



Owner's Manual for the Vehicle.
With a quick reference guide
for your convenience.



M5



M5

Congratulations, and thank you for choosing a BMW M5.

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 BMW. 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. In addition, you will find information on maintenance and care, there to ensure operating and driving safety, as well as to maintain the best possible value of your vehicle.

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) or a Warranty and Service Guide Booklet (Canadian models). 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 (US models) or in the Warranty and Service Guide Booklet (Canadian models).

We wish you an enjoyable driving experience.

BMW M

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 desire 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 center will be glad to assist at any time.

Symbols used



Indicates instructions or precautions that must be followed precisely in order to avoid the possibility of personal injury and serious damage to the vehicle. ◀




Contains information that will assist you in gaining the optimum benefit from your vehicle and enable you to care more effectively for your vehicle. ◀



Refers to measures that can be taken to help protect the environment. ◀

◀ Marks the end of a specific item of information.

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

 Identifies index entries that refer to owner service procedures or topics on car care.



Identifies systems or components, which your BMW center can either activate or adapt to suit an individual driver's requirements ("Car Memory", "Key Memory"). Refer to page 52.

The individual vehicle

On 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 group.


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

If your BMW features equipment that is not described in this Owner's Manual (a car radio or telephone, for instance), we have enclosed Supplementary Owner's Manuals. We ask you to read these manuals as well.

Status at time of printing

BMW pursues a policy of continuous, ongoing development 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. Nor can errors and omissions be entirely ruled out. You are therefore asked to appreciate that no legal claims can be entertained on the basis of the data, illustrations or descriptions in this Owner's Manual.

For your own safety

 Use unleaded gasoline only. Fuels containing up to and including 10 % ethanol or other oxygenates with up to 2.8 % oxygen by weight (that is, 15 % MTBE or 3 % methanol plus an equivalent amount of co-solvent) will not void the applicable warranties respecting defects in materials or workmanship. Field experience has indicated significant differences in fuel quality (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 centers.

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 (for instance, CBs, walkie-talkie, ham radio or similar accessories) 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 BMW center for additional information. ◀



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. ◀

Symbol on vehicle parts



Indicates that you should consult the relevant section of this Owner's Manual for information on a particular part or assembly.

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 a crash 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 dealer, 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 366-0123 in Washington, D.C. area) or write to: NHTSA, U.S. Department of Transportation, Washington, D.C. 20590. You can also obtain other information about motor vehicle safety from the Hotline.



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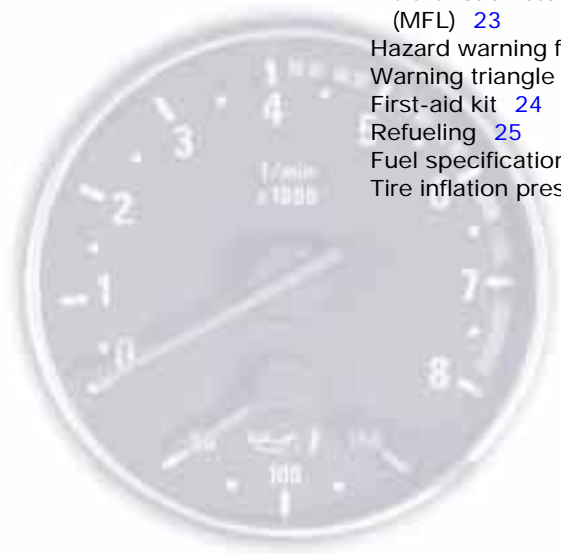
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Controls and features

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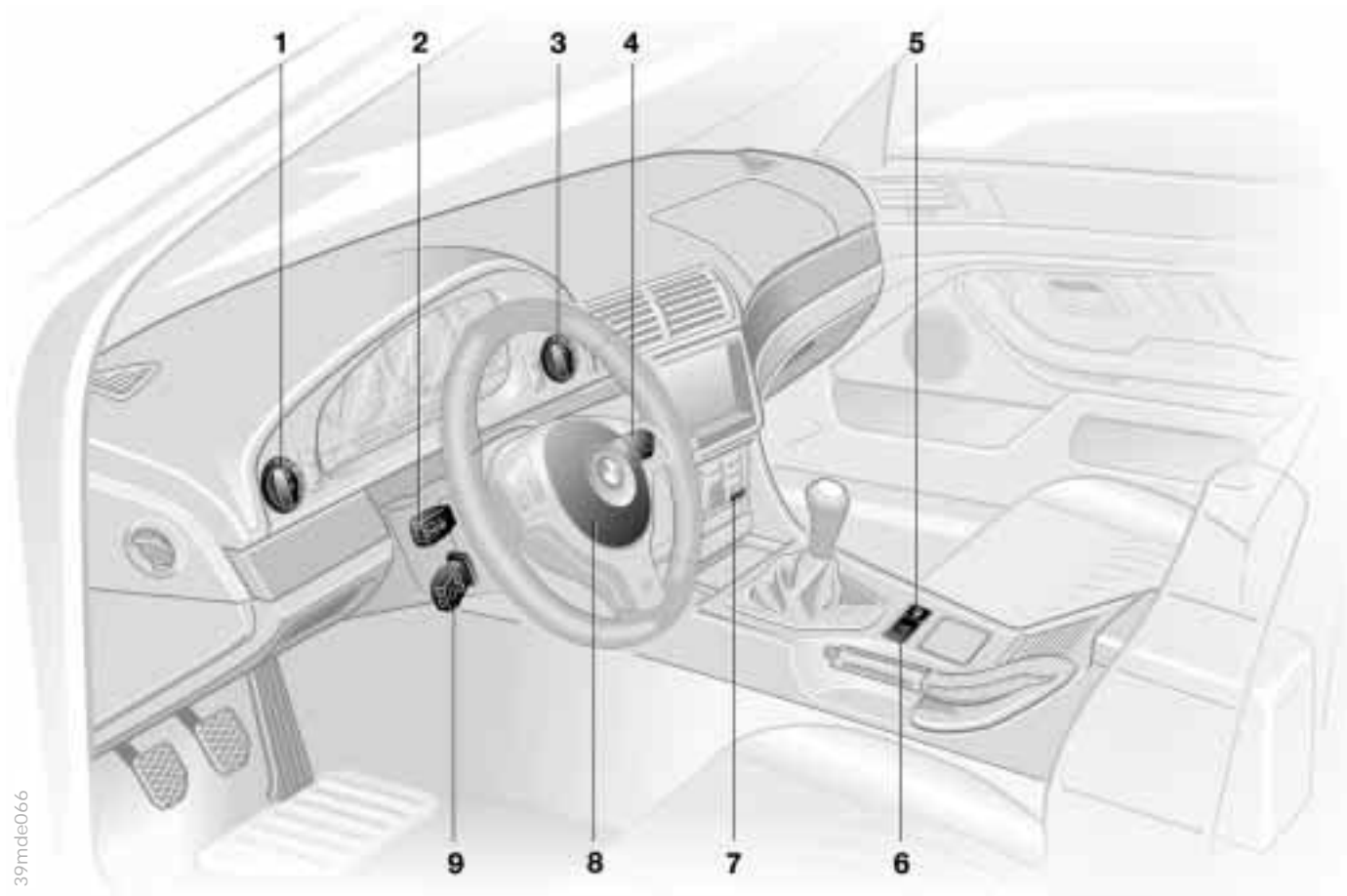
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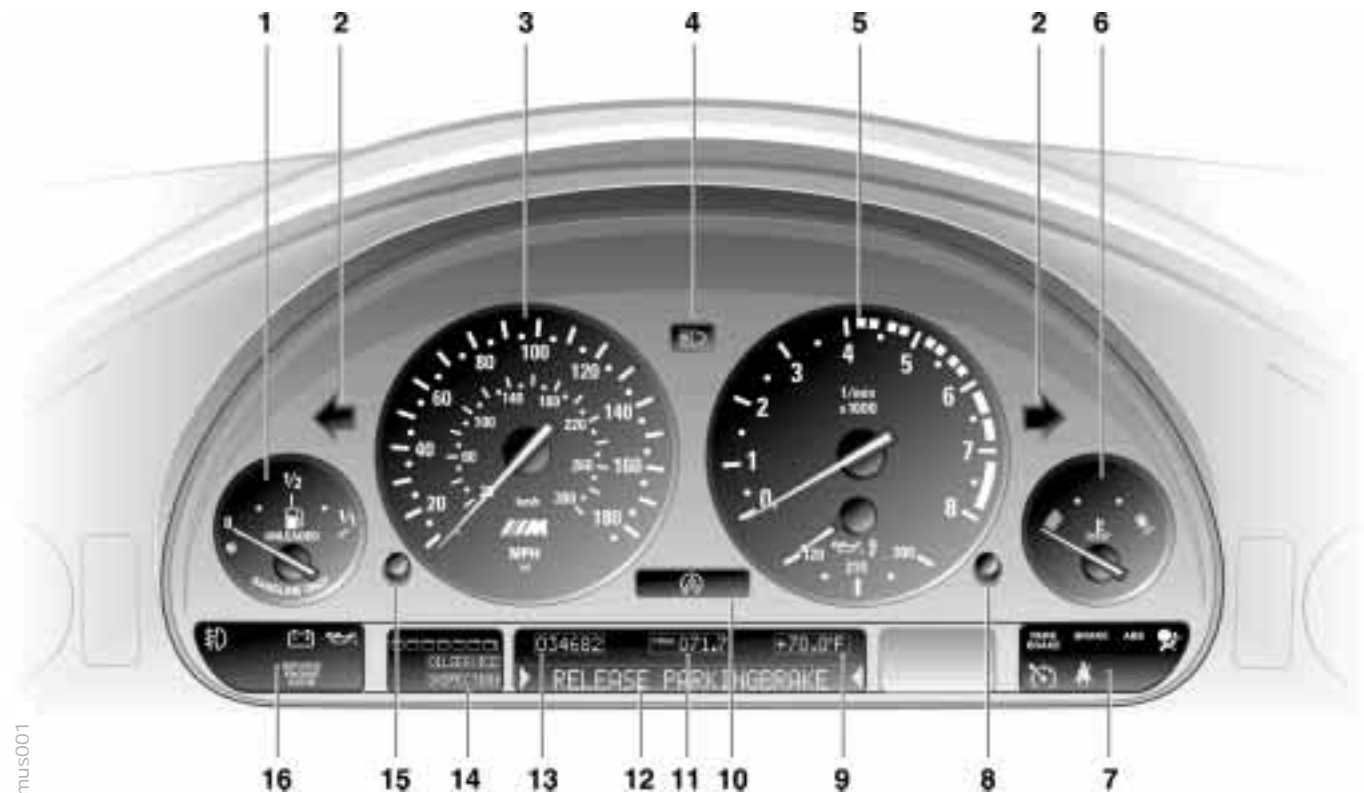
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You can display the outside temperature and distance driven in different units of measurement. ◀

Technology that monitors itself

Many of the systems of your BMW monitor themselves automatically, both during engine starts and while you are driving. Indicator and warning lamps that are identified by "●" are tested for proper functioning whenever the ignition key is turned. They light up once for different periods of time.

If a fault should occur in one of these systems, the corresponding lamp does not go out after the engine is started or it lights up while the vehicle is moving. You will see how to react to this in the following section.

Red: stop immediately



Battery charge current ●

The battery is no longer being charged. There is a malfunction of the alternator drive belt or in the charging circuit of the alternator. Please contact the nearest BMW center.



If the drive belt is defective, do not continue driving. The engine could be damaged due to overheating. If the drive belt is defective, increased steering effort is also required. ◀



Engine oil pressure ●

If the message "STOP! ENGINE OIL PRESSURE" appears in the Check Control: stop the vehicle and switch off the engine immediately. Check the engine oil level; top up as required. If the oil level is correct: please contact the nearest BMW center.



Do not continue driving. The engine could be damaged because of inadequate lubrication. ◀



Brake hydraulic system ●

Have the brake fluid level checked. Before continuing your journey, be sure to read the notes on pages [124](#) and [142](#).

The indicator lamp comes on together with the "Check brake pads" message in the Check Control.



Brake hydraulic system warning lamp for Canadian models.

Indicator and warning lamps

Red: an important reminder



Parking brake ●
Comes on when you engage the parking brake.

For additional information, refer to page [63](#).



Parking brake warning lamp for Canadian models.



Please fasten safety belts ●
An acoustical signal is sounded and a message appears in the Check Control for 4 to 8 seconds. The acoustical signal ends when the belt is fastened.

For additional information on safety belts, refer to page [53](#).



Airbags ●
Please have the system inspected by your BMW center.

For additional information, refer to pages [54](#), [176](#).

Yellow: check as soon as possible



Antilock Brake System (ABS) ●
ABS has been deactivated in response to a system malfunction. Conventional braking efficiency is available without limitations. Please have the system inspected by your BMW center.

For additional information, refer to page [121](#).



ABS warning lamp for Canadian models.



Dynamic Stability Control (DSC) ●

DSC has been switched off or has been deactivated because of a malfunction. In the event of a malfunction, have the system checked by your BMW center.

For additional information, refer to page [86](#).



Dynamic Brake Control (DBC)* ●
Fault in the DBC system. Conventional braking efficiency is available without limitations.

For additional information, refer to page [124](#).



Dynamic Brake Control (DBC)* warning lamp for Canadian models.



Service Engine Soon ●
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 center at the earliest possible opportunity.

For additional information on the OBD interface socket, refer to page [153](#).



Service Engine Soon warning lamp for Canadian models.

22 Indicator and warning lamps

Green: for your information



Turn signal indicator

Flashes when the turn signals are in operation. Rapid flashing means there is a fault in the system.

For additional information, refer to page [64](#).



Cruise control

Comes on when the cruise control is activated: available for operation via the multifunction steering wheel.

For additional information, refer to page [67](#).



Fog lamps

Comes on whenever you switch on the fog lamps.

For additional information, refer to page [91](#).

Blue: for your information



High beams


Comes on when the high beams are on or the headlamp flasher is actuated.

For additional information, refer to pages [64](#), [91](#).

Multifunction steering wheel (MFL)

The controls integrated in the multifunction steering wheel (MFL) are provided so that you can operate a number of accessories quickly and without being distracted from traffic conditions. You may operate:

- ▷ Selected functions of the radio as well as the CD and cassette modes,
- ▷ the cruise control,
- ▷ selected cellular phone* functions and
- ▷ the voice recognition*.

 In order to operate a system via the MFL, the corresponding system controls must be activated. ◀

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.



- 1 Horn: the entire surface
- 2 Radio/Cellular phone: select
- 3 Press briefly:
Receive a phone call, initiate dialing, and terminate a call.
Press longer:
Turn voice recognition on and off
- 4 Radio/Cellular phone: volume
- 5 Radio/Cellular phone: scan backward or scan station keys or scroll through the phone listings.
Rewind for the CD and cassette players
- 6 Radio/Cellular phone: scan forward or scan station keys or scroll through the phone listings.
Fast forward for the CD and cassette players
- 7 Cruise control: activate stored setting (resume)
- 8 Cruise control: accelerate and store (+) as well as decelerate and store (-)
- 9 Cruise control: activate/interrupt/deactivate.

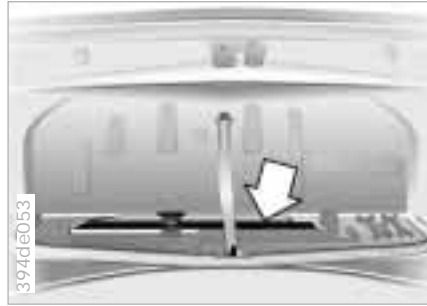
24 Hazard warning flashers



The button flashes intermittently when the hazard warning flashers are on.

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

Warning triangle*



The hazard warning triangle is readily accessible. It is stored in the container for the onboard tool kit mounted in the luggage compartment lid.

To open the container, loosen the wing nut(s).



Comply with legal requirements that cover the availability of a hazard warning triangle in the vehicle. ◀

First-aid kit*



Under the front 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 articles in the first-aid kit may be used within a limited time only. For this reason, check the contents of the kit regularly. Replace any items whose expiration dates have passed. These items are available in any drugstore or pharmacy. Comply with legal requirements that cover the availability of a first-aid kit in the vehicle. ◀




Fuel filler door

 Before filling the tank, shut off the engine. If you do not, fuel cannot be filled into the tank and the Service Engine Soon lamp may come on. ◀


To open the filler door, press on the front edge.

To unlock the fuel filler door if the central locking system malfunctions, refer to page [170](#).

 When handling fuels, comply with all of the applicable safety precautions and regulations posted at the filling station. 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. ◀



Simple and environmentally friendly

 Open the filler cap carefully to prevent fuel from spraying out. Fuel spray may cause injury. Do not top off. Topping off may cause fuel to spill. ◀


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

When refueling, insert the filler nozzle completely into the filler pipe. Pulling the nozzle out of the pipe during refueling

- ▷ results in premature pump shutoff
- ▷ and will reduce the effect of the vapor recovery system on the pump.

As long as the filler nozzle is used properly, the fuel tank is full whenever the nozzle shuts off the first time.

Tank capacity: refer to page [186](#).


 Close the filler cap carefully after refueling until a "click" is heard. While closing, be sure not to squeeze the strap which is fastened to the cap. A loose or missing cap will activate the message "CHECK FILLER CAP" in the Check Control or the Service Engine Soon lamp. ◀

26 Fuel specifications

The engine uses lead-free gasoline only.


Required fuel:

- ▷ Premium Unleaded Gasoline, min. 91 AKI
AKI = Anti Knock Index

 Do not use leaded fuels. The use of leaded fuels will cause permanent damage to the system's oxygen sensor and the catalytic converter. ◀

Tire inflation pressure




 Check tire inflation pressures regularly – at least every two weeks and before beginning a longer trip. Incorrect tire pressure can otherwise lead to tire damage and accidents. ◀

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

Check tire pressures

All pressure specifications are indicated in psi (kilopascal) for tires at ambient temperature (refer also to the next page).

 After you have corrected the tire inflation pressure, reactivate the Tire Pressure Warning (RDW) system. Refer to page [88](#). ◀

Tire inflation pressure

Comply with tire approval specifications

The inflation pressures in the table apply to tires from BMW-approved manufacturers. Your BMW center is familiar with these pressures. Higher pressures may be specified for tires from other manufacturers. You will find a list of approved tire sizes on page [133](#).

Your vehicle is equipped with tires which not only meet US standards, but also European standards. We recommend the exclusive use of BMW-approved tires.

BMW Tires					
All pressure specifications in the table are indicated in psi (kilopascal) with cold tires (cold = ambient temperature)					
	245/40 ZR 18	35 (240)	-	44 (300)	-
M5	275/35 ZR 18	-	38 (260)	-	48 (330)
	235/45 R 17 94 H M+S	35 (240)	38 (260)	39 (270)	46 (320)

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Overview

Controls and features

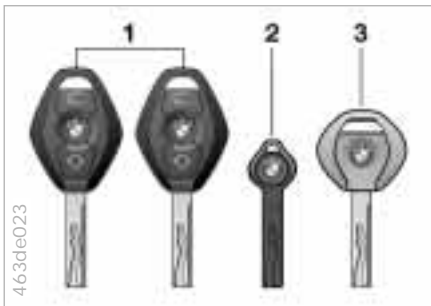
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1 The master keys with remote control determine the functions of the Key Memory. Refer to page [52](#)

 There is an extended-life battery in every master key which is charged automatically in the steering lock as you drive.


For this reason, if you have a master key that is otherwise not used, use that key approximately once every year while driving for an extended period. This will charge the battery. Refer also to page [33](#). ◀

2 Spare key for storage in a safe place, such as in your wallet. This key is not intended for constant use

3 Door and ignition key
The lock for the glove compartment cannot be operated with this key. This is recommended for valet parking, for instance

Replacement keys

Replacement keys are available exclusively through your BMW center. Your BMW center is obligated to ensure that a person requesting a key is authorized to do so since the keys belong to a security system (refer to "Electronic vehicle immobilizer" on page [31](#)).

 If possible, take all of the master keys that belong to the vehicle with you when you pick up your replacement key. Whenever you receive a new replacement key, turn it once to position 2 in the ignition lock (ignition switched on) and then back, so that the electronic vehicle immobilizer can "learn" the new key. ◀

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 center can cancel the electronic system authorization for individual keys (in the event of loss, for instance). 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 that is 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.

 Force applied to the key can damage the integrated electronic circuitry. A damaged key can no longer be used to start the engine. ◀

The concept

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

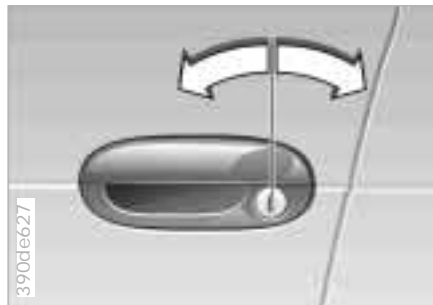
- ▷ doors
- ▷ luggage compartment lid
- ▷ fuel filler door.

The central locking system can be operated

- ▷ from outside via the door lock and using the remote control
- ▷ from inside by pressing a button.

The fuel filler door is not locked when you open the vehicle from the inside (refer to page 36). The alarm system is automatically armed whenever you activate the central locking system from outside of the vehicle. Both the door locks and release handles remain locked. The alarm system is also activated or deactivated.

If locked from inside, the central locking system unlocks automatically (only those doors which were not locked separately with the safety lock buttons) in the event of an accident. Refer to page 36. In addition, the hazard warning flashers and interior lamps come on.

**Using the key**

One turn of the key in the driver's door lock unlocks the driver's door only. Turning the key a second time unlocks all of the remaining doors, the luggage compartment lid and the fuel filler door.



You can have a confirmation message set to inform you that the vehicle has been properly locked. ◀

Convenience operation

You can also operate the windows and sliding/tilt sunroof via the door lock.

- ▷ To open: with the door closed, turn the key to the "Unlock" position and hold it.
- ▷ To close: with the door closed, turn the key to the "Lock" position and hold it.



Watch during the closing process to be sure that no one is inadvertently injured. Releasing the key stops the operation. ◀

Manual operation

(in the event of an electrical failure)

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


Opening and closing – from the outside

Using the remote control

The remote control makes opening and locking the doors of your vehicle very convenient. Furthermore, it provides three additional functions that can only be executed by means of the remote control:

- ▷ Switch on interior lamps, refer to page [34](#)
With this function, you can also "search for" your vehicle – when parked in an underground garage, for instance.
- ▷ Open the luggage compartment lid, refer to page [35](#)
The luggage compartment lid will open slightly, regardless of whether the lid was previously locked or unlocked.
- ▷ Panic mode, refer to page [35](#)
In case of danger, you can trigger an alarm.


When the vehicle is unlocked or locked, the anti-theft system is simultaneously deactivated/activated, the alarm system is disarmed/armed and the interior lamps are switched on/off.


 You can have a confirmation message set to inform you that the vehicle has been properly locked. ◀



Master keys

Keys with remote control are master keys. Refer to page [30](#).

 Children might be able to lock the doors from the inside. For this reason, always take the vehicle's keys with you so that the vehicle can be opened again from the outside at any time. ◀

 Master keys that are used repeatedly are always ready for operation since the battery in the key is charged automatically in the steering lock as you drive.

If it is no longer possible to unlock the vehicle via the remote control, the battery is discharged. Use this key while driving for an extended period in order to charge the battery. Refer also to page [30](#).

To prevent unauthorized use of the remote control, surrender only the door and ignition key 3 or the spare key 2 (refer to page [30](#)) when leaving the vehicle for valet parking, for example. In the event of a system malfunction, please contact your BMW center. You can also obtain replacement keys there. ◀

34 Opening and closing – from the outside



Unlocking and convenience opening mode

To unlock: press button 1.

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: press and hold button 1. The windows and the sliding/tilt sunroof are then opened.



To lock and secure

Press button 2.



Deactivate the tilt sensor alarm system and interior motion sensor

Press button 2 a second time immediately after locking.

For additional information, refer to page [41](#).

To switch on the interior lamps

After locking the vehicle, press button 2 a second time.


Opening and closing – from the outside



Luggage compartment lid open – Panic mode

Open the luggage compartment lid: press button 3.

The luggage compartment lid will open slightly, regardless of whether it was previously locked or unlocked.

 Before and after a trip, be sure that the luggage compartment lid was not opened unintentionally. ◀

Panic mode: by pressing and holding button 3 for two to five seconds, you can trigger the alarm system if there is an impending danger (the system must be armed).

The alarm is deactivated by pressing button 1.

Non-BMW systems

The remote control system's functioning may be affected by other units or equipment operating in the immediate vicinity of your vehicle.

If this should occur, you can unlock and lock the vehicle via the door lock with a master key.

For US owners only


The transmitter and receiver units comply with part 15 of the FCC (Federal Communications Commission) regulations. Operation is governed by the following:

FCC ID: LX8EWS
 LX8FZVS
 LX8FZVE

Compliance statement:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:


- ▷ This device may not cause harmful interference, and
- ▷ this device must accept any interference received, including interference that may cause undesired operation.


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

36 Opening and closing – from the inside



Use this button to operate the central locking system when the front doors are closed. The doors and luggage compartment lid are unlocked or locked only. The antitheft alarm system is not activated. Also, the fuel filler door remains unlocked to allow refueling.

 If you desire, the central locking system will secure the locks as soon as you start to drive. This can be adjusted to be key-specific. ◀

 If only the driver's door was unlocked from the outside and you press the button


- ▷ all other doors, the luggage compartment lid and the fuel filler door will be unlocked if the driver's door is open
- ▷ the driver's door will be locked again if it is closed. ◀

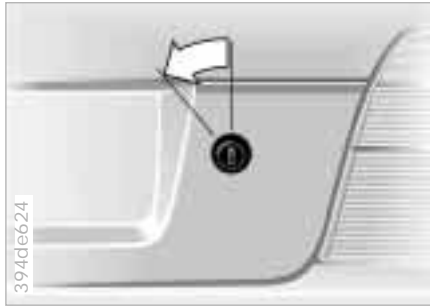
To unlock and open the doors

- ▷ Either unlock the doors together with the button for the central locking system and then pull each of the release handles above the armrests or
- ▷ pull the release handle for each door twice: the first pull unlocks the door, and the second one opens it.

To engage locks

- ▷ Use the central locking button to lock all of the doors simultaneously, or
- ▷ press down the individual door lock buttons. The fuel filler door remains then unlocked. To prevent the driver from being inadvertently locked out of the vehicle, the driver's door lock button will not engage as long as the door is open.

 When the vehicle is moving, do not lock the doors with the safety lock buttons. Doors locked in this manner would not open automatically in the event of an accident. Children might be able to lock the doors from the inside. For this reason, always take the vehicle's keys with you so that the vehicle can be opened again from the outside at any time. ◀



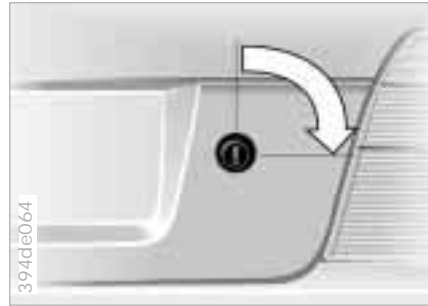
The lock

Only the master key (refer to page 30) fits in the lock of the luggage compartment.

Opening separately

Turn the master key to the left in the luggage compartment lock clear to the stop – the luggage compartment lid will open slightly.

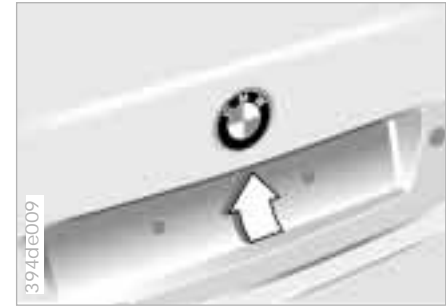
The luggage compartment is locked again as soon as you close the lid.



Secure separately

Turn the master key to the right past the resistance point and then pull it out in the horizontal position.

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 surrender the door and ignition key (refer to page 30) for valet parking, for instance.



To open from outside

Press the button (arrow): the luggage compartment lid opens slightly.

The luggage compartment is lighted when the luggage compartment lid is opened.

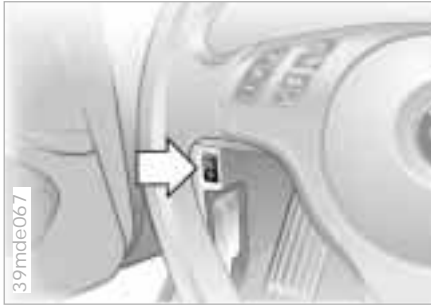
Manual operation

(in the event of an electrical failure)

Turn the master key to the left in the luggage compartment lock clear to the stop – the luggage compartment lid will open slightly.

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

38 Luggage compartment lid




Opening from inside the vehicle

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

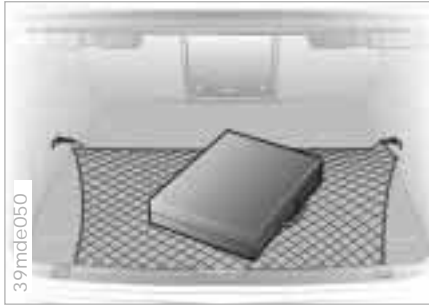


To close

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

 Operate the vehicle only when the luggage compartment lid is completely closed. Otherwise, exhaust fumes could penetrate the interior of the vehicle. Should it be absolutely necessary to operate the vehicle with the luggage compartment lid open:

- ▷ Close all windows. Shut the sliding/tilt sunroof.
- ▷ Increase the air supply of the automatic climate control to a high level. Refer to page 97. ◀



Luggage net

Use the luggage net to secure smaller items of luggage.

If you place objects on the luggage net, this helps to prevent them from moving.

The lashing eyes located at the corners of the luggage compartment provide you with a convenient means of attaching draw straps* for securing suitcases and luggage.

Refer also to "Cargo loading" on page [114](#).



Hanger*

You will find a hanger on the left-hand side of the luggage compartment for fastening shopping bags, packages or other items.

The concept

The vehicle alarm system responds:

- ▷ When a door, the hood or the luggage compartment lid is opened.
- ▷ To movement inside the vehicle (interior motion sensor).
- ▷ to changing the vehicle's tilt if someone attempts to steal the wheels or tow the vehicle.
- ▷ To an interruption in battery voltage.

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

- ▷ Sounding an acoustical alarm for 30 seconds.
- ▷ The hazard warning flashers are activated for approx. five minutes.
- ▷ The high beams flash on and off in the same rhythm.

To activate and deactivate the alarm system

When the vehicle is locked or unlocked with the key or the remote control, the alarm system is also simultaneously armed or disarmed.

The interior motion sensor is activated approx. 30 seconds after you have finished locking the vehicle.

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



You can have various confirmation messages set to inform you that the alarm system has been armed or disarmed. ◀

You can still open the luggage compartment after the system has been armed by pressing button 3 of the remote control (refer to page 35). When you close the luggage compartment, the lid is secured again.



Indicator lamp displays

- ▷ The indicator lamp below the interior rearview mirror flashes continuously: the system is armed.
- ▷ The indicator lamp flashes when it is armed: a door (or doors), the hood, luggage compartment lid or rear window is not completely closed. Even if you do not close the indicated area, the system begins to monitor the remaining areas, and the indicator lamp flashes continuously after 10 seconds. However, the interior motion sensor is not activated.
- ▷ The indicator lamp goes out when the system is disarmed: no manipulation or attempted intrusions have been detected in the period since the system was armed.

Alarm system

- ▷ The indicator lamp flashes for 10 seconds when the system is disarmed: an attempted entry has been detected in the period since the system was armed.

Following triggering of an alarm, the indicator lamp will flash continuously.

Avoiding unintentional alarms

The tilt alarm sensor and interior motion sensor may be switched off at the same time. You can do this to prevent a false alarm from being triggered (in garages with elevator ramps, for instance, or when the vehicle is transported by trailer or train):

Actuate the lock (= arm the system) twice; in other words, press button 2 of the remote control twice in succession (refer to page 34). You may also actuate the lock twice with the key (refer to page 32).

The indicator lamp lights up briefly and then flashes continuously. The tilt alarm sensor and the interior motion sensor are deactivated as long as the system is armed.



Interior motion sensor

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

In order for the interior motion sensor to function properly, the windows and sliding/tilt sunroof must be completely closed.

Nevertheless, you should deactivate the interior motion sensor (refer to the previous column) if the windows or sliding/tilt sunroof should be left open.

42 Electric power windows




Open and close windows

In ignition key position 1 and 2:

- ▷ Depress the rocker switch until you feel resistance:
The window continues to move 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 power windows as long as neither of the front doors has been opened. To open a window, press the switch beyond the resistance point.

 Remove the key from the ignition key and close the doors when you leave the vehicle so that children cannot operate the power windows and possibly injure themselves. ◀

For convenience operation via the door lock or remote control, refer to page [32](#) or [34](#).

Safety feature


A contact strip is located on the inside upper frame of each of the windows. 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.


 Despite this safety feature, be extremely careful to ensure that the closing path of the window is not obstructed. Otherwise, an object might not touch the contact strip in some situations (very thin objects, for instance). You can disable this safety feature by pressing the switch beyond the pressure point and holding it. Because 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 be sure 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 vehicle. Never leave the keys in the vehicle with unsupervised children. Never place anything that could obstruct the driver's vision on or next to the windows. ◀



Safety switch

With the safety switch, you can prevent the rear windows from being opened or closed via the switch in the rear passenger area (by children, for example).

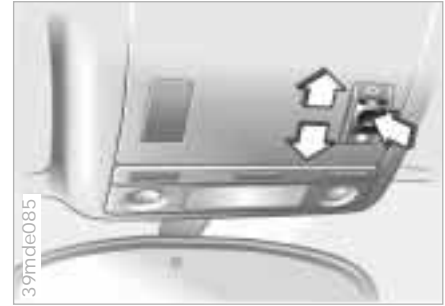
 Press the safety switch whenever children are riding in the rear of the vehicle. Careless use of the power windows can lead to injury. ◀

 To prevent injuries, exercise care when closing the sliding/tilt sunroof and keep it in your field of vision until it is shut. Before leaving the vehicle, 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 the power sunroof. Unsupervised use of these systems can result in serious personal injury. ◀

You can avoid pressure or drafts in the passenger compartment when the sunroof is open or lifted by opening the air vents in the dashboard and increasing the air supply as required. Refer to page 97.

If the sunroof is completely open, air disturbances may be caused in the vehicle when you are driving at higher speeds. Close the roof as far as is necessary until this natural phenomenon ceases.


For convenience operation via the door lock or remote control, refer to page 32 or 34.



Lifting - opening - closing

With the ignition key in position 1 or higher, press the switch or slide it to the desired direction until you feel resistance.

When lifting, the headliner retracts several inches.

 If the sliding/tilt sunroof is up, then the headliner cannot be closed. ◀

After the ignition has been switched off, you can still operate the sunroof as long as neither front door has been opened.

44 Sliding/tilt sunroof*

Automatic* opening and closing

Press the switch past the resistance point briefly: the sunroof travels to either the fully-closed or fully-open position.

Other automatic operations are:

- ▷ With the sunroof open, press the switch briefly toward "Lift:" the sunroof automatically extends to its fully raised position.
- ▷ With the sunroof raised, press the switch briefly toward "Open:" the sunroof automatically extends to the "Open" position.

Pressing the switch again stops the motion immediately.

Safety feature

If the sliding/tilt sunroof encounters resistance at a point roughly past the middle of its travel when it is closing, the closing cycle is interrupted and the sunroof will open again slightly.



Despite this safety feature, be extremely careful to ensure that the closing path of the roof is not obstructed. Otherwise, triggering the closing-force limitation may not be ensured in some situations (with very thin objects, for instance). You can disable this safety feature by pressing the switch beyond the pressure point and holding it. ◀

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 desired.




Power loss or malfunction

Following a power interruption (if the battery is disconnected, for instance), the sunroof can only be raised in some circumstances. To correct this situation:

- 1 Raise the sliding/tilt sunroof fully.
- 2 Press and hold the switch for approx. 20 seconds.

In the event of an electrical system malfunction, the sliding/tilt sunroof can be manually operated. Refer to page [170](#).

For maximum safety when adjusting the seat position, please observe the following:

 Never try to adjust your seat while driving the vehicle. The seat could respond with unexpected movement, and the ensuing loss of vehicle control could lead to an accident. Be sure that the safety belt remains firmly against your body at all times. In the event of a frontal impact, a loose lap belt could slide over your hips, leading to abdominal injury. In addition, the safety belt's restraint effectiveness is reduced if the belt is worn loosely. Never travel with the backrest reclined to an extreme angle (especially important for front passengers). Keep the backrest relatively upright to minimize the risk of sliding under the safety belt and sustaining injury in the event of a crash. Do not move the seats to the rear when the vehicle is at an extreme angle (on garage ramps or steep slopes, for example). If you do so, the automatic safety belt height adjustment can be disengaged. ◀

Correct sitting posture

To reduce strain on your spinal column, sit all the way back in the seat and rest your back fully against the backrest. The ideal sitting posture is achieved when your head is extended from your spine in a straight line. For long-distance driving, you may wish to increase the angle of the backrest slightly to reduce muscular tension. You should always be able to reach the highest point on the steering wheel without straightening your arms.



- 1 Tilt angle (driver's seat only)
- 2 Backward/Forward adjustment
- 3 Cushion height
- 4 Backrest angle
- 5 Head restraint height
Adjust the tilt angle of the head restraint manually by rotating it




Lumbar support

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.

- ▷ Press the front/rear of switch: increase/decrease curvature.
- ▷ Press the upper/lower end of the switch: curvature is shifted upward or downward.

 Comply with the adjustment instructions on page 45. Failure to do so could result in diminished personal safety. ◀



Thigh support


You can also adjust the thigh support to correspond with your personal comfort.



Head restraints

Adjust the angle of the front head restraint by rotating it forward or back.

Adjust the height of the rear head restraint by pulling it up or pushing it down.

 Head restraints reduce the risk of spinal injury in the event of an accident.

Adjust the head restraint so that its center is approximately level with your ears.

Leave the center-rear head restraint in the fully-lowered position at all times. Extending it limits its function. ◀



This seat allows you to make additional adjustments with the power seat system (see under BMW M sports seat, page 45) for

- 1 Lumbar support
- 2 Shoulder support

Lumbar support

See under BMW M sport seat on page 46.



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 the optimal shoulder support setting, we recommend:

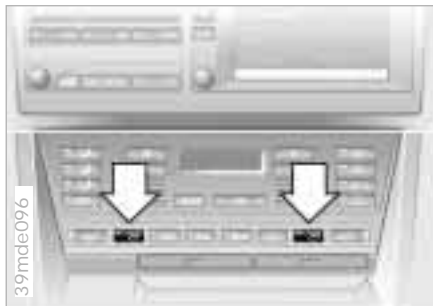
Driver and front passenger:

- 1 Adjust the upper backrest section to its extreme rear position.
- 2 Adjust the seat to the optimal position as described on page 45.
- 3 Bring the upper backrest section forward until your shoulders enjoy firm support.

Front passenger's seat adjustment for relaxed traveling:

- 1 Adjust the upper backrest section to its extreme rear position.
- 2 Increase the seat cushion tilt.
- 3 Tilt the backrest somewhat further.
- 4 Bring the upper backrest section forward.

 Make corrections in the forward/backward adjustment of the seat to ensure that the safety belt still fits firmly against your body. If you do not do this, the protection provided by the safety belt may be reduced. ◀

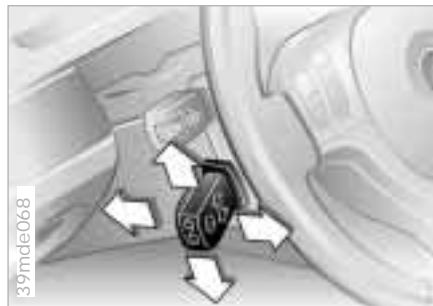


Active changes in the seat's surface help to avoid muscle cramps, pain in the spine's lumbar region and fatigue.


To activate the seat, press the button (arrow).

For additional details concerning the BMW active seat, please refer to the chapter describing "Advanced technology" on page [177](#).

Adjusting the steering wheel



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

 Do not adjust the steering wheel while the vehicle is moving. There is a risk of accident from unexpected movement. ◀

To store the steering wheel setting, refer to "Seat, mirror and steering wheel memory" on page [50](#).

Automatic steering wheel adjustment


In order to make it easier to get into and out of the vehicle, 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.



Your BMW center can adjust your vehicle's systems in such a manner that your personalized setting is automatically called up for the steering wheel position when you unlock the vehicle with your personal key. ◀




 The mirror on the passenger's side features a lens with a more convex surface 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. ◀

Exterior mirrors

- 1 Switch for 4-way adjustment
- 2 Selection switch for changing between mirrors

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

To store the mirror settings, refer to "Seat, mirror and steering wheel memory" on page [50](#).

 Your BMW center can adjust your vehicle's systems in such a manner that your personalized setting is automatically called up for the mirror position when you unlock the vehicle with your personal key. ◀

Electric heaters

Both mirrors are automatically defrosted with the ignition key in position 2.



Interior and exterior mirrors, automatic dimming feature

By responding to the effects of ambient light and the glare from following traffic, these mirrors dim automatically through an infinitely-variable range.

The mirrors automatically revert to their clear, undimmed setting whenever you engage reverse gear.

To ensure that the mirrors continue to operate properly, keep the two photocells in the interior mirror clean and unobstructed. One photocell (arrow) is in the mirror glass, while the other is offset somewhat on the opposite side of the mirror.

For an explanation of the electrochromic technology used in this mirror, refer to page [179](#).



Sun visors

The sun visors can be folded down toward the windshield or swiveled out against the side windows.

Lighted vanity mirror

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

The mirror lamps operate in ignition key positions 1 and 2.

Seat, mirror and steering wheel memory



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 adjustment setting for the lumbar support is not saved in the memory.

To store

- 1 Turn the key to ignition key position 1 or 2.
- 2 Adjust the desired positions for the seat, door mirror and steering wheel.
- 3 Press the **MEMORY** button: the indicator lamp in the button lights up.
- 4 Press memory button 1, 2 or 3, as desired: the indicator lamp goes out.

To select a stored setting

Convenience function:

- 1 Open the driver's door after unlocking or put ignition key in position 1.
- 2 Briefly press memory button 1, 2 or 3, as desired.
Movement stops immediately when one of the seat-adjustment or memory buttons is activated during the adjustment process.

Safety function:

- 1 With the driver's door closed and ignition key either removed or in position 0 or 2.
- 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.



Do not call up a position from the memory while the vehicle is moving. There is a risk of accident from unexpected movement of the seat or steering wheel. ◀

Seat, mirror and steering wheel memory



Your BMW center can adjust your vehicle's systems in such a manner that your personalized settings are automatically called up for the seat, mirror and steering wheel positions when you unlock the vehicle with your personal remote control key. ◀



If you make use of this setting mode, be sure that the footwell behind the driver's seat is unobstructed before unlocking the vehicle. Otherwise, persons or objects could be injured or damaged should the seat move backward. ◀



Passenger side exterior mirror tilt function

(automatic curb monitor)

- 1 Move the mirror selector switch (arrow) to the "driver's mirror" position.
- 2 When reverse gear is engaged, the passenger-side mirror tilts downward. This brings the area directly adjacent to the vehicle (curbs, etc.) into the driver's field of vision as an aid during parking.

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



How the system functions

You have probably frequently wished that you could configure individual functions of your vehicle to reflect your own personal requirements. In developing this vehicle, BMW has "built in" a few options that, should you so desire, your BMW center can adjust for you.

There are settings related to the vehicle ("Car Memory") and settings related to individuals ("Key Memory"). You can configure two different basic settings for two different persons. The only requirement is that each person uses his or her own remote control key.

When your vehicle is unlocked with the remote control, the vehicle recognizes the individual user by means of a data exchange with the key, and makes adjustments accordingly.

In order for you to distinguish between different keys, colored decals are supplied together with the keys.

What the system can do

Your BMW center can provide you with details on the capabilities of the Car Memory and Key Memory systems.



You will see this symbol throughout the Owner's Manual. It is to remind you at appropriate places of the settings that are available to you. ◀

An example for Key Memory is the automatic adjustment of the driver's power seat with stored settings for the individual person when the vehicle is unlocked.

Safety belts



Drive with your safety belt on

Fasten your safety belt at the beginning of every trip.

To fasten: make sure you hear the catch 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.

For care instructions, refer to page [149](#).

The two safety belt buckles that are integrated in the rear seat are for passengers sitting on the left and right. The belt buckle with the word "CENTER" (in the red button) is intended exclusively for a passenger sitting in the middle.



For your safety, comply with the following instructions for wearing safety belts. If you do not, the safety belts may not be able to provide their maximum protection. The following information also applies to your passengers:

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, wear it as snugly against your body as possible. Do not allow the belt to rest against hard or fragile objects. 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.

Avoid wearing bulky clothing that prevents the belt from fitting properly. Pull on the belt periodically to readjust

the tension over your shoulder. In the event of a frontal impact, a loose lap belt could slide over your hips, leading to abdominal injury. In addition, the safety belt's restraint effectiveness is reduced if the belt is worn loosely. 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. ◀




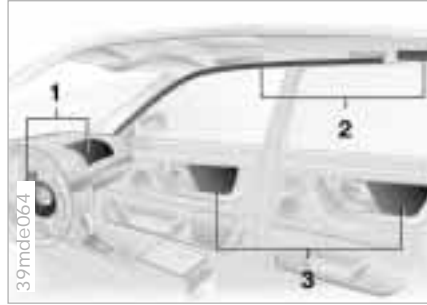
Vehicles with through-loading system*: please read and comply with the instructions for the center safety belt on page [111](#). ◀



If the safety belt system has been subjected to the stresses involved in an accident or otherwise damaged: have the entire safety belt mechanism replaced by your BMW center, including the safety belt tensioner. In addition, have your BMW center inspect the safety belt anchors. If a child restraint system was in the vehicle during an accident, consult the manufacturer's instructions regarding replacement. ◀

Child restraint systems*

 Never install a rear-facing child restraint device on the front passenger seat. Otherwise, injuries could occur when the airbag is triggered in the event of an accident. Children should always ride in the rear and the restraint systems should be secured with the outer belts. The center seat belt should only be used when it is necessary to secure three child restraint systems. Do not attempt to modify child restraint systems. If you do this, the protection provided by these systems could be impaired. ◀

Airbags

- 1 Front airbags on the driver and passenger sides
- 2 Head airbags on the driver and passenger sides (front and rear*)
- 3 Side airbags on the driver and passenger sides (front and rear*)

Protective effect

The front airbags protect the driver and passenger in the event of a severe frontal collision in which the protection afforded by the belts alone may no longer be sufficient. The head protection and side airbags help provide protection in the event of a collision from the side. Each of the side airbags is designed to help support the upper body.




The side airbags in the rear passenger area* of your vehicle may already have been deactivated, either at the time of manufacture or by a BMW center. You may have them activated if you desire to do so. Please contact your BMW center for additional information. ◀

Airbags



The illustration schematically depicts the primary directions of vehicle impact that initiate an airbag deployment.

 The airbags will not be triggered in the event of a minor accident, a vehicle roll-over, or an impact from the rear. ◀

Functional status



The indicator lamp in the instrument cluster displays the operational status of the airbag system with the ignition key in position 1 and higher.

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.

Have the system checked by a BMW center immediately.

Sitting correctly with airbags



For your own safety, please observe the following precautions concerning airbags. If you do not, their protective function may be impaired and your personal safety in jeopardy. This information applies to all vehicle occupants:

Even though there is an airbag, wear a safety belt every time you get in the vehicle, because airbags enhance safety by providing added protection. Make sure you are seated comfortably in your seat in such a way that you always maintain control, and are not too close to the steering wheel.

Always hold the steering wheel by the rim to keep any chance of injury to hands or arms to an absolute minimum should the airbag be deployed.

No one and nothing is to come between the airbag and the seat occupant. Do not use the cover panel above the front passenger-side airbag as a storage area.

Never tape the airbag cover panels, cover them over or alter them in any other way.

Do not install a rear-facing child restraint system in the front passenger seat of this vehicle. Children under 13 years of age and children less than 5 ft (150 cm) tall should only ride in the rear seat.

If your vehicle is equipped with side airbags in the rear passenger area, be sure that child restraints are mounted correctly and provided with the greatest-possible distance between the airbags in the side trim panels. Do not allow children to lean out of the child seat in the direction of the side trim panels. Otherwise, serious injuries could occur if the airbag is triggered (if activated per customer request). ◀



At all times, occupants should sit upright and be properly restrained (infants and small children in appropriate child restraint systems; larger children and adults using the safety belts). Never let an occupant's head rest near or on a side airbag because the inflating airbag could cause a serious or fatal injury. Please note that the word "Airbag" imprinted on the door trim panel indicates the airbag's location. Accident research shows that the safest place for children in an automobile is in the rear seat. However, a child sitting in the rear seat and not properly restrained may place his or her head on or near the side airbag, if so equipped. For example, a child – even though belted – may fall asleep with his or her head against the side airbag. It may be difficult for a driver to ensure that children in the rear seat will remain properly positioned at all times and not place their heads on or near the side airbag.

Therefore, we recommend that the rear-seat side airbags, if provided, be deactivated if children will be travelling in the rear seat.

The rear seat side airbags may already have been deactivated, either at the time of manufacture or by a BMW center. Labels in the rear door opening should indicate the status of your rear seat side airbags. If you are uncertain of their status, or wish to have the airbags activated or deactivated, please contact your BMW center. ◀

Airbags

Even when all these guidelines are observed, there is still a small residual risk of injuries to the face, hands and arms occurring from airbag deployment in isolated instances.

The ignition and inflation noise may provoke a mild temporary hearing loss in extremely sensitive individuals.

Airbag warning information is also provided on the sun visors.

For additional information concerning the airbag system, refer to pages [151](#) and [176](#).

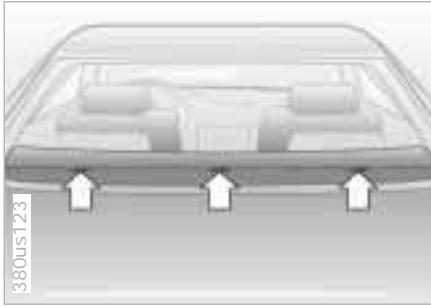


This is the right way for a child to sit in a child restraint when rear side airbags (arrow) are provided.



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

58 Transporting children safely



Commercially-available child restraint systems are designed to be secured with a lap belt or with the lap 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 you use a child restraint system with a tether strap, three additional tether anchorage points have been provided (refer to the arrows in the illustration). Depending on the location selected for seating in the rear passenger area, attach the strap hook to the corresponding anchorage point to secure the child restraint system.

Adjust the tether strap according to the child restraint manufacturer's instructions.



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

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

Your vehicle 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/9 kg) would be within the airbag's deployment range, you should never mount such a device in the front passenger seat, since the impact of the airbag against the child restraint's backrest could lead to serious or fatal injuries.

Transporting children safely

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 a 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 comply with the instructions for installation and use provided by the child restraint's manufacturer whenever you use such a device. Be sure 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.

60 Transporting children safely



Unlock the safety belt

Release the safety belt, remove the child's seat and retract the safety belt to its end position on the belt retractor.



Child seat security

All of the rear belt retractors and the front passenger's safety belt can be locked for mounting and securing child restraint systems.

Information regarding this is located near the buckle latch of each safety belt.

Lock the safety belt

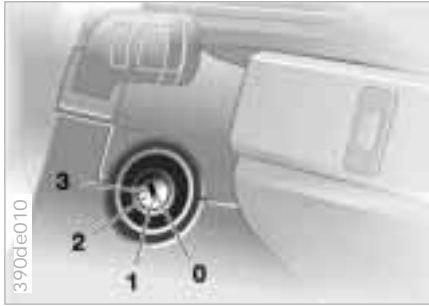
Pull the entire length of the belt from the belt retractor. Allow the reel to retract the belt somewhat and engage the buckle, then tighten the belt against the child restraint system. The retraction mechanism is now locked.

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.

Steering/Ignition lock



0 Steering lock engaged

The key can be inserted and removed in this position only.

An acoustic warning is sounded when you fail to remove the ignition key after opening the driver's door.

After removing the key, turn the steering wheel slightly to the left or right until you hear the lock engage.

Once the ignition has been switched off (ignition key in position 0 or pulled out), the radio functions are still available for approx. 20 minutes. Turn the radio back on to use it.

1 Steering lock disengaged

Turning the steering wheel slightly to the right or left often makes it easier to turn the key from 0 to 1.

Individual electrical accessories are ready for operation.

2 Ignition on


All electrical equipment and accessories are available for use.

3 Starting the engine

62 Starting the engine


Before starting

- ▷ Engage the parking brake.
- ▷ Move the shift lever to the neutral position.
- ▷ Depress the clutch pedal.

 Do not allow the engine to run in enclosed spaces. 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 vehicle unattended with the engine running. An unattended vehicle with a running engine represents a potential safety hazard. ◀

Starting the engine

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

 Do not actuate the starter for too short a time. Do not turn it for more than approx. 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, begin driving immediately at a moderate engine speed. ◀

If the engine does not start on the first attempt (the engine is very hot or cold, for instance):

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

Cold starts at very low temperatures, from approx. +5 °F (-15 °C) and at altitudes above 3,300 ft (1,000 m):


- ▷ On the first start attempt, engage the starter for a longer period (approx. 10 seconds).
- ▷ Press the accelerator pedal halfway down while engaging the starter.

Engine idle speed is controlled by the engine computer system. Increased speeds at startup 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 any electrical devices not in use, as well as the ignition when the vehicle is not being driven.

Switching off the engine

Turn the ignition key to position 1 or 0.

 Do not remove the ignition key while the vehicle is still moving. If you do so, the steering will lock, making it impossible to steer the vehicle. When you leave the vehicle, always remove the ignition key and engage the steering lock. Always engage the parking brake when parking on slopes and inclined surfaces, since not even placing the lever in 1st gear or reverse may not provide adequate resistance to rolling. ◀

Parking brake



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

To engage

The lock engages automatically when you lift the lever, and the "PARK BRAKE" (in Canada "P") indicator lamp comes on in the instrument cluster in ignition key position 2. Refer to page [21](#).

To release

Pull up slightly on the lever, press the button and lower the lever.



If, in exceptional circumstances, it should be necessary to engage the parking brake while the vehicle is in motion, do not pull it with 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 axle.

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

Always engage the parking brake when parking on slopes and inclined surfaces, since even placing the lever in 1st gear or reverse may not provide adequate resistance to rolling. ◀

To avoid corrosion, apply the parking brake lightly from time to time when coasting to a standstill (at a traffic signal, for instance), provided that it is safe to do so.




Every time you shift gears, always depress the clutch pedal all the way down, pushing the manual-shift gear lever into the desired position.

Also, depress the clutch when starting the vehicle, as otherwise lockout will prevent the engine from starting if the clutch is not depressed.

The shift lever's neutral gate is located between 3rd and 4th gears.

When shifting from each gear into "Neutral," the shift lever returns automatically to this neutral position because of its spring loading.


When the vehicle lighting is switched on, the shift pattern is illuminated on the shift lever.

 When shifting gears in the 5th/6th-gear plane, be sure to press the shift lever to the right in order to prevent inadvertent selection of a gear in the 3rd/4th-gear plane. ◀

Reverse

Select "Reverse" only when the vehicle is stationary. Press the shift lever to the left to overcome a slight resistance.

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

 Do not hold the vehicle in place on slopes by slipping or "riding" the clutch. Use the parking brake instead. A slipping clutch increases clutch wear. ◀

Turn signal/Headlamp flasher

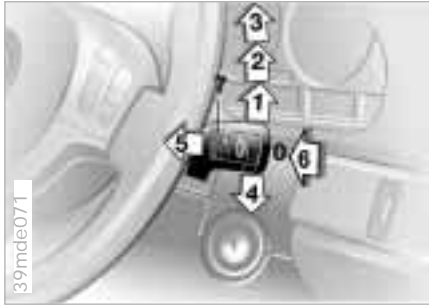


- 1 High beam (blue indicator lamp)
- 2 Headlamp flasher (blue indicator lamp)
- 3 Turn signal indicator (green indicator lamp accompanied by periodic clicking sound from the relay)

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.



- 0 Wipers retracted
- 1 Intermittent mode or rain sensor*
- 2 Normal wipe
- 3 Fast wipe
- 4 Brief wipe
- 5 Cleaning windshield
- 6 Intensive cleaning*
- 7 Rotary dial for control of the wipe interval or the sensitivity of the rain sensor

1 Intermittent mode or rain sensor*

Intermittent mode:

You can set the wipe interval to four stages with rotary dial 7. In addition, the wipe interval automatically adapts to variations in road speed.

Rain sensor:

When the rain sensor is activated, the windshield wiper is controlled automatically, depending on the degree of wetness of the windshield (in both snow and rain). You do not have to be concerned with switching the windshield wiper on or off or adjusting the wipe interval between intermittent and full wipe. Instead, you can concentrate fully on the traffic conditions. This is especially important under adverse weather conditions.

The rain sensor is positioned on the windshield, directly ahead of the interior rearview mirror.

To activate the rain sensor:

Move the lever to position 1 with the ignition key in position 1 or higher. The wipers travel once across the windshield, regardless of the weather conditions.

You can also leave the lever permanently in position 1. It is then only necessary to activate the rain sensor from ignition key position 1 and higher. To do this


- ▷ turn rotary dial 7 briefly or
- ▷ use either the cleaning windshield 5 or the intensive cleaning 6.

To adjust the sensitivity of the rain sensor:

Turn rotary dial 7.

Deactivating the rain sensor:

Move lever into position 0.

 Deactivate the rain sensor in automatic car washes. If you do not, damage may occur if the wipers switch on unintentionally. ◀



2 Normal wiper speed

When the vehicle is stationary, the wipers switch automatically to intermittent wipe (not on vehicles with rain sensor).

3 Fast wiper speed

When the vehicle is stationary, the wipers operate at normal speed (not on vehicles with rain sensor).

5 Cleaning windshield

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

If you pull the lever only briefly, the system sprays washer fluid onto the windshield without activating the wipers.

6 Intensive cleaning*

As at 5. In addition, an intensive-action washer fluid is first sprayed on the windshield.

For changing the wiper blades, refer to page 156.

Cleaning headlamps*

If the headlamps are on, they will also be cleaned every fifth time you activate cleaning windshield 5 or intensive cleaning 6.

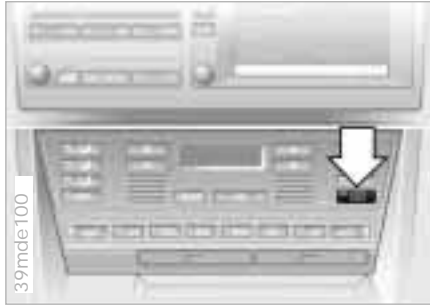


Do not use the washers if there is any danger that the fluid will freeze on the windshield. If you do so, your vision could be obscured. For this reason, use an antifreeze agent. Refer to page 138. Do not press the washer lever if the supply tank is empty. If you do so, the washer pump will be damaged. ◀

Windshield washer jets

The windshield washer jets are warmed automatically when the ignition key is in position 2.

Rear window defroster



To activate

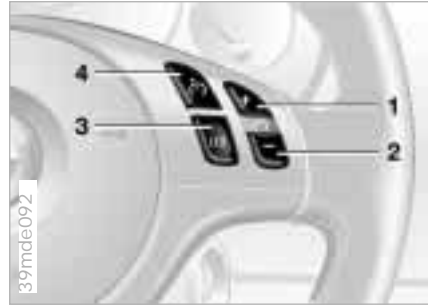
Press the button: as long as the indicator lamp remains on, the rear window defroster continues at high-output (rapid thaw).

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

To deactivate

If the indicator lamp is still on, press the button.

Cruise control



You can store and automatically maintain any desired vehicle speed above approx. 20 mph (30 km/h).

- 1 Accelerate and store
- 2 Decelerate and store
- 3 Activate/interrupt/deactivate the system
- 4 Recall the stored speed



Do not use cruise control on winding roads, when high traffic density prevents driving at a constant speed, when the road surface is slick (snow, rain, ice), or when the road surface is loose (rocks, sand). ◀

To activate the system

From ignition key position 2.

Press button 3. The indicator lamp in the instrument cluster comes on. You can now use the cruise control.

To deactivate the system

- ▷ In the activated state: press button 3 twice.
- ▷ When the cruise control has been interrupted: press button 3 once.
- ▷ Turn the ignition key to position 0.

The indicator lamp goes out and the stored speed is deleted.




To store and maintain speed or to accelerate

Press button 1 briefly:

The system registers and maintains the current vehicle speed. Every time you briefly touch the button, the speed increases by approx. 0.6 mph (1 km/h).

Press and hold button 1:

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

 If, on a downhill gradient, the engine braking effect is not sufficient, the controlled speed can be exceeded. Speed can drop on uphill grades if the engine output is insufficient. ◀

To decelerate

Press button 2 briefly:

With the cruise control active, every brief touch of the button reduces the speed by approx. 0.6 mph (1 km/h).

Press and hold button 2:

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

To cancel the cruise control

When the system is activated, press button 3. The indicator lamp stays on.

If you like, you can use the cruise control at a later time by pressing button 4 to resume the last stored speed.

In addition, cruise control is canceled automatically

- ▷ if the brakes are applied,
- ▷ when you depress the clutch pedal,
- ▷ or if the cruise speed is either exceeded or not met for an extended length of time (if you depress the accelerator pedal and exceed the set speed, for example).

To resume the stored setting

Press button 4:

The vehicle accelerates to and maintains the last speed stored.



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).

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

Trip odometer

To reset the trip odometer to zero, press the button (arrow) with the ignition key in position 1 or higher.

Outside temperature display

The outside temperature appears in the display panel from ignition key position 1 and higher.

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

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

Ice warning

If the outside temperature drops to approx. +37.5 °F (+3 °C), a signal is sounded as a warning and the display flashes for a brief period. The warning is repeated whenever the temperature climbs to at least +43 °F (+6 °C) following the last warning and then drops back 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), on bridges or shaded road surfaces, for instance. ◀

70 Tachometer



The orange early warning zone appears depending upon the engine temperature. As the engine temperature increases, more and more sectors of this early warning zone disappear.

Avoid engine speeds in the early warning zone if possible.

Do not operate the engine with the needle in the red overspeed zone 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.

Engine oil temperature



The normal operating temperature is in a range between +176 °F (+80 °C) and +248 °F (+120 °C). Do not exceed the maximum temperature of +302 °F (+150 °C).

Fuel gauge



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

If the indicator lamp comes on and stays on, there are approx. 2.5 gal (10 liters) of fuel still in the tank.

For fuel tank capacity, refer to page 186.

If the tilt of the vehicle varies (when you are driving in mountainous areas, for example), the needle may fluctuate slightly.



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

Coolant temperature



Blue

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

Red

If the warning, "COOLANT TEMPERATURE" appears in the Check Control: the engine is overheated. Shut off the engine immediately and allow it to cool down.

Between the blue and red zones

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

Checking coolant level: page [141](#).

Service Interval Display



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 center for an appointment.

Red lamp

The maintenance deadline has been passed.

72 Check Control



Text messages are used to alert the driver to system malfunctions with the ignition key in position 2 and higher. The alert is accompanied by a gong.

- 1 Status symbol for messages
- 2 Display
- 3 CHECK button

Messages concerning system faults are differentiated based on two priorities:

Priority 1

These defects are immediately indicated by a gong and a flashing warning symbol (1). Simultaneous defects will be displayed consecutively. These status messages remain in the display until the defects are corrected. They cannot be deleted by pressing the CHECK button (3):

- ▷ "RELEASE PARKING BRAKE"
- ▷ "COOLANT TEMPERATURE"
The coolant is overheated. Stop the vehicle and switch off the engine immediately. Refer to page [141](#).
- ▷ "STOP! ENGINE OILPRESS"
The oil pressure is too low. Stop the vehicle and switch off the engine immediately. Refer to page [139](#).

▷ "CHECK BRAKE FLUID"

The level has dropped nearly to the minimum. Top up the brake fluid at the next opportunity. Refer to page [142](#). Have the source of the brake fluid loss diagnosed and corrected by your BMW center.

▷ "FLAT TIRE"

Reduce vehicle speed immediately and stop the vehicle. Avoid hard brake applications. Do not oversteer. Refer to page [89](#).

▷ "LIMIT"*

This is displayed if the programmed speed limit has been exceeded.

Priority 2

These displays appear for 20 seconds with the ignition key in position 2 and higher. The warning symbols remain after the message disappears. You can display the messages again by pressing the CHECK button 3.

▷ "TRUNK LID OPEN"

This message appears only when you initially begin a trip.

▷ "DOOR OPEN"

This message appears after a minimal defined road speed has been exceeded.

▷ "FASTEN SEAT BELTS"*

In addition to this message, an indicator lamp with the safety belt icon appears and an acoustical signal is sounded.

▷ "WASHER FLUID LOW"

Too low; top up fluid at the next opportunity. Refer to page 138.

▷ "CHECK ENGINE OIL LEV"

The oil level is at the absolute minimum, therefore add engine oil as soon as possible. Refer to page 139. Until then, do not drive more than approx. 30 miles (50 km).

▷ "TIRE PRESSURE SET"

The RDW has transferred the current inflation pressure in the tires as the target values that the system will monitor. Refer to page 88.

▷ "TIRE CHECK INACTIVE"

This indicates a temporary interference in the RDW or a system fault. Refer to page 89.

▷ "CHECK BRAKE LAMPS"

A lamp has failed or the electrical circuit has a fault. Refer to page 159 and 168 or consult a BMW center.

▷ "CHECK LOWBEAM LAMPS"

"CHECK SIDE LAMPS"

"CHECK REAR LAMPS"

"CHECK FRONT FOG LAMPS"*

"CHECK LICPLATE LAMP"

"CHECK HIGHBEAM LAMP"

"CHECK BACK UP LAMPS"

Defective bulb or circuit. Refer to pages 157 ff. and 168 or consult a BMW center.

▷ "CHECK BRAKE LININGS"

Have the brake linings checked by your BMW center. Refer to page 124.

▷ "CHECK COOLANT LEVEL"

The coolant level is too low; top up at the next opportunity. Refer to page 141.

▷ "CHECK FILLER CAP"

Check whether the fuel filler cap has been properly closed. Refer to page 25. An improperly closed fuel filler cap will activate the Service Engine Soon lamp.

▷ "ENGINE FAILSAFE PROG"

There is a fault in the engine's electronic control system. The electronics allow for continued driving with reduced engine output and engine speed.

Please have the system inspected by your BMW center.

▷ "OUTSIDE TEMP 24 °F (-5.0 °C)"

This temperature display is only an example. The current temperature is displayed at outside temperatures of 37.5 °F (+3 °C) and below. Refer also to page 69.

Displays after completion of a trip

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

The following displays will appear when appropriate:

▷ "LIGHTS ON"

This display appears when you open the driver's door after parking the vehicle.

▷ "KEY IN IGNITION LOCK"

▷ "CHECK ENGINE OIL LEV"

Check the engine oil at the earliest opportunity (next stop for fuel). Refer to page [139](#).

Status messages remain available for a period of approx. three minutes after the display goes out and the key is removed from the ignition. Press the CHECK button (3) to display these messages. If there were multiple messages, press the CHECK button repeatedly to view them all in sequence.

To check the Check Control

Press the CHECK button (3) with the ignition key in position 2:

CHECK CONTROL OK appears in the display.

There are no faults in the monitored systems.



You can have the Check Control messages displayed in a different language. ◀


Multi-Information Display (MID)

Central display

The MID serves as the central display and control for the following onboard systems:

- ▷ Digital clock (e.g. time displayed in digital numerals, date)
- ▷ Audio-systems (radio, cassette, CD)
- ▷ Computer (e.g. fuel consumption, cruising range)
- ▷ Cellular phone (e.g. dialing)

You will find explanations and notes for operating the digital clock and the computer on the following pages. Please refer to the separate Owner's Manual on operating the audio-systems, the cellular phone and the onboard monitor.


 Any unrealistic number entries will not be accepted.

All stored data will be lost if the power supply is interrupted. Time of day, switch-on times for independent heating and ventilation, distance and cruise control speed limit must be reset, once the power supply has been re-established. ◀



- 1 Function button for sound systems
- 2 Function button for the cellular phone*
- 3 Indicator lamp for independent ventilation system
 - ▷ remains on if switch-on time is active
 - ▷ flashes while operating
- 4 Function button for the digital clock and computer
- 5 Indicator display for the various computer systems
- 6 Display for the entry and check buttons. Depending on the operating mode, the functions and alternatives which can be selected via the keys are displayed here
- 7 Entry and check buttons for operating the various computer systems

76 Digital clock

 Only make entries when the vehicle is standing still – to avoid endangering yourself or other road users. ◀

To display time or date



Press the left side of the key.

Display shows:



You can have the clock time displayed in 12 or 24 hours.

To change the display:



Press the left side of the key.

If the 12-hour clock display is in use, AM or PM appear after the time.

Changing the time display



Press the left side of the key.



Press the right side of the key:
The dots flash in the display.

To alter the setting:



Press on the left or right, or keep holding down.

To store the input:



Press the right side of the key.

To change the date



Press the left side of the key.



Press.



Press the right side of the key:
The dots and the DATE display will flash.

To alter the setting:



Press on the left or right, or keep holding down.

To store the input:



Press the right side of the key.

The clock takes leap years into account and therefore does not have to be reset manually.

Digital clock

Reminder signal

You can program an hourly reminder signal (Memo), that will, for example, remind you of news broadcasts.



Press the left side of the key.



Press:

MEMO OFF appears in the display for entry and check buttons, and the tone symbol will appear in the upper right of the display.

A signal is then heard 15 seconds before each hour.

Timer



Press the left side of the key.



Press.

Display shows:



To start the stopwatch:



Press the right of the key.

To take an intermediate time reading:



Press.



Press.

The stopwatch display can be seen counting up; the stopwatch continues to run.

To halt the stopwatch:



Press the right side of the key.



The stopwatch is halted whenever the ignition switch is turned back to 0, but starts to run again when the ignition key is turned to 1. ◀

78 Digital clock

Enter the switch-on times for the independent ventilation system

You can enter two different switch-on times.

After 30 minutes, the ventilation will switch off automatically.



Please observe the notes for operating the independent ventilation system on page [102](#). ◀



Press the left side of the key.



Press at left/right.

Display shows:



Press the right side of the key:
Display flashes, e.g. TIME 1.

To input the time:



Press on the left or right, or keep holding down.

To confirm the input:



Press the right side of the key.

The activated time is marked with an asterisk.



The switch-on times remain memorized until new inputs are made.

You can change switch-on times that have already been memorized by making a new time input as described above.

When the switch-on time is active, the LED comes on in the MID. During actual operation of the ventilation, the LED flashes. The LED goes out when the system is switched off.

To activate/deactivate the time:



Press twice.

Turning the independent ventilation system on and off directly



The independent ventilation function can only be called up in ignition key position 1. ◀



Press the left side of the key.



Press
or



press.

Computer



Only make entries when the vehicle is standing still – to avoid endangering yourself or other road users. ◀

Computer calculations begin at the start of the journey.

Information can also be called up in the display by remote control; see page 83.

Speed limit

Speed limit input:

You can input the road speed here at which you wish to hear and see a reminder signal: a signal will sound, the word LIMIT will flash and the stored speed will briefly flash in the Check Control display on the instrument panel (Limit).

The speed limit reminder is only repeated if the vehicle has in the meantime been driven at least 3 mph (approx. 5 km/h) slower.



Press the right side of the key.



Press.



Press the right side of the key.

Display shows:



Input the limit by pressing the function keys.

To correct an entry:



Press the left side of the key and repeat the input.

To store the input:



Press the right side of the key.

80 Computer

Adopting the current speed as the speed limit:



Press the right side of the key.



Press.



Press twice at right.

Deactivating the speed limit:



Press the right side of the key.



Press.

The LIMIT display goes out, but the memorised value is not lost and can be reactivated by pressing the LIMIT key.

Distance to destination

The remaining distance to the destination will be displayed on the screen. This is of course only possible if you entered the entire distance before starting the journey.

Input:



Press the right side of the key.



Press the left side of the key.



Press the right side of the key.

Display shows:



You can input the distance by pressing the function keys.

To correct an entry:



Press the left side of the key and repeat the input.

To store the input:



Press the right side of the key.

Checking memorised value:



Press the right side of the key



Press the left side of the key.

Computer

Estimated time of arrival

When you have input the distance from your destination, you can obtain an estimated time of arrival display which is continuously updated by the computer as your average driving period varies.



Press the right side of the key.



Press the right side of the key:
The estimated time of arrival is displayed.

Cruising range

The distance which the vehicle should cover on the remaining fuel in the tank is displayed.



Press the right side of the key.



Press.
The display shows the probable range.



When there is only enough fuel to drive less than 30 miles (50 km), you should refuel, as otherwise the engine or the catalytic converter could be damaged. ◀

The onboard computer will only register fuel amounts over 1.8 gal (6 liters).

Fuel consumption

You can have the average fuel consumption displayed for two different distances, for example a complete journey and part of the journey.

To start the calculation, select the CONS function with the engine running.



Press the right side of the key.



Press the left or right side of the key:
The average fuel consumption will be indicated in the display.

To restart the fuel consumption calculation:



Press the left or right side of the key.



Press the right side of the key.

Speed

You can call up a display of the vehicle's average speed.

To start the calculation, select the SPEED function with the engine running.



Press the right side of the key.



Press:

The display indicates the average speed.

To recalculate the speed:



Press the right side of the key.

Extended immobiliser function

You can establish a code that will prevent the engine from being started unless the code is entered.

If you do not have access to the code, the emergency deactivation procedure will have to be carried out.

Establishing and activating the code



Press the right side of the key.



Press the left side of the key.

Display shows:



Enter the code via the function keys.

To correct an entry:



Press at the left and repeat the input.

To store the input:



Press the right side of the key.
Turn the ignition key to position 0.

Deactivate the code:

When you are asked to input the code (ignition key in position 1 or 2):

▷ Input the code at the function keys.



Press the right side of the key.

After the code has been input correctly and confirmed with the SET key, the time display appears.


Computer

After three incorrect code entries, or three attempts to start the engine without a code entry, the alarm will sound for 30 seconds on vehicles fitted with an alarm.

Emergency deactivation:

If you have forgotten the code, proceed as follows:

- 1 Disconnect the battery, wait approx. 2 minutes, then reconnect it. Note that on vehicles with an alarm, this will sound.
- 2 Place the ignition key in position 1: The time display will count down for the next ten minutes.
- 3 After ten minutes, start the engine.

 If the code becomes available again in the meantime, it can be input during the waiting period after pressing the CODE key. ◀



Remote control

The button on the flashing turn indicator lever can be used to select the items of computer information which are to be displayed.

To do this, press:

- ▷ The button on the lever until PROG 1 shows on the display.
- ▷ The MID keys in the order in which you wish the information to be displayed.

Each time an entry is stored, the program number appears on the display.

To terminate the selection procedure:



Press the right side of the key.

To have all the available information displayed, press:

- ▷ The button on the lever until the display shows PROG 1.
- ▷ The SET key.

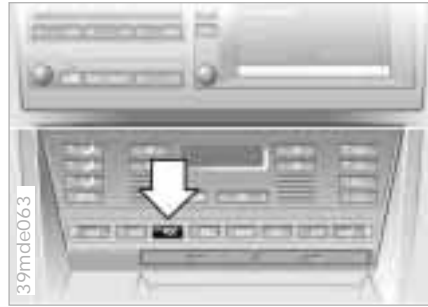
To obtain individual items of information, press the button in briefly as often as necessary.

The concept

The PDC assists you when you are parking. A signal warns you of the real distance to an obstacle. To do this, four ultrasonic sensors in the front and rear bumpers measure the distance to the nearest object. The monitoring range for the front and both rear corner sensors extends approx. 2 ft (60 cm) beyond the bumper. The range for the center rear sensors extends approx. 5 ft (1.50 meters).

Automatic operation

The system starts to operate automatically approx. one second after you select reverse or move the selector lever into the "R" position with the ignition key in position 2.



Turn on manually

Press the button (arrow), the indicator lamp comes on.

After driving more than approx. 160 ft (50 meters) or exceeding approx. 20 mph (30 km/h), the system switches off and has to be switched back on when you want to use it again.

Turn off manually

Press the button again.

Acoustic signals

The distance to an object is indicated by a high beeping sound in the front and a low beeping sound in the back. As the distance between the 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 the obstruction remains constant during this time (if you are moving parallel to a wall, for instance).

Malfunction in the PDC system:

The indicator lamp flashes and a brief continuous signal tone is heard

- ▷ when the PDC system is activated via the button
- ▷ when you first select reverse or move the selector lever into the "R" position after switching on the ignition
- ▷ when there is a malfunction while the PDC system is active.

Switch the system off and have the cause of the malfunction corrected by your BMW center.

Park Distance Control (PDC)*



The PDC does not remove the driver's personal responsibility for evaluating the distance between the vehicle and any obstacles. Even when sensors are involved, 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 or snow in order to ensure that they will continue to operate effectively. Do not apply high-pressure spray to the sensors for a prolonged period of time. Maintain an adequate distance of more than 4 in (10 cm). ◀

DSC maintains vehicle stability, even in critical driving situations.

The system optimizes vehicle stability during acceleration and when starting from a full stop, as well as optimizing traction. In addition, the system recognizes unstable vehicle conditions (understeering or oversteering, for example) and holds the vehicle on a sure course by intervening via the engine and by braking intervention at the individual wheels.

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 [21](#).

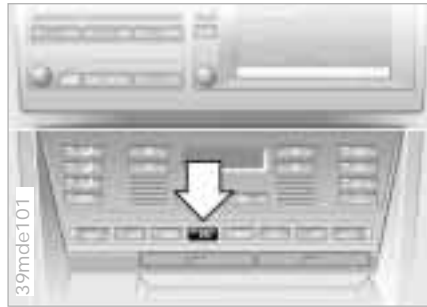
Indicator lamp flashes:

The system is active and governs the drive and braking forces.

If the indicator lamp fails to go out after the engine is started, or if it comes on during normal driving and stays on:

There is a system malfunction or the system was deactivated with the button.

You can continue to drive the vehicle normally, but without DSC. Please consult your BMW center for repairs.



To deactivate the system

Press the button (arrow); the indicator lamp comes on and stays on.

When DSC is deactivated, you are driving with conventional power transfer.

In the following exceptional circumstances, it may be effective to deactivate the DSC for a short period:

- ▷ When rocking the vehicle or starting off in deep snow or on loose surfaces
- ▷ When driving with snow chains.

Refer also to page [125](#).

To reactivate the system

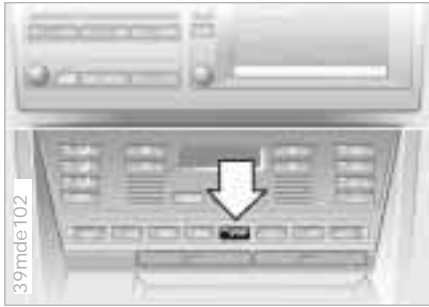
Press the button again; the indicator lamp goes out.



The laws of physics cannot be repealed, even with DSC. An appropriate driving style always remains 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. ◀

For additional details concerning DSC, please refer to the chapter describing "Advanced technology" on page [178](#).

M Dynamic Driving Control



Performance recognition

With the ignition key in position 2, press the key (arrow). The indicator lamp illuminates.

Deactivating performance recognition: Press the button again; the indicator lamp goes out.

The coordinated performance-comfort mode is activated automatically each time you start the engine.

Whenever it is required, this system changes the settings of the Servotronic power steering, and the accelerator pedal response from a performance-comfort mode to a pure performance mode. That is, steering response becomes more performance-oriented and the response of the accelerator pedal is much more spontaneous (performance recognition).

88 Tire Pressure Warning (RDW)

The concept

The tire-pressure warning system, RDW, monitors the tire inflation pressure in all four tires while driving. The system provides an alert whenever the inflation pressure has dropped significantly in one of the tires.

So that the RDW can "learn" the correct tire inflation pressure, check the inflation pressure in all the tires, comparing them to the values in the inflation pressure table (page 27), making corrections if necessary. Then activate the system.

The Check Control (refer to page 72) will inform you if the tire pressure of one of the tires has dropped significantly.



Activate the system

- 1 Turn the ignition key to position 2 (do not start the engine).
- 2 Press and hold the button (arrow) until the message "SET TIRE PRESSURE" is displayed for a few seconds in the Check Control.
- 3 The RDW initiates an automatic learning process during driving, and stores this target condition. This one-time learning process takes at least 10 minutes, and from that point on the RDW can identify and report a flat tire.

Repeat this process after altering the tire inflation pressure, changing the tire or rotating the wheels.

Do not carry out any further system activation on the target condition that has already been "learned" after correcting the inflation pressure.

Tire Pressure Warning (RDW)

Flat tire

In the event of a flat tire, the message "TIRE DEFECT" appears in the Check Control. In addition, a gong is sounded.

If this occurs, reduce vehicle speed immediately and stop the vehicle in a safe location. Avoid hard brake applications. Do not oversteer. Correct the tire failure using the M Mobility system (refer to page [162](#)).



The RDW cannot inform you of sudden and severe tire damage caused by external influences. The RDW will not identify the natural, even loss of pressure in all four tires, either. ◀



Check the tire inflation pressure on a regular basis and correct if necessary. Refer to page [26](#).

Do not carry out any kind of system activation when using snow chains. Under these kinds of conditions, false warnings and unidentified losses in pressure are possible.

In certain circumstances, when driving on snow-covered or slippery road surfaces, there may be a delay in identifying any loss in inflation pressure.

A sporty driving style (slip at the wheels receiving the torque, high lateral accelerations) can lead to delayed RDW warnings. ◀

System fault

The message "TIRECONTROL INACTIVE" appears in the Check Control if there is a system fault.

Please contact your BMW center for additional information.



Side lamps (side marker lamps)



With the switch in this position, the front, rear and side vehicle lighting is switched on. For lighting on one side for parking as an additional feature, refer to page 91.

Low beams



When you switch off the ignition and the low beams are still on, only the position lamps (side marker lamps) remain on.



"Follow-me-home lighting:"
If you actuate the headlamp flasher after you have parked the vehicle and shut off the engine, the low beams will remain on for a brief period. You may also have this function deactivated if you wish. ◀

"LAMPS ON" warning

With the ignition key in position 0, this message is displayed in the Check Control after the driver's door is opened if the headlamps have not been switched off.

Daytime running lamps*

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



Turn the rotary dial to adjust the lighting intensity.



- 1 High beam (blue indicator lamp)
- 2 Headlamp flasher (blue indicator lamp)
- 3 Parking lamp

Parking lamp, left or right

As an additional feature, you can illuminate your vehicle on either side for parking, if you wish to do so:

With the ignition key in position 0, push the lever in the appropriate direction. The lever engages in the turn signal position.



Front fog lamps

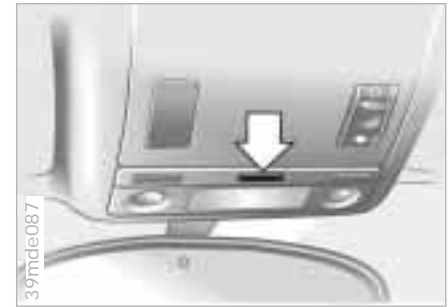


A green indicator lamp appears in the instrument cluster to indicate that the front fog lamps are on.

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



Comply with the legal regulations concerning the use of fog lamps. ◀



The interior lamps operate automatically.

Switching the interior lamps on and off

Press the button (arrow).

If you wish the interior lamps to remain off at all times, press and hold the button for approximately 3 seconds.

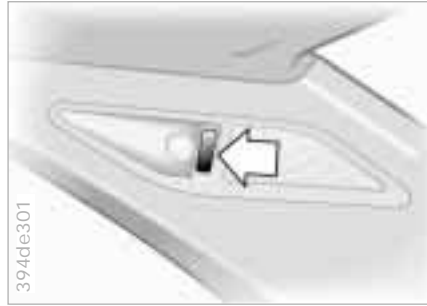
Press the button briefly to revert to normal operation.

92 Interior lamps


Footwell lamps

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

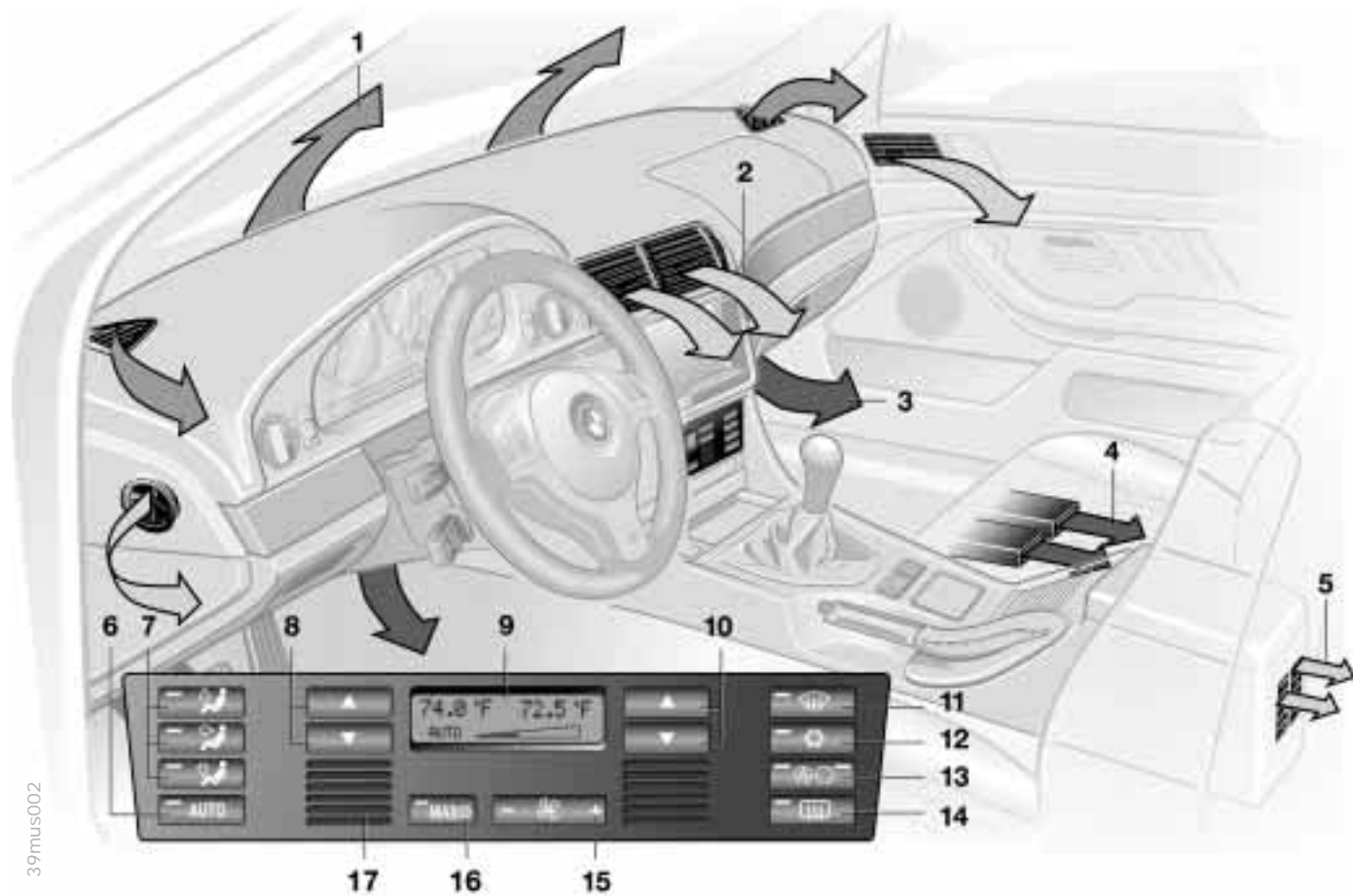
Reading lamps



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

 In order to prevent battery discharge, all of the lamps in the vehicle are switched off automatically approx. 15 minutes after the ignition key is turned to position 0. ◀

94 Automatic climate control




Automatic climate control

- 1 Air flow directed toward the windshield and side windows
- 2 Air flow for the upper body
The side rotary dials allow you to open and close the air supply through an infinitely-variable range, while the levers change the airflow direction. The center rotary dial controls the temperature of the air as it flows out, see page [98](#)
- 3 Front footwell ventilation
- 4 Rear footwell ventilation
- 5 Air flow for the upper body in the rear seat [99](#)
- 6 Automatic air distribution [96](#)
- 7 Individual air distribution [96](#)
- 8 Temperature control – left-hand side [96](#)
- 9 Display for temperature and air supply [96](#), [97](#)
- 10 Temperature control – right-hand side [96](#)
- 11 To defrost windows and remove condensation [97](#)
- 12 Air conditioner [97](#)
- 13 Automatic recirculated air control (AUC) [98](#)
- 14 Rear window defroster [67](#), [98](#)
- 15 Air supply [97](#)
- 16 Maximum cooling [97](#) or residual heat mode [98](#)
- 17 Air grill for interior temperature sensor – please keep clear and unobstructed

Tips for pleasant driving

Use the automatic system (AUTO button 6). Select an interior temperature that is comfortable for you – we recommend 72 °F (22 °C). When the outside temperature is above 41 °F (5 °C), you can also use the air conditioner 12. This will dry the air as well as preventing condensation on the window surfaces – if there are passengers with damp clothing, for example. Set the air outlets 2 so that the air flows past you and is not directed straight at you. Set the rotary dial between the air outlets 2 for the upper body to a medium position, since air that is somewhat cooler promotes driving without fatigue.




The following description will lead you through additional individual adjustments.

 Your BMW center can program the settings of your vehicle in such a manner that, when you unlock the vehicle with your individualized key, your own personalized setting for the automatic climate control is initiated. ◀

Automatic air distribution

The AUTO program assumes the adjustment of the air distribution and the air supply for you and – in addition to that – adapts the temperature to external influences (summer, winter) to meet preferences you can specify. This program maintains a comfortable in-car climate regardless of the season. Select an interior temperature that is comfortable for you – we recommend 72 °F (22 °C). The selected temperature and AUTO for the air supply appear in the display 9. Refer to the overview on page 94. Open the air outlets for the upper body. Switch on the air conditioner 12 in warm weather. The maximum cooling capacity is achieved when you set rotary dial 3 (refer to page 98) to cold.

Individual air distribution

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

Temperature

You can make individual temperature adjustments on the driver's side or the front passenger side. The figures in the display provide a general indication of interior temperature. We recommend 72 °F (22 °C) as a comfortable setting, whether the air conditioner is operating or not. When you start the vehicle, this system ensures that the selected temperature is achieved as quickly as possible. It then maintains this temperature, regardless of the season.

Set the rotary dial 3 (refer to "Draft-free ventilation" on page 98) to a medium setting, since air that is somewhat cooler promotes driving without fatigue. Utilize this method of mixing air especially for making minor adjustments for personal comfort.



You can set uncontrolled heater output up to 90 °F (32 °C). Full cooling output is available from the air conditioner down to 60 °F (16 °C). ◀

Automatic climate control

Air supply



In the "AUTO" program, the air supply is controlled automatically. AUTO will appear in the display 9. Refer to the overview on page 94. Use "+" and "-" to vary the air supply. Your setting is displayed with bars and the automatic air supply is switched off. The automatic air distribution setting is maintained. You can reactivate the automatic air supply by pressing the "AUTO" button.

When you press "-" during operation at the lowest blower speed, all displays are canceled: the fan, heating and air conditioner are switched off. The outside air supply is closed. You can switch the system back on by pressing any button of the automatic climate control (except the MAX button 16).

To defrost windshield and side windows



This program quickly removes ice and condensation from the windshield and the side windows.

Air conditioner



The air is cooled and dehumidified and – depending on the temperature setting – warmed again when the air conditioner system is switched on. 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. 41 °F (5 °C). This will help to prevent the windows from fogging up. If the windows fog over after switching the air conditioner off, switch it back on.



Condensation forms in the air conditioner system during operation, which then exits under the vehicle. Traces of condensed water of this kind are thus normal. ◀

Maximum cooling



You will get maximum cooling capacity using this program if the engine is running and the outside temperature is above +41 °F (+5 °C).

The temperature display 9 jumps to +61 °F (+16 °C), the system switches over to the recirculated-air mode, and the air will only stream out of the ventilation grill with the maximum amount of air flow. That is why you need to keep these open if you select this program.

Automatic recirculated air control (AUC)

You can respond to unpleasant external odors by temporarily excluding the flow of outside air. The system then recirculates the air currently within the vehicle. By repeated actuations of the button, you can select one of three different operation modes.

- ▷ Indicator lamps off: outside air flow operational.
- ▷ Left-hand indicator lamp on – AUC mode: the system recognizes pollutants in the outside air and blocks the flow of air when necessary. The system then recirculates the air currently within the vehicle. Depending on the air quality, the automatic system then switches back and forth between outside air supply and recirculation of the air within the vehicle.
- ▷ Right indicator lamp on – recirculated air mode: the flow of external air into the vehicle is completely blocked. The system then recirculates the air currently within the vehicle.



If the windows fog over in the recirculated air mode, switch the recirculated air off and increase the air supply as required. ◀

Rear window defroster

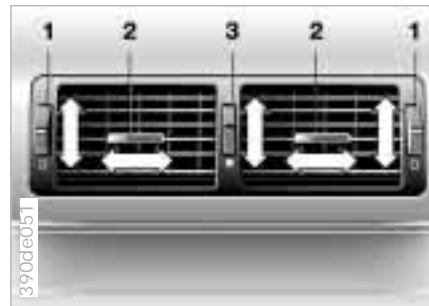
When the rear window defroster is activated, the indicator lamp comes on. The rear window defroster switches off automatically.

Residual heat mode

The heat which is stored in the engine is utilized for heating the interior when the engine has been switched off (while waiting at a railroad crossing, for instance). In ignition key position 1, you can alter the settings of the automatic climate control. With the ignition key in position 0, the system automatically directs heated air to the windshield, side windows and footwells.



This function may be activated when the outside temperature is below approx. 59 °F (15 °C), the engine is at operating temperature, and the battery is adequately charged. The LED on the button will light up when all conditions have been met. ◀

**Draft-free ventilation**

For your optimal personal comfort, you can adjust airflow onto the upper body area from the air outlets:

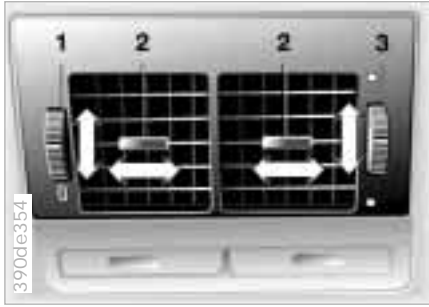
Use rotary dial 1 to open and close the air outlets through an infinitely-variable range. You can use the levers 2 to adjust the direction of the airflow.

Set the air outlets so that the air flows past you and is not directed straight at you.

Rotary dial 3 allows you to control the temperature of the air flow from these air outlets as desired:

- ▷ Turn toward blue – colder.
- ▷ Turn toward red – warmer.

Automatic climate control



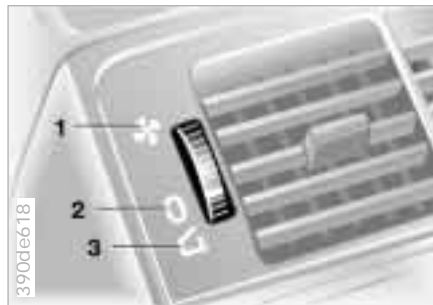
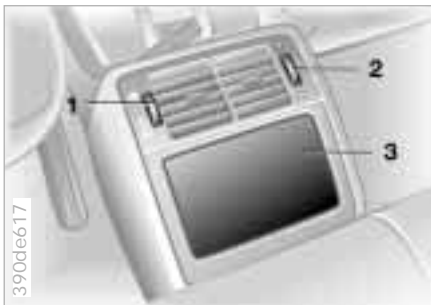
Rear passenger area ventilation

Rotary dial 1 opens the air outlets in an infinitely-variable range. You can vary the temperature of the air as it flows out using rotary dial 3 in the same manner as for the front rotary dial.

You can change the direction of the air flow with levers 2.

Microfilter, activated-charcoal filter

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



Climate control

- 1 Air supply
- 2 Temperature
- 3 Storage compartment with ventilation

Air supply

- 1 Maximum blower speed
- 2 Blower off
- 3 Storage compartment

You can adjust the air supply for the air outlets and the storage compartment through an infinitely-variable range between the "0" and "Maximum" settings.

When set to "0" and "Storage compartment," the fan is switched off and the air supply through the air outlets is blocked. The storage compartment is ventilated in both settings as follows:

- ▷ "0" setting – warm air.
- ▷ "Storage compartment" setting – cold air.


Individual adjustments on the front-seat control elements influence the air supply of the rear passenger area climate control.

Temperature

Passengers in the rear seating area can adjust their own temperature for the adjacent air outlets:

- ▷ Turn toward blue – colder.
- ▷ Turn toward red – warmer.

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.

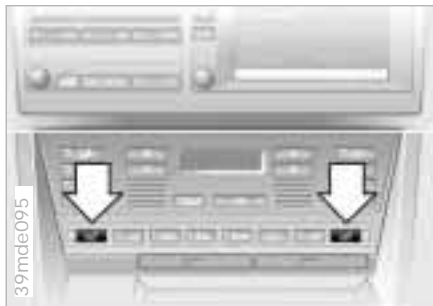
 A temperature adjustment is only possible when the blower is switched on – it is not possible when set to "0" and "Storage compartment." ◀



Storage compartment with ventilation

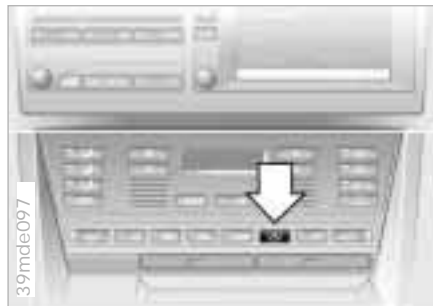
Press the cover back gently to open it.

- 1 Slide regulator for opening and closing the air supply:
 - ▷ Regulator to the left – air supply opened.
 - ▷ Regulator to the right – air supply closed.
- 2 Beverage holder insert – may also be removed.



The seat cushion and backrest can be heated when the ignition key is in position 2. You can call up different heating modes by repeatedly pressing the keys. When the three indicator lamps are illuminated, the highest heating mode is activated. One lamp indicates the lowest heating mode. The temperature is regulated with a thermostat in each mode.

You can also switch the higher heating modes off directly: press the key and hold it slightly longer.



To actuate, press the button briefly with ignition key in position 1.

Roller sun blinds* for rear side windows

Use the strap to pull out the blinds, then hook them in the provided attachment.

This system ventilates the interior and lowers its temperature by using the blower of the automatic climate control, when the vehicle is unattended.

The independent ventilation system is operated via the Multi-Information Display (MID) – refer to page 78 – or the onboard monitor. Refer to the separate onboard monitor Owner's Manual.

You may preselect two different activation times. The ventilation will remain activated for 30 minutes. You can also turn it on and off directly. Because of its high current consumption, you should not activate the system twice in succession without allowing the battery to be recharged while you are driving.

When a preselected activation time is set, the independent ventilation system is operational at outside temperatures above 60 °F (16 °C), or by direct switch activation. It cannot be switched on when the vehicle is moving.


The air emerges via the air outlets for the upper body. Therefore, the air outlets must be open for the system to operate.

You can adjust the airflow volume and the air distribution when the ignition key is in position 1.

The concept

The BMW Universal Transmitter replaces up to three hand-held transmitters that control different devices such as a garage door opener, alarm systems or a door locking system. The BMW Universal Transmitter recognizes and "learns" the transmitted signal from each of the original hand-held transmitters.

The signal of an original hand-held transmitter can be programmed to one of three channel keys. Following that, each of the devices can be operated with the channel key that you have programmed for it. A transmission of the signal is indicated by the indicator lamp. Before you sell your vehicle, the programmed channel keys should be deleted. Refer to page 105 for the description of this process.

 To prevent potential injuries or damage: during the programming operation and before every remote triggering of a programmed device using the BMW Universal Transmitter, be sure that there are no persons, animals or objects within the range of movement of the respective device. Read and comply with the safety instructions for the original hand-held transmitter also. ◀



To Canadian residents
During programming, your hand-held transmitter may automatically stop transmitting after two seconds. This may not be long enough to program the BMW Universal Transmitter. If you are programming from one of these hand-held transmitters, the Universal Transmitter's lamp may begin to flash in a series of double-blinks. If this occurs, continue to hold the button on the Universal Transmitter while you reactivate your hand-held transmitter. You may have to repeat this function several times while programming. ◀



Before programming, read the "User's information" section on page 105. ◀

The original hand-held transmitter



If this symbol is depicted on the packaging or in the user's instructions for the original hand-held transmitter, it may be assumed that this original hand-held transmitter is compatible with the BMW Universal Transmitter.

Checking for the change code

In order to determine whether the original hand-held transmitter is equipped with a change code system, you may either refer to the instructions for the original hand-held transmitter or program a channel key as described in the left column on page 104 under "Programming."

Following that, press and hold the programmed channel key of the BMW Universal Transmitter. If the indicator lamp of the BMW Universal Transmitter flashes rapidly for two seconds and then stays on continuously, the original hand-held transmitter is equipped with a change code system. If the change code system is available, program the channel keys as described in the right-hand column on page 104 under "Programming a hand-held transmitter with change code."




If you have additional questions, please consult your BMW center or call 1-800-355-3515. ◀



Programming

- 1 Channel keys
- 2 Indicator lamp
- 3 Receiver for programming

 Read and comply with the safety precautions on page 103. ◀


- 1 Ignition key position 2
- 2 For initial operation: press and hold the two outer keys (1) until the indicator lamp (2) flashes. Release the keys. The three channel keys are cleared.




- 3 Hold the original hand-held transmitter toward the receiver (3) a maximum of 2 in (5 cm) away.
- 4 Simultaneously press the transmitting key of the original hand-held transmitter (arrow 2) and the desired channel key of the BMW Universal Transmitter (arrow 1). Release both keys as soon as the indicator lamp flashes rapidly.
- 5 To program other original hand-held transmitters, repeat steps 3 and 4.

The corresponding channel key is now programmed with the signal of the original hand-held transmitter.

Programming a hand-held transmitter with change code

 Read and comply with the safety precautions on page 103. ◀

Consult the operating instructions for the individual device when programming the BMW Universal Transmitter. Read and comply with the following programming instructions for the use of the BMW Universal Transmitter with a change code system:

 A second person simplifies programming of the BMW Universal Transmitter. ◀

- 1 Program the BMW Universal Transmitter as described above under "Programming."
- 2 Press and hold the programming key on the receiver of the device for about two seconds or until the programming lamp on the device comes on.
- 3 Press the desired channel key of the BMW Universal Transmitter three times.



If you have additional questions, please consult your BMW center or call 1-800-355-3515. ◀

Clearing the channel keys



Read and comply with the safety precautions on page 103. ◀

Individual channel keys cannot be cleared. However, the three channel keys can be cleared together in the following manner:

- ▷ Press and hold the two outer channel keys of the BMW Universal Transmitter until the indicator lamp flashes, and then release the keys.

All channel keys are cleared.

User's information

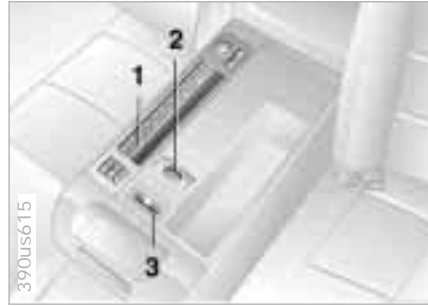
Do not use this BMW Universal Transmitter with any garage door opener that lacks safety "stop" and "reverse" features as required by federal safety standards (this includes any garage door opener model manufactured before April 1, 1982).

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference received, including interference that may cause undesired operation.

106 Integrated rear-seat equipment*



Fold the armrest out and open the cover by lifting the handle (arrow).



In order to operate certain functions from the rear passenger area as well, the corresponding controls are integrated in the center armrest.

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

- 1 Multi-Information Display for operation of the radio and onboard computer (with limited functional range)
- 2 Cigarette lighter
- 3 Electric rear window blind



Two beverage holders are provided in the lower section of the center armrest. Pull the handle outward to open (arrow).

Glove compartment



To open


Pull the handle and the lamp comes on.


To close

Fold up cover.

To lock

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


 If you turn over only your door and ignition key for valet parking, for example (refer to page [30](#)), access to the glove compartment is not possible. ◀

 To prevent injury in the event of a crash, close the glove compartment immediately after use. ◀

Rechargeable flashlight*

Located on the left-hand side of the glove compartment.

It features integral overload-protection, so it can be left in its holder continuously.

 Be sure that the flashlight is switched off when it is inserted into its holder. Failure to comply with this precaution could lead to overcharging and damage. ◀



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

Storage compartment on center console between the front seats: to open, reach into the recess at the front and pull upward. If a cellular phone has been installed, this compartment is occupied by the phone.

You will find additional storage compartments in all of the doors as well as in the backrests of the front seats*.

**Handsfree system***

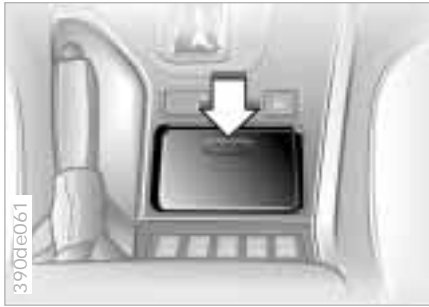
For vehicles with a telephone hookup*, the trim cover for the handsfree speaker is located in the headliner in the area of the interior lamp.

For further information on the cellular phone, refer to the separate Owner's Manual.



Two holders for canned drinks have been provided in the front center console (illustration).

Press to open; push back inward to close.



To open

Press briefly in the direction indicated by the 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 nonsmokers, the insert is removed in the same way.

110 Cigarette lighter*



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

Remove as soon as the lighter retracts.

 Hold or touch the hot cigarette lighter by the knob only. Holding or touching it in other areas could result in burns.

The cigarette lighter remains operational when the ignition key has been removed. For this reason, children should never be left in the vehicle unattended. ◀

Cigarette lighter socket

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

Ashtray, rear*

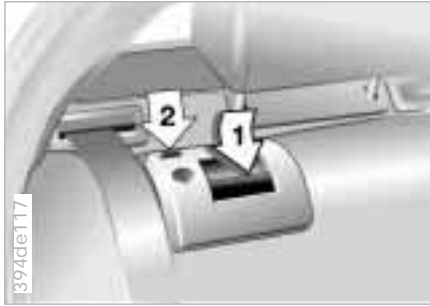


To open

Press the recess the in lid.

To empty

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

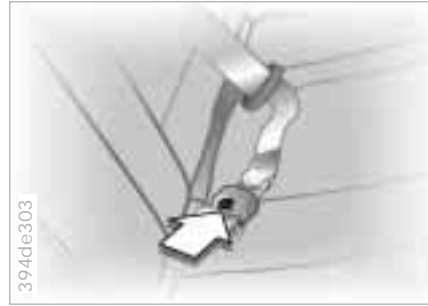


The rear backrest is divided into two sections, one-third and two-thirds of the seat respectively. For carrying longer objects, you can fold down either section of the backrest separately.

To open:

Reach into the recess and pull forward (arrow 1).

When you close the backrest, be sure that the catch engages securely. The red tab (arrow 2) must go fully down.



The center belt has an additional small buckle.

- ▷ If you connect the two belt sections, you can use the center 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).



You can lock each backrest in the rear seat with a master key.

This also prevents access to the luggage compartment from the interior of the vehicle when you turn over the door and ignition key (3) to someone else (refer to page 30). This is convenient for valet parking, for instance.

112 Ski bag*

The ski bag allows the safe and clean transport of up to four pairs of standard skis or up to two snowboards.

With the length of the ski bag and the additional space in the luggage compartment, you can store skis with a length of up to 6.8 ft (2.10 meters). Because of the tapered shape of the bag, the ski bag can only accommodate two pairs of skis with a length of 6.8 ft (2.10 meters).



Installing the center armrest

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

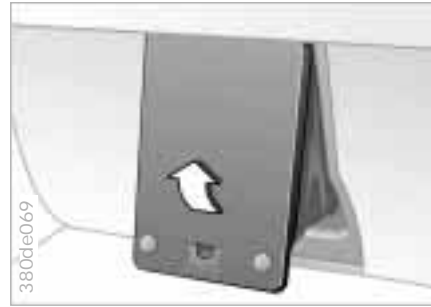


Be sure that the seat covers are not damaged by the side pins. ◀

Removing the center armrest

(Not required for vehicles with the through-loading system. Refer to page [114](#).)

- 1 Fold the center armrest completely down.
- 2 Loosen the trim from the upper Velcro® fastener 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).



Loading

- 1 Press the release button (arrow 1): The cover panel in the luggage compartment is unlocked.
- 2 Press the detent levers inward (arrow 2) and pull the cover forward.
- 3 Extend the ski bag between the front seats. The zipper provides convenient access to stored items. It may be opened to allow the ski bag to dry.

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

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



An unsecured ski bag could lead to loss of vehicle control and to personal injury in case of an accident. ◀

Securing the load

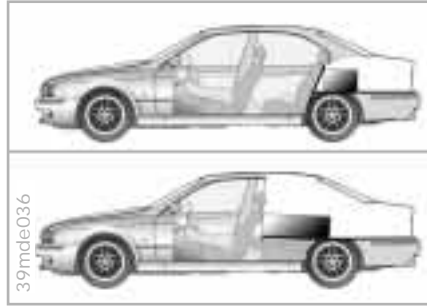


Secure the bag's contents by tightening down the retaining strap at the buckle. ◀

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

Cargo loading**With throughloading system**

- 1 Fold the center armrest down.
Loosen the trim from the upper Velcro® fastener and place it on the armrest.
- 2 Press button 1 downward and swing the cover forward.
- 3 Press knob 2: the cover in the luggage compartment is unlocked.


**Stowing cargo**

If you are transporting a load in your BMW:

- ▷ Load heavy cargo as far forward as possible – directly behind the backrests or the luggage compartment partition – and as low as possible.
- ▷ Cover sharp edges and corners.
- ▷ Do not pile objects higher than the top edge of the backrest.
- ▷ If you are transporting very heavy loads when the rear seat is not occupied, secure the outer safety belts in the opposite buckle.

**Securing the load**

- ▷ Secure smaller, light pieces with the luggage net or use draw straps* (refer to page 39).
- ▷ For large, heavy pieces, see your BMW center for load-securing devices*. The lashing eyes provided at the corners of the luggage compartment serve for mounting these load-securing devices.
- ▷ Read and comply with the information enclosed with the load-securing devices.

 Always position and secure the load correctly. If you do not, it can endanger the passengers during braking or evasive maneuvers. Do not exceed the permissible gross weight and axle load (refer to page 186), otherwise the vehicle's operating safety is no longer assured and a violation of the laws of the road occurs.

Do not carry hard or heavy objects unsecured in the passenger compartment. If you do so, they may be projected through the air during braking and evasive maneuvers, thus endangering vehicle occupants. ◀



Anchors

Access to the anchors:
To open the cover (arrow) please use the tool included with the luggage system.

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

Roof-mounted luggage racks raise the center of gravity of the vehicle when they are loaded. For this reason, they exercise a major effect on the vehicle's 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. You will find the specifications under "Technical Data" on page 186.

Make sure that the load is not too heavy, and attempt to distribute it evenly. Always load the heaviest pieces first (on the bottom). Be sure that adequate clearance is maintained for raising 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 and avoid sudden acceleration or braking. Do not corner at high speeds.

The roof load increases the aerodynamic resistance. Increased fuel consumption and additional stresses on the vehicle's body result from this.



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Overview**Controls and features****Operation, care and maintenance****Owner service procedures****Advanced technology****Technical data****Index**

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



Because of its engineering design, the BMW M5 is an especially high-quality vehicle. To protect your own investment, we recommend that you follow the break-in instructions carefully. By doing so, you will create the basis for optimal service life of the vehicle. ◀

Engine and differential

Up to 1,200 miles (2,000 km):
Drive at varying engine speeds and road speeds, but do not exceed 5,500 RPM or 105 mph (170 km/h) during this period.

Obey all applicable local, state, provincial or federal speed limits.

Do not depress the accelerator pedal to the full-throttle position.

Following the break-in inspection at 1,200 miles (2,000 km), you can gradually increase engine or road speeds.

You should also comply with 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. For this reason, drive with extra care during the initial 200 miles (300 km).

Obey all applicable local, state, provincial or federal 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 (500 km) must elapse before the brake pads and disks achieve the optimal pad-surface and wear patterns required for trouble-free operation and long service life later on.

To break in the separate parking brake drums, apply the parking brake lightly when coasting to a standstill (at a traffic signal, for instance), provided that traffic conditions allow you to do so. To avoid corrosion, repeat this procedure from time to time.



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

Clutch

The clutch will also begin to function optimally after approx. 300 miles (500 km). During the run-in period, treat the engine with care and do not engage the clutch at high engine speeds.

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 the tires and the road surface when you operate the vehicle on wet or slushy roads. This phenomenon is referred to as aquaplaning or hydroplaning. 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:

Do not drive through water that is deeper than 1 ft (30 cm). If you must drive through water accumulations up to that depth, drive only at walking speed. Driving at a faster speed could cause damage to the engine, the electrical systems and the transmission.

Rear parcel tray:

Do not place heavy or hard objects on the rear parcel tray. If you do so, they could pose a danger to vehicle occupants during a braking or evasive maneuver, or in a crash.

Clothes hooks:

When suspending articles of clothing from the hooks, be sure that they will not obstruct the driver's vision. Do not hang heavy objects on the hooks. If you do so, such objects could pose a danger during braking or evasive maneuvers. ◀

120 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:

- ▷ Be sure to comply with the scheduled maintenance requirements.
- ▷ Fill the fuel tank well before it is empty.
- ▷ Do not attempt to start the engine by tow-starting. If you do so, unburned gasoline in the catalytic converter could ignite and cause severe damage. If you have starting problems, start the engine with an outside starting aid only. Refer to page [171](#).

- ▷ Avoid other situations in which the fuel is not burned or burns incompletely such as frequent or extended starter engagement or repeated start attempts in which the engine does not start. Stopping and restarting an engine which is running properly does not present a problem. Never allow the engine to run with any of the spark plug cables disconnected.



Be sure to comply with the instructions above to prevent unburned fuel from reaching the catalytic converter. Otherwise, the catalytic converter 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 undercoating to their surfaces. When driving, standing at idle or when parking, take precautions to avoid contact between the hot exhaust system and easily flammable materials (grass, hay or leaves, for example). Such contact could lead to a fire, resulting in serious personal injury and property damage. ◀

Antilock Brake System (ABS)

The concept

ABS enhances active safety by helping to prevent the wheels from locking when the brakes are applied. This is done because locked wheels are dangerous. When the front wheels slide, the driver loses steering control over the vehicle. Traction loss at the rear wheels can cause the rear axle to break into an uncontrolled skid.

With ABS, the shortest possible braking distances are achieved under most conditions (on straight-aways and in curves, with different road surfaces).

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

- ▷ To help provide vehicle stability
- ▷ To help maintain steering control and maneuverability – on all types of road surfaces (asphalt, concrete, mud, wet, snow, ice).

Braking with ABS

The system becomes operative once the vehicle exceeds a speed of approx. 6 mph (10 km/h). The ABS is deactivated whenever the vehicle's speed drops back below approx. 4 mph (6 km/h). This means that the wheels can lock in the final phase of a brake application – a factor of no significance in actual practice.

If you are in a situation that requires full braking, you will exploit the full benefits of the ABS system if you apply maximum brake pressure ("panic stop"). Since the vehicle maintains steering responsiveness, you can avoid possible obstacles with a minimum of steering effort, despite the full brake application.

The ABS system closed-loop control circuit cycles in fractions of a second. A pulsing of the brake pedal, combined with the sounds associated with the hydraulic controls, tells you that the brake system is within its maximum limit range and reminds you that you should adapt your vehicle's speed to road conditions.

On road surfaces which have a loose layer on a firm base (on gravel or snow, for instance), the braking distances with ABS may be longer than with the wheels locked. This is also true if snow chains are mounted. However, ABS continues to provide enhanced vehicle stability and steering response under these conditions.

Information for your safety

Not even ABS can suspend the laws of physics. The consequences of brake applications with an adequate safety distance between vehicles, if the vehicle is driven at excessive speeds in curves, or during aquaplaning remain the responsibility 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 risks that could affect your own safety and that of others.



Do not make any modifications to the ABS system.

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

In the event of a fault



If the ABS warning lamp in the instrument cluster lights up, refer to page 21. The brake




system then reverts to conventional operation as on vehicles without ABS. However, have the brake system checked by your BMW center as soon as possible. To prevent undetected defects and cumulative faults from adversely affecting the brake system, refer any problems to your BMW center at the earliest opportunity.

Disc brakes

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

Infrequent driving, extended periods when the vehicle is parked, and driving conditions in which brake applications are less frequent all promote an increase in corrosion of the brake disks and contamination of the brake pads. This occurs because the minimal application force that is required to clean the disks is not reached between the pads and disks.

If the brake disks are corroded, they will tend to respond to braking with a pulsating effect which even extended application cannot correct.

 For your own safety: use only brake linings that BMW has released for your particular vehicle model. BMW cannot evaluate non-approved brake pads to determine if they are suited for use, and therefore cannot ensure the operating safety of the vehicle if they are installed. ◀

Driving notes


While driving on wet roads or in heavy rain, it is effective to apply light pressure to the brake pedal every few miles or kilometers. Watch traffic conditions to ensure that this maneuver does not endanger other road users. The heat which is generated by the brake applications helps to dry the brake disks and pads.

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 on page 126).

Extended or steep mountain descents should be driven in the gear in which only minimal periodic brake applications is required. This avoids excessive strain on the brakes and possible impairment of the braking effect.

The engine's braking effectiveness can be increased even more by progressively shifting down – clear into first gear, if necessary.

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

 Do not coast with the clutch depressed, with the shift lever in neutral or with the engine shut off. The engine does not provide any braking effect with the transmission in neutral or with the engine shut off. 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. ◀

Dynamic Brake Control (DBC)*


If you apply the brakes rapidly, this system automatically generates maximum braking force boost and thus helps to achieve the shortest possible braking distance in "panic braking" situations. All of the benefits of the ABS system are exploited under these circumstances.

Do not reduce the pressure on the brake pedal for the duration of the brake application. When the brake pedal is released, the DBC is deactivated.



In the event of a malfunction, the yellow warning lamp comes on. Conventional braking efficiency is available without limitations. Have the system checked and repaired at your BMW center as soon as possible.



 Refer to the "Information for your safety" covering the ABS system on page [122](#). This information also generally applies to DBC. ◀

Brake system**Brake fluid level**

The warning lamp for the brake's hydraulic system comes on or the message "CHECK BRAKE FLUID" appears in the Check Control:



The brake fluid level is too low in the reservoir (refer to page [142](#)).

If the brake fluid level is too low and brake pedal travel has become noticeably longer, there may be a defect in one of the brake system's hydraulic circuits.



Proceed to the nearest BMW center. Higher brake application pressure may be necessary under these conditions, and brake pedal travel may be significantly longer. Please remember to adapt your driving style accordingly. ◀

The warning lamp also comes on when the message "CHECK BRAKE LININGS" is displayed in the Check Control.

Brake linings

The message "CHECK BRAKE LININGS" appears in the Check Control:

The brake pads have reached their minimum pad thickness. Proceed to the nearest BMW center as soon as possible to have the pads replaced.



For your own safety: use only brake linings that BMW has released for your particular vehicle model. BMW cannot evaluate non-approved brake pads to determine if they are suited for use, and therefore cannot ensure the operating safety of the vehicle if they are installed. ◀

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

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

Locks

BMW door lock deicer can be used to free locks if they are frozen. This deicer also contains lubricant.

After using the deicer, treatment with BMW lock cylinder grease is recommended.

Rubber seals and components

Treat the rubber parts and weatherstripping on the doors, hood and luggage compartment lid with BMW rubber treatment or BMW Silicon Spray to prevent them from freezing.



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

Snow chains

Mount BMW snow chains* on winter tires only. Always mount snow chains in pairs and on the rear wheels only. Read and comply with the chain manufacturer's safety precautions. Do not exceed a maximum speed of 30 mph (50 km/h). To achieve maximum traction, we recommend that you deactivate the DSC system when snow chains have been mounted. Refer to page 86.

Starting off

When starting from a full stop in deep snow or for "rocking" the vehicle to free it, we recommend that you deactivate the DSC system. Refer to page 86.

Driving on low-traction road surfaces

Use smooth, gentle pressure to control the accelerator pedal. Avoid excessive engine speeds and shift to the next higher gear at an early point. Adapt your speed and driving style when approaching grades or slopes.

Maintain an adequate distance between yourself and the vehicle ahead.

Brakes

Winter road conditions substantially reduce the amount of traction available between the tires and the road surface. The resulting increases in braking distance are considerable and should be kept in mind at all times.

ABS is intended to prevent the wheels from locking during brake applications, thus helping to maintain vehicle stability and steering response.

If the ABS system does not respond for any reason and the wheels lock: reduce the pressure on the brake pedal until the wheels just start to roll again while still maintaining enough force to continue braking. Following that, increase pedal pressure again. Reduce the pressure as the wheels lock, then reapply pressure. Repeat this braking method as necessary.

This type of staggered braking will reduce the braking distance, and the vehicle still remains responsive to steering.

You can then attempt to steer around hazards after you have reduced pressure on the brake pedal.



Do not shift down on slick road surfaces. Doing so could cause the rear wheels to lose traction and skid, resulting in the loss of vehicle control. ◀



Depress the clutch during hard braking on road surfaces that provide only poor or uneven traction. ◀

Skid control

Depress the clutch and release the accelerator pedal. Countersteer carefully and attempt to regain control of the vehicle.

Parking

Engage either 1st or reverse gear. Apply the parking brake whenever you park on inclined surfaces. In order to prevent the parking brake linings from locking due to frost or corrosion, dry them by gently applying the parking brake as the vehicle is coming to a stop. Make sure that following traffic is not endangered.



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

Power steering

If there is a change in steering response (difficult steering, for example) or, especially on vehicles with Servotronic*, if the steering "drifts" or "floats" at increasing speeds:
Consult a BMW center to have it checked.



If the power steering fails, increased effort will be required to steer the vehicle. ◀

Cellular phone*

Mobile communications systems (cellular phone, radio, etc.) are only allowed a power output of up to 10 watts. Mobile communication devices not specifically designed for use in your vehicle may trigger malfunctions in the operation of your vehicle. BMW can neither test nor assume responsibility for every individual product being offered on the market. We recommend that you consult your BMW center before purchasing any device of this kind.

To ensure that your BMW continues to provide reliable and trouble-free operation, do not use a cellular phone or other radio device with an antenna located inside the passenger compartment. The antenna should always be mounted on the outside of the vehicle.



Before loading the vehicle on a car-carrier train or driving it through a car-wash, remove the antenna. ◀

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's sound system is operating. Climatic factors such as intense solar radiation, fog, rain and snow can also interfere with reception.

Cellular phones without formal 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 Owner's Manual provided with your sound system for detailed information on its use.

Information for your safety

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

It is not merely the tire's service life, but also driving comfort and – above all else – driving safety that depend on the condition of the tires and the maintenance of the specified tire pressure.


Incorrect inflation pressure is a frequent cause of tire damage. It also significantly influences the roadholding ability of your BMW.

 Check tire inflation pressures on a regular basis (refer to page 26), at least every two weeks and before beginning a longer trip. If this is not done, incorrect tire pressures can cause driving instability and tire damage, ultimately resulting in accidents. ◀

Tire condition**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.

Tread depth should not be allowed to go below 0.12 in (3 mm), even though the legally specified minimum tread depth is 0.063 in (1.6 mm). At a tread depth of 0.063 in (1.6 mm), tread depth indicators (arrow) in the tread-groove base indicate that the legally-permissible wear limit has been reached. Below 0.12 in (3 mm) tread depth, there is an increased risk of aquaplaning, even at relatively moderate speeds and with only small amounts of water on the road.

 Do not drive 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. Overloading can lead to overheating and increases 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, respond by immediately reducing your speed and carefully proceeding to the nearest BMW center 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. BMW tests and approves wheel/tire combinations. Refer to page [133](#).

DOT Quality Grades

Tread wear

Traction AA A B C

Temperature A B C



All passenger vehicle tires must conform to Federal Safety Requirements in addition to these grades. ◀

Tread wear

The tread wear grade is a comparative rating based on the wear rate of the tire when tested under controlled conditions on a specified government test course.

For example, a tire graded 150 would wear one and one-half (1 ½) times as well on the government course as a tire graded 100. The relative performance of tires depends upon the actual conditions of their use, however, and may depart significantly from the norm due to variations in driving habits, service

practices and differences in road characteristics and climate.

Traction

The traction grades, from highest to lowest, are AA, A, B and C.

Those grades represent the tire's ability to stop on wet pavement as measured under controlled conditions on specified government test surfaces of asphalt and concrete. A tire marked C may have poor traction performance.



The traction grade assigned to this tire is based on straight-ahead braking traction tests, and does not include acceleration, cornering, hydroplaning, or peak traction characteristics. ◀

Temperature

The temperature grades are A (the highest), B and C, representing the tire's resistance to the generation of heat and its ability to dissipate heat when tested under controlled conditions on a specified indoor laboratory test wheel.

Sustained high temperature can cause the material of the tire to degenerate and reduce tire life, and excessive temperature can lead to sudden tire failure. The grade C corresponds to a level of performance which all passenger car tires must meet under the Federal Motor Vehicle Safety Standard No. 109. Grades B and A represent higher levels of performance on the laboratory test wheel than the minimum required by law.



The temperature grade for this tire is established for a tire that is properly inflated and not overloaded. Excessive speed, underinflation, or excessive loading, either separately or in combination, can cause heat buildup and possible tire failure. ◀

Uniform Tire Quality Grading

Quality grades can be found where applicable on the tire sidewall between tread shoulder and maximum section width. For example:

Treadwear 200 Traction AA
Temperature A



Do not use retreaded tires, since driving safety may be impaired.

This is due to the possible variations in casing structures and, in some cases, to their extreme age, which can lead to a decrease in their durability. ◀

Tire age

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

DOT ... 3400 indicates that the tire was manufactured during week 34 of the year 2000.

BMW recommends the replacement of all tires when the tires are no more than 6 years old, even if a tire life of 10 years is possible.

Tire rotation

Between the axles

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 interests of safety and maintaining optimal handling characteristics, interaxle tire rotation is not recommended.

If a proposed interaxle rotation of tires is based on economic considerations, one should consider whether the costs for the rotation are likely to be recaptured by any increase in the service life of the tires which might be realized. In principle, interaxle tire rotation should be performed at short intervals, with a maximum of 3,000 miles (5,000 km). Consult your BMW center for more information.

Should you decide to rotate the tires, it is essential that you comply with the following:

Rotate tires on the same side only, since braking characteristics and road grip could otherwise be adversely affected.

Following rotation, correct the tire inflation pressure.



If different tire sizes are mounted on the front and rear axles (refer to page 133), the wheels may not be rotated from one axle to the other. ◀

Wheel and tire combinations

The right choice



Use only wheels and tires approved by BMW for the corresponding vehicle model, as otherwise the tires may make contact with the body as the result of tolerances despite the same nominal size being used, resulting in serious accidents. If non-approved wheels and tires are used, BMW cannot evaluate their suitability, and therefore cannot be held liable for driving safety. ◀

For wheel and tire specifications approved by BMW, refer to page [134](#).



The correct wheel-tire combination affects on different systems that otherwise will not function properly, e.g. ABS, DSC.

For this reason, use only tires of the same brand and tread pattern on the vehicle and, for example, restore the approved wheel-tire combination following a flat tire as soon as possible. ◀

Codes on the tires and wheels

The code on tires has the following meaning.

Codes on radial tires:

Example: 225/60 R 15 96 W

Nominal width in mm	_____	225	/	60	R	15	96	W
Aspect ratio in %	_____							
Belt rating code for radial	_____							
Rim diameter in inches	_____							
Load rating (not for 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 149 mph (240 km/h)
 W = up to 167 mph (270 km/h)
 Y = up to 186 mph (300 km/h)
 ZR = over 149 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 on light-alloy wheels:

8 J x 18 EH2

Rim width in inches	_____	8	J	x	18	EH2
Code letter for flange type	_____					
Symbol for full-drop center rim	_____					
Rim diameter in inches	_____					
Extended hump on the 2 rim shoulders	_____					

Protect valve stems and valves from dirt using screw-on valve stem caps. Dirt in the valves frequently leads to slow leaks.

Storage

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

Choosing the right tire

BMW recommends winter tires (M+S radial tires) for operation under inclement winter driving conditions. While so-called all-season tires (M+S designation) provide better winter traction than summer tires with the load ratings H, V, W, Y and ZR, they generally do not achieve the performance of winter tires.

In the interests of safe tracking and steering response, install radial tires made by the same manufacturer and with the same tread configuration on all four wheels if you elect to mount winter tires.

Do not exceed specified maximum speeds

In Germany: attach a corresponding sign in accordance with the Federal Motor Vehicles Safety Standards in your field of vision if the maximum speed of the vehicle is higher. This sticker is available from the tire dealer or your BMW center.



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

Unprofessional attempts by laymen to service tires can lead to damage and accidents.

Have this work performed by skilled professionals only. Your BMW center will be glad to assist you with both their expertise and the proper equipment for your vehicle. ◀

Tire condition, tire pressure

Winter tires display a perceptible loss in their ability to cope with winter driving conditions once the tread wears to below 0.16 in (4 mm), and should thus be replaced.

Comply with the specified tire inflation pressure and be sure to have the wheels balanced each time a tire or wheel is changed. In addition, also have the Tire Pressure Warning (RDW) reinitialized, for details refer to page [88](#).

Snow chains*

The use of narrow-link BMW snow chains on winter tires is approved only in pairs and only on the rear wheels. Comply with all manufacturer's safety precautions when mounting the chains.



Deactivate the Tire Pressure Warning (RDW) when using snow chains. The snow chains can lead to malfunction warnings and undetected losses in pressure. For further information, refer to page [88](#). ◀

134 **Approved wheel and tire specifications**

BMW tests certain tire brands for each tire size, classifies them as road-safe and approves them. Your BMW center can provide information in this connection.

Observe any regulations applicable in the country of use, e.g. requiring entry in the vehicle documents.

Tire specifications

Summer

Front: 245/40 ZR 18

8Jx18EH2

Rear: 275/35 ZR 18

9.5Jx18EH2

Winter (M+S)

235/45 R 17 94 H

8Jx17EH2

Snow chains*

It is not possible to mount snow chains with 18-inch wheels and tires.




Deactivate the tire pressure control (RDW) when using snow chains. The snow chains can lead to malfunction warnings and undetected losses in pressure.

For further information, refer to [88](#). ◀



To unlock

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

 Do not work on your vehicle without appropriate skills. 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. Comply with all applicable instructions and warnings. Failure to work in an informed, professional manner when servicing components and materials constitutes a safety hazard for vehicle occupants and other road users. If you are not familiar with



the guidelines, please have the operations performed by your BMW center. ◀


To open

Pull the release handle and open the hood.

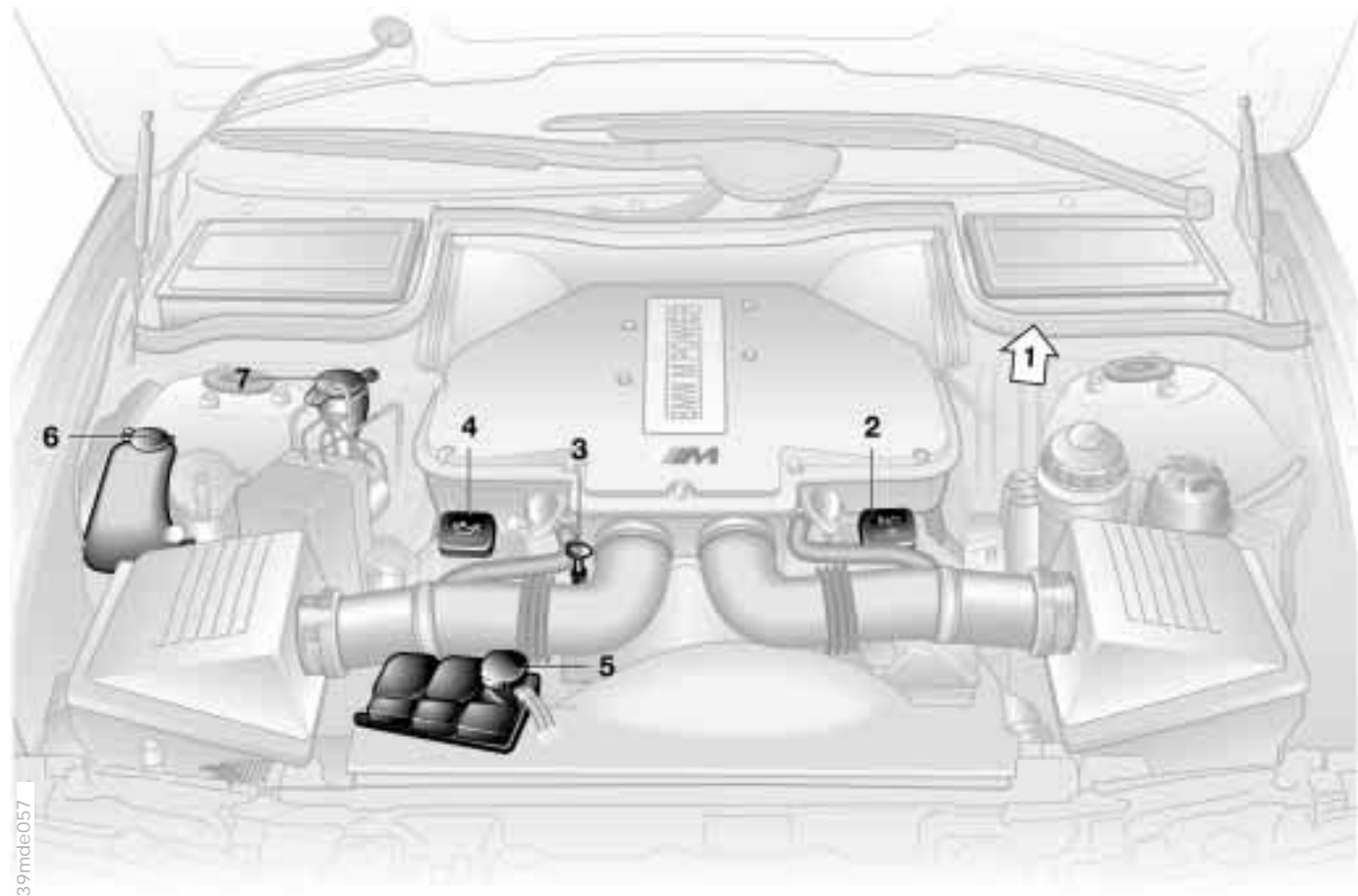


To close

Allow the hood to fall from a height of about 4 in(10 cm) so that it audibly engages.

 To avoid injuries, be sure that the travel path of the hood is clear when it is closed, as with all closing procedures. If it is determined that the hood is not completely closed while driving, stop immediately and close it securely. ◀

136 Engine compartment



Engine compartment

- 1 Reservoir for brake fluid (under the housing of the microfilter) [142](#)
- 2 Auxiliary terminal for jump starting [171](#)
- 3 Engine oil dipstick [139](#)
- 4 Engine oil filler neck [139](#)
- 5 Coolant expansion tank [141](#)
- 6 Reservoir for the intensive-cleaning system [138](#)
- 7 Reservoir for the windshield and headlamp washer system* [138](#)



Headlamp* and windshield washer system

Capacity in US quarts (liters).

Windshield washer:

Approx. 3.7 US quarts (3.5 liters)

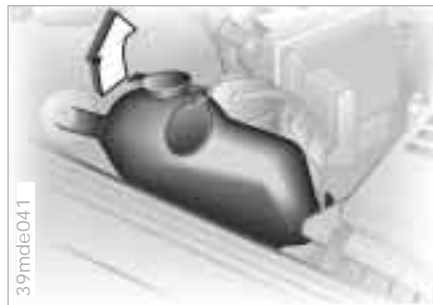
With headlamp-washing system:

Approx. 6.3 US quarts (6.0 liters).

Fill with water and – if 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. It resists freezing to approx. -17 °F (-27 °C) and is available from your BMW center.



Antifreeze agents or intensive-action washer fluids for the washer systems are highly flammable. For this reason, keep them away from sources of flame and store them only in their original containers. Store them so that they are inaccessible to children. Comply with the instructions on the containers. ◀

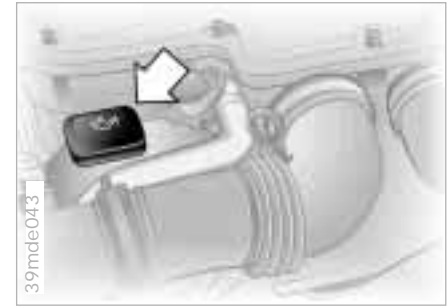
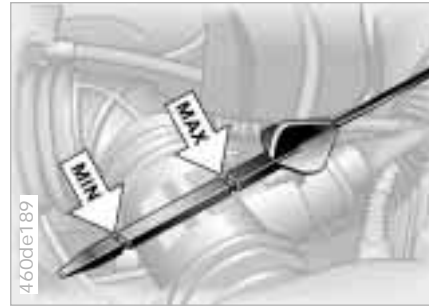
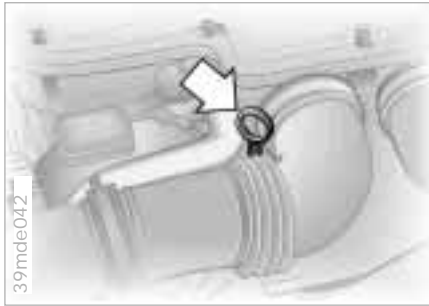
Washer nozzles

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 BMW center.

Headlamp washer system

Have the nozzles adjusted by your BMW center as required.



Checking oil level


- 1 Park the vehicle on a level surface.
- 2 Allow the engine to run at operating temperature for at least 15 seconds at idle, then shut it off.
- 3 After approx. one minute, pull the dipstick out and wipe it off with a clean lint-free cloth, paper towel, or similar material.
- 4 Carefully push the dipstick all the way into the guide tube and pull it out again.
- 5 The oil level should be between the two graduations on the dipstick.

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

The oil volume 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 will damage the engine.

To add oil

Wait until the level has dropped to just above the lower mark before adding oil. However, do not wait until the oil level drops below the lower mark.


 BMW engines are designed to operate without oil additives; the use of additives could lead to damage in some cases. This is also true for the manual transmission, the differential, and the power steering system. ◀

Specified engine oils

The quality of the engine oil selected has critical significance for the operation and service life of an engine. Based on extensive testing, BMW has approved only certain engine oils.

Use only approved "BMW High Performance Synthetic Oil."

If you are unable to obtain "BMW High Performance Synthetic Oil," you can add small amounts of synthetic oil in between oil changes. Use only oils with the API SH specification or higher.


 Ask your BMW center for details concerning the specific "BMW High Performance Synthetic Oil" or "synthetic oils" which have been approved. ◀

You can also call BMW of North America at 1-800-831-1117 or visit this website: www.bmwusa.com to obtain this information.

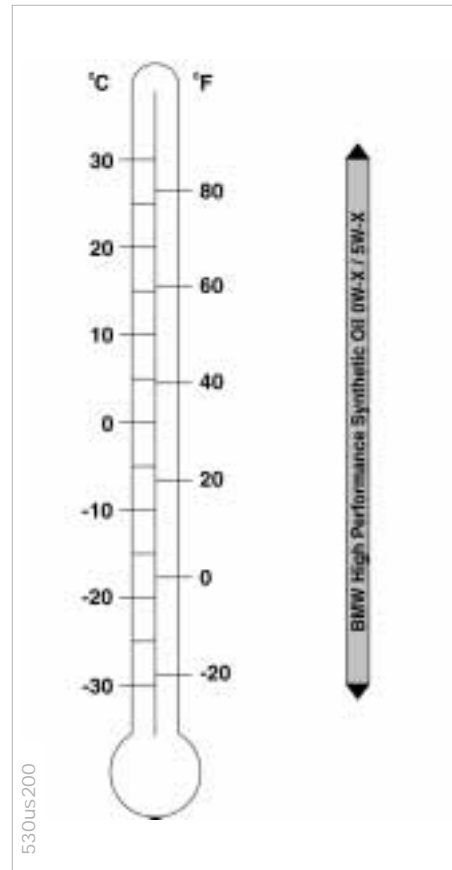
Viscosity ratings

Viscosity is the oil flow rating as established in SAE classes.


The selection of the correct SAE class depends on the climatic conditions in the area where you typically drive your BMW.

 Approved oils are in SAE classes 5W-40 and 5W-30. ◀


These oils may be used for driving in all ambient temperatures.



Engine oil

 Always observe all environmental protection guidelines and regulations when disposing of used oil. ◀


Recommendation: have the oil changed by your BMW center only.

 Continuous exposure to used oil has caused cancer in laboratory testing.


For this reason, any skin areas that come into contact with oil should be thoroughly washed with soap and water.

Always store oils, grease and similar materials so that they are inaccessible to children. Comply with warning labels and information on containers. ◀

Coolant

 Do not add coolant to the cooling system when the engine is hot. If you attempt to do so, escaping coolant can cause burns.

To avoid the possibility of secondary damage, never use anything other than factory-approved, nitrite and amino-free extended-duty antifreeze with corrosion inhibitor. Your BMW center is familiar with the official specifications. Antifreeze and anticorrosion agents are hazardous to health. You should always store them in their original container and in a location which is out of reach of children. Extended-duty antifreeze with corrosion inhibitor contains the flammable substance ethylene glycol. For this reason, do not spill antifreeze with corrosion inhibitor on hot engine parts. It could ignite and cause serious burns. ◀

 Comply with the applicable environmental laws regulating the disposal of extended-duty antifreeze with corrosion inhibitor. ◀



Checking coolant level

Correct coolant level when the engine is cold (approx. 68 °F/20 °C): Visible within the transparent expansion tank, no higher than the COLD mark.

Adding 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 zone; otherwise, there is a danger of scalding.

- 1 Turn the cap counterclockwise slightly in order to allow accumulated pressure to escape. Then open.
- 2 If the coolant is low, slowly add coolant until the correct level is reached – do not overfill.

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.

Brake fluid**Brake fluid level**

If the indicator lamp for the brake hydraulic system appears or if the "CHECK BRAKE FLUID" message appears in the Check Control*: the brake fluid level is too low in the reservoir.



The brake fluid reservoir is located under the microfilter housing on the driver's side of the vehicle. For adding brake fluid or for determining and correcting the cause of brake fluid loss, consult your BMW center. Your BMW center is familiar with the specifications for factory-approved brake fluids (DOT 4).

Brake fluid loss may result in extended brake pedal travel. If this occurs, refer to the information on page [124](#).



Brake fluid is hygroscopic, that is, it absorbs moisture from the air over time. In order to ensure the safety and reliability of the brake system, have the brake fluid changed every two years by an BMW center. Refer also to the Service and Warranty Information Booklet (US models) or the Warranty and Service Guide Booklet (Canadian models). Brake fluid is toxic and damages the vehicle's paint. You should always store it in its original container and in a location which is out of reach of children. Do not spill the fluid and do not fill the brake fluid reservoir beyond the MAX mark. The brake fluid could ignite upon contact with hot engine parts and cause serious burns. ◀



Comply with the applicable environmental laws regulating the disposal of brake fluid. ◀



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 maximum driving and operating safety – and as cost-effectively as possible for you.

Please keep in mind that regular maintenance is not only necessary for the safety of your vehicle, but also plays a significant role in maintaining 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 systems rely solely on distance traveled to determine when service is due, the BMW Maintenance System began many years ago to take the actual conditions under which the vehicle is driven into consideration.

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.

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

Determining the maintenance intervals according to the actual vehicle driving loads on the vehicle covers every kind of operating situation. However, even those who drive only short distances – significantly less than 6,200 miles (10,000 km) annually – should have the engine oil changed at least every 2 years since oil deteriorates over time, regardless of use.

Service and Warranty Information Booklet (US models)/Warranty and Service Guide Booklet (Canadian models)

For additional information on maintenance intervals and procedures, please refer to the Service and Warranty Information Booklet (US models) or the Warranty and Service Guide Booklet (Canadian models).

As a precaution against rust, it might be a good idea to have the body checked for damage from rocks or gravel at the same time, depending upon operating conditions.

Caring for your vehicle



Have your BMW center perform maintenance and repairs.

Your BMW center 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. Be sure that all maintenance work is confirmed in the Service and Warranty Information Booklet (US models) or the Warranty and Service Guide Booklet (Canadian models). These entries are your proof that the vehicle has received regular maintenance. They are also a requirement for warranty claims. ◀

Washing your vehicle

You can have your new BMW washed in an automatic car wash. Car wash systems that do not employ brushes are preferable.

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

To prevent spots, do not wash the vehicle when the hood is still warm, or immediately after and during exposure to strong sunlight.

When using an automatic car wash, be sure that:

- ▷ The car wash system is suited for the dimensions of your vehicle.
- ▷ No damage will occur on vehicles with attached body accessories (such as spoilers or antennas). Consult the car wash operator if necessary.
- ▷ The wheels and tires of your vehicle cannot be damaged by the conveyance devices of the car wash system.
- ▷ The vehicle is cleaned with minimum brush pressure, and that ample water is available for washing and rinsing.

Vehicles with rain sensor*:


Clean the windshield regularly. Wax from automatic car washes or insects, for example, can cause malfunctions in the function of the rain sensor.





Deactivate the rain sensor in automatic car washes. If you do not, damage may occur if the wipers switch on unintentionally. ◀

Parts of the vehicle that are inaccessible to the automatic washer – such as door sills, door and hood edges, etc. – should be cleaned by hand.

In the winter months, it is especially important to be sure that the vehicle 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.

 If spray wands or high-pressure washers are used, be sure to maintain an adequate distance between the spray source and the vehicle's surface. 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. ◀

-  When cleaning the headlamps, please observe the following:
- ▷ Do not wipe dry (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 deicer spray to remove accumulated ice and snow – never use a scraper. ◀

 After washing the vehicle, apply the brakes briefly to dry them. Braking efficiency might otherwise be reduced by the moisture and the brake rotors could also be corroded. ◀

Exterior finish

To provide effective corrosion protection, multilayer paintwork is applied at the factory. Cathaphoretic immersion priming techniques are supplemented using special body-cavity protectants, with the application of specially-developed and extensively tested materials. A layer of flexible PVC is first applied to the undercarriage. Following this, a comprehensive undercoating treatment with a wax-based protectant is applied. 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 this, environmental factors that occur locally or regionally can have negative effects on the finish of your vehicle. These should guide you in determining the frequency and extent of your efforts to maintain the vehicle finish.

Caring for your vehicle

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 if they are allowed to remain on the finish of your vehicle for any period of time (spots, etching, flaking, separation in the top coat).

In industrial areas, deposits of flue dust, lime, oily soot, precipitation containing sulfur-dioxide (acid rain) and other environmental pollutants will damage the vehicle's finish unless adequate care is provided – even though this is generally limited to the outside horizontal surfaces.

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


In tropical zones, temperatures of over 105 °F (40 °C) in the shade prevail, in addition to heavy ultraviolet radiation and high humidity. Under those conditions, light paints can reach temperatures up to 175 °F (80 °C) and dark paints up to 250 °F (120 °C).

Caring for the vehicle finish

Regular washing is a preventive measure against long-term effects from substances that are harmful to the vehicle's finish, especially if you drive your vehicle in areas with high levels of air pollution or aggressive natural substances (tree resins, pollen).

Nevertheless, you should immediately remove especially aggressive substances. Failure to do so can lead to changes in the paint's chemical structure or to discoloration. 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. Remove tar spots with tar remover. After cleaning, the affected areas should be waxed to ensure continued protection.

 Use cleaning and car-care products that you can obtain at your BMW center. ◀

Waxing your vehicle

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.

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



Use cleaning and car-care products that you can obtain at your BMW center. ◀

Paint damage

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

The paint color code for your vehicle is provided on a sticker located on the right hand side under the hood and on the first page the Service and Warranty Information Booklet (US models) or of the Warranty and Service Guide Booklet (Canadian models).

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. Wait a few days, then polish the repaired area. Finish by applying a wax preservative.

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

Window care

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.



When caring for break-resistant security glass*, observe the following instructions:

The inner surface of the side windows is coated with a plastic film. For this reason, do not affix any decals or adhesive stickers on the inside of these windows unless they are to be placed there permanently. Wash the glass with clean water. If necessary, you may add a commercially-available mild household cleaner. Do not use abrasive cleaners. If the windows are fogged or iced over, treat them with an anti-misting cloth or a deicer spray – do not use an ice scraper. ◀

Caring for your vehicle

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



Use only wiper blades approved by BMW. ◀

Caring for other vehicle components and materials

Light-alloy wheels should be treated with alloy wheel cleaner, especially during the winter months. However, do not use aggressive products containing acids, strong alkalis or abrasives. Do not use steam cleaners operating at temperatures above 140 °F (60 °C). Follow the manufacturer's instructions.

If your vehicle has chrome parts* such as the window frames and door handles, clean these parts carefully with ample clean water after driving on roads that have been salted. Add a shampoo supplement if desired. Use chrome polish as an additional treatment.

Plastic components, vinyl upholstery, headliners, lamp lenses, the clear cover of the instrument cluster and components with a sprayed dull black surface can be cleaned with water (add plastic shampoo as required). Do not allow moisture to soak through the seats or 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.

The safety belts should be cleaned with a mild soap and water solution without being removed from the vehicle. 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.



Use cleaning and car-care products that you can obtain at your BMW center. ◀

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 attack the protective layer of the leather, the cleaned surfaces should be treated with BMW leather care agent. This also acts as an antistatic 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.

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

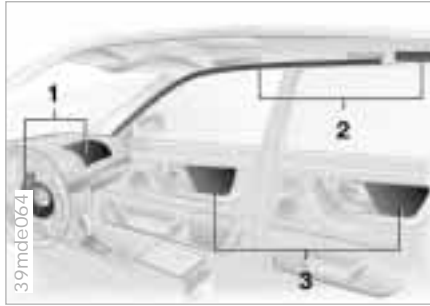


Use cleaning and car-care products that you can obtain at your BMW center. ◀




Cleaning agents can contain substances that are dangerous or pose health risks. For this reason, always read and comply with the warnings and danger notices on the package.

Open the doors or windows on your vehicle when cleaning the interior. Never clean your vehicle with solvents or other materials not specifically intended for this application. ◀



- 1 Front airbags on the driver and passenger sides
- 2 Head airbags on the driver and passenger sides (front and rear*)
- 3 Side airbags on the driver and passenger sides (front and rear*)

Important safety notices

 Do not remove the airbag restraint system's gas generator. Testing and servicing are to be performed only by trained technicians. In the event of the air bag restraint system malfunctioning, being deactivated or triggered (in response to an accident), consult an BMW center only for the performance of any removal and service operations.

Do not modify or tamper with either the wiring or the individual components in the airbag system. This includes the padded steering wheel hub, the instrument panel, the side trim panels of the front or rear doors and the roof pillars or the sides of the headliner. Never apply adhesive materials to these components or cover or modify them in any way. Do not remove or dismantle the steering wheel yourself.

To ensure compliance with official safety regulations, have an BMW center dispose of airbag generators.


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. ◀

Consult your BMW center regarding special procedures if you intend to store the vehicle for more than three months.


Any BMW center will be glad to inform you of the advisability, legal requirements and factory recommendations regarding technical modifications on your vehicle. For this purpose, the BMW center will require 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 lens and avoid staring directly at the unfiltered beam for extended periods (several hours), as inflammation of the iris could result. ◀

California laws require us to state the following warning:

 Engine exhaust, some of its constituents, and certain vehicle components contain or emit chemicals known to the State of California to cause cancer and birth defects or other reproductive harm. ◀

OBD interface socket



Access to the interface socket for the On-Board-Diagnostics (OBD): lift the cover (arrow) next to the steering column.

The purpose of the OBD (Onboard Diagnostic) system is to assure proper emission control system operation for the vehicle's lifetime by monitoring emission-related components and systems for deterioration and malfunction.



An illuminated indicator informs you of the need for service, not of the need to stop the vehicle. However, the systems should be checked by your BMW center at the earliest possible opportunity.

Under certain conditions, the indicator will blink or flash. This indicates a rather severe level of engine misfire. When this occurs, you should reduce speed and consult the nearest BMW center as soon as possible. Severe engine misfire over only a short period of time can seriously damage emission control components, especially the catalytic converter.



Warning lamp: Service Engine Soon for Canadian models



When the filler cap is not properly tightened, the OBD system can detect the vapor leak and the indicator will light up. If the filler cap is subsequently tightened, the indicator should go out within a few days. ◀



**Replacement procedures:**

Onboard tool kit [156](#)
Windshield wiper blades [156](#)
Lamps and bulbs [157](#)
Repairing a flat tire [162](#)
Battery [166](#)
Fuses [168](#)

In case of electrical malfunction:

Fuel filler door [170](#)
Sliding/Tilt sunroof [170](#)

Assistance, giving and receiving:

Jump-starting [171](#)
Towing the vehicle [172](#)

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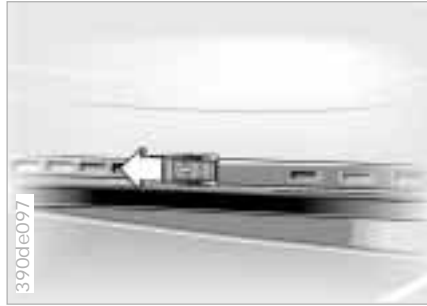
156 Onboard tool kit



The onboard tool kit is located in the luggage compartment lid.

Loosen the wingnut to open.

Windshield wiper blades




- 1 Lift the wiper arm up slightly and hold it firmly.
- 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.




Use only wiper blades approved by BMW. ◀

Lamps and bulbs

The lamps and bulbs are essential factors contributing to the safety of your vehicle. Observe the following instructions during bulb replacement carefully. If you are not familiar with any of the procedures, consult your BMW center.


 Do not touch the glass portion of a new bulb with your bare hands since even small amounts of impurities burn in to the surface and reduce the service life of the bulb. Use a clean cloth, paper napkin, or a similar material, or hold the bulb by its metallic base. ◀


A replacement bulb set is available from your BMW center.

 Whenever working on the electrical system, switch off the electrical accessory you are working on or disconnect the cable from the negative terminal of the battery. Failure to do this could result in short circuits. To prevent injuries and damage, comply with any instructions provided by the bulb manufacturer. ◀

Xenon lamps

The service life of these bulbs is very long and the probability of a failure is very low, provided that they are not switched on and off an unusual number of times. If one of these bulbs should nevertheless fail, it is possible to continue driving with great caution using the fog lamps, provided traffic laws in your area do not prohibit this.

 Because of the extremely high voltages involved, any work on the Xenon lighting system should be carried out by technically-qualified personnel only. Otherwise, there is a risk of fatal injury. ◀


 When cleaning the headlamps, please observe the following:

- ▷ Do not wipe dry (this causes 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 ample water.
- ▷ Always use a deicer spray to remove accumulated ice and snow – never use a scraper. ◀



Parking lamp

10 watt bulb

 The bulb holder and reflector are a single unit and are both changed at the same time. ◀

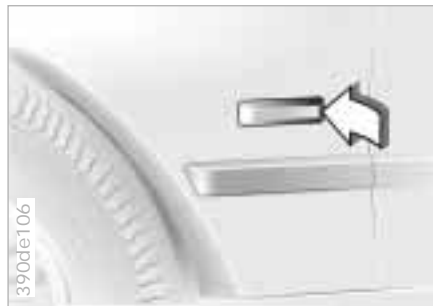
- 1 Turn the bulb holder with reflector to the left and remove.
- 2 Disconnect the plug.
- 3 Plug the new bulb holder into the plug connector. Be sure that it is securely engaged.
- 4 Insert the reflector with bulb holder and turn to the right as far as possible.



Turn signal indicator/Side lamps (side marker lamps), front

Dual-filament bulb, 21 watts

- 1 Turn the bulb holder to the left and remove it.
- 2 Remove and replace the bulb.



Side turn signals*


5 watt bulb

- 1 Use finger pressure against the rear end of the lens (arrow) to press it forward for removal.
- 1 Apply gentle pressure to the bulb while turning it to the left to remove.



Front fog lamps

HB4, 51 watt bulb

 The bulb is pressurized. Therefore, wear safety glasses and protective gloves. Failure to comply with this precaution could lead to injury if the bulb is accidentally damaged during replacement. ◀


- 1 Pull the cover panel next to the fog lamp forward to remove.
- 2 Loosen the screw (arrow) and swing the lamp assembly out.
- 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.



Tail lamp assembly

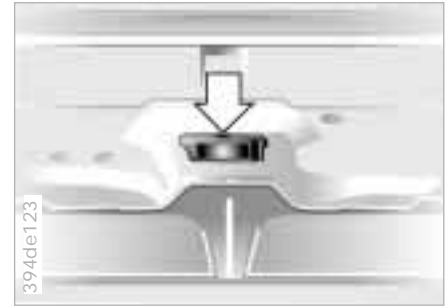
Rear lamp/side marker lamps: LEDs
 Remaining bulbs: 21 watts

- | | |
|-------------------------------|--------|
| 1 Turn signal indicator | yellow |
| 2 Rear lamp/side marker lamps | red |
| 3 Backup lamp | white |
| 4 Brake lamp | red |
| 5 Reflector | red |

 Please contact your BMW center if there is a defect in the rear lamp/side marker lamp assembly. ◀



- 1 Use the upper handle to fold down the side panel in the luggage compartment.
- 2 Turn the corresponding bulb holder to the left (arrow) and remove it.
- 3 Press the defective bulb gently and turn it to the left. Remove the bulb and replace it.
- 4 Insert the bulb holder and turn to the right as far as possible.



Center (high-mount) brake lamp* 21 watt bulb

- 1 Open the luggage compartment lid.
- 2 Unclip the cover panel (on the underside of the package tray) with a screwdriver (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 to the left (arrow); this disengages the lamp.
- 2 Remove the lamp and replace the bulb.

Interior lamps

Front

Interior lamp (10 watt bulb) with reading lamps (10 watt bulbs)

- 1 Interior lamp: press the lamp out to the side with a screwdriver and remove the lens. Pull the bulb from the contact tabs.
- 2 Reading lamp: gently press against the lamp while turning it to the left to remove it.

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 in the upper recesses to pry the lamp out.
- 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 it.

Lamps and bulbs

Footwell lamps

5 watt bulb

- 1 Use a screwdriver to press the lens out to the side.
- 2 Replace the bulb.

Glove compartment lamp

5 watt bulb

- 1 Apply a screwdriver in the recess to pry the lamp out.
- 2 Remove the reflector.
- 3 Replace the bulb.

Luggage compartment lamps

Lamp on the underside of the rear package tray: 10 watt halogen lamp.

Lamp in luggage compartment lid: 10 watt bulb.

- 1 Apply a screwdriver in the recess to pry the lamp out.
- 2 Remove the reflector.
- 3 Replace the bulb.

162 Repairing a flat tire



Precautions in case of a flat tire: Stop the vehicle as far as possible from passing traffic. Switch on the hazard warning flashers. Turn the steering wheel to the straight-ahead position, remove the key and engage the steering lock. Shift into 1st or reverse and engage the parking brake.

All passengers should be outside the vehicle and well away from your immediate working area (behind a guardrail, for instance).

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. Comply with all safety guidelines and regulations. ◀

M Mobility System

For repairing a flat tire, you will find an M Mobility system in the BMW M5. With the aid of this system, you can apply a liquid sealant to the inside of the tire, thereby sealing off the damaged area, and then continue driving.

The M Mobility system makes the transport of a spare wheel superfluous and minimizes the curb weight.



The M Mobility system is located in the luggage compartment under the floor mat;

- 1 Lift up the floormat and then raise the front cover panel.
- 2 Loosen the M Mobility system from its storage location.



Please note that the system's sealant container must be replaced every three years by your BMW center if the device is not used. ◀



Repairing a flat tire



The components of the M Mobility system

- 1 On/Off switch
- 2 Connection hose with pressure gauge for connecting the compressor with the sealant container or to connect the compressor to the wheel
- 3 Pressure gauge for indicating the tire pressure
- 4 Connector hose from the sealant container to the wheel
- 5 Warning sticker for maximum speed
- 6 Plug and cable for the cigarette lighter socket
- 7 Protective gloves (not illustrated).

Use the M Mobility System

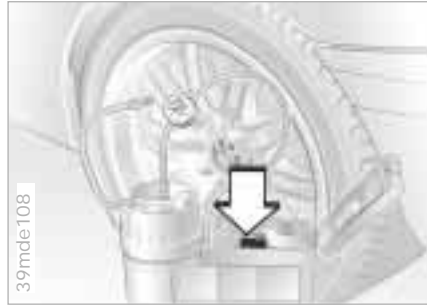
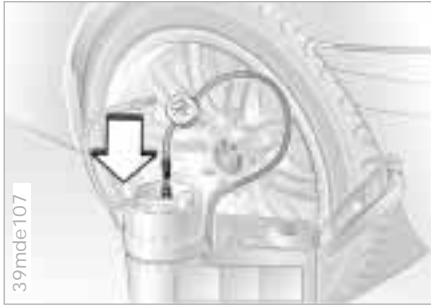
-  If possible, leave the foreign object in the tire. ◀
-  Do not exceed the maximum speed limits described below, otherwise it could lead to accidents. Before you use the M Mobility System, read the warnings and danger notices on the device carefully. ◀

1 Remove the warning sticker 5 for maximum speed that is located on top of the device and affix it to the steering wheel.



2 Take off the round cover and take out hose 4. Unscrew the valve from the defective wheel and screw the hose to the valve.

164 Repairing a flat tire



- 3 Flip open the cover and pull out the enclosed protective gloves. Take out hose 2 with the pressure gauge and screw it to the connection on the sealant container, as shown in the illustration.
- 4 Make sure that the system has been switched off (Position 0). Take out plug 6 and plug it into the cigarette lighter socket in the passenger compartment (refer to page 110).
- 5 Make sure that the screw on the rear of the pressure gauge 3 is tightened down. Turn on the M Mobility System (position 1, refer to illustration) and allow 3 minutes to elapse, to let the sealant flow in. At this point, it is insignificant what the tire pressure is.
- 6 Turn off the device.
Disconnect the connector hose from the sealant container and the tire valve. Stow the M Mobility System in the luggage compartment.

- 7 Directly, afterward, drive at least 1.2 miles (2 km), so that the liquid sealant distributes evenly throughout the inside of the tire. If possible drive at no less than 15 mph (20 km/h), but not more than 40 mph (60 km/h). Stop in a suitable spot.



39mde109

- 8 Take out the hose with the pressure gauge and screw it onto the valve. Take out the plug and plug it into the cigarette lighter socket in the passenger compartment.
- 9 Inflate the tire pressure:
 - ▷ To increase the tire pressure: turn on the M Mobility System (position I). To check the new tire pressure briefly turn off the device.
 - To reduce the tire pressure: turn the screw on the back of the pressure gauge, this will open the air release valve.

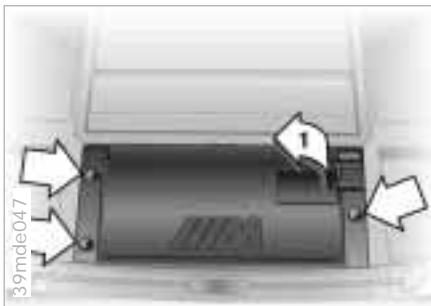
▶ If the inflation pressure does not hold, complete step 10 and then repeat steps 7 through 10. The use of the M Mobility System may be ineffective if the damaged area in the tire is larger than approx. 0.15 inches (4 mm). Please contact the nearest BMW center if the tire with the M Mobility System cannot be made roadworthy, or contact BMW Roadside Assistance at 1-800-332-4269. ◀


- 10 Unscrew the hose from the valve and stow the M Mobility System in the luggage compartment.

When you start driving again, do not exceed the permissible maximum speed of 50 mph (80 km/h).

You will find corresponding instructions for using the M Mobility System on the device.

Replace the defective tire as soon as possible and have the wheel and tire balanced. Reactivate the tire pressure warning system (RDW), refer to page 88. Have the M Mobility System filled. Contact your BMW center for this.



 Battery posts, terminals, and related accessories contain lead and lead compounds. Wash hands after handling. ◀

Installation location

The battery is located under the floor-mat in the luggage compartment.

- 1 Read and comply with the warning information on page [167](#).
- 2 Lift the floormat.
- 3 Press the small cover gently. Lift the cover (arrow 1).
- 4 Disconnect the battery cable from the negative terminal.
- 5 Loosen the three screws (arrows) and remove the cover.

Maintenance

The battery is absolutely maintenance-free, that is, the original electrolyte will normally last for the service life of the battery under moderate climatic conditions.

Symbols

You will find the following symbols on your vehicle battery. To avoid injury, please comply with the corresponding precautions whenever you work with or near the battery.



Before handling the battery, please read the following information:



Wear eye protection. Do not allow particles containing battery acid or lead to come into contact with your eyes, your skin, or your clothing.



Battery acid is extremely corrosive. Wear eye protection and protective gloves. Do not tip the battery. Battery acid can leak from the ventilation openings.



Do not allow children access to batteries and battery acid.



Never allow sparks or open flame near the battery. Do not smoke in the vicinity of the battery. Avoid sparks from electrical cables or electrical equipment. Turn the key to position 0 in the steering lock when connecting or disconnecting the battery. Don't short-circuit the battery terminal. If you do so, you could be injured by electrical sparks.



A highly-explosive gas is generated when the battery is charged.

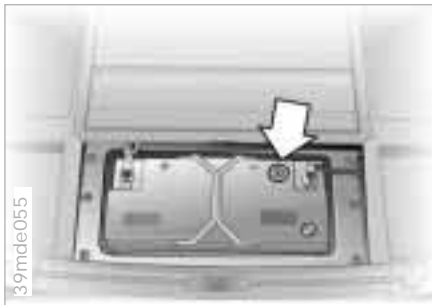


If you happen to get acid in your eyes, rinse thoroughly for 15 minutes with clear water.

Consult a physician immediately. If your skin or clothing are splashed by acid, rinse immediately with plenty of water. If electrolyte is accidentally swallowed, consult a physician immediately.




In order to protect the battery case from ultraviolet radiation, do not place it in direct sunlight. A discharged battery can freeze. Store the battery in areas where temperature remains above freezing.




Charge condition

You can read the charge condition of the battery with the "Magic Eye" (a hydrometer):

- ▷ Green: adequate charge.
- ▷ Black: not adequately charged. The battery has to be recharged. Please contact your BMW center for additional information.
- ▷ Yellow: replace the battery.


 The service life specified for the battery can be achieved only if it is always kept adequately charged. Check the charge condition of the battery frequently if the vehicle is used primarily for driving short distances. ◀

Removal and installation

 Do not disconnect the battery when the engine is running. If you do so, the ensuing voltage surge will damage the vehicle's onboard electronics. Do not alter the positive terminal wiring in any way. If you do so, the Battery Safety Terminal's safety function will no longer be guaranteed. Repair and disposal must be performed by trained technicians only. ◀


When removing the battery, disconnect the cable on the negative terminal first, then the cable on the positive terminal.

When installing a battery, connect the positive terminal first, then connect the negative terminal.

 When installing the battery, be sure that it is mounted securely in the battery well and that the cover is installed. If the battery is not mounted and fastened properly, it will not be adequately secured in case of an accident. ◀

Charging the battery

Charge the battery in the vehicle only when the engine is not running.

 Before doing any work on the electrical system, be sure to disconnect the cable from the battery's negative terminal. Failure to do so could result in short-circuits, a fire or personal injury. ◀

If the vehicle is to be parked longer than four weeks, disconnect the battery from the vehicle's electrical system by disconnecting the negative terminal cable and then recharge using a suitable charging device.

If you intend to store your vehicle for longer than twelve weeks: remove the battery, charge it and store it in a cool (but frost-and dust-free) room. Every three months and before reinstalling the battery, have it recharged. If it is not recharged, it will not be serviceable. Every time the battery is discharged, especially over extended periods, its service life is reduced.



Avoid environmental pollution when disposing of old batteries. ◀



Return used batteries to a recycling point or your BMW center. Maintain the battery in an upright position for transport and storage. Secure the battery against tilting in transit. ◀

Fuses

If an electrical accessory should fail, switch it off and check the fuse.

In the 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).


Fuses

The fuses, their respective ampere ratings and the equipment in their circuits are all indicated below the fuse holder.

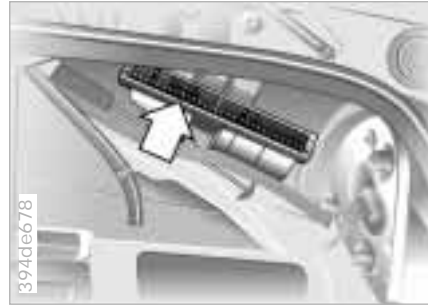
Close the fuse holder by holding the top of the cover in place and screwing the two quick-release knobs to the right.

Additional fuses are provided in the luggage compartment (refer to the 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 center for repair.

 Do not attempt to repair a burned fuse or replace it with a fuse having a different color or amperage rating. To do this could cause a fire in the vehicle resulting from a circuit overload. ◀

If the fuse continues to burn through, have the problem corrected by a BMW center.

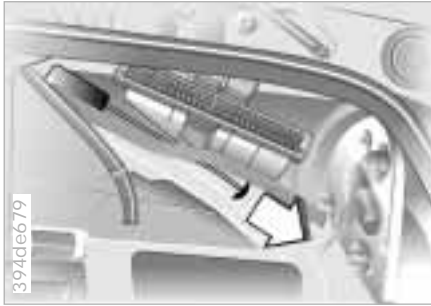


In the luggage compartment

Use the handle to pull the trim on the right wall down.

A list of the fuses, their respective ampere ratings and the equipment in their circuits is provided on the rear of the side trim.

170 Fuel filler door



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).

Sliding/Tilt sunroof*




Manual operation

- 1 Remove the interior lamp (refer to page 160), reach into the opening and push out the panel.
- 2 Use the Allen wrench from the onboard tool kit (refer to page 156) to turn the sliding/tilt sunroof in the desired direction.

Jump-starting

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.

 Do not touch the parts conducting electrical current while the engine is running. To do so creates the risk of fatal injury. ◀

Carefully comply with the following instructions to avoid personal injury and damage to one or both vehicles:


- 1 Be sure that the battery on the support vehicle is also rated at 12 volts, and that the capacities of the two batteries (Ah) are roughly comparable (printed on casing).
- 2 Leave your battery connected to the vehicle electrical system.
- 3 Make sure that there is no contact between the bodywork of the two vehicles – this creates a risk of short circuits.



- 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 of the auxiliary terminal for jump starting is identified with a "Batt. +" sign. Refer to the illustration. Flip the cap out to open.



- 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 a ground on the engine or on the bodywork of the vehicle that is to be started. There is a special nut on the strut dome of your BMW for this (refer to the arrow in the illustration).

 Observe the same sequence for connecting the jumper cables when helping other vehicles. If you do not, there is the risk of injury if sparks generate at the battery. ◀

- 6 Start the engine of the support vehicle and let it run.
- 7 Start the engine on the vehicle needing the jump-start, and allow it to run as usual. If the first start attempt is not successful, wait a few minutes before another attempt in order to allow the discharged battery to recharge.
- 8 Before disconnecting the jumper cables from your BMW, turn on the headlamps, the rear window defroster, and set the blower to the highest speed; allow the engine to run approx. 10 seconds. This will prevent a voltage surge from the voltage regulator to the electrical accessories.
- 9 Then disconnect the jumper cables in reverse sequence.

Depending on the cause of the fault, recharge the battery.

Towing the vehicle



Tow fitting

The screw-in tow fitting is stored in the onboard tool kit; be sure 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 paved road surfaces only. It should not be used to pull a vehicle out of deep snow, mud, sand, etc. Always observe all applicable towing laws and regulations.

Access to tow sockets


Front:

Apply pressure to the arrow symbol on the cover and remove the cover.




Rear:

Apply pressure to the arrow symbol on the cover; remove the cover.

 Tightly screw in the towing fittings all the way. If you do not, the threads could be damaged. Never attach tie-down hooks, chains, straps, or tow hooks to tie rods, control arms, or any other part of the vehicle suspension, as severe damage to these components will occur, leading to possible accidents. ◀

Use only a nylon towing strap to tow the vehicle, since the inherent resilience of this material helps protect both vehicles from sudden jerking movements.

Towing the vehicle

 The towed vehicle should always be the lighter of the two vehicles. If this is not the case, it is no longer possible to control vehicle response. ◀

Tow-starting


It is better to start the vehicle's engine by jump starting. For instructions on jump starting, refer to page 171.

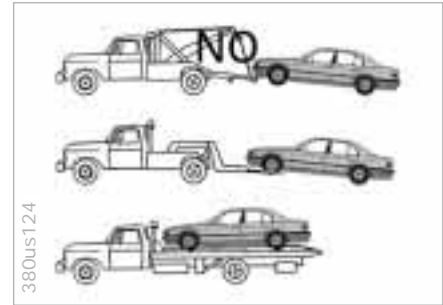
Never attempt to use your vehicle to push another vehicle, as damage to the energy-absorbing bumpers could result.

Towing a vehicle

- 1 Place selector lever in position N.
- 2 Towing speed:
Max. 45 mph (70 km/h).
- 3 Towing distance:
Max. 95 miles (150 km).
- 4 Leave the ignition key at position 1 to ensure that the brake lamps, turn signals, horn and windshield wipers remain operative, and to prevent the steering lock detent from engaging.
- 5 Switch on the hazard-warning system (comply with country-specific regulations).


Find some means of identifying the vehicle in tow, for instance, place a sign or warning triangle in the rear window.

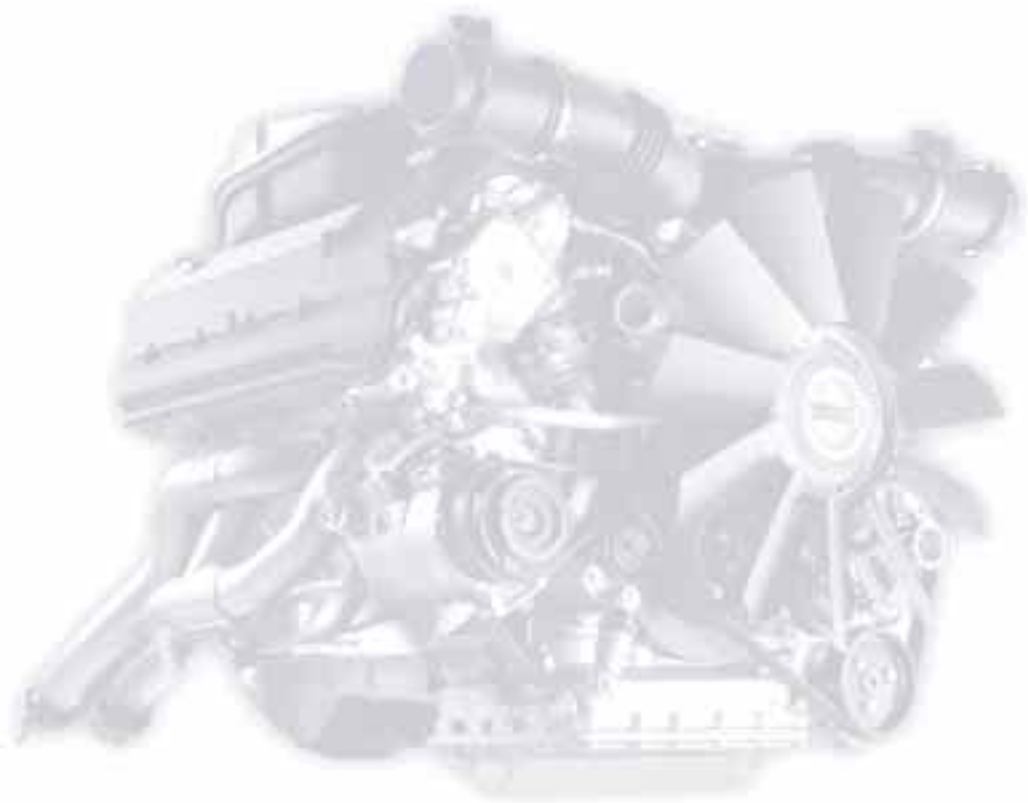
 Make sure that the ignition key remains in position 1 even when the electrical system has failed. This will prevent the steering lock from engaging. The steering and brakes are without power assist when the engine is not running. This means that increased effort is required for steering and braking. ◀



Towing with a commercial tow truck

- ▷ Do not tow with sling-type equipment.
- ▷ Use a wheel lift or flat bed carrier.
- ▷ Please comply with applicable towing laws.

 Never allow passengers to ride in a towed vehicle for any reason. ◀





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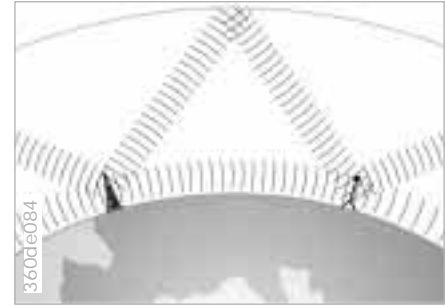
Deceleration sensors continuously monitor the physical forces acting upon the vehicle. If, as the result of a frontal collision, a deceleration is reached at which the protection of the safety belts alone is no longer adequate, the gas generators of the front airbag will be simultaneously ignited on both the driver and passenger sides. However, the front airbag on the passenger-side is only triggered if an additional sensor has recognized that the passenger seat is occupied.

Depending on which side the vehicle is involved in a side collision, the head protection and side airbags in the front and rear* are triggered 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 designed 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 required to inflate the airbags is not dangerous, and the associated smoke then dissipates.

The entire process is completed within fractions of a second.



The AM frequency bands (medium-wave, long-wave and short-wave) make it possible to receive stations from a great distance, because the broadcast signals travel not only along the ground as surface waves, but also as waves bounced back to earth from the ionosphere.

Frequency-modulation (FM) provides substantially better sound quality than AM. However, because FM transmissions rely on line-of-sight broadcast waves, their effective reception range is limited.

Radio reception

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:

The "Radio Data System" (RDS) makes sure that, for broadcast stations sending on several frequencies, the radio automatically tunes to the frequency with the best reception quality.

The Diversity Antenna system employs several FM antennas integrated within the rear window. An integral processor automatically selects the antenna with the best FM reception quality at any given time. The selection of the antenna takes place within milliseconds, and is therefore not noticed by the radio listener.

BMW active seat*



BMW seats are configured for your orthopedic well-being. The active seat is an engineering enhancement of BMW's seats, designed to ensure less fatigue during extended trips while sitting with little movement. The seat is no longer a passive element between the road, the running gear and the passenger. Instead, it creates minor and imperceptible shifts in your weight by an active change in the contour of the seat surface. The basic seat position is not changed as this occurs. Fluid cushions are located below the surface of the seat in the seat's upholstery on the left and right. The fluid is circulated slowly back and forth between the two cushions by means of a pump. This causes a movement of the spinal column which is virtually imper-

ceptible, resulting in an improved flow of blood to the vertebral discs and the muscles in the area of the spinal column. Vehicle occupants can experience less muscle cramping, back pain in the spine's lumbar region and fatigue. The active seat thus provides a significant contribution to your driving comfort and safety.

178 Dynamic Stability Control (DSC)

Highly sensitive sensors monitor the number of revolutions of the wheels, the 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 engine torque. If necessary, the system also responds with additional braking intervention at all four wheels.

In addition, DSC permanently monitors the vehicle's current operating condition and compares it with an ideal condition that is calculated from the sensor's signals. If deviations from this occur (understeering or oversteering, for instance), DSC can stabilize the vehicle in fractions of a second by reducing engine output and with the assistance of braking intervention at individual wheels. As a result, dangerous skids can be prevented even as they are just beginning.

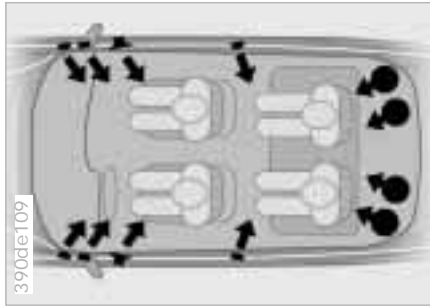
You may need some time to become accustomed to this system intervention. However, it provides optimum drive force and vehicle stability.

The braking intervention is accompanied by sounds specific to the system.

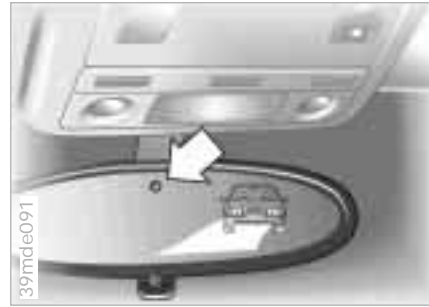
Safety belt tensioner



The safety belt tensioner responds to severe frontal 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. This reduces the tendency to slide under the lap belt.



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, midrange speakers and tweeters furnish you with an impressively full-bodied listening experience. The loudspeakers are oriented in such a manner that they 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.



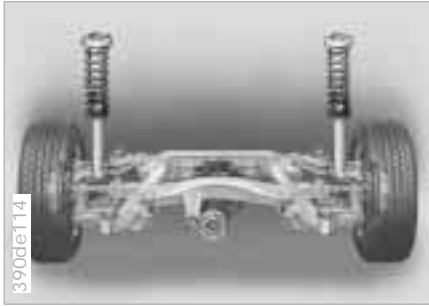
The interior and exterior mirrors with automatic dimming feature reduce the glare from following traffic by adapting the intensity of the reflected images to correspond to levels of light registered by the unit's sensors. The mirrors revert to their undimmed setting as soon as the light source disappears.

One sensor is mounted on the front of the interior mirror housing and is designed to monitor light levels in the area immediately forward of the vehicle. A second sensor is integrated within the mirror's glass.

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.

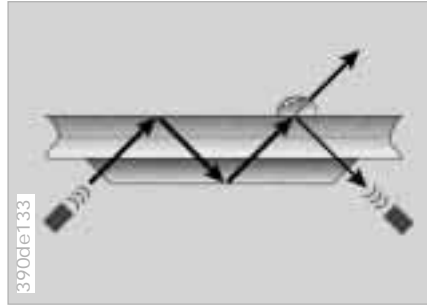
The semisolid reacts chemically to this electrical current, thus providing infinitely-variable dimming of the mirror (electrochromic technology).

As a result, it is no longer necessary to dim the mirror manually, and the driver can maintain full concentration on traffic.



The control arms on the patented integrated aluminum rear axle assembly are not mounted directly on the body. They are mounted elastically on a chassis sub-frame which is joined in turn with elasticity 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 integrated rear axle assembly'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.



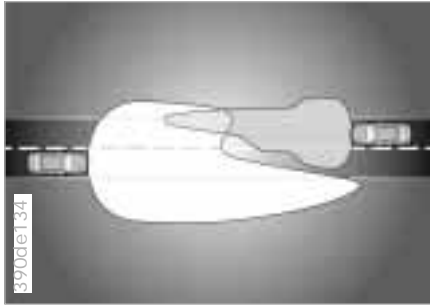
The rain sensor controls windshield wiper operation, depending on how wet the windshield is.

Infrared light is carried along the surface of the windshield in an optical conductor in such a manner that it is reflected completely when the windshield is dry. The quantity of reflected light is measured.

If there is moisture on the glass, the amount of light reflected is reduced since the infrared light at the surface of the windshield can escape. The quantity of reflected light is thus a means of gauging the degree of wetness on the windshield.

When the "Intermittent" wiper speed position is selected, the wiper reacts immediately if water is splashed onto the windshield from vehicles traveling ahead, for example. As a result, the rain sensor provides a contribution to driving safety and comfort.

Xenon lamps



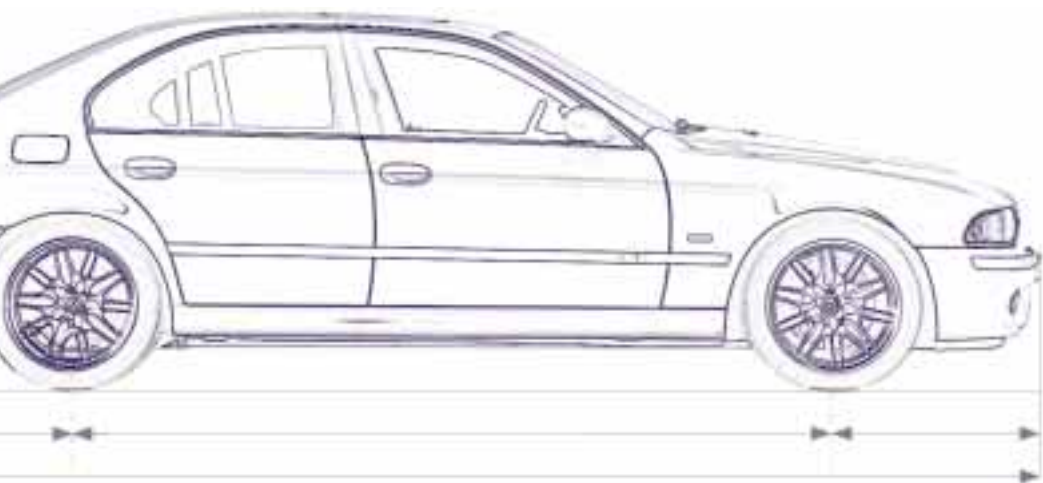
Xenon lamps illuminate the side and front areas of the vehicle with significantly more brightness and uniformity than traditional halogen lamps.

In a xenon lamp, an electric arc replaces the filament in order to generate intense illumination. A gas mixture in a quartz glass tube 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 warm-up period. Maximum brightness is attained in approx. 15 seconds.

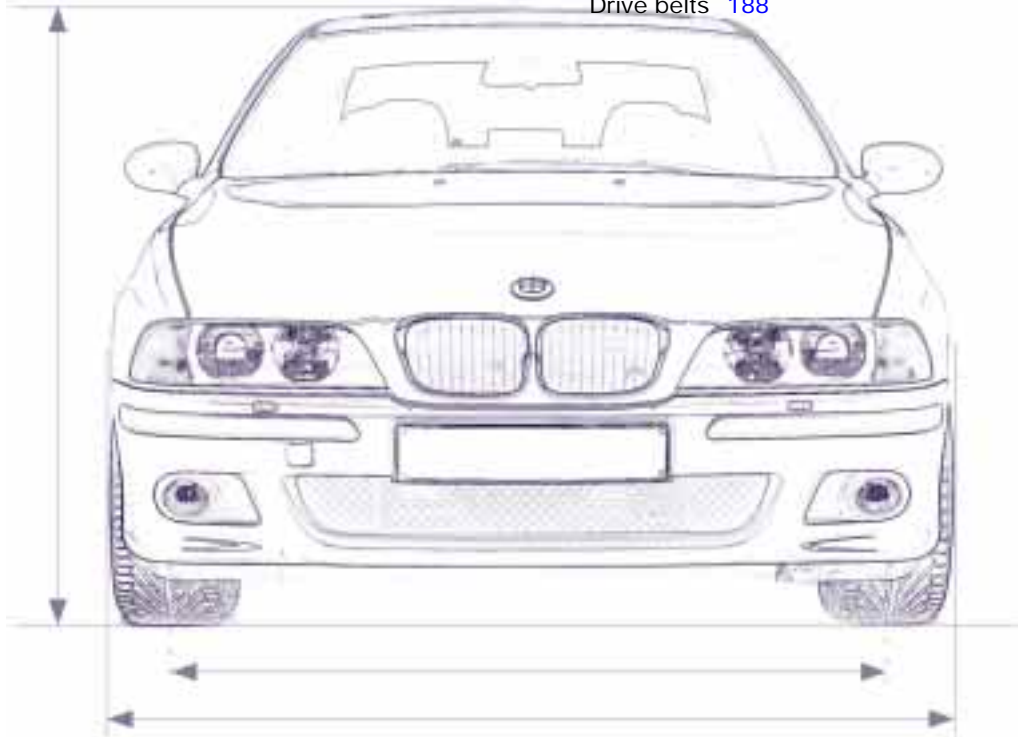
Xenon lamps improve the driver's visibility and orientation to the road, especially in adverse weather conditions and driving situations (driving at night in heavy rain or through road repair areas where there are no lane markers, for instance).

Vehicles with xenon lamps are equipped with automatic headlamp range control. As a result, the highway is always optimally lighted, regardless of load conditions, and drivers in oncoming traffic are not blinded.

Xenon lamps make a significant contribution to highway safety since other highway users, or bicyclists and motorcyclists in the right lane, and pedestrians are more easily detected.



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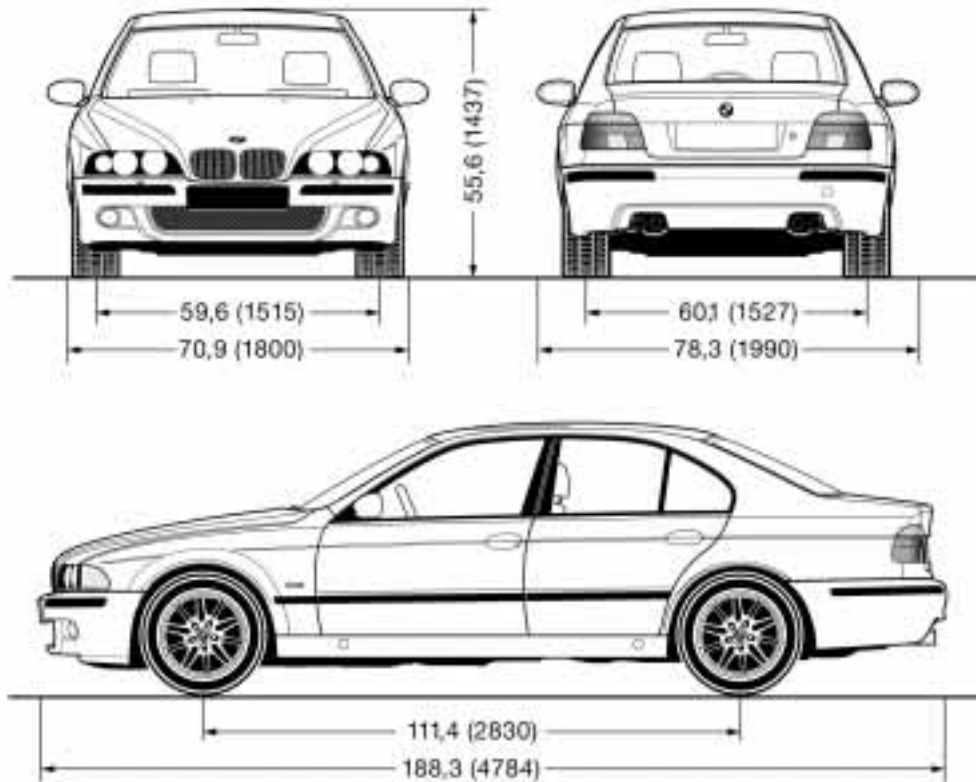
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184 **Engine data**

		BMW M5
Displacement	cu in (cm ³)	301.5 (4,941)
Number of cylinders		8
Maximum output at engine speed	hp RPM	394 6,600
Maximum torque at engine speed	lb ft (Nm) RPM	368 (500) 3,800
Compression ratio	ϵ	11.0
Stroke	in (mm)	3.50 (89.0)
Bore	in (mm)	3.70 (94.0)
Fuel-injection system		Digital-electronic engine management system



All dimensions are given in inches (mm). Minimum turning circle dia.: 38.1 ft (11.6 m)

186 **Weights**

BMW M5		
Curb weight (with one person, ready for operation, full tank of fuel, options not included)	lbs. (kg)	4,024 (1,825)
Approved gross vehicle weight	lbs. (kg)	5,049 (2,290)
Approved front axle weight	lbs. (kg)	2,426 (1,100)
Approved rear axle weight	lbs. (kg)	2,701 (1,225)
Approved roof load capacity	lbs. (kg)	220 (100)
Never exceed either the approved axle weights or the gross vehicle weight.		
Luggage compartment capacity	cu ft (liters)	16.2 (460)

			Notes
Fuel tank reserve	gal. (liters)	approx. 18.5 (approx. 70)	Fuel specification: page 26
	gal. (liters)	approx. 2.5 (approx. 10)	
Windshield washer system, with headlamp washer system Intensive cleaning system	quarts (liters)	approx. 3.7 (approx. 3.5)	For details: page 138
	quarts (liters)	approx. 6.3 (approx. 6.0)	
	quarts (liters)	approx. 1.1 (approx. 1.0)	
Cooling system including heater circuit	quarts (liters)	12.7 (12.0)	For details: page 141
Engine oil and filter change	quarts (liters)	6.9 (6.5)	"BMW High Performance Synthetic Oil" For details: page 140
Manual transmission and differential		-	Oil change at the 1,200 mile service, then the oil never needs to be changed again

188 Electrical system

Battery

12V 110 Ah

Spark plugs

NGK BKR 6 EQUIP or

Bosch FGR 7 DQP

This spark ignition system meets all requirements of the Canadian Interference-Causing Equipment Regulations (ICES-2).

Drive belts

Coolant pump – Generator – Power steering

Drive belt 7 K x 1629

A/C compressor

Drive belt 5 K x 980



You can obtain Original BMW Parts and Accessories, as well as professional advice from your BMW center. ◀

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X

- Xenon lamps [157](#), [181](#)

Refueling



So that you will have important specifications available when you stop to refuel, we recommend that you supplement this table with data which apply to your vehicle.

Fuel

Designation	Premium Unleaded Gasoline
AKI Minimum	91

Engine oil

Quality	
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The oil volume between the two marks on the oil dipstick amounts to approx. 1.1 US quarts (1 liter).

Tire inflation pressures	Summer		Winter	
	Front	Rear	Front	Rear
4 persons				
5 persons or 4 plus luggage				

**We wish you an enjoyable
driving experience.**



The Ultimate Driving Machine

M5 US-En