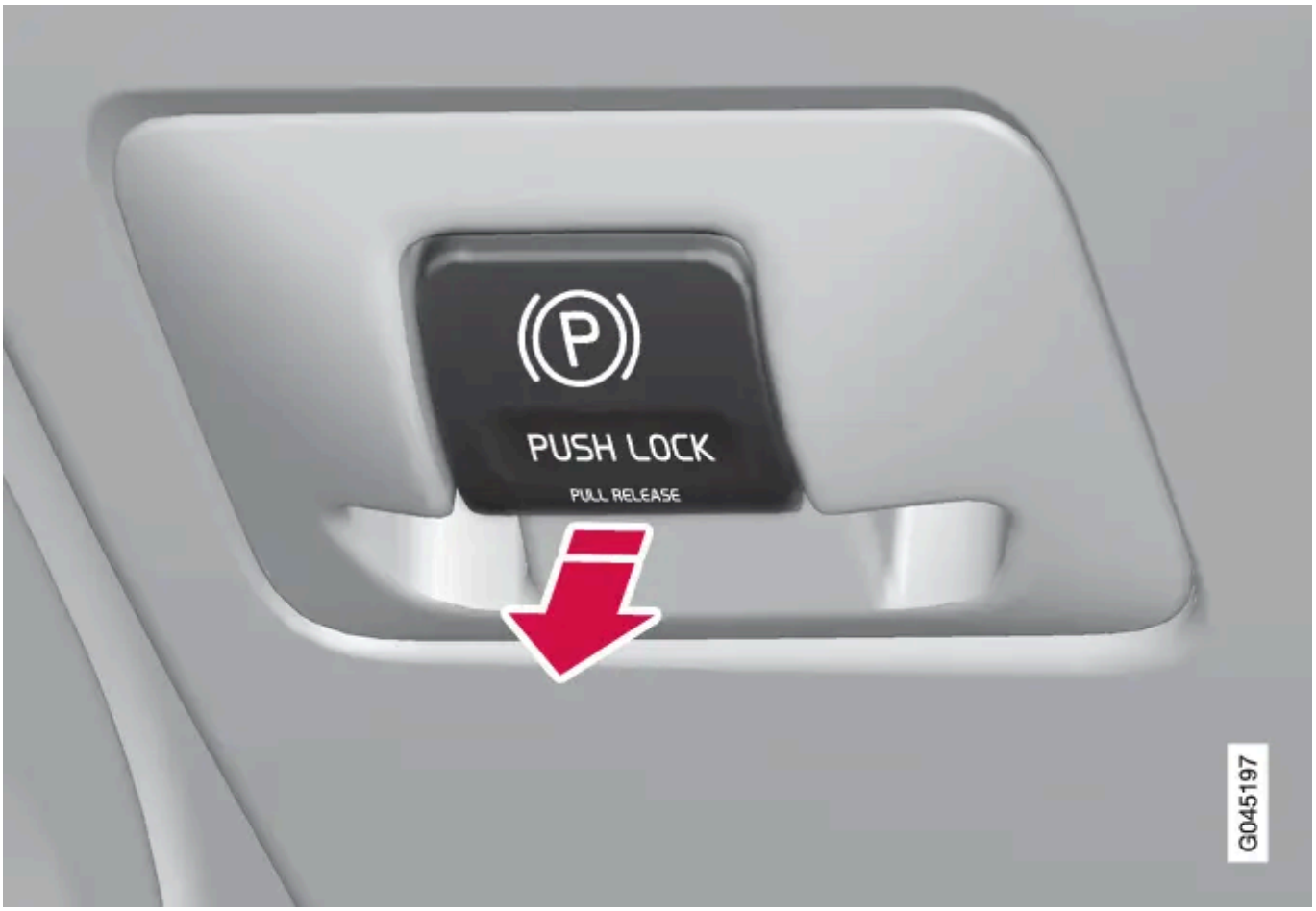
[1] Available on the V60 Cross Country in combination with certain engines only.

7.1.5. Parking brake – releasing

The electric parking brake helps to keep the vehicle stationary when it is parked.

Releasing the electric parking brake





Parking brake control

Manual release

1. Fasten the seat belt.
2. Insert the remote key in the ignition slot and press the START/STOP ENGINE button (or press the START/STOP ENGINE button with a valid remote key in the passenger compartment on vehicles with the optional keyless drive).
3. Press firmly on the brake pedal.
4. Pull the parking brake control.

Automatic release

1. Start the engine.
2. **Note**
   - For safety reasons, the parking brake is only released automatically if the engine is running and the driver is wearing a seat belt.
   - The electric parking brake will be released immediately when the accelerator pedal is pressed and the gear selector is in position D or R.

   Fasten the seat belt.
3. Move the gear selector to position D or R and press the accelerator pedal. The parking brake will release when the vehicle begins to move.

Heavy load uphill

A heavy load, such as a trailer, can cause the vehicle to roll backward when the parking brake is released automatically on a steep incline. To help avoid this:

1. Keep the electric parking brake lever pushed in with the left hand while shifting into Drive with the right.
2. While pressing the accelerator pedal to pull away, release the parking brake lever only after the vehicle begins to move.

7.1.6. Parking brake – symbols and messages

A text message can be erased by pressing briefly on the OK button on the turn signal lever.

Symbol and messages in the instrument panel

Symbol	Message	Description/action
(P)!	"Message"	Read the message in the information display
(P)		A flashing symbol indicates that the parking brake is being applied. If the symbol flashes in any other situation then this means that a fault has arisen. Read the message on the information display.
-	Park brake not fully released	A fault is preventing the parking brake from being released. Try to apply the parking brake and release it several times. If the problem persists, contact an authorized Volvo workshop. If you drive off with this error message showing, a warning signal sounds.
-	Parking brake not applied	A fault is preventing the parking brake from being applied. Try to apply the parking brake and release it several times. If the problem persists, contact an authorized Volvo workshop. If you drive off with this error message showing, a warning signal sounds.
-	Parking brake Service required	A fault has occurred. Try to apply and release. Contact a Volvo workshop if the fault remains

Warning

If the vehicle must be parked before the fault has been corrected, always put the gear selector in P and turn the wheels so that they point away from the curb if the vehicle is pointing uphill or toward the curb if it is pointing downhill.

7.1.7. Parking brake – general information

The electric parking brake helps to keep the vehicle stationary when it is parked.

Electric parking brake



Parking brake control

> **Note**
>
> - A faint sound from the parking brake's electric motor can be heard when the parking brake is being applied. This sound can also be heard during the automatic function check of the parking brake.
> - The brake pedal will move slightly when the electric parking brake is applied or released.

Low battery voltage

If the battery voltage is too low, the parking brake cannot be applied or released. Connect an auxiliary battery if the battery voltage is too low, see Jump starting.

Parking on a hill

- If the vehicle is pointing uphill, turn the front wheels so that they point away from the curb.
- If the vehicle is pointing downhill, turn the front wheels so that they point toward the curb.

The parking brake should also be applied.

7.1.8. Parking brake – applying

The electric parking brake helps to keep the vehicle stationary when it is parked.

Applying the electric parking brake





1. Press firmly on the brake pedal.
2. Push the control.

> The  symbol in the instrument panel flashes while the parking brake is being applied and glows steadily when the parking brake has been fully applied.

3. Release the brake pedal and ensure that the vehicle is at a standstill.
4. When the vehicle is parked, the gear selector must be in position P.

Note

- In an emergency the parking brake can be applied when the vehicle is moving by holding in the control. Braking will be interrupted when the accelerator pedal is depressed or the control is released.
- An audible signal will sound during this procedure if the vehicle is moving at speeds above 6 mph (10 km/h).

7.1.9. Hill Descent Control (HDC)[1] – introduction

HDC is a type of automatic engine brake and makes it possible to increase or decrease the vehicle's speed on downhill gradients using only the accelerator pedal, without applying the brakes. The brake system functions automatically to maintain a low and steady speed.

Introduction

Normally, when the accelerator pedal is released while driving down hills, the vehicle's speed slows as the engine runs at lower rpm (the normal engine braking effect). However, if the downhill gradient becomes steeper and if the vehicle is carrying a load, speed increases despite the engine braking effect. In this situation, the brakes must be applied to reduce the vehicle's speed.

HDC is particularly useful when driving down steep hills with rough surfaces, and where the road may have slippery patches.

Warning

HDC does not function in all situations, and is a supplementary braking aid. The driver has full responsibility for driving in a safe manner.

[1] Available on the V60 Cross Country in combination with certain engines only.

7.1.10. Emergency Brake Assistance (EBA)

EBA is designed to provide full brake effect immediately in the event of sudden, hard braking.

Emergency Brake Assistance

The EBA system is activated by the speed with which the brake pedal is depressed.

When the EBA system is activated, the brake pedal will go down and pressure in the brake system immediately increases to the maximum level. Maintain full pressure on the brake pedal in order to utilize the system completely. EBA is automatically deactivated when the brake pedal is released.

Note

- When the EBA system is activated, the brake pedal will go down and pressure in the brake system immediately increases to the maximum level. You must maintain full pressure on the brake pedal in order to utilize the system completely. There will be no braking effect if the pedal is released. EBA is automatically deactivated when the brake pedal is released.
- When the vehicle has been parked for some time, the brake pedal may sink more than usual when the engine is started. This is normal and the pedal will return to its usual position when it is released.

7.1.11. Brakes – symbols

Symbols in the instrument panel

Symbol	Specification
	Steady glow – Check the brake fluid level. If the level is low, fill with brake fluid and check for the cause of the brake fluid loss.
	Automatic function check: steady glow for two seconds when the engine is started.

Warning

If  and  come on at the same time and the brake level is below the MIN mark in the reservoir or if a brake system-related message is shown in the information display: **DO NOT DRIVE**. Have the vehicle towed to a trained and qualified Volvo service technician and have the brake system inspected.

7.2. Driving recommendations

7.2.1. Driving in cold weather

Check your vehicle before the approach of cold weather.

The following advice is worth noting:

- Make sure that the engine coolant contains 50 percent antifreeze. Any other mixture will reduce freeze protection. This gives protection against freezing down to –31 °F (–35 °C). The use of "recycled" antifreeze is not approved by Volvo. Different types of antifreeze must not be mixed.
- Volvo recommends using only genuine Volvo antifreeze in your vehicle's radiator.
- Try to keep the fuel tank well filled – this helps prevent the formation of condensation in the tank. In addition, in extremely cold weather conditions it is worthwhile to add fuel line de-icer before refueling.
- The viscosity of the engine oil is important. Oil with low viscosity (thinner oil) improves cold-weather starting as well as decreasing fuel consumption while the engine is warming up. Full synthetic 0W-30 oil is recommended for driving in areas with sustained low temperatures.

- The load placed on the battery is greater during the winter since the windshield wipers, lighting, etc., are used more often. Moreover, the capacity of the battery decreases as the temperature drops. In very cold weather, a poorly charged battery can freeze and be damaged. It is therefore advisable to check the state of charge more frequently and spray an anti-rust oil on the battery posts.
- Volvo recommends the use of snow tires on all four wheels for winter driving, see Snow tires/studded tires.
- To prevent the washer fluidreservoir from freezing, add washer solvents containing antifreeze. This is important since dirt is often splashed on the windshield during winter driving, requiring the frequent use of the washers and wipers. Volvo Washer Solvent should be diluted as follows: Down to 14 °F (–10 °C): 1 part washer solvent and 4 parts water Down to 5 °F (–15 °C): 1 part washer solvent and 3 parts water Down to 0 °F (–18 °C): 1 part washer solvent and 2 parts water Down to –18 °F (–28 °C): 1 part washer solvent and 1 part water.
- Use Volvo Teflon Lock Spray in the locks.
- Avoid using de-icing sprays as they can cause damage to the locks.

7.2.2. Engine and cooling system

Under special conditions, for example when driving in hilly terrain, extreme heat or with heavy loads, there is a risk that the engine and cooling system will overheat.

Proceed as follows to avoid overheating the engine.

- Maintain a low speed when driving with a trailer up long, steep hills. For information, see Towing a trailer
- Do not turn the engine off immediately when stopping after a hard drive.

> **Warning**
>
> The cooling fan may start or continue to operate (for up to 6 minutes) after the engine has been switched off.

- Remove any auxiliary lights from in front of the grille when driving in hot weather conditions.

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

7.2.3. Conserving electrical current

Keep the following in mind to help minimize battery drain:

- When the engine is not running, avoid using ignition mode II. Many electrical systems (the audio system, the optional navigation system, power windows, etc) will function in ignition modes 0 and I. These modes reduce drain on the battery.
- Please keep in mind that using systems, accessories, etc., that consume a great deal of current when the engine is not running could result in the battery being completely drained. Driving or having the engine running for approximately 15 minutes will help keep the battery charged.
- The optional 12-volt socket in the cargo area area provides electrical current even with the ignition switched off, which drains the battery.

7.2.4. Before a long distance trip

It is always worthwhile to have your vehicle checked by a trained and qualified Volvo service technician before driving long distances. Your retailer will also be able to supply you with bulbs, fuses, spark plugs and wiper blades for your use in the event that problems occur.

As a minimum, the following items should be checked before any long trip:

- Check that engine runs smoothly and that fuel consumption is normal.
- Check for fuel, oil, and fluid leakage.
- Have the transmission oil levelchecked.
- Check condition of drive belts.
- Check state of the battery's charge.
- Examine tires carefully (the spare tire as well), and replace those that are worn. Check tire pressure.
- The brakes, front wheel alignment, and steering gear should be checked by a trained and qualified Volvo service technician only.
- Check all lights, including high beams.
- Reflective warning triangles are legally required in some states/provinces.
- Have a word with a trained and qualified Volvo service technician if you intend to drive in countries where it may be difficult to obtain the correct fuel.
- Consider your destination. If you will be driving through an area where snow or ice are likely to occur, consider snow tires.

7.2.5. Economical driving

Better driving economy may be obtained by thinking ahead, avoiding rapid starts and stops and adjusting the speed of your vehicle to immediate traffic conditions.

Economical driving conserves natural resources

Observe the following rules:

- Bring the engine to normal operating temperature as soon as possible by driving with a light foot on the accelerator pedal for the first few minutes of operation. A cold engine uses more fuel and is subject to increased wear.
- Whenever possible, avoid using the vehicle for driving short distances. This does not allow the engine to reach normal operating temperature.
- Drive carefully and avoid rapid acceleration and hard braking.
- Use the transmission's Drive (D) position as often as possible and avoid using kick-down.
- Using the engine's optional Eco function[1] can help improve fuel economy. For additional information, see ECO.
- Using the transmission's Sport mode[2] may increase fuel consumption somewhat. Use the transmission's Drive (D) position as often as possible. For additional information about Sport mode, see Transmission – Geartronic.
- Do not exceed posted speed limits.
- Avoid carrying unnecessary items (extra load) in the vehicle.
- Maintain correct tire pressure. Check tire pressure regularly (when tires are cold).
- Remove snow tires when threat of snow or ice has ended.
- Note that roof racks, ski racks, etc, increase air resistance and also fuel consumption.
- At highway driving speeds, fuel consumption will be lower with the air conditioning on and the windows closed than with the air conditioning off and the windows open.
- Using the onboard trip computer's fuel consumption modes can help you learn how to drive more economically.

Other factors that decrease gas mileage are:

- Dirty air cleaner
- Dirty engine oil and clogged oil filter
- Dragging brakes
- Incorrect front end alignment

Some of the above mentioned items and others are checked at the standard maintenance intervals.

> ⚠ **Warning**
>
> **Driving with the tailgate open:** Driving with the tailgate open could lead to poisonous exhaust gases entering the passenger compartment. If the tailgate must be kept open for any reason, proceed as follows:
>
> - Close the windows
> - Set the ventilation system control to air flow to floor, windshield and side windows and the blower control to its highest setting.

Handling and roadholding

At the specified curb weight your vehicle has a tendency to understeer, which means that the steering wheel has to be turned more than might seem appropriate for the curvature of a bend. This ensures good stability and reduces the risk of rear wheel skid. Remember that these properties can alter with the vehicle load. The heavier the load in the cargo area, the less the tendency to understeer.

- Vehicle load, tire design and inflation pressure all affect vehicle handling. Therefore, check that the tires are inflated to the recommended pressure according to the vehicle load. Loads should be distributed so that capacity weight or maximum permissible axle loads are not exceeded.
- At the specified curb weight your vehicle has a tendency to understeer, which means that the steering wheel has to be turned more than might seem appropriate for the curvature of a bend. This ensures good stability and reduces the risk of rear wheel skid. Remember that these properties can alter with the vehicle load. The heavier the load in the cargo compartment, the less the tendency to understeer.

[1] Available on certain 4-cyl. engines

[2] Models with the T6 turbo engine only.

7.2.6. Driving through water

V60: The vehicle can be driven through water up to a depth of approximately 10 in. (25 cm), at a maximum speed of 6 mph (10 km/h).
V60 Cross Country: The vehicle can be driven through water up to a depth of approximately 12 in. (30 cm), at a maximum speed of 6 mph (10 km/h).

- Take particular care when driving through flowing water.
- Clean the electrical connections for trailer wiring after driving in mud or water.
- When driving through water, maintain low speed and do not stop in the water.

Warning

- Avoid driving through standing or rushing water. Doing so can be dangerous and it may also be difficult to determine the actual depth of the water.
- If water cannot be avoided, after driving through the water, press lightly on the brake pedal to ensure that the brakes are functioning normally. Water or mud can make the brake linings slippery, resulting in delayed braking effect.

Important

- Engine damage will occur if water is drawn into the air cleaner.
- **V60:** If the vehicle is driven through water deeper than 10 in (25 cm), water may enter the differential and the transmission. This reduces the oil's lubricating capacity and may shorten the service life of these components.
- **V60 Cross Country:** If the vehicle is driven through water deeper than 12 in. (30 cm), water may enter the differential and the transmission. This reduces the oil's lubricating capacity and may shorten the service life of these components.
- Damage to any components, the engine, transmission, turbo-charger, differential or its internal components caused by flooding, vapor lock or insufficient oil is not covered under warranty.
- Do not allow the vehicle to stand in water up to the door sills longer than absolutely necessary. This could result in electrical malfunctions.
- If the engine has been stopped while the vehicle is in water, do not attempt to restart it. Have the vehicle towed out of the water.

7.3. Emergency towing

7.3.1. Towing the vehicle

Always check with state and local authorities before attempting to tow another vehicle because this type of towing is subject to regulations regarding maximum towing speed, length and type of towing device, lighting, etc.

1. With the remote key fully pressed into the ignition slot[1], press START/STOP ENGINE for approximately 2 seconds to activate ignition mode **II**.
2. The remote key must remain in the ignition slot[2] for the entire time that the vehicle is being towed.
3. Keep the tow rope taut when the towing vehicle slows down by applying light pressure on the brake pedal. This will help prevent jarring movements of the vehicle being towed.
4. Be prepared to apply the brakes to stop the vehicle being towed.

Important

General towing precautions:

- Please check with state and local authorities before attempting this type of towing, as vehicles being towed are subject to regulations regarding maximum towing speed, length and type of towing device, lighting, etc.
- If the vehicle's battery is dead, see Jump starting to provide current for releasing the electric parking brake and to move the gear selector from the P position to N. If this is not possible, see Transmission – shiftlock override for information about manually overriding the shiftlock system to move the gear selector from P to N.
- Maximum speed: 50 mph (80 km/h). Do not exceed the maximum allowable towing speed.
- Maximum distance with front wheels on ground: 50 miles (80 km).
- The vehicle should only be towed in the forward direction.

[1] Not necessary in vehicles with the optional keyless drive.

[2] For vehicles with the optional keyless drive, the remote key must be in the vehicle.

7.3.2. Towing by tow truck

When necessary, call for professional help from an authorized towing company. Volvo recommends the use of flat bed equipment.

Important

In certain conditions, the towing eyelet may be used to pull the vehicle onto a flatbed tow truck.

- The vehicle's position and ground clearance determine if it can be pulled up onto a flatbed tow truck using the towing eyelet.
- If the angle of the tow truck’s ramp is too steep or the ground clearance under the vehicle is insufficient, damage could occur by attempting to pull the vehicle using the towing eyelet.
- If necessary, lift the vehicle using the tow truck’s lifting device.

Warning

No person or object should be behind the tow truck while the vehicle is being pulled up onto the flatbed.

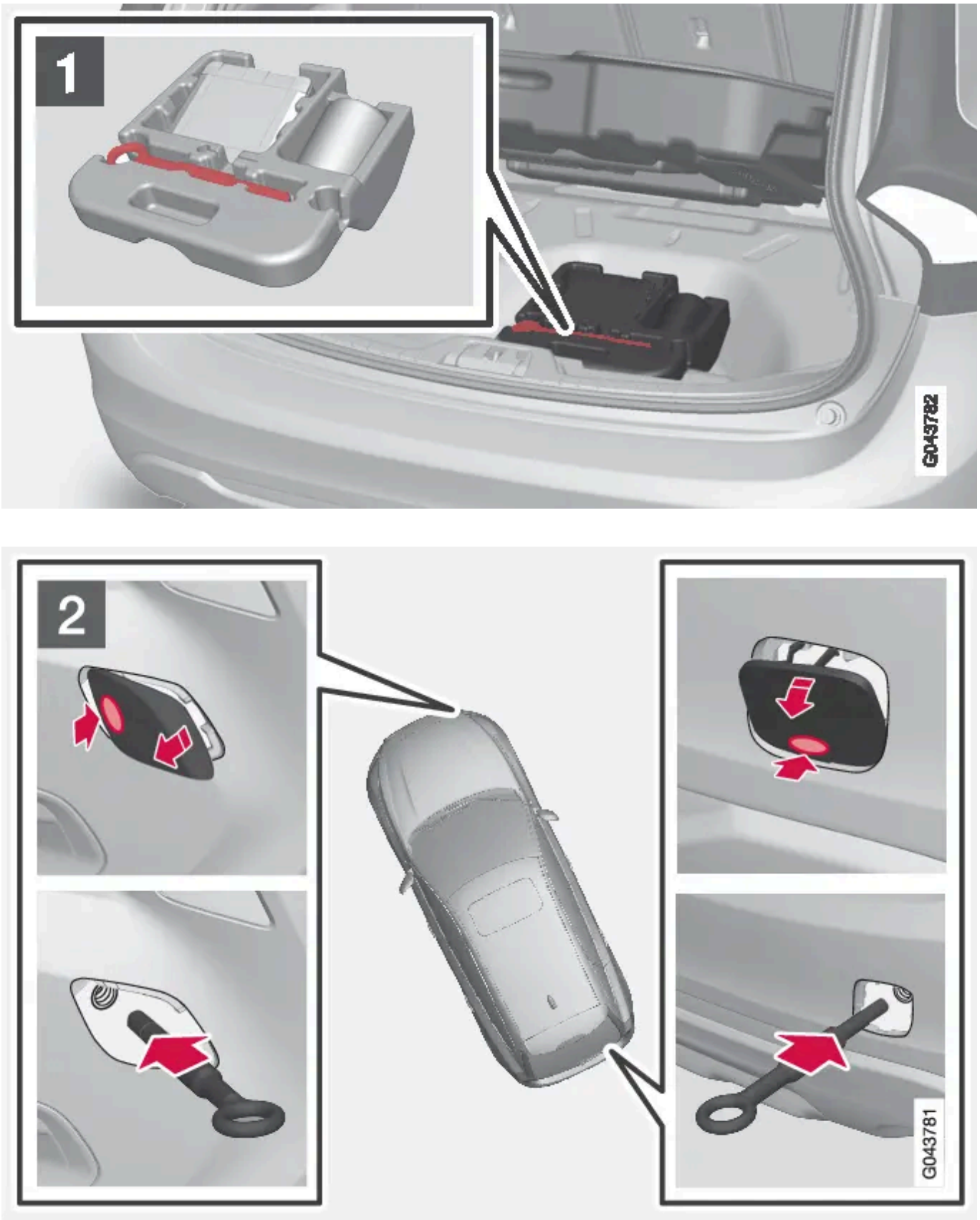
Important

- The vehicle should always be towed in the forward direction.
- Vehicles with All Wheel Drive (AWD)* that are being towed with the front wheels off the ground should not be towed at a speed above approx. 45 mph (70 km/h) and should not be towed farther than 30 miles (50 km).

* Option/accessory.

7.3.3. Towing eyelet

When used, the towing eyelet should always be securing attached.



Removing the front/rear covers

Attaching the towing eyelet

1. 1
   The towing eyelet is located under the floor of the cargo area, with the spare tire. This eyelet must be screwed into the positions provided on the right sides of either the front or rear bumper (see illustration).

2. 2
   There are two different types of covers over the openings for the towing eyelet and they have to be opened differently.
   - If the cover has a notch, insert a coin, etc., into the notch and pry open the edge of the cover. Open the cover completely and remove it.
   - If the cover has a mark along one edge or in a corner, press the mark while prying out the opposite side/corner using a coin, etc. Open the cover and remove it.

Screw the towing eyelet in place, first by hand and then using the tire iron until it is securely in place.

After the vehicle has been towed, the eyelet should be removed and returned to its storage location.

Press the cover for the attachment point back into position.

Warning

- When the vehicle is being towed, the ignition should be in mode **II** (in mode **I**, all of the vehicle's airbags are deactivated). For more information, see Ignition modes
- Never remove the remote key from the ignition slot when the vehicle is being towed. For vehicles with keyless drive, the remote key must remain inside the vehicle.
- The power brakes and power steering will not function when the engine is not running. Approximately 5 times more pressure will be required on the brake pedal and the steering wheel will be considerably harder to turn.
- The towing eyelets must not be used for pulling the vehicle out of a ditch or for any similar purpose involving severe strain.

7.4. Fuel

7.4.1. Emission controls

Three-way catalytic converter

- Keep your engine properly tuned. Certain engine malfunctions, particularly involving the electrical, fuel or distributor ignition systems, may cause unusually high three-way catalytic converter temperatures. Do not continue to operate your vehicle if you detect engine misfire, noticeable loss of power or other unusual operating conditions, such as engine overheating or backfiring. A properly tuned engine will help avoid malfunctions that could damage the three-way catalytic converter.
- Do not park your vehicle over combustible materials, such as grass or leaves, which can come into contact with the hot exhaust system and cause such materials to ignite under certain wind and weather conditions.

- Excessive starter cranking (in excess of one minute), or an intermittently firing or flooded engine can cause three-way catalytic converter or exhaust system overheating.
- Remember that tampering or unauthorized modifications to the engine, the Engine Control Module, or the vehicle may be illegal and can cause three-way catalytic converter or exhaust system overheating. This includes: altering fuel injection settings or components, altering emission system components or location or removing components, and/or repeated use of leaded fuel.

> **Note**
>
> Unleaded fuel is required for vehicles with three-way catalytic converters.

Heated oxygen sensors

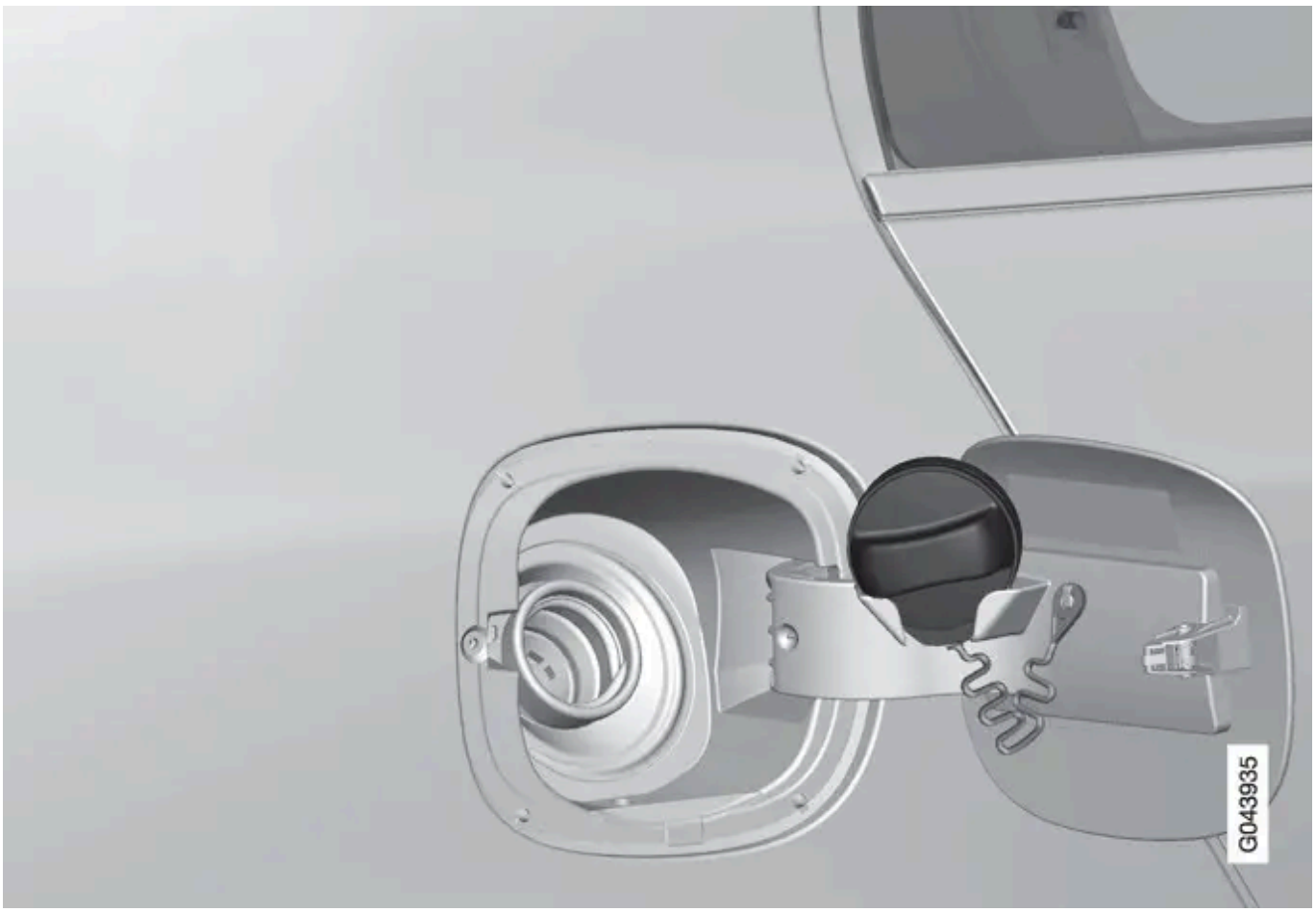
The heated oxygen sensors monitor the oxygen content of the exhaust gases. Readings are fed into a control module that continuously monitors engine functions and controls fuel injection. The ratio of fuel to air into the engine is continuously adjusted for efficient combustion to help reduce harmful emissions.

7.5. Refueling

7.5.1. Refueling – opening/closing fuel cap

If necessary, the fuel filler door can be opened manually.

Opening/closing the fuel cap



Fuel vapor expands in hot weather. Open the filler cap slowly.

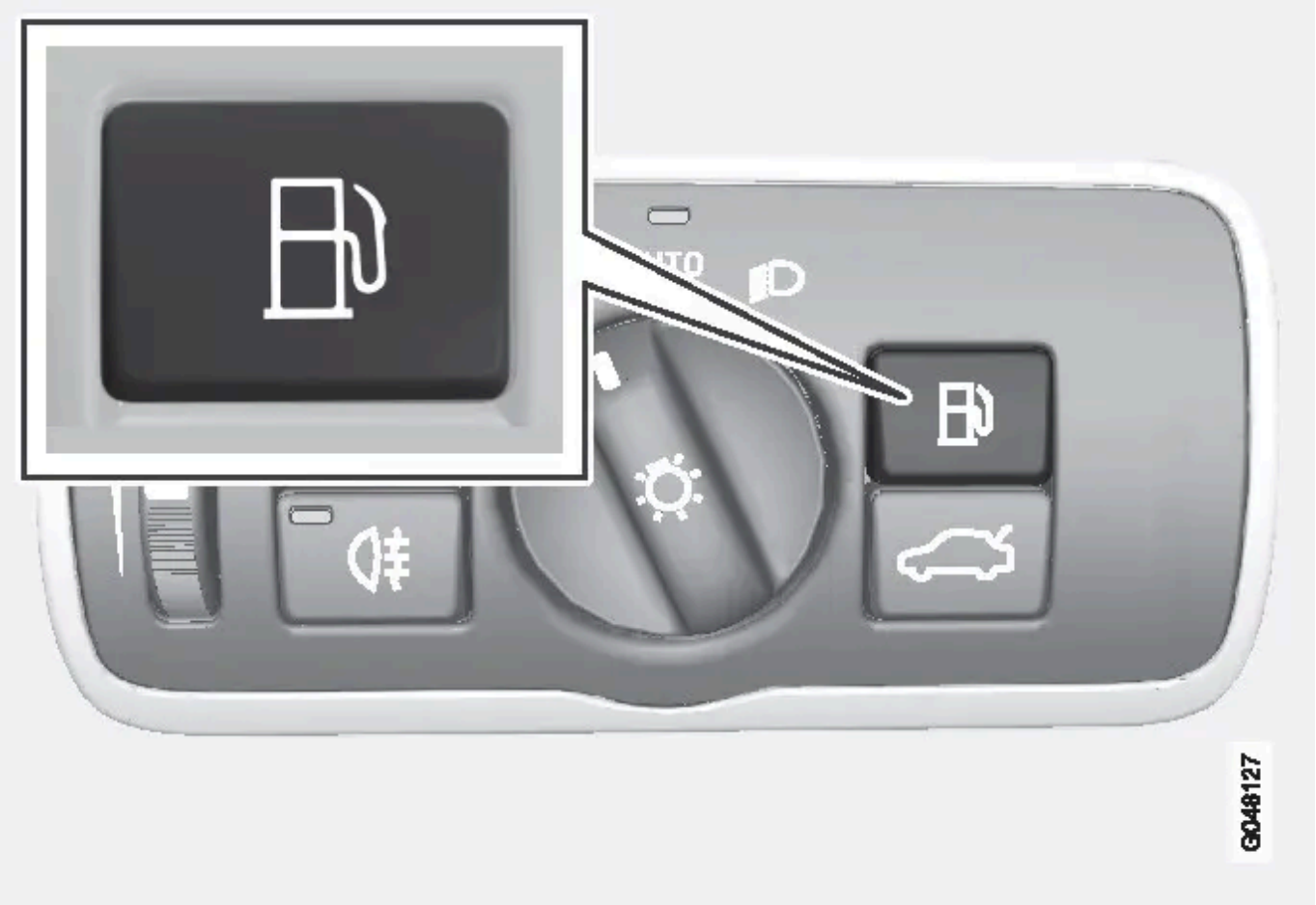
After refueling, close the fuel filler cap by turning it clockwise until it clicks into place.

> **Important**
>
> - Do not refuel with the engine running[1]. Turn the ignition off or to position I. If the ignition is on, an incorrect reading could occur in the fuel gauge.
> - Avoid overfilling the fuel tank. Do not press the handle on the filler nozzle more than one extra time. Too much fuel in the tank in hot weather conditions can cause the fuel to overflow. Overfilling could also cause damage to the emission control systems.

[1] If the fuel filler cap is not closed tightly or if the engine is running when the vehicle is refueled, the Check Engine Light (malfunction indicator lamp) may indicate a fault. However, your vehicle's performance will not be affected. Use only Volvo original or approved fuel filler caps.

7.5.2. Refueling – opening/closing fuel filler door

The fuel filler door is located on the right rear fender (indicated by an arrow beside the fuel tank symbol on the information display)



With the ignition switched off, press and release the button on the lighting panel to unlock the fuel filler door. Please note that the fuel filler door will remain unlocked until the vehicle begins to move forward. An audible click will be heard when the fuel filler door relocks.

- If you intend to leave your vehicle while it is being refueled, this feature enables you to lock the doors/tailgate while leaving the fuel filler door unlocked.
- You can also keep the vehicle locked if you remain inside it during refueling. The central locking button does not lock the fuel filler door.
- Be sure the fuel filler door is not obstructed and is completely closed after refueling.
- Open the fuel filler cap slowly during hot weather.

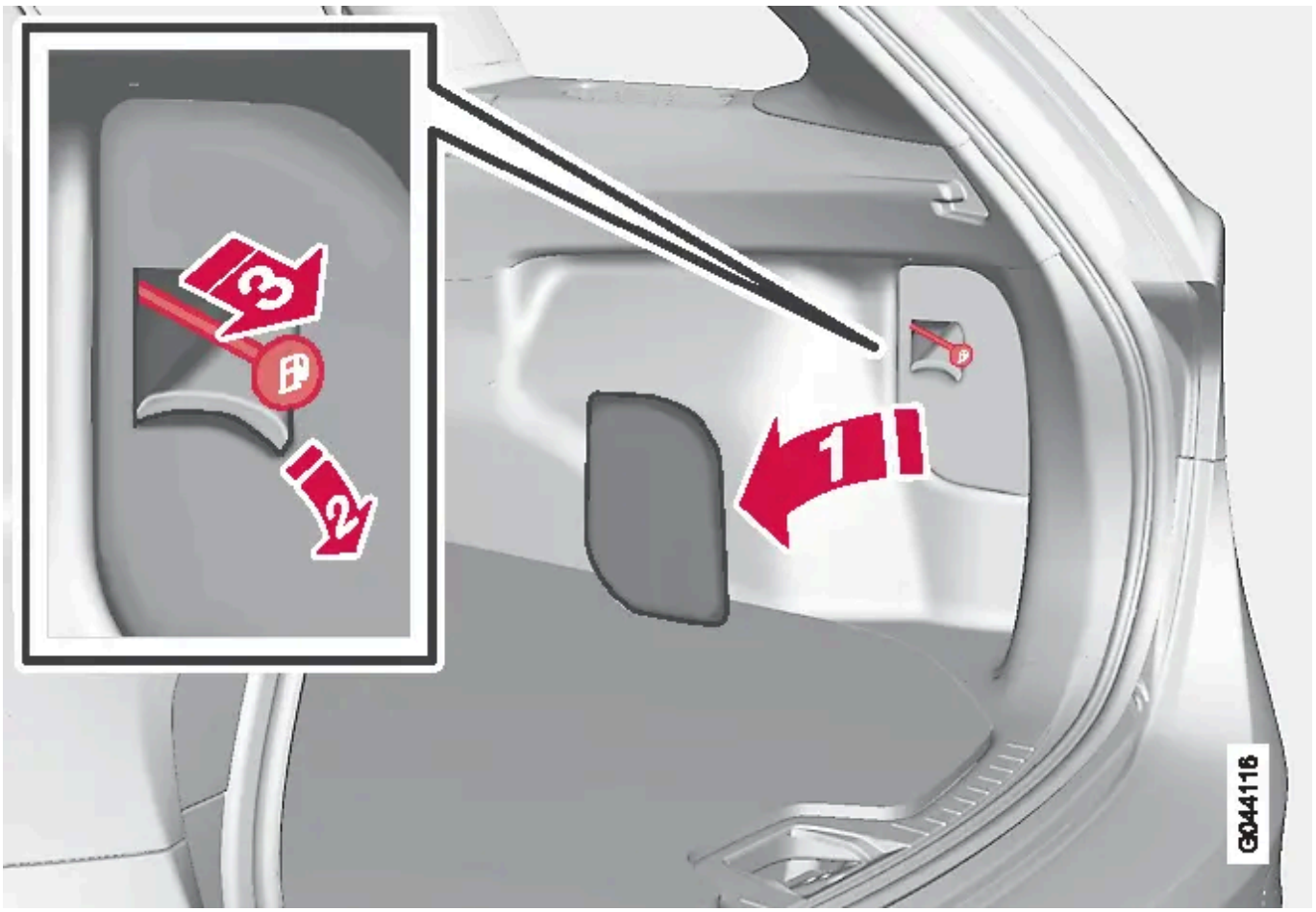
Close the fuel filler door by pressing it; a click indicates that it is closed.

Important

Avoid spilling gasoline during refueling. In addition to causing damage to the environment, gasolines containing alcohol can cause damage to painted surfaces, which may not be covered under the New Vehicle Limited Warranty.

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Manually opening the fuel filler door



1. Open the side hatch in the cargo area (on the same side as the fuel filler door).
2. Open a perforated section of the insulation and grasp the handle on the green cord.
3. Gently pull the cord straight rearward until the fuel filler door clicks open.

7.5.3. Refueling – octane rating

Volvo recommends premium fuel for best performance, but using 87 octane[1] or above will not affect engine reliability.

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Minimum octane



Typical pump octane label

> **Note**
>
> Vehicles equipped with the high performance 4-cylinder engines (B4204T9 and B4204T10) require premium fuel[2].

TOP TIER Detergent Gasoline

Volvo endorses the use of “TOP TIER Detergent Gasoline” where available to help maintain engine performance and reliability. TOP TIER Detergent Gasoline meets a new standard jointly established by leading automotive manufactures to meet the needs of today’s advanced engines. Qualifying gasoline retailers (stations) will, in most cases, identify their gasoline as having met the “TOP TIER Detergent Gasoline” standards.

> **Note**
>
> Information about TOP TIER Detergent Gasoline is available at www.toptiergas.com.

Demanding driving

In demanding driving conditions, such as operating the vehicle in hot weather, towing a trailer, or driving for extended periods at higher altitudes than normal, it may be advisable to switch to higher octane fuel (91 or higher) or to change gasoline brands to fully utilize your engine's capacity, and for the smoothest possible operation.

Note

When switching to higher octane fuel or changing gasoline brands, it may be necessary to fill the tank more than once before a difference in engine operation is noticeable.

Fuel Formulations

Do not use gasoline that contains lead as a knock inhibitor, and do not use lead additives. Besides damaging the exhaust emission control systems on your vehicle, lead has been strongly linked to certain forms of cancer.

Many fuels contain benzene as a solvent. Unburned benzene has been strongly linked to certain forms of cancer. If you live in an area where you must fill your own gas tank, take precautions. These may include:

- standing upwind away from the filler nozzle while refueling
- refueling only at gas stations with vapor recovery systems that fully seal the mouth of the filler neck during refueling
- wearing neoprene gloves while handling a fuel filler nozzle.

Use of Additives

With the exception of gas line antifreeze during winter months, do not add solvents, thickeners, or other store-bought additives to your vehicle's fuel, cooling, or lubricating systems. Overuse may damage your engine, and some of these additives contain organically volatile chemicals. Do not needlessly expose yourself to these chemicals.

Warning

Never carry a cell phone that is **switched on** while refueling your vehicle. If the phone rings, this may cause a spark that could ignite gasoline fumes, resulting in fire and injury.

Warning

Carbon monoxide is a poisonous, colorless, and odorless gas. It is present in all exhaust gases. If you ever smell exhaust fumes inside the vehicle, make sure the passenger compartment is ventilated, and immediately return the vehicle to a trained and qualified Volvo service technician for correction.

[1] AKI (ANTI KNOCK INDEX) is an average of the Research Octane Number (RON) and the Motor Octane Number (MON), MON+RON/2.

[2] Refer to your Warranty and Maintenance Records booklet for additional information.

7.5.4. Refueling – fuel requirements

Volvo recommends the use of detergent gasoline to control engine deposits.

Deposit control gasoline (detergent additives)

Detergent gasoline is effective in keeping injectors and intake valves clean. Consistent use of deposit control gasolines will help ensure good drivability and fuel economy. If you are not sure whether the gasoline contains deposit control additives, check with the service station operator.

> **Note**
>
> Volvo does not recommend the use of external fuel injector cleaning systems.

Unleaded fuel

Each Volvo has a three-way catalytic converter and must use only unleaded gasoline. U.S. and Canadian regulations require that pumps delivering unleaded gasoline be labeled "UNLEADED". Only these pumps have nozzles which fit your vehicle's filler inlet. It is unlawful to dispense leaded fuel into a vehicle labeled "unleaded gasoline only". Leaded gasoline damages the three-way catalytic converter and the heated oxygen sensor system. Repeated use of leaded gasoline will lessen the effectiveness of the emission control system and could result in loss of emission warranty coverage. State and local vehicle inspection programs will make detection of misfueling easier, possibly resulting in emission test failure for misfueled vehicles.

> **Note**
>
> Some U.S. and Canadian gasolines contain an octane enhancing additive called methyl-cyclopentadienyl manganese tricarbonyl (MMT). If such fuels are used, your Emission Control System performance may be affected, and the Check Engine Light (malfunction indicator light) located on your instrument panel may light. If this occurs, please return your vehicle to a trained and qualified Volvo service technician for service.

Gasoline containing alcohol and ethers, "Oxygenated fuels"

Some fuel suppliers sell gasoline containing "oxygenates" which are usually alcohols or ethers. In some areas, state or local laws require that the service pump be marked indicating use of alcohols or ethers. However, there are areas in which the pumps are unmarked. If you are not sure whether there is alcohol or ethers in the gasoline you buy, check with the service station operator. To meet seasonal air quality standards, some areas require the use of "oxygenated" fuel.

Volvo allows the use of the following "oxygenated" fuels; however, the octane ratings listed must still be met.

Alcohol – Ethanol

Fuels containing up to 10% ethanol by volume may be used. Ethanol may also be referred to as Ethyl alcohol, or "Gasohol".

Ethers – MTBE: Fuels containing up to 15% MTBE may be used.

Methanol

Do not use gasolines containing methanol (methyl alcohol, wood alcohol). This practice can result in vehicle performance deterioration and can damage critical parts in the fuel system. Such damage may not be covered under the New Vehicle Limited Warranty.

7.6. Start/stop-system

7.6.1. Start/Stop – introduction

Start/Stop is a function that temporarily switches off the engine when the vehicle is not moving, for instance in heavy traffic or at a traffic light to help reduce fuel consumption.

Start/Stop is available with certain engines/transmissions.

7.6.2. Start/Stop – Hill Start Assist (HSA)

Start/Stop is a function that temporarily switches off the engine when the vehicle is not moving, for instance in heavy traffic or at a traffic light to help reduce fuel consumption.

When starting on steep hills, HSA (see Transmission – general information) retains pressure on the brake pedal for several seconds after the pedal has been released in order to keep the vehicle at a standstill. The brakes will be released after several seconds or when the driver presses the accelerator pedal.

7.6.3. Start/Stop – Auto-stop exceptions

Start/Stop is a function that temporarily switches off the engine when the vehicle is not moving, for instance in heavy traffic or at a traffic light to help reduce fuel consumption.

In certain situations or conditions, the engine **may not auto-stop** when the vehicle comes to a standstill, such as if:

Condition/situation
The vehicle's speed has not reached a speed of approx. 5 mph (8 km/h) after the most recent auto-start or after the driver has started the engine.
The driver unbuckles his/her seat belt.
The main battery's charge is below the minimum level.
The engine has not reached its normal operating temperature.
The ambient temperature is below approx. 25°F (-4°C) or above approx. 85°F (30°C).
The windshield's heating function* is activated.
The climate system cannot keep the desired settings in the passenger compartment; the blower will operate at high speed.
The vehicle is backing up.
The main battery's temperature is below freezing or too high.
The driver is turning the steering wheel hard.
The road's incline is very steep.
A trailer's electrical system is connected to the vehicle.

Condition/situation
The hood has been opened[1].
The transmission has not reached its normal operating temperature.
Atmospheric pressure is below a level equivalent to an altitude of approx. 4,900–8,200 ft (1500–2500 m) above sea level. The actual pressure is also affected by current weather conditions.
The Adaptive Cruise Control's* Queue Assist feature is activated.
The gear selector is in the S[2] or "+/–" position.

* Option/accessory.

[1] Certain engines only

[2] Sport mode (where applicable)

7.6.4. Start/Stop – symbols and messages

Start/Stop is a function that temporarily switches off the engine when the vehicle is not moving, for instance in heavy traffic or at a traffic light to help reduce fuel consumption.

Text messages



Combined with the information symbol in the instrument panel, the Start/Stop function may also display messages in certain situations. Follow the instructions provided in the message. The following table gives several examples.

Symbol	Message	Information/action
	**Auto Start/Stop Service required**	Start/Stop is not functioning properly. Contact a Volvo retailer or a trained and qualified Volvo service technician.
	**Autostart Engine running** + an audible signal	This is triggered if the driver's door is opened while the engine is auto-stopped.
-	**Press Start button**	The engine will not auto-start. Start the engine normally by pressing the START/STOP ENGINE button.
-	**Select P or N to start**	Start/Stop has been deactivated. Move the gear selector to N or P and start the engine normally be pressing the START/STOP ENGINE button.
-	**Press Start button**	The engine will not auto-start. Move the gear selector to N or P and start the engine normally be pressing the START/STOP ENGINE button.

If the message does not disappear after the suggested action has been taken, contact a Volvo retailer or a trained and qualified Volvo service technician.

7.6.5. ECO*

Eco is a function[1] developed by Volvo to give the driver the opportunity to actively drive more economically and to help reduce fuel consumption.

Introduction



When Eco is activated, the following functions are modified:

- The automatic transmission's shifting points
- The engine management system and accelerator pedal response
- Stop/stop function (Start/Stop – introduction): the engine can auto-stop before the vehicle has come to a full stop
- Eco Coast functionality is activated: engine braking is disabled
- Climate system settings: certain functions (e.g., air conditioning) will be temporarily reduced or deactivated

> **Note**
>
> When Eco is activated, several climate system parameters are changed and the function of certain current-consuming systems will be reduced.
>
> Some of these functions can be restarted manually but full functionality will not be restored until Eco is deactivated.

Function



1 ECO On/Off button in the center console

2 ECO symbol in the instrument panel

When the engine is switched off, ECO is deactivated and must be reactivated each time the engine is started (with the exception of certain engines).

The **ECO** symbol will be displayed in the instrument panel and the indicator light in the ECO button will be **on** when Eco is activated.

Eco on or off



When ECO is deactivated, the **ECO** symbol will **not** be displayed in the instrument panel and the indicator light in the ECO button will be **off**. The function will remain deactivated until the button is pressed again.

Eco Coast

Eco Coast is an integral part of the Eco function and essentially deactivates engine braking, allowing the vehicle to roll freely.

> **Note**
>
> To function optimally, Eco Coast should primarily be used when the vehicle can coast as far as possible.

When the driver releases the accelerator pedal, the transmission is automatically disengaged from the engine and engine rpm will be reduced to the idle level (approx. 700-800 rpm), which helps reduce fuel consumption.

This feature is primarily intended to be used in driving situations where a decrease in speed is expected, such as when approaching an intersection or a traffic light.

Eco Coast enables proactive driving with as little braking as possible.

Combinations of On and Off

Depending on the driving situation, Eco can be used in different ways to help reduce fuel consumption:

- **With Eco activated**: this enables Eco Coast, which allows the vehicle **to roll freely for as far as possible** when the driver releases the accelerator pedal (e.g., when approaching a traffic light or intersection).

or

- **With Eco deactivated**: engine braking can be used **when the vehicle will only roll for a short distance** (in heavy traffic, etc.) or **when driving down hills**.

To help keep fuel consumption as low as possible, Eco Coast should not be used in traffic situations where the brakes have to be used frequently.

Activating Eco Coast

Eco Coast is activated when the accelerator pedal is released completely if:

- Eco is activated
- The gear selector is in D
- The vehicle's speed is between approximately 40–85 mph (65–140 km/h). Always observe posted speed limits
- The gradient of a down-slope is less than approximately 6%

Deactivating Eco Coast

In certain situations, it may be advisable to switch off the Eco Coast function, such as:

- When driving down steep hills, in order to utilize engine braking
- Prior to passing another vehicle, in order to do so as safely as possible

Deactivating Eco Coast (and reactivating engine braking) can be done in the following ways:

- Press the ECO button on the center console
- Move the gear selector to the manual "**S+/–**" position
- Change gears using the steering wheel paddles*
- Press the brake or accelerator pedal

Eco Coast limitations

This function will not be available if:

- Cruise control is activated
- The gradient of a down-slope is more than approximately 6%
- The steering wheel paddles* are used to manually change gears
- The engine and/or transmission have not reached their normal operating temperature
- The gear selector is moved from D to the manual "**S+/–**" position
- The vehicle's speed is not within the 40–85 mph (65–140 km/h). interval

Additional information and settings



Other ECO-related settings can be made in the vehicle's MY CAR menu. See My Car – introduction for more information.

* Option/accessory.

[1] Option on models equipped with certain 4-cylinder engines

7.6.6. Start/Stop – Auto-start exceptions

Start/Stop is a function that temporarily switches off the engine when the vehicle is not moving, for instance in heavy traffic or at a traffic light to help reduce fuel consumption.

In certain situations or conditions, the engine **may auto-start** even though the driver is still pressing the brake pedal, such as if:

Condition/situation
Condensation forms on the windows.
The climate system cannot keep the desired settings in the passenger compartment.
Electrical current consumption is temporarily high or the main battery's charge is below the minimum level.
The brake pedal is pumped repeatedly.
The hood has been opened[1].
The vehicle begins to move or increases speed slightly (if the engine auto-stopped before the vehicle was at a standstill (see ECO)).
The driver unbuckles his/her seat belt while the gear selector is in the D or N positions.
The steering wheel is turned[1].
The gear selector is moved from D to S[2], R or "+/–".
The driver's door is opened with the gear selector in D – an audible signal and a text message will inform the driver that Start/Stop is active.

Warning

Do not open the hood if the engine has auto-stopped. The engine could suddenly auto-start.

Before opening the hood:

- Switch off the ignition using the START/STOP ENGINE button.
- Be aware that if the engine has been running, components in the engine compartment will be very hot.

If the engine does not auto-start, this could be due to:

- The driver's seat belt is not fastened
- The gear selector is in P and the driver's door is opened

In these cases, the driver will have to restart the engine by pressing the START/STOP ENGINE button.

[1] Certain engines only

[2] Sport mode (where applicable)

7.6.7. Start/Stop – function

Start/Stop is a function that temporarily switches off the engine when the vehicle is not moving, for instance in heavy traffic or at a traffic light to help reduce fuel consumption.

Function and use





Start/Stop symbol in the instrument panel



Start/Stop button on the center console

Start/Stop is activated automatically each time the engine is started[1]. The symbol in the instrument panel will be displayed for several seconds when the engine starts and the indicator light in the On/Off button will remain illuminated while the function is activated.

All of the vehicle's systems will function while the engine is auto-stopped, although the function of certain systems may reduced at this time. For example, blower speed and high infotainment system volume may be reduced to help conserve the battery's capacity.

Auto-stopping the engine

Normally, when Start/Stop is activated and the brakes are applied until the vehicle comes to a standstill, the engine will auto-stop automatically **if the driver keeps the brake pedal depressed**.



To remind the driver that the engine has been auto-stopped, the Start/Stop symbol will illuminate in the instrument panel and remain on until the engine restarts.



If the ECO function* (ECO) is activated, the engine may auto-stop before the vehicle comes to a complete standstill.

Auto-starting the engine

The engine restarts as soon as the driver releases the brake pedal.

Deactivating Start/Stop



In certain situations (e.g., driving in heavy, stop-and-go traffic), it may be preferable to deactivate Start/Stop.

This is done by pressing the button in the center console. The indicator light in the button will go out.

Start/Stop will remain deactivated until the button is pressed again or until the engine is switched off and restarted by the driver.

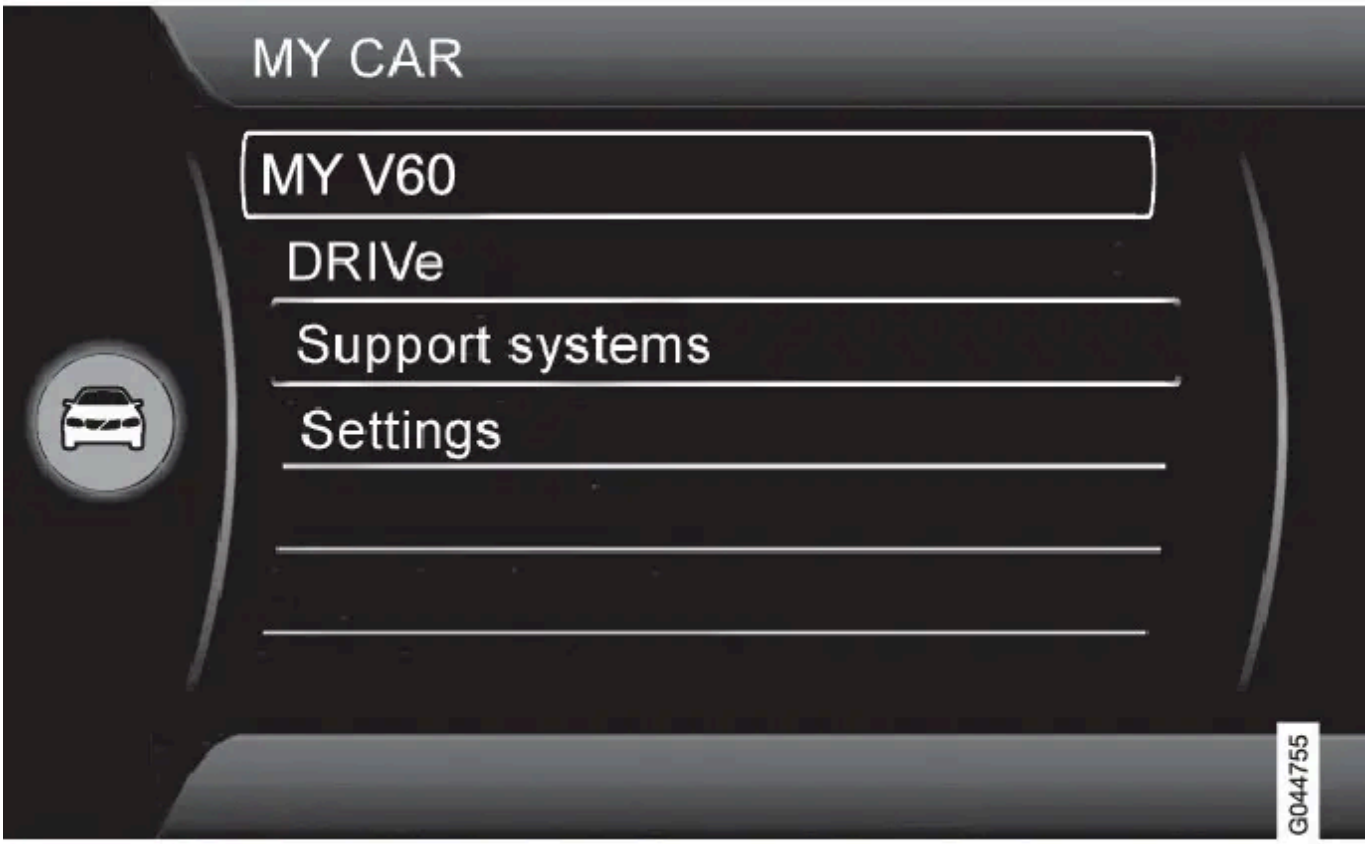
[1] Not when the engine is started using the optional Engine Remote Start feature, Starting the engine

* Option/accessory.

7.6.8. Start/Stop – settings

Start/Stop is a function that temporarily switches off the engine when the vehicle is not moving, for instance in heavy traffic or at a traffic light to help reduce fuel consumption.

Settings for the Start/Stop function can be made in the **MY CAR** menu system.



7.7. Towing a trailer

7.7.1. Trailer Stability Assist (TSA)

Trailer Stability Assist is a system designed to help stabilize a vehicle that is towing a trailer when the vehicle and trailer have begun to sway and is part of the stability system. For information on the stability system, see

Function

A vehicle towing a trailer may begin to sway for various reasons. Normally this only occurs at high speeds but, for example, if the trailer is overloaded or if the load is unevenly distributed in the trailer, there is risk of swaying at speeds between approximately 45-55 mph (70-90 km/h).

Swaying may be caused by factors such as:

- The vehicle and trailer are hit by a sudden, strong crosswind
- The vehicle and trailer are traveling on an uneven road surface or drive over a bump

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- Sudden movements of the steering wheel

Facts about TSA

- TSA intervenes at speeds above approximately 40 mph (60 km/h)
- The stability system symbol in the instrument panel will flash when TSA is working
- If the driver switches off the stability system's Spin Control function, TSA will also be switched off (but will be on again the next time the engine is started)
- TSA may not intervene when the vehicle and trailer begin to sway if the driver tries to compensate for the swaying motion by moving the steering wheel rapidly

How TSA works

Once swaying has begun, it can be very difficult to stop, which makes it difficult to control the vehicle and trailer.

The TSA system continuously monitors the vehicle's movements, particularly lateral movement. If the system detects a tendency to sway, the brakes are applied individually on the front wheels, which has a stabilizing effect on the vehicle and trailer. This is often enough to enable the driver to regain control of the vehicle.

If this is not adequate to stop the swaying motion, the brakes are applied to all of the wheels on the vehicle and on the trailer if it is equipped with brakes, and engine power is temporarily reduced. As the swaying motion begins to decrease and the vehicle-trailer have once again become stable, TSA will now stop regulating the brakes/engine power and the driver regains control of the vehicle.

7.7.2. Towing a trailer

When towing a trailer, always observe the legal requirements of the state/province.

> **Note**
>
> For the maximum trailer and tongue weights recommended by Volvo, see Weights.

- All Volvo models are equipped with energy-absorbing shock-mounted bumpers. Trailer hitch installation should not interfere with the proper operation of this bumper system.

Trailer towing does not normally present any particular problems, but take into consideration:

- Increase tire pressure to recommended full pressure, see Tire inflation – pressure table.
- When your vehicle is new, avoid towing heavy trailers during the first 620 miles (1,000 km).
- Maximum speed when towing a trailer: 50 mph (80 km/h).
- Engine and transmission are subject to increased loads. Therefore, engine coolant temperature should be closely watched when driving in hot climates or hilly terrain. Use a lower gear and turn off the air conditioner if the temperature gauge needle enters the red range.
- If the automatic transmission begins to overheat, a message will be displayed in the text window.

- Avoid overload and other abusive operation.
- Hauling a trailer affects handling, durability, and economy.
- It is necessary to balance trailer brakes with the towing vehicle brakes to provide a safe stop (check and observe state/local regulations).
- Do not connect the trailer's brake system directly to the vehicle's brake system.
- More frequent vehicle maintenance is required.
- Remove the ball holder when the hitch is not being used.

Warning

- Bumper-attached trailer hitches must not be used on Volvos, nor should safety chains be attached to the bumper.
- Trailer hitches attaching to the vehicle rear axle must not be used.
- Never connect a trailer's hydraulic brake system directly to the vehicle brake system, nor a trailer's lighting system directly to the vehicle lighting system. Consult your nearest authorized Volvo retailer for correct installation.
- When towing a trailer, the trailer's safety chains or wire must be correctly fastened to the attachment points provided in the trailer hitch on the vehicle. The safety chain or wire must never be fastened to or wound around the towing ball.

Note

- When parking the vehicle with a trailer on a hill, apply the parking brake before putting the gear selector in P. Always follow the trailer manufacturer's recommendations for wheel chocking.
- When starting on a hill, put the gear selector in D before releasing the parking brake.
- If you use the manual (Geartronic) shift positions while towing a trailer, make sure the gear you select does not put too much strain on the engine (using too high a gear).
- The drawbar assembly/trailer hitch may be rated for trailers heavier than the vehicle is designed to tow. Please adhere to Volvo's recommended trailer weights.
- Avoid driving with a trailer on inclines of more than 15%.

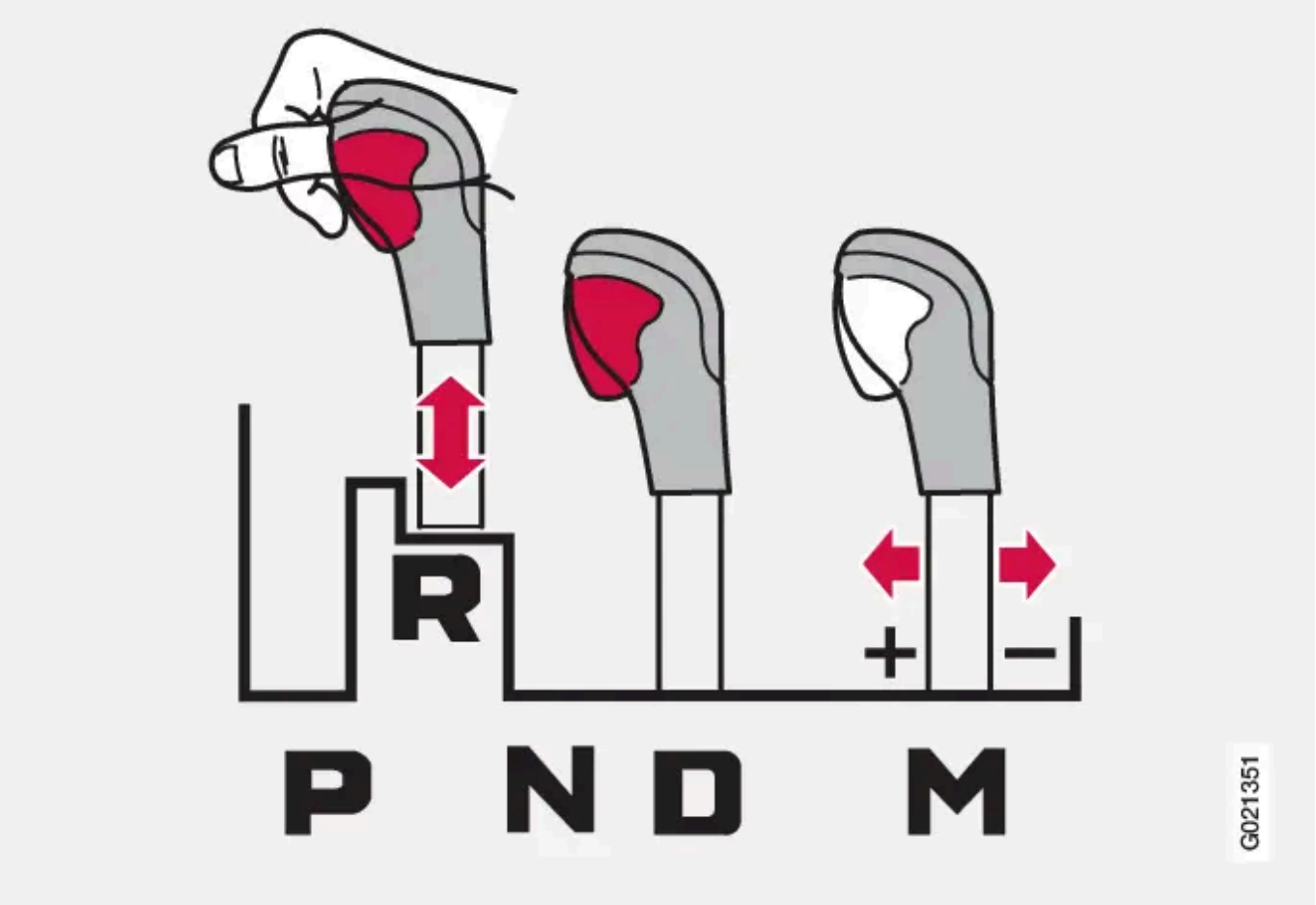
Trailer cable

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

7.8. Transmission

7.8.1. Transmission – general information

The transmission automatically shifts between the various forward gears, based on the level of acceleration and speed.



Shiftgate positions

Depress the button on the front of the gear selector knob to move the gear selector between the R, N, D, and P positions.

The gear selector can be moved freely between the Geartronic (manual shifting) and Drive (D) positions while driving.

> **Important**
>
> The transmission's temperature is monitored to help prevent damage to the transmission or other drivetrain components. If there is a risk of overheating, the warning symbol on the instrument panel will illuminate and a text message will be displayed. Follow the instructions provided there.

Hill Start Assist (HSA)[1]

HSA makes it easier to start or back up on a hill by retaining pressure on the brake pedal for several seconds after the pedal has been released in order to keep the vehicle at a standstill.

The brakes will be released after several seconds or when the driver presses the accelerator pedal.

[1] Certain models only

7.8.2. Transmission – shiftlock override

If the vehicle cannot be driven, for example because of a dead battery, the gear selector must be moved from the P position before the vehicle can be moved[1].

Shiftlock override



1. 1
   Lift away the rubber mat on the floor of the storage compartment behind the center console to expose the small opening for overriding the shiftlock system.

2. 2
   Insert the key blade into the opening. Press the key blade down as far as possible and keep it held down.

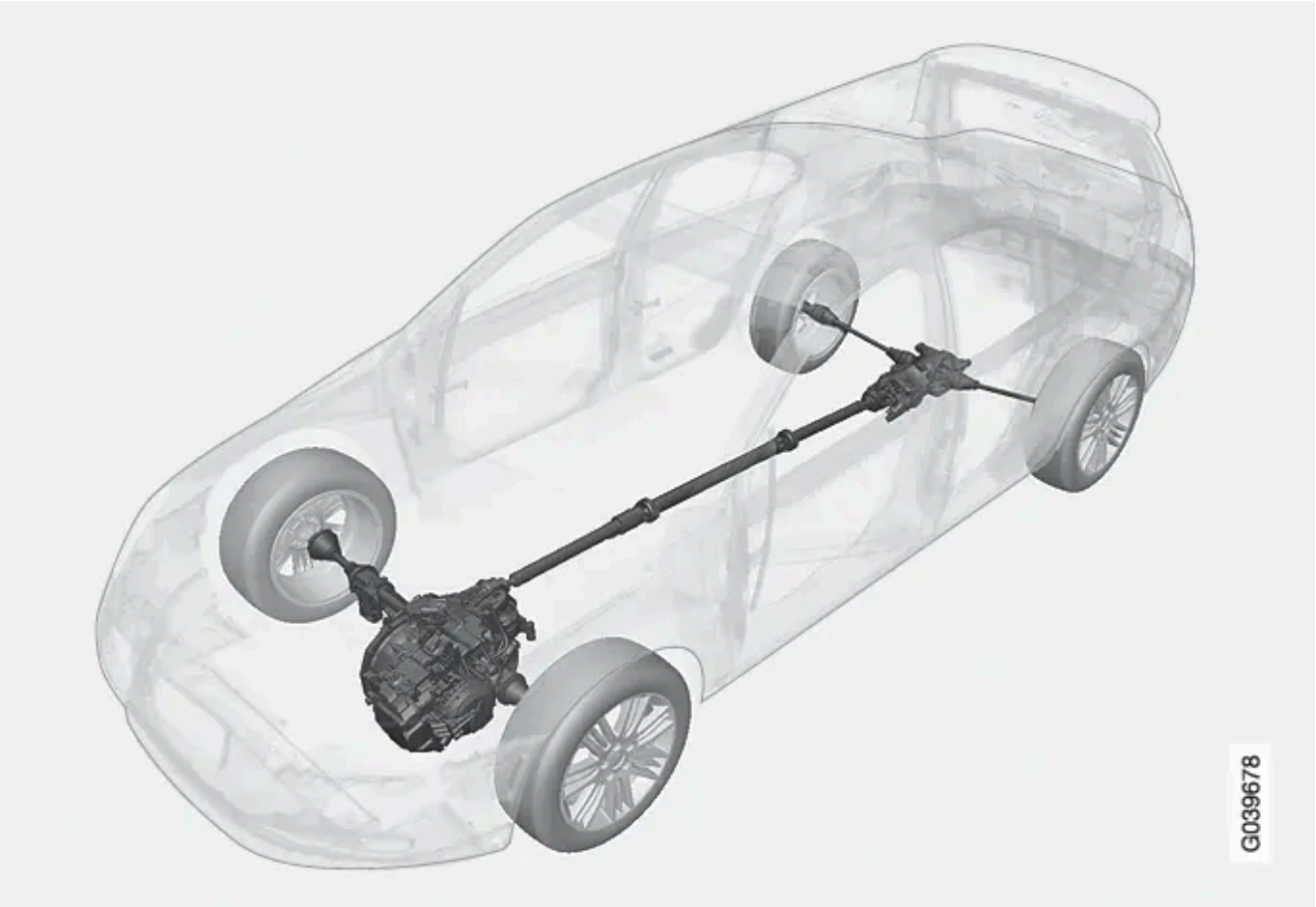
3. 3
   Move the gear selector from the P position. For information on the key blade, see Detachable key blade – general information.

[1] If the battery is dead, the electric parking brake cannot be applied or released. Connect an auxiliary battery if the battery voltage is too low, see .

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7.8.3. All Wheel Drive (AWD)

Your Volvo can be equipped with permanent All Wheel Drive, which means that power is distributed automatically between the front and rear wheels.



Under normal driving conditions, most of the engine's power is directed to the front wheels. However, if there is any tendency for the front wheels to spin, an electronically controlled coupling distributes power to the wheels that have the best traction.

> **Note**
>
> The message **AWD disabled Service required** will be appear in the information display if an electrical fault should occur in the AWD system. A warning light will also illuminate in the instrument panel. If this occurs, have the system checked by a trained and qualified Volvo service technician.

7.8.4. Transmission – Geartronic

Geartronic allows you to manually shift among your vehicle's forward gears. The manual position (**+S–**) can be selected at any time.

Geartronic: manual shifting (+S–)



To shift gears manually, move the gear selector to the side from D toward **+S–**. The **+S–** symbol in the instrument panel will change from **white** to **orange** and the number of the gear currently being used (**1**, **2**, **3**, etc.) will be displayed (see the following illustration)[1].

- To return to automatic shifting mode from **+S–**, move the gear selector to the side toward D.

Gear shift indicator*



Gear shift indicator in a digital instrument panel*[2]

This option indicates when to shift up or down to help conserve fuel. A white arrow will appear above or below the number of the current gear to prompt the driver to shift up or down.

While driving

- If you select the manual shifting position while driving, the gear that was being used in the Drive position will also initially be selected in the manual shifting position.
- Move the gear selector forward (toward +) to shift to a higher gear or rearward (toward –) to shift to a lower gear.
- If you hold the gear selector toward "–", the transmission will downshift one gear at a time and will utilize the braking power of the engine. If the current speed is too high for using a lower gear, the downshift will not occur until the speed has decreased enough to allow the lower gear to be used.
- If you slow to a very low speed, the transmission will automatically shift down.

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Shiftlock: Neutral (N)

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

In order to move the gear selector from N to another gear position, the brake pedal must be depressed and the ignition must be in at least position II, see Ignition modes.

Geartronic: steering wheel paddles*

In addition to the manual gearshift function using the gear selector, this option makes it possible to manually shift gears from the steering wheel.



Steering-wheel mounted gear shift paddles

1 "**–**": Shift down to a lower gear.

2 "**+**": Shift up to a higher gear.

In order to shift gears with the paddles, they have to first be activated. **The gear selector can be in either the D or S position.**

Activating the paddles:

- Pull either paddle toward the steering wheel and release it; the **D** in the instrument panel will change to the number of the gear currently being used.

Shifting gears:

- Pull the paddle toward the steering wheel and release it.

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Deactivating the paddles:

- Hold the "**+**" paddle for approximately 3 seconds.

> **Note**
>
> If the gear selector was in **D** when paddle shifting was activated (**D** changed to the number of the gear being used), the transmission will automatically revert to **D** after approximately 5 seconds if the paddles are not used to shift gears.
>
> This will **not** occur:
>
> - during active driving (e.g., on a winding road, while accelerating, etc)
> - if the gear selector was in **S** when the paddles were activated
>
> If the transmission reverts to **D**, the paddles will have to be reactivated (pull either paddle toward the steering wheel and release it) before they can be used to shift gears again.
>
> The paddles can also be manually deactivated by pulling both paddles toward the steering wheel and holding them until the gear number shown in the instrument panel changes to **D**.

Geartronic: Sport mode (S)[3]

This transmission mode provides sportier shifting characteristics and enables a more active driving style by making it possible to drive at higher rpm in each gear before shifting up. The engine also responds faster when the accelerator pedal is pressed.

To access Sport mode from Drive (D), move the gear selector to the left. The transmission will not switch to manual shifting mode until the gear selector is moved forward or rearward toward + or –.

Sport mode can be selected any time.

> **Note**
>
> - On vehicles equipped with Sport mode, the transmission symbol in the main instrument panel will change from D to S when the gear selector is moved to the manual shifting mode. If the gear selector is moved toward "+" or "-", the number of the gear currently being used will be displayed, see Information displays – introduction.
> - Please be aware that using Sport mode may result in a slight decrease in fuel economy. Driving in D can help improve fuel economy.

Geartronic: starting on slippery surfaces

Selecting 3rd gear in Geartronic's manual shifting mode can help provide better traction when starting off on slippery surfaces. To do so:

1. Depress the brake pedal and move the gear selector to the side from D toward **+S–**.
2. Press the gear selector forward and release it (this selects 2nd gear). Press the selector forward again and release it to select 3rd gear. The optional steering wheel paddles can also be used; see the previous section "Geartronic: steering wheel paddles."
3. Release the brake pedal and press gently on the accelerator pedal.

[1] If Sport mode is being used, the symbol will change to "S".

* Option/accessory.

[2] Analog instrument panel: the gear shift indicator is displayed in the center of the speedometer.

[3] Certain models only

7.8.5. Transmission – positions

The transmission automatically shifts between the various forward gears, based on the level of acceleration and speed.

Park: position P

Select the P position when starting or parking.

Shiftlock

When P has been selected, the transmission is mechanically blocked in this position. The brake pedal must be depressed and the ignition must be in at least mode II (see Ignition modes) before the gear lever can be moved from the P position.

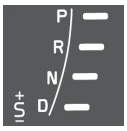
> **Warning**
>
> Always apply the parking brake when the vehicle is parked, particularly when parking on a hill. The transmission's P mode may not be able to keep the vehicle stationary if it is parked on an incline.

Press the control to apply the parking brake, see Parking brake – general information.



> **Important**
>
> The vehicle must be stationary when position P is selected.

Gear indicator



The gear currently being used is displayed on the right side of the instrument panel.

The "**S**" symbol turns orange if Sport mode is being used.

Reverse: position R

The vehicle must be stationary when position R is selected.

Neutral: position N

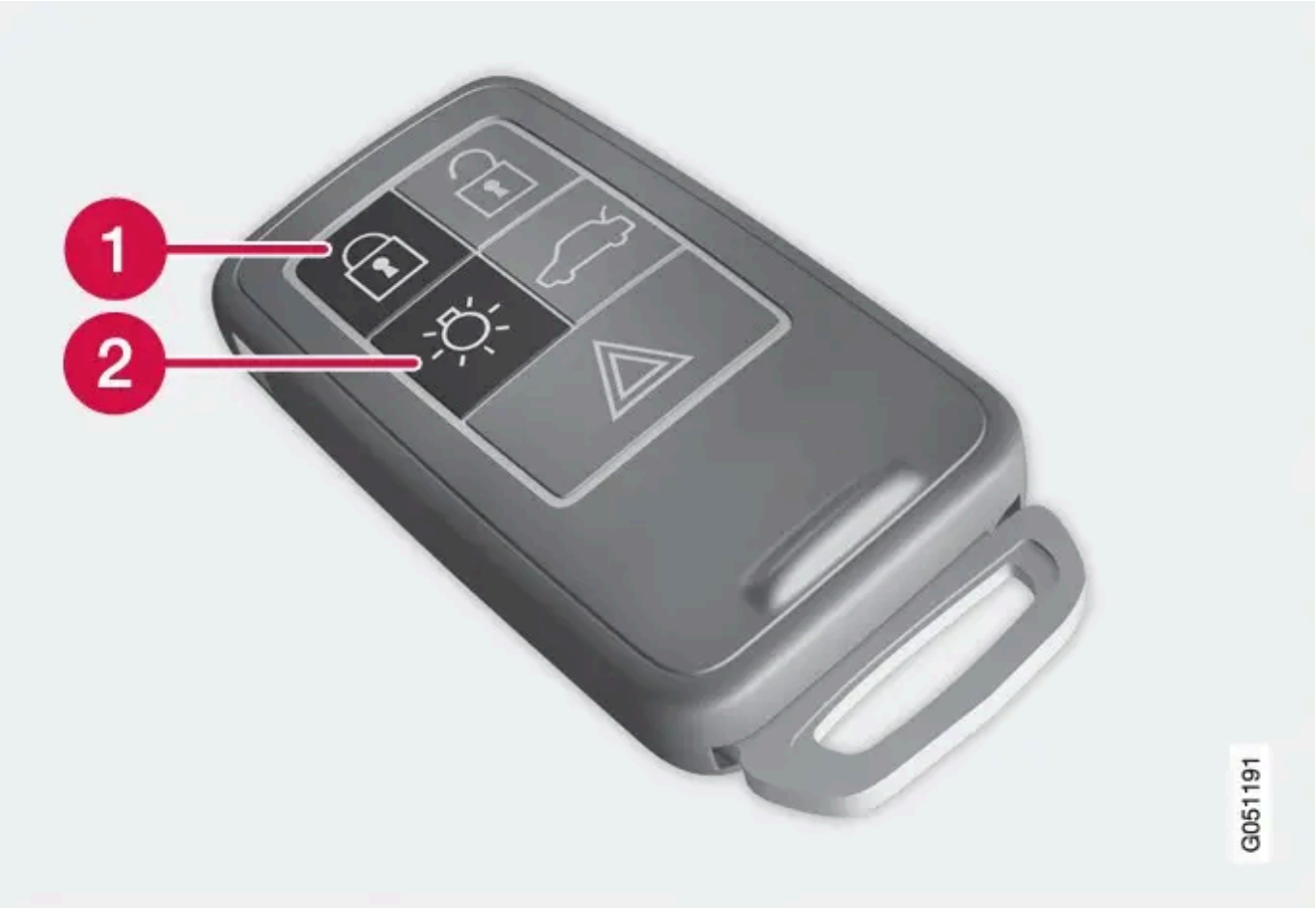
No gear is engaged and the engine can be started with the gear selector in this position. Apply the parking brake if the vehicle is stationary with the gear selector in position N. In order to move the gear selector from the N position, the brake pedal must be depressed and the ignition must be in at least mode II.

Drive: position D

D is the normal driving position. The car automatically shifts between the various forward gears, based on the level of acceleration and speed. The car must be at a standstill when shifting from position R to position D.

7.9. Engine Remote Start (ERS)* – starting the engine

ERS is a feature that makes it possible to remotely start the engine using the remote key to cool or heat the passenger compartment before driving.



Remote key buttons used for remote engine start

1 Lock

2 Approach lighting

Starting the engine

The maximum range for ERS is approximately 100 ft (30 meters) if the view of the vehicle is unobstructed. **The vehicle must also be locked.**

To start the engine:

- Press the lock button (1) briefly.
- Immediately press the approach lighting button (2) for approximately 2 seconds.

If the requirements for ERS have been met, the following will occur:

- The turn signals will flash several times.
- The engine will start.
- The turn signals will illuminate for 3 seconds to indicate that the engine has started.

After the engine has started, the vehicle remains locked but the alarm is disarmed.

Active functions

When the engine is started with ERS, the following functions are activated:

- The climate control system
- The infotainment system.

Deactivated functions

When the engine is started with ERS, the following functions are deactivated:

- Headlights
- Parking lights
- License plate lights
- Windshield wipers

* Option/accessory.

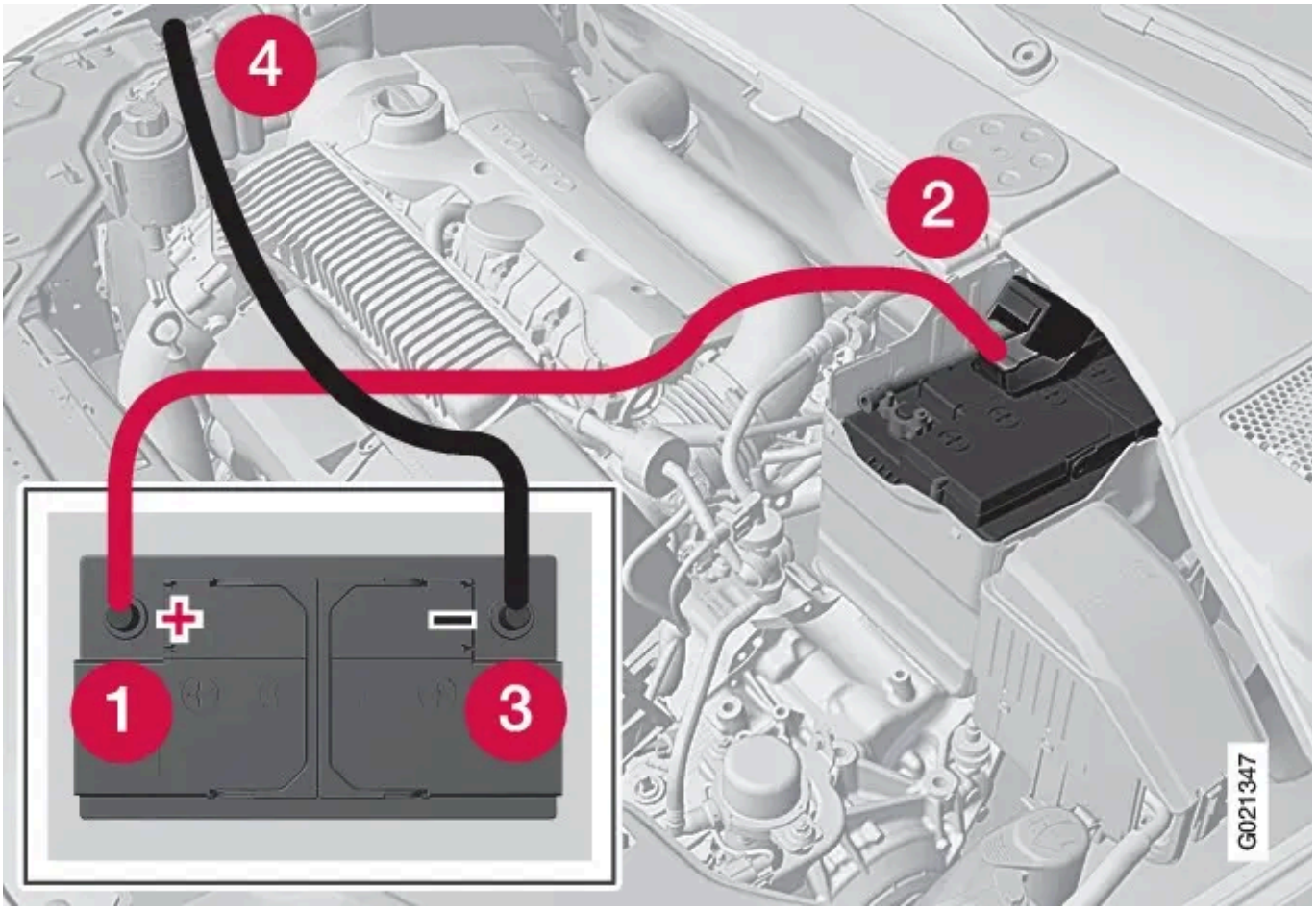
7.10. Switching off the engine

Switch off the engine by pressing the START/STOP ENGINE button.

If the gear selector is not in the P position or if the vehicle is moving, press the START/STOP ENGINE button twice or press and hold it in until the engine switches off.

7.11. Jump starting

Follow these instructions to jump start your vehicle's dead battery or to jump start another vehicle's dead battery using your vehicle.



Connecting the jumper cables

If the 12-volt auxiliary battery to be used is in another vehicle, check that the vehicles are not touching to prevent premature completion of a circuit. Be sure to follow jump starting instructions provided for the other vehicle.

To jump start your vehicle:

1. Switch off the ignition (set the ignition to mode 0, see Ignition modes).
2. First connect the red jumper cable to the auxiliary battery's positive (+) terminal (1).
3. Fold back the cover over the positive (+) terminal on your vehicle's battery (2), marked with a "+" sign, located under a folding cover.
4. Connect the black jumper cable to the auxiliary battery's negative (–) terminal (3) and to the ground point in your vehicle's engine compartment (right engine mount at the top, on the outer screw) (4).
5. Start the engine in the assisting vehicle, then start the engine in the vehicle with dead battery.
6. After the engine has started, first remove the negative (–) terminal jumper cable (black). Then remove the positive (+) terminal jumper cable (red).

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Warning

PROPOSITION 65 WARNING!

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer and reproductive harm. Wash hands after handling.

Important

Connect the jumper cables carefully to avoid short circuits with other components in the engine compartment.

Warning

- Do not connect the jumper cable to any part of the fuel system or to any moving parts. Avoid touching hot manifolds.
- Batteries generate hydrogen gas, which is flammable and explosive.
- Battery fluid contains sulfuric acid. Do not allow battery fluid to contact eyes, skin, fabrics or painted surfaces. If contact occurs, flush the affected area immediately with water. Obtain medical help immediately if eyes are affected.
- Never expose the battery to open flame or electric spark.
- Do not smoke near the battery.
- Failure to follow the instructions for jump starting can lead to injury.

7.12. Engine Remote Start (ERS)* – introduction

ERS is a feature that makes it possible to remotely start the engine using the remote key to cool or heat the passenger compartment before driving.

The climate/ and infotainment systems will start using the same settings as when the engine was switched off.

When the engine is started using ERS, it will run for a maximum of 15 minutes before automatically switching off again. After 2 ERS starts, the engine must be started in the normal way before ERS can be used again.

Note

- Always adhere to applicable State, Province and/or Local laws regarding engine idling when using ERS.
- The service life of the remote key's battery is affected by ERS use. If this feature is used frequently, the battery should be replaced once a year, see Remote key – replacing the battery.

Warning

Keep the following in mind before using ERS:

- The vehicle should be in view.
- The vehicle should be unoccupied.
- The vehicle must not be parked indoors or in an enclosed area. Exhaust fumes are harmful to the health.

* Option/accessory.

7.13. Engine Remote Start (ERS)* – switching off the engine

ERS is a feature that makes it possible to remotely start the engine using the remote key to cool or heat the passenger compartment before driving.

Any of the following will switch off the engine if it has been started with ERS:

- Pressing the lock button (1) or the unlock button (2) on the remote key
- Unlocking the vehicle
- Opening a door
- Depressing the accelerator or brake pedal
- Moving the gear selector from the **P** position
- If there are less than approx. 2.5 gallons (10 liters) of fuel in the tank
- More than 15 minutes have elapsed.

If the engine has been started with ERS and switches off, the turn signals will illuminate for 3 seconds.

Message in the instrument panel display

If ERS is interrupted, a text message will be displayed in the instrument panel.

* Option/accessory.

7.14. Eco Guide* and Power Meter*

Eco guide and Power guide are two gauges in the instrument panel that help improve driving economy. The vehicle also stores driving-related statistics in the form of a bar graph, see .

Introduction

To display or remove these functions from the instrument panel, select the "Eco" theme (see Information displays – introduction).

Driving statistics are also stored and can be displayed in the form of a bar chart (see Trip computer – Trip statistics).

Eco Guide

This gauge gives an indication of how economically the vehicle is being driven.



1 Current (instantaneous) reading

2 Average

Current (instantaneous) reading

This is the current level of economical driving; the higher the reading, the more economically the vehicle is being driven.

This value is calculated based on the vehicle's speed, engine speed (rpm), engine load and brake use.

The optimal speed range is between approximately 30–50 mph (50–80 km/h), preferably at as low rpm as possible. The markers fall when the brake or accelerator pedal is pressed.

If the current reading is very low, the red field in the gauge will illuminate after a slight delay, indicating low driving economy.

Average

The average reading changes gradually according to changes in the current reading to indicate how economically the vehicle has been driven recently. The higher the average reading, the more economically the vehicle has been driven.

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Power Meter

This gauge indicates the engine power that has been utilized and the amount of power remaining.



1. Available power
2. Utilized power

Available power

The smaller, upper indicator shows the engine's available power[1]. The higher the reading on the scale, the greater the amount of power remaining in the current gear.

Utilized power

The larger, lower indicator shows the amount of engine power that has been utilized[1]. The higher the reading on the scale, the greater the amount of power that is being utilized.

The larger the gap between the two indicators, the greater the amount of power remaining.

* Option/accessory.

[1] Depending on rpm

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7.15. Starting the engine

The engine can be started/switched off using the remote key and the START/STOP ENGINE button.



Ignition slot with remote key inserted (see Ignition modes for more information on ignition modes)

Warning

Before starting the engine:

- Fasten the seat belt.
- Check that the seat, steering wheel and mirrors are adjusted properly.
- Make sure the brake pedal can be depressed completely. Adjust the seat if necessary.

Warning

- Never use more than one floor mat at a time on the driver's floor. Before driving, remove the original mat from the driver's seat floor before using any other type of floor mat. Any mat used in this position should be securely and properly anchored in the attaching pins. An extra mat on the driver's floor can cause the accelerator and/or brake pedal to catch. Check that the movement of these pedals is not impeded.
- Volvo's floor mats are specially manufactured for your car. They must be firmly secured in the clips on the floor so that they cannot slide and become trapped under the pedals on the driver's side.

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1. Press the remote key into the ignition slot as far as possible, with the metallic key blade pointing outward (not inserted into the slot)[1].
2. Depress the brake pedal[2].
3. Press and release the START/STOP ENGINE button. The autostart function will operate the starter motor until the engine starts or until its overheating function stops it.

   The starter motor operates for a maximum of 10 seconds. If the engine has not started, repeat the procedure.

Important

If the engine does not start after the third try, wait for approximately 3 minutes before trying to start it again to give the battery time to recover its starting capacity.

Note

Keyless drive*

To start a vehicle equipped with the keyless drive feature, one of the remote keys must be in the passenger compartment. Follow the instructions in steps 2 and 3 to start the vehicle.

Warning

- Always remove the remote key from the ignition slot when leaving the vehicle and ensure that the ignition in mode **0** (see Ignition modes for information about the ignition modes), especially if there are children in the vehicle.
- On vehicles with the optional keyless drive, never remove the remote key from the vehicle while it is being driven or towed.
- Always place the gear selector in Park and apply the parking brake before leaving the vehicle. Never leave the vehicle unattended with the engine running.
- Always open garage doors fully before starting the engine inside a garage to ensure adequate ventilation. The exhaust gases contain carbon monoxide, which is invisible and odorless but very poisonous.

Note

- After a cold start, idle speed may be noticeably higher than normal for a short period. This is done to help bring components in the emission control system to their normal operating temperature as quickly as possible, which enables them to control emissions and help reduce the vehicle's impact on the environment[3].

Important

- When starting in cold weather, the automatic transmission may shift up at slightly higher engine speeds than normal until the automatic transmission fluid reaches normal operating temperature.
- Do not race a cold engine immediately after starting. Oil flow may not reach some lubrication points fast enough to prevent engine damage.
- The engine should be idling when you move the gear selector. Never accelerate until after you feel the transmission engage. Accelerating immediately after selecting a gear will cause harsh engagement and premature transmission wear.
- Selecting P or N when idling at a standstill for prolonged periods of time will help prevent overheating of the automatic transmission fluid.

[1] On vehicles with the optional keyless drive, it is only necessary to have a remote key in the passenger's compartment.

[2] If the vehicle is moving, it is only necessary to press the START/STOP ENGINE button to start the vehicle.

* Option/accessory.

[3] If the gear selector is in the D or R positions and the car is not moving, engine speed (rpm) will be lower and it will take longer for the engine to reach normal operating temperature.

8. Infotainment

8.1. Audio settings

8.1.1. External audio source volume

Set the volume for an external audio device. If the external sound source's volume is too low or high, the quality of the sound may be impaired.

If an external device such as an MP3 player or an iPod ® is connected to the **AUX** socket, the device's volume may be different than the volume of the infotainment system's internal sound sources such as the radio. To help prevent this, adjust the input volume of the external audio source. To do so: From the AUX's normal view, press OK/MENU. Select **AUX input** and select **Standard** or **Boost**.

> **Note**
>
> Sound quality may be affected if the MP3 player is being charged while the system is in AUX mode. To help prevent this, avoid charging the MP3 player in a 12-volt socket while it is being played.

8.1.2. Infotainment - advanced audio settings

Sound settings for the radio and other media sources can be adjusted to your preferences.
To access the advanced sound settings, press SOUND to open the menu. Turn TUNE, go to **Premium sound** and press OK/MENU.

Sound stage

Sound reproduction can be optimized for different sections of the passenger compartment. The sound stage can be set for the **Driver seat**, the **Rear seats** or the **Whole car**.

1. Turn TUNE to go to **Sound stage** and press OK/MENU.
2. Select a profile by turning TUNE and confirm by pressing OK/MENU.

Surround

When switched on, the system will automatically select settings for the best sound quality, which is normally DPL II and PLII will appear on the screen. If the recording was made using Dolby Digital technology, playback will be provided with this setting and DIGITAL will appear on the screen. If Surround is switched off, audio will be provided using 3 channel stereo.

1. Turn TUNE to go to **Surround** and press OK/MENU.
2. Surround can be switched on or off by pressing OK/MENU

The Surround level can be adjusted separately when the function is on.

1. Turn TUNE to go to the level setting and confirm by pressing OK/MENU.
2. Select a Surround level by turning TUNE and confirm by pressing OK/MENU.

Subwoofer

The subwoofer's sound level can be adjusted separately.

1. Turn TUNE to go to **Subwoofer** and press OK/MENU.
2. Select a sound level by turning TUNE and confirm by pressing OK/MENU.

Center speaker

The center speaker's sound level can be adjusted separately. If Surround is on, **DPL II center level** will be selected; otherwise **3 channel center level** is selected.

1. Turn TUNE to go to **Center** and press OK/MENU.
2. Select a sound level by turning TUNE and confirm by pressing OK/MENU.

8.1.3. Automatic volume control

The infotainment system compensates for disrupting noises in the passenger compartment.

The system increases the volume to compensate for the speed of the vehicle. Sound level compensation can be set at **Low**, **Medium**, **High** or **Off**.

1. Press SOUND to open the sound settings menu. Turn TUNE to go to **Volume compensation** and press OK/MENU.
2. Select a level by turning TUNE and confirm by pressing OK/MENU.

8.1.4. Infotainment – general sound settings

The following are general infotainment sound settings.

Press SOUND to access the menu for general sound settings such as **Bass**, **Treble**, etc. Turn TUNE to go to the various alternatives (e.g., **Treble**) and press OK/MENU to select.

Adjust the setting by turning TUNE and save the new setting by pressing OK/MENU. Please note that the volume can only be adjusted within a comfortable range. When a function is active (e.g., the optional navigation system), adjust its volume by turning VOL.

Continue turning TUNE to access the other sound alternatives:

- **Premium sound** – Infotainment - advanced audio settings.
- **Bass**: Bass level.
- **Treble**: Treble level.
- **Fader**: Balance between the front and rear speakers.
- **Balance**: Balance between the right and left speakers.
- **Equalizer**: Sound levels for different frequencies.
- **Navigation volume**: Volume for navigation system* guidance.
- **Voice control volume**: Volume for the voice control system's responses.
- **Ringtone volume**: Volume for a connected cell phone's ringing signal.
- **Park assist volume**: Volume for the park assist system*.
- **Cross Traffic Alert-vol.**: Volume for the CTA system*.
- **Volume compensation**: Speed-related volume compensation .
- **Reset audio settings**: Reset to factory settings.

* Option/accessory.

8.1.5. Adjusting the equalizer

Adjust the equalizer and adapt the sound level separately for each radio waveband.

1. Press SOUND to access the sound settings. Turn TUNE to select **Equalizer** and press OK/MENU.
2. Select the waveband by turning TUNE and confirm by pressing OK/MENU.
3. Make the settings by turning TUNE and confirm by pressing OK/MENU or cancel by pressing EXIT. Do the same for the other wavebands.
4. When the settings have been made, press EXIT to confirm and return to the normal view.

8.1.6. Infotainment – audio settings

The audio system is precalibrated for optimal sound reproduction and can be adjusted to your preferences.

Optimal sound reproduction settings

The audio system is precalibrated for optimal sound reproduction using digital signal processing.

This calibration takes into account the speakers, amplifier, cabin acoustics, listener position, etc., for each combination of vehicle and infotainment system.

Dynamic calibration is also available, which monitors the setting of the volume control, radio reception and the vehicle's speed.

The sound settings described in this owner's information, such as **Bass**, **Treble** and **Equalizer**, are only intended to help the listener adapt sound reproduction to his/her personal preferences.

Sound quality for streaming Internet audio

The amount of data being transmitted depends on the services or apps being used in the vehicle. For example, streaming audio means that large amounts of data are transferred, which calls for a good Internet connection and a strong signal. Sound quality can be adjusted in certain apps; choosing high quality increases download times or may result in interruptions in the audio stream. For this reason, it may be advisable to select a lower sound quality in order to help ensure a consistent listening experience.

8.2. Bluetooth hands-free connection

8.2.1. Disconnecting a Bluetooth® device

When a Bluetooth® device is out of range, it is automatically disconnected.

If a cell phone is moved out of range during a call, the call will switch to the phone's speaker and microphone.

The hands-free function is deactivated when the ignition is switched off and the driver's door is opened.

To remove (unpair) a Bluetooth® device, see Deleting a Bluetooth® device. The infotainment system will no longer search for the unpaired device.

8.2.2. Call Management

These functions help to manage phone calls.

Incoming calls

1. Press OK/MENU (or the thumb wheel on the steering wheel keypad) to answer a call, even if the infotainment system is in e.g., RADIO or MEDIA mode.

Reject or end a call by pressing EXIT.

Call menu

From the telephone's normal view, press OK/MENU while a call is in progress to access the following functions:

- **Mobile phone** – the call is transferred from the hand-free function to the cell phone. The connection will be broken on certain phones, which is normal. The hands-free will prompt you to reconnect.
- **Mute microphone** – Infotainment system sound is muted.
- **Dial number** – call a third party using the number keys while another call is in progress (the call in progress will be put on hold).

Call list

The call list is shared and updated with the hands-free function each time a phone is connected. From the telephone's normal view, turn TUNE counter-clockwise to display this list.

From the telephone's normal view, press OK/MENU and select **Call list** to see the currently connected phone's call list.

Note

In order to display the connected cell phone's call list in the infotainment system, information sharing must be accepted in the phone when it is connected. Depending on the phone, the following will occur:

- A pop-up window or notification is displayed and accepted in the phone.
- Accept information sharing in the phone's settings for a Bluetooth® connection to the infotainment system.

In certain cases, the phone must be disconnected and reconnected to the infotainment system before information sharing is possible.

8.2.3. Bluetooth® hands-free phones – audio settings

Volume settings can be made for phone calls, the infotainment system and for when the phone rings.

Phone call volume

Phone call volume can only be changed while a call is in progress. Use the steering wheel keypad or the VOL control on the center console.

Infotainment system volume

While no phone calls are in progress, the infotainment system's volume can be adjusted in the normal way using the steering wheel keypad or the VOL control on the center console.

If a sound source is active when a call is received, it will be muted automatically.

Ringing volume

This volume can be changed by pressing the SOUND button, turning TUNE to **Ringtone volume** and pressing OK/MENU. Set the volume by turning TUNE and save the setting by pressing OK/MENU.

Ringing tones

The cell phone's ringing tone will be used when a call is received.

Note

In certain cases, the connected cell phone's ringing tone may not be switched off when one of the hands-free system's ringing tones is used.

8.2.4. Switching to another Bluetooth® device

If more than one device is connected at the same time, you can switch between these devices. Before this is possible, they must first be paired with the infotainment system.

Switching media players

1. Be sure that the external device's Bluetooth® function is activated. Refer to the devices's user's guide if necessary.
2. From the media Bluetooth® ´s normal view, press OK/MENU and select **Change device**.

> The infotainment system will search for previously connected devices. The Bluetooth® names of the devices found will appear in the center console display.

3. Select the desired device.

> The selected device will be connected.

Switching cell phones

1. Be sure that the external device's Bluetooth® function is activated. Refer to the devices's user's guide if necessary.
2. From the telephone’s normal view, press OK/MENU and select **Change phone**.

> The infotainment system will search for previously connected phones. The Bluetooth® names of the phones found will appear in the center console display.

3. Select the desired device.

> The selected device will be connected.

8.2.5. Connecting and disconnecting a Bluetooth® device

Sensus infotainment offers Bluetooth®, which makes it possible to establish wireless connections with other Bluetooth® devices after they have been paired and connected.



Up to 15 Bluetooth® devices can be paired and this procedure only needs to be done once for each device. After pairing has been completed, the device no longer needs to be visible or discoverable; its Bluetooth® feature only needs to be activated.

When Bluetooth® is active and the most recently connected device is within range, it will be connected automatically when the ignition is switched on. The device's name will be displayed in the sound source's normal view. To connect a different device, press OK/MENU and select Change device.

When the Bluetooth® device is out of range of the vehicle, it will be automatically disconnected. To manually disconnect the device, switch off its Bluetooth function.

To unpair a Bluetooth® device, see Deleting a Bluetooth® device. When this has been done, the infotainment system will no longer automatically search for the device.

Two Bluetooth® devices can be connected at the same time, for example a cell phone and a media player, which makes it possible to switch between these devices.



Example: a cell phone is connected as a phone and as a media player

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8.2.6. Deleting a Bluetooth® device

Paired Bluetooth® devices can be deleted (unpaired) from the infotainment system, which means that the system will no longer search for these devices.

Deleting a media player

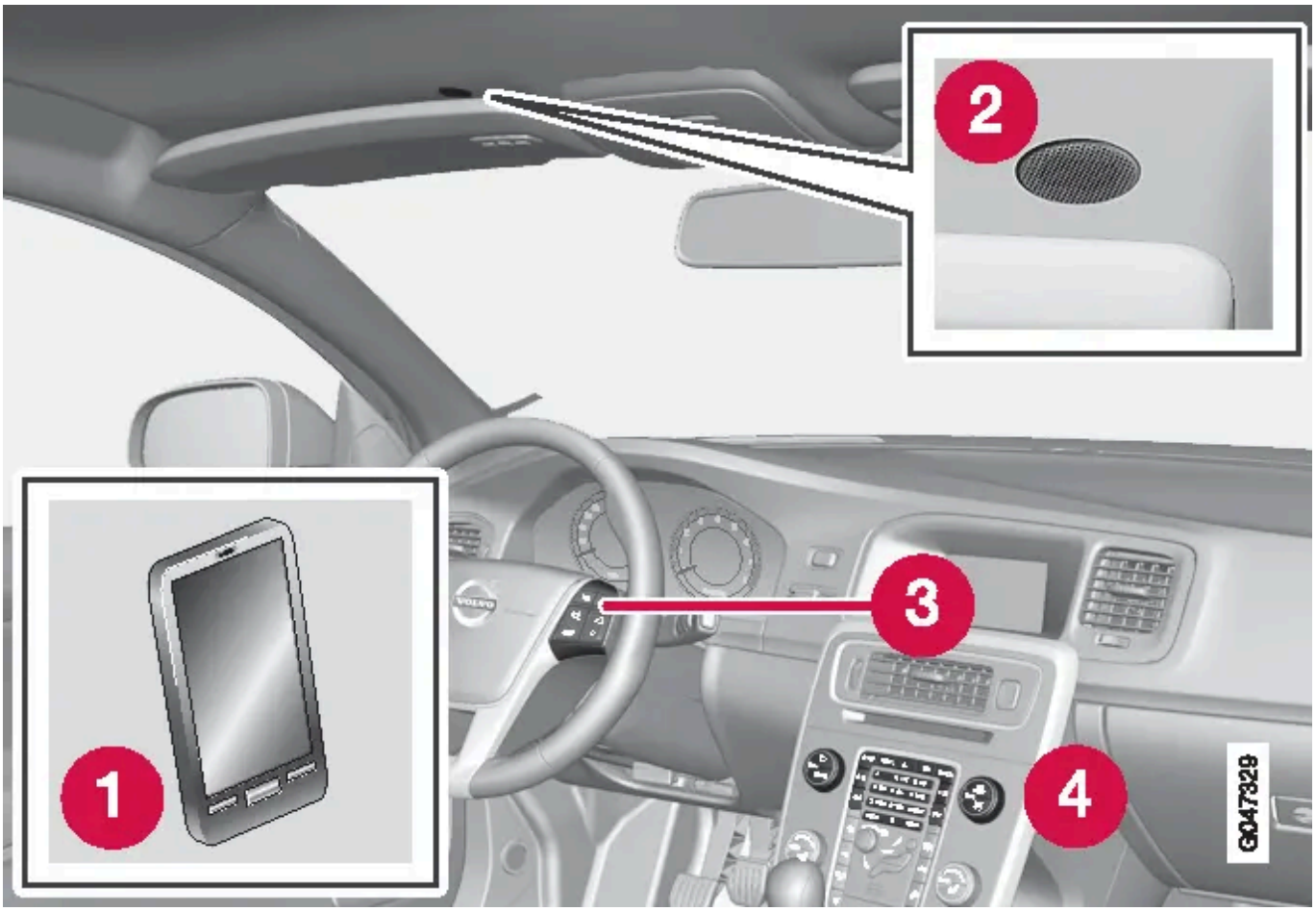
From the media Bluetooth®'s normal view, press OK/MENU and select **Change device** → **Delete device**.

Deleting a cell phone

From the telephone's normal view, press OK/MENU and select **Change phone** → **Delete device**.

8.2.7. Bluetooth® hands-free system – overview

The illustration provides an overview of the Bluetooth® hands-free system.



System overview

1. Cell phone
2. Microphone
3. Steering wheel keypad
4. Center console controls

8.2.8. On-screen symbols

The following is an overview of the symbols that may be displayed in the screen's activity/status field.



Activity/status field

Active current functions and in certain cases, their status, are displayed in the activity/status field. Due to limited space, not all activity/status symbols will be displayed at all times.

Symbol	Explanation
	Connecting to the Internet via Bluetooth®.
	Connected to the Internet via Bluetooth®.
	No Internet connection via Bluetooth®.
	Connecting to the Internet via Wi-Fi.
	Connected to the Internet via Wi-Fi.
	No Internet connection via Wi-Fi.
	Connected to the Internet via Wi-Fi via roaming (for connections in other countries).
	Connecting to the Internet via the integrated modem* [1]. The number of bars illuminated indicates the strength of the signal. The type of connection is indicated under the bars.
	Connected to the Internet via the integrated modem* [1].
	No Internet connection via the integrated modem* [1].
	The integrated modem* [1] is connected to the Internet via roaming (for connections in other countries).
	This symbol is displayed when the vehicle's position is being transmitted.
	Cell phone connected.
	Missed call(s).
	Call in progress.

Symbol	Explanation
	Unread text message.
	Microphone muted.
	Audio muted.
	SOS service [1] active.
	ON CALL service [1] active.

* Option/accessory.

[1] Models with Volvo On Call only.

8.2.9. Bluetooth® hands-free system

A Bluetooth®-enabled cell phone or other device can be wirelessly connected to the infotainment system.



Overview of center console Bluetooth® controls

The device must first be paired and connected to the infotainment system.

A hands-free connection to the infotainment system makes it possible to remotely control many of a cell phone's functions. The phone's controls can also be used at any time, even it is connected to the infotainment system.

When a cell phone or other device is connected, audio can be streamed to the infotainment system, see Media Bluetooth®. Toggle between the devices by pressing the TEL and MEDIA buttons to access the respective sources' functions.

Note

Not all cell phones are fully compatible with the hands-free system. A list of compatible phones is available at your Volvo retailer or at www.volvocars.us

Activating



Press TEL briefly to activate the most recently connected phone. If a phone is already connected, pressing TEL will display a shortcut menu listing commonly used phone functions. The symbol in the display indicates that a phone is connected.

Making a call

1. Ensure that the symbol is visible at the top of the display and that the hands-free function is in telephone mode.
2. Dial the desired number or in normal view, turn TUNE clockwise to access the phone book or counter-clockwise to access the call list. Scroll to the desired contact/name.
3. Press OK/MENU to initiate the call.

End the call by pressing EXIT.

Reading text messages [1]

The infotainment system will show the connected phone's messages.

If the connected cell phone receives a text message, the symbol will appear at the top of the display.

1. Press TEL followed by OK/MENU to access the **Phone menu**.
2. Turn TUNE to **Messages** and pressOK/MENU.
3. Turn TUNE to scroll to the desired message and press OK/MENU.

> The message will be displayed.

4. Press OK/MENU to access the text message menu to e.g., let the system's text-to-speech function read the message, call the message's sender or delete the message.

If TEL mode is already active, a pop-up menu with new messages will be displayed. By pressing OK/MENU, the selected message will be displayed and the text-to-speech function will read it. Cancel reading by pressing EXIT.

The pop-up-menu and the message can be turned off in **Phone menu → Message notifications**.

> **Note**
>
> In order to show the connected cell phone's messages on the infotainment system's display, the cell phone has to accept mirroring when it is connected. Depending on the phone, the following will occur:
>
> - A pop-up window or notification will be displayed and accepted in the phone.
> - Accept mirroring in the settings for the phone's Bluetooth® connection to the infotainment system.
>
> It may be necessary to disconnect and reconnect the phone from the infotainment for mirroring to take place.

[1] Not supported by all cell phones.

8.2.10. Phone book

The list of contacts (phone book) displayed on the infotainment system's screen mirrors the phone book in the currently connected cell phone.

The  symbol must be displayed at the top of the infotainment system's screen and the hands-free system must be in telephone mode before the phone book can be used.

For incoming calls, if the phone book contains information about the caller, it will be displayed on the screen.

> **Note**
>
> Mirroring (syncing contacts) must be activated when a cell phone is connected to the infotainment system before the phone book can be displayed on the center console screen. Depending on the type of phone, the following may happen:
>
> - A pop-up window or notification will be displayed and accepted in the phone.
> - Accept mirroring (activate "Sync contacts" or similar) in the phone's Bluetooth® settings.
>
> It may be necessary to disconnect and reconnect the phone from the infotainment for mirroring to take place.

8.2.11. Pairing a Bluetooth® device

Two Bluetooth® devices (a cell phone and a media player) can be connected at the same time and you can toggle between them. It is also possible to make a phone call and stream audio files at the same time, and a cell phone can be used to connect the vehicle to the Internet .

Up to 15 Bluetooth® devices can be paired to the infotainment system and the pairing procedure only needs to be done once for each device. After pairing has been completed, the device no longer needs to be visible or discoverable; its Bluetooth® feature only needs to be activated.

> **Note**
>
> If your cell phone's operating system is updated, this may break the connection between the phone and the vehicle. If this happens, delete the phone from the list of paired phones (Deleting a Bluetooth® device) and repeat the pairing procedure described in this article.

The procedure for connecting an external device varies, depending on whether the device has been paired previously.

Both of the following connection methods assume that the device has not yet been paired to the system.

The examples are based on pairing a cell phone. Connecting a media player is done in the same way. However, it is done from MEDIA mode (press the MEDIA button on the center console to enter this mode).

There are two ways of pairing a device:

- By searching for the external device using the infotainment system's menus.
- By searching for the vehicle (infotainment system) using the external device's Bluetooth® function.

If you are not already in telephone mode, press the TEL button on the center console.



An example of telephone mode's normal view

Method 1: search for the external device using the infotainment system's menus

1. Make the external device discoverable/visible using its Bluetooth® function. Refer to the device's user's guide if necessary or go to www.volvocars.com.
2. From the telephone's normal view, press OK/MENU and select **Search new phone** (for media players, **Search new device**).

> The infotainment system will now search for Bluetooth® devices that are in range, which may take up to 1 minute.

3. Select a Bluetooth® device from the list and press OK/MENU.
4. Be sure that the code displayed in the device is the same as the one shown on the infotainment screen. If so, accept the code in both places.
5. From the cell phone, accept or reject any choices regarding its phone book and messages.

> The external device is now paired to the infotainment system.

If this method has not succeeded, press EXIT and pair the device using method 2.

Method 2: search for the vehicle using the external device's Bluetooth® function

1. From the telephone's normal view, press OK/MENU and select **Make car discoverable**. Confirm by pressing OK/MENU.
2. Search for Bluetooth® devices (i.e., the infotainment system) from the external device, which may take up to 1 minute.
3. Select the vehicle's name on the external device's screen.
4. Be sure that the code displayed in the device is the same as the one shown on the infotainment screen. If so, accept the code in both places.
5. From the cell phone, accept or reject any choices regarding its phone book and messages.

> The external device is now paired to the infotainment system.

When the external device has been paired and selected, its Bluetooth® name will appear on the infotainment system's screen and the device can be controlled from the vehicle.

8.2.12. Connecting a Bluetooth® device

Two Bluetooth® devices (a cell phone and a media player) can be connected at the same time and you can toggle between them. It is also possible to make a phone call and stream audio files at the same time, and a cell phone can be used to connect the vehicle to the Internet .

Up to 15 Bluetooth® devices can be paired to the infotainment system and the pairing procedure only needs to be done once for each device. After pairing has been completed, the device no longer needs to be visible or discoverable; its Bluetooth® feature only needs to be activated.

> **Note**
>
> If your cell phone's operating system is updated, this may break the connection between the phone and the vehicle. If this happens, delete the phone from the list of paired phones (Deleting a Bluetooth® device) and repeat the pairing procedure described in this article.

The procedure for connecting an external device varies, depending on whether the device has been paired previously.

Both of the following connection methods assume that the device has not yet been paired to the system.

The examples are based on pairing a cell phone but pairing another device is done in the same way. However, it is done from MEDIA mode (press the MEDIA button on the center console to enter this mode).

There are two ways of pairing a device:

- By searching for the external device using the infotainment system's menus.
- By searching for the vehicle (infotainment system) using the external device's Bluetooth® function.

If you are not already in telephone mode, press the TEL button on the center console.



An example of telephone mode's normal view

Method 1: search for the external device using the infotainment system's menus

1. Make the external device discoverable/visible using its Bluetooth® function. Refer to the device's user's guide if necessary or go to www.volvocars.com.
2. From the telephone's normal view, press OK/MENU and select **Search new phone** (for media players, **Search new device**).

> The infotainment system will now search for Bluetooth® devices that are in range, which may take up to 1 minute.

3. Select a Bluetooth® device from the list and press OK/MENU.
4. Be sure that the code displayed in the device is the same as the one shown on the infotainment screen. If so, accept the code in both places.
5. From the cell phone, accept or reject any choices regarding its phone book and messages.

> The external device is now paired to the infotainment system.

If this method has not succeeded, press EXIT and pair the device using method 2.

Method 2: search for the vehicle using the external device's Bluetooth® function

1. From the telephone's normal view, press OK/MENU and select **Make car discoverable**. Confirm by pressing OK/MENU.
2. Search for Bluetooth® devices (i.e., the infotainment system) from the external device, which may take up to 1 minute.
3. Select the vehicle's name on the external device's screen.
4. Be sure that the code displayed in the device is the same as the one shown on the infotainment screen. If so, accept the code in both places.
5. From the cell phone, accept or reject any choices regarding its phone book and messages.

> The external device is now paired to the infotainment system.

When the external device has been paired and selected, its Bluetooth® name will appear on the infotainment system's screen and the device can be controlled from the vehicle.

8.2.13. Automatically connect a Bluetooth® device

When a Bluetooth® device has been paired to the infotainment system, it will automatically be connected when the ignition is switched on.

When Bluetooth® is active and the most recently connected device is within range, it will be connected automatically. If this device is not within range, the system will attempt to connect another previously paired device.

To connect a different paired device, press EXIT, select to connect a new device or switch to another Bluetooth device.

8.3. Bluetooth media

8.3.1. Disconnecting a Bluetooth® device

When a Bluetooth® device is out of range, it is automatically disconnected.

If a cell phone is moved out of range during a call, the call will switch to the phone's speaker and microphone.

The hands-free function is deactivated when the ignition is switched off and the driver's door is opened.

To remove (unpair) a Bluetooth® device, see Deleting a Bluetooth® device. The infotainment system will no longer search for the unpaired device.

The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.

8.3.2. Media Bluetooth®

The media player is equipped with Bluetooth® for streaming audio files from external Bluetooth®-enabled devices such as cell phones, tablets, etc.

The device must be paired with and connect to the infotainment system.

For more information about listening to music and navigating in the menus, see Infotainment – operating the system. The following provides detailed information.

Certain functions can be stored in the FAV button. A stored function can then be started easily by pressing FAV, see Favorites.

Playback and navigation

Playback and navigation are controlled using the buttons in the center console or the steering wheel keypad. It is also possible to change tracks from certain external devices.

When a cell phone is connected to the infotainment system, it is also possible to remote-control some of the phone's features, see Bluetooth® hands-free system. Toggle between TEL and MEDIA modes to control the various devices' functions.

Note

- Bluetooth® devices must support Audio/Video Remote Control Profile (AVRCP) and Advanced Audio Distribution Profile (A2DP). The phone must use AVRCP version 1.3 and A2DP 1.2. If older versions of these standards are used, certain features may not function properly.
- Not all cell phones or other devices are fully compatible with the Bluetooth® function in the vehicle's media player. A list of compatible phones and other devices is available at you Volvo retailer.
- The media player can only play audio files via Bluetooth®.

8.3.3. Switching to another Bluetooth® device

If more than one device is connected at the same time, you can switch between these devices. Before this is possible, they must first be paired with the infotainment system.

Switching media players

1. Be sure that the external device's Bluetooth® function is activated. Refer to the devices's user's guide if necessary.
2. From the media Bluetooth® ´s normal view, press OK/MENU and select **Change device**.

> The infotainment system will search for previously connected devices. The Bluetooth® names of the devices found will appear in the center console display.

3. Select the desired device.

> The selected device will be connected.

Switching cell phones

1. Be sure that the external device's Bluetooth® function is activated. Refer to the devices's user's guide if necessary.
2. From the telephone’s normal view, press OK/MENU and select **Change phone**.

> The infotainment system will search for previously connected phones. The Bluetooth® names of the phones found will appear in the center console display.

3. Select the desired device.

> The selected device will be connected.

8.3.4. Connecting and disconnecting a Bluetooth® device

Sensus infotainment offers Bluetooth®, which makes it possible to establish wireless connections with other Bluetooth® devices after they have been paired and connected.



Up to 15 Bluetooth® devices can be paired and this procedure only needs to be done once for each device. After pairing has been completed, the device no longer needs to be visible or discoverable; its Bluetooth® feature only needs to be activated.

When Bluetooth® is active and the most recently connected device is within range, it will be connected automatically when the ignition is switched on. The device's name will be displayed in the sound source's normal view. To connect a different device, press OK/MENU and select Change device.

When the Bluetooth® device is out of range of the vehicle, it will be automatically disconnected. To manually disconnect the device, switch off its Bluetooth function.

To unpair a Bluetooth® device, see Deleting a Bluetooth® device. When this has been done, the infotainment system will no longer automatically search for the device.

Two Bluetooth® devices can be connected at the same time, for example a cell phone and a media player, which makes it possible to switch between these devices.



Example: a cell phone is connected as a phone and as a media player

8.3.5. Shuffle

This function plays the tracks/audio files in random order (shuffle).[1].

To listen to tracks in random order for the selected source:

1. In the selected source's normal view, press OK/MENU.
2. Turn TUNE to **Shuffle**.
3. Press OK/MENU to activate or deactivate the function.

[1] Not video DVDs. For external devices, shuffle is available for USB and iPod®. It is not supported by all cell phones.

8.3.6. Deleting a Bluetooth® device

Paired Bluetooth® devices can be deleted (unpaired) from the infotainment system, which means that the system will no longer search for these devices.

Deleting a media player

From the media Bluetooth®'s normal view, press OK/MENU and select **Change device** → **Delete device**.

Deleting a cell phone

From the telephone's normal view, press OK/MENU and select **Change phone** → **Delete device**.

8.3.7. Pairing a Bluetooth® device

Two Bluetooth® devices (a cell phone and a media player) can be connected at the same time and you can toggle between them. It is also possible to make a phone call and stream audio files at the same time, and a cell phone can be used to connect the vehicle to the Internet .

Up to 15 Bluetooth® devices can be paired to the infotainment system and the pairing procedure only needs to be done once for each device. After pairing has been completed, the device no longer needs to be visible or discoverable; its Bluetooth® feature only needs to be activated.

> **Note**
>
> If your cell phone's operating system is updated, this may break the connection between the phone and the vehicle. If this happens, delete the phone from the list of paired phones (Deleting a Bluetooth® device) and repeat the pairing procedure described in this article.

The procedure for connecting an external device varies, depending on whether the device has been paired previously.

Both of the following connection methods assume that the device has not yet been paired to the system.

The examples are based on pairing a cell phone. Connecting a media player is done in the same way. However, it is done from MEDIA mode (press the MEDIA button on the center console to enter this mode).

There are two ways of pairing a device:

- By searching for the external device using the infotainment system's menus.
- By searching for the vehicle (infotainment system) using the external device's Bluetooth® function.

If you are not already in telephone mode, press the TEL button on the center console.



An example of telephone mode's normal view

Method 1: search for the external device using the infotainment system's menus

1. Make the external device discoverable/visible using its Bluetooth® function. Refer to the device's user's guide if necessary or go to www.volvocars.com.
2. From the telephone's normal view, press OK/MENU and select **Search new phone** (for media players, **Search new device**).

> The infotainment system will now search for Bluetooth® devices that are in range, which may take up to 1 minute.

3. Select a Bluetooth® device from the list and press OK/MENU.
4. Be sure that the code displayed in the device is the same as the one shown on the infotainment screen. If so, accept the code in both places.
5. From the cell phone, accept or reject any choices regarding its phone book and messages.

> The external device is now paired to the infotainment system.

If this method has not succeeded, press EXIT and pair the device using method 2.

Method 2: search for the vehicle using the external device's Bluetooth® function

1. From the telephone's normal view, press OK/MENU and select **Make car discoverable**. Confirm by pressing OK/MENU.
2. Search for Bluetooth® devices (i.e., the infotainment system) from the external device, which may take up to 1 minute.
3. Select the vehicle's name on the external device's screen.
4. Be sure that the code displayed in the device is the same as the one shown on the infotainment screen. If so, accept the code in both places.
5. From the cell phone, accept or reject any choices regarding its phone book and messages.

> The external device is now paired to the infotainment system.

When the external device has been paired and selected, its Bluetooth® name will appear on the infotainment system's screen and the device can be controlled from the vehicle.

8.3.8. Fast forward/reverse

The fast forward/reverse feature can be used for audio/video files [1].

Press and hold the ⏮ / ⏭ buttons to fast forward or reverse.

This is done at one speed for audio files but several speeds can be chosen for video files.

Press the ⏮ / ⏭ buttons repeatedly to increase the speed; release to return to normal viewing speed.

[1] CD/DVD, USB and iPod® only.

8.3.9. Automatically connect a Bluetooth® device

When a Bluetooth® device has been paired to the infotainment system, it will automatically be connected when the ignition is switched on.

When Bluetooth® is active and the most recently connected device is within range, it will be connected automatically. If this device is not within range, the system will attempt to connect another previously paired device.

To connect a different paired device, press EXIT, select to connect a new device or switch to another Bluetooth device.

8.4. CD/DVD

8.4.1. CD/DVD

The media player can play commercially purchased discs as well as ones that you have burned yourself.

The media player supports and can play the following types of discs and files:

- Purchased CDs/DVDs (CD/DVD Audio).
- Purchased DVDs (DVD Video).
- Home-burned CDs/DVDs containing audio files.

For more information about compatible file formats, see Media player – compatible file formats.

In order to play, a disc may not contain more than 5,000 files (including playlists).

> **Note**
>
> The media player may not be able to read all copyrighted or home-burned audio files.

The FAV button can be used to store frequently used functions. The stored function can then be started by pressing FAV, see Favorites.

Playing an audio CD/DVD and navigating menus

From the disc´s normal view, press OK/MENU and turn TUNE to display the disc's menu structure. Navigate through this structure by turning TUNE.

Play a track by pressing OK/MENU.

Playing an home-burned CD/DVD and navigating menus

If a disc with audio/video files is inserted, its folder structure will be read by the system. It may take several seconds until the disc begins playing, depending on its quality and the amount of information it contains.

From the disc´s normal view, press OK/MENU and turn TUNE to access the disc's folder structure or to search among categories. Navigate in this structure by turning TUNE and select a folder by pressing OK/MENU. Leave the structure by pressing EXIT.

Play a file by pressing OK/MENU.

When the file is finished, the next one will begin playing. When all of the files in a folder have been played, the media player will automatically select another folder.

Playing a DVD video and navigating menus

For information about playing video DVDs, see Playing and navigating in DVDs.

Media searches

Searches can be performed on all of your devices (USB, CD, etc.). For more information about the search functions.

8.4.2. Shuffle

This function plays the tracks/audio files in random order (shuffle).[1].

To listen to tracks in random order for the selected source:

1. In the selected source's normal view, press OK/MENU.
2. Turn TUNE to **Shuffle**.
3. Press OK/MENU to activate or deactivate the function.

[1] Not video DVDs. For external devices, shuffle is available for USB and iPod®. It is not supported by all cell phones.

8.4.3. Camera angle while playing DVD videos

If supported by the DVD, this function makes it possible to select the camera angle from which a certain scene is viewed.

From the disc's normal view, press OK/MENU and selcet **Advanced settings** → **Angles**.

8.4.4. Playing and navigating in DVDs

While a video DVD is playing, a disc menu may appear on the screen that enables you to make additional settings such as selecting subtitles, language and choice of scenes.
For basic information about playback and navigating in menus, see .

Note

Videos can only be played when the vehicle is stationary or moving at a speed under 4 mph (6 km/h). When the vehicle reaches a speed of approx. 5 mph (8 km/h), the video will no longer be shown and **Video unavailable at this speed** will be displayed. However, the film's audio can still be heard. The video will resume playing when the vehicle's speed goes below 4 mph (6 km/h).

Navigating in a DVD's menus



Buttons in the center console control panel, shown in the illustration, are used to navigate in a DVD's menus.

Changing chapters or title

Turn TUNE to access the list of chapters and navigate in this list (the film will pause if it is currently playing). Press OK/MENU to choose a chapter and return to the normal view in the display (if a film was playing, it will resume). Press EXIT to access the list of titles.

In the list of titles, turn TUNE to make a selection and press OK/MENU to confirm. This also returns you to the list of chapters. Press OK/MENU to confirm and return to the normal view (if a film was playing, it will resume). Press EXIT to cancel and return to the normal view (without having made a selection).

It is also possible to change chapters by pressing ⏮ / ⏭ on the center console control panel or on the steering wheel keypad.

8.4.5. Media player – compatible file formats

The media player supports a number of different types of files that are listed in the following tables.

Compatible CD/DVD formats

> **Note**
>
> Dual format (double-sided discs) such as DVD Plus or CD-DVD are thicker than normal discs and may not play in your infotainment system.
>
> If a disc containing both CDDA and MP3 tracks is played, all MP3 tracks will be ignored.

Audio formats	CD-Audio, mp3, wma, aac, m4a
Video formats	DVD-Video

Compatible USB formats

The audio and video files in the following table are supported by the system for playback through the USB socket.

Audio format	mp3, mp4, wma, aac, m4a, m4b
Video format	–

MP3 audio specifications

Format	kHz	kbps
MPEG-1/Audio	32	32–320[1]
	44.1	32–320[1]
	48	32–320[1]
MPEG-2/Audio	16	8–160
	22.05	8–160
	24	8–160
MPEG-2.5/Audio	8	8-64
	11.025	8-64
	12	8-64

WMA audio specifications

In order to play, a file must meet the following criteria:

WMA version	8.x, 9.x, 10.x, Pro

AAC audio specifications

In order to play, a file must meet the following criteria:

Audio format	MPEG-2 and MPEG-4
Audio sampling rate	8–96 kHz
Channels (ch)	1ch and 2ch

WAV audio specifications

In order to play, a file must meet the following criteria:

Audio sampling rate	Up to 44.1 kHz
Channels (ch)	1ch and 2ch
Audio bit rate	16 kbps for 1ch

The .wav format also supports the PCM format.

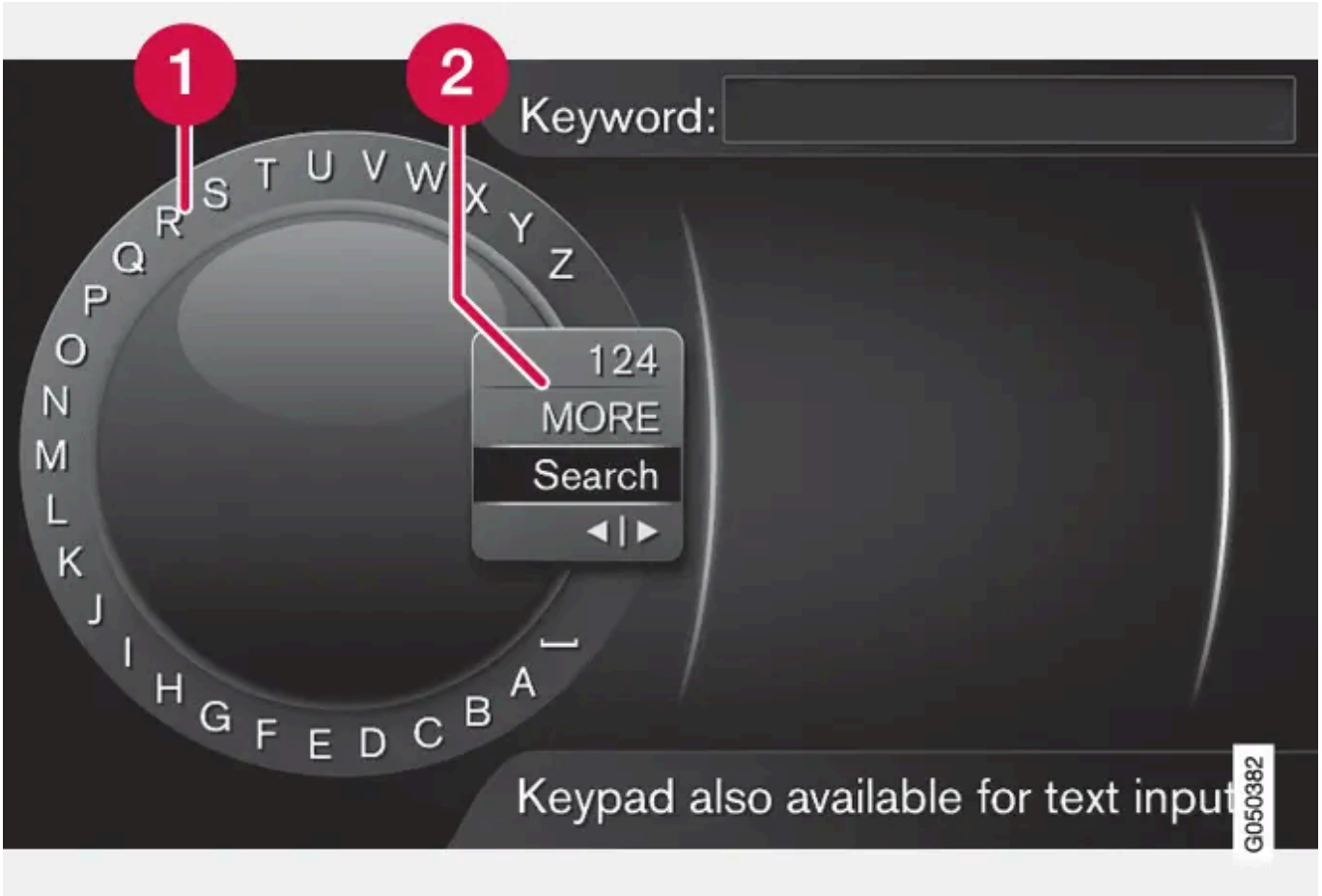
[1] Not 144 kbps.

8.4.6. Media Search

You can search for music in your connected devices. The search includes USB and discs.

To start a search, press OK/MENU from the source's normal view and select **Media search**.

Search functions



Search using the text wheel

1 Character list

2 Switch between character entry modes (see the following table)

The text wheel can be used to enter text. To use it:

1. Turn TUNE to the desired letter and press OK/MENU to confirm. The number/letter keys on the center console can also be used.

   To switch from letter entry mode to the entry mode for numbers or special characters, or to go to the list of results, turn TUNE to one of the selections (see the explanation in the following table) in the list for switching character entry mode (2) and press OK/MENU.

2. Continue entering the remaining characters in the same way.
3. When you have finished entering the search criteria, select **Search**.

> The search will be conducted. The results will be displayed and grouped in the following categories: artist, album track, year and composer.

4. Turn TUNE to a category and press OK/MENU.
5. Turn TUNE to select a device and press OK/MENU to begin playback.

123/ABC	Toggle between letters and numbers by pressing OK/MENU.
MORE	Switch to special characters by pressing OK/MENU.
Search	Start the media search.
{ | }	Switch from the text wheel to the **Keyword:** field. Move the cursor by turning TUNE. Erase any characters by pressing EXIT. Press OK/MENU to return to the text wheel. Please note that the letter/number keys on the center console can be used to make changes in the **Keyword:** field.

Press EXIT briefly to erase a single character. Press and hold EXIT to erase all of the characters that have been entered.

If a number key on the center console is pressed while the text wheel is displayed (see the previous illustration), a list of characters will be displayed. Press repeatedly on the key to access the desired letter. Continue with the next letter, etc. When a key has been pressed, this will be confirmed when the next key is pressed.

8.4.7. Fast forward/reverse

The fast forward/reverse feature can be used for audio/video files [1].

Press and hold the ⏮ / ⏭ buttons to fast forward or reverse.

This is done at one speed for audio files but several speeds can be chosen for video files.

Press the ⏮ / ⏭ buttons repeatedly to increase the speed; release to return to normal viewing speed.

[1] CD/DVD, USB and iPod® only.

8.4.8. Screen settings

Certain screen settings, such as brightness and contrast, can be adjusted (while the vehicle is not moving).

1. In play mode, press OK/MENU and select **Image settings**. Confirm by pressing OK/MENU.
2. Turn TUNE to scroll to the desired setting and press OK/MENU.
3. Adjust the setting by turning TUNE and confirm by pressing OK/MENU.

Press OK/MENU or EXIT to return to the list of settings.

8.5. Voice control

8.5.1. Voice control settings

There are a number of settings that can be made for the voice control system.

- **User settings**: A voice (user) profile can be set in the normal view for MY CAR, by press OK/MENU and select **Settings** → **Voice control settings** → **User setting**. The choices are: **Default** or **Trained user**. **Trained user** can only be selected if voice training has been completed.
- **Synthetic voice speed**: The speed of the systems's dynamic (not prerecorded) text-to-speech voice can be changed in the normal view for MY CAR, by press OK/MENU and select **Settings** → **Voice control settings** → **Read out speed**. Choose between **Fast**, **Medium** and **Slow**.
- **Voice control volume**: Volume can be adjusted by pressing the SOUND button and turning TUNE to **Voice control volume** and pressing OK/MENU. Adjust the volume by turning TUNE and save the new setting by pressing OK/MENU.

8.5.2. Voice control - introduction

Voice control enables the driver to voice-activate certain functions in the infotainment system, a Bluetooth®-connected cell phone or in the optional navigation system.

Note

- The information about phone commands in this section applies to a **Bluetooth®-connected cell phone**. See Bluetooth® hands-free system for more detailed information.
- Volvo' optional navigation system has a separate user's guide containing that system's specific voice commands.

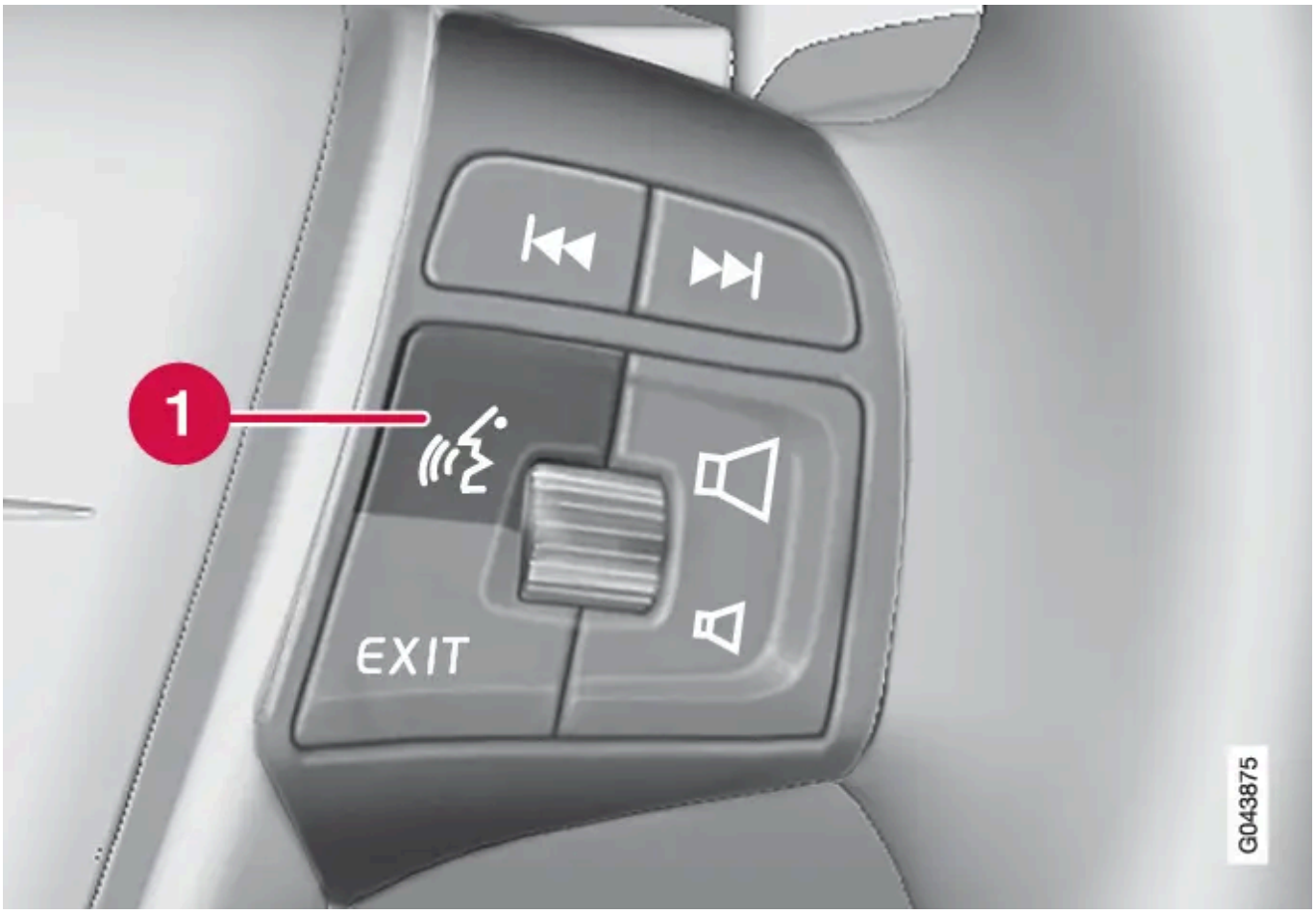
Voice control offers convenience and enables the driver to keep his/her hands on the steering wheel and concentrate on driving.

Warning

As the driver, you have full responsibility for operating the vehicle safely and adhering to all applicable traffic regulations.

Input to the system is in dialog form: commands from the driver and a response from the system. The voice control system uses the same microphone as the Bluetooth® hands-free system, see Bluetooth® hands-free system – overview and system responses come via the infotainment system's speakers.

Getting started



Right side steering wheel keypad

1 Voice control button

- Press the button (1) to activate the system and initiate a command dialog. The most common commands will then be displayed on the center console screen.

While using the voice control system, keep the following in mind:

- When giving commands, speak at your usual speed and in a normal tone of voice **after the tone**
- Avoid speaking while the system is responding. Commands cannot be processed during a response.
- The vehicle's doors, windows and moonroof* should be closed when using the voice control system
- Avoid background noises in the cabin when using the system

> **Note**
>
> If you are uncertain of the commands that you can use, saying **help** will prompt the system to provide a number of commands that can be used in a specific situation.
>
> Commands can be cancelled by:
>
> - Saying **cancel**
> - Pressing EXIT or any of the mode buttons (Tel, MEDIA, etc.).

Cell phones

Before any phone-related voice commands can be used, a Bluetooth®-enabled cell phone must be paired with and connected to the infotainment system. If a command is given and no phone is connected, the system will inform you of this. See Connecting a Bluetooth® device for information about pairing and connecting a cell phone.

* Option/accessory.

8.5.3. Voice control commands

Voice control enables the driver to voice-activate certain functions in the infotainment system, a Bluetooth®-connected cell phone or in the optional navigation system.

The driver initiates a voice command dialog by pressing the voice control button on the steering wheel keypad.

When a dialog has begun, the most common commands will be displayed on the center console screen.

Once you become familiar with the system, you can speed up the command dialogue by briefly pressing the voice control button to skip prompts from the system.

Commands can be given in several ways

For example, the command for searching for a track on a CD can be given as several short commands or as one command:

- **Media search** > **Track**: Say **Media search**, wait for the system's response and then say **Track**.

or

- Say **Media search track** without pausing.

8.5.4. Radio voice control

Radio voice commands can be used to e.g., change stations.

The following command dialogs are only examples; the system's responses may very according to the situation.

Changing stations

The dialog lets you change radio stations.

1. The user begins by saying **Select station**.

> The system will prompt you for the station's name.

2. Say the station's name.

> The system will tune to the selected station.

Changing frequencies

The system understands frequency numbers between **87.5** (eighty-seven point five) and **108.0** (one-hundred-eight point oh).

This dialog lets you change radio frequencies.

1. The user begins by saying **Frequency**.

> The system will prompt you for the frequency number.

2. Say a number between 87.5 and 108.0 megahertz.

> The system will tune to the selected frequency.

Other commands

Additional radio voice commands can be found in the MY CAR normal view by pressing OK/MENU and selecting **Settings** → **Voice control settings** → **Command list** → **Radio commands**.

8.5.5. Voice control language

The languages available for voice control can be selected in the MY CAR menu system.



Sample list of languages

Voice control is not available in all languages. The languages supported are marked by the icon in the list of languages and may vary according to the country/area in which you live. Language changes are made in the MY CAR menu system.

Note

Changing the language for voice controls also changes the language used in the entire infotainment system.

8.5.6. Multimedia voice control

Voice commands can be used to control the multimedia functions such as changing audio sources or tracks.

The following command dialogs are only examples; the system's responses may very according to the situation.

Changing sources

The following is a voice command for changing media sources.

1. The user begins by saying **Disc**.

> The system switches to the CD/DVD player.

Switch to other sources by saying e.g., **Bluetooth**", "**AUX**, **USB**, etc. The sources available depend on the devices currently connected and whether or not the device contains playable files. If a media source is not available, the system will provide an explanation.

Changing tracks

The system understands the digits **0** (zero) to **99** (ninety-nine). Numbers above ninety-nine will not be recognized.

The following is a voice command for changing tracks.

1. The user begins by saying: **Select track**.

> The system will prompt you for the track number.

2. Say the track's number (one number only, e.g., twenty-three, not two-three).

> The system will switch to the selected track on the active media source.

Searching for media

The following is a voice command for searching for media sources.

1. The user begins the dialog by saying **Media search**.

> The system will display a numbered list of all possible search categories and will prompt you to say a line number or category.

2. Say the line number or search category.

> The system will continue to provide instructions.

Other commands

Additional multimedia voice control commands can be found in the MY CAR normal view by pressing OK/MENU and selecting **Settings** → **Voice control settings** → **Command list** → **Media commands**.

8.5.7. Voice control help functions

These functions help you get started using the voice control system and improve the system's voice recognition.

- **Voice tutorial**: helps acquaint you with the system and the procedure for giving voice commands.
- **Voice training**: A function that helps the system improve its voice recognition (learn to identify your voice and pronunciation). This also makes it possible to set a user profile.
- **Brief instruction**: A function that reads a brief instruction about how the system works.

> **Note**
>
> These instructions are only available when the vehicle is parked.

Tutorial

The tutorial can be started in the normal view for MY CAR, by press OK/MENU and select **Settings** → **Voice control settings** → **Tutorial**.

The tutorial is divided into 3 lessons that take a total of about 5 minutes to complete. By default, the system begins with the first lesson. To skip a lesson and go to the next one, press ⏭. Go to the previous lesson by pressing ⏮.

Leave the tutorial by pressing EXIT.

Speaker adaptation

The system will display a number of phrases for you to say. Adaptation can be started in the normal view for MY CAR, by press OK/MENU and select **Settings** → **Voice control settings** → **Speaker adaptation**.

When this has been completed, remember to select a **Trained user** profile under **User setting**.

Brief instruction

The system will read a brief instruction about voice control. To start, press the voice control button on the steering wheel key-pad and say "**Brief instruction**".

8.5.8. Voice control command shortcuts

The system provides lists of voice command shortcuts.

Global commands for the infotainment system functions and cell phone can by found in the normal view for MY CAR, by press OK/MENU and select **Settings** → **Voice control settings** → **Command list** → **Global commands**, **Phone commands**, **Media commands**, **Radio commands** and **Navigation commands***.

Help texts for each command explain if the command can be used in all media sources or is specific to one particular source.

* Option/accessory.

8.5.9. Cell phone voice control

Voice commands can be used to control many of the most common functions in a Bluetooth®-connected cell phone.

The following command dialogs are only examples; the system's responses may very according to the situation.

Dialing a number

The system understands the digits **0** (zero) to **9** (nine). These numbers can be spoken individually, in groups of several digits at a time, or the entire phone number can be given at once. Numbers above nine will not be recognized.

The following is an example of a voice command dialog for dialing a number.

1. The user begins by saying **Dial number**.
> The system's response is **Number please**.
2. Begin speaking the digits in the phone number individually **Six-eight-seven**, etc.
> If you pause, the system will repeat the most recently spoken group of digits.
3. Continue saying the remaining digits. When you have given the entire number, conclude by saying **Ok**.
> The system will initiate the call.

The number can be changed by saying **Correction** (which will delete the last group of digits spoken) or **Delete** (which will erase the entire phone number). By saying **Repeat**, the system will repeat the entire phone number.

Calling a contact

The following dialogue enables you to call a contact in your cell phone's phone book.

1. The user begins by saying **Call contact**.
> The system's response is **Name please**.
2. Say the contact's number in the list displayed.
> If only one contact is found, the call will be initiated. Otherwise, the system will continue to prompt you for more information.

If there is more than one phone number for a particular contact, specify the number to call by saying **Mobile**,**Work**, etc.

Other commands

Additional cell phone voice commands can be found in the MY CAR normal view by pressing OK/MENU and selecting **Settings** → **Voice control settings** → **Command list** → **Phone commands**.

8.6. External device via AUX/USB socket

8.6.1. External audio source volume

Set the volume for an external audio device. If the external sound source's volume is too low or high, the quality of the sound may be impaired.

If an external device such as an MP3 player or an iPod ® is connected to the **AUX** socket, the device's volume may be different than the volume of the infotainment system's internal sound sources such as the radio. To help prevent this, adjust the input volume of the external audio source. To do so: From the AUX's normal view, press OK/MENU. Select **AUX input** and select **Standard** or **Boost**.

> **Note**
>
> Sound quality may be affected if the MP3 player is being charged while the system is in AUX mode. To help prevent this, avoid charging the MP3 player in a 12-volt socket while it is being played.

8.6.2. Connecting an external audio source via the AUX/USB sockets

External audio sources such as an iPod® or mp3 player can be connected to the infotainment system via the AUX and USB sockets in the center console storage compartment (see the illustration).



AUX/USB sockets

To connect an audio source:

1. Connect your device to one of the sockets.
2. From the media's normal view, press MEDIA, turn TUNE to the desired audio source, e.g., **USB**, **iPod** or **AUX** and press OK/MENU.

Reading USB will appear in the center console display as the system reads the device's file structure. The amount of time required for this depends on the file structure and number of files.

Note

- The system supports a number of iPod® models produced in 2005 or later.
- In order to help avoid damage to the USB socket, it will be switched off if there is a short circuit or if the connected device uses too much current (which can happen if the device does not comply with the USB standard). The USB socket will reactivate the next time the ignition is switched on if the problem no longer exists. If the problem persists, contact a trained and authorized Volvo service technician.

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8.6.3. Shuffle

This function plays the tracks/audio files in random order (shuffle).[1].

To listen to tracks in random order for the selected source:

1. In the selected source's normal view, press OK/MENU.
2. Turn TUNE to **Shuffle**.
3. Press OK/MENU to activate or deactivate the function.

[1] Not video DVDs. For external devices, shuffle is available for USB and iPod®. It is not supported by all cell phones.

8.6.4. External audio sources via the AUX/USB sockets

External audio sources such as an iPod® or an mp3 player can be connected to the infotainment system.



A device with rechargeable batteries can be recharged when it is connected to the USB socket (if the ignition is on or the engine is running).

The FAV button can be used to store frequently used functions. The stored function can then be started by pressing FAV, see Favorites.

Listening and navigating menus

An audio source connected to the USB socket can be operated using the infotainment controls. This is not the case for a device connected via the AUX socket.

From the source's normal view, turn TUNE to access the folder structure or to search among categories. Navigate in this structure by turning TUNE and select a folder by pressing OK/MENU. Leave the structure by pressing EXIT.

Play a file by pressing OK/MENU.

When the file is finished, the next one will begin playing. When all of the files in a folder have been played, another folder will automatically be selected.

Media searches

Searches can be performed on all of your devices (USB, CD, etc.). For more information about the search functions, see Media Search.

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USB flash drive

To simplify the use of a USB flash drive, it is advisable to only store music files on it. It will take considerably longer for the system to index the files on the drive if it contains anything other than compatible music files.

> **Note**
>
> The system supports removable media that uses the USB 2.0 standard and the FAT32 file system.

> **Note**
>
> When using a longer type of USB device, connecting it with a USB adapter cable will help reduce mechanical wear on the USB socket and on the device.

Technical specifications

Max. number of files	15,000
Max. number of folders	1,000
Max. number of folder levels	8
Max. number of playlists	100
Max. number of tracks in a playlist	1,000
Subfolders	No limit

Mp3 player

Many MP3 players have a file indexing system that is not supported by the vehicle's infotainment system. In order to use an MP3 player, the system must be set to **USB Removable device/Mass Storage Device**.

iPod®



Note

The system will only play audio files from an iPod®.

Note

To start playback, the source should be set to iPod® (not USB).

When iPod® is used as a sound source, the infotainment system has a menu structure similar to the one in the iPod®.

8.6.5. Media player – compatible file formats

The media player supports a number of different types of files that are listed in the following tables.

Compatible CD/DVD formats

Note

Dual format (double-sided discs) such as DVD Plus or CD-DVD are thicker than normal discs and may not play in your infotainment system.

If a disc containing both CDDA and MP3 tracks is played, all MP3 tracks will be ignored.

Audio formats	CD-Audio, mp3, wma, aac, m4a
Video formats	DVD-Video

Compatible USB formats

The audio and video files in the following table are supported by the system for playback through the USB socket.

Audio format	mp3, mp4, wma, aac, m4a, m4b
Video format	–

MP3 audio specifications

Format	kHz	kbps
MPEG-1/Audio	32	32–320[1]
	44.1	32–320[1]
	48	32–320[1]
MPEG-2/Audio	16	8–160
	22.05	8–160
	24	8–160
MPEG-2.5/Audio	8	8-64
	11.025	8-64
	12	8-64

WMA audio specifications

In order to play, a file must meet the following criteria:

WMA version	8.x, 9.x, 10.x, Pro

AAC audio specifications

In order to play, a file must meet the following criteria:

Audio format	MPEG-2 and MPEG-4
Audio sampling rate	8–96 kHz
Channels (ch)	1ch and 2ch

WAV audio specifications

In order to play, a file must meet the following criteria:

Audio sampling rate	Up to 44.1 kHz
Channels (ch)	1ch and 2ch
Audio bit rate	16 kbps for 1ch

The .wav format also supports the PCM format.

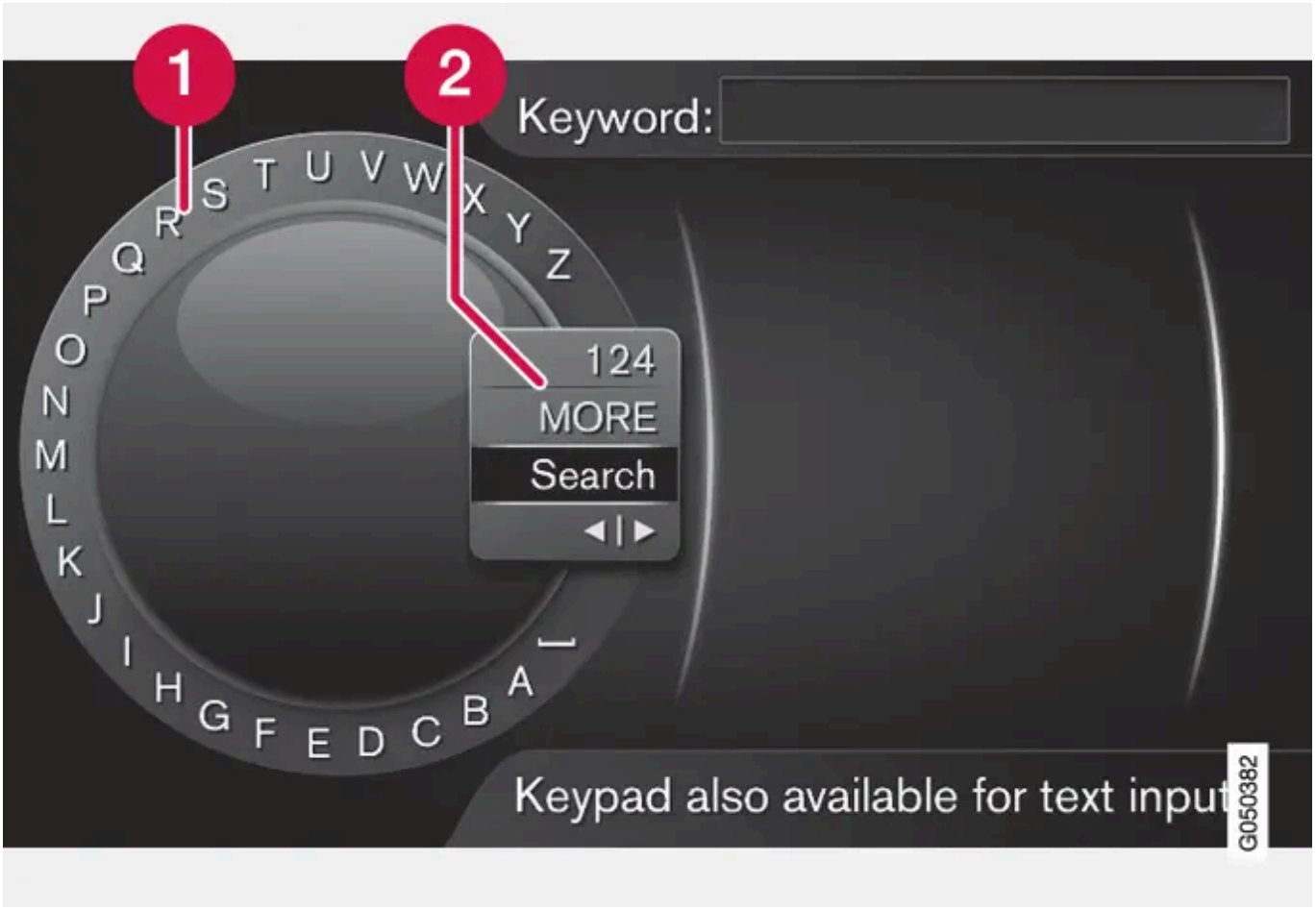
[1] Not 144 kbps.

8.6.6. Media Search

You can search for music in your connected devices. The search includes USB and discs.

To start a search, press OK/MENU from the source's normal view and select **Media search**.

Search functions



Search using the text wheel

1 Character list

2 Switch between character entry modes (see the following table)

The text wheel can be used to enter text. To use it:

1. Turn TUNE to the desired letter and press OK/MENU to confirm. The number/letter keys on the center console can also be used.

   To switch from letter entry mode to the entry mode for numbers or special characters, or to go to the list of results, turn TUNE to one of the selections (see the explanation in the following table) in the list for switching character entry mode (2) and press OK/MENU.

2. Continue entering the remaining characters in the same way.

3. When you have finished entering the search criteria, select **Search**.

> The search will be conducted. The results will be displayed and grouped in the following categories: artist, album track, year and composer.

4. Turn TUNE to a category and press OK/MENU.

5. Turn TUNE to select a device and press OK/MENU to begin playback.

123/ABC	Toggle between letters and numbers by pressing OK/MENU.
MORE	Switch to special characters by pressing OK/MENU.
Search	Start the media search.
{ | }	Switch from the text wheel to the **Keyword:** field. Move the cursor by turning TUNE. Erase any characters by pressing EXIT. Press OK/MENU to return to the text wheel. Please note that the letter/number keys on the center console can be used to make changes in the **Keyword:** field.

Press EXIT briefly to erase a single character. Press and hold EXIT to erase all of the characters that have been entered.

If a number key on the center console is pressed while the text wheel is displayed (see the previous illustration), a list of characters will be displayed. Press repeatedly on the key to access the desired letter. Continue with the next letter, etc. When a key has been pressed, this will be confirmed when the next key is pressed.

8.6.7. Fast forward/reverse

The fast forward/reverse feature can be used for audio/video files [1].

Press and hold the ⏮ / ⏭ buttons to fast forward or reverse.

This is done at one speed for audio files but several speeds can be chosen for video files.

Press the ⏮ / ⏭ buttons repeatedly to increase the speed; release to return to normal viewing speed.

[1] CD/DVD, USB and iPod® only.

8.7. Infotainment system menus

8.7.1. Infotainment menu overview

This is a general overview of the selections and settings that can be made in the infotainment system's menus.

If a menu text is grayed-out, this means that it cannot currently be selected. This may be because the function is not installed in the vehicle, that the source is not currently connected or is connected but is empty.

RADIO

- AM
- FM

MEDIA

- CD/DVD
- DVD Video
- iPod
- USB
- Media Bluetooth®
- AUX

TEL

- Bluetooth® hands-free

- Web browser

8.7.2. Audio CD/DVD menus

The following is an overview of the settings that can be made for audio CDs/DVDs.

Disc menu	Read
Play/Pause	CD/DVD
Stop [1]	
Media search	Media Search
Shuffle	Shuffle

Gracenote® options	
Gracenote® database	
Gracenote® results	
FAV key options	Favorites
No function	
Play/Pause	CD/DVD
Shuffle	Shuffle

[1] DVDs only.

8.7.3. Bluetooth® hands-free menus

The following is an overview of the settings that can be made for the Bluetooth® hands-free function.

Phone menu	**Read**
Call list	Call Management
Contacts	Phone book
Messages	Bluetooth® hands-free system
Message notifications	Bluetooth® hands-free system
Change phone	Switching to another Bluetooth® device
Search new phone	
Make car discoverable	
Device 1 Device 2 etc.	
Connect for phone	Bluetooth® hands-free system
Delete device	Deleting a Bluetooth® device

8.7.4. USB menus

The following is an overview of the settings that can be made for USB.

USB menu	**Read**
Play/Pause	External audio sources via the AUX/USB sockets
Media search	Media Search
Shuffle	Shuffle
Select USB partition	

FAV key options	Favorites
No function	
Play/Pause	External audio sources via the AUX/USB sockets
Shuffle	Shuffle

8.7.5. Media Bluetooth® menus

The following is an overview of the settings that can be made for Media Bluetooth®.

Bluetooth menu	Read
Play/Pause	Media Bluetooth®
Shuffle	Shuffle
Change device	Switching to another Bluetooth® device
Search new device	
Make car discoverable	
FAV key options	Favorites
No function	
Play/Pause	Media Bluetooth®
Shuffle	Shuffle
Device 1 Device 2 etc.	
Connect for media	Media Bluetooth®
Delete device	Deleting a Bluetooth® device

8.7.6. AUX menus

The following is an overview of the settings that can be made for AUX.

AUX menu	Read
AUX input	External audio source volume
Standard	
Boost	

8.7.7. Video DVD menus

The following is an overview of the settings that can be made for video DVDs.

DVD video menu	Read
Play/Pause	Playing and navigating in DVDs
DVD disc menu	Playing and navigating in DVDs
Stop	Playing and navigating in DVDs
Subtitles	Playing and navigating in DVDs
Audio tracks	Playing and navigating in DVDs
Advanced settings	
Angles	Camera angle while playing DVD videos
Screen ratios	
FAV key options	Favorites
No function	
Play/Pause	Playing and navigating in DVDs
Next subtitle	Playing and navigating in DVDs
Next audio track	Playing and navigating in DVDs

Video DVD pop-up menu PressOK/MENU while a video is playing to access the pop-up menu.	
Image settings	Screen settings
Video DVD menu	Infotainment – operating the system
DVD disc menu	Playing and navigating in DVDs

8.7.8. Web browser menus

The following is an overview of the settings that can be made for the web browser.

Web browser This menu is displayed in the normal view if no tab is open.	Read
Enter address	Browser
Settings Displays the web browser's settings menu, see below.	
Bookmark 1 Bookmark 2 etc.	Browser

Browser pop-up menu Press key **5** on the center console while a website is displayed to access the pop-up menu.	Read
Back	Browser
Forward	Browser
Reload	Browser

Stop	Browser
New tab	Browser
Close tab	Browser
Zoom in or Zoom out	Browser
Add bookmark or Delete bookmark	Browser
Settings Displays the web browser's settings menu, see below.	

Web browser settings menu Press Settings in one of the two menus above to access the settings menu.	**Read**
Bookmarks	Browser
Bookmark 1 Bookmark 2 etc.	
Rename	
Reorder	
Delete	
Content filtering	Browser
Accept cookies	Browser
Show images	
Block pop-ups	
Enable JavaScript	
Text size	Browser
Large	
Medium	
Small	
Clear browsing data	Browser
FAV key options	Favorites
No function	
Add/delete bookmark	Browser
New tab	Browser
Close tab	Browser

8.7.9. AM radio menus

The following is an overview of the settings that can be made for AM radio.

AM menu	Read
Show presets	Preset radio stations
FAV key options	Favorites
No function	
Show presets	Preset radio stations

8.7.10. iPod® menus

The following is an overview of the settings that can be made for an iPod®.

iPod menu	Read
Play/Pause	External audio sources via the AUX/USB sockets
Shuffle	Shuffle
FAV key options	Favorites
No function	
Play/Pause	External audio sources via the AUX/USB sockets
Shuffle	Shuffle

8.7.11. FM radio menus

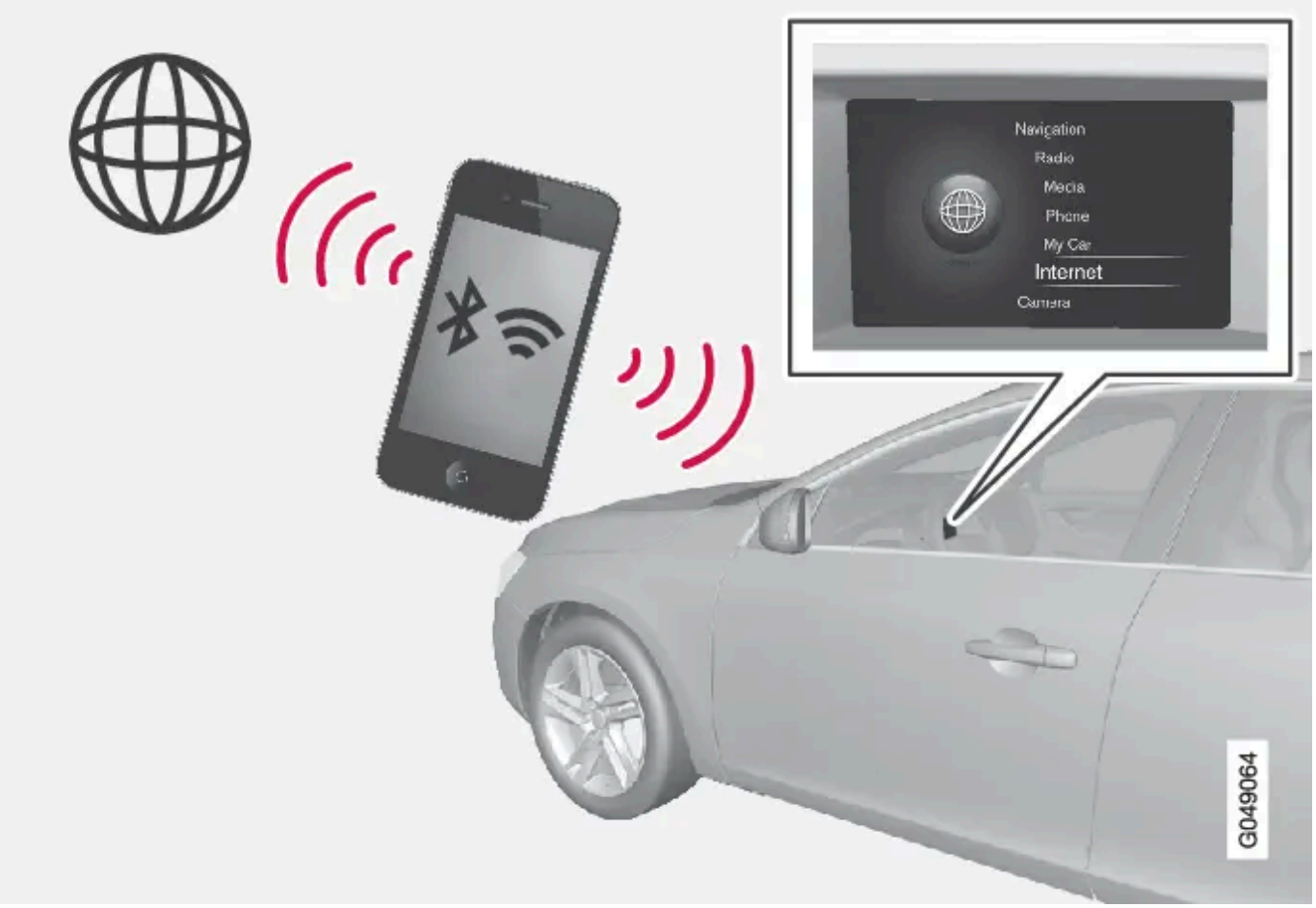
The following is an overview of the settings that can be made for FM radio.

FM menu	Read
Alternative frequency	
Show	
Radio text	Radio text
Presets	Preset radio stations
None	
Tune station by	Radio station search
Station list	List of radio stations
Manual tuning	Manual radio station search
FAV key options	Favorites
No function	
Toggle radio text or presets	Radio text and Preset radio stations

8.8. Internet connected car

8.8.1. Internet connection

Connecting the vehicle to the Internet makes it possible to utilize navigation services, web radio and to stream music via apps and to use the integrated web browser.



The system's integrated apps can be used when the vehicle is connected to the Internet. The apps available may vary and may include navigation services, social media, web radio and music services. The vehicle has a basic web browser to search for and display Internet content.

If an Internet connection is through a cell phone, other mobile functions are also available, such as reading text messages and making calls, see Bluetooth® hands-free system.

The cell phone and your service provider must support tethering (sharing an Internet connection) and your subscription must include data communication.

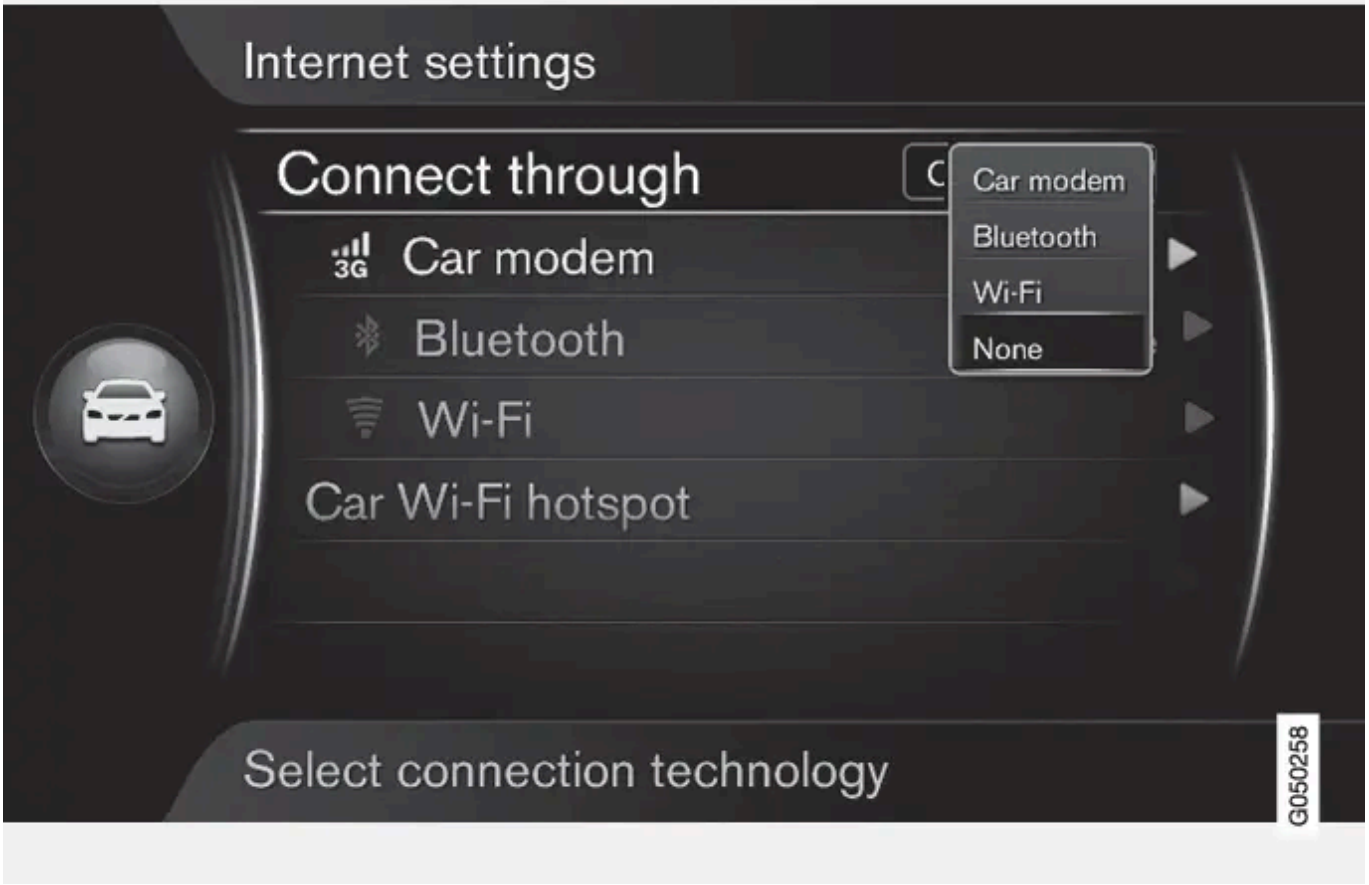
Note

Data is transmitted while the vehicle is online, which may result in additional charges from your service provider.

Data roaming may result in additional charges.

Contact your service provider for information about costs/fees, etc.

Connecting the vehicle to the Internet



Internet connection settings

The default Internet connection setting is "none." When one of the other connection methods has been selected, this will be stored and the vehicle will attempt to connect automatically using this method whenever a network is available. To change this setting, choose one of the other connection methods. To stop automatic connection, see the section "Disconnecting" below.

Choose a connection method - Bluetooth®, Wi-Fi or integrated modem.

Integrated modem* [1]

To connect using the modem, see Car modem.

Bluetooth®

1. The cell phone must first be paired with and connected to the infotainment system.

2. Activate tethering (portable/personal hotspot) via the cell phone's Bluetooth® function.

3. From MY CAR's normal view, press OK/MENU and select **Settings → Internet settings → Bluetooth**.

> The vehicle is now connected.

The system will then automatically connect via Bluetooth® when a network is available.

A symbol on the screen will show the current status of the connection.

To disconnect, see the section "Disconnecting."

The vehicle can store information on a maximum of 10 Bluetooth® networks. If another network is added, the oldest network and password will be removed from the list.



1. Activate tethering (portable/personal hotspot) in the cell phone.
2. From MY CAR's normal view, press OK/MENU and select **Settings** → **Internet settings** → **Wi-Fi**.

> This starts a search for available Wi-Fi networks.

3. Select your network.
4. Select **Connect**.
5. Enter the network password.

> The vehicle will attempt to connect to the network.

The system will then automatically connect via Wi-Fi when the network is available.

A symbol on the screen will show the current status of the connection.

To disconnect, see the section "Disconnecting".

The vehicle can store information on a maximum of 10 Bluetooth® networks. If another network is added, the oldest network and password will be removed from the list.

Removing a saved Wi-Fi network

1. Press the MY CAR button to display the source's normal view.
2. Press OK/MENU and select **Settings** → **Internet settings**.
3. Select **Wi-Fi**.

> A list of available networks will be displayed.

4. Select the network to be removed from the list.
5. Select **Forget**.

> The system will no longer automatically connect to this network.

Removing all networks

All networks can be removed simultaneously. Please note that this will also reset all user data and system settings to the factory defaults.

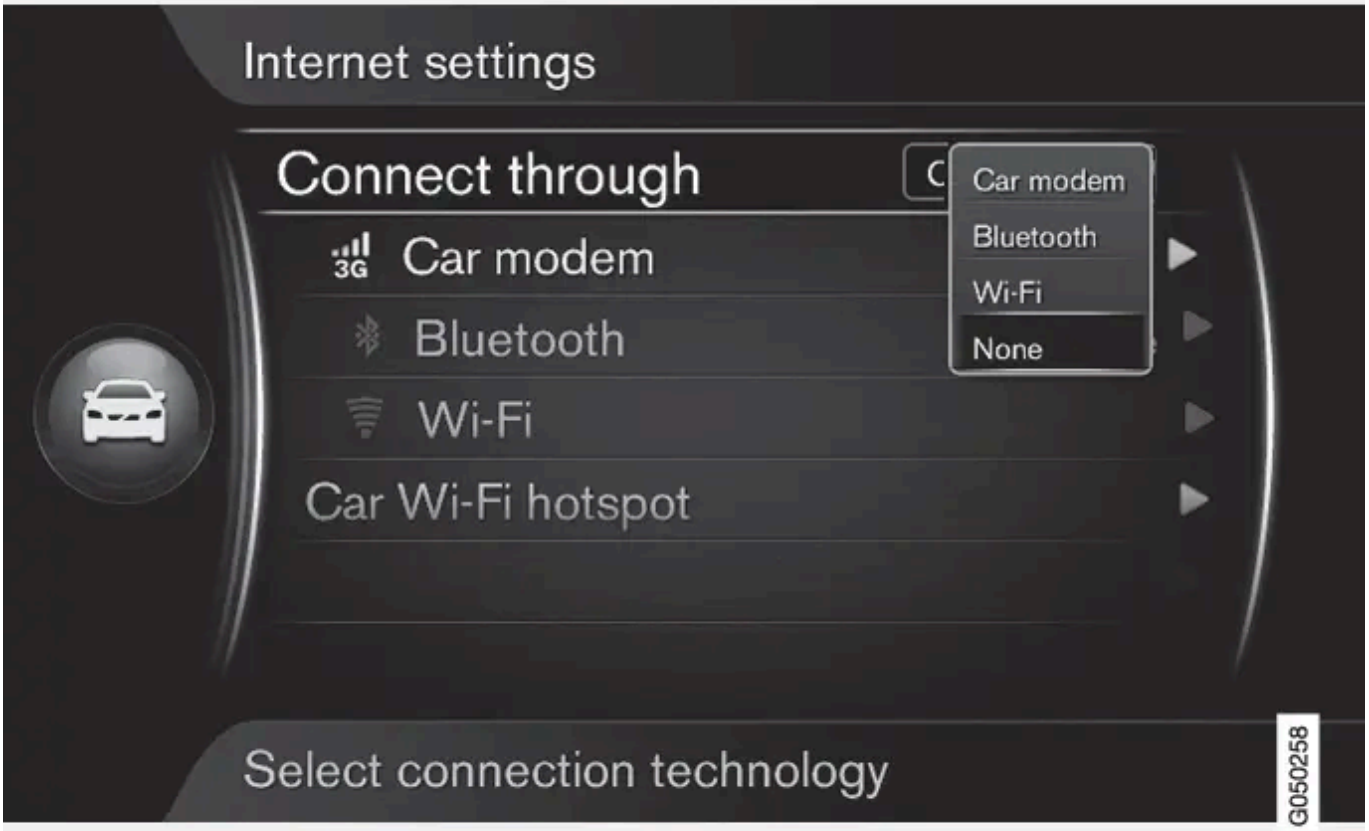
To return to the factory defaults, from MY CAR's normal view, press OK/MENU. Select **Settings** → **Reset to factory settings**.

Wi-Fi technology and security

The vehicle can be connected to a Wi-Fi network at a frequency of 2.4 GHz. If several devices are using this frequency simultaneously, this may result in reduced performance.

- Frequency: 2.4 GHz.
- Standards: 802.11 b / g / n.
- Encryption protocol: WPA2-AES-CCMP.

Disconnecting



From MY CAR's normal view, press OK/MENU and select **Settings** → **Internet settings** → **None**. The vehicle will not connect to the Internet.

Internet connection problems

The amount of data being transferred is determined by the services or apps being used in the vehicle. For example, streaming audio may require large of amounts of data to be transferred, which requires a good connection and a strong signal.

- **Cell phone to the infotainment system**

The Bluetooth® connection's speed can vary, depending on the location of the cell phone in the vehicle. Moving the phone closer to the infotainment system can help increase signal strength. Be sure that there are no obstructions between the phone and the system.

- **Cell phone to the network service provider**

The speed of the mobile network varies depending on your location and some areas may provide poor reception (in tunnels, driving in deep valleys, indoors). The speed may also be linked to your service subscription.

> **Note**
>
> Contact your service provider if data communication problems occur.

* Option/accessory.

[1] Only models with Volvo On Call

8.8.2. Booking service and repairs

Connected Service Booking (CSB) makes setting up a time for service, maintenance and/or repairs directly from the vehicle quick and convenient.

Prerequisites

- The owner (primary driver) must have a valid Volvo ID. See Volvo ID for additional information.
- The vehicle must be connected to the Internet using a paired Bluetooth® cell phone or Wi-Fi tethering (a personal hotspot). On models equipped with Volvo On Call (VOC)*, you can connect to the Internet using your separate VOC data plan. Refer to your separate Volvo On Call manual.
- By default, the retailer where you purchased your vehicle will be your preferred (primary) retailer/Volvo authorized workshop who will perform service and repairs on your vehicle. To change the preferred retailer, go to Dealer Locator at volvocars.com and select a retailer, click on Service Scheduler and book an appointment at the new preferred retailer.
- In order to be guided through the on-screen steps, the menu alternative **Display notifications** must be activated.

CSB menu access

Once the prerequisites have been established, all CSB-related menus can be accessed in MY CAR by pressing OK/MENU and then selecting **Maintenance & repair**.

Booking information and data from the vehicle

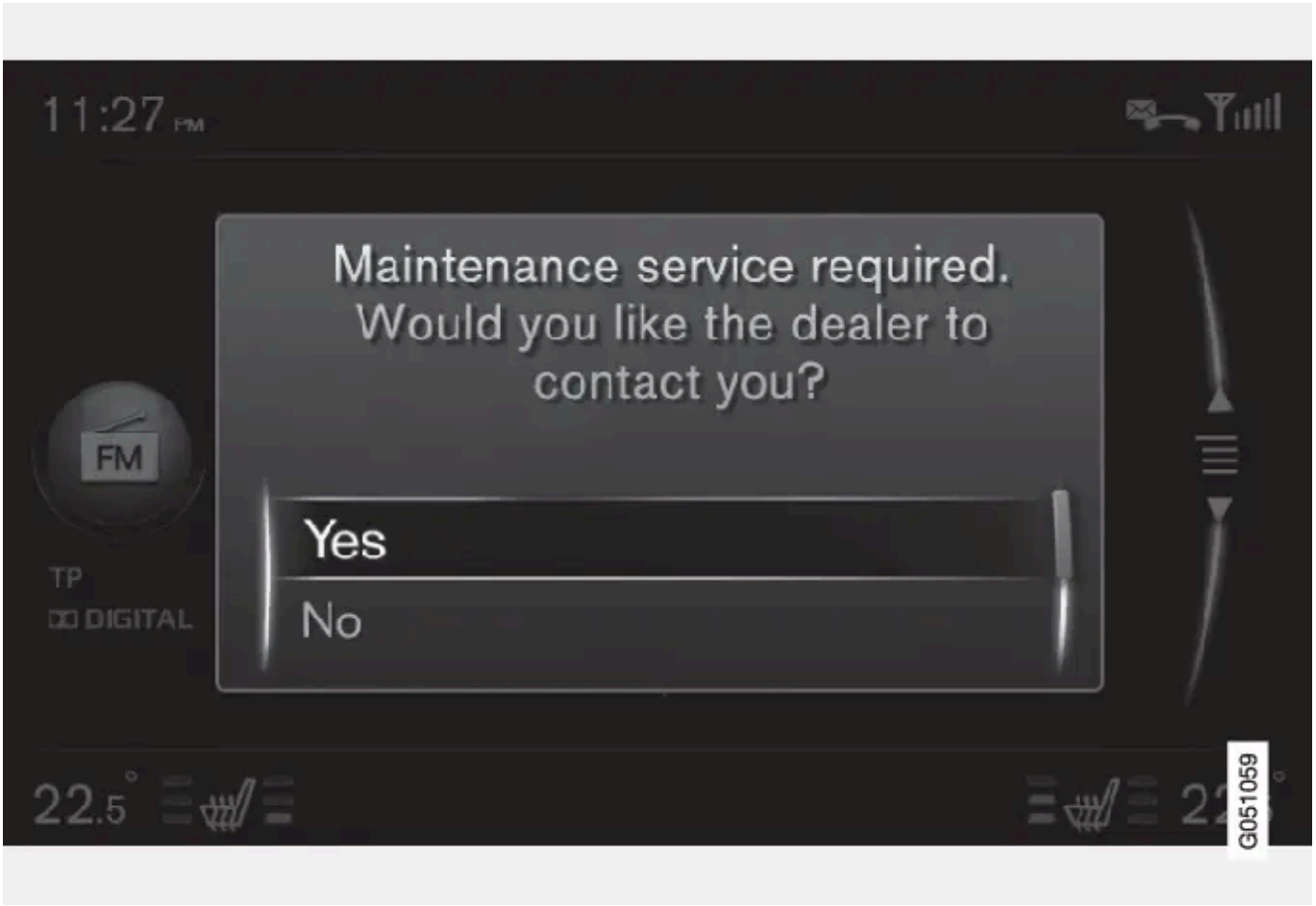
If you request an appointment from your vehicle, with your consent, booking information and data about your vehicle[1] will be transmitted to your preferred retailer.

Using the service

Once the prerequisites have been established, all CSB-related menus can be accessed in MY CAR by pressing OK/MENU and then selecting **Maintenance & repair**.

If the time for the next regularly scheduled service is approaching, if the vehicle requires certain types of repairs or if a system needs to be checked, a message will be displayed. You will then by guided through the steps required to book service or repairs.

On-screen service messages



On-screen service message

The pop-up service alert menu offers the following alternatives:

- **Yes**: The vehicle will transmit a booking request as well as vehicle data directly to your preferred retailer. In return, you will receive an email from this retailer with a link to their booking portal. From a smartphone or a computer, you can select a day and time that suits you and specify any other service requests that you may have. When you have submitted your request, it will be entered into the retailer's booking portal and you will receive immediate confirmation online and via email. The service reminder light in the vehicle's instrument panel will also be turned off remotely by Volvo.
- **No**: No other messages will be displayed on the Sensus screen but the Service Reminder Light on the vehicle's instrument panel will stay on. If you have answered "No", service can still be booked manually (see the following section).
- **Postpone**: The pop-up menu will be displayed that next time the engine is started.

Booking service or repairs manually

Access your Volvo On-Line Service Scheduler portal from a smartphone or a computer to select a day and time that suits you and specify any other service requests that you may have. When you have submitted your request, it will be entered into the retailer's booking portal and you will receive immediate confirmation online and via email.

My Appointments

This displays booking information.

1. Select **Maintenance & repair** → **My Appointments**.

Transmitting vehicle data

In order for a retailer to access vehicle data, the information is initially sent to a central Volvo database (not directly to your retailer) where any retailer can access or search for this information using your vehicle's VIN number. This number can be found in your warranty booklet or on the dashboard at the lower left corner of the windshield.

1. Select **Maintenance & repair** → **Send vehicle data**.

Booking information and vehicle data

When you opt to book service from your vehicle, booking information and vehicle data will be transmitted. Vehicle data consists of a number of parameters in the following areas:

- Service requirements
- Function status
- Fluid levels
- Odometer reading (mileage)
- Vehicle Identification Number (VIN)
- The vehicle's software version

* Option/accessory.

[1] This information includes: service requirements, status of various functions, odometer reading and the vehicle's VIN number and software version.

8.8.3. Applications

Applications (apps) are services that can be used when the vehicle is connected to the Internet. The apps available vary and include services related to navigation, social media, web radio and music.

For basic information on using the infotainment system, see operating the system.

Before any apps can be used, the vehicle has to be connected to the Internet.

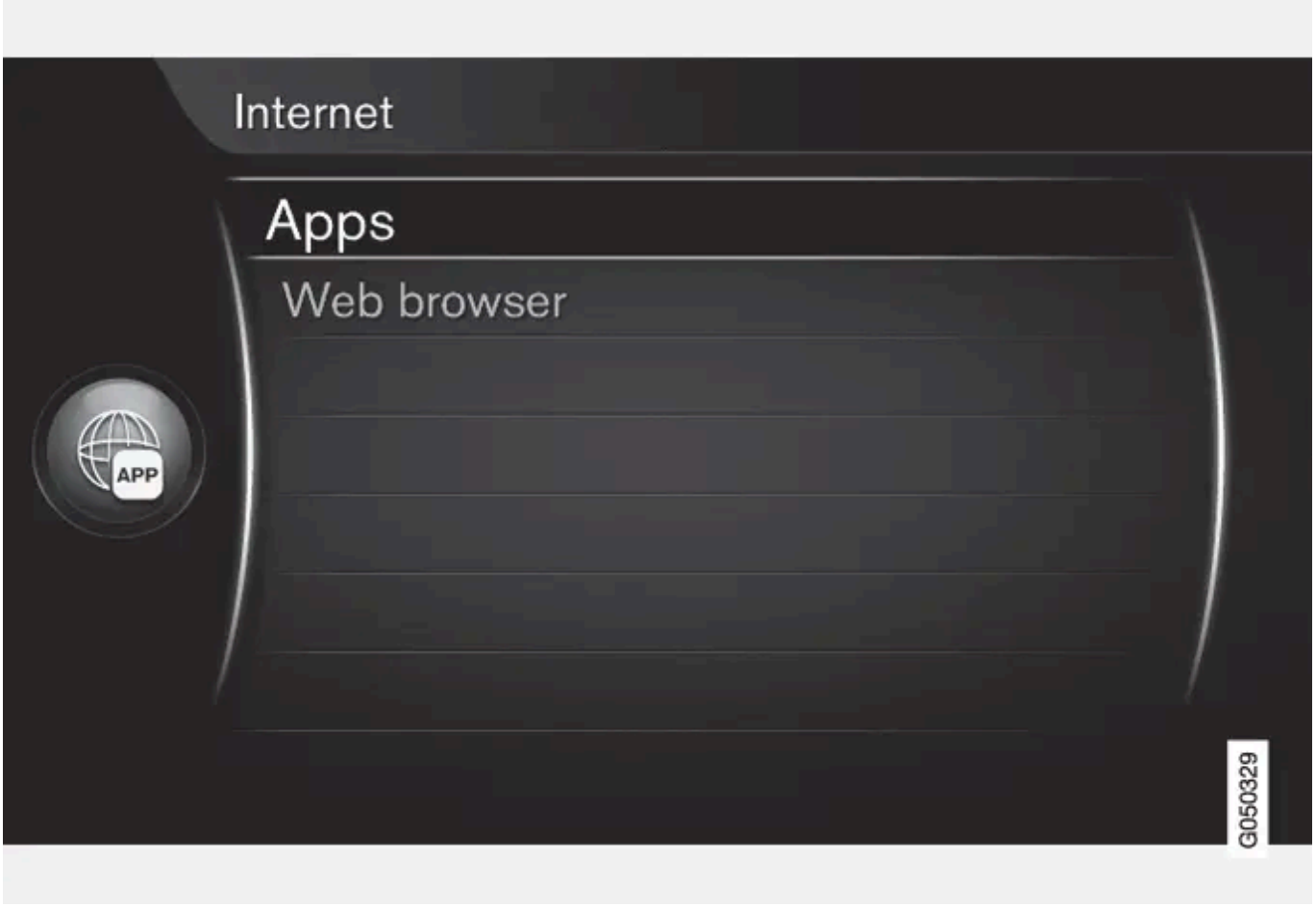
A symbol will be displayed in the upper right corner of the screen when the vehicle is connected. If no Internet connection is available, a message will be displayed.

Note

Data is transmitted while the vehicle is online, which may result in additional charges from your service provider.

Data roaming may result in additional charges.

Contact your service provider for information about costs/fees, etc.



Press the button on the center console and select **Apps** to display the apps that are currently available. Select one from the list and start it by pressing OK/MENU.

The apps are downloaded to the vehicle and are updated each time they are started. This means that an Internet connection is required each time an app is used.

Certain apps require sharing location information. The symbol will be displayed whenever this takes place.

Logging in

There are two types of apps/services that require you to log in:

- Ones that require registration by a service provider. Follow the instructions on the screen when starting apps of this type or use an existing account to log in.
- Certain apps require a personal Volvo ID. Register an ID (see Volvo ID) or use an existing one to access useful functions such as sending an address from a map service on the Internet to a navigation app or to Volvo's Sensus Navigation system*.

Navigation services

Navigation services provide guidance to a preset destination. However, in certain situations beyond the system's control (e.g., very recent road construction, etc.), this guidance may not be accurate.

Warning

- Always use good judgment when following navigation system guidance, and do not follow guidance that seems contrary to your own best judgment.
- Never use the navigation system or any other feature in your vehicle in a way that distracts you from the task of driving safely. Distraction can lead to a serious accident.
- Set and make changes in your navigation system only with the vehicle parked.
- Be aware of the current traffic situation.
- Always comply with relevant traffic regulations.

Note

The optional Sensus Navigation system can be installed (activated) in your vehicle at any time, giving you access to additional functions and map information. Consult your Volvo retailer.

* Option/accessory.

8.8.4. On-screen symbols

The following is an overview of the symbols that may be displayed in the screen's activity/status field.



Activity/status field

Active current functions and in certain cases, their status, are displayed in the activity/status field. Due to limited space, not all activity/status symbols will be displayed at all times.

Symbol	Explanation
	Connecting to the Internet via Bluetooth®.
	Connected to the Internet via Bluetooth®.
	No Internet connection via Bluetooth®.
	Connecting to the Internet via Wi-Fi.
	Connected to the Internet via Wi-Fi.
	No Internet connection via Wi-Fi.
	Connected to the Internet via Wi-Fi via roaming (for connections in other countries).
	Connecting to the Internet via the integrated modem* [1]. The number of bars illuminated indicates the strength of the signal. The type of connection is indicated under the bars.
	Connected to the Internet via the integrated modem* [1].
	No Internet connection via the integrated modem* [1].
	The integrated modem* [1] is connected to the Internet via roaming (for connections in other countries).
	This symbol is displayed when the vehicle's position is being transmitted.
	Cell phone connected.
	Missed call(s).
	Call in progress.

Symbol	Explanation
	Unread text message.
	Microphone muted.
	Audio muted.
	SOS service [1] active.
	ON CALL service [1] active.

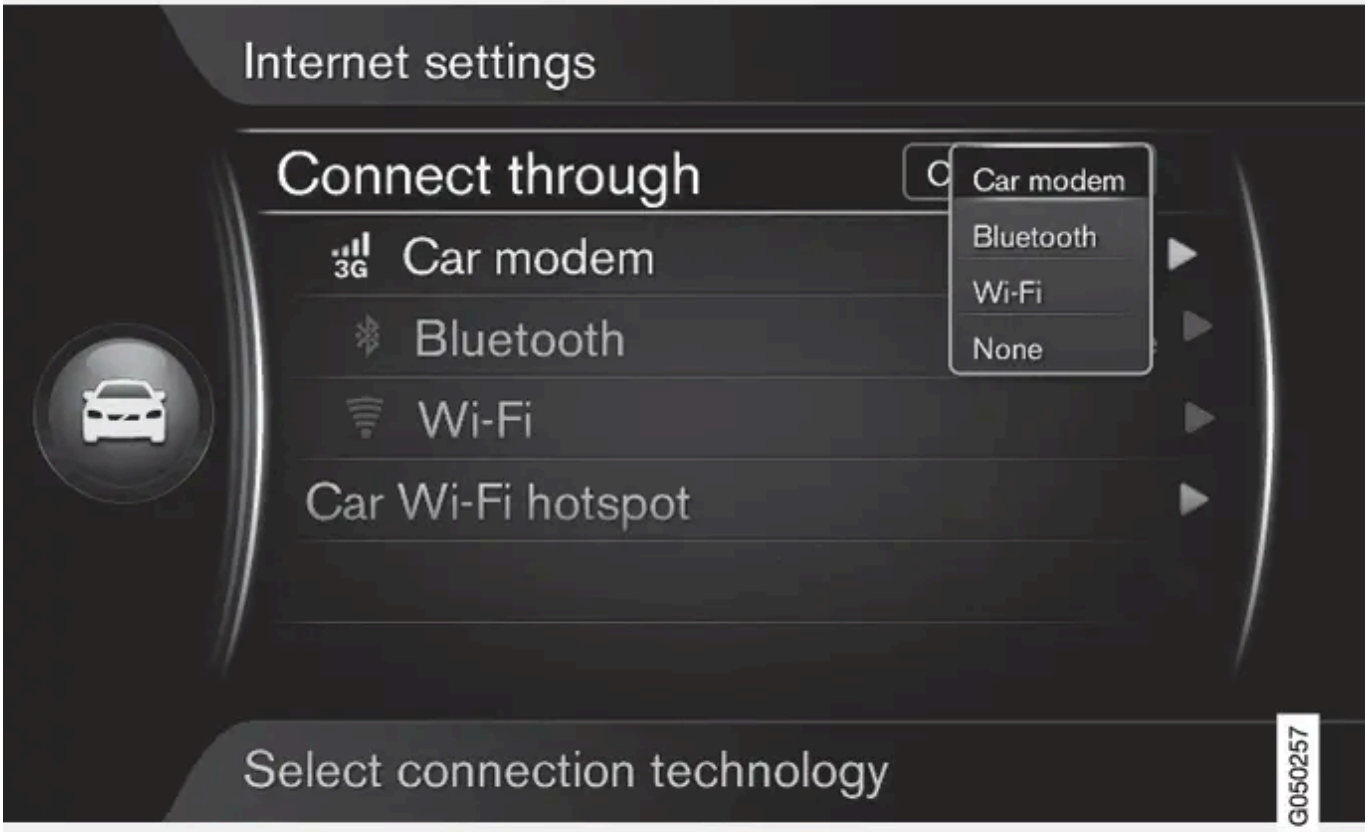
* Option/accessory.

[1] Models with Volvo On Call only.

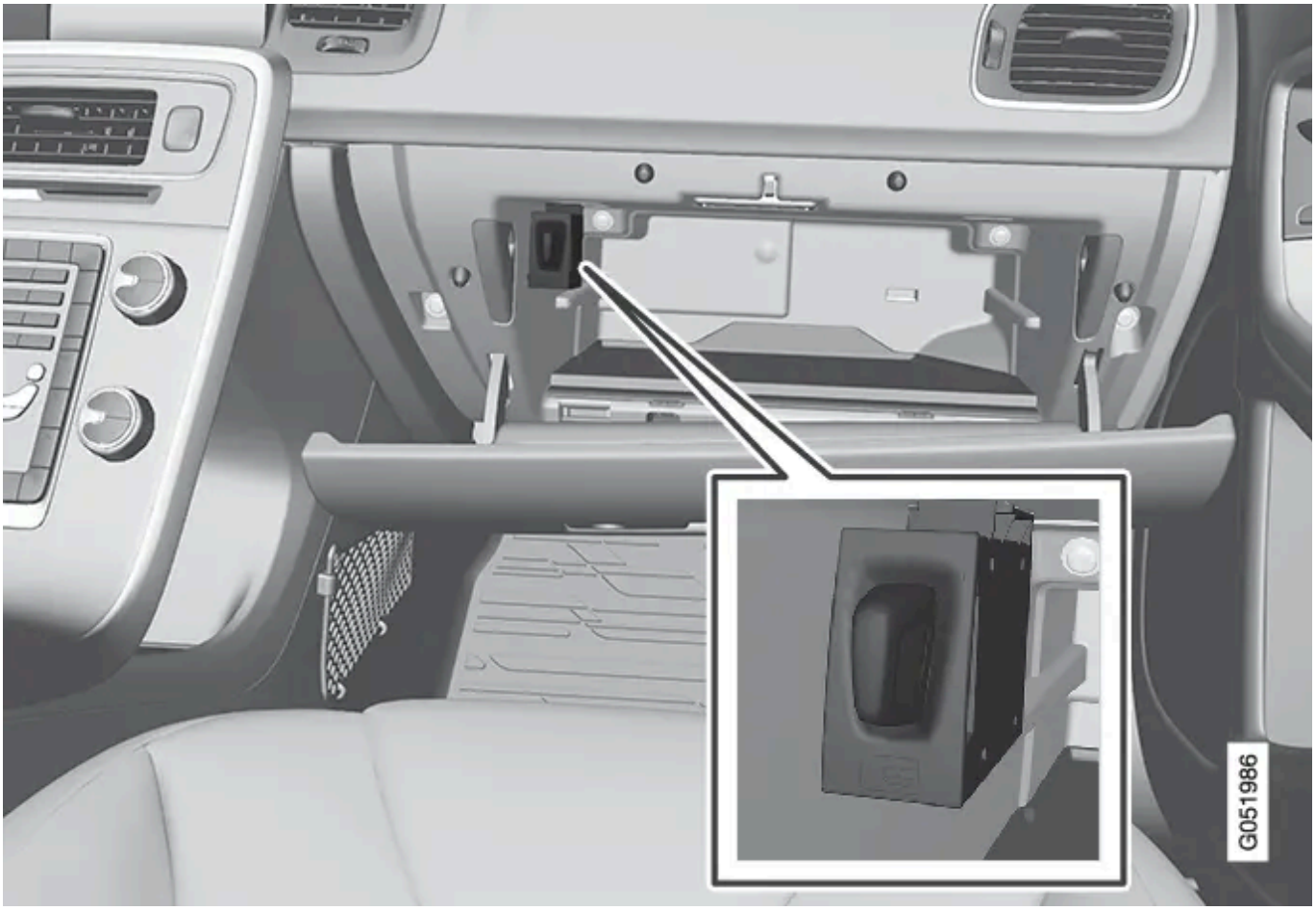
8.8.5. Car modem* [1]

The vehicle is equipped with a modem that can be used to connect to the Internet. This connection can also be shared via Wi-Fi.

Internet connection



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SIM card holder in the glove compartment

1. Insert your personal SIM card in the holder located in the glove compartment.
2. Press the MY CAR button on the center console to display this mode's normal view. Press OK/MENU and select **Settings** → **Internet settings** → **Car modem**.
3. Enter the SIM card's PIN code.

> The vehicle will now connect to the Internet and the various on-line functions can be used, see Internet connection.

Note

- The data subscription in the vehicle must be active in order to connect to the Internet.
- To avoid having to enter the PIN code each time the ignition is switched on, the SIM card can be unlocked in the menu system. To do so, press the MY CAR button on the center console to display this mode's normal view. Press OK/MENU and select **Settings** → **Internet settings** → **Car modem**. Deselect (unmark) the **Lock SIM card** box.

From MY CAR's normal view, press OK/MENU and select **Settings** → **Internet settings** → **None** to turn off the Internet connection.

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Sharing a Wi-Fi hotspot (tethering)



When an Internet connection has been established using the modem, this connection (a Wi-Fi hotspot) can be shared (tethered) to enable other devices in the vehicle to use the modem.

1. From MY CAR's normal view, press OK/MENU and select **Settings** → **Internet settings** → **Car Wi-Fi hotspot**

   Enter a name for the Wi-Fi network (SSID) and specify a password. The name must contain 6-32 characters and the password must contain 10-63 characters. The name and password can be changed at any time.

2. Activate the vehicle's Wi-Fi hotspot by checking the box on the screen.

> External devices can now connect to the vehicle's Wi-Fi hotspot.

To deactivate, remove the check from the box.

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Up to 8 devices can be connected to the vehicle's Wi-Fi hotspot. To view the number of devices connected, from MY CAR's normal view, press OK/MENU and select **Settings** → **Internet settings**.



Number of devices connected to the Wi-Fi hotspot

For certain connected devices, from MY CAR's normal view, press OK/MENU and select **Settings** → **Internet settings** → **Car Wi-Fi hotspot**.

Wi-Fi hotspot technical specifications and security

Wi-Fi hotspot tethering uses a frequency of 2.4 GHz. If several devices use this frequency simultaneously, this may result in slower access times.

- Frequency: 2.4 GHz.
- Standards: 802.11 b / g / n.
- Security certificate: WPA2-AES-CCMP.
- The antenna for the vehicle's modem is located on the roof.

No or poor Internet connection

See Internet connection.

* Option/accessory.

[1] Models equipped with Volvo On Call with Sensus Connect* only.

8.8.6. Browser

The infotainment system has an integrated web browser for searching for and displaying Internet content.

The web browser supports the HTML 4 standard for text and graphics. However, it does not support animations, video or audio. Information cannot be downloaded or saved.

In order to use the web browser, the vehicle must first be connected to the Internet.

> **Note**
>
> Data is transmitted while the vehicle is online, which may result in additional charges from your service provider.
>
> Data roaming may result in additional charges.
>
> Contact your service provider for information about costs/fees, etc.

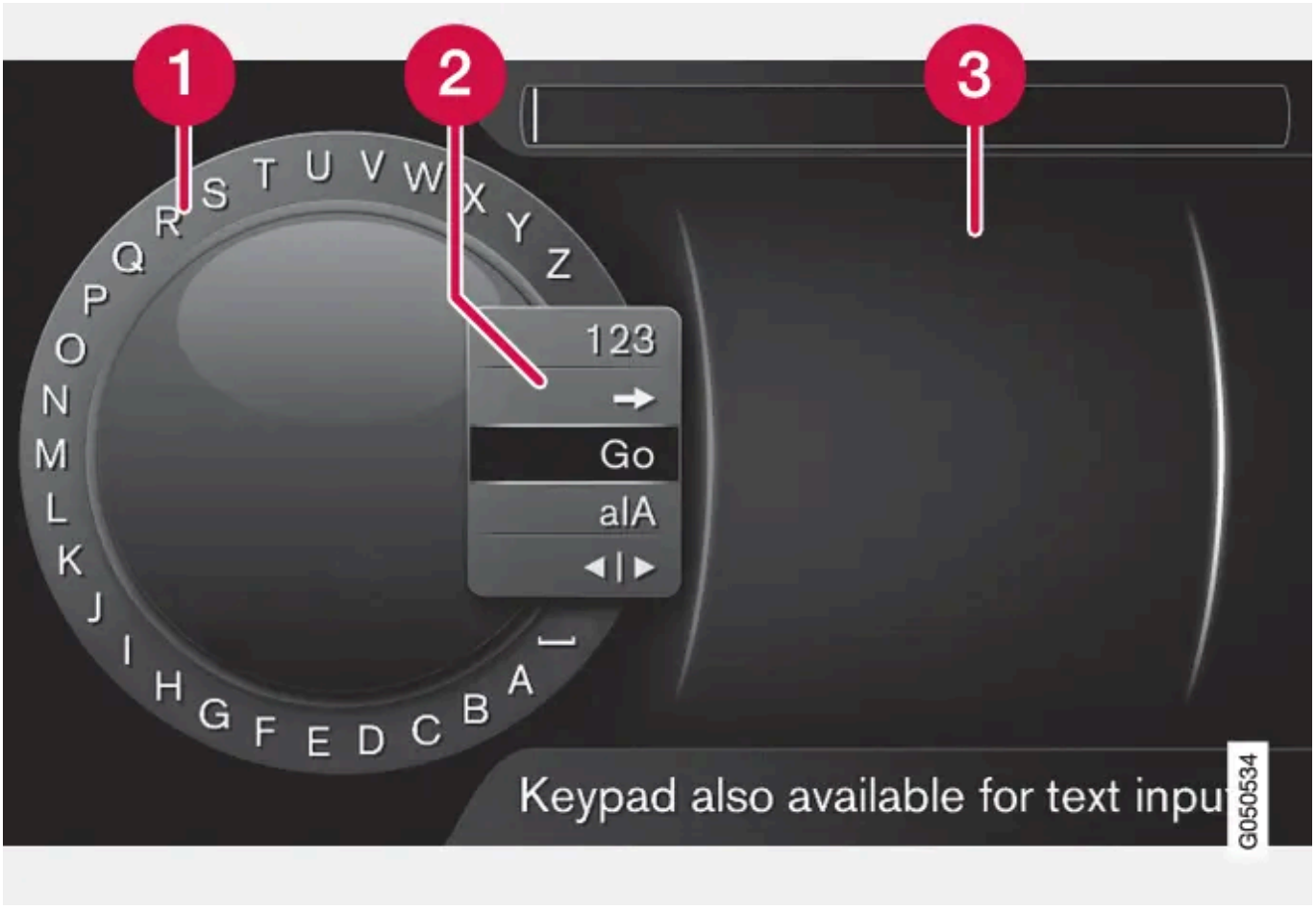
> **Note**
>
> The web browser is not available while the vehicle is moving.

Press the Internet button (🌐) on the center console and select **Web browser**.

For Bluetooth® Internet connections, the Bluetooth® symbol will appear in the upper-right corner of the display.

If no Internet connection is available, a message indicating this will be displayed.

Searching for information



Searching using the text wheel

1 List of characters

2 Switching between character entry modes (see the following table)

3 Surf history

Use the text wheel to enter a web address.

1. Turn TUNE to the desired letter and press OK/MENU to confirm. The number/letter keys on the center console can also be used.
2. Continue to the next letter, etc. The results of the search will be displayed in the phone book.
3. To switch from letter entry mode to the entry mode for numbers or special characters, or to go view surf history, turn TUNE to one of the selections (see the explanation in the following table) in the list for switching character entry mode (2) and press OK/MENU.

123/ABC	Toggle between letters and numbers by pressing OK/MENU.
=>	This leads to surf history. Turn TUNE to select a web address and press OK/MENU to go to the website.
Go	Go to the website by pressing OK/MENU.

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a|A	Toggle between upper and lower case letters by pressing OK/MENU.
{ | }	Switch from the text wheel to the **Address:** field. Use TUNE to move the cursor and erase characters by pressing EXIT. Press OK/MENU to return to the text wheel. The number/letter keys on the center console can also be used to edit the **Address:** field.

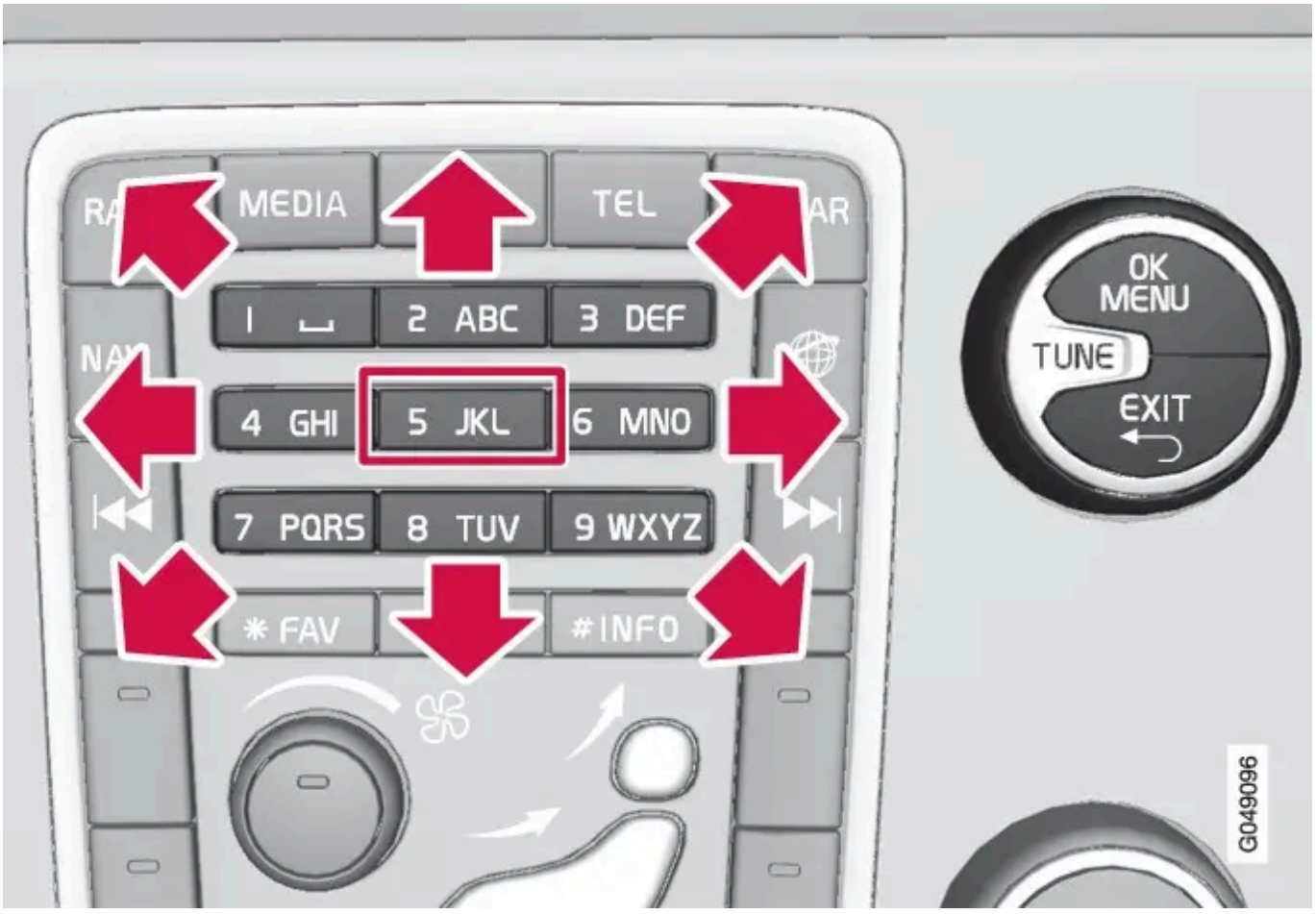
Press EXIT briefly to erase a single character. Press and hold EXIT to erase all characters.

Pressing a number key on the center console while the text wheel is displayed (see the previous illustration) will display a list of characters. Press the desired key repeatedly to enter the desired letter and continue to the next letter, etc.

To enter a number, press and hold the button.

Navigating in the web browser

Turn TUNE to navigate among links or to scroll on a web page. Press OK/MENU to activate the selection/link.



Moving the cursor on a web page

The buttons on the center console can be used to move the cursor on a web page.

A pop-up menu can be accessed by pressing button **5** on the center console or by moving the cursor to a non-clickable area and pressing OK/MENU.

Functions

The available functions can be accessed by pressing button **5** on the center console or by moving the cursor to a non-clickable area and pressing OK/MENU.

- **Back** – Return to the previous page.
- **Forward** – If **Back** has been used, press forward to return to the page.
- **Reload** – Refresh the page.
- **Stop** – Stop loading a page.
- **New tab** – Creates a new tab/page. Up to 4 tabs can be open at the same time.
- **Close tab** – Close a tab/page.
- **Zoom in**/**Zoom out**.
- **Add bookmark**/**Delete bookmark** – Add or delete a bookmark. Up to 20 bookmarks can be saved.
- **Settings** – Adapt the way that the browser displays and handles information. See the following section for more information.

Settings

- **Bookmarks** – **Rename**, **Reorder** or **Delete**.
- **Content filtering** – Adapt the way in which web pages are displayed. The following can be activated/deactivated: **Show images**, **Block pop-ups** and **Enable JavaScript**.
- **Accept cookies** – Cookies are small text files that are stored and make it possible e.g., to use various functions on web pages and enable the page's owner to compile surf statistics.
- **Text size** – Change the size of the text: **Large**, **Medium** or **Small**.
- **Clear browsing data** – **Cookies, browsing history and cache will be cleared**.
- **FAV key options** – Certain functions can be programmed in the FAV button. The stored function can then be started by merely pressing FAV, see Favorites.

8.8.7. Internet map[1]

This feature makes it possible to display map and route information.

The system can calculate a suitable route and indicate your vehicle's position in relation to the route on the map. If you deviate from your planned route, the system automatically recalculates the route and guides you to your destination. In addition to map information, symbols for selected points of interest (POI) will also be displayed.

This feature will not function in areas where the vehicle is unable to connect to the Internet.

If the Internet connection is weak or is interrupted, route calculation will not function correctly and certain map scales may not be available, depending on the amount of map information that was buffered before the connection was broken.

Volvo offers a full-scale navigation system (Sensus Navigation) that utilizes harddisk-based maps, voice guidance, advanced route calculation including traffic information, Internet search functionality and the capacity to select intermediate destinations. Contact your Volvo retailer to upgrade to Sensus Navigation. This upgrade will replace Internet map.

Internet map provides information that guides you to your destination. However, all of the recommended guidance is not always reliable, since situations may arise that are outside the capacity and judgement of the navigation system, such as sudden changes in the weather.

Warning

- Always use good judgment when following navigation system guidance, and do not follow guidance that seems contrary to your own best judgment.
- Never use the navigation system or any other feature in your vehicle in a way that distracts you from the task of driving safely. Distraction can lead to a serious accident.
- Set and make changes in your navigation system only with the vehicle parked.
- Be aware of the current traffic situation.
- Always comply with relevant traffic regulations.
- Due to weather conditions or time of year affecting the road conditions, some recommendations may be less reliable.

[1] Not available in all markets.

8.9. Media player

8.9.1. CD/DVD

The media player can play commercially purchased discs as well as ones that you have burned yourself.

The media player supports and can play the following types of discs and files:

- Purchased CDs/DVDs (CD/DVD Audio).
- Purchased DVDs (DVD Video).
- Home-burned CDs/DVDs containing audio files.

For more information about compatible file formats, see Media player – compatible file formats.

In order to play, a disc may not contain more than 5,000 files (including playlists).

Note

The media player may not be able to read all copyrighted or home-burned audio files.

The FAV button can be used to store frequently used functions. The stored function can then be started by pressing FAV, see Favorites.

Playing an audio CD/DVD and navigating menus

From the disc´s normal view, press OK/MENU and turn TUNE to display the disc's menu structure. Navigate through this structure by turning TUNE.

Play a track by pressing OK/MENU.

Playing an home-burned CD/DVD and navigating menus

If a disc with audio/video files is inserted, its folder structure will be read by the system. It may take several seconds until the disc begins playing, depending on its quality and the amount of information it contains.

From the disc´s normal view, press OK/MENU and turn TUNE to access the disc's folder structure or to search among categories. Navigate in this structure by turning TUNE and select a folder by pressing OK/MENU. Leave the structure by pressing EXIT.

Play a file by pressing OK/MENU.

When the file is finished, the next one will begin playing. When all of the files in a folder have been played, the media player will automatically select another folder.

Playing a DVD video and navigating menus

For information about playing video DVDs, see Playing and navigating in DVDs.

Media searches

Searches can be performed on all of your devices (USB, CD, etc.). For more information about the search functions.

8.9.2. Media Bluetooth®

The media player is equipped with Bluetooth® for streaming audio files from external Bluetooth®-enabled devices such as cell phones, tablets, etc.

The device must be paired with and connect to the infotainment system.

For more information about listening to music and navigating in the menus, see Infotainment – operating the system. The following provides detailed information.

Certain functions can be stored in the FAV button. A stored function can then be started easily by pressing FAV, see Favorites.

Playback and navigation

Playback and navigation are controlled using the buttons in the center console or the steering wheel keypad. It is also possible to change tracks from certain external devices.

When a cell phone is connected to the infotainment system, it is also possible to remote-control some of the phone's features, see Bluetooth® hands-free system. Toggle between TEL and MEDIA modes to control the various devices' functions.

Note

- Bluetooth® devices must support Audio/Video Remote Control Profile (AVRCP) and Advanced Audio Distribution Profile (A2DP). The phone must use AVRCP version 1.3 and A2DP 1.2. If older versions of these standards are used, certain features may not function properly.
- Not all cell phones or other devices are fully compatible with the Bluetooth® function in the vehicle's media player. A list of compatible phones and other devices is available at you Volvo retailer.
- The media player can only play audio files via Bluetooth®.

8.9.3. External audio sources via the AUX/USB sockets

External audio sources such as an iPod® or an mp3 player can be connected to the infotainment system.



A device with rechargeable batteries can be recharged when it is connected to the USB socket (if the ignition is on or the engine is running).

The FAV button can be used to store frequently used functions. The stored function can then be started by pressing FAV, see Favorites.

Listening and navigating menus

An audio source connected to the USB socket can be operated using the infotainment controls. This is not the case for a device connected via the AUX socket.

From the source's normal view, turn TUNE to access the folder structure or to search among categories. Navigate in this structure by turning TUNE and select a folder by pressing OK/MENU. Leave the structure by pressing EXIT.

Play a file by pressing OK/MENU.

When the file is finished, the next one will begin playing. When all of the files in a folder have been played, another folder will automatically be selected.

Media searches

Searches can be performed on all of your devices (USB, CD, etc.). For more information about the search functions, see Media Search.

USB flash drive

To simplify the use of a USB flash drive, it is advisable to only store music files on it. It will take considerably longer for the system to index the files on the drive if it contains anything other than compatible music files.

> **Note**
>
> The system supports removable media that uses the USB 2.0 standard and the FAT32 file system.

> **Note**
>
> When using a longer type of USB device, connecting it with a USB adapter cable will help reduce mechanical wear on the USB socket and on the device.

Technical specifications

Max. number of files	15,000
Max. number of folders	1,000
Max. number of folder levels	8
Max. number of playlists	100
Max. number of tracks in a playlist	1,000
Subfolders	No limit

Mp3 player

Many MP3 players have a file indexing system that is not supported by the vehicle's infotainment system. In order to use an MP3 player, the system must be set to **USB Removable device/Mass Storage Device**.

iPod®



Note

The system will only play audio files from an iPod®.

Note

To start playback, the source should be set to iPod® (not USB).

When iPod® is used as a sound source, the infotainment system has a menu structure similar to the one in the iPod®.

8.9.4. Media Player

The media player can play audio and video files from CDs/DVDs and external devices connected to the AUX/USB sockets. Audio files can also be streamed from Bluetooth®-enabled devices. Certain media players can also communicate with cell phones via Bluetooth®.

Connecting to the Internet may also make it possible to listen to web radio, audio books and to use music services, see .



Media player controls

For more information about listening to music and navigating in the menus, see Infotainment – operating the system.

Certain functions can be stored in the FAV button. A stored function can then be started easily by pressing FAV, see Favorites.

Gracenote MusicID®

Gracenote MusicID® is the industry standard for music recognition. This technology is used to identify and provide cover art and music information for CDs, digital music files on media players and Internet music services.

8.9.5. Media player – compatible file formats

The media player supports a number of different types of files that are listed in the following tables.

Compatible CD/DVD formats

Note

Dual format (double-sided discs) such as DVD Plus or CD-DVD are thicker than normal discs and may not play in your infotainment system.

If a disc containing both CDDA and MP3 tracks is played, all MP3 tracks will be ignored.

Audio formats	CD-Audio, mp3, wma, aac, m4a
Video formats	DVD-Video

Compatible USB formats

The audio and video files in the following table are supported by the system for playback through the USB socket.

Audio format	mp3, mp4, wma, aac, m4a, m4b
Video format	–

MP3 audio specifications

Format	kHz	kbps
MPEG-1/Audio	32	32–320[1]
	44.1	32–320[1]
	48	32–320[1]
MPEG-2/Audio	16	8–160
	22.05	8–160
	24	8–160
MPEG-2.5/Audio	8	8-64
	11.025	8-64
	12	8-64

WMA audio specifications

In order to play, a file must meet the following criteria:

WMA version	8.x, 9.x, 10.x, Pro

AAC audio specifications

In order to play, a file must meet the following criteria:

Audio format	MPEG-2 and MPEG-4
Audio sampling rate	8–96 kHz
Channels (ch)	1ch and 2ch

WAV audio specifications

In order to play, a file must meet the following criteria:

Audio sampling rate	Up to 44.1 kHz
Channels (ch)	1ch and 2ch
Audio bit rate	16 kbps for 1ch

The .wav format also supports the PCM format.

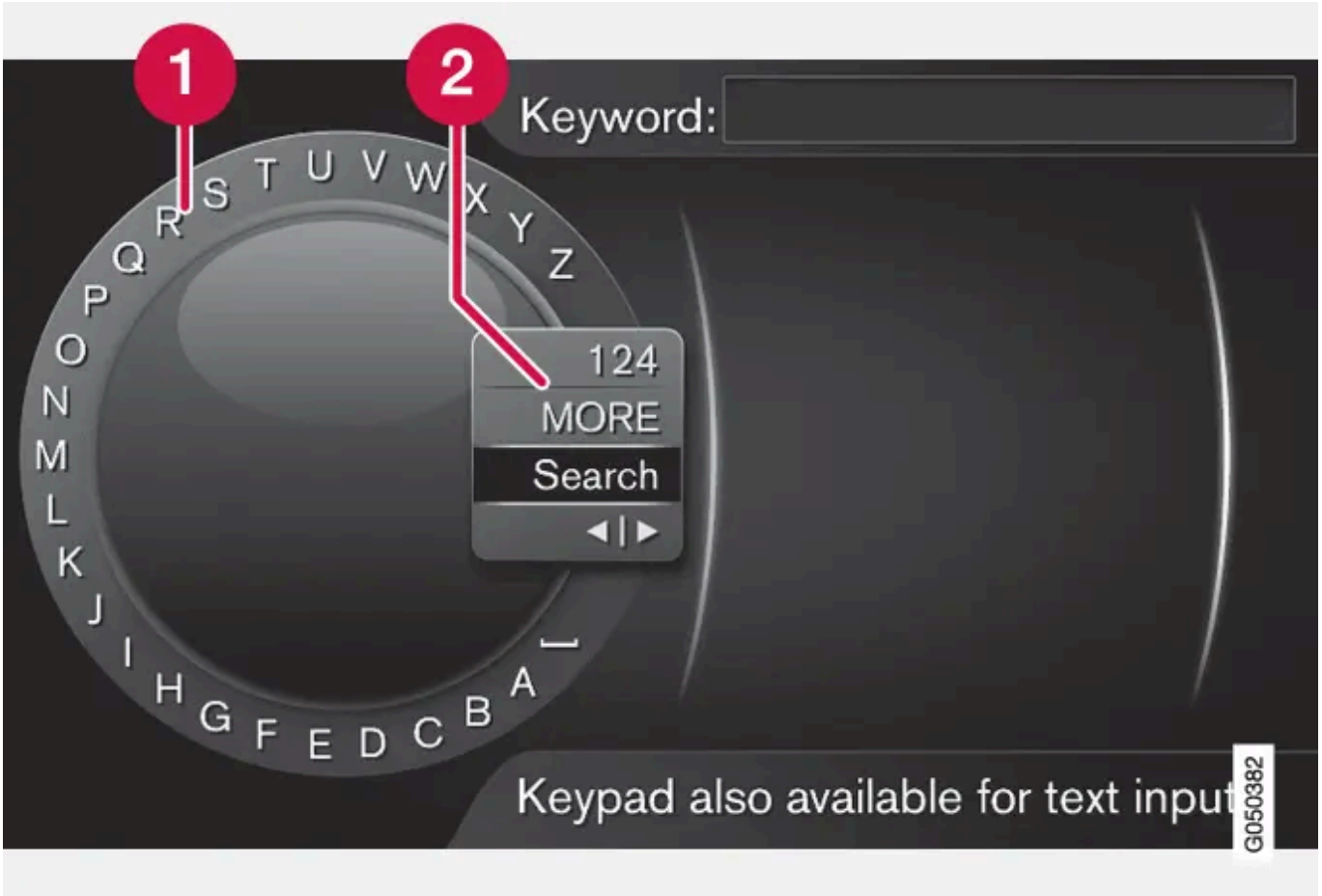
[1] Not 144 kbps.

8.9.6. Media Search

You can search for music in your connected devices. The search includes USB and discs.

To start a search, press OK/MENU from the source's normal view and select **Media search**.

Search functions



Search using the text wheel

1 Character list

2 Switch between character entry modes (see the following table)

The text wheel can be used to enter text. To use it:

1. Turn TUNE to the desired letter and press OK/MENU to confirm. The number/letter keys on the center console can also be used.

   To switch from letter entry mode to the entry mode for numbers or special characters, or to go to the list of results, turn TUNE to one of the selections (see the explanation in the following table) in the list for switching character entry mode (2) and press OK/MENU.

2. Continue entering the remaining characters in the same way.
3. When you have finished entering the search criteria, select **Search**.

> The search will be conducted. The results will be displayed and grouped in the following categories: artist, album track, year and composer.

4. Turn TUNE to a category and press OK/MENU.
5. Turn TUNE to select a device and press OK/MENU to begin playback.

123/ABC	Toggle between letters and numbers by pressing OK/MENU.
MORE	Switch to special characters by pressing OK/MENU.
Search	Start the media search.
{ | }	Switch from the text wheel to the **Keyword:** field. Move the cursor by turning TUNE. Erase any characters by pressing EXIT. Press OK/MENU to return to the text wheel. Please note that the letter/number keys on the center console can be used to make changes in the **Keyword:** field.

Press EXIT briefly to erase a single character. Press and hold EXIT to erase all of the characters that have been entered.

If a number key on the center console is pressed while the text wheel is displayed (see the previous illustration), a list of characters will be displayed. Press repeatedly on the key to access the desired letter. Continue with the next letter, etc. When a key has been pressed, this will be confirmed when the next key is pressed.

8.10. Phone book

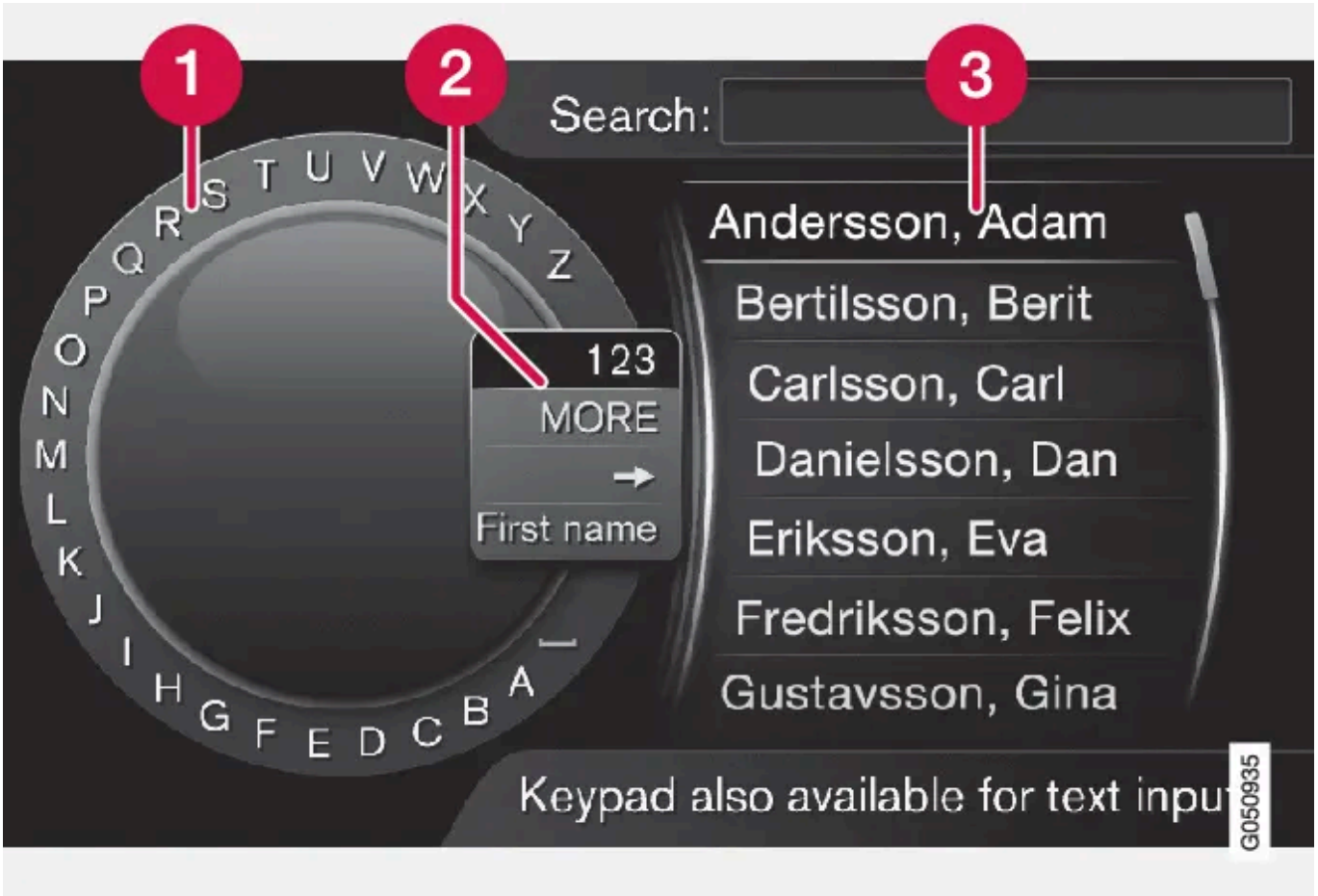
8.10.1. Phone book – character table for the center console keypad

The following table shows the characters that can be accessed by pressing the respective keys on center console. Press once for the number on the key and continue pressing to reach the desired letter on the key.

Button	Function
1 ␣	Space . , - ? @ : ; / ( ) 1
2 ABC	A B C Å Ä Æ À Ç 2
3 DEF	D E F È É 3
4 GHI	G H I Ì 4
5 JKL	J K L 5
6 MNO	M N O Ö Ø Ñ Ò 6
7 PQRS	P Q R S ß 7
8 TUV	T U V Ü Ù 8
9 WXYZ	W X Y Z 9
0 +	+ 0 p w
#INFO	# *

8.10.2. Searching for phone book contacts

The following is the procedure for searching for contacts in you're your phone book



Search using the text wheel

1 Character list

2 Switch between character entry modes (see the following table)

3 List of phone book contacts

To search for contacts in telephone´s normal view, press OK/MENU and select **Contacts**.

1. Turn TUNE to the desired letter and press OK/MENU to confirm. The number/letter keys on the center console can also be used.
2. Continue with the remaining characters in the contact's name. The search results will be listed in the phone book (3).
3. To switch from letter entry mode to the entry mode for numbers or special characters, or to go to the pone book, turn TUNE to one of the selections (see the explanation in the following table) in the list for switching character entry mode (2) and press OK/MENU.

123/ABC	Toggle between letters and numbers by pressing OK/MENU.
MORE	Switch to special characters by pressing OK/MENU.
=>	This leads to the phone book (3). Turn TUNE to select a contact and press OK/MENU to display the contact's information.
First name/Last name	Toggle between first-/last name sort order in the phone book.

Press EXIT briefly to erase a single character. Press and hold EXIT to erase all of the characters that have been entered.

If a number key on the center console is pressed while the text wheel is displayed (see the previous illustration), a list of characters will be displayed. Press repeatedly on the key to access the desired letter. Continue with the next letter, etc. When a key has been pressed, this will be confirmed when the next key is pressed.

8.10.3. Phone book

The list of contacts (phone book) displayed on the infotainment system's screen mirrors the phone book in the currently connected cell phone.

The  symbol must be displayed at the top of the infotainment system's screen and the hands-free system must be in telephone mode before the phone book can be used.

For incoming calls, if the phone book contains information about the caller, it will be displayed on the screen.

Note

Mirroring (syncing contacts) must be activated when a cell phone is connected to the infotainment system before the phone book can be displayed on the center console screen. Depending on the type of phone, the following may happen:

- A pop-up window or notification will be displayed and accepted in the phone.
- Accept mirroring (activate "Sync contacts" or similar) in the phone's Bluetooth® settings.

It may be necessary to disconnect and reconnect the phone from the infotainment for mirroring to take place.

8.10.4. Quick phonebook searches

From the telephone’s normal view, turn TUNE clockwise to display the list of contacts (phonebook).

Turn TUNE to scroll to a contact and press OK/MENU to make a call.

The primary phone number will be displayed below the contact's name. If there is a ▼ symbol to the right of the contact's name, this indicates that there are other phone numbers stored for this contact. Press OK/MENU to display these numbers. Turn TUNE to select one of the other phone numbers and press OK/MENU to make a call.

Search the phone book by entering the beginning of the contact's name using the center console keypad, see also Phone book – character table for the center console keypad.

8.11. Radio

8.11.1. SiriusXM™ satellite radio*

The SiriusXM™ satellite system consists of a number of high elevation satellites in geosynchronous orbit.

Listening to satellite radio

The digital signals from the satellites are line-of-sight, which means that physical obstructions such as bridges, tunnels, etc, may temporarily interfere with signal reception.

Avoid any obstructions, such as metallic objects transported on roof racks or in a ski box, or other antennas that may impede signals from the SiriusXM™ satellites.

Selecting SiriusXM™ radio mode

1. With the infotainment system switched on, press RADIO.

2. Turn TUNE or the thumb wheel on the steering wheel keypad to scroll to **Sirius** and press OK/MENU or the thumb wheel on the steering wheel keypad.

Activating SiriusXM™ radio

1. Tune to a satellite channel that has no audio, which means that the channel is unsubscribed and the text **Subscription update needed** is displayed (see also "Selecting a channel").
2. Call SiriusXM™ at 1-888-539-7474.
3. If you tune to an unsubscribed channel, the SiriusXM™ ID will be displayed (see "SiriusXM™ ID" below for an alternative method of displaying the ID).
4. **Updating subscription** will be displayed while the subscription is being updated, after which the display will return to the normal view.

Traffic information

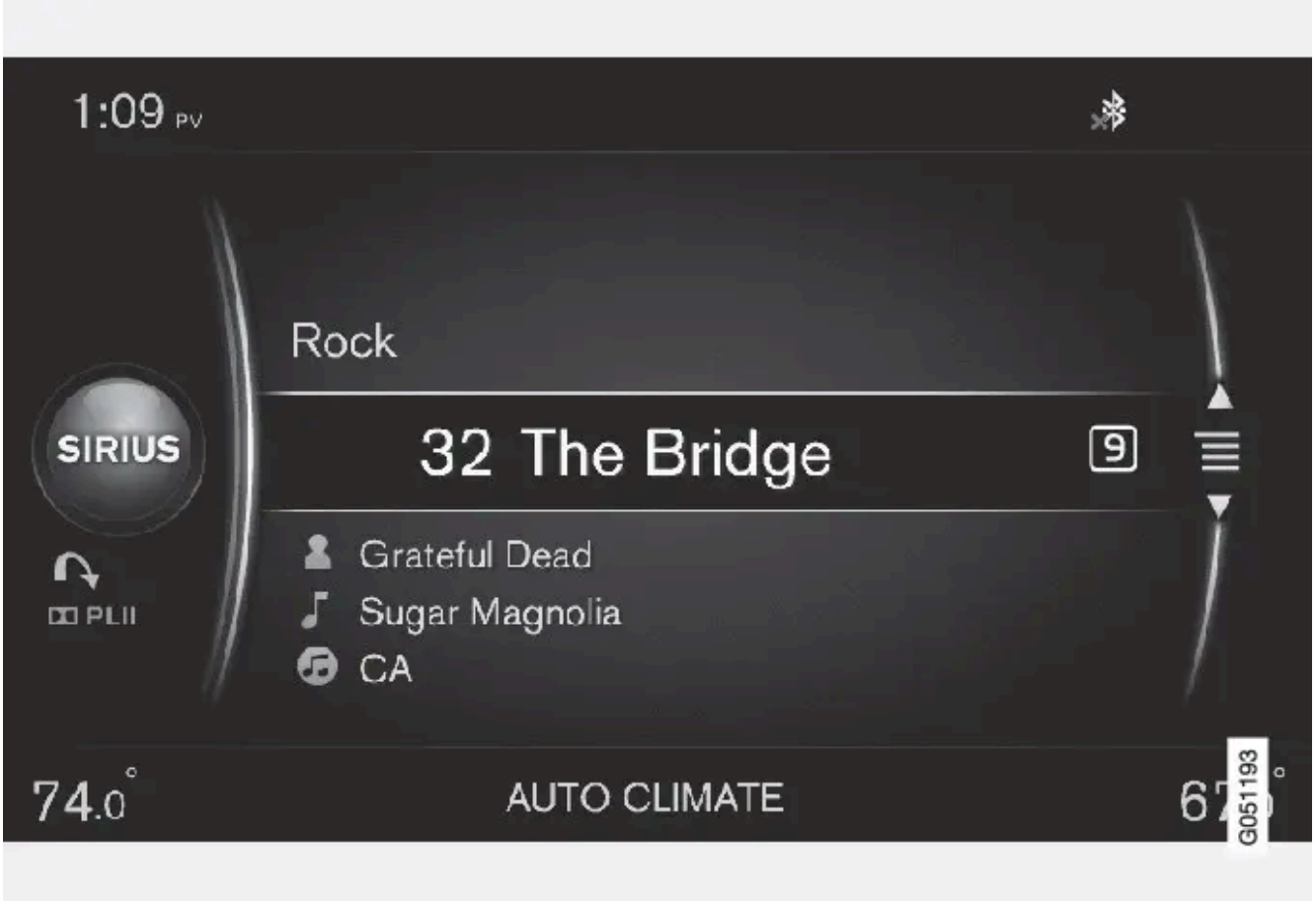
This feature interrupts regular programming to provide you with information about traffic jams, accidents, etc.

To activate:

1. With Sirius activated, press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to display the Sirius menu.
2. Scroll to **Traffic announcement** and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to open a list where you can switch this feature on or off, or select an area from which you would like to receive traffic information.

> If you have activated the function, a curved arrow symbol will appear under the Sirius symbol on the left side of the screen - see the following illustration. You will then receive traffic information **from the traffic channel** in the area that you have se-

lected (i.e., the radio will switch from the current channel to the traffic channel), regardless of which mode (RADIO, MEDIA, etc.) that you are currently using.



3. Press EXIT to leave this list.

If the current radio programming is interrupted by a traffic announcement:

- Press the thumb wheel on the steering wheel keypad or OK/MENU on the center console. The pop-up window on the screen will close but the traffic announcement will continue.
- Press EXIT to close the pop-up window and reject the traffic announcement. The radio will return to the previous radio broadcast.

Traffic channel toggling

If the radio program that you are listening to is interrupted too often by traffic information, do as follows:

1. Save the channel that you are currently listening to (or the channels that you frequently listen to) as a preset .
2. Activate the traffic function if you have not already done so (see the information above)
3. The first time your current channel is interrupted by traffic information, accept by pressing the thumb wheel or OK/MENU.

> The radio will switch automatically to the traffic channel in the area that you have selected.

4. Save the traffic channel as a preset.

The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.

5. Toggle at any time between the channels ("your" channel and the traffic channel) using the keys used to store the presets on the center console.

SiriusXM™ ID

The SiriusXM™ ID (sometimes referred to as the Electronic Serial Number or ESN) is required when contacting the SiriusXM™ Call Center. It is used to activate your account and when making any account transactions.

To display the ID

1. With Sirius activated, press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to display the Sirius menu.
2. Scroll to **Sirius ID** and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console.

Sirius menus

From the main Sirius screen, press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to open the Sirius menu screen. The following alternatives are available:

Browse categories

See SiriusXM™ satellite radio - selecting categories/channels.

Show

Scroll to **Show** and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to open a drop-down menu offering the following selections:

- **Radio text**: this displays information describing the channel that you are currently listening to.
- **Presets**: this displays a list of preset channels and the numbers of the keys on the center console under which they have been stored. Press the respective keys to tune to the stored channels.
- **None**: No text will be displayed.

Scroll to your choice, press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to select.

> **Note**
>
> Pressing the FAV button on the center console enables you to toggle between the selections above (see also the section **FAV key functions** for details.)

Channel list information

Scroll to **Channel list information** and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to open a drop-down menu offering the following selections:

- **Channel name**: the channel list will display the name of the current channel.
- **Artist**: the channel list will display the name of the artist that you are currently listening to.
- **Title**: the channel list will display the name of the track that you are currently listening to.

Scroll to your choice, press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to select.

The information that you have selected will also be displayed on the screen.

> **Note**
>
> Pressing the INFO button on the center console while the channel list is displayed enables you to toggle between the selections above.

Sirius ID

See the section "SiriusXM™ ID" above for detailed information.

FAV key options

Scroll to **FAV key options** and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to open a pop-up menu offering the selections:

- **Toggle radio text or Presets**: press FAV to toggle between radio text and a list of preset channels.
- **No function**

Scroll to your choice, press the thumb wheel on the steering wheel keypad or **OK/MENU** on the center console to select and press EXIT.

* Option/accessory.

8.11.2. Radio station search

The radio automatically compiles a list of stations of the strongest stations that it is currently receiving.

An automatic station search utilizes the compiled list of stations. It is also possible to perform a manual station search.

You can set the default type of station search. To do so:

1. In FM mode's normal view, press OK/MENU and select **Tune station by**.
2. Turn TUNE to **Station list** or **Manual tuning** and select by pressing OK/MENU.

8.11.3. HD Radio™reception (U.S. models only)

HD radio is a brand name registered by the Ibiquity digital corporation [1]. They are the developer of a broadcasting technology called IBOC or In Band On Channel, which refers to the method of transmitting a digital radio broadcast signal centered on the same frequency as the AM or FM station's present frequency.

Introduction



Display when the radio is receiving an HD Radio broadcast

> **Note**
>
> HD radio volume may fade in and out at times due to coverage limitations.

HD radio is a brand name registered by the Ibiquity digital corporation [1]. They are the developer of a broadcasting technology called IBOC or In Band On Channel, which refers to the method of transmitting a digital radio broadcast signal centered on the same frequency as the AM or FM station's present frequency.

The IBOC system is referred to as a "hybrid" since it is both analogue and digital. During hybrid operation, receivers still continue to receive the analogue (non-digital) signal. HD radio receivers incorporate both modes of reception, where the receiver will automatically switch to the analogue signal if the digital signal cannot be decoded or is lost by the receiver.

When you have tuned to an HD Radio station, the HD symbol will appear in the infotainment system display. The symbol will be displayed in different colors:

- **Grayed-out symbol**: HD Radio is in standby mode

- **White symbol**: the radio is actively receiving an HD broadcast
- **Orange symbol**: the radio is receiving an HD broadcast with digital sound

More information about HD radio and IBOC can be found on Ibiquity's website, www.hdradio.com and www.ibiquity.com.

Benefits of digital broadcasting

- Better sound (FM sounds near CD quality and AM as analogue FM).
- Some FM frequencies offer a greater number of listening choices through “multicasting” (consisting of a frequency's main channel and any sub-channels that may also be available on that particular frequency. See also the section "Sub-channels" below).
- When receiving a digital signal there is no multipath disturbance or hisses/pops/crackling due to outside influences.

How HD broadcasting works

HD Radio works similarly to conventional radio and broadcasts of this type are available in many areas of the United States. However, there are a few key differences:

- Instead of transmitting one analogue signal, stations send out a bundled signal – both analogue and digital.
- An HD radio receiver can receive both digital and analogue broadcasts. Depending on the terrain and location of the vehicle (which will influence the signal strength), the receiver will determine which signal to receive.

Benefits of digital broadcasting

- Better sound (FM sounds near CD quality and AM as analogue FM).
- Some FM frequencies offer a greater number of listening choices through “multicasting” (consisting of a frequency's main channel and any sub-channels that may also be available on that particular frequency. See also the section "Sub-channels" below).
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How HD broadcasting works

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[1] HD Radio (TM) technology is manufactured under license from iBiquity Digital Corp. U.S. and Foreign Patents. HD Radio(TM) and the HD and HD Radio logos are proprietary trademarks of iBiquity Digital Corp.

8.11.4. List of radio stations

The radio automatically compiles a list of the strongest stations that it is currently receiving. This enables you to listen to a station in an area where you are not familiar with the stations or their frequencies.

The automatic station search utilizes the compiled list of stations.

> **Note**
>
> This list will only display the frequencies of the stations currently being received, **not** a complete list of all radio frequencies on the currently selected waveband.

8.11.5. Preset radio stations

Radio stations that you listen to frequently can be stored as presets and can be tuned by pressing the appropriate number key on the center console.



Preset (number) keys

AM/FM radio

Ten preset stations can be stored for each waveband (**AM**/**FM**, etc.)

Stored preset stations are selected using the number keys on the center console.

1. Tune to a station, see Radio station search.

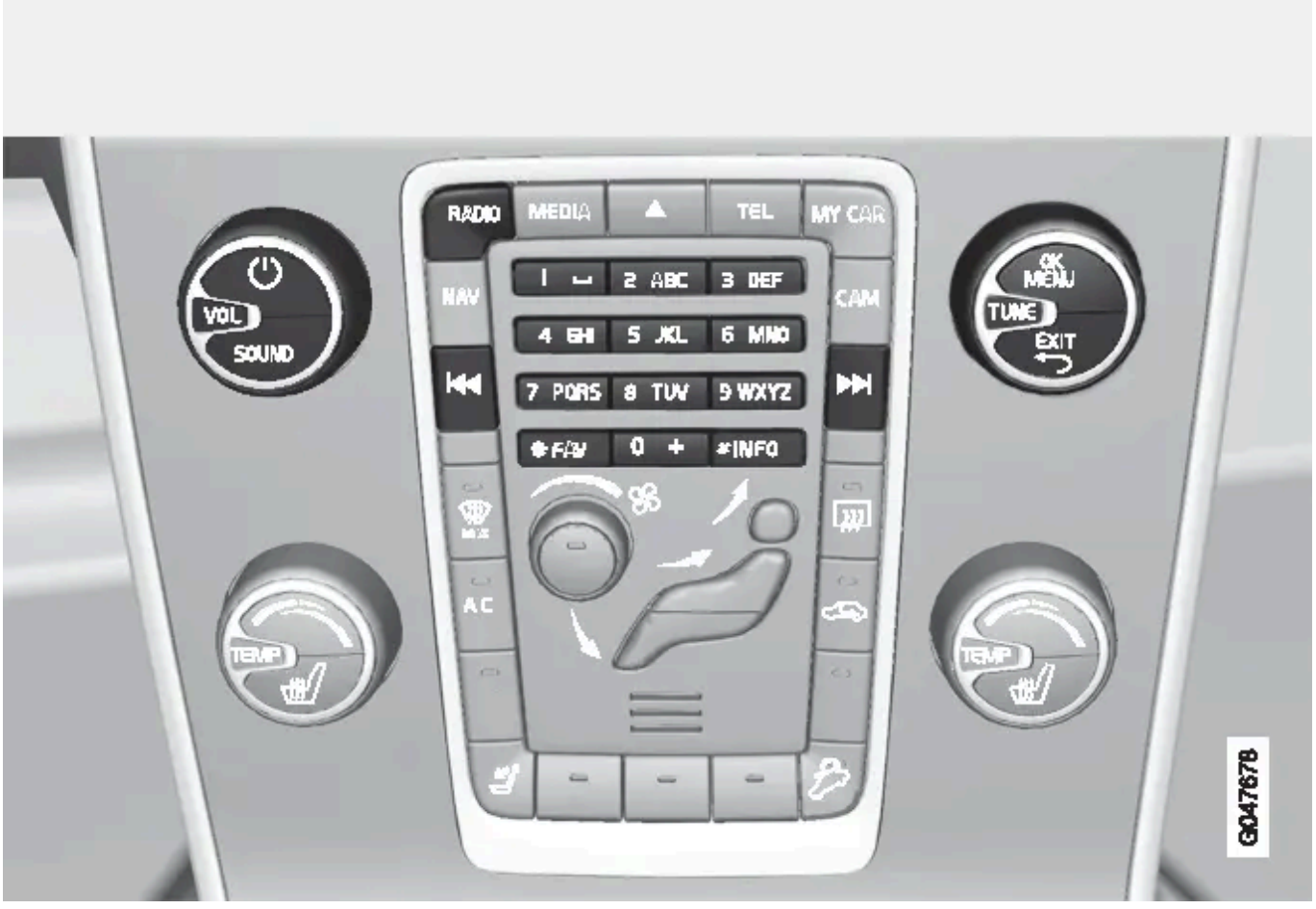
2. Press and hold one of the number keys to store the station on that key.

A list of preset stations can be displayed.

1. In AM/FM's normal view, press OK/MENU and select **Show** → **Presets** to activate (or deactivate) this function.

8.11.6. Radio

Your vehicle's radio offers AM, FM and SiriusXM™ satellite radio*.
If the vehicle is connected to the Internet, it may also be possible to listen to web radio, see .



Radio controls on the center console

Shortcuts to certain functions can be stored in the FAV button. A shortcut can then be activated by pressing the FAV button, see Favorites.

AM/FM radio



- Radio station search
- Preset radio stations

SiriusXM™ satellite radio*

- Preset radio stations
- SiriusXM™ satellite radio

Web radio

- Applications

* Option/accessory.

8.11.7. Automatic station search

The radio automatically compiles a station list that is used by the automatic station search function.

If the automatic station search function is activated, it is possible to search from the normal view and in the list of stations.

Station searches in normal view

1. In FM mode, **press** ⏮ / ⏭ **briefly** on the center console or the steering wheel keypad.

> The radio will change to the next/previously stored station.

2. In FM mode, **Press and hold** ⏮ / ⏭ on the center console or the steering wheel keypad.

> The radio will switch to the next/previous available station.

Searching in the station list

1. In FM mode, turn TUNE: **FM station list** will be displayed.
2. Turn TUNE to a station and select it by pressing OK/MENU.

Switch between automatic and manual radio station searching in the station list by pressing INFO on the center console.

8.11.8. SiriusXM™ satellite radio* - selecting categories/channels

Channel categories are lists of stations offering similar types of programming.

Selecting a channel category

To select a channel category:

1. From the main Sirius screen, press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to display the Sirius menu.
2. If necessary, scroll to **Browse categories** and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console.
3. Scroll to the category of your choice and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console.

> The channels in the selected category are displayed.

Selecting a channel

From the selected category:

1. Turn the thumb wheel on the steering wheel keypad or TUNE on the center console to scroll through the category to the channel of your choice.
2. Press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to select and listen to the channel.

Channel presets

Sirius channels can be stored as presets on the number keys on the center console for easy access. This can be done in two ways:

Method 1: Tune to a channel

1. Tune to a channel as described in the previous sections.
2. Press and hold a number key for several seconds to store the channel.

> When listening to Sirius satellite radio, pressing the selected number key will tune to the channel stored as a preset on that key.

Method 2: Directly from the channel list

1. Turn the thumb wheel on the steering wheel keypad or TUNE on the center console to scroll through the category to the channel of your choice.
2. Press and hold a number key for several seconds to store the channel.

If **Toggle radio text or presets** has been selected in the FAV key options, press FAV on the center console to display the favorites list. This will show the channels that have been stored on the various number keys.

Direct channel entry

The SiriusXM™ satellite channels are in numerical order throughout all of the categories. To access a channel directly:

1. Turn the thumb wheel on the steering wheel keypad or TUNE to access the channel list.
2. Use the keypad buttons to enter the channel's number (or scroll to the channel).
3. Press OK/MENU. The radio will tune to this channel, even if it belongs to a category other than the currently selected one.

* Option/accessory.

The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.

8.11.9. Manual radio station search

The radio automatically compiles a list of radio stations but it is also possible to search for stations manually.

If manual searching is set, these searches can be made from the normal view and in a list of radio frequencies.

Searching for stations from normal view

1. In FM mode, **press** the arrow keys ⏮ / ⏭ **briefly** in the center console or the steering wheel keypad.

> The radio will switch to the previous/next **stored** station.

2. In FM mode, **press and hold** the arrow keys ⏮ / ⏭ in the center console or the steering wheel keypad.

> The radio will switch to the previous/next **available** station.

Searching for stations in a list of frequencies

1. In FM mode, turn TUNE: **FM tuning** will be displayed.

2. Turn TUNE to a frequency and select it by pressing OK/MENU.

Toggle between manual and automatic station searches in the list of frequencies by pressing the INFO button in the center console.

8.11.10. Radio text

Some FM or SiriusXM™ satellite radio* stations transmit information about program content, artists, etc., which can be shown on the display.

1. To display this information, in FM/SiriusXM™ normal view, press OK/MENU and select **Show** to activate (or deactivate) this function.

* Option/accessory.

8.12. HD Radio

8.12.1. HD Radio™ - sub-channels

In many cases, a main HD Radio station (FM wavebands only) will also have sub-channels offering additional types of programming or music.

Sub-channels



Example of an HD Radio station with sub-channels

If any sub-channels are available, the “-” symbol will be displayed to the left of the frequency number and a number will be displayed to the right of the frequency number indicating that the currently tuned frequency has at least one sub-channel.

Selecting sub-channels

To listen to a station's sub-channel(s), press and hold the right arrow key on the center console or on the steering wheel keypad for approximately 1 second. To go back to the main channel, press and hold the left arrow key on the center console or on the

steering wheel keypad for approximately 1 second. To go to subchannel 2 (if available), press and hold the right arrow key on the center console or on the steering wheel keypad for approximately 1 second.

If you are currently tuned to a frequency's main channel, pressing and holding the left arrow key for approximately 1 second will tune to the next lower radio frequency.

> **Note**
>
> - When the radio has gone into HD mode, it may take several seconds before the ">" symbol (if the current frequency has any sub-channels) is displayed to the left of the frequency. Pressing and holding the arrow keys for approximately 1 second before the main-/sub-channel icon is displayed will cause the radio to tune to the next available radio station, not to the current station's sub-channels.
> - When you are no longer in broadcasting range of the currently tuned **sub-channel**, **No reception** will be displayed. The radio will then be muted and it will be necessary to tune to or search for a new radio station.

Sub-channels can also be stored as presets, see Preset radio stations.

If you press a sub-channel's preset button, it may take up to **6 seconds** before the channel becomes audible. If you press this button while you are out of digital range of the transmitter, **No reception** will be displayed.

8.12.2. HD Radio™reception (U.S. models only)

HD radio is a brand name registered by the Ibiquity digital corporation [1]. They are the developer of a broadcasting technology called IBOC or In Band On Channel, which refers to the method of transmitting a digital radio broadcast signal centered on the same frequency as the AM or FM station's present frequency.

Introduction



Display when the radio is receiving an HD Radio broadcast

> **Note**
>
> HD radio volume may fade in and out at times due to coverage limitations.

HD radio is a brand name registered by the Ibiquity digital corporation [1]. They are the developer of a broadcasting technology called IBOC or In Band On Channel, which refers to the method of transmitting a digital radio broadcast signal centered on the same frequency as the AM or FM station's present frequency.

The IBOC system is referred to as a "hybrid" since it is both analogue and digital. During hybrid operation, receivers still continue to receive the analogue (non-digital) signal. HD radio receivers incorporate both modes of reception, where the receiver will automatically switch to the analogue signal if the digital signal cannot be decoded or is lost by the receiver.

When you have tuned to an HD Radio station, the HD symbol will appear in the infotainment system display. The symbol will be displayed in different colors:

- **Grayed-out symbol**: HD Radio is in standby mode
- **White symbol**: the radio is actively receiving an HD broadcast
- **Orange symbol**: the radio is receiving an HD broadcast with digital sound

More information about HD radio and IBOC can be found on Ibiquity's website, www.hdradio.com and www.ibiquity.com.

Benefits of digital broadcasting

- Better sound (FM sounds near CD quality and AM as analogue FM).
- Some FM frequencies offer a greater number of listening choices through “multicasting” (consisting of a frequency's main channel and any sub-channels that may also be available on that particular frequency. See also the section "Sub-channels" below).
- When receiving a digital signal there is no multipath disturbance or hisses/pops/crackling due to outside influences.

How HD broadcasting works

HD Radio works similarly to conventional radio and broadcasts of this type are available in many areas of the United States. However, there are a few key differences:

- Instead of transmitting one analogue signal, stations send out a bundled signal – both analogue and digital.
- An HD radio receiver can receive both digital and analogue broadcasts. Depending on the terrain and location of the vehicle (which will influence the signal strength), the receiver will determine which signal to receive.

Benefits of digital broadcasting

- Better sound (FM sounds near CD quality and AM as analogue FM).
- Some FM frequencies offer a greater number of listening choices through “multicasting” (consisting of a frequency's main channel and any sub-channels that may also be available on that particular frequency. See also the section "Sub-channels" below).
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[1] HD Radio (TM) technology is manufactured under license from iBiquity Digital Corp. U.S. and Foreign Patents. HD Radio(TM) and the HD and HD Radio logos are proprietary trademarks of iBiquity Digital Corp.

8.12.3. HD Radio™ - limitations

Certain factors may limit HD radio reception.

Limitations

- **Main channel vs. sub-channels (FM only)**: The main channel is the only channel that can receive in hybrid mode (both digital and analogue). If a frequency has sub-channels, they are broadcast in digital mode only. The main FM channel will be displayed as, for example, 93.9 WNYC (Volvo uses the symbol ">" to indicate there are sub-channels available) The sub-FM channels will be displayed as 93.9 – 2 WNYC, 93.9 - 3 WNYC, etc.
- **Reception coverage area**: Due to current IBOC transmitter power limitations, the reception coverage area in digital mode is somewhat more limited than the station's analogue coverage area. Please be aware that as with any radio broadcast technology, terrain, time of day, foliage level and building location can have positive or negative effects on radio reception.
- **Analogue to digital/digital to analogue blending**: Analogue to digital blending will occur as the signal strength reaches a preset threshold in the receiver. This will be noticeable in fringe areas (areas with weak reception) and is normal.

> **Note**
>
> There may be a noticeable difference in sound quality when a change from analogue to digital or digital to analogue occurs, such as:
>
> - Volume increase or decrease
> - Equalizer settings, i.e., Bass/ Midrange/Treble cut or boost
> - Time alignment (Digital program material in extreme cases can be as much as 8 seconds behind the analogue). This will noticeable as a "stuttering" effect.
>
> **The above items are dependant on the broadcaster's equipment settings and do not indicate a fault in the vehicle's radio receiver or antenna systems**.

8.12.4. HD Radio™ - switching on and off

The factory setting for HD radio is **off**.

Switching HD on or off

If HD radio is switched on when driving through areas with weak HD signals (fringe areas), you may experience that the radio repeatedly switches between analogue/digital and digital/analogue reception. If this happens, it may be desirable to switch HD off.

To do so:

1. Be sure the infotainment system is switched on and in one of the AM or FM modes.
2. Press OK/MENU in the center console control panel.
3. Turn TUNE and move the marker to **HD Radio**.
4. Press OK/MENU to turn HD off (the X will disappear from the box on the display screen).

This will disable the radio's capability to receive digital broadcasts but it will continue to function as a conventional (analogue) AM/FM receiver. Please note that when HD is switched off, it will not be possible to tune to sub-channels (see the following

section for a more detailed explanation of sub-channels).

Repeat steps 2-4 above to reactivate HD (an X will appear in the box on the display screen). Please note that this will only switch HD on or off for the selected waveband (AM, FM1, etc.).

8.13. SiriusXM Satellite radio

8.13.1. SiriusXM™ satellite radio*

The SiriusXM™ satellite system consists of a number of high elevation satellites in geosynchronous orbit.

Listening to satellite radio

The digital signals from the satellites are line-of-sight, which means that physical obstructions such as bridges, tunnels, etc, may temporarily interfere with signal reception.

Avoid any obstructions, such as metallic objects transported on roof racks or in a ski box, or other antennas that may impede signals from the SiriusXM™ satellites.

Selecting SiriusXM™ radio mode

1. With the infotainment system switched on, press RADIO.
2. Turn TUNE or the thumb wheel on the steering wheel keypad to scroll to **Sirius** and press OK/MENU or the thumb wheel on the steering wheel keypad.

Activating SiriusXM™ radio

1. Tune to a satellite channel that has no audio, which means that the channel is unsubscribed and the text **Subscription update needed** is displayed (see also "Selecting a channel").
2. Call SiriusXM™ at 1-888-539-7474.
3. If you tune to an unsubscribed channel, the SiriusXM™ ID will be displayed (see "SiriusXM™ ID" below for an alternative method of displaying the ID).
4. **Updating subscription** will be displayed while the subscription is being updated, after which the display will return to the normal view.

Traffic information

This feature interrupts regular programming to provide you with information about traffic jams, accidents, etc.

To activate:

1. With Sirius activated, press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to display the Sirius menu.
2. Scroll to **Traffic announcement** and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to open a list where you can switch this feature on or off, or select an area from which you would like to receive traffic information.

> If you have activated the function, a curved arrow symbol will appear under the Sirius symbol on the left side of the screen - see the following illustration. You will then receive traffic information **from the traffic channel** in the area that you have selected (i.e., the radio will switch from the current channel to the traffic channel), regardless of which mode (RADIO, MEDIA, etc.) that you are currently using.



3. Press EXIT to leave this list.

If the current radio programming is interrupted by a traffic announcement:

- Press the thumb wheel on the steering wheel keypad or OK/MENU on the center console. The pop-up window on the screen will close but the traffic announcement will continue.

- Press EXIT to close the pop-up window and reject the traffic announcement. The radio will return to the previous radio broadcast.

Traffic channel toggling

If the radio program that you are listening to is interrupted too often by traffic information, do as follows:

1. Save the channel that you are currently listening to (or the channels that you frequently listen to) as a preset .
2. Activate the traffic function if you have not already done so (see the information above)
3. The first time your current channel is interrupted by traffic information, accept by pressing the thumb wheel or OK/MENU.

> The radio will switch automatically to the traffic channel in the area that you have selected.

4. Save the traffic channel as a preset.
5. Toggle at any time between the channels ("your" channel and the traffic channel) using the keys used to store the presets on the center console.

SiriusXM™ ID

The SiriusXM™ ID (sometimes referred to as the Electronic Serial Number or ESN) is required when contacting the SiriusXM™ Call Center. It is used to activate your account and when making any account transactions.

To display the ID

1. With Sirius activated, press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to display the Sirius menu.
2. Scroll to **Sirius ID** and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console.

Sirius menus

From the main Sirius screen, press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to open the Sirius menu screen. The following alternatives are available:

Browse categories

See SiriusXM™ satellite radio - selecting categories/channels.

Show

Scroll to **Show** and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to open a drop-down menu offering the following selections:

- **Radio text**: this displays information describing the channel that you are currently listening to.

- **Presets**: this displays a list of preset channels and the numbers of the keys on the center console under which they have been stored. Press the respective keys to tune to the stored channels.
- **None**: No text will be displayed.

Scroll to your choice, press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to select.

> **Note**
>
> Pressing the FAV button on the center console enables you to toggle between the selections above (see also the section **FAV key functions** for details.)

Channel list information

Scroll to **Channel list information** and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to open a drop-down menu offering the following selections:

- **Channel name**: the channel list will display the name of the current channel.
- **Artist**: the channel list will display the name of the artist that you are currently listening to.
- **Title**: the channel list will display the name of the track that you are currently listening to.

Scroll to your choice, press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to select.

The information that you have selected will also be displayed on the screen.

> **Note**
>
> Pressing the INFO button on the center console while the channel list is displayed enables you to toggle between the selections above.

Sirius ID

See the section "SiriusXM™ ID" above for detailed information.

FAV key options

Scroll to **FAV key options** and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to open a pop-up menu offering the selections:

- **Toggle radio text or Presets**: press FAV to toggle between radio text and a list of preset channels.
- **No function**

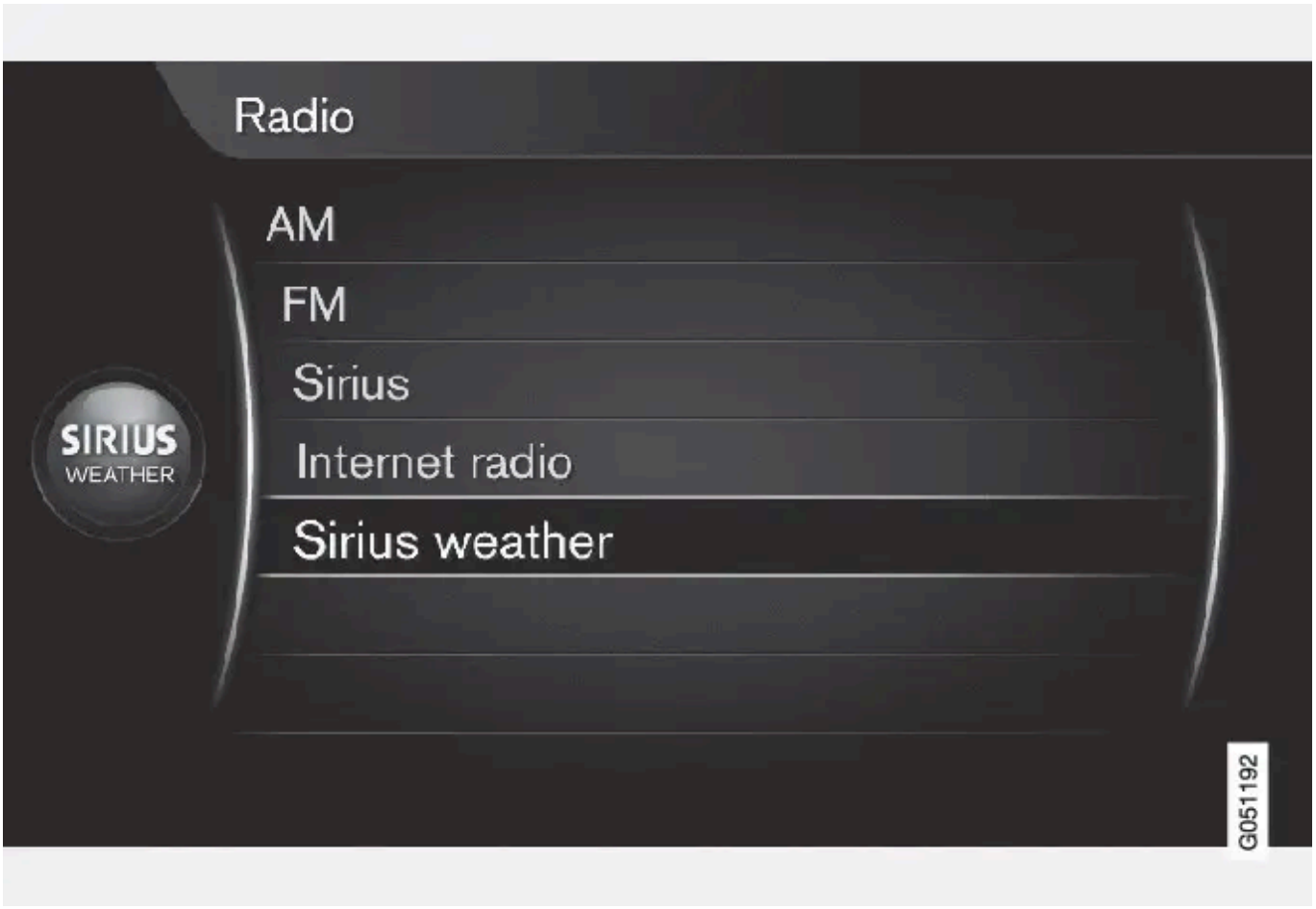
Scroll to your choice, press the thumb wheel on the steering wheel keypad or **OK/MENU** on the center console to select and press EXIT.

* Option/accessory.

8.13.2. SiriusXM™ satellite radio* - weather

Sirius Weather is a feature that provides information about the weather forecast in the area of your choice, along your current route, at a ski resort, etc.
This feature is only available in vehicles equipped with the optional Volvo navigation system.

Using Sirius weather



Radio mode's main screen

To open this feature, turn the thumb wheel on the steering wheel keypad or TUNE on the center console to scroll to **Sirius weather** and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console. If this feature has been used before, it will open using your previously chosen settings (e.g., forecast location, today, etc.).

If your subscription has not been activated, you will be prompted on-screen to call Sirius, see also SiriusXM™ satellite radio.

Weather forecast information

Weather forecasts can be selected for various periods of time or for a ski area. Scroll to **Forecast** and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console. The following choices are available:

- **Current**
- **Today**
- **5-day**
- **Ski info**

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Scroll to your choice and and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to confirm.

> **Note**
>
> - If the ignition has been switched off for more than one hour, it may take several minutes to load weather forecast information when the ignition is switched on again, depending on the strength of the signal from the satellite in the vehicle's current location.
> - If no weather data is available for the chosen location, **No weather data available** will be displayed.
> - If **Device error** is displayed, weather information is not available and the menu will be grayed out. Contact a trained and qualified Volvo service technician for assistance.

Selecting a location or area

From the main Sirius weather screen, scroll to **Select area** and press OK/MENU or from any normal Sirius weather screen view, press OK/MENU to open a menu where you can select an area. The following alternatives will be displayed:

- **Current location**
- **Near destination**[1]
- **Select on map**
- **Search winter sport area**

Scroll to the alternative of your choice and press OK/MENU.

Map view

Selecting this alternative opens a map showing your route. Turn the thumb wheel on the steering wheel keypad or TUNE on the center console to zoom in or out. See the separate navigation system manual for detailed information about selecting locations on the map.

With the map displayed on the screen, press the thumb wheel or OK/MENU to open an additional menu displaying:

- **Storm information**
- **Show on map**
- **Legend**
- **Time stamp**

Pressing OK/MENU from any of the selections above opens sub-menus with various alternatives.

> **Note**
>
> In order to obtain storm information, move the cursor (see Internet map – scroll menu) to a point on the map where a **Storm** icon is displayed and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console. See also the information about weather icons in the menu selection **Legend.**

Select winter sport area[2]

Press OK/MENU to open a list of ski areas. Scroll to the area of your choice and press OK/MENU. Scroll to an area and press OK/MENU again to open a menu of more local ski areas.

Presets

When a location and type of forecast have been selected, this information can be stored as a preset. Up to 10 presets can be stored. Scroll to **Save as preset** and press OK/MENU to add the location to the list.

If the preset list is full and you would like to add a new one, you will be prompted to removed one of the existing presets before the new one can be added.

Favorites

The * FAV button can be used to create a shortcut. To do so from the Sirius weather normal view:



Location of the FAV button

1. Scroll to **FAV key options** and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console.
2. Scroll to: **No function**, **Toggle forecast** or **Toggle presets** and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to select.
3. Press **EXIT** to leave the menu.

- If you have chosen **Toggle forecast**, pressing the * FAV button repeatedly will change the weather forecast displayed.
- If you have chosen **Toggle presets** pressing the * FAV button repeatedly will display any preset areas that have been stored.

* Option/accessory.

[1] Only available if a route has been set in the navigation system.

[2] This is only available if you have requested a weather forecast for a ski area.

8.13.3. SiriusXM™ satellite radio* - selecting categories/channels

Channel categories are lists of stations offering similar types of programming.

Selecting a channel category

To select a channel category:

1. From the main Sirius screen, press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to display the Sirius menu.
2. If necessary, scroll to **Browse categories** and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console.
3. Scroll to the category of your choice and press the thumb wheel on the steering wheel keypad or OK/MENU on the center console.

> The channels in the selected category are displayed.

Selecting a channel

From the selected category:

1. Turn the thumb wheel on the steering wheel keypad or TUNE on the center console to scroll through the category to the channel of your choice.
2. Press the thumb wheel on the steering wheel keypad or OK/MENU on the center console to select and listen to the channel.

Channel presets

Sirius channels can be stored as presets on the number keys on the center console for easy access. This can be done in two ways:

Method 1: Tune to a channel

1. Tune to a channel as described in the previous sections.
2. Press and hold a number key for several seconds to store the channel.

> When listening to Sirius satellite radio, pressing the selected number key will tune to the channel stored as a preset on that key.

Method 2: Directly from the channel list

1. Turn the thumb wheel on the steering wheel keypad or TUNE on the center console to scroll through the category to the channel of your choice.
2. Press and hold a number key for several seconds to store the channel.

If **Toggle radio text or presets** has been selected in the FAV key options, press FAV on the center console to display the favorites list. This will show the channels that have been stored on the various number keys.

Direct channel entry

The SiriusXM™ satellite channels are in numerical order throughout all of the categories. To access a channel directly:

1. Turn the thumb wheel on the steering wheel keypad or TUNE to access the channel list.
2. Use the keypad buttons to enter the channel's number (or scroll to the channel).
3. Press OK/MENU. The radio will tune to this channel, even if it belongs to a category other than the currently selected one.

* Option/accessory.

8.14. Type approval

8.14.1. Type approval

The following is a declaration of conformity.

Wi-Fi



G051360

Declaration of Conformity for the audio and navigation systems

Declaration of Conformity

Mitsubishi Electric Corporation Sanda Works
2-3-33, Miwa, Sanda-city, Hyogo, 669-1513 Japan

We declare, at our sole responsibility, that the following product conforms to the Essential Requirements of the Radio and Telecommunications Terminal Equipment Directive 1999/5/EC in accordance with the tests conducted to the appropriate requirements of the relevant standards, as listed herewith.

Product :	Audio Navigation Unit	
Model/Type Number :	NR-1V	
Directive and Stendards used :	Radio :	EN 300 328 V1.7.1 :2006-10
		EN 300 440-1 V1.6.1 :2010-08
		EN 300 440-2 V1.4.1 :2010-08
	EMC :	EN 301 489-1 V1.9.2 :2011-09
		EN 301 489-3 V1.4.1 :2002-08
		EN 301 489-17 V2.1.1 :2009-05
	Safety :	IEC 60950-1:2005 (Second Edition) + Am 1:2009
		EN 60950-1 : 2006+A1:2010+A11:2009+A12:2011

The authorized signatory to this declaration :

Date: 17th July 2013

Signature:

Name: Kazuhito Funae
Title: Manager,
Mitsubishi Electric Corporation Sanda Works
Address: 2-3-33, Miwa, Sanda-city, Hyogo, 669-1513, Japan

The responsible person based within the EC :

Date: 1st July 2013

Signature:

Name: Jan Billig
Title: General Manager,
Mitsubishi Electric Automotive Europe,B.V.
Swedish Branch, Technical Center
Address: Ostra Eriksbergsgatan 38, SE41878 Gothenburg, Sweden

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8.15. Infotainment menu overview

This is a general overview of the selections and settings that can be made in the infotainment system's menus.

If a menu text is grayed-out, this means that it cannot currently be selected. This may be because the function is not installed in the vehicle, that the source is not currently connected or is connected but is empty.

RADIO

- AM
- FM

MEDIA

- CD/DVD
- DVD Video
- iPod
- USB
- Media Bluetooth®
- AUX

TEL

- Bluetooth® hands-free

- Web browser

8.16. Volvo Sensus

Volvo Sensus is the core of the contact interface with your vehicle. Sensus provides information, entertainment and offers access to functions that make owning and operating a Volvo easier.



G048166

Volvo Sensus is the operating system in your vehicle and it enables you to interact intuitively with the vehicle's various features and functions, including accessing the Internet, when it suits you.

Volvo Sensus uses the center console screen to display information and menus, and to offer a user interface that enables you to make personalized settings for e.g., vehicle, infotainment and climate system functions.

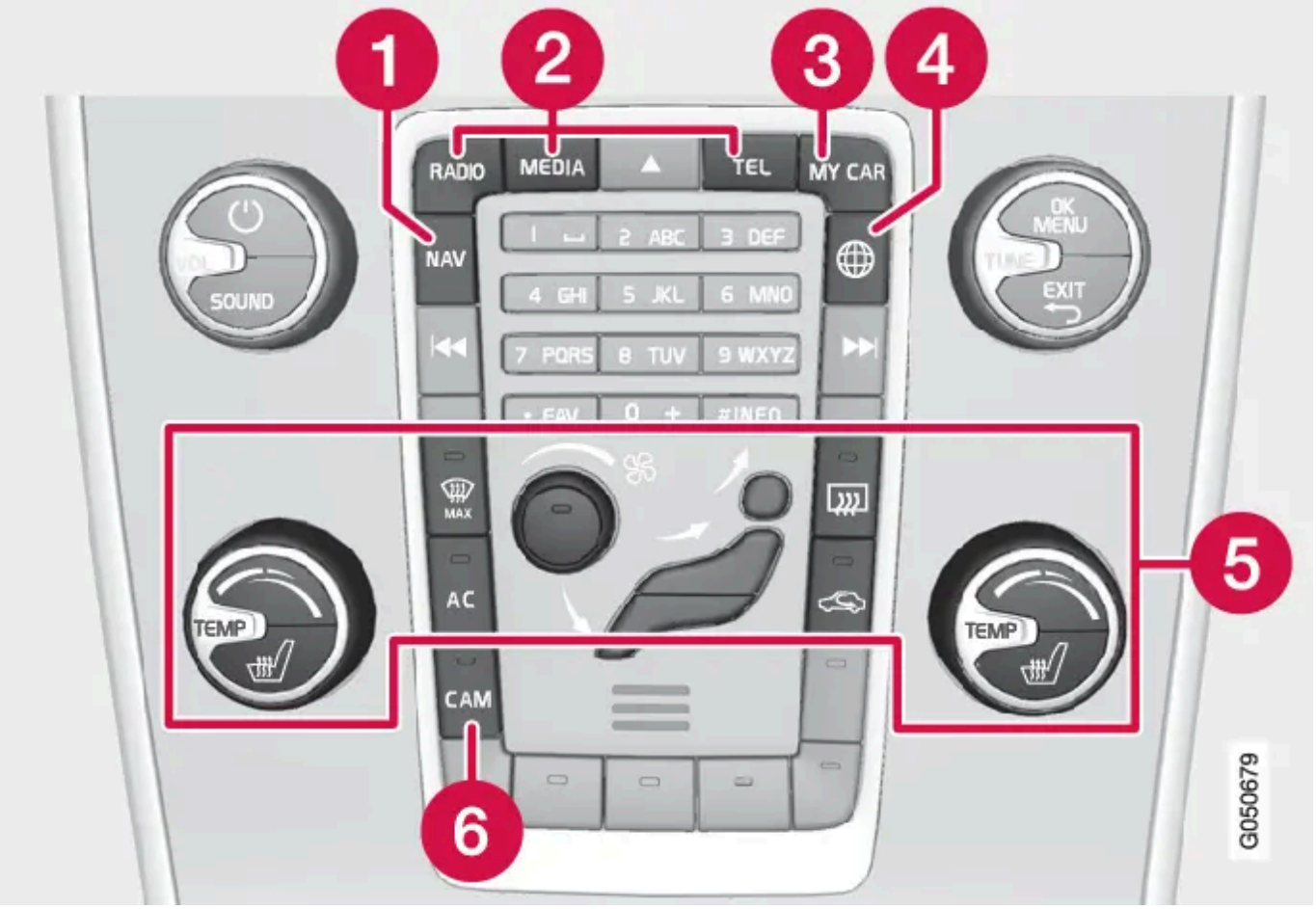
The buttons on the center console or the steering wheel keypad are used to activate/deactivate functions and change numerous settings.

Pressing the MY CAR button on the center console displays all of the settings related to driving and operating the vehicle, such as City Safety, lock and alarm functions, automatic blower speed, setting the clock, etc.

Pressing the source buttons on the center console (RADIO, MEDIA, TEL, , NAV* and CAM*, etc.) make it possible to select e.g., AM or FM radio, play a CD or DVD, use the Bluetooth® hands-free feature, the navigation system* or the park assist camera*.

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See your on-board owner's manual or the separate printed supplements for detailed information about the functionality offered by Volvo Sensus.



Center console control panel

1. Volvo Navigation System (VNS)* – NAV: see the separate VNS manual for operating instructions.
2. Infotainment (RADIO, MEDIA, TEL)
3. Vehicle-related settings - MY CAR.
4. Internet connected vehicle.
5. Climate system.
6. Park assist camera - CAM*.

* Option/accessory.

8.17. Favorites

The * FAV button can be used to store frequently used functions (create a shortcut), making it possible to start the stored function in the main modes (radio, media, MY CAR and the web browser if the vehicle is connected to the Internet) by simply pressing * FAV.

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Storing a shortcut



1. Select a main mode (e.g., RADIO, MEDIA) by pressing its button on the center console.
2. Select a source (e.g., **AM**, **Bluetooth**).
3. In the source's normal view, press OK/MENU and select its FAV menu or press and hold the * FAV button until the menu is displayed.
4. From the menu, select the function to be stored in the * FAV button as a shortcut.

> When the source (e.g., **AM**, **Bluetooth**) is active (selected), press * FAV briefly to start the stored function.

8.18. Disclaimers

The following disclaimers apply to your infotainment system.

camellia:1.2.0

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Unicode: 5.1.0

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8.19. Volvo ID

This is your personal ID that can be used to access a number of services [1]

Creating a Volvo ID



To create a Volvo ID, provide your personal email address and then follow the instructions provided in the email that you will receive from Volvo. This can be done from:

- From an Internet-connected vehicle: Enter your email address in the app that requires a Volvo ID and follow the instructions provides or press the Internet connect (🌐) button on the center console and select **Apps**, **Settings** and follow the instructions provided.
- Volvo On Call (VOC*): download the latest version of the VOC app and create a Volvo ID on the start page.

[1] These services vary and may be subject to change. Consult your Volvo retailer.

* Option/accessory.

8.20. On-screen symbols

The following is an overview of the symbols that may be displayed in the screen's activity/status field.



Activity/status field

Active current functions and in certain cases, their status, are displayed in the activity/status field. Due to limited space, not all activity/status symbols will be displayed at all times.

Symbol	Explanation
	Connecting to the Internet via Bluetooth®.
	Connected to the Internet via Bluetooth®.
	No Internet connection via Bluetooth®.
	Connecting to the Internet via Wi-Fi.
	Connected to the Internet via Wi-Fi.
	No Internet connection via Wi-Fi.
	Connected to the Internet via Wi-Fi via roaming (for connections in other countries).
	Connecting to the Internet via the integrated modem* [1]. The number of bars illuminated indicates the strength of the signal. The type of connection is indicated under the bars.
	Connected to the Internet via the integrated modem* [1].
	No Internet connection via the integrated modem* [1].
	The integrated modem* [1] is connected to the Internet via roaming (for connections in other countries).
	This symbol is displayed when the vehicle's position is being transmitted.
	Cell phone connected.
	Missed call(s).
	Call in progress.

Symbol	Explanation
	Unread text message.
	Microphone muted.
	Audio muted.
	SOS service [1] active.
	ON CALL service [1] active.

* Option/accessory.

[1] Models with Volvo On Call only.

8.21. Infotainment – overview

This is an overview of the main components in the infotainment system.



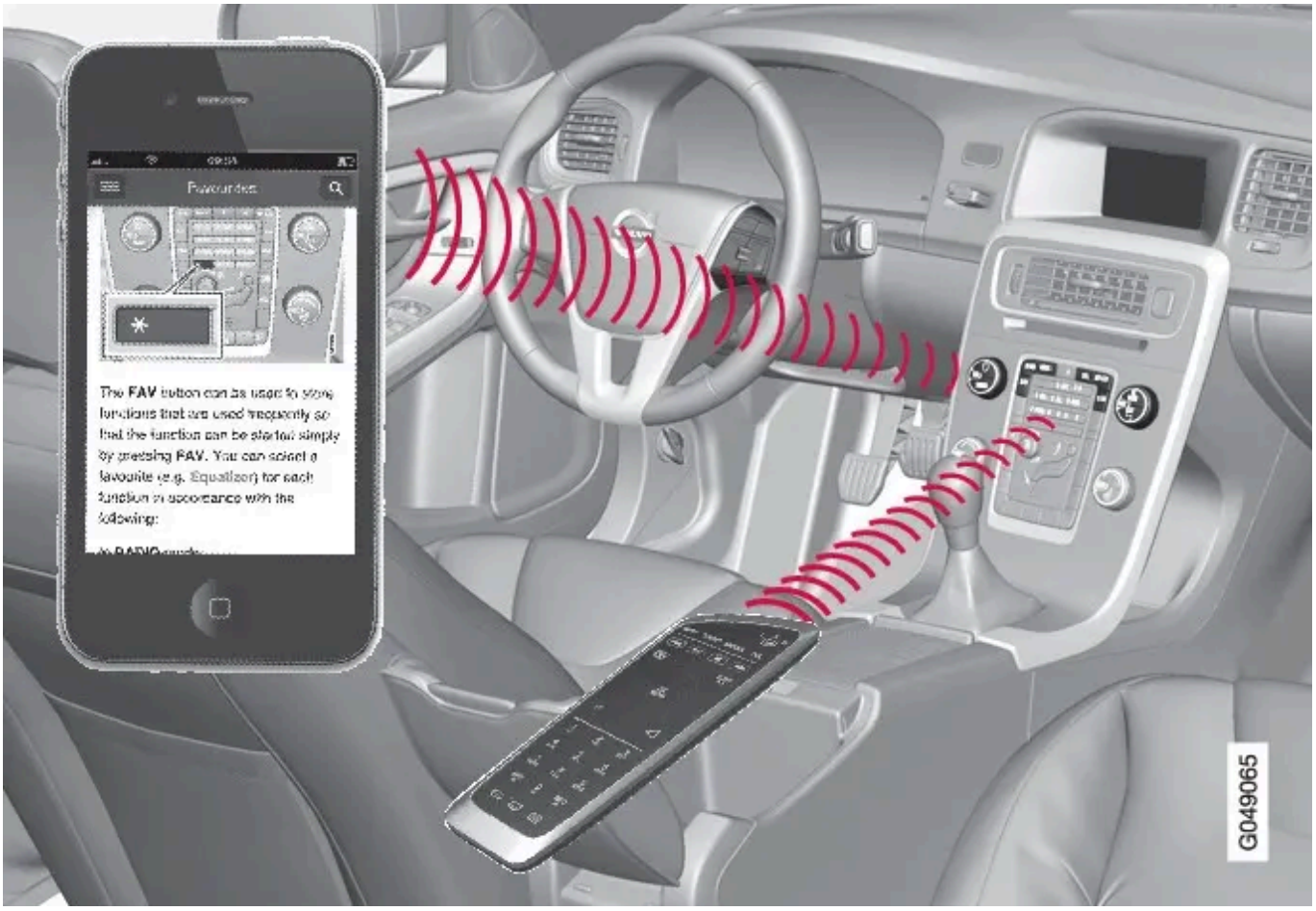
1. Steering wheel keypad.
2. Display. The display's layout and appearance may change according to the theme chosen for the instrument panel. Refer to the Owner's Manual supplement for more information.
3. Center console control panel.
4. AUX/USB sockets for external audio sources (e.g., iPod® or mp3 player).
5. A/V-AUX socket.

8.22. Infotainment

The infotainment system consists of a radio, media player and has the capacity to communicate with a cell phone, which in some cases can be voice controlled. It is also possible to connect to the Internet to e.g., stream audio content via apps.

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Information is presented on a 7-inch screen in the upper section of the center console and the system can be controlled using the steering wheel keypad, center console controls or in some cases, voice commands.



If the infotainment system is on when the ignition is switched off, it will be activated again when the ignition is put into mode **I** or higher and will continue in the same mode that was being used (e.g., radio). The driver's door also has to be closed on model with keyless drive*.

The infotainment system can be used for 15 minutes at a time without the remote key in the ignition slot by pressing the on/off button.

While the engine is being started, the infotainment system will be temporarily interrupted and will resume when the engine has started.

> **Note**
>
> To help avoid excessive battery drain, remove the remote key from the ignition slot if the infotainment system is used while the engine is switched off.

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G051225

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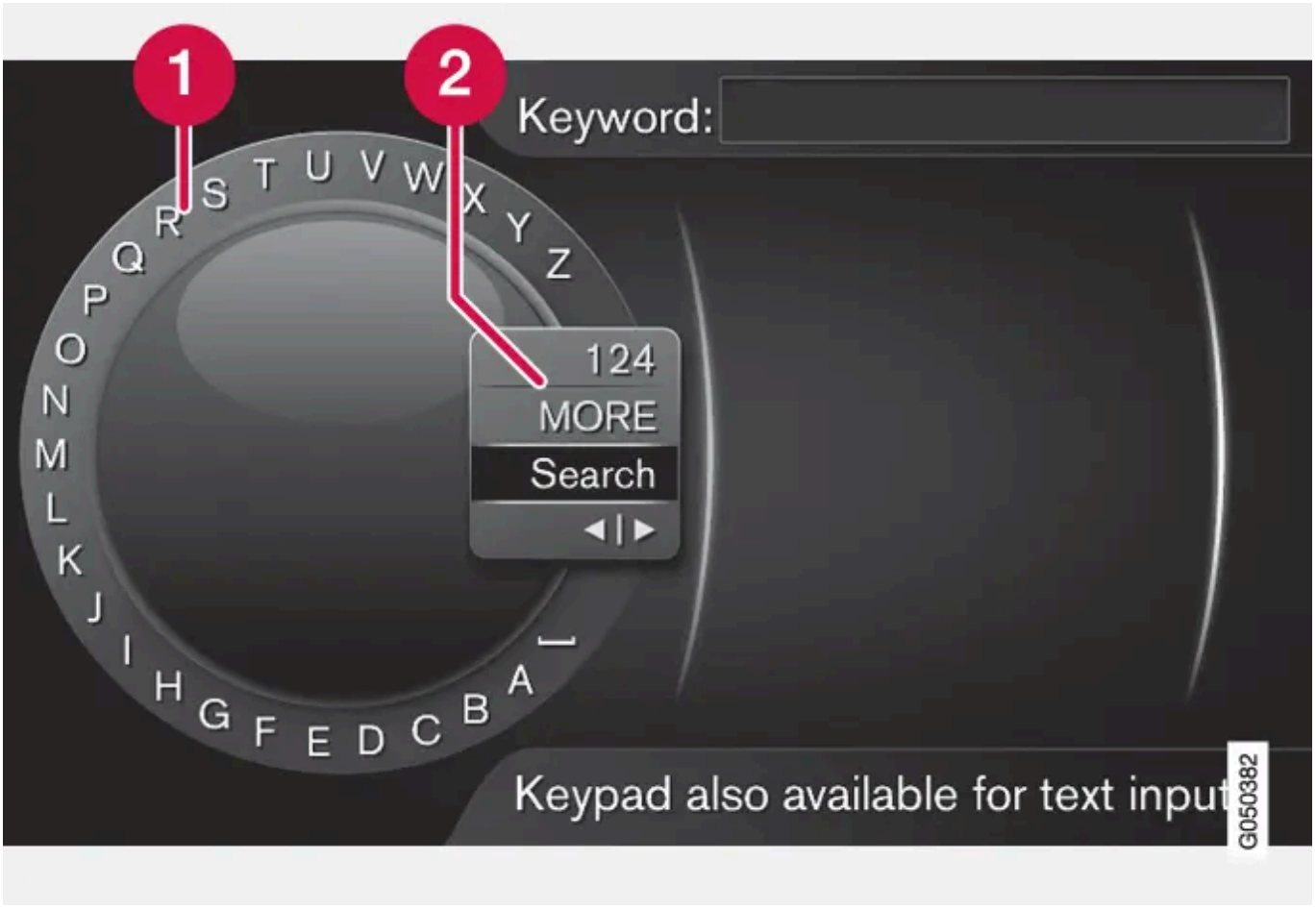
* Option/accessory.

8.23. Media Search

You can search for music in your connected devices. The search includes USB and discs.

To start a search, press OK/MENU from the source's normal view and select **Media search**.

Search functions



Search using the text wheel

1 Character list

2 Switch between character entry modes (see the following table)

The text wheel can be used to enter text. To use it:

1. Turn TUNE to the desired letter and press OK/MENU to confirm. The number/letter keys on the center console can also be used.

   To switch from letter entry mode to the entry mode for numbers or special characters, or to go to the list of results, turn TUNE to one of the selections (see the explanation in the following table) in the list for switching character entry mode (2) and press OK/MENU.

2. Continue entering the remaining characters in the same way.
3. When you have finished entering the search criteria, select **Search**.

> The search will be conducted. The results will be displayed and grouped in the following categories: artist, album track, year and composer.

4. Turn TUNE to a category and press OK/MENU.
5. Turn TUNE to select a device and press OK/MENU to begin playback.

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123/ABC	Toggle between letters and numbers by pressing OK/MENU.
MORE	Switch to special characters by pressing OK/MENU.
Search	Start the media search.
{ | }	Switch from the text wheel to the **Keyword:** field. Move the cursor by turning TUNE. Erase any characters by pressing EXIT. Press OK/MENU to return to the text wheel. Please note that the letter/number keys on the center console can be used to make changes in the **Keyword:** field.

Press EXIT briefly to erase a single character. Press and hold EXIT to erase all of the characters that have been entered.

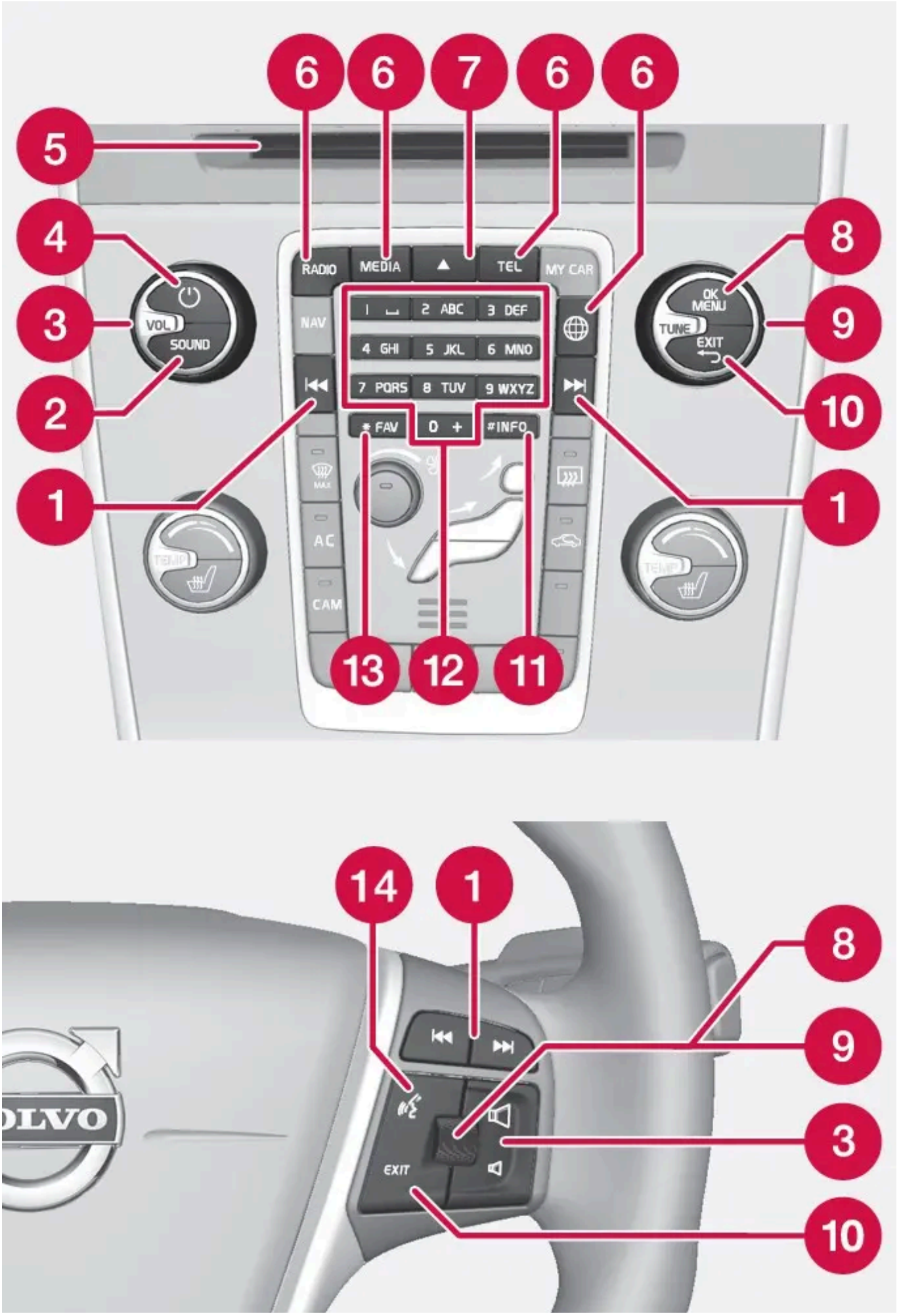
If a number key on the center console is pressed while the text wheel is displayed (see the previous illustration), a list of characters will be displayed. Press repeatedly on the key to access the desired letter. Continue with the next letter, etc. When a key has been pressed, this will be confirmed when the next key is pressed.

8.24. Infotainment – operating the system

The infotainment system can be operated from the center console and certain functions can also be operated

from the steering wheel keypad or by using voice commands.



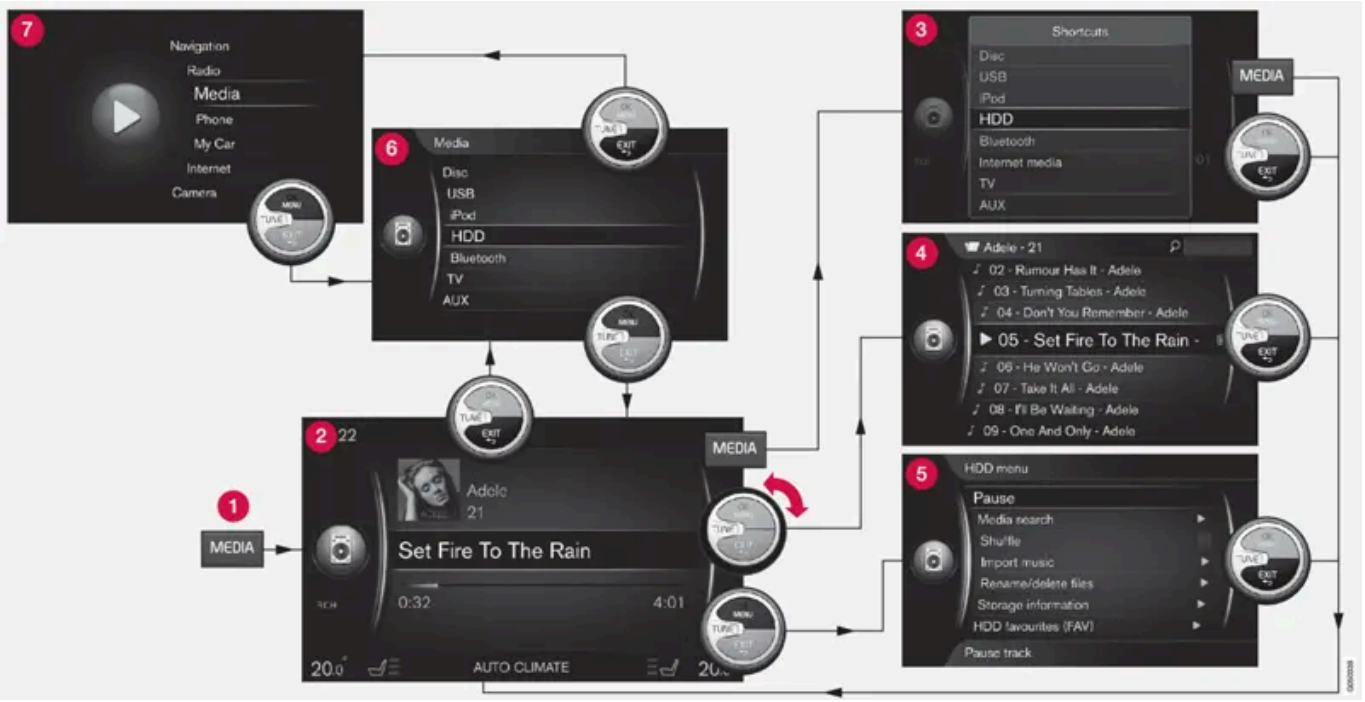


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1. **Left/right arrow keys** – **short press** moves between preset radio stations, tracks on a disc or chapters on a DVD. **Press and hold** to search within tracks or to tune to the next/previous available radio station.
2. SOUND – press to access the menu for adjusting bass, treble, etc. For additional information, see general sound settings .
3. VOL – turn to raise or lower the volume level.
4. ⏻ ON/OFF/MUTE – **short press -** switch the system ON. **Press and hold (until the screen turns black) -** switch the system OFF. A short press when the infotainment system is on will mute/unmute the sound. The entire infotainment system, including the navigation* and telephone functions, is switched on/off at the same time by using this button.
5. CD/DVD* slot.
6. **Mode buttons** – press to select a mode (e.g., RADIO, MEDIA, TEL, etc.) by pressing its button on the center console. The most recent **source** in the selected mode (e.g., FM in **RADIO** mode) will be displayed. From a mode, pressing its mode button will display a shortcut menu.
7. Eject a disc. An ejected disc that is not removed from the slot after approx. 12 seconds will be drawn back into the player.
8. OK/MENU – press the thumb wheel on the steering wheel keypad or this button on the center console to confirm a menu selection or accept an incoming phone call. From a mode's main view, pressing this button displays a menu for the selected source (e.g., FM in **RADIO** mode). Arrows at the right of the screen indicate submenus.
9. TUNE – turn the thumb wheel on the steering wheel keypad or this button on the center console to scroll among tracks/folders, radio stations, phone contacts or to navigate among the alternatives shown on the screen.
10. EXIT – **short press -** go upward in the menu system, cancel a current function, Interrupt or reject a phone call, or erase characters that have been entered on the screen. **Press and hold -** to go to the mode's main view. From a mode's main view, pressing and holding EXIT takes you to the infotainment system's main view, which enables you to access the same modes as by pressing the respective mode buttons on the center console (6).
11. # INFO – if more information is available than is currently displayed on the screen, press # INFO to display the remaining information.
12. Keypad for entering text/numbers, storing preset radio stations, etc.
13. * FAV – this button can be used to store a shortcut to a commonly used function, see Favorites.
14. **Voice control** – press to activate voice commands.

Menu navigation



An example of menu navigation (the illustration is generic and the function shown may not be available in all markets)

1 **Mode button** – press to change modes or from within an active mode, to display its shortcut menu.

2 **Normal view** – a mode's normal view.

3 **Shortcut menu** – displays the mode's most common alternatives.

4 **Quick scroll menu** – menu displayed by turning TUNE to e.g., change tracks, radio stations, etc.

5 **Source menu** – the selected mode's functions and settings.

6 **Source selection menu**[1] – displays the sources that can be selected.

7 **Main mode menu** – displays the main modes. A mode can also be selected by pressing its button on the center console (1).

These views vary depending on the mode and source selected, the optional equipment in the vehicle, settings, etc.

Select a mode by pressing its button on the center console (1) (e.g., RADIO, MEDIA, etc.). To navigate in the mode's menus, use the TUNE, OK/MENU, EXIT buttons or the modes button (1).

If a menu text is grayed-out, this means that it cannot currently be selected. This may be because the function is not installed in the vehicle, that the source is not currently connected or is connected but is empty.

For a list of the available functions, see Infotainment menu overview.

* Option/accessory.

[1] **Only in modes with several sources.**

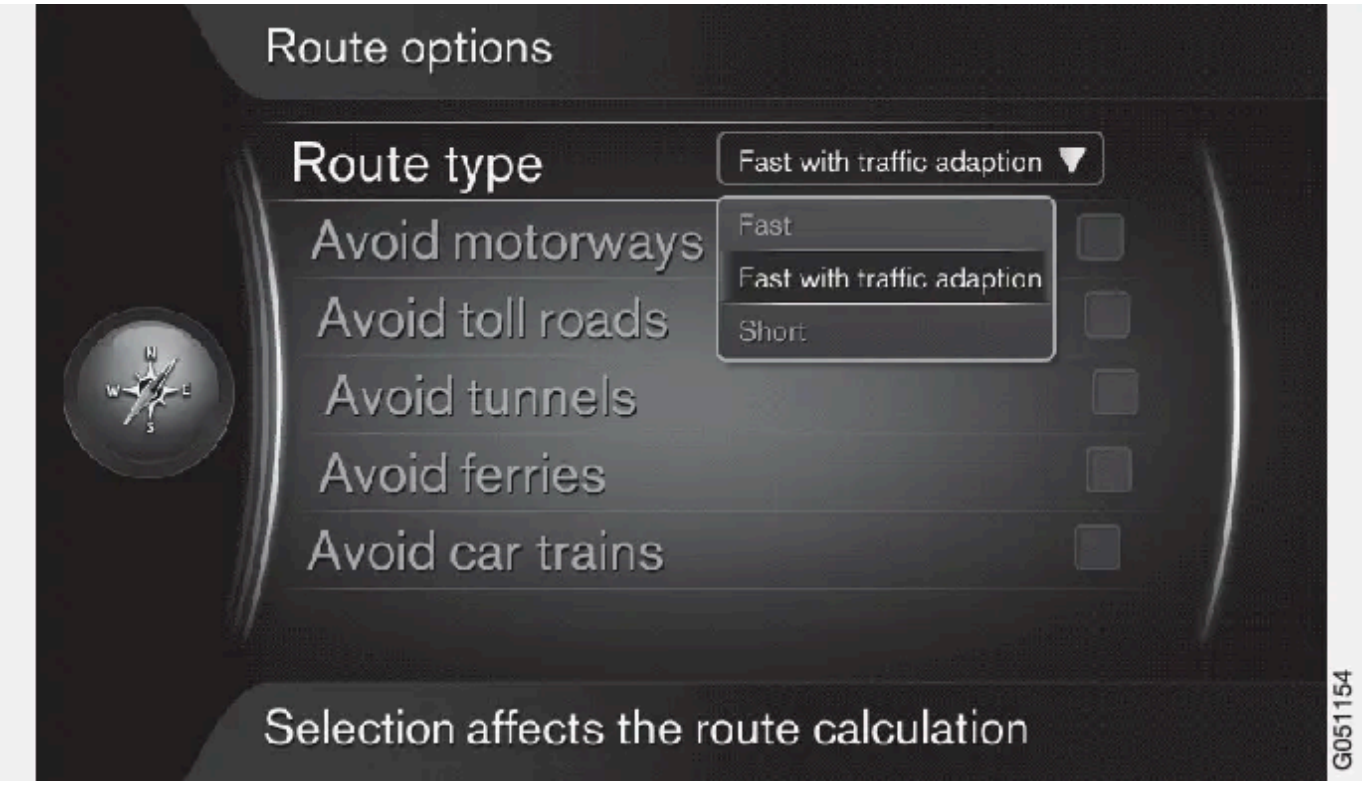
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9. Internet map

9.1. Internet map – route options

Route options enable you to specify the type of roads that your route will follow.

Route type



From Internet map's normal view, press OK/MENU and select **Settings** → **Route options** → **Route type** to display the options for route type.

Make a selection and confirm by pressing OK/MENU.

- **Fast with traffic adaption**: the shortest travel time on roads with the fewest traffic tie-ups.
- **Fast**: the shortest travel time is prioritized.
- **Short**: the most direct route is prioritized. The route may include secondary roads.

Customize your route

From Internet map's normal view, press OK/MENU and select **Settings** → **Route options** to customize your route.

To select a route that avoids one or more of the options displayed, highlight the option and press OK/MENU.

- **Avoid highways**

- Avoid toll roads
- Avoid tunnels
- Avoid ferries
- Avoid car trains

Note

- If a route has already been set when one or more of these alternatives are changed, there may be a slight delay in guidance as the system recalculates the route.
- If the system has been set to avoid toll roads, highways, etc., roads of this type will only be used when there are no other alternatives.

9.2. Internet map – entering text

Use the on-screen text wheel or the center console keypad to enter text such as an address or a point of interest.



Screen view showing the free-text field

The Internet map system uses a text wheel for entering various types of information.

Activating a selection

When the desired function/menu selection has been chosen by turning the **thumb wheel** on the steering wheel keypad or TUNE on the center console control panel, press the **thumb wheel**/OK/MENU to display the function/menu's next level.

Entering characters



The text wheel

- Mark (highlight) a text field.
- Press OK/MENU to display the text wheel.
- Select a character with the **thumb wheel**/TUNE and enter it by pressing the **thumb wheel**/OK/MENU.

Center console keypad



Center console keypad

The center console keypad **0**–**9**, ***** and **#** can also be used to enter characters.

For example, press **9**[1] to display all of the characters that can be entered by pressing this key, which can be for example: **w**, **x**, **y**, **z** and **9**. Press the button briefly to move the cursor to each available character.

- Stop on the desired character to select it and it will appear in the text field.
- Delete or cancel with EXIT.

Other characters

The inset menu in the text wheel below shows other special characters or numbers.

- Select **More** + OK/MENU to access the text wheel for special characters.
- **123** + OK/MENU: numbers are displayed in the wheel.
- **=>** + OK/MENU: the cursor moves to the list at the right of the screen. Selections can be made here by pressing OK/MENU.

[1] The characters for each respective key may vary, depending on the language selected and the market

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9.3. Internet map – overview of the remaining route

This feature provides an overview of the remainder of your current route.

To display the remaining section of your route, in the source's main menu, press OK/MENU and select **Route → Map of remaining route**.

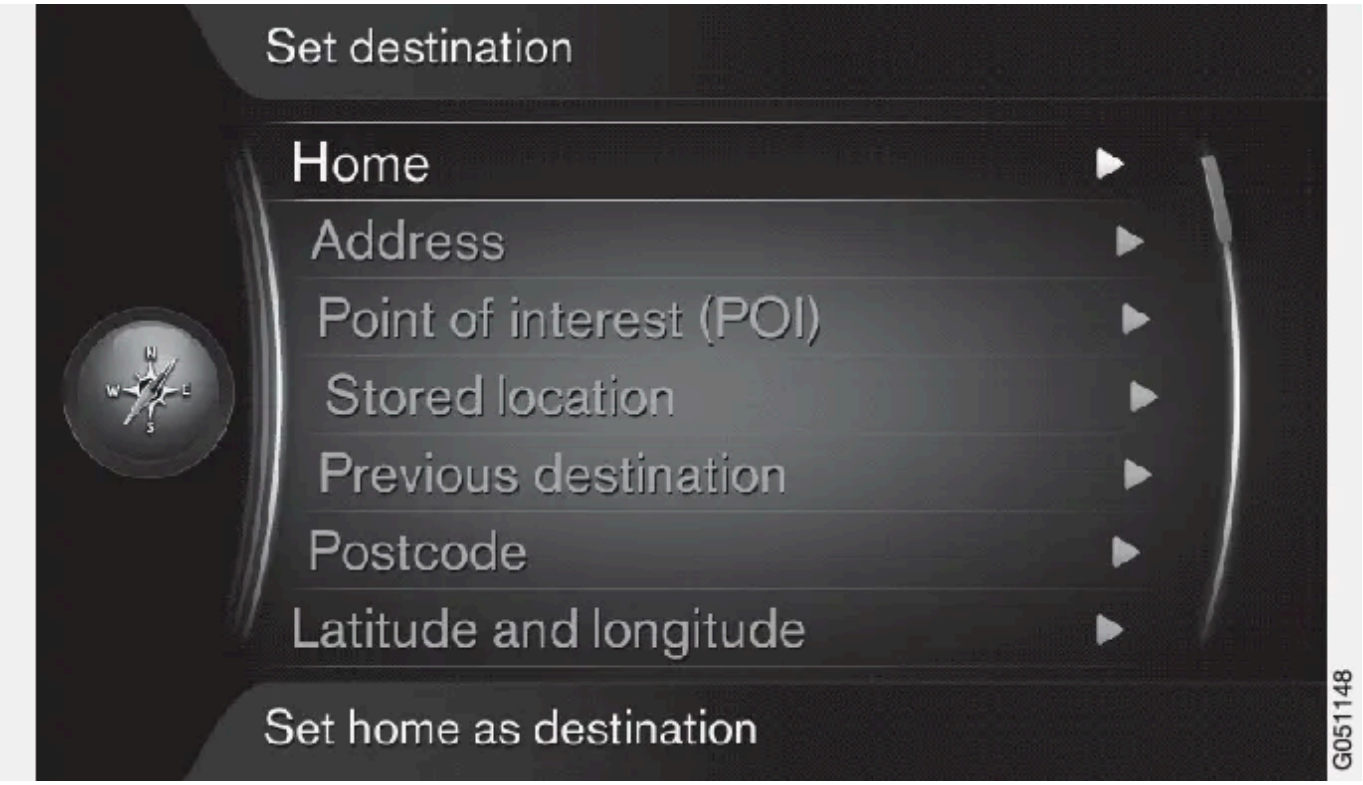


See also information about the scroll menu.

9.4. Internet map - select destination

Plan a trip by selecting a destination.

From Internet map's normal view, press OK/MENU to display the following screen and select **Set destination**.



Home

The system can store the location of your choice under **Home**. This function is displayed each time a location is saved:

- **Save location as home**. Press OK/MENU.

To activate guidance when the destination is set as **Home**:

- Scroll to **Home**and press OK/MENU.

Address

It is only necessary to specify a town/city to set a route with guidance. You will be guided to the center of the town/city.

The following criteria can be used to search for a destination using its address:

- **Country:**
- **City:**
- **Street:**
- **Number:**

Points of interest (POI)

It is possible to search for a POI using any of the following alternatives:

- **By name**

- **By category**
- **Around the car**
- **Near the destination**
- **Around point on map**

To help make the map easier to read, the number of POIs displayed at the same time is restricted. Zoom in on an area to display additional POIs.

For information about other POI display options, see Map options.

See Internet map – symbols for points of interest (POI) for a list of the POI symbols used on the map.

Stored location

This provides a list of destinations that have been stored.

Each stored destination can be edited using:

- **Set single destination**
- **Edit**
- **Delete**
- **Delete all**.

Previous destination

This provides a list of previously set destinations. Mark by pressing OK/MENU and choose among:

- **Set single destination**
- **Information**
- **Save**
- **Delete**
- **Delete all**.

Zip code (postcode)

Search for a destination using its zip code.

Latitude and longitude

Specify a destination using its GPS coordinates.

Begin by deciding how the GPS coordinates are to be displayed by scrolling to **Format:** and pressing OK/MENU. Scroll to one of the following alternatives and pressOK/MENU:

- **DD°MM'SS"**: position in Degrees, Minutes and Seconds.

- **Decimal**: the position shown using decimals.

Continue by entering the coordinates and select one of the following:

- **Set single destination**
- **Save**.

Position on the map

This displays the map with the current location marked by the crosshairs.

- Turn TUNE to change the map scale.

- Move the crosshairs using the number keys: [6 MNO] to move to the right, 8 TUV] to move downward, etc., see also Internet map – scroll menu.
- When you have moved to the desired position on the map, press OK/MENU.



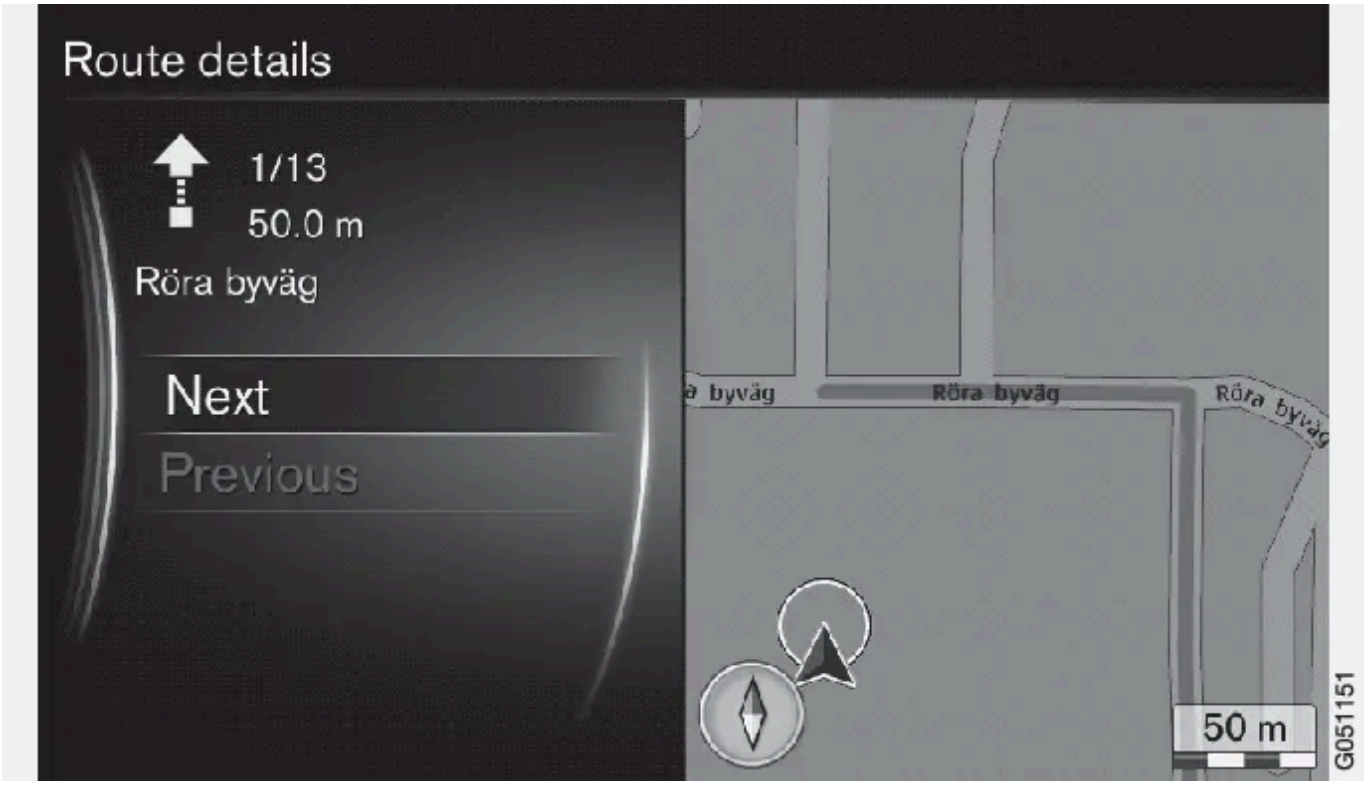
Select one of the following and press OK/MENU:

- **Set single destination**
- **Save**

9.5. Internet map - detailed route information

This view shows all of the exits, intersections, etc., along your route.

To display detailed route information, press OK/MENU in the source's normal view and select **Route** → **Detailed route information**.

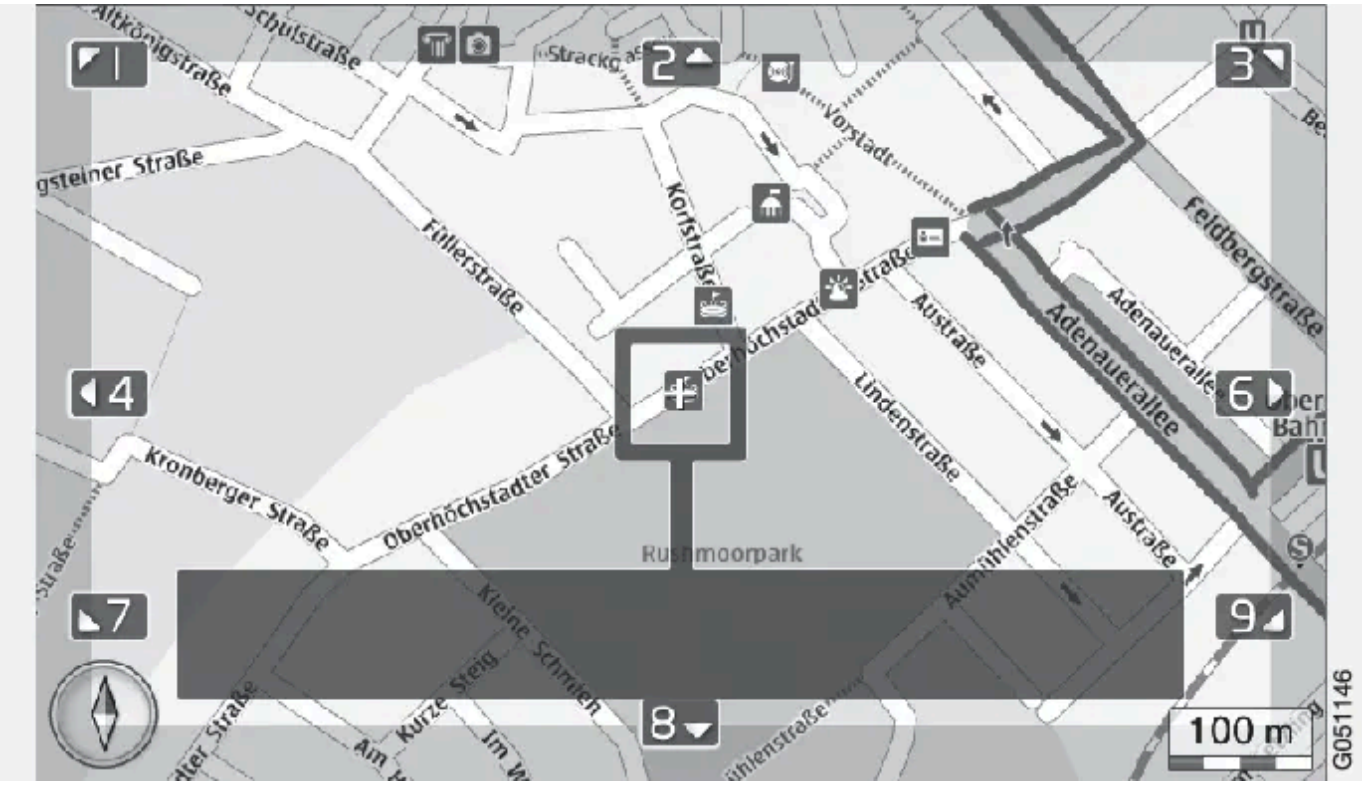


Detailed route information

The entire route to your destination consists of a number of different sections of road, including straightaways, exits, intersections, road entrances, etc. Scroll among the various sections by selecting **Next**/**Previous**. The location on the map, description, distance and points of interest will be displayed.

9.6. Internet map – scroll menu

The Scroll menu makes it possible to move the crosshairs across the map using the center console keypad.



Map scroll with crosshairs [1].

Activating map scroll when the map is displayed

- Press one of the number keys (**0**–**9**) on the center console.

Scrolling

- Press one of the following number keys (1-2-3-4-6-7-8-9): an arrow indicating the scrolling direction will be displayed in the margins combined with the number key to be used to scroll in the desired direction.

Zooming in/out

- Turn TUNE.

Key no. "5"

5 JKL In Map scroll mode, pressing key **5** centers the map around the vehicle's position.

Exiting the Scroll menu

- Press EXIT or NAV.

The crosshairs



Pressing OK/MENU displays a menu for the point on the map that the crosshairs are currently pointing to, containing:

- **Set single destination**: deletes any previous destinations and starts guidance on the map.
- **POI information**: shows the name and address for the POI closest to the crosshairs. For additional information about POIs, see Internet map – symbols for points of interest (POI) .
- **Information**: displays relevant information about the marked position.
- **Save**: makes it possible to store the marked position in the system's memory.

[1] You can decide if the crosshairs' position on the map shows the location's name or GPS coordinates, see map options.

9.7. Internet map[1]

This feature makes it possible to display map and route information.

The system can calculate a suitable route and indicate your vehicle's position in relation to the route on the map. If you deviate from your planned route, the system automatically recalculates the route and guides you to your destination. In addition to map information, symbols for selected points of interest (POI) will also be displayed.

This feature will not function in areas where the vehicle is unable to connect to the Internet.

If the Internet connection is weak or is interrupted, route calculation will not function correctly and certain map scales may not be available, depending on the amount of map information that was buffered before the connection was broken.

Volvo offers a full-scale navigation system (Sensus Navigation) that utilizes harddisk-based maps, voice guidance, advanced route calculation including traffic information, Internet search functionality and the capacity to select intermediate destinations. Contact your Volvo retailer to upgrade to Sensus Navigation. This upgrade will replace Internet map.

Internet map provides information that guides you to your destination. However, all of the recommended guidance is not always reliable, since situations may arise that are outside the capacity and judgement of the navigation system, such as sudden changes in the weather.

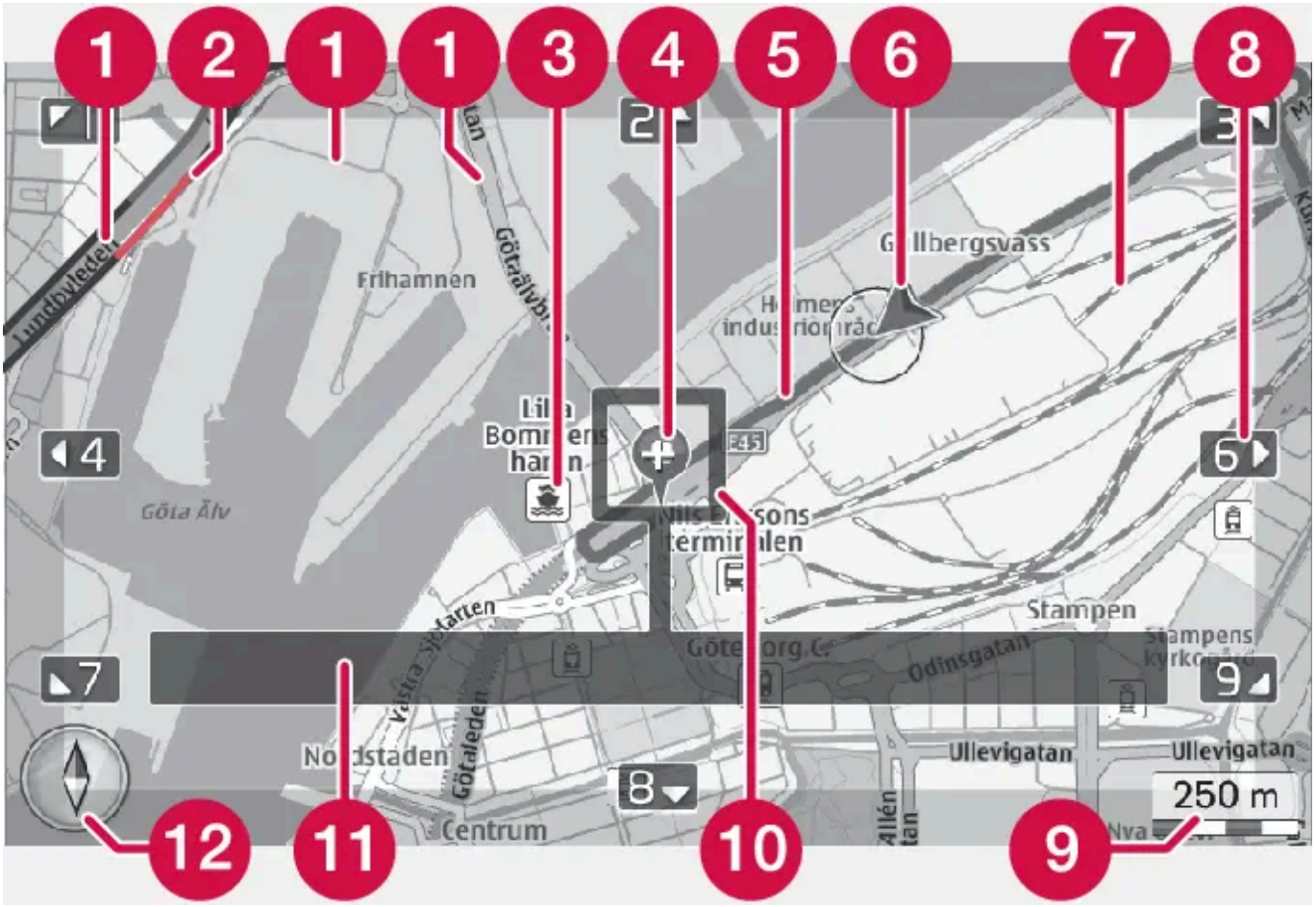
Warning

- Always use good judgment when following navigation system guidance, and do not follow guidance that seems contrary to your own best judgment.
- Never use the navigation system or any other feature in your vehicle in a way that distracts you from the task of driving safely. Distraction can lead to a serious accident.
- Set and make changes in your navigation system only with the vehicle parked.
- Be aware of the current traffic situation.
- Always comply with relevant traffic regulations.
- Due to weather conditions or time of year affecting the road conditions, some recommendations may be less reliable.

[1] Not available in all markets.

9.8. Internet map – on-screen text and symbols

This article provides an explanation of the text and symbols used on the screen.



1. Type of road (size and color vary according to the size of the road and the map scales/colors being used)
2. Traffic information: indicated by a line by the side of the road
3. Point of interest (POI)
4. Symbol for final destination
5. Planned route (blue)
6. Vehicle's current location
7. Railroad
8. Keys (on the center console keypad) for scrolling/moving the map in the directions indicated by the arrows
9. Map scale
10. Magnifier and crosshairs
11. Name of the current road/street, coordinates or information about a point of interest (POI)
12. Compass

9.9. Using Internet map

This article describes the procedure for starting Internet map, planning a route and starting guidance to your destination.

See operating instructions and using menus . Characters are entered using either the text wheel or the center console keypad are used to enter text .

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1. The vehicle must be connected to the Internet .
2. Press the NAV button on the center console to start Internet map.
3. Accept position sharing about the vehicle's position.

> **Note**
>
> Internet map cannot function if position sharing has not been accepted.
>
> To turn position sharing off, from the source's normal view, press OK/MENU, select **Settings** and deselect **Position sharing**.

4. Select a destination.
5. Select route options (e.g., type of road, tunnels, ferries, etc.)
6. Select map options (e.g., full-screen, map colors, position information etc.)

> The vehicle's location and any selected points of interest will be shown on the map.

Show the remaining route

From the source's normal view, for an overview of your route, press OK/MENU and select **Route → Map of remaining route**.

Show detailed route information.

Change destination

Change destinations by selecting a new destination.

Cancel/resume guidance

From the source's normal view, to cancel or resume guidance, press OK/MENU and select OK/MENU and select **Cancel/Resume guidance**.

Change of ownership

When the vehicle changes owners, it is important that user data and system settings be returned to the original factory settings, see Change of ownership.

9.10. Internet map – symbols for points of interest (POI)

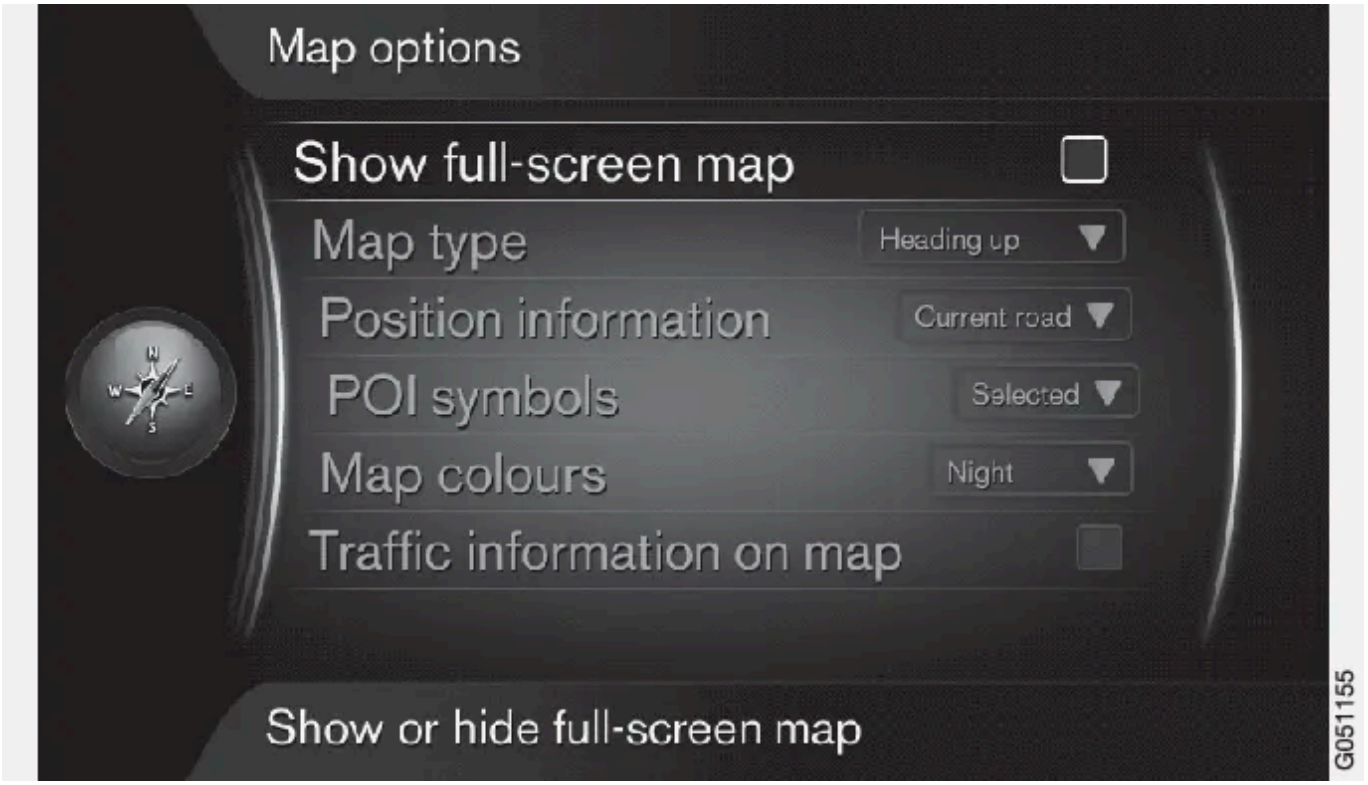
The following table shows the symbols used to indicate various points of interest (POI).

	Restaurant

	Theater Music Culture
	Dancing Nightclub
	Movie theater
	Casino
	Museum
	Landmark Tourist attraction
	Church/place of worship
	Airport
	Railroad station/commuter train station
	Public transportation/mass transit
	Ferry terminal
	Taxi station
	Hotel/lodging
	Shopping center/mall
	Business/service center
	ATM Bank
	Police Emergency ward
	Post office
	Tourist information
	Gas station
	Car rental
	Car repairs
	Facilities
	Hospital Medical care clinic
	Library
	Conference/exhibition center
	Parking lot/garage
	Public restrooms
	Sport complex Playing fields
	Outdoor/recreational activities
	Amusement park

9.11. Internet map – map options

The following illustration shows the various map view options.



The illustration is generic - not all of the options shown are available on all markets

Full-screen map

From the source's normal view, to see the map on the entire screen, press OK/MENU on the center console[1] and select **Settings** → **Map options** → **Show full-screen map**.

You can also scroll to this alternative on the screen and press OK/MENU to show the map on the entire screen. Other information that is normally displayed at the top and bottom of the screen (temperature, etc.) will not be visible while the map is in full-screen mode.

Map type

From the source's normal view, to set the way in which the vehicle's direction is shown on the map, pressOK/MENU and select **Settings** → **Map options** → **Map type**.

Confirm by pressing OK/MENU.

- **North up**: North is always at the top of the screen. The "car" symbol moves on the screen according to the vehicle's current direction.
- **Map heading up**: The "car" symbol remains at the center of the screen and points upward. The map rotates under the car symbol depending on the turns in the road.
- **3D Heading up**: Same as **Map heading up** but a 3D version of the map is displayed. The display varies depending on the degree of zoom.

Position information

From the source's normal view, to display information about the vehicle's current position, pressOK/MENU and select **Settings** → **Map options** → **Position information**.

Confirm by pressing OK/MENU.

- **Current road**: The name of the road where the vehicle/cursor is located will be displayed.
- **Lat/Long**: The map coordinates of the vehicle's current location will be displayed.
- **None**: No information of this type will be displayed.

POI (Points of Interest) symbols

From the source's normal view, to display the POIs to be displayed on the map, press OK/MENU and select **Settings** → **Map options** → **POI symbols**.

Select the POIs to be shown on the map here. Confirm by pressing OK/MENU.

- **Default**: The POIs chosen using **Selected** will be displayed.
- **Selected**: Turn TUNE on the center console to scroll to each POI to be displayed. Confirm by pressing OK/MENU.
- **None**: No POIs will be displayed.

For an example of POIs, see Internet map – symbols for points of interest (POI) .

Map colors

From the source's normal view, to select map colors, press OK/MENU and select **Settings** → **Map options** → **Map colors**.

Confirm by pressing OK/MENU.

- **Automatic**: A sensor monitors the amount of ambient light and automatically adjusts the screen.
- **Day**: Enhanced color and contrast for daylight conditions.
- **Night**: Color and contrast are adjusted for best visibility in dark ambient lighting conditions.

Traffic information on the map[2]

The sides of the roads on the map for which traffic information is available are marked in green, yellow or red.

- Green: traffic is moving freely
- Yellow: slow moving traffic
- Red: traffic jam or accident

From the source's normal view, to display traffic information, press OK/MENU and select **Settings** → **Map options** → **Traffic on map**.

[1] In all cases in this article, you can also press the thumb wheel on the steering wheel keypad or turn the thumb well to scroll.

[2] Not available on all markets

10. Wheels and tires

10.1. Changing a wheel

10.1.1. Changing a wheel – spare wheel

Wheel changes should always be carried out correctly.

Spare tire

A spare tire can be purchased for your vehicle as an accessory. Follow the instructions included with the spare tire regarding use and stowing in the vehicle. See also Changing a wheel – removing wheel for additional information.

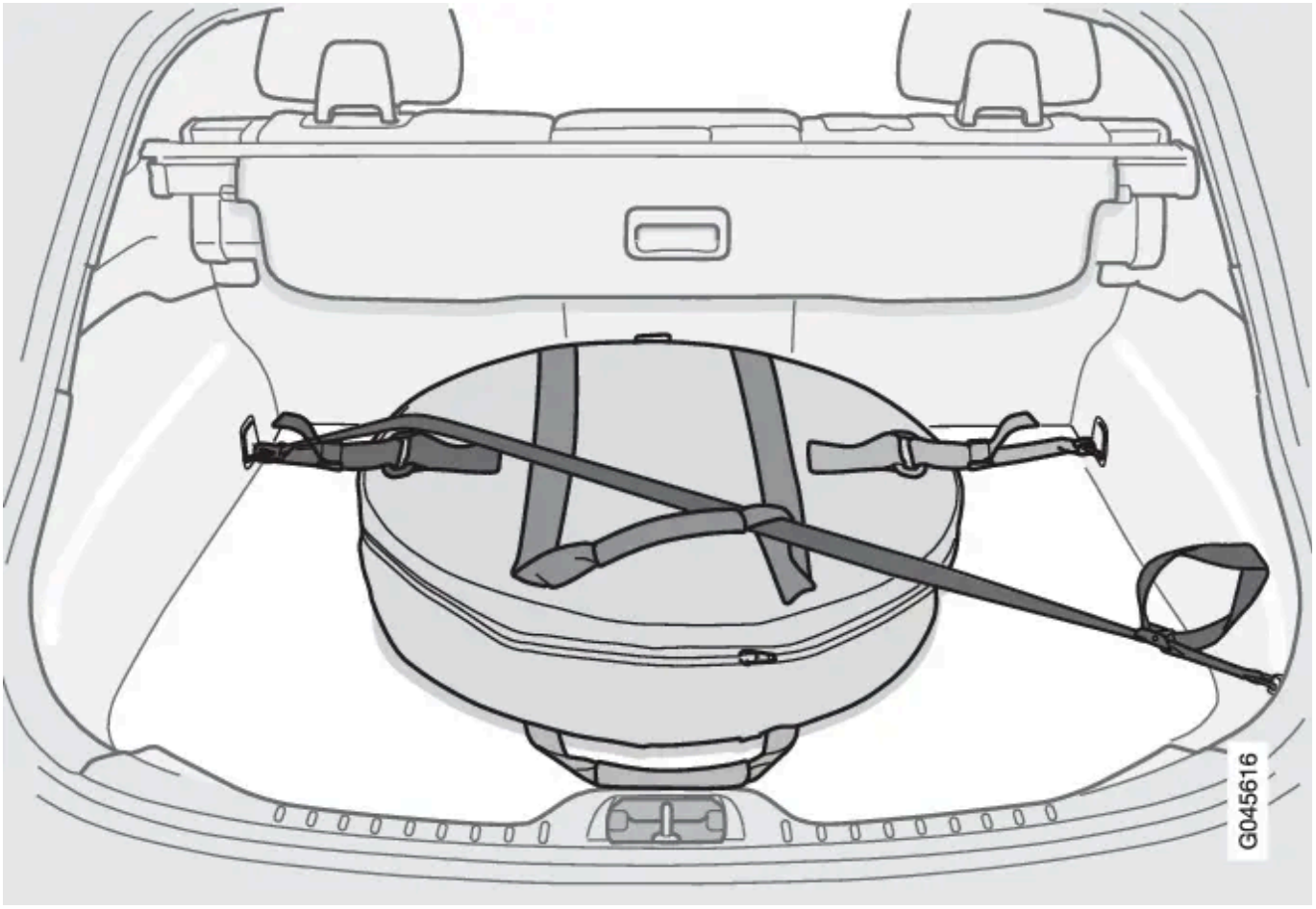
Spare wheel

The following instructions only apply if you have purchased a temporary spare wheel* for your vehicle.

If there is no temporary spare wheel in your vehicle, please see Tire sealing system – general information for instructions on using the tire sealing system.

The accessory temporary spare wheel is provided in a bag that must be securely strapped in place in the cargo area while the vehicle is being driven.

The spare wheel is only intended for temporary use. Replace it with a normal wheel as soon as possible. The vehicle's handling may be altered by the use of the spare wheel. The correct tire pressure is stated in the tire pressure table, see Tire inflation – pressure table and in the tire inflation placard on the driver's side door jamb at the rear of the driver's door opening.



Turn the handle on the spare wheel bag out toward you. Secure the stitched strap hooks in the front loading eyelets. Secure the long strap in one of the front loading eyelets, wrap the strap diagonally over the spare wheel and through the upper handle. Secure the short strap on the long strap. Secure in the rear loading eyelet and tighten.

Warning

Current legislation prohibits the use of the “Temporary Spare” tire other than as a temporary replacement for a punctured tire. It must be replaced as soon as possible by a standard tire. Road holding and handling may be affected with the “Temporary Spare” in use.

Important

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

* Option/accessory.

10.1.2. Changing a wheel – accessing the spare wheel

The following procedure explains how to access the spare wheel (where applicable).

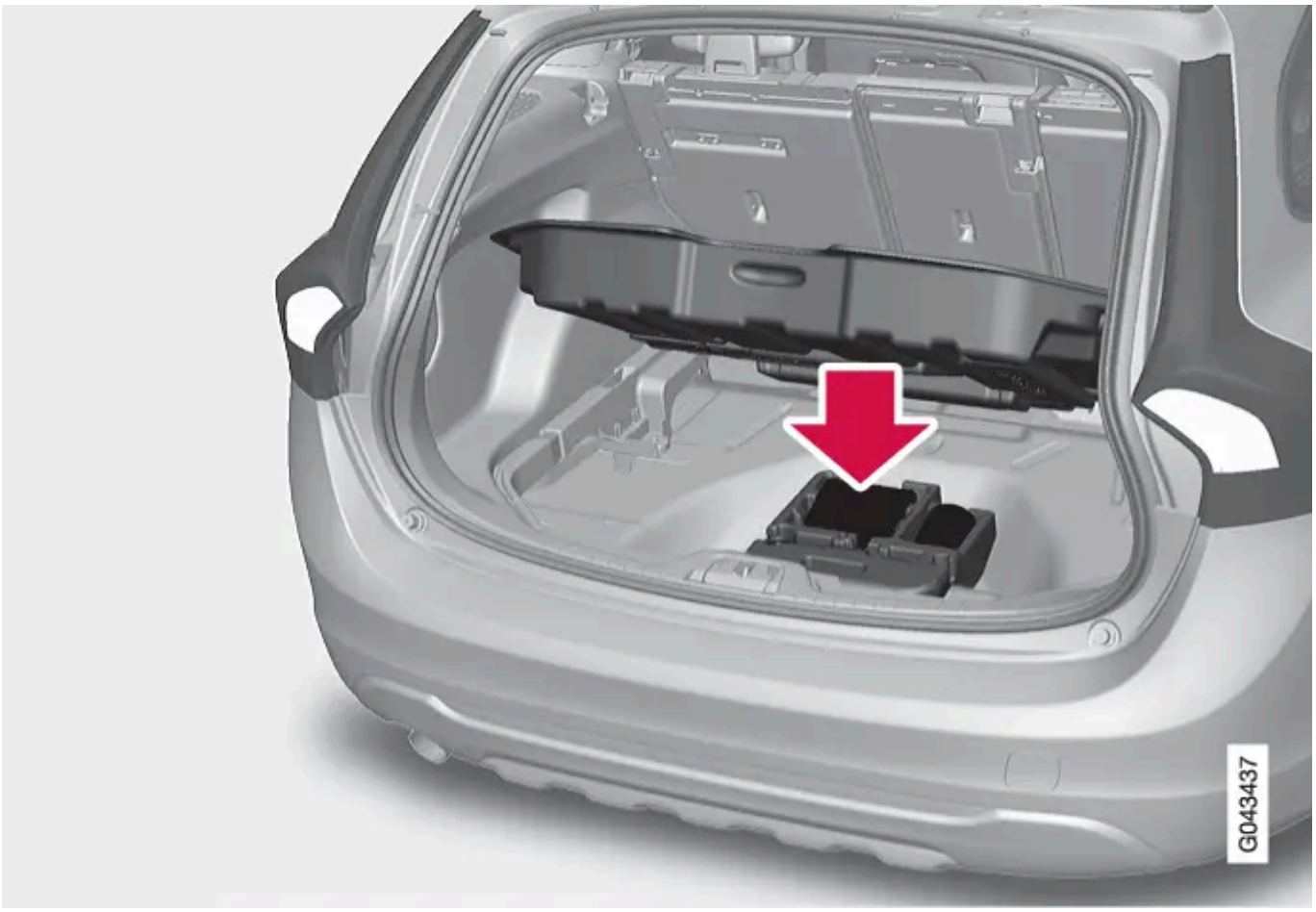
1. Release the bag's retaining straps.
2. Lift the bag out of the vehicle and remove the spare wheel from the bag.
3. Fold up the floor hatch in the cargo area.
4. Remove the jack* and tools* from the foam block and change the wheels (see the instructions in the following section "Changing a wheel").
5. After changing wheels, return the jack and tools to the foam block and close the floor hatch.
6. If possible, place the wheel with the punctured tire in the bag.
7. If there is a wheel in the bag, strap the bag securely in place in the cargo area.

> **Warning**
>
> - If there is a wheel in the bag, the bag must be securely restrained using its straps and the load anchoring eyelets in the cargo area. See Changing a wheel – spare wheel and carefully follow the instructions.
> - If the wheel with the punctured tire is too big to fit in the bag, it should be securely restrained in the cargo area using suitable straps, a net for anchoring cargo, etc.

* Option/accessory.

10.1.3. Changing a wheel – removing wheel

Wheel changes should always be carried out correctly.



Location of jack and tools

Changing a wheel

1. Apply the parking brake and put the gear selector in P.

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2. Take out the jack*, lug wrench*, the tool for removing the plastic covers on the wheel nuts, the towing eyelet and the wheel cover removal tool (certain models only) stowed under the floor of the cargo area.

3. 

Tool for removing the plastic covers on the wheel nuts

Remove the wheel cover (where applicable) using the removal tool or remove the wheel cover by hand.

4. Block the wheels that are on the ground with wooden blocks or large stones.

5. 

Lug wrench and towing eyelet

Screw the towing eyelet into the lug wrench as shown in the illustration.

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Important

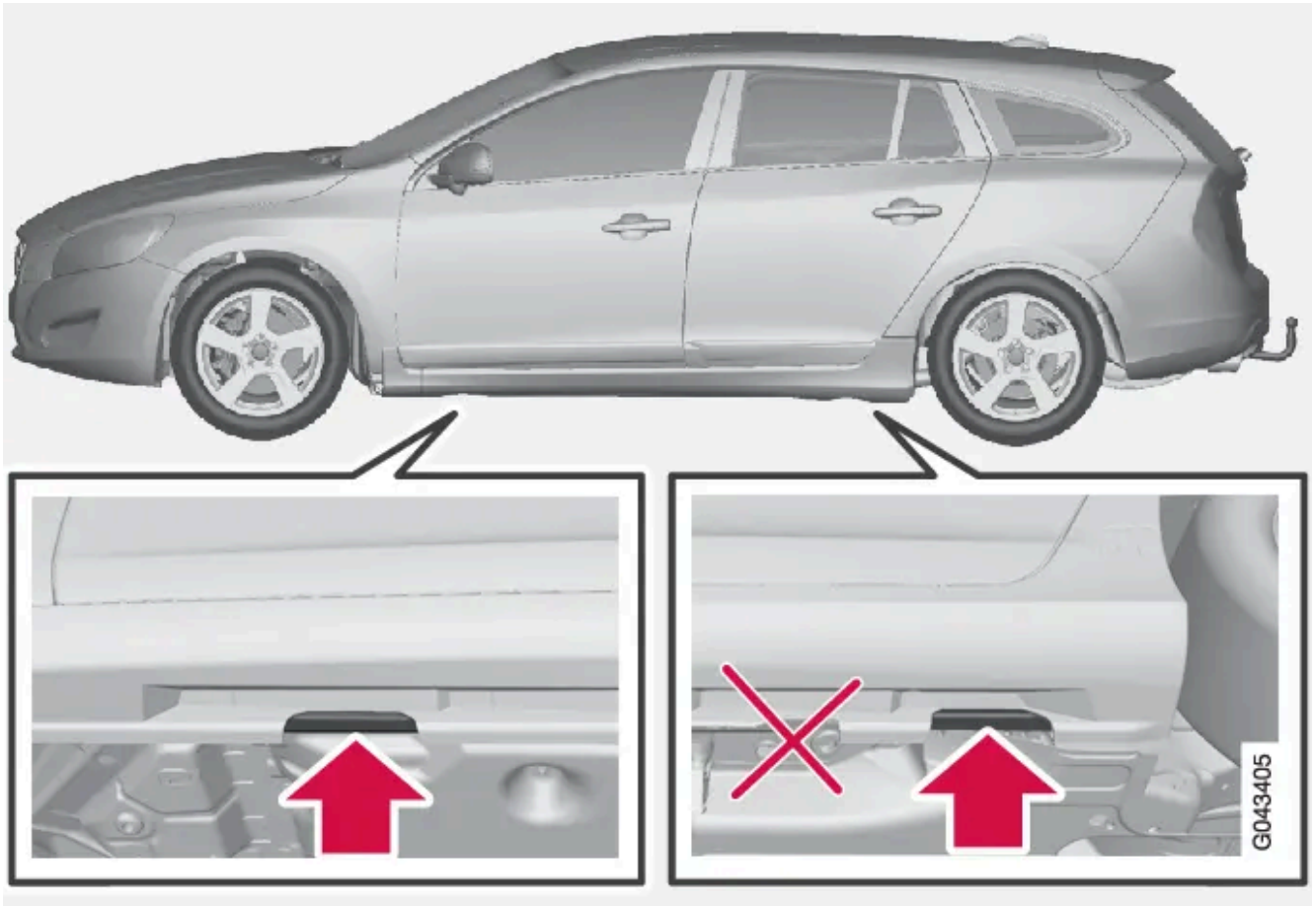
The towing eyelet must be screwed into the lug wrench as far as possible.

6.



With the vehicle still on the ground, remove the plastic covers on the wheel nuts with the tool provided and use the lug

wrench/towing eyelet to loosen the wheel nuts ½ – 1 turn by exerting downward (counterclockwise) pressure.



Jack attachment points

7. There are two jack attachment points on each side of the vehicle. Position the jack correctly in the attachment (see the illustration) and crank while simultaneously guiding the base of the jack to the ground. The base of the jack must be flat on a level, firm, non-slippery surface. Before raising the vehicle, check that the jack is still correctly positioned in the attachment.
8. Raise the vehicle until the wheel to be changed is lifted off the ground.
9. Unscrew the wheel nuts completely and remove the wheel.

Warning

- The jack must correctly engage the jack attachment.
- Be sure the jack is on a firm, level, non-slippery surface.
- Never allow any part of your body to be extended under a vehicle supported by a jack.
- Use the jack intended for the vehicle when changing a tire. For any other job, use stands to support the vehicle.
- Apply the parking brake and put the gear selector in the Park (P) position.
- Block the wheels standing on the ground, use rigid wooden blocks or large stones.
- The jack should be kept well-greased and clean, and should not be damaged.
- No objects should be placed between the base of jack and the ground, or between the jack and the attachment bar on the vehicle.

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Note

The jack provided with your vehicle is intended to be used only in temporary situations such as changing wheels in the event of a flat tire. Only the jack that came with your particular model should be used to lift the vehicle. If the vehicle needs to be lifted more frequently or for a prolonged period, using a garage jack or hoist is recommended. Always follow this device's instructions for use.

* Option/accessory.

10.1.4. Changing a wheel – installing a wheel

It is important to re-install wheels properly.

Re-installing the wheel

1. Clean the contact surfaces on the wheel and hub.
2. Lift the wheel and place it on the hub.



Tighten the wheel nuts

3. Install the wheel nuts and tighten hand-tight. Using the lug wrench, tighten crosswise until all nuts are snug.

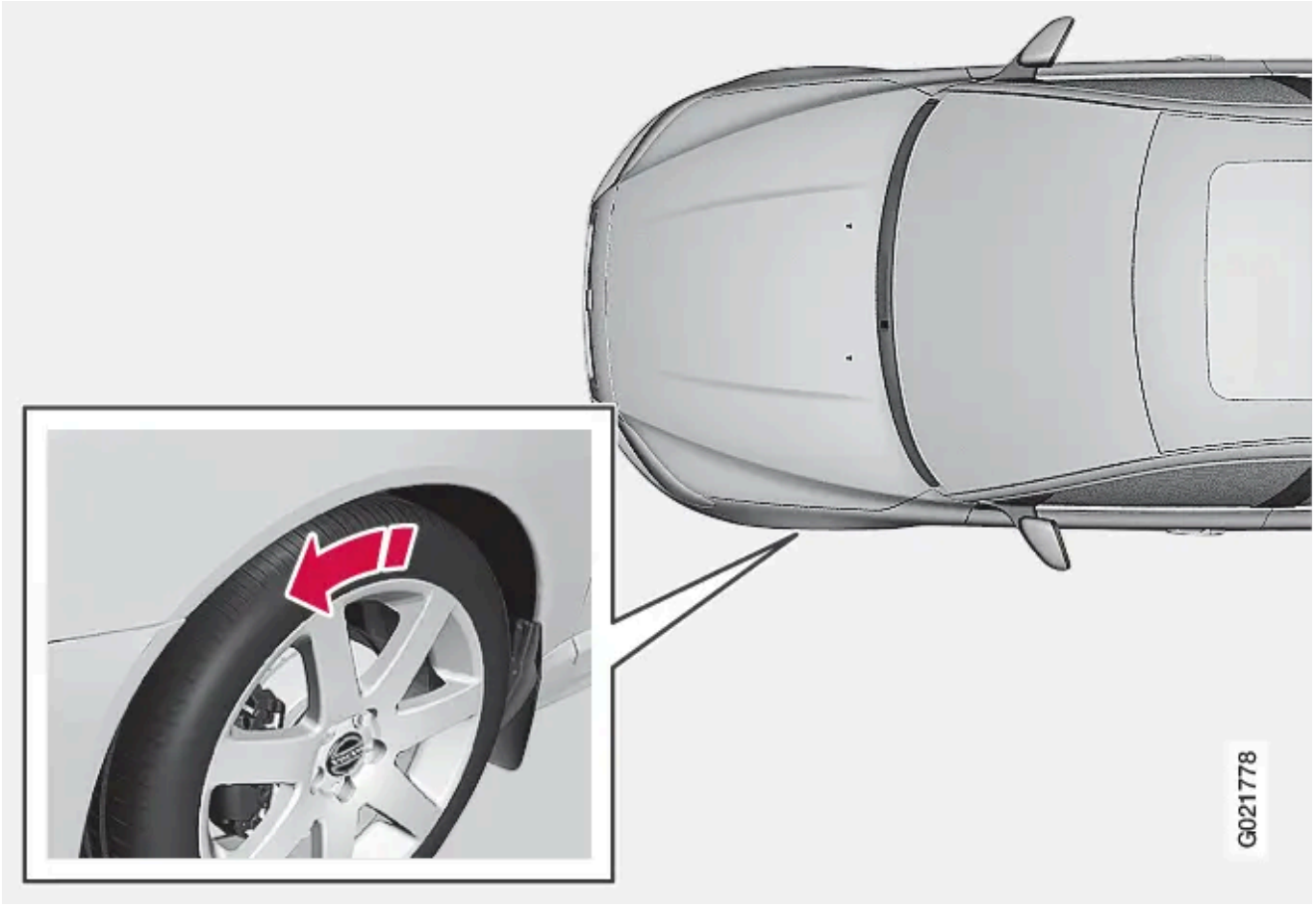
4. Lower the vehicle to the ground and alternately tighten the bolts crosswise to 103 ft. lbs. (140 Nm).

5. Press the plastic covers onto the wheel nuts and Install the wheel cover (where applicable). The opening in the wheel cover for the tire's inflation valve must be positioned over the valve.

10.1.5. Changing a wheel – direction of rotation

Incorrectly mounted tires impair the car's braking properties and ability to force aside rain, snow and slush.

Summer and winter tires



The arrows shows the direction of rotation of the tire

- The tires with the most tread should always be on the rear axle (to help reduce the risk of skidding).
- When switching between summer and winter tires, mark the tires to indicate where they were mounted on the car, e.g., LF = left front, RR = right rear
- Tires with tread designed to roll in only one direction are marked with an arrow on the sidewall.
- Contact a Volvo workshop if you are unsure about the tread depth.

10.2. Tire sealing system

10.2.1. Tire sealing system* – general information

The vehicle is equipped with a tire sealing system that enables you to temporarily seal a hole in the tread surface and re-inflate a flat tire, or to adjust a tire's inflation pressure.



Introduction

The tire sealing system consists of an air compressor, a container for the sealing compound, wiring to connect the system to the vehicle's electrical system via one of the 12-volt sockets, and a hose used to connect the system to the tire's inflation valve.

> **Note**
>
> The tire sealing system's compressor has been tested and approved by Volvo.

The 12-volt sockets are located in the front tunnel console, on the rear side of the center console in the rear seat and in the cargo area*.

Accessing the tire sealing system

The tire sealing system is stowed under the floor of the cargo area. To access it:

- Lift the floor hatch in the cargo area.
- Lift out the tire sealing system.

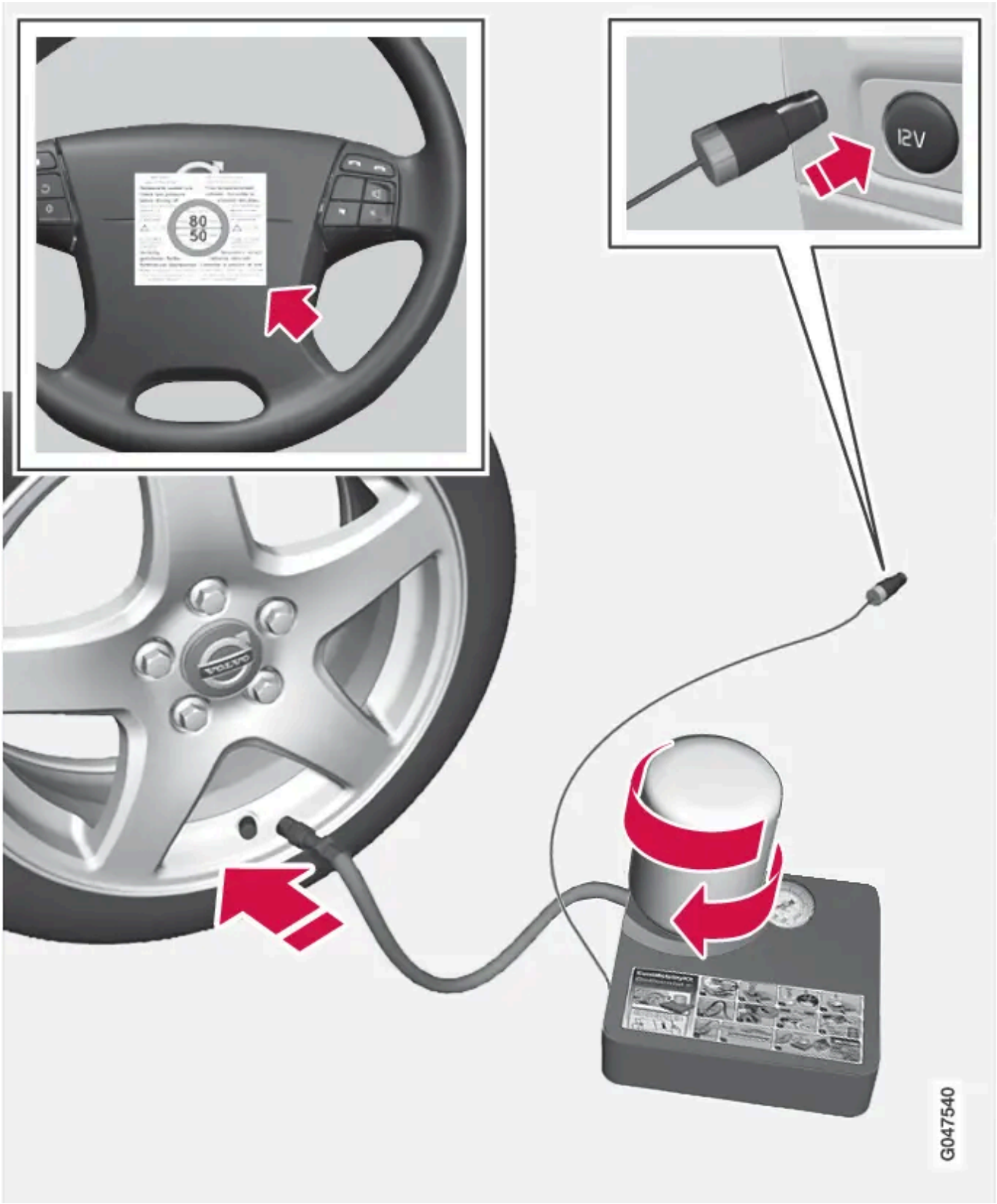
Note

- The tire sealing system is only intended to seal holes on the tire's tread area, not the sidewall.
- Tires with large holes or tears cannot be repaired with the tire sealing system.
- After use, stow the tire sealing system properly to help prevent rattling.

Warning

- After using the tire sealing system, the vehicle should not be driven farther than approximately 120 miles (200 km).
- Have the tire inspected by a trained and qualified Volvo service technician as soon as possible to determine if it can be permanently repaired or must be replaced.
- The vehicle should not be driven faster than 50 mph (80 km/h) while using a tire that has been temporarily repaired with the tire sealing system.
- After using the tire sealing system, drive carefully and avoid abrupt steering maneuvers and sudden stops.

Tire sealing system–temporarily repairing a flat tire



Temporarily repairing a flat tire is done in two stages:

- **Stage 1:** The hole is sealed by pumping sealing compound into the tire. The car is then driven a short distance to distribute the sealing compound in the tire.

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> **Note**
>
> Do not remove any foreign objects (nails, etc.) from the tire before using the sealing system.

- **Stage 2:** The tire's inflation pressure is checked and adjusted if necessary.

> **Warning**
>
> - Never leave the tire sealing system unattended when it is operating.
> - Keep the tire sealing system away from children.
> - Be sure the vehicle is parked safely off the road and away from moving traffic.
> - Apply the parking brake.

* Option/accessory.

10.2.2. Tire sealing system* – sealing hole

The tire sealing system can be used to temporarily seal a hole in the tread surface of a tire.

Stage 1: Sealing the hole

1. Peel off the speed limit sticker and affix it to the steering wheel hub where it will be clearly visible to the driver.
2. Ensure that the on/off switch is in position 0 (the 0 side of the switch should be pressed down).
3. > **Warning**
   >
   > Contact with the sealing compound may cause skin irritation. If contact occurs, wash the affected area immediately with soap and water.

   Unscrew the orange cover over the bottle holder and unscrew the cap on the bottle of sealing compound.
4. > **Note**
   >
   > Do not break the seal on the bottle. This occurs automatically when the bottle is screwed into the holder.

   Screw the bottle into the bottle holder.

5.

> **Warning**
>
> The bottle is equipped with a catch to keep it securely in place and help prevent sealing compound leakage. Once in place, the bottle cannot be unscrewed. This must be done by a trained and qualified Volvo service technician.

Remove the valve cap from the tire's inflation valve and screw the tire sealing system's hose connector onto the valve as tightly as possible by hand.

6. Connect the electrical wire to the nearest 12-volt socket in the vehicle.

> **Note**
>
> Be sure that none of the other 12-volt sockets is being used while the compressor is in operation.

7. Start the vehicle's engine.

8.

> **Warning**
>
> The vehicle´s engine should be running when the tire sealing system is used to avoid battery drain. Therefore, be sure the vehicle is parked in a well ventilated place, or outdoors, before using the system.

Start the tire sealing system's compressor by pressing the on/off switch to position I.

9.

> **Warning**
>
> - Never stand next to the tire being inflated when the compressor is in operation.
> - If cracks, bubbles, etc. form on the tire, switch off the compressor immediately.
> - If there is visible damage to the sidewall or the rim, the tire cannot be repaired. The vehicle should not be driven if this occurs. Contact a towing service or Volvo On Call Roadside Assistance if applicable.

> **Note**
>
> The air pressure gauge will temporarily show an increase in pressure to approximately 88 psi (6 bar) while the sealing compound is being pumped into the tire. The pressure should return to a normal level after approximately 30 seconds.

Within seven minutes, inflate the tire to between 22—44 psi (1.8—3.0 bar). Switch off the compressor briefly to get a clear reading from the pressure gauge.

10.

> **Important**
>
> The compressor should not be used for more than 10 minutes at a time to avoid overheating.

> **Warning**
>
> If the pressure remains below 22 psi (1.8 bar) after approximately seven minutes, turn off the compressor. In this case, the hole is too large to be sealed and the vehicle should not be driven.

Switch off the compressor and disconnect the electrical wire from the 12-volt socket.

11. Unscrew the hose from the tire's inflation valve and reinstall the valve cap.

> **Important**
>
> - After inflating the tires, always reinstall the valve cap to help avoid damage to the valve from dirt, gravel, etc.
> - Use plastic valve caps only. Metal caps could corrode and become difficult to remove.

12. Immediately drive the vehicle for approximately 2 miles (3 km) at a maximum speed of 50 mph (80 km/h) to distribute the sealing compound in the tire.

> **Important**
>
> If your vehicle is equipped with the Tire Pressure Monitoring System (TPMS), the use of the sealing compound may lead to incorrect tire pressure readings or in rare cases, damage to the tire pressure sensor. Use the tire sealing system to check and adjust the damaged tire's inflation pressure.

> **Note**
>
> - Safely stow the tire sealing system in a convenient place as it will soon be used again to check the tire's inflation pressure.
> - The empty bottle of sealing compound cannot be removed from the bottle holder. Consult a trained and qualified Volvo service technician to have the bottle removed and properly disposed of.

> **Warning**
>
> If heavy vibrations, unsteady steering behavior, or noises should occur while driving, reduce speed and park the vehicle in a safe place. Recheck the tire for bumps, cracks, or other visible damage, and recheck its inflation pressure. If the pressure is below 19 psi (1.3 bar), do not continue driving. Have the vehicle towed to a trained and qualified Volvo service technician.

* Option/accessory.

10.2.3. Tire sealing system* – sealing compound container

The sealing compound container must be replaced if the tire sealing system has been used to repair a tire or if the container's expiration date has passed (see the date on decal).

Replacing the sealing compound container

Note

- After use, the sealing compound bottle, the hose, and certain other system components must be replaced. Please consult your Volvo retailer for replacement parts.
- If the sealing compound bottle's expiration date has passed, please take it to a Volvo retailer or a recycling station that can properly dispose of harmful substances.

* Option/accessory.

10.2.4. Tire sealing system – checking inflation pressure

The tire sealing system can also be used to check the tires' inflation pressure.

Stage 2: Checking inflation pressure

1. Connect the tire sealing system as described in **stage 1**, see Tire sealing system – sealing hole.
2. Refer to the inflation pressure table in this chapter for the correct inflation pressure. If the tire needs to be inflated, start the tire sealing system's compressor. If necessary, release air from the tire by turning the air release knob counterclockwise.

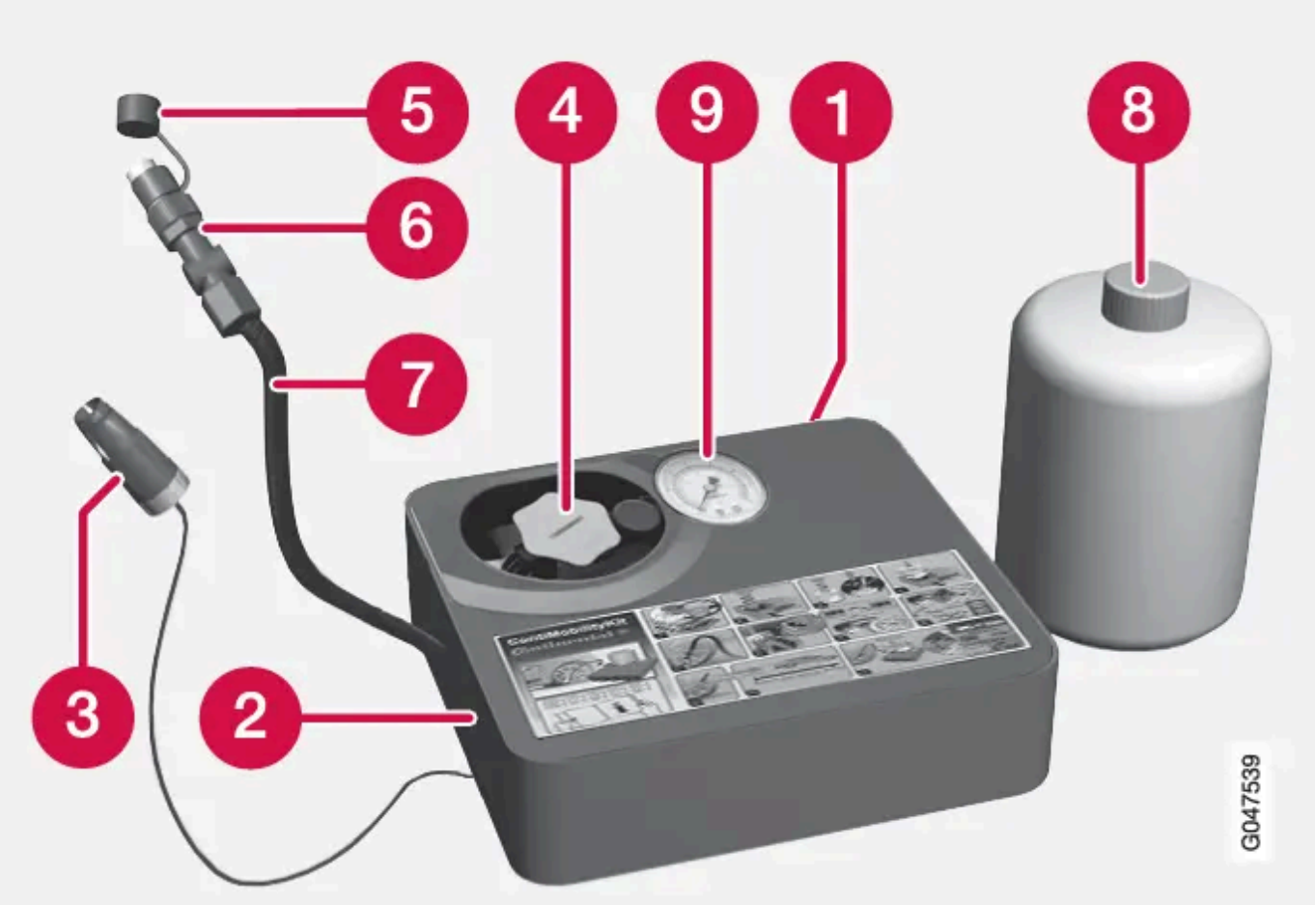
Important

The compressor should not be used for more than 10 minutes at a time to avoid overheating.

Warning

If you interrupt your trip for more than 1 hour, check the inflation pressure in the damaged tire again before continuing.

10.2.5. Tire sealing system* – overview



1 Speed limit sticker (on the rear side of the compressor)

2 On/Off switch

3 Electrical wire

4 Bottle holder (orange cover)

5 Protective hose cover

6 Air release knob

7 Hose

8 Bottle with sealing compound

9 Air pressure gauge

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Warning

Please keep the following points in mind when using the tire sealing system:

- The sealing compound bottle (no. 8 in the illustration) contains 1) rubber latex, natural and 2) ethanediol. These substances are harmful if swallowed.
- The contents of this bottle may cause allergic skin reactions or otherwise be potentially harmful to the respiratory tract, the skin, the central nervous system, and the eyes.

Precautions:

- Keep out of reach of children.
- Do not ingest the contents.
- Avoid prolonged or repeated contact with the skin.
- Wash thoroughly after handling.

First aid:

- Skin: Wash affected areas of skin with soap and water. Get medical attention if symptoms occur.
- Eyes: Flush with plenty of water for least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if symptoms occur.
- Inhalation: Move the exposed person to fresh air. If irritation persists, get medical attention.
- Ingestion: Do **NOT** induce vomiting unless directed to do so by medical personnel. Get medical attention.
- Disposal: Dispose of this material and its container to a hazardous or special waste collection point.

Note

Do not break the seal on the bottle. This occurs automatically when the bottle is screwed into the holder.

* Option/accessory.

10.2.6. Tire sealing system* – inflating tires

The tire sealing system can be used to inflate the tires.

To do so:

1. Park the car in a safe place.
2. The compressor should be switched off. Ensure that the on/off switch is in position

   0 (the 0 side of the switch should be pressed down).

3. Take out the electrical wire and hose.
4. Remove the valve cap from the tire's inflation valve and screw the hose connector onto the valve as tightly as possible by hand.
5. Connect the electrical wire to the nearest 12-volt socket in the vehicle.
6. Start the vehicle's engine.
7. **Warning**

   - The vehicle's engine should be running when the tire sealing system is used to avoid battery drain. Therefore, be sure the vehicle is parked in a well ventilated place, or outdoors, before using the system. The parking brake should be securely applied and the gear selector should be in the P (park) position.
   - Children should never be left unattended in the vehicle when the engine is running.

   Check the tire's inflation pressure on the gauge. Switch off the compressor briefly to get a clear reading from the pressure gauge.
8. Refer to the tire inflation table in this chapter for the correct inflation pressure. If the tire needs to be inflated, start the tire sealing system's compressor (press the on/off switch to position I). If necessary, release air from the tire by turning the air release knob counterclockwise.
9. **Important**

   The compressor should not be used for more than 10 minutes at a time to avoid overheating.

   Turn off the compressor (press the on/off switch to position 0) when the correct inflation pressure has been reached.
10. Unscrew the hose from the tire's inflation valve and reinstall the valve cap.

    Important

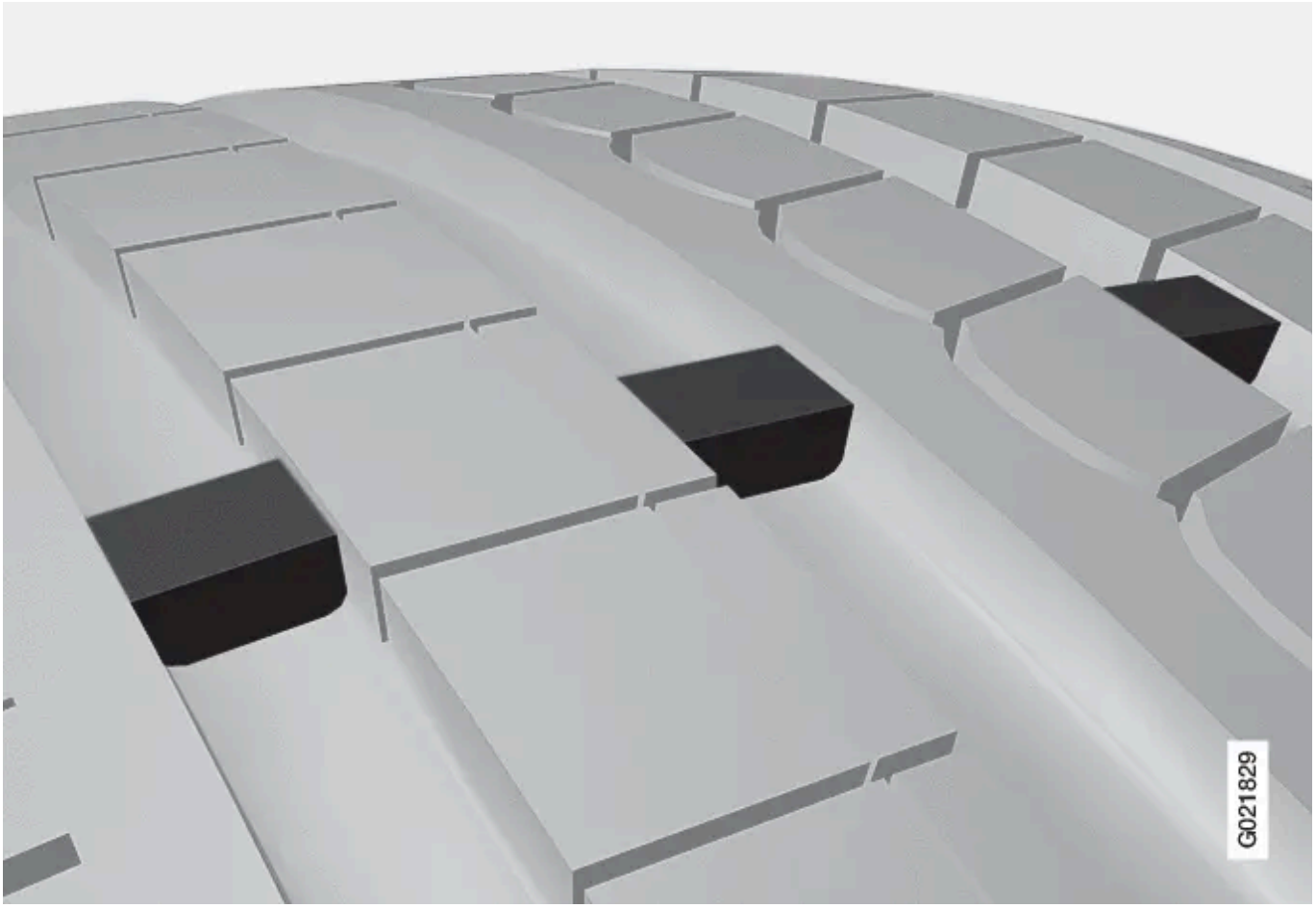
    - After inflating the tires, always reinstall the valve cap to help avoid damage to the valve from dirt, gravel, etc.
    - Use plastic valve caps only. Metal caps could corrode and become difficult to remove.
11. Disconnect the electrical wire from the 12-volt socket.

* Option/accessory.

10.3. Tires

10.3.1. Tires – tread wear indicator

The tires have wear indicator strips running across or parallel to the tread.



The letters TWI are printed on the side of the tire. When approximately 1/16" (1.6 mm) is left on the tread, these strips become visible and indicate that the tire should be replaced. Tires with less than 1/16" (1.6 mm) tread offer very poor traction.

When replacing worn tires, it is recommended that the tire be identical in type (radial) and size as the one being replaced. Using a tire of the same make (manufacturer) will prevent alteration of the driving characteristics of the vehicle.

10.3.2. Tire Pressure Monitoring System (TPMS) – general information

TPMS uses sensors mounted in the tire valves to check inflation pressure levels. When the vehicle is moving at a speed of approximately 20 mph (30 km/h) or faster, these sensors transmit inflation pressure data to a receiver located in the vehicle.

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Note

USA – FCC ID: KR5S180052050

This device complies with part 15 of the FCC rules. Operation is subject to the following conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

When low inflation pressure is detected or if a sensor is not functioning properly, TPMS will light up the tire pressure warning light ( ) (also referred to as a telltale) in the instrument panel and will display one of the following messages: **Tire pressure low**, **Tire needs air now** or **Tire press. syst Service required**.

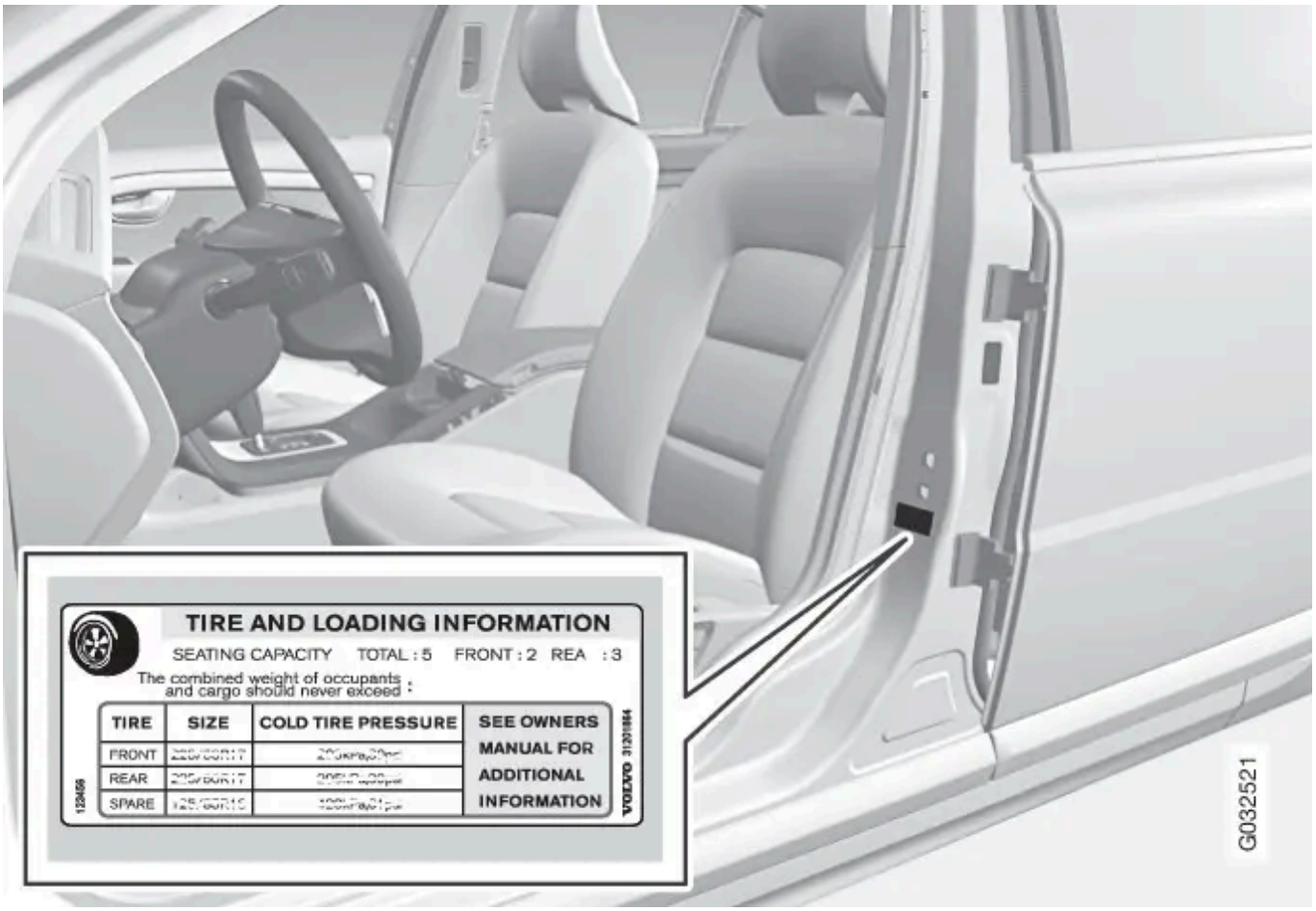
Note

If a malfunction occurs in the system, the tire pressure warning light will flash for approximately 1 minute and then remain illuminated. **Tire press. syst Service required** will be displayed.

10.3.3. Tire inflation – general information

Check tire inflation pressure regularly.

Inflation placard



Tire inflation

See the tire inflation table in Tire inflation – pressure table. A tire inflation pressure placard is also located on the driver's side B-pillar (the structural member at the side of the vehicle, at the rear of the driver's door opening). This placard indicates the designation of the factory-mounted tires on your vehicle, as well as load limits and inflation pressure.

> **Note**
>
> - The placards shown indicate inflation pressure for the tires installed on the vehicle at the factory only.
> - A certain amount of air seepage from the tires occurs naturally and tire pressure fluctuates with seasonal changes in temperature. Always check tire pressure regularly.

- Use a tire gauge to check the tire inflation pressure, including the spare[1], at least once a month and before long trips. You are strongly urged to buy a reliable tire pressure gauge, as automatic service station gauges may be inaccurate.
- Use the recommended cold inflation pressure for optimum tire performance and wear.
- Under-inflation or over-inflation may cause uneven treadwear patterns.

> **Warning**
>
> - Under-inflation is the most common cause of tire failure and may result in severe tire cracking, tread separation, or "blow-out," with unexpected loss of vehicle control and increased risk of injury.
> - Under-inflated tires reduce the load carrying capacity of your vehicle.

When weather temperature changes occur, tire inflation pressures also change. A 10-degree temperature drop causes a corresponding drop of 1 psi (7 kPa) in inflation pressure. Check your tire pressures frequently and adjust them to the proper pressure, which can be found on the vehicle's tire information placard or certification label.

[1] Available as an accessory

10.3.4. Tire Pressure Monitoring System (TPMS) – recalibrating

In certain cases, it may be necessary to recalibrate TPMS to conform to Volvo's recommended tire inflation pressures (see the inflation pressure table in), for example, if higher inflation pressure is necessary when transporting heavy loads, etc.

Recalibrating TPMS (Canadian models only)*

This is done in the vehicle's menu system.

To recalibrate:

1. Switch off the engine.
2. Inflate the tires to the desired pressure and put the ignition in mode I or II (see Ignition modes for additional information).
3. Press the MY CAR key in the center console control panel and select **Settings** → **Car settings** → **Tire pressure**.
4. Press OK/MENU, select **Calibrate tire pressure** and press OK/MENU again.
5. Drive the vehicle at a speed above 20 mph (30 km/h) continuously for at least 10 minutes.

> Calibration is done automatically once initiated by the driver and the system does not give any confirmation when calibration is finished.

The new pressures are used until step 1-5 above are repeated.

* Option/accessory.

10.3.5. Changing a wheel – spare wheel

Wheel changes should always be carried out correctly.

Spare tire

A spare tire can be purchased for your vehicle as an accessory. Follow the instructions included with the spare tire regarding use and stowing in the vehicle. See also Changing a wheel – removing wheel for additional information.

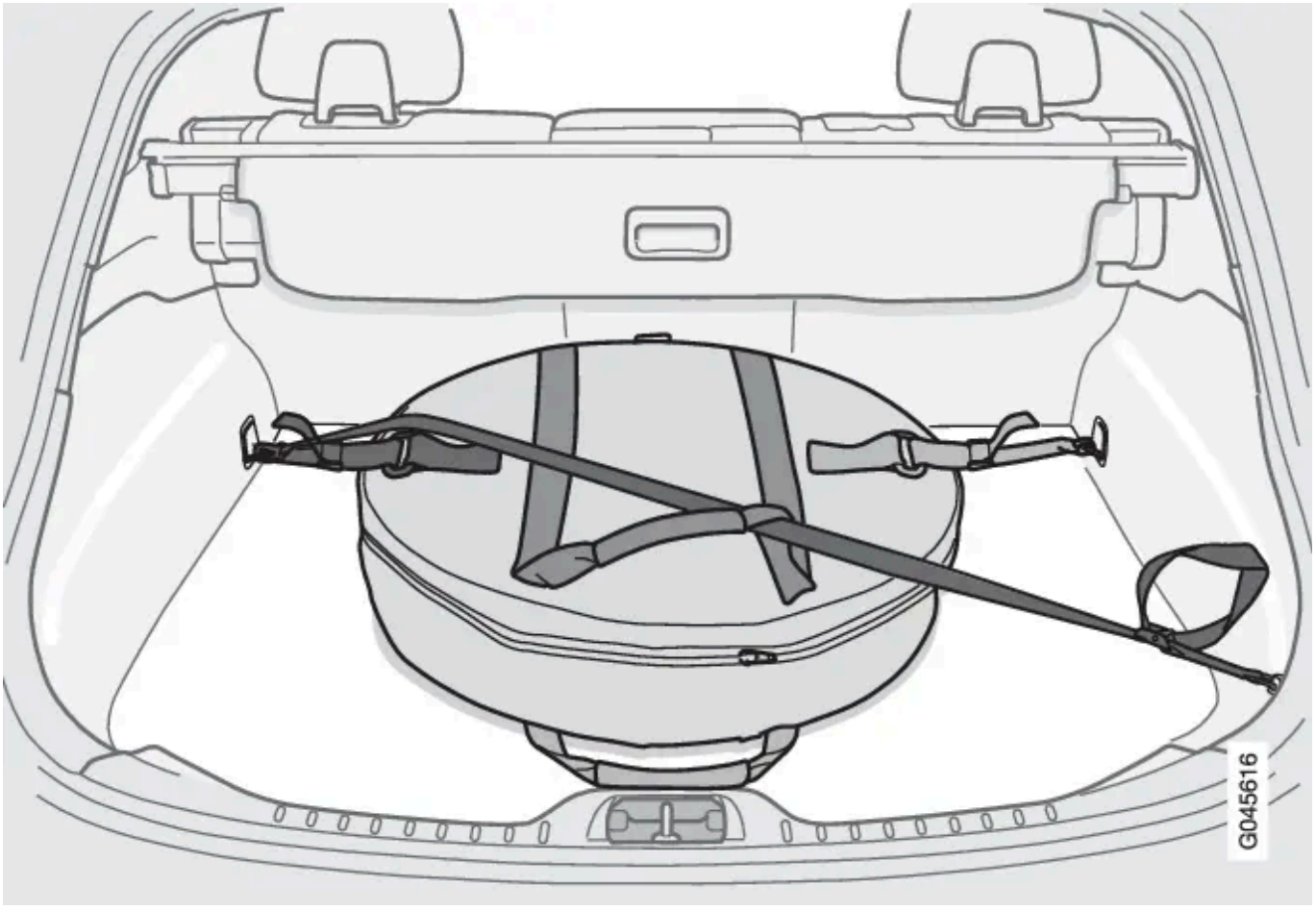
Spare wheel

The following instructions only apply if you have purchased a temporary spare wheel* for your vehicle.

If there is no temporary spare wheel in your vehicle, please see Tire sealing system – general information for instructions on using the tire sealing system.

The accessory temporary spare wheel is provided in a bag that must be securely strapped in place in the cargo area while the vehicle is being driven.

The spare wheel is only intended for temporary use. Replace it with a normal wheel as soon as possible. The vehicle's handling may be altered by the use of the spare wheel. The correct tire pressure is stated in the tire pressure table, see Tire inflation – pressure table and in the tire inflation placard on the driver's side door jamb at the rear of the driver's door opening.



Turn the handle on the spare wheel bag out toward you. Secure the stitched strap hooks in the front loading eyelets. Secure the long strap in one of the front loading eyelets, wrap the strap diagonally over the spare wheel and through the upper handle. Secure the short strap on the long strap. Secure in the rear loading eyelet and tighten.

Warning

Current legislation prohibits the use of the “Temporary Spare” tire other than as a temporary replacement for a punctured tire. It must be replaced as soon as possible by a standard tire. Road holding and handling may be affected with the “Temporary Spare” in use.

Important

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

* Option/accessory.

10.3.6. Tires – storage and age

When storing complete wheels (tires mounted on rims), they should be suspended off the floor or placed on their sides on the floor.

New Tires



Remember that tires are perishable goods. As of 2000, the manufacturing week and year (Department of Transportation (DOT) stamp) will be indicated with 4 digits (e.g., 1513 means that the tire illustrated was manufactured during week 15 of 2013).

Tire age

Tires degrade over time, even when they are not being used. It is recommended that tires generally be replaced after 6 years of normal service. Heat caused by hot climates, frequent high loading conditions or Ultra Violet (U.V.) exposure can accelerate the aging process. The temporary spare[1] should also be replaced at 6-year intervals, even if it has never been used.

A tire's age can be determined by the DOT stamp on the sidewall (see the illustration).

A tire with e.g., visible cracks or discoloration should be replaced immediately.

Storing wheels and tires

When storing completes wheels (tires mounted on rims), they should be suspended off the floor or placed on their sides on the floor.

Tires not mounted on rims should be stored on their sides or standing upright, but should not be suspended.

Important

Tires should preferably be stored in a cool, dry, dark place, and should never be stored in close proximity to solvents, gasoline, oils, etc.

Warning

- The wheel and tire sizes for your Volvo are specified to meet stringent stability and handling requirements. Unapproved wheel/tire size combinations can negatively affect your vehicle's stability and handling.
- Any damage caused by installation of unapproved wheel/tire size combinations will not be covered by your new vehicle warranty. Volvo assumes no responsibility for death, injury, or expenses that may result from such installations.

[1] Option or accessory on some models

10.3.7. Tire inflation – checking pressure

Inflation pressure should be checked when the tires are cold.

Cold tires

The tires are considered to be cold when they have the same temperature as the surrounding (ambient) air.

This temperature is normally reached after the vehicle has been parked for at least 3 hours.

After driving a distance of approximately 1 mile (1.6 km), the tires are considered to be hot. If you have to drive farther than this distance to pump your tire(s), check and record the tire pressure first and add the appropriate air pressure when you get to the pump.

If checking tire pressure when the tire is hot, never "bleed" or reduce air pressure. The tires are hot from driving and it is normal for pressures to increase above recommended cold pressures. A hot tire at or below recommended cold inflation pressure could be significantly under-inflated.

To check inflation pressure:

1. Remove the cap from the valve on one tire, then firmly press the tire gauge onto the valve.
2. Add air to reach the recommended air pressure.
3. Replace the valve cap.

> **Important**
>
> - After inflating the tires, always reinstall the valve cap to help avoid damage to the valve from dirt, gravel, etc.
> - Use plastic valve caps only. Metal caps could corrode and become difficult to remove.

4. Visually inspect the tires to make sure there are no nails or other objects embedded that could puncture the tire and cause an air leak.
5. Check the sidewalls to make sure there are no gouges, cuts, bulges or other irregularities.
6. Repeat this procedure for each tire, including the spare[1].

> **Note**
>
> - If you overfill the tire, release air by pushing on the metal stem in the center of the valve. Then recheck the pressure with your tire gauge.
> - Some spare tires (available as an accessory) require higher inflation pressure than the other tires. Consult the tire inflation pressure table, see Tire inflation – pressure table or see the inflation pressure placard.

[1] Available as an accessory

10.3.8. Self-supporting run flat tires (SST)

Self-supporting run flat tires are available as optional equipment on certain models.

The vehicle must be equipped with one of the tire pressure monitoring systems if tires of this type are installed.

Tires of this type have specially reinforced sidewalls that make it possible to continue driving to a limited extent even though the tire has lost some or all of its inflation pressure. These tires are mounted on special rims (normal tires can also be mounted on these rims).

If an SST tire loses inflation pressure, the yellow TPMS symbol illuminates in the instrument panel and a text message is also displayed. If this happens, reduce speed to not more than 50 mph (80 km/h). The tire should be replaced as soon as possible.

Warning

- SST tires should only be mounted by service technicians who are familiar with tires of this type.
- SST tires may only be mounted on vehicles equipped with a tire pressure monitoring system.
- Do not drive faster than 50 mph (80 km/h) if the monitoring system indicates that a tire has lost inflation pressure.
- Do not drive farther than 50 miles (80 km) before replacing a damaged SST tire.
- Drive carefully and avoid e.g., hard braking or fast turns.
- SST tires must be replaced if they are damaged. A tire of this type cannot be repaired.

10.3.9. Calibrating Tire Monitor

In order for Tire Monitor to work correctly, tire pressure reference values must be set. This must be done each time wheels or tire pressures are changed.

Calibration

1. Switch off the engine.
2. Inflate the tires to the desired pressure (consult tire pressure placard located on the driver's side B-pillar (the structural member at the side of the vehicle) and put the ignition in mode **II**, see Ignition modes.
3. Press the MY CAR button on the center console control panel and select **Settings** → **Car settings** → **Tire monitoring**.
4. Press OK/MENU, select **Calibrate tire pressure** and press OK/MENU again.
5. Drive away.

> The calibration process will be completed while driving and will be interrupted if the vehicle is parked and the engine is switched off. Calibration continues automatically when driving resumes.

The new reference values will be used until steps 1-5 stated above are repeated.

Note

Always remember to calibrate Tire Monitor when the wheels have been changed or the tire pressure has been corrected according to tire pressure placard or tire pressure table. If correct reference values have not been set, the system cannot issue low tire pressure alerts correctly.

10.3.10. Tire specifications – terminology

The following is a glossary of tire-related terms.

The tire suppliers may have additional markings, notes or warnings such as standard load, radial tubeless, etc.

- Tire information placard: A placard showing the OE (Original Equipment) tire sizes, recommended inflation pressure, and the maximum weight the vehicle can carry.
- Tire Identification Number (TIN): A number on the sidewall of each tire providing information about the tire brand and manufacturing plant, tire size and date of manufacturer.
- Inflation pressure: A measure of the amount of air in a tire.
- Standard load: A class of P-metric or Metric tires designed to carry a maximum load at 35 psi [37 psi (2.5 bar) for Metric tires]. Increasing the inflation pressure beyond this pressure will not increase the tires load carrying capability.
- Extra load: A class of P-metric or Metric tires designed to carry a heavier maximum load at 41 psi [43 psi (2.9 bar) for Metric tires]. Increasing the inflation pressure beyond this pressure will not increase the tire's load carrying capability.
- kPa: Kilopascal, a metric unit of air pressure.
- PSI: Pounds per square inch, a standard unit of air pressure.
- B-pillar: The structural member at the side of the vehicle behind the front door.
- Bead area of the tire: Area of the tire next to the rim.
- Sidewall of the tire: Area between the bead area and the tread.
- Tread area of the tire: Area of the perimeter of the tire that contacts the road when mounted on the vehicle.
- Rim: The metal support (wheel) for a tire or a tire and tube assembly upon which the tire beads are seated.
- Maximum load rating: a figure indicating the maximum load in pounds and kilograms that can be carried by the tire. This rating is established by the tire manufacturer.
- Maximum permissible inflation pressure: the greatest amount of air pressure that should ever be put in the tire. This limit is set by the tire manufacturer.
- Recommended tire inflation pressure: inflation pressure, established by Volvo, which is based on the type of tires that are mounted on a vehicle at the factory. This information can be found on the tire inflation placard(s) located on the driver's side B-pillar and in the tire inflation table in this chapter.
- Cold tires: The tires are considered to be cold when they have the same temperature as the surrounding (ambient) air. This temperature is normally reached after the vehicle has been parked for at least 3 hours.

10.3.11. Tire inflation – pressure table

The following tire pressures are recommended by Volvo for your vehicle. Refer to the tire inflation placard (see for its location) for information specific to the tires installed on your vehicle at the factory.
Some of the tire sizes listed here may not be available in all markets.

Tire size	Cold tire pressure for up to five persons	
	Front psi (kPa)	Rear psi (kPa)
215/65 R16 Extra load 235/55 R17 235/50 R18	36 (250)	36 (250)
235/45 R19 Extra load	39 (270)	39 (270)
Temporary spare tire T125/80R17	61 (420)	61 (420)

Warning

19" wheels may **never** be used on vehicles that are **not** equipped with the R-design or the Sport chassis options.

Using 19" wheels on vehicles equipped the **standard chassis** presents a safety risk and the risk of damage to the vehicle, and impairs the vehicle's driving characteristics.

Note

Please consult a Volvo retailer's Parts department for the most up-to-date specifications.

10.3.12. Tire specifications – Uniform Tire Quality Grading

ALL PASSENGER VEHICLE TIRES MUST CONFORM TO FEDERAL SAFETY REQUIREMENTS IN ADDITION TO THESE GRADES.

Quality grades can be found, where applicable, on the tire sidewall between the tread shoulder and maximum section width. For example:

Treadwear 200 Traction AA Temperature A

TREADWEAR

The treadwear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course. For example, a tire graded 150 would wear one and one half (1 ½) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and many depart significantly from the norm due to variation in driving habits, maintenance practices and differences in road characteristics and climate.

TRACTION

The traction grades, from highest to lowest, are AA, A, B, and C, as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance. The traction grade assigned to this tire is based on braking (straight-ahead) traction tests and is not a measure of cornering (turning) traction.

> **Warning**
>
> The traction grade assigned to this tire is based on braking (straight-ahead) traction tests and is not a measure of cornering (turning) traction.

TEMPERATURE

The temperature grades are A (the highest), B, and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel. Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a minimum level of performance that all passenger vehicle tires must meet under the Federal Motor Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law.

> **Warning**
>
> The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, under-inflation, or excessive loading, either separately or in combination, can cause heat buildup and tire failure.

10.3.13. Tire Pressure Monitoring System (TPMS) – changing wheels

The tire pressure monitoring system[1] uses sensors mounted in the tire valves to check inflation pressure levels. When the vehicle is moving at a speed of approximately 20 mph (30 km/h) or faster, these sensors transmit inflation pressure data to a receiver located in the vehicle.

Please keep the following in mind when changing or replacing the factory installed TPMS wheels/tires on the vehicle:

- Not all aftermarket wheels are equipped with TPMS sensors in the valves.
- If the vehicle is equipped with a temporary spare tire, this tire does not have a TPMS sensor.
- If wheels without TPMS sensors are mounted on the vehicle, a text message will displayed in the instrument panel each time the vehicle is driven above 20 mph (30 km/h) for 10 minutes or more.
- Once TPMS sensors are properly installed, the warning message should not reappear. If the message is still displayed, drive the vehicle for several minutes at a speed of 20 mph (30 km/h) or faster to erase the message.
- Volvo recommends that TPMS sensors be fitted on all wheels used on the vehicle, including winter tires. Volvo does not recommend moving sensors back and forth between sets of wheels.

Important

When inflating tires with TPMS valves, press the pump's mouthpiece straight onto the valve to help avoid bending or otherwise damaging the valve.

Important

- After inflating the tires, always reinstall the valve cap to help avoid damage to the valve from dirt, gravel, etc.
- Use plastic valve caps only. Metal caps could corrode and become difficult to remove.

Note

- If you change to tires with a different dimension than the factory-installed ones, the TPMS system must be reconfigured for these tires. This must be done by a trained and qualified Volvo service technician.
- If a tire is changed, or if the TPMS sensor is moved to another wheel, the sensor's seal, nut, and valve core should be replaced.
- When installing TPMS sensors, the vehicle must be parked for at least 15 minutes with the ignition off. If the vehicle is driven within 15 minutes, a TPMS error message will be displayed.

[1] Not available in all markets or in all models.

10.3.14. Loading specifications

Properly loading your vehicle will provide maximum return of vehicle design performance.

Before loading your vehicle, familiarize yourself with the following terms for determining your vehicle's weight ratings, with or without a trailer, from the vehicle's Federal/Canadian Motor Vehicle Safety Standards (FMVSS/CMVSS) label, and the vehicle's tire information placard:

Curb weight

The weight of the vehicle including a full tank of fuel and all standard equipment. It does not include passengers, cargo, or optional equipment.

Capacity weight

All weight added to the curb weight, including cargo and optional equipment. When towing, trailer hitch tongue load is also part of cargo weight.

Permissible axle weight

The maximum allowable weight that can be carried by a single axle (front or rear). These numbers are shown on the Federal/Canadian Motor Vehicle Safety Standards (FMVSS/CMVSS) label. The total load on each axle must never exceed its maximum permissible weight.

Gross vehicle weight (GVW)

The vehicle's curb weight + cargo + passengers.

> **Note**
>
> - The location of the various labels in your vehicle, see Label information.
> - A table listing important weight limits for your vehicle, see Weights.

10.3.15. Loading specifications – load limit

The load limit of your vehicle is the combined weight of the occupants and cargo.

Steps for Determining Correct Load Limit

1. Locate the statement "the combined weight of occupants and cargo should never exceed XXX pounds" on your vehicle's placard.
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kilograms or XXX pounds.
4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 1400 lbs. and there will be five 150 lb. passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. (1400 – 750 (5 × 150) = 650 lbs.)
5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
6. If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle.

> **Warning**
>
> - Exceeding the permissible axle weight, gross vehicle weight, or any other weight rating limits can cause tire overheating resulting in permanent deformation or catastrophic failure.
> - Do not use replacement tires with lower load carrying capacities than the tires that were original equipment on the vehicle because this will lower the vehicle's GVW rating. Use only tires with the correct load carrying capacity. Consult your Volvo retailer for information.

10.3.16. Tire Monitor - introduction

Tire Monitor uses the rotational speed of the tires to determine if they are properly inflated.

When a tire is under-inflated, its diameter (and consequently also its rotational speed) changes. By comparing the individual tires with each other it is possible to determine if one or more tires are under inflated.

When low inflation pressure is detected or if the system is not functioning properly, Tire Monitor will light up the tire pressure warning light ( ) (also referred to as a telltale) in the instrument panel and will display one of the following messages in the text window, for example: **Tire pressure low Check rear right tire**[1] or **Tire press. syst Service required**.

If the system cannot determine which tire has low pressure, a general text (**Tire pressure low Check tires**) will be displayed.

> **Note**
>
> If a malfunction occurs in the system, the tire pressure warning light will flash for approximately 1 minute and then remain illuminated. **Tire press. syst Service required** will be displayed.

> **Note**
>
> The system indicates low tire pressure but does not replace normal tire maintenance. For information on correct tire pressure, please refer to the tire inflation pressure table (see Tire inflation – pressure table), the tire inflation pressure placard located on the driver's side B-pillar (the structural member at the side of the vehicle, at the rear of the driver's door opening) or consult your Volvo retailer.

[1] That last part of this message varies, depending on the tire(s) effected.

10.3.17. Tire Monitor status information

The current status of the system and the tires is indicated by color-coded graphics.

This status can be displayed by pressing the MY CAR button on the center console and going to **Settings** → **Car settings** → **Tire monitoring**.

The following color-coded graphics indicate:

- **All green**: the system is operational and all tire pressures are at or above the recommended levels.
- **One yellow wheel**: the tire indicated is under-inflated.
- **All wheels yellow**: two or more tires are under-inflated
- **All wheels gray**: the system is currently unavailable. It might be necessary to drive at a speed of at least 20 mph (30 km/h) for several minutes for the system to become operational.
- **All wheels gray in combination with the message Tire press. syst Service required and the telltale in the instrument panel ( ) is illuminated**: the system is not functioning correctly. Have it checked by a trained and qualified Volvo service technician.

10.3.18. Tire Pressure Monitoring System (TPMS) – activating/deactivating

The tire pressure monitoring system[1] uses sensors mounted in the tire valves to check inflation pressure levels. When the vehicle is moving at a speed of approximately 20 mph (30 km/h) or faster, these sensors transmit inflation pressure data to a receiver located in the vehicle.

Activating/deactivating TPMS (Canadian models only)

1. Switch off the engine.
2. Put the ignition in mode I or II (see Ignition modes for additional information).
3. Press the MY CAR key in the center console control panel and select **Settings** → **Car settings** → **Tire pressure**
4. Select **Tire monitoring** and press OK/MENU to turn the system on or off.

[1] Not available in all markets or in all models.

10.3.19. Tire specifications

The following information can be found on a tire's sidewall.

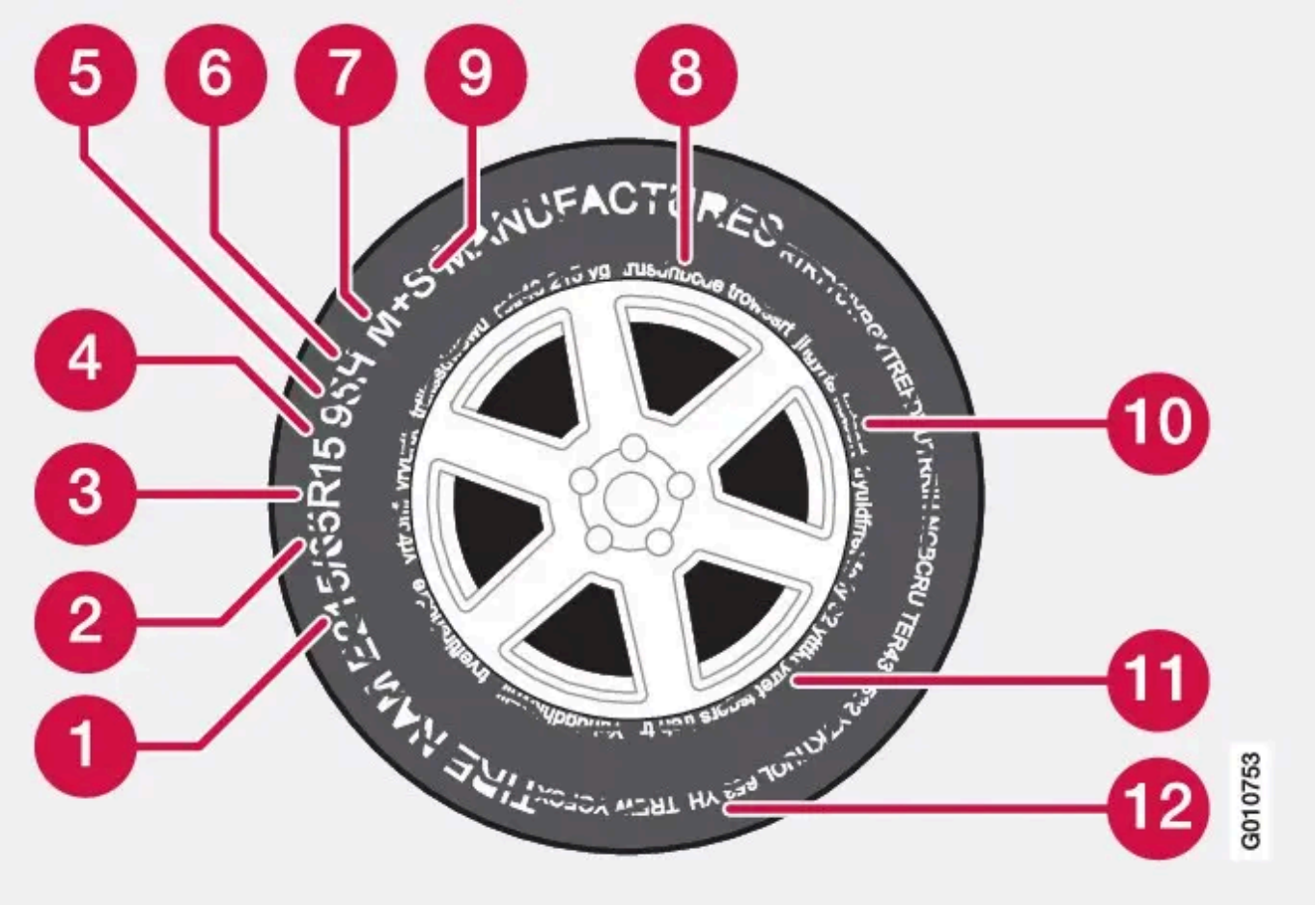
Tire ratings

Speed ratings

The speed ratings in the table translate as follow:

Speed ratings	
M	81 mph (130 km/h)
Q	100 mph (160 km/h)
T	118 mph (190 km/h)
H	130 mph (210 km/h)
V	149 mph (240 km/h)
W	168 mph (270 km/h)
Y	186 mph (300 km/h)

Information on the sidewall



Federal law mandates that tire manufacturers place standardized information on the sidewall of all tires (see the illustration).

The following information is listed on the tire sidewall:

The tire designation:

> **Note**
>
> Please be aware that the following tire designation is an **example only** and that this particular tire may not be available on your vehicle.

1. 215: the width of the tire (in millimeters) from sidewall edge to sidewall edge. The larger the number, the wider the tire.
2. 65: The ratio of the tire's height to its width in percent.
3. R: Radial tire (the designation RF and the ⓞ symbol indicate that the vehicle is equipped with optional self-supporting run flat tires[1]. See Self-supporting run flat tires (SST) for more information about these tires).
4. 15: The diameter of the wheel rim (in inches).
5. 95: The tire's load index. In this example, a load index of 95 equals a maximum load of 1521 lbs (690 kg).
6. H: The tire's speed rating, or the maximum speed at which the tire is designed to be driven for extended periods of time, carrying a permissible load for the vehicle, and with correct inflation pressure. For example, H indicates a speed rating of 130 mph (210 km/h).

Note

The tire's load index and speed rating may not appear on the sidewall because they are not required by law.

7. M+S or M/S = Mud and Snow, AT = All Terrain, AS = All Season
8. U.S. DOT Tire Identification Number (TIN): This begins with the letters "DOT" and indicates that the tire meets all federal standards. The next two numbers or letters are the plant code where it was manufactured, the next two are the tire size code and the last four numbers represent the week and year the tire was built. For example, 1510 means that the tire was manufactured during week 15 of 2010. The numbers in between are marketing codes used at the manufacturer's discretion. This information helps a tire manufacturer identify a tire for safety recall purposes.
9. Tire Ply Composition and Material Used: Indicates the number of plies indicates or the number of layers of rubber-coated fabric in the tire tread and sidewall. Tire manufacturers also must indicate the ply materials in the tire and the sidewall, which include steel, nylon, polyester, and others.
10. Maximum Load: Indicates the maximum load in pounds and kilograms that can be carried by the tire. Refer to the vehicle's tire information placard located on the B-Pillar for the correct tire pressure for your vehicle.
11. Treadwear, Traction, and Temperature grades: see Tire specifications – Uniform Tire Quality Grading for more information.
12. Maximum permissible inflation pressure: the greatest amount of air pressure that should ever be put in the tire. This limit is set by the tire manufacturer.

[1] Self-supporting run flat tires may not be available on all models

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10.3.20. Snow chains

Snow chains can be used on your Volvo with the following restrictions:

- Snow chains should be installed on front wheels only. Use only Volvo approved snow chains.
- If accessory, aftermarket or "custom" tires and wheels are installed and are of a size different than the original tires and wheels, chains in some cases CANNOT be used. Sufficient clearances between chains and brakes, suspension and body components must be maintained.
- Some strap-on type chains will interfere with brake components and therefore CANNOT be used.
- **All Wheel Drive models**: Snow chains should only be installed on the front wheels.
- Certain size tires may not allow the assembly of snow chains/traction devices.

Consult your Volvo retailer for additional snow chain information.

Important

- Check local regulations regarding the use of snow chains before installing.
- Use single-sided snow chains only.
- Always follow the chain manufacturer's installation instructions carefully. Install chains as tightly as possible and retighten periodically.
- Never exceed the chain manufacturer's specified maximum speed limit. (Under no circumstances should you exceed 31 mph (50 km/h).
- Avoid bumps, holes or sharp turns when driving with snow chains.
- The handling of the vehicle can be adversely affected when driving with chains. Avoid fast or sharp turns as well as locked wheel braking.

10.3.21. Tire Pressure Monitoring System (TPMS) – messages

The tire pressure monitoring system uses sensors mounted in the tire valves to check inflation pressure levels. When the vehicle is moving at a speed of approximately 20 mph (30 km/h) or faster, these sensors transmit inflation pressure data to a receiver located in the vehicle.

Erasing warning messages

When a low tire pressure warning message has been displayed and the tire pressure warning light in the instrument panell () has come on:

1. Use a tire pressure gauge to check the inflation pressure of all four tires.
2. Re-inflate the tire(s) to the correct pressure (consult the tire pressure placard located on the driver's side B-pillar (the structural member at the side of the vehicle, at the rear of the driver's door opening) or the inflation pressure table, see Tire inflation – pressure table.
3. In certain cases, it may be necessary to drive the vehicle for several minutes at a speed of 20 mph (30 km/h) or faster. This will erase the warning text and the telltale will go out.

Note

- Tire monitoring systems use a temperature compensated pressure value. This pressure value is dependent on tire temperature and ambient temperature, which can differ from the recommended cold tire pressure in the tire inflation table and on the tire pressure placard located on the driver's side B-pillar (the structural member at the side of the vehicle, at the rear of the driver's door opening). This means that it may sometimes be necessary to inflate them slightly above the recommended cold pressure value (approx. 3-4 psi or 0.2-0.3 bar) in order to reset a low tire pressure warning.
- To help avoid incorrect tire inflation pressure, if possible only inflate the tires when they are cold. The tires are considered to be cold when they have the same temperature as the surrounding (ambient) air. This temperature is normally reached after the vehicle has been parked for at least 3 hours. After driving a distance of approximately 1 mile (1.6 km), the tires are considered to be hot.

Important

- After inflating the tires, always reinstall the valve cap to help avoid damage to the valve from dirt, gravel, etc.
- Use plastic valve caps only. Metal caps could corrode and become difficult to remove.

The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.

Warning

- Incorrect inflation pressure could lead to tire failure, resulting in a loss of control of the vehicle.
- Tire monitoring systems cannot indicate sudden tire damage caused by external factors (e.g., a blowout) in advance.

10.3.22. Tires – tire economy

A smooth driving style and correct inflation pressure can help prolong the tires' service life.

- Maintain correct tire pressure. The tire inflation table, see Tire inflation – pressure table.
- Avoid fast starts, hard braking and tire screeching.
- Tire wear increases with speed.
- Correct front wheel alignment is very important.
- Unbalanced wheels impair tire economy and driving comfort.
- Tires must maintain the same direction of rotation throughout their lifetime.
- When replacing tires, the tires with the most tread should be mounted on the rear wheels to reduce the chance of oversteer during hard braking.
- Hitting curbs or potholes can damage the tires and/or wheels permanently.

10.3.23. Snow tires/studded tires [1]

Owners who live in or regularly commute through areas with sustained periods of snow or icy driving conditions are strongly advised to fit suitable winter tires to help retain the highest degree of traction.

Tires for winter use:

- It is important to install winter tires on all four wheels to help retain traction during cornering, braking, and accelerating. Failure to do so could reduce traction to an unsafe level or adversely affect handling.
- Do not mix tires of different design as this could also negatively affect overall tire road grip.
- Winter tires wear more quickly on dry roads in warm weather. They should be removed when the winter driving season has ended.
- Studded tires should be run-in 300 – 600 miles (500 – 1000 km) during which the vehicle should be driven as smoothly as possible to give the studs the opportunity to seat properly in the tires. The tires should have the same rotational direction throughout their entire lifetime.

Note

Please consult state or provincial regulations restricting the use of studded winter tires before installing such tires.

[1] Where permitted

10.3.24. Tire pressure monitoring - introduction

Volvo provides two different systems to monitor tire pressure: Tire Pressure Monitoring System (TPMS) or Tire Monitor.

Determining which tire monitoring system is in your vehicle

To see which system is installed in your vehicle, press the MY CAR button on the center console. Go to **Settings → Car settings**.

- If your vehicle has a menu called **Tire monitoring**, see Tire Monitor - introduction.
- If your vehicle has a menu called **Tire pressure**, see Tire Pressure Monitoring System (TPMS) – general information.

Introduction

Each tire, including the spare[1] (if provided), should be checked monthly when cold and inflated to the inflation pressure recommended by the vehicle manufacturer on the vehicle placard or tire inflation pressure label. (If your vehicle has tires of a different size than the size indicated on the vehicle placard or tire inflation pressure label, you should determine the proper tire inflation pressure for those tires.)

As an added safety feature, your vehicle has been equipped with a tire pressure monitoring system that illuminates a low tire pressure telltale () when one or more of your tires is significantly under-inflated. Accordingly, when the low tire pressure telltale illuminates, you should stop and check your tires as soon as possible, and inflate them to the proper pressure.

Driving on a significantly under-inflated tire causes the tire to overheat and can lead to tire failure. Under-inflation also reduces fuel efficiency and tire tread life, and may affect the vehicle's handling and stopping ability. Please note that a tire pressure monitoring system is not a substitute for proper tire maintenance, and it is the driver's responsibility to maintain correct tire pressure, even if under-inflation has not reached the level to trigger illumination of the system's low tire pressure telltale.

Your vehicle has also been equipped with a TPMS malfunction indicator to indicate when the system is not operating properly. The monitoring system's malfunction indicator is combined with the low tire pressure telltale.

When the system detects a malfunction, the telltale will flash for approximately one minute and then remain continuously illuminated. This sequence will continue upon subsequent vehicle start-ups as long as the malfunction exists. When the malfunction indicator is illuminated, the system may not be able to detect or signal low tire pressure as intended.

System malfunctions may occur for a variety of reasons, including the installation of replacement or alternate tires or wheels on the vehicle that prevent the tire pressure monitoring system from functioning properly.

Always check the system's malfunction telltale after replacing one or more tires or wheels on your vehicle to ensure that the replacement or alternate tires and wheels allow the system to continue to function properly.

Note

The system indicates low tire pressure but does not replace normal tire maintenance. For information on correct tire pressure, please refer to the tire inflation pressure table (see Tire inflation – pressure table), the tire inflation pressure placard located on the driver's side B-pillar (the structural member at the side of the vehicle, at the rear of the driver's door opening) or consult your Volvo retailer.

Warning

Incorrect inflation pressure could lead to tire failure, resulting in a loss of control of the vehicle.

[1] Available as an accessory

10.3.25. Tire Monitor – messages

When low tire pressure has been detected, a message will be displayed and the tire pressure warning telltale in the instrument panel  will illuminate.

Erasing warning messages

To erase a low tire pressure message and turn off the telltale:

1. Use a tire pressure gauge to check the inflation pressure of the under-inflated tire(s).
2. Re-inflate the tire(s) to the correct pressure (consult the tire pressure placard located on the driver's side B-pillar (the structural member at the side of the vehicle, at the rear of the driver's door opening) or the inflation pressure table, see Tire inflation – pressure table.
3. Recalibrate Tire Monitor, see Calibrating Tire Monitor.

Note

- Tire monitoring systems use a temperature compensated pressure value. This pressure value is dependent on tire temperature and ambient temperature, which can differ from the recommended cold tire pressure in the tire inflation table and on the tire pressure placard located on the driver's side B-pillar (the structural member at the side of the vehicle, at the rear of the driver's door opening). This means that it may sometimes be necessary to inflate them slightly above the recommended cold pressure value (approx. 3-4 psi or 0.2-0.3 bar) in order to reset a low tire pressure warning.
- To help avoid incorrect tire inflation pressure, if possible only inflate the tires when they are cold. The tires are considered to be cold when they have the same temperature as the surrounding (ambient) air. This temperature is normally reached after the vehicle has been parked for at least 3 hours. After driving a distance of approximately 1 mile (1.6 km), the tires are considered to be hot.

Important

- After inflating the tires, always reinstall the valve cap to help avoid damage to the valve from dirt, gravel, etc.
- Use plastic valve caps only. Metal caps could corrode and become difficult to remove.

Warning

- Incorrect inflation pressure could lead to tire failure, resulting in a loss of control of the vehicle.
- Tire monitoring systems cannot indicate sudden tire damage caused by external factors (e.g., a blowout) in advance.

10.3.26. Tires – general information

Your vehicle is equipped with tires according to the vehicle's tire information placard on the B-pillar (the structural member at the side of the vehicle, at the rear of the driver's door opening).

Introduction

Important

Some Volvo models are equipped with an Ultra High Performance tire and wheel combination designed to provide maximum dry pavement performance with consideration for hydroplaning resistance. They may be more susceptible to road hazard damage and, depending on driving conditions, may achieve a tread life of less than 20,000 miles (30,000 km). Even if this vehicle is equipped with Volvo's advanced AWD or stability system, these tires are not designed for winter driving, and should be replaced with winter tires when weather conditions dictate.

The tires have good road holding characteristics and offer good handling on dry and wet surfaces. It should be noted however that the tires have been developed to give these features on snow/ice-free surfaces.

Most models are equipped with "all-season" tires, which provide a somewhat higher degree of road holding on slippery surfaces than tires without the "all-season" rating. However, for optimum road holding on icy or snow-covered roads, we recom-

mend suitable winter tires on all four wheels.

When replacing tires, be sure that the new tires are the same size designation, type (radial) and preferably from the same manufacturer, on all four wheels. Otherwise there is a risk of altering the car's roadholding and handling characteristics.

Tire rotation

Your vehicle has no required tire rotation. Tire wear is affected by a number of factors such as tire inflation, ambient temperature, driving style, etc.

Note

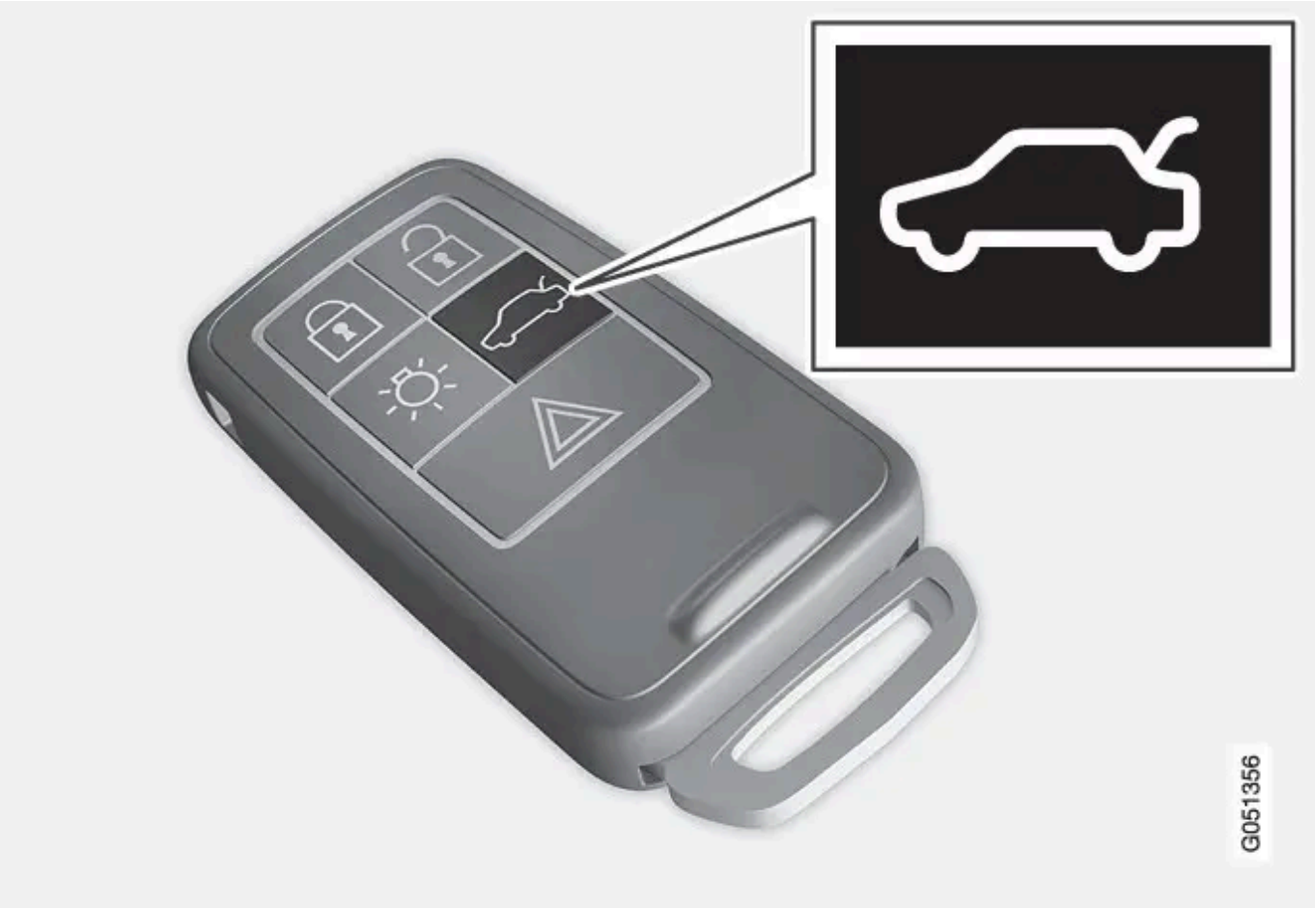
- If the tires are rotated, they should only be moved from front to rear or vice versa. They should never be rotated left to right/right to left.
- Ideally, tire rotation should be done the first time after approximately 3,000 miles (5,000 km) and thereafter at 6,000-mile (10,000-km) intervals. Some customers find that tire rotation may help to get extra mileage from tire life.
- Tire rotation should only be performed if front/rear tire wear is fairly even and tread height is above 1/16" (1.6 mm).

11. Loading and storage

11.1. Loading

11.1.1. Locking/unlocking – tailgate

The tailgate can be opened, locked and unlocked in several ways.



Tailgate unlock button on the remote key

Unlocking the tailgate with the remote key

1. Press the tailgate unlock button on the remote key to unlock (but not open) the tailgate. See Remote key and key blade for more information.

> The alarm indicator light on the dashboard will go out to indicate that the alarm is not monitoring the entire vehicle.

Note

- If the doors are locked while the tailgate is open, the tailgate will remain unlocked until the vehicle is relocked by pressing the Lock button on the remote key.
- On keyless drive vehicles, the gear selector must be in the Park (P) position, all doors and the tailgate must be closed and the ignition must be switched off before the vehicle can be locked.

Unlocking the tailgate from the driver's seat



1. Press the button on the lighting panel (1) to unlock (but not open) the tailgate.

Note

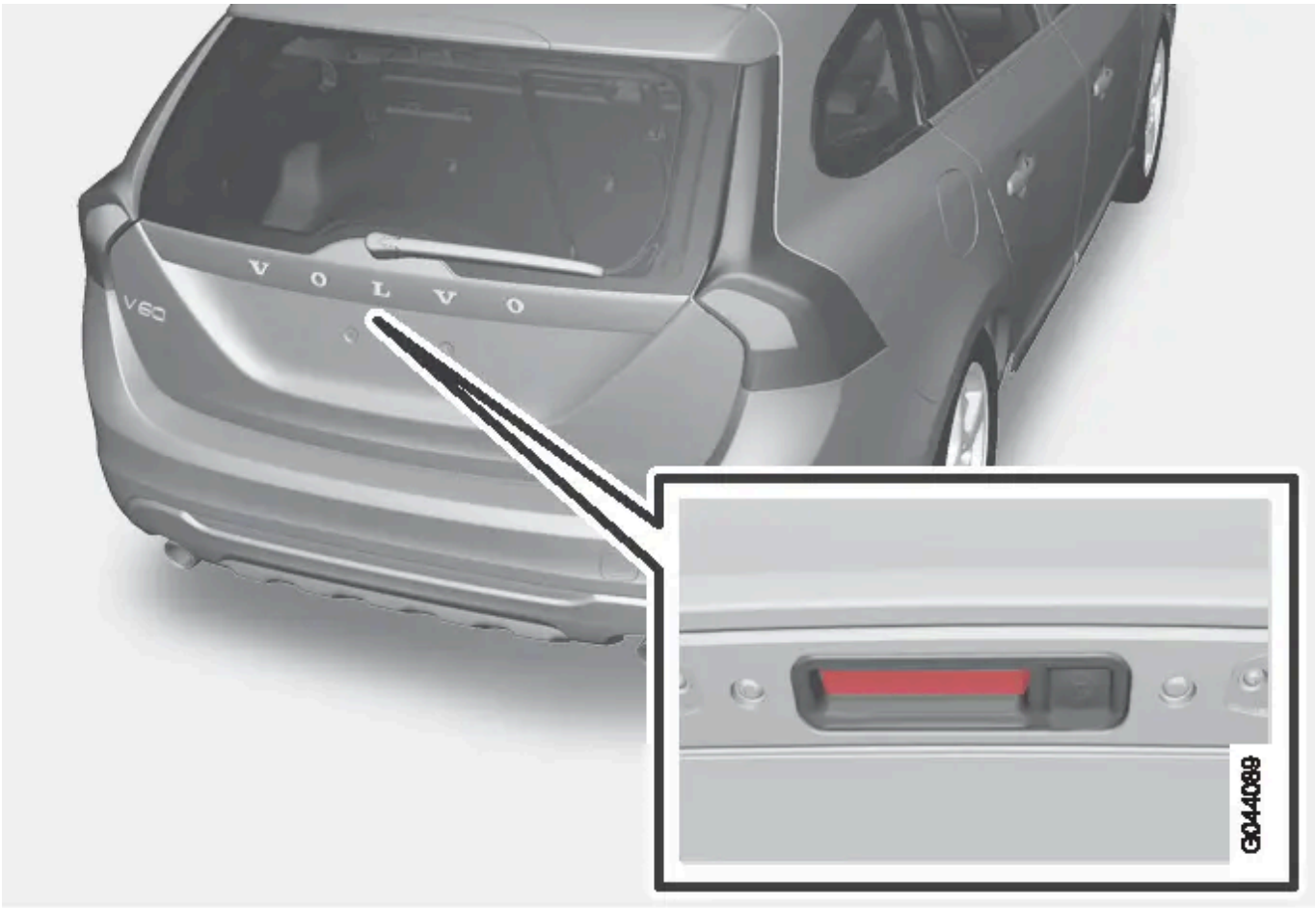
The taillights will illuminate automatically for a short period when the tailgate has been opened.

Locking the tailgate with the remote key

Press the lock button ( ) on the remote. See also Remote key and key blade.

The alarm indicator on the dashboard will begin flashing to show that the vehicle is locked and that the alarm has been armed.

Opening that tailgate manually



The tailgate is held closed by an electronic locking mechanism. To open:

1. Press lightly on the wider rubberized plate under the handle to release the lock.
2. Lift the handle to open the tailgate.

Important

- When pressing the rubberized plate, only light pressure is necessary to release the tailgate's electronic locking mechanism.
- When opening the tailgate, pull it up using the handle. Too much pressure on the rubberized plate can damage its electrical connections.

11.1.2. Loading – roof load carriers

Using load carriers

Load carriers are available as Volvo accessories. Observe the following points when in use:

- To avoid damaging your vehicle and to achieve maximum safety when driving, we recommend using the load carriers that Volvo has developed especially for your vehicle.
- Volvo-approved removable roof racks are designed to carry the maximum allowable roof load for this vehicle: 220 lbs (100 kg). For non-Volvo roof racks, check the manufacturer's weight limits for the rack.
- Never exceed the rack manufacturer's weigh limits and never exceed the maximum rated roof load of 220 lbs (100 kg).
- Avoid single-point loads. Distribute loads evenly.
- Place heavier cargo at the bottom of the load.
- Secure the cargo correctly with appropriate tie-down equipment.
- Check periodically that the load carriers and load are properly secured.
- Remember that the vehicle's center of gravity and handling change when you carry a load on the roof.
- The vehicle's wind resistance and fuel consumption will increase with the size of the load.
- Drive smoothly. Avoid rapid starts, fast cornering and hard braking.

11.1.3. Grocery bag holder

The grocery bag holder holds shopping bags in place.



Grocery bag holder under the floor of the cargo area

The grocery bag holder holds shopping bags in place.

1. Open the hatch in the floor of the cargo area.
2. Secure the shopping bags with the strap.

11.1.4. Loading specifications

Properly loading your vehicle will provide maximum return of vehicle design performance.

Before loading your vehicle, familiarize yourself with the following terms for determining your vehicle's weight ratings, with or without a trailer, from the vehicle's Federal/Canadian Motor Vehicle Safety Standards (FMVSS/CMVSS) label, and the vehicle's tire information placard:

Curb weight

The weight of the vehicle including a full tank of fuel and all standard equipment. It does not include passengers, cargo, or optional equipment.

Capacity weight

All weight added to the curb weight, including cargo and optional equipment. When towing, trailer hitch tongue load is also part of cargo weight.

Permissible axle weight

The maximum allowable weight that can be carried by a single axle (front or rear). These numbers are shown on the Federal/Canadian Motor Vehicle Safety Standards (FMVSS/CMVSS) label. The total load on each axle must never exceed its maximum permissible weight.

Gross vehicle weight (GVW)

The vehicle's curb weight + cargo + passengers.

> **Note**
>
> - The location of the various labels in your vehicle, see Label information.
> - A table listing important weight limits for your vehicle, see Weights.

11.1.5. Loading specifications – load limit

The load limit of your vehicle is the combined weight of the occupants and cargo.

Steps for Determining Correct Load Limit

1. Locate the statement "the combined weight of occupants and cargo should never exceed XXX pounds" on your vehicle's placard.
2. Determine the combined weight of the driver and passengers that will be riding in your vehicle.
3. Subtract the combined weight of the driver and passengers from XXX kilograms or XXX pounds.
4. The resulting figure equals the available amount of cargo and luggage load capacity. For example, if the "XXX" amount equals 1400 lbs. and there will be five 150 lb. passengers in your vehicle, the amount of available cargo and luggage load capacity is 650 lbs. (1400 – 750 (5 × 150) = 650 lbs.)
5. Determine the combined weight of luggage and cargo being loaded on the vehicle. That weight may not safely exceed the available cargo and luggage load capacity calculated in Step 4.
6. If your vehicle will be towing a trailer, load from your trailer will be transferred to your vehicle.

Warning

- Exceeding the permissible axle weight, gross vehicle weight, or any other weight rating limits can cause tire overheating resulting in permanent deformation or catastrophic failure.
- Do not use replacement tires with lower load carrying capacities than the tires that were original equipment on the vehicle because this will lower the vehicle's GVW rating. Use only tires with the correct load carrying capacity. Consult your Volvo retailer for information.

11.1.6. Loading – general

The load carrying capacity of your vehicle is determined by factors such as the number of passengers, the amount of cargo, the weight of any accessories that may be installed, etc.

To increase loading space, the rear seat backrests can be folded down, see Rear seats – folding backrest.

When loading the cargo area, keep the following in mind:

- Load objects in the cargo area against the backrest whenever possible.
- Unstable loads can be secured to the load anchoring eyelets with straps or web lashings to help keep them from shifting.
- Stop the engine and apply the parking brake when loading or unloading long objects. The gear selector can be knocked out of position by long loads, which could set the vehicle in motion.

Warning

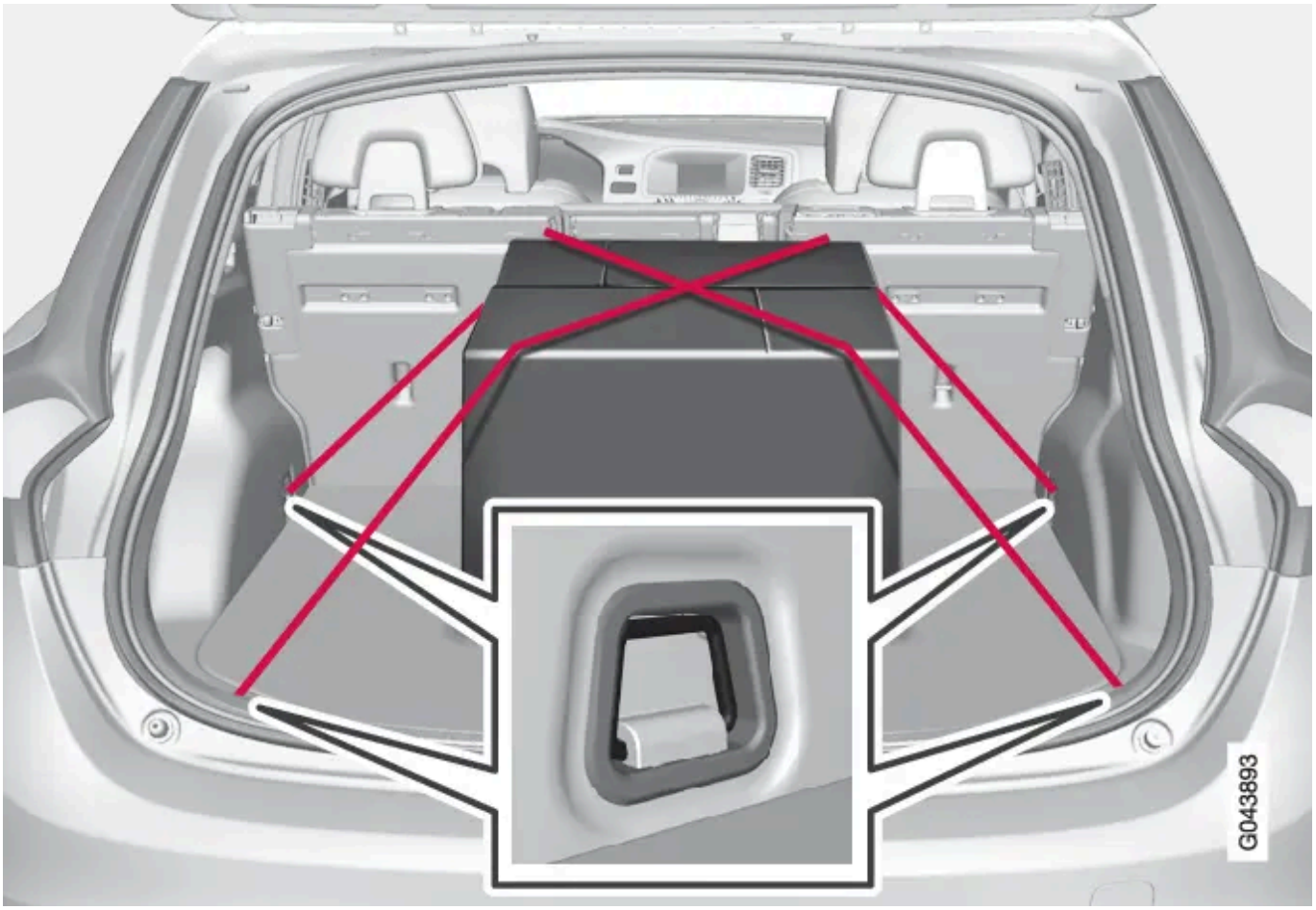
- Stop the engine, put the gear selector in P, and apply the parking brake when loading or unloading long objects.
- The vehicle's driving characteristics may change depending on the weight and distribution of the load.
- A 44-pound (20 kg) object produces a force of 2,200 pounds (1,000 kg) in a head-on collision at 30 mph (50 km/h).
- The cargo area and rear seat should not be loaded to a level higher than 2 in. (5 cm) below the upper edge of the rear side windows. Objects placed higher than this level could impede the function of the Inflatable Curtain.

11.1.7. Load anchoring eyelets

The load anchoring eyelets on both sides of the vehicle are used to fasten straps, etc., to help anchor items in the cargo area.

Warning

The two upper hooks shown in the illustration are for holding grocery bags only. They are **not** intended for anchoring heavy objects.



Warning

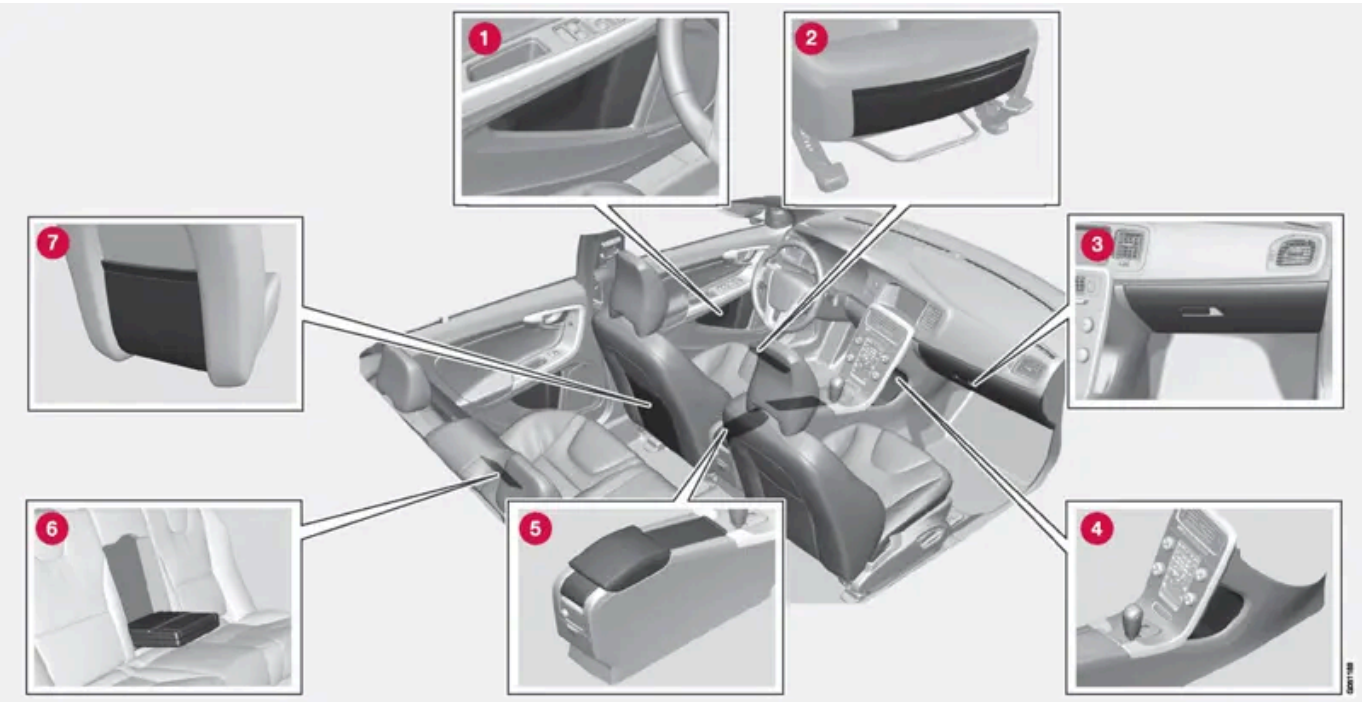
- Cover sharp edges on long loads to help prevent injury to occupants. Secure the load to help prevent shifting during sudden stops.
- Always secure large and heavy objects with a seat belt or cargo retaining straps.
- Always secure the load to help prevent it from moving in the event of sudden stops.
- Switch off the engine, apply the parking brake and put the gear selector in P when loading and unloading the vehicle.

11.2. Passenger compartment convenience

11.2.1. Storage spaces

The following is an overview of the storage compartments in the passenger compartment.





1. Compartment in door panel
2. Storage pocket on the front edge of the front seat cushions
3. Glove compartment
4. Storage compartment
5. Storage compartment, 12-volt socket and AUX input/USB connector
6. Rear seat cup holders
7. Storage pocket

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11.2.2. Glove compartment

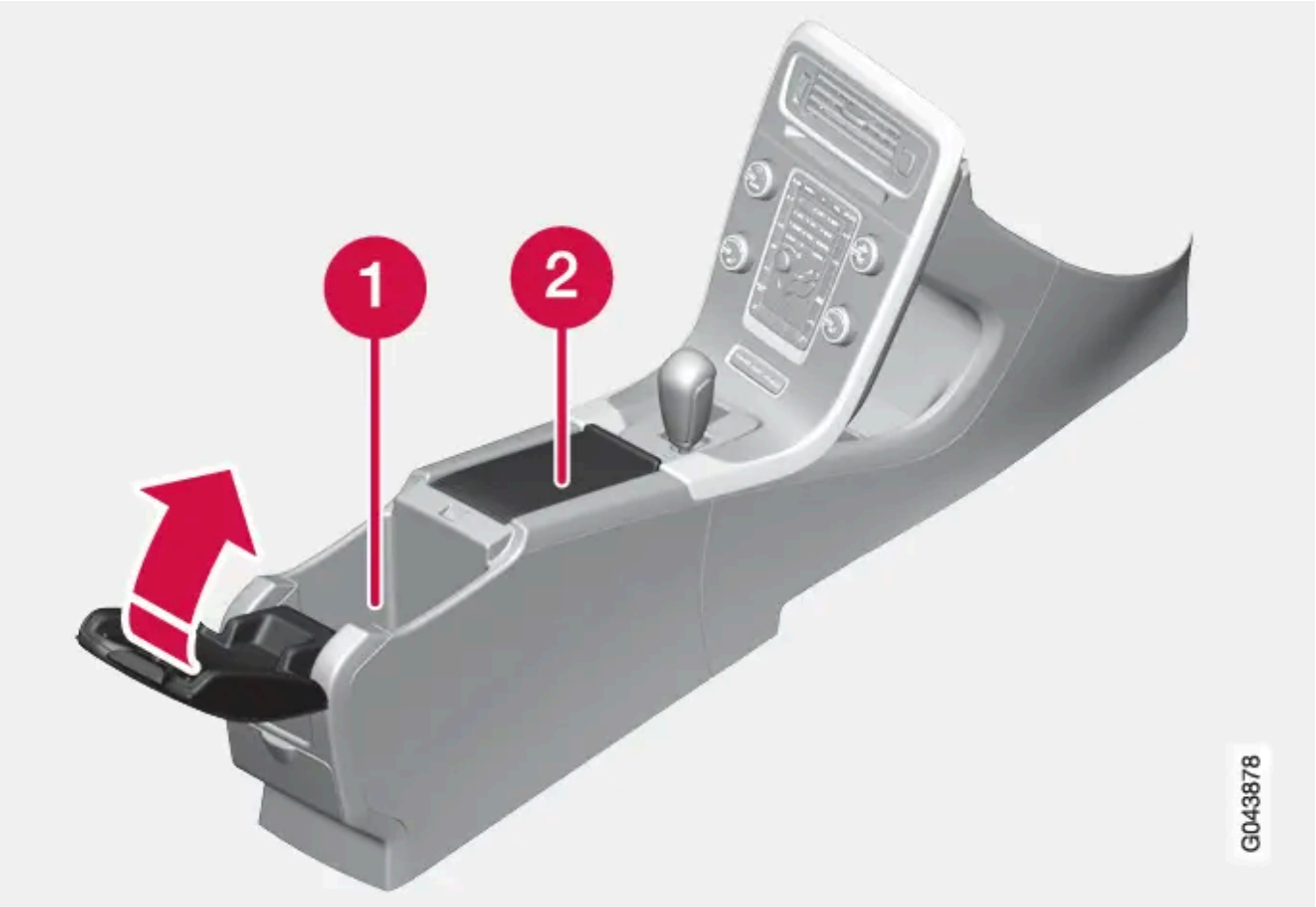
The glove compartment provides a lockable storage compartment for small items.



The owner's manual and maps can be kept here. There are also holders for pens and fuel cards. The glove compartment can be locked manually with the key blade, see Locking/unlocking – glove compartment.

11.2.3. Tunnel console

The tunnel console is located between the front seats.



1 Storage compartment (for CDs, etc.) under armrest, AUX input/USB connector.

2 Includes cup holder for driver and passenger, 12-volt socket and a small storage compartment.

11.2.4. 12-volt socket in the cargo area*

The 12-volt socket can be used e.g., to connect the tire sealing system's compressor (certain models) and other 12-volt accessories.





Fold down the cover to access the electrical socket.

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Note

The 12-volt socket in the cargo area provides electrical current even when the ignition is switched off. Using the socket while the engine is not running will drain the battery.

* Option/accessory.

11.2.5. Tunnel console – 12-volt sockets

The electrical sockets can be used for 12-volt accessories such as cell phone chargers and coolers. For the socket to supply current, the ignition must be in at least mode I. The sockets are located between the cup holders in the tunnel console and on the rear side of the tunnel console for rear seat passengers.



12-volt socket in the front tunnel console



12-volt socket in the rear center console

The maximum current consumption is 10A (120W) if only one of the 12-volt sockets in the passenger compartment is in use. If both the front and rear sockets are used at the same time, the maximum current consumption per socket is 7.5A (90W).

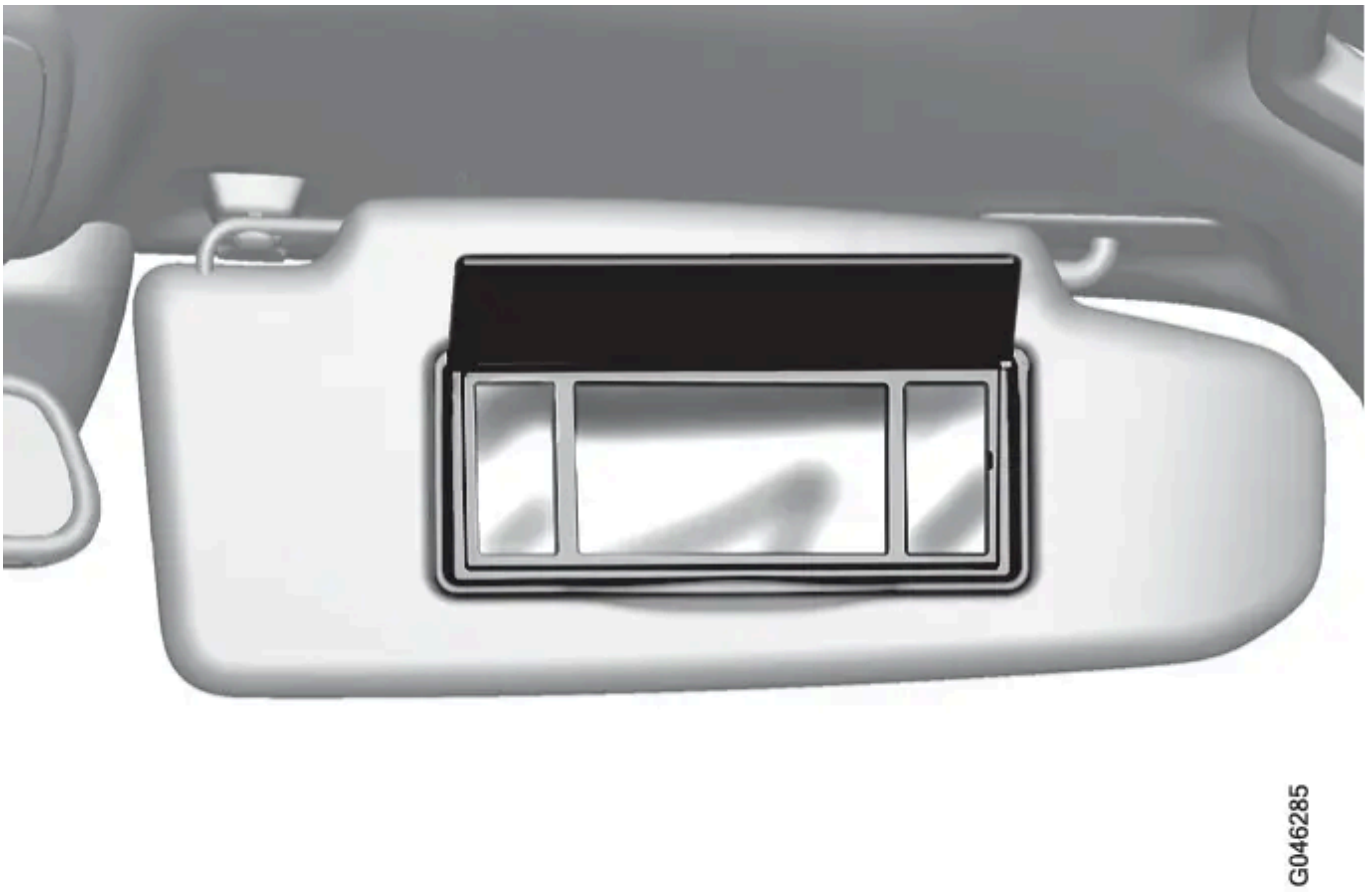
The auxiliary sockets can also be used to power a cigarette lighter. Accessory cigarette lighters and ashtrays can be purchased from your Volvo retailer.

Warning

Always keep the sockets covered when not in use.

11.2.6. Vanity mirror

The vanity mirrors are located on the upper side of the sun visors.



Vanity mirror with lighting

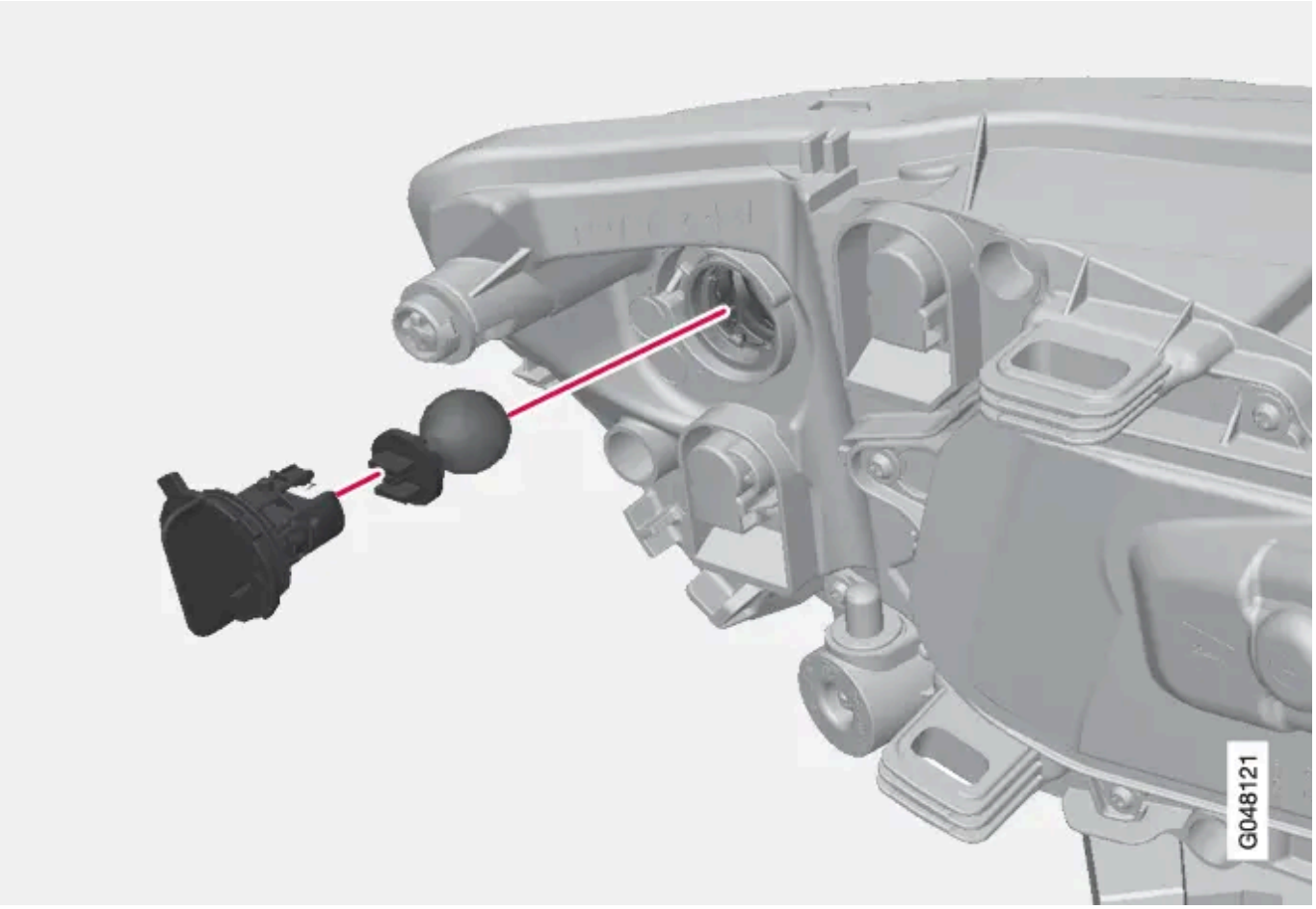
The light comes on automatically when the cover is lifted.

12. Maintenance and servicing

12.1. Bulbs

12.1.1. Bulbs – front turn signals

The turn signal bulb is concealed behind the smaller cover.



1. Remove the headlight housing from the vehicle (see Bulbs – headlight housing).
2. Remove the cover by pulling it straight out.
3. Pull the holder to access the bulb.
4. Press in the bulb and turn it to remove it from the holder.
5. Press and turn the new bulb into place.

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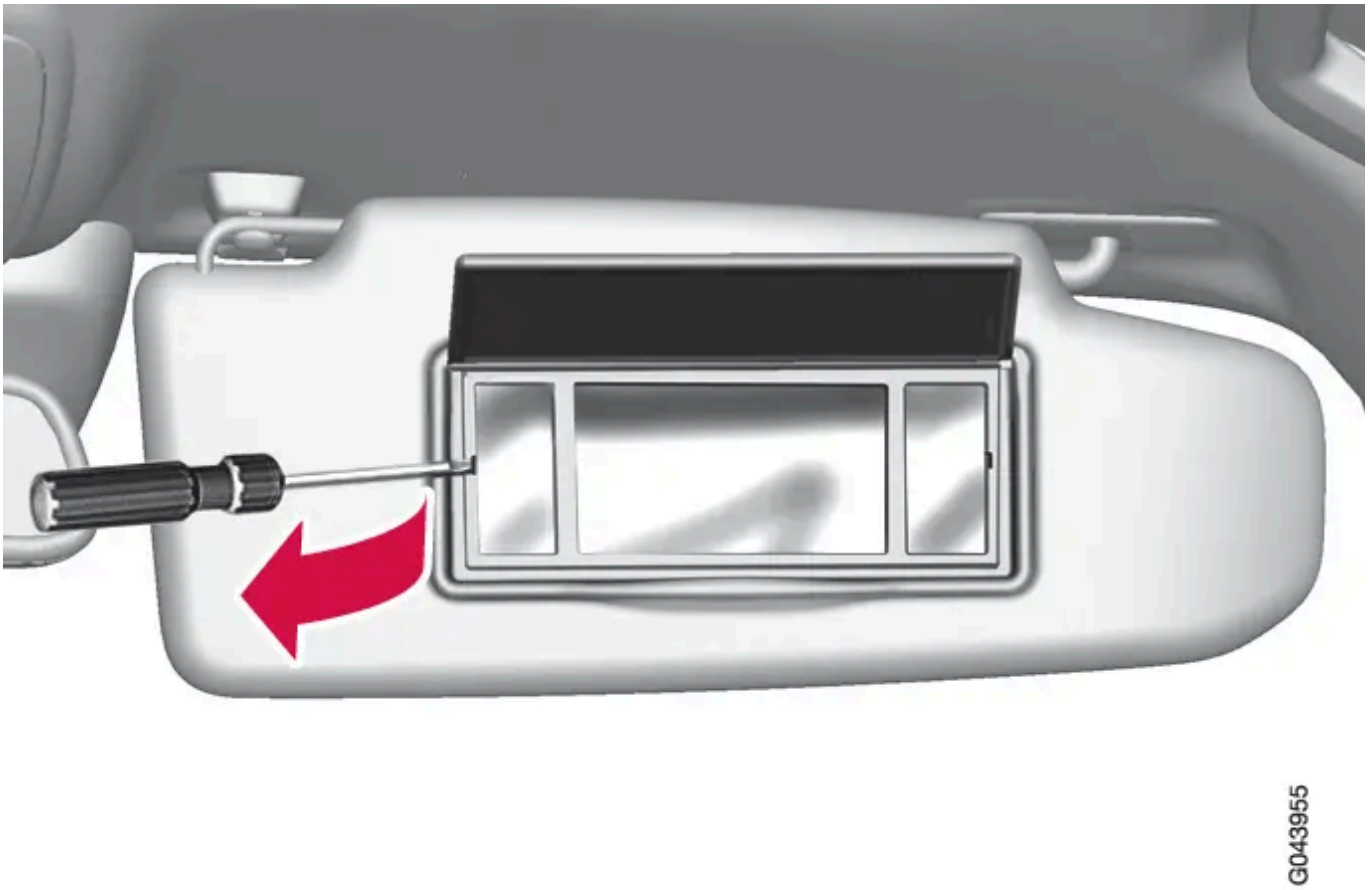
6. Reinsert the bulb holder into the headlight housing.

7. Put the cover back into position and reinstall the headlight housing.

12.1.2. Bulbs – vanity mirror lighting

The vanity mirror bulbs are located behind the lens.

Removing the lens



1. Insert a screwdriver underneath the side of the lens and carefully pry up the lug on the edge.

2. Carefully detach and lift out the lens.

3. Use needle nose pliers to pull the bulb straight to the side. Replace the bulb. Do not exert too much pressure on the bulb with the pliers to help avoid damaging it.

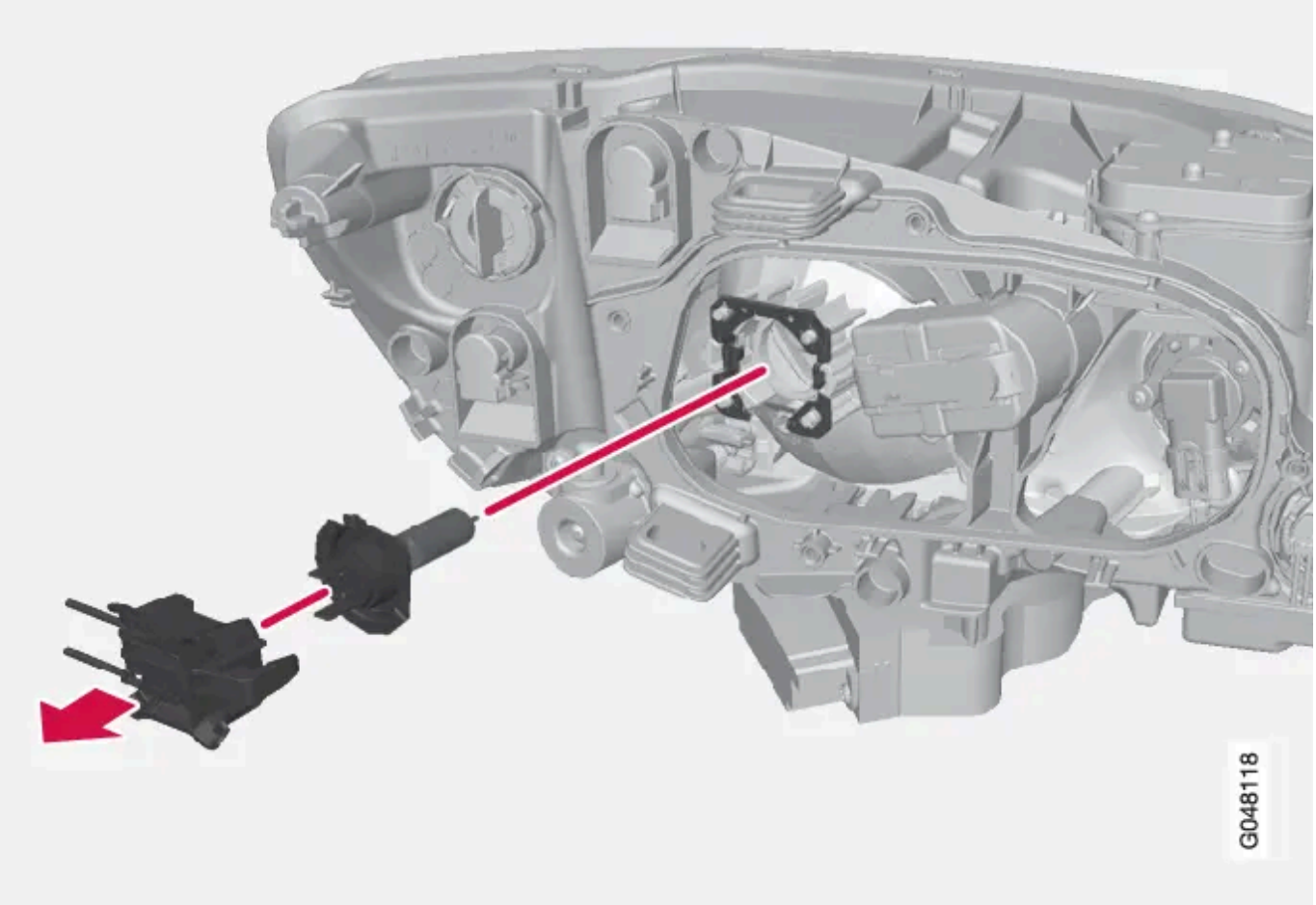
Reinstalling the lens

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1. Put the lens back into position.
2. Press it into place.

12.1.3. Bulbs – low beam, Halogen

The low beam bulb is concealed by the larger cover.



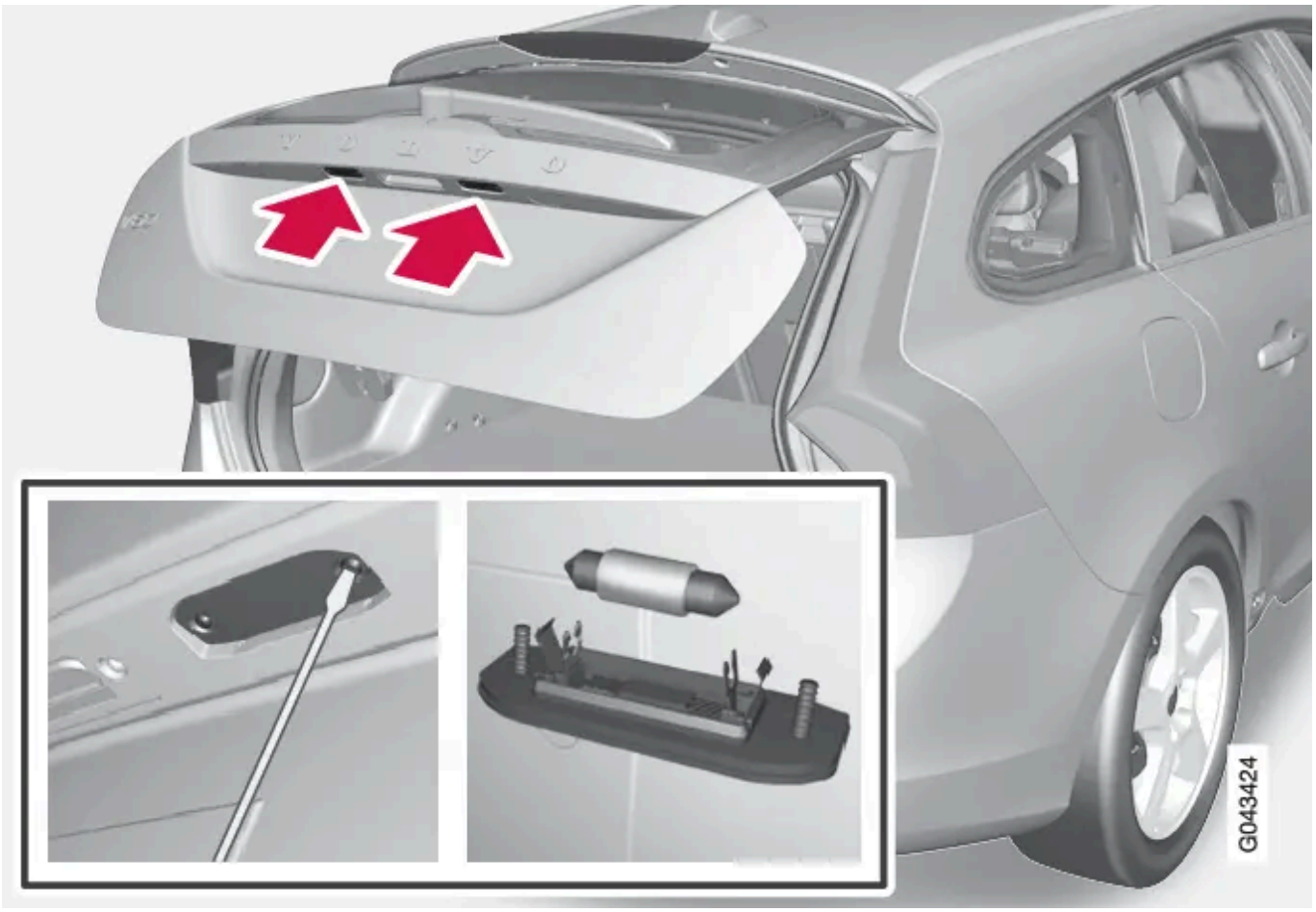
1. Remove the headlight housing from the vehicle (see Bulbs – headlight housing).
2. Remove the cover over the bulbs (see Bulbs – cover).
3. Unplug the connector from the bulb.
4. Remove the bulb by pulling it straight out.
5. The guide lug on the new bulb should be straight up when the bulb is inserted into the holder and the bulb should snap into place.

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6. Put the cover back into position and reinstall the headlight housing.

12.1.4. Bulbs – license plate lighting

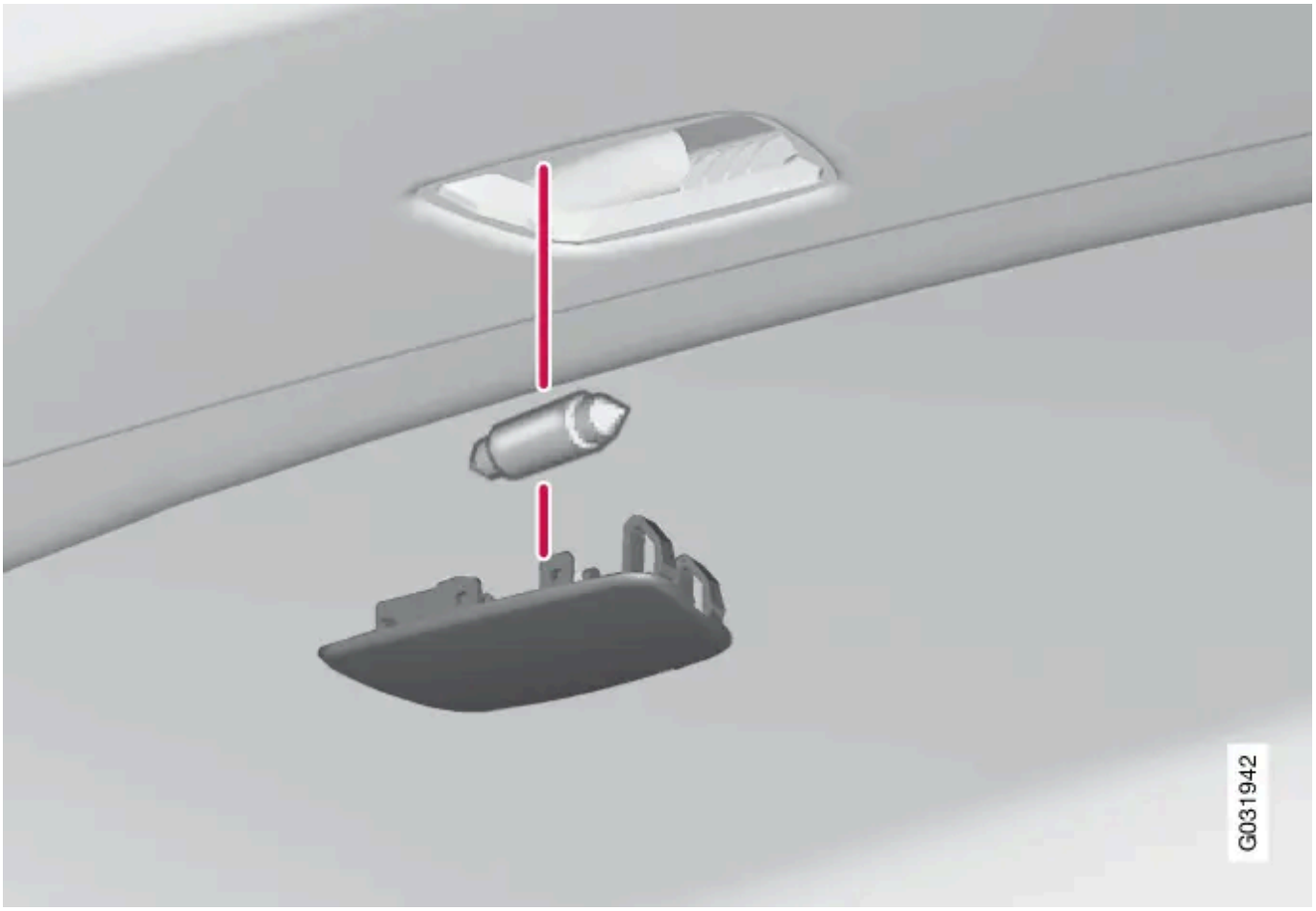
The license plate lighting is located next to the tailgate handle.



1. Remove the screws with a screwdriver.
2. Carefully detach the entire bulb housing and pull it out.
3. Replace the bulb.
4. Reinsert the entire bulb housing and tighten the screws.

12.1.5. Bulbs – cargo area lighting

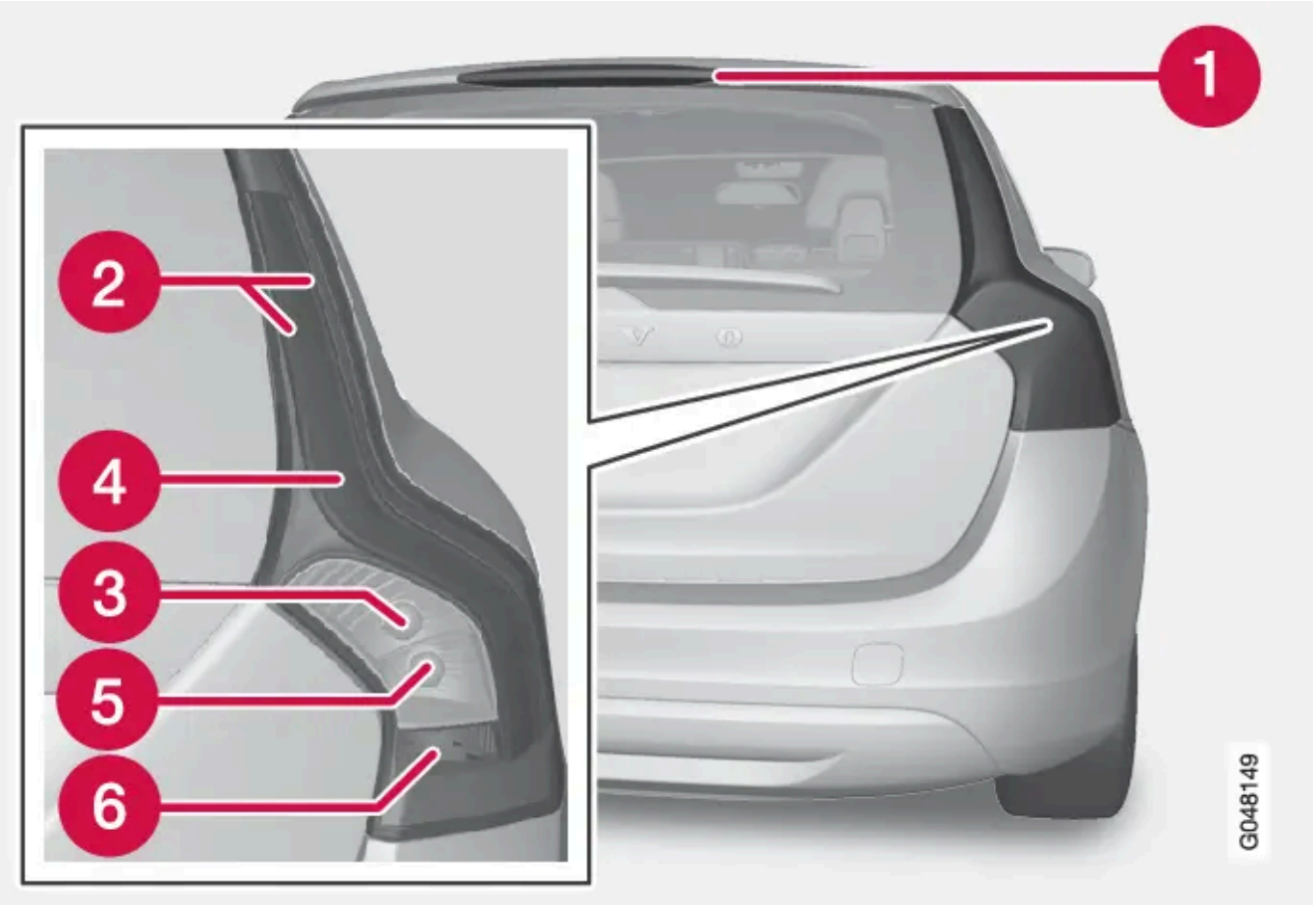
The cargo area light is located in the ceiling liner.



1. Insert a screwdriver and gently turn so that the bulb housing comes loose.
2. Replace the bulb.
3. Check that the bulb illuminates and press it back into the bulb housing.

12.1.6. Bulbs – taillight housing

The backup lights, fog lights and turn signals are replaced from inside the cargo area



1 Brake light (LED)

2 Parking lights/side marker light (LED)

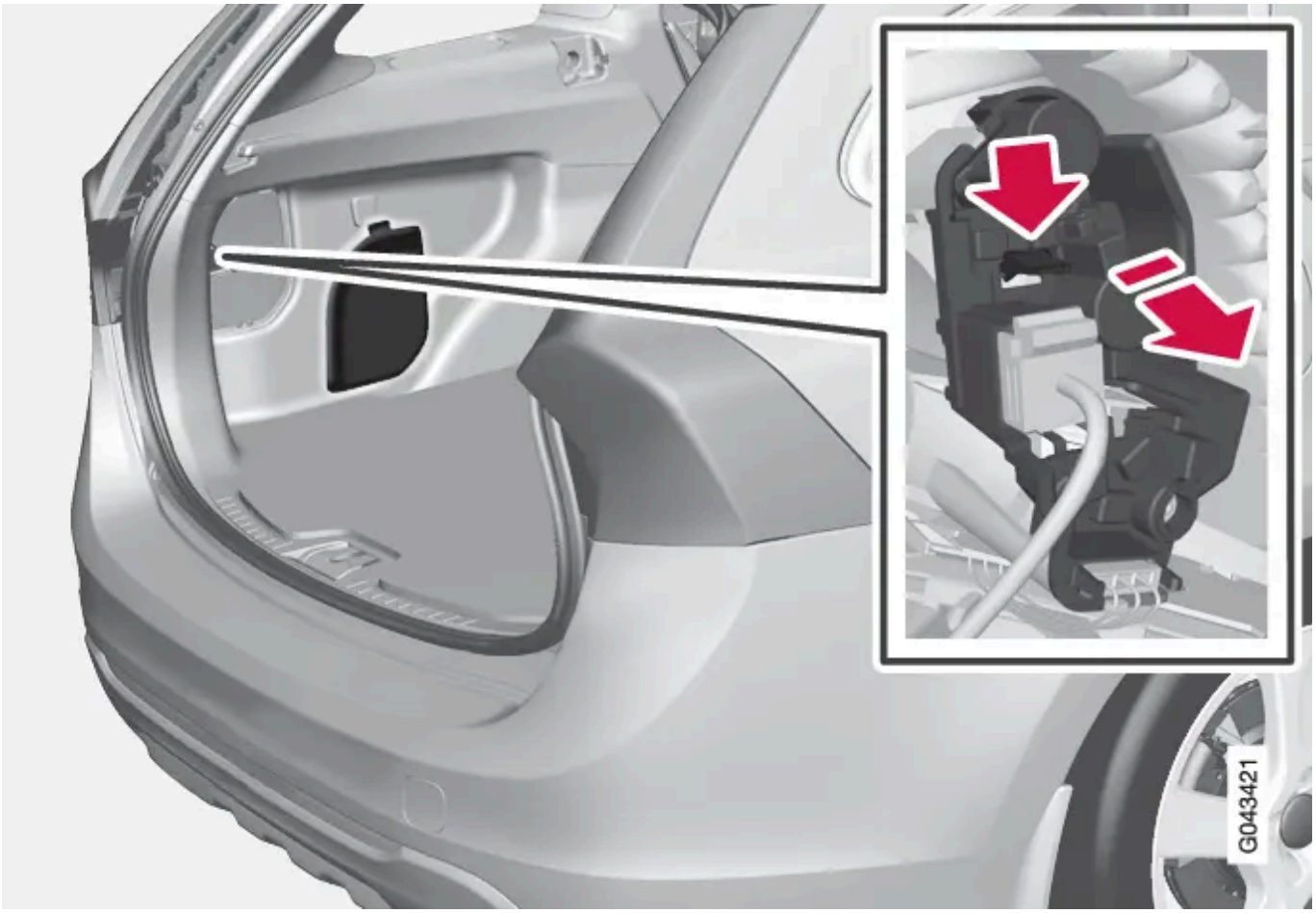
3 Turn signal

4 Brake light (LED)

5 Backup light

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6 Rear fog light



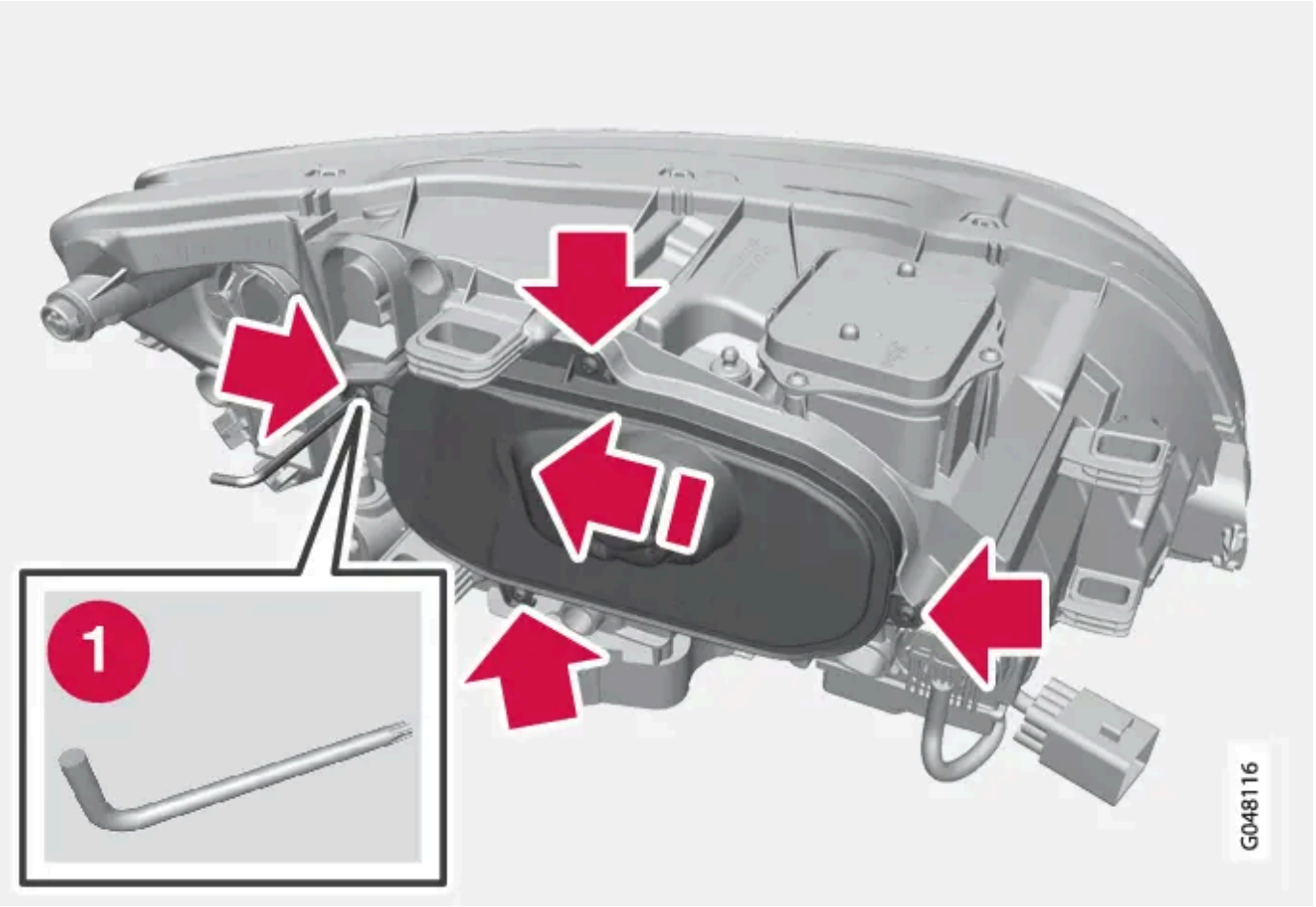
1. Open the panel.
2. Pull the insulation in front of the bulb holder straight out.
3. Press down the catch and pull out the bulb holder.
4. Remove the defective bulb by pressing it in and turning it counterclockwise.
5. Press a new bulb into place and turn it clockwise.
6. Hold down the catch and press the bulb holder back into place.
7. Put the insulation and panel back in place.

12.1.7. Bulbs – cover

The larger cover has to be removed in order to change the high/low beam headlight bulbs.

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Removing the cover to access the bulbs



> **Note**
>
> Before starting to replace a bulb, see Bulbs – introduction.

1. Loosen the cover's four retaining screws (3-4 turns) with a Torx T20 tool (1). The screws should not be removed completely.
2. Push the cover to the side.
3. Remove the cover.

Reinstall the cover in the reverse order.

12.1.8. Bulbs – specifications

The following bulbs can be replaced by the vehicles owner. All other bulbs should only be replaced by a trained and qualified Volvo service technician.

Lighting function	Wattage	Bulb
Low beam (halogen)	55	H11 LL
High beam (halogen)	65	H9
Extra high beam (models with Active Bending Lights*)	55	H7 LL
Front turn signals	24	PY24W
License plate lighting	5	C5W LL
Vanity mirror lighting	1.2	W2x4.6d type T5
Glove compartment lighting	5	SV8.5 (length 43mm)
Rear turn signals	21	PY21W LL
Rear fog light	21	H21W LL
Backup light	21	H21W LL
Brake light	21	P21W LL
Cargo area lighting	5	SV8.5 (length 43mm)
Front footwell lighting	3	W2, 1x9.5d type T10

Note

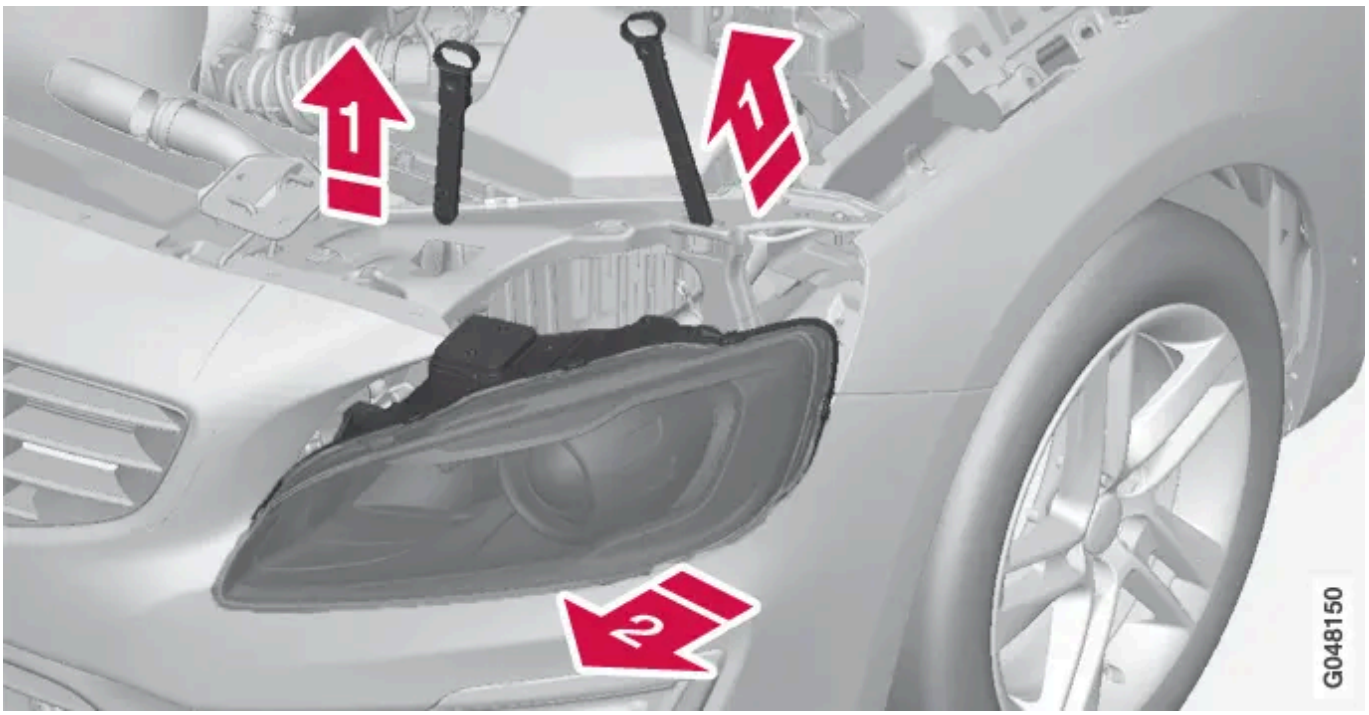
Please consult a Volvo retailer's Parts department for the most up-to-date bulb specifications.

* Option/accessory.

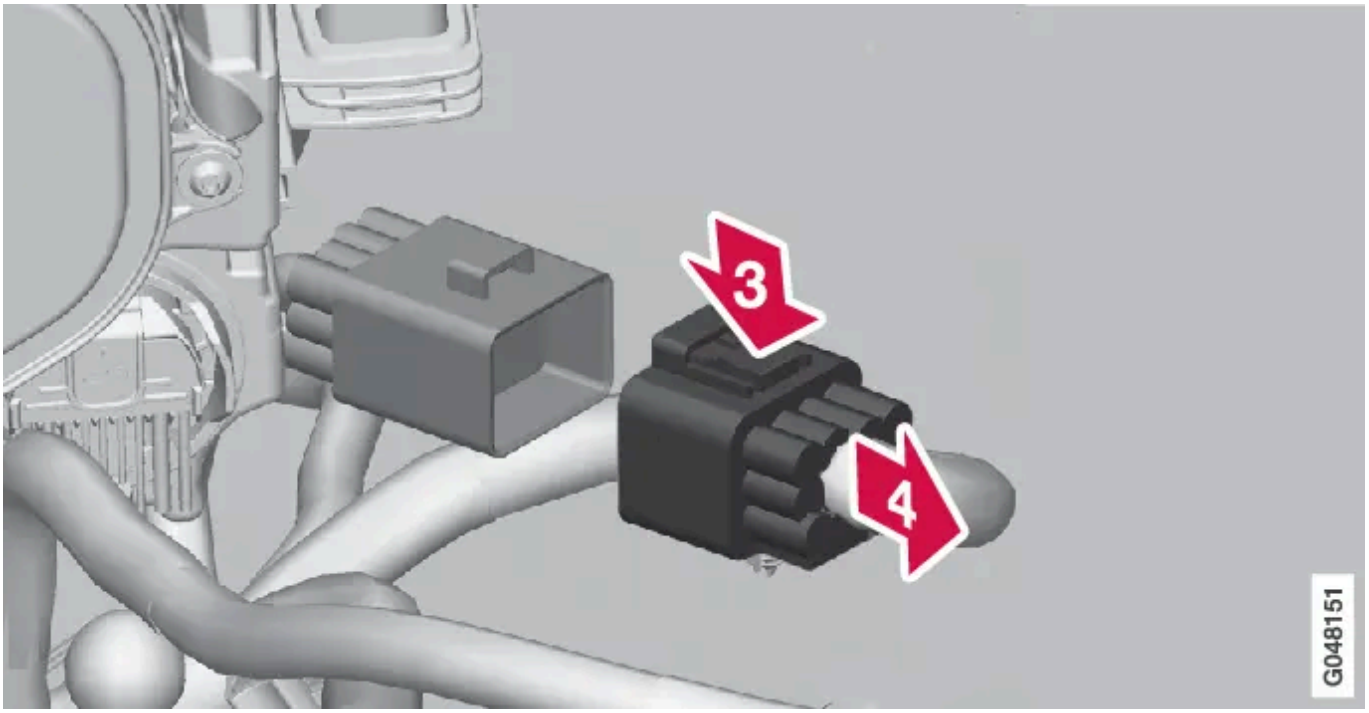
12.1.9. Bulbs – headlight housing

The entire headlight housing must be lifted out when replacing all front bulbs.

Removing the headlight housing



1. Pull out the headlight housing's locking pins.
2. Remove the headlight housing by alternatively pulling the front and rear edges until it can be lifted out.



> **Important**
>
> When disconnecting the connector, pull on the connector itself and not on the wiring.

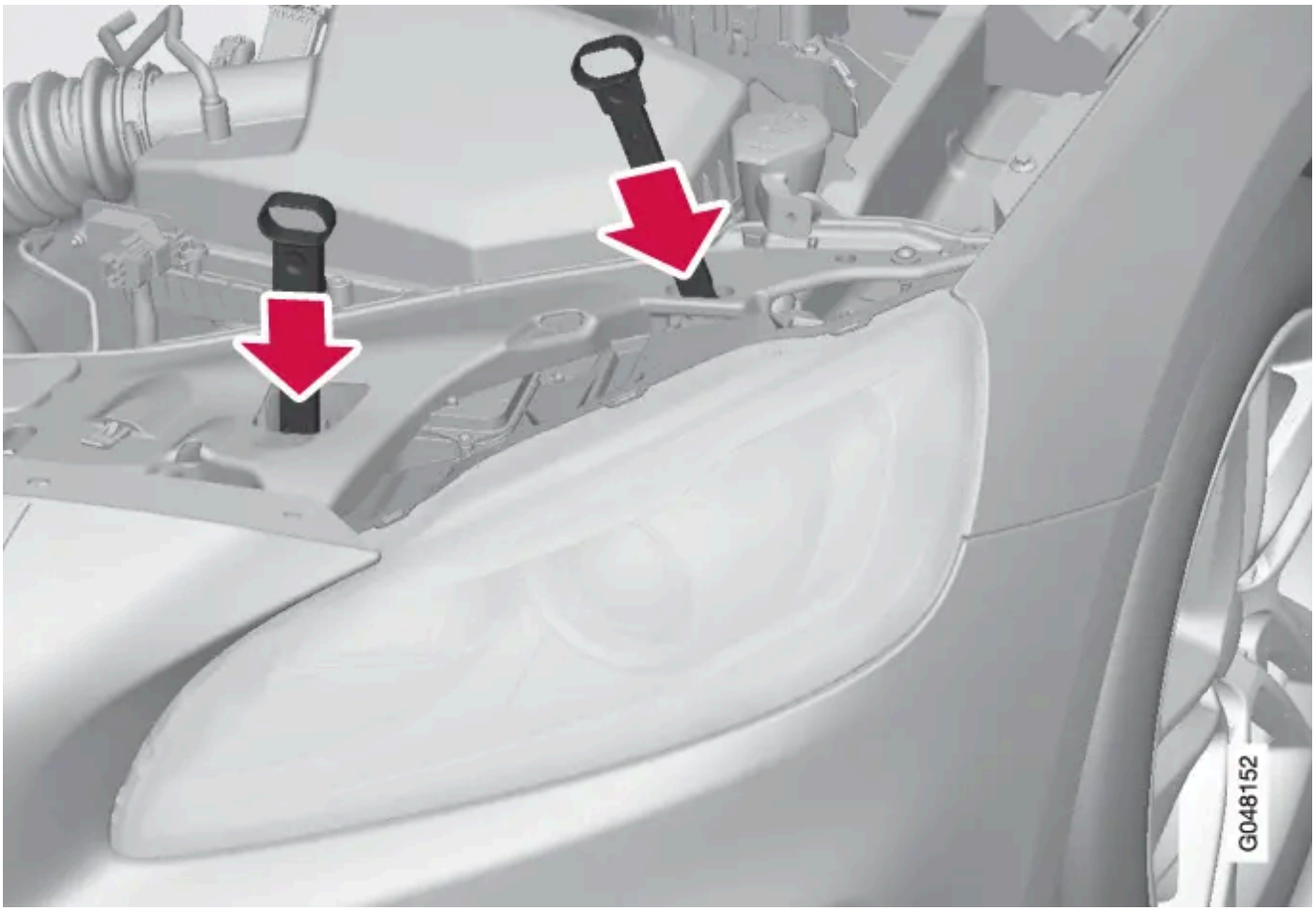
3. Unplug the wiring connector by holding down the clip with your thumb.

The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.

4. Pull the connector out with the other hand.

5. Lift out the headlight housing and place it on a soft surface to avoid scratching the lens.
6. Replace the defective bulb(s).

Reinserting the headlight housing



1. Plug in the connector until it clicks into place.
2. Reinstall the headlight housing and locking pins. The short locking pin should be closest to the grille. Check that they are correctly inserted.

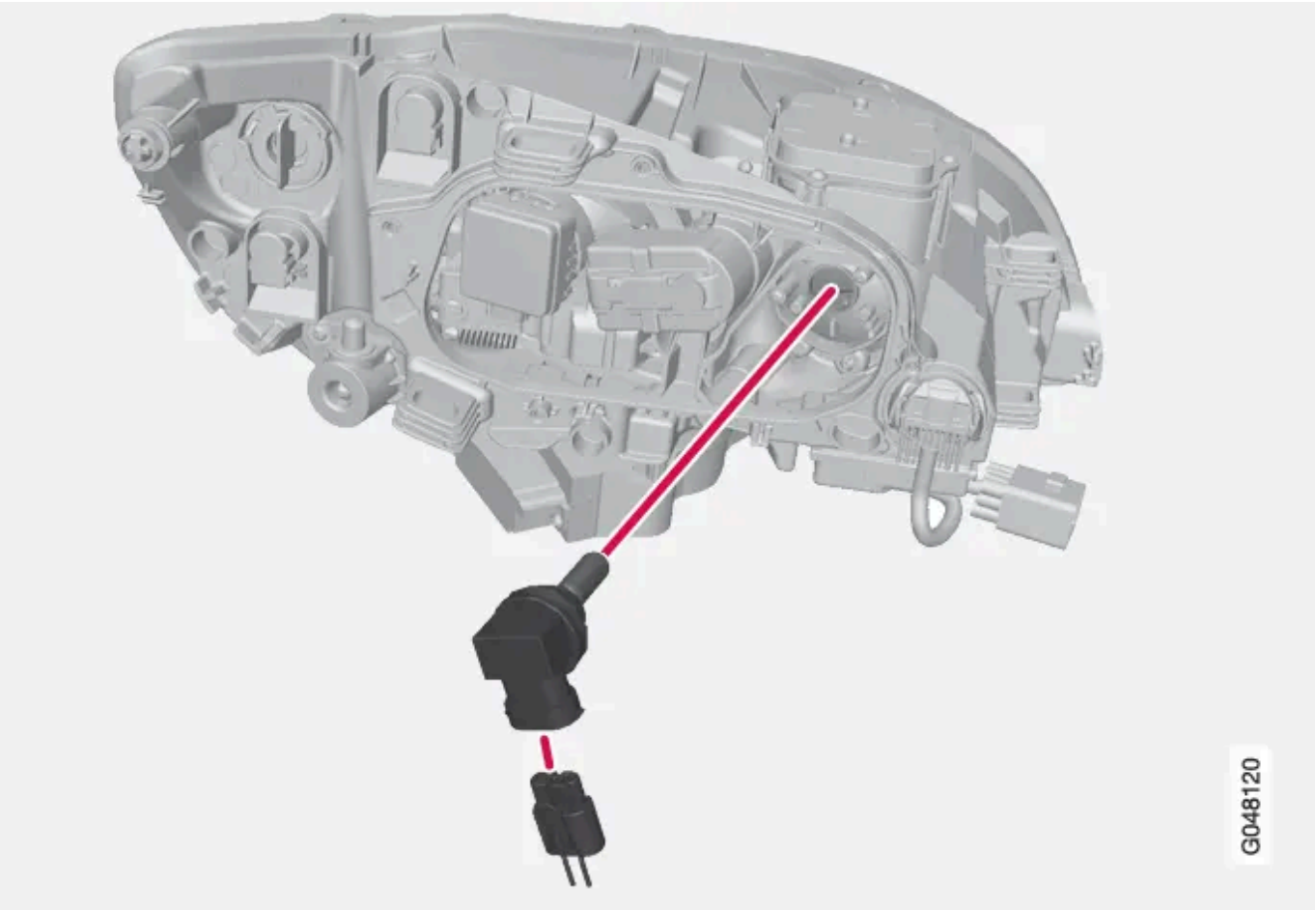
   The headlight housing must be properly in place and the wiring connector correctly reconnected before the lighting is switched on or the remote key is inserted into the ignition slot.

3. Check that the lights function properly.

12.1.10. Bulbs – extra high beam

The extra high beam bulb is concealed by the larger cover.

Extra high beam [1]

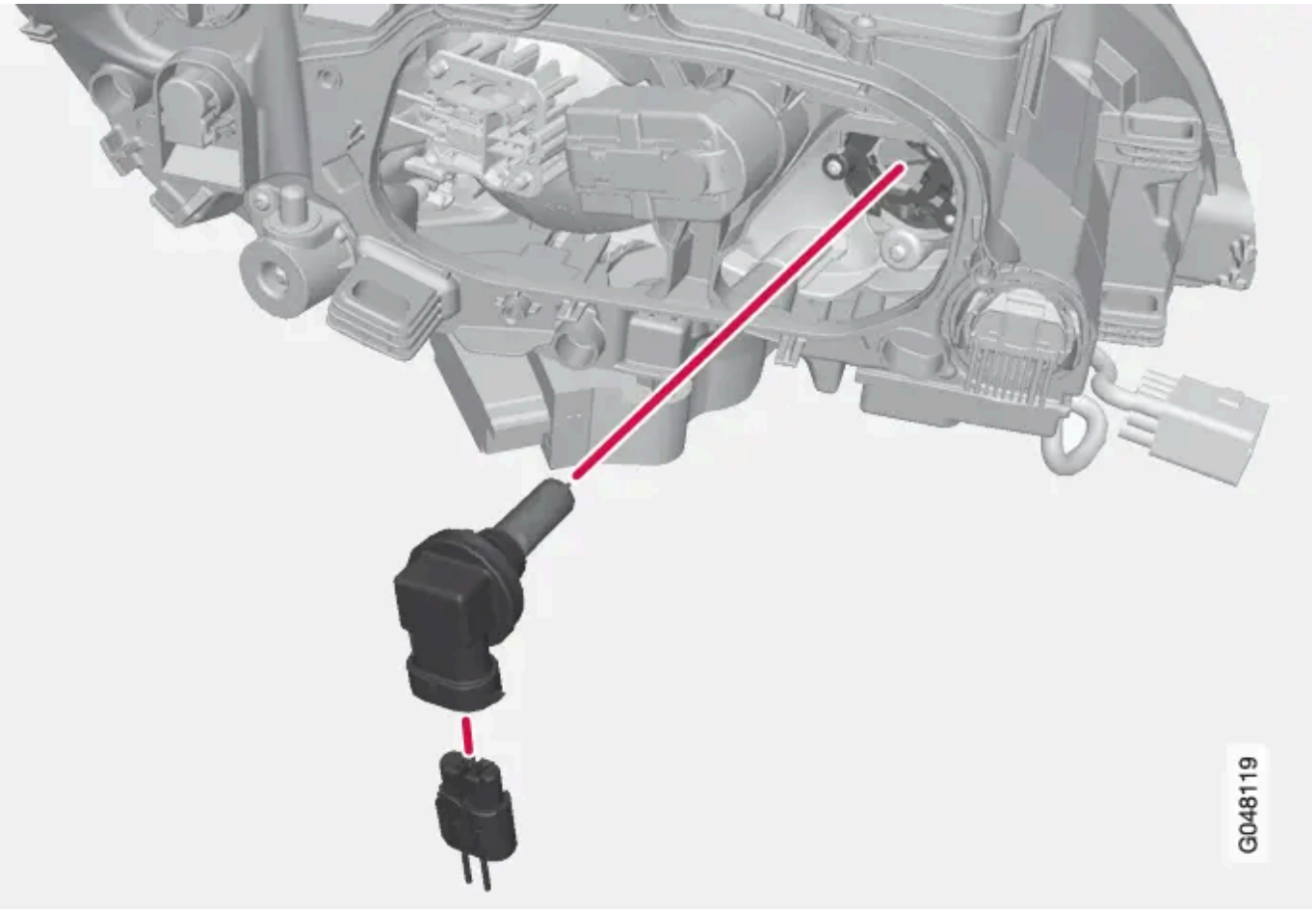


1. Remove the headlight housing from the vehicle (see Bulbs – headlight housing).
2. Remove the cover over the bulbs (see Bulbs – cover).
3. Remove the bulb by turning it counterclockwise and pulling it straight out.
4. Remove the connector from the bulb.
5. Press the new bulb into the socket and turn it clockwise to put it in place. It can only be secured in one position.
6. Put the cover back into position and reinstall the headlight housing.

[1] Models with optional Active Bending Lights only.

12.1.11. Bulbs – high beam, Halogen

The high beam bulb is concealed behind the larger cover.



1. Remove the headlight housing from the vehicle (see Bulbs – headlight housing).
2. Remove the cover over the bulbs (see Bulbs – cover).
3. Remove the bulb by turning it counterclockwise and pulling it straight out.
4. Remove the connector from the bulb.
5. Press the new bulb into the socket and turn it clockwise to put it in place. It can only be secured in one position.
6. Reinsert the bulb holder into the headlight housing.
7. Put the cover back into position and reinstall the headlight housing.

12.1.12. Bulbs – introduction

Certain bulbs can be replaced by the vehicle's owner. However, the bulbs on the following list should only be replaced by a trained and qualified Volvo service technician.

All bulb specifications are listed in Bulbs – specifications.

- Active Bending Lights
- Front parking lights
- Front side marker lights
- Cornering lights
- Turn signals in the door mirrors
- Approach lighting in the door mirrors
- Interior lighting (except for the front footwell lighting)
- Rear parking lights/side marker lights
- LED bulbs

Note

- For information regarding any bulbs not mentioned in this section, please contact your Volvo retailer or a trained and authorized Volvo service technician.
- Always switch off the ignition before starting to replace a bulb.
- If an error message remains in the display after a faulty bulb has been replaced, contact an authorized Volvo workshop.
- Condensation may form temporarily on the inside of the lenses of exterior lights such as headlights, fog lights, or taillights. This is normal and the lights are designed to withstand moisture. Normally, condensation will dissipate after the lights have been on for a short time.
- The optional Active Bending Light bulbs contain trace amounts of mercury. These bulbs should always be disposed of by a trained and qualified Volvo service technician.

Important

Never touch the glass of bulbs with your fingers. Grease and oils from your fingers vaporize in the heat and will leave a deposit on the reflector, which will damage it.

Warning

- The engine should not be running when changing bulbs.
- If the engine has been running just prior to replacing bulbs in the headlight housing, please keep in mind that components in the engine compartment will be hot.

Warning

- Active Bending Lights* – due to the high voltage used by these headlights, these bulbs should only be replaced by a trained and qualified Volvo service technician.
- Turn off the lights and remove the remote key from the ignition before changing any bulbs.

* Option/accessory.

12.2. Engine compartment

12.2.1. Battery – handling

The battery's service life is affected by the number of starts, if it has been discharged, driving style, driving conditions, weather conditions ,etc.

Handling

- Check that the battery cables are correctly connected and tightened.
- Never disconnect the battery when the engine is running (for example, when replacing the battery).
- If the battery is fully discharged a number of times, this may shorten its service life.
- The service life of a battery is affected by factors such as the number of starts, driving conditions and climate. Extreme cold may also further decrease the battery's starting capacity.
- Because the battery's starting capacity decreases with time, it may be necessary to recharge it if the vehicle is not driven for an extended period of time or if the vehicle is usually only driven short distances.
- Never use a quick charger to charge the battery. Only traditional types of battery chargers should be used.

Important

The infotainment system's energy-saving feature may not function correctly or at all, and/or a message may be displayed if a battery charger or jumper cables are not connected properly.

- The negative terminal on the battery must **never** be used to connect a jumper cable or a battery charger. Only the ground point on the chassis may be used.

See Jump starting for an illustration and additional information.

Warning

- Never expose the battery to open flame or electric spark.
- Do not smoke near the battery.
- Battery fluid contains sulfuric acid. Do not allow battery fluid to contact eyes, skin, fabrics or painted surfaces. If contact occurs, flush the affected area immediately with water. Obtain medical help immediately if eyes are affected.

Note

The life of the battery is shortened if it becomes discharged repeatedly.

12.2.2. Battery – maintenance

Proper battery maintenance can help prolong its service life.

Maintenance

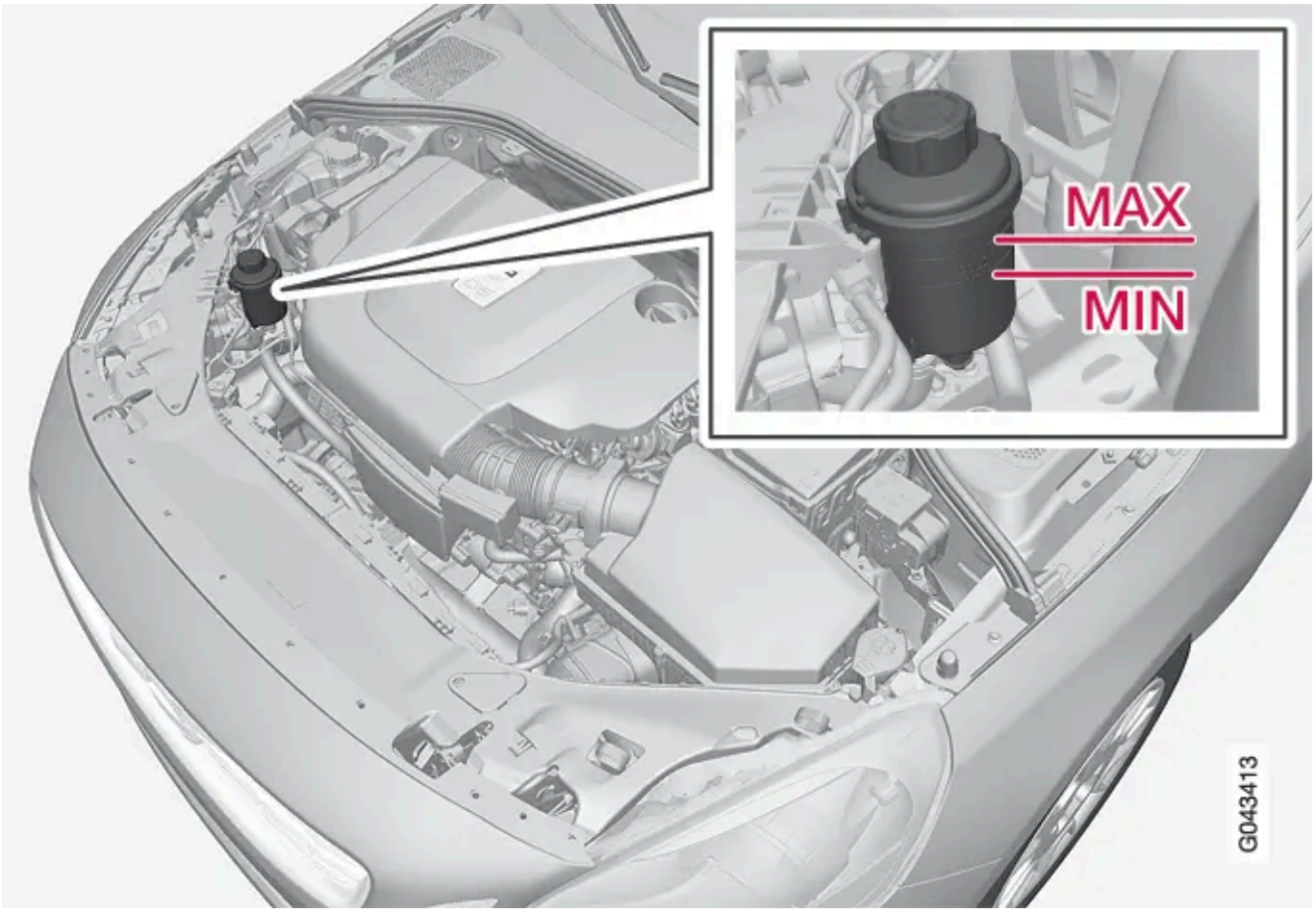
- Use a screw driver to open the caps or cover and a flashlight to inspect the level.
- If necessary, add distilled water. The level should never be above the indicator.
- The fluid level should be checked if the battery has been recharged.
- After inspection, be sure the cap over each battery cell or the cover is securely in place.
- Check that the battery cables are correctly connected and properly tightened.
- Never disconnect the battery when the engine is running, or when the key is in the ignition. This could damage the vehicle's electrical system.
- The battery should be disconnected from the vehicle when a battery charger is used directly on the battery.
- To help keep the battery in good condition, the vehicle should be driven for at least 15 minutes a week or connected to a charger with an automatic charging function.
- If the battery is fully discharged a number of times, this may shorten its service life. Keeping the battery fully charged helps prolong its service life.
- The service life of a battery is affected by factors such as driving conditions and climate. Extreme cold may also further decrease the battery’s starting capacity.
- Because the battery’s starting capacity decreases with time, it may be necessary to recharge it if the vehicle is not driven for an extended period of time or if the vehicle is usually only driven short distances.

Important

- Always use distilled or deionized water (battery water).
- Never fill above the level mark in the cell.

12.2.3. Engine compartment – power steering fluid

The fluid level must be between the MIN and MAX marks. For capacities and recommended fluid grade, see .



Check the level frequently. It does not normally require changing.

Warning

If a problem should occur in the power steering system or if the vehicle has no electrical current and must be towed, it is still possible to steer the vehicle. However, keep in mind that greater effort will be required to turn the steering wheel.

Important

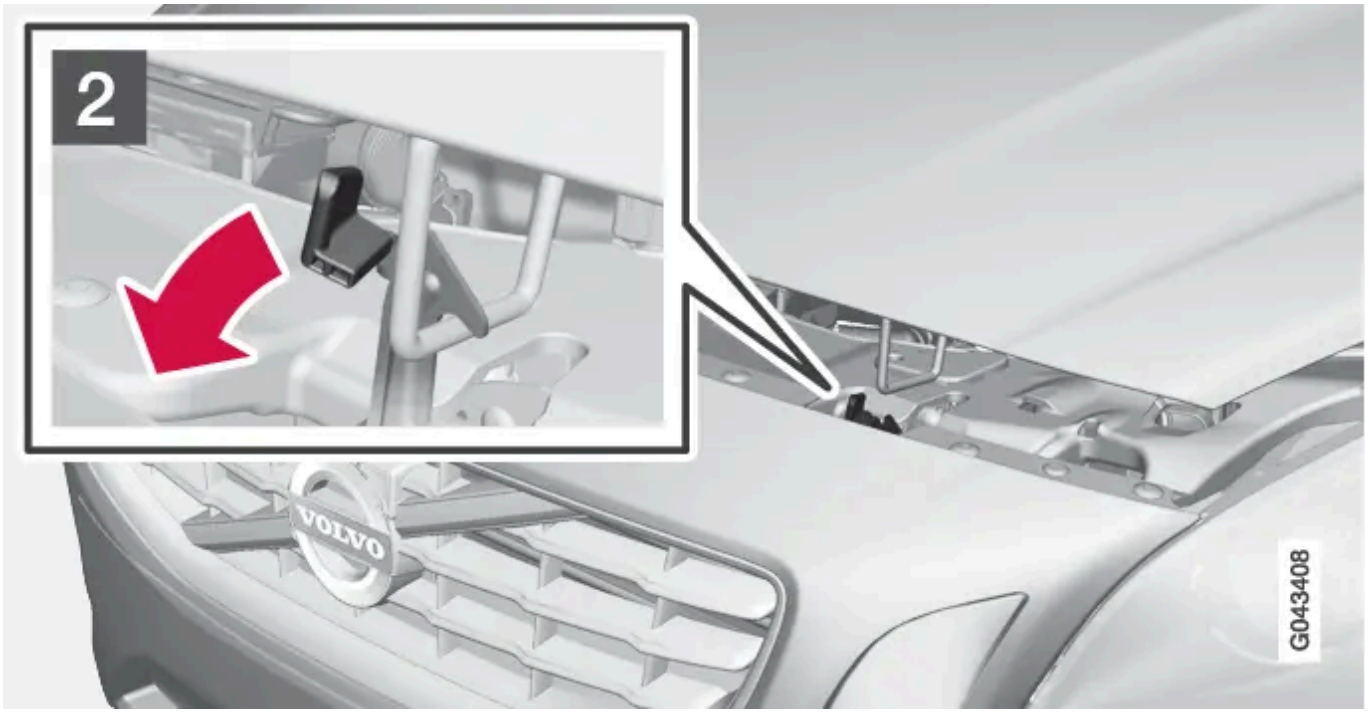
Keep the area around the power steering fluid reservoir clean when checking.

12.2.4. Maintenance – opening/closing hood

The hood is opened by first releasing the lock from the passenger compartment and then pressing the release control.

Opening and closing the hood





1. 1

   Turn the handle located under the left side of the dash approximately 20-25 degrees clockwise to release the hood lock.

2. 2

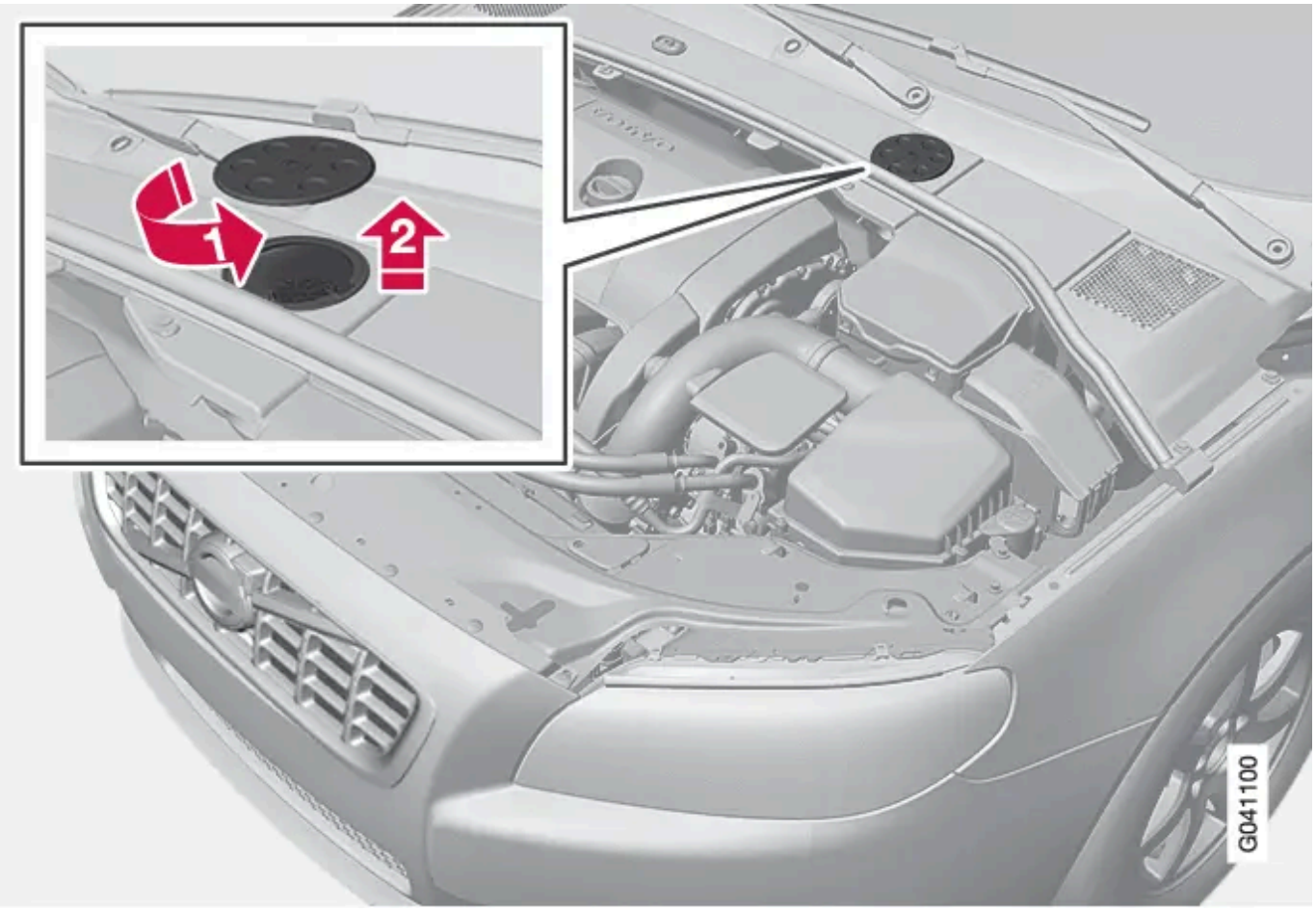
   Lift the hood slightly. Press the release control (located under the right front edge of the hood) to the left, and lift the hood.

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> **Warning**
>
> Check that the hood locks properly when closed.

12.2.5. Engine compartment – brake fluid

The brake fluid should always be between the MIN and MAX marks on the inside of the reservoir.



Location of the brake fluid reservoir

Checking the level

The fluid reservoir is concealed under the round cover at the rear of the engine compartment. The round cover must be removed first before the reservoir cap can be accessed.

Check, without removing the cap, that there is sufficient fluid in the reservoir.

Fluid type: DOT 4 boiling point >536 °F (>280 °C).

Replace: The fluid should be replaced according to the intervals specified in the Warranty and Service Records Information booklet.

When driving under extremely hard conditions (mountain driving, etc), it may be necessary to replace the fluid more often. Consult a trained and qualified Volvo service technician.

Always entrust brake fluid changing to a trained and qualified Volvo service technician.

Warning

- If the fluid level is below the MIN mark in the reservoir or if a brake-related message is shown in the information display: **DO NOT DRIVE**. Have the car towed to a trained and qualified Volvo service technician and have the brake system inspected.
- Dot 4 should never be mixed with any other type of brake fluid.

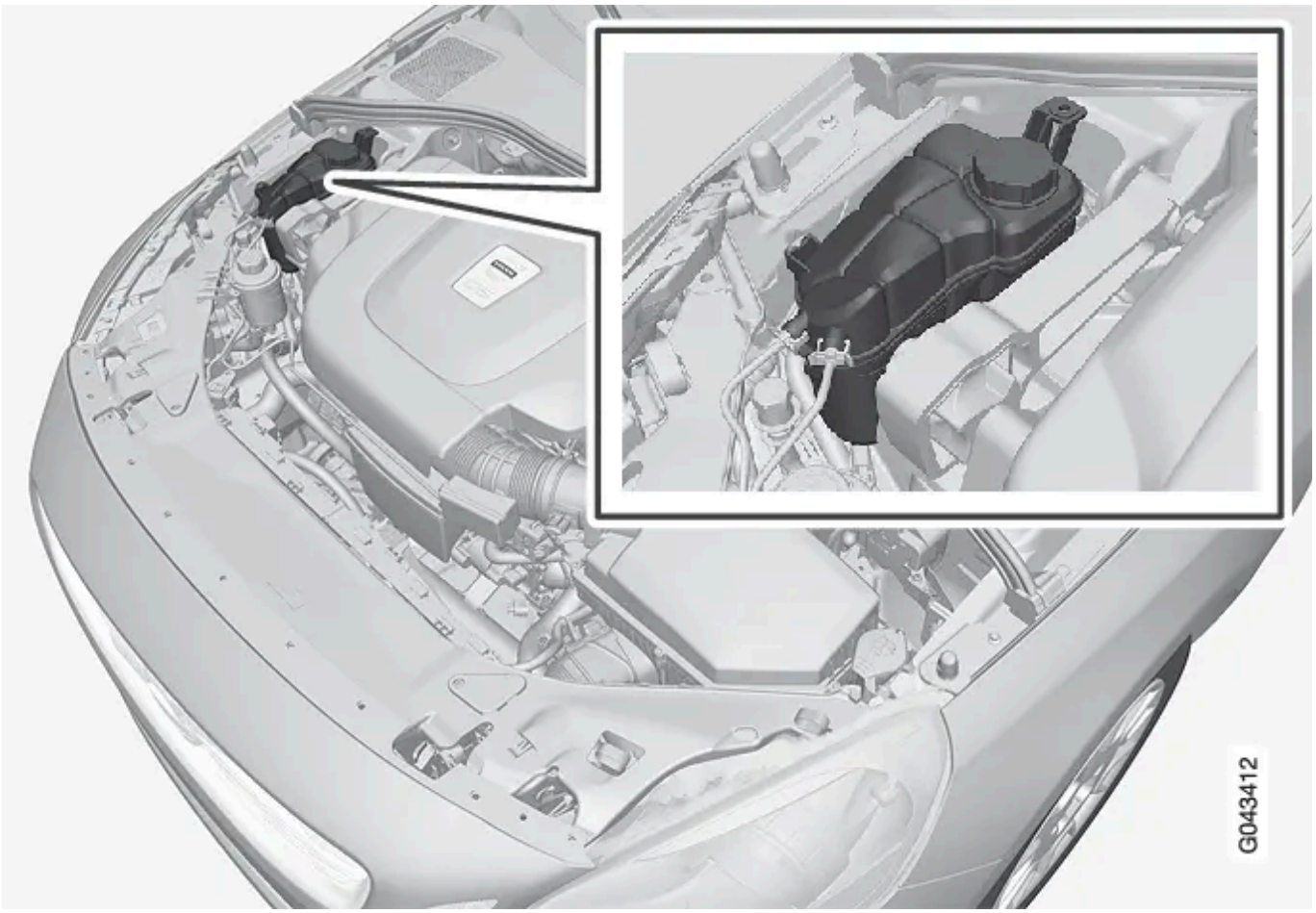
Filling

1. Turn and open the cover.
2. Unscrew the reservoir cap and fill the fluid. The level must be between the MIN and MAX marks.

12.2.6. Engine compartment – coolant

Normally, the coolant does not need to be changed. If the system must be drained, consult a trained and qualified Volvo service technician.

Level check and filling



Location of the coolant reservoir

See Fuel tank volume – specification and volume for information on cooling system capacities.

Important

- If necessary, top up the cooling system with Volvo Genuine Coolant/Antifreeze only (a 50/50 mix of water and antifreeze).
- Different types of antifreeze/coolant may not be mixed.
- If the cooling system is drained, it should be flushed with clean water or premixed anti-freeze before it is refilled with the correct mixture of water/anti-freeze.
- The cooling system must always be kept filled to the correct level, and the level must be between the MIN and MAX marks. If it is not kept filled, there can be high local temperatures in the engine which could result in damage. Check coolant regularly!
- Do not top up with water only. This reduces the rust-protective and antifreeze qualities of the coolant and has a lower boiling point. It can also cause damage to the cooling system if it should freeze.
- Do not use chlorinated tap water in the vehicle's cooling system.

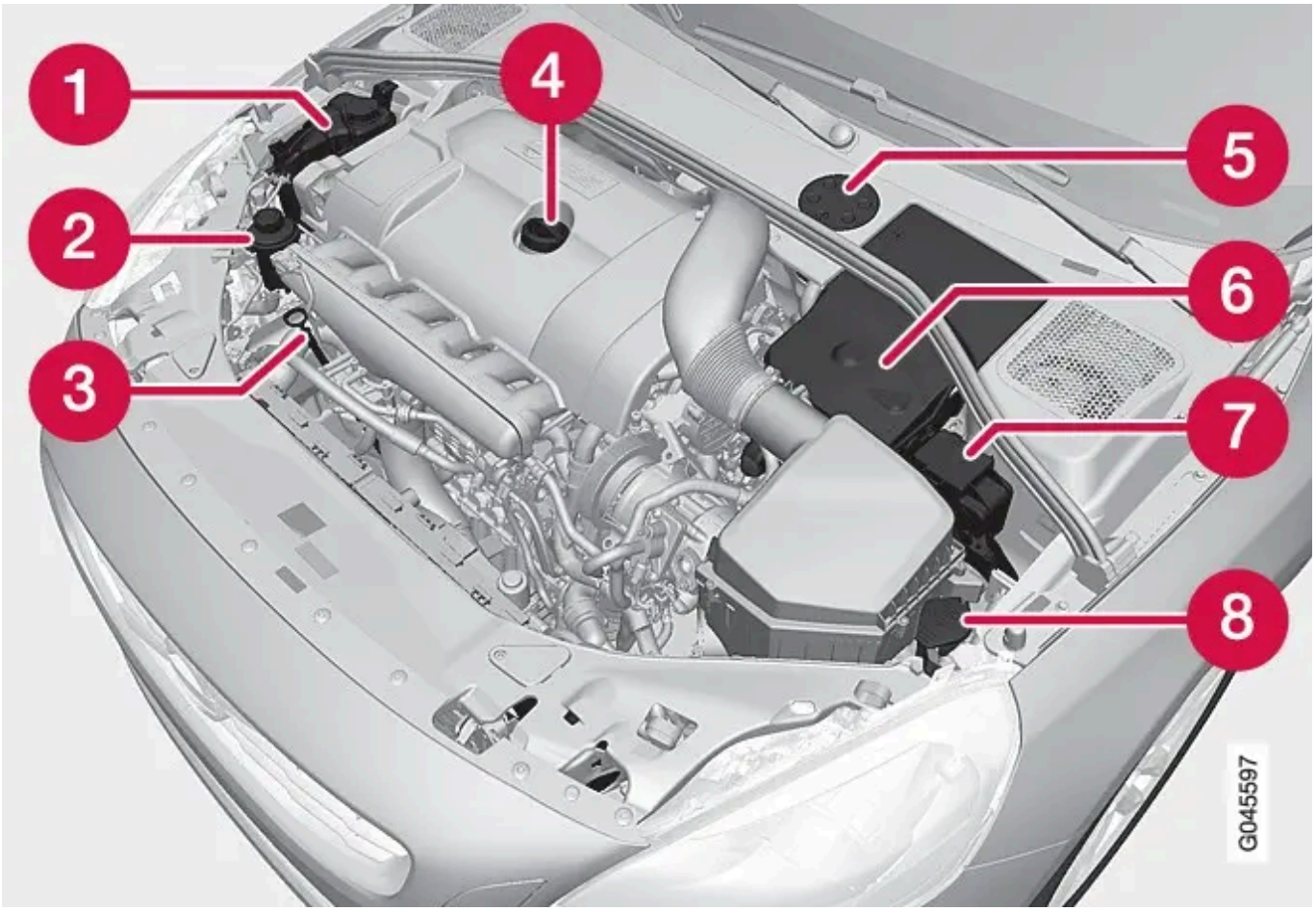
The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.

Warning

- Never remove the expansion tank cap while the engine is warm. Wait until the engine cools.
- If it is necessary to top off the coolant when the engine is warm, unscrew the expansion tank cap slowly so that the overpressure dissipates.

12.2.7. Engine compartment – overview

The overview shows the main inspection points in the engine compartment.



1 Coolant expansion tank

2 Power steering fluid reservoir

3 Dipstick-engine oil

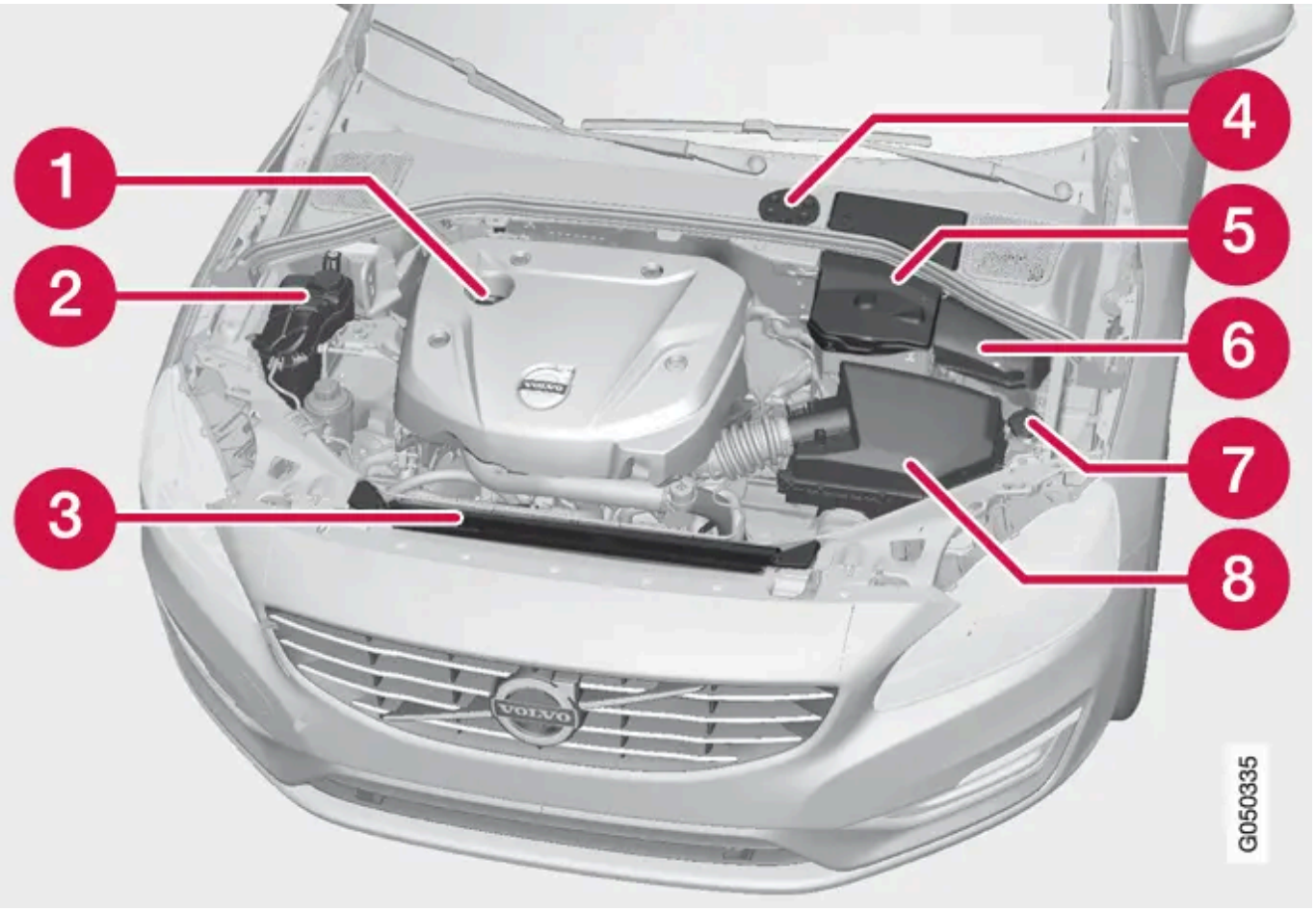
4 Filler cap-engine oil

5 Cover over brake fluid reservoir

6 Battery

7 Relay/fuse box

8 Washer fluid reservoir



Engine compartment - 4-cylinder engines only

1 Filler cap-engine oil

2 Coolant expansion tank

3 Radiator

4 Brake fluid reservoir

5 Battery

6 Relay/fuse box

7 Washer fluid reservoir

8 Air cleaner

The appearance of the engine compartment may vary depending on engine model.

Warning

The cooling fan (located at the front of the engine compartment, behind the radiator) may start or continue to operate (for up to 6 minutes) after the engine has been switched off.

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Warning

Before performing any operations in the engine compartment, the ignition should always be completely switched off (in mode **0**, see Ignition modes) and there should be no remote keys in the passenger compartment. The gear selector should be in the P (park) position. If the engine has been running, wait until it has cooled before touching any components in the engine compartment.

The distributor ignition system operates at very high voltages. Special safety precautions must be followed to prevent injury. Always turn the ignition off when:

- Replacing distributor ignition components e.g. plugs, coil, etc.
- Do not touch any part of the distributor ignition system while the engine is running. This may result in unintended movements and body injury.

12.2.8. Battery specifications

If the battery is replaced, replace it with a battery of the same cold start capacity as the original (see the decal on the battery).

General information

Warning

PROPOSITION 65 WARNING!

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer and reproductive harm. Wash hands after handling.

12 volt system with a voltage-regulated alternator. Single pole system in which the chassis and engine block are used as conductors. The negative terminal is connected to the chassis.

Motor	Voltage (V)	Cold start capacity CCA (Cold Cranking Amperes) (A)
Engines with Start/Stop*	12	800[1]
All other engines	12	520–800

* Option/accessory.

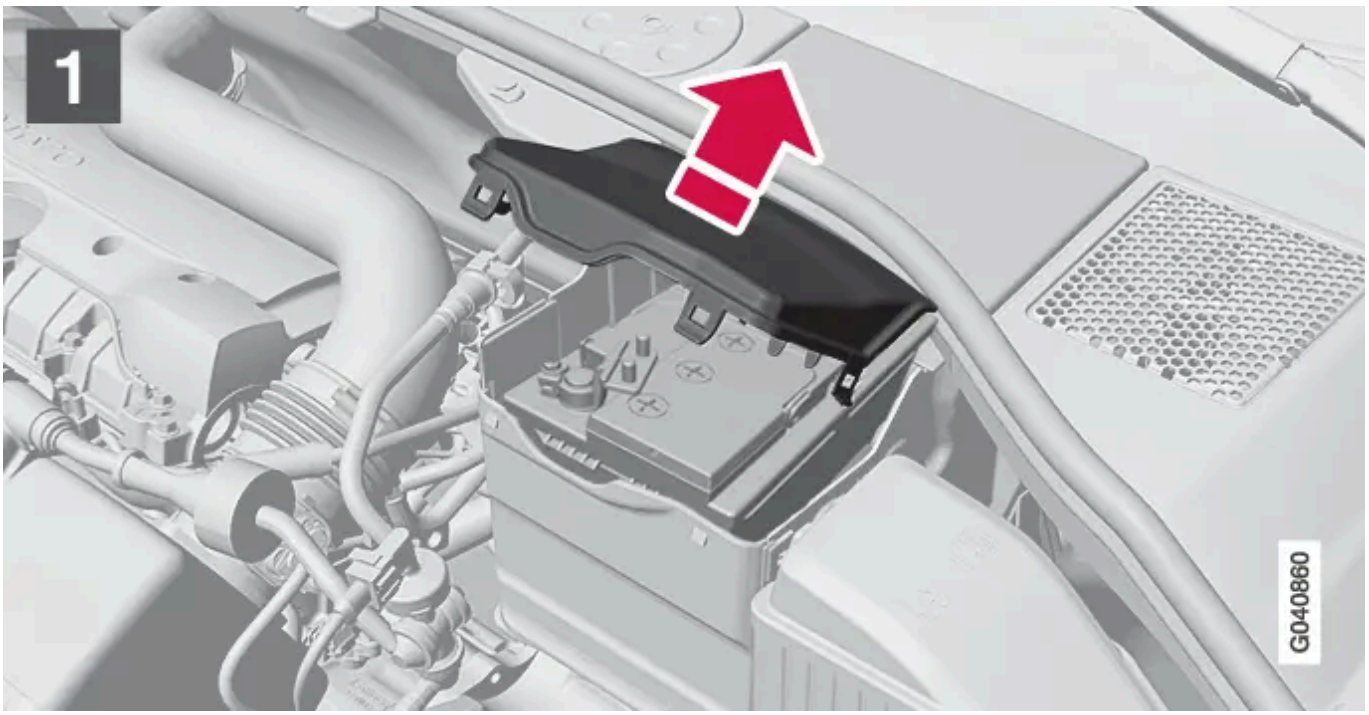
[1] AGM (Absorbed Glass Mat) batteries have to be used on models with Start/Stop

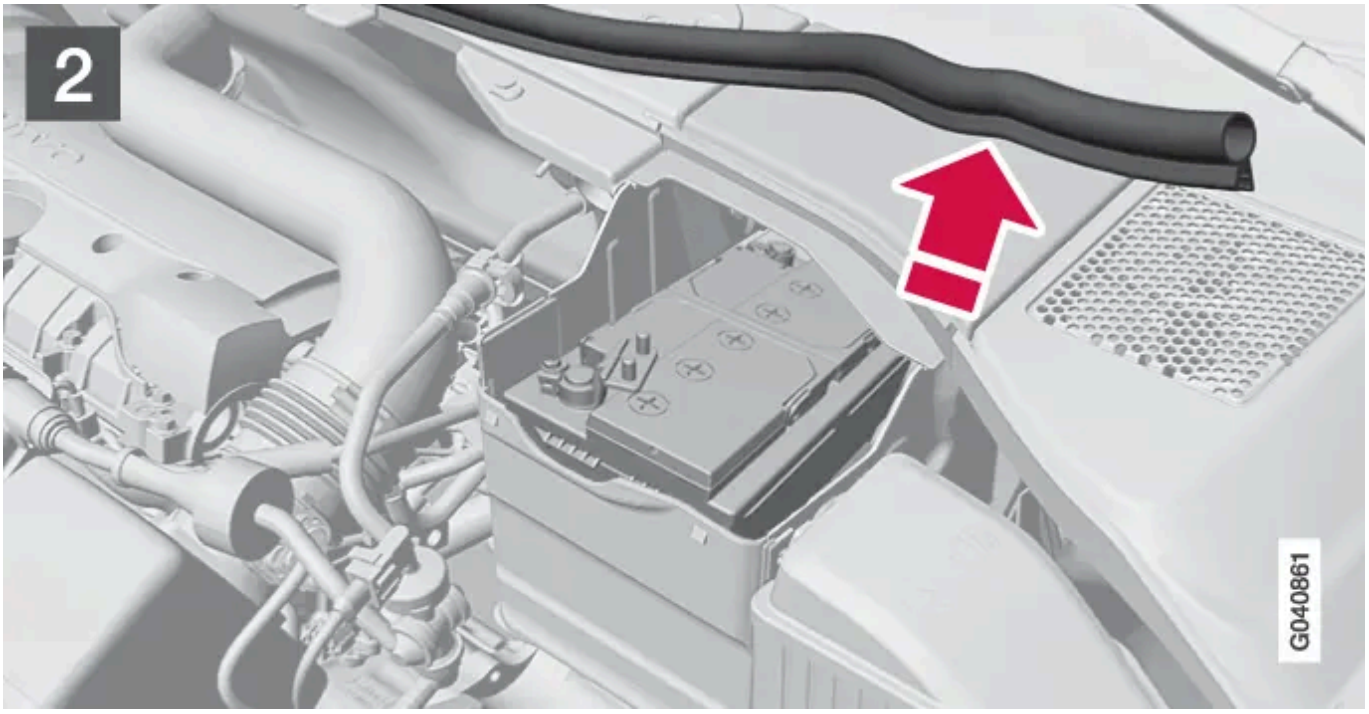
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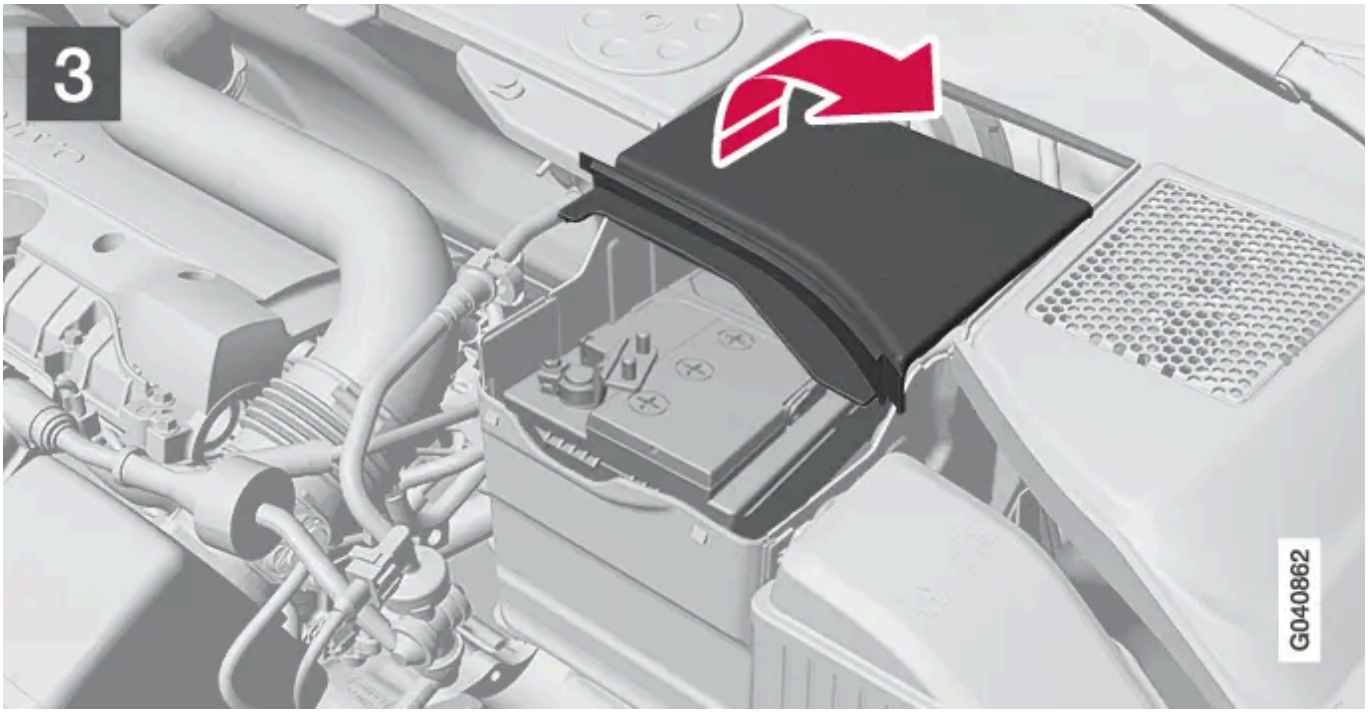
12.2.9. Battery – changing

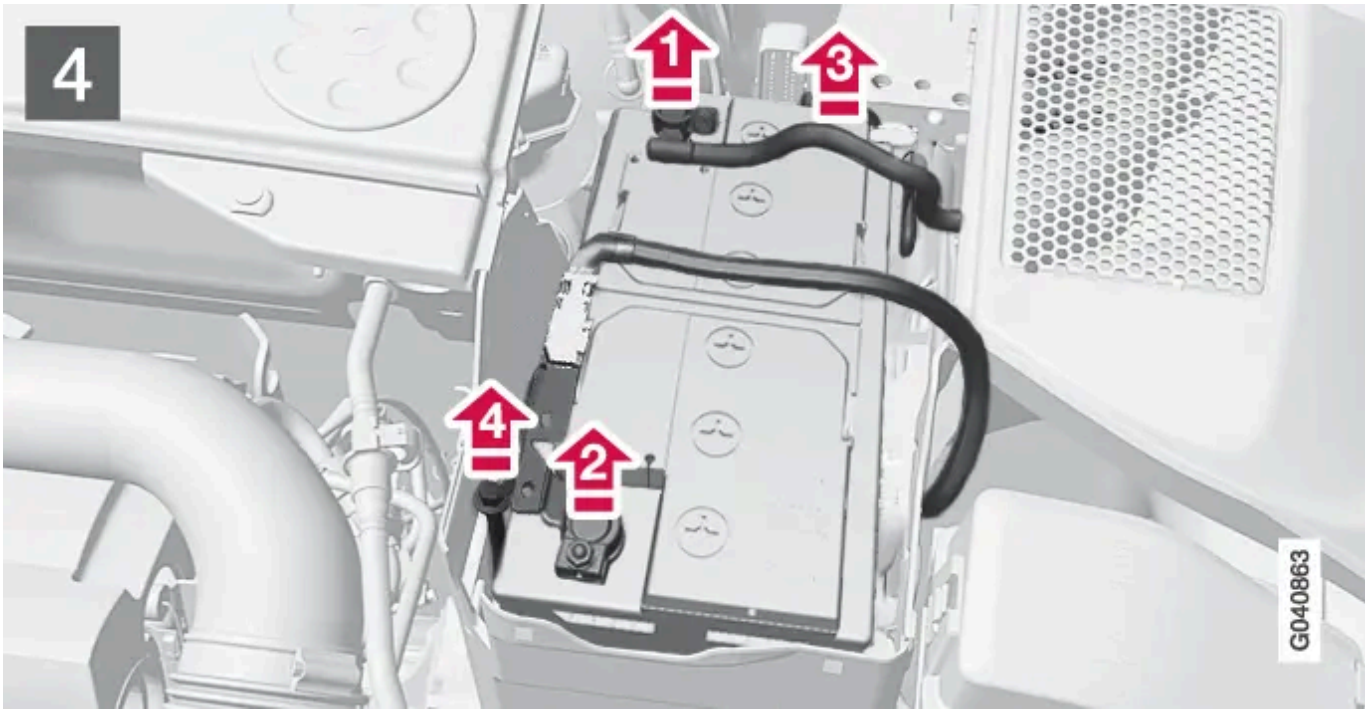
When changing batteries, be sure to use the correct battery for your vehicle. Consult a Volvo retailer or a trained and qualified Volvo service technician.

Changing

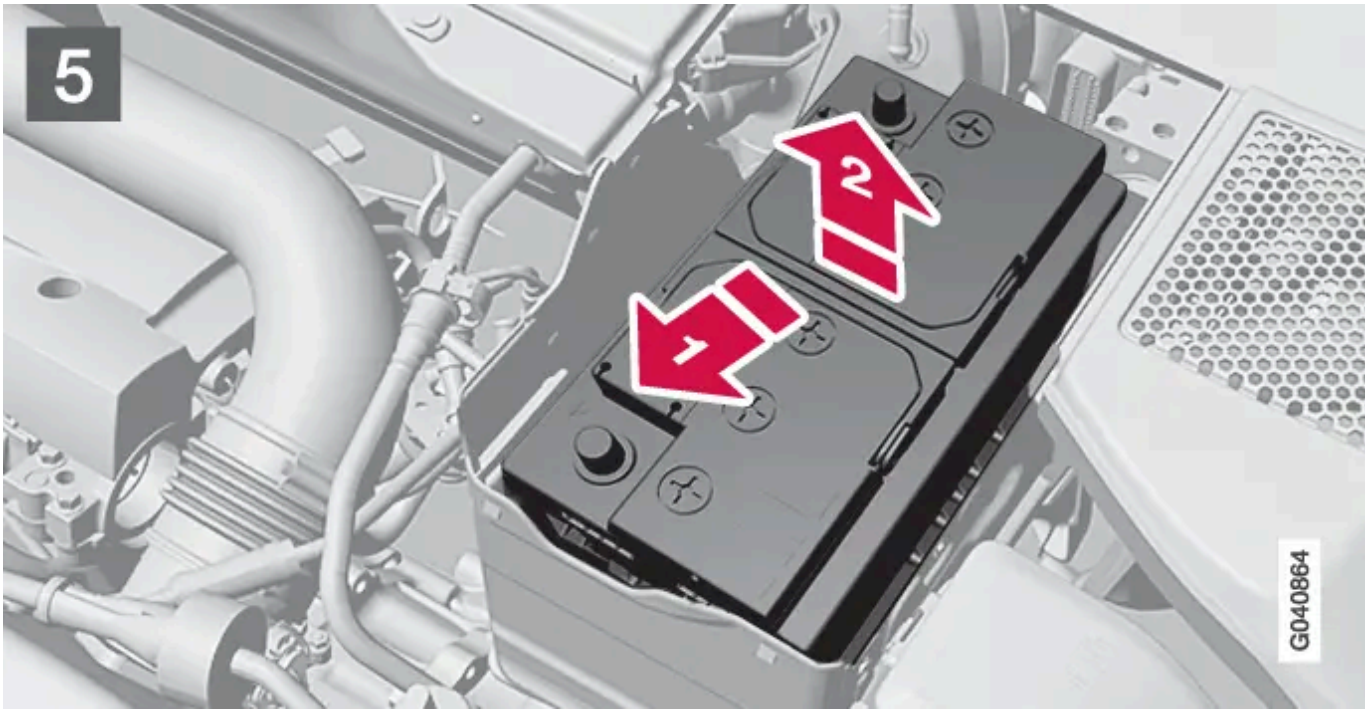








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Warning

Connect and disconnect the positive and negative cables in the correct sequence.

Removal

Switch off the ignition, remove the remote key from the ignition slot and wait at least 5 minutes before disconnecting the battery so that all information in the vehicle's electrical system can be stored in the control modules.

1. 1
   Open the clips on the front cover and remove the cover.

2. 2
   Release the rubber molding so that the rear cover is free.

3. 3
   Remove the rear cover by pulling it away.

4. 4
   1. Detach the black negative cable.
   2. Detach the red positive cable
   3. Detach the ventilation hose from the battery
   4. Loosen the screw holding the battery clamp.

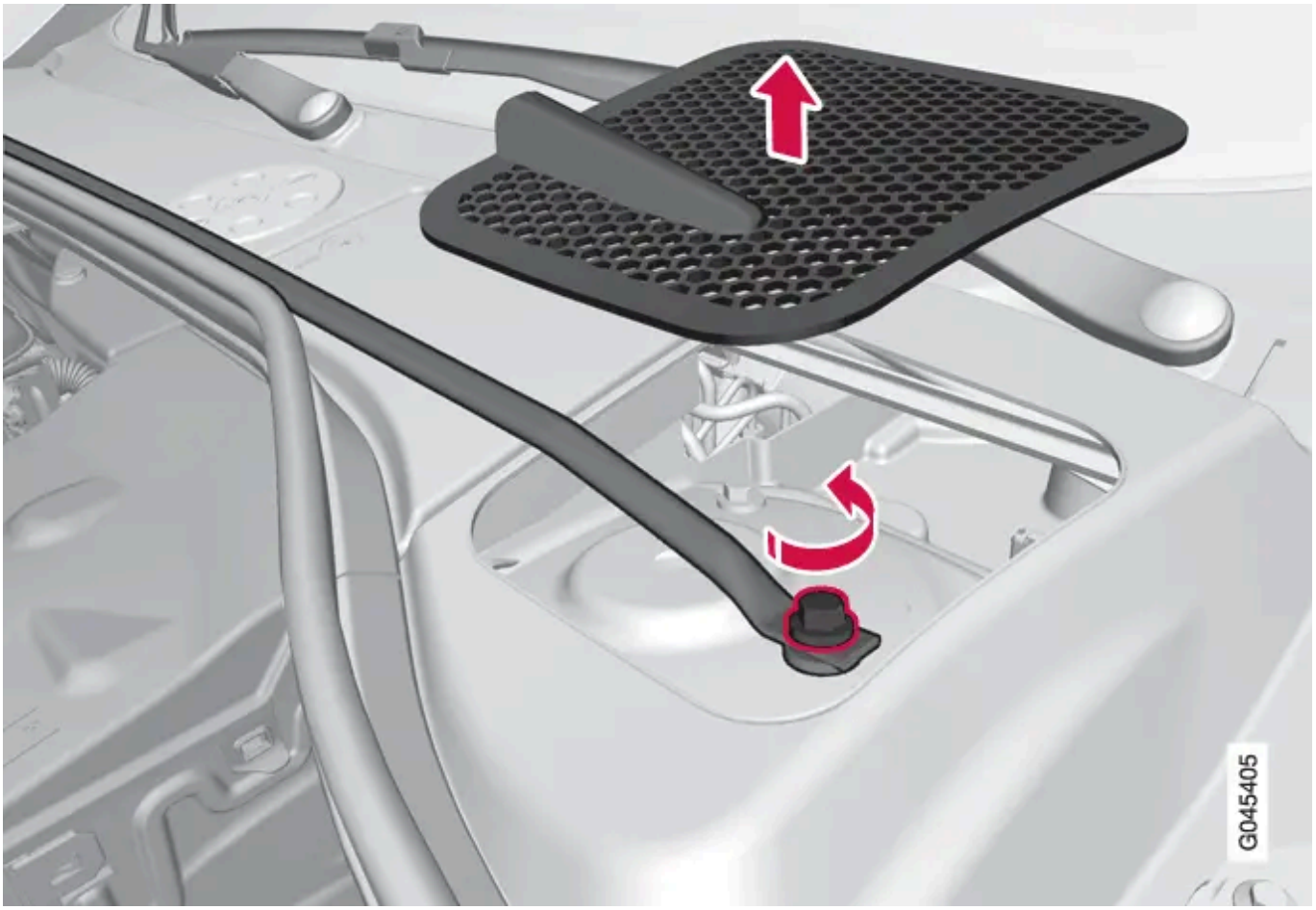
5. 5
   Move the battery to the side and lift it up.

Warning

PROPOSITION 65 WARNING!

Battery posts, terminals, and related accessories contain lead and lead compounds, chemicals known to the state of California to cause cancer and reproductive harm. Wash hands after handling.

Rally bar R-Design models*



Rally bar and bulkhead hatch

Vehicles with the optional R-Design package are equipped with a rally bar in the engine compartment that must be removed before the battery can be replaced.

1. Remove the hatch in the bulkhead on both sides of the engine compartment (pry them up carefully with a plastic knife or similar object).
2. Remove the screw on each side of the engine compartment holding the rally bar in place.
3. Lift out the rally bar.

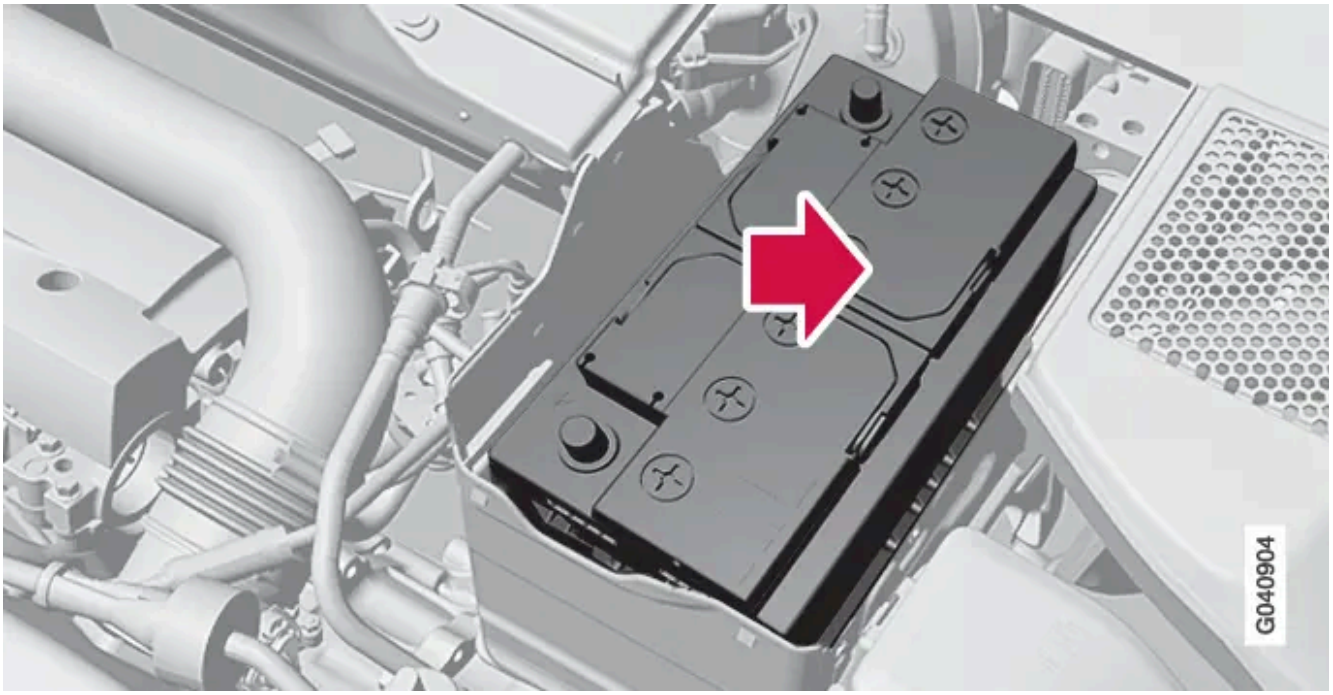
> The battery can now be removed (see the instructions in the previous section).

- After a new battery has been installed (see the following section), reinstall the rally bar in the reverse order.

> **Note**
>
> When reinstalling the rally bar, tighten the screws to 22 ft lbs (30 Nm).

Installation

1. Lower the battery into the battery box.



2. Move the battery inward and to the side until it reaches the rear edge of the box.
3. Tighten the clamp that secures the battery.
4. Connect the ventilation hose.

> Be sure that it is correctly connected to the battery and the vent in the vehicle's body.

5. Connect the red positive cable.
6. Connect the black negative cable.
7. Press in the rear cover. (See Removal).
8. Reinstall the molding. (See Removal).
9. Reinstall the front cover and secure it with the clips. (See Removal).

* Option/accessory.

12.2.10. Engine compartment – engine oil

The correct oil must be used for the stated oil change (service) intervals to apply.
The oil level on 4-cylinder engines is checked electronically and is checked using a dipstick on 5- and 6-cylinder engines.

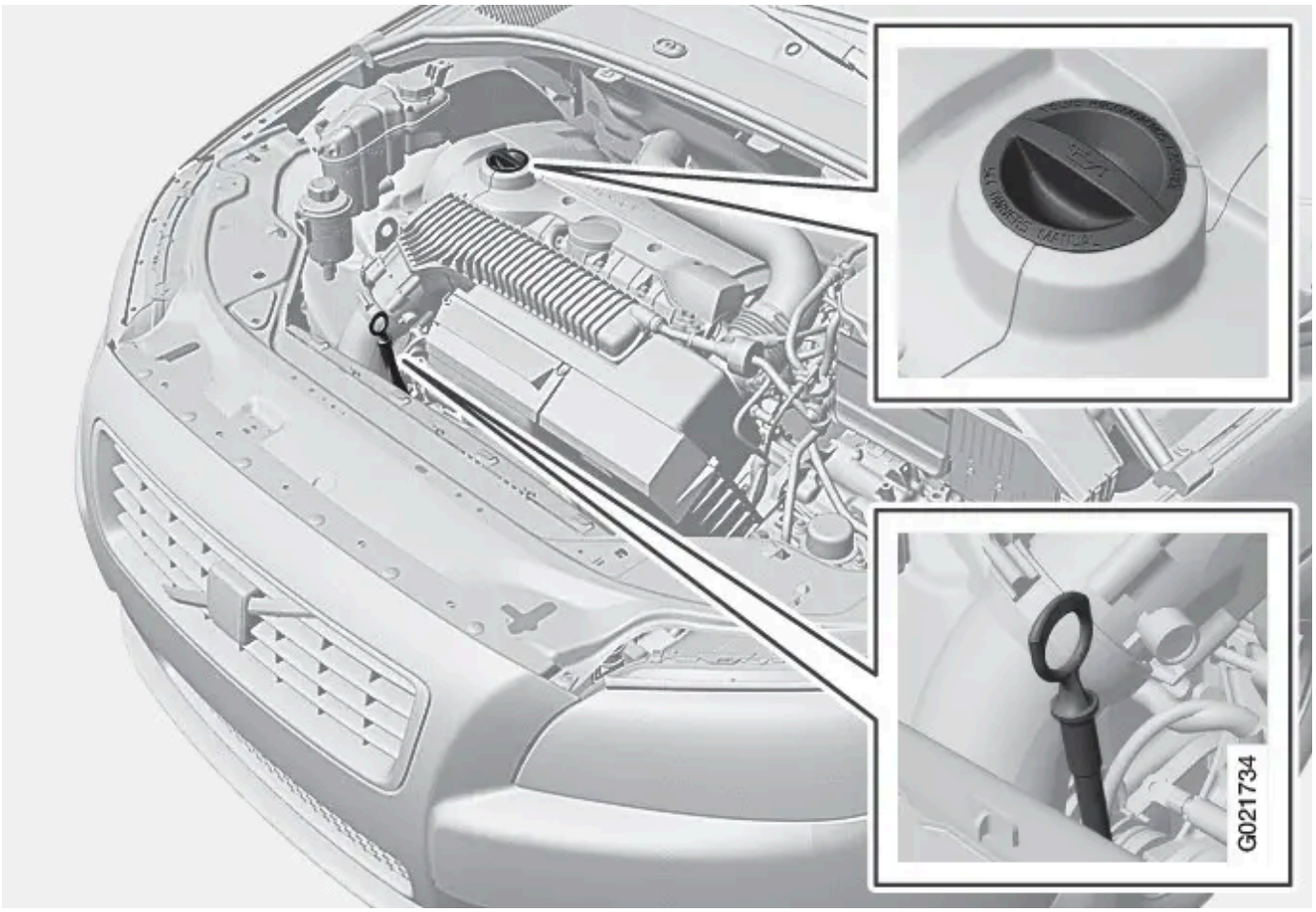
Checking the engine oil (5- and 6-cylinder engines)

The oil level should be checked at regular intervals, particularly during the period up to the first scheduled maintenance service.

- See Oil specifications for oil specifications.
- Also, refer to the Warranty and Service Records information booklet for information on oil change intervals and oil specifications.

Important

- Not checking the oil level regularly can result in serious engine damage if the oil level becomes too low.
- Oil that is lower than the specified quality can damage the engine.
- Volvo does not recommend the use of oil additives.
- Always add oil of the same type and viscosity as already used.
- Never fill oil above the MAX mark. This could cause an increase in oil consumption.
- Oil changes should be carried out by a trained and qualified Volvo service technician.

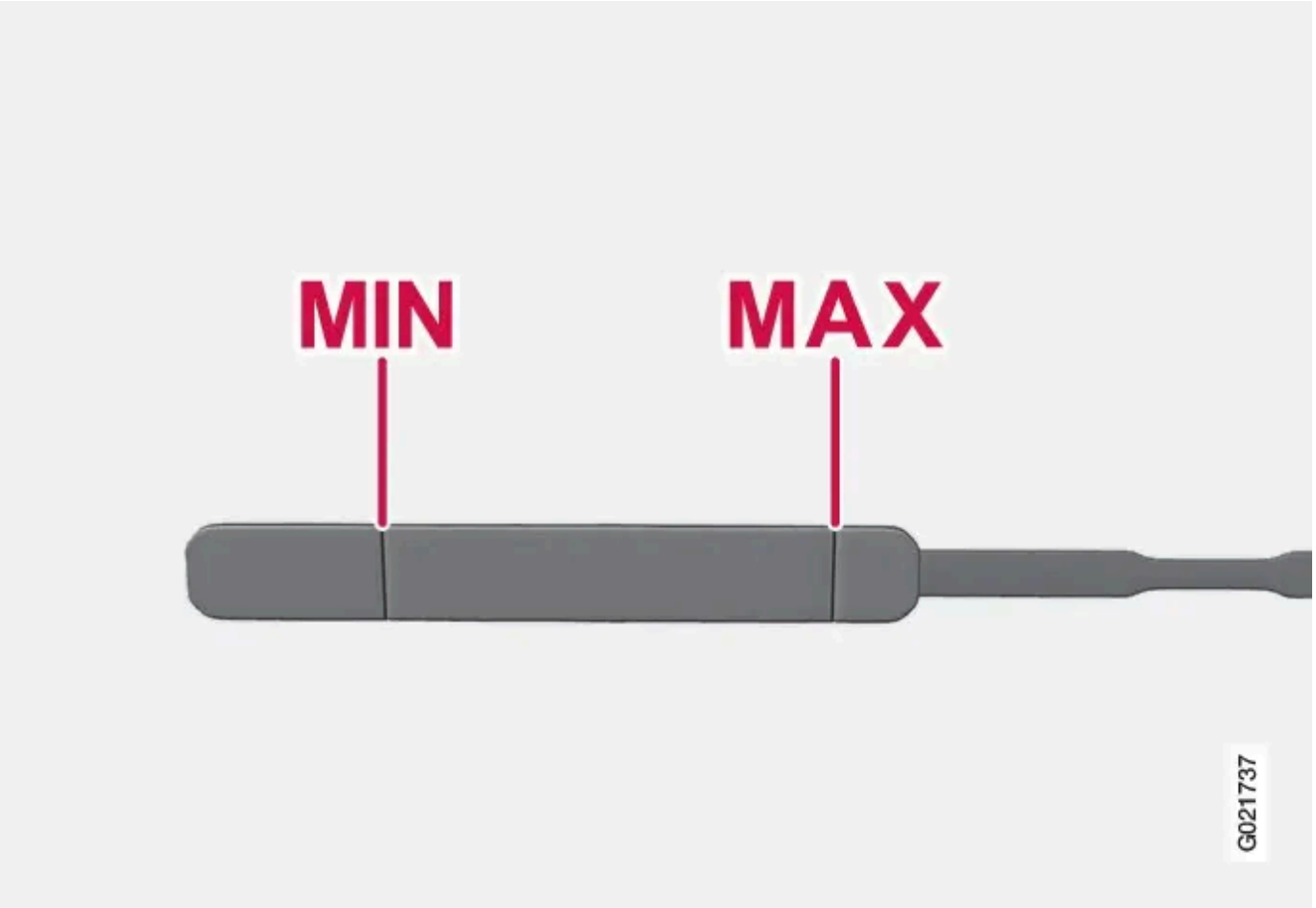


Location of the filler cap and dipstick

Note

Before checking the oil:

- The car should be parked on a level surface.
- **If the engine is warm**, wait for at least 10 – 15 minutes after the engine has been switched off.



The oil level must be between the MIN and MAX marks on the dipstick

Checking the oil

1. Pull out the dipstick and wipe it with a lint-free rag.
2. Reinsert the dipstick, pull it out, and check the oil level. The level must be between the MIN and MAX marks.
3. Add oil if necessary. If the level is close to the MIN mark, add approximately 0.5 US quarts (0.5 liters) of oil.
4. Recheck the level and add more oil if necessary until the level is near the MAX mark.

Warning

Do not allow oil to spill onto or come into contact with hot exhaust pipe surfaces.

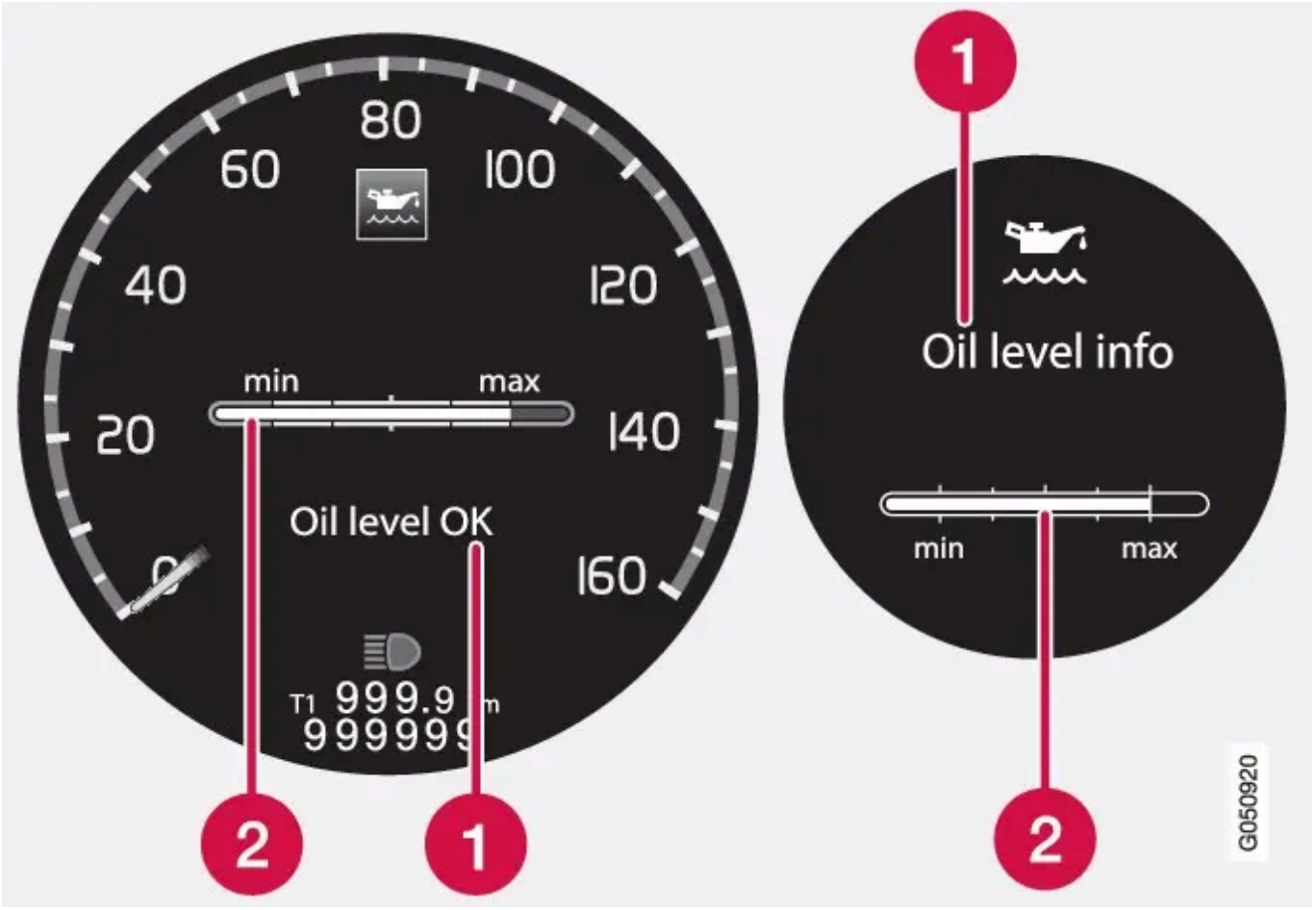
Electronic oil level sensor (4-cylinder engines only)



Oil filler cap

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No action is necessary until a message is displayed, see the following illustration.



Left: digital instrument panel*, Right: analog instrument panel

1 Message

2 Oil level

The oil level can be checked when the engine is not running by scrolling to the oil level sensor using the thumb wheel on the left steering wheel lever.

Important

- If **Oil service required** is displayed, the oil level may be too high. Take the vehicle to an authorized Volvo workshop as soon as possible.
- If the oil level sensor indicates that the level is too low, using the correct oil, top up with the amount of oil indicated as soon as possible, see oil specifications .

Warning

Do not allow oil to spill onto or come into contact with hot exhaust pipe surfaces.

Electronically checking the oil level

The oil level should be checked at regular intervals, particularly during the period up to the first scheduled maintenance service.

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To check the oil level:

1. Activate ignition mode II, see Ignition modes.
2. Turn the thumb wheel on the left steering wheel lever until **Oil level** is displayed.

> The oil level will be displayed.

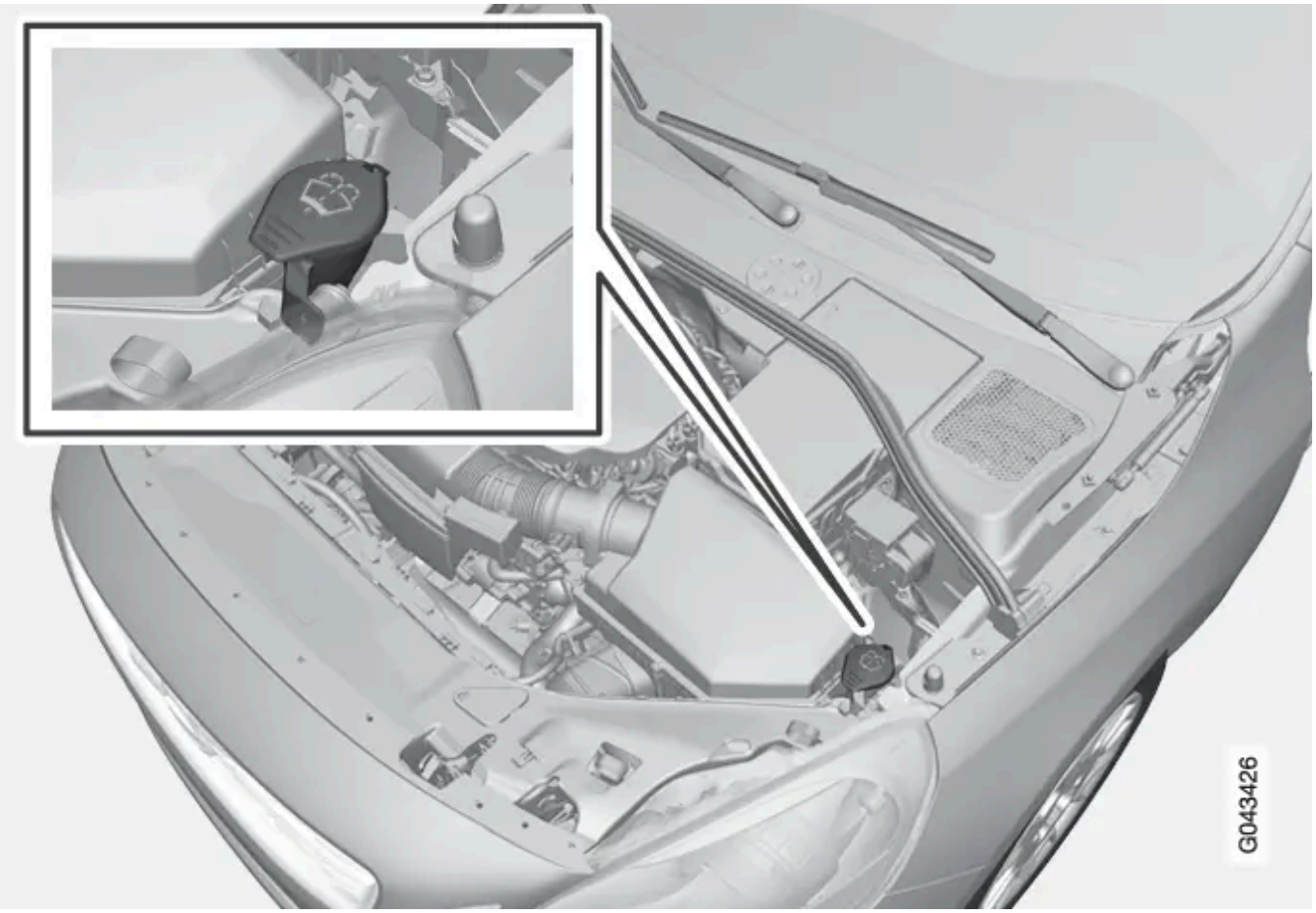
Note

- The system cannot detect changes in the oil level immediately. The vehicle must be driven approximately 20 miles (30 km) or have been parked on level ground with the engine off for 2 hours before the oil level reading will be correct.
- If the necessary conditions are not met for checking the oil level electronically (time interval after the engine was switched off, if the vehicle is parked on an incline, etc.), **Not available** will be displayed. This does **not** indicate a problem with the oil level sensor.

* Option/accessory.

12.2.11. Engine compartment – washer fluid

Washer fluid helps keep the windshield and headlights clean. During cold weather, the reservoir should be filled with windshield washer solvent containing antifreeze. Use Volvo Original Washer Fluid or the equivalent with a recommended pH value between 6 and 8.



Location of the washer fluid reservoir

The windshield and headlight washers share a common reservoir.

The washer fluid reservoir is located on the driver's side of the engine compartment. For capacities, see Fuel tank volume – specification and volume.

12.2.12. Battery – symbols

There are information and warning symbols on the battery.

Symbols on the battery

	Wear protective goggles.
	Keep away from children.
	Avoid smoking, open flames, and/or sparks.
	See the owner's manual.
	Contains corrosive acid.

	Risk of explosion
	Recycle properly

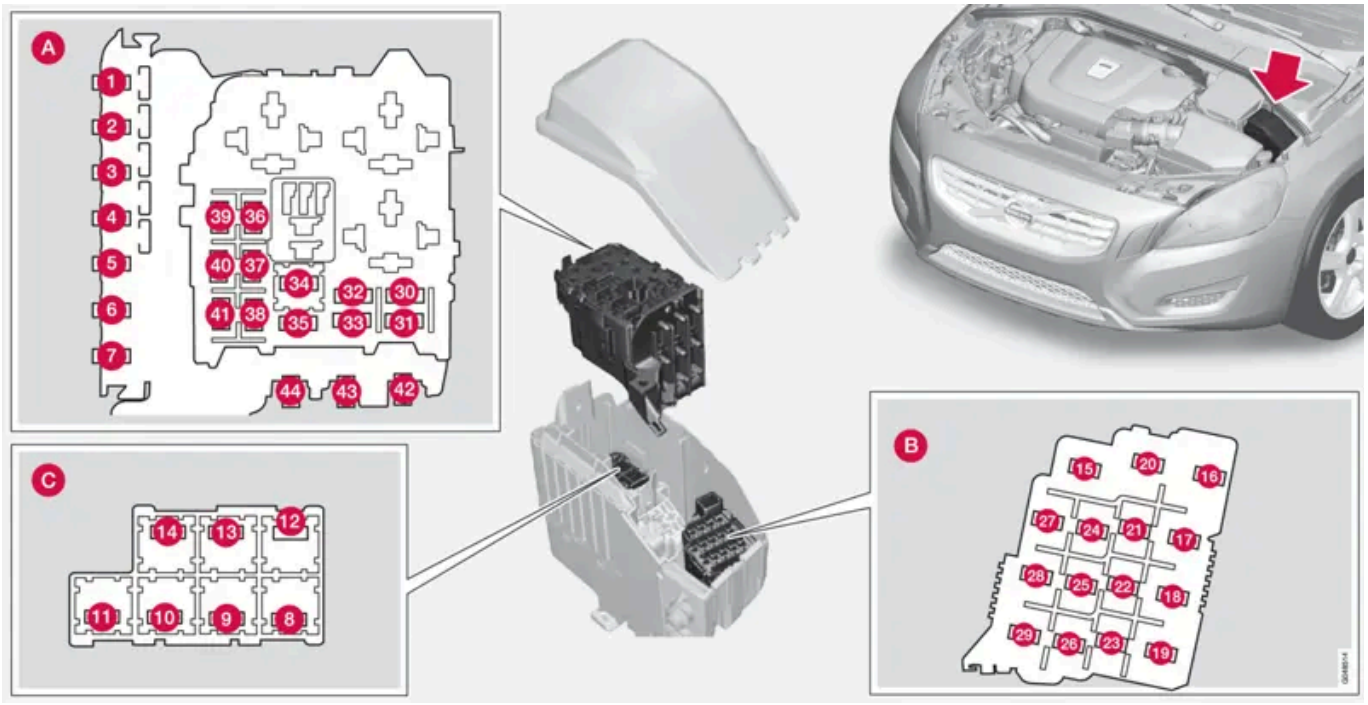
Note

A used battery should be disposed of in an environmentally responsible manner. Consult your Volvo retailer or take the battery to a recycling station.

12.3. Fuses

12.3.1. Fuses – engine compartment

The fuses in the engine compartment protect e.g., engine and brake functions.



Ⓐ Engine compartment, upper

Ⓑ Engine compartment, front

Ⓒ Engine compartment, lower

Positions

These fuses are all located in the engine compartment box. Fuses in **C** are located under **A**.

A decal on the inside of the cover shows the positions of the fuses.

- Fuses 1 – 15, 34 and 42 – 44 are relays/circuit breakers and should only be removed or replaced by a trained and qualified Volvo service technician.
- Fuses 16 – 33 and 35 – 41 may be changed at any time when necessary.

There is a special fuse removal tool on the underside of the cover.

Pos	Function	A
1	Circuit breaker: central electrical module under the glove compartment [1]	50
2	Circuit breaker: central electrical module under the glove compartment	50
3	Circuit breaker: central electrical module in the cargo compartment [1]	60
4	Circuit breaker: central electrical module under the glove compartment [1]	60
5	Circuit breaker: central electrical module under the glove compartment [1]	60
6	–	
7	–	
8	Headed windshield*, driver's side	40
9	Windshield wipers	30
10	–	
11	Climate system blower [1]	40
12	Headed windshield*, passenger's side	40
13	ABS pump	40
14	ABS valves	20
15	Headlight washers	20
16	Active Bending Lights-headlight leveling*	10
17	Central electrical module (under the glove compartment)	20
18	ABS	5
19	Adjustable steering force*	5
20	Engine Control Module (ECM), transmission, SRS	10
21	Heated washer nozzles*	10
22	-	
23	Lighting panel	5
24	-	
25	-	
26	-	
27	Relay coils	5
28	Auxiliary lights*	20
29	Horn	15
30	Relay coils, Engine Control Module (ECM)	10
31	Control module - automatic transmission	15
32	A/C compressor (not 4-cyl. engines)	15
33	Relay-coils A/C, relay coils in engine compartment cold zone for Start/Stop	5
34	Starter motor relay [1]	30

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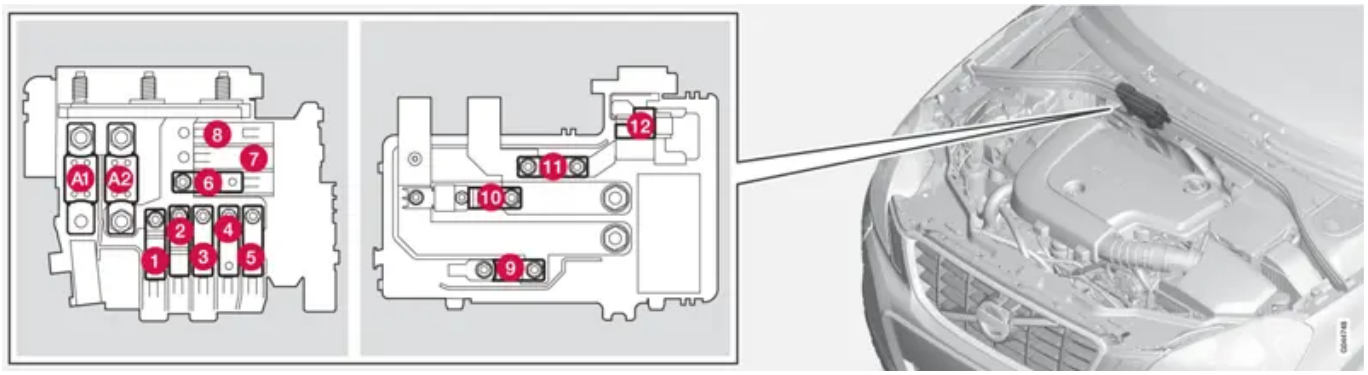
Pos	Function	A
35	Engine control module (4-cyl. engines) Ignition coils (5-cyl. engine)	20
36	Engine Control Module (4-cyl. engines)	20
	Engine Control Module (5-cyl. engine)	10
37	4-cyl. engines: mass air meter, thermostat, EVAP valve	10
	5-cyl. engine: Injection system, engine control module	15
38	A/C compressor (5-cyl. engine), engine valves	10
	Engine valves/oil pump/center heated oxygen sensor (4-cyl. engines)	15
39	Front/rear heated oxygen sensors (4-cyl. engines), EVAP valve (5-cyl. engine), heated oxygen sensors (5-cyl. engine)	15
40	Oil pump/crankcase ventilation heater/coolant pump (5-cyl. engines)	10
	Ignition coils (4-cyl. engines)	15
41	Fuel leakage detection (5-cyl. engine), control module for radiator shutter (5-cyl. engine)	5
	Fuel leakage detection, A/C solenoid (4-cyl. engines)	7.5
42	Coolant pump (4-cyl. engines)	50
43	Cooling fan	60 (4/5-cyl. engines)
		80 (6-cyl. engines)
44	Power steering	100

[1] This position is not used on vehicles with the optional Start/Stop function, refer to the table "Engine compartment cold zone" in Fuses – engine compartment cold zone (Start/Stop only).

* Option/accessory.

12.3.2. Fuses – engine compartment cold zone (Start/Stop only) [1]

There are fuses in the engine compartment cold zone on models with the Start/Stop function.



Location of Start/Stop fuses

Positions

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- Fuses A1, A2 and 1–11 are relays/circuit breakers and should only be removed or replaced by a trained and qualified Volvo service technician.
- Fuse 12 may be changed at any time when necessary.

Pos	Function	A
A1	Circuit breaker: central electrical module in the engine compartment	175
A2	Circuit breaker: fuseboxes under the glove compartment, central electrical module in the cargo area	175
1	-	
2	Circuit breaker: fusebox **B** under the glove compartment (see Fuses – glove compartment)	50
3	Circuit breaker: fusebox **A** under the glove compartment (see Fuses – glove compartment)	60
4	Circuit breaker: fusebox **A** under the glove compartment (see Fuses – glove compartment)	60
5	Circuit breaker: central electrical module in the cargo area	60
6	Climate system blower	40
7	–	–
8	–	–
9	Starter motor relay	30
10	Internal diode	50
11	Auxiliary battery	70
12	Central electrical module: auxiliary battery reference voltage, auxiliary battery charging point	15

[1] Option on 4-cyl. engines

12.3.3. Fuses – introduction

The fuses help protect the vehicle's electrical components from overloading.

There are relay/fuseboxes located in the engine compartment, the passenger compartment and the cargo area.

If an electrical component fails to function, this may be due to a blown fuse. The easiest way to see if a fuse is blown is to remove it.

To do so:

1. Pull the fuse straight out. If a fuse is difficult to remove, **a special fuse removal tool is located on the inside of the engine compartment fusebox cover**.
2. From the side, examine the curved metal wire in the fuse to see if it is intact.

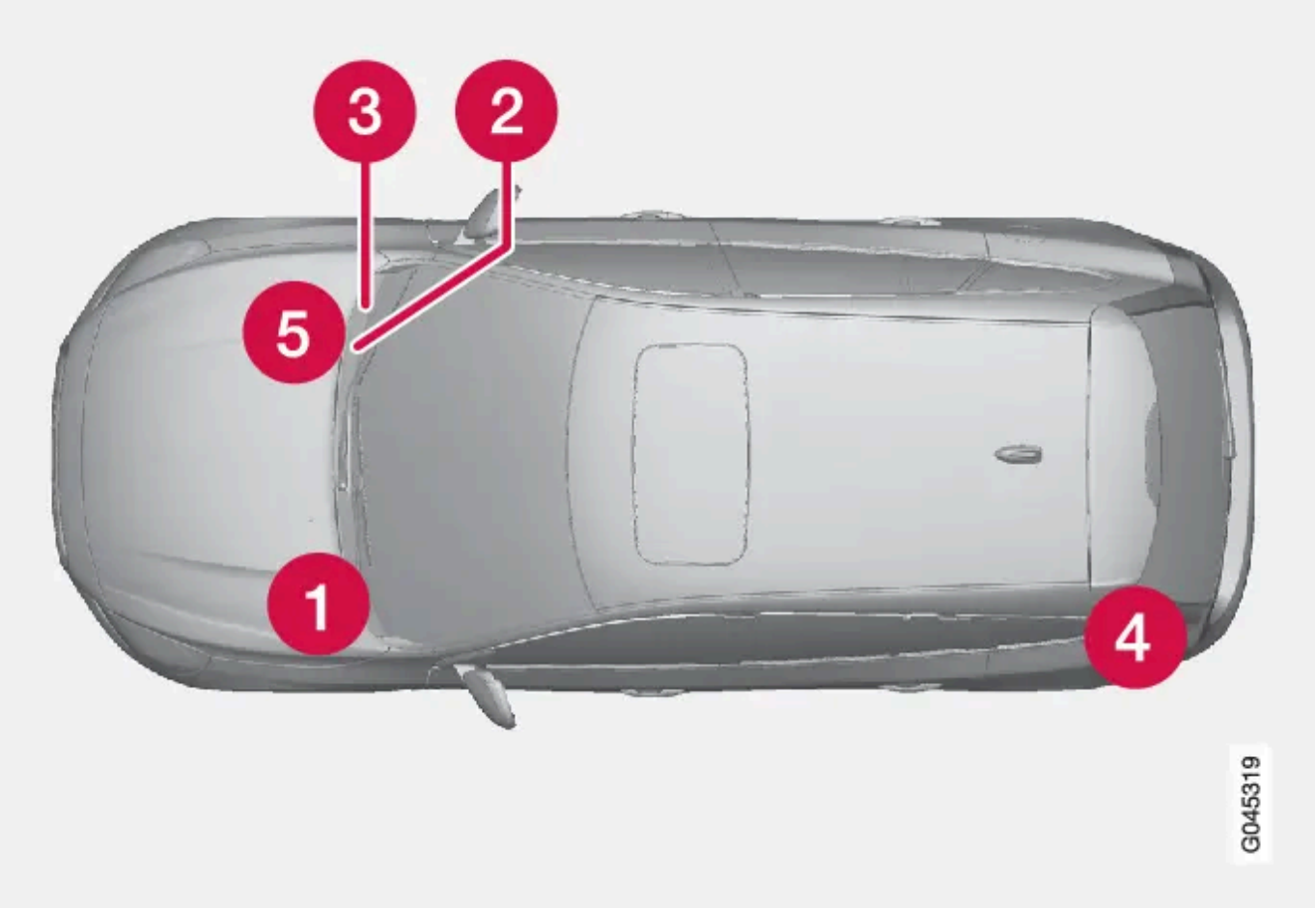
If the wire is broken, insert a new fuse of the same color and amperage (written on the fuse).

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If fuses burn out repeatedly, have the electrical system inspected by a trained and qualified Volvo service technician.

> **Warning**
>
> Never use metal objects or fuses with higher amperage than those stated on the following pages. Doing so could seriously damage or overload the vehicle's electrical system.

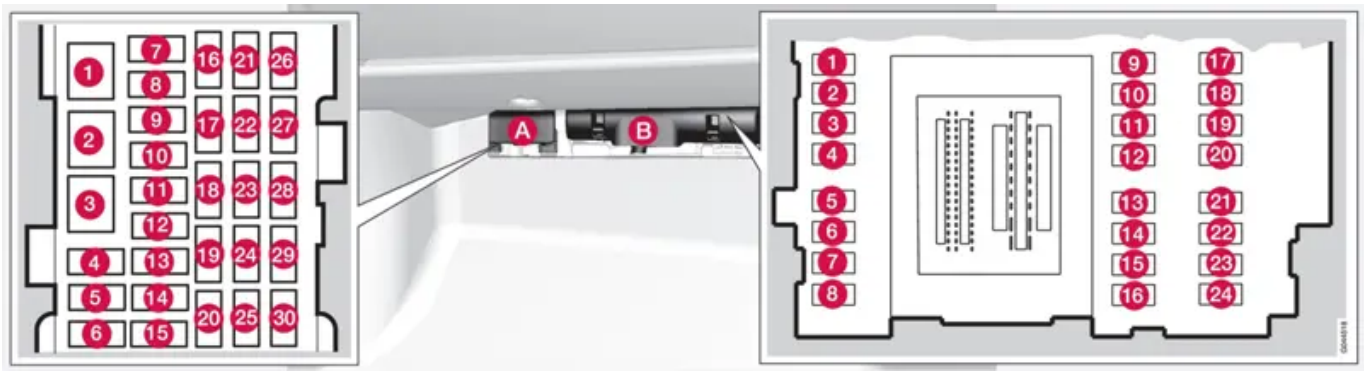
Location of the fuseboxes



1. Engine compartment
2. Under the glove compartment
3. Under the glove compartment
4. Cargo area (under the floor)
5. Engine compartment cold zone (Start/Stop only)

12.3.4. Fuses – glove compartment

The fuses under the glove compartment protect components such as the infotainment system and optional power seat.



Fusebox A: General fuses

Fusebox B: Control module fuses

Fold aside the upholstery covering the fuseboxes.

1. Press the cover's lock and fold it up.
2. The fuses are accessible.

Positions: fusebox A

Pos	Function	A
1	Circuit breaker for the infotainment system and for fuses 16-20	40
2	Windshield/tailgate washers	25
3	-	
4	-	
5	-	
6	Keyless drive* (door handles)	5
7	-	
8	Controls in driver's door	20
9	Controls in front passenger's door	20
10	Controls in right rear passenger's door	20
11	Controls in left rear passenger's door	20
12	Keyless drive*	7.5
13	Power driver's seat*	20
14	Power front passenger's seat*	20
15	-	
16	Infotainment system display	5
17	Infotainment system: amplifier, SiriusXM™ satellite radio*	10

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Pos	Function	A
18	Sensus control module	15
19	Bluetooth hands-free system	5
20	-	
21	Power moonroof* Courtesy lighting, climate system sensor	5
22	12-volt sockets in tunnel console	15
23	Heated rear seat* (passenger's side)	15
24	Heated rear seat* (driver's side)	15
25	-	
26	Heated front passenger's seat*	15
27	Heated driver's seat*	15
28	Park assist*, trailer hitch control module*, park assist camera* Blind Spot Information System (BLIS)*	5
29	All Wheel Drive* control module	15
30	Active chassis system*	10

Positions: fusebox B

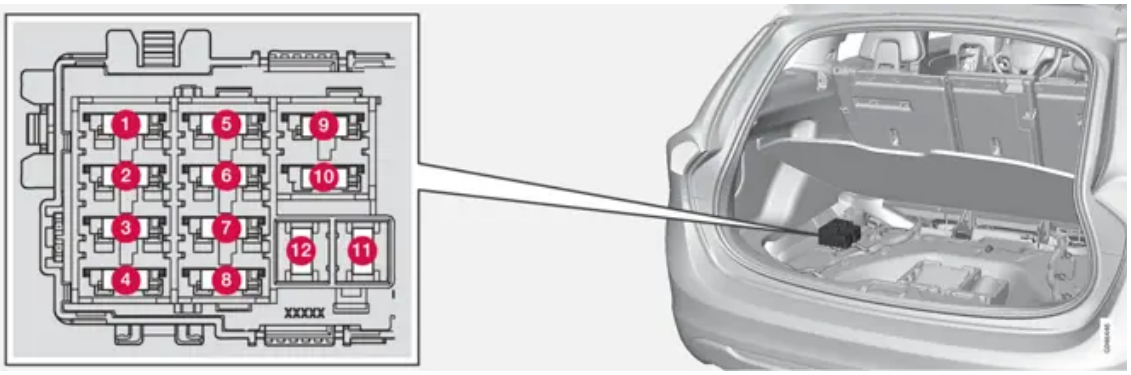
Pos	Function	A
1	Tailgate wiper	15
2	-	
3	Front courtesy lighting, driver's door power window controls, power seat(s)*, HomeLInk® Wireless Control System*	7.5
4	Instrument panel	5
5	Adaptive cruise control/collision warning*	10
6	Courtesy lighting, rain sensor*	7.5
7	Steering wheel module	7.5
8	Cental locking: fuel filler door	10
9	Electrically heated steering wheel*	15
10	Electrically heated windshield*	15
11	Tailgate unlock	10
12	Electrical folding rear seat outboard head restraints*	10
13	Fuel pump	20
14	Climate system control panel	5
15	-	
16	Alarm, On-board diagnostic system	5
17	-	
18	Airbag system, occupant weight sensor	10
19	Collision warning system*	5
20	Accelerator pedal sensor, auto-dim mirror function, heated rear seats*	7.5
21	-	
22	Brake lights	5

Pos	Function	A
23	Power moonroof*	20
24	Immobilizer	5

* Option/accessory.

12.3.5. Fuses – cargo area/trunk

The fuses in the cargo area/trunk protect components such as trailer connections, the parking brake, etc.



Positions

Pos	Function	A
1	Electric parking brake (left side)	30
2	Electric parking brake (right side)	30
3	Heated rear window	30
4	Trailer socket 2 *	15
5	-	
6	12-volt socket in cargo area	15
7	-	
8	-	
9	-	
10	-	
11	Trailer socket 1*	40
12	-	

* Option/accessory.

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12.4. Vehicle care

12.4.1. Cleaning the interior

Only use cleaning agents and car care products recommended by Volvo. Clean regularly and follow the instructions included with the car care product.

Cleaning the interior

Upholstery care

Fabric

Clean with soapy water or a detergent. For more difficult spots caused by oil, ice cream, shoe polish, grease, etc., use a clothing/fabric stain remover. Consult your Volvo retailer.

Alcantera™ suede-like material

Suede-like upholstery can be cleaned with a soft cloth and mild soap solution.

Leather care

Volvo's leather upholstery is manufactured with a protectant to repel soiling. Over time, sunlight, grease and dirt can break down the protection. Staining, cracking, scuffing, and fading can result.

Volvo offers an easy-to-use, non-greasy leather care kit formulated to clean and beautify your vehicle's leather, and to renew the protective qualities of its finish. The cleaner removes dirt and oil buildup. The light cream protectant restores a barrier against soil and sunlight.

Volvo also offers a special leather softener that should be applied after the cleaner and protectant. It leaves leather soft and smooth, and reduces friction between leather and other finishes in the vehicle.

Volvo recommends cleaning, protecting and conditioning your vehicle's leather two to four times a year. Ask your Volvo retailer about Leather Care Kit 951 0251 and Leather Softener 943 7429.

Cleaning leather upholstery

1. Pour leather cleaner on a damp sponge and squeeze it until the cleaner foams.
2. Apply the foam to the stain by moving the sponge with circular movements.
3. Dampen the stain thoroughly with the sponge. Let the sponge absorb the stain, do not rub.
4. Dry the stain with soft paper towels or a towel, and allow the leather to dry completely.

Protecting leather upholstery

1. Put a small amount of protectant cream on a cloth and apply a thin coating of cream to the upholstery with light circular movements.
2. Allow the leather to dry for 20 minutes.

This will help the leather resist staining and protect against sunlight's harmful UV rays.

> **Important**
>
> - Under no circumstances should gasoline, naphtha or similar cleaning agents be used on the plastic or the leather since these can cause damage.
> - Take extra care when removing stains such as ink or lipstick since the coloring can spread.
> - Use solvents sparingly. Too much solvent can damage the seat padding.
> - Start from the outside of the stain and work toward the center.
> - Sharp objects (e.g. pencils or pens in a pocket) or Velcro fasteners on clothing may damage the textile upholstery.
> - Clothing that is not colorfast, such as new jeans or suede garments, may stain the upholstery.

Cleaning a leather-covered steering wheel

- Remove soil, dust, etc., with a damp sponge and a neutral soap solution.
- Leather should be allowed to breath. Never cover the steering wheel with a plastic protector.
- Volvo recommends cleaning, protecting and conditioning the steering wheel with Volvo's Leather Care Kit 951 0251 and Leather Softener 943 7429.

If there are stains on the steering wheel:

Type 1 (ink, wine, coffee, milk, sweat or blood)

1. Use a soft cloth or sponge. Wipe the wheel with a solution with 5% ammonia. For blood stains, mix approx. 1 cup (2 dl) of water and one ounce (25g) of salt and wipe the stain.

Type 2 (fat, oil, sauces, or chocolate)

1. Same procedure as for type I stains.
2. Finish by rubbing the wheel with absorbent paper or a towel.

Type 3 (dry soil or dust)

1. Remove the soil/dust with a soft brush.
2. Same procedure as for type I stains.

> **Important**
>
> Sharp objects, such as rings, could damage the leather on the steering wheel.

Cleaning the seat belts

Clean only with lukewarm water and a mild soap solution.

Cleaning floor mats

The floor mats should be vacuumed or brushed clean regularly, especially during winter when they should be taken out for drying. Spots on textile mats can be removed with a mild detergent. For best protection in winter, Volvo recommends the use of Volvo rubber floor mats. Consult your Volvo retailer.

Spots on interior plastic, metal, or wood surfaces

Cleaning interior plastic components should be done with a cleaning agent specially designed for this purpose. Consult your Volvo retailer.

> **Important**
>
> - Do not use cleaning agents with high alcohol content such as washer fluid to clean instrument panel glass.
> - Never spray cleaning agents or water directly onto components with electrical buttons or controls. Clean components of this type by applying the cleaning agent/water sparingly to a cloth and wiping the components so that no liquid penetrates into these components.

12.4.2. Washing the car

The vehicle should be washed at regular intervals since dirt, dust, insects and tar spots adhere to the paint and may cause damage. To help prevent corrosion, it is particularly important to wash the car frequently in the wintertime.



The following points should be kept in mind when washing and cleaning the car:

- Avoid washing your car in direct sunlight. Doing so may cause detergents and wax to dry out and become abrasive. To avoid scratching, use lukewarm water to soften the dirt before you wash with a soft sponge, and plenty of sudsy water.
- **Bird droppings**: Remove from paintwork as soon as possible. Otherwise the finish may be permanently damaged.
- A detergent can be used to facilitate the softening of dirt and oil.
- Dry the car with a clean chamois and remember to clean the drain holes in the doors and rocker panels.
- Tar spots can be removed with tar remover after the car has been washed.
- A stiff-bristle brush and lukewarm soapy water can be used to clean the wiper blades. Frequent cleaning of the windshield and wiper blades improves visibility considerably and also helps prolong the service life of the wiper blades.
- Wash off the dirt from the underside (wheel housings, fenders, etc).
- In areas of high industrial fallout, more frequent washing is recommended.

Note

When washing the car, remember to remove dirt from the drain holes in the doors and sills.

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Important

- During high pressure washing, the spray mouthpiece must never be closer to the vehicle than 13" (30 cm). Do not spray into the locks.
- Dirt, snow, etc., on the headlights can reduce lighting capacity considerably. Clean the headlights regularly, for example when refueling.

Special moonroof cautions:

- Always close the moonroof and sun shade before washing your vehicle.
- Never use abrasive cleaning agents on the moonroof.
- Never use wax on the rubber seals around the moonroof.

Exterior components

Volvo recommends the use of special cleaning products, available at your Volvo retailer, for cleaning colored plastic, rubber, or ornamental components such as chromed strips on the exterior of your vehicle. The instructions for using these products should be followed carefully. Solvents or stain removers should not be used.

Important

- Avoid waxing or polishing plastic or rubber components
- Polishing chromed strips can wear away or damage the surface
- Polishes containing abrasive substances should not be used

12.4.3. Polishing and waxing

Normally, polishing is not required during the first year after delivery, however, waxing may be beneficial.

- Before applying polish or wax the vehicle must be washed and dried. Tar spots can be removed with kerosene or tar remover. Difficult spots may require a fine rubbing compound.
- After polishing use liquid or paste wax.
- Several commercially available products contain both polish and wax.
- Waxing alone does not substitute for polishing a dull surface.
- A wide range of polymer-based waxes can be purchased today. These waxes are easy to use and produce a long-lasting, high-gloss finish that protects the bodywork against oxidation, road dirt and fading.
- Do not polish or wax your vehicle in direct sunlight (the surface of the vehicle should not be warmer than 113 °F (45 °C).

Important

Volvo does not recommend the use of long-life or durable paint protection coatings, some of which may claim to prevent pitting, fading, oxidation, etc. These coatings have not been tested by Volvo for compatibility with your vehicle's clear coat. Some of them may cause the clear coat to soften, crack, or cloud. Damage caused by application of paint protection coatings may not be covered under your vehicle's paint warranty.

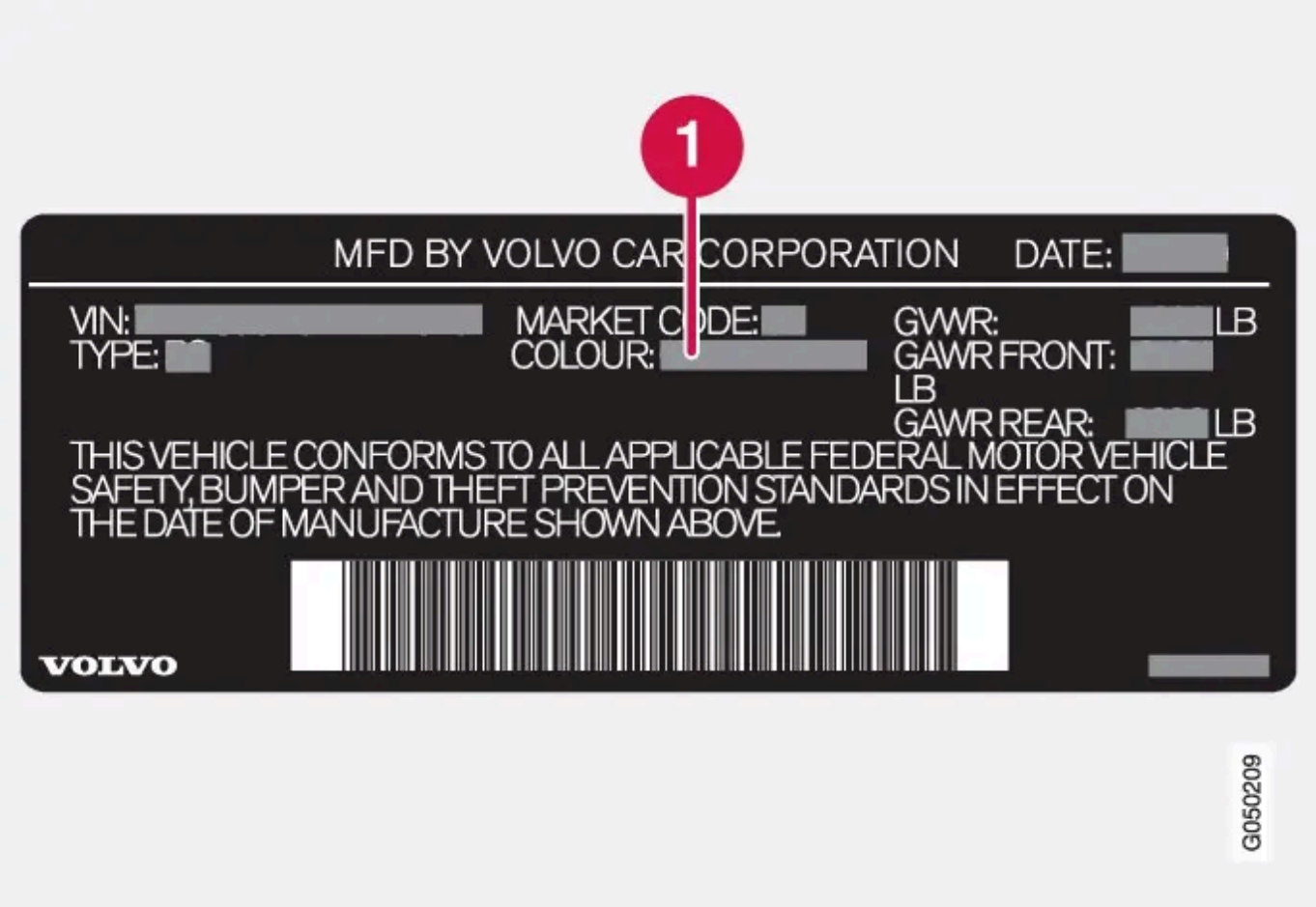
12.4.4. Touching up paintwork

Paint damage requires immediate attention to avoid rusting. Make it a habit to check the finish regularly, for instance washing the vehicle. Touch-up if necessary.

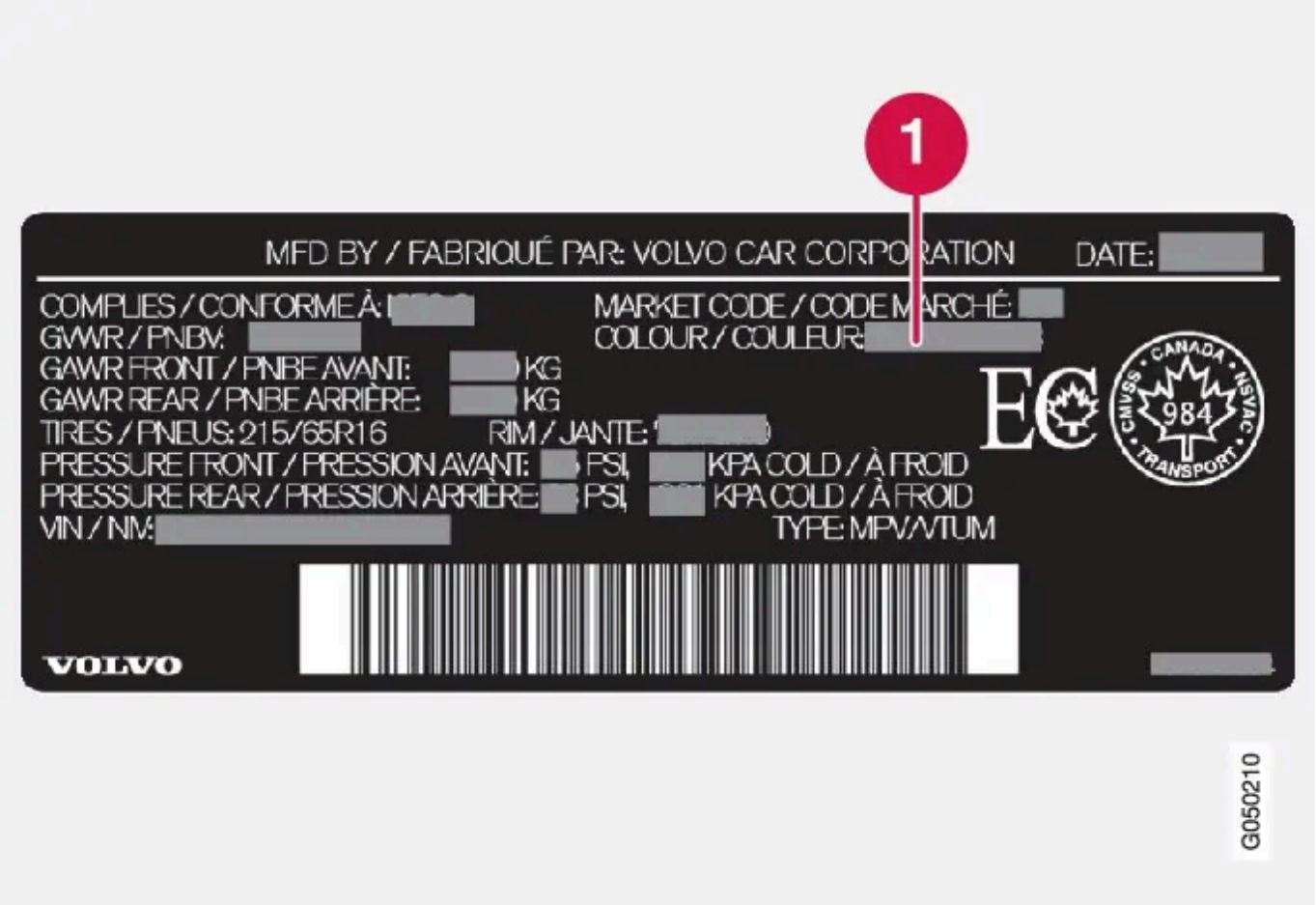
Paint repairs require special equipment and skill. Contact your Volvo retailer for any extensive damage.

Minor scratches can be repaired by using Volvo touch-up paint.

Color code



Sample color code: US models



Sample color code: Canadian models

Make sure you have the right color. See Label information for the location of this label (label number 4 in the illustration).

Minor stone chips and scratches

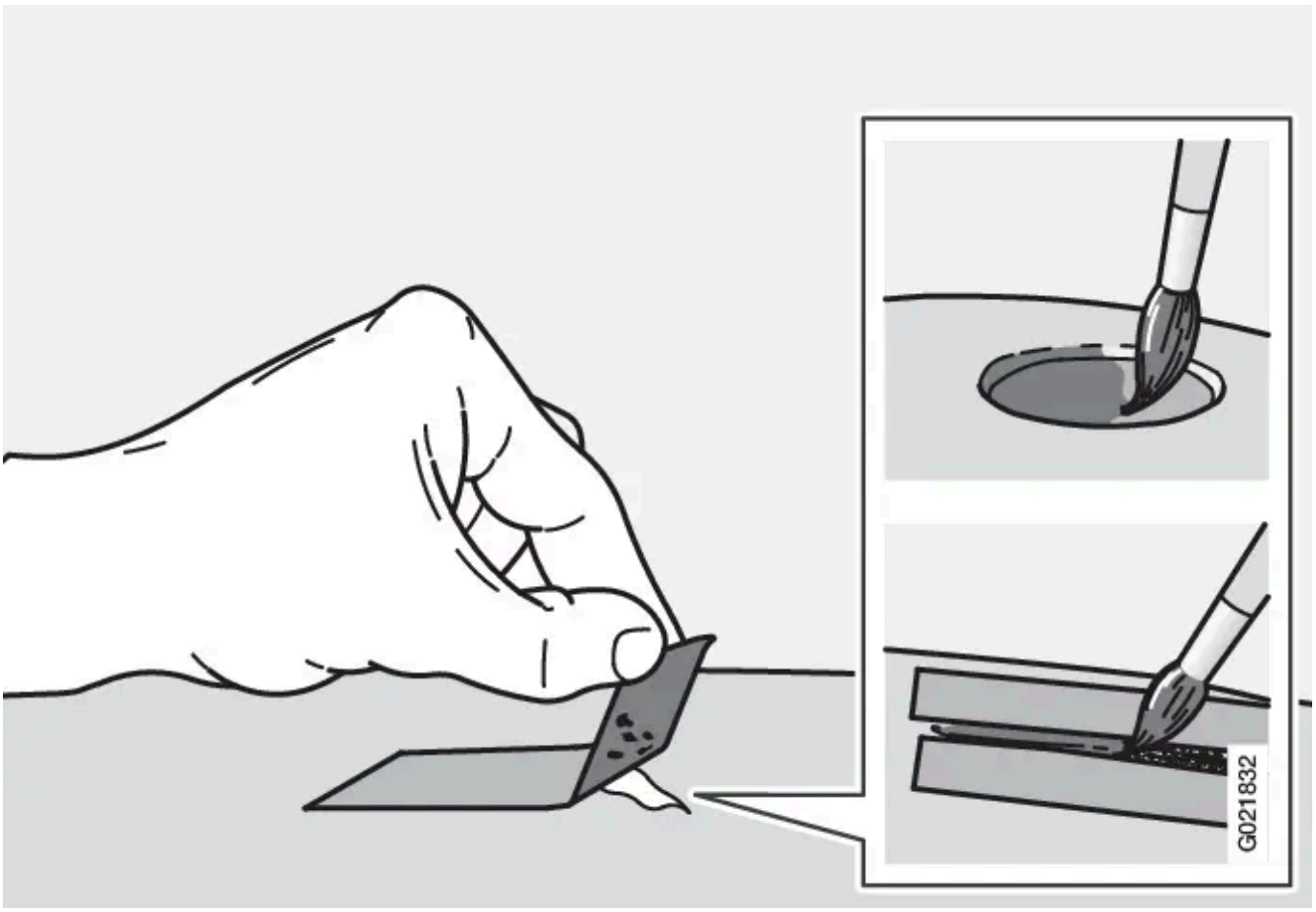
Material:

- Primer – can
- Paint – touch-up pen
- Brush
- Masking tape

If the stone chip has not gone down to the bare metal and an undamaged color coat remains, you can add paint immediately after removing dirt.

> **Note**
>
> When touching up the vehicle, it should be clean and dry. The surface temperature should be above 60 °F (15 °C).

Repairing stone chips



1. Place a strip of masking tape over the damaged surface. Pull the tape off so that any loose flakes of paint adhere to it.
2. Thoroughly mix the primer and apply it with a small brush.
3. When the primer surface is dry, the paint can be applied using a brush. Mix the paint thoroughly; apply several thin paint coats and let dry after each application.
4. If there is a longer scratch, you may want to protect surrounding paint by masking it off
5. After a few days, polish the touched-up areas. Use a soft rag and a small amount of polish.

12.4.5. Automatic car wash

The vehicle should be washed at regular intervals since dirt, dust, insects and tar spots adhere to the paint and may cause damage. To help prevent corrosion, it is particularly important to wash the car frequently in the wintertime.

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- We do NOT recommend washing your car in an automatic wash during the first few months (because the paint will not have hardened sufficiently).
- An automatic wash is a simple and quick way to clean your car, but it is worth remembering that it may not be as thorough as when you yourself go over the car with sponge and water. Keeping the underbody clean is most important, especially in the winter. Some automatic washers do not have facilities for washing the underbody.

Note

Condensation may form temporarily on the inside of the lenses of exterior lights such as headlights, fog lights, or taillights. This is normal and the lights are designed to withstand moisture. Normally, condensation will dissipate after the lights have been on for a short time.

Important

- Before driving into an automatic car wash, turn off the optional rain sensor to avoid damaging the windshield wipers.
- Make sure that side view mirrors, auxiliary lamps, etc, are secure, and that any antenna(s) are retracted or removed. Otherwise there is risk of the machine dislodging them.
- **Chromed wheels:** Clean chrome-plated wheels using the same detergents used for the body of the vehicle. Aggressive wheel-cleaning agents can permanently stain chrome-plated wheels.

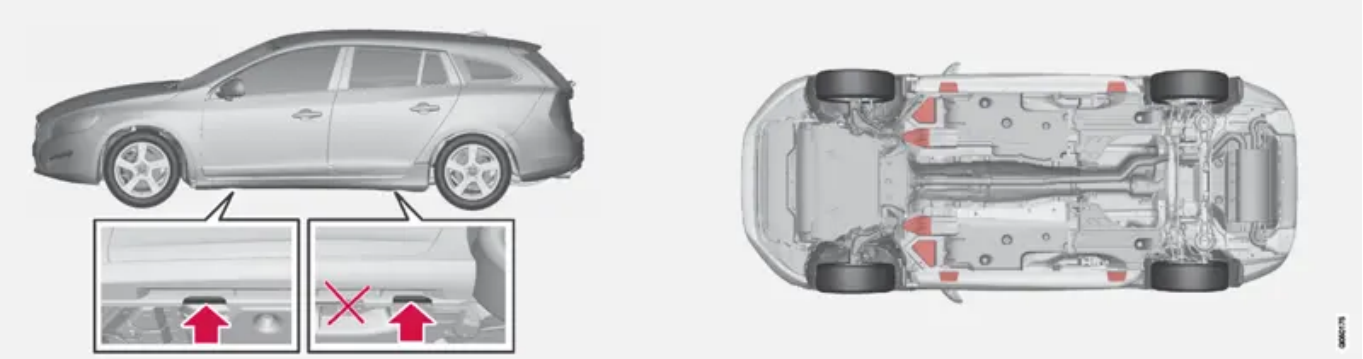
Warning

- When the vehicle is driven immediately after being washed, apply the brakes, including the parking brake, several times in order to remove any moisture from the brake linings.
- Engine cleaning agents should not be used when the engine is warm. This constitutes a fire risk.

12.5. Maintenance – hoisting

When the vehicle is hoisted, the jack or garage lift must be positioned in the correct lifting points.

Hoisting the vehicle



If a garage jack is used to lift the vehicle, it should be placed:

Front: under either of the two reinforced areas under the front section of the vehicle, **not under to jack attachment points (the outermost points shown in the illustration)**.

Rear: Under the jack attachment points.

Ensure that the jack is positioned so that the vehicle cannot slide off it. Always use axle stands or similar structures.

12.6. Onboard Diagnostic System

OBD II is part of your vehicle's computerized engine management system. It stores diagnostic information about your vehicle's emission controls. It can light the Check Engine light (MIL) if it detects an emission control "fault." A "fault" is a component or system that is not performing within an expected range. A fault may be permanent or temporary. OBD II will store a message about any fault.

Emission inspection readiness

How do states use OBD II for emission inspections?

Many states connect a computer directly to a vehicle's OBD II system. The inspector can then read "faults." In some states, this type of inspection has replaced the tailpipe emission test.

How can my vehicle fail OBD II emission inspection?

Your vehicle can fail OBD II emission inspection for any of the following reasons.

- If your Check Engine (MIL) light is lit, your vehicle may fail inspection.
- If your vehicle's Check Engine light was lit, but went out without any action on your part, OBD II will still have a recorded fault. Your vehicle may pass or fail, depending on the inspection practices in your area.
- If you had recent service that required disconnecting the battery, OBD II diagnostic information may be incomplete and "not ready" for inspection. A vehicle that is not ready may fail inspection.

How can I prepare for my next OBD II emission inspection?

- If your Check Engine (MIL) light is lit – or was lit but went out without service, have your vehicle diagnosed and, if necessary, serviced by a qualified Volvo technician.
- If you recently had service for a lit Check Engine light, or if you had service that required disconnecting the battery, a period of driving is necessary to bring the OBD II system to "ready" for inspection. Two half-hour trips of mixed stop-and-go/highway driving are typically needed to allow OBD II to reach readiness. Your Volvo retailer can provide you with more information on planning a trip.
- Maintain your vehicle in accordance with your vehicle's maintenance schedule.

12.7. Maintenance – owner maintenance

Periodic maintenance requirements and intervals are described in your vehicle's Warranty and Service Records Information booklet.
The following points can be carried out between the normally scheduled maintenance services.

Owner maintenance

Each time the car is refueled:

- Check the engine oil level.
- Clean the windshield, windshield wipers, headlights, and taillights.

Monthly:

- Check cold tire pressure in all tires. Inspect the tires for wear.
- Check that engine coolant and other fluid levels are between the indicated "min" and "max" markings.
- Clean interior glass surfaces with a glass cleaner and soft paper towels.
- Wipe driver information displays with a soft cloth.
- Visually inspect battery terminals for corrosion. Corrosion may indicate a loose terminal connector, or a battery near the end of its useful service life. Consult your Volvo retailer for additional information.

As needed:

Wash the car, including the undercarriage, to reduce wear that can be caused by a buildup of dirt, and corrosion that can be caused by salt residues.

Clean leaves and twigs from air intake vents at the base of the windshield, and from other places where they may collect.

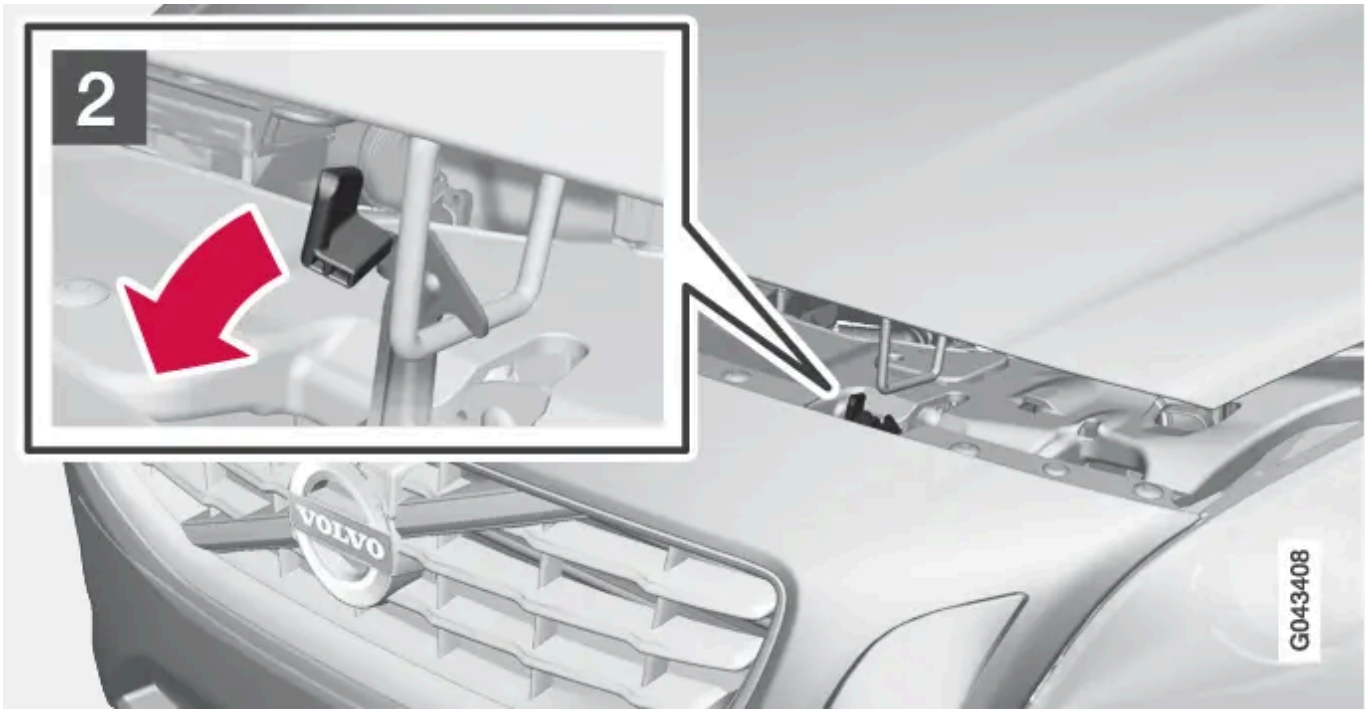
> **Note**
>
> Complete service information for qualified technicians is available online for purchase or subscription at www.volvotechinfo.com.

12.8. Maintenance – opening/closing hood

The hood is opened by first releasing the lock from the passenger compartment and then pressing the release control.

Opening and closing the hood





1. 1

   Turn the handle located under the left side of the dash approximately 20-25 degrees clockwise to release the hood lock.

2. 2

   Lift the hood slightly. Press the release control (located under the right front edge of the hood) to the left, and lift the hood.

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> **Warning**
>
> Check that the hood locks properly when closed.

12.9. Booking service and repairs

Connected Service Booking (CSB) makes setting up a time for service, maintenance and/or repairs directly from the vehicle quick and convenient.

Prerequisites

- The owner (primary driver) must have a valid Volvo ID. See Volvo ID for additional information.
- The vehicle must be connected to the Internet using a paired Bluetooth® cell phone or Wi-Fi tethering (a personal hotspot). On models equipped with Volvo On Call (VOC)*, you can connect to the Internet using your separate VOC data plan. Refer to your separate Volvo On Call manual.
- By default, the retailer where you purchased your vehicle will be your preferred (primary) retailer/Volvo authorized workshop who will perform service and repairs on your vehicle. To change the preferred retailer, go to Dealer Locator at volvocars.com and select a retailer, click on Service Scheduler and book an appointment at the new preferred retailer.
- In order to be guided through the on-screen steps, the menu alternative **Display notifications** must be activated.

CSB menu access

Once the prerequisites have been established, all CSB-related menus can be accessed in MY CAR by pressing OK/MENU and then selecting **Maintenance & repair**.

Booking information and data from the vehicle

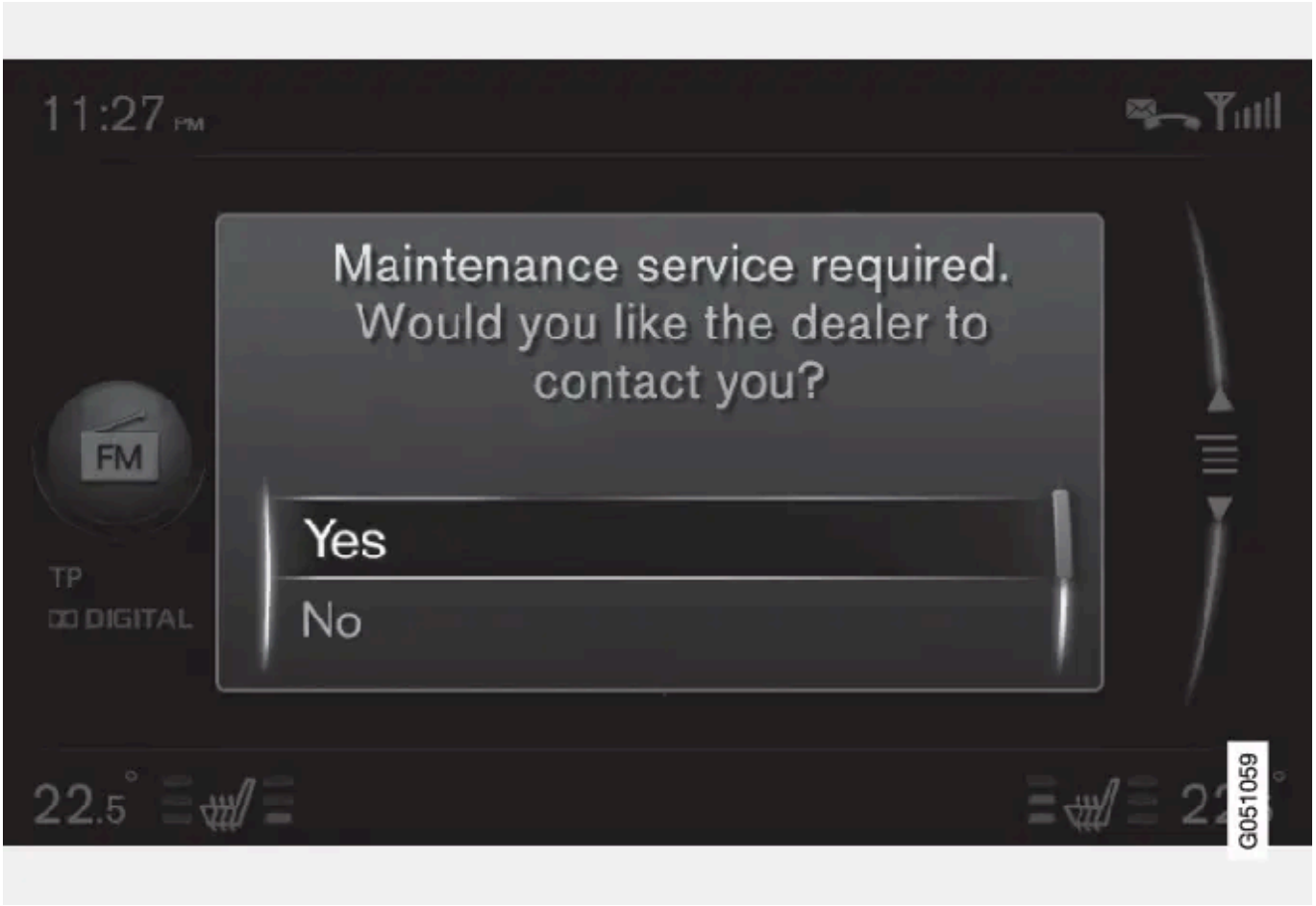
If you request an appointment from your vehicle, with your consent, booking information and data about your vehicle[1] will be transmitted to your preferred retailer.

Using the service

Once the prerequisites have been established, all CSB-related menus can be accessed in MY CAR by pressing OK/MENU and then selecting **Maintenance & repair**.

If the time for the next regularly scheduled service is approaching, if the vehicle requires certain types of repairs or if a system needs to be checked, a message will be displayed. You will then by guided through the steps required to book service or repairs.

On-screen service messages



On-screen service message

The pop-up service alert menu offers the following alternatives:

- **Yes**: The vehicle will transmit a booking request as well as vehicle data directly to your preferred retailer. In return, you will receive an email from this retailer with a link to their booking portal. From a smartphone or a computer, you can select a day and time that suits you and specify any other service requests that you may have. When you have submitted your request, it will be entered into the retailer's booking portal and you will receive immediate confirmation online and via email. The service reminder light in the vehicle's instrument panel will also be turned off remotely by Volvo.
- **No**: No other messages will be displayed on the Sensus screen but the Service Reminder Light on the vehicle's instrument panel will stay on. If you have answered "No", service can still be booked manually (see the following section).
- **Postpone**: The pop-up menu will be displayed that next time the engine is started.

Booking service or repairs manually

Access your Volvo On-Line Service Scheduler portal from a smartphone or a computer to select a day and time that suits you and specify any other service requests that you may have. When you have submitted your request, it will be entered into the retailer's booking portal and you will receive immediate confirmation online and via email.

My Appointments

This displays booking information.

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1. Select **Maintenance & repair** → **My Appointments**.

Transmitting vehicle data

In order for a retailer to access vehicle data, the information is initially sent to a central Volvo database (not directly to your retailer) where any retailer can access or search for this information using your vehicle's VIN number. This number can be found in your warranty booklet or on the dashboard at the lower left corner of the windshield.

1. Select **Maintenance & repair** → **Send vehicle data**.

Booking information and vehicle data

When you opt to book service from your vehicle, booking information and vehicle data will be transmitted. Vehicle data consists of a number of parameters in the following areas:

- Service requirements
- Function status
- Fluid levels
- Odometer reading (mileage)
- Vehicle Identification Number (VIN)
- The vehicle's software version

* Option/accessory.

[1] This information includes: service requirements, status of various functions, odometer reading and the vehicle's VIN number and software version.

12.10. Maintenance – introduction

Periodic maintenance will help keep your vehicle running well.

Introduction

The maintenance services contain several checks that require special instruments and tools and therefore must be performed by a qualified technician. To keep your Volvo in top condition, specify time-tested and proven Genuine Volvo Parts and Accessories.

The Federal Clean Air Act – U.S.

The Federal Clean Air Act requires vehicle manufacturers to furnish written instructions to the ultimate purchaser to assure the proper servicing and function of the components that control emissions. These services, which are listed in the "Warranty and

Service Records Information" booklet, are not covered by the warranty. You will be required to pay for labor and material used.

Maintenance

Your Volvo passed several major inspections before it was delivered to you, in accordance with Volvo specifications. The maintenance procedures outlined in the Warranty and Service Records Information booklet, many of which will positively affect your vehicle's emissions, should be performed as indicated. It is recommended that receipts for vehicle emission maintenance be retained in case questions arise concerning maintenance. Inspection and maintenance should also be performed anytime a malfunction is observed or suspected.

Applicable warranties – U.S./Canada

In accordance with applicable U.S. and Canadian regulations, the following list of warranties is provided.

- New Vehicle Limited Warranty
- Parts and Accessories Limited Warranty
- Corrosion Protection Limited Warranty
- Seat Belt and Supplemental Restraint Systems Limited Warranty
- Emission Design and Defect Warranty
- Emission Performance Warranty

These are the federal warranties; other warranties are provided as required by state/provincial law. Refer to your separate Warranty and Service Records Information booklet for detailed information concerning each of the warranties.

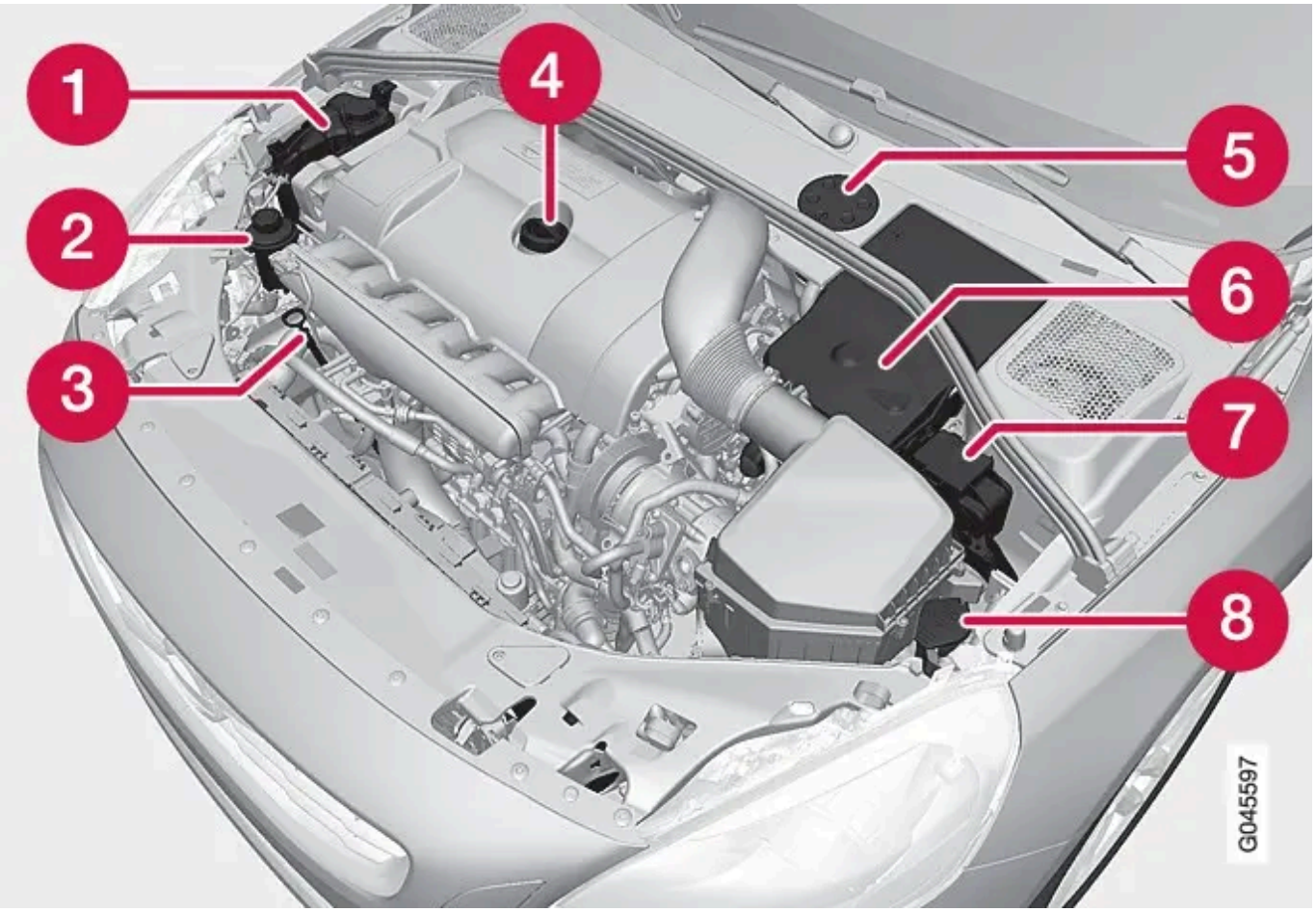
Periodic maintenance helps minimize emissions

Note

- Refer to your Warranty and Service Records Information booklet for a comprehensive service and maintenance schedule up to 150,000 miles (240,000 km). This program contains inspections and services necessary for the proper function of your vehicle and includes components that affect vehicle emissions.
- The Warranty and Service Records Information booklet also contains detailed information concerning the warranties that apply to your vehicle.

12.11. Engine compartment – overview

The overview shows the main inspection points in the engine compartment.



1 Coolant expansion tank

2 Power steering fluid reservoir

3 Dipstick-engine oil

4 Filler cap-engine oil

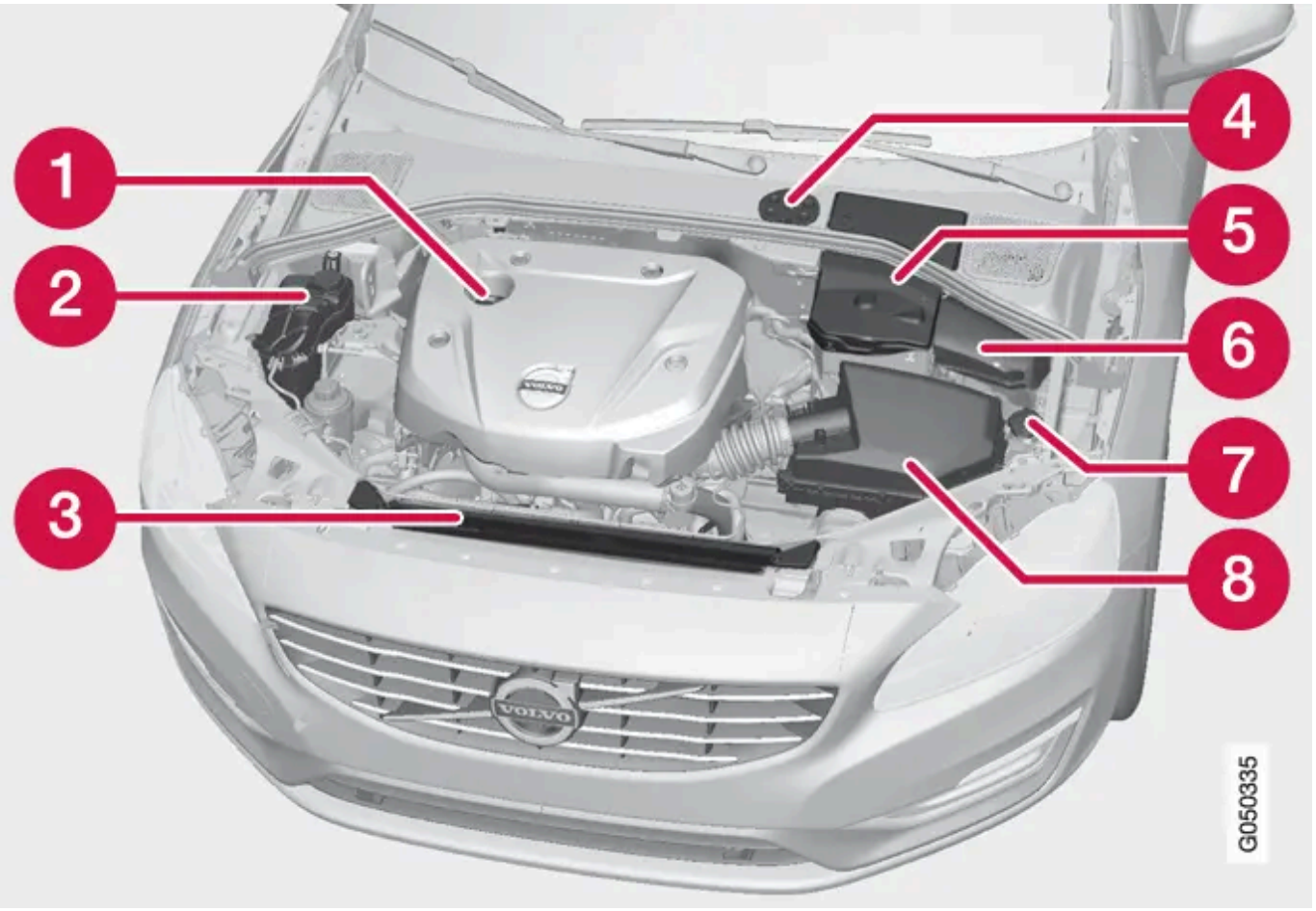
5 Cover over brake fluid reservoir

6 Battery

7 Relay/fuse box

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8 Washer fluid reservoir



Engine compartment - 4-cylinder engines only

1 Filler cap-engine oil

2 Coolant expansion tank

3 Radiator

4 Brake fluid reservoir

5 Battery

6 Relay/fuse box

7 Washer fluid reservoir

8 Air cleaner

The appearance of the engine compartment may vary depending on engine model.

Warning

The cooling fan (located at the front of the engine compartment, behind the radiator) may start or continue to operate (for up to 6 minutes) after the engine has been switched off.

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Warning

Before performing any operations in the engine compartment, the ignition should always be completely switched off (in mode **0**, see Ignition modes) and there should be no remote keys in the passenger compartment. The gear selector should be in the P (park) position. If the engine has been running, wait until it has cooled before touching any components in the engine compartment.

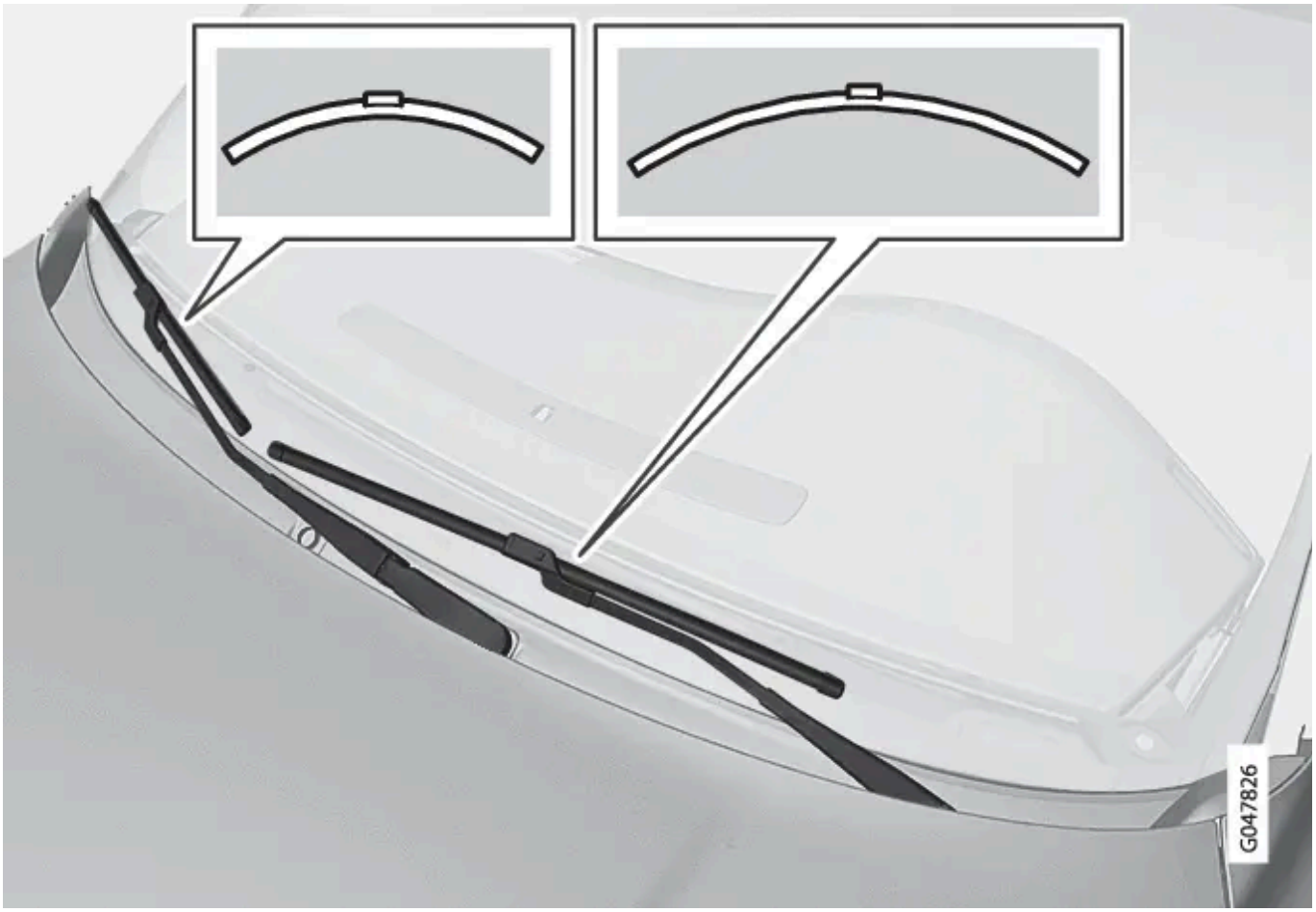
The distributor ignition system operates at very high voltages. Special safety precautions must be followed to prevent injury. Always turn the ignition off when:

- Replacing distributor ignition components e.g. plugs, coil, etc.
- Do not touch any part of the distributor ignition system while the engine is running. This may result in unintended movements and body injury.

12.12. Wiper blades – windshield

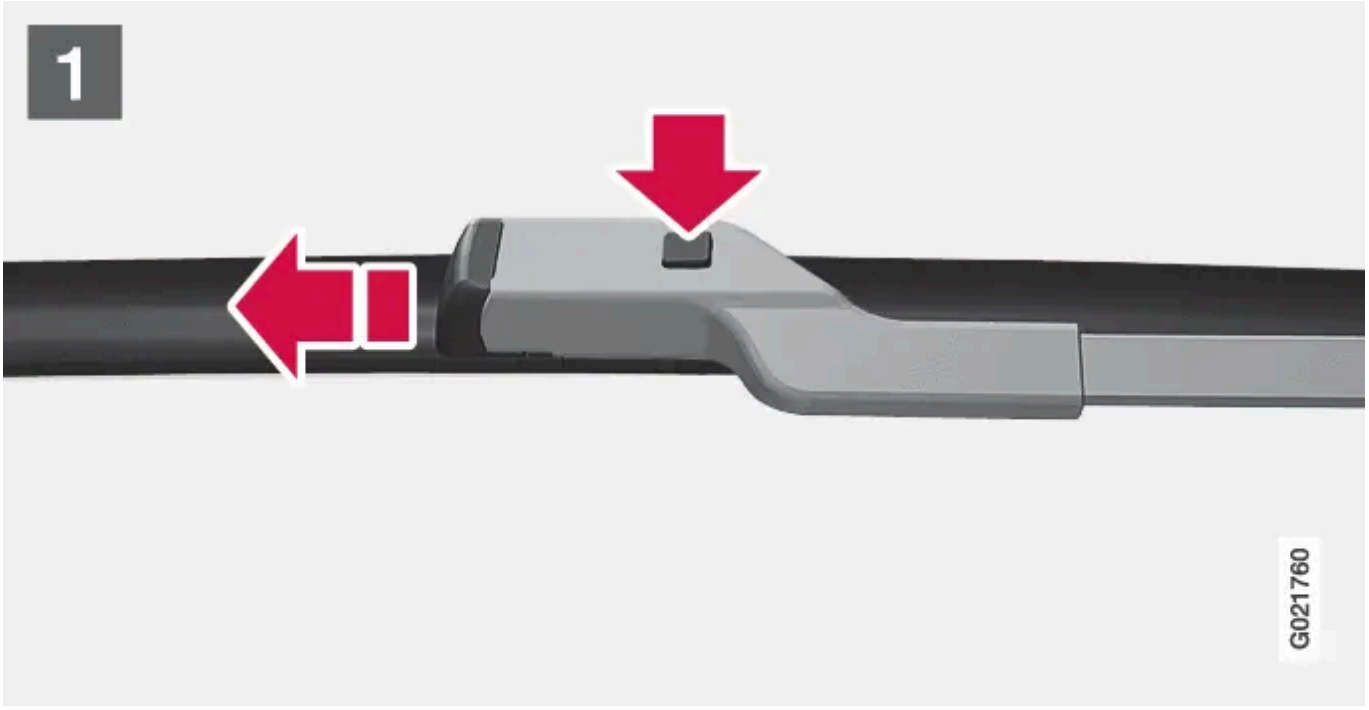
The wiper blades should be replaced regularly for best effect.
The windshield wiper blades must be in the vertical (service) position for replacement, washing or to lift them away from the windshield when e.g., removing ice or snow.

Replacing the windshield wiper blades

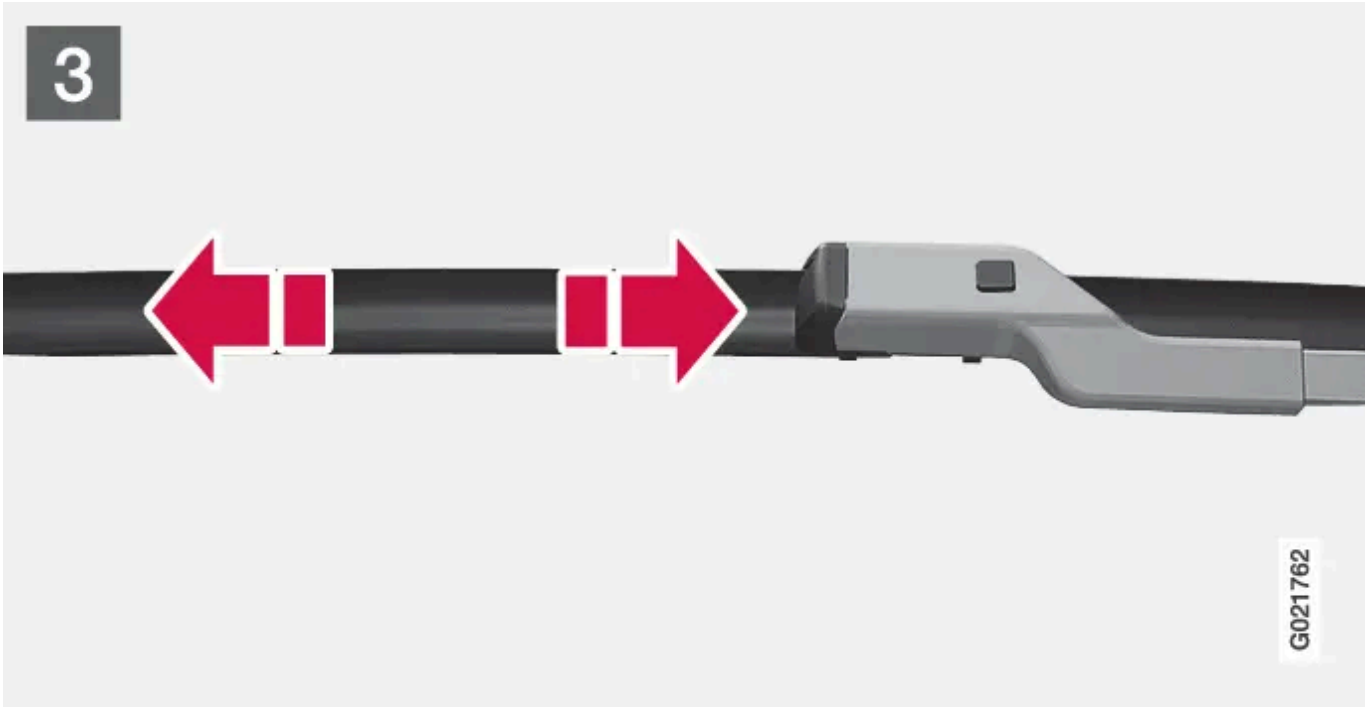


Note

The windshield wiper blades are different lengths. The blade on the driver's side is longer than the one on the passenger side.







1. 1
   With the wipers in the service position, fold out the wiper arm from the windshield. Press the button on the wiper blade attachment and pull the wiper blade straight out, parallel with the wiper arm.

2. 2
   Slide in the new wiper blade until it clicks into place.

3. 3
   Check that the blade is securely in place.

4. Press the wipers back against the windshield.

To return the wipers from the service position to the normal position, fold the wipers back against the windshield and press the START/STOP ENGINE button briefly to put the ignition in mode **I** (or start the engine).

Cleaning

Keeping the windshield and wiper blades clean helps improve visibility and prolongs the service life of the wiper blades. Clean the wiper blades with a stiff-bristle brush and lukewarm soap solution or car washing detergent.

12.13. Engine compartment – engine oil

The correct oil must be used for the stated oil change (service) intervals to apply.
The oil level on 4-cylinder engines is checked electronically and is checked using a dipstick on 5- and 6-cylinder engines.

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Checking the engine oil (5- and 6-cylinder engines)

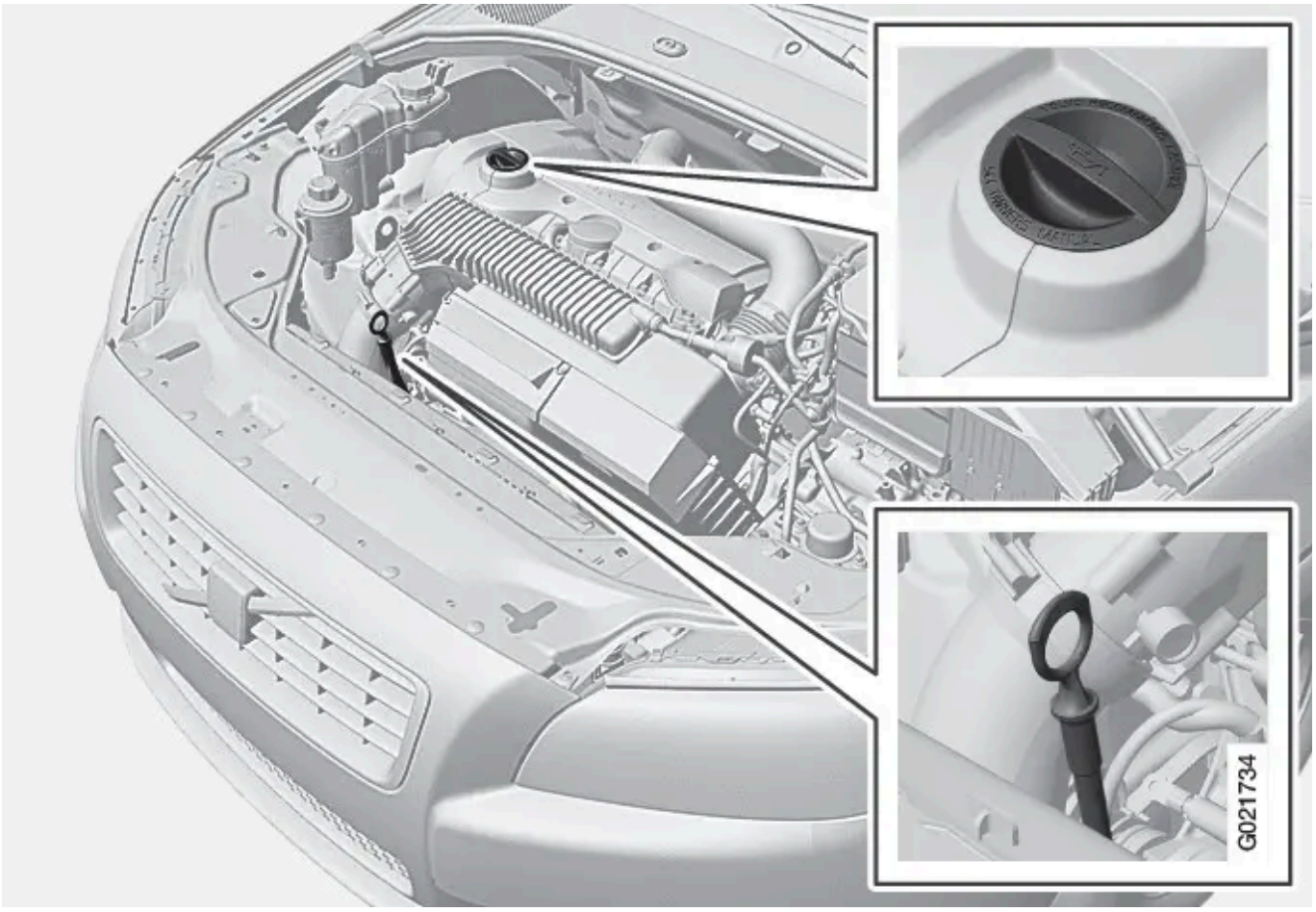
The oil level should be checked at regular intervals, particularly during the period up to the first scheduled maintenance service.

- See Oil specifications for oil specifications.
- Also, refer to the Warranty and Service Records information booklet for information on oil change intervals and oil specifications.

Important

- Not checking the oil level regularly can result in serious engine damage if the oil level becomes too low.
- Oil that is lower than the specified quality can damage the engine.
- Volvo does not recommend the use of oil additives.
- Always add oil of the same type and viscosity as already used.
- Never fill oil above the MAX mark. This could cause an increase in oil consumption.
- Oil changes should be carried out by a trained and qualified Volvo service technician.

Checking and adding oil

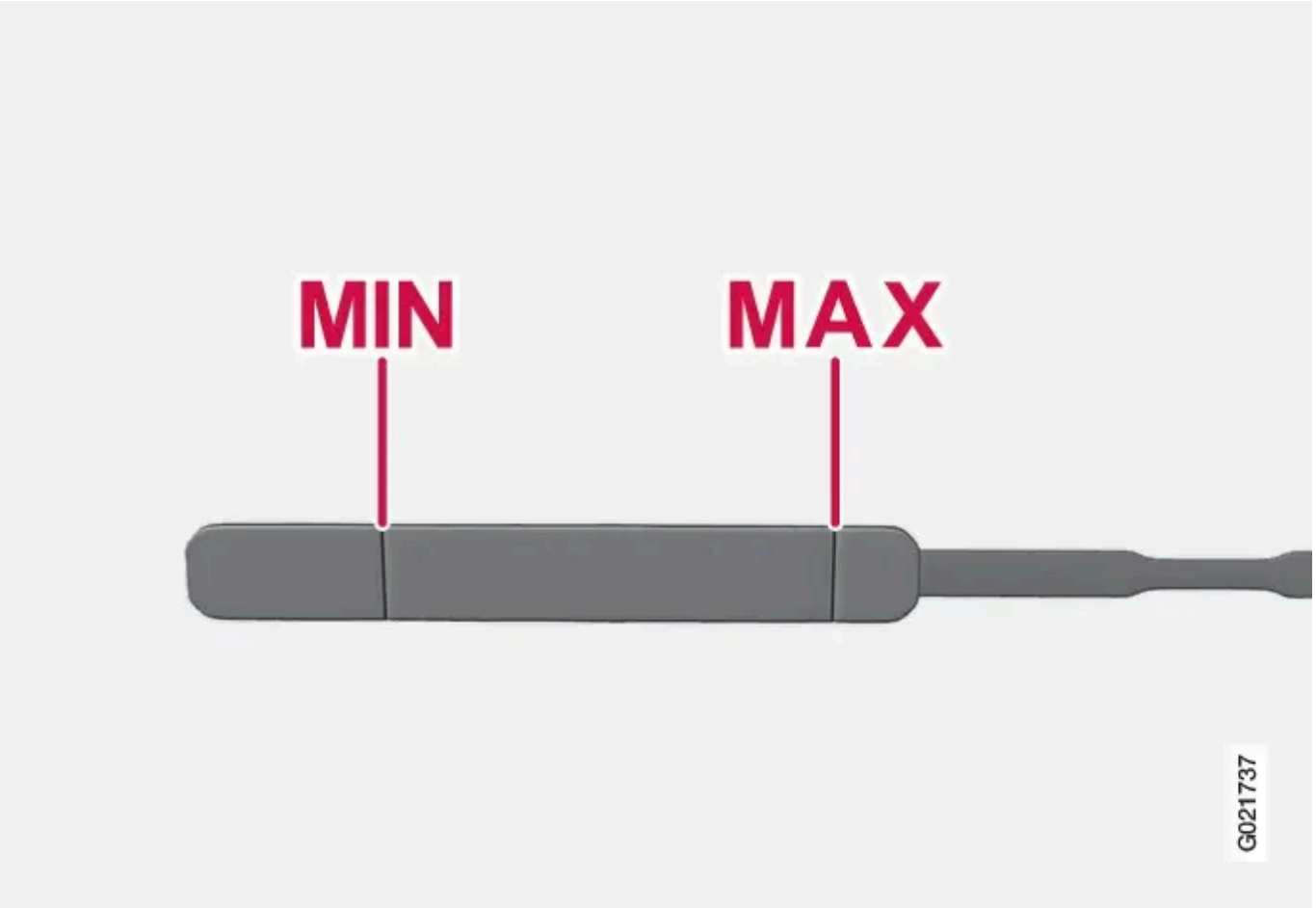


Location of the filler cap and dipstick

Note

Before checking the oil:

- The car should be parked on a level surface.
- **If the engine is warm**, wait for at least 10 – 15 minutes after the engine has been switched off.



The oil level must be between the MIN and MAX marks on the dipstick

Checking the oil

1. Pull out the dipstick and wipe it with a lint-free rag.
2. Reinsert the dipstick, pull it out, and check the oil level. The level must be between the MIN and MAX marks.
3. Add oil if necessary. If the level is close to the MIN mark, add approximately 0.5 US quarts (0.5 liters) of oil.
4. Recheck the level and add more oil if necessary until the level is near the MAX mark.

Warning

Do not allow oil to spill onto or come into contact with hot exhaust pipe surfaces.

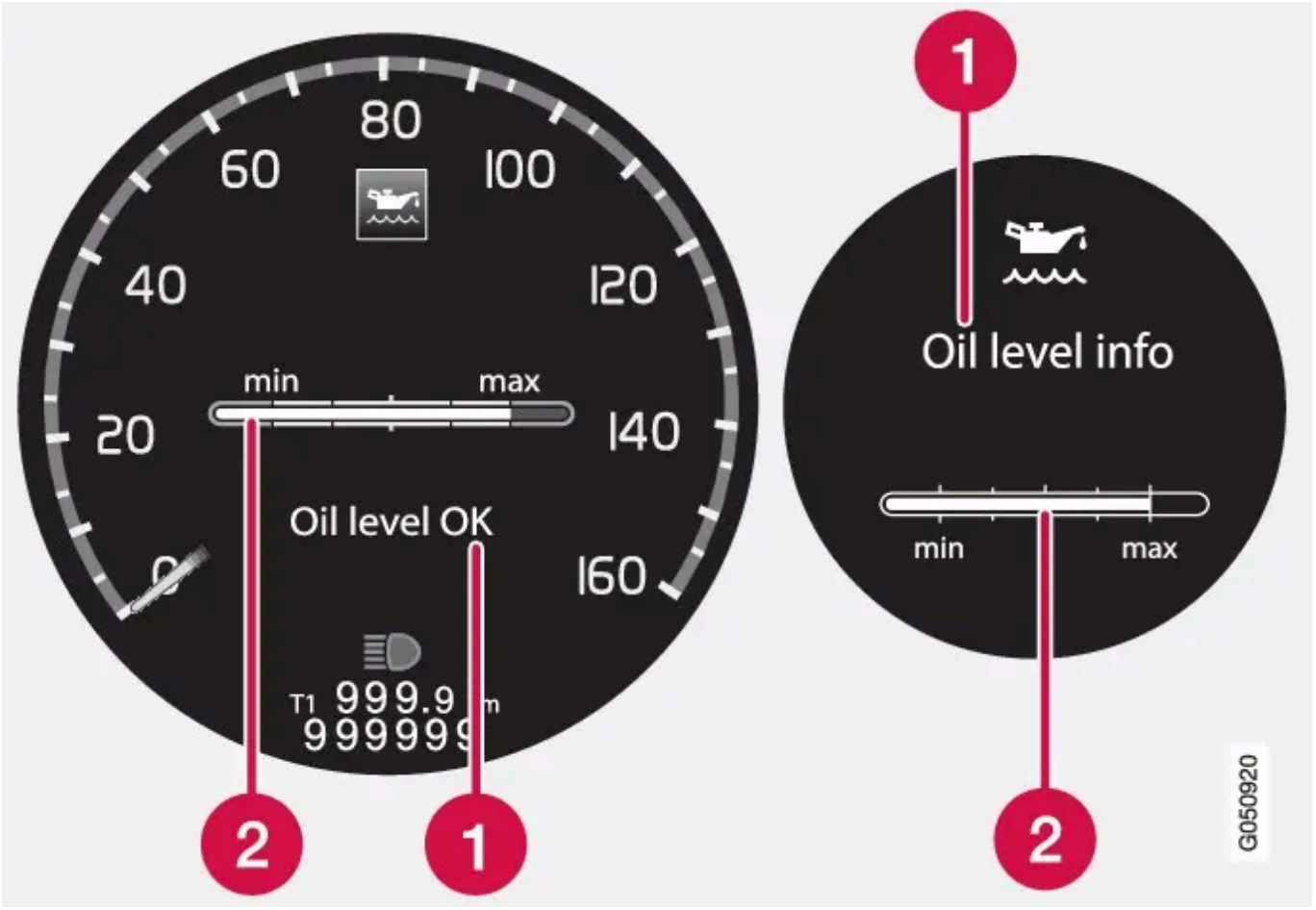
Electronic oil level sensor (4-cylinder engines only)



Oil filler cap

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No action is necessary until a message is displayed, see the following illustration.



Left: digital instrument panel*, Right: analog instrument panel

1 Message

2 Oil level

The oil level can be checked when the engine is not running by scrolling to the oil level sensor using the thumb wheel on the left steering wheel lever.

Important

- If **Oil service required** is displayed, the oil level may be too high. Take the vehicle to an authorized Volvo workshop as soon as possible.
- If the oil level sensor indicates that the level is too low, using the correct oil, top up with the amount of oil indicated as soon as possible, see oil specifications .

Warning

Do not allow oil to spill onto or come into contact with hot exhaust pipe surfaces.

Electronically checking the oil level

The oil level should be checked at regular intervals, particularly during the period up to the first scheduled maintenance service.

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To check the oil level:

1. Activate ignition mode II, see Ignition modes.
2. Turn the thumb wheel on the left steering wheel lever until **Oil level** is displayed.

> The oil level will be displayed.

Note

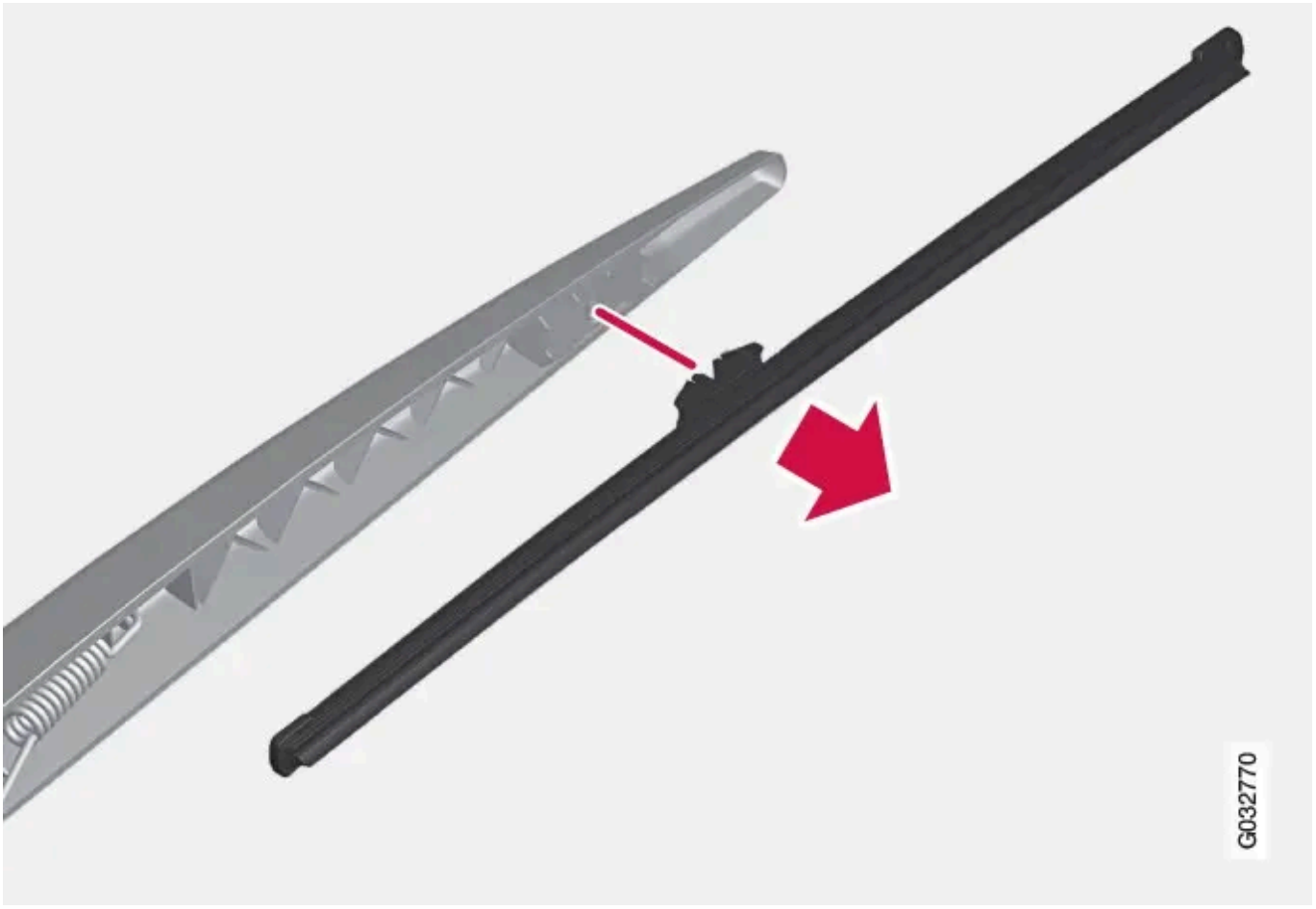
- The system cannot detect changes in the oil level immediately. The vehicle must be driven approximately 20 miles (30 km) or have been parked on level ground with the engine off for 2 hours before the oil level reading will be correct.
- If the necessary conditions are not met for checking the oil level electronically (time interval after the engine was switched off, if the vehicle is parked on an incline, etc.), **Not available** will be displayed. This does **not** indicate a problem with the oil level sensor.

* Option/accessory.

12.14. Wiper blades – tailgate

The wiper blades should be replaced regularly for best effect.

Replacing the tailgate wiper blade



1. Fold the wiper arm outward.
2. Grasp the inner section of wiper blade (at the arrow).
3. Pull out the blade to release it from the wiper arm.
4. Press the new wiper blade into place and check that it seats securely.
5. Fold the wiper arm back toward the tailgate window.

12.15. Wiper blades – service position

The windshield wiper blades must be in the vertical (service) position for replacement, washing or to lift them away from the windshield when e.g., removing ice or snow.



Wiper blades in service position

> **Important**
>
> Be sure the wiper blades are not frozen in position before attempting to move them to the service position.

To put the windshiield wipers in the service position:

1. Insert the remote key into the ignition slot[1] and press the START/STOP ENGINE button briefly to put the ignition in mode I (see Ignition modes for detailed information about the ignition modes).
2. Press the START/STOP ENGINE button again briefly to switch the ignition off.
3. Within 3 seconds, move the right steering wheel lever up and hold it for at least 1 second.

> The wipers will then move to the vertical (service) position on the windshield.

The wipers can be returned to the normal position by pressing the START/STOP ENGINE button briefly to put the ignition in mode **I** (or by starting the engine).

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Important

If the wiper arms have been folded out from the windshield while in the service position, fold them back against the windshield before returning the wipers to the normal position to help avoid scratching the paint on the hood.

[1] Not necessary on vehicles with the optional keyless drive.

13. Specifications

13.1. Dimensions and weights

13.1.1. Weights

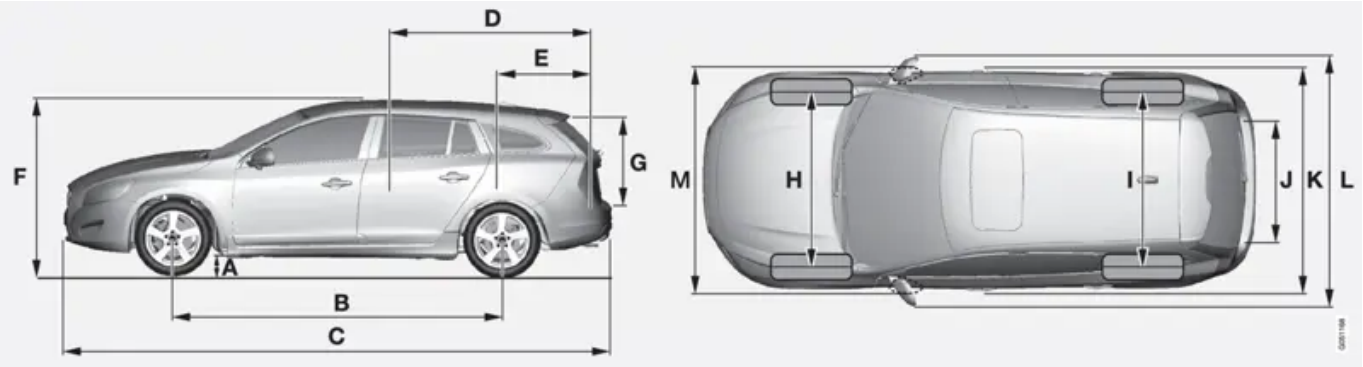
The following table lists important weight data for your vehicle.

Category	USA	Canada
Gross vehicle weight 5-cyl. AWD	5050 lbs	2290 kg
Capacity weight 5-cyl. AWD	990 lbs	450 kg
Permissible axle weights, front 5-cyl. AWD	2670 lbs	1210 kg
Permissible axle weights, rear 5-cyl. AWD	2450 lbs	1110 kg
Curb weight	3740 - 3900 lbs	1690 - 1760 kg
Max. roof load	165 lbs	75 kg
Max. trailer weights	Without brakes: 1650 lbs With brakes, 1 7/8" ball: 2,000 lbs With brakes, 2" ball: 3,300 lbs	Without brakes: 750 kg With brakes, 1 7/8" ball: 900 kg With brakes, 2" ball: 1500 kg
Max. tongue weight	165 lbs	75 kg

13.1.2. Dimensions

This section lists your vehicle's most important dimensions.

Dimensions–V60CC



Position	Dimension	in. (mm)
A	Ground clearance (curb weight + 2 people) [1]	7.0 (178)
B	Wheelbase	109.2 (2774)
C	Length	182.6 (4638)
D	Load length, floor, seatback down	68.9 (1749)
E	Load length, floor	38.5 (978)
F	Height	58.4 (1484)
G	Load height	25.9 (658)
H	Track, front	63.7 (1619) [2] / 63.3 (1609) [3]
I	Track, rear	62.1 (1577) [2] 61.7 (1567) [3]
J	Load width, floor	42.9 (1090)
K	Width	73.4 (1865)s
L	Width incl. door mirrors (folded out)	82.6 (2097)
M	Width incl. door mirrors (folded in)	74.8 (1899)

[1] Varies slightly depending on tire size, optional sport chassis, etc.

[2] with 50 mm offset

[3] with 55 mm offset

13.2. Engine

13.2.1. Fuel tank volume – specification and volume

The table lists the fuel tank volume for your vehicle.

Volume	Specification
17.8 US gallons (67.5 liters)	–

13.2.2. Brake fluid – specification and volume

Brake fluid transfers braking force when the brake pedal is depressed to the master cylinder and to the slave cylinders on each wheel.

Specification: DOT 4 boiling point >536 °F (>280 °C)

Volume: 0.63 US qts (0.6 liters)

13.2.3. Transmission oil – specification and volumes

The table lists transmission oi[1] l volumes and specifications.

System	Volume	Specification
Automatic (TF-80SC)	7.4 US qts (7 liters)	Transmission fluid AW-1
Automatic (TG-81SC)	7 US qts (6.6 liters)	

[1] Under normal driving conditions the transmission oil does not need changing during its service life. However, it may be necessary under adverse driving conditions.

13.2.4. Coolant – specification and volume

The table lists coolant volumes and specifications.

System	Volume	Specification
T5	9.4 US qts. (8.9 liters)	Coolant with corrosion inhibitor mixed with water (50/50 mix), see packaging.
-	-	

13.2.5. Oil volume

The following table provides technical data for the respective engines. Some of these engines may not be available in all markets. Engine specifications for Special Edition vehicles may vary.

T12 (5 cyl.)	B5254T12	5.8 US qts (5.5 liters)

13.2.6. Engine specifications

The following table provides technical data for the respective engines. Engine specifications for Special Edition vehicles may vary.
Some of the engines listed here may not be available in all markets.

Engine specifications

Specification/Model	5-cyl. T12
Engine designation	B5254T12
Output (kW/rps)	187/90
Output (hp/rpm)	250/5400 rpm
Torque (Nm/rps)	360/30–70
Torque (ft. lbs./rpm)	266/1800–4200
No. of cylinders	5
Bore (in/mm)	3.27/83
Stroke (in/mm)	3.63/92.3
Displacement	2.497 liters / (152.4 cu. in.)
Compression ratio	9.5:1

13.2.7. Oil specifications

Full synthetic engine oil meeting the minimum ACEA A5/B5 must be used. Lower quality oils may not offer the same fuel economy, engine performance, or engine protection.

Volvo recommends:



G050450

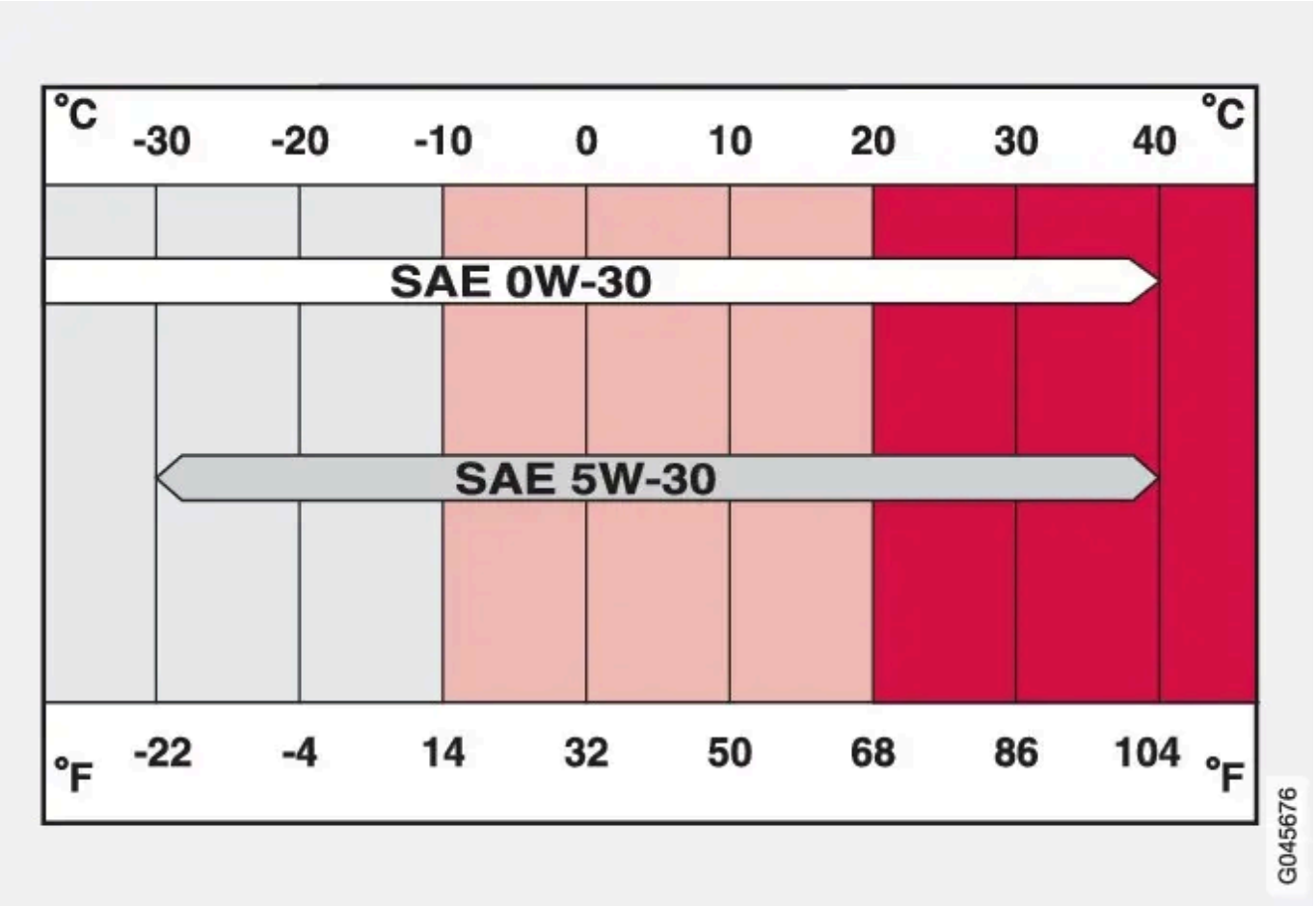
Refer to the warranty and Service Records information booklet for information on oil change intervals and oil type requirements.

> **Note**
>
> This vehicle comes from the factory with synthetic oil.

Oil additives must not be used.

Oil viscosity

Incorrect viscosity oil can shorten engine life under normal use. SAE 5W-30 will provide good fuel economy and engine protection. See the viscosity chart.



Viscosity chart

Extreme engine operation

SAE 0W-30 oil meeting ACEA A5/B5 requirements is recommended for extreme driving conditions.

13.3. Fluids and lubricants

13.3.1. Fuel tank volume – specification and volume

The table lists the fuel tank volume for your vehicle.

Volume	Specification
17.8 US gallons (67.5 liters)	–

13.3.2. Washer fluid – specification and volume

Washer fluid helps keep the windshield and tailgate window on wagon models clean and free from ice and road salt during winter driving.

Specification: Use a washer antifreeze recommended by Volvo, mixed with water.

Volume:

- 6.8 US qts (6.5 liters)
- 4.7 US qts (4.5 liters[1])

[1] Models without headlight washers

13.3.3. Brake fluid – specification and volume

Brake fluid transfers braking force when the brake pedal is depressed to the master cylinder and to the slave cylinders on each wheel.

Specification: DOT 4 boiling point >536 °F (>280 °C)

Volume: 0.63 US qts (0.6 liters)

13.3.4. Air conditioning – specification and volume

The air conditioning system in your vehicle contains the following:

Refrigerant: R134a (HFC134a)

Volume: 1.7 lbs (770 g)

Compressor oil: PAG

13.3.5. Transmission oil – specification and volumes

The table lists transmission oi[1]l volumes and specifications.

System	Volume	Specification
Automatic (TF-80SC)	7.4 US qts (7 liters)	Transmission fluid AW-1
Automatic (TG-81SC)	7 US qts (6.6 liters)	

[1] Under normal driving conditions the transmission oil does not need changing during its service life. However, it may be necessary under adverse driving conditions.

13.3.6. Power steering – specification

This fluid is used to help reduce and regulate steering force.

Specification: Power steering fluid recommended by Volvo.

13.3.7. Coolant – specification and volume

The table lists coolant volumes and specifications.

System	Volume	Specification
T5	9.4 US qts. (8.9 liters)	Coolant with corrosion inhibitor mixed with water (50/50 mix), see packaging.
-	-	

13.3.8. Oil volume

The following table provides technical data for the respective engines. Some of these engines may not be available in all markets. Engine specifications for Special Edition vehicles may vary.

T12 (5 cyl.)	B5254T12	5.8 US qts (5.5 liters)

13.3.9. Oil specifications

Full synthetic engine oil meeting the minimum ACEA A5/B5 must be used. Lower quality oils may not offer the same fuel economy, engine performance, or engine protection.

Volvo recommends:



G050450

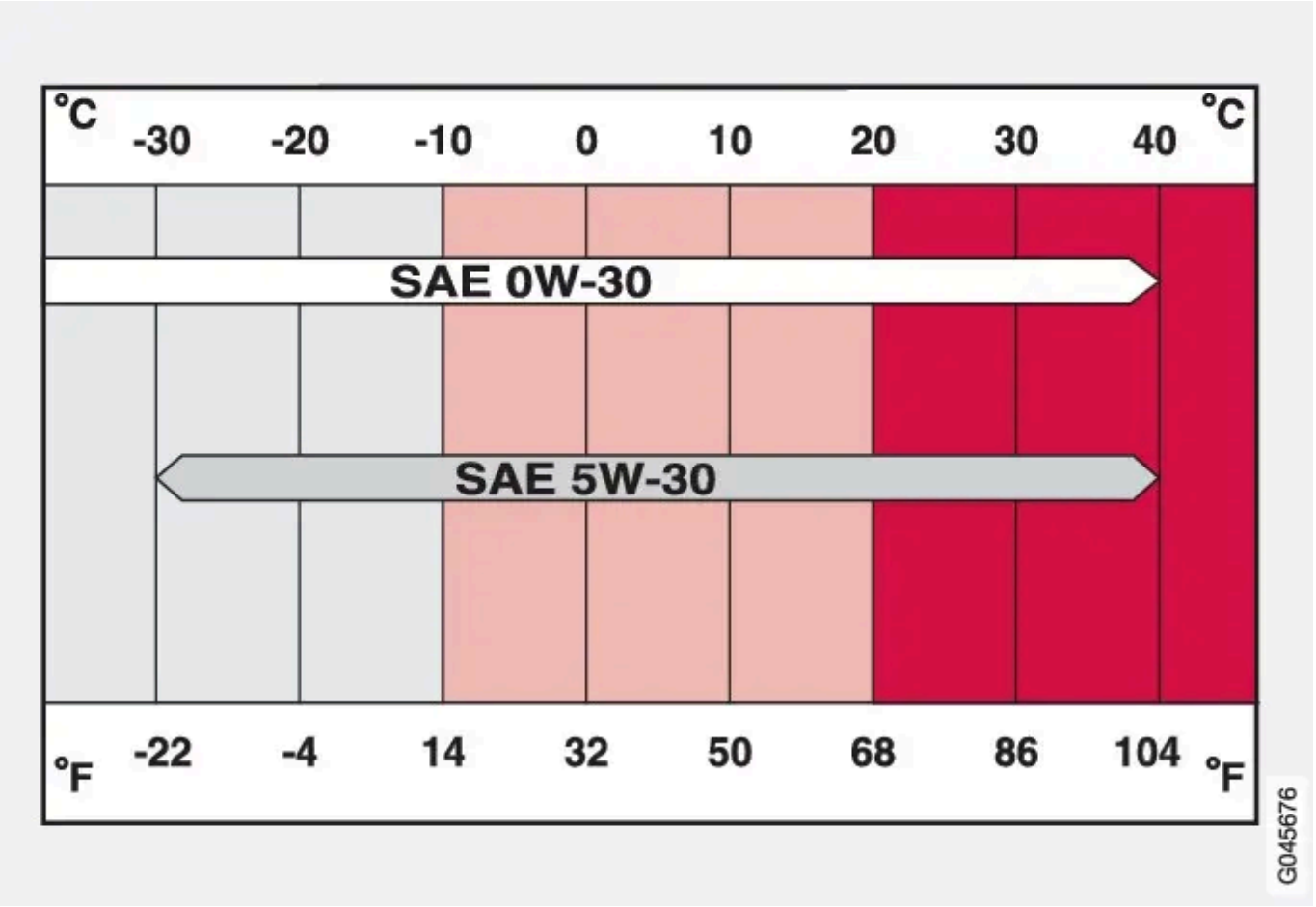
Refer to the warranty and Service Records information booklet for information on oil change intervals and oil type requirements.

> **Note**
>
> This vehicle comes from the factory with synthetic oil.

Oil additives must not be used.

Oil viscosity

Incorrect viscosity oil can shorten engine life under normal use. SAE 5W-30 will provide good fuel economy and engine protection. See the viscosity chart.



Viscosity chart

Extreme engine operation

SAE 0W-30 oil meeting ACEA A5/B5 requirements is recommended for extreme driving conditions.

13.4. Wheel and tire specifications

13.4.1. Tire inflation – pressure table

The following tire pressures are recommended by Volvo for your vehicle. Refer to the tire inflation placard (see for its location) for information specific to the tires installed on your vehicle at the factory.

Some of the tire sizes listed here may not be available in all markets.

Tire size	Cold tire pressure for up to five persons	
	Front psi (kPa)	Rear psi (kPa)

Tire size	Cold tire pressure for up to five persons	
215/65 R16 Extra load 235/55 R17 235/50 R18	36 (250)	36 (250)
235/45 R19 Extra load	39 (270)	39 (270)
Temporary spare tire T125/80R17	61 (420)	61 (420)

Warning

19" wheels may **never** be used on vehicles that are **not** equipped with the R-design or the Sport chassis options.

Using 19" wheels on vehicles equipped the **standard chassis** presents a safety risk and the risk of damage to the vehicle, and impairs the vehicle's driving characteristics.

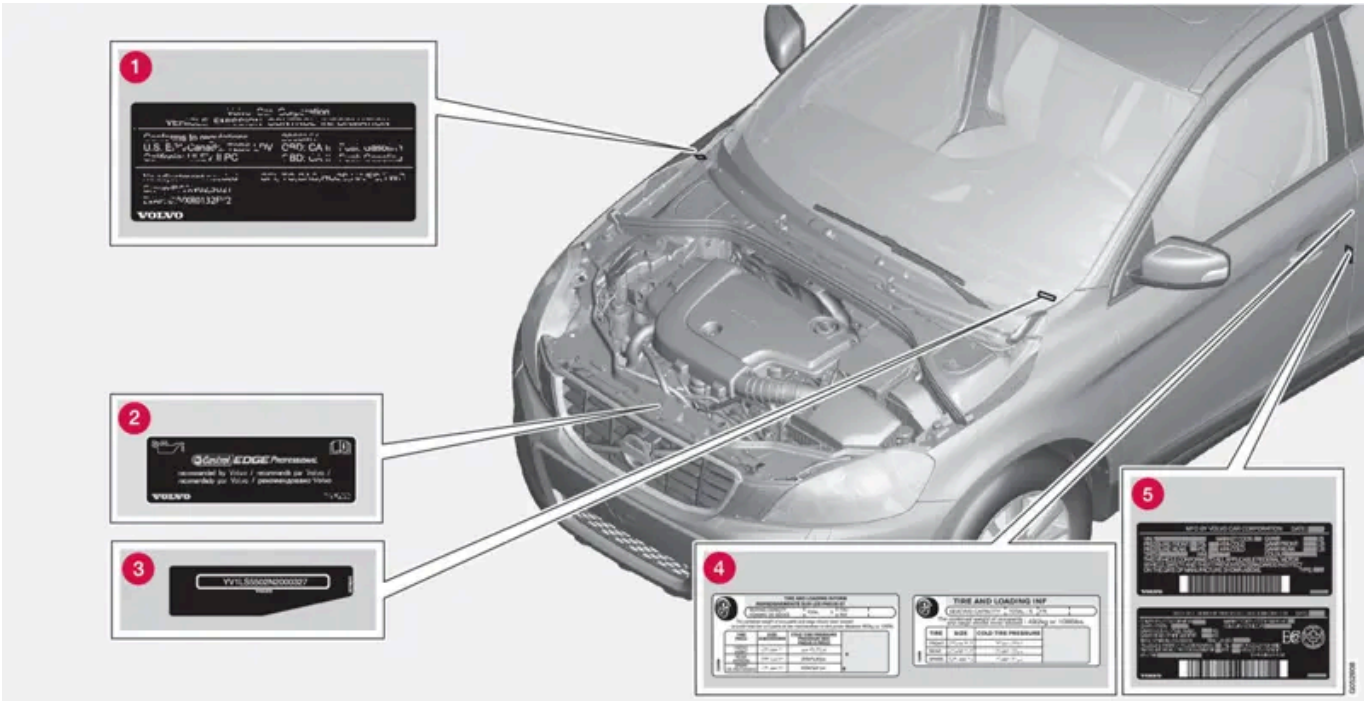
Note

Please consult a Volvo retailer's Parts department for the most up-to-date specifications.

13.5. Label information

The labels in your vehicle provide information such as the chassis number, paint code, tire inflation pressure, etc.

Location of labels



List of labels

1. **Vehicle Emission Control Information.** Your Volvo is designed to meet all applicable emission standards, as evidenced by the certification label on the underside of the hood. For further information regarding these regulations, please consult your Volvo retailer.
2. **Engine oil.** This label contains the recommended engine oil specifications.
3. **Vehicle Identification Number (VIN).** The VIN plate is located on the top left surface of the dashboard. The Vehicle Identification Number (VIN) should always be quoted in all correspondence concerning your vehicle with the retailer and when ordering parts.
4. **Tire inflation pressures.** This label indicates the correct inflation pressures for the tires that were on the vehicle when it left the factory.
5. **Federal Motor Vehicle Safety Standards (FMVSS) specifications (USA) and Ministry of Transport (CMVSS) standards (Canada).** Your Volvo is designed to meet all applicable safety standards, as evidenced by the certification label on the driver's side B-pillar (the structural member at the side of the vehicle, at the rear of the driver's door opening). This label also includes codes for paint color, etc. For further information regarding these regulations, please consult your Volvo retailer. U.S. models have the upper decal; Canadian models have the lower one.

The content of this manual represents the status of the user manual at the time of printing and may not be completely valid in future instances. For more information refer to the first page for the complete disclaimer note.

14. Volvo On Call*

14.1. Volvo On Call mobile app

As a VOC user, you can download a mobile app that enables you to have telephone contact with your vehicle when it is parked.

Certain functions may not be available in all models.

The mobile app is updated regularly, which may result in this information not being completely up-to-date with respect to the functionality available. Go to www.volvocars.com/us/voc or www.volvocars.com/ca for additional information about the app.

The Volvo On Call mobile app is available for the iPhone and for Windows/Android phones and can be downloaded from Apple's AppStore, Windows Phone Store or Google Play.

A personal Volvo ID is required in order to use the mobile app.

For additional information about the Volvo ID, the features it offers and how to create it, see Volvo ID.

Locating the vehicle

The vehicle's location is shown on a map and directions to the vehicle can be provided. There is also a digital compass to help show the owner the right direction. When you are within approx. 100 yards/meters of the vehicle, you can activate its horn and turn signals to help locate it.

The vehicle's instrument panel

This function provides information such as: the fuel level, range on the remaining fuel, average fuel consumption, average speed and odometer/trip odometer readings.

Vehicle "checkup"

The mobile app monitors the vehicle's condition and provides information about bulbs and the levels of brake fluid, coolant and engine oil.

Driving logbook

Detailed information about each trip made during the past 40 days can be saved and downloaded. All or part of this information can be exported from the mobile app to a spreadsheet format and sent to an email address. This is very useful for e.g., keeping track of business-related driving.

This function can be deactivated, in which case the vehicle will not transmit logbook information at the end of each trip.

Vehicle information

Basic information such as model, license plate number and VIN number are readily accessible.

Theft notification

If the vehicle's alarm is triggered, the owner will be informed via his/her cell phone.

Remote door unlock

The status of all doors and windows is provided. The owner can lock/unlock the vehicle from another location but for security reasons, the app's password is always required before the vehicle can be unlocked.

Engine remote start (ERS) * [1]

ERS makes it possible to remotely start the engine using the remote key to enable the climate system to cool or heat the passenger compartment before driving.

When the engine starts, the climate and infotainment systems will restart using the same settings as when the engine was switched off.

You can choose to let the engine run for between 1 and 15 minutes before it automatically switches off again. After 2 ERS starts, the engine must be started in the normal way before ERS can be used again.

> **Warning**
>
> Keep the following in mind before using ERS:
>
> - The vehicle should be in view.
> - The vehicle should be unoccupied.
> - The vehicle must not be parked indoors or in an enclosed area. Exhaust fumes are harmful to the health.

> **Note**
>
> Always observe applicable state, province and/or local laws regarding engine idling when using ERS.

* Option/accessory.

[1] Certain models only.

14.2. Contacting the VOC customer service center manually

Contact the VOC customer service center to request assistance in emergency situations. [1]

- Press the SOS button for at least 2 seconds to request help in the event of illness, a threat to the occupants of the vehicle, etc.
- The customer service center receives a signal for help and information about the vehicle's location.
- The customer service center attempts to establish voice contact with the driver to determine the type of help required.

If voice contact is not possible, the VOC customer service then contacts the emergency services for appropriate action.

* Option/accessory.

[1] Models with Volvo On Call*

14.3. Using roadside assistance

You can request help in the event of a flat tire, if the battery is discharged, etc.

- Press the ON CALL button for at least 2 seconds.
- The VOC customer service center will establish voice contact with the driver to determine the type of assistance that is required.

14.4. Using Volvo On Call

The following is a brief introduction into using VOC.

Automatic alarm

In the event of an accident in which the seat belt pretensioners, airbags or the inflatable curtains have been triggered, a signal is transmitted automatically to the VOC customer service center, who send the appropriate type of assistance (ambulance, police, etc.) to the site.

When a service is active, a symbol will appear on the screen.

The SOS button: emergency situations

Press and hold the SOS button for approx. 2 seconds to activate the manual alarm function.

Alternative to the SOS button

In the MY CAR normal view, press OK/MENU and select **Settings** → **Volvo On Call** → **SOS**.

The ON CALL button: roadside assistance

Press the ON CALL button for approx. 2 seconds to activate the roadside assistance functions, see Volvo On Call (VOC) functions.

Alternative to the ON CALL button

In the MY CAR normal view, press OK/MENU and select **Settings** → **Volvo On Call** → **On Call**.

> **Note**
>
> The **SOS** button should only be used in an emergency situation such as an accident, illness or in the event of a threat to the occupants of the vehicle. Misusing this button could result in extra charges.
>
> The **ON CALL** button can be used for all of the other VOC services, including roadside assistance.

Canceling a call

A service call that has been initiated can be cancelled within 10 seconds by pressing the EXIT button on the steering wheel key-pad or the center console.

Settings

Possible settings in the menu system include:

- **Key lock**: choose when the SOS and ON CALL buttons are to be activated. This function only allows the buttons to be activated when the ignition is in I, II or if the engine is running.
- **Activate subscription**
- **Deactivate subscription**
- **Activate service**: use to activate supplementary services such as roadside assistance.

14.5. Volvo On Call (VOC)*

VOC is an integrated, **subscription-based** system that provides emergency, roadside assistance and security services.

VOC is connected to the vehicle's airbag and alarm systems. The vehicle has an integrated Global System for Mobile

Communications (GSM) module that handles communication between the vehicle and the VOC customer service center.



The Volvo On Call buttons

The SOS and ON CALL buttons form the basis for communication between the vehicle and the VOC customer service center.

- SOS button: press in emergency situations.
- ON CALL button: press to contact the customer service center when roadside assistance is required.

See also Using Volvo On Call for additional information.

Availability

From the time that the remote key has been removed from the vehicle, VOC's functions remain available for 5 full days and subsequently once an hour for the following three weeks. After three weeks have elapsed, the system will remain switched off until the engine is started.

VOC uses GPS (Global Positioning System) to locate the vehicle and its integrated GSM module to enable communication with the VOC customer service center.

Warning

The system can only function in areas where there is adequate cellular network coverage.

Just as in the case of cell phones, atmospheric disturbances or areas with relatively few GSM transmitters can make it impossible for VOC to make a connection, for example, in rural areas.

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Subscriptions

A free trial subscription is initiated when the vehicle is purchased and VOC is activated. The subscription has a time limit but can be extended by contacting your Volvo retailer.

Convenience services

- The VOC mobile app.

Safety services

- Automatic alarm.
- Manual alarm.
- Roadside assistance.

Security services

- Theft notification.
- Remote door unlock.
- Remote vehicle immobilizer.

Change of owners

When the vehicle changes owners, it is essential to transfer the VOC subscription to the new owner, see Changing ownership of a vehicle with Volvo On Call.

Information on the Internet

Go to www.volvocars.com/us/voc or www.volvocars.com/ca for additional information about Volvo On Call.

Volvo ID

A personal Volvo ID makes it possible to e.g., log onto the VOC mobile app. Your Sensus Infotainment supplement contains information about creating a Volvo ID and the features it offers.

Geographic coverage

Volvo On Call is available in the United States and Canada.

* Option/accessory.

14.6. Remote door unlock[1]

If necessary, your vehicle can be unlocked from the customer service center.

1. Contact the VOC customer service center at 855-399-4691 (this number applies in both the United States and Canada).
2. After confirming that the caller is the vehicle's owner or other authorized person (using your PIN code), the VOC customer service center sends a signal to the vehicle to unlock it.
3. The trunk/tailgate has to be opened to unlock the other doors. Press the rubber touch pad twice (V60/V60CC/XC60/XC70) or pull the handle (S60/S80).

> **Note**
>
> If the trunk/tailgate is not opened within the time period set by the VOC customer service center, it will relock.

4. Opening the doors will trigger the alarm. Turn off the alarm by pressing the unlock button on the remote key or insert the remote key into the ignition slot.

> **Note**
>
> If the vehicle is parked in a garage or other covered area, remote unlocking may not be possible due to poor signal reception.

* Option/accessory.

[1] Vehicles equipped with Volvo On Call (VOC)* only.

14.7. Volvo On Call security services

The Volvo On Call (VOC) security services are intended to provide assistance in threatening situations, if you are locked out of your vehicle, etc.

If the vehicle's normal electrical system is not functioning properly, VOC's reserve battery provides the system with current.

Theft notification

A signal will be sent automatically to the Volvo On Call customer service center in the event of a break-in or theft (if the vehicle's alarm has been triggered).

This service will be interrupted if the alarm is turned off using one of the vehicle's remote keys.

Remote door unlock

If the vehicle's remote key has been lost or locked in the car, the doors can be unlocked remotely within the following three weeks with assistance from the VOC customer service center, see Remote door unlock.

Remote vehicle immobilizer

If the vehicle has been stolen, the owner or police can contact the VOC customer service center to have the vehicle's remote keys immobilized (deactivated).

> **Note**
>
> This applies even if the vehicle has been unlocked and started with one of its remote keys.

After contacting the owner/police, the VOC customer service center then deactivates the remote keys. Once the engine has been switched off, it can only be restarted if the owner/police has given the VOC customer service center authorization to reactivate the remote keys. Once this authorization has been verified (using your PIN code), the VOC customer service center will reactivate the remote keys.

Reserve battery

The reserve battery's service life is at least 1 year. If the battery's charge level goes below a certain level, the message **On Call Service required** will be displayed.

If the message remains on the screen, the battery's capacity should be checked by a trained and qualified Volvo service technician.

14.8. Volvo On Call display messages

VOC automatically displays information messages when necessary.

The following two messages will be displayed on the center console screen:

- **Could not find vehicle position**: see Availability.
- **Service temporarily unavailable**: see Availability.

The following two messages will appear in the instrument panel:

- **Volvo On Call Service required**: the system is not functioning properly. Contact a trained and qualified Volvo service technician for assistance.
- **Volvo On Call subscription will soon expire**: the VOC subscription needs to be renewed. Contact the VOC customer service center for assistance.

14.9. Volvo On Call geographic coverage

The map shows the areas in which VOC is available. The service is constantly being expanded; contact your Volvo retailer for up-to-date information.



However, the system can only function in areas where there is adequate cellular network coverage.

14.10. Volvo On Call PIN code

The PIN code is used for security purposes to help identify those persons who are authorized to use VOC services in a specific vehicle.

The 4-digit PIN code, which was sent to you when your Volvo retailer activated your subscription, is used for security reasons to help identify those persons who are authorized to use certain VOC services such as Remote door unlock or to create an account in the mobile app.

If you have forgotten or would like to change your PIN code

If you have forgotten your PIN code or would like to change it (e.g., if you have purchased a previously owned Volvo with VOC), contact your Volvo retailer or press the On Call button in your vehicle. The new code will be sent to you via email.

If an incorrect PIN code has been entered in the app multiple times

If a PIN code has been entered incorrectly 10 times in a row, the account will be frozen. In order to use the app again, a new PIN code must be selected and a new app account will have to be created.

14.11. Volvo On Call (VOC)* functions

The following table provides an overview of the functions that are available from the VOC customer service center and the mobile app. Please note that these functions are subject to change. Contact your Volvo retailer or go to www.volvocars.com/us/voc or www.volvocars.com/ca for up-to-date information about the range of Volvo On Call functions and services.

Function	Customer service center	App[1]
Automatic alarm	X	
Manual alarm	X	
Roadside assistance	X	X
Theft notification	X	X
Remote Door Unlock	X	X
Remote Vehicle Immobilizer	X	
Engine remote start (ERS)		X
Locating the vehicle	X	X
Instrument panel information		X
Vehicle "checkup"		X
Driving logbook		X
Vehicle information		X

* Option/accessory.

[1] Some of these functions may not be available for all models.

14.12. Volvo On Call customer service center phone number

Country	Customer service center number
United States and Canada	855-399-4691

14.13. Menu options for Volvo On Call *

The following is an overview of the selections and settings available in the VOC system's menu.

To display the menu, press the MY CAR button on the center console. Press this button again to open a shortcut menu providing access to the VOC menu.

Retailer information
SOS
On Call
Key lock
Lock/Unlock SOS and On Call buttons

Activate subscription
Activate service

* Option/accessory.

14.14. Changing ownership of a vehicle with Volvo On Call

If the vehicle changes owners, the Volvo On Call (VOC) service should be cancelled.

Cancelling the VOC service

If your vehicle changes owners, contact your Volvo retailer to cancel the VOC service. The subscription will be terminated and the service history will be erased.

When the vehicle changes owners, all personal settings should be reset to the factory defaults, see Change of ownership.

Starting the VOC service

If you purchase a previously owned Volvo with VOC:

The new owner should contact his/her Volvo retailer to transfer the remaining period of the VOC subscription. All contact information must be updated in order for VOC to function and to ensure that the previous owner is no longer authorized to use VOC services in the vehicle. The new owner will be given a 4-digit personal code, which is used to identify him/her as being authorized to approve certain VOC services.

14.15. Convenience services for VOC

Convenience services are available by using the mobile app to e.g., remote-start the engine*, etc.

As a VOC user, a mobile app is available that enables you to have telephone contact from an iPhone or from Windows/Android phones with your vehicle when it is parked. With it, you can locate the vehicle, lock it from another location, check the fuel level and much more. Read more about this app in the following section.

* Option/accessory.

14.16. Volvo On Call safety services

The Volvo On Call (VOC) safety services can be used in emergency situations.

Automatic alarm

In the event of certain types of accidents, a signal is transmitted automatically to the VOC customer service center, who take appropriate action according to the information that they receive.

The following occurs if the seat belt pretensioners, airbags or the inflatable curtains have been triggered:

- A signal is transmitted automatically to the VOC customer service center with information about the vehicle's location and that an airbag, etc., has been triggered.
- The VOC customer service center attempts to establish voice contact with the driver to determine the extent of the accident and the need for assistance.
- The VOC customer service center then contacts the appropriate emergency service (police, ambulance, towing, etc.).

If voice contact is not possible, the VOC customer service then contacts the emergency services for appropriate action.

Manual alarm

Press SOS to contact the customer service center for help in emergency situations, see Contacting the customer service center manually.

Roadside assistance

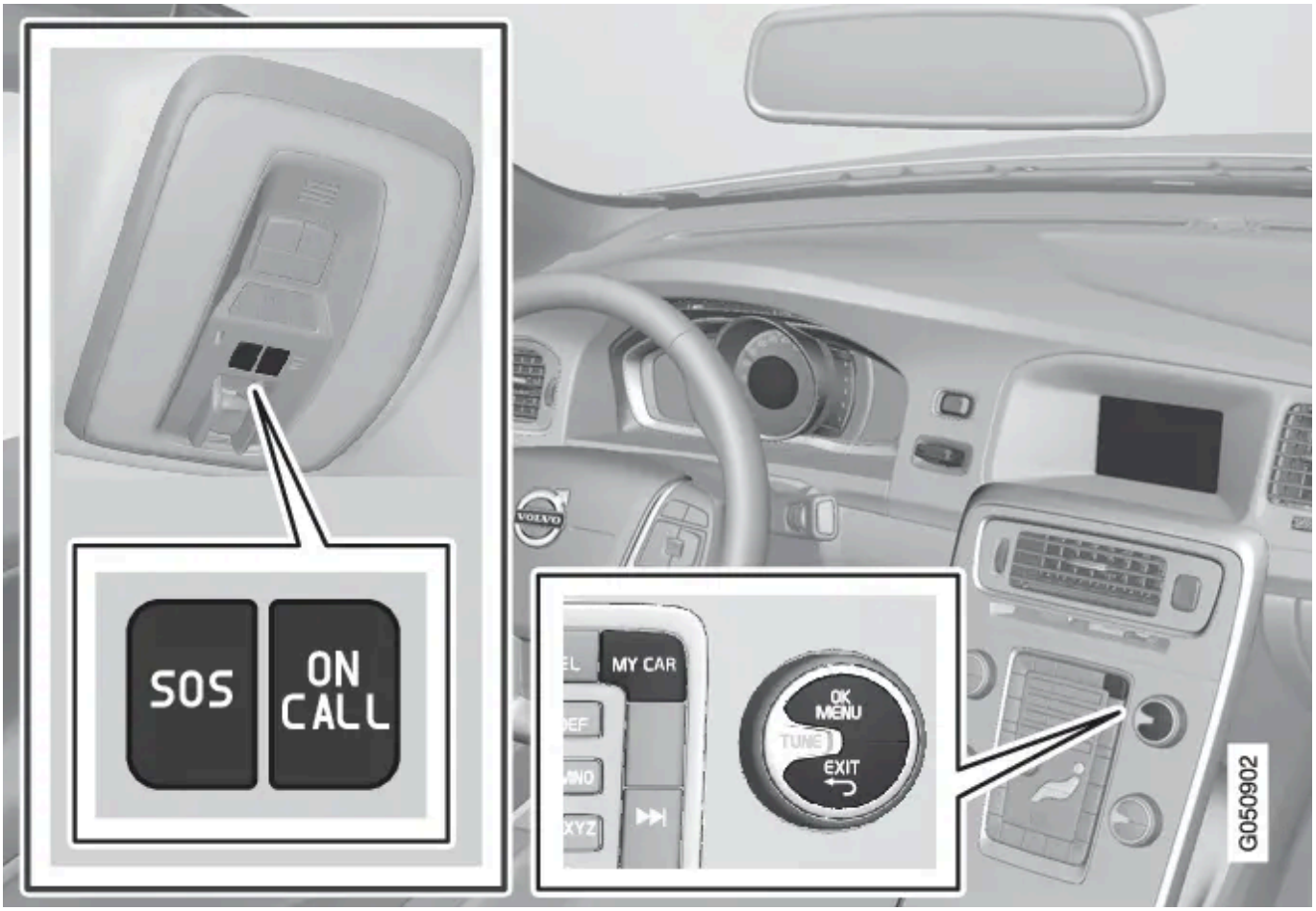
Request help for e.g., flat tires, a discharged battery, if you have run out of fuel, etc., see Summoning roadside assistance.

Emergency number

When an emergency call has been initiated, VOC attempts to contact the customer service center. If this is not possible, the call will be transferred to the emergency 911 number instead.

14.17. Volvo On Call overview

The following is an overview of the Volvo On Call controls.



SOS/ON CALL buttons in the ceiling console above the rear-view mirror, and center console controls

14.18. Personal information

Personal information is gathered for use with the Volvo On Call service.

Volvo's sales companies (see the following table) and Volvo Car Corporation are responsible for the personal details used in VOC-related services.

Country	Sales company
United States	Volvo Cars of North America, LLC
Canada	Volvo Cars of Canada

Why information is gathered

Personal information is used by Volvo and its partners to provide and develop the VOC service.

Types of personal information gathered

The primary types of personal information gathered for VOC-related purposes are:

- Personal information that the customer provides in connection with the activation of the VOC service and during other contact with Volvo, including name, address, telephone number, type of service and the duration of the service.
- When information about a specific VOC-related event is automatically transmitted from the vehicle. A message of this type contains: the vehicle identification number (VIN), time when the service is used, type of service, if airbags have been triggered, if the seat belt tensioners have been triggered, current fuel level, current temperature inside and outside the vehicle, whether the doors are locked and windows are closed and the vehicle's last six locations, including speed and direction.
- Other information associated with the owner/driver, such as telephone calls with people in the vehicle, the customer service center that provided the service and notes made by the customer service operator.

Access to my personal information

Volvo uses sub-contractors to provide the service. These sub-contractors work on behalf of Volvo and may only process personal information to the extent necessary to provide service. All sub-contractors are bound by agreements requiring them to observe strict confidentiality and to treat personal details in accordance with applicable legislation.

Deleting personal information

The personal details required to provide the VOC service are stored during the subscription period and thereafter for as long as necessary in order for Volvo to fulfil its obligations according to legislation and other regulations. Information generated during events covered by the VOC service is deleted three months after an event has occurred.

Corrections and register extracts

Private persons have the right to request corrections of incorrect information and to obtain an extract showing the personal information that has been processed. Requests for extracts from the register must be submitted in writing and signed by the applicant and include name, address and customer number. The request should be posted to:

Volvo Cars of North America, LLC

Customer Care Center

1 Volvo Drive,

P.O. Box 914

Rockleigh, New Jersey 07647

Phone: 1-800-458-1552

Volvo Cars of Canada

National Customer Service

9130 Leslie Street, Suite 101

Richmond Hill, Ontario L4B 0B9

Phone: 1-800-663-8255

Consent to gather VOC-related personal information

By activating a VOC subscription in accordance with the instructions in this document, the user agrees to the collection of VOC-related personal information.