



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



BMW recommends Castrol



**M roadster**  
**M coupe**

Congratulations, and thank you for choosing a BMW.

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

Please take the time to read this Owner's Manual and familiarize yourself with the information that we have compiled for you before starting off in your new 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. The manual also contains information on care and maintenance designed to enhance operating and driving safety and contribute to maintaining the value of your vehicle throughout an extended service life.

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 Emissions 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 wish 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 pass the Owner's Manual on to the new owner – the manual represents a legally-required element of the vehicle.

If you have additional questions, your BMW center will be glad to advise you.

© 2001 BMW M GmbH  
Munich, Germany  
Reprinting, including excerpts, only with the written consent of BMW M GmbH, Munich.  
Order No. 01 41 0 026 955  
US English XII/2000  
Printed in Germany  
Printed on environmentally friendly paper  
(bleached without chlorine, suitable for recycling).

## 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.

## Your individual vehicle

In buying your BMW, you have decided in favor of a model with individualized equipment and features. 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 which 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 which is not described in this Owner's Manual (a car radio or telephone, for instance), Supplementary Owner's Manuals are enclosed. We ask you to read these manuals as well.

### **Status at time of printing**

BMW pursues a policy of continuous, ongoing development which is conceived to ensure that our vehicles continue to embody the highest quality 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 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 (i.e. 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 (i.e. volatility, composition or 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 which 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. Obey pertinent 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 (e.g. C.B., walkie-talkie, ham radio or similar) may cause extensive damage to the vehicle, compromise its safety, interfere with the vehicle's electrical system or affect the validity of the BMW Limited Warranty. See your 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 202-366-0123 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.



Overview

Controls and features

Operation, care  
and maintenance

Owner service procedures

Advanced technology

Technical data

Index



# Contents

## Overview

- Cockpit 16
- Instrument cluster 18
- Indicator and warning lamps 20
- Hazard warning flashers 24
- Warning triangle 24
- First-aid kit 25
- Refueling 25
- Fuel specifications 26
- Tire inflation pressure 26
- Tire inflation pressure (table) 27

## Controls and features

### Opening and closing:

- Keys 30
- Electronic vehicle immobilizer 31
- Central locking system 32
- Opening and closing from the outside 32
- Opening and closing from the inside 33
- Luggage compartment lid 34
- Electric power windows 35
- Sunroof – coupe 36
- Convertible top – roadster 37

### Adjustments:

- Seats 46
- Mirrors 47

### Safety systems:

- Safety belts 49
- Airbags 51
- Transporting children safely 53

### Driving:

- Steering/Ignition lock 55
- Starting the engine 56
- Switching off the engine 57
- Parking brake 57
- Manual transmission 58
- Turn signal indicators/High beams 58
- Wiper/Washer system 59
- Rear window defroster 60
- Cruise control 61

### Everything under control:

- Odometer 62
- Tachometer 62
- Fuel gauge 62
- Coolant temperature gauge 63
- Engine oil temperature gauge 63
- Service Interval Display 64
- Outside temperature 64
- Clock 64

### Technology for safety and driving convenience:

- Dynamic Stability Control (DSC) 65
- Tire Pressure Warning (RDW) 67

### Lamps:

- Parking lamps/Low beams 69
- Interior lamps 70
- Reading lamps 71

### Controlling the climate for pleasant driving:

- Heating and ventilation/Air conditioner 72
- Seat heating 77

## Controls and features

### Cabin convenience:

- Glove compartment 78
- Storage compartments 78
- Storage boxes 78
- Beverage holder 79
- Ashtray 79
- Cigarette lighter 80

### Loading and transporting:

#### coupe:

- Roll-up cover 81
- Partition net 81
- Cargo loading 82
- Roof-mounted luggage rack 83

## Operation, care and maintenance

### Special operating instructions:

- Break-in procedure 86
- Driving notes 87
- Catalytic converter 88
- Antilock Brake System (ABS) 89
- Disc brakes 91
- Brake system 92
- Winter operation 93
- Power steering 94
- Cellular phone 95
- Radio reception 95
- Hardtop – roadster 96

### Wheels and tires:

- Notes on tire inflation pressure 98
- Tire condition 98
- Tire replacement 99
- Tire rotation 100
- Wheel and tire combinations 101
- Special features of winter tires 102
- Snow chains 102
- Approved wheel and tire specifications 103

### Under the hood:

- Hood 104
- Engine compartment 106
- Fluids for the washer systems 108
- Washer nozzles 108
- Engine oil 109
- Coolant 111
- Brake fluid 112
- Vehicle Identification Number 113

### Care and maintenance:

- The BMW Maintenance System 114
- Caring for your vehicle 115
- Airbags 122
- Storing your vehicle 123

### Laws and regulations:

- Technical modifications 124
- California Proposition 65 Warning 124
- OBD connector 125

# Contents

## Owner service procedures

### Replacement procedures:

- Onboard tool kit [128](#)
- Windshield wiper blades [128](#)
- Lamps and bulbs [129](#)
- Master key with battery-powered lamp [134](#)
- Changing a wheel [135](#)
- Repairing a flat tire [135](#)
- Battery [140](#)
- Fuses [142](#)

### In case of electrical malfunction:

- Power convertible top [143](#)
- Fuel filler door [143](#)

### Assistance, giving and receiving:

- Jump-starting [144](#)
- Towing the vehicle [145](#)

## Advanced technology

- Airbags [150](#)
- Radio reception [150](#)
- Dynamic Stability Control (DSC) [151](#)
- Safety belt tensioner [151](#)
- Interior rearview mirror with automatic dimming feature [152](#)
- Limited slip differential [153](#)

## Technical data

- Engine specifications [156](#)
- Dimensions [157](#)
- Weights [158](#)
- Capacities [159](#)
- Electrical system [160](#)
- Drive belts [160](#)

Everything from A to Z [164](#)





Cockpit 16  
Instrument cluster 18  
Indicator and warning lamps 20  
Hazard warning flashers 24  
Warning triangle 24  
First-aid kit 25  
Refueling 25  
Fuel specifications 26  
Tire inflation pressure 26  
Tire inflation pressure (table) 27

## Overview

## Controls and features

## Operation, care and maintenance

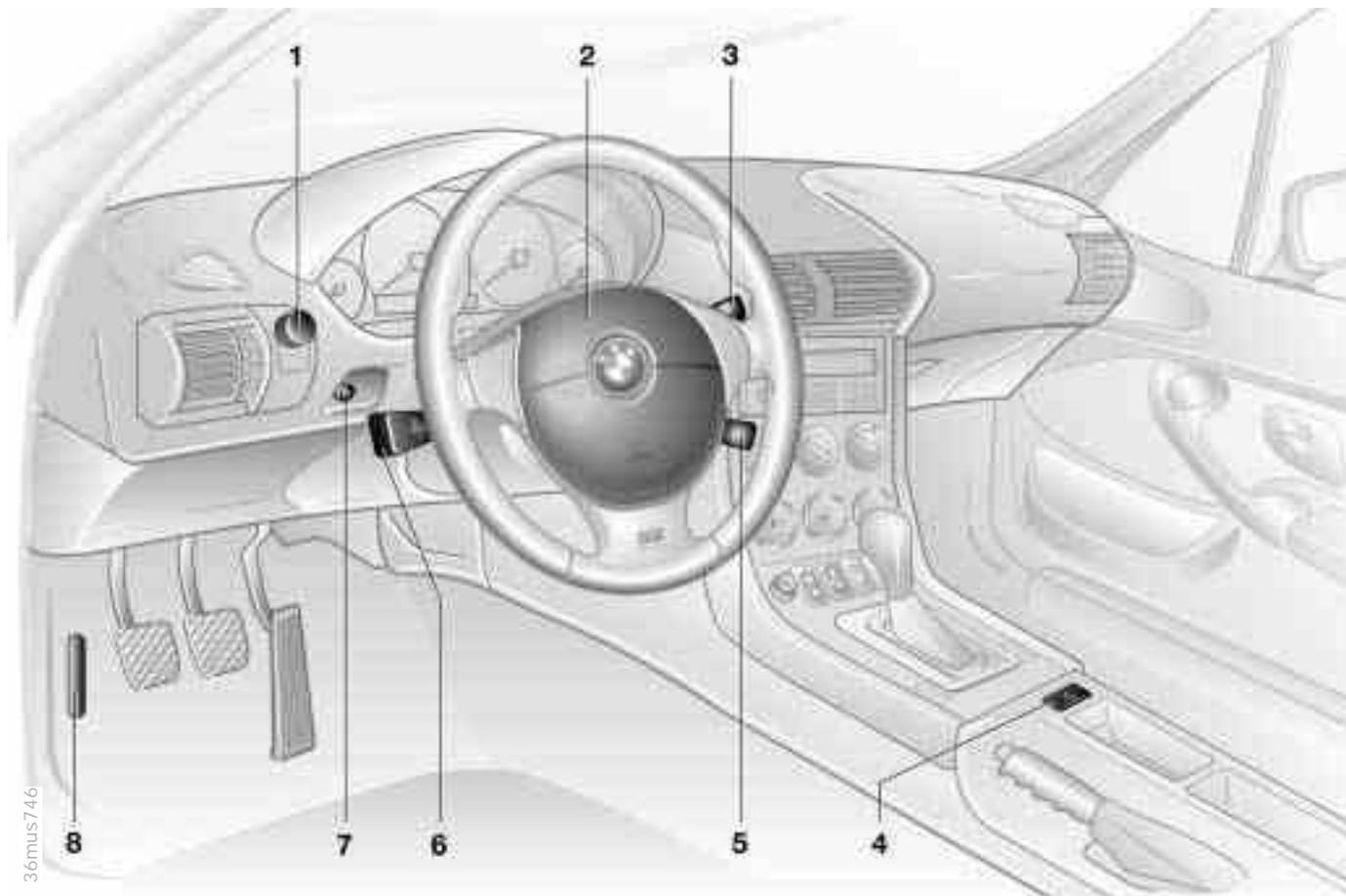
## Owner service procedures

## Advanced technology

## Technical data

## Index

## 16 Cockpit



# Cockpit

- 1 Parking lamps/Low beams [69](#)
- 2 Horn
- 3 Wiper/Washer system [59](#)
- 4 Hazard warning flashers [24](#)
- 5 Cruise control\* [61](#)
- 6 ▷ Turn signal indicator [58](#)
  - ▷ High beams [58](#)
  - ▷ Headlamp flasher [58](#)
- 7 Tire Pressure Warning (RDW) [67](#)
- 8 Hood release [104](#)

## 18 Instrument cluster



# Instrument cluster

- 1 Fuel gauge with indicator lamp for reserve range [62](#)
- 2 Indicator lamp for turn signals [23](#)
- 3 Speedometer
- 4 Indicator and warning lamps for:
  - ▷ Battery charge current [20](#)
  - ▷ High beams [23](#)
  - ▷ Engine oil pressure [20](#)
- 5 Tachometer [62](#)
- 6 Coolant temperature gauge [63](#)  
Also refer to Engine oil temperature gauge on page [63](#)
- 7 Indicator and warning lamps for:
  - ▷ Brake pad wear [22](#)
  - ▷ Brake hydraulic system/Cornering Brake Control (CBC) [20, 21](#)
  - ▷ Parking brake [21](#)
  - ▷ Airbags [21](#)
- 8 Indicator and warning lamps for:
  - ▷ Service Engine Soon [22](#)
  - ▷ Check Filler Cap [22](#)
  - ▷ Safety belts [21](#)
  - ▷ Engine oil level [22](#)
  - ▷ Antilock Brake System (ABS) [22](#)
- 9 Indicator lamp for Dynamic Stability Control (DSC) [21, 22](#)
- 10 Trip odometer [62](#)
- 11 Service Interval Display [64, 114](#)
- 12 Odometer [62](#)
- 13 Indicator and warning lamps for:
  - ▷ Engine electronics [22](#)
  - ▷ Tire Pressure Warning (RDW) [21, 22](#)
- 14 Trip odometer reset button [62](#)

The illustration shows the instrument cluster in the US version. In the Canadian models, some of the indicator and warning lamps have a different appearance. Refer to pages [20](#) to [23](#).

## 20 Indicator and warning lamps

### 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 each 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 below.

### Red: stop immediately



**Battery charge current ●**  
The battery is no longer being charged. The alternator drive belt is defective or there is a malfunction 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. Increased force is required to steer the vehicle if the drive belt is defective. ◀



**Engine oil pressure ●**  
Stop the vehicle immediately and switch off the engine. Check the engine oil level. Top up as required. If oil level is correct: please contact the nearest BMW center.



Do not continue driving, otherwise, the engine could be damaged because of inadequate lubrication. ◀



**Brake hydraulic system ●**  
The brake fluid level is too low. Before driving further, be sure to read the notes on pages [92](#) and [112](#).



**Brake hydraulic system warning lamp for Canadian models.**

# Indicator and warning lamps

## Red and yellow: continue to drive cautiously



If the red warning lamp for the brake hydraulic system comes on together with the yellow indicator lamps for ABS and DSC:



The entire ABS, CBC and DSC control system has failed.



Continue to drive cautiously and defensively and avoid full brake applications. Have the system

checked by your BMW center as soon as possible.

For additional information, refer to pages [65](#), [89](#).



Warning lamps for Canadian models.



## Red: an important reminder



Parking brake

Comes on when the parking brake is applied.

For additional information, refer to page [57](#).



Parking brake warning lamp for Canadian models.



Please fasten your safety belt ●  
Together with an acoustic signal.

Comes on until the safety belts are fastened.

For additional information on safety belts, refer to page [49](#).



Airbags ●

Please have the system inspected by your BMW center.

For additional information, refer to pages [51](#), [150](#).

## Yellow: stop immediately



Tire Pressure Warning (RDW) ●

Flashing warning lamp: a flat tire has occurred. To come to an immediate stop, reduce speed, while avoiding any sudden, jerky braking or steering maneuvers.

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

## 22 Indicator and warning lamps

### Yellow: check as soon as possible



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

For additional information, refer to page [89](#).



Antilock Brake System warning lamp for Canadian models.



**Engine oil level** ●  
Comes on while driving: the oil level is at the absolute minimum; refill as soon as possible. Do not drive more than approx. 30 miles (50 km) until you add oil.

For additional information, refer to page [109](#).



**Engine oil level** ●  
Comes on after the engine has been shut off: add engine oil at your earliest opportunity (when you stop to refuel).

For additional information, refer to page [109](#).



**Engine oil level** ●  
Comes on for a short time (approx. 15 seconds) after the

engine has been started: please have the system checked by your BMW center.



**Brake pads** ●  
Have the brake pads checked. For additional information, refer to page [92](#).



**Tire Pressure Warning RDW** ●  
RDW has been switched off via the button 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 pages [26](#), [67](#).



**Dynamic Stability Control (DSC)** ●  
Indicator lamp flashes:

The system is active and governs drive force and braking force.

If the indicator lamp fails to go out after the engine is started, or if it comes on during normal driving and stays on: DSC has been switched off via the button or has been deactivated because of a malfunction.

In the event of a malfunction, have the system checked by the nearest BMW center.

For additional information, refer to page [65](#).



**Service Engine Soon** ●  
If the indicator lamp comes on 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, refer to page [125](#).



Service Engine Soon warning lamp for Canadian models.



**Engine electronics** ●  
There is a fault in the engine's electronic control system. You can continue to drive with reduced engine output or engine speed. Please have the system checked by your BMW center.



**Check Filler Cap** ●  
If the indicator lamp lights up with the filler cap properly closed: there is a fault in the fuel system. The system should be checked at the earliest possible opportunity at your BMW center.

For additional information, refer to page [25](#).

# Indicator and warning lamps

## Green: for your information



Turn signal indicators

Flashes when the turn signal indicators are in operation.

Rapid flashing indicates a system malfunction.

For additional information, refer to page [58](#).

## Blue: for your information



High beams

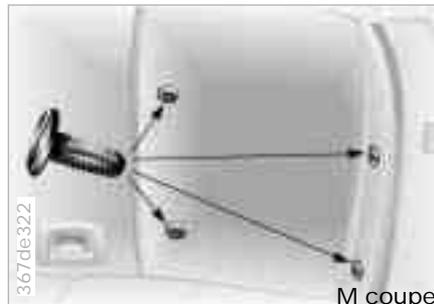
Lights up when the high beams are on or the headlamp flasher is actuated.

For additional information, refer to page [58](#).



The button flashes intermittently when the hazard flashers are on.

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



### M coupe

The warning triangle is located in the luggage compartment at the rear right behind a trim panel.

Release the cover:

- 1 Fold the luggage compartment floor mat up.
- 2 To release, turn the four mounting clips (arrows) of the right-hand trim panel on the rear wall of the luggage compartment approx.  $\frac{1}{4}$  turn with a coin or screwdriver.
- 3 Pull out the clips and remove the trim panel.

### M roadster

The warning triangle is located in the luggage compartment in the area of the sill.

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

## First-aid kit\*

### M coupe

In the luggage compartment at the left rear. Release the Velcro® fasteners.

### M roadster

In the luggage compartment on the left in a storage area; swing retaining strap upward.

 Some of the articles in the first-aid kit may be used within a limited time only. For this reason, check the expiration dates of each of the items regularly, and replace any whose expiration dates have passed. You can acquire replacements in any drugstore or pharmacy. Comply with legal requirements which cover availability of a first-aid kit in the vehicle. ◀

## Refueling



 Before filling the tank, shut off the engine, as otherwise fuel cannot flow into the tank and the Service Engine Soon warning lamp may come on. Refer to page 22. ◀

Open the fuel filler cap:  
Open the fuel filler door, turn the fuel filler cap counterclockwise and remove the cap. Place the filler cap in the bracket attached to the fuel filler door.

 Open the filler cap carefully. If you do not, fuel could spray out. ◀

To unlock if the central locking system malfunctions, refer to page 143.

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

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

The fuel tank is full, whenever the fuel nozzle shuts off the first time, as is specified for proper service.

Tank capacity: refer to page 159.

Close the fuel filler cap:  
Position the cap on the neck. Turn the cap clockwise to the stop.

 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 Check Filler Cap lamp. ◀

Close the fuel filler door.

## 26 Refueling

 When handling fuels, comply with all of the applicable safety precautions displayed at gas stations. Never carry spare fuel containers in your vehicle. Whether they are empty or full, these containers can leak, cause an explosion, or lead to fire in the event of a collision. ◀

## 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



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

On the next page you will find all pressure specifications, indicated in psi (kilopascal [kPa]) with the tires at ambient temperature.

 After correcting the tire inflation pressure, re-initialize the Tire Pressure Warning (RDW) system, refer to page [67](#). ◀

## 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 driving instability, tire damage and accidents. ◀

### Comply with tire approval specifications

The inflation pressures in the table apply to tires made by BMW-approved manufacturers. Your BMW center is familiar with these pressures. Higher pressures may be specified for tires made by other manufacturers. You will find a list of approved tires on page [103](#).

Your vehicle is equipped with tires that meet both US standards and European standards. We recommend the exclusive use of BMW-approved tires.

BMW	Tires				
	All tire pressures are in psi (kilopascals [kPa])				
M roadster	Front: 225/45 ZR 17	32 (220)	–	35 (240)	–
M coupe	Rear: 245/40 ZR 17	–	32 (220)	–	38 (260)
	225/45 R 17 90 H M+S	32 (220)	35 (240)	35 (240)	38 (260)



Have winter tires mounted at your BMW center or a tire dealer. ◀

**Opening and closing:**

Keys 30

Electronic vehicle  
immobilizer 31

Central locking system 32

Opening and closing from the  
outside 32Opening and closing from the  
inside 33

Luggage compartment lid 34

Electric power windows 35

Sunroof - coupe 36

Convertible top - roadster 37

**Adjustments:**

Seats 46

Mirrors 47

**Safety systems:**

Safety belts 49

Airbags 51

Transporting children safely 53

**Driving:**

Steering/Ignition lock 55

Starting the engine 56

Switching off the engine 57

Parking brake 57

Manual transmission 58

Turn signal indicators/High  
beams 58

Wiper/Washer system 59

Rear window defroster 60

Cruise control 61



**Everything under control:**

Odometer 62  
 Tachometer 62  
 Fuel gauge 62  
 Coolant temperature gauge 63  
 Engine oil temperature gauge 63  
 Service Interval Display 64  
 Outside temperature 64  
 Clock 64

**Technology for safety and driving convenience:**

Dynamic Stability Control (DSC) 65  
 Tire Pressure Warning (RDW) 67

**Lamps:**

Parking lamps/Low beams 69  
 Interior lamps 70  
 Reading lamps 71

**Controlling the climate for pleasant driving:**

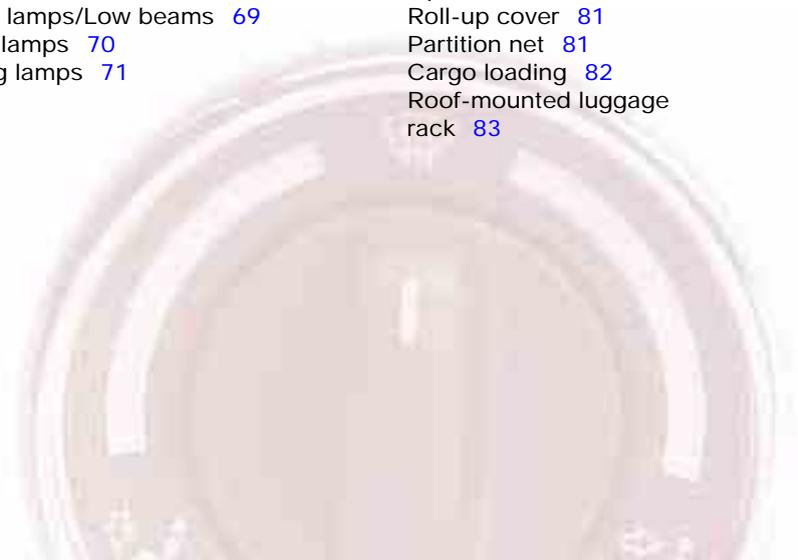
Heating and ventilation/  
 Air conditioner 72  
 Seat heating 77

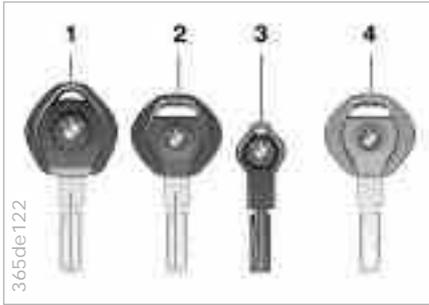
**Cabin convenience:**

Glove compartment 78  
 Storage compartments 78  
 Storage boxes 78  
 Beverage holder 79  
 Ashtray 79  
 Cigarette lighter 80

**Loading and transporting cargo:**

coupe:  
 Roll-up cover 81  
 Partition net 81  
 Cargo loading 82  
 Roof-mounted luggage rack 83

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



- 1 Master key with battery-powered lamp (switch on by pressing the BMW symbol)
- 2 Master key without lamp
- 3 Spare key for storage in a safe place such as your wallet. This key is not intended for continuous use
- 4 Door and ignition key  
The luggage compartment lid and the storage boxes\* cannot be opened with this key – this is useful 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 the next page).



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 that key to position 2 in the ignition lock once (ignition switched on) and then back. This allows the electronic vehicle immobilizer to "learn" the new key. ◀

## The key to security

The electronic vehicle immobilization unit increases the anti-theft protection of your BMW – you do not have to adjust or activate anything. 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 a key is lost, 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 which 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. ◀

## 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

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 the equipment. ◀

### The concept

The central locking system becomes operational when the doors are closed. The system simultaneously engages and releases the locks on the

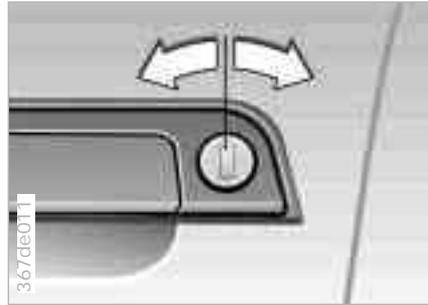
- ▷ doors
- ▷ luggage compartment
- ▷ fuel filler door.

The central locking system can be operated

- ▷ from outside via the door locks and the luggage compartment lock (M coupe: open only)
- ▷ from inside via the safety lock buttons (locks doors only).

When the system is actuated from outside the vehicle, the anti-theft protection is simultaneously activated. It prevents the doors from being unlocked with the lock buttons or release handles.

The central locking system unlocks automatically in the event of an accident. In addition, the hazard warning flashers and interior lamps come on.



### With the key

 Do not lock the vehicle if there are persons still inside, as it cannot be unlocked from the inside. ◀

### Convenience locking mode

Electrically powered windows can also be closed via the door locks:

When the doors are closed, hold the key in the "Lock" position.

 Watch the closing process carefully and be sure that no one is trapped by the closing motion. The movement stops when you release the key. ◀

### Manual operation

(in the event of electrical failure)

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

# Opening and closing from the inside

## To unlock and open the doors

- ▷ Pull the door handle of a door twice: the initial pull unlocks the door, and the second opens it.

## To engage the locks

When the lock button of any door is pressed down, the doors and luggage compartment are locked. The anti-theft protection system is not activated.

The fuel filler door also remains unlocked to allow refueling.

To avoid being accidentally locked out of the vehicle:

- ▷ The vehicle cannot be locked with the lock button when the driver's door is open.
- ▷ The lock button on the passenger's door only operates the central locking system if both doors are closed.



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. ◀

## 34 Luggage compartment lid



### The lock

The illustration depicts the luggage compartment lock of the M roadster as an example.

The operation and function for the M coupe are the same as for the M roadster.

Only the master keys (refer to page 30) will fit in the luggage compartment lock.

On the M coupe the central locking system is only actuated during opening.

### Locking separately

(not on the M coupe)

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

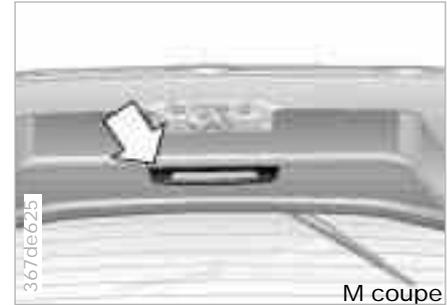
This locks the luggage compartment and disengages it from the central locking system. If you then surrender only the door and ignition key (refer to page 30), access to the vehicle through the luggage compartment is not possible. This is recommended for valet parking, for instance.

### Manual operation

(in the event of electrical malfunction)

Turn the master key in the lock of the luggage compartment lid to the left to the stop – the luggage compartment opens slightly.

The luggage compartment is locked again as soon as it is closed.



### To close

The illustration depicts the luggage compartment lid of the M coupe.

The handle recess in the interior trim panel of the luggage compartment lid (arrow) makes it easier to pull the lid down.

On the M roadster, the handle recess is located to the left of the lock mechanism.



To avoid injuries, be sure that the travel path of the luggage compartment lid is clear when it is closed, as with all closing procedures. ◀

## Luggage compartment lid Electric power windows

**⚠** Do not drive with the luggage compartment lid open, since exhaust fumes could penetrate the interior of the vehicle. Should it be absolutely necessary to operate the vehicle with the luggage compartment lid open (coupe; roadster with closed convertible top):

- ▷ Close all windows. On the coupe, close the sunroof.
- ▷ Increase the air supply of the heating and ventilation system to a high level. Refer to page [72](#). ◀



### Opening and closing windows

From ignition key position 1 and up:

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

After the ignition has been switched off: Actuation is still possible for up to 15 minutes in ignition key position 0 or if the ignition key has been removed, as long as no doors have been opened.

**⚠** 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 ensure that they are not obstructed in any way. Unsupervised use of these systems can result in serious personal injury. Remove the ignition key to deactivate the electric power windows whenever you leave the 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. ◀

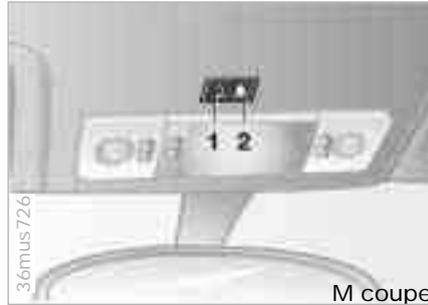
For convenience closing via the door lock, refer to page [32](#).

## 36 Electric power windows Sunroof\* – coupe

### Jam protection

If one of the windows comes into contact with an object between the window and roof frame when it is closing, the closing cycle is interrupted immediately and the window will open again slightly.

 This jam protection function can be overridden by pressing the switch beyond the resistance point and holding it. ◀



### Lifting – Closing

From ignition key position 1 and up:

To lift: press button 1.

To close: press button 2.

 To prevent injuries, exercise care when closing the sunroof. Keep it in your field of vision until it is closed. ◀

To avoid pressure or drafts in the passenger compartment when the sunroof is open, keep the air vents in the instrument panel open and increase the air supply if necessary. Refer to page 72.

## Weather protection

The convertible top combines reliable protection from the elements with simple, convenient operation. Here are a few tips to ensure that you have pleasure with your roadster.

It is advisable to close the convertible top when the vehicle is parked. The closed convertible top not only protects the passenger compartment from unforeseeable damage from the weather, it also provides a certain degree of theft protection. In addition, keep valuables only in the locked luggage compartment, even with the convertible top closed.

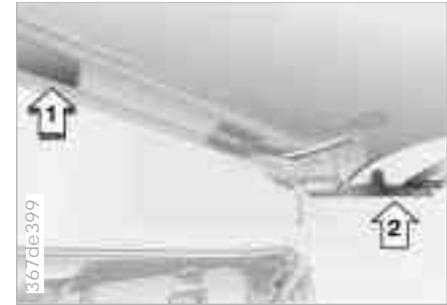
Never mount a roof-mounted luggage rack on the convertible top. Please contact your BMW center for suitable securing devices and additional accessories.

To prevent damage, do not operate the convertible top at temperatures at or below the freezing point.



## To open

- 1 With the doors closed, lower the side windows a few inches (centimeters).
- 2 To release the convertible top: pull the levers outward on the left and the right of the convertible top frame (refer to the illustration).



- 3 Raise the convertible top approx. 8 inches (20 cm) from the convertible top frame on the inside to relieve tension on the top. Refer to arrow 1.

 Be sure that the convertible top folds at the front linkage joints first (refer to arrow 2). If it does not, the convertible top linkage could be bent. ◀

- 4 Continue to raise the top at the front and push it toward the rear into the convertible top compartment. In the process, make sure the rear window is laid down evenly and free of creases. To prevent the rear window from being scratched, a soft cloth should be laid in the window fold.

## 38 Manual convertible top – roadster

5 Fold the release lever against the convertible top frame.

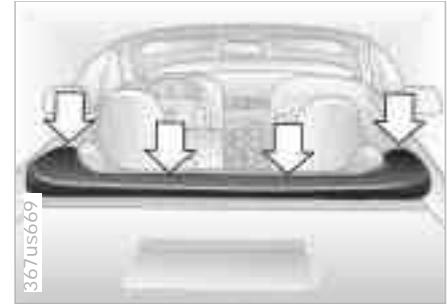
 In order to avoid subsequent moisture damage, do not open and store the convertible top when it is wet (refer also to the chapter on vehicle care). ◀



### To mount the cover

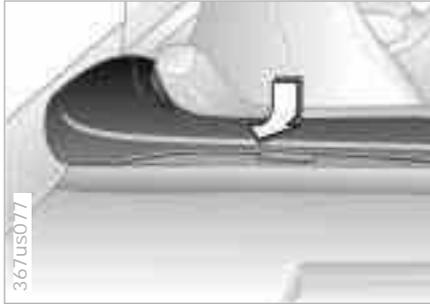
The illustration depicts a representative schematic of the fasteners for the convertible cover.

To secure, press the outer ring of the cover fastener onto the mating piece on the vehicle (refer to the arrows).



The attachment points of the cover are indicated by the four arrows in the illustration.

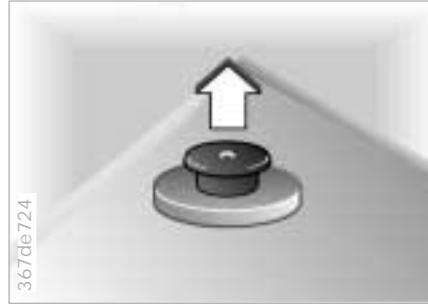
- 1 Position the convertible cover on the convertible top compartment and align the upper portions of the fasteners with the lower portions on the vehicle.
- 2 Lift the cover at the rear, reach underneath it and engage the two middle fasteners.
- 3 Attach the front fasteners.



- 4 Push the peripheral frame of the cover under the edge of the convertible top compartment.
- 5 Check the convertible cover to be sure it is properly secured.

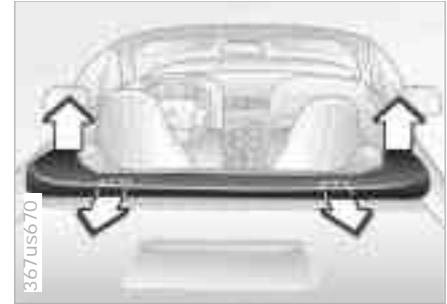
 In order to avoid damage and soiling of the inside of the convertible top, always drive with the convertible cover installed. ◀

 Be sure that the cover is secured properly on the vehicle. If it is not firmly secured, the flow of air while driving could loosen the cover at higher speeds. ◀



## To close

- 1 To remove the convertible top cover:
  - ▷ Loosen the fasteners. Pull the cap of the latch upward. Refer to the arrow.



- ▷ Loosen the front fasteners (outer arrows).
- ▷ Pull the outer frame of the cover under the edge of the convertible top compartment.
- ▷ Lift the cover from the rear and release the middle fasteners (middle arrows).

## 40 Manual convertible top – roadster

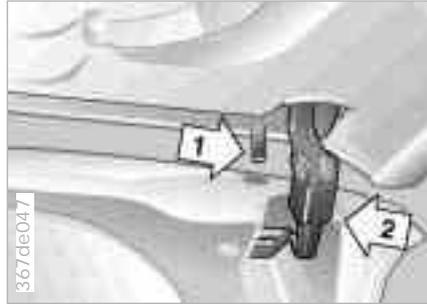


- ▷ To avoid damage, carefully fold the cover and store it in the luggage compartment.

 Do not position heavy objects on the cover.

If you store the cover away from the vehicle, the cover should be spread out. ◀

- 2 When the doors are closed, lower the side windows slightly.



- 3 Pull the release lever away from the frame as far as possible.
- 4 Holding the convertible top at the front convertible top frame, lift it out of the convertible top compartment and fold it forward.

 When folding the convertible top forward, do not grasp it by the side linkage. If you do so, there is a risk of injury to your hands and fingers. ◀

- 5 Insert the pins 1, on the left and the right, into the guides in the windshield frame. Using the handle recess in the center of the convertible top frame, pull the convertible top down. Hold the top in this position and secure both fasteners (refer also to page 97).

 Be sure that the fastener hooks 2 on the left and right are securely engaged in the frame of the windshield. If they are not, the convertible top could open while the vehicle is moving. ◀

 At higher speeds, it may occur that the lower air pressure which is created in the passenger compartment will cause the top or the rear window to flutter. Increase the air supply via the ventilation controls so that a low pressure draft does not occur in the vehicle. ◀

## Power convertible top\* - roadster

### Weather protection

The convertible top combines reliable protection from the elements with simple, convenient operation. Here are a few tips to ensure that you have pleasure with your roadster.

It is advisable to close the convertible top when the vehicle is parked. The closed convertible top not only protects the passenger compartment from unforeseeable damage from the weather, it also provides a certain degree of theft protection. In addition, keep valuables only in the locked luggage compartment, even with the convertible top closed.

Never mount a roof-mounted luggage rack on the convertible top. Please contact your BMW center for suitable securing devices and additional accessories.

To prevent damage, do not operate the convertible top at temperatures at or below the freezing point.

To conserve the battery, it is advisable to operate the top only with the engine running.

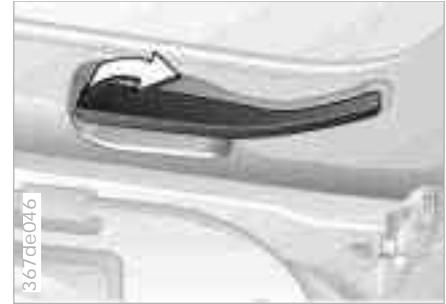


Operate the convertible top only when the vehicle is stationary.

Do not lay objects on the convertible top, since they would fall off when the convertible top is operated and cause damage or injuries.

Do not reach into the convertible top mechanism during opening and closing. Keep children away from the moving parts of the convertible top during operation.

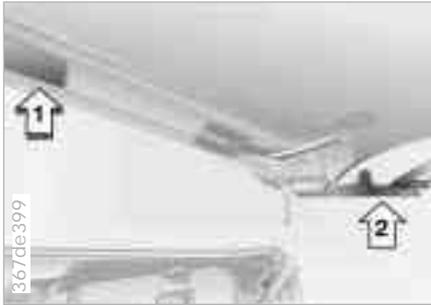
The automatic sequence is interrupted immediately if the button for actuating the top (pages 42 and 45) is released. The sequence can be continued in the desired direction by pressing the button. ◀



### To open

- 1 With the doors closed, lower the side windows a few inches (centimeters).
- 2 To release the convertible top: pull the levers outward on the left and the right of the convertible top frame (refer to the illustration).

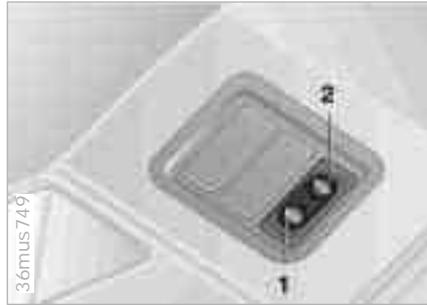
## 42 Power convertible top\* – roadster



3 Raise the convertible top approx. 8 in (20 cm) from the convertible top frame on the inside to relieve tension on the top. Refer to arrow 1.

 Be sure that the convertible top folds at the front linkage joints first (refer to arrow 2). If it does not, the convertible top linkage could be bent. ◀

4 Press the release lever against the frame of the top.

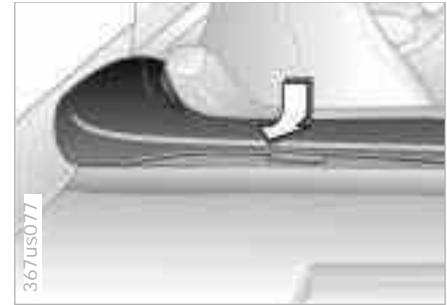
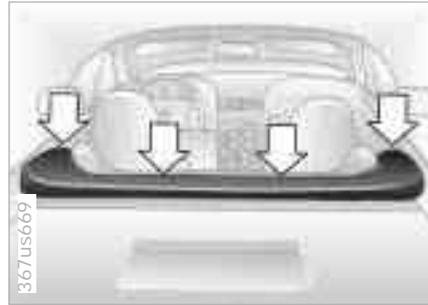


5 Hold the footbrake down during the entire opening procedure.

6 Lift the convertible top frame. Press and hold the button for convertible top operation in the "Open" direction (2) until the opening process is completed and the convertible top is folded into the convertible top compartment.

 If the convertible top has not been lifted far enough, or if the footbrake is not applied, the motor which operates the convertible top will not operate. ◀

 In order to avoid subsequent moisture damage, do not leave the convertible top open when it is wet (refer also to the chapter on vehicle care). ◀



## To mount the cover

The illustration depicts a representative schematic of the fasteners for the convertible cover.

To secure, press the outer ring of the cover fastener onto the mating piece on the vehicle (refer to the arrows).

The attachment points of the cover are indicated by the four arrows in the illustration.

- 1 Position the convertible cover on the convertible top compartment and align the upper portions of the fasteners with the lower portions on the vehicle.
- 2 Lift the cover at the rear, reach underneath it and engage the two middle attachments.
- 3 Attach the front fasteners.

- 4 Push the peripheral frame of the cover under the edge of the convertible top compartment.
- 5 Check the convertible cover to be sure it is properly secured.

 In order to avoid damage and soiling of the inside of the convertible top, always drive with the convertible cover installed. ◀

 Be sure that the cover is secured properly on the vehicle. If it is not firmly secured, the flow of air while driving could loosen the cover at higher speeds. ◀

## 44 Power convertible top\* – roadster



### To close

1 To remove the convertible top cover:

- ▷ Loosen the fasteners. Pull the cap of the latch upward. Refer to the arrow.

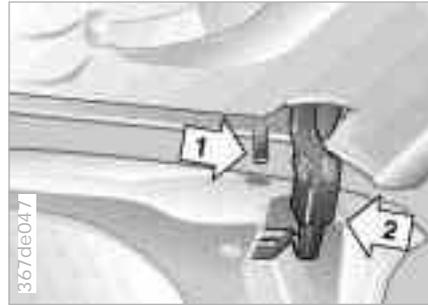
- ▷ Release the front fasteners (outer arrows).
- ▷ Pull the outer frame of the cover under the edge of the convertible top compartment.
- ▷ Lift the cover from the rear and release the middle fasteners (middle arrows).

- ▷ To avoid damage, carefully fold the cover and store it in the luggage compartment.



Do not position heavy objects on the cover.

The cover should be spread out if you store it away from the vehicle. ◀



- 2 When the doors are closed, lower the side windows slightly.
- 3 Pull the release lever away from the frame as far as possible.
- 4 Hold the footbrake down during the entire closing procedure.
- 5 Press and hold the button for convertible top operation in the "Close" direction (1) until the closing process is completed and the convertible top frame has docked against the windshield frame.
- 6 Insert the pins 1, on the left and the right, into the guides in the windshield frame. Using the handle recess in the center of the convertible top frame, pull the convertible top down. Hold the top in this position and secure both fasteners (refer also to page 97).

 If the footbrake is not applied, the motor which operates the convertible top will not operate. ◀

 Be sure that the fastener hooks 2 on the left and right are securely engaged in the frame of the windshield. If they are not, the convertible top could open while the vehicle is moving. ◀

 At higher speeds, it may occur that the lower air pressure which is created in the passenger compartment will cause the top or the rear window to flutter. Increase the air supply via the ventilation controls so that a low pressure draft does not occur in the vehicle. ◀

## 46 Seat adjustment

For maximum safety, please comply with the following:

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

Be sure that the safety belt is fastened 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. When adjusting your seat, select a position that provides the maximum distance between you and the steering wheel, instrument panel and door while still allowing comfortable and safe access to all vehicle controls. ◀

### 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. In the ideal sitting posture, your head extends along a straight line from your spine.

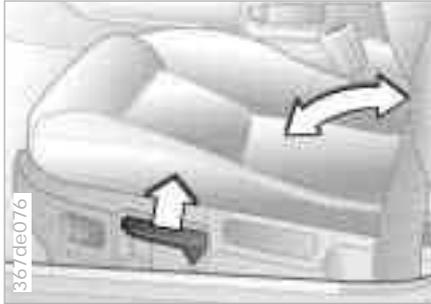
For long-distance driving, you may wish to increase the backrest tilt angle slightly to reduce muscular tension. You should also be able to grasp the highest point of the steering wheel with your arms slightly bent.

After a seat adjustment in the coupe, adjust the height of the safety belt also. Refer to page [49](#).



1 Height\*

2 Backward/Forward adjustment



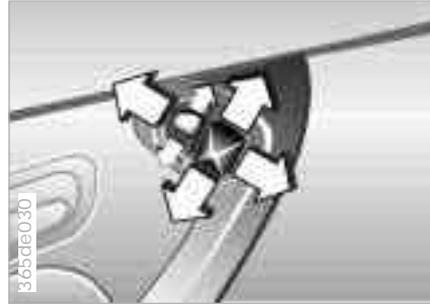
### Backrest angle

Pull the lever and apply or remove weight as required.

 Read and comply with the adjustment instructions on page 46. Failure to do so can result in diminished personal safety. ◀

### Head restraints

The head restraints are integrated into the backrests. Head restraints reduce the risk of spinal injury in the event of an accident.



### Exterior mirrors

Make adjustments with the large, four-directional mirror switch.

Change to the other rearview mirror with the smaller switch.

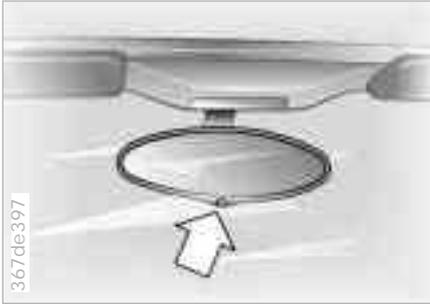
- ▷ Push the switch up – mirror on the driver's side.
- ▷ Push the switch down – mirror on the passenger's side.

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

 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. ◀

### Electric defrosting\*

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



### **Interior rearview mirror with automatic dimming feature**

By responding to the effects of ambient light and the glare from following traffic, this mirror automatically dims through an infinitely variable range. There are two photocells for automatic dimming. One photocell (arrow) is positioned in the mirror frame, while the other is slightly offset on the back of the mirror.

The mirror switches to its clear, undimmed mode whenever you shift into reverse.

For the mirror to function properly, keep the photocells clean and the area between the inside rearview mirror and the windshield free of any obstruction, such as stickers etc.

For further information regarding the mirror's electrochromic technology, refer to page [152](#).

### **Vanity mirrors**

Fold the sun visors down and push the cover (coupe only) to the side.



## Drive with your safety belt on

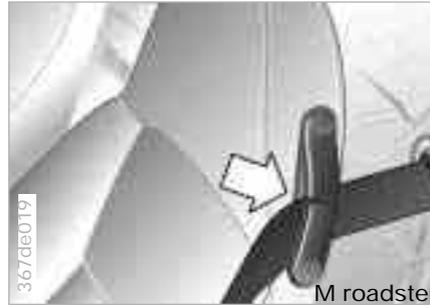
Fasten your safety belt before beginning every trip.

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 to its reel.

The safety belt locks:

- ▷ In an abrupt stop or a collision.
- ▷ If it is pulled out very quickly.
- ▷ During sudden braking or acceleration.
- ▷ When the vehicle is at an extreme angle.



## M roadster

Make sure the safety belts are routed through the belt guides on the seat backrests.



## Safety belt height adjustment – M coupe

You can adjust the safety belts to fit your own physical dimensions by using the safety belt height adjustment mechanism.

Downward adjustment:  
Press the button down (arrow 1).

Upward adjustment:  
Grasp the deflection fitting on the sides and slide it upward (arrows 2).



Comply with the following instructions for wearing safety belts. If you do not, maximum personal protection will not be provided and the safety function of the belt is limited. These instructions also apply for vehicle 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 your pelvis and shoulder, wear it as snugly against your body as possible. Do not route the belt across hard or fragile objects. Do not route the belt across your neck, or run it across sharp edges. Be sure that the belt does not become caught or jammed.

Avoid wearing bulky clothing which will prevent proper belt fit. Pull the safety belt across your shoulders frequently to re-tension it. 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 also wear their safety belt at all times, taking care to ensure that the lap belt fits against the lower hips and does not exert pressure on the abdominal area. ◀

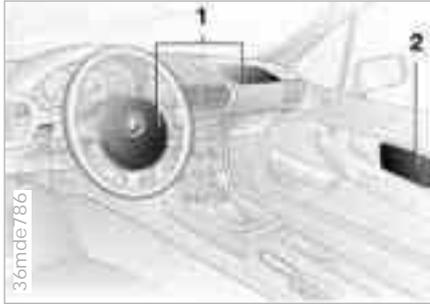
For care and cleaning, refer to page [120](#).



If the safety belt system has been stressed as a result of an accident or if it has been damaged in any other way: have the belt system, including the safety belt tensioner replaced by an BMW center. In addition, have your BMW center inspect the safety belt anchors.

If a child restraint system was in your vehicle during an accident, consult the manufacturer's instructions regarding replacement. ◀

# Airbags



- 1 Front airbags on the driver and passenger side
- 2 Side airbags on the driver and passenger side

## Protective effect

The front airbags help protect the driver and passenger in the event of a head-on collision where the protection provided by the safety belt alone would not be adequate. The side airbags help provide protection in the event of a side collision. Each side airbag provides support to the side chest area.



The illustration depicts schematically the primary directions of vehicle impact which initiate 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. ◀

## Operational readiness



The indicator lamp on the instrument cluster shows the airbag system's operational readiness starting with ignition key position 1.

System operational:

- ▷ The indicator lamp comes on briefly before going 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 a high-intensity frontal impact occurring within its normal response range.

Please have your BMW center inspect the system immediately.

**Sitting correctly with airbags**

 For your safety, comply with the following instructions for the airbags. If you do not, the airbags may not be able to provide their maximum protection. All passengers in the vehicle should be aware of and comply with this information:

The airbags are supplemental restraint devices designed to provide extra protection; they are not a substitute for safety belts. Wear your safety belt at all times.

Adjust your seat to a position that is comfortable for you, allowing unrestricted vehicle operation, and is not closer to the steering wheel than necessary.

Always grasp the steering wheel by the steering wheel rim, keeping your hands at the "9-o'clock" and "3-o'clock" positions in order to minimize any risk of injury to hands or arms if the airbag does deploy.

There should not be any other people, animals or objects between the airbag and the passenger in that seat.

Do not use the cover panel for the front airbag on the passenger side as a storage area.

Do not apply adhesive materials to the cover panels of the airbags, cover them or modify them in any other way.

If you use a child restraint system, read carefully and comply with the instructions on page 53.

Be sure that child seats are installed correctly and with the greatest possible distance from the airbag in the side trim panel. Do not allow children to lean out of the child's seat in the direction of the side trim panel. Otherwise, serious injuries could occur if the airbag is triggered. ◀

Even when you have complied with all of these guidelines, there is still a small residual risk of minor facial, hand and arm injuries from airbag deployment occurring in isolated instances. The ignition and inflation noise may cause a mild temporary hearing loss in extremely sensitive individuals.

Corresponding airbag safety precautions are provided on both sun visors and the instrument panel (US models).

For additional information concerning the airbag system, refer to pages 122 and 150.



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



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



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

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

If the airbag deploys and hits the backrest of the rear-facing child seat, it is likely that the child sitting in the rear-facing child seat will be seriously injured or killed.

If it is necessary for a child (not an infant) to ride in the vehicle, certain precautions should be taken. First, move the passenger seat as far away from the instrument panel as possible. This important precaution is intended to maximize the distance between the airbag and the child. Older children should be tightly secured with the safety belt. Younger children should be secured in an appropriate forward-facing child restraint system that has first been secured with a safety belt.

In the interest of the child's safety, please read carefully and comply with the instructions for installation and use provided by the child restraint's manufacturer whenever you use such a system.

Do not allow children to lean out of a child restraint system toward the door or instrument panel, as otherwise serious injuries may result if the airbag deploys. Always ensure that all occupants (of all ages) remain properly and securely restrained at all times. Read carefully and comply with the safety precautions covering safety belts on pages 49, 50. If you do not, the protective function of the safety belts will be limited. ◀

## 54 Transporting children safely



### To lock the belt

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

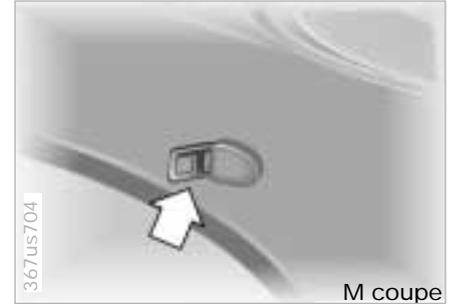
### Child restraint installation

The safety belt on the passenger side can be locked for mounting and securing child restraint systems.

A label with operating instructions is attached to the belt next to the sliding latch plate.

### To release the belt

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

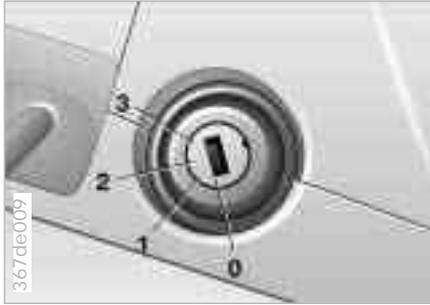


### M coupe

For the use of child restraint systems with a tether strap, an additional mounting point is provided in the coupe at the right rear on the roof frame.

Attach the tether strap hook to the mounting point. Adjust the tether strap according to the child restraint manufacturer's instructions.

# Steering/Ignition lock



## 0 Steering lock engaged

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

An acoustic warning sounds 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.

## 1 Steering lock disengaged

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

Individual electrical equipment and accessories are available for use.

## 2 Ignition on

All electrical equipment and accessories are available for use.

## 3 Starting the engine

When starting, depress the clutch, since a lock otherwise prevents the engine from being started.

### **Before starting**

- ▷ Engage the parking brake.
- ▷ Put manual-shift gear lever in idling position.
- ▷ Depress the clutch pedal.



Do not run the engine 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. Do not 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 after the engine starts. ◀

Do not allow the engine to warm up by allowing it to run while the vehicle remains stationary. Instead, begin driving immediately at a moderate engine speed.

Should the engine fail to start on the first attempt (if it 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 approx. 3,300 ft (1,000 meters):

- ▷ 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.

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

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

To prevent the battery from discharging, always switch off any accessories which are not required. Switch off the ignition when the vehicle is not being driven.

## Switching off the engine

Turn the ignition key to position 1 or 0.

**⚠** Never remove the ignition key while the vehicle is rolling. The steering locks and it is impossible to steer the vehicle.

Always remove the ignition key and engage the steering lock before leaving the vehicle.

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. ◀

## Parking brake



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

### To engage

The lock engages automatically when you lift the lever, and the indicator lamp in the instrument cluster comes on when the ignition key is in 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 at the rear (fishtailing).

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 and one-sided braking, 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.



Press the clutch pedal all the way down each time you shift, pressing the manual-shift gear lever into its proper end position.

Depress the clutch when starting the vehicle, too, otherwise, lockout will prevent the engine from starting.

The shift lever's neutral plane is located between 3rd and 4th gear.

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

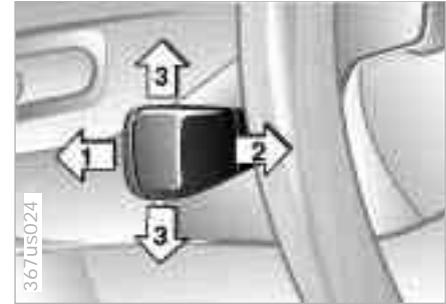
### Reverse

Select reverse only when the vehicle is stationary. Press the shift lever to the left to overcome the 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, otherwise, the ensuing friction to the clutch plates will cause a great deal of wear and tear on the clutch. ◀

### Turn signals/High beams



- 1 High beams (blue indicator lamp)
- 2 Headlamp flasher (blue indicator lamp)
- 3 Turn signal indicator (green indicator lamp and rhythmic clicking of the relay)

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

### To signal briefly

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

# Wiper/Washer system



## Windshield

- 0 Wipers retracted
- 1 Intermittent operation
- 2 Normal wipe
- 3 Fast wipe
- 4 Brief wipe
- 5 Cleaning the windshield

## Rear window – M coupe only

- 6 Intermittent operation/Cleaning the rear window

### 0 Wipers retracted

The wipers are partially hidden behind the hood. To bring the wipers up into their vertical position (important when changing the blades, or folding up when frost is expected):

Switch on the wipers and switch off the ignition when the wipers are approximately vertical.



Fold the wipers down onto the windshield before turning on the ignition key. Failure to do this could result in damage to the wiper/washer system and hood. ◀

### 1 Intermittent operation

The length of the interval is varied automatically according to the vehicle's actual road speed.

### 2 Normal wipe

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

### 3 Fast wipe

When the vehicle is stationary, the system does not switch to a lower wiper speed.

### 4 Brief wipe

The wipers move once across the windshield.

### 5 Cleaning the windshield

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

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

### **6 Intermittent operation/ Cleaning the rear window**

Press the lever briefly:

The intermittent setting of the rear window wiper is switched on or off.

Press and hold the lever:

The system sprays washer fluid against the rear window and activates the wiper. After the lever is released, the wiper continues to cycle for a few seconds.

To change the wiper blades, refer to page [128](#).

### **Cleaning the headlamps\***

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



Do not use the washers if there is any danger that the fluid will freeze on the windshield, otherwise vision could be obscured. For this reason, use an antifreeze agent. Refer to page [108](#). Do not use the washers when the reservoir is empty, otherwise damage to the washer pump could result. ◀

### **Windshield washer jets**

The windshield washer jets are heated automatically\* when the ignition key is in position 2.



The M coupe is equipped with a rear window defroster.

### **To activate**

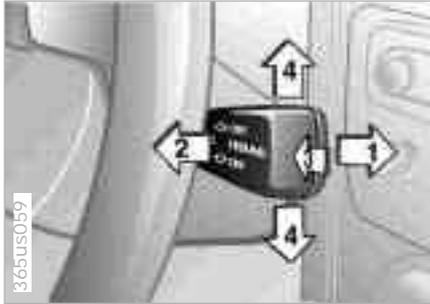
Press the button, the indicator lamp comes on.

### **To deactivate**

Press the button if the indicator lamp is on.



Maximum switch-on time 8 minutes. ◀



You can store and automatically maintain any desired vehicle speed above approx. 25 mph (40 km/h).

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

 Do not use the 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 or gravel, sand). ◀

## To store and maintain speed/ to accelerate

Press the lever briefly in direction 1: The system records and maintains the current vehicle speed. Every time you briefly press the lever, the speed increases by approx. 0.6 mph (1 km/h).

Hold the lever in position 1: The vehicle accelerates without pressure on the accelerator pedal. When you release the lever, the system stores and maintains the current speed.

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

## To decelerate

Press the lever briefly in direction 2: If you are already driving with active cruise control, the speed is decreased by approx. 0.6 mph (1 km/h) every time you briefly press the lever.

Hold the lever in position 2: With the cruise control active, the system automatically reduces the throttle opening to slow the vehicle. When you release the lever, the system stores and maintains the current speed.

## Activate stored setting (resume)

Press the lever briefly in direction 3: The vehicle accelerates to and maintains the last speed stored.

## To deactivate

Press the lever briefly in direction 4: The cruise control is deactivated immediately.

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

- ▷ When you apply the brakes.
- ▷ When you depress the clutch.
- ▷ If you exceed or fall below the programmed speed for an extended period (by depressing the accelerator, for example).



### 1 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).

### 2 Trip odometer

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



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

To protect the engine, the engine management system automatically interrupts the fuel supply in this range; you will notice a loss of power.



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

Once the indicator lamp stays on continuously, there are still approx. 2.1 gallons (8 liters) of fuel in the fuel tank.

Tank capacity: page [159](#).

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



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

## Coolant temperature gauge



### 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 [112](#).

### Blue

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

### Red

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

Comes on while driving: the engine is overheated. Switch off the engine immediately and allow it to cool down.

## Engine oil temperature 63



During normal operation the engine oil temperature is between 175 °F (80 °C) and 250 °F (120 °C). During performance-oriented driving, do not exceed the maximum temperature of 265 °F (130 °C).

Up to an oil temperature of 140 °F (60 °C) an engine speed of 4,000 rpm may not be exceeded.

**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.

This alerts you that maintenance is due. Please arrange for an appointment with your BMW center.

**Red lamp**

Maintenance is overdue.



The display appears from ignition key position 1.

**Set the clock**

Starting in ignition key position 0.

Press adjustment knob (arrow) with a pointed object, e.g. a ballpoint pen.

Press briefly: setting is carried out in steps of one minute.

Keep pressing: setting is carried out in fast mode.

Releasing adjustment knob stops setting.

# Dynamic Stability Control (DSC)

## The concept

DSC helps maintain 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, it recognizes unstable vehicle conditions, such as understeering or oversteering, and, as far as is possible within the laws of physics, helps keep the vehicle on a steady course by reducing the engine speed and brake applications to the individual wheels.

The DSC is operational every time you start the engine.

## Indicator lamp

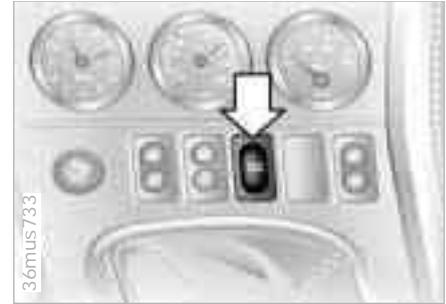


The indicator lamp in the instrument cluster goes out shortly after you switch on the ignition.

Refer to page 22.

The indicator lamp flashes: DSC is active and controls the drive and braking forces.

If the indicator lamp fails to go out after the engine has been started, or if it comes on during normal driving and stays on: the DSC has been switched off via the button or there is a malfunction. You can continue to drive the vehicle normally, but without DSC. In the event of a malfunction, please consult your BMW center.



## To deactivate the system

Press the button (arrow) – the indicator lamp comes on and remains on.

When the DSC is deactivated, you are operating the vehicle in the conventional drive mode.

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.



To help maintain driving stability, always drive with the DSC activated when possible. ◀

## 66 Dynamic Stability Control (DSC)

### To reactivate the system

Press the button again; the indicator lamp will go out.



The laws of physics cannot be repealed, even with DSC. The results of driving irresponsibly rest with the driver. We therefore urge you to avoid using the additional safety margin of the system as an excuse for taking risks.

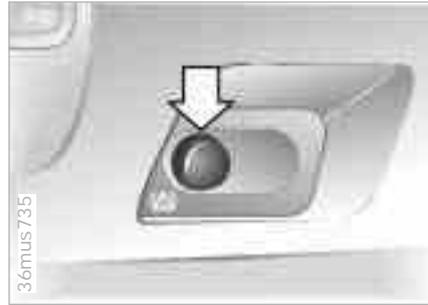
Do not make any modifications to the DSC system. Allow only authorized technicians to perform service procedures on the DSC. ◀

You will find additional details concerning DSC in the chapter "Advanced technology" on page [151](#).

# Tire Pressure Warning (RDW)

## The concept

The Tire Pressure Warning (RDW) monitors the tire pressure in all four wheels while driving. The system is designed to detect whenever the inflation pressure in a tire drops significantly, monitoring the speed of the tires relative to each other. A flat tire can be detected and reported because its speed suddenly deviates drastically from that of the other tires.



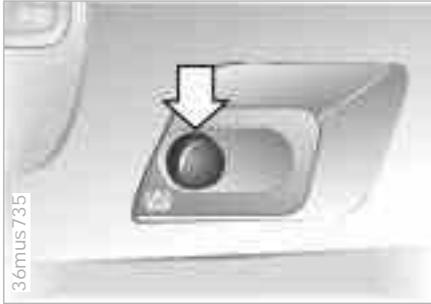
## Initializing the system

Initializing is necessary to familiarize the system with the correct inflation pressure.

Repeat this process after any changes in tire inflation pressure, tire rotation or replacement. Do not carry out further system initialization after correcting the inflation pressure and letting the system "learn" what condition is required.

- 1 Check the tire inflation pressure in all the tires, comparing them with the inflation pressure table (page 27), and adjusting their pressure if necessary.
- 2 Turn the ignition key to position 2.

- 3 Continue to press the button until the indicator lamp in the instrument cluster lights up. After a short time, the indicator lamp will go out automatically.
- 4 Switch the ignition off.



### Activating/deactivating the system

The system is automatically active in ignition key position 2 and is therefore always on during driving.

To deactivate the system: tap the button, the indicator lamp will light up.

To activate the system: tap the button again, the indicator lamp goes out.

Deactivate the system while driving with snow chains, since false warnings and undetected losses in pressure are possible under these kinds of conditions.

### Flat tire



The indicator lamp in the instrument cluster will flash in the event of tire pressure loss. To come to an immediate stop, reduce speed, while avoiding any sudden, jerky braking or steering maneuvers.

Fix the flat tire using the M Mobility system (refer to page 135).

Reset the indicator lamp: the indicator lamp must be switched off manually after mounting a new wheel. At this point, hold the RDW button down until the indicator lamp goes out. Re-initialize the system afterward.



The RDW cannot alert you to severe and sudden tire damage caused by external factors. The RDW will not identify the natural 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.

Under certain circumstances, there may be false warnings or a delayed detection of pressure losses when driving on snow-covered or slippery road surfaces.

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

### System malfunction

As long as there is still a malfunction, the indicator lamp in the instrument cluster will stay lit.

Please contact your BMW center for assistance.

## Parking lamps/Low beams



### Instrument panel lighting

In order to adjust the illumination intensity, turn the pulled switch.

### "LIGHTS ON" warning

When you open the driver's door after turning the ignition key to position 0, a warning signal sounds for a few seconds to remind you if the low beams have not been switched off.

### Daytime running lamps\*

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

### Parking lamps (position lamps/ side marker lamps)



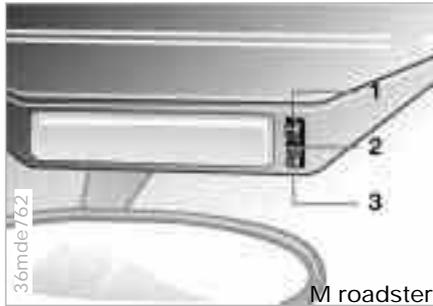
Position 1  
With the switch in this position, vehicle lighting on both sides is on.

### Low beams



Position 2  
When you switch the ignition off while the low beams are still on, only the parking lamps (position lamps/ side marker lamps) remain on.

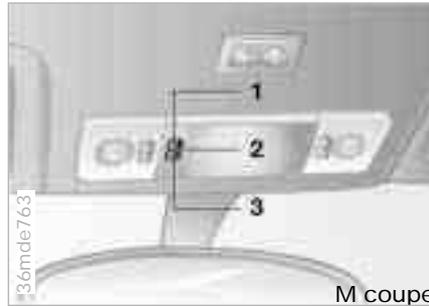
## 70 Interior lamps



M roadster

### M roadster

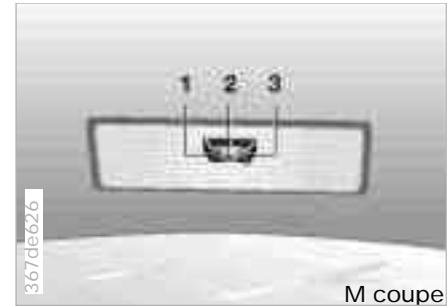
- 1 Continuously off
- 2 Automatically controlled
- 3 Continuously on



M coupe

### M coupe - front

- 1 Continuously on
- 2 Continuously off
- 3 Automatically controlled

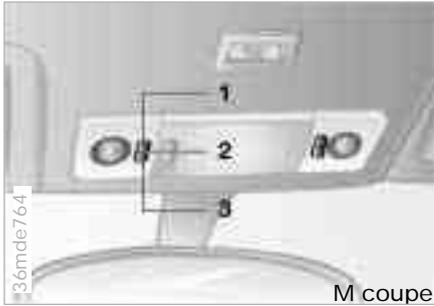


M coupe

### M coupe - rear

- 1 Continuously on
- 2 Continuously off
- 3 Automatically controlled

# Reading lamps

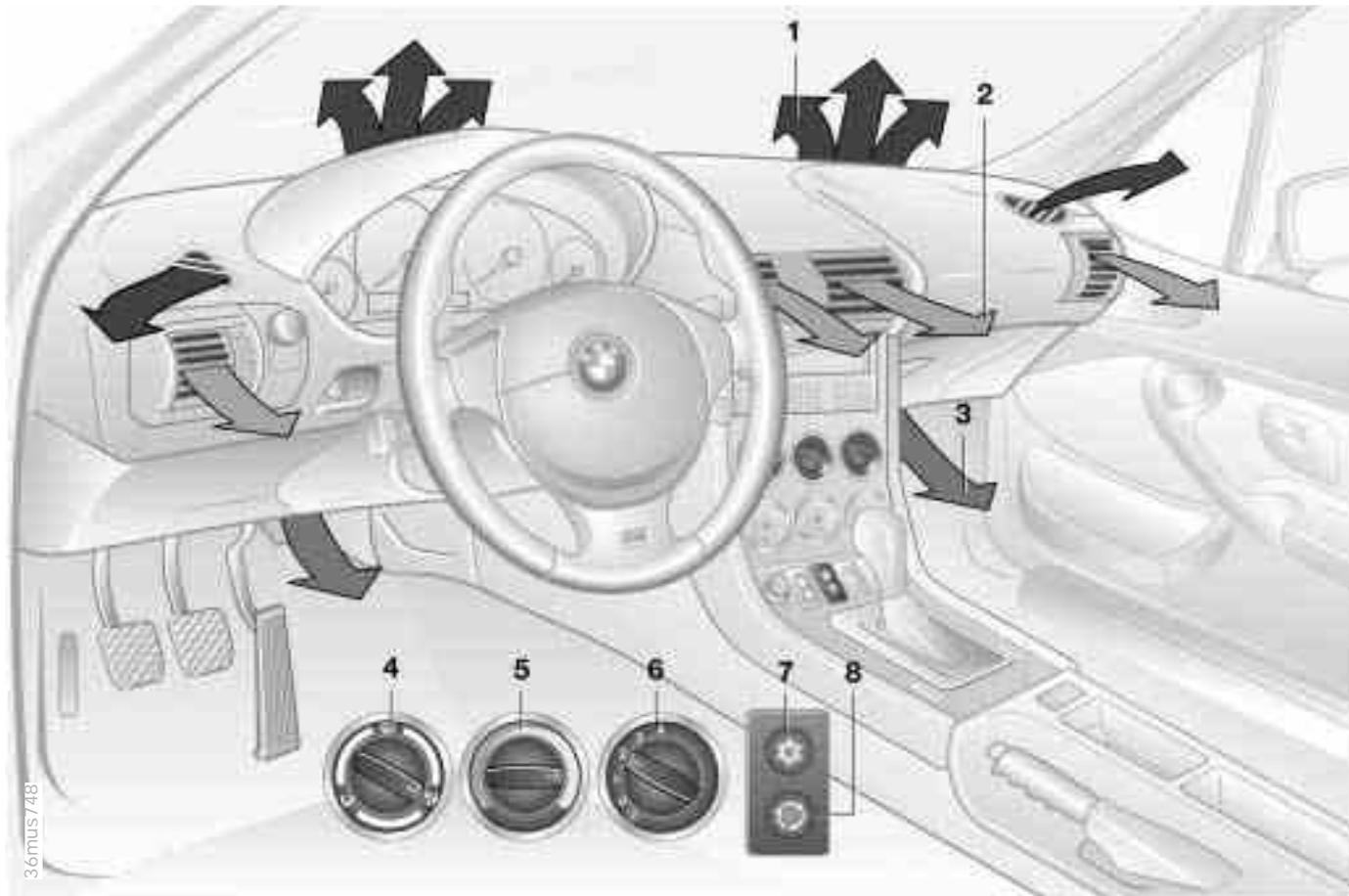


The M coupe is equipped with reading lamps:

- 1 Continuously on
- 2 Continuously off
- 3 Automatically controlled

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

## 72 Heating and ventilation/Air conditioner



- 1 Airflow toward the windshield and side windows
- 2 Airflow toward upper body  
The rotary dials allow infinitely variable regulation of the air supply. You can change the airflow direction with the lever in the center of the vent or by rotating the vent grille [75](#)
- 3 Front footwell ventilation
- 4 Air distribution onto the
  - ▷ windows 
  - ▷ upper body 
  - ▷ footwell All intermediate settings are possible [74](#)
- 5 Temperature [74](#)
- 6 Air supply  
The heating and ventilation are operational beginning with position 1 [74](#)
- 7 Air conditioner [74](#)
- 8 Recirculated air mode [74](#)

### Air distribution



You can direct the airflow onto the windows , toward the upper body  and into the footwell . All intermediate settings are possible. In position , a small volume of air is directed onto the windows in order to keep them free of condensation.

A "6 o'clock" position is recommended as the normal operating setting.

### Temperature



In order to increase the temperature of the passenger compartment, turn to the right (red). For rapid heating, turn completely to the right. Then select an interior temperature which is pleasant for you.

### Air supply



You can select blower speeds from 1 to 4. Both heating and ventilation become more effective as the airflow rate is increased. In position 0, the blower and the heater are switched off.

### Air conditioner



The air is cooled and dehumidified and – depending on the temperature setting – warmed again when the air conditioner is switched on.

Depending on the weather, the windshield may fog over briefly when the engine is started.

At outside temperatures below approx. 41 °F (+5 °C), switch off the air conditioner. This will help to prevent the windows from fogging up.

If the windows fog over directly after switching the air conditioner off, switch it on again.



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. ◀

### Recirculated air mode



If there are unpleasant odors in the incoming air, you can temporarily block the airflow. The system then recirculates the air currently within the vehicle.



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



## Draft-free ventilation

The outlets for the occupants' upper body area can be adjusted to suit your personal preferences:

Use the rotary dials (2) to open and close the outlets throughout an infinitely-variable range. With the levers (1) you can direct the airflow to the side, and up or down by rotating the vent grill.

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



## Rapid ventilation

- 1 Set the rotary blower speed control for the airflow rate to position 4.
- 2 Switch on the air conditioner.
- 3 Turn the rotary temperature control completely to the left (blue). Then select an interior temperature which is pleasant for you.
- 4 Rotary control for air distribution in position .
- 5 Open the outlets for the upper body area.



## Cooling

- 1 Set the rotary blower speed control for the airflow rate to position 2.
- 2 Switch on the air conditioner.
- 3 Use the rotary temperature control to select an interior temperature which is pleasant for you.
- 4 Rotary control for air distribution in position .
- 5 Open the outlets for the upper body area.

## 76 Heating and ventilation/Air conditioner



### Heating

This setting is recommended if the windows are free of ice and condensation:

- 1 Set the rotary blower speed control for the airflow rate to position 2.
- 2 Use the rotary temperature control to select an interior temperature which is pleasant for you.
- 3 Rotary control for air distribution in position .



### Rapid heating

- 1 Set the rotary blower speed control for the airflow rate to position 3.
- 2 Turn the rotary temperature control completely to the right (red). Then select an interior temperature which is pleasant for you.
- 3 Rotary dial for air distribution in position .



### To defrost the windows and remove condensation

- 1 Set the blower speed control for the airflow rate to position 4.
- 2 Turn the rotary temperature control completely to the right (red).
- 3 Rotary control for air distribution in position .
- 4 To defrost the rear window on the coupe, switch on the rear window defroster.

## Seat heating\*



To switch over while heating: press the section of the switch that is dimly lit.

To switch off early: press the section of the switch that is brightly lit.

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

Press the switches with the heating symbols:



Rapid heating as long as the switch comes on brightly. Automatic changeover to regular heating.



Heating as long as the switch comes on brightly. Heating switches off automatically.

## 78 Glove compartment



### To open

Pull the handle and push down the door.

### To close

Push the door up.



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

## Storage compartments

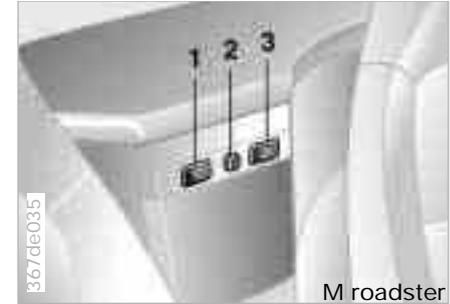


Storage compartments are located in the center console, in the doors and, on the M coupe, between the backrests (refer to the illustration).

A coin box is located in the door pocket on the driver's side.

A storage net is mounted on the passenger side of the center console.

## Storage boxes\*



The M roadster has locking storage boxes\*:

### Small storage box

Press button 1 to open the box.

### Large storage box

Press button 3 and lift the lid of the box.

Both of the storage boxes can be locked with the master keys (refer to page 30) at lock 2.

## Beverage holder\*



The beverage holder is located in the center console next to the parking brake.

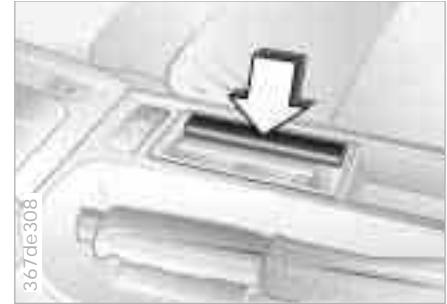
You will find a coin box in front of the beverage holders.

## Ashtray\*



### To open

Press down on the left of the lid (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): The ashtray insert pops up and can be removed.

## 80 Cigarette lighter\*



Press in. The lighter can be removed as soon as it pops up.



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

This socket can be used for connecting a flashlight, car vacuum cleaner, or other appliances up to approx. 200 watts at 12 volts. Do not damage the socket by inserting plugs of a different shape or size.

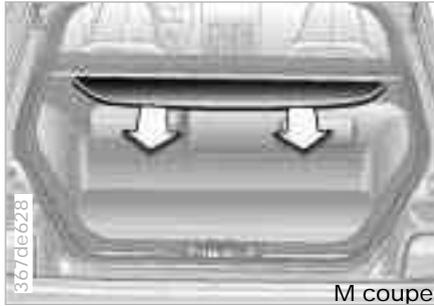


### Non-smoker's equipment package\*

On vehicles with the non-smoker's equipment package, the socket is concealed by a cover.

For access to the socket: lift the cover off.

## Roll-up cover



Pull out the roll-up cover and hook it into the holders at the rear.

The roll-up cover can carry light items such as articles of clothing.

 Do not place heavy or hard objects on the roll-up cover. These objects could endanger vehicle occupants during heavy brake applications and evasive maneuvers or in a crash.

Do not allow the roll-up cover to snap back when it is retracted. This could damage it. ◀

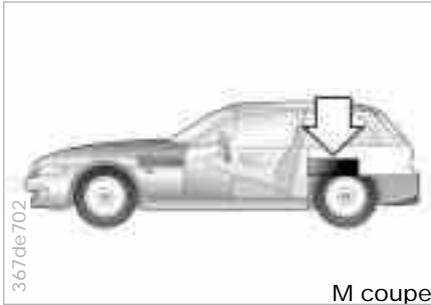
## Partition net\*



Pull out the partition net on the strap and grip the bar firmly with the other hand. Then grasp the bar on both sides, pull it up and position it into the holders. This process will work out best if you do it from inside the passenger compartment.

 Do not allow the partition net to snap back when it is retracted. If this is done, there is a risk of personal injury, and the partition net could be damaged. ◀

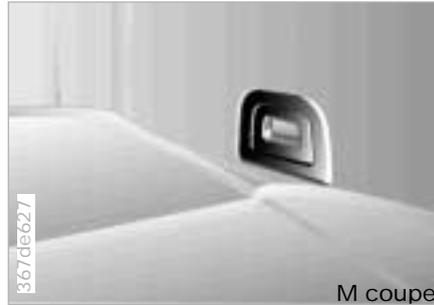
## 82 Cargo loading



### Stowing cargo

If you are transporting cargo in your coupe:

- ▷ Load heavy cargo as far forward as possible – directly behind 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.
- ▷ Pull the partition net\* out (refer to page 81). Be sure that no items are able to penetrate the partition net.



### Securing the load

For securing suitcases, you can obtain load-securing devices\* from your BMW center. The lashing eyes located in the luggage compartment serve for mounting these load-securing devices.

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, for example, or in a crash.

Do not exceed the permissible gross weight and the approved axle loads (refer to page 158). If you do so, the operating safety of the vehicle is no longer ensured, and the registration specifications are not met.

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, for example, or in a crash, thus endangering vehicle occupants. ◀

## Roof-mounted luggage rack

A special luggage system is available for your coupe as an optional accessory. Please comply with the precautions included with the installation instructions.

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

You should therefore always remember not to exceed the approved roof load capacity, the approved gross vehicle weight or the axle loads when loading the rack. You will find the specifications for this under "Technical Data" on page [158](#).

Make sure that the load is not too large in size, and distribute it evenly. Always load the heaviest pieces first (on the bottom). Be sure that adequate clearance is maintained for raising the sunroof, and that objects do not project into the opening path of the luggage compartment lid.

Lash the roof luggage down correctly and securely to prevent it from shifting or being lost during driving – this would endanger 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 results from this.



**Special operating instructions:**

- Break-in procedure 86
- Driving notes 87
- Catalytic converter 88
- Antilock Brake System (ABS) 89
- Disc brakes 91
- Brake system 92
- Winter operation 93
- Power steering 94
- Cellular phone 95
- Radio reception 95
- Hardtop – roadster 96

**Wheels and tires:**

- Notes on tire inflation pressure 98
- Tire condition 98
- Tire replacement 99
- Tire rotation 100
- Wheel and tire combinations 101
- Special features of winter tires 102
- Snow chains 102
- Approved wheel and tire specifications 103

**Under the hood:**

- Hood 104
- Engine compartment 106
- Fluids for the washer systems 108
- Washer nozzles 108
- Engine oil 109
- Coolant 111
- Brake fluid 112
- Vehicle Identification Number 113

**Care and maintenance:**

- The BMW Maintenance System 114
- Caring for your vehicle 115
- Airbags 122
- Storing your vehicle 123

**Laws and regulations:**

- Technical modifications 124
- California Proposition 65 Warning 124
- OBD connector 125

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

## 86 Break-in procedure

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

### Engine and differential

Up to 1,200 miles (2,000 km):

Drive with varying engine and road speeds, but do not exceed 4,500 rpm or 100 mph (150 km/h).

Comply with local and state maximum speed limits.

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

After you have driven 1,200 miles (2,000 km), you can gradually increase the engine and 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's 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. You should therefore drive with extra caution during the initial 200 miles (300 km).

Comply with local and state maximum 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

Approx. 300 miles (500 km) must elapse before the brake pads and discs achieve the optimal surface and wear pattern.

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 light up when the parking brake is applied. Vacuum for the brake system booster on your BMW is available only when the engine is running. When you move the vehicle with the engine off – for instance, by towing – substantially higher levels of pedal force will be required to brake the vehicle. ◀

### Clutch

The clutch will reach optimal function after approx. 300 miles (500 km). Shift gears carefully during the break-in period.

## 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:

When driving on wet or slushy roads, reduce vehicle speed. If you do not, a wedge of water may form between the tires and the road surface. 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:

When there is water on the roads, do not drive in it if it is deeper than 1 ft (30 cm). If the water is at that depth, drive only at walking speed, otherwise the vehicle can sustain damage to the engine, the electrical systems and the transmission.

### Roll-up cover (coupe):

Never use the roll-up cover to store heavy or bulky objects. If you do so, such objects could injure vehicle occupants during braking and evasive maneuvers or in a crash.

### Clothes hook (coupe):

Hang items of clothing on the hooks in such a manner that they do not obstruct the driver's vision. Do not hang heavy objects on the hooks. If you do so, they could cause personal injury during braking and evasive maneuvers or in a crash, for example. ◀

## 88 Catalytic converter

The catalytic converter reduces harmful exhaust emissions.

It 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's oxygen sensor.

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

- ▷ Be sure to comply with the scheduled maintenance requirements.
- ▷ Fill the fuel tank well before it is empty.
- ▷ Tow-start the vehicle only when the engine is cold. Tow-starting when the engine is warm could cause unburned fuel to ignite to the catalytic converter, resulting in significant damage. It is better to start the vehicle with an outside starting aid.

- ▷ Avoid any other situations in which the fuel would not be (completely) burned, for instance:  
Frequent or consecutive extended starting attempts or repeated starting attempts when the engine fails to start. (Shutting down and restarting an engine which is running properly does not present a problem.)  
Never let the engine run with any of the spark plug connectors disconnected.



Be sure to comply with the instructions above to prevent unburned fuel from reaching the catalytic converter. This could cause overheating, leading to serious damage to the catalytic converter.

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 while the engine is idling, or when parking, be careful to avoid contact between the hot exhaust system and easily-flammable materials (hay, dry grass, leaves, etc.). Such contact could cause a fire, resulting in personal injuries and property damage. ◀

# Antilock Brake System (ABS)

## The concept

ABS increases active safety by preventing the wheels from locking when braking. The reason: 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 end to break into an uncontrolled skid.

The system can achieve the shortest braking distances possible under most conditions (on straight-aways, in curves and on various road surfaces.).

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

- ▷ To help provide vehicle stability.
- ▷ Assured ability to steer and maneuver on the various road surfaces (asphalt, concrete, dirt, wet conditions, snow and ice).

## Braking with ABS

The system is operative once the vehicle exceeds a speed of approx. 6 mph (10 km/h). It is inactive once again below approx. 4 mph (6 km/h). Therefore, the wheels could theoretically tend to lock in the final phase of a braking action, but this is insignificant in actual practice.

If you are in a situation which 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 closed-loop control circuit cycles in fractions of a second. The pulsation at the brake pedal, together with sounds generated by the hydraulic control system, indicate to you that the vehicle is approaching its maximum braking range. It is a reminder to you that you must adapt the vehicle's road speed to existing road conditions.

On road surfaces that have a loose surface layer on a firm base with good traction (on gravel, deep sand or snow, for example), braking distances may be longer than with locked wheels. This also applies for driving with snow chains. 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. ABS alone cannot prevent accidents if the brakes are applied without an adequate, safe distance between vehicles or if the speed limit has been exceeded. Nor can it prevent the hazards of aquaplaning. Responsibility for these types of situations remains in the hands (and at the feet) of the driver. You should never allow the added safety of ABS to lull you into a false sense of security, or mislead you into taking increased risks that could affect your own safety and that of others.

 Do not make any modifications to the ABS system.

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

### Antilock Brake System (ABS)/ Cornering Brake Control (CBC)

CBC is an advanced engineering feature of the ABS. When braking while cornering at high speed or braking during high lateral acceleration, or when braking during a lane change, vehicle stability is improved and steering response is enhanced.

### In the event of a malfunction



The ABS warning lamp comes on, refer to page 22. 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.



If the red warning lamp for the brake hydraulic system comes on together with the yellow indicator lamps for ABS and DSC (refer to page 21), the entire ABS, CBC and DSC control system has failed. Continue to drive cautiously and defensively. Avoid full brake applications because the vehicle could become unstable and go out of control. Have the system checked by your BMW center as soon as possible.

Warning lamps for Canadian models.

## Disc brakes

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

When the vehicle is driven only occasionally, during extended periods when the vehicle is not used at all, or in operating conditions where brake applications are less frequent, there is an increased tendency for corrosion of the discs and accumulation of contamination on the brake pads. This occurs because the minimal pressure which must be exerted by the pads to clean the discs by brake applications is not reached.

If the brake discs are corroded, they will tend to respond to braking with a pulsating effect which even extended application will fail to cure.

 For your own safety: use only brake pads that BMW has approved for your specific 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 in the event of their use. ◀

### Driving notes

While driving in wet conditions and in heavy rain, it is advisable to apply light pressure to the brake pedal every few miles – watch traffic conditions to ensure that this maneuver does not endanger other road users. The heat generated in this braking process helps dry the brake pads and discs.

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 94.

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

You can increase the engine's braking effect by selecting progressively lower gears, downshifting into first gear, if necessary.

Should engine braking prove inadequate, you should still avoid extended, continuous braking. Instead, decelerate the vehicle with increased pressure on the brake pedal (watch for following traffic!), release the pedal and then repeat the brake application (staggered braking). This staggered braking technique allows the brakes to cool in the intervals between active braking phases, preventing overheating and ensuring that full braking capacity remains available at all times.

 Do not drive the vehicle with the clutch depressed, with the shift lever in neutral or with the engine shut off. The engine provides no braking control when the transmission is in neutral and there is no power assist for braking and steering when the engine is 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. ◀

### **Brake fluid level**



The warning lamp for the hydraulic brake system comes on:



The brake fluid level is too low in the reservoir (refer to page 112).

If the brake fluid level is too low and brake pedal travel is noticeably longer, there may be a defect in one of the two hydraulic brake 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. ◀

### **Brake pads**



The warning lamp for the brake pads comes on:

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 pads that BMW has approved for your specific 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 in the event of their use. ◀

## 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 vehicle operation through the winter remains safe and trouble-free.

### Coolant

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

### Locks

BMW door lock deicer can be used to free the doors if they are frozen. This deicer also contains lubricant. After using deicer, treatment with BMW lock cylinder grease is recommended.

### Rubber seals and components

In order to prevent freezing, apply BMW rubber treatment or silicone spray to weather-stripping on the doors, hood, luggage compartment and to convertible top seals.



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

### Snow chains

Mount the BMW snow chains\* only in pairs on the rear wheels only. Comply with the manufacturer's safety precautions. Do not exceed a speed limit of 30 mph (50 km/h) when driving with chains. As an exception in this situation, we recommend that you deactivate the DSC and RDW when snow chains are mounted. Refer to page 65 or page 67.

### Starting off

When starting from a full stop or "rocking" free in deep snow, we recommend that you deactivate the DSC system. Refer to page 65.

### 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. Shift down into the next lowest gear when approaching uphill or downhill grades. Maintain an adequate distance between yourself and the vehicle ahead.

### Braking

Winter road conditions substantially reduce the traction available between the tires and the road surface. Remember that – in every situation – braking distances will be significantly longer as a result of this.

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

If it should occur that the ABS does not respond in a critical braking situation 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 process.

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

You can still attempt to steer around hazards once you have reduced the 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, which could result in the loss of vehicle control. ◀



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

### **Skid control**

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

### **Parking**

Engage 1st or reverse gear. Depending on the steepness of the incline, you can apply the parking brake as well. In order to prevent the parking brake pads 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**

Changes in steering response (high steering effort, for example): Consult a BMW center to have the system checked.



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

## Cellular phone\*

Mobile communications systems (cellular phones, two-way radios, etc.) are approved only up to a power output of 10 watts. Nonetheless, they may cause interference in the operation of your vehicle if they are not specifically designed for use in 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, refrain from using a cellular phone or other radio device with an antenna located inside the passenger compartment. The antenna should always be fitted on the outside of the vehicle.

 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 official BMW approval can also generate interference during use. This phenomenon assumes the form of a low-pitched hum emanating from the speaker system.

Please refer to the Owner's Manual provided with your sound system for detailed information on its use.



Whenever necessary (when entering a car wash, for instance), remove the rod antenna\* (refer also to page 116). To remove the antenna, grasp the rod at the bottom and unscrew it to the left from the antenna base. ◀

You will find additional information concerning radio reception in the chapter "Advanced technology" on page 150.

## 96 Hardtop\* – roadster

The fabric top does not have to be removed even in winter, when the hardtop is normally in constant use. In order to prevent water spots and mildew stains, the fabric top must be completely dry before it is stored in the convertible top compartment.

Two people are necessary for the installation and removal of the hardtop. Work with extreme caution during this operation to avoid paint damage and damage to the body and hardtop.

You may purchase a Hardtop lift\* from your BMW center. This accessory is especially designed to facilitate installation and removal of the hardtop.



### Installation

Hook the protective fabric on the convertible top linkage (arrow).

Open the convertible top and fold it down in the convertible top compartment. Refer to pages 37 and 41.

When doing this, make sure the rear window is laid down evenly and free of creases. To prevent the rear window from being scratched, position the protective fabric in the window fold.

Do not install the convertible top cover.

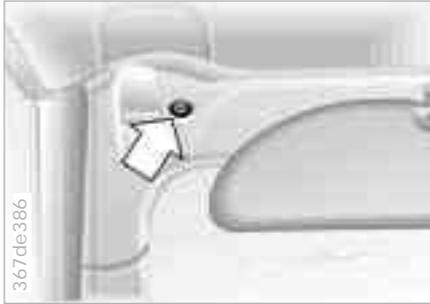
Lower the side windows and remove the rod antenna if necessary to avoid damage.



Rotate the cover panel which is located in the right and left trim panels behind the seats in the direction of the arrow until the opening for the hardtop mount is completely free.

Remove the hardtop from the protective cover. Clean any dirt and dust from the contact surfaces between the hardtop and the vehicle body in order to protect against abrasion.

Position the hardtop on the mounts with the assistance of a second person.



Using the wrench from the onboard tool kit (fastened to the jack with a Velcro® strip), turn the screw (arrow) two to three turns into the windshield frame on the right and left sides.



Turn the right and left locking levers of the rear hardtop mounting fasteners in the direction of the arrow to the stop.

 The rear mounting fasteners are locked correctly when the locking levers engage audibly and point to the rear of the vehicle. ◀

Finally, tighten the screws in the windshield frame (refer to the left column) and secure the wrench in the onboard tool kit.

 After you have driven approx. 30 to 60 miles (50 to 100 km), check the front hardtop fasteners to be sure that they are seated securely. ◀

## Removal

Reverse the above procedure for removal of the hardtop.

 The two screws of the front hardtop fasteners remain permanently in the windshield frame of your vehicle to prevent their loss. ◀

Following the initial delivery of the vehicle, or after the hardtop has been in use for an extended period, closing the convertible top requires increased effort. You may find this operation easier with the assistance of a second person. Following that, the convertible top should remain closed for at least 12 hours.

**Information for your safety**

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

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

 Incorrect inflation pressure is a frequent cause of tire damage. It also significantly influences the road-holding ability of your BMW. Check tire inflation pressures regularly (refer to page 26), at least every two weeks and before you begin an extended journey. If this is not done, incorrect tire pressures may cause unstable driving, tire damage and 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 pattern depth.

The tread pattern depth should be at least 0.12 in (3 mm), although the legally permissible minimum tread pattern depth is 0.063 in (1.6 mm). Wear indicators appear in the tread at 0.063 in (1.6 mm) to indicate that the legally permissible wear limit has been reached. There is a significantly increased risk of aquaplaning at higher speeds when the tread pattern depth is below 0.12 in (3 mm), even if there is only a small amount of water on the road surface.

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

Avoid overloading the vehicle so that the permitted load on the tires is not exceeded. Overloading causes overheating and damage inside the tires. The ultimate result can assume the form of a sudden inflation pressure loss.

Unusual vibrations encountered during normal vehicle operation can indicate a flat tire 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 reducing your speed immediately. Drive carefully to the nearest BMW center or professional tire dealer, or have the vehicle towed in to have it and its tires inspected.

Tire damage (up to and including sudden and complete inflation pressure loss) can pose an extreme hazard for both 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 and tire specifications. Refer to page [103](#).

## 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 (1½) 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, aquaplaning, 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 a sudden flat

tire. The grade C corresponds to a level of performance which all passenger vehicle 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:

Tread wear 200 Traction AA  
Temperature A



Do not use retreaded tires as this could negatively affect driving safety. This is due to the possible variations in casing structures and, in some instances, to their extreme age, factors 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 ... 3200 indicates that the tire was manufactured in week 32 of 2000.

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

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

## **Tire rotation**

### **Between the axles**

Tread wear at the front and rear axle is different and will vary according to individual driving conditions. In the interest of safety and optimal vehicle response, we advise against rotating wheels from front to rear and vice versa.

If rotating the wheels between the axles is under consideration for economic reasons, the costs for remounting the wheels must be calculated against any savings which might result from the anticipated extension in tire life. Rotation should always be carried out at short intervals (max. 3,000 miles/ 5,000 km). Consult your BMW center for more information.

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

Rotate wheels on the same side of the vehicle only, otherwise braking efficiency and road grip could be adversely affected.

Following rotation, correct the tire inflation pressure.



If tires with different sizes are mounted on the front and rear axles (refer to page 103), 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, leading to 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 the information on page 103.

 The correct wheel and tire combination affects different systems such as ABS, DSC and RDW. The function of these systems is impaired if improper wheel and tire combinations are used.

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

### Codes on tires and wheels

The code on tires has the following meaning.

Codes on radial tires:

Example: 205/60 R 15 91 H

Nominal width in mm \_\_\_\_\_

Aspect ratio in % \_\_\_\_\_

Belt rating ID code for radial tires \_\_\_\_\_

Wheel diameter in inches \_\_\_\_\_

Load rating (not on ZR tires) \_\_\_\_\_

Speed rating (before R on ZR tires) \_\_\_\_\_

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

Summer tires:

S = up to 112 mph (180 km/h)  
 T = up to 118 mph (190 km/h)  
 H = up to 130 mph (210 km/h)  
 V = up to 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)

All season and 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:

Example: 7 J x 15 EH 2

Rim width in inches \_\_\_\_\_

Code letter for flange type \_\_\_\_\_

Symbol for full-drop center rim \_\_\_\_\_

Rim diameter in inches \_\_\_\_\_

Extended hump on the 2 rim shoulders \_\_\_\_\_

Protect valve inserts against dirt by using screw-on valve 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 sure tracking and safe steering response, mount winter tires which are made by the same manufacturer and which have the same tread pattern at all four wheels.

### **Comply with recommended speed**



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

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

Have this work performed by skilled professionals only. Any BMW center has the required technical knowledge and the proper equipment and will be happy to assist you. ◀

### **Tire condition, tire pressure**

Once the tire wears to below 0.16 in (4 mm), winter tires display a perceptible decrease in their ability to cope with winter driving conditions, and should be replaced in the interest of safety.

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

## **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 67. ◀

## Approved wheel and tire specifications

BMW tests certain tire brands for each tire size, classifies them as road-safe and approves them. Consult your BMW center for more information. Observe any regulations applicable in the country of use, e.g. requiring entry in the vehicle documents.

Tire specifications	Suitable for snow chains	Light-alloy wheel
M roadster, M coupe		
Summer		
Front: 225/45 ZR 17	-	7.5Jx17 AH 2 IS 41
Rear: 245/40 ZR 17	-	9Jx17 AH 2 IS 8
Winter (M+S)		
225/45 R 17 90 H	*	Front: 7.5Jx17 EH 2 IS 41 Rear: 7.5Jx17 EH 2 IS 25



Have winter tires mounted at your BMW center or a tire dealer. ◀

### Snow 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 67. ◀

### Wheel with asymmetrical hump (AH)

The rim design with a so-called asymmetrical hump results in a clearly extended holding of the tire on the rim in the case of a leak compared to the usual symmetrical hump, so that the vehicle can be braked to a stop more safely. Another advantage of the asymmetrical hump is that no special tire is required.

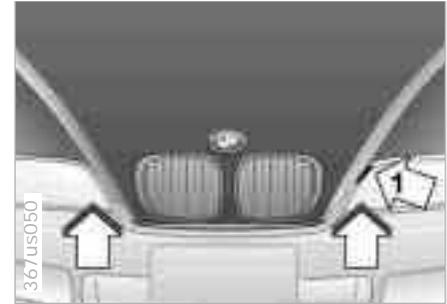


Do not work on your vehicle without appropriate skills. Always switch off the engine and allow it to cool down before working in the engine compartment. Always disconnect the battery before working on any electrical systems or equipment, especially when these are located within the engine compartment. Comply with all applicable instructions and warnings. If you are not familiar with all guidelines, have the work performed by your BMW center. Otherwise, safety hazards for vehicle occupants and other road users may occur as a result of improper handling of components and materials. ◀



#### To release

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



#### To open

Grasp the hood on both sides on the level of the latch (arrow 1); press the latch upward and simultaneously lift the hood with both hands.

# Hood



## To close

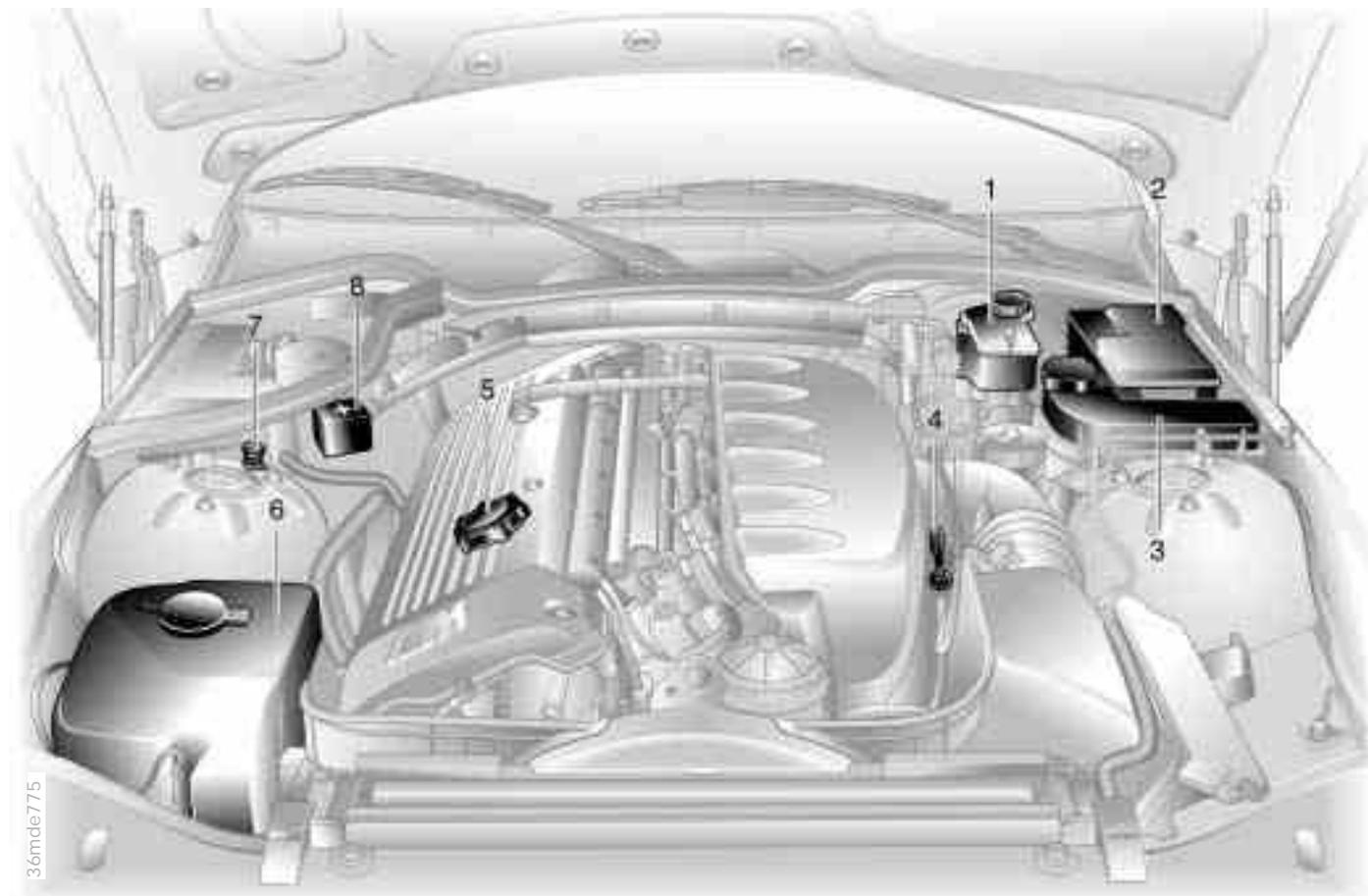
Allow the hood to fall from a height of about 12 in (30 cm) so that it audibly engages.



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. ◀

## 106 Engine compartment



- 1 Brake fluid reservoir [112](#)
- 2 Fuse box [142](#)
- 3 Coolant expansion tank [112](#)
- 4 Engine oil dipstick [109](#)
- 5 Engine oil filler neck [109](#)
- 6 Reservoir for windshield and headlamp\* washer system [108](#)
- 7 Auxiliary terminal for jump-starting – negative terminal [144](#)
- 8 Auxiliary terminal for jump-starting – positive terminal [144](#)



### Headlamp\* and windshield washer system

Capacity: approx. 5.6 US quarts (5.3 liters).

Fill with water and – if required – with an antifreeze agent (according to the manufacturer's recommendations).



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



Antifreeze agent for the washer systems is inflammable. For this reason, keep it away from sources of flame and store it only in its original container. Store it so that it is inaccessible to children. Comply with the instructions on the containers. ◀

## Washer nozzles

### Windshield washer system

Windshield:

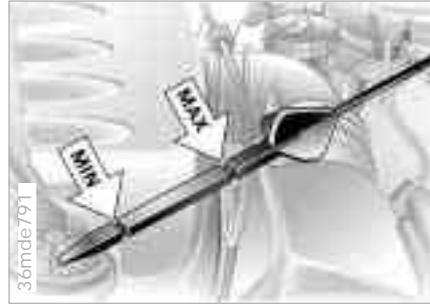
The spray from the nozzles should be directed so as to ensure effective cleaning, even at high speeds. If necessary, correct the adjustment with a needle, or have the adjustment made by your BMW center.

Rear window – M coupe only:

Have this system adjusted by your BMW center as required.

### Headlamp washer system\*

Have this system adjusted by your BMW center as required.



## To check oil level

- 1 Park the vehicle on a level surface.
- 2 Switch the engine off after it has reached normal operating temperature.
- 3 After approx. 1 minute, pull the dipstick out and wipe it off with a clean lint-free cloth, paper towel, or similar material.
- 4 Push the dipstick carefully all the way into the guide tube and pull it out again.
- 5 The oil level should be between the two marks on the dipstick.

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

The space between the two marks on the dipstick corresponds to approx. 1.4 US quarts (1.3 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. Do not wait until the oil 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 also applies to the manual transmission, differential and the power steering system. ◀

**Specified engine oils**

The quality of the engine oil which is 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. Only use 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](http://www.bmwusa.com) to obtain this information.

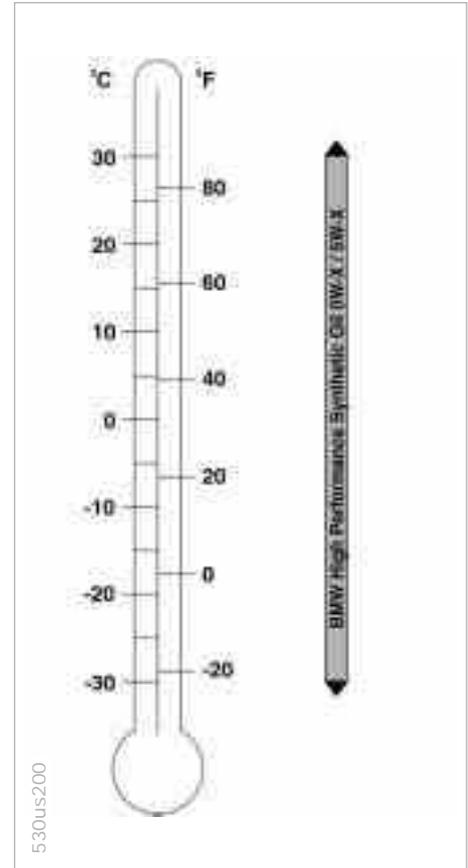
**Viscosity – ratings**

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 drive your BMW.

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

These oils may be utilized in all ambient temperatures.



## Engine oil

 Comply with the applicable environmental laws regulating the disposal of used oil. ◀

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

 Continuous exposure to used oil has caused cancer in laboratory testing. Any skin areas that come in contact with oil should thus be thoroughly washed with soap and water. Store oil, grease, etc., always out of reach of children. Comply with warning labels and information on containers. If you use SAE 15W-40 engine oil in low temperatures (below +14 °F / -10 °C), the engine may become difficult to start.

Special engine oils individually approved by BMW are preferred for use in your engine. Please contact your BMW center for details. ◀

## Coolant

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

To avoid the possibility of damage later on, do not use anything other than factory-approved, nitrite and amino-free extended-duty antifreeze with corrosion inhibitor which can be used with aluminum radiator cores. Your BMW center is familiar with the approved specifications.

Antifreeze and corrosion inhibitor agents are hazardous to health. Store them in their original containers. Keep the containers tightly closed and out of reach of children.

Extended-duty antifreeze with corrosion inhibitor contains the flammable substance ethylene glycol. For this reason, do not spill extended-duty antifreeze with corrosion inhibitor on hot engine components. If you do, it could be ignited and cause burns. ◀

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



### Checking coolant level

The correct coolant level when the engine is cold (approx. +68 °F/+20 °C). Unscrew the cap from the expansion tank.

The coolant level is correct when the upper end of the red float is at least even with the upper edge of the filler neck (refer to the arrow in the illustration), but no more than 0.8 in (2 cm) above it – that is, up to the second mark on the float (refer also to the schematic diagram next to the filler neck).

### To add coolant

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

- 1 Turn the cap slightly counterclockwise 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 regularly. Refer to the Service and Warranty Information Booklet (US models) or the Warranty and Service Guide Booklet (Canadian models).



If the warning lamp for the brake hydraulic system comes on:

The brake fluid level is too low.



Add brake fluid until the upper mark ("MAX") is reached.

To eliminate the cause of the brake fluid loss, please consult a BMW center. You can also receive information concerning approved brake fluids (DOT 4) there.

Brake fluid loss may result in extended brake pedal travel. If this occurs, refer to the notes on page [92](#).

## Brake fluid



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

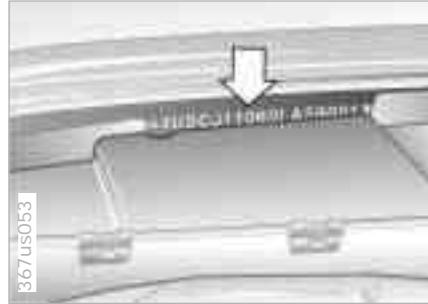
In order to ensure the operating safety and reliability of the brake system, have the brake fluid changed every two years by a BMW center. Refer also to the Service and Warranty Information Booklet (US models) or the Warranty and Service Guide Booklet (Canadian models).

Brake fluid is hazardous to health and will damage the vehicle's paint. You should always store it in its original container and in a location which is inaccessible to children. Avoid brake fluid spills. Do not fill brake fluid beyond the "MAX" mark in the reservoir. 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. ◀

## Vehicle Identification Number



The Vehicle Identification Number is located in the engine compartment below the windshield (arrow) and on the top of the instrument panel.



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 your 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 considers the actual conditions under which the vehicle operates.

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

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

Determining the maintenance intervals according to the actual loads on the vehicle covers every kind of operating situation. However, since oil deteriorates over time regardless of use, even those who drive only short distances – significantly less than 6,200 miles (10,000 km) annually – should have the engine oil changed regularly. Refer to the Service and Warranty Information Booklet (US models) or to the Warranty and Service Guide Booklet (Canadian models).

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

For detailed information on required maintenance items and the work involved, please refer to the Service and Warranty Information Booklet (US models) or to the Warranty and Service Guide Booklet (Canadian models).

Depending upon operating conditions, it may be advisable to have the body checked for damage from rocks or gravel at the same time as a precaution against rust.



Have your BMW center do the maintenance and repair.

Your BMW center is always informed on the latest maintenance work and repair techniques and is 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 will constitute your proof that the vehicle has received regular maintenance. They are also required for warranty claims. ◀

## Washing your vehicle

You can wash your BMW by hand or in an automatic car wash – even when it is new. Car wash systems that do not employ brushes are preferable.

Loosen and remove tough dirt and dead insects before washing the vehicle.

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

If a brushless car wash is unavailable and a brush car wash must be used, modern systems with soft brushes are preferable. In order to protect the convertible top, special waxing programs may not be selected for the M roadster. The small amount of beading wax always used in automatic car washes will not harm your vehicle's finish.

## 116 Caring for your vehicle

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 ample water is available for washing and rinsing.

Parts of the vehicle which 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 ensure 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 rub dry (this causes scratches) and 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 discs could also be corroded. ◀

## Caring for your vehicle

### Cleaning and care of the convertible top – M roadster

The appearance and life of the convertible top are highly dependent on its proper care and operation. You should pay particular attention to the following instructions if your vehicle has a light-colored top.

Protect the vehicle from exposure to intense sunlight whenever possible by parking it in the shade. This will prevent the paint, rubber and fabric-covered parts from being attacked.

Never fold up the convertible top and store it in the convertible top compartment when wet, dirty or frozen, since mildew stains and rub spots may result.

To prevent the formation of creases in the rear window and mildew stains in the fabric, do not leave the top folded in the convertible top compartment for extended periods.

If the vehicle will be parked for lengthy periods in an enclosed space, be sure that the convertible top is dry and that there is adequate ventilation.

Clean off bird droppings immediately, since they attack the convertible top and cause the rubber seals to swell due to their caustic characteristics.

Besides water, treat rubber seals only with talcum powder, rubber care products or silicone spray, particularly when they feel dry or tend to stick.

Eliminate noises such as squeaks with lubricant spray.

Never use sharp-edged objects to clean snow or ice from the rear window. The use of deicing spray is not approved. Due to the danger of damage and discoloration, do not apply adhesive tape, stickers, etc., to the window or cover it with plastic film.

Depressions and discoloration may occur in the convertible top as a result of improper maintenance and cleaning or as the result of stresses from excessive use. The convertible top and its seams may also develop leaks. These occurrences are not covered by the warranty. For repairs, please consult your BMW center.

### Special wash for the top

In the case of more extensive dirt, which is especially visible on light-colored top materials, clean the top with the BMW Convertible Cleaning Set. Please proceed as follows:

Spray the convertible top with the cleaning agent and then rub with a well-dampened sponge using circular motions until a foam develops. Then you can finish washing the vehicle in an automatic car wash. After three to five washings the convertible top should be treated with a special impregnating spray. Please follow the instructions on the spray can.

 Use the cleaning and car-care products that you can obtain at your BMW center. ◀

**Rear window cleaning**

While the roadster's rear window has the advantage of being extremely flexible, there is the disadvantage that it has a relatively soft surface. For this reason, clean the rear window only with a soft, antistatic cloth or with BMW Convertible Rear Window Cleaner.

If you wash the vehicle frequently in brush car washes, and in particular in those with hard brushes, faint scratches in the rear window may result. With the window replacement system you can replace a heavily scratched window at a relatively low price. Please contact your BMW center for additional information.



Do not use spot removers, paint thinners, solvents, gasoline or similar substances for removing spots from the convertible top or from the rear window. These materials destroy the rubber seals, which will lead to leaks. Use only BMW-approved cleaners. ◀

**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 care 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 programs designed to further improve the durability of their finishes. Despite this, environmental factors which 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.

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 concentration) and tree excretions (resins and pollen) all contain substances capable of causing damage when 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 the tropics, in addition to ultra-violet radiation and high humidity, temperatures over +105 °F (+40 °C) in the shade are common. 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 your vehicle

## Caring for the vehicle finish

Regular washing is a preventive measure against long-term effects from substances which 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 the 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 the cleaning and car-care products that you can obtain at your BMW center. ◀

## Paint damage

You can touch up minor paint flaws with BMW spray paint or a BMW touchup stick.

The color code for your vehicle is provided on a tag located near the vehicle data plate and on the first page of the Service and Warranty Information Booklet (US models) or 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. 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 repaired professionally in accordance with the manufacturer's instructions. Your BMW center uses original BMW finish materials in accordance with approved repair procedures.

 Use the cleaning and car-care products that you can obtain at your BMW center. ◀

### **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!

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 which have been approved by BMW. ◀

### **Caring for other vehicle components and materials**

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

If your vehicle is equipped with chromed parts\* such as window frames, door handles, etc., clean these parts thoroughly with plenty of water and, if they are exposed to the effects of salt, also with a shampoo additive. Use chrome polish for additional treatment.

Plastic components, vinyl upholstery, the 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, since this could cause damage to the belt fabric.

After cleaning, never allow the inertia reels 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 the cleaning and car-care products that you can obtain at your BMW center. ◀

## Caring for your vehicle

### Care of upholstery materials

Depressions formed in the upholstered materials in the course of everyday use can be brushed up working with a lightly dampened brush "against the nap."

The tendency of the pile to lie in a particular direction on velour upholstery is not a quality defect, and, just as on home textiles or clothing, cannot be avoided.

Fuzz on upholstery materials, rubbed-in fabric or suede residues can be removed with a fuzz or Velcro® brush. A cleaning glove is available for particularly "stubborn" lint. Remove spots and larger soiled areas immediately with luke-warm water, an interior cleaner, a spot remover or appropriate cleaning fluid. Brush the fabric afterwards to restore its appearance.

If the vehicle will be stored for an extended period or if it is exposed to intense sunlight, cover all the seats or the windows to prevent fading (roadster: convertible top closed).



Use the cleaning and car-care products that you can obtain at your BMW center. ◀

The buildup of an electrostatic charge on the seat covers, particularly if atmospheric humidity is low, can give the occupants an unpleasant electric shock if they touch metal body parts after leaving the vehicle. Although this is not dangerous in any way, it can be avoided by touching a bare or polished metal part of the vehicle while getting out.

### 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.

As this product is manufactured using natural materials, you must make allowances for special characteristics and possible surface irregularities. You should also bear in mind that this kind of material requires special care and attention.

Regular cleaning and care are essential, since 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.

To protect the leather from dampness or moisture, you can treat it with a BMW impregnating agent.

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

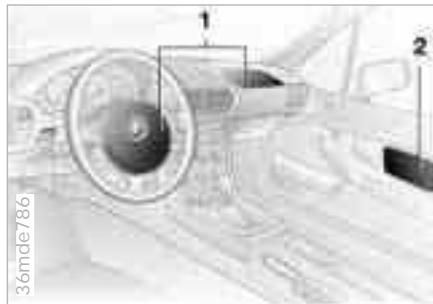
Spilled liquids should be wiped up immediately, and greasy and oily stains dabbed with a stain remover.

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

 Use the cleaning and car-care products that you can obtain at your BMW center. ◀

 Cleaning agents can contain substances which are dangerous or which pose health risks. Therefore, always comply with the warnings and danger notices on the package. Open the doors or windows on your vehicle when cleaning the interior (when the roadster's convertible top is closed). Never clean your vehicle with solvents or other materials not specifically intended for this application. ◀

## Airbags



- 1 Front airbags on the driver and passenger side
- 2 Side airbags on the driver and passenger side

### Important safety notices

 Do not attempt to remove the gas generators of the airbag restraint system from the vehicle or to disassemble them.

Have inspection and service procedures performed by specially-trained personnel only.

If the airbag restraint system malfunctions, is deactivated or triggered as a response to an accident, have the system repaired or disassembled by a BMW center only.

Do not make modifications of any kind to the individual components or system wiring. These include the upholstered covers on the steering wheel hub, in the instrument panel and in the side trim panels of the doors. Never apply adhesive materials to these components or cover or modify them in any way. Do not attempt to disassemble the steering wheel itself.

To ensure compliance with applicable safety regulations, have the airbag generators disposed of by an BMW center only.

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. ◀

## Storing your vehicle



If you intend to store the vehicle for longer than three months, have the maintenance operations described on this page performed. ◀

### Preparation for storage

Have the following operations performed by your BMW center:

- 1 Clean and apply a rustproofing agent or other treatment to the engine, engine compartment, undercarriage, axles and major components in accordance with approved repair procedures. Wash the vehicle, clean the interior and treat painted and chromed parts. Clean the rubber seals around the hood, luggage compartment and doors.
- 2 Change the engine oil and oil filter with the engine at operating temperature. As an additional corrosion protection measure, a corrosion inhibitor can be added to the engine in accordance with the manufacturer's instructions.
- 3 Check the coolant level and concentration and top up if necessary.
- 4 Check the fluid level of the windshield washer fluid reservoir; top up if necessary.

- 5 Fill the fuel tank completely to prevent the formation of condensation.
- 6 Increase the tire inflation pressure to 51 psi (350 kPa).

### Before parking the vehicle for storage

- 1 Dry the parking brake and footbrake by brake applications to prevent the brake discs and drums from corroding.
  - 2 Park the vehicle in a covered, dry, and well-ventilated room. Place the transmission in 1st gear. Chock the wheels to prevent the vehicle from rolling if necessary. Do not apply the parking brake.
  - 3 Remove the battery, charge it completely and store it in a cool (but frost-free) room.
- M roadster:
- 4 Remove the hardtop\* and store it separately. Refer to page 97.
  - 5 Close the convertible top.

### During storage

Recharge the battery every six months. 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.

### Removing the vehicle from storage

Recharge the battery if the "Magic Eye" turns black. Refer to page 141.

Then have Inspection I performed by your BMW center, including a brake fluid replacement if necessary. Refer to the Service Manual.

Any BMW center will be happy to advise you concerning the advisability, legal implications and factory recommendations for technical modifications to the vehicle. For this purpose, the BMW center will require the Vehicle Identification Number. The engine number is also required in some instances.

### **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. These LEDs are similar to laser technology.

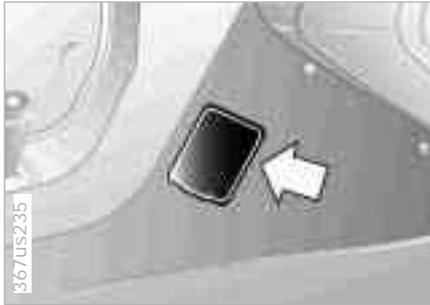


Do not remove the protective lens and avoid staring directly at the unfiltered beam for extended periods (several hours), since inflammation of the iris could result. ◀

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. ◀



The connector for the Onboard Diagnostic system (OBD) is located in the center console under a cover on the passenger's side (arrow).

The purpose of the OBD system is to ensure proper operation of the emission control system throughout 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, but 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.



Service Engine Soon warning lamp 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 [128](#)
- Windshield wiper blades [128](#)
- Lamps and bulbs [129](#)
- Master key with battery-powered lamp [134](#)
- Changing a wheel [135](#)
- Repairing a flat tire [135](#)
- Battery [140](#)
- Fuses [142](#)

### In case of electrical malfunction:

- Power convertible top [143](#)
- Fuel filler door [143](#)

### Assistance, giving and receiving:

- Jump-starting [144](#)
- Towing the vehicle [145](#)



## Overview

## Controls and features

## Operation, care and maintenance

## Owner service procedures

## Advanced technology

## Technical data

## Index

The onboard tool kit is located in the luggage compartment, under the floor mat.

**M coupe:**

Grasp the floor mat by the straps on the left and right. Pull it upward and remove it.

**M roadster:**

Lift the floor mat from the rear by the strap and fold it forward.

## Windshield wiper blades



### Front

- 1 Position the wipers vertically. To do this, switch on the wipers and switch off the ignition when the wipers are approximately vertical.
- 2 Raise the wiper arm completely.
- 3 Press the spring retainer (arrow) and extract the blade, pulling toward the wiper arm.
- 4 Insert a new wiper blade and apply pressure until you hear it engage.

### Rear window wiper – M coupe

Follow the same procedure as described for changing the front wiper blades, except that the wiper does not have to be positioned vertically.



Fold the wipers back onto the window before you turn the ignition key to position 1 or 2. ◀



Use only wiper blades which have been approved by BMW. ◀

## Lamps and bulbs

The lamps and bulbs make essential contributions to the safety of your vehicle. Therefore, comply fully with the following instructions during bulb replacement. 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 into 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.

 Before performing any work on the electrical system, switch off the affected accessories or disconnect the cable from the negative terminal of the battery. Failure to do so could result in short circuits in the electrical system. To prevent injuries and damage, comply with any instructions provided by the bulb manufacturer. ◀



The illustration depicts the right side of the engine compartment.

### 1 High beams

HB3 bulb, 65 watt

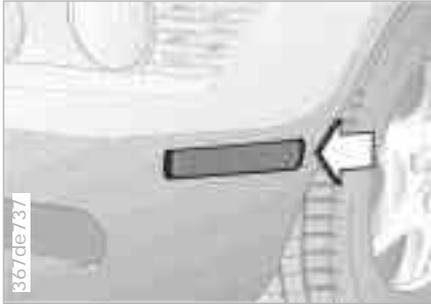
### 2 Low beams

HB4 bulb, 55 watt

 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. ◀

- 1 Turn the bulb holder with the bulb to the left and remove toward the rear.
- 2 Pull off the plug.
- 3 Push the new bulb holder with the bulb onto the plug – ensure proper locking.
- 4 Reinstall in reverse order.

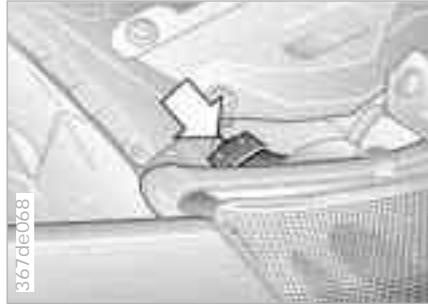
-  When cleaning the headlamps, please observe the following:
- ▷ Do not wipe dry (this causes scratches) and never use abrasives or strong solvents to clean the covers.
  - ▷ Remove dirt and contamination (such as insects) by soaking with BMW Car Shampoo and then rinsing with plenty of water.
  - ▷ Always use a deicer spray to remove accumulated ice and snow – never use a scraper. ◀



### **Position lamps**

5 watt bulb

- 1 Using your fingertip, press forward on the rear edge of the lamp's cover (arrow) and remove.
- 2 Turn the bulb holder with the bulb to the right and remove it from the lamp.
- 3 Pull the bulb out of the socket and replace.
- 4 Install in the reverse order.



### **Front turn signal indicators**

21 watt bulb

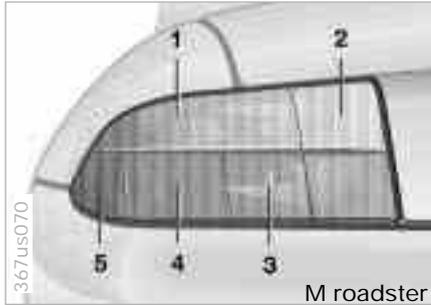
- 1 Turn the bulb holder with the bulb to the left and remove toward the rear.
- 2 Applying light pressure, turn the bulb to the left. Remove and exchange the bulb.
- 3 Insert the bulb holder and turn to the right as far as possible.



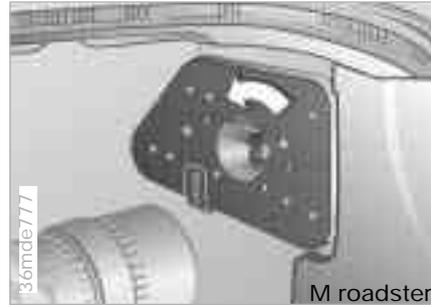
### **Side turn signals**

5 watt bulb

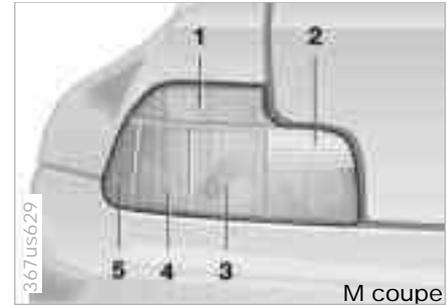
- 1 Using your fingertip, press toward the rear on the front edge of the lamp's cover (arrow) and remove.
- 2 Turn the bulb holder with the bulb to the right and remove it from the lamp.
- 3 Pull the bulb out of the socket and replace.
- 4 Install in the reverse order.



M roadster



M roadster



M coupe

## Tail lamp assembly – M roadster

Tail lamp, side marker lamp:

5 watt bulbs

Remaining bulbs: 21 watt

- |                         |       |
|-------------------------|-------|
| 1 Turn signal indicator | white |
| 2 Backup lamp           | white |
| 3 Tail lamp, reflector  | red   |
| 4 Brake lamp            | red   |
| 5 Side marker lamp      | red   |

- 1 Turn the lock of the bulb holder to the left (arrow) and remove the bulb holder.
- 2 Pull the bulb holder for the side marker lamp forward out of the tail lamp.
- 3 Press the defective bulb gently and turn it to the left. Remove the bulb and replace it.

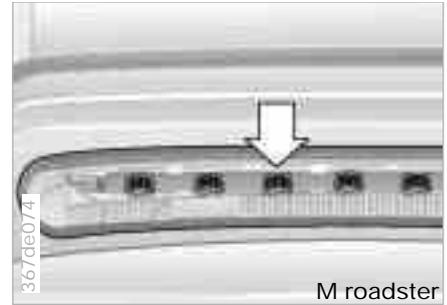
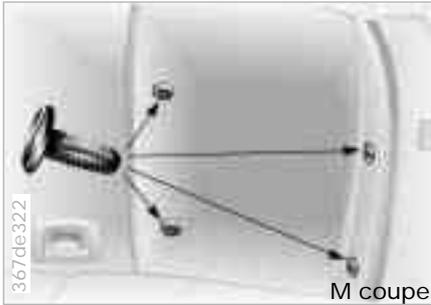
## Tail lamp assembly – M coupe

Tail lamp, side marker lamp:

5 watt bulbs

Remaining bulbs: 21 watt

- |                         |       |
|-------------------------|-------|
| 1 Turn signal indicator | white |
| 2 Backup lamp           | white |
| 3 Tail lamp, reflector  | red   |
| 4 Brake lamp            | red   |
| 5 Side marker lamp      | red   |



- 1 Lift up the luggage compartment floor mat.
- 2 To release, turn the mounting clips (arrows) of the trim panel on the rear wall of the luggage compartment approx. ¼ turn with a coin or screwdriver.
- 3 Pull out the clips and remove the trim panel.

- 4 Turn the corresponding bulb holder to the left (arrow) and remove it.
- 5 Press gently while turning the defective bulb to the left. Remove the bulb and replace it.
- 6 Insert the bulb holder and turn to the right as far as possible.

**Side marker lamp:**

- Pull the bulb holder out of the tail lamp assembly toward the front.
- 7 Reinstall the trim panel in the reverse order:  
Insert the clips and turn them ¼ turn to secure them.

**Center (high-mount) brake lamp – M roadster**

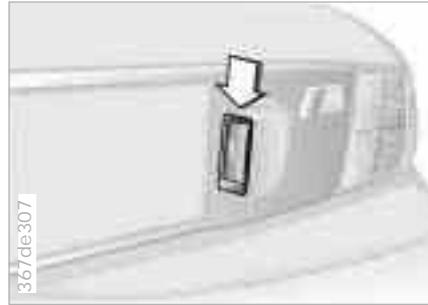
Seven lamps at 5 watts each

- 1 Open the luggage compartment lid.
- 2 Remove the cover (use a screwdriver if necessary).
- 3 Press gently while turning the defective bulb to the left and remove it.
- 4 Pull the bulb out of the bulb socket and replace.
- 5 Install in the reverse order.



## Center (high-mount) brake lamp – M coupe

In the event of a malfunction, please consult your BMW center.



## License plate lamps

5 watt bulb

- 1 Press against the upper edge of the lens (arrow) and remove it.
- 2 Turn the bulb holder with the bulb to the left and remove it from the lamp.
- 3 Pull the bulb out of the bulb socket and replace.
- 4 Install in the reverse order.

## Interior lamp – M roadster

10 watt bulb

- 1 Use a screwdriver to press out the lens at the left recess.
- 2 Pull the bulb out of the contact lugs.

 When reinstalling the lens, first position it on the left, then snap it into place. ◀

## Luggage compartment lamp – M roadster

5 watt bulb

The lamp is located above in the luggage compartment.

- 1 Use a screwdriver to press out the lamp.
- 2 Pull the bulb out of the contact lugs.

### Interior lamps – M coupe

Front:

15 watt bulb

- 1 Use a screwdriver to press out the lamp at the left recess.
- 2 Press back the plastic tab on the reflector, open the reflector and replace the bulb.

Rear:

10 watt bulb

- 1 Use a screwdriver to press out the lamp at the side recess.
- 2 Press back the plastic tab on the reflector, open the reflector and replace the bulb.

### Reading lamps – M coupe

10 watt bulbs

- 1 Use a screwdriver to press out the lamp at the left recess.
- 2 Press gently while turning the defective bulb to the left. Remove the bulb and replace it.

## Master key with battery-powered lamp



Return used batteries to a recycling point or to your BMW center. ◀

If light intensity drops, renew the battery to safeguard against acid escaping.

### Battery change

- 1 Remove the cover on the back of the key with a screwdriver.
- 2 Insert a new battery (refer to the illustration) of the same type (CR 2025) so that it touches the contacts.
- 3 Snap the cover into place and apply uniform pressure to seat it.

## Changing a wheel

The M roadster and M coupe are delivered from the factory without a jack and lug wrench.

Please have your BMW center switch the tires on your vehicle from summer to winter tires, or the reverse.

To repair a flat tire, refer to the following pages.

## Repairing a flat tire



Safety measures in the event of a flat tire:

Stop the vehicle as far as possible from the flow of traffic. Turn on the hazard warning flashers.

Turn the steering wheel to the straight-ahead position and engage the steering lock, engage the parking brake and shift into 1st or reverse gear.

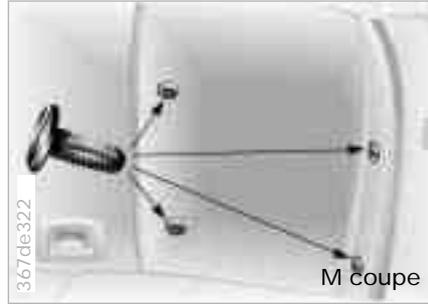
All passengers should be outside the vehicle and well away from your immediate working area (for instance, behind the guardrail).

If a warning triangle or portable hazard warning lamp is available, set it up on the roadside at an appropriate distance from the rear of the vehicle. Comply with all safety guidelines and regulations. ◀

## M Mobility System

You will find an M Mobility system in the M roadster and M coupe, for repairing flat tires. 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 transporting a spare wheel superfluous, thereby reducing the amount of weight you have to carry around.



The M Mobility system is located in the luggage compartment at the rear right, on the M coupe also under a cover.

Release the cover on the M coupe:

- 1 Fold the luggage compartment floor mat up.
- 2 To release, turn the four mounting clips (arrows) of the right-hand trim panel on the rear wall of the luggage compartment approx. ¼ turn with a coin or screwdriver.
- 3 Pull out the clips and remove the trim panel.

 Note that the fluid bottle in the system's sealant container must be replaced every 3 years by your BMW center if the system is not used. ◀

### **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 Sticker for maximum speed
- 6 Plug and cable for the cigarette lighter socket
- 7 Protective gloves (not shown)

# Repairing a flat tire

## Using the M Mobility system

Release the securing device of the M Mobility system and remove the system from the luggage compartment.

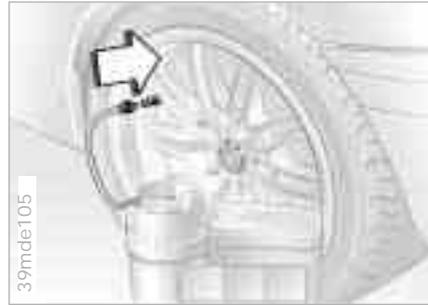


If possible, leave the foreign object in the tire. ◀

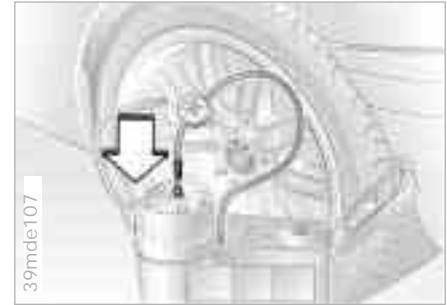


Do not exceed the maximum speed limits described below, otherwise accidents could result. Before you use the M Mobility system, read the warnings and danger notices on the device carefully. ◀

1 Pull sticker 5 off for maximum speed and affix it to the steering wheel.



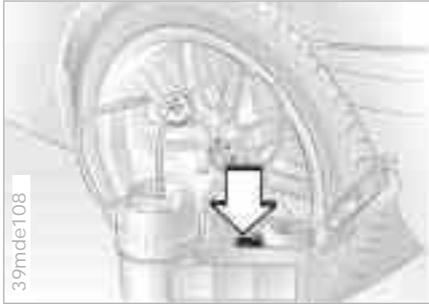
2 Remove the round cover and take out hose 4. Unscrew the valve stem cover from the defective wheel and screw the hose to the valve.



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 terminal for the sealant container as shown in the illustration.

4 Make sure that the system has been switched off (position 0). Take out the plug 6 and insert it into the cigarette lighter socket in the passenger compartment (refer to page 80).

## 138 Repairing a flat tire



- 7 Then immediately drive at least 1.2 miles (2 km), so that the liquid sealant distributes evenly throughout the inside of the tire.  
Do not exceed 40 mph (60 km/h), and if possible, do not drop below 15 mph (20 km/h).  
Stop at an appropriate spot.

- 5 Make sure that the screw on the rear of pressure gauge 3 is tightened down. Turn on the M Mobility system (position I, refer to illustration) and allow three minutes to elapse to let the sealant flow in. It does not matter afterward what the tire's inflation pressure is.
- 6 Turn the device off.  
Disconnect the connector hose from the sealant container and the tire valve. Stow the M Mobility system in the luggage compartment.



- 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 Reset the inflation pressure to 29 psi (200 kPa):
  - ▷ To increase the tire pressure: turn on the M Mobility system (position I). To check the current setting for the tire pressure briefly turn off the device.
  - ▷ To reduce the tire pressure: turn the screw on the back of the pressure gauge; a valve located there will open.

## Repairing a flat tire



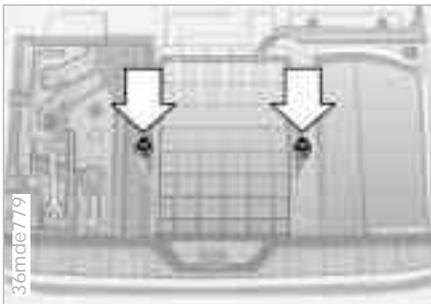
If the inflation pressure won't hold, carry out step 10 anyway and then repeat steps 7 through 10 again. The use of the M Mobility system may be ineffective if the damaged area in the tire is larger than approx. 0.15 in (4 mm). Please consult the nearest BMW center if the tire cannot be temporarily repaired with the M Mobility system. ◀

10 Unscrew the hose from the valve and stow the M Mobility system in the luggage compartment.

After the flat tire has been fixed and you start driving again, do not exceed a 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 new wheel balanced. Re-initialize the Tire Pressure Warning (RDW) system, refer to page 67 for further information. Have the M Mobility system refilled. Contact your BMW center for this.



 Battery posts, terminals and related accessories contain lead and lead compounds. Wash hands after handling. ◀

### Battery location

The battery is located in the luggage compartment under the floor mat and a cover.

To make the battery accessible, lift up or remove the floor mat, unscrew the nuts of the cover (arrows) and remove the cover.

### Maintenance

The battery is completely maintenance-free. That means that 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.



Please read the following information before working with the battery.



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.



Ensure that children keep well away from batteries and battery acid.



Do not allow sparks or open flame near the battery. Do not smoke near the battery. Avoid sparks from electrical cables or electrical equipment. Turn the key to position 0 in the ignition lock when the battery is disconnected or connected. Do not short circuit the battery terminals. This creates a risk of personal injury from high-voltage sparks.



A highly-explosive gas is generated when the battery is charged.

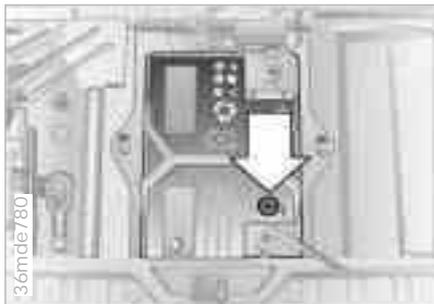


If acid is accidentally splashed into your eyes, rinse them thoroughly for 15 minutes with clear water. Following that, consult a physician immediately. If acid splashes onto your skin or clothing, rinse immediately with ample clean water. If acid is accidentally swallowed, consult a physician immediately.



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.

# Battery



## Charge condition

You can read the charge condition of the battery with the "Magic Eye" (a hydrometer):

- ▷ Green: adequate charge.
- ▷ Black: not charged adequately.  
The battery must be recharged.  
Please contact your BMW center.
- ▷ Yellow: replace the battery.

 The projected service life of the battery can only be reached if the battery is fully-charged at all times. Check the charge condition of the battery frequently if the vehicle is used primarily for driving short distances. ◀

## Charging the battery

Charge the battery in the vehicle only when the engine is off. Charge the battery by using the connectors in the engine compartment (Connectors, refer to jump-starting on page 144).

 Before performing any work on the electrical system, disconnect the cable from the negative terminal. If you do not, short circuits can create the risk of fire or personal injury. ◀

If you plan to park the vehicle for longer than 4 weeks, disconnect the battery from the vehicle electrical system by disconnecting the cable at the negative terminal. Then recharge the battery with an appropriate battery charger.

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. Refer also to page 123.

 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 when transporting. ◀

**Removal and installation**

 Do not disconnect the battery cables when the engine is running. If you do so, the ensuing voltage surge will damage the vehicle's onboard electronics.

Do not make any modifications in the wires leading to the positive terminal. 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.

Unscrew the battery retaining clamp.

When installing the battery, connect the positive terminal first, then connect the negative terminal.

 When installing a battery and cover, be sure that they are mounted properly. If this is not done, the battery will not be adequately secured in case of an accident. ◀

**Fuses**

If an electrical accessory fails, switch it off and check the fuse.

The fuse box (electrical distribution center), which contains spare fuses, relays and plastic tweezers, is located on the left-hand side of the engine compartment.

- 1 Press the retaining flap in and lift off the cover.
- 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 ("blown"), the metal strip will have melted and separated. Replace the blown fuse with a new fuse of the same ampere rating (color code).

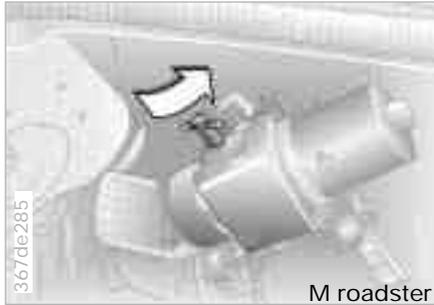
A listing of the fuses, their respective ampere ratings and the equipment in their circuits is provided on the cover of the fuse box.

When you close the fuse box, be sure that the cover is seated securely.

 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 a fuse burns through again, have the source of the fault checked and corrected by a BMW center.

## Power convertible top\*



### Closing manually

For roadsters with power convertible top\*, the convertible top drive unit is located in the luggage compartment behind the left side trim panel.

Turn the clip at the top of the trim panel to the left or right and swing the trim panel to the side.

Turn the T-pin a half turn to the left (refer to the illustration).

The convertible top drive unit is disengaged and the convertible top can be operated manually. Refer to page [37](#).

Please have your BMW center eliminate the defect and reengage the drive.

## Fuel filler door

143



### Releasing manually

M coupe: release the cover panel in the luggage compartment at the rear right, refer to page [136](#).

Pull the button at the right in the luggage compartment sharply (arrow).

Please consult your BMW center to have the defect corrected.

## 144 Jump-starting

Never use spray starter fluids to start the engine.

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.

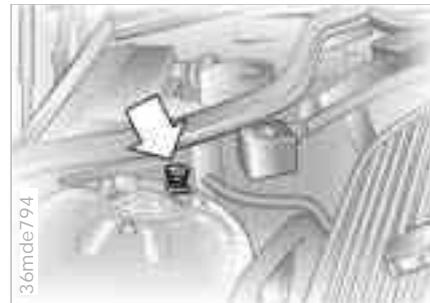
 Do not touch voltage-carrying components when the engine is running. To do so creates a risk of fatal injury. ◀

Carefully comply with the following instructions to avoid personal injury and damage to one or both vehicles:

- 1 Ensure 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 the discharged battery connected to the vehicle electrical system.
- 3 Make sure that there is no contact between the bodywork of the two vehicles. This creates the risk of short-circuiting.



- 4 Start by connecting the jumper cable from the positive terminal of the support vehicle to the auxiliary terminal for jump-starting located in your BMW's engine compartment. The cover of the auxiliary terminal for jump-starting is indicated by a "+" sign. Refer to the illustration. Flip the cap forward to open.



- 5 Then connect the negative terminals. First attach the cable to either the support vehicle's negative battery terminal "-", or to a suitable ground on its engine or body. Then connect the other terminal of the cable to a ground on the engine or on the body of the vehicle which is to be started. This is a special nut which is provided on the suspension strut dome of the BMW. Refer to the arrow in the illustration.

 Follow the same sequence when connecting jumper cables if you are assisting another vehicle. If you do not, there is a risk of personal injury from spark generation at the battery. ◀

## Jump-starting

- 6 Start the support vehicle's engine 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 lamps, set the blower at the highest speed and run the engine for at least 10 seconds. This will prevent a voltage surge at the voltage regulator to the electrical accessories.
- 9 Then disconnect the jumper cables in reverse sequence.

If necessary 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. Comply with all applicable towing laws and regulations at all times.

### Access to tow sockets

Front:

Use a screwdriver to press the cover out.



Rear:

Use a screwdriver to press the cover out.

 Screw the tow fitting in until it is tight against the stop. If you do not, the threads can be damaged. Do not tow the vehicle by any components of the running gear, or lash them down in any way. If you do so, the components could be damaged, 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.

 The towed vehicle should always be the lighter of the two vehicles. If this is not the case, it will not be possible to control vehicle handling. ◀

### Tow-starting

For instructions on jump-starting, refer to page [144](#).

Never attempt to use your vehicle to push another vehicle, since damage to the energy-absorbing bumpers could result.

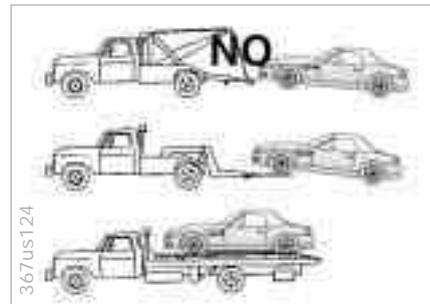
### Towing a vehicle

- 1 Put the manual-shift gear lever in neutral.
- 2 Towing speed:  
45 mph (70 km/h) maximum.
- 3 Towing distance:  
95 miles (150 km) maximum.
- 4 Leave the ignition key at position 1 to ensure that brake lamps, turn signal indicators, horn and windshield wipers remain operative, and to prevent the steering lock from engaging.
- 5 Switch on the hazard warning flashers (observe applicable legal 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 to prevent the steering lock from engaging.

The steering and brakes are without power assist when the engine is off. 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 equipment.
- ▷ Please comply with applicable towing laws.

 Never allow passengers to ride in a towed vehicle for any reason. ◀







Airbags 150  
Radio reception 150  
Dynamic Stability Control  
(DSC) 151  
Safety belt tensioner 151  
Interior rearview mirror with  
automatic dimming  
feature 152  
Limited slip differential 153

## Overview

## Controls and features

## Operation, care and maintenance

## Owner service procedures

## Advanced technology

## Technical data

## Index



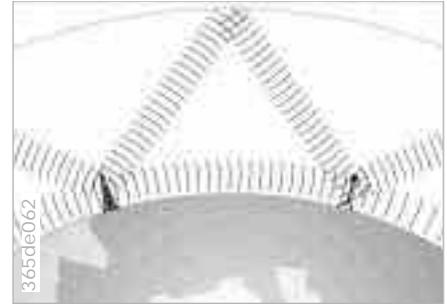
Deceleration sensors continuously monitor the physical forces acting upon the vehicle. In the event of a severe frontal impact, the gas generators of the driver- and passenger-side front airbags are ignited simultaneously. However, the passenger-side front airbag is only triggered if an additional sensor has recognized that the passenger seat is occupied.

If it is necessary during a side impact, a side airbag will be triggered on the side where the collision occurs.

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 it dissipates together with the associated smoke.

The entire process is completed within a fraction 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 atmospheric waves that are reflected from the ionosphere.

Frequency-modulation (FM) provides substantially better sound quality than the other frequencies. However, because FM transmissions rely on line-of-sight broadcast waves, their effective reception range is limited.

The limitations which are inherent to radio reception in a moving vehicle have been minimized by the use of innovative systems.

## Dynamic Stability Control (DSC)

Highly sensitive sensors monitor the number of revolutions of the wheels, steering angle, lateral acceleration, brake pressure and the movement of the vehicle around its vertical axis.

If differences in wheel revolutions should occur, the system will recognize the potential danger this loss of traction can cause and reduces the drive torque going to the wheels. The system will also apply the brakes to all four wheels, if necessary.

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 conditions such as understeering or oversteering should occur, DSC will help stabilize the vehicle in fractions of a second by reducing engine power output, and applying the brakes to individual wheels.

As a result, many dangerous skids can be prevented even as they are just beginning, within physically feasible limits.

You may need some time to become accustomed to this system's intervention. However, it provides optimum drive force and vehicle stability.

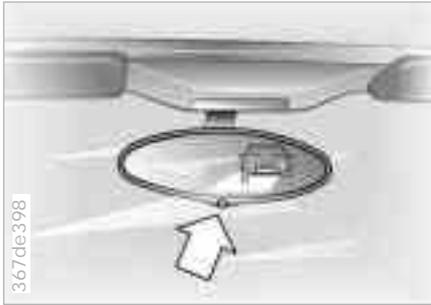
The braking intervention may be accompanied by a certain degree of noise.

## Safety belt tensioner 151



The safety belt tensioner responds to severe frontal impacts 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 tends to further reduce the tendency to slide under the lap belt.

## 152 Interior rearview mirror with automatic dimming feature



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 inside rearview mirror manually, and the driver can concentrate completely on traffic conditions.

The interior rearview mirror with automatic dimming feature reduces blinding from following traffic by adapting the intensity of the reflected images to correspond to levels of light registered by the unit's sensors. The mirror reverts to its undimmed setting as soon as the light source disappears.

One light sensor is mounted on the front of the mirror housing. This sensor is directed forward. It measures light intensity in the area ahead of the vehicle. A second light sensor is located on the lower edge of the mirror. The electronic control system compares the light intensity from front and rear. The difference provides the basic parameter used to modulate an electrical current and induce chemical

## Limited slip differential\*

With unfavorable road conditions, the drive forces that should be transferred may not be accommodated by the traditional differential, and therefore one wheel may spin. This wheelspin is largely avoided by the limited slip differential (cut-off value approx. 25 %).

Under actual driving conditions, this means better traction characteristics when starting and accelerating (under adverse road conditions) and during performance-oriented driving on winding roads.

However, in the case of extremely dynamic driving, the vehicle may tend at the same time to spin around its vertical axis in the vehicle center of gravity on road surfaces with different adhesion characteristics. Controlling this rotation tendency places greater demands on the driver and therefore requires special alertness.

The limited slip differential is active during actual driving without the driver taking action.



[Engine specifications 156](#)  
[Dimensions 157](#)  
[Weights 158](#)  
[Capacities 159](#)  
[Electrical system 160](#)  
[Drive belts 160](#)



[Overview](#)

[Controls and features](#)

[Operation, care  
and maintenance](#)

[Owner service procedures](#)

[Advanced technology](#)

[Technical data](#)

[Index](#)

Overview

Controls

Car care

Repairs

Technology

Data

Index

156 **Engine specifications**

		M roadster, M coupe
Displacement	cu in (cm <sup>3</sup> )	198.1 (3,246)
Number of cylinders		6
Maximum power output at engine speed	hp rpm	315 7,400
Maximum torque at engine speed	lb-ft (Nm) rpm	251 (340) 4,900
Compression ratio	$\epsilon$	11.5
Stroke	in (mm)	3.58 (91.0)
Bore	in (mm)	3.43 (87.0)
Fuel-injection system		Digital-electronic engine management system

		M roadster, M coupe
Length	in (mm)	158.5 (4,025)
Width	in (mm)	68.5 (1,740)
Height (unloaded)	in (mm)	49.8 (1,266)
Wheelbase	in (mm)	96.8 (2,459)
Track, front	in (mm)	56.0 (1,422)
Track, rear	in (mm)	58.7 (1,492)
Min. turning circle dia.	ft (m)	34.1 (10.4)

158 **Weights**

		M roadster	M coupe
Curb weight (with one person, ready for operation, full tank of fuel, options not included)			
	lbs. (kg)	3,131 (1,420)	3,131 (1,420)
Approved gross vehicle weight	lbs. (kg)	3,660 (1,660)	3,660 (1,660)
Approved front axle load	lbs. (kg)	1,874 (850)	1,874 (850)
Approved rear axle load	lbs. (kg)	1,962 (890)	1,962 (890)
Approved roof load capacity	lbs. (kg)	77 (35) (with hardtop*)	110 (50)
Luggage compartment capacity	cu ft (liters)	5.8 (165)	7.2 – 13.9 (205 – 395)

			Notes
Fuel tank reserve	gal. (liters) gal. (liters)	approx. 13.5 (approx. 51) approx. 2.1 (approx. 8.0)	Fuel specification: page <a href="#">26</a>
Windshield washer system including headlamp washer system	quarts (liters)	approx. 2.6 (approx. 2.5) approx. 5.6 (approx. 5.3)	For details: page <a href="#">108</a>
Cooling system including heater circuit	quarts (liters)	11.3 (10.7)	For details: page <a href="#">111</a>
Engine with oil filter renewal	quarts (liters)	5.8 (5.5)	"BMW High Performance Synthetic Oil" For details: page <a href="#">110</a>
Manual transmission		-	Lifetime fluid, no fluid change required
Differential	quarts (liters)	1.3 (1.2)	Changing the oil during the breaking-in inspection and inspection II

## 160 Electrical system

### Battery

12V, 70 Ah

### Spark plugs

NGK DCPR8EKP

This spark ignition system meets all requirements of the Canadian Interference-Causing Equipment Regulations (ICES-2).

## Drive belts

AC alternator – Coolant pump –

Power steering

Drive belt 6 PK x 1470

A/C compressor

Drive belt 5 PK x 829



You can obtain Original BMW parts and accessories, as well as professional advice from your BMW center. ◀



A B C

P Q R

Everything from A to Z 164



Overview

Controls and features

Operation, care  
and maintenance

Owner service procedures

Advanced technology

Technical data

Index

Overview

Controls

Car care

Repairs

Technology

Data

Index

# Everything from A to Z

## A

ABS (Antilock Brake System) 89  
Accessories 6  
Adding  
  brake fluid 112   
  engine coolant 112   
  engine oil 109  
  washer fluid 108   
Additional storage areas 78  
Adjusting  
  backrest 47  
  mirrors 47  
  seat 46  
  washer nozzles 108   
Air conditioner 74  
Air distribution 74  
Air outlets 72  
  ventilation 73  
Air pressure 26, 98  
  checking 26   
Air vents 72  
Airbags 21, 51, 122, 150  
Airflow rate 74  
Antenna 95  
Antifreeze 112  
Antifreeze protection,  
  radiator 93, 112, 112   
Antilock Brake System  
  (ABS) 89  
Anti-theft protection 32

Approved gross vehicle  
  weight 158  
Aquaplaning 87, 98  
Ashtray 79  
Automatic car washes 115  
Automatic cruise control 61  
Automatic dimming, interior  
  rearview mirror 48  
Automatic rear window  
  washer 59  
Automatic windshield  
  washer 108  
Axle weights 158

## B

Backrest, adjusting 47  
Backup lamps 58  
  bulb replacement 131   
Battery 140, 160  
  capacity 160  
  charge condition 141  
  charging 141  
  discharged 144  
  disposal 141   
  removal and  
  installation 142  
Battery change, keys 134   
Battery safety terminal 142  
Beverage holder 79  
BMW High Performance  
  Synthetic Oil 110  
Body-cavity protectant 118

Brake fluid 112  
  adding 112   
  disposal 113   
Brake hydraulic system 20  
Brake lamps, bulb replacement 131   
Brake pads 22, 92  
Brake system 92  
  add brake fluid 112   
  brake fluid 112  
  fluid level 92  
Brakes  
  malfunctions 92  
  winter road conditions 93  
Break-in procedure 86  
Bulb replacement 129   
Bulbs and lamps 129

## C

California Proposition  
  65 Warning 124  
Capacities 159  
Car care  
  exterior 115  
  interior 120  
Car keys 30  
Car radio  
  reception 95, 150  
  refer also to the separate  
  Owner's Manual  
Car wash systems 115, 117

## Care

  exterior 119  
  interior 120  
  leather 121  
  paint 119  
  upholstery materials 121  
  windows and glass 120  
Cargo loading 82  
Caring for the vehicle  
  finish 119  
Cassette mode, refer to the  
  Radio Owner's Manual  
Catalytic converter 88  
CBC (Cornering Brake  
  Control) 90  
Cellular phone 95  
  refer also to the separate  
  Owner's Manual  
Central locking system 32  
Charge condition of the  
  battery 141   
Charge indicator lamp 20  
Charging the battery 141   
Chassis number 113  
Checking oil level 109   
Checking tire  
  pressure 26 , 98  
Child restraint system 53  
  installation 54  
  M coupe with tether  
  strap 54  
Child seat 53

Cigarette lighter [80](#)  
 Cleaning the headlamps [60](#)  
 Cleaning the rear window [60](#)  
 Cleaning the windshield [59](#)  
 Cockpit [16](#)  
 Code, refer to the Radio Owner's Manual  
 Coin box [79](#)  
 Cold start [56](#)  
 Compartments [78](#)  
 Connecting a car vacuum cleaner [80](#)  
 Controls, cockpit [16](#)  
 Convertible top care [117](#)  
     electrical defect [143](#)  
     operation [37](#), [41](#)  
     weather protection [41](#)  
 Coolant [93](#), [112](#)  
     antifreeze protection [93](#)  
 Coolant temperature [63](#)  
 Copyright [4](#)  
 Cornering Brake Control (CBC) [90](#)  
 Cover, convertible top [38](#), [43](#)  
 Cruise control [61](#)  
 Cup holder, refer to beverage holder [79](#)  
 Curb weight [158](#)

**D**  
 Dashboard [16](#)  
 Data link connector for Onboard Diagnostics [125](#)  
 Date, refer to the Radio Owner's Manual  
 Daytime running lamps [69](#)  
 Deep water [87](#)  
 Defrost the windows and remove condensation [76](#)  
 Defrosting rear window [60](#)  
     mirrors [47](#)  
 Difficult steering [94](#)  
 Dimensions [157](#)  
 Dipstick, engine oil [109](#)  
 Dirty spots on paintwork [118](#)  
 Disc brakes [91](#)  
 Displacement [156](#)  
 Display lighting [69](#)  
 Displays [18](#)  
 Disposal batteries [141](#)  
     brake fluid [113](#)  
     engine oil [111](#)  
 Door key [30](#)  
 Doors manual operation [32](#)  
     unlocking and locking [32](#)  
 DOT Quality Grades [99](#)  
 Drive belts [160](#)

Driving notes [87](#)  
 Driving through water [87](#)  
 DSC (Dynamic Stability Control) [65](#), [151](#)  
 Dynamic Stability Control (DSC) [65](#), [151](#)  
  
**E**  
 Electric convertible top operation [41](#)  
 Electric power windows [35](#)  
 Electrical defect convertible top [143](#)  
     fuel filler door [143](#)  
 Electrical system [160](#)  
 Electronic immobilizer [31](#)  
 Emergency operation convertible top [143](#)  
     doors [32](#)  
     fuel filler door [143](#)  
     luggage compartment lid [34](#)  
 Engine compartment [107](#)  
 Engine coolant [112](#)  
     adding [112](#)  
 Engine oil [109](#)  
     adding [109](#)  
     dipstick [109](#)  
     disposal [111](#)  
     grades [110](#)  
     level [22](#), [109](#)  
     pressure [20](#)  
     viscosity [110](#)

Engine output [156](#)  
 Engine specifications [156](#)  
 Exterior finish [118](#)  
  
**F**  
 Failure of an electrical accessory [142](#)  
 Fan [74](#)  
 Filler cap cover [25](#)  
 Filling the washer reservoir [108](#)  
 First-aid kit [25](#)  
 Fittings, tow-starting and towing [145](#)  
 Flasher, headlamp [58](#)  
 Flat tire [98](#)  
     Z3 roadster, Z3 coupe [135](#)  
 Folding top [37](#)  
 Footbrake [91](#)  
 Front airbags [51](#), [122](#)  
 Frost protection, radiator [93](#)  
 Fuel [26](#)  
 Fuel filler door electrical defect [143](#)  
     emergency operation [143](#)  
 Fuel gauge [62](#)  
 Fuel tank capacity [159](#)  
 Fuses [142](#)

# Everything from A to Z

## G

Gasoline 26  
Glass sunroof 36  
Glove compartment 78  
Grilles 72  
Gross vehicle weight 158

## H

Hardtop 96  
Hazard warning  
  flashers 24  
Hazard warning system 24  
Hazard warning  
  triangle 24  
Head restraints 47  
Headlamp cleaning  
  system 108  
Headlamp cover,  
  care 116, 129  
Headlamp flasher 58  
Headlamp washers 60  
Headlamps, high  
  beam 23, 58  
  bulb replacement 129  
Headlamps, low beam 69  
  bulb replacement 129  
Heated seats 77  
Heating and ventilation 72  
Height 157  
Height adjustment, seats 46  
Help with jump starting 144

High beams 23, 58  
  bulb replacement 129  
Hood release 104  
Horn 17

## I

Identification number of the  
  vehicle 113  
Identification, tires 101  
Ignition key 30  
Ignition lock 55  
Ignition switch 55  
Immobilizer  
  electronic 31  
  vehicle 31  
Imprint 4  
Indicator lamps 20  
Inflation pressures 27, 98  
INSPECTION 64  
Instrument panel 16  
Instrument panel lighting 69  
Instruments 18  
Interior lamps 70  
  bulb replacement 133  
Interior rearview mirror,  
  automatic dimming  
  feature 48  
Intermittent wipe switch 59

## J

Jump-starting 144

## K

Key, battery change 134  
Keys 30

## L

Lamp switch 69  
Lamps and bulbs 129  
Lashing eyes 82  
Leather care 121  
Length 157  
License plate lamps, bulb  
  replacement 133  
Light-alloy wheel 103  
LIGHTS ON warning 69  
Limited slip differential 153  
Load-securing devices 82  
Lock buttons 33  
Locks, care 93  
Low beam headlamps 69  
  bulb replacement 129  
Low-fuel indicator lamp 62  
Luggage compartment 34  
  capacity 158  
  locking separately 34  
  manual operation 34  
Luggage compartment lamp,  
  bulb replacement 133  
Luggage compartment  
  lid 34  
  manual operation 34

## M

M + S tires 102  
M Mobility system  
  components 137  
  using 137  
M+S radial tires 102  
Magic Eye, refer to Battery  
  charge condition 141  
Maintenance 64, 114  
Malfunction, cellular  
  telephone 95  
Manual operation  
  convertible  
  top 37, 143  
  doors 32  
  luggage  
  compartment 34  
Manual transmission 58  
Master key, battery  
  change 134  
Mirrors 47  
  adjusting 47  
  defrosting 47  
Mobile phone 95  
  refer also to the separate  
  Owner's Manual  
Modifications,  
  technical 6, 124  
Multifunction switch 58

- N**
- Net 81
  - Non-smoker's equipment package 80
  - Notes on driving 87
- O**
- OBD data link connector 125
  - Odometer 62
  - Oil, adding 109 
  - Oil additives 109
  - Oil change intervals, refer to the Service and Warranty Information Booklet (US models) or the Warranty and Service Guide Booklet (Canadian models)
  - Oil consumption 109
  - Oil dipstick 109
  - Oil grades 110
  - Oil level checking 109   
indicator lamp 22
  - Oil pressure, indicator lamp 20
  - OILSERVICE 64
  - Old batteries 141
  - Onboard Diagnostics, data link connector 125
  - Onboard tool kit 128 
- Opening and closing**
- from the inside 33
  - from the outside 32
- Original parts 6**
- Output 156**
- Outside mirrors 47**
- P**
- Paint damage 119
  - Paint protection 119
  - Parking brake 21, 57
  - Parking lamps 69
  - Parking, winter 94
  - Partition net 81
  - Phone, mobile 95 refer also to the separate Owner's Manual
  - Please wear your safety belt warning lamp 21
  - Position lamp, bulb replacement 130 
  - Power seat adjustment 46
  - Power steering 94
  - Pressure, tires 26 , 98
  - Protection, paint 119
- Q**
- Quality Grades 99
- R**
- Radiator, frost protection 93
  - Radio reception 150
  - Radio, refer to the separate Owner's Manual
  - Reading lamps 71
  - Rear lamps 131 
  - Rear window defroster 60
  - Rear window washer, automatic 59
  - Rear window wiper 59 blade replacement 128 
  - Rearview mirrors 47
  - Recirculated air mode 74
  - Refueling 25
  - Releasing the hood 104 
  - Replacement key 30
  - Replacement, tires 99, 100
  - Replacing fuses 142 
  - Replacing windshield wiper blades 128 
  - Reporting safety defects 7
  - Reservoir, washer system 108 
  - Reverse gear 58
  - Roll-up cover 81
  - Roof load capacity 158
  - Roof rack 83
  - Rubber seals and components 93, 120
- S**
- Safety belt tensioner 151
  - Safety belts 49
  - Safety defects, reporting 7
  - Seals and components 93, 120
  - Seat adjustment 46
  - Seat heaters 77
  - Securing cargo 82
  - Service and Warranty Information Booklet (US models) 115
  - Service Interval Display 64, 114
  - Set temperature 74
  - Side airbags 51, 122
  - Side marker lamps, bulb replacement 131 
  - Skid control 94
  - Slippery roads 93
  - Snow chains 93 , 102
  - Socket 80 electrical appliances 80 flashlight 80 vacuum cleaner 80
  - Spare keys 30
  - Spark plugs 160
  - Special oils 110
  - Specifications, engine 156
  - Speed control 61
  - Starting assistance 144 

# Everything from A to Z

Starting problems  
56, 88, 144, 145

Starting the engine 56

Steering 94

Steering wheel lock 55

Storage boxes 78

Storage trays 78

Storing the vehicle 123

Summer tires 101

Sunroof 36

Switching off the engine 57

Symbols 4, 140

## T

Tachometer 62

Tail lamp assembly, bulb replacement 131 

Tail lamps 131

bulb replacement 131 

Tank capacity 159

Technical Data 155

Technical modifications 6, 124

Telephone, refer to the separate Owner's Manual

Temperature display engine coolant 63

Temperature layering 75

Tire condition 98

Tire damage 98 

Tire inflation pressures 26 , 98

Tire Quality Grading 99

Tire replacement 99, 100

Tire rotation between front and rear 100

Tire specifications 103

Tire tread 98

Tires, identification 101

Tools 128 

Torque 156

Tow fittings 145 

Towing the vehicle 145 

Track width 157

Traction Control System, refer to ASC+T/DSC

Transmission 58

Tread depth, tires 98

Trip odometer 62

Turn signals 23, 58

bulb replacement 130 , 131 

Turning circle 157

Two-way radios 95

## U

Uniform Tire Quality Grading 99

Upholstery care 121

Use of antifreeze 112 

Used batteries 141 

## V

Vacuum cleaner, connecting 80

Valve caps 101

Vanity mirrors 48

Vehicle battery 140, 160

Vehicle care exterior 115 interior 120

Vehicle Identification Number 113

Vehicle immobilizer 31

Vehicle storage 123

Velour care 121

Ventilation 72 outlets 72

Ventilation, draft-free 75

Vents 72

Vinyl upholstery, care 120

Viscosity 110

## W

Warm feet – cool head 75

Warning lamps 20

Warning triangle 24

Warranty and Service Guide Booklet (Canadian models) 115

Washer fluid, adding 108 

Washer nozzles, adjusting 108 

Washer reservoir, filling 108 

Washers, headlamp 60

Washing your vehicle 115

Weights 158

Wheelbase 157

Wheels and tires 101

Width 157

Windows, convenience closing mode 32

Windshield washer 108

filling reservoir 108 

nozzles 108

Windshield wipers 59 blade replacement 128 

Winter driving 93

Winter tires 102

Wiper blade replacement 128 

Wiper/Washer system 59

Wipers 59

Working in the engine compartment 104 

# Refueling

BMW recommends Castrol



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	
---------	--

The space between the two marks on the dipstick corresponds to approx. 1.4 US quarts (1.3 liter).

## Tire inflation pressure

	Summer		Winter	
	Front	Rear	Front	Rear
1 - 2 persons				
2 persons plus luggage				

**We wish you an enjoyable  
driving experience.**



**The Ultimate Driving Machine**

**M Z3 US-En**