

5 Series



Owner's Manual



Congratulations, and thank you for choosing a BMW.

Thorough familiarity with your vehicle will provide you with enhanced control and security when you drive it. We therefore have this request:

Please take the time to read this Owner's manual and familiarize yourself with the information that we have compiled for you before starting off in your new car. It contains important data and instructions intended to assist you in gaining maximum use and satisfaction from the unique range of technical features on your BMW. The manual also contains information on care and maintenance designed to enhance operating safety and contribute to maintaining the value of your BMW throughout an extended service life.

This Owner's Manual should be considered a permanent part of this vehicle. It should stay with the vehicle when sold to provide the next owner with important operating, safety and maintenance information.

This manual is supplemented by a Service and Warranty Information booklet (US models only). We recommend that you read this publication thoroughly.

Your BMW is covered by the following warranties:

- New Vehicle Limited Warranty
- Limited Warranty Rust Perforation
- Federal Emissions System Defect Warranty
- Federal Emissions Performance Warranty
- California Emission Control System Limited Warranty

Detailed information about these warranties is listed in the Service and Warranty Information booklet.

We wish you many miles of driving pleasure and satisfaction,

BMW AG

Notes on the Owner's Manual

We have made every effort to ensure that you are able to find what you need in this Owner's Manual as quickly as possible. The fastest way to find certain topics is by using the detailed index at the end. If you require an initial overview of your vehicle, this can be found in the first chapter. The detailed list of contents that directly follows the summary of contents is intended to stimulate your curiosity regarding your BMW and to encourage you to read the manual.

Should you wish to sell your BMW at some time in the future, please remember to hand over the Owner's Manual to the new owner; it is part of the vehicle.

Should you have any further questions, your BMW Retailer will be glad to assist at any time.

Symbols used



These sections contain vital information – please read the accompanying text passages carefully, both for your own safety and to prevent damage to the vehicle. ◀



These passages contain information on special and unique features in your vehicle. ◀



Special information on recycling. ◀

◀ indicates the end of a note.

* indicates special equipment, country-specific equipment and optional extras.



indicates that you should study the relevant section of this Owner's Manual in connection with a particular part or assembly.

The individual vehicle

In buying your BMW, you have decided in favor of a model with individualized equipment and fittings. This Owner's Manual describes all models and equipment that BMW offers within the same range.

We hope you will understand that equipment and fitting variants are included which you might not have chosen for your vehicle. Any differences can easily be identified, as all optional accessories and special equipment are marked with an asterisk *.

If your BMW features equipment which is not described in this Owner's Manual (e.g. car radio or telephone), (Supplementary) Owner's Manuals are enclosed. We ask you to read these manuals, too.

Status when going to press

BMW pursues a policy of continuous, ongoing development that is conceived to ensure that our vehicles continue to embody the highest quality and safety standards combined with advanced, state-of-the-art technology. For this reason, it is possible that the features described in this Owner's Manual could differ from those on your vehicle. We are unable to completely eliminate the possibility that errors might have occurred. We therefore ask you to accept that no claims of a legal nature can arise from the specifications, illustrations and descriptions.

For your own safety



Use unleaded fuel only.

Fuels containing up to 10% ethanol or other oxygenates with up to 2.8% oxygen by weight (i.e. 15% MTBE or 3% methanol plus an equivalent amount of co-solvent) will not void the applicable warranties with respect to defects in materials or workmanship. Field experience has indicated significant differences in fuel quality (i.e. volatility, composition, additives, etc.) among gasolines offered for sale in the United States and Canada. The use of poor-quality fuels may result in driveability, starting and stalling problems especially under certain environmental conditions, such as high ambient temperature and high altitude.

Should you encounter driveability problems that you suspect could be related to the fuel you are using, we recommend that you respond by switching to a recognized high-quality brand. Failure to comply with these recommendations may result in unscheduled maintenance.

Follow the relevant safety rules when you are handling gasoline. ◀



Important safety information!

For your own safety, use genuine parts and accessories approved by BMW.

When you purchase accessories tested and approved by BMW and Original BMW Parts, you simultaneously acquire the assurance that they have been thoroughly tested by BMW to ensure optimum performance when installed on your vehicle.

BMW warrants these parts to be free from defects in material and workmanship.

BMW will not accept any liability for damage resulting from installation of parts and accessories not approved by BMW.

BMW cannot test every product from other manufacturers to verify if it can be used on a BMW safely and without risk to either the vehicle, its operation, or its occupants.

Original BMW Parts, BMW Accessories and other products approved by BMW, together with professional advice on using these items, are available from all BMW Retailers.

Installation and operation of non-BMW approved accessories such as alarms, radios, amplifiers, radar detectors, wheels, suspension components, brake dust shields, telephones (including operation of any portable cellular phone from within the vehicle without using an externally mounted antenna) or transceiver equipment (e.g. C.B., walkie-talkie, ham radio or similar) may cause extensive damage to the vehicle, compromise its safety, interfere with the vehicle's electrical system or affect the validity of the BMW Limited Warranty. See your authorized BMW Retailer for additional information.

Do not use key or remote to lock doors or luggage compartment with anyone inside the car. See page 34 for more details.

"Maintenance, replacement, or repair of the emission control devices and systems may be performed by any automotive repair establishment or individual using any certified automotive part". ◀

The following only applies to vehicles owned and operated in the US.

REPORTING SAFETY DEFECTS

If you believe that your vehicle has a defect which could cause an accident or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying BMW of North America, Inc., P.O. Box 1227, Westwood, New Jersey 07675-1227, Telephone (201) 307-4000.

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 BMW of North America, Inc.

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 (or 202-366-0123 in Washington, D.C. area) or write to: NHTSA, U.S. Department of Transportation, Washington, DC 20590. You can also obtain other information about motor vehicle safety from the Hotline.

...the engine, the transmission, the suspension, the steering, the brakes, the lights, the horn, the wipers, the mirrors, the windows, the doors, the locks, the keys, the fobs, the remotes, the buttons, the switches, the controls, the features, the options, the accessories, the maintenance, the care, the service, the repairs, the technical, the data, the index.

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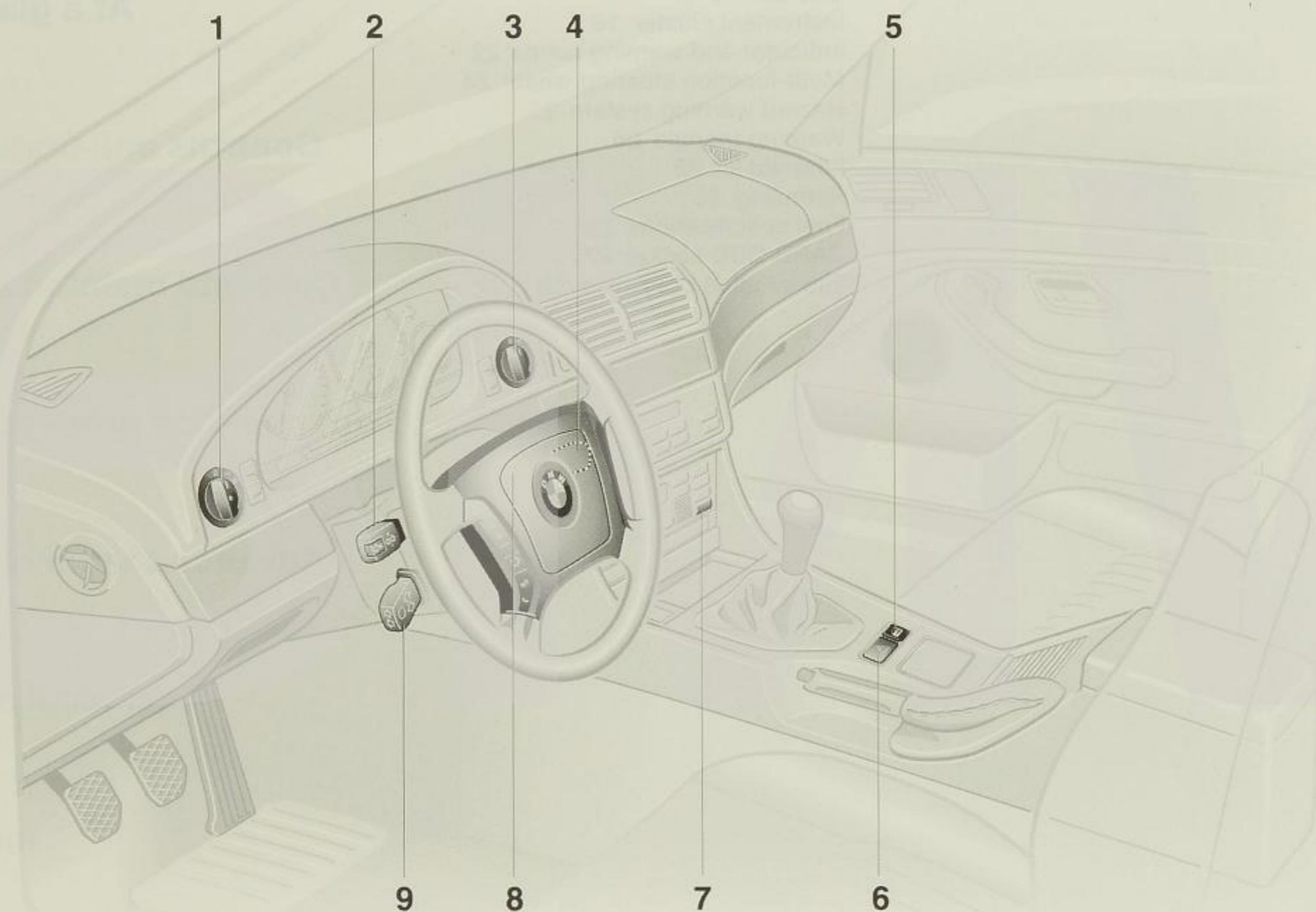
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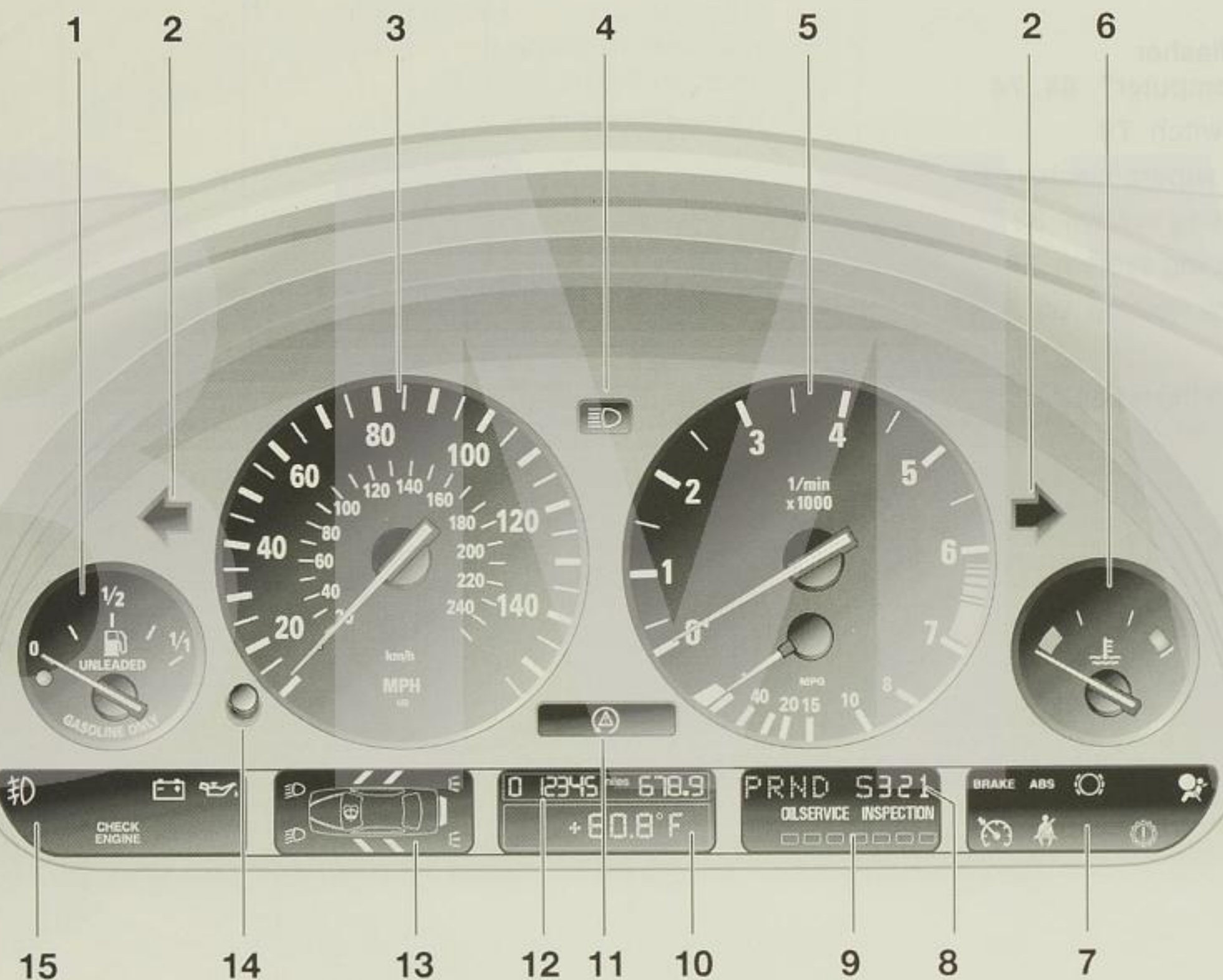
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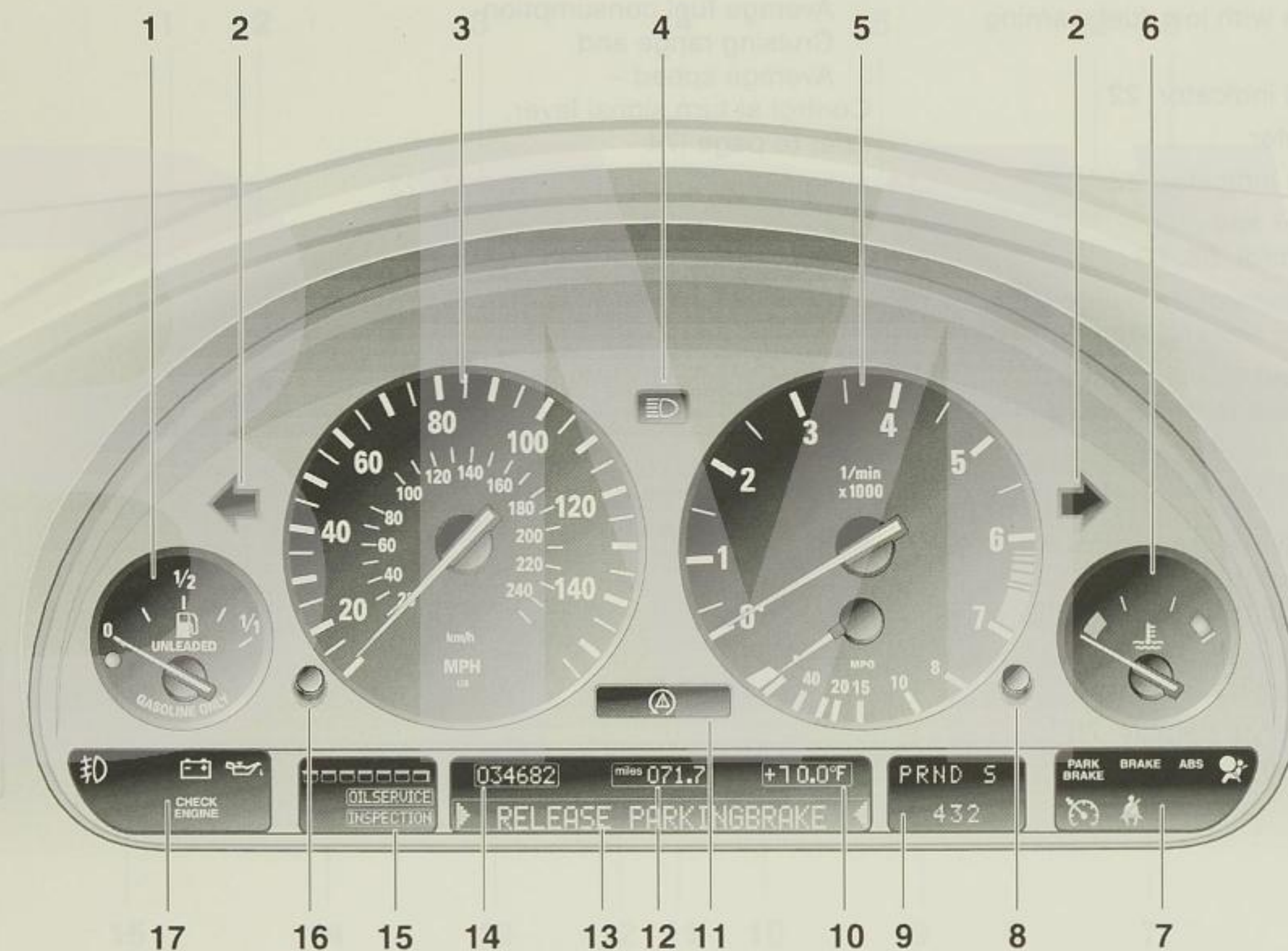
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- 2 Turn signal indicator 22
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Indicator and warning lamps

Some indicator and warning lamps are accompanied by a "●" symbol in the following text. These lamps come on briefly to verify that they are operational when you turn the ignition key to position 2.

Turn signal indicator, green

Flashes when the turn signals are in operation. Rapid flashing indicates a system malfunction.

For additional information: Page 64

High beam, blue

Indicates that the headlamps are on high beam setting, comes on briefly when you activate the headlamp flashers.

For additional information: Page 64

Parking brake*, red ●

Comes on when you engage parking brake. For additional information: Page 60

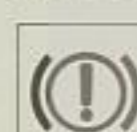


Pictogram for Canadian models

Parking brake*/**Brake hydraulics, red ●**

Comes on when you engage parking brake. For additional information: Page 60

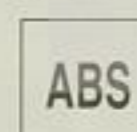
Comes on although parking brake is released: Have the brake fluid level checked. Before continuing your journey, be sure to read the notes on pages 101 and 121. Also comes on when "CHECK BRAKE LININGS" message appears in Check Control.



Pictogram for Canadian models

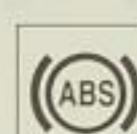
Brake pads*, yellow ●

Have the brake pads checked. For additional information: Page 101

ABS Antilock Brake System, yellow ●

ABS has been deactivated in response to system malfunction. Conventional braking performance remains unimpaired. Please have the system inspected at your authorized BMW Retailer.

For additional information: Page 98



Pictogram for Canadian models

Airbags, red ●

This lamp comes on for an operational check when you turn the ignition key to position 1. Should the lamp fail to come on during the operational check, or if it lights up during normal driving: Please refer the problem to your authorized BMW Retailer as soon as possible.

For additional information: Page 54

Automatic cruise control, green

Comes on when the cruise control is activated, indicating that you can enter system commands at the multi-function steering wheel. For additional information: Page 66

Please fasten safety belts, red ●

Simultaneous with an acoustical signal or a warning* in the Check Control. Remains on until safety belts are fastened.

For additional information on safety belts: Page 53

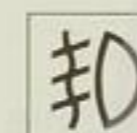
Automatic transmission*, yellow ●

Because of a malfunction the automatic transmission shifts only in the emergency program.

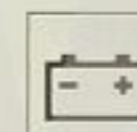
Please proceed to the nearest BMW Retailer. For additional information: Page 63

Automatic Stability Control plus Traction ASC+T/Dynamic Stability Control DSC*, yellow ●

ASC+T/DSC* has been deactivated, either through the switch or in response to a system malfunction. If through a system malfunction, please have it checked at your BMW Retailer. For additional information: Page 77

Front fog lamps, green

Lights up whenever you switch on the fog lamps. For additional information: Page 79

Battery charge current, red ●

The battery is no longer being charged. Defect in the generator drive belt or in the charging circuit of the generator. Please contact the nearest BMW Retailer.



Do not continue driving if the V-belt is defective; there is risk of engine damage due to overheating. There will also be an increase in the effort required to steer the vehicle. ◀

**Engine oil level*, yellow
Engine oil pressure, red ●**

Lights up yellow: Check engine oil level. For additional information: Page 117

If this lamp lights up red on during normal vehicle operation, accompanied by the message STOP!ENGINE OILPRESS in the Check Control*: Stop vehicle and switch off engine immediately. Check level of oil in engine, top up as required. If oil level is correct: Please contact the nearest BMW Retailer.



Do not attempt to continue driving as lack of adequate lubrication could lead to permanent and severe engine damage. ◀

Emissions Malfunction Indicator lamp (MIL), yellow ●

If the indicator lights up, either continuously or intermittently, this indicates a fault in the emissions-related electronic systems. Although the vehicle remains operational, you should have the systems checked by your BMW Retailer at the earliest possible opportunity. For additional information: Page 27



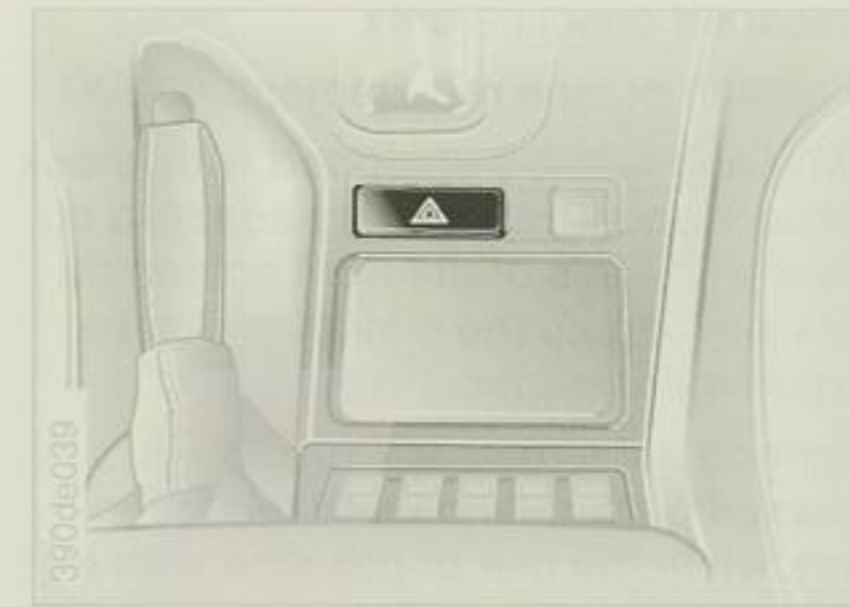
- | | |
|---|---|
| 1 Cellular phone: Lift receiver/hang up, activate/deactivate receiver, start dialing and terminate conversation | 6 Horn: The entire surface |
| 2 Radio/phone: Selection* | 7 Cruise control: Activate stored setting (resume) |
| 3 Radio/phone: Reverse scan and/or station buttons or scan address book* | 8 Cruise control: Store and accelerate (+) and decelerate and store (-) |
| 4 Radio/phone: Volume | 9 Cruise control: Activate/deactivate |
| 5 Radio/phone: Forward scan and/or station buttons or scan address book* | 10 Recirculated air mode or steering wheel heater: Switching on and off |

The integrated controls on the multi-function steering wheel have been specially designed to allow you to operate a number of accessories both safely and quickly, without taking your eyes from the road:

- ▷ selected radio functions
- ▷ the recirculated air mode of the air conditioner or the steering wheel heater
- ▷ automatic cruise control, and
- ▷ selected cellular phone functions.

▶ The controls on the MFL are active only when the corresponding systems are switched on.◀

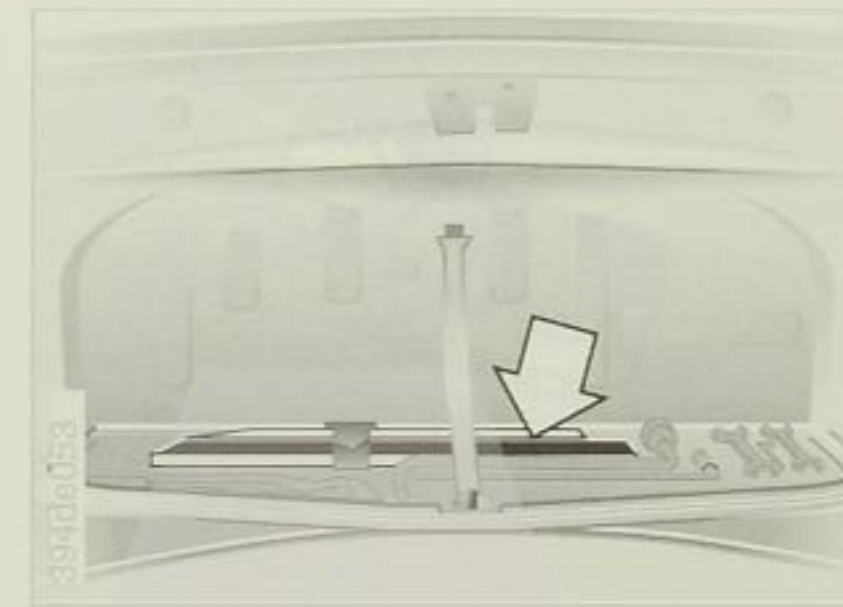
The illustration shows the maximum possible number of controls, corresponding to a full range of optional equipment. Refer to the individual accessory manuals for more detailed descriptions.



The push-button flashes rhythmically when the hazard flashers are on.

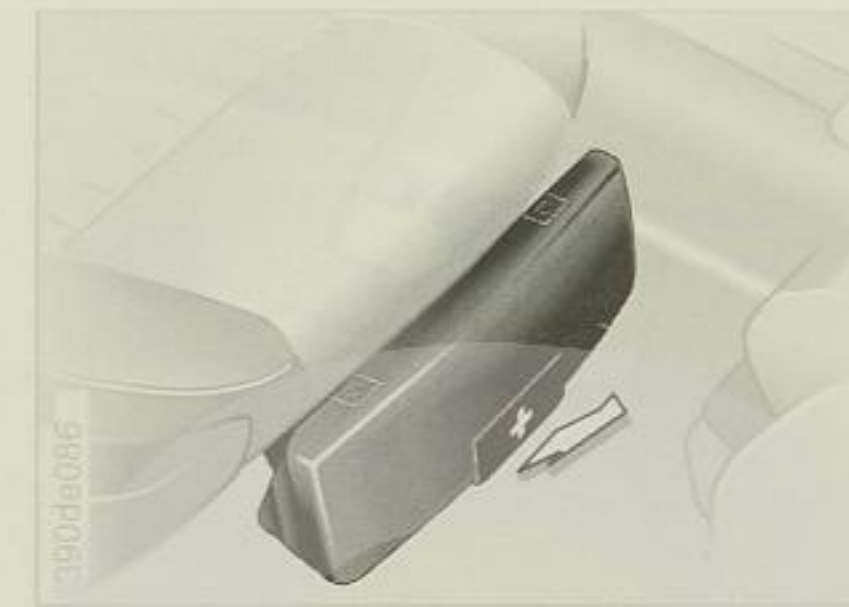
To help you locate the switch in an emergency, the button is also illuminated whenever the car lamps are on.

▶ The turn signal function has priority over the hazard signal. Therefore, from ignition key position 1 and onward, you can activate the turn signal even when the hazard lamps are on.◀



The hazard warning triangle is quickly available, stored in the onboard tool kit mounted on the inside of the luggage compartment lid.

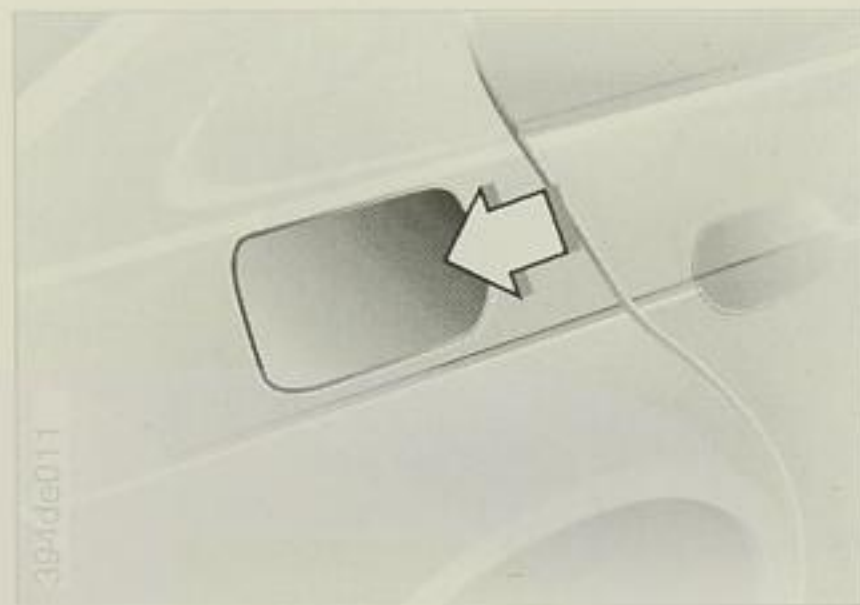
⚠ Comply with legal requirements concerning the need to carry a warning triangle in the car.◀



Located beneath the passenger's seat. To remove: Lift the release lever on the front (arrow) and pull the first-aid kit forward out of its support.

To store: Position the back of the kit into the support, then push back until the lever engages.

⚠ Some of the items contained in the first-aid kit are suitable for use for a limited period only. Please check the contents of the kit on a regular basis, re-placing any items on which the expiration dates have passed. The individual items are available from any store carrying pharmaceutical supplies. Comply with legal requirements concerning the need to carry a first-aid kit in the car.◀

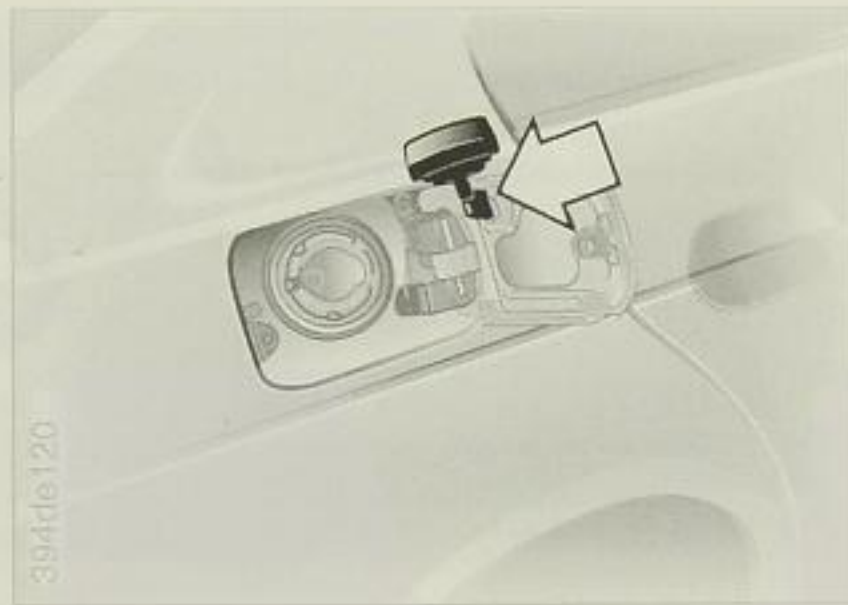


⚠ Always switch off the engine before refueling, as otherwise no fuel can enter the tank and the CHECK ENGINE warning lamp comes on. ◀

To open the filler door, press against its forward edge.

To unlock the filler door if the central locking system fails, refer to page 145.

⚠ Always observe all applicable safety precautions and regulations when handling gasoline. Never carry spare fuel containers in your vehicle. Whether empty or full, these containers can leak, cause an explosion, or lead to fire in the event of a collision. ◀



⚠ Carefully open the filler cap as otherwise fuel could spray out. Fuel spray may cause injury. ◀

Keep the filler cap in the bracket attached to the fuel filler door.

When refueling, always insert the filler nozzle all the way into the pipe. Pulling the nozzle out of the pipe during refueling

- ▷ results in premature activation of the nozzle overflow sensor
- ▷ and will reduce the effect of the vapor retrieval system on the pump when a nozzle incorporating a gasoline-vapor recirculation device is used.

Fuel specifications

Unleaded gasoline only.

Minimum octane requirement: 89 AKI

BMW engines are equipped with knock sensors and automatically adapt to operate with fuels of different octane ratings, as long as the minimum octane requirement is met.

Higher octane fuels will provide increased performance and fuel economy, while the use of gasoline with a lower octane rating will have an adverse effect.

⚠ Use of leaded fuel will cause permanent damage to both the catalytic converter and the engine-management system oxygen sensors. ◀

AKI = Anti Knock Index

CARB-OBD socket



The socket is on the driver's side, underneath the left-hand side of the instrument panel, under a cover (arrow).

The cover has the letters "OBD" on it.

The inflation pressures are indicated on a sticker attached to the B-pillar behind the driver's door (visible with door open).

Inflation pressures are indicated in psi (bar) with tires cold (cold = ambient temperature).

The inflation pressures in the table apply to tires from BMW-approved manufacturers. Your BMW Retailer is familiar with these pressures. Higher pressures may be specified for tires from other manufacturers.



Check the tire pressures at least every two weeks (remember the spare!). Incorrect tire pressures have a negative effect on vehicle handling response. They can also lead to tire damage and accidents. ◀

BMW model	Tire specifications	Inflation pressures in psi (bar)			
528i	225/60 R 15 96 H M+S	US/CDN:			
	225/60 R 15 96 W				
	225/55 R 16 95 W	33 (2.3)	41 (2.8)	33 (2.3)	41 (2.8)
	235/45 R 17 93 W	outside US/CDN:			
	255/40 R 17 94 W				
	205/65 R 15 94 Q M+S	29 (2.0)	33 (2.3)	33 (2.3)	41 (2.8)
	225/60 R 15 96 Q M+S				
540i	225/55 R 16 95 Q M+S				
	225/55 R 16 95 H M+S	US/CDN:			
	225/55 R 16 95 W				
	235/45 R 17 93 W	35 (2.4)	42 (2.9)	35 (2.4)	42 (2.9)
	255/40 R 17 94 W	outside US/CDN:			
	225/55 R 16 95 Q M+S				
		30 (2.1)	35 (2.4)	35 (2.4)	42 (2.9)

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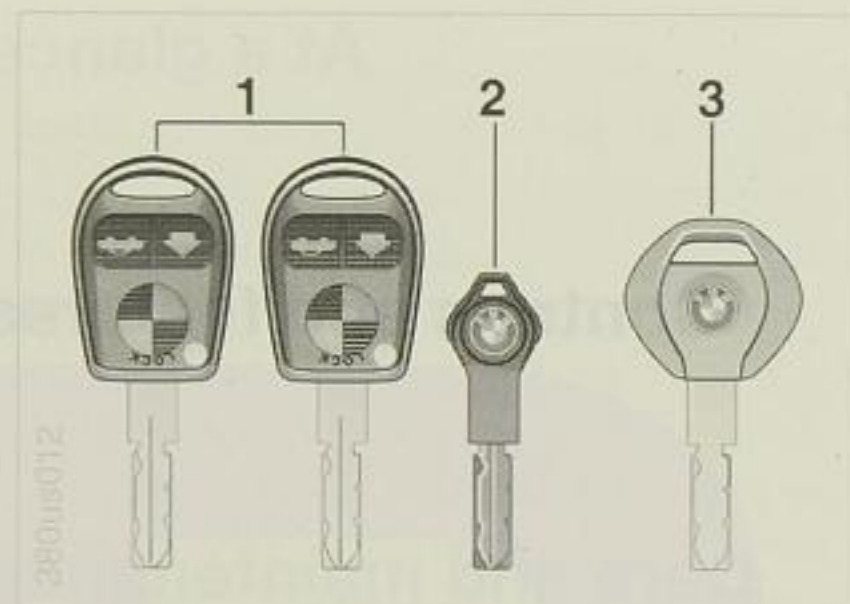
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 Cargo loading 93

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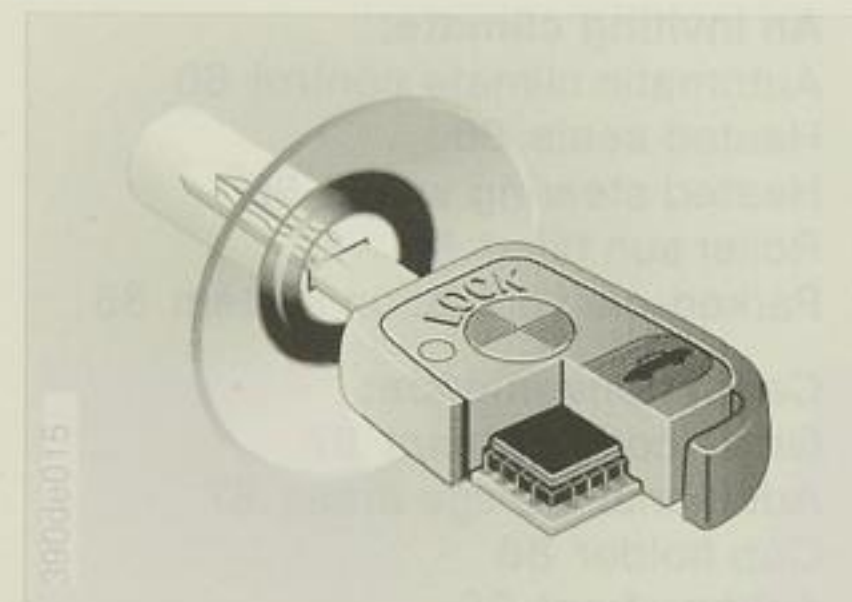


- 1 Master keys incorporating remote control transmitters
- 2 Spare key for storage in a safe place, e.g., in your wallet. This key is not intended for continuous use.
- 3 Door and ignition key
This key does not operate the glove and luggage compartment locks nor the lock on the backrest of the rear seat. Useful for preventing unauthorized access, e.g. at a hotel.

Replacement keys

are available exclusively through your authorized BMW Retailer. The retailer is under obligation to check the legitimation of the person requesting such a replacement, as the keys are part of a security system (refer to "Electronic vehicle immobilizer" adjacent columns).

Electronic vehicle immobilizer



The key to security

Your BMW is equipped with a passive anti-theft system. This electronic immobilization system is designed to reduce the susceptibility of the vehicle to theft by making it impossible to start the engine using any means other than the special keys furnished with the vehicle. Your BMW Retailer can cancel the electronic system authorization for individual keys (e.g. in the event of loss). A deactivated key can no longer be used to start the engine.

How the electronics work

At the heart of this system is an electronic chip integrated into the key. The lock mechanism itself is actually a dual-function device, simultaneously serving as a communications interface designed to allow the security system to maintain a continuous stream of variable, vehicle-specific signals with the electronic circuitry in the key. The system will not release the ignition, fuel injection and starter unless it recognizes an "authorized" key.



External force can damage the electronic circuitry integrated in the key. Such a key can no longer be used to start the engine. ◀

Central locking system

The concept

The central locking system is ready for operation as soon as the front doors are closed. The system engages and releases the locks on the

- ▷ doors
- ▷ luggage compartment lid
- ▷ fuel filler door.

The central locking system can be operated

- ▷ from outside via the driver's door or luggage compartment lock and with the remote control
- ▷ from inside via the central locking button.

The fuel filler door remains unlocked when you activate the system from inside the vehicle.

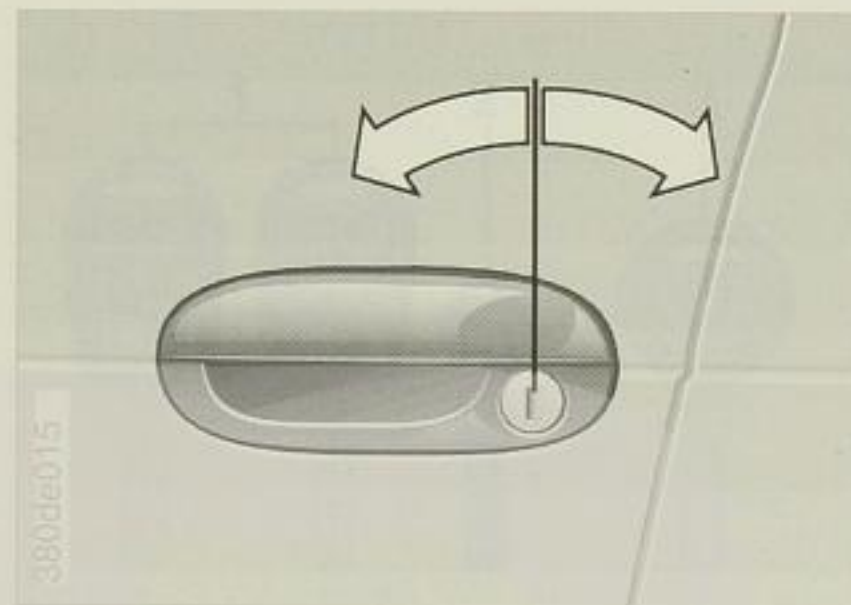
The anti-theft system is automatically armed whenever you activate the central locking system from outside the vehicle. Both the door locks and release handles remain locked.

The alarm system is also activated or de-activated.

You will find additional information on the alarm system on page 40.

Except for the functions "Switch on interior lamps" and "Open luggage compartment", all the remaining remote control functions can also be activated by using keys in the locks.

The central locking system responds to accidents by immediately releasing all door locks, but only if the individual lock buttons have not been engaged manually. The hazard warning flashers and the interior lamps also come on automatically.



To engage and release locks

One turn of the key in the door lock opens only the driver's door, a second turn of the key opens all other doors, the luggage compartment and the fuel filler door.

! Never lock an occupied vehicle from the outside, as it would be impossible for any persons remaining in the car to unlock it from the inside. ◀

Convenience operating mode

You can operate the electric power windows and sliding/tilt sunroof from the door lock.

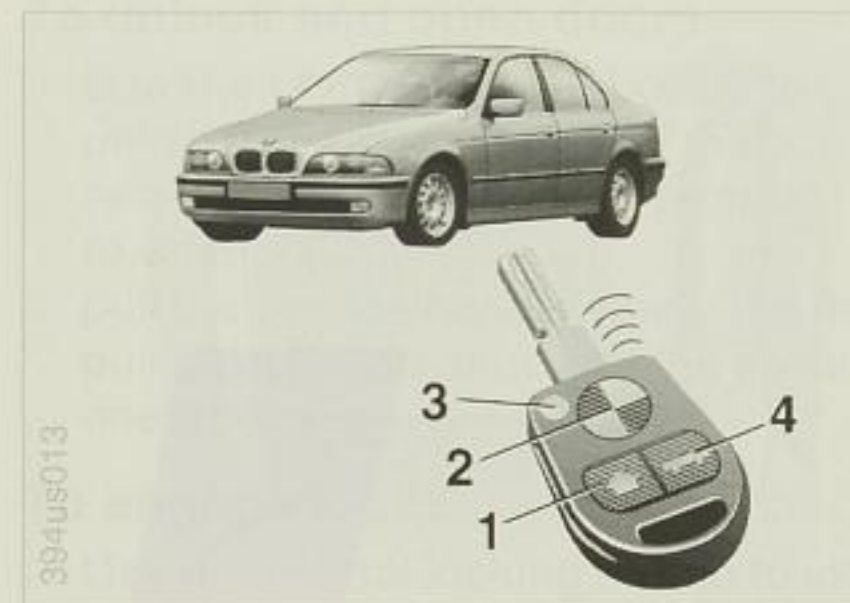
- ▷ To open: With the door closed, turn the key all the way to the left (unlock). Maintain pressure on the key to continue opening.
- ▷ To close: With the door closed, turn the key to the right (lock) and hold in its place.

The windows/sunroof stop moving immediately when you release the key.

Emergency lock operation (in the event of electrical failure)

Turn the key all the way to the extreme left or right to unlock/lock the door.

Remote control



To unlock car

Press button 1.

The central locking system releases all locks while simultaneously deactivating the alarm system and switching on the interior lamps.

Press the button once to unlock the driver's door only; press a second time to unlock all remaining doors as well as the luggage compartment and fuel filler door.

Convenience opening mode

You can also use your remote control transmitter to open the electric power windows and sliding/tilt sunroof:

Maintain pressure on button 1. Releasing the button immediately interrupts the opening process.

To lock and secure

Press button 2.

This also arms the alarm system.

! Never lock an occupied vehicle from the outside, as it then cannot be unlocked from the inside. ◀

To switch on interior lamps

After locking the car, press button 2 again.

Provided that you are within transmission range of the remote control, you can, e.g., use this feature to help locate your car in a crowded parking lot.

Deactivating the alarm system tilt sensor

After locking the car, briefly press button 2 a second time to deactivate the alarm system's interior motion sensors as well (refer to page 41).

To open luggage compartment

Press button 4

The luggage compartment lid opens slightly, regardless of whether the luggage compartment was previously locked or unlocked.

Panic Mode (triggering the alarm)

In case of imminent danger, you can hold down button 4 for 2 – 5 seconds to set off the alarm system when it is armed.

The alarm is deactivated by pressing button 1.

▶ The LED (Light-Emitting Diode) 3 lights up briefly when each button is pressed. Individual symbols on the remote control keys may differ from those shown. ◀

Master keys

The keys with the remote-control transmitters are also standard master keys.

To further enhance vehicle security, there is no external lock on the front passenger's door.



Children can lock the doors from inside. Therefore you should always remove the key and take it with you to ensure that you remain able to unlock the car from the outside at all times. ◀

Same-frequency interference

Operation of the remote control system may be affected by other units or equipment employing the same transmission frequency in the immediate vicinity of your car.

For US owners only:

The transmitter and receiver comply with Section 15 of the Federal Communication Commission (FCC) Rules. Operation is subject to the following three conditions:

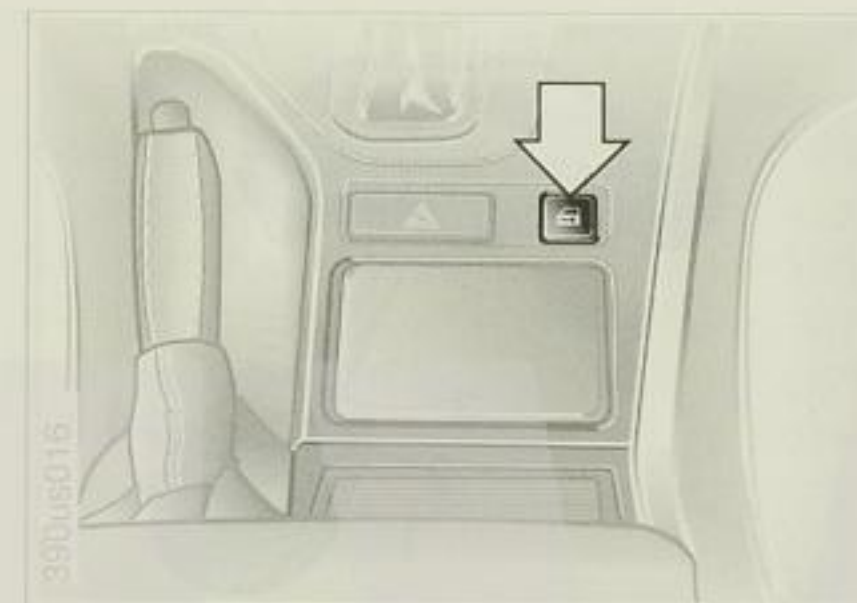
FCC ID: LX8EWS
LX8FZV
MAADA58XX

As defined in the regulations, this device must not emit harmful interference, and must be shielded against interference from external sources to prevent unauthorized or inadvertent activation.



Any unauthorized modifications or changes to these devices could void the user's authority to operate this equipment. ◀

Door locks – inside



Use this button to operate the central locking system when the front doors are closed. The button allows you to engage and release the doors and luggage compartment, but the anti-theft system is not activated. Also, the fuel filler door remains unlocked to allow refueling.



If only the driver's door has been unlocked from the outside, pushing the button the first time locks the driver's door again; pushing the button a second time unlocks all doors and the luggage compartment. ◀

Door locks – inside

To unlock and open doors

- ▷ Use the central locking button to unlock the doors, then pull the release handle above the armrest to open, or
- ▷ pull the release handle twice: the first pull unlocks the door, and the second one opens it.

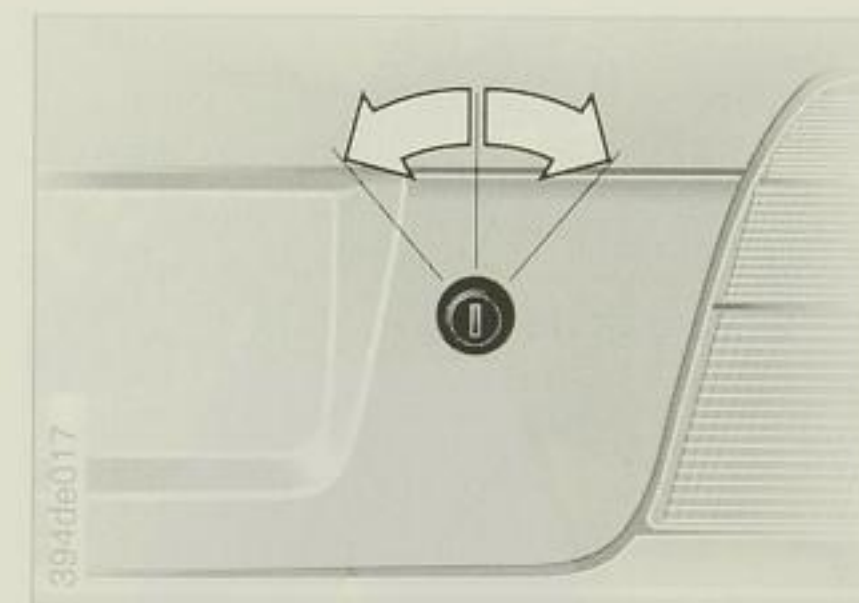
To engage locks

- ▷ Use the central locking button to lock all doors at once, or
- ▷ press down the individual door lock buttons. As an added design feature to prevent the driver from being inadvertently locked out of the vehicle, the driver's door lock will not engage as long as the door is open.

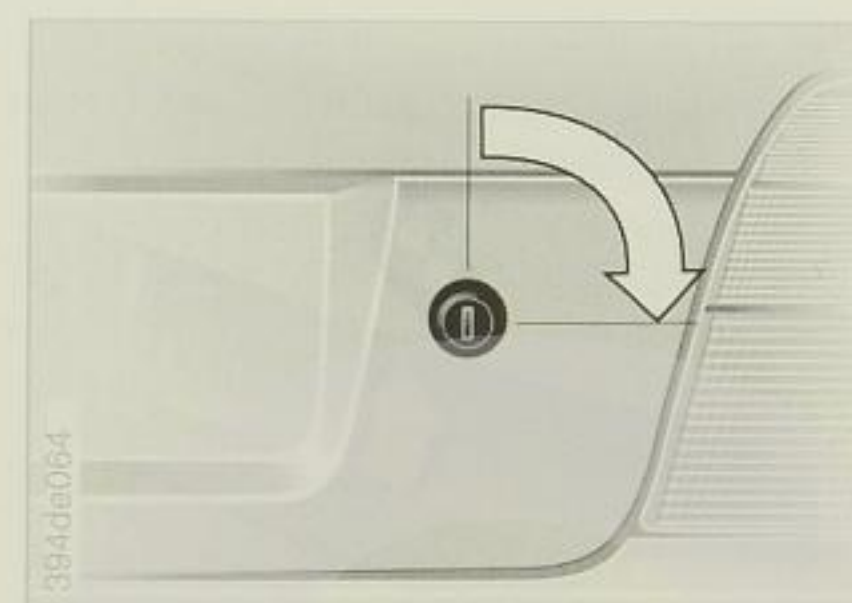


Avoid using the inside door buttons to lock the doors while driving, as they would then fail to unlock automatically in the event of an accident. As children might be able to lock the doors from the inside, you should always remove the key and take it with you to ensure that you remain able to unlock the car from the outside at all times. ◀

Luggage compartment lid



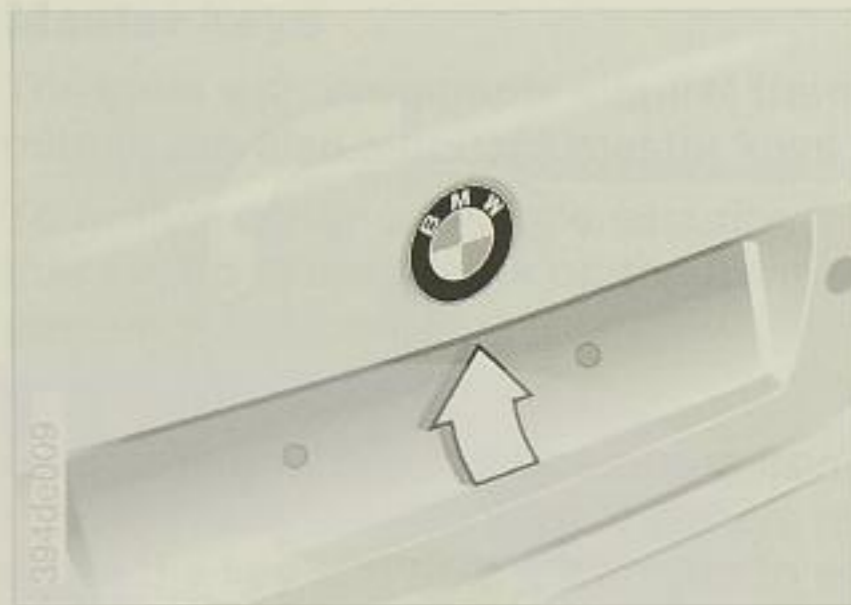
Only the master key (refer to page 32) fits in the lock of the luggage compartment.



Secure separately

Turn the master key to the right until the slot is horizontal, then remove the key from the lock.

This locks the luggage compartment lid and disconnects it from the central locking system. This feature can be used to prevent unauthorized access to the luggage compartment when you leave the door and ignition key 3 (refer to page 32) with parking lot attendants, hotel personnel, etc.

**To open from outside**

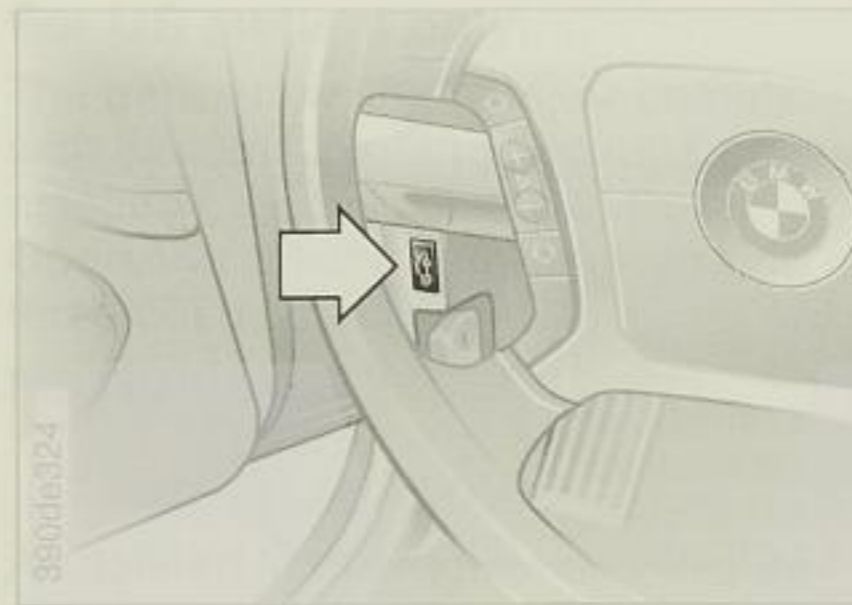
Press the button: The luggage compartment lid opens slightly.

Emergency lock operation

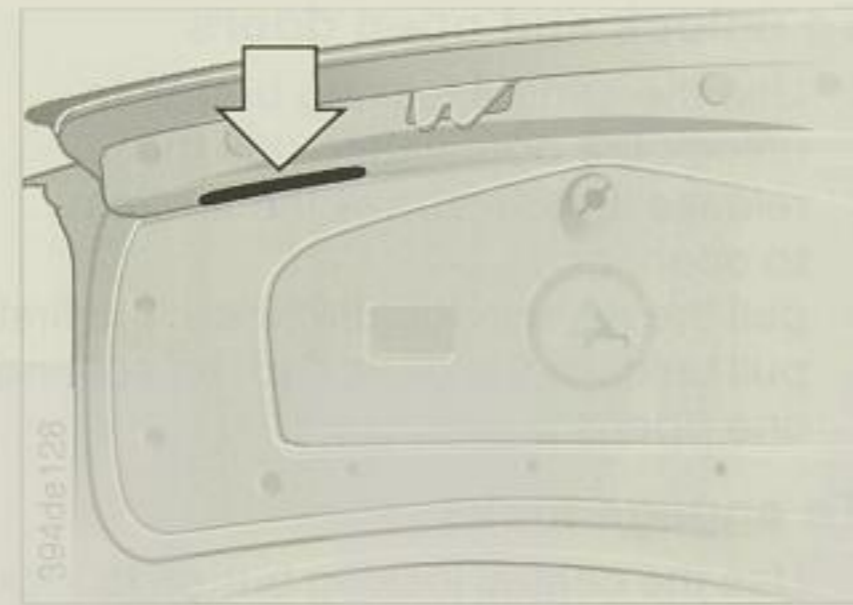
(in the event of electrical failure)

Turn the central key all the way to the left - the luggage compartment lid opens slightly.

The luggage compartment is locked again as soon as you close the lid.

**Opening from inside the car**

Provided the luggage compartment has not been locked separately, you can use this button to open it when the vehicle is stationary.

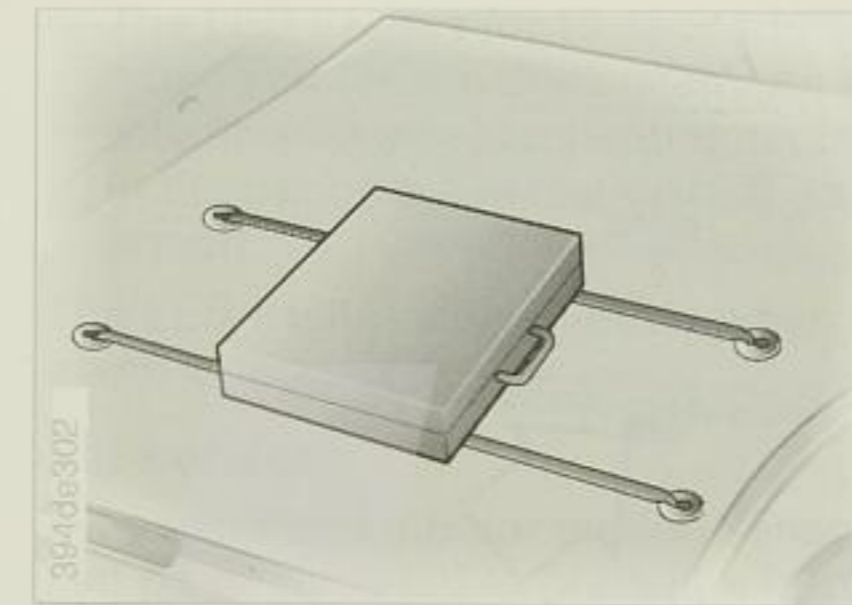
**Close the luggage compartment**

The handle recess (arrow) next to the lock mechanism is designed to assist you in closing the luggage compartment lid.

⚠ To prevent injury, make sure that the luggage compartment area is clear for closing. ◀

⚠ Do not drive with the luggage compartment lid open, as exhaust fumes could penetrate the interior of the vehicle. Should it be absolutely necessary to operate the vehicle with the luggage compartment lid open:

- ▷ Raise all windows and shut the sliding/tilt sunroof.
- ▷ Considerably increase the air flow through the interior via the automatic climate control system (refer to page 80). ◀

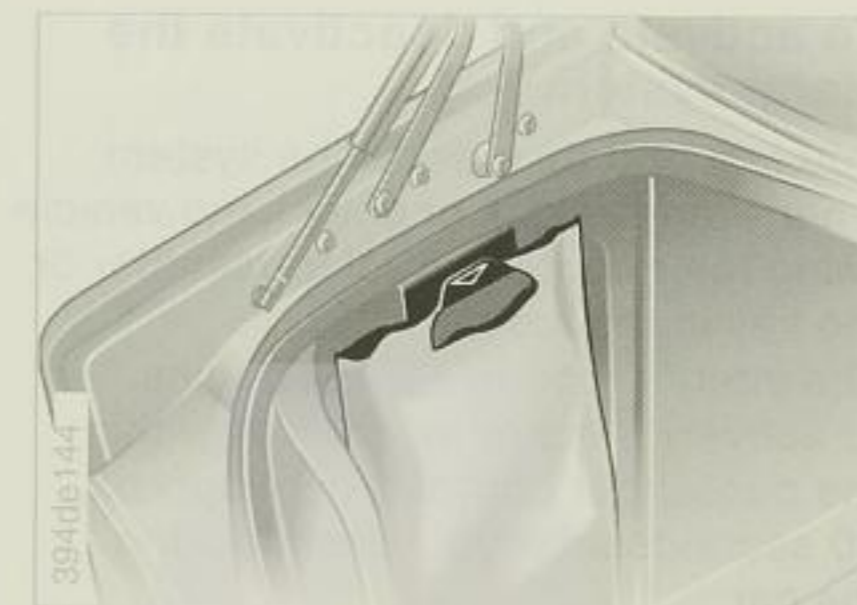
**Luggage straps**

Use the straps on the floor of the luggage compartment to secure smaller suitcases.

Movement is reduced, when objects are placed on the straps.

Lashing eyes are provided at the front corners and the rear panel of the luggage compartment as a convenient means of attaching luggage compartment nets* or elastic straps for securing luggage.

Also refer to "Cargo loading", page 93.

**Hanger**

On the left-hand side of the luggage compartment is a hanger for fastening packs, bundles, etc.

The vehicle alarm system responds:

- ▷ when a door, the hood or the luggage compartment lid is opened,
- ▷ to motions within the vehicle interior (interior motion sensor),
- ▷ to variations in the vehicle tilt sensor such as occur during attempts to steal the wheels or tow the vehicle
- ▷ to interruption of battery voltage.

The system responds to unauthorized vehicle entry and attempted theft by simultaneously activating the following:

- ▷ an alarm sounds for 30 seconds
- ▷ the hazard warning flashers operate for 5 minutes
- ▷ the high beams flash on and off in the same rhythm.

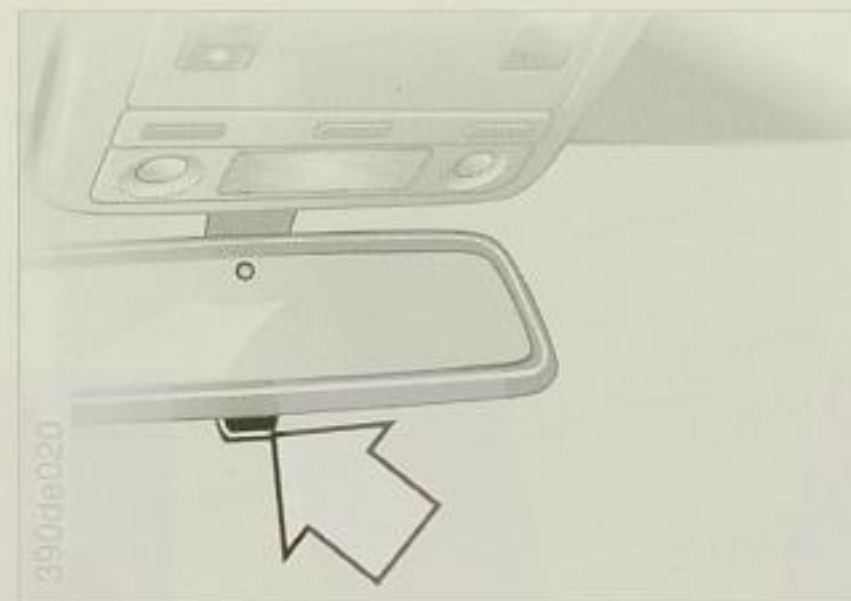
To activate and deactivate the alarm system

You arm and deactivate the system whenever you lock or unlock the vehicle using the remote control transmitter or the key in the locks.

The interior motion sensor begins to actively monitor movement within the passenger compartment approx. 30 seconds after you finish locking the car.

The system indicates that it has been correctly armed by switching on the hazard flashers for a single cycle and by emitting an acoustical signal.

When the system is active, you can still gain access to the luggage compartment by pressing button 4 on the remote control transmitter. When you close the luggage compartment it locks again.



LED displays

- ▷ The light emitting diode (LED) under the interior mirror flashes continuously: the system is armed.
- ▷ If the LED flashes while you are arming the system, the door(s), hood or luggage compartment lid are not completely closed. Even if you do not respond by securing the area concerned, the system starts to monitor all other areas and the LED flashes continuously after ten seconds. However, the interior motion sensor remains off.
- ▷ The LED goes out when you disarm the system: no manipulation or attempted intrusions have been detected in the period since the system was armed.

- ▷ The LED flashes for 10 seconds when you disarm the system: An attempted entry has been detected in the period since the system was armed.

The LED flashes continuously when an alarm is triggered.

Tilt sensor

Tilt sensor and interior motion sensor can be deactivated to prevent a false alarm from being triggered, e.g., in garages with elevator ramps, or when the vehicle is transported by trailer or train:

Lock the vehicle (arming the alarm system) twice in succession: Press button 2 on the remote-control transmitter two times, or turn the key in the door lock to the right (lock) twice in succession.

The LED lights up briefly and then flashes continuously. The tilt and interior motion sensors remain de-activated for as long as the system remains armed.



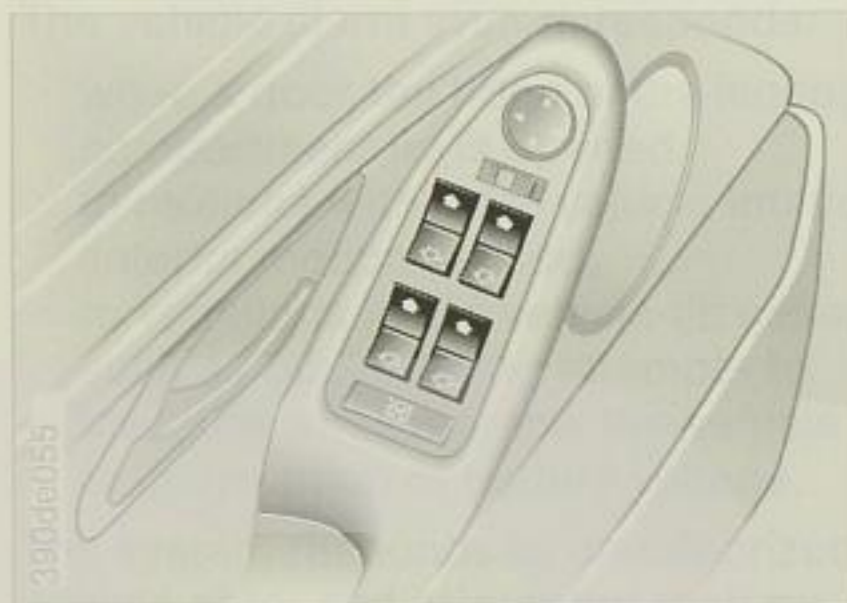
Interior motion sensor

The illustration shows the transmitter and receiver of the interior motion sensor.

To avoid false alarms, always ensure that the windows and sunroof are tightly closed before activating the motion sensor.

However, you should deactivate the interior motion sensor when

- ▷ children or animals are left in the vehicle
- ▷ the windows and/or sunroof are left open.

**Open and close windows**

From ignition key position 1:

- ▷ Depress the rocker switch until you feel resistance:
The window continues moving for as long as you maintain pressure on the switch.
- ▷ Press the rocker switch beyond the resistance point:
The window moves automatically. Press the switch a second time to stop the window.

After the ignition has been switched off:

- ▷ you can still operate the windows as long as neither of the front doors has been opened. To open the window, press the switch beyond the resistance point.



As children could attempt to operate the power windows, possibly leading to injury, you should always remove the key from the ignition when leaving the vehicle. ◀

Convenience mode for operating windows via remote control and from driver's door lock: refer to pages 34 and 35.

Safety feature

A contact strip is integrated into each of the upper window frame sections. If pressure is exerted against this contact strip while a window is being raised, the system will respond by stopping the window and then retracting it a small distance.



You can disable this safety system (e.g. in the event of an unauthorized entrance of the vehicle), by pressing the switch beyond its pressure point and holding it there. ◀



As the power windows are sealed at high pressure to prevent wind noise when closed, a powerful motor is required for efficient closing. When closing the windows, always ensure that they are not obstructed in any way. Unsupervised use of these systems can result in serious personal injury. Remove the ignition key to deactivate the electric power windows whenever you leave the car. Never leave the keys in the car with unsupervised children. Never place anything that could obstruct the driver's vision on or next to the windows. ◀

**Safety switch**

You can use the safety switch to deactivate the rear power window switches (e.g., when children are riding in the rear seats).



Always press the safety switch when children are riding in the rear of the car interior. Careless use of the power windows can lead to injury. ◀



To prevent injuries, you should always exercise care when closing the sunroof, being sure to keep it within your field of vision until it is shut.

Before leaving the car, switch off the electric sunroof mechanism by taking out the ignition key. Do not leave children unattended in the vehicle with access to vehicle keys. Use of the key can result in starting of the engine and operation of vehicle systems such as power sunroof, etc. Unsupervised use of these systems can result in serious personal injury. ◀

To avoid unpleasant drafts and pressure variations within the passenger compartment, you should refrain from closing the interior ventilation outlets when the sunroof is open. You can further stabilize the cabin pressure by selecting a higher blower speed.

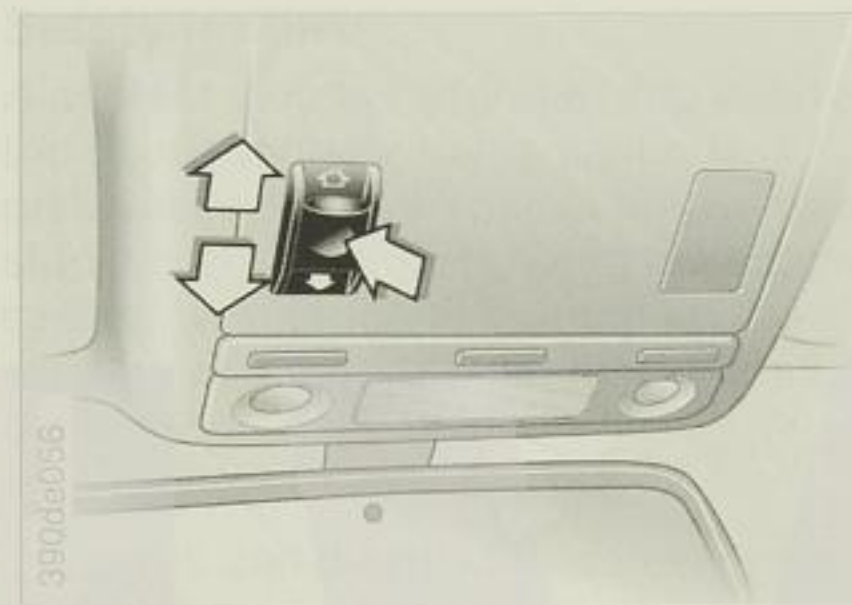
Convenience mode for operating sunroof via remote control and from driver's door lock: refer to pages 34 and 35.

Safety feature

If the sliding/tilt sunroof encounters resistance at a point roughly halfway through its travel range when closing, it will respond by halting and then retracting a small distance.



You can disable this safety system (e.g. in the event of an unauthorized entrance of the vehicle), by pressing the switch beyond its pressure point and holding it there. ◀



Lifting - opening - closing

From ignition key position 1 press the switch or slide it to the desired direction until you feel resistance.

When lifting the headliner retracts several inches.

After the ignition has been switched off, you can still operate the sliding/tilt sunroof as long as neither of the front doors has been opened.

Sliding/tilt sunroof*

Automatic* opening and closing

Press the corresponding end of the control switch past the resistance point and then release it.

Other automatic operations are:

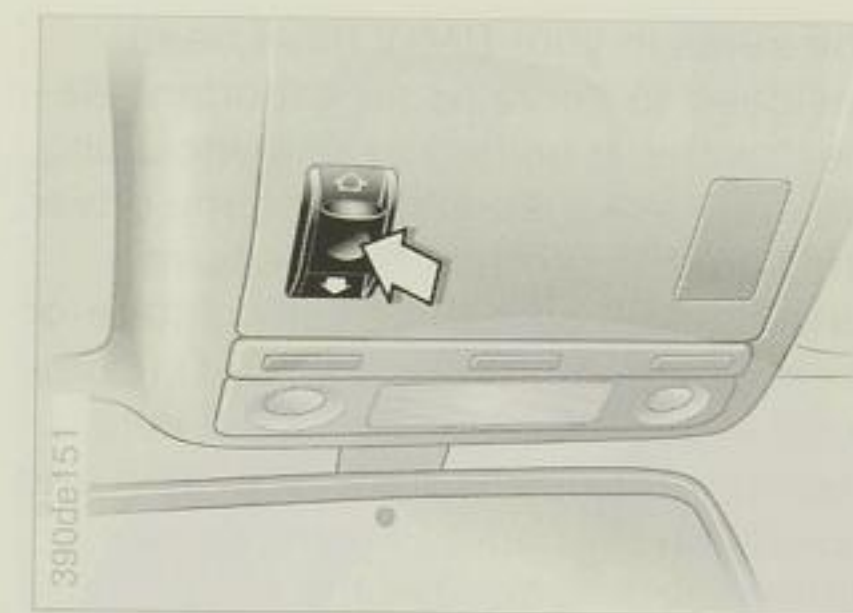
- ▷ With the sunroof open, press the switch towards "Lift":
The sunroof automatically extends to its fully raised position.
- ▷ With the sunroof raised, press the switch towards "Open":
The sunroof automatically opens all the way.

Sliding/tilt sunroof with glass moonroof*

The options and control procedures are essentially the same as those previously described for the sliding/tilt sunroof.

In order to open the raised roof, press the control switch towards "Open" until the roof has reached the desired position.

The headliner insert slides back somewhat when you raise the sunroof. When the sunroof is opened the headliner retracts with it. The headliner will then automatically remain in its retracted position, but can be repositioned as required.



Power loss or malfunction

After interruptions in electrical supply (e.g., when the battery is disconnected), the sunroof will only lift. To reinitialize the mechanism:

- 1 raise the sliding/tilt sunroof all the way;
- 2 hold the switch pressed for approximately one more second.


In the event of an electrical malfunction you can also operate the sliding/tilt sunroof manually - refer to page 145.

The seats in your BMW have been designed to serve as an important element within a unified system including the road, the suspension and the driver. They are the product of extensive development carried out using state-of-the-art technology such as CAD (Computer Aided Design) and FEA (Finite Element Analysis), followed by test and evaluation procedures using specialized electronic equipment.

The seats' compliance rates are precisely calibrated for optimum performance in combination with your own car's suspension, while each seat's stable support structure operates together with the safety belt, the safety belt tensioner and the airbag to ensure maximum occupant safety. Relaxed and fatigue-free driving comfort – even on extended journeys – is furnished by orthopedically shaped, multilayer upholstery featuring natural fiber material and an extensive system of internal ventilation channels. Lumbar support and shoulder cushions allow individually tailored support for your entire spinal column.

Seat adjustment

For maximum safety, please observe the following:

 Never try to adjust your seat while operating the vehicle. The seat could respond with unexpected movement, and the ensuing loss of vehicle control could lead to an accident.

Ensure that the safety belt remains firmly against your body at all times. In a frontal impact, a loose safety belt could slide past the hips and exert direct pressure against the abdominal area, possibly leading to injury. If the safety belt is loose, there will also be an extended delay before it can start to exert effective restraint in an accident.

Never ride with the backrest reclined to an extreme horizontal angle (especially important for front passengers to remember). Keep the backrest relatively upright to minimize the risk of "sliding under" the safety belt and sustaining injury in an accident.


To prevent the shoulder strap's automatic height adjustment mechanism from disengaging, do not slide the seats to the rear when the vehicle is at an extreme angle (e.g., on garage ramps or steep slopes). ◀

Electric power seats



- 1 Cushion tilt sensor
- 2 Longitudinal adjustment
- 3 Cushion height
- 4 Backrest angle
- 5 Head restraint height

Adjust the inclination of the headrest by tilting it.

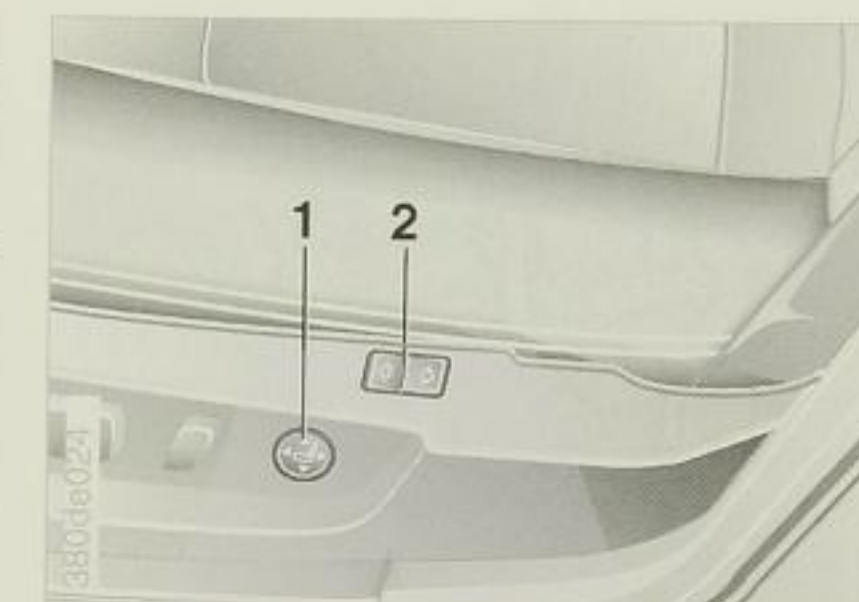
 Head restraints reduce the risk of spinal injury in an accident. Adjust the middle of the head restraint to roughly ear height. ◀

Electric power seats

To reduce strain on the spinal column, sit all the way back in the seat and rest your back fully against the backrest. Ideal sitting posture is achieved with your head extending from your spine in a straight line.

For long-distance driving, you may wish to increase the backrest tilt angle slightly to reduce muscular tension. Please remember that you should always remain able to grasp the entire periphery of the steering wheel without straightening your arms.

BMW Comfort Seat*



This seat provides you with additional adjustment options for the shoulders and lumbar region.

1 Lumbar support

- ▷ Press front/rear of switch: Increase/decrease curvature.
- ▷ Press the upper/lower end of the switch: Curvature moves upward/downward.

You can adjust the backrest's contour for additional support in the curvature of your spine's lumbar region.

The upper hips and spinal column receive supplementary support to help you maintain a relaxed, upright posture.



2 Shoulder support

Press the rocker switch to adjust the tilt angle of the shoulder support.

You can use the adjustable upper backrest for supplementary support in the shoulder region. This provides a relaxed driving position and helps relieve stress on the shoulder muscles.

To obtain an optimal seating posture, we recommend:

Driver and front passenger:

- 1 adjust the upper backrest section to its extreme rear position
- 2 adjust optimal seating posture as shown in left column
- 3 bring the upper backrest section forward until your shoulders enjoy firm support.

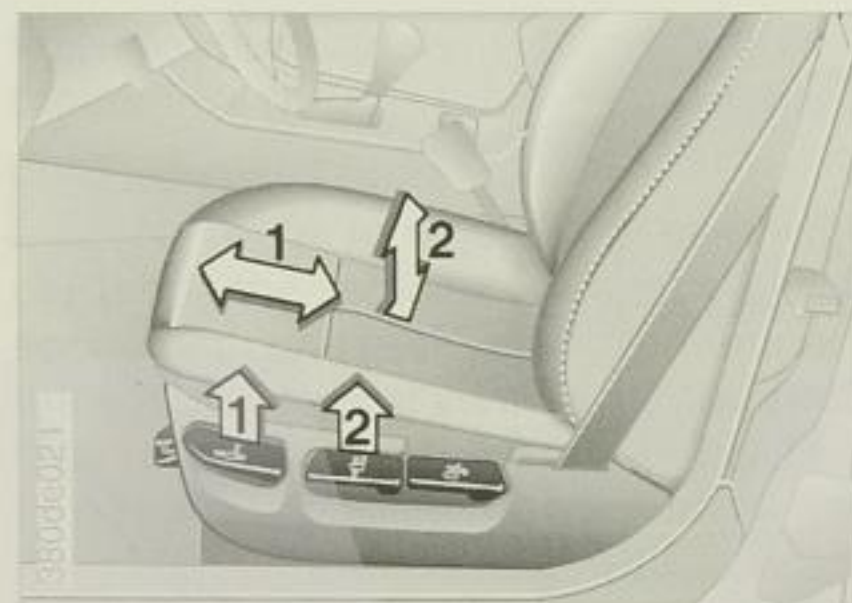
Front passenger's seat adjusted for relaxed driving:

- 1 adjust the upper backrest section to its extreme rear position
- 2 increase the seat cushion tilt
- 3 tilt the backrest more
- 4 bring the upper backrest section forward.

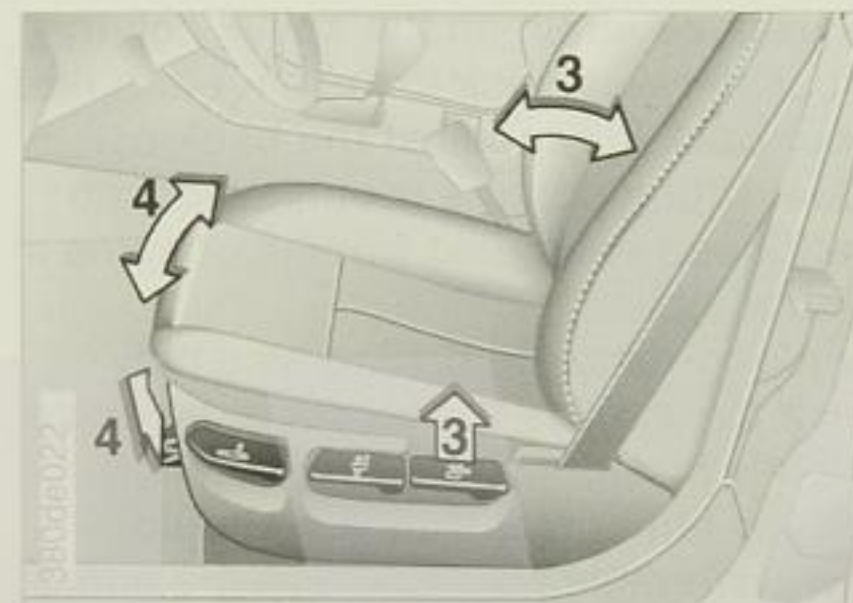


Move the seat forward or back to ensure that the safety belt remains firmly pressed against your body, otherwise the protection provided by the safety belt may be reduced. ◀

BMW Sports Seat*



- 1 Longitudinal adjustment
Pull up the lever and slide the cushion into desired position. After releasing the lever apply pressure to the cushion to ensure that the latch engages securely.
- 2 Cushion height
Pull up the lever to release the detent. You can now raise the seat by lifting yourself to reduce the weight on the cushion, or lower it by pressing down.

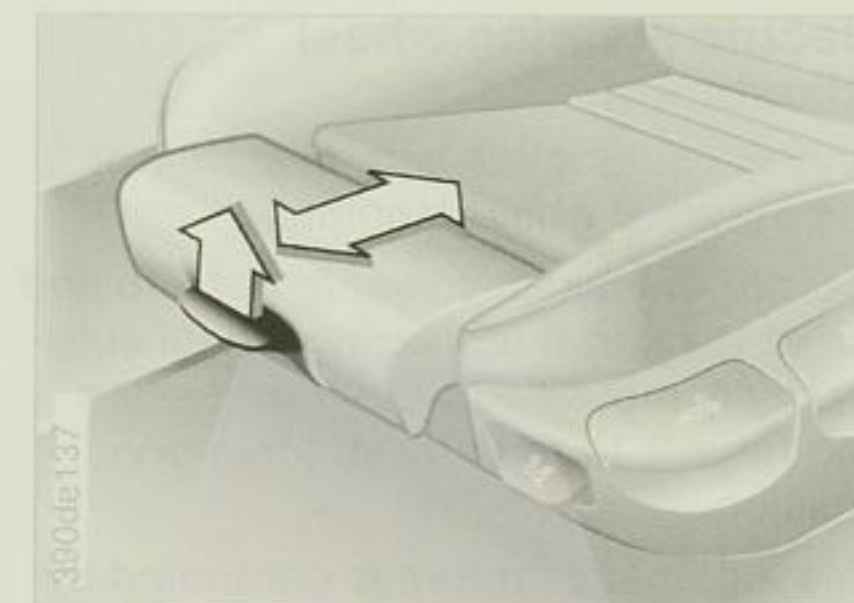


- 3 Backrest angle
Pull the lever and load or relieve the backrest as required.
- 4 Tilt angle
Pull lever and move seat as required.

BMW Sports Seat*

To reduce strain on the spinal column, sit all the way back in the seat and rest your back fully against the backrest. Ideal sitting posture is achieved with your head extending from your spine in a straight line.

For long-distance driving, you may wish to increase the backrest tilt angle slightly to reduce muscular tension. Please remember that you should always remain able to grasp the entire periphery of the steering wheel without straightening your arms.



This seat is equipped with a supplementary adjustment for the lower thigh region:

Pull the lever and adjust the thigh support to the desired position.

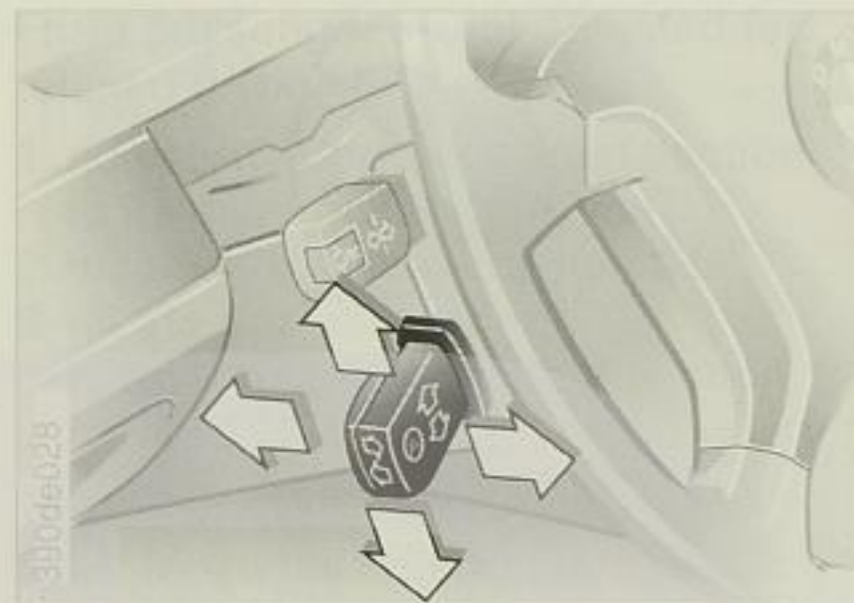


Head restraints


Swivel the restraint back or forward to adjust the tilt angle and press it down or pull it upward to obtain the desired vertical adjustment.



Head restraints reduce the risk of spinal injury in an accident. Adjust the middle of the head restraint to roughly ear height. ◀

**Electric**

The steering wheel can be moved in any of four directions. Adjust by moving the control lever in the desired direction.

 Never adjust the steering wheel while driving as an unexpected movement may result in an accident. ◀

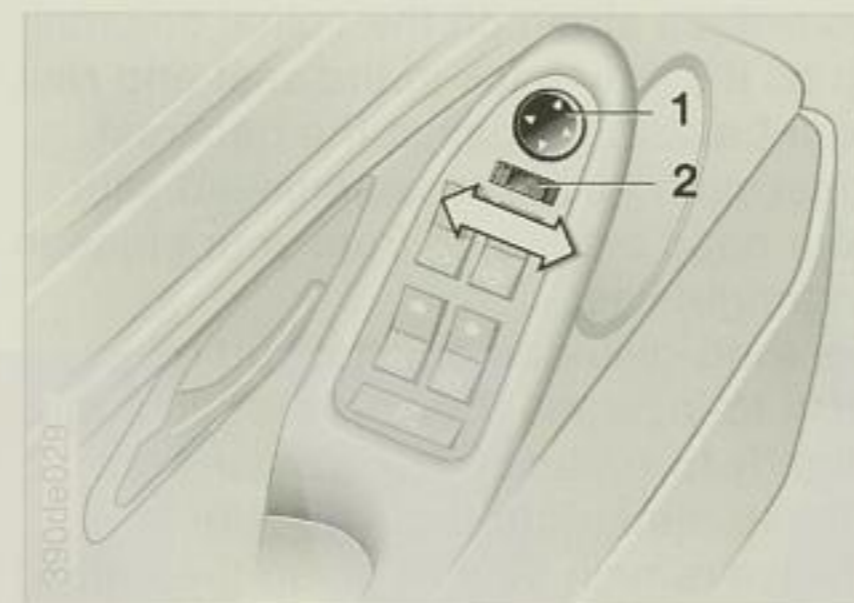
To store the steering wheel setting, refer to "Seat, mirror and steering wheel memory" on page 52.

Electric steering wheel adjustment

(only in conjunction with seat, mirror and steering wheel memory)

In order to make it easier to get into and out of the car, the steering wheel automatically moves into the top position and returns to the driving (memory) position.

This automatic feature is controlled by the position of the ignition key and by the driver's door.


Mirrors**Exterior mirrors**

- 1 Mirror switch for 4-way adjustment.
- 2 Left/right selection switch.

You can also adjust the mirrors manually by pressing against the outer edges of their lenses.

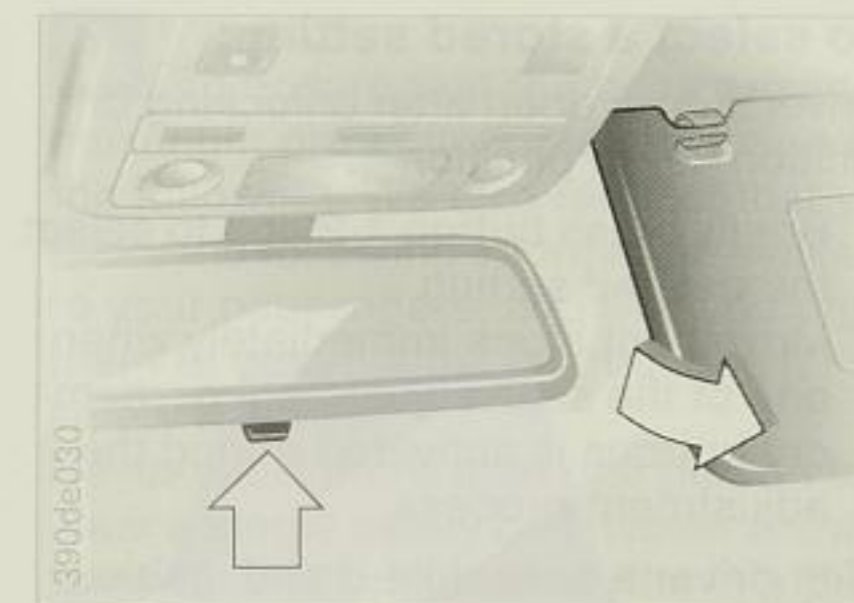
To store the mirror angles: refer to "Seat, mirror and steering wheel memory" on page 52.

Mirrors

 The mirror on the passenger's side features a lens with a more convex curvature than the mirror installed on the driver's side. When estimating the distance between yourself and other traffic, bear in mind that the objects reflected in the mirror are closer than they appear. This means that estimations of the distance to following traffic should not be regarded as precise. This precaution also applies to the aspherical outer sections on the mirror's lens. ◀

Electric heaters

Both mirrors are heated automatically, depending on the outside temperature, with the ignition key in position 2.

**Inside rearview mirror**

You can reduce glare caused by following vehicles by tilting the lever to the dimmed position.

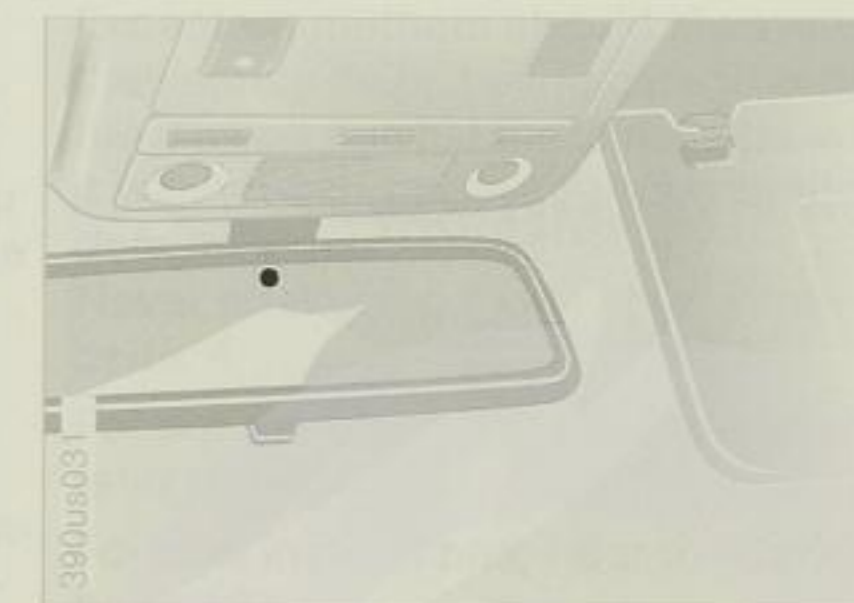
Lighted vanity mirror

Fold down the sun visor and slide the cover panel to the side as required.

The mirror lamps operate from ignition key position 1 onward.

Sun visors

These can be folded down toward the windshield or swiveled out against the side windows.

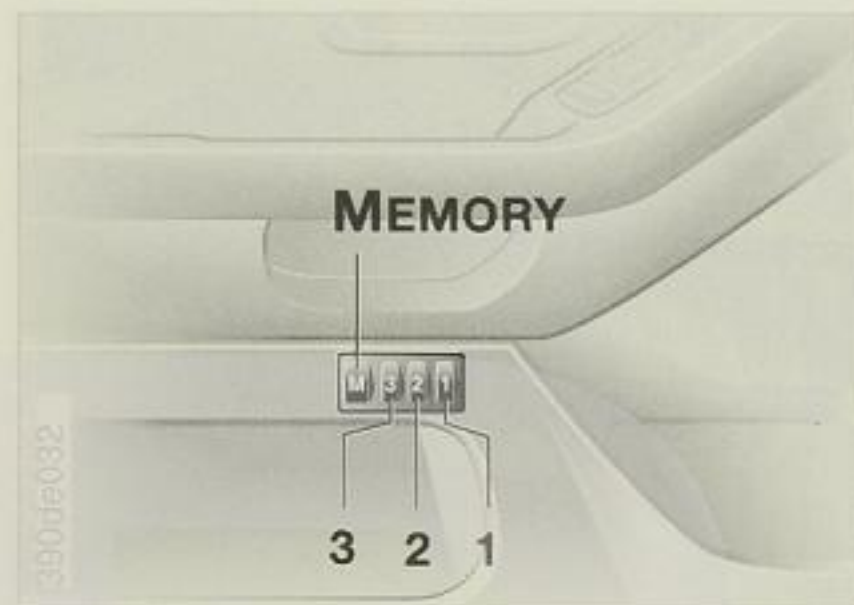
**Inside rearview mirror with automatic dimming feature***

This mirror automatically responds to light (ambient light and headlamp glare) by dimming through an infinitely variable range.

The mirror automatically reverts to its clear, undimmed setting whenever you select "Reverse".

To ensure that the mirror continues to operate properly, keep the two photocells clean and unobstructed. One photocell is integrated in the mirror glass, the other somewhat offset on the back of the mirror.

For an explanation of the electro-chromic technology used in this mirror refer to page 154.



You can store and call up three different seat, exterior mirror and steering wheel positions. The illustration shows the buttons on the driver's door, for making these position adjustments.



The system does not include a provision for storing lumbar-support adjustments. ◀

To store

- 1 Ignition key at position 1 or 2.
- 2 Adjust the seat, exterior mirrors and steering wheel to the desired position.
- 3 Press the **MEMORY** button: the indicator lamp in the button comes on.
- 4 Press memory button 1, 2 or 3, as desired: the indicator lamp goes out.

To select a stored setting:

Driver's door open after unlocking or ignition key in position 1:

- ▷ Briefly press button 1, 2 or 3 to select the desired setting. Movement stops immediately when one of the seat-adjustment or memory buttons is activated during the adjustment process.

With driver's door closed and ignition key either removed or in position 0 or 2:

- ▷ Maintain pressure on desired memory button 1, 2 or 3 until the adjustment process is completed.

If you press the **MEMORY** button accidentally: Press the button a second time, the indicator lamp goes out.



Never call up the memory while driving, as an unexpected seat or steering wheel movement may result in an accident risk. ◀



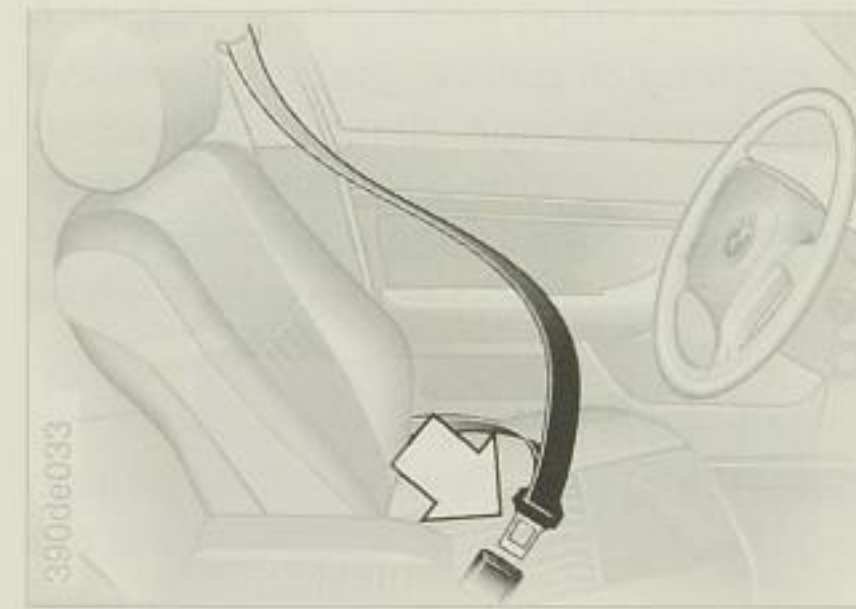
Passenger side exterior mirror tilt function

(automatic curb monitor)

- 1 Set the mirror switch (arrow) in the position "Driver's mirror".
- 2 When the selector lever is placed in "Reverse", the passenger-side mirror tilts downward to help the driver monitor the area directly adjacent to the car during parking (curbs, etc.).

You can deactivate this automatic feature by setting the mirror selection switch to the "passenger side" position.

Safety belts



Always fasten your safety belt before starting off.

To fasten: Make sure you hear the lock engage in the belt buckle.

To release: Press the red button in the buckle. Hold the belt and guide it back into its reel.

The shoulder belt anchor automatically adjusts to continue providing an optimum fit when you move the seat forward or back.

The safety belt inertial mechanism also locks:

- ▷ in a sudden stop or crash
- ▷ when you pull it sharply
- ▷ during abrupt braking or acceleration
- ▷ in curves
- ▷ when the vehicle is at an extreme angle.



To ensure that the belts provide maximum protection, please observe the following. We also request that you make the following information available to your passengers, and that you urge them to observe the instructions for safety belt use:

Never allow more than one person to wear a single safety belt. Never allow infants or small children to ride in a passenger's lap.

Avoid twisting the belt while routing it firmly across the hips and shoulder. Do not allow the belt to rest against hard or fragile objects in your pockets. Never route the belt across your neck, do not run it across sharp edges and ensure that the belt does not become caught or jammed.

The belt should rest as firmly as possible against your body. You should thus avoid wearing clothing that prevents it from doing so. Pull the belt periodically to retension it across your shoulder. In the event of a frontal impact, a loose lap belt could slide over your hips, leading to abdominal injury. Due to the increased distance between belt and body, there would also be a delay before restraint becomes effective.

Expectant mothers should always wear their safety belts, taking care to position the lap belt against the lower hips, where it will not exert pressure against the abdominal area.

Never attempt to modify the safety belts. ◀

For child restraint system installation, refer to page 57.

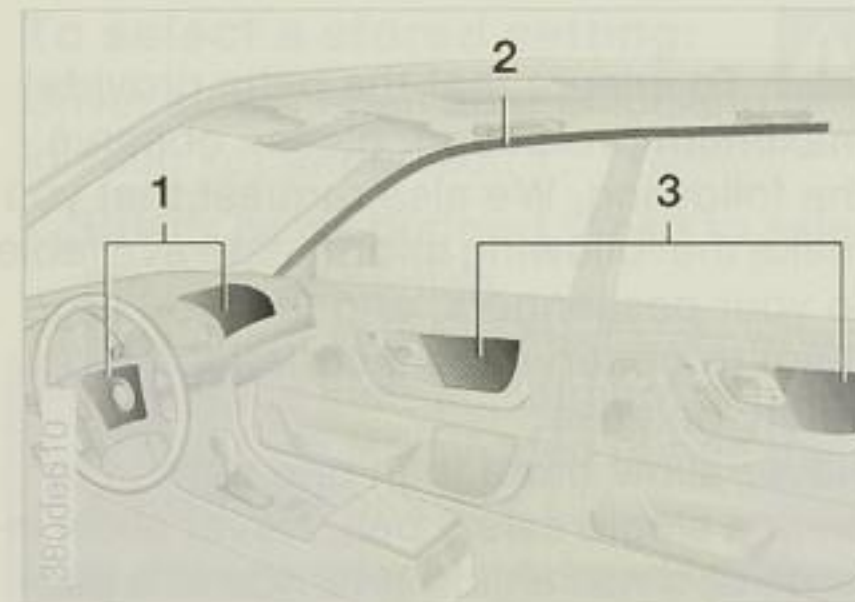
For care instructions, refer to "Car care" page 127.



Vehicles with cargo loading*: Please refer to information on center rear safety belt on page 90.



Never install a rear-facing child restraint system on the front passenger's seat, as otherwise serious or fatal injuries will occur when the airbag inflates. To ensure that the child restraint system continues to provide your child with optimal protection, you should never attempt to modify it in any way. ◀

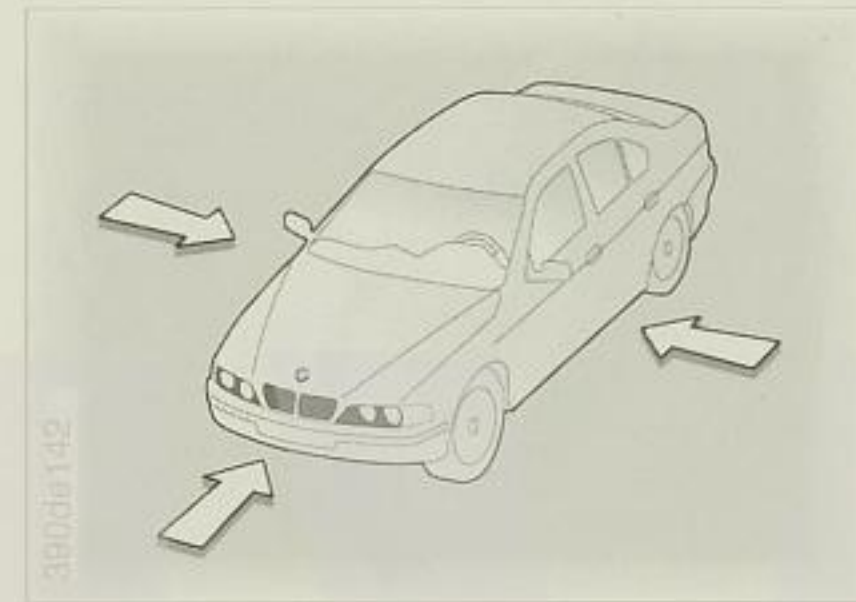


- 1 Front airbag system, consisting of driver and passenger airbag
- 2 Side impact Head Protection System (HPS)
- 3 Front and rear side airbags*

Protective effect

The front airbags supplement the three-point safety belts by providing additional protection for the front-seat occupants, in the event of a severe frontal collision in which the protection afforded by the belts alone may no longer be sufficient.

In the case of severe side collisions, the side airbags increase the protection for the front and rear-seat occupants and the side impact Head Protection Systems additionally protect the driver and front passenger.



The airbags are triggered by impacts coming from the directions shown in the illustration. Note that the supplementary protection against lateral impact is available only on vehicles equipped with optional door-mounted airbags.

Indicator lamp



The indicator lamp shows that the system is operational from ignition key position 1.

System operational:

- ▷ The indicator lamp comes on briefly then goes out.

System malfunction:

- ▷ The indicator lamp fails to come on.
- ▷ The indicator lamp comes on briefly before going out and then lighting up again.

A system malfunction could prevent the system from responding to an impact occurring within its normal response range. Please have your authorized BMW Retailer inspect and repair the system as soon as possible.



The airbag indicator lamp also comes on if the safety belt lock tensioners are activated. ◀



For your own safety and that of your passengers, we strongly urge you to help ensure that the restraint systems continue to provide optimal protection at all times by observing the following instructions. We also request that you make the information below available to your passengers, and that you urge them to observe the instructions for safety belt use:

The airbags are supplemental restraint devices designed to provide extra protection; they are not a substitute for safety belts. Wear your safety belt at all times. The airbag system does not respond to minor collisions, if the vehicle rolls over, or in the event of an impact at the rear of the vehicle. Here, your safety belt remains your sole source of protection.

When adjusting your seat, select a position that provides the maximum distance between you and the steering wheel/instrument panel/door while still allowing

comfortable and safe access to all vehicle controls.

To avoid sustaining hand and arm injuries: Always grasp the steering wheel on the rim with the hands at the 9 and 3 o'clock positions, not the center cushion.

Never allow any objects to obstruct the area between the airbag and the driver/passenger.

Do not use the cover panel above the passenger-side airbag as a storage area. Do not apply tape or stickers to the cover panel of the steering wheel, to the instrument panel or the side paneling of the front doors and roof pillars or the ceiling paneling and do not cover or otherwise modify them. Otherwise the airbags may not function in the intended manner.

Do not install a rear-facing child-restraint device on the front passenger seat. ◀

Make sure that child restraints are installed correctly on the rear seat as far as possible from the door. Do not allow children to lean out of the child's seat toward the door, as otherwise serious injuries may result if the airbag is triggered. Even when all these guidelines are observed, there is still a small residual risk of injuries to the face, hands and arms occurring in isolated instances. The ignition and inflation noise may provoke a mild temporary hearing loss in sensitive individuals.

Airbag warning information is also provided on the sun visors.

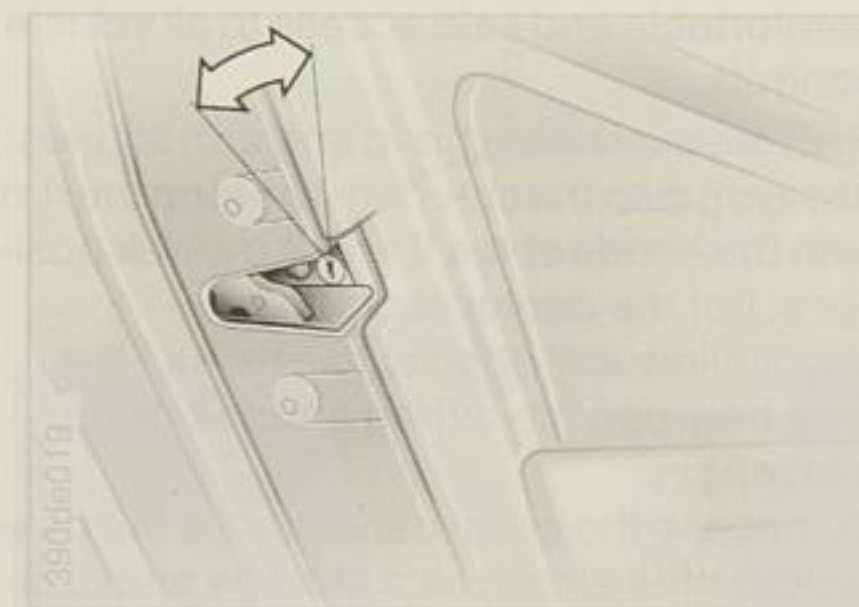


This is the right way a child should sit in a child restraint when rear side airbags (arrow) are provided.



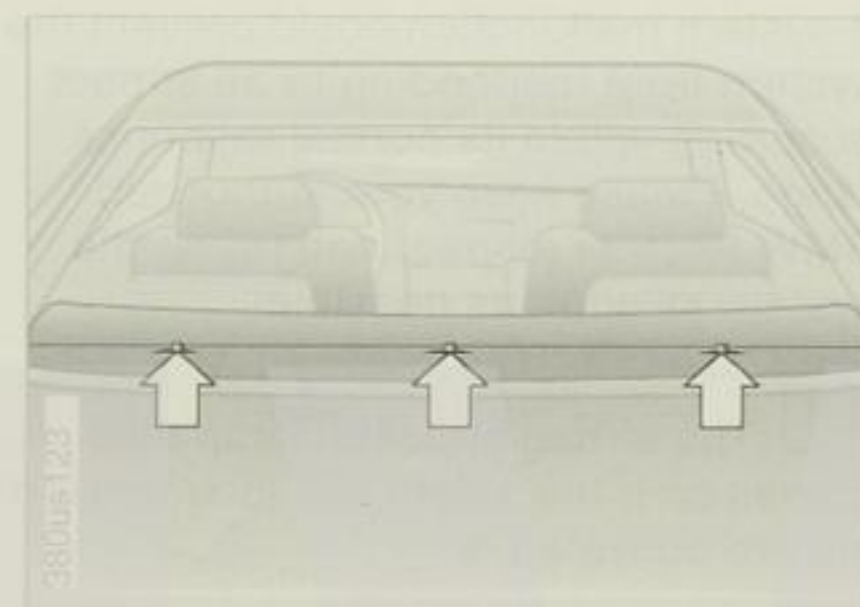
This is the right way a larger child should sit wearing the safety belt when rear side airbags (arrow) are provided.

Child-safety locks



Insert the key into a rear door lock and turn it outward:
The door can now be opened from the outside only.

Child restraints*



All occupants - especially children - should be restrained whenever riding in a motor vehicle.

Infants or small children should never be held on the lap of a passenger.

Children should always sit in the rear and use, depending on age, either a child restraint system or the existing safety belts. Accident statistics have shown that children are safer when properly restrained in the rear seats than in the front seating positions.

Infants or toddlers should be secured with a child restraint system appropriate for their size.

Children six years and older may wear safety belts.

Child restraints*

Commercially available child seats complying with the legal standard are designed to be secured with a safety belt or with the safety belt portion of a combination lap/shoulder belt. Improperly or inadequately installed restraint systems can increase the risk of injury to children. Always read and follow the instructions that come with the system.

If the child restraint of your choice requires the use of a tether strap, three fastening points (see arrows, illustration on page 56) have been provided on the rear shelf for attachment. Ask your BMW Retailer to perform the necessary work.

! Before installing any child-restraint device or child seat, please read the following:

Never install a rearward-facing child-restraint system in the front passenger seat of this car.

Your car is equipped with an airbag supplemental restraint system for the front passenger. Because the backrest on any rear-facing child restraint system (of the kind designed for infants under 1 year and 20 lbs.) would be within the airbag's deployment range, you should never mount such a device

in the front passenger seat, as the impact of the airbag against the child restraint's backrest could lead to serious or fatal injuries.

If it is necessary for a child (not an infant) to ride in the front seat, certain precautions should be taken. First, move the passenger seat as far away from the dashboard as possible. This important precaution is intended to maximize the distance between the airbag and the child. Older children should be tightly secured with the safety belt. Younger children should be secured in an appropriate forward-facing child restraint system that has first been properly secured with a safety belt. Never install a rear-facing child restraint system in the front passenger seat. We strongly urge you to carefully read and observe the instructions for installation and use provided by the child restraint's manufacturer whenever you use such a device.

Always ensure that all occupants (of all ages) remain properly and securely restrained at all times. ◀

All rear seating positions in your vehicle meet the recommendations of SAE J1819, an industry recommended practice for securing child restraint systems in motor vehicles.

Restraint installation



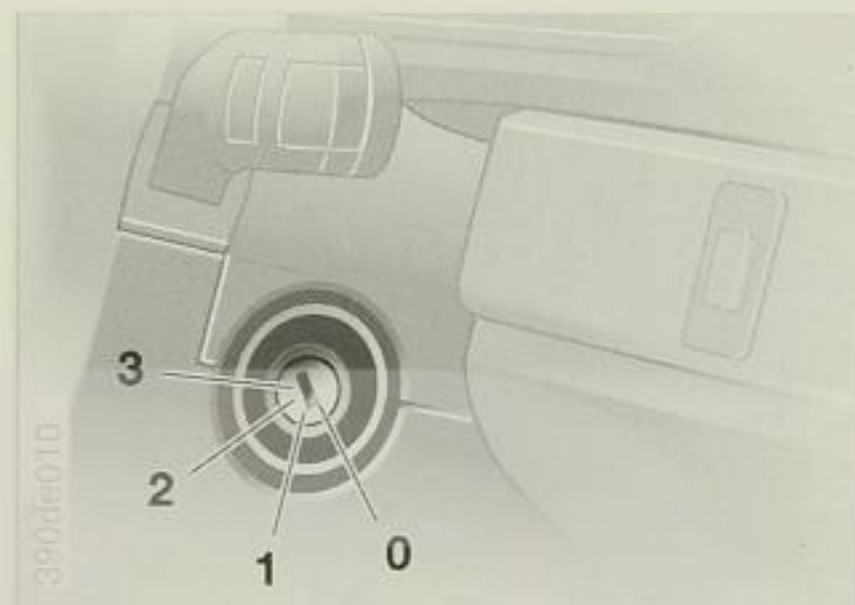
To allow you to use the safety belts to secure child restraint systems, the belts at all rear positions and the front passenger seat feature a special locking mode. A label with operating instructions is attached to the belt next to the latch plate.

To lock the belt

Extract the entire length of the belt from the inertia reel mechanism. Allow the reel to retract the belt somewhat and engage the buckle, then tighten the belt against the child restraint system. The retraction mechanism is now locked. The belt cannot be extracted further. Always observe the installation instructions provided by the manufacturer of the child restraint system.

To release the belt

Release the buckle, remove the child restraint device and allow the inertia reel to retract the belt completely.

**0 Steering lock engaged**

This is the only position in which the ignition key can be inserted and removed.

After extracting the key, turn the steering wheel a small amount to the left or right until you hear the lock engage.

Vehicles with automatic transmission:

To move the selector lever out of P, the ignition key must be turned at least to position 2.

Your vehicle is equipped with an interlock; therefore, the ignition key cannot be turned to position 0 and removed until the selector lever is in position P.


1 Steering lock disengaged

You will often find that it is easier to turn the ignition key from position 0 to 1 when you move the steering wheel slightly to help disengage the lock.

2 Ignition on


All electrical equipment and accessories are available for use.

3 Starter activation

 Vehicles with manual transmission: Step on the clutch when starting the vehicle, otherwise a lock prevents the engine from starting. ◀


Starting engine**Before starting**

- ▷ Engage parking brake.
- ▷ Ensure that the transmission selector is in "Neutral" (or "Park" if vehicle is equipped with automatic transmission).
- ▷ Step on the clutch pedal.

 **Never** allow the engine to run with the vehicle standing in an enclosed area. The exhaust gases contain carbon monoxide, an odorless and colorless, but highly toxic gas. Breathing the exhaust gases poses an extreme health risk, and can lead to unconsciousness and death. Never leave the car unattended with the engine running, as such a vehicle represents a potential safety hazard. ◀

Starting engine

- ▷ Start the engine. Do not press the accelerator pedal.

 BMW 528i, BMW 540i with manual transmission:

You should not release the starter prematurely, but you should also avoid holding it engaged for more than 20 seconds. Release the ignition key immediately as soon as the engine starts.

Do not allow the engine to warm up by leaving it running while the vehicle remains stationary. Instead, drive off immediately at a moderate engine speed.

BMW 540i with automatic transmission: Your BMW is equipped with the convenience starting feature. Simply turn the key to position 3 (starter) and then release it immediately.

The starter automatically continues to operate until the engine starts.

The automatic starting mode will not operate if the battery voltage is low.

Should this condition arise, it remains possible to jump-start the engine (refer to page 146). ◀

Should the engine fail to start on the first attempt, e.g., if it is very hot or cold:

- ▷ Press the accelerator pedal halfway down while engaging the starter.

Cold start at very low temperatures, from approx. +5 °F (-15 °C) at high altitudes, over 3300 ft (1000 m):

- ▷ It may be necessary to allow the starter to remain engaged somewhat longer than under standard operating conditions (as long as approx. 10 seconds)
- ▷ Press the accelerator pedal halfway down while engaging the starter.

If the vehicle is used at high altitudes at very low temperatures over a longer period of time, change the engine oil to special oil (refer to page 119). Please contact your authorized BMW Retailer for additional information.

Usually it is not necessary to depress the accelerator pedal. However, at high altitudes or in very hot or very cold weather, depress the pedal halfway when starting the engine.

Engine idle speed is controlled by the engine computer system. Increased speeds at start-up are normal and should decrease as the engine warms up. If engine speed does not decrease, service is required.

To prevent the battery from discharging, always switch off the electrical devices not in use, as well as the ignition when the vehicle is not being driven.

Turn the ignition key to position 1 or 0.

! Never remove the ignition key while the vehicle is moving making it impossible to steer the vehicle. Always remove the ignition key and engage the steering lock before leaving the vehicle.

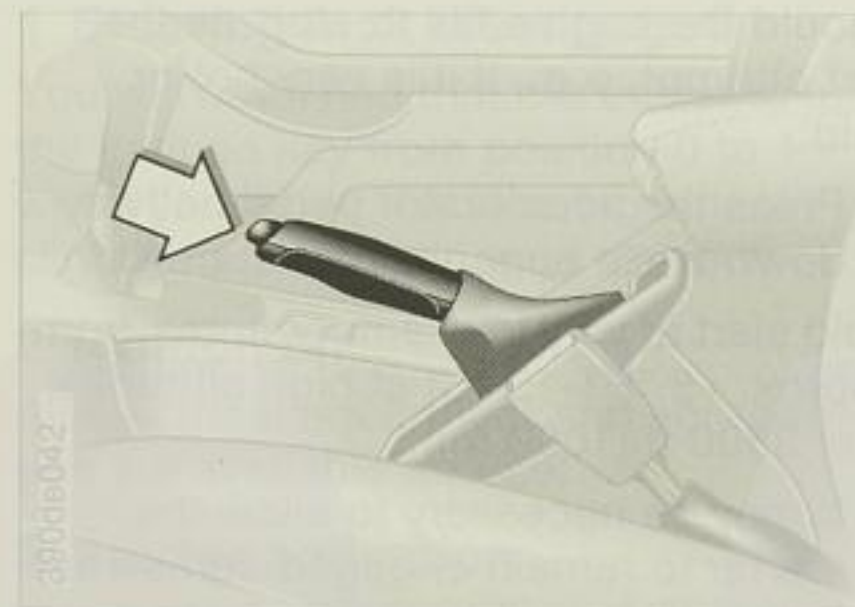
Vehicles with manual transmission: Always engage the parking brake when parking on slopes and inclined surfaces, as placing the lever in 1st gear or reverse may not provide adequate resistance to rolling.

Vehicles with automatic transmission: Place the selector lever in "Park". ◀


Vehicles with automatic transmission*

The vehicle must be stationary and the selector lever in Park before you can remove the ignition key.

Parking brake



To engage

The lever catches automatically, the "PARK BRAKE" or "BRAKE" indicator lamp ("P" or  on Canadian models) appears on the instrument panel when you turn the ignition key to position 2, refer to page 22.

To release

Pull up on the lever, then press the release button and lower the lever.

The parking brake is primarily designed to prevent the vehicle from rolling while parked, and operates against the rear wheels.

! Should exceptional circumstances make it necessary to engage the brake with the vehicle in motion, do not apply excessive pressure. Keep your thumb pressed against the release button while carefully pulling up the lever to apply moderate pressure.

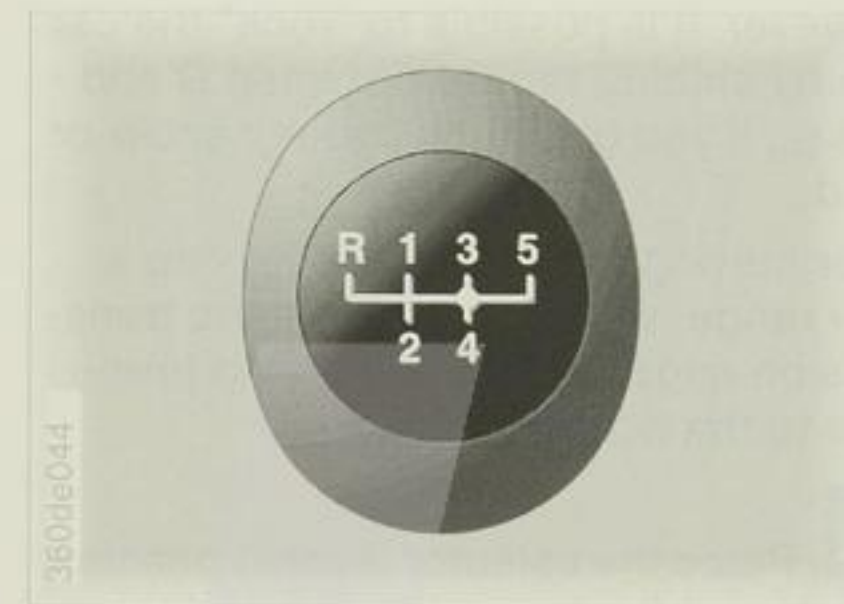
Excessive pressure can lead to over-braking and loss of traction (fishtailing) at the rear.

The brake lamps do not light up when the parking brake is applied.

Vehicles with manual transmission: Always engage the parking brake when parking on slopes and inclined surfaces, as placing the lever in 1st gear or reverse may not provide adequate resistance to rolling.

Vehicles with automatic transmission: Place the selector lever in "Park". ◀

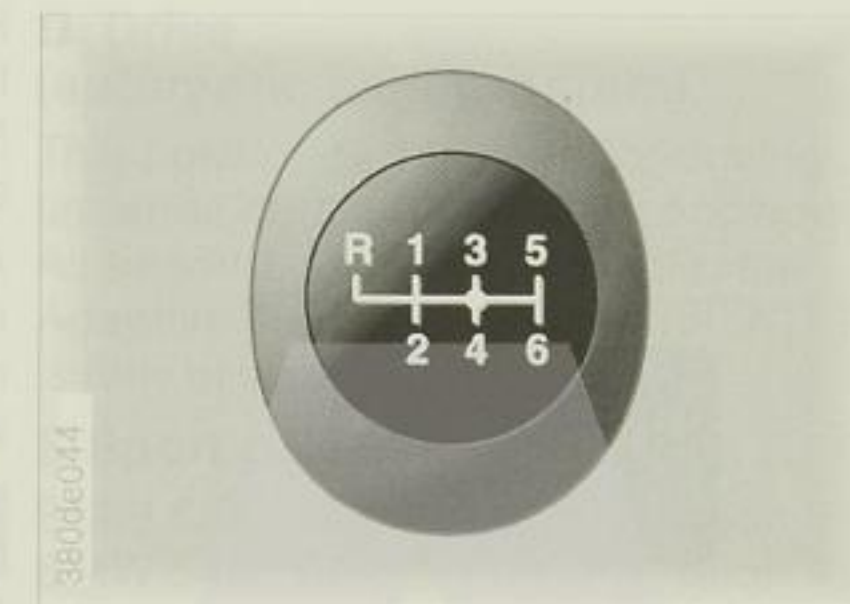
Manual transmission



BMW 528i

The shift lever's neutral plane (dot in the illustration) is located between 3rd and 4th gears.

If no counterpressure is applied, the shift lever will automatically return to the 3rd/4th plane whenever you shift into "Neutral".



BMW 540i

The shift lever's neutral plane (dot in the illustration) is located between 3rd and 4th gears.

If no counterpressure is applied, the shift lever will automatically return to the 3rd/4th plane whenever you shift into "Neutral".

! Always press the shift lever toward the right when selecting 5th or 6th gear, as the lever will otherwise tend to return to the center plane, leading to unintentional engagement of 3rd or 4th gear. ◀

Reverse

Select only with the vehicle stationary. Press the shift lever to the left to overcome the slight resistance.

As you do this the backup lamps will turn on automatically when the ignition key is in position 2.

! Do not "ride" the clutch to hold the vehicle in place on slopes; use the parking brake instead. A slipping clutch increases clutch wear. ◀



Your BMW's automatic transmission is equipped with Adaptive Transmission Control (ATC). This special feature selects from among a range of shift programs to precisely tailor the transmission's response to your individual driving style and requirements (including a special winter mode).

You can find a more detailed description of Adaptive Transmission Control in the chapter devoted to your car's technical features ("Advanced technology" on page 150).

Selector lever positions

BMW 528i: P R N D 3 2 1

BMW 540i: P R N D 4 3 2

The transmission range display varies according to model (refer to illustrations).



Range selection

The selector lever remains locked in "Park" until the ignition key is inserted in the steering lock.

The selector lever must be in "Park" or "Neutral" before it will be possible to start the engine.



You must step on the footbrake with the vehicle stationary before the selector lever will move out of P or N. This shift-lock mechanism also remains engaged at engine speeds above 2,500 rpm. It is also necessary to press the brake pedal before selecting a drive position, since the vehicle "creeps" at idle with a drive position engaged. ◀

However, it is possible to "rock" the car free by shifting rapidly between D and R, e.g., if you get stuck in deep snow or sand.

After moving the selector lever into a new range, wait until you feel the transmission engage before applying pressure to the accelerator pedal.



Place the selector lever in position P or N and firmly engage the parking brake before leaving the vehicle with the engine running, otherwise the vehicle could roll.

Never leave the car unattended with the engine running, as such a vehicle represents a potential safety hazard.

If you should accidentally select "Neutral" while traveling at high speed, remove your foot from the accelerator pedal immediately. Allow the engine speed to drop to idle before selecting the desired position, otherwise the transmission may be damaged. ◀



A detent prevents inadvertent shifts into some selector lever positions. To release the shift-lock mechanism, press the button on the front side of the selector handle (arrow).

P Park

Select only with the vehicle stationary. Transmission locks to prevent rear wheels from turning.

R Reverse

Select only with the vehicle stationary.

N Neutral

Select only if your journey is interrupted for a longer period. Only select while the car is being driven if the vehicle begins to skid.

D Drive (automatic shift program)

This position is designed for driving under all normal operating conditions. All forward gears are available; the Adaptive Transmission Control (ATC) is fully operational.

S Sport program

BMW 528i: Selector lever position 3

BMW 540i: Selector lever position 4

In this position the high-performance mode of the Automatic Transmission Control is activated. The transmission shifts up only as far as 4th gear.

The Sport Program is designed for performance-oriented driving, but we also recommend that you select it whenever maximum precision and driver control are desired, regardless of speed and driving conditions.

Mountain ascents and engine braking

BMW 528i:

Selector lever positions 2 and 1

BMW 540i:

Selector lever positions 3 and 2

Select these ranges to prevent undesired shifts and use the engine braking effect to maximum advantage on mountain roads or extended uphill and downhill stretches. The transmission upshifts only as far as the selected gear.

Downshifts are executed as soon as the vehicle speed drops back within the range for the next lowest gear.

"Kickdown" (automatic downshift)

In the "Kickdown" mode you achieve the maximum acceleration and the top speed in position D. To activate this mode, depress the accelerator pedal beyond the full-throttle position, at which a pressure point must be overcome.

Electronic transmission control module



When the indicator lamp comes on or "TRANS FAILSAFE PROG" appears in the Check Control*, this indicates a malfunction in the electronic shift control unit or in the transmission.

Bring the vehicle to a stop, select transmission position "P", set the parking brake and turn the engine off (ignition key to position 0).

Wait a few seconds, then start the engine.

If the indicator lamp goes out after a few seconds, normal transmission performance has been restored. Drive off normally.

If the indicator lamp does not go out, all selector lever position can still be selected, however in the forward positions the vehicle has limited performances as it drives only in the 4th or 5th gear.

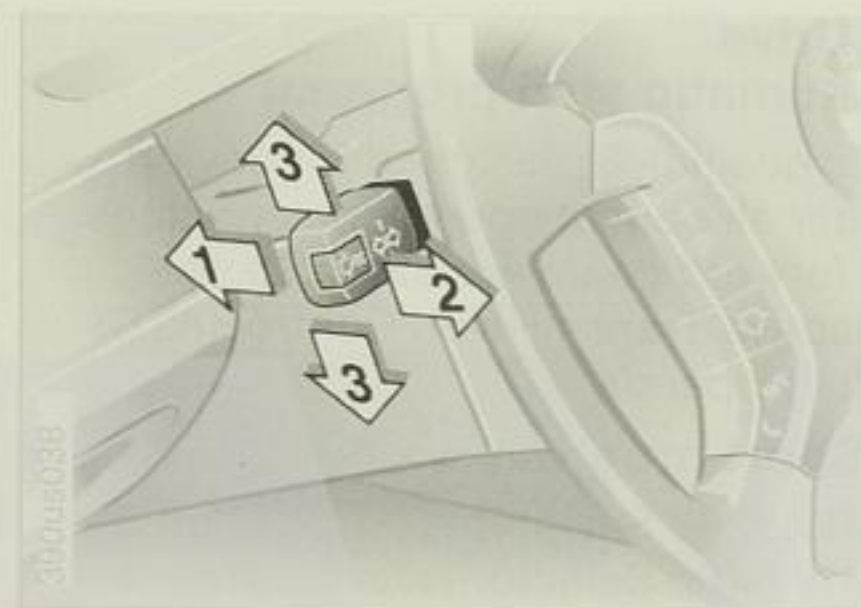
Under these circumstances, avoid extreme engine loads and consult the nearest authorized BMW Retailer.



Never attempt to carry out any service operations in the engine compartment without first ensuring that the transmission is in Park or Neutral. ◀

For information on jump-starting and towing the vehicle, refer to pages 146 and 147.

Turn signal/High beam



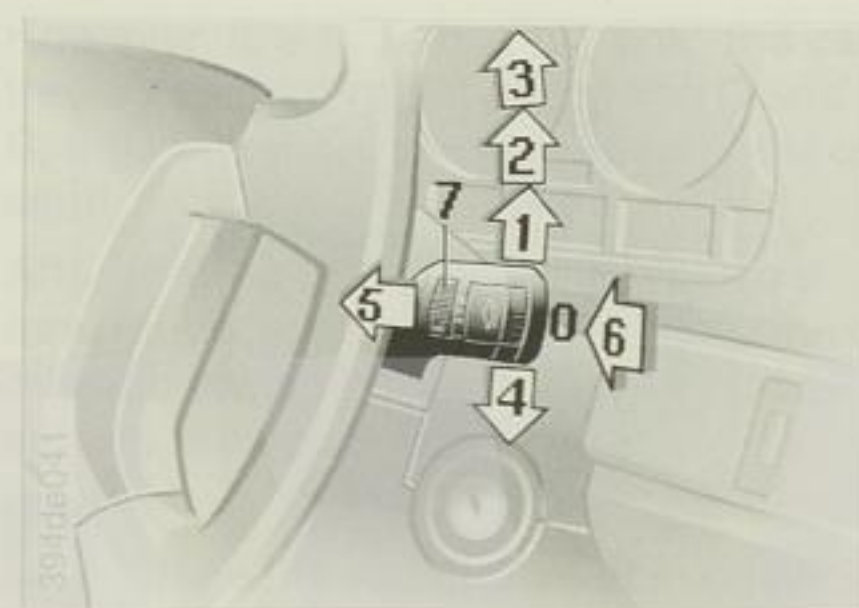
- 1 High beam (blue indicator)
- 2 Headlamp flasher
- 3 Turn signal (green indicator accompanied by periodic ticking sound from the relay).

If the indicator lamp and the ticking from the relay are both faster than normal, one of the turn indicators has failed.

To signal briefly

Press the lever up to but not beyond the detent. It then returns to the center position when released.

Wiper/washer system



- 0 Wipers retracted
- 1 Intermittent wipe
- 2 Normal wipe
- 3 Fast wipe
- 4 Brief wipe
- 5 Automatic windshield washer
- 6 Automatic intensive-action washer*
- 7 Rotary dial for control of intermittent wipe intervals

1 Intermittent wipe

You can use the rotary dial (7) to select from among four wipe intervals. The wipe interval automatically adapts to variations in vehicle speed.

Wiper/washer system

2 Normal wipe

The wipers automatically revert to intermittent operation when the vehicle is stationary.

3 Wiper speed fast

The wipers automatically revert to normal speed when the vehicle is stationary.

5 Automatic windshield washer

The system sprays washer fluid against the windshield and activates the wipers for a brief period.

(Exception: If you pull the lever briefly, the system sprays fluid onto the windshield without activating the wipers).

6 Automatic intensive-action washer*

As with 5 (standard wash/wipe), but with intensive-action cleanser sprayed onto the windshield prior to the wiping phase.

Heating of the windshield washer spray nozzles:

Automatic in ignition key position 2.

Headlamp washers*

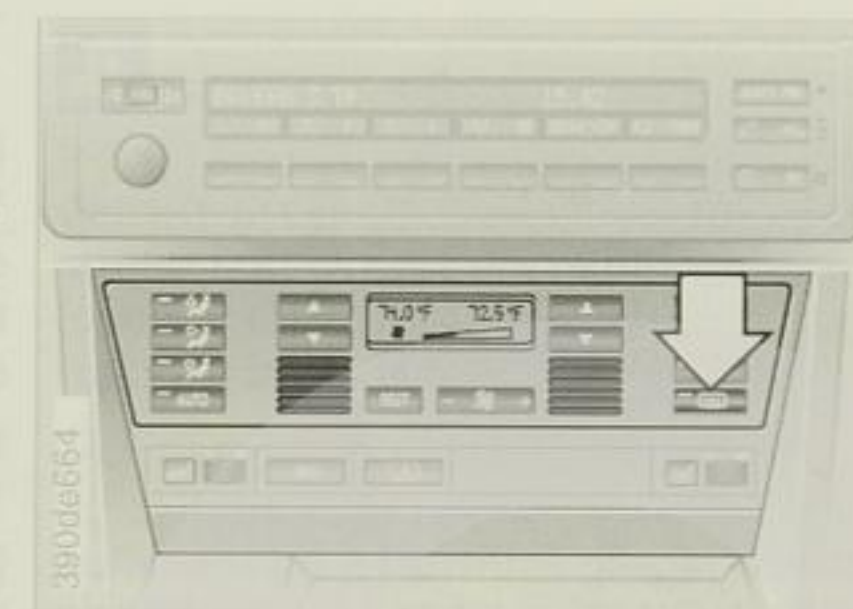
If they are on, the headlamps will also be cleaned every fifth time you activate the automatic windshield washer (intensive-action or standard wash/wipe).



Do not use the washers when there is a danger of the fluid freezing on the windshield, otherwise vision could be obscured.

Do not use the washers when the reservoir is empty, otherwise damage to the washer pump could result. ◀

Rear window defroster



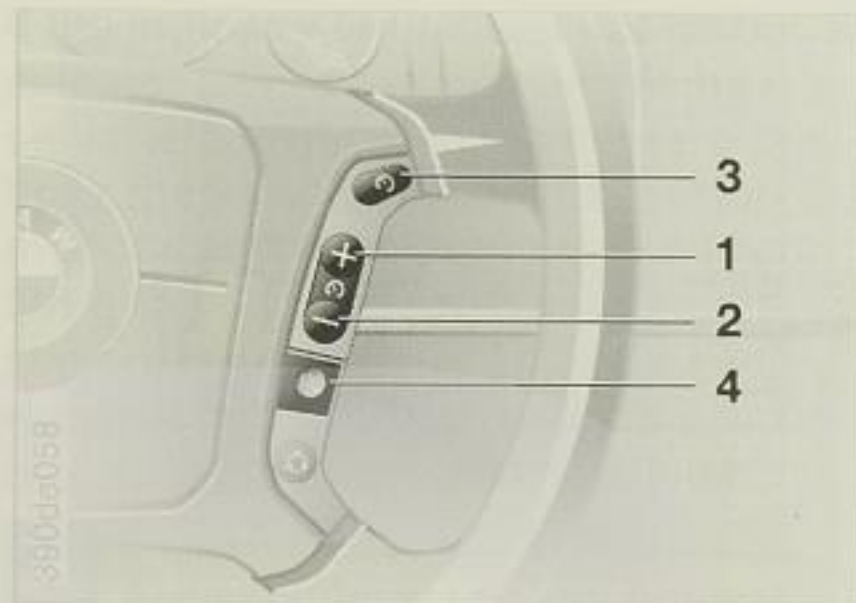
To activate

Press the button: as long as the indicator lamp is on, the rear window defroster continues at high-output (rapid thaw).

After the indicator lamp goes out, the defroster continues operating at reduced power for a limited period before deactivating automatically.

Deactivate

If the indicator lamp is on, press the button.



You can store and automatically maintain any desired vehicle speed above approx. 18 mph (30 km/h).

To activate system - in ignition key positions 1 and up:

Press button 4, the indicator lamp in the instrument cluster comes on.

You can now use the cruise control.

Switch off the system: press button 4 once again, the indicator lamp remains on. You can use the cruise control again as required.

To deactivate the system: press button 4 while the system is switched off. The indicator lamp goes off and the memorized speed is cancelled.

1 Store and maintain speed/accelerate

Press button briefly:

The system records and maintains the current vehicle speed. Every time you tap the button the speed increases by 0.6 mph (1 km/h).

Maintain pressure on button:

The vehicle accelerates without pressure on the accelerator pedal. When you release the button, the system records and maintains the current speed.

2 Decelerate

Press button briefly:

When cruise control is active, every tap of the button reduces the speed by approx. 0.6 mph (1 km/h).

Maintain pressure on button:

With the cruise control active, the system automatically reduces the throttle opening to slow the vehicle. When you release the button, the system records and maintains the current speed.

Cruise control

3 Activate stored setting

Press button:

The vehicle accelerates to and maintains the last speed stored. Turn ignition key to position 0 to cancel memorized speed and deactivate system.

4 Activate/Off/Deactivate

Every time you press a button the system status changes in this order.

In addition, the system is also automatically deactivated in response to the following conditions:

- ▷ When you apply pressure to the brake pedal
- ▷ When you apply pressure to the clutch pedal, and when you move the automatic transmission selector lever from Drive to Neutral
- ▷ If you exceed the programmed speed by more than 10 mph (16 km/h) for more than 30 seconds.

The system is switched off and the stored speed deleted from its memory when you turn the ignition key to position 0.



Refrain from using the cruise control on twisting roads, when high traffic density prevents driving at a constant speed and when driving on slippery (snow, rain, ice) or loose (stones, sand) road surfaces. ◀



If the engine braking effect is insufficient on a downhill grade, the controlled speed can be exceeded. Speed can drop on uphill grades if the engine output is insufficient. ◀



Odometer

You can activate the displays shown in the illustration with the ignition key in position 0 by pressing the button in the instrument cluster (arrow).

Trip odometer

To reset to zero, press the button in the instrument cluster (arrow) with the ignition key in position 1 and up.

Outside temperature display

The outside temperature appears in the display panel as soon as you turn the ignition key to position 1.

You can change the unit of measurement (°C/°F), by

- 1 pressing and holding down the button (arrow) with the ignition key in position 1
- 2 then turning the ignition key to 0.

Ice warning

If the outside temperature drops below +37.5°F (+3°C), a warning signal sounds and the display blinks for a short time.

The warning is repeated whenever the temperature rises to at least +43°F (+6°C) and then sinks again to +37.5°F (+3°C).



The ice warning does not alter the fact that surface ice can form at temperatures above +37.5°F (+3°C), e.g. on bridges and shaded road surfaces. ◀



Never allow the engine to operate with the needle in the red overspeed sector of the gauge.

To protect the engine, the engine-management system automatically interrupts the fuel supply in this range; the resulting effect resembles that associated with a sudden loss of power.



Indicates current fuel consumption in mpg (in liters per 100 km on Canadian vehicles). This instrument clearly shows whether your current driving style is conducive to economy and minimum exhaust emissions.

When the vehicle is stationary, the needle reverts to the maximum reading (in Canada, to zero).



When you switch on the ignition, the indicator lamp comes on briefly to confirm that the system is operational.

If the indicator lamp stays on, there are approx.

- ▷ 2.1 gal (8 liters) – BMW 528i
- ▷ 2.6 gal (10 liters) – BMW 540i

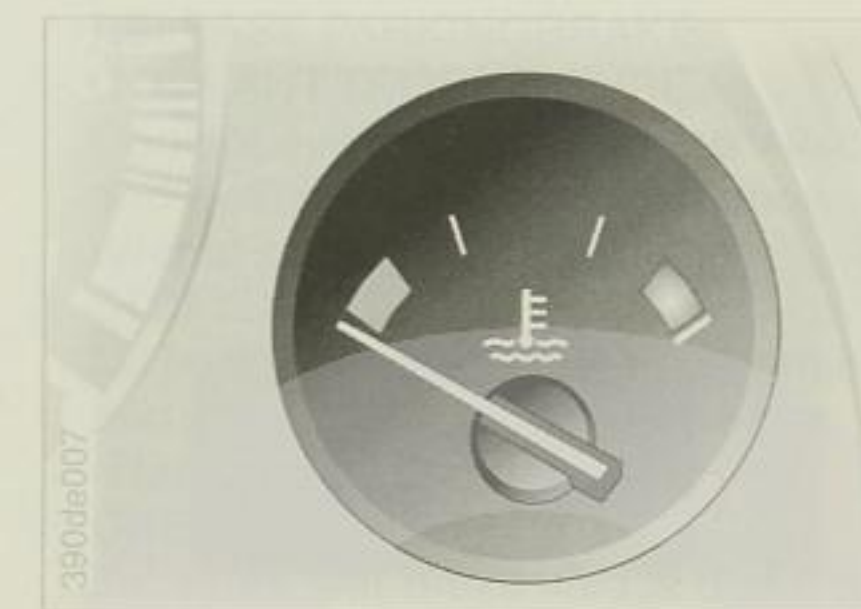
in the tank.

Tank volume: on page 161.

Certain operating conditions (such as those encountered in mountainous areas) may cause the needle to fluctuate slightly.



Please refuel early, as driving to the last drop of fuel can result in damage to the engine and/or catalytic converter. ◀



Blue

The engine is still cold. Drive at moderate engine and vehicle speeds.

Red

If either the warning lamp goes on or the warning "COOLANT TEMPERATURE" in the Check Control* display goes on: the engine is overheated. Switch off engine immediately and allow it to cool down.

Between the blue and red sectors

Normal operating range. It is not unusual for the needle to rise as far as the edge of the red sector in response to high outside temperatures or severe operating conditions.

Checking coolant level: on page 120.



The precise layout varies according to the individual model version.

Green lamps

The number of illuminated lamps decreases as the time for your next maintenance visit approaches.

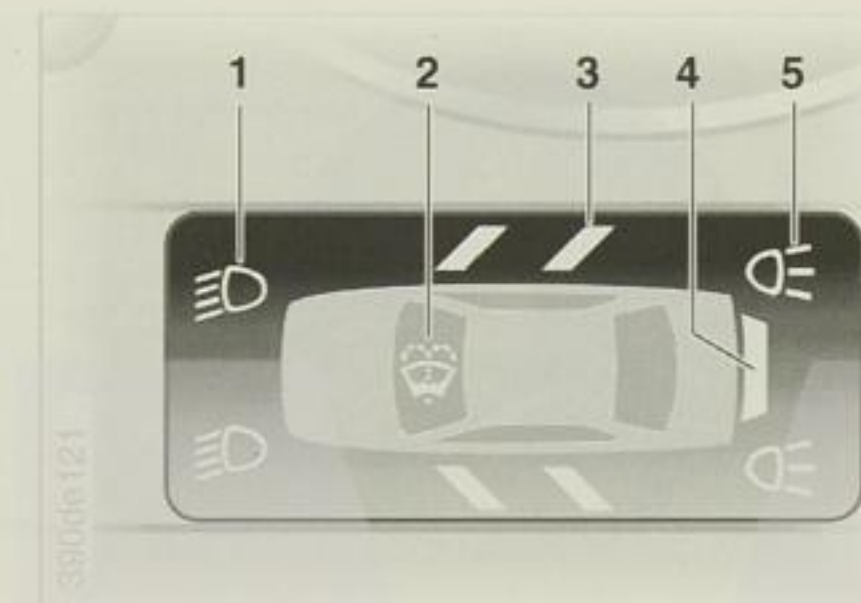
Yellow lamp

This field appears together with OILSERVICE or INSPECTION.

Maintenance is due. Please contact your BMW Retailer for an appointment.

Red lamp

The maintenance deadline has been passed.



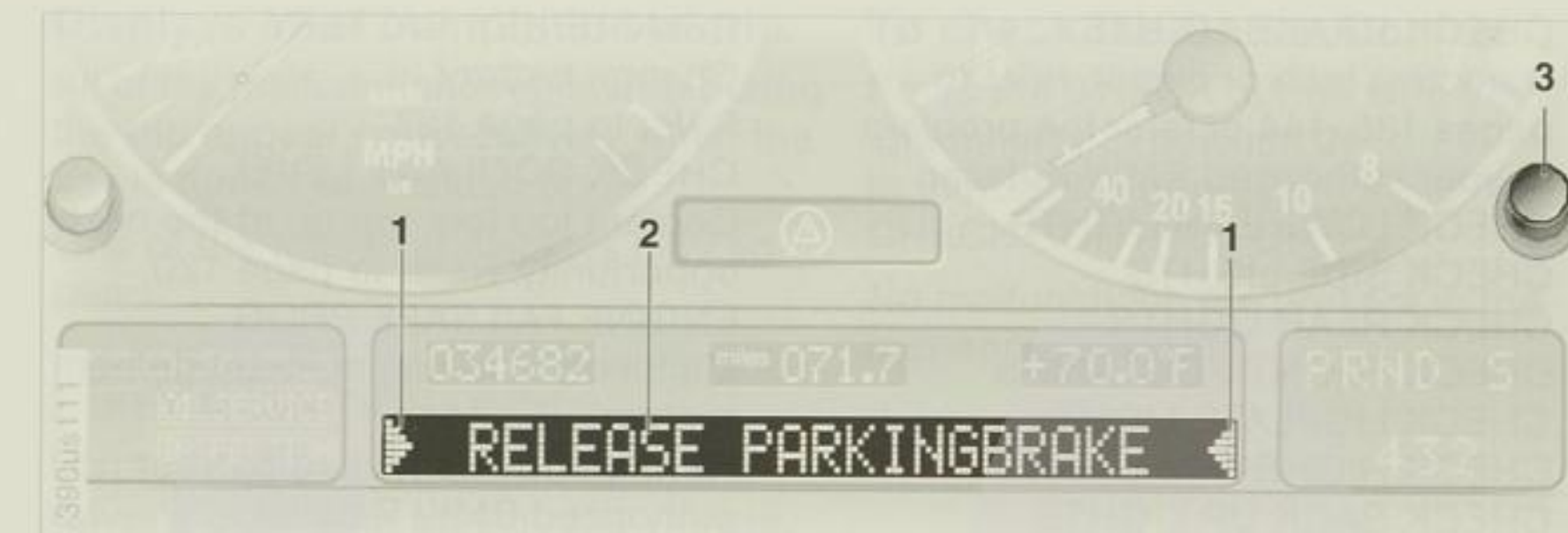
Graphic display*

The following notes or symbols are shown at ignition key position 2 and subsequent positions, until the interferences are removed:

- 1 Check low beam lamps.
 - 2 Refill windshield washer (goes out after approx. 1 minute).
 - 3 Door open.
 - 4 Luggage compartment open.
 - 5 Check brake and taillamps.
- A defective center taillamp is indicated by the upper symbol.

When you open the door after stopping, a warning signal sounds without a visual indicator for:

- ▷ LIGHTS ON and
- ▷ KEY IN IGNITION LOCK.



Alphanumeric display*

Texts are used to alert the driver to system malfunctions, with information and warnings signaled by a gong - when the ignition key is turned to position 2.

- 1 Status report symbol
- 2 Display
- 3 CHECK button

The system classifies system malfunctions by assigning them one of two priority ratings:

Priority 1

These defects are immediately indicated by a gong and a flashing warning symbol (1). Simultaneous defects will be displayed consecutively. These status reports remain in the display until the defects are rectified; it is not possible to delete them by pressing the CHECK button (3):

- ▷ RELEASE PARKINGBRAKE
- ▷ COOLANT TEMPERATURE
Coolant overheated. Stop the vehicle and switch off the engine at once, refer to pages 69, 120.
- ▷ STOP!ENGINE OILPRESS
Oil pressure too low. Stop the vehicle and switch off the engine at once, refer to page 23.
- ▷ CHECK BRAKE FLUID
Indicates that brake fluid is down to roughly minimum level. Top up at the next opportunity. Refer to page 121. Have the source of the brake fluid leak diagnosed and rectified by your BMW Retailer.
- ▷ SPEED LIMIT*
Indicates that vehicle is exceeding the programmed speed limit.

Priority 2

These displays appear for 20 seconds when the ignition key is turned to position 2. The warning symbols remain after the message disappears. You can view the message again by pressing the CHECK button.

▷ **TRUNKLID OPEN**

Message appears only when you set the car in motion.

▷ **DOOR OPEN**

Display appears once a minimal vehicle speed has been exceeded.

▷ **FASTEN SEAT BELTS***

In addition a warning lamp with a safety belt symbol appears and an acoustical signal sounds.

▷ **WASHER FLUID LOW**

Fluid low, top up at the next opportunity, refer to page 116.

▷ **CHECK ENGINE OIL LEV**

Oil is down to roughly minimum level, top up at next opportunity (when refueling), refer to page 117.

▷ **CHECK BRAKE LIGHTS**

Defective bulb or circuit, refer to pages 135, 144 or refer the problem to your authorized BMW Retailer.

▷ **CHECK LOWBEAM LIGHTS**

CHECK SIDE LIGHTS

CHECK REAR LIGHTS

CHECK FRONT FOG LAMPS

CHECK LICPLATE LIGHT

CHECK HIGHBEAM LIGHT

CHECK BACK UP LIGHTS

Defective bulb or circuit. Refer to pages 132, 144 or consult your authorized BMW Retailer.

▷ **TRANS. FAILSAFE PROG**

Please consult the nearest authorized BMW Retailer. Refer to page 63.

▷ **CHECK BRAKE LININGS**

Have the brake pads inspected by your BMW Retailer. Refer to page 100.

▷ **REMOTE KEY BATTERY**

Change battery.

Refer to page 137.

▷ **CHECK COOLANT LEVEL**

Coolant too low, top up at the next opportunity. Refer to page 120.

▷ **ENGINE FAILSAFE PROG**

Malfunction in engine management system.

Have the fault checked by your authorized BMW Retailer.

Displays after completion of trip

All of the malfunctions registered during the trip appear consecutively when the key is turned to Position 0.

One of the following displays may appear:

▷ **LIGHTS ON**▷ **KEY IN IGNITION LOCK**

Display appears when you open the driver's door after parking the vehicle. A supplementary gong is also heard.

Status reports remain available for a period of approximately three minutes after the display goes out and the key is removed from the ignition. If there were several warnings, press the CHECK button repeatedly.

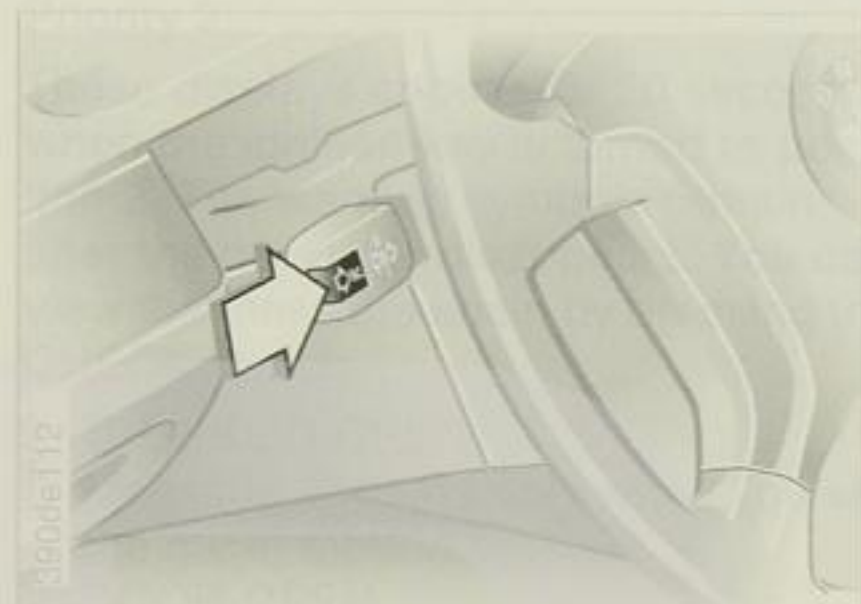
To check the Check Control

Press the CHECK button with the ignition key in position 2:

In the display appears:

CHECK CONTROL OK.

No malfunctions are present in the monitored systems.



Mode selection

You can use the button in the turn signal lever to select computer data for display in the instrument cluster whenever the ignition key is in position 1 or 2. Press the button briefly towards the steering column to select the next display mode.

The range of available displays varies according to your individual car's equipment.



Outside temperature and average fuel consumption

The displays appear in the following orders:

Outside temperature, average fuel consumption, cruising range, average speed.

Starting with ignition key position 1, the last respective setting is displayed.

You can alter the outside temperature unit of measure (°C/°F) by

- 1 pressing and holding the trip distance recorder reset button (in ignition key position 1) and
- 2 turning the ignition key to position 0.

Refer also to page 68.



Cruising range and average speed

The computer bases its calculations of the cruising range on the rate of fuel consumption in the period immediately preceding your data request.

In its average speed calculations the computer ignores any time spent with the vehicle stationary and the engine off.

Cancel display

After selecting the average speed, you can press the button briefly to cancel all data displays from the onboard computer.

You can use the CHECK button to delete individual computer displays*. Any current Check Control status reports will then appear.

To restart calculations

You can reset the system and restart calculations for average speed and fuel consumption by maintaining pressure on the button in the turn signal lever (with engine running).

Park Distance Control PDC

The PDC assists you when you back into a parking space. A signal warns you of the real distance to an obstacle. The system features four ultrasonic sensors installed in your rear bumper. The monitoring range of the two corner sensors extends to approx. 2 ft. (60 cm) behind the bumper. The range of the two middle sensors is approx. 4.9 ft. (1.50 m) outward.

The system starts to operate automatically approximately one second after you select reverse with the ignition key at position 2. PDC is deactivated when you shift back out of reverse.

Acoustical signals

The distance to the nearest object is indicated by a tone sounding at various intervals. As the distance between vehicle and object decreases, the intervals between the tones become shorter. A continuous tone indicates the presence of an object less than 1 ft. (30 cm) away.

The warning signal will be canceled after approx. 3 seconds, if the distance to an obstacle remains constant, e.g., when you are moving parallel to a wall. System malfunctions will be indicated by a continuous high-pitched tone when the system is activated the first time. Please refer the problem to your authorized BMW Retailer.

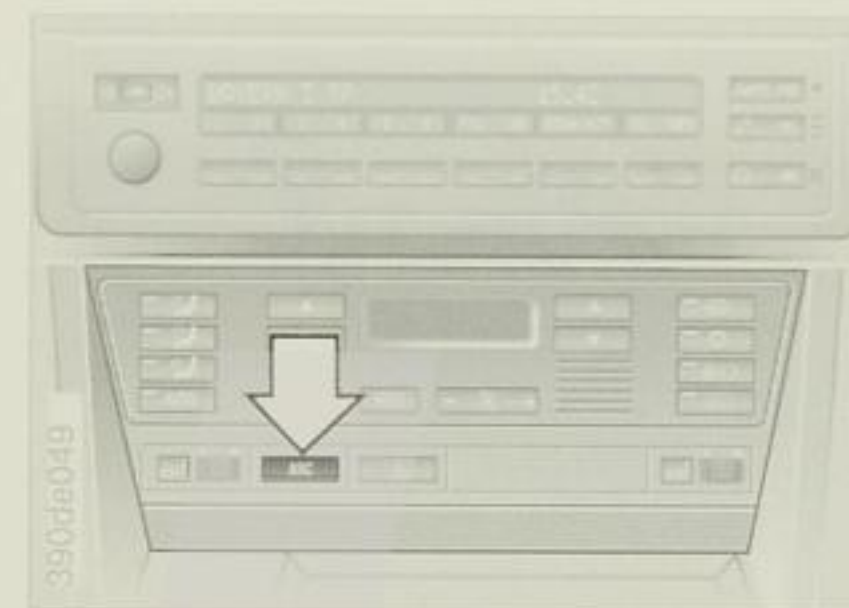


Despite PDC, final responsibility for estimating the distance between the vehicle and any obstructions remains the responsibility of the driver. Even in the case of sensors, there is a blind spot in which objects cannot be detected. This applies especially in those cases where the system approaches the physical limits of ultrasonic measurement, as occurs with tow bars and trailer couplings, and in the vicinity of thin and painted objects. Certain sources of sound, such as a loud radio, could drown the PDC signal tone. ◀



Keep the sensors clean and free of ice to ensure that they continue to operate effectively. Please avoid directing prolonged high-pressure spray against the sensors. Maintain an adequate distance of more than approx. 4 in (10 cm). ◀

ASC+T/DSC*



Automatic Stability Control plus Traction (ASC+T)/Dynamic Stability Control (DSC)*

This system is designed to enhance operating stability, especially when accelerating and cornering.

DSC extends the advantages of ASC+T (optimum driving stability during acceleration and merging with traffic as well as optimum traction) to driving through curves and cornering, within the physically feasible limits.

The system starts up automatically each time you start the engine.

Indicator lamp



The indicator lamp in the instrument cluster goes out shortly after you switch on the ignition.

Refer to page 23.

To deactivate the system:

Press the button, the indicator lamp comes on.



The control button on vehicles equipped with DSC is identified by the letters DSC. ◀

With deactivated ASC+T/DSC you are driving with conventional, unregulated torque transfer. We recommend that you deactivate the system for increased traction:

- ▷ when rocking the vehicle or starting off in deep snow or on loose surfaces
- ▷ when driving with snow chains. Also refer to page 110.

To reactivate the system:

Press the button again; the indicator lamp goes out.

Indicator lamp flashes:

The system regulates the drive torque in response to the vehicle operating conditions and activates the brakes as required.

If the indicator lamp fails to go out after the engine is started, or comes on during the course of normal vehicle operation:

System malfunction; the vehicle remains operational, but without ASC+T/DSC. Consult your authorized BMW Retailer for repair.

For further information on ASC+T/DSC refer to "Advanced technology", page 151.

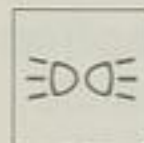


Vehicles equipped with ASC+T/DSC remain subject to the laws of physics. Any consequences arising from traction loss due to excessive vehicle speed remain the responsibility of the driver. We therefore urge you to avoid using the additional safety margin of the system as an excuse for taking risks. ◀

The system cannot provide optimal performance when different types of tires are installed on the car. You should therefore ensure that tires from a single manufacturer with the same tread configuration remain fitted at all four wheels.



Parking lamp (side marker lamps)



Low beam/Xenon lamps*



When you switch off the ignition with the low beam headlamps on, only the parking lamps (side marker lamps) will remain on.

Xenon lamps*

Refer to pages 133, 155 for more detailed information.

LIGHTS ON warning

When you open the driver's door after returning the ignition key to position 0, a buzzer sounds to remind you that the lamps have been left on.

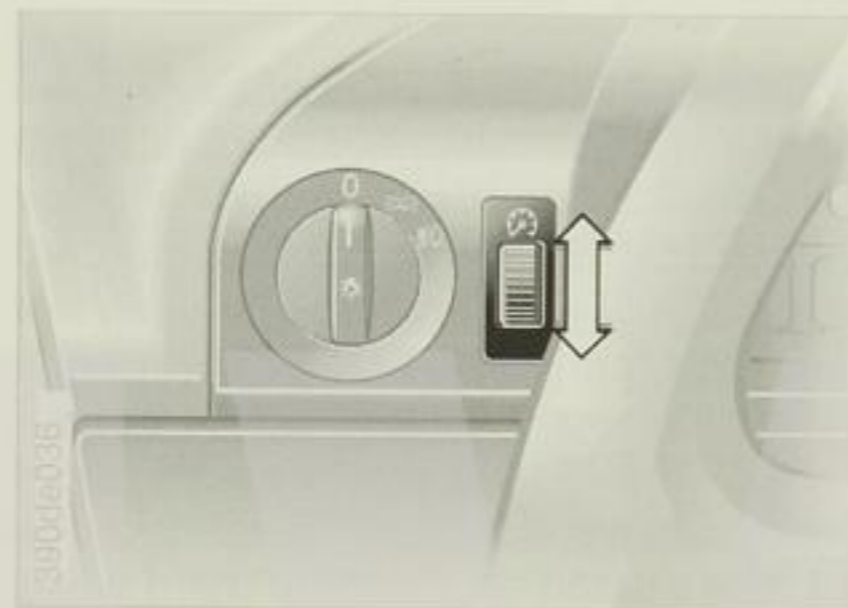
On vehicles with alpha-numeric Check Control*:

The reminder is given through the Check Control.

Daytime running lamps*

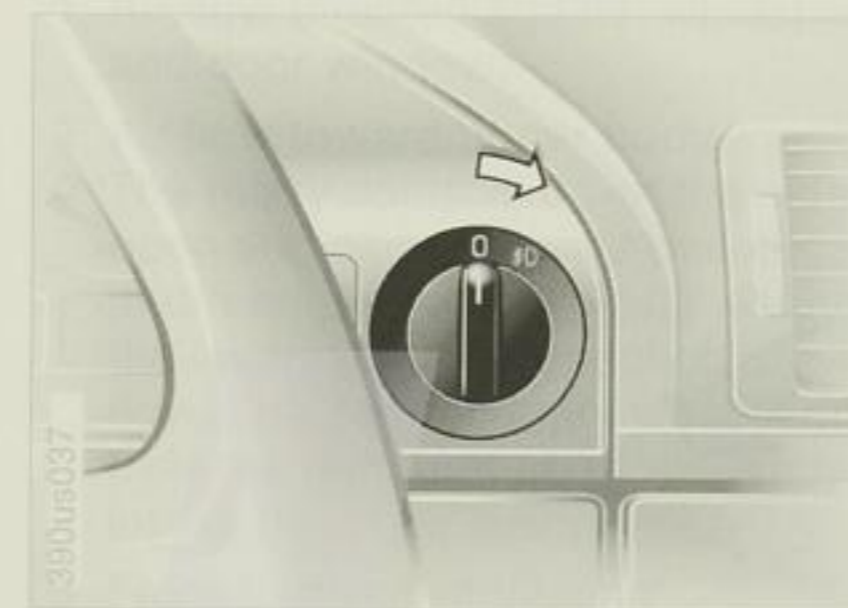
The headlamps are automatically switched on for daylight driving at ignition key position 2.

Instrument rheostat

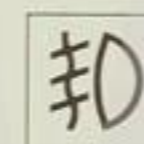


Adjust the illumination intensity by turning the rotary switch.

Fog lamps



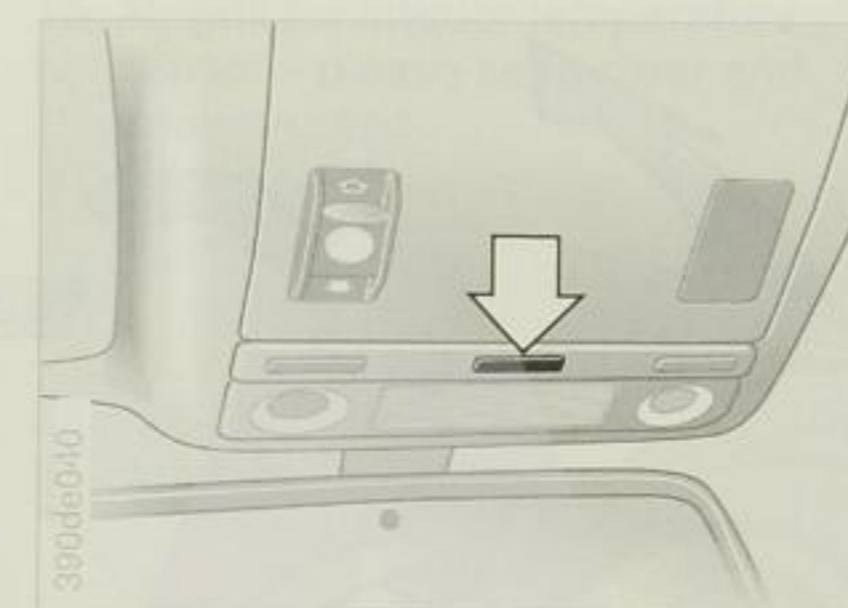
Front fog lamps



A green indicator lamp appears in the instrument cluster to indicate that the fog lamps are on.

If the high beam is switched on, the fog lamps go out.

Interior lamps



The interior lamps operate automatically.

Switching interior lamps on and off
Press button (arrow).

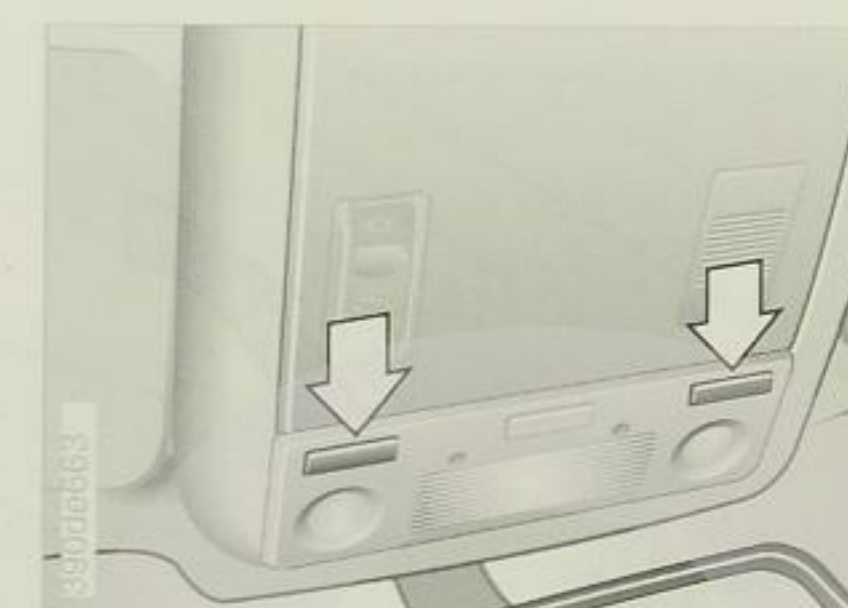
If you want the interior lamps to remain off continuously, maintain pressure on the button for approximately 3 seconds.

Press the button briefly to revert to normal operation.

Footwell lamps

The footwell lamps operate in the same way as the interior lamp.

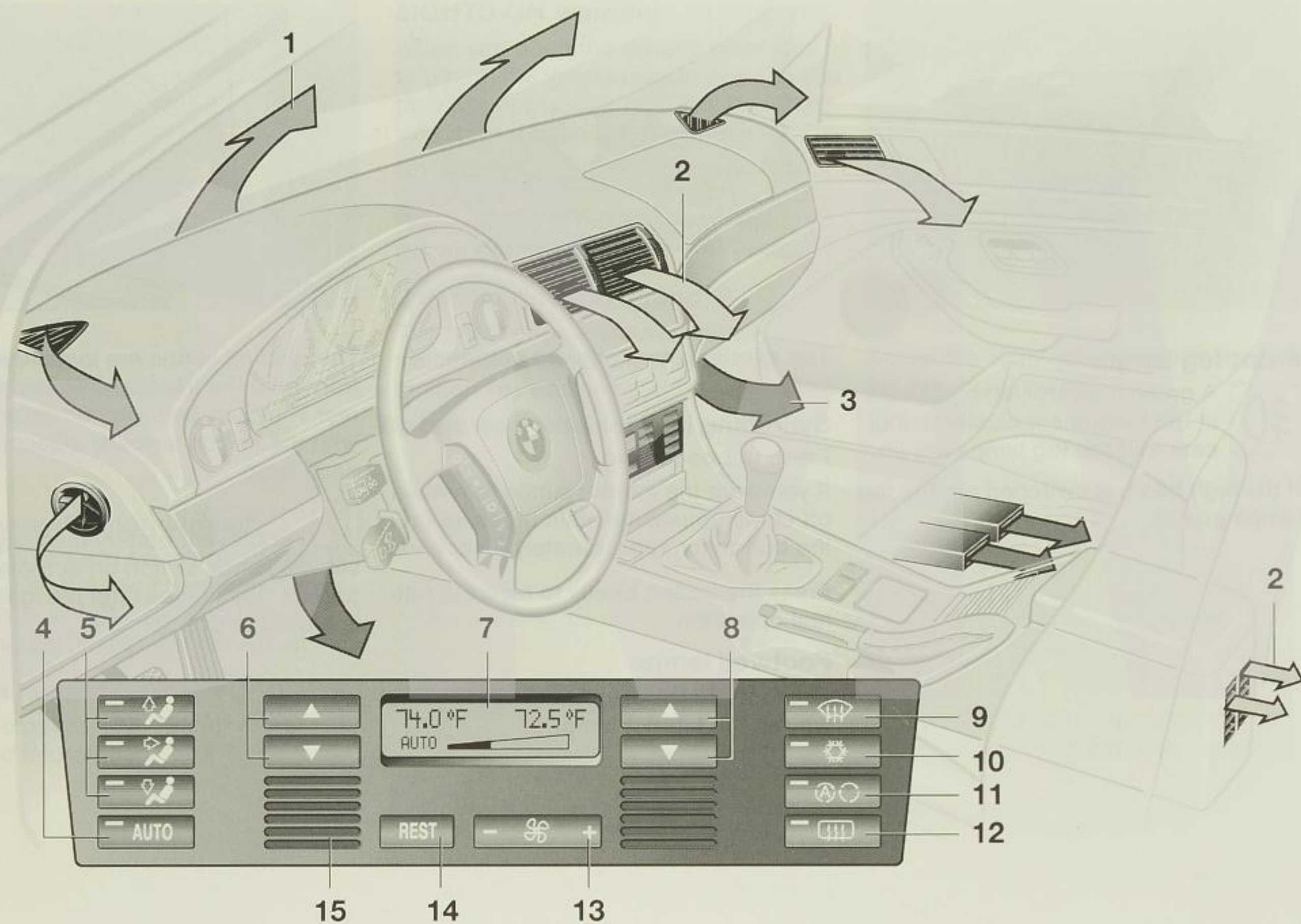
Reading lamps



The reading lamps are located in the front near the interior lamp and in the rear. They can be switched on and off with the switch (arrows) adjacent to each lamp.



To prevent battery discharge, all vehicle lamps switch off automatically approx. 15 minutes after the ignition key is turned to position 0. ◀



- 1 Air flow directed against windshield and door windows
- 2 Air flow toward upper body
The rotary controls down the sides open and close the vent outlets (any intermediate setting possible) and the levers alter the direction of air flow. The central rotary wheel controls the temperature of the emerging air 84
- 3 Front footwell ventilation
Additional vent outlets are also located in the rear footwell.
- 4 Automatic air distribution 82
- 5 Individual air distribution 82
- 6 Temperature control – left-hand side 83
- 7 Display for temperature and air supply 83
- 8 Temperature control – right-hand side 83
- 9 Defrost the windshields and remove condensation 83
- 10 Air conditioner 83
- 11 Recirculated-air mode 83
- 12 Rear window defroster 65, 84
- 13 Air supply 83
- 14 Residual heat mode 84
- 15 Air grill for interior temperature sensor – please keep clear and unobstructed


Pleasant temperatures in any type of weather mean relaxed driving. This is not only a contribution to your personal well-being, but also to road safety. By its very nature, personal comfort is subjective. In response to this fact, we have provided separate temperature controls for the driver and front passenger. Numerous individually adjustable ventilation outlets have been provided at convenient locations to help ensure comfortable draft-free air distribution. The system features a microfilter and an activated-charcoal filter to remove impurities from the incoming air. We have also thought of the environment outside the car: The air conditioning system refrigerant is free of CFCs.

Tips for pleasant driving




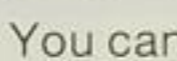
Use the automatic system, i.e. press AUTO button 4. Select the required passenger compartment temperature, e.g. 70°F (22°C). At outside temperatures of 40°F (5°C) or above, you can also use the air conditioning system 10. This will dry the air and prevent window fogging, for example if people are wearing damp clothes in the vehicle. Set the outlets 2 so that the air flows past you and is not directed straight at you. Set the rotary control between the outlets 2 for the upper body to a central position so that cooler air helps prevent tiredness during the journey.

The description below tells you how to obtain various settings that may be individually preferred.



Automatic air distribution

 The AUTO-program automatically adjusts the air distribution as well as the air supply and also adapts your entries for temperature to external influences (summer, winter). This program maintains a comfortable in-car climate regardless of the season. Select the interior temperature which you consider to be most pleasant, e.g. 70 °F (22 °C). The selected temperatures and the word AUTO for the air supply appear in display 7, refer to the overview on page 80. Open the outlets for the upper body area. Switch on the air conditioner in warm weather. Maximum cooling effect is obtained when rotary control 3 (see page 84) is in the cold setting.

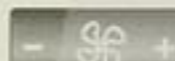
Individual air distribution

 You can cancel the AUTO program by selecting specific distribution patterns to suit your own individual requirements. You can direct air toward the windshield and windows , toward the upper body , and/or into the footwell .

Temperature


 Individual temperature selections are available for the driver and front passenger.  The temperatures that appear are reference values for the interior temperature. We recommend 70°F (22°C) as a comfortable setting, both with and without the air conditioner. When you start the vehicle, the system ensures that the selected temperature is achieved as quickly as possible. It then maintains this temperature, regardless of the season.

Air supply


 In AUTO mode the air supply is automatically controlled, AUTO appears in display 7 – see the overview on page 80. You can vary the air supply by means of "+" and "-". Your setting is indicated by bars, the automatic control of the air supply is switched off, that of the automatic air distribution remains unchanged. You can reactivate it by pressing the AUTO button. When you press "-" during operation at minimum blower speed all displays are canceled:


The blower, heating and air conditioner are switched off, the air supply is stopped. By pressing any button of the automatic climate control (except REST button 14), you can switch the system back on.

To defrost windshield and door windows


 This mode is designed for rapid removal of ice and condensation from the windshield and side windows.

Air conditioner

 The air conditioner cools and dehumidifies incoming air, before reheating it to the selected temperature. Depending on the weather, the windshield may fog over briefly when the engine is started. Switch off the air conditioner at outside temperatures below approx. 40°F (5°C). This will prevent the windows from fogging up. Frequently switching the air conditioner on and off may also promote the formation of condensation on the window surfaces.


 Condensation forms in the air conditioner system during operation, which then exits under the vehicle. Therefore, it is not unusual for a small puddle to form there. ◀

Recirculated-air mode/Automatic recirculated-air control AUC


 You can respond to unpleasant odors in the outside air by suspending the flow of external air into the vehicle. The system then recirculates the air currently within the vehicle. Press the button repeatedly to run through the following control sequence

- ▷ Indicator lamps off: Outside air flow operational.
- ▷ Left-hand indicator lamp on – AUC mode: The system detects pollutants in the outside air and responds by deactivating the outside air flow as required. The system then recirculates the air currently within the vehicle.
- ▷ Right-hand indicator lamp on: The flow of external air into the vehicle is permanently blocked. The system then recirculates the air currently within the vehicle.

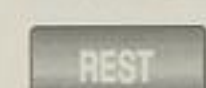
If you have a multifunction steering wheel with the recirculated-air button (refer to page 24), you can also use it to switch between "Off" and the recirculated-air mode or AUC and the recirculated-air mode.

 If condensation starts to form on window surfaces during operation in the recirculated air mode, deactivate it and possibly increase the air supply. ◀


Rear window defroster

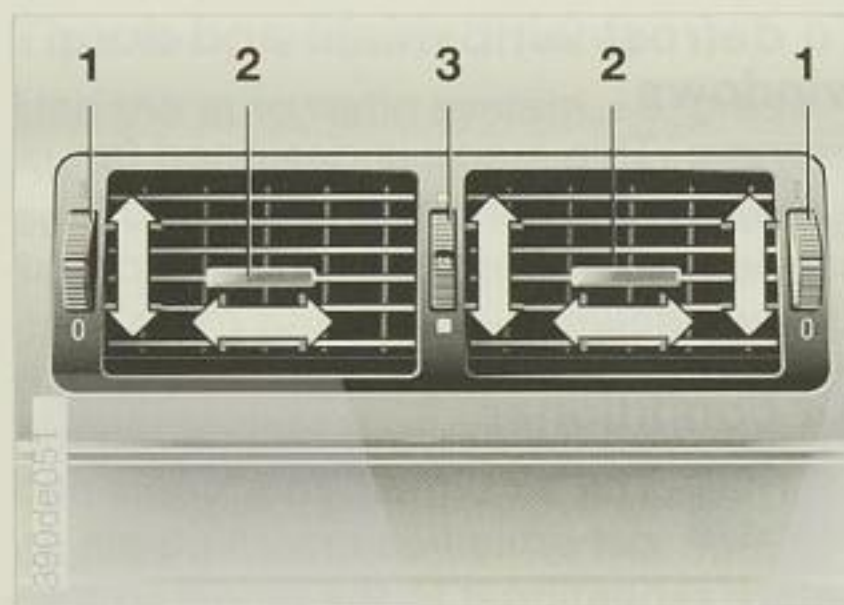
 The indicator lamp comes on to confirm that the defroster is operating. The rear window defroster switches off automatically.

Residual heat mode

 The system employs the heat stored in the engine to continue heating the interior after you switch off the ignition, e.g., while you wait at a railroad crossing.

In ignition key position 1, you can alter the settings of the automatic climate control. In ignition key position 0, the system automatically directs heated air to the windshield, side windows and footwells.

 Operates only at outside temperatures below approx. 59°F (15°C), with the engine at normal operating temperature and with adequate battery voltage. ◀

**Draft-free ventilation**

You can adjust the blower controls for the upper body area to select the optimum airflow rates and directions for your personal requirements:

Use rotary control 1 for infinitely-variable selection of air-flow height and to open and close the vent. You can use rotary control 2 to adjust the flow direction from side to side. Rotary control 3 allows you to temper the air flow from these outlets by adding heat or cooling as desired:

Turn toward blue – colder
Turn toward red – warmer

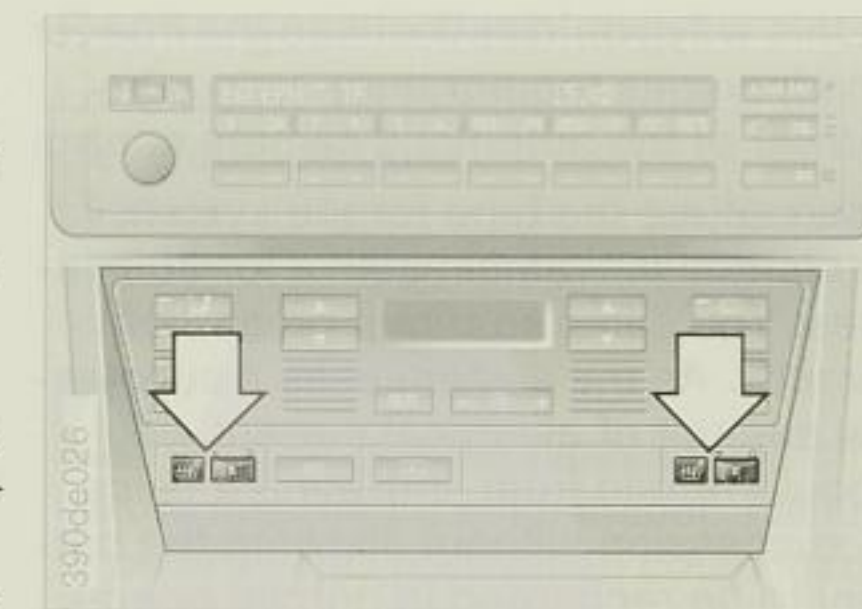
To adjust rear compartment vents:

Use the left rotary dial to close the vent or open it for any desired air flow. Use the right rotary dial to adjust the temperature in accordance with the front air vents.

Use the levers at the centers of the vent outlets to control the direction of the emerging air.

Automatic climate control Seat heating***Micro- and activated-charcoal filter**

The microfilter removes dust and pollen from the incoming air while the activated-charcoal filter provides additional protection by filtering gaseous pollutants from the outside air. Your BMW Retailer replaces this combined filter as a standard part of your scheduled maintenance. A substantial reduction in air flow indicates that the filter needs to be replaced early.



The seat cushion and backrest can be heated at ignition key position 2.

Press the buttons to activate and switch off the heaters.

A green indicator lamp within the button goes on to indicate that the seat heater is operating.

Use the rotary dial switch to select the desired heating level – the temperature is then regulated via thermostatic control.

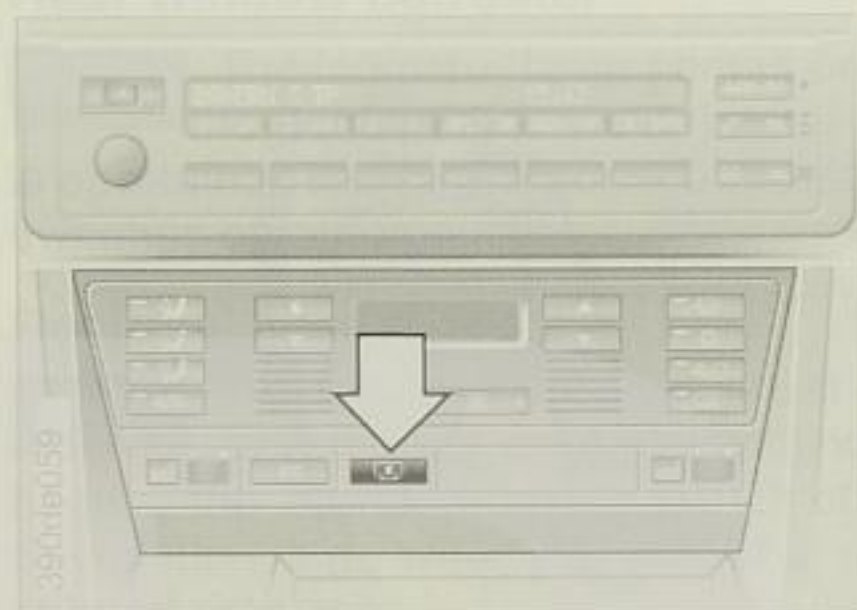
- Minimum temperature
- Maximum temperature

Steering wheel heating* 85

To activate and cancel, press button (arrow) with the ignition key in position 2.

The lamp within the button lights up when the steering wheel heater is in operation.

If you have a multifunction steering wheel without steering wheel heating, the button for recirculated-air mode is in this position (refer to page 24).



Press button to activate with ignition key at position 1 or 2.

Blinds for rear side windows*

Use the strap to extract the blinds, then suspend them in the attachment provided.

Parked-car ventilation*

In this way you can ventilate the interior and lower its temperature, using the blower of the automatic climate control.

You can set the time for the system to start; it will remain active for 30 minutes. You can also turn it on and off directly. As the system uses a substantial amount of electrical current, you should refrain from activating it twice in succession without allowing the battery to be recharged in normal operation between use.

The independent ventilation system is available for pre-programmed operation at temperatures above 60°F (16°C) as well as for direct operation at any temperature, but not while driving.

The air emerges via the vent outlets for the upper body. The vents must therefore be open for the system to operate.

Glove compartment



To open


Pull the handle and the lamp comes on.

To close

Fold up cover.


To engage locks

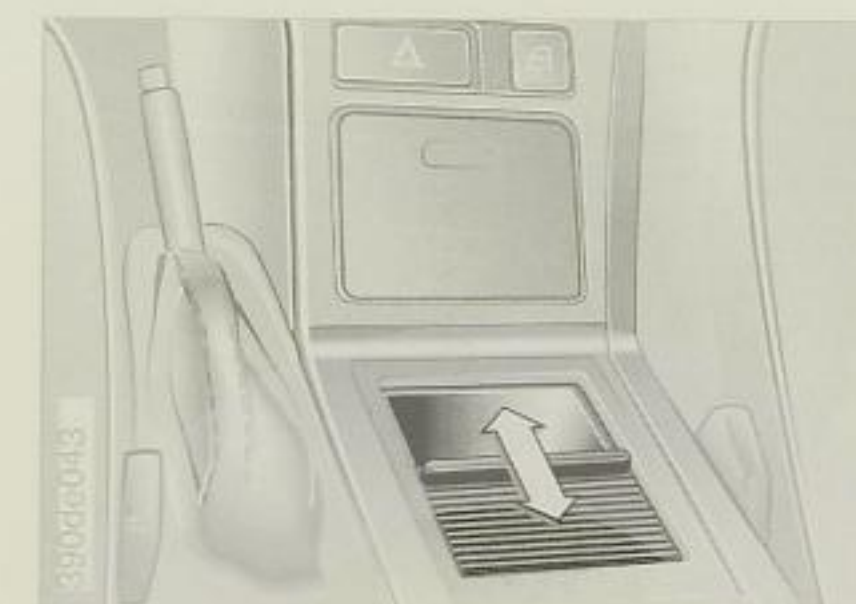
Use one of the master keys. A master key is also required for unlocking.

 To prevent injury in an accident, always close the glove compartment immediately after use. ◀

Rechargeable flashlamp*

Located on the left-hand side of the glove compartment. Features integral overload-protection, so it can be left in its holder continuously.

 Ensure that the flashlamp is off before inserting it in its holder. Failure to observe this precaution could lead to overcharging and damage to the unit. ◀

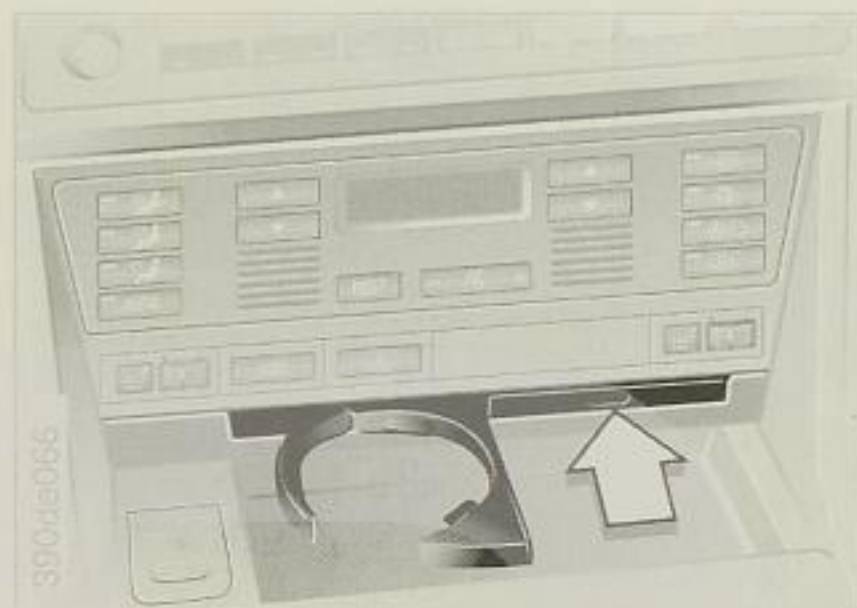


The cover of the storage compartment on the vertical surface of the center console can be pushed open or closed (illustration). If the vehicle is equipped with a cassette-holder,* open each cassette compartment by pressing on the small button.

Storage compartment on center console between the front seats: To open, reach into the recess at the front and pull upward.

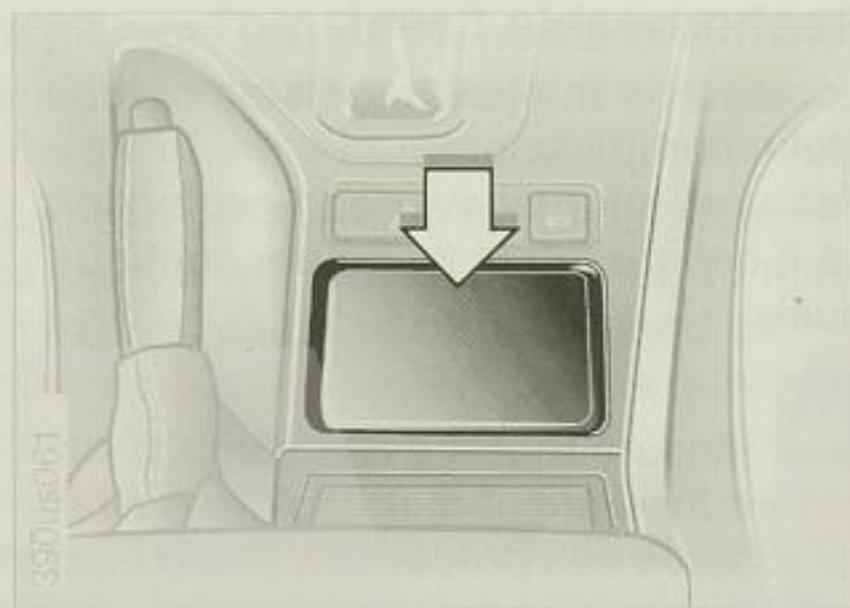
You will find a coin holder in the door pocket on the driver's side.

You will find additional storage areas in all the doors and on the backrest of the front seat.



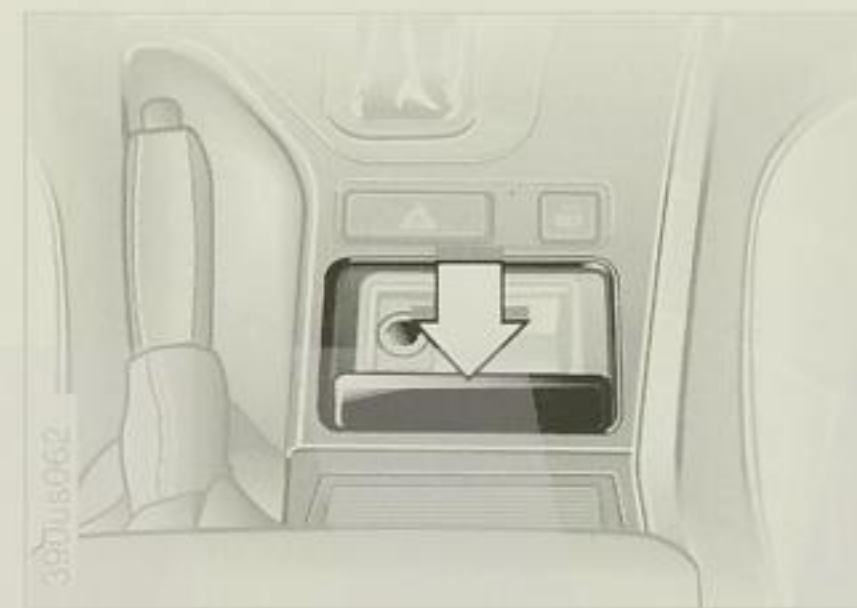
Two holders for canned drinks have been provided in the center console below the controls for the automatic climate control, with two additional holders for rear passengers on the rear of the console, just below the vent outlets.

Press to open, fold back inward to close.

**To open**

Press in direction indicated by arrow.

To extinguish a cigarette, tap off the ash and gently press the tip into the funnel.

**To empty**

Open the lid and press down (arrow): You can now pull the ashtray upward for removal.

On vehicles equipped for non-smokers the insert is removed in the same way.

**Cigarette lighter**

Press the cover panel for access (arrow), then push down the lighter.

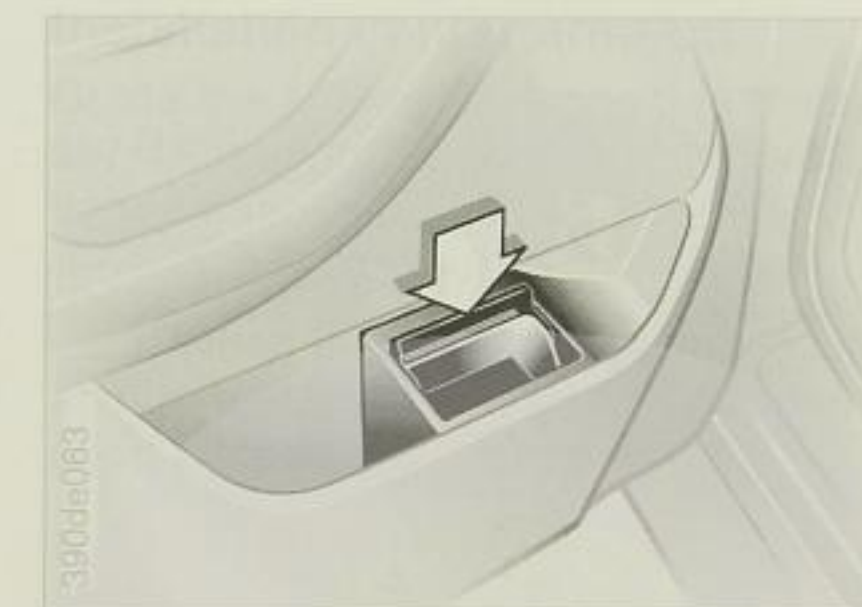
Remove as soon as the lighter jumps back out.



Always hold the cigarette lighter by its plastic knob. Never touch the metal jacket of the lighter or its heating coils, as serious burns could result. The cigarette lighter remains operational when the ignition key has been removed. Therefore do not leave unsupervised children in the vehicle. ◀

Cigarette lighter socket

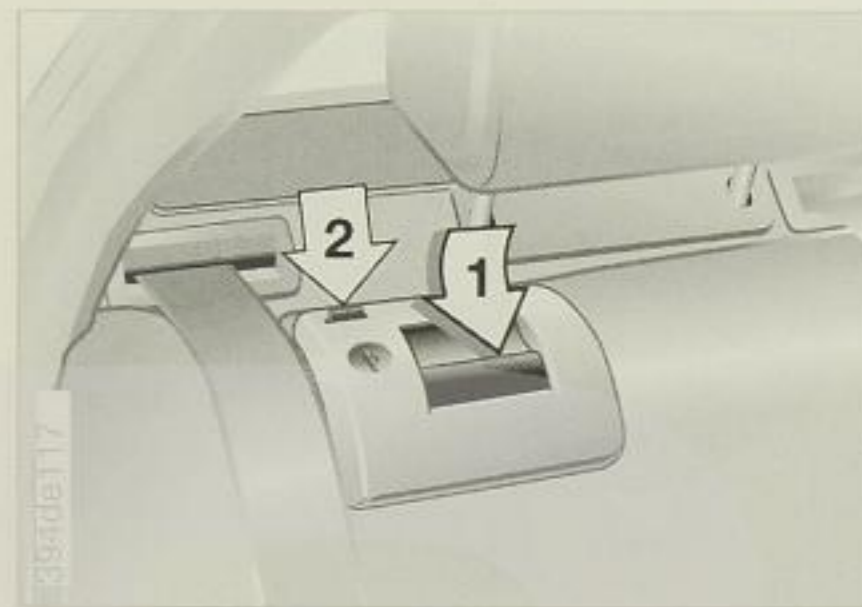
Suitable for attaching power supplies for handlamps, car vacuum cleaners, etc., up to a rating of approx. 200 watts at 12 volts. Avoid damaging the socket by inserting plugs of a different shape or size.

**To open**

Press recess in lid.

To empty

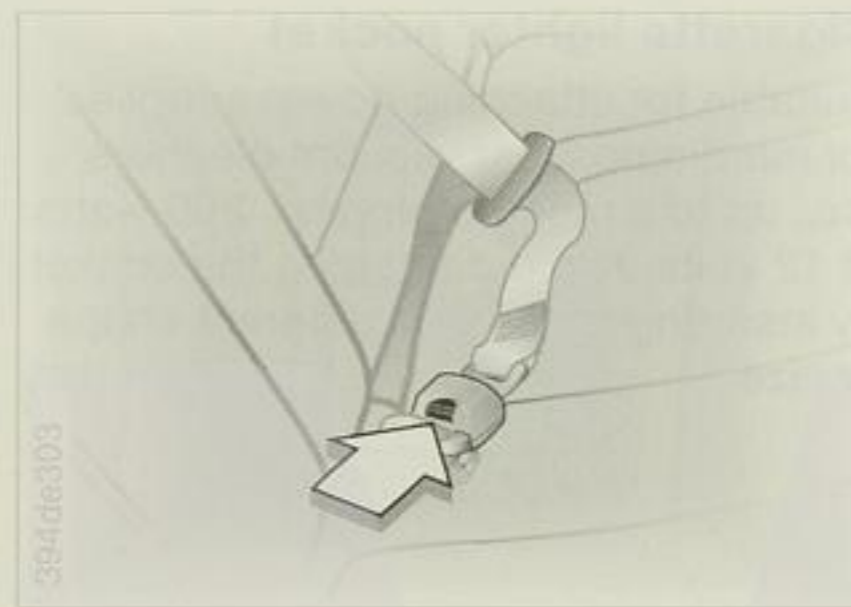
Press the edge of the cover (arrow). You can now pull the ashtray upward for removal.



The backrest of the rear seat is divided into two portions, one-third and two-thirds of the seat respectively. Each side can be folded down separately to carry longer objects.

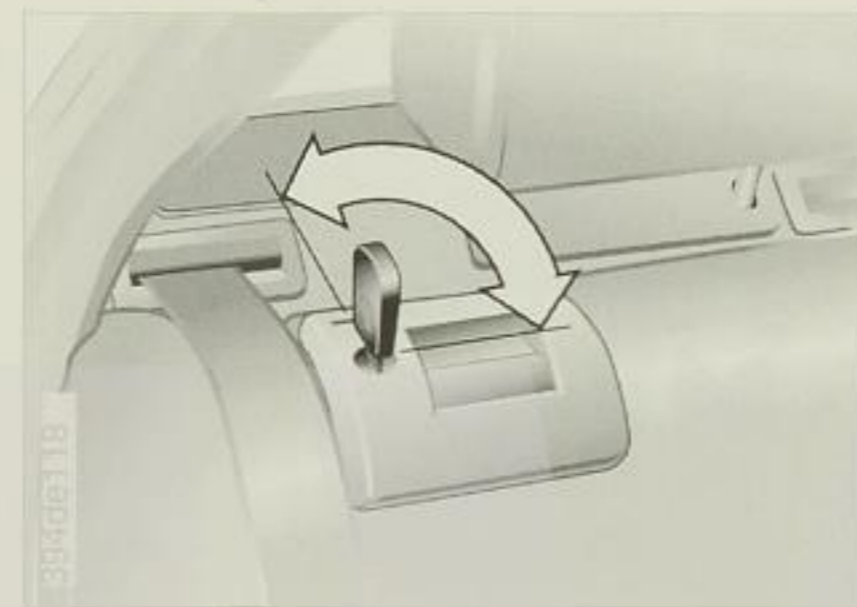
To open:
Reach into the hollow area and pull forward (arrow 1).

When you close it again, ensure that the retainer latches properly. The red slide (arrow 2) must go underneath.



The central belt has an additional small buckle.

- ▷ If you connect the two belt sections, you can use the central belt as any normal 3-point belt
- ▷ It is easier to fold the rear seat backrest up and down if you unbuckle the belt (arrow).

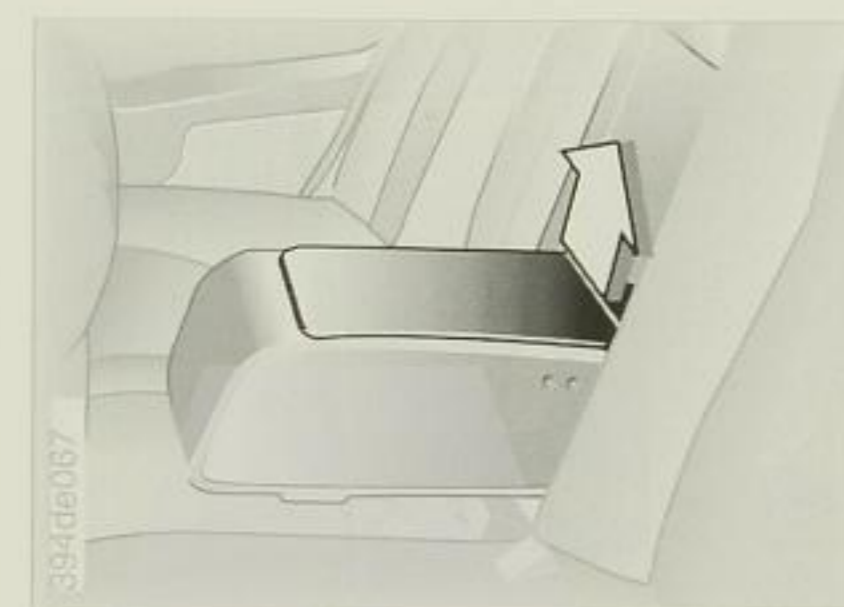


With a central key you can lock each backrest in the rear seat.

This prevents access to the trunk also from the interior of the vehicle, when you turn over door and ignition key 3 to someone else (refer to page 32). This is advantageous, e.g. at a hotel.

Designed for safe, convenient transport of 3 to 4 pairs of skis.

The length of the ski bags and the additional space in the trunk make it possible to transport skis of up to 6.8 ft. (2.10 m). Because the ski bag contracts as additional skis are inserted, the bag is suitable for transporting only two pairs of skis when both are of the maximum length of 6.8 ft. (2.10 m).



Removing center armrest

(Not provided with through-loading system, refer to page 93)

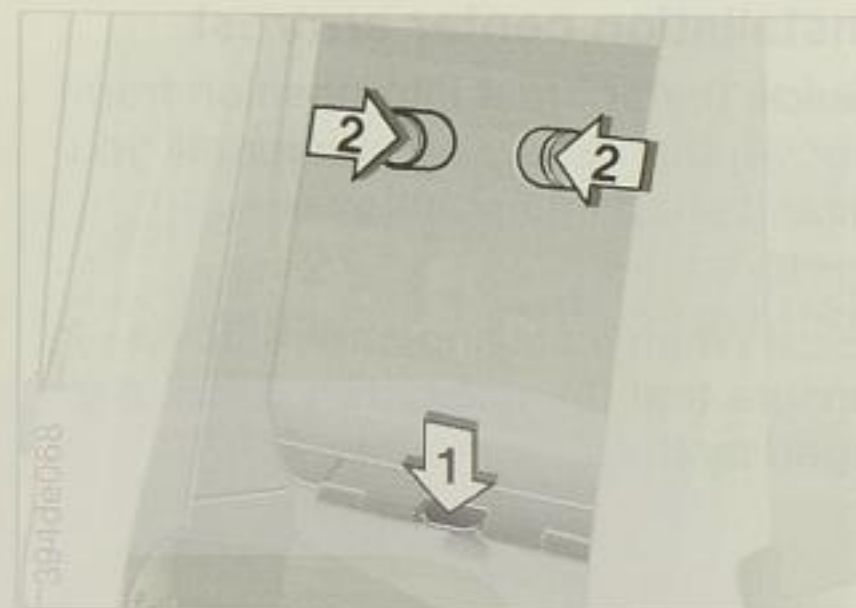
- 1 Fold down the center armrest.
- 2 Detach the Velcro® strip holding the center cover in position and place it on the armrest.
- 3 Grasp the front of the armrest with one hand, then use your other hand to reach down behind the armrest and pull up sharply (arrow).

Installation center armrest

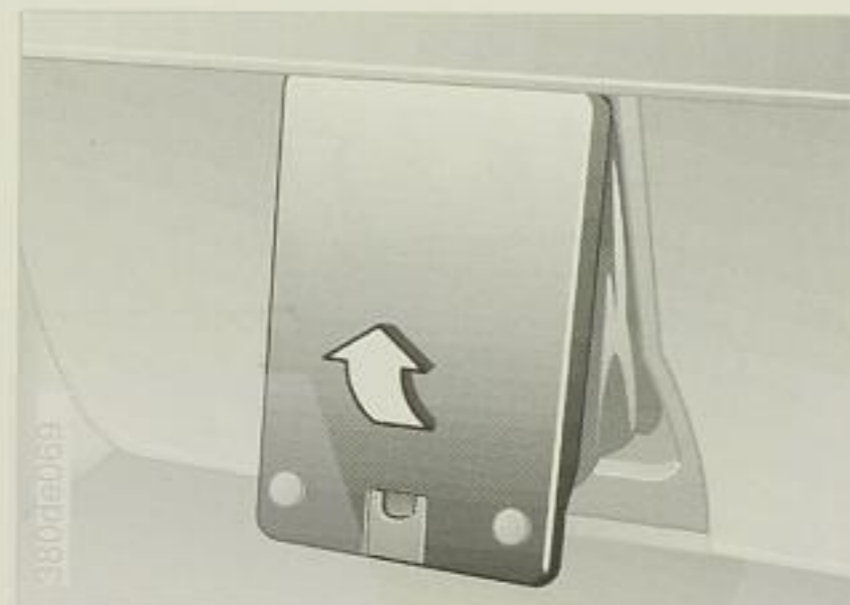
Guide the armrest into position from above, then apply pressure until you hear it snap into position.



When installing and removing it, ensure that the upholstery is not damaged by the side mounts. ◀

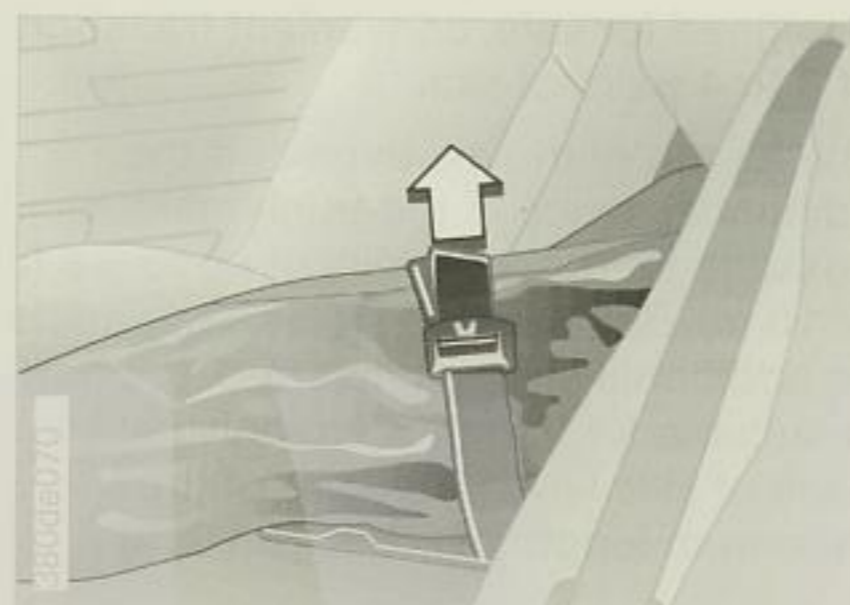
**Loading**

- 1 Press the release button (arrow 1) to unlock the cover panel in the luggage compartment.
- 2 Press the dentent levers (arrow 2) inward and fold the cover to the front.
- 3 Extend the ski bag between the front seats. The zipper provides convenient access to the inside of the bag, and can also be left open to promote drying.



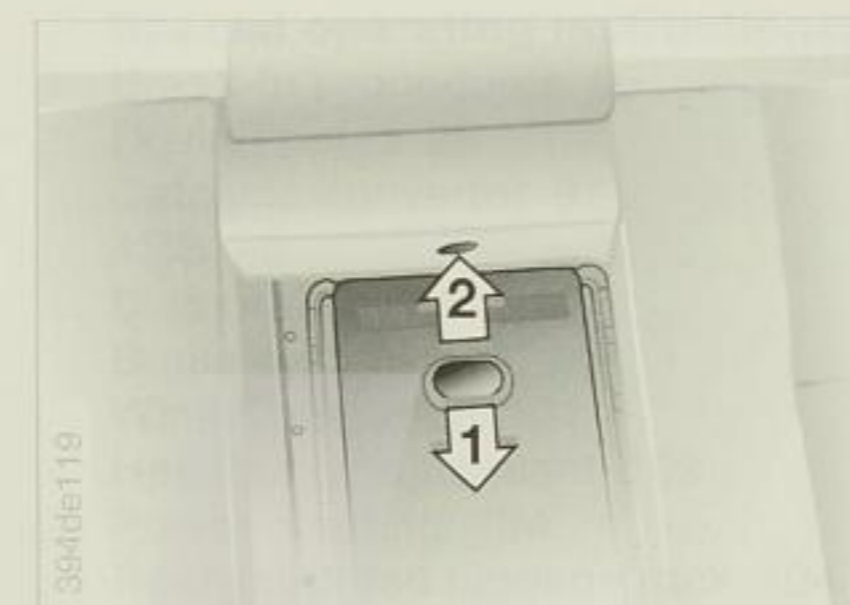
- 4 Use the magnetic retainers to attach the cover panel to the upper surface (metal surface below rear tray) of the luggage compartment.

Please ensure that the skis are clean before loading them into the bag. Take care to avoid damage from sharp edges.



- Secure the bag's contents by tightening down the strap at the buckle. ◀

To store the ski bag, perform the above steps in reverse sequence.

**Provided with through-loading system**

- 1 Tip the center armrest outward, loosen the trim from the upper Velcro® strip and place it on the armrest.
- 2 Press button 1 downward and swing the cover forward.
- 3 Press knob 2: The cover in the trunk is unlocked.

**Securing load**

- ▷ Secure smaller, light pieces with the retaining straps, a luggage compartment net* or elastic straps (refer to page 39)
- ▷ For large, heavy pieces, see your BMW retailer for load-securing devices*. Lashing eyes are provided at the front corners and the rear panel of the luggage compartment for attaching these load-securing devices.
- ▷ Observe the information enclosed with the load-securing devices.

! Always stow and secure the cargo properly, otherwise the vehicle occupants may be endangered during braking and evasive maneuvers. Do not exceed the permissible gross weight and the permissible axle loads (refer to page 160); if you do, the operating safety of the vehicle is no longer ensured and you violate the law. Do not stow heavy or hard objects in the passenger compartment, otherwise they would be thrown around during braking and evasive maneuvers and endanger the occupants. ◀

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To ensure that your vehicle provides maximum economy throughout a long service life, we request that you observe the following:

Engine and differential

Up to 1200 miles (2000 km):
Constantly vary both engine and vehicle speed; never exceed 4500 rpm and following speeds during this initial period:

BMW 528i: 100 mph (160 km/h)

BMW 540i: 106 mph (170 km/h)

Refrain from using full throttle and avoid pressing the accelerator beyond the kickdown point.

Once 1200 miles (2000 km) have elapsed, the engine and vehicle speeds can gradually be increased.

You should also observe these break-in procedures if the engine or differential is replaced later in the course of the vehicle service life.

Tires

Due to technical factors associated with their manufacture, tires do not achieve their full traction potential until an initial break-in period has elapsed.

Thus drive with extra care during the initial 200 miles (300 km).

Always observe all official speed limits.



When the vehicle is operated on wet or slushy roads, a wedge of water may form between the tire and the road surface. This phenomenon is referred to as aquaplaning, or hydroplaning, and can lead to partial or complete loss of traction, vehicle control and braking effectiveness. Reduce your speed on wet roads. ◀

Brake system

Approximately 300 miles (or 500 km) must elapse before the brake pads and rotors achieve the optimal pad-surface and wear patterns required for trouble-free operation and long service life later on.



The brake lamps do not come on when the parking brake is set. Vacuum for the brake system servo unit on your BMW is available only when the engine is running. When you move the car with the engine off – e.g., by towing – substantially higher levels of pedal force will be required to brake the vehicle. ◀

Driving notes



Brakes:

Do not drive with your foot resting on the brake pedal. Even light but consistent pedal pressure can lead to high temperatures, brake wear and possibly even brake failure.

Aquaplaning:

A wedge of water can form between tires and road surface when you operate the vehicle on wet or slushy roads. This phenomenon is referred to as aquaplaning, or hydroplaning, and it is characterized by a partial or complete loss of contact between the tires and the road surface. The ultimate results are loss of steering and braking control.

Driving through water:

Only drive through water with a depth of approx. 1 ft. (30 cm) and at this depth no faster than walking speed, otherwise the engine and electrical system may be damaged.

Driving notes

Rear parcel tray:

Never use the rear parcel tray to store heavy or bulky objects. They could pose a danger to the occupants when the car is braked heavily or in a crash.

Clothes hooks:

When suspending clothing from the hooks, ensure that they will not obstruct the driver's vision. Refrain from hanging heavy objects from the hooks, as these could cause personal injury when the car is braked heavily or in a crash. ◀

Catalytic converter

The catalytic converter reduces harmful exhaust emissions, and is designed for use with unleaded fuel only.

Even minute quantities of lead would be enough to permanently damage both the catalytic converter and the system oxygen sensor.

To ensure efficient, trouble-free engine operation and avoid potential damage:

- ▷ Always have your car serviced in accordance with maintenance instructions.
- ▷ Never drive until the fuel tank is empty.
- ▷ Respond to engine miss by switching off the engine at once.
- ▷ Never tow-start the car unless the engine is cold, or else unburned fuel may reach the catalytic converter. It is better to jump-start the engine from another car's battery.
- ▷ Avoid any other situations in which the fuel would not be (completely) burned in the engine, e.g.: Frequent or consecutive extended starting attempts, repeated starting attempts when the engine fails to start (switching off and restarting a healthy engine causes no damage). Never let the engine run with any of the spark-plug cables disconnected.



Failure to observe the above precautions could allow uncombusted fuel to reach the catalytic converter, which could respond by overheating, leading to serious damage.

Extreme temperatures occur at the catalytic converter on this and every catalyst-equipped vehicle. Heat shields are installed adjacent to some sections of the exhaust system. Never remove these shields; do not apply under-coating to their surfaces. When driving, standing at idle, and parking the vehicle, take care to avoid contact between the exhaust system and flammable materials (e.g., grass, hay, leaves, etc.). Such contact could lead to a fire resulting in personal injury and property damage. ◀

ABS enhances active safety by helping to prevent the wheels from locking under braking.

The system can achieve the shortest braking distances possible under most conditions (on straights and in curves, on asphalt, ice, wet road surfaces, etc.).

ABS is designed to meet two essential requirements during every application:

- ▷ to help provide vehicle stability
- ▷ to help retain steering and maneuvering capability on all types of road surface (asphalt, cement, dirt, moisture, snow and ice).

Braking with ABS

The system becomes operative once the vehicle exceeds a speed of approx. 5 mph (8 km/h). The ABS is deactivated whenever the vehicle's speed drops back below approx. 2 mph (3 km/h). This means that the wheels can lock in the final phase of a panic stop – a factor of no significance in actual use.

The ABS system closed-loop control circuit cycles in fractions of a second. A pulsation at the brake pedal indicates to the driver that ABS is active, i.e., the car is within its maximum braking range. In addition, the audible pulsation that accompanies the control operation calls the attention of the driver to the reduced traction between the tires and the road surface (slippery road surface), and serves as a reminder that the speed of the car should be reduced to adapt to road conditions.

On road surfaces which have a loose layer on a firm base, e.g., on gravel or snow, the braking distances with ABS may be longer than with the wheels locked. The same applies when snow chains are fitted. However, ABS continues to provide enhanced vehicle and steering control under these conditions.

Information for your safety

Not even ABS can suspend the laws of physics. ABS alone cannot prevent accidents if the brakes are applied without an adequate, safe distance between vehicles, if the car reaches excessive rates of lateral acceleration in curves, or if aquaplaning occurs. Responsibility for these types of situations remains in the hands (and at the feet) of the driver. You should never allow the added safety of ABS to lull you into a false sense of security, or mislead you into taking increased risks that could affect your own safety and that of others.

Antilock Brake System ABS

To ensure that the system remains completely operational:

Never fit tires of different sizes (e.g., winter tires/spare wheel): refit the correct tire to all wheels as soon as possible.



Never modify the ABS.

Service procedures on ABS are to be performed by authorized technicians only. ◀


In the event of a fault

the ABS warning lamp in the instrument cluster lights up, refer to page 22. The braking system then reverts to conventional operation as on a vehicle without ABS. However, have the braking system checked by your BMW Retailer as soon as possible. To prevent undetected defects and cumulative faults from adversely affecting the brake system, refer any problems to your authorized BMW Retailer at the earliest opportunity.

Disc brakes furnish optimum deceleration and braking control as well as greater fade resistance under heavy use.

Limited vehicle use, extended periods with the car parked or in storage, and operating conditions where braking is restricted to gentle, low-pressure applications will all increase the tendency for corrosion to form on the rotors, while contamination will simultaneously accumulate on the pads.

The pads must exert a minimal pressure against the rotors for the brakes to clean themselves effectively; under the conditions described above, this may not happen. If the brake rotors are corroded, they will tend to respond to braking with a pulsating effect which even extended application will fail to cure.

 We recommend the use of original BMW brake pads and components. ◀


Driving notes

When driving in wet conditions and in heavy rain, it is a good idea to apply light pressure to the brake pedal every few miles (kilometers). Watch traffic conditions to ensure that this maneuver does not endanger other road users. The heat generated in this braking process helps dry the brake pads and rotors.

Maximum braking force is obtained while the wheels continue to rotate, peaking when the wheels remain on the verge of locking without actually doing so. ABS maintains this state automatically. If the ABS fails, you should revert to the staggered braking technique described below (refer to page 101). Extended or steep mountain descents do not necessarily have to lead to reduced braking efficiency; downshift to a gear in which only minimal periodic brake applications are required (you can move the selector lever to the appropriate lower range if your car is equipped with an automatic transmission).

You can increase the engine's braking effect by selecting progressively lower gears, downshifting as far as 1st gear, or the 1st or 2nd shift position, on steep descents.

Should engine braking prove inadequate, you should still avoid extended, continuous braking. Instead of maintaining low to moderate pressure over an extended period of time, you should decelerate by applying more substantial pressure to the brake pedal (watch for following traffic!), then releasing the pedal, then repeating the application. This staggered braking technique allows the brakes to cool in the intervals between active braking phases, preventing overheating and ensuring that full braking capacity remains available at all times.

 Do not allow the vehicle to coast by pressing down the clutch pedal or shifting into neutral while underway. Never drive with the engine switched off. The engine provides no braking effect when the clutch is disengaged or the transmission is in neutral, and there is no power-assist for brakes and steering when the engine is not running. Never allow floor mats, carpets or any other objects to protrude into the area around the accelerator, clutch and brake pedals and obstruct their movement. ◀

Brake system


Possible faults

- ▷ If the warning lamp for brake hydraulics lights up and the message CHECK BRAKE FLUID appears in the Check Control*, the brake fluid level is too low.
- ▷ If the message CHECK BRAKE LININGS appears in the Check Control*, the brake pads have only the minimum thickness.

Brake fluid level


Low brake fluid (refer to page 121), accompanied by a substantial increase in pedal travel may indicate a defect in one of the brake system's hydraulic circuits.

The remaining circuit continues to provide adequate brake-system performance.

 For your safety, you should proceed immediately to the nearest BMW Retailer. Higher pedal pressures may be required for braking, and pedal travel may be longer than usual. Please remember to adapt your driving style accordingly. ◀

Brake pads

If the brake pads are almost worn out proceed to your BMW Retailer to have the pads replaced as soon as possible.

 We recommend the use of original BMW brake pads and components. ◀

Winter operation

The onset of winter is often accompanied by rapid changes in weather. Adaptations in driving style should be accompanied by preparations on the vehicle itself to ensure that your progress through the winter remains safe and trouble-free.

Coolant


Ensure that the coolant mixture contains the year-round ratio of 50:50 of water and antifreeze/corrosion protection. This mixture provides protection against freezing down to approx. -34°F (-37°C). Replace the coolant every three years.

Locks

BMW door lock de-icer can be used to free them if frozen. This de-icer also contains lubricant. After its use, treatment with BMW lock barrel grease is recommended.

Rubber seals and components

To prevent the weather-stripping from freezing, apply BMW's rubber treatment or silicone spray to the door, hood and luggage compartment seals.

 A complete range of car-care products is available from any authorized BMW Retailer. ◀

Snow chains

BMW snow chains* can be fitted on both summer and winter tires in response to severe winter road conditions. Attach them in pairs on the rear wheels only, and be sure to observe the manufacturer's safety instructions. Do not exceed a maximum speed of 30 mph (50 km/h). For maximum traction, we recommend that you manually deactivate ASC+T/DSC* when driving with snow chains mounted (refer to page 77).

Starting off

We recommend that you use the manual control switch to deactivate ASC+T/DSC* when starting off in deep snow or when rocking the car to free it (refer to page 77).

Driving on low-traction road surfaces

Use smooth, gentle pressure to control the accelerator pedal, avoiding sudden transitions and high throttle openings. Adapt your speed and driving style when approaching grades or slopes. Maintain an adequate distance between yourself and the car ahead.

Brakes

Winter road conditions substantially reduce the amount of traction available between the tires and the road surface; the resulting – considerable – increases in braking distance should be continually kept in mind.

ABS is intended to prevent the wheels from locking under braking to help the vehicle remain stable and sensitive to steering.

Should the ABS fail, to avoid locking wheels as a result: Reduce the pressure on the brake pedal until the wheels just start to roll again while still maintaining enough force to continue braking. Then increase the pressure again, reduce it again when the wheels lock, reapply pressure etc.

This staggered braking procedure will reduce stopping distances while helping you to maintain steering control. It can allow you to steer around hazards once you have reduced the pressure on the brake pedal.



Never downshift to exploit engine braking when driving on slippery roads; it could lead to loss of rear-wheel traction and endanger vehicle control. ◀



Always remember to disengage the clutch during hard braking on road surfaces affording only poor or uneven traction. ◀

Winter operation

Loss of lateral traction (sliding)

Release the accelerator pedal and depress the clutch pedal. Countersteer carefully and attempt to regain control of the vehicle.

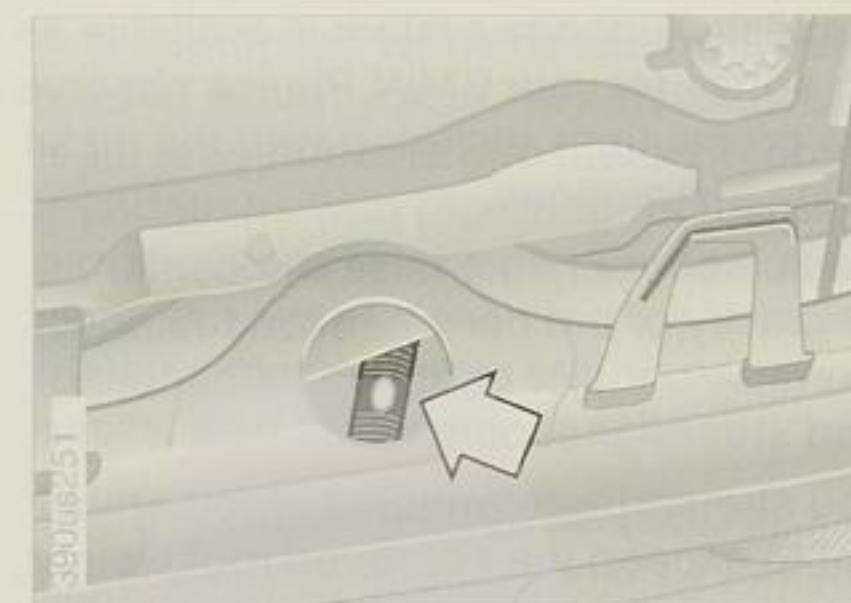
Parking

Engage 1st or reverse gear. If your car is equipped with automatic transmission, place the selector lever in Park. Engage the parking brake when parking on hills and inclined surfaces. To prevent frost and corrosion from locking the parking brake shoes, you can dry them by gently pulling up the lever while stopping. Make sure that following traffic is not endangered.



The brake lamps do not come on when the parking brake is engaged. ◀

Headlamp adjustment



Before checking ensure:

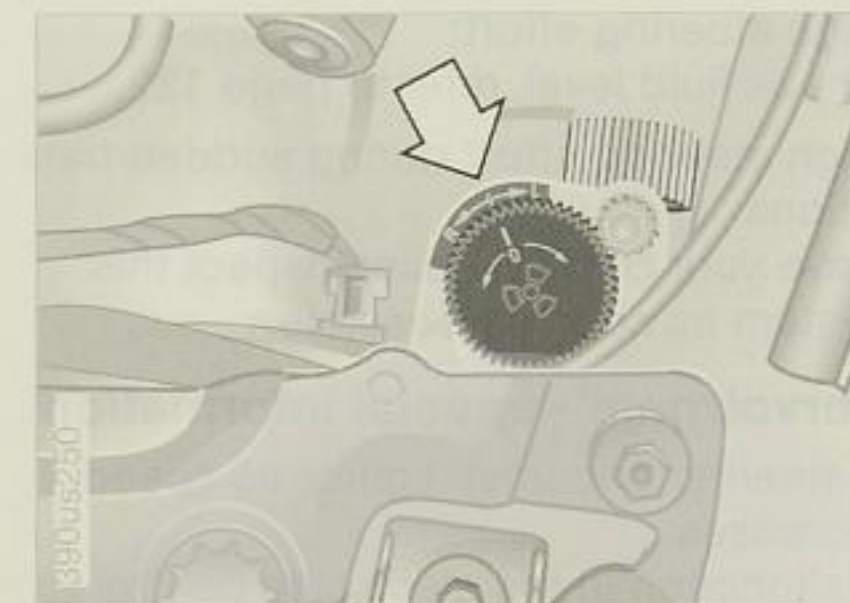
- ▷ that the vehicle is parked on a flat, horizontal surface
- ▷ that the tires are inflated to the prescribed pressures
- ▷ the vehicle is unloaded, the fuel tank full, and the driver or an object of comparable weight is on the driver's seat.

Vertical adjustment

Remove the cover.

Check the adjuster (arrow) to ensure that the bubble is centered on the reference mark.

If you determine that the headlamps are aimed too high or low, have them adjusted by your BMW Retailer.



Horizontal adjustment

Use the adjustment mechanism (arrow) to ensure that the zero designation aligns with the middle mark.

If you determine that the headlamps are aimed too high or low, have them adjusted by your BMW Retailer.

High steering effort:
Check fluid level, refer to page 122.


High steering effort during sudden transitions:

Have your BMW Retailer inspect this system as soon as possible.

Servotronic - special information

If steering becomes lighter as speed increases:

Malfunction in the electronic control system. Have your BMW Retailer inspect this system as soon as possible.

 Failure in the power steering system will be accompanied by a substantial increase in the amount of effort required to steer the vehicle. ◀

Roof luggage rack

A special luggage system is available as an option for your BMW. Please observe the precautions included with the installation instructions.

Because roof racks raise the center of gravity of the car when loaded, they exercise a major effect on its handling and steering response.

You should therefore always remember not to exceed the approved roof weight, the approved gross vehicle weight or the axle weights when loading the rack.

Make sure that the load is not too heavy, and attempt to distribute it evenly. Always load the heaviest pieces first (on the bottom). Make sure there is sufficient space to raise the sliding/tilt sunroof.

Secure the roof luggage correctly and securely to prevent it from shifting or being lost during driving (danger to following traffic).


Drive smoothly; avoid sudden acceleration and braking; corner gently.

The roof load increases the aerodynamic resistance: increased fuel consumption and stress on the roof are the immediate results.

Cellular phones*

Mobile communications devices (mobile phones, two-way radios, etc.) not specifically designed for use in your car may trigger malfunctions in other vehicular systems. BMW can neither test nor assume responsibility for every individual product being offered on the market. We recommend that you consult your BMW Retailer before purchasing any device of this kind.

To ensure that your BMW continues to provide reliable and trouble-free operation, refrain from using a cellular phone or other radio device with an antenna located inside the passenger compartment. The antenna should always be fitted on the outside of the vehicle.

 Always remove the external cellular phone antenna before transporting the vehicle on a train or driving it through a car-wash. ◀

Radio reception

The reception and sound quality obtained from mobile radios varies according to a variety of factors, including the broadcast range of the transmitter and the directional orientation of the antenna.

Interference factors such as high-tension power lines, buildings and natural obstructions can all lead to unavoidable reception interference, regardless of how well the vehicle sound system is operating.

Climatic factors such as intense solar radiation, fog, rain and snow can also interfere with reception.

Cellular phones without official BMW approval can also generate interference. This phenomenon assumes the form of a low-pitched hum emanating from the speaker system.


Please refer to the supplementary operating instructions provided with your sound system for detailed information on its use.

Technical modifications to the vehicle

Any authorized BMW Retailer will be glad to inform you of the advisability, legal requirements and factory recommendations with regard to technical modifications on the car. For this purpose, the Retailer requires the Vehicle Identification Number and, in some cases, also the engine number.

Light-Emitting Diodes (LEDs)

Light-emitting diodes installed behind translucent lenses serve as the light source for many of the controls and displays in your vehicle. The concept behind their operation is related to that employed for lasers, and they are officially designated as Class 1 light-emitting diodes.


 Do not remove the protective lenses and avoid staring directly at the unfiltered beam for extended periods (several hours), as inflammation of the iris could result. ◀

Information for your safety

The factory-approved radial tires are matched to the car and have been selected to provide optimum safety and driving comfort on your car.

In a very real sense, both tire life and your own safety are riding on correct tire specifications and inflation pressures.

Incorrect inflation pressure is a frequent cause of tire damage. It also influences the roadholding of your BMW to a very great extent.

 Check tire pressures – not forgetting the spare tire – regularly, i.e., at least twice a month and before starting any long journey. Incorrect tire pressure can otherwise lead to tire damage and accidents. ◀

Tire tread**Tire tread – Tire damage**

Inspect your tires frequently for tread wear, signs of damage and for foreign objects lodged in the tread. Check the tread depth.

Make sure that the depth of the remaining tread is at least 0.12 in (3 mm). Otherwise there is an increased risk of aquaplaning, even at relatively moderate speeds and with only small amounts of water on the road.

We recommend that you always replace the tires once the tread wears to 0.12 in (3 mm). If you continue to use the tires, wear indicators appear in the tread at 0.063 in (1.6 mm).

 Never continue driving on a deflated (flat) tire. A flat tire greatly impairs steering and braking response, and can lead to complete loss of control over the vehicle.

Avoid overloading the vehicle so that the permitted load on the tires is not exceeded.

This can lead to overheating and increases in the rate at which damage develops inside the tires. The ultimate result can assume the form of a sudden air loss.

Unusual vibrations encountered during normal vehicle operation can indicate tire failure or some other vehicle defect, as can variations in normal vehicle response, such as a pronounced tendency to pull to the left or right. Should this occur, you should respond by immediately reducing your speed and carefully proceeding to the nearest BMW Retailer or professional tire center, or having the vehicle towed in to have it and its tires inspected.

Tire damage (up to and including blow-outs) can endanger the lives of both the vehicle occupants and other road users. ◀

Tire replacement

To maintain good handling and vehicle response, use only tires of a single tread configuration from a single manufacturer.

We cannot approve the use of retreaded tires, as possible variations in case structures and their indeterminate ages (which could be substantial) could lead to extreme wear, with impaired handling and reduced safety as the ultimate results.

Interaxle tire changes

The tread wear patterns at the front end differ from those at the rear – the actual patterns will vary according to individual driving conditions. In the interest of safety and optimal vehicle response, we advise against rotating tires from front to rear and vice versa.

When considering the potential economic benefits of interaxle tire rotation, you must decide whether the expense of having the tires rotated is likely to be amortized during the anticipated extension in tire life. We recommend that you discuss the matter with your BMW Retailer.

Should you decide to rotate the tires, it is essential to observe the following: Leave the tires on the same side of the vehicle (include spare in rotation pattern as desired).

Braking response and traction may be adversely affected.


Rotation should always be carried out at short intervals, maximum 3000 miles (approx. 5000 km).

Always replace tires after 10 years, regardless of use or tread wear.

Spare tires over 6 years old should be used only in case of emergency. Such a tire should be replaced by a new tire immediately, and should not be fitted together with new tires.

The date on which the tire was manufactured is indicated by the code on the sidewall:

DOT... 327 indicates that the tire was manufactured in Week 32 of 1997.

 If different sizes of tires are fitted to front and rear axle (from page 110) you must not interchange wheels from one axle to the other. ◀

Tires and wheels

Use only BMW-approved tires.

Due to the high speeds which this vehicle can reach, the use of specific brands, specifications and dimensions is mandatory. Consult any BMW Retailer for details.

Observe national, provincial and state regulations.

The tire codes will aid you in selecting the correct tire. The essential data for radial tires are as follows:

Example: 235/60 R 16 100W

Nominal width in mm _____
 Aspect ratio in % _____
 Radial tire code _____
 Wheel diameter in inches _____
 Load rating (not on ZR tires) _____
 Speed rating (before R on ZR tires) _____

The speed rating indicates the approved maximum speed for the tire.

Summer tires:

S = up to 112 mph (180 km/h)
 T = up to 118 mph (190 km/h)
 H = up to 130 mph (210 km/h)
 V = up to 150 mph (240 km/h)
 W = up to 167 mph (270 km/h)
 ZR = over 150 mph (240 km/h)

Winter tires:

Q M+S = up to 100 mph (160 km/h)
 T M+S = up to 118 mph (190 km/h)
 H M+S = up to 130 mph (210 km/h)

Codes stamped on light-alloy wheels:

8 J x 16 H 2
 Hump width in inches _____
 Code letter for flange type _____
 Symbol for full-drop center rim _____
 Rim diameter in inches _____
 Hump on the 2 rim shoulder _____

Protect valve inserts against dirt using screw-on valve stem caps. Dirt in the valves frequently leads to slow leaks.

Winter tires

We recommend winter tires (M+S radial tires) for operation under inclement winter driving conditions. Although all-season M+S tires provide better winter traction than standard summer tires with H, V, W and ZR speed ratings, they generally fail to provide the same levels of performance as standard snow tires in winter driving.

If you fit winter tires, install radial tires of the same tread configuration and from a single manufacturer on all four wheels (better still: on all five wheels). This ensures safe tracking and steering response.

Fit BMW-approved winter tires only. Any BMW Retailer will be glad to provide you with information on the best winter tires for your particular driving conditions.

Never exceed the maximum speed for which the tires are rated.

When tread depth is less than 0.16 in (4mm), tires noticeably lose their winter usefulness and, in the interest of safety, should be replaced.

Observe the specified tire inflation pressures and be sure to have the wheel and tire assemblies balanced every time you change the tires.



Unprofessional attempts to service tires can lead to damage and accidents. Have this work performed by skilled professionals only. Your BMW Retailer will be glad to assist you. ◀

Store tires in a cool, dry place, away from light whenever possible. Protect the tires against contact with oil, grease and fuel.

Tire specifications	Steel rim (wheel rim)	Light-alloy wheel	Recess (mm)
BMW 528i			
225/60 R 15 96 H M+S	–	7Jx15	20
225/60 R 15 96 W	–	7Jx15	20
225/55 R 16 95 W	–	7Jx16	20
235/45 R 17 93 W	–	8Jx17	20
Front: 235/45 R 17 93 W	–	8Jx17	20
Rear: 255/40 R 17 94 W	–	9Jx17	26
205/65 R 15 94 Q M+S	–	6.5Jx15	18
225/60 R 15 96 Q M+S	–	7Jx15	20
225/55 R 16 95 Q M+S	–	7Jx16	20
BMW 540i			
225/55 R 16 95 H M+S	–	7Jx16	20
225/55 R 16 95 W	–	7Jx16	20
235/45 R 17 93 W	–	8Jx17	20
Front: 235/45 R 17 93 W	–	8Jx17	20
Rear: 255/40 R 17 94 W	–	9Jx17	26
225/55 R 16 95 Q M+S	–	7Jx16	20

Pay attention to the specifications for tires and wheels in the vehicle's manuals. If sizes not approved by the manufacturer are fitted, an entry in the car documents may be necessary. Comply with local legislation.



The use of rims and wheel bolts that do not meet the specifications of the original equipment will affect the

safe operation of your vehicle and may cause an accident and personal injury. Never mix tires of different design, such as steel-belted radials with radial bias-belted or bias-ply tires, etc. Mixing tire types will adversely affect road-holding and can lead to loss of vehicle control. ◀

Snow chains

Small-link BMW snow chains* can be fitted on summer and winter tires. Install on the rear tires only - never at the front. Observe all manufacturer's safety precautions when mounting the chains.



When tires are fitted to 17-inch wheels, it is not possible to fit snow chains. ◀

Hood

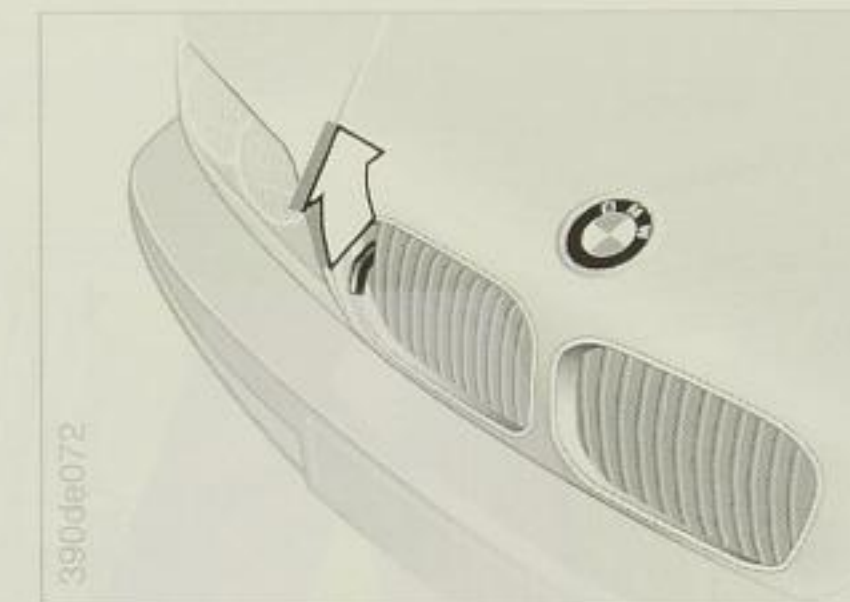


To unlock

Pull the lever located under the left-hand side of the instrument panel.

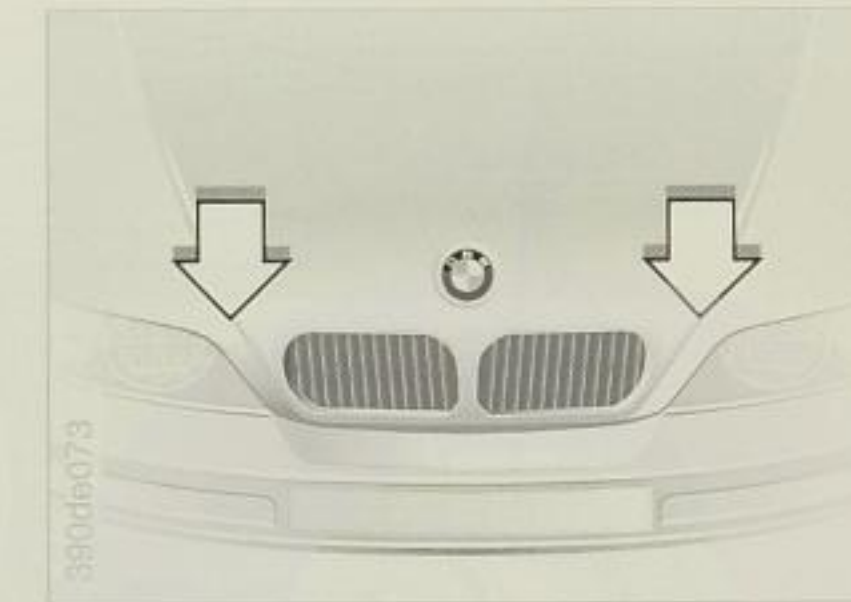


Do not work on the car unless you possess the appropriate specialised knowledge. Always switch off the engine and allow it to cool down before working in the engine compartment. Always disconnect the battery before working on any electrical systems or equipment, especially when these are located within the engine compartment. Observe all applicable instructions and warnings. Failure to work in an informed, professional manner when servicing components and materials constitutes a safety hazard. If you are not familiar with the guidelines, please have the operations performed by your authorized BMW Retailer. ◀



To open

Pull the release handle and open the hood.

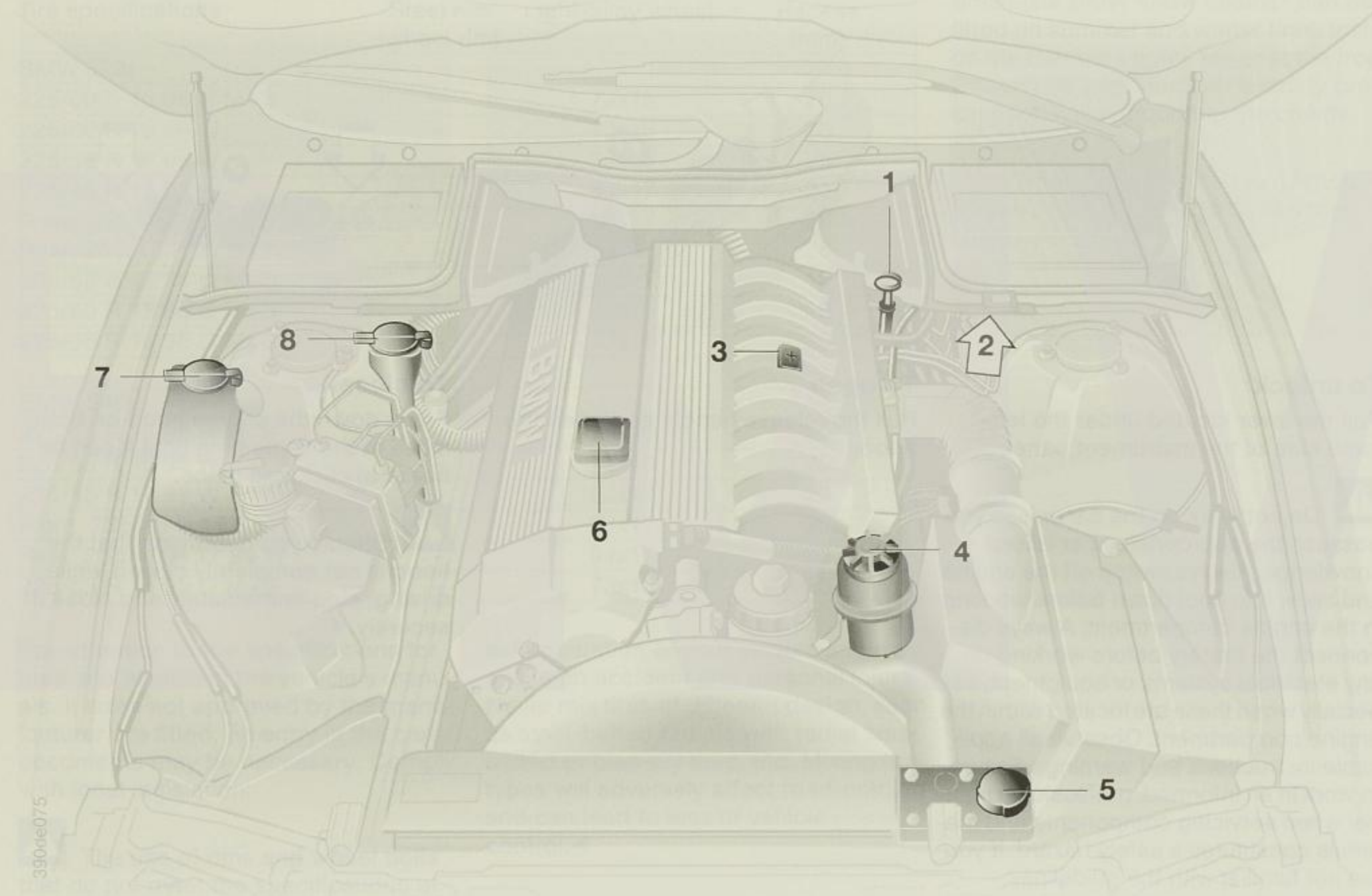


To close

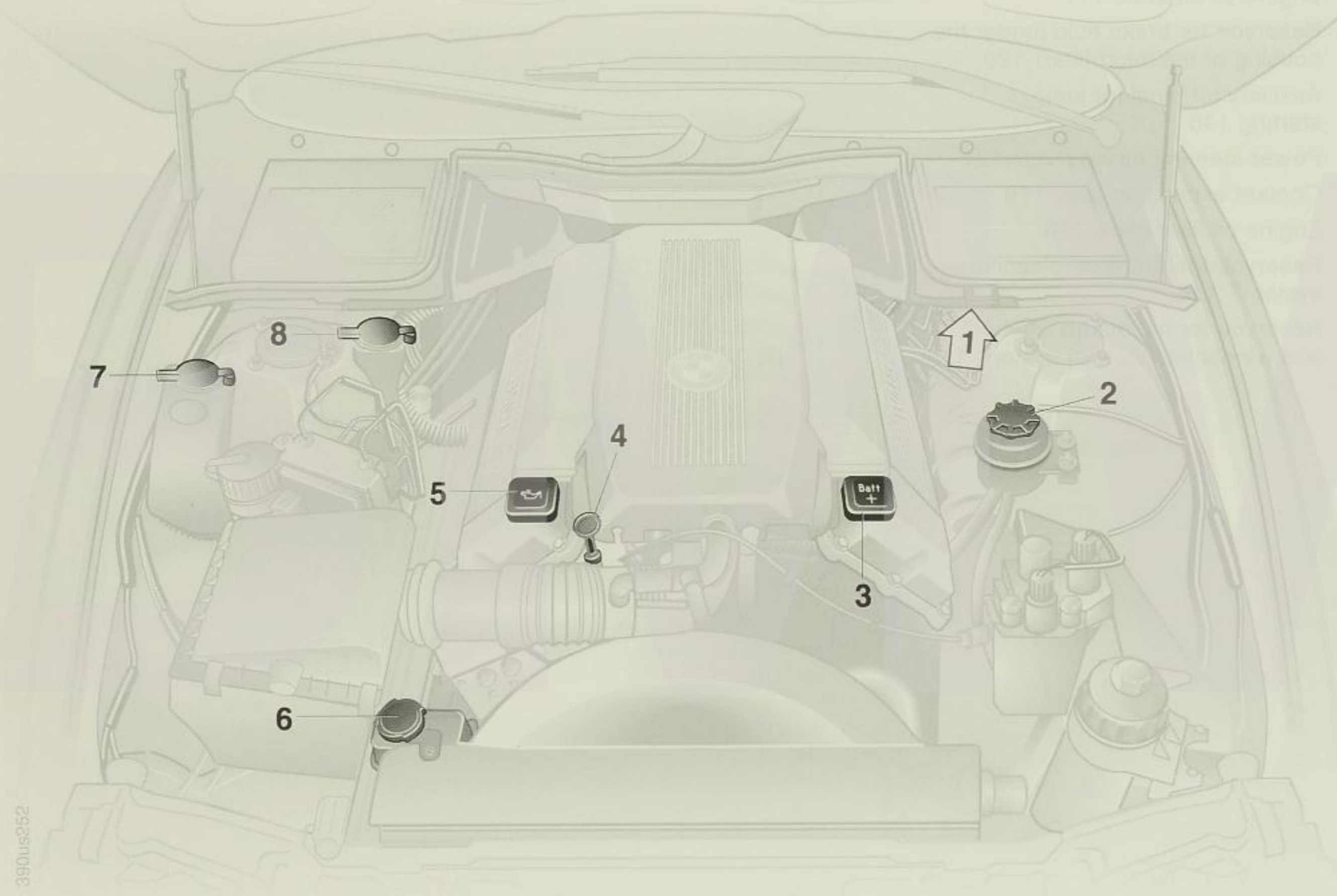
Press down the engine hood on both sides at the same time until it can be heard to click into place.



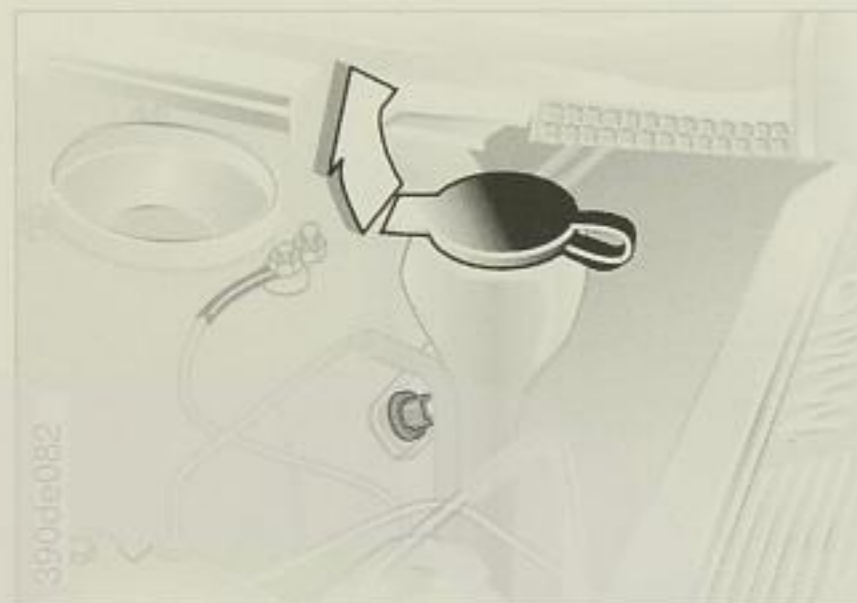
Should you determine that the hood is not completely closed while driving, stop immediately and close it securely. ◀



- 1 Engine oil dipstick 117
- 2 Reservoir for brake fluid (under the housing of the microfilter) 120
- 3 Auxiliary terminal for jump starting 146
- 4 Power steering oil reservoir 121
- 5 Coolant expansion tank 119
- 6 Engine oil filler neck 118
- 7 Reservoir for intensive-cleaning system* 116
- 8 Reservoir for headlamp washer* and windshield washer system 116



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- 7 Reservoir for intensive-cleaning system* 116
- 8 Reservoir for headlamp washer* and windshield washer system 116



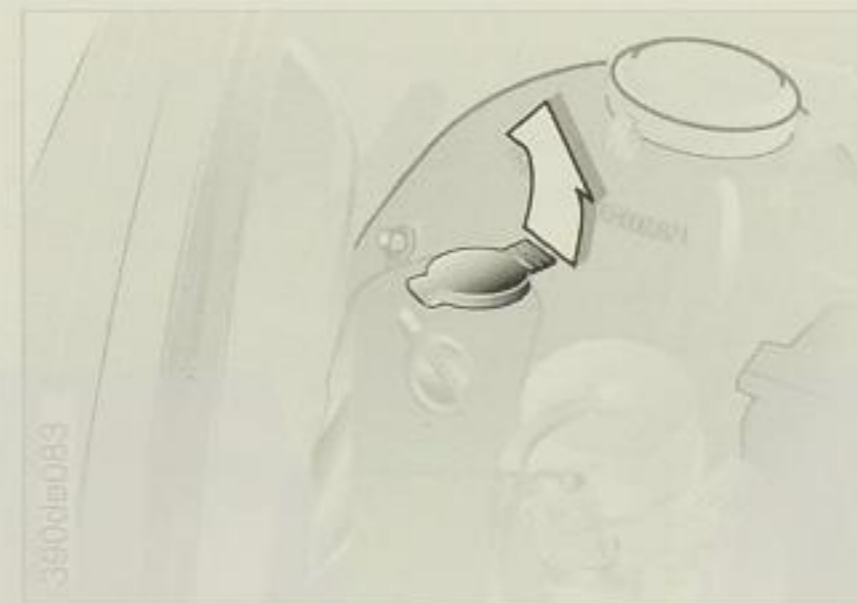
Headlamp washer* and windshield washer

The reservoir capacity is approx. 3.7 US quarts (3.5 liters) for the windshield washer system alone and 6.3 US quarts (6.0 liters) together with the headlamp washer system.

Fill with water and - as required - with a washer antifreeze (according to manufacturer's recommendations).



We recommend that you mix the washer fluid before adding it to the reservoir. ◀



Intensive-action washer reservoir*

Capacity approx. 1.1 US quarts (1.0 liters). Fill with intensive-action washer fluid. This fluid retains its fluid state down to approx. -17°F (-27 °C) and is available from your BMW Retailer.

Washer nozzles

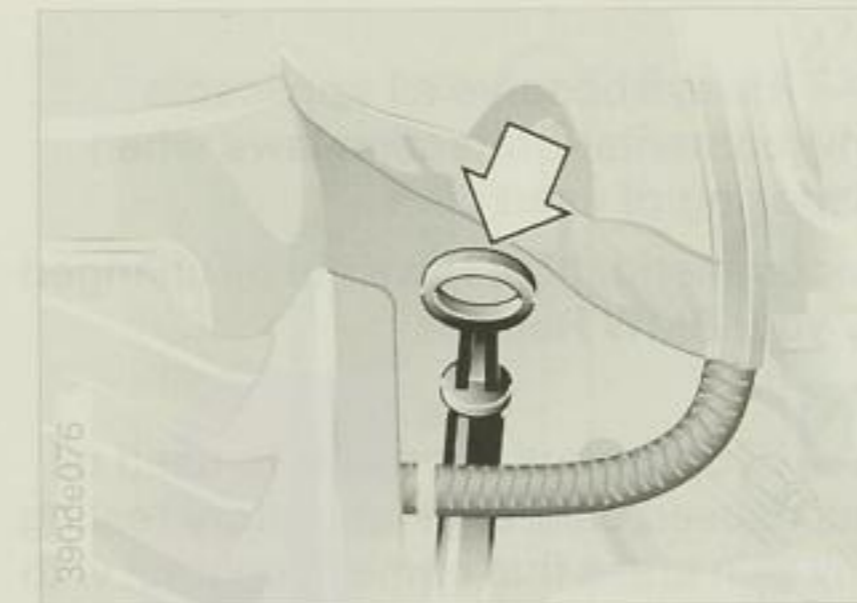
Windshield washer

The spray from the nozzles should be directed so as to ensure effective cleaning, even at high speeds. Use a needle to adjust the nozzles as required, or have them adjusted at your authorized BMW Retailer.

Headlamp washer system

Have these adjusted by your BMW Retailer as required.

Engine oil



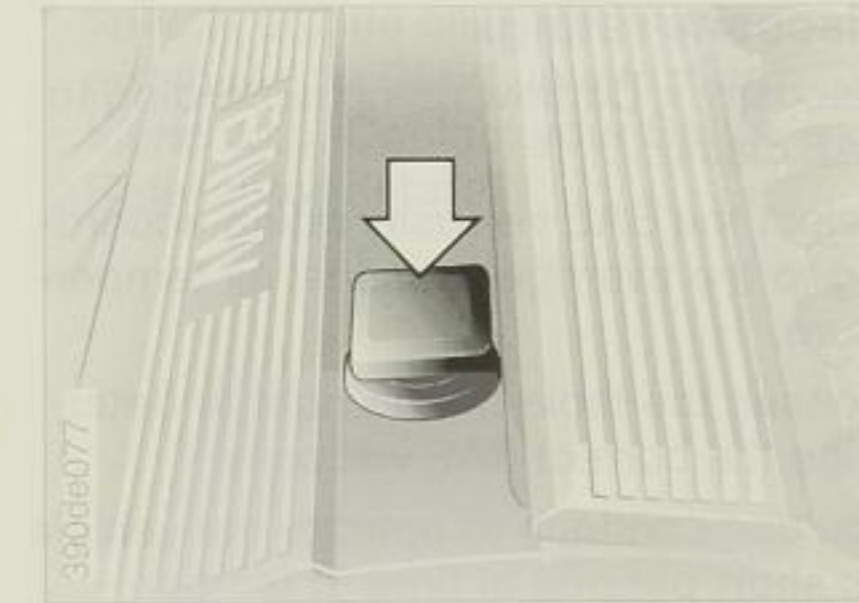
Checking oil level

As with fuel economy, oil consumption is directly influenced by your driving style and vehicle operating conditions.

When the indicator lamp for the engine oil level is on (refer to page 23) or when in the Check Control the warning CHECK ENGINE OIL LEV appears (refer to page 71), check the oil level while the car is standing on a level surface.

To obtain precise readings:

- ▷ Check with engine cold, before starting.
- ▷ When checking with the engine warm, wait briefly for the oil to drain back down into the oil pan (e.g., while refueling).



Checking oil level:

- 1 Pull out dipstick and wipe off with a lint-free cloth, paper tissues etc.
- 2 Push the dipstick all the way into the guide tube and pull it out again.
- 3 The oil level should be in between the two graduations on the dipstick.

To add oil

Wait until the level has dropped to just above the lower mark before adding oil. Never wait until the oil drops below the lower mark.

The space between the two marks on the dipstick corresponds to approx. 1.1 US quarts (1 liter). Do not fill beyond the upper mark on the dipstick. Excess oil harms the engine. Because it would be consumed within a short period, it would also result in an abnormally high rate of oil consumption.



BMW engines are designed to operate without oil additives; the use of additives could even lead to damage in some cases. This notice also applies to the fluids and lubricants in the transmission (automatic and manual), the differential and the power steering system. ◀

Engine oil specifications

Always refer to the API specifications when selecting oil.

Required quality:

API SH
API-SH/CD
API-SH/CE

Viscosity ratings

Viscosity = Oil flow rating according to SAE class.

Select the SAE viscosity rating according to the average seasonal air temperature.

Consult the table on the right to determine the correct SAE viscosity.

You can continue to operate the vehicle for short periods of time at temperatures beyond the range for the SAE rating of the oil being used.



Always observe all applicable environmental-protection laws when disposing of used oil. ◀

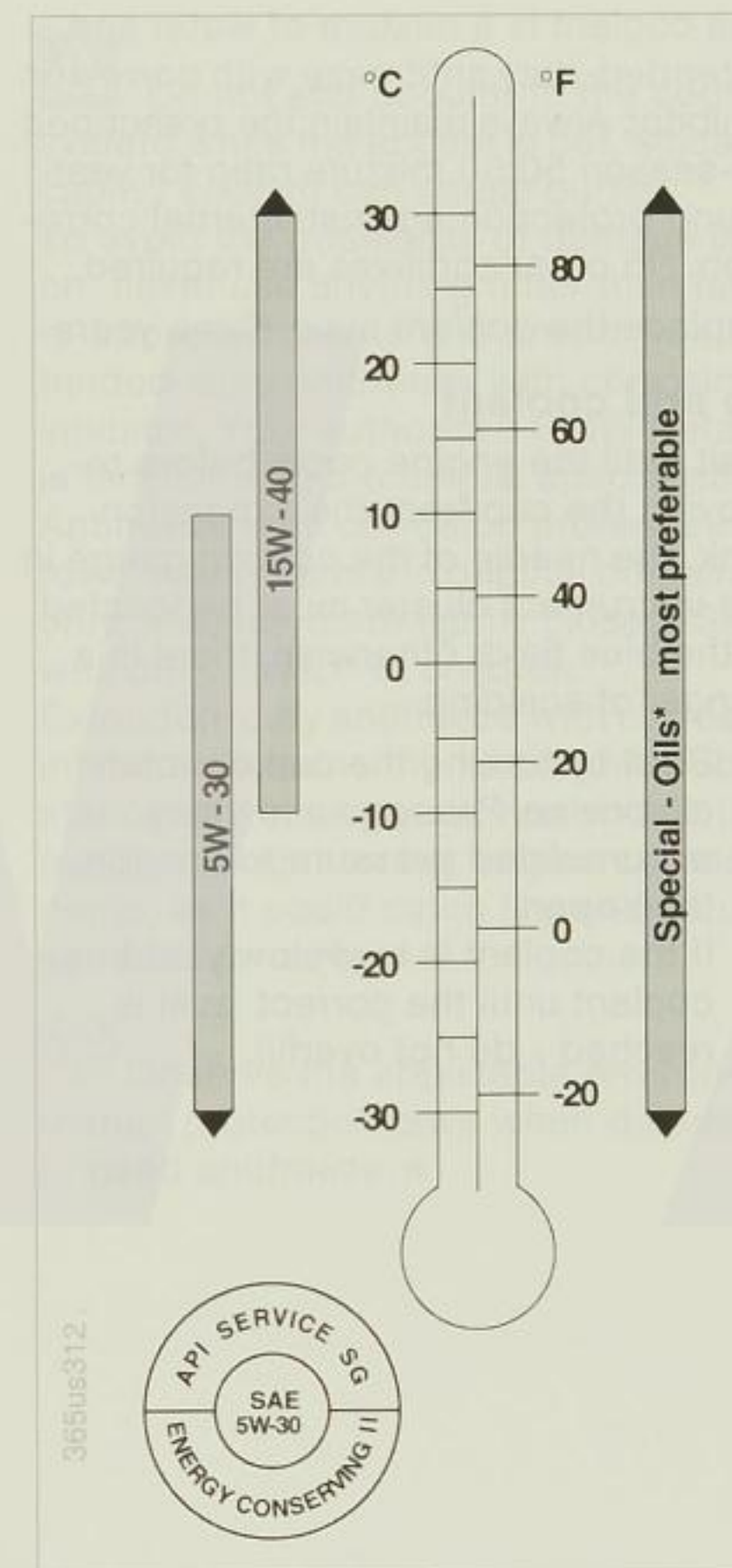
Recommendation: Have the oil changed by your BMW Retailer.



Continuous exposure to used oil has caused cancer in laboratory testing. Any skin areas that come in contact with oil should be thoroughly washed with soap and water.

Always store oil, grease, etc., out of reach of children. Observe all warning labels and information on lubricant containers.

If you use SAE 15W-40 engine oil in low temperatures (below 14°F (-10 °C) the engine may become difficult to start. Special engine oils individually approved by BMW are the preferred choice for your engine. Please contact your BMW Retailer for details. ◀



* Special engine oils individually approved by BMW (low friction lubricants). Contact your BMW Retailer for details.

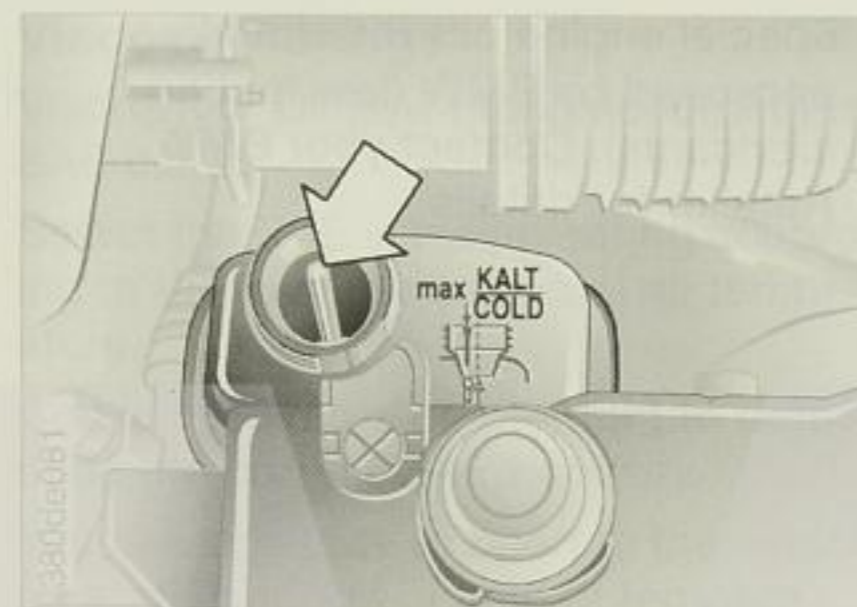


6-cylinder engine

The illustration shows the coolant expansion container as installed in the BMW 528i.

Correct coolant level with the engine cold, approx. 68°F (20°C):

Visible through the translucent expansion tank, up to the KALT/COLD mark.



8-cylinder engine

Correct coolant level with the engine cold, approx. 68°F (20°C):

Unscrew the cap from the expansion tank.

The coolant level is correct when the end of the red float aligns with the upper edge of the filler opening (refer to arrow in illustration - a schematic diagram is also provided on the expansion tank).

The coolant is a mixture of water and extended-duty antifreeze with corrosion inhibitor. Always maintain the prescribed all-season 50:50 mixture ratio for year-round protection against internal corrosion. No other additives are required.

Replace the coolant every three years.

To add coolant

Wait until the engine cools before removing the cap from the expansion tank. The needle of the coolant gauge in the instrument cluster must be located in the blue field; otherwise, there is a danger of scalding.

- 1 Start by turning the cap counter-clockwise. Pause to allow any accumulated pressure to escape, then open.
- 2 If the coolant is low, slowly add coolant until the correct level is reached - do not overfill.

Coolant



Do not add coolant to the cooling system while the engine is hot, since escaping coolant can cause burns. To avoid the possibility of damage later on, never use anything other than factory-approved, nitrite and amino-free extended-duty antifreeze with corrosion inhibitor. Your authorized BMW Retailer is familiar with the official specifications. Antifreeze with corrosion protectant is toxic. Always store in original containers only, keeping them tightly closed. Store well out of reach of children.

Extended-duty antifreeze with corrosion inhibitor contains the flammable substance ethylene-glycol. You should thus avoid spilling it on hot engine components, as it could catch fire and cause serious burns. ◀



Observe the applicable environmental protection laws when disposing of used antifreeze. ◀

Brake fluid

If the indicator lamp for brake hydraulics appears or if the warning "Check brake fluid" appears in the Check Control: Brake fluid loss results in extended pedal travel. For this situation, refer to the notes on page 101.

The brake fluid reservoir is located under the microfilter housing on the driver's side of the car. Should you determine that the brake fluid is low, refer the problem to your BMW Retailer, who can trace and rectify any sources of leakage when refilling the reservoir. Your BMW Retailer is familiar with the specifications for approved brake fluids (DOT 4).



Brake fluid is hygroscopic, i.e., over time it absorbs moisture from the air.

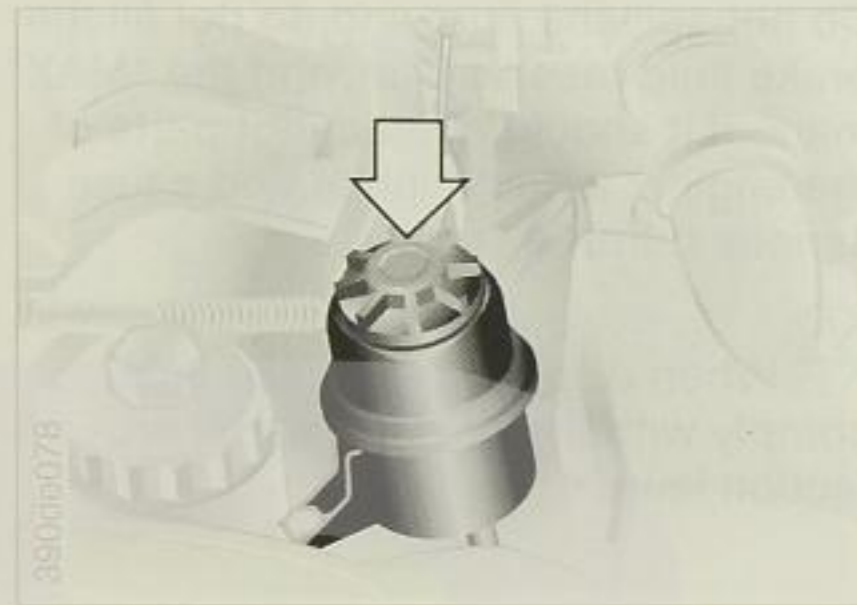
Therefore, have your brake fluid replaced by your BMW Retailer, every two years (refer to Service and Warranty Information booklet).

Since brake fluid is toxic and damages automotive paint, you should always store it in its original container and in a location inaccessible to children.

Do not spill the fluid and do not fill the brake fluid reservoir beyond the "MAX" mark. If it should contact hot parts of the engine, it could ignite and cause serious burns. ◀



When disposing of brake fluid, comply with the environmental protection laws. ◀

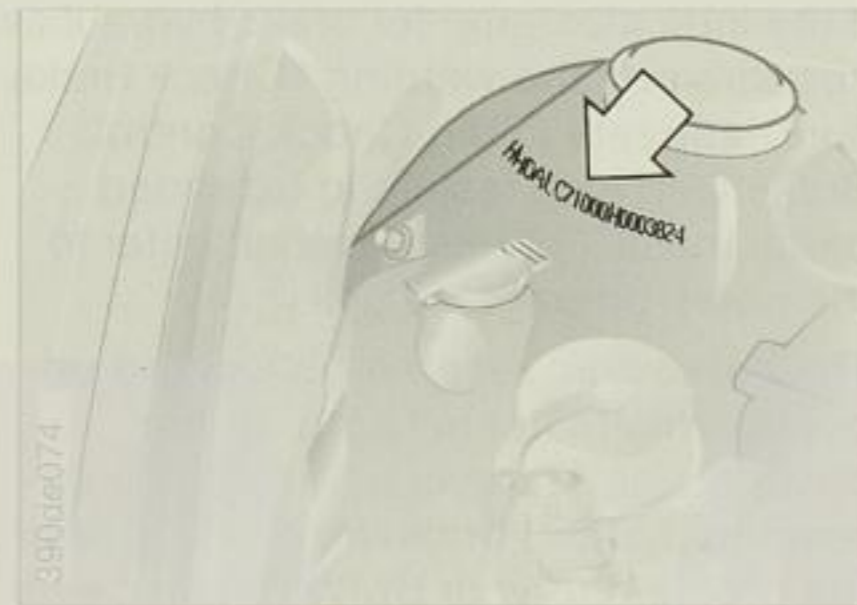


With the engine off, unscrew the reservoir cap and then push the dipstick into the reservoir again.

The fluid level should be between the marks on the dipstick.

Screw the reservoir cap back on.

Contact your BMW Retailer if the fluid is low, as only ATF may be used and special knowledge is required for topping up.



In the engine compartment, stamped on the right-hand strut dome (arrow) and on the upper edge of the instrument panel on the left-hand side.



The BMW Maintenance System has been designed as a reliable means of providing the customer with maximum vehicle safety and reliability with minimum complication and expense.

Please remember that regular periodic maintenance plays an essential part in ensuring continued vehicle security. It also helps maintain the resale value of the vehicle.

Service Interval Display

Advanced technology is employed to calculate the optimal maintenance intervals, which are then indicated in the Service Interval Display. While conventional maintenance systems rely on mileage alone to determine when service is due, the BMW Maintenance System reflects the actual conditions under which the vehicle is operated.

From the point of view of maintenance, 62,000 miles (100,000 km) accumulated in short-distance urban driving are not the equivalent of the same distance covered at moderate speeds in long-distance highway travel. In response to this fact, the BMW Maintenance System monitors operating conditions as the basis for determining the optimum service intervals for your individual vehicle.

The BMW Maintenance System includes the Engine Oil Service as well as Inspections I and II.

Determining the maintenance intervals according to the actual loads on the car covers every kind of operating situation. However, drivers who cover only extremely short distances – substantially less than 6000 miles (10,000 km) annually – should have the engine oil changed at least once a year, as the oil continues to age whether or not the car is used on a regular basis.

Service and Warranty Information booklet

Please refer to the Service and Warranty Information booklet for additional information on maintenance intervals and procedures.

Depending upon operating conditions, as a precaution against rust it may be a good idea to have the body checked for stone damage and chips at the same time.

Please ensure that all maintenance operations are entered in the Service and Warranty Information booklet upon completion. These entries will constitute your proof that the vehicle has received regular maintenance. They are also required for warranty claims.



Have maintenance and repairs carried out at your BMW Retailer. Your BMW Retailer is always informed on the latest maintenance work and repair techniques and equipped with the required special tools. In addition, checking parts known from experience to be subject to wear is a permanent part of the maintenance specifications. ◀

Washing your car

Right from the start, you can wash your new BMW either by hand or in an automatic car wash.

To prevent spots, avoid washing when the hood is still warm, or immediately after and during exposure to strong sunlight.

When using an automatic car wash, ensure that:

- ▷ No damage can occur with vehicles equipped with attached accessories (such as spoilers). If you are uncertain, consult the manager of the car wash.
- ▷ The vehicle is cleaned with minimum brush pressure, and that ample water is available for washing and rinsing.

Wipe away tough dirt and loosen and remove dead insects before washing the car.



Always maintain an adequate distance between the spray source and the vehicle's surface when using spray wands and high-pressure washers. Inadequate distance and excessive pressure can damage or weaken the finish, making it more susceptible to subsequent attack. In addition, moisture could penetrate to vehicle components, leading to long-term damage. ◀

Parts of the car which are inaccessible to the automatic washer - such as door sills, door and hood edges, etc. - should be cleaned by hand.



Please observe the following when cleaning the headlamp covers:

- ▷ Do not clean by wiping with a dry cloth (scratches). Never use abrasives or strong solvents to clean the covers.
- ▷ Remove dirt and contamination (such as insects) by soaking with BMW Car Shampoo and then rinsing with plenty of water.
- ▷ Always use a de-icer to remove accumulated ice - do not use a scraper. ◀

In the winter months, it is especially important to ensure that the car is washed on a regular basis. Large quantities of dirt and road salt are difficult to remove, and they also cause damage to the vehicle.



After washing, the brakes may be wet and thus less effective! Apply the brakes briefly to dry them. ◀

Exterior finish

To provide effective corrosion protection, multilayer paintwork is applied at the factory. Cataphoretic immersion priming techniques are supplemented using special body-cavity protectants, with the application of specially-developed and extensively tested materials. The entire underbody is sprayed with a flexible PVC layer before final comprehensive application of a wax-based protectant.

Regular maintenance makes an important contribution to maintaining the safety and value of your vehicle.

Increasing awareness of the effects of harmful environmental factors on vehicle finishes have led paint and vehicle manufacturers to initiate ongoing programs designed to further improve the durability of their finishes. Despite the high quality of the resulting products, local and regional factors can still have a negative effect on your car's paintwork. These should guide you in determining the frequency and extent of your efforts to maintain the vehicle finish.

Depending upon material and type of impact (perforation of paint layer), physical stresses from sand, road salt, gravel, etc., can cause corrosion to start extending beneath the finish, starting at the point of impact.

Road dirt, tar spots, dead insects, animal droppings (strong alkali effect) and tree excretions (resins and pollen) all contain substances capable of causing damage when allowed to remain on the finish of your car for any period of time (spots, etching, flaking, separation in the top coat).

In industrial areas, deposits from fly ash, lime, oil deposits, sulfur-dioxide in precipitation (acid rain) and other environmental pollutants will all damage the surface of the car unless adequate protection is provided.

In coastal regions, high levels of atmospheric salt and humidity promote corrosion.

Caring for the vehicle finish

As a precaution against damage resulting from exposure to aggressive substances, we recommend that you wash the car weekly when it is used in an area with high levels of air pollution or aggressive natural substances (tree resin, pollen).

When you notice any particularly aggressive substances on the finish of your car, we strongly recommend that you clean them away immediately in order to prevent discoloration and possible changes in the chemical structure of the paint. Gasoline spilled during refueling, oil, grease and brake fluid should always be cleaned away immediately, as should bird droppings (finish damage).

Any contamination remaining on the surface of the vehicle will be especially conspicuous after washing. Use cleaning fluid or alcohol with a clean cloth or cotton pad to remove. You can use tar remover to remove any tar spots on the finish of the vehicle, but should never apply it or any other aggressive cleanser to lenses or headlamp covers. After cleaning, the affected areas should be waxed to ensure continued protection.




A full range of car-care products is available from your BMW Retailer. ◀

Waxing your car

Protect the finish using carnauba or synthetic-based waxes only.

The best way to determine when the finish needs to be waxed is by noting when water stops beading on the surface. Depending upon operating conditions, this can happen after as little as 3 to 4 months.

You can use a glass cleaner to remove any wax or silicone that may have been left on the windows during waxing.

 A full range of car-care products is available from your BMW Retailer. ◀

Paint damage

You can touch up small areas of damage with BMW spray paint or a BMW touch-up stick.

The paint color code for your car is provided on a sticker located on the right hand side under the hood and on the first page of your Service and Warranty Information booklet.

Damage caused by flying stones, scratches, etc., must be touched up without delay to prevent rust from forming.

If corrosion has started to form in an area with paint damage, remove all rust and clean the area, then prime the area with a BMW Primer Stick. Finally, apply the finish coat. After a few days, polish and protect the touched-in areas.

More extensive paint damage should be professionally repaired in accordance with the manufacturer's instructions. Your BMW Retailer uses original BMW finish materials in accordance with official repair procedures.

Caring for other vehicle components and materials


Alloy wheels should be treated with alloy wheel cleaner, particularly during the winter months. Do not use aggressive products containing acids, strong alkalis or abrasives. Alloy wheels should not be cleaned with a steam jet operating at temperatures above 140 °F (60 °C) (follow manufacturer's instructions).

If your vehicle has chrome parts* such as window mouldings, door handles, etc.; clean these parts carefully with ample water and perhaps with a shampoo additive, especially if they have any salt residue on them. Use chrome polish for an additional treatment.

You can use window and glass cleaner to clean inside window surfaces and mirrors without smearing and streaking. Never use polishing pastes or abrasive (quartz) cleansers on mirror lenses.

Break-resistant security glass*

The glass installed on all side windows is designed to offer resistance to breakage and vandalism. Each break-resistant window contains several layers of clear synthetic plastic film sandwiched between the inner and outer glass panes. In addition, another film is applied to the inner surface of the glass (facing the passenger compartment). This film prevents the glass, if shattered, from spreading into the passenger compartment.

 Please note the following precautions regarding this inner glass surface film*:

- ▷ Do not apply any self-adhesive labels, or labels with tape, to the inner surface.
- ▷ Clean the glass with water. If ineffective, you may use regular household window cleaner; wipe the cleaner off immediately. Do not use window cleaners containing solvents or abrasives, as these may scratch the film.
- ▷ If frost or ice builds up on the inner surface in cold, high-humidity climates, do not use a scraper nor an "ice-removing spray". Start the engine and refer to the instructions on defrosting the door windows. ◀

Plastic components, vinyl upholstery, headliners, lamp lenses, the clear cover of the instrument panel and components with a sprayed dull black surface can be cleaned with water (add plastic shampoo as required). Avoid soaking the headliner. Never use solvents such as lacquer thinner, heavy-duty grease remover, fuels, etc.

Rubber components should be cleaned with water only; a rubber treatment or silicone spray may also be applied.


Clean the wiper blades with soapy water. The wiper blades should be replaced twice a year, before and after the cold season.

The safety belts should be cleaned with a mild soap and water solution without being removed from the car. Never attempt chemical or dry cleaning, as damage to the belt fabric could result.

After cleaning, never allow the inertia reel to retract the belts until they are completely dry. Dirty safety belts prevent the inertia reel mechanism from retracting the strap properly, and thus constitute a safety hazard.

Heavily soiled floor carpets and mats* can be cleaned with an interior cleaner. The floor mats can be removed from the vehicle for cleaning.

Please use only a damp cloth to clean wooden fascia panels and components. Follow up by drying with a soft cloth.

 A full range of car-care products is available from your BMW Retailer. ◀

Leather care

The leather upholstery* used by BMW is a natural product of the highest quality, processed using state-of-the-art methods to ensure that it will maintain its high quality for years to come, provided that it is properly cared for.

Because this product is manufactured using natural materials, you must make allowance for its special characteristics as well as for the peculiarities of its use and care.

Regular periodic cleaning and care are essential, as dust and road dirt act as abrasives in the pores and creases of the material. This leads to wear spots and premature brittleness on the surface of the leather. We therefore suggest that you clean the leather with a vacuum cleaner or dust cloth at frequent intervals.

For cleaning use BMW leather cleaning foam.

Since dirt and grease gradually affect the protective surface layer of the leather, the cleaned surfaces should be treated with a BMW leather care agent. This serves also as an anti-static agent.

For protection against dampness or moisture, treat the leather with a BMW impregnating agent.

We recommend that you perform this procedure twice a year on leather exposed to normal use.

Spills should be wiped up immediately. Remove grease and oil stains without rubbing, but rather by dabbing with spot remover.

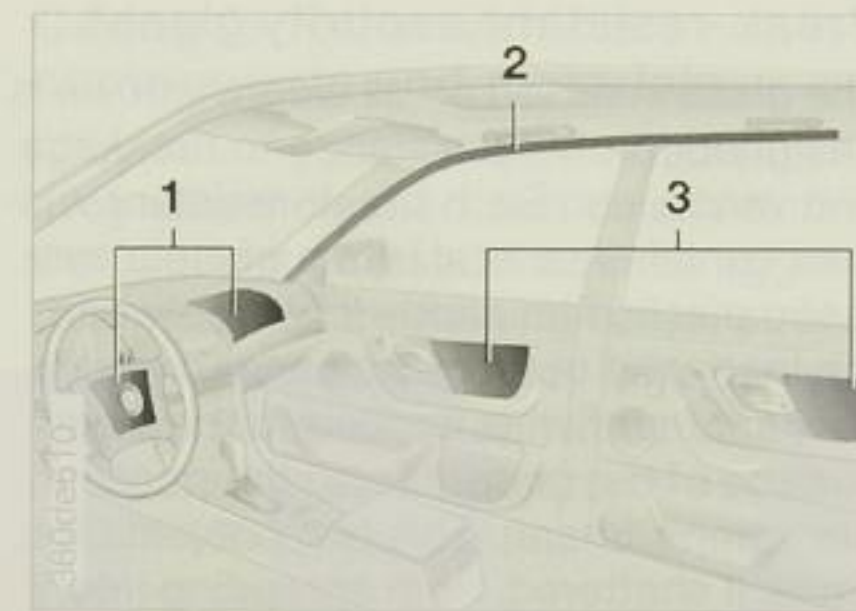
If the upholstery is to be exposed to intense sunlight or if the vehicle is to be stored for an extended period, cover all leather surfaces (or, better yet, the windows) to prevent fading.



A full range of car-care products is available from your BMW Retailer. ◀



Cleaning agents can contain substances that are dangerous or bad for your health. Therefore always observe the warnings and danger notices on the package. Open the doors or windows on your vehicle before cleaning the interior. Never clean your vehicle with cleaning agents (or solvents) not specifically intended for this purpose. ◀

Airbags

- 1 Front airbag system, consisting of driver and passenger airbag
- 2 Side impact Head Protection System (HPS)
- 3 Front and rear* side airbags

Important safety notices

Never attempt to remove the gas generators for the airbag supplemental restraint system from the vehicle. Testing and service procedures are to be performed exclusively by qualified technicians. In the event of malfunction, deactivation or triggering (in response to an accident), always entrust repair and service operations to your authorized BMW Retailer.

Airbags

Do not modify or tamper with either the wiring or the individual components in the airbag system; these include the covering of the steering wheel and of the instrument panel, the side panels and the roof pillars, as well as the sides of the headliner. Do not glue, cover or alter these in any way. Do not remove or dismantle the steering wheel.

To ensure compliance with official safety regulations, entrust disposal of airbag generators to an authorized BMW Retailer.

Unprofessional attempts to service the system could lead to failure in an emergency or undesired airbag activation, either of which could result in personal injury. ◀

Vehicle storage

Consult your BMW Retailer regarding the required special procedures if you intend to store the vehicle for longer than three months.

Owner service procedures

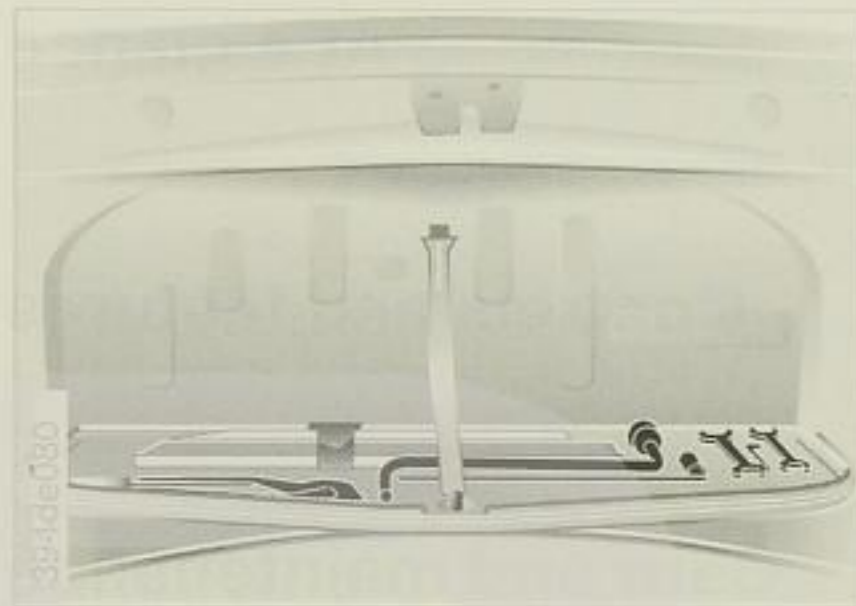
- Onboard tool kit 132
- Windshield wiper blades 132
- Lamps and bulbs 132
- Remote control 137
- Changing tires 139
- Battery 142
- Fuses 144

In case of electrical malfunction:

Fuel filler door 145
Sliding/tilt sunroof 145

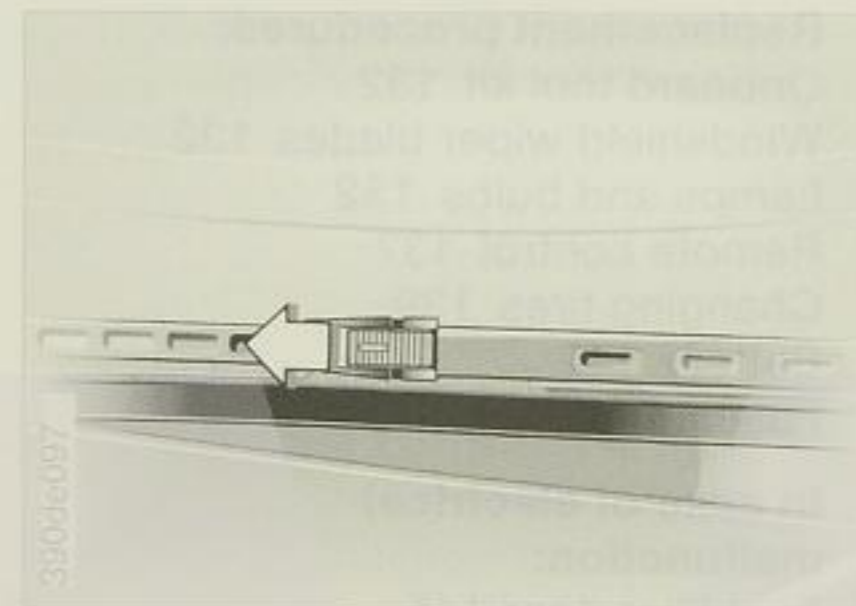
Assistance, giving and receiving:

Jump-starting 146
Towing the vehicle 147



Attached to the underside of the luggage compartment lid. Unscrew the wingnut for access.

Windshield wiper blades



- 1 Lift the wiper arm and fold it outward from the windshield, holding it vertically.
- 2 Press back the release (arrow) and pull the wiper blade back toward the base of the wiper arm.
- 3 Install the new blade and slide the release back into position.

Lamps and bulbs

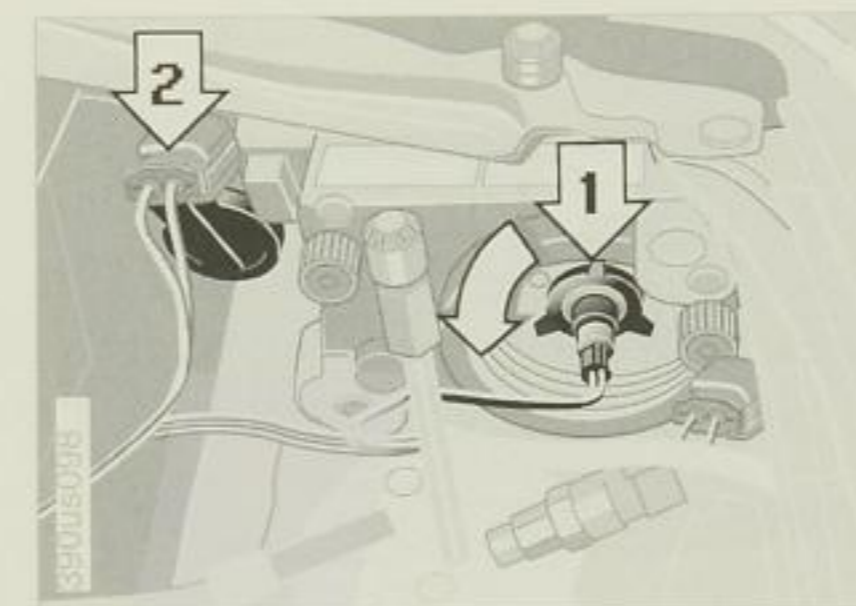
The lamps and bulbs on your car play a vital role in ensuring road safety, a fact which you should always bear in mind in caring for them. Carefully observe the following instructions during bulb replacement, referring any procedures with which you are not familiar to your BMW Retailer.

- ▶ Never touch the bulb glass of a new lamp with your bare hands. Use a clean cloth, paper napkin, etc., or hold the bulb by its metallic base. ◀

A replacement bulb set is available from your BMW Retailer.

- ⚠ Always switch off all electrical systems and components before working on them. As an alternative, you can disconnect the cable from the negative terminal of the battery. To prevent injuries and damage, always observe any instructions provided by the bulb manufacturer. ◀

Lamps and bulbs



1 Low beam

2 High beam

Low beam: H7, 55 watt bulb

- ⚠ The inside of the H 7 bulb is under pressure: Always wear gloves and eye protection! Failure to observe this precaution could lead to injury if the bulb is accidentally damaged during replacement. ◀

- 1 Turn the bulb holder to the left (arrow) and remove
 - 2 Remove and replace bulb.
- High beam: HB3, 60 watt bulb
- 1 Turn the bulb holder to the left and remove
 - 2 Disconnect the plug

- 3 Connect the new bulb holder with bulb to the plug – ensure that it is securely engaged
- 4 Install in the opposite order of work.

- ▶ Please observe the following when cleaning the headlamp covers:

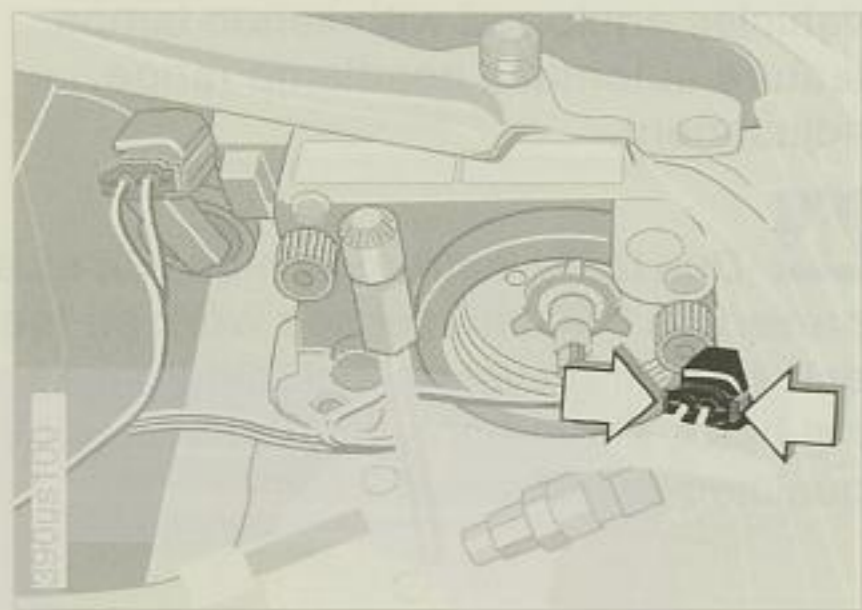
- ▶ Do not clean by wiping with a dry cloth (scratches). Never use abrasives or strong solvents to clean the covers.
- ▶ Remove dirt and contamination (such as insects) by soaking with BMW Car Shampoo and then rinsing with plenty of water.
- ▶ Always use a de-icer spray to remove accumulated ice and snow – never use a scraper. ◀

Xenon lamp*

The operating life of these lamp units is extremely long and the likelihood of failure very low, provided that they are not switched on and off a very great number of times. If a xenon headlamp should none the less fail, switch on the fog lamps and continue the journey with great care, provided that local legislation does not prohibit this.

Vehicles equipped with xenon lamps feature automatic headlamp range adjustment.

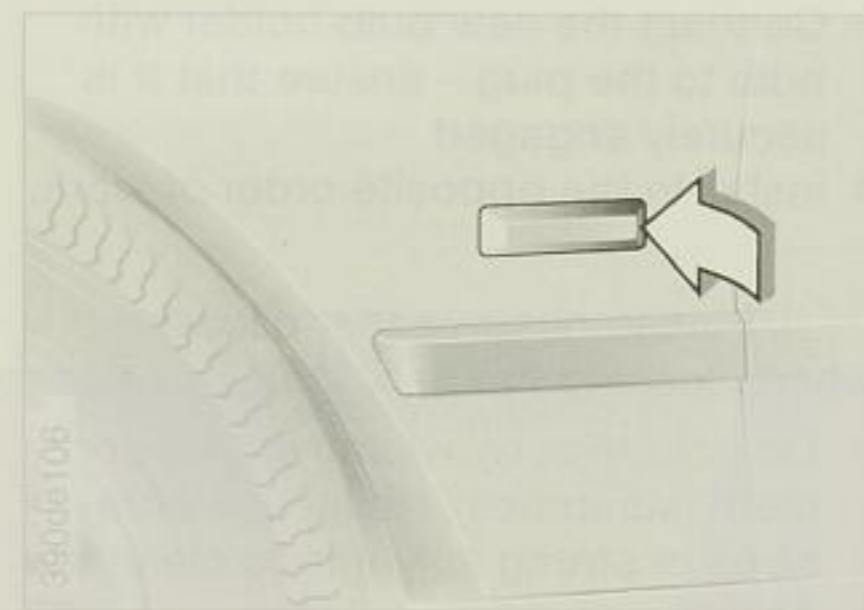
- ⚠ Due to the extremely high voltages present in the unit, service work on the entire lighting system including changing bulbs should only be carried out by qualified personnel. ◀



Turn signals/parking lamps (side marker lamps), front

Dual-filament bulb, 21 watt

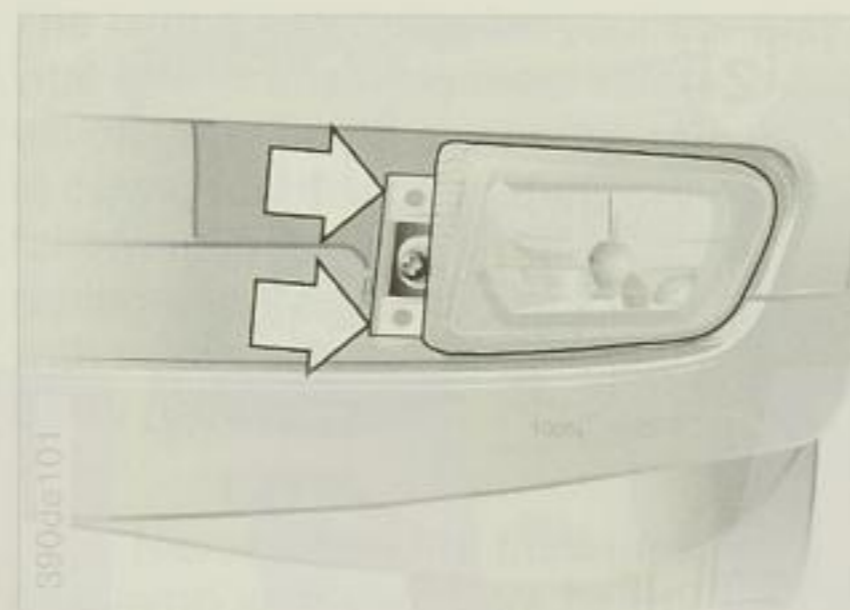
- 1 Press together the tabs (arrow) and extract the bulb holder
- 2 Press gently on the bulb, turn it to the left and remove
- 3 After replacing the bulb insert the holder (note lug positions) and snap it back into place.



Side turn signals

5 watt bulb

- 1 Use finger pressure against the rear end of the lens (arrow) to press it forward for removal
- 2 Press gently on the bulb and turn it to the left to remove.



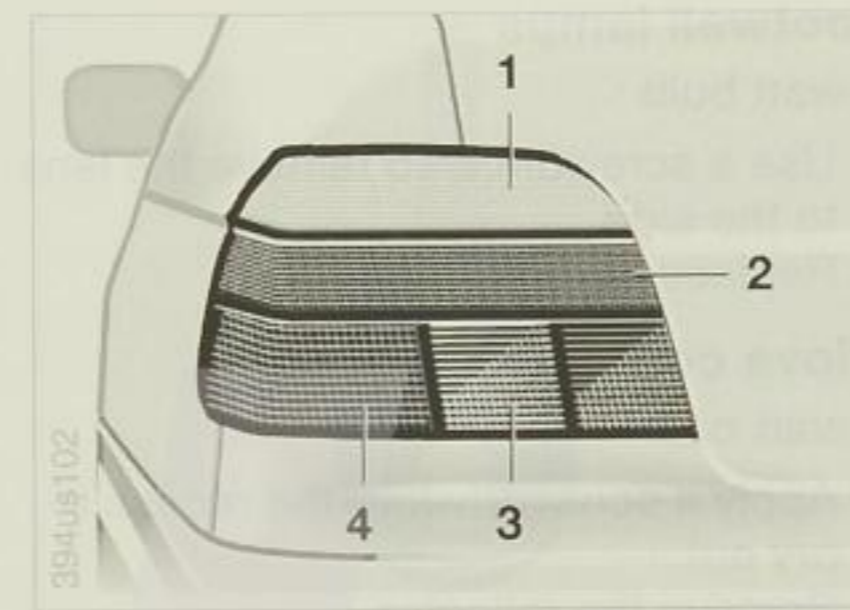
Front fog lamps

H7, 55 watt bulb



The inside of the H7 bulb is under pressure: Always wear gloves and eye protection! Failure to observe this precaution could lead to injury if the bulb is accidentally damaged during replacement. ◀

- 1 Pull the cover panel next to the headlamp forward to remove
- 2 Loosen both screws (arrows) and swivel out the lamp assembly
- 3 Release the spring on the back of the lamp and turn the cover to the left
- 4 Release the clamp, remove the contact base and replace the bulb.



Taillamps

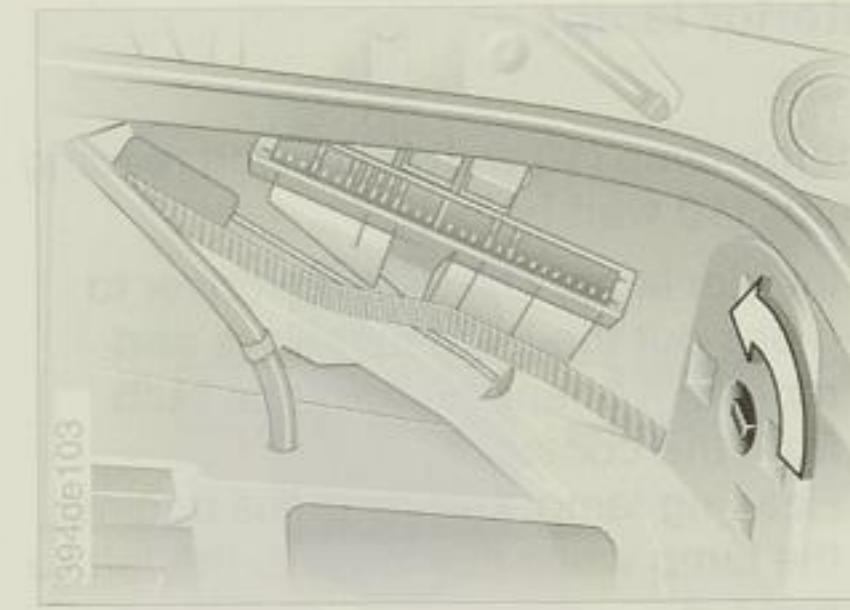
Taillamp: 5 watt bulbs

Remaining bulbs: 21 watt

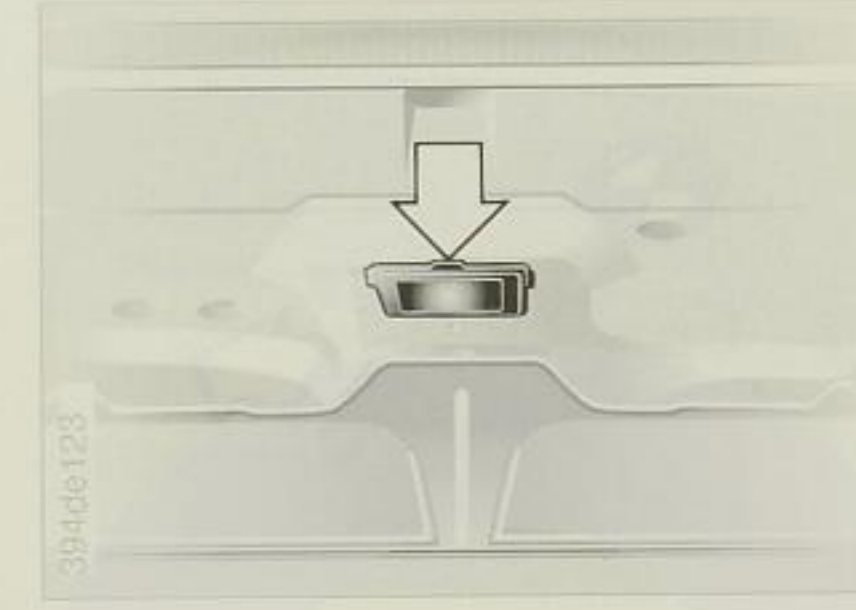
- | | |
|-----------------------------|--------|
| 1 Turn signal | yellow |
| 2 Taillamp/Side marker lamp | |
| Reflector | red |
| 3 Backup lamp | white |
| 4 Brake lamp | red |



If both lamps fail in the taillamp, the brake lamps take on the function of the taillamps. ◀



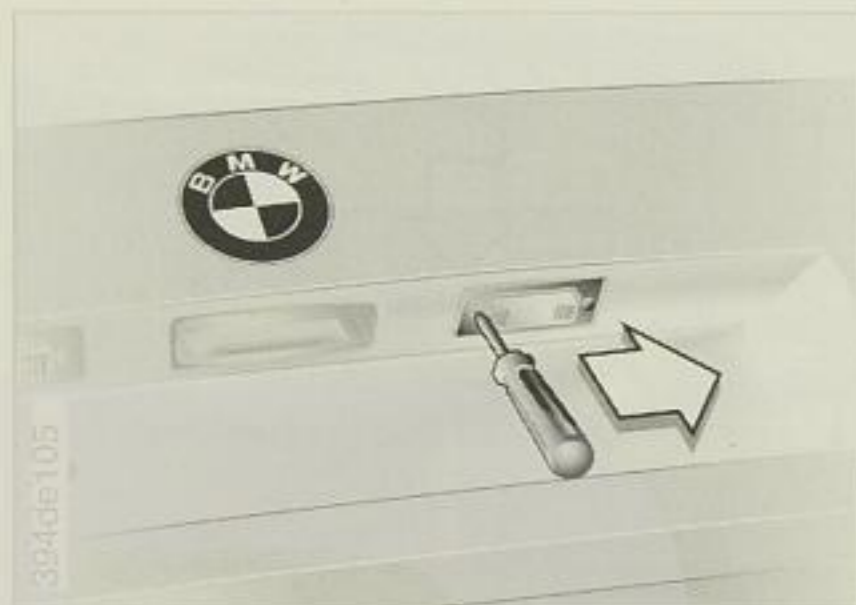
- 1 Use the upper handle to fold down the side panel in the luggage compartment
- 2 Turn the bulb holder's release knob to the left (arrow) and remove the holder
- 3 Apply gentle pressure to the bulb while turning it to the left to remove.



Center (high-mount) brake lamp

21 watt bulb

- 1 Open luggage compartment lid
- 2 Use a screwdriver to release the cover (below the rear shelf) from its retaining clips (arrow)
- 3 Turn the bulb holder to the left and remove
- 4 Apply gentle pressure to the bulb while turning it to the left to remove.



License plate lamps

5 watt bulb

- 1 Insert a screwdriver into the slot and press toward the right (arrow) to release the lamp unit
- 2 Remove the lamp unit and replace the bulb.

Interior lamps

Front:

Interior lamp (10 watt bulb) with reading lamps (10 watt bulbs)

- 1 Interior lamp: Use a screwdriver to press out the lamp sideways and remove the lens. Extract the bulb from the contacts
- 2 Reading lamp: Gently press against the lamp while turning it to the left to remove.

Indirect lighting

1 watt bulb

- 1 Unclip the lamp holder
- 2 Remove the bulb.

Rear:

Interior lamp (10 watt bulb) with reading lamp (5 watt bulb)

- 1 Use a screwdriver to press the lamp up at the upper recess
- 2 Interior lamp: Push back the tab on the reflector and replace the bulb
- 3 Reading lamp: Gently press against the lamp while turning it to the left to remove.

Footwell lamps

5 watt bulb

- 1 Use a screwdriver to remove the lens to the side
- 2 Replace bulb.

Glove compartment lamp

5 watt bulb

- 1 Apply a screwdriver to the recess to pry out
- 2 Remove the reflector
- 3 Replace bulb.

Luggage compartment lamps

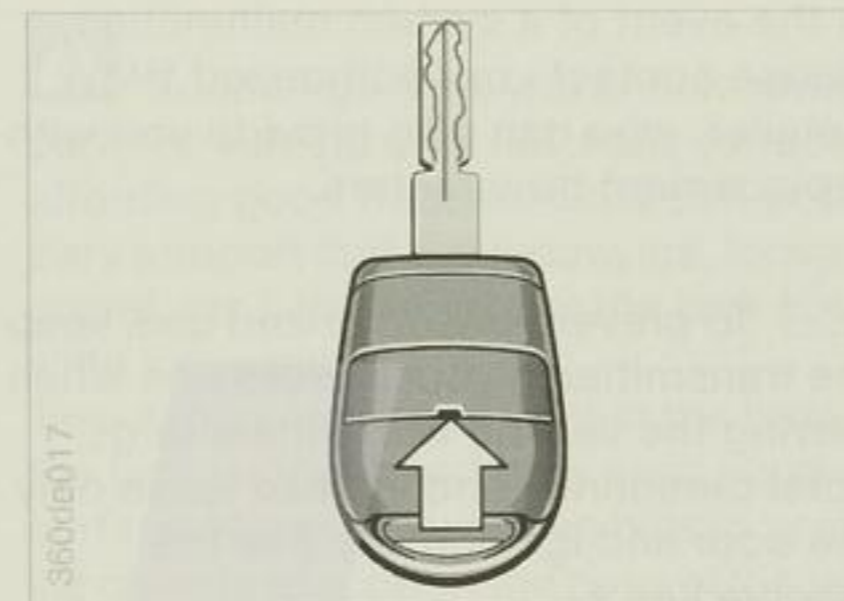
Lamp on underside of rear shelf:

10 watt halogen bulb.

Lamp in luggage compartment:

- 1 Apply a screwdriver to the recess to pry out
- 2 Remove the reflector
- 3 Replace bulb.

Remote control

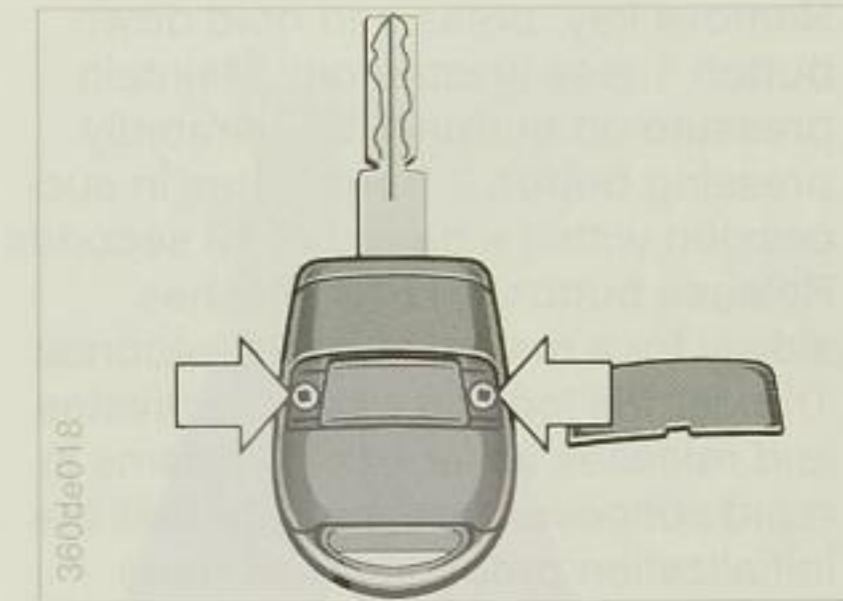


Changing battery

Renew when the message REMOTE KEY BATTERY appears in the Check Control display panel, the LED no longer lights up when a button is pressed and it is not possible to lock the car using the remote key.

Only install a battery of the specification (CR 2016) indicated in the battery compartment and make sure that the battery is installed in the correct position.

- 1 Use a screwdriver to lift the cover at the recess (arrow)



- 2 Loosen the two screws (arrows) and remove the cover.

The battery type and installation position are indicated on the base of the battery compartment.



Always return used batteries to an authorized recycling agency or your BMW Retailer. ◀



New transmitter

If you fit a new transmitter (e.g., as replacement for a defective one), the transmitter in the remote control must be initialized:

- 1 Enter the vehicle and close the doors
- 2 Briefly (max. 5 seconds) turn the ignition key to position 1 in the steering lock, then return it to position 0

- 3 Remove key; press and hold down button 1 (see illustration). Maintain pressure on button 1 while rapidly pressing button 2 three times in succession within a period of 10 seconds
- 4 Release button 1, LED 3 flashes slowly for a maximum of 10 seconds
- 5 The central locking system activates and releases all lock mechanisms in rapid succession to indicate that the initialization procedure has been successfully completed.

If the LED does not flash or if the central locking system fails to respond, the initialization procedure will have to be repeated.

If you possess additional transmitters for your vehicle (up to a maximum of four units), you must now initialize these as well. Ensure that no more than 30 seconds is allowed to elapse between the individual initialization procedures. Repeat steps 3 and 4 above for each of the transmitters. The central locking will confirm each initializing operation as described in step 5.

In the event of a system malfunction, please contact your authorized BMW Retailer, who can also provide you with replacement transmitters.



To prevent unauthorized use, keep the transmitter in your possession when leaving the vehicle with others (e.g., hotel personnel) and instead leave only the door and ignition key 3 or the reserve key. ◀

Changing tires



To change tires, you should always park the vehicle on a flat, hard surface affording good traction. On a soft or slippery support surface (snow, ice, loose gravel, etc.), the vehicle or the jack could slide sideways.

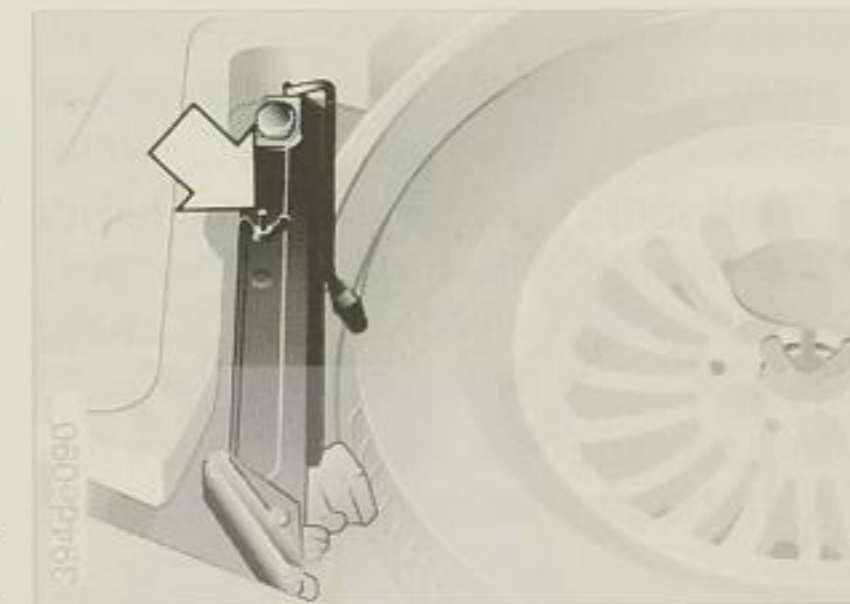
Take extra care to ensure that the base of the jack is positioned on a solid support surface. Never use wooden blocks or similar objects to support the base of the jack, as the weight of the car could exceed their support capacity. Never lie beneath the vehicle or start the engine while the car is supported by the jack - risk of fatal injury. Additional precautions to observe when changing flat tires:

When pulling over the roadside to change a tire, always try to park the car as far as possible from passing traffic.

Turn the steering wheel to the straight-ahead position, remove the key and engage the steering lock. Shift into 1st or reverse (selector lever in Park with automatic) and engage the parking brake. Switch on the hazard flashers.

All passengers should be outside the car and well away from your immediate working area (e.g., behind the guardrail).

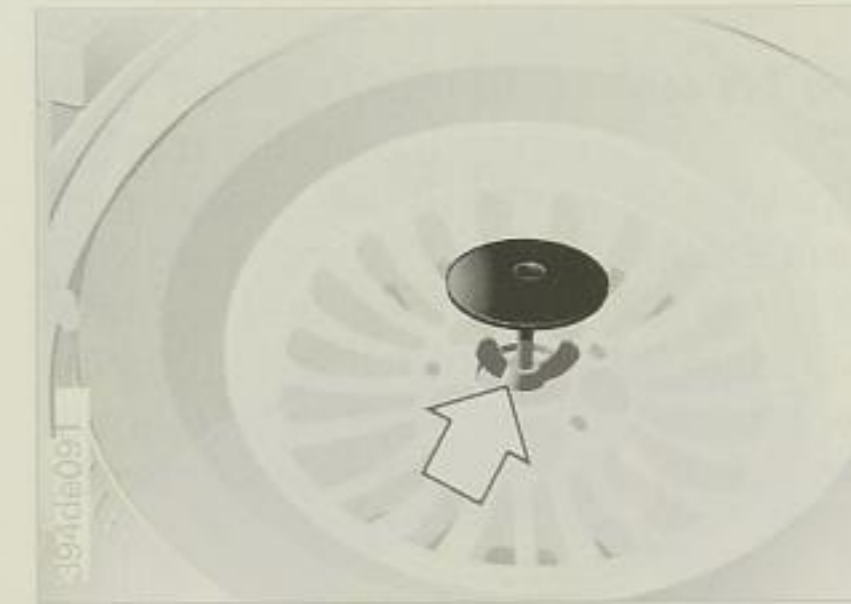
If a warning triangle or portable hazard warning lamp is available, set it up on the roadside at an appropriate distance from the rear of the vehicle. Observe all safety guidelines and regulations. ◀



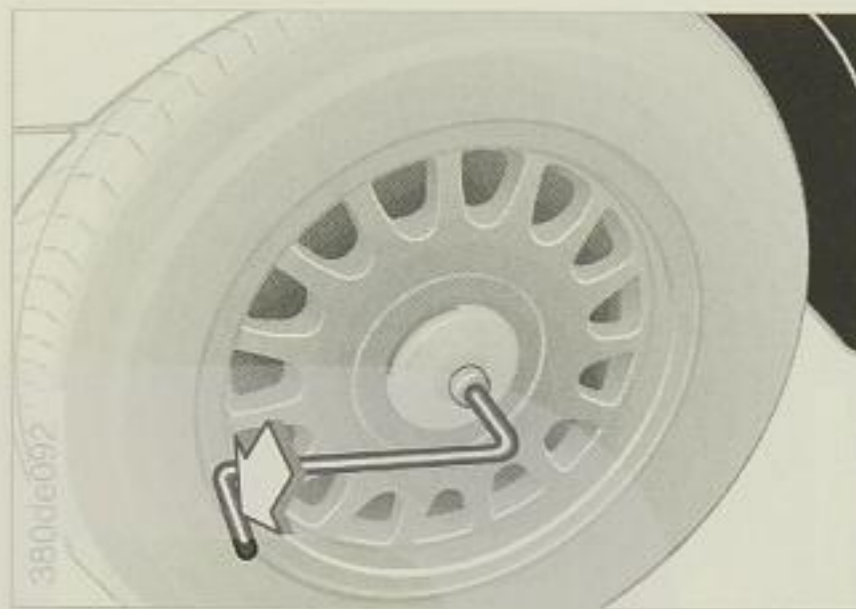
To avoid rattling noises, note the positions of the tools before removing them, then return them to their initial positions after completing work.

To change the tire you will need:

- ▷ Car jack
Fold back the luggage compartment floor mat for access, then unscrew the wingnut to release the jack (arrow).
After using, screw the jack all the way back down. Fold back the handle and insert it in its holder.
- ▷ Wedge (wheel chock)
In the spare tire well beneath the jack. Unscrew the wingnut to remove.

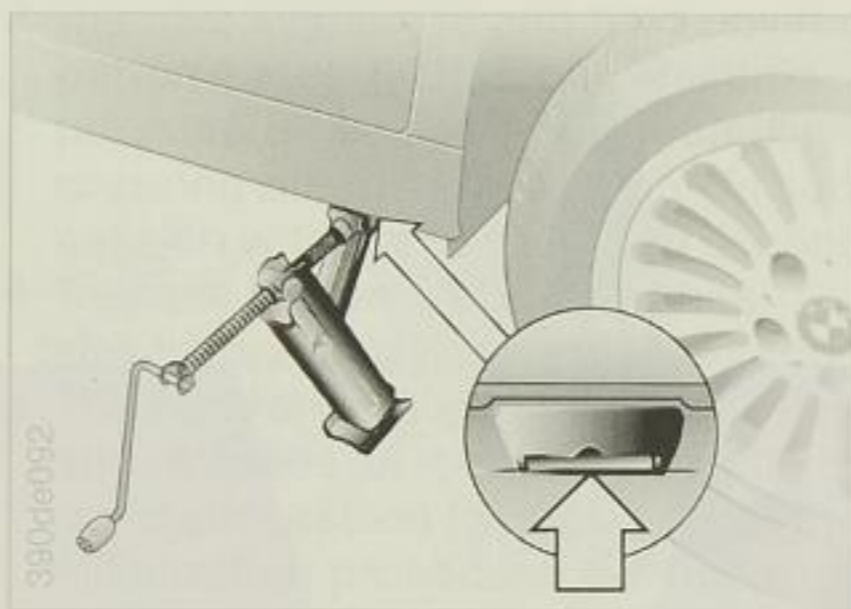


- ▷ Spare tire and adapter* for lug bolt covers*
Both are stored in the luggage compartment below the floor mat. Fold back the mat for access. Remove the adapter and the plastic fitting. Unscrew the wingnut (arrow) by hand and remove the wheel.
- ▷ Wheel lug wrench, alignment tool and screwdriver
In onboard tool kit on the underside of the luggage compartment lid.

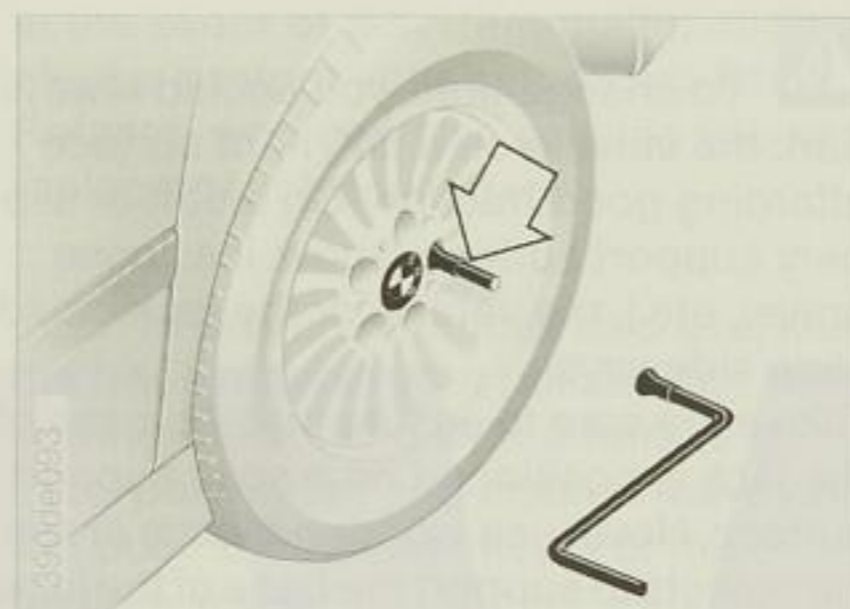


Procedure

- 1 Secure the vehicle against rolling by placing the wedge against the rear surface of the front tire on the side of the car opposite the side being raised. If the car is parked on an inclined surface, place the wedge securely against the front of the tire.
- 2 Wheels with hub cover*: Use a screwdriver to pry off the hub cover at the slot.
- 3 Wheels with adapter*: Position the lug bolt adapter on the lug bolt cover. Then apply the lug wrench and turn it to the left (see illustration).



- 4 Loosen lug bolts 1/2 turn.
- 5 Position the jack beneath the jacking point located closest to the flat tire. Align the jack to ensure that its entire support surface will exert even pressure against the jacking point. The head of the jack should fit securely in the square recess (see inset illustration).
- 6 Crank the car up until the wheel in question is raised from the ground.
- 7 Unscrew the lug bolts and remove the wheel.



- 8 Take the alignment tool from the onboard tool kit and insert it together with the plastic insert into one of the bolt sockets (arrow).
- 9 Lift on the new wheel; secure by screwing at least two lug bolts into opposite sockets. Remove the alignment tool.
- 10 Screw on the remaining lug bolts and tighten down all the bolts.
- 11 Lower the jack and remove it from beneath the car.
- 12 Tighten the lug bolts, alternating between bolts positioned opposite one another.

Changing tires

- 13 Wheels with hub covers: Position the hub cover and press on tightly.
- 14 If equipped with lug boltcaps: Align the arrow on the cap with the mark on the wheel and press into place.

! The jack is designed for changing tires only. Never use it to raise another vehicle model or any load of any kind, as the result could be accidents and personal injury.

To ensure continued safety, have the lug bolts checked with a calibrated torque wrench [torque specification 72 ft.·lb (100 Nm)] at the earliest opportunity. If you have fitted a new wheel (spare tire) for the first time, have the lug bolt torque rechecked a second time after 600 miles (1000 km). ◀

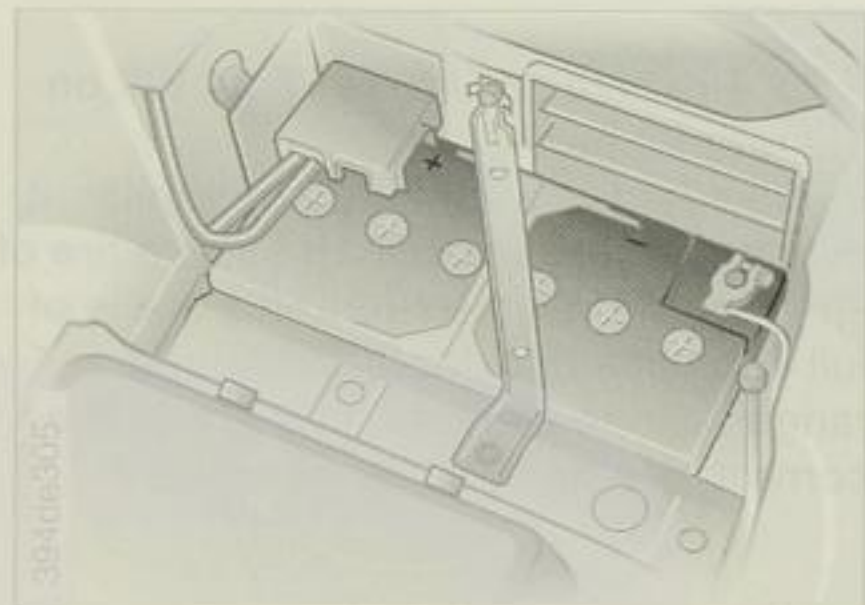
When storing the wheel, take care to ensure that you do not damage the retaining pin in the spare tire recess.

When light-alloy wheels other than Original BMW light-alloy wheels are fitted to the car, it may be necessary to use different lug bolts.

Have the defective tire repaired and balanced at the earliest opportunity.

▶ Specially BMW-approved balance weights are required to balance the special aluminum wheels. Never attempt to balance these wheels using standard balance weights. ◀

▶ Tire size 255/40 R 17 94 W* on the rear wheels:
In the event of a puncture or similar, it may be necessary to fit the spare tire of different size at the rear. This tire is of full capacity in all load and speed ranges. None the less, fit a tire of the correct size as soon as possible. ◀



The battery is located behind the right-side trim panel in the luggage compartment.

Grasp the handle in the upper panel and fold down.

The battery is maintenance-free, meaning that the electrolyte will normally last for the life of the battery.

Acid level: Up to the "MAX" mark in each cell, located approx. 0.2 in (5 mm) above the top of the plates.

Should the electrolyte drop to below the minimum level - e.g., during extended operation in hot climates - add distilled water (not acid).

Keep the top of the battery clean and dry.

Symbols

You will find the following symbols on your car battery. To avoid injury, please observe the corresponding precautions whenever you work with or near the battery.



Before working with the battery, read the following.



Wear eye protection. Avoid letting acid or lead particles come into contact with your eyes, your skin or your clothing.



Battery acid is extremely corrosive. Wear eye protection and protective gloves. Do not tilt the battery; acid could emerge from the ventilation openings.



Ensure that children keep well away from batteries and battery acid.



Never allow sparks or open flame, and do not smoke in the vicinity of the battery. Avoid sparks from electrical cables and equipment. Never short-circuit the battery terminals. Danger from high-voltage sparks.



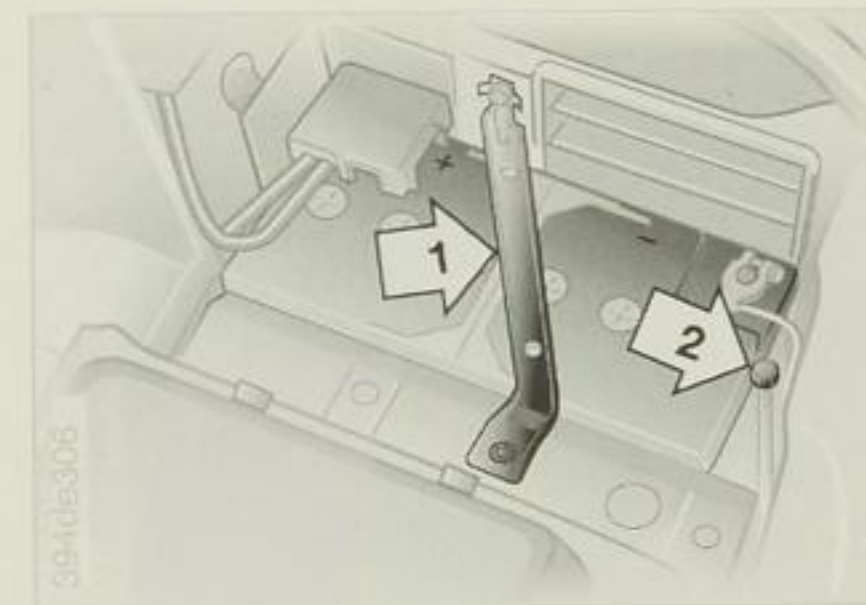
A highly-explosive gas is generated when the battery is charged.



If you happen to get acid in your eyes, rinse thoroughly for several minutes with clear water. Then consult a physician immediately. If you get acid spray on your skin or clothing, apply soap immediately to neutralize the acid, then rinse with plenty of water. If electrolyte is accidentally ingested, consult a physician immediately.



To protect the casing against ultraviolet radiation, avoid exposing it to direct sunlight. A discharged battery can freeze; always store battery in areas where temperature remains above freezing.



Removal and installation



Never disconnect the cable from the battery terminal while the engine is running, as the resulting voltage surge would destroy the vehicle's electronic systems.

When removing the battery, first disconnect the negative terminal, then the positive terminal. Dismantle the protective clamp (1) and unscrew the battery bracket (2).

When installing the battery, connect the positive terminal first, then proceed to the negative terminal.



When installing, always ensure that the battery is properly mounted and the protective clamp is fastened. Otherwise it will not be sufficiently secured in an accident.

Charging the battery

Only charge the battery in the vehicle when the engine is off.

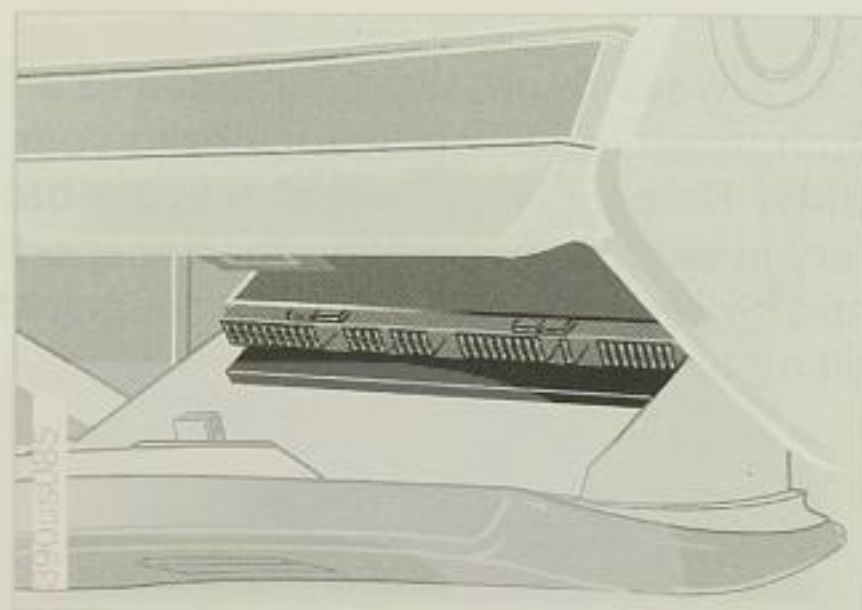
To avoid short circuits, always disconnect the cable from the battery's negative terminal before working on the electrical system.

If you are planning to remove the vehicle from service for more than four weeks, you should disconnect the battery at the negative terminal.

If you intend to store your car for longer than six weeks: Remove the battery, charge it and store it in a cool (but frost-free) room. Recharge the battery after three months at the latest, as it will otherwise be damaged beyond use. Every time the battery is discharged, especially over extended periods, its service life is reduced.



Always return used batteries to an authorized recycling agency or to your BMW Retailer. Always maintain the battery in an upright position for transport and storage. Secure the battery against tilting in transit.



When an electrical accessory fails to operate, switch it off and inspect the fuse.

In glove compartment

- 1 Open the glove compartment and turn the two white quick-release knobs to the left. Spare fuses and plastic tweezers are located on the fuse holder
- 2 Use the plastic tweezers to remove the fuse for the accessory or equipment that has stopped working
- 3 If the fuse is burned through (the metal strip will have melted and separated), replace it with a new fuse of the same ampere rating (color code).

The fuses, their respective ampere ratings and the equipment in their circuits are all indicated below the fuse holder.

Close the fuse holder by holding the top of the cover in place and screwing the two quick-release knobs to the right.

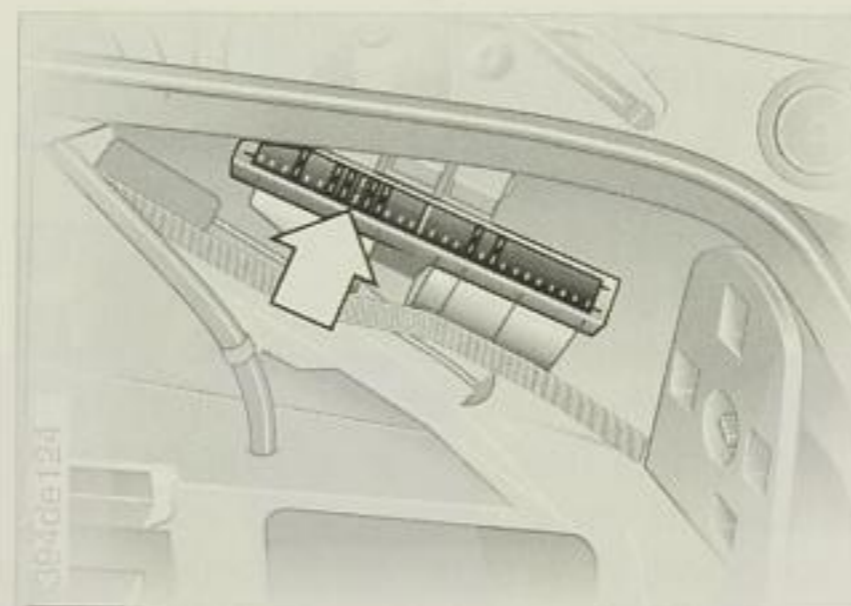
Additional fuses are provided in the luggage compartment (refer to next column).

The fuse for continuous positive current is located in a separate fuse box above the battery. If this fuse is defective, refer the problem to your BMW Retailer for repair.



Do not attempt to repair a burned fuse. You should never replace a burned fuse with another fuse of a different ampere rating, as the resulting circuit overload could lead to a fire in the vehicle. ◀

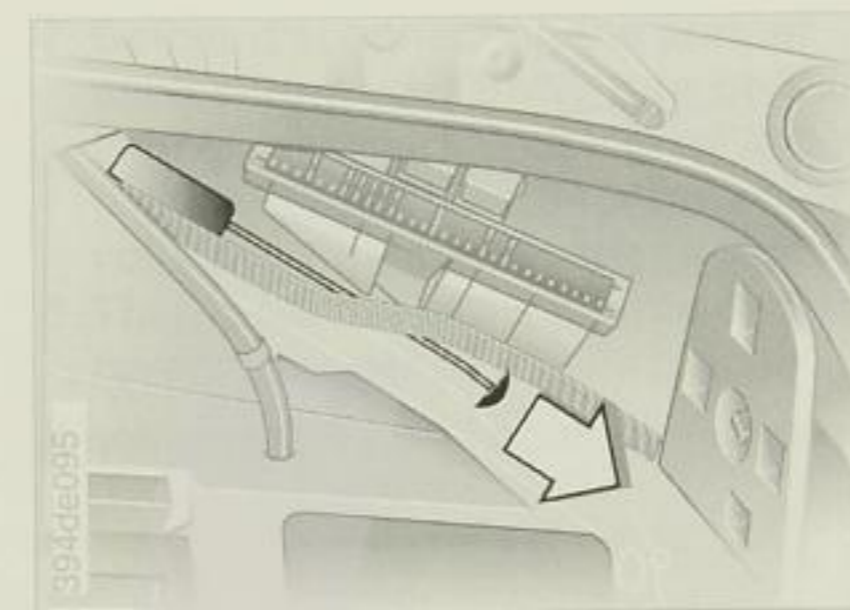
If the fuse continues to burn through, refer the problem to your BMW Retailer for repair.



In the luggage compartment

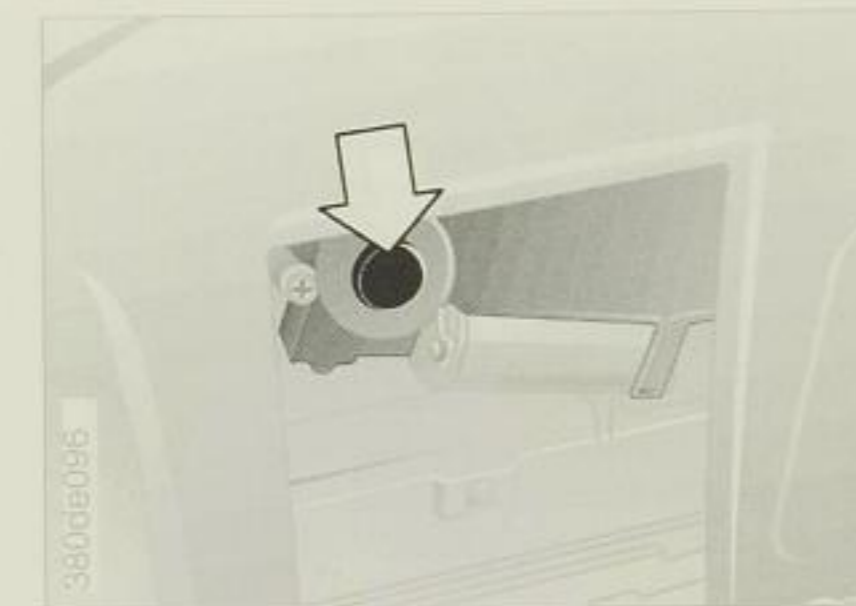
Use the handle to pull down the trim on the right wall.

A table listing all fuses along with their individual ampere ratings and circuit assignments is located on the back of the side trim.



Manual release

- 1 Use the handle to lower the trim panel on the right side of the luggage compartment
- 2 Pull the knob with the fuel pump symbol (arrow).




Manual operation

- 1 Remove the interior lamp (refer to page 136), reach into the opening and push out the panel
- 2 Remove the plug (arrow) and use the allen key (onboard tool kit) to turn the slide/tilt sunroof in the desired direction.

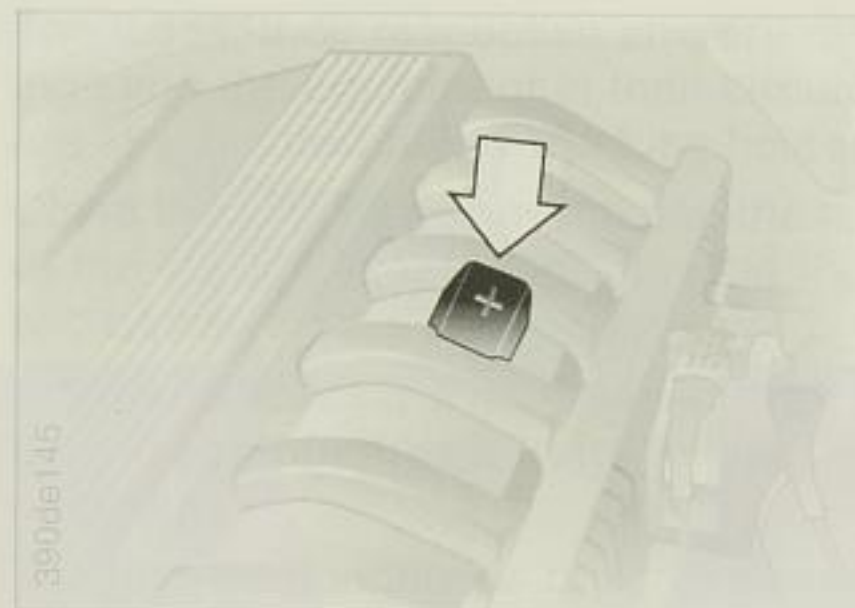
Never use spray starter fluids.

If the battery is discharged the engine can be started with the use of two jumper cables and the battery of another vehicle. Always use jumper cables with fully insulated handles on the terminal clamps.

 Contact with high-voltage wiring and cables on a running engine can be harmful or fatal! ◀

Carefully observe the following instructions to avoid personal injury as well as damage to one or both vehicles:


- 1 Ensure that the battery on the support vehicle is also rated at 12 volts, and that the two batteries' capacities (Ah) are roughly comparable (printed on casing).
- 2 Leave your battery connected to the car electrical system.
- 3 Make sure that there is no contact between the bodywork of the two vehicles – short circuit risk!
- 4 Start by connecting the jumper cable from the positive terminal of the support vehicle to the positive terminal connector located in your BMW's engine compartment (the cover is marked "Batt.+", see illustration next column).



Remove by pulling tab. The illustration shows the external start support point of the BMW 528i. For the BMW 540i, refer to Engine compartment, page 114.

- 5 Then connect the negative terminals. Attach the cable to either the support vehicle's negative battery terminal, or to a suitable ground on its engine or bodywork. Then connect the other end of the cable to ground on the vehicle's engine or bodywork which is to be started. There is a special nut on the strut dome of your BMW, see arrow in illustration next column.



 Observe the same sequence for connecting the jumper cables when helping other vehicles; this will help prevent sparks from being generated at the battery. ◀

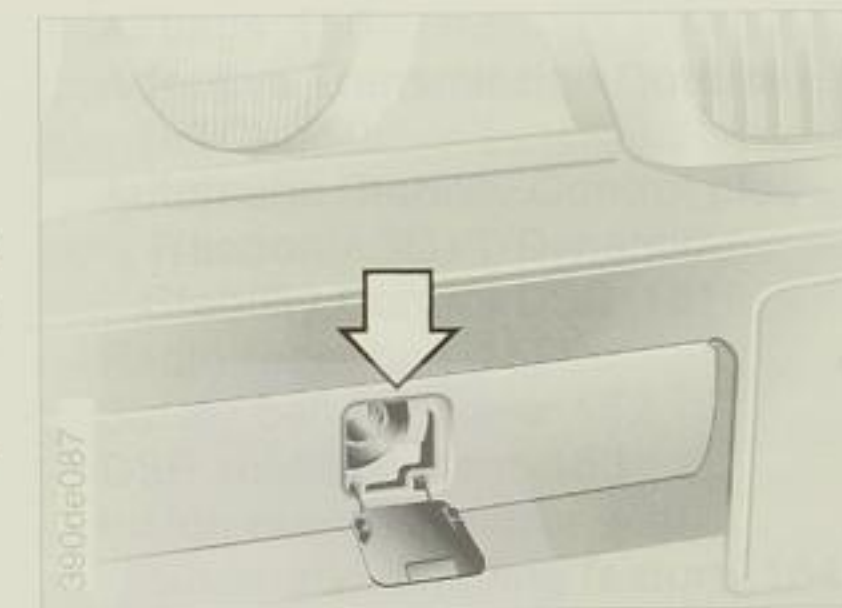
- 6 If the battery on the support vehicle is weak, start the engine and let it run. Start the engine on the car with the discharged battery and allow it to continue running. If necessary restart after a few minutes to allow the discharged battery to recharge.

Jump-starting

- 7 Before disconnecting the jumper cables from your BMW, turn on the lamps, rear window defroster and highest blower speed to prevent a voltage surge at the voltage regulator
- 8 Then disconnect the jumper cables in reverse sequence.

If necessary, have the battery recharged.

Towing the vehicle



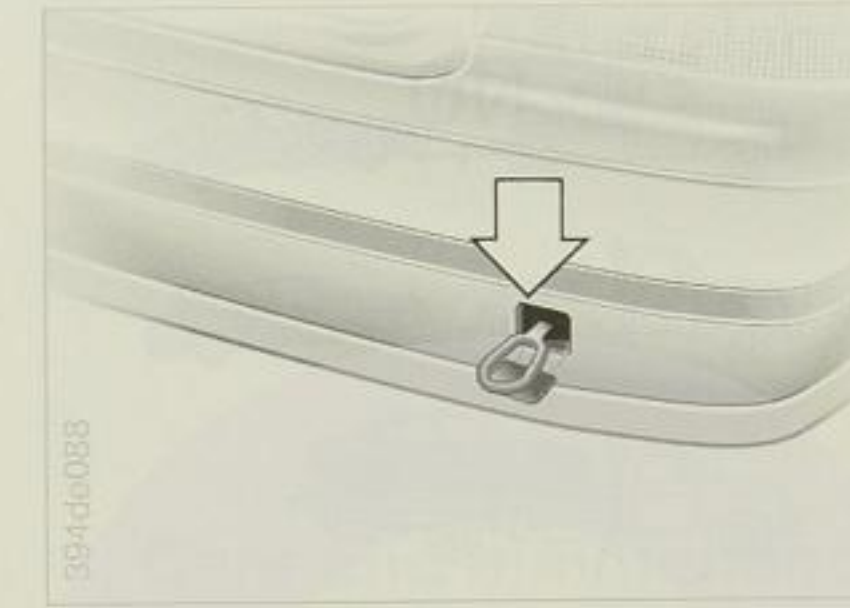
Tow fitting

The screw-in tow fitting is stored in the onboard tool kit; ensure that it remains in the vehicle at all times. This fitting is designed for installation in the tow sockets located at the front and rear of the vehicle, and is intended for towing on proper road surfaces only.

Access to tow sockets


Front:

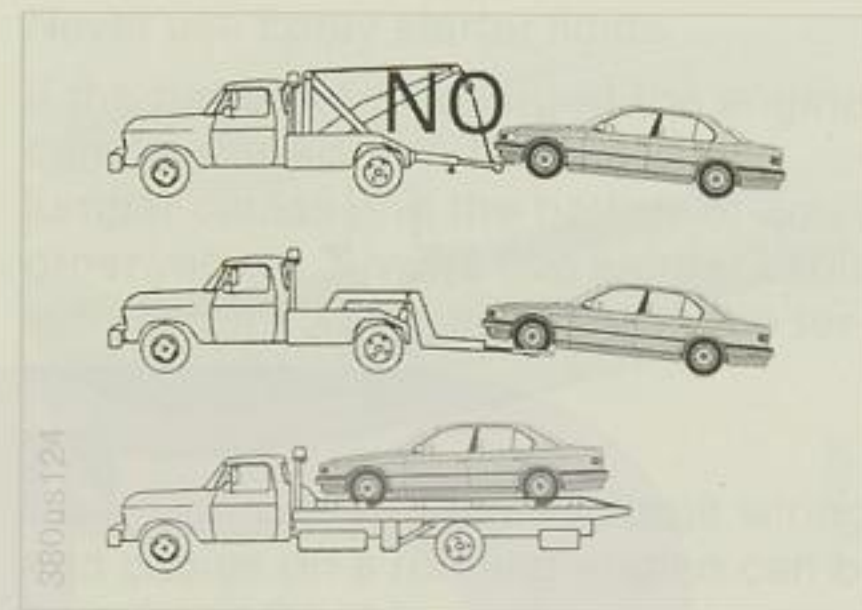
Apply pressure to the arrow symbol on the cover panel to remove.



Rear:

Procedure same as for front.

 Always screw in the tow fitting tightly up to the stop. ◀



Towing with a commercial tow truck

- ▷ Do not tow with sling-type equipment.
- ▷ Use wheel lift or flat bed equipment.
- ▷ Please comply with applicable state towing laws.



Never allow passengers to ride in a towed vehicle for any reason. ◀

At a glance

Controls and features

Care and maintenance

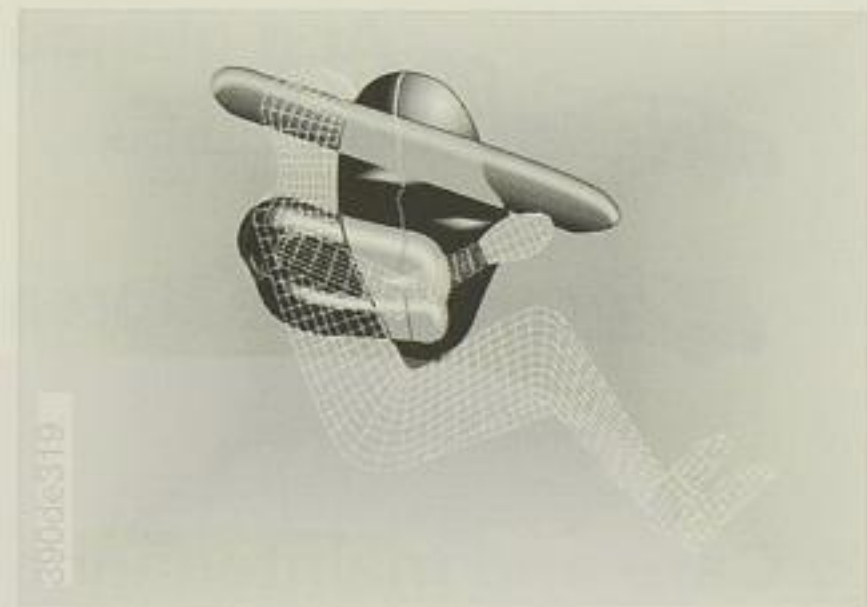
Owner service procedures

Advanced technology

Technical data

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 Radio reception 152
 Safety belt tensioner 152
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Deceleration sensors continuously monitor the physical forces acting upon the vehicle. If, in the case of a collision, deceleration occurs - of the kind in which the safety belts alone do not provide adequate protection - the two gas generators responsible for activating the driver and front passenger airbags ignite simultaneously. The passenger's airbag is activated only when a special sensor indicates that the front passenger's seat is occupied.

In the case of side collisions, the side airbags for the front and rear-seat occupants and the head airbags for the front-seat occupants (HPS) ignite if necessary.

The airbags located under the marked covers inflate and unfold in a matter of a few milliseconds. In this process they tear through the rated breaking points of the upholstered covers or press them out.

Because the inflation process must be virtually instantaneous, it is necessarily accompanied by a certain amount of ignition and inflation noise. The gas which the system employs to inflate the airbag is not dangerous, and the associated smoke is quickly dissipated.

The entire process is completed within one twentieth of a second.

ATC



On vehicles with automatic transmission Adaptive Transmission Control ATC uses a number of factors to calculate the maximally efficient gear. In this process it monitors your personal driving style, the situation in which you are driving, the condition of the road and the traffic conditions.

ATC recognizes your personal driving style from the positions and movements of the gas pedal, decelerations when braking and lateral acceleration through curves. Four shift characteristics - from comfort-oriented to performance-oriented - are available for selection by ATC.

In order to take driving conditions into account, ATC registers corners and both uphill and downhill gradients.

ATC

For example, if you maintain speed through a curve, it does not upshift. On uphill gradients it shifts only when the engine speed increases, in order to make more efficient use of power reserves. On downhill gradients ATC downshifts when the speed of the vehicles increases causing the driver to step on the brakes.

With respect to road conditions, ATC monitors the friction between the tires and the road. The system responds to slippery road surfaces (snow and ice) by activating the winter program. Second gear is used when moving away from a standstill, upshifts occur sooner, and on descents downshifting does not occur in spite of the application of brakes. This enables you to "feel" the road as you drive and produces greater dynamic stability. If the friction between the tires and the road is adequate, the normal system is again activated. The transmission also switches out of the winter program when the driver moves the selector lever from "D" to "4", "3", "2" or "1" or if ASC+T/DSC* is switched off.

By recognizing traffic conditions, ATC can retain maximum driving comfort, e.g., it recognizes stop-and-go traffic and then proceeds only in second gear until it encounters higher starting loads. Of course the selector lever can still be used to select specific gear ratios. Performance-oriented driving is made possible by moving the lever from position "D" to "4", "3" or "2". When you select position "3", "2" or "1" this will be the highest gear that the transmission will use. Position "2" is best for driving on steep mountain slopes with a heavy load.

ASC+T/DSC*

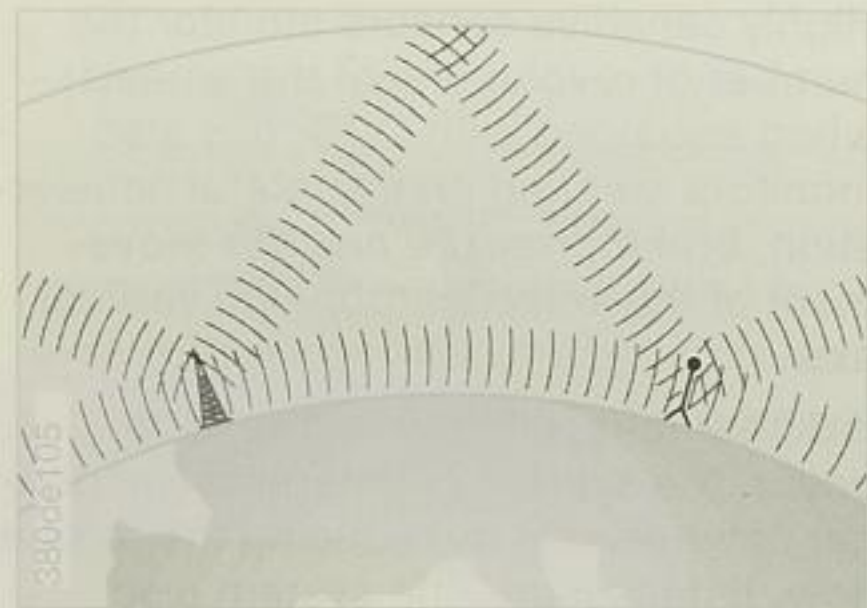
Highly sensitive sensors monitor the number of revolutions of the wheels; when equipped with DSC, this also monitors steering angle, lateral acceleration, brake pressure and the movement of the vehicle around its vertical axis.

If differences in the wheel speeds occur, the system counteracts the danger of wheelspin by reducing the torque flow. If necessary, the system also responds with additional application of the brakes at the rear wheels.

When DSC detects instability in the vehicle, the braking action can also be directed to the front wheels in order to stabilize it.

You may need some time to become accustomed to this system intervention. However, it guarantees optimum propulsive force and driving stability.

The braking-intervention is accompanied by a certain degree of noise.



The Antenna Diversity system employs several FM antennas integrated within the rear window to provide three separate sources for receiving broadcast waves. An integral processor automatically selects the antenna with the best FM reception quality at any given time. Because the ongoing antenna selection process is completed within milliseconds, it remains inaudible to the radio listener.

AM provides substantially longer reception ranges than FM. AM broadcast signals, propagated at ground level in the form of surface waves, are also reflected from the ionosphere as atmospheric waves.

Frequency-modulation (FM) provides substantially better sound quality than AM. However, FM uses line-of-sight broadcast waves, normally limiting its effective transmission range to about 60 miles (100 km).

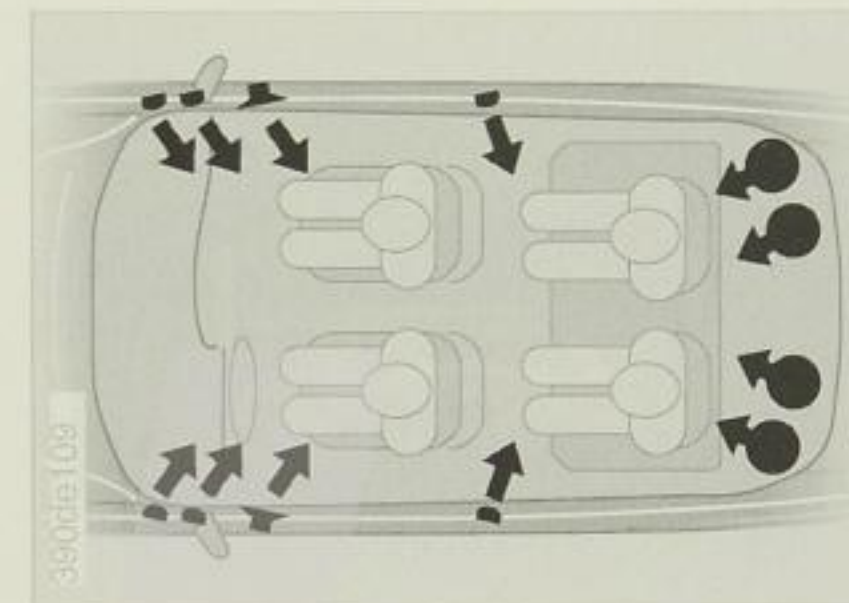
Although numerous factors combine to impose inherent limitations on the reception quality available from mobile radios, specially designed systems can be employed to minimize their effects:

Safety belt tensioner



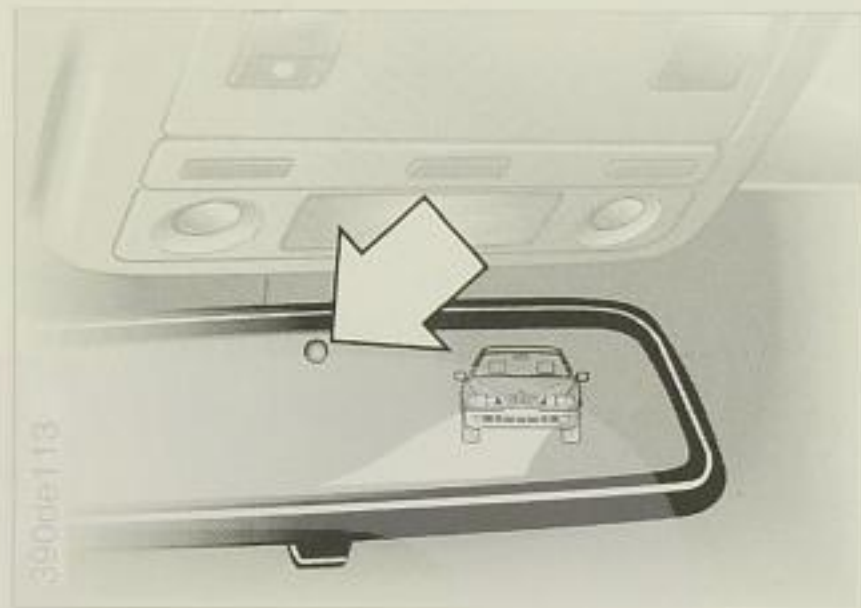
The safety belt tensioner responds to collisions by tightening the belts to ensure that occupants remain firmly positioned in their seats. A gas-pressure system retracts the buckle assembly to tension the shoulder and lap belts within fractions of a second, reducing the forward motion of the driver and passenger.

DSP sound system*



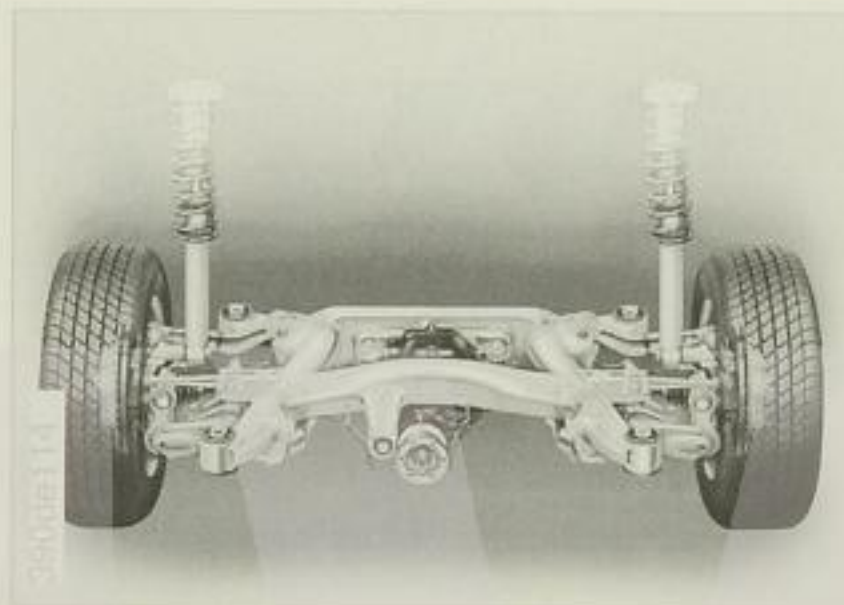
The DSP Professional premium sound system features a special amplifier combined with Digital Sound Processing (DSP) and integrated speakers to surround you with crisp, true-to-life sound reproduction.

The speaker system's subwoofers, woofers, mid-range speakers and tweeters furnish you with an impressively full-bodied listening experience. The individual components are oriented so as to produce the aural sensation that you would experience facing the stage in a concert hall. The system also automatically adjusts the bass and treble settings to compensate for changes in volume and vehicle speed.



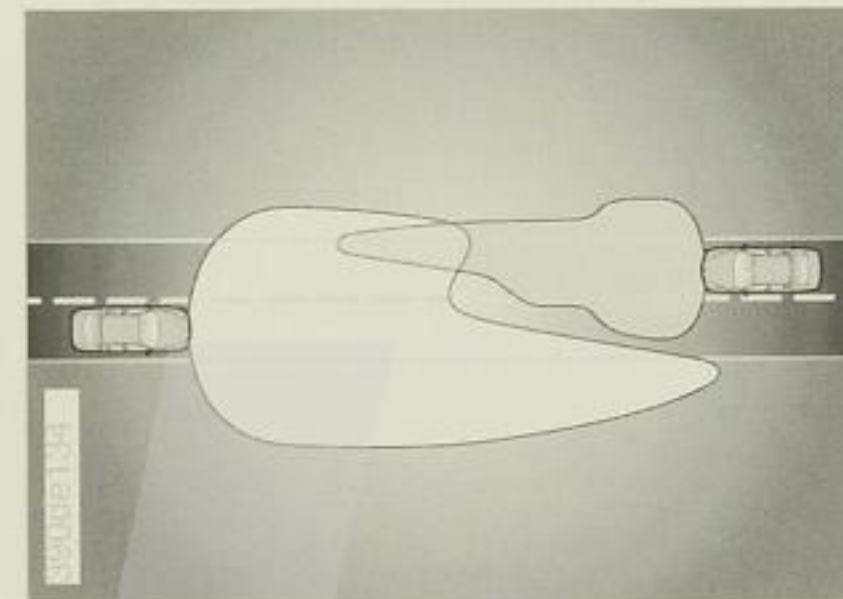
The result is a mirror that automatically dims through an infinitely-variable range of settings to adapt to current conditions (electro-chromic technology). Thereby it is no longer necessary to dim the mirror manually, and the driver can keep full concentration on the traffic.

The interior rearview mirror with automatic dimming feature reduces blinding from following traffic by adapting the intensity of the reflected images to correspond to levels of light registered by the unit's sensors. The mirror reverts to its undimmed setting as soon as the light source disappears. One of these sensors is mounted on the front of the mirror housing and is designed to monitor light levels in the area immediately forward of the vehicle, while the second sensor is integrated within the mirror's lens. The electronic control system operates by comparing the respective levels of luminous intensity in front of and behind the car. The difference provides the basic parameter used to modulate an electrical current and induce chemical changes in a semisolid layer incorporated in the lens.



The control arms on the patented integrated aluminum rear suspension assembly are not mounted directly on the body. They are mounted elastically in a frame, which, in turn, is elastically attached to the vehicle body. The resulting double elastic suspension system effectively absorbs the forces resulting from bumps and road surface irregularities.

The compliance rates of the integral suspension system's control arm mounts have been precisely calibrated to help provide supplementary adjustment in the tracking angle of the rear wheels (programmed self-steer effect). The ultimate result is enhanced safety and control under all conditions.



The xenon lamp* illuminates the side and front area of the vehicle even brighter and more evenly than the traditional halogen lamp.

In a xenon lamp* an electric arc replaces the traditional filament in order to generate an intense illumination. A gas mixture in a quartz piston with metal vapor is ignited by a high electric voltage. The arc that is generated is then sustained by a lower voltage. When the lamp is turned on there is a brief period of high intensity. Maximum brightness is attained in approx. 15 seconds.

Xenon lamps* provide improved orientation especially in case of bad weather conditions and difficult driving conditions, e.g., night driving in heavy rain through a road repair area without lane markers.

Xenon lamps* contribute considerably to road safety, since other parties in the traffic, such as pedestrians, bicyclists and motorcyclists who use the right lane, are more easily recognized.



The mirror is mounted on the windshield, and it is the only mirror in the car that can be dimmed automatically. The mirror is made of a special material that can be dimmed by a small amount of light. When the mirror is dimmed, it reflects less light, and the driver can see the road ahead more clearly.

The mirror is also equipped with a small, rectangular, black, plastic cover that can be pulled down over the mirror. This cover is used to protect the mirror from damage when the car is parked or when the driver is not using the mirror.

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The interior of the car is designed to provide a comfortable and safe driving environment. The dashboard is made of a high-quality material that is resistant to wear and tear. The front seats are upholstered in a durable fabric that is easy to clean and maintain.

The interior of the car is also equipped with a small, rectangular, black, plastic cover that can be pulled down over the mirror. This cover is used to protect the mirror from damage when the car is parked or when the driver is not using the mirror.

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Item	Value
Length	4,552 mm
Width	1,773 mm
Height	1,450 mm
Wheelbase	2,500 mm
Track (front)	1,500 mm
Track (rear)	1,500 mm
Ground clearance	150 mm

The dimensions of the car are as follows: Length 4,552 mm, Width 1,773 mm, Height 1,450 mm, Wheelbase 2,500 mm, Track (front) 1,500 mm, Track (rear) 1,500 mm, and Ground clearance 150 mm.

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The engine specifications are as follows: Engine type, Displacement, Power, Torque, and Fuel consumption.

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		BMW 528i	BMW 540i
Displacement	cu in (cm ³)	170.4 (2793)	268.4 (4398)
Number of cylinders		6	8
Max. output at engine speed	hp (kW) rpm	190 (142) 5300	282 (210) 5700
Max. torque at engine speed	lb-ft. (Nm) rpm	206 (280) 3950	310 (420) 3900
Compression ratio	ε	10.2	10.0
Stroke	in (mm)	3.31 (84)	3.26 (82.7)
Bore	in (mm)	3.31 (84)	3.62 (92)
Fuel-injection system	Digital-electronic engine-management system		

		BMW 528i	BMW 540i
Length	in (mm)	188.0 (4775)	188.0 (4775)
Width	in (mm)	70.9 (1800)	70.9 (1800)
Height (unloaded)	in (mm)	56.5 (1435)	56.5 (1435)
Wheelbase	in (mm)	111.4 (2830)	111.4 (2830)
Track, front	in (mm)	59.5 (1512)	59.5 (1512)
Track, rear	in (mm)	60.1 (1526)	60.1 (1526)
Minimal turning radius	ft. (m)	37.1 (11.3)	37.4 (11.4)

		BMW 528i	BMW 540i
Curb weight (with one person, ready for operation, full tank of fuel, options not included)			
with manual transmission	lbs (kg)	3450 (1565)	3748 (1700)
with automatic transmission	lbs (kg)	3505 (1590)	3803 (1725)
Approved gross vehicle weight			
with manual transmission	lbs (kg)	4464 (2025)	4762 (2160)
with automatic transmission	lbs (kg)	4519 (2050)	4817 (2185)
Approved front axle weight	lbs (kg)	2138 (970)	2381 (1080)
Approved rear axle weight	lbs (kg)	2502 (1135)	2635 (1195)
Approved roof load capacity	lbs (kg)	220 (100)	220 (100)
Never exceed either the approved axle weights or the gross vehicle weight.			
Luggage compartment capacity	cu ft. (liters)	16.3 (460)	16.3 (460)

Capacities

				Notes
Fuel tank reserve	gal. (liters) gal. (liters)	approx. 18.5 (approx. 70) approx. 2.1 (approx. 8) approx. 2.6 (approx. 10)	– BMW 528i – BMW 540i	Fuel specification: Page 26
Windshield washer system	quarts (liters)	approx. 3.7 (approx. 3.5)		For details: Page 116
with headlamp washer system	quarts (liters)	approx. 6.3 (approx. 6.0)		
Intensive cleaning system	quarts (liters)	approx. 1.1 (approx. 1.0)		
Cooling system including heater circuit	quarts (liters)	11.1 (10.5) – BMW 528i 12.7 (12.0) – BMW 540i		For details: Page 120
Engine oil and filter change	quarts (liters)	6.9 (6.5) – BMW 528i 7.9 (7.5) – BMW 540i		Approved HD oil for gasoline engines. Specifications: Page 118
Manual transmission, automatic transmission and final drive unit	–	–		Lifetime fluid, no fluid change required

Battery

BMW 528i:
12 V, 70 Ah

BMW 540i:
12 V, 90 Ah

Spark plugs

Dual electrode:
Bosch F7 LDCR or
NGK BKR 6 EK

Drive belts

BMW 528i:

Water pump-AC generator-power
steering

Ribbed V-belt 6 K x 1555

A/C compressor

Ribbed V-belt 5 K x 906

BMW 540i:

Water pump-AC generator-power
steering

Ribbed V-belt 7 K x 1605

A/C compressor

Ribbed V-belt 5 K x 980

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