Owner's Handbook

5 Series

BMW AG
In the interests of continuing technical development, we reserve the right to modify designs, equipment and accessories.

Dimensions, weights and performance data quoted in this handbook are to the best of our knowledge correct. Changes can be made by the manufacturer.

Important information for your safety
For your own safety, use spare parts and accessories approved by BMW.

When you use accessories tested and approved by BMW and Original BMW Parts, you have the assurance that their suitability for your vehicle has been thoroughly tested by BMW. BMW bears full product responsibility for these items.

BMW cannot entertain any liability for spare parts and accessories of any kind which it has not approved.

Congratulations on your choice of a BMW.

The better you are acquainted with your car, the easier you will discover driving to be. We therefore request you to heed the following piece of advice:

This owner’s handbook contains important information on operating and looking after your BMW. Please read it carefully before setting out in your new car, so that you are fully familiar with the technical advantages of your BMW. It also contains useful information on care and maintenance, to maintain both the car’s operating safety and its full resale value.

Wishing you many an enjoyable and safe journey,
BMW AG
Fuel grades

Catalyst-equipped cars
Unleaded premium fuel for spark-ignition engines to DIN 51,007 standard or equivalent, minimum octane number 95 (RM) (Euro Super).¹

Cars without catalytic converter²
Unleaded premium fuel for spark-ignition engines to DIN 51,007 standard or equivalent, minimum octane number 95 (RM) (Euro Super) or Premium fuel for spark-ignition engines to DIN 51,609, minimum octane number 96 (RM) or premium fuel, minimum octane number 95 (RM).²

BMW E65/E66 7 Series
Diesel oil to DIN 51,601 standard.

For winter operation, see page 135.

Further checks:

- Tyre pressures (including the spare wheel), twice a month 145-148
- Engine oil level 85
- Battery and level (add distilled water if necessary) 90
- Coolant level 58
- Brake fluid level 87
- Vehicle lighting (rearview mirrors) 101
- Cleaning fluid for the windscreen, headlight and fog light washers and windscreen wiper system 89

1) These engine versions with knock control can also run on fuel with a minimum octane number of 91 (RMM); performance and fuel consumption are reduced as it is.

2) Catalytic converter can be retrofitted.

Adding fuel

To open the fuel filler, turn the cap counterclockwise and take it off.

To close the fuel filler, place the cap on the filler and turn it clockwise until it engages (slotted-type catch).

Warning:
Always observe the appropriate safety regulations when handling fuel.

To release the fuel filler if the central locking system fails:
- Lift up the right foot mat in the luggage compartment
- Take off the right section of the luggage compartment trim (quick-release fasteners)
- Push back the lock bar.

BMW touring
- Open the flap in the right-hand side panel of the load area
- Pull back the button with the fuel pump symbol (arrow).

See Page 9.
Main controls

1. Headlight switch
2. Lever for turn indicators, parking lights, low/high headlight beams and headlight flasher
3. Fog light switch
4. Wiper/washer lever
5. Hazard warning flashers
6. Rear window heater
7. Steering column adjusting lever

Keys

A - Master key
- Main key with battery and light in key head (press BMW emblem to operate).
- Spare key
- Duplicate key for safe keeping, e.g. in wallet or purse.

B - Door and ignition key
Does not fit the luggage compartment or door box locks.

Obtaining a replacement key:
The key number is on a plate supplied together with the car's keys. Please keep it in a safe place.

Main key with battery and light
If the light becomes dim, renew the battery in case as it begins to leak out.

To charge battery: see illustration.

Hand in sport batteries at a collection point for used batteries or at your BMW service station.

Central locking/thief protection

When a door lock is operated and the driver's door is closed, the car's doors, luggage compartment and engine compartment will be locked or released.

During the locking procedure the vehicle immobilizer, which is approved by car insurance companies, can be checked locally and the anti-theft deadlock are activated and engaged. They are released when the car is unlocked.

The key can only be withdrawn when it is positioned vertically.

Note:
On cars with anti-theft warning system, this can only be activated and de-activated by way of the infra-red remote control. Open the car by inserting and turning the key when the anti-theft warning system is activated will set off the alarm.
Warning: Wherenever the car is locked from the outside, the theftproofing device is engaged. People still in the car are then unable to unlock the doors from the inside.

Inside the car, and with the driver’s door closed, the lock button on either front door can be used to lock and unlock the front doors. Pulling the door handle above the front door armrest also unlocks them.

To avoid being locked out of the car accidently, the car cannot be locked by pressing down the lock button if the driver’s door is open.

In the event of a collision, the central locking is automatically released; the interior light and (depending on the version) the rear warning flashes are switched on.

Convenienly closed, the interior lighting, windows, and electric sliding-fitting sunroof are switched on, the doors closed, and the key in the lock direction, and hold it there for as long as necessary.

Note: This function can also be performed from the tailgate lock on the towing: turn the key to the right and hold it there.

Warning: When locking the car, check that there is no danger of fingers etc. being trapped. The locking procedure is interrupted as soon as the key is released.

Emergency operation (in the event of an electrical fault)

At any door, turn the key in the appropriate direction to the limit position to release or lock that door.

Opening the doors from the outside:

Lift up the handle plate.

Driver’s door lock heating.

The heating is switched on when the handle plate is lifted.

The heating time is automatically controlled to save energy.

Opening the doors from the inside:

Pull the handle above the armrest.

Important note:

Children left in the car could lock the doors from the inside. To prevent this, make sure of removing the ignition key and taking it with you, so that the doors can be unlocked again from the outside.

Luggage compartment

Lock can only be operated with the master key.

Central locking

(only locking is possible by turning key to right. The theftproofing device is engaged at the same time.)

If the key is turned to the left, the theftproofing device is engaged but the luggage compartment can still be opened.

Locking luggage compartment

(removes master key in the horizontal position)

This prevents access to the luggage compartment if the spare door and ignition key is fitted in all hotel garages, workshops etc. (for vehicles with through-loading facility).

If the theftproofing device is actuated, the luggage compartment can be opened with a master key but the theftproofing device must be activated again afterwards.

Luggage compartment light

The light comes on when the lid is opened.

There are lashing eyes in the luggage compartment floor for luggage nets, tensioning straps for securing items of luggage.

Use the tensioning straps in the luggage compartment for securing smaller items of luggage.

The handle recess next to the lock facilitated closing the luggage compartment lid when open.

To release the fuel filler flap if the central locking system has failed:

- lif the right floor mat in the luggage compartment
- take off the right-section of the luggage compartment trim (quick-release fashion)
- push back the lock bar (arrow).

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Releasing the fuel filler flap if the central locking system has failed:

- open the flap in the right-hand side trim of the load area
- pull back the button with the fuel pump symbol (arrow).
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**Tailgate lock**
This can only be operated with a master key.

Key turned to right: central locking and thieftproofing device engaged, immobilizer activated.

Key turned to left: when the thieftproofing device is engaged, the tailgate and rear window can still be opened at their release buttons (see next column).

**Emergency operation (in event of an electrical fault)**
Turn the key to the left-hand limit position to release and open the tailgate.

Note:
In order to lock the tailgate when on the move, close the front doors and press down the safety catch on either of these doors.

**Tailgate and rear window**
- Release with central locking system or at tailgate lock.
- To open the tailgate:
  - Press button 1 beneath the BMW badge.

**To open the rear window:**
Press button 2 above the tailgate lock, the window can now be pivoted upwards.

**To close:**
- Press tailgate or window shut.
- Lock by means of the central locking system or of the tailgate lock.

The recess handle on the right next to the lock facilitates closing the tailgate lid when open.

**Childproof locks on rear doors**
Insert the master key in the lock and turn to wards the outside; the door can only be opened from the outside.

**Remote control with infrared transmitter**
- Point the transmitter at the receiver located below car's interior mirror frame 5 metres away. The beam must reach the receiver directly.

**Opening: press button 1:**
- The LED comes on briefly.
- The central locking and thieftproofing device are released.
- The immobilizing device is de-activated.
- The alarm system is deactivated.
- The car's interior light is switched on.

**Locking: press button 2:**
- The LED comes on briefly.
- The central locking is engaged.
- The thieftproofing device is engaged.
- The immobilizing device is activated.
- The alarm system is activated.

To switch off the alarm system, lift alarm sensor e.g. when travelling by autorail or using a two-level garage (see also Page 64): press button 2 again briefly after activating the thieftproofing device.

**Convenient closing circuit:**
To close the windows and sliding roof, hold button 2 depressed. The closing procedure will start after a delay of approximately 2 seconds and the LED flashes.

**Note:**
If convenient closing is interrupted inadvertently, do not restart the process simply by pressing the button a second time, as the tail alarm sensor will otherwise be switched off. To restart convenient closing, first of all press button 1 (opening).

**Warning:**
During the closing process, check that there is no danger of fingers etc. being trapped. The closing process is interrupted immediately when the button is released.

**Master key**
The key on the infrared transmitter is a master key.

Except for the alarm function, all remote-control functions can also be performed with the conventional keys (see Page 7).
Batteries

- Replace the batteries if the LED does not come on when a button is pressed, and closing movements cannot be performed.
- Leave the cover at the access (arrow) with the aid of a screwdriver.

Remove the 2 screws (arrows) and take off the cover.

The correct battery type and installed position are printed on the battery holder.

Important:
- Use only batteries of the specified type.
- Hand in spent batteries at a collection point for used batteries or at your BMW service station.

Initialising the transmitter

- After replacing the transmitter battery, the infrared transmitter must be initialised (unless renewing taken less than one minute and none of the buttons is pressed). The same applies if a new transmitter has been obtained, e.g. to replace a faulty one:
  - The car must have been opened using the remote control.
  - Close the driver's door.

Important:
- If the driver's door is not closed, the initialising process can still be carried out but any further initialising process in future is blocked. This blocking must then be rectified by a BMW service station.
  - Briefly turn the ignition key in the steering lock to position 1 (for max. 5 seconds), then back to 0.

Note:
- In the same way that any key can be copied, the infrared transmitter's signal can also be reproduced. To guard against abuse, the code is changed automatically each time the transmitter is used and it can be re-initialised at any time. You should nevertheless always protect the infrared transmitter against use by unauthorised persons.

- Press button 1 (illustrated) on the transmitter and hold depressed. Press button 1 briefly three times within 10 seconds, meanwhile always keeping button 1 depressed. Release button 1; the LED will flash slowly for max. 10 seconds.
- While the LED is flashing, hold the transmitter close to the receiver under the inside mirror (at a distance of no more than approx. 15 cm) and press one of the two buttons.
- The central locking function will be engaged and immediately released again, indicating that the transmitter has been successfully initialised.

If the LEDs do not flash or if the central locking does not respond, the initialising procedure must be repeated.

Any other transmitters, used for the car (up to four are possible) must each be initialised within 30 seconds. Do not operate the ignition this time.

If a transmitter develops a fault, a replacement can be obtained from your BMW service station.
Seats

Moving seat forward/back
Pull lever (1) and push the seat to the desired position.

After repositioning the lever, make sure that the seat engages in its catches.

Angle of complete seat (driver's seat only)
Pull lever (2) and move the seat as required.

BMW sports seat®
Additional adjustment of thigh support at hand wheel to one side of the front foot side.

Seat back adjustment
Pull lever (1) and apply weight against the seat back or allow it to come forward.

Seat height adjustment
Pull lever (2). Apply weight to seat or allow it to come up as required.

Warning:
Do not reproduce the driver's seat while the car is in motion. A sudden seat movement could cause you to lose control of the car and result in an accident. Nor should the front passenger's seat be fully reclined while the car is being driven.

Note:
The spine obtains most relief when you sit right back in the seat and rest against the seat back.

Ideally, the driver's head should be on a straight line forming a direct extension of the spinal column.

On longer journeys the seat back angle can be increased slightly to reduce the strain on the body muscles further. However, the driver must still be able to reach the full circumference of the steering wheel with the arms slightly bent.

Front and rear head restraints®
To alter the height, pull up or push down as required. Pivot forward or back to adjust the angle.

Warning:
Head restraints help to reduce scalp injury in an accident. They should be positioned approximately at ear height when the seat is occupied.

Electric front seat adjustment®
1. Seat angle adjustment
2. Forward/back seat movement
3. Seat height adjustment
4. Seat back angle adjustment
5. Head-restraint height adjustment

BMW sports seat®
Additional adjustment of thigh support at hand wheel to one side of the front foot side.

Switching:
With the driver's door open or with the door closed, but the automatic interior light still on, try to turn the ignition key to turn position 1.

Press the desired button 1, 2 or 3 briefly.

The automatic movement process is interrupted as soon as a seat or mirror control switch or the memory keys are operated.

With the driver's door closed and the ignition key either removed or in position 0 or 2:
Press the desired button 1, 2 or 3 until the memory operation has been completed.

Tilting down passenger's side door mirror
Mirror changover switch (see Page 26) in driver's side mirror position:
When reversing or selector lever position R is selected, the passenger's side door mirror glass will tilt down slowly to show the road alongside and behind the rear side of the car (edge of kerb, etc), at an angle when parking.

You can deactivate the automatic mirror tilting system by pressing the left/mirror changover switch to the "passenger's side mirror" position.
Lumbar support
Press rocker switch on inner side of seat frame to adjust to the required position. This facility enables you to extend or retract the convex support in the seat back for the lower thigh. This provides support for the upper pelvis and spine, to enable a relaxed sitting position.

Electrically-adjusted rear head restraints
When rear passenger fastens his or her seat belt, the corresponding head restraint automatically moves into position. To adjust the height, operate the rocker switch.

Steering column adjustment
Fold out the damper lever. Pull out or push in the steering wheel to adjust its position in relation to the seat. Fold the clamp lever back in.

Warning:
Do not adjust position of the steering column while driving — risk of accident.

Automatic steering wheel adjustment
(only in conjunction with height adjustment)
To facilitate access and exit, the steering wheel moves to its top position when:
- the ignition key is turned to position 0
- the driver's door is opened when ignition key is in position 1
- the ignition key is in position 2, the handbrake is applied and the driver's door opened.

The steering wheel moves to the travel (memory) position when:
- the ignition key is in position 2 and the handbrake is released when the driver's door is open
- the ignition key is in position 2, the handbrake is applied and the driver's door is closed.

Electric steering wheel adjustment
Steering wheel reach and height can be adjusted by moving the lever accordingly.

Warning:
Never adjust the steering wheel while driving — risk of accident.

Seating steering wheel position: see seat, mirror and steering wheel memory, Page 15.

Horn
Press the centre pad (the slotted cover) on the steering wheel at any convenient point.

Standard steering wheel: press one of the horn pushers.
Through-loading facility

The rear seat is divided one-third/two-thirds. To store long objects, the seat cushions and seat back sections can be folded down. Pull the strap on the seat cushions and lift upright, moving the front seats forward slightly, if necessary.

The rear seat back is automatically disengaged and can then be folded forward.

Warning: The outer corner sections of the seat backs are fixed.

First pull out the head restraints with a firm movement, positioning the seat back at an angle if necessary. The space between the folded seat back and the door is suitable for temporary storage of the head restraints.

If a seat back is inadvertently locked in position again, press the lever (arrow) and release it; the seat back is now disengaged.

If necessary, the seat cushions can also be removed. Lift the cushions into an upright position, squeeze the release lever and lift out the cushions to the front. Follow the reverse procedure when installing.

Long items can be carried with the front passenger's seat slid forward, its head restraint removed (a sudden jerk is necessary to remove the electrically operated version) and the seat back in the reclined position. To install an electrically-operated head restraint again, press in firmly to engage in position.

With the seat cushion removed, remove the retaining mount (arrow) and allow the red seat back slide to engage in the pin on the mount. Warning: Before installing a seat cushion again after removal, always fold the retaining mount back down. Ensure that loads are secured in transit to prevent them from sliding around, so that they cannot injure the car's occupants particularly when it is braked or caused to swerve.

When the seat back is folded back up, ensure that it engages correctly so that the seat back functions properly. The red slide (arrow) must move down.

If a seat back is not locked into position, the seat belt cannot be pulled out.
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**Roller cover for load area**

Pull out roller cover and engage at rear in the sockets.

The roller cover cassette can be removed: Press the buttons on either side (arrow) and take out the cassette.

To reinstall, simply press the cassette into the holders.

Light weight objects, such as items of clothing, may be placed on the roller cover.

**Load area dividing net**

Pull the net out of the larger seat back top section, extend the mounting rod to the full width and locate in the holders (see illustration). If desired, the smaller net section can also be drawn out and fitted to the mounting rod.

- Holders for the mounting rod are available with the rear seat back(s) both folded down and intact.

**Flaps in load area base**

To open:
- Press the rear access handle (arrow), fold up flap on handle.

The front flap conceals the following:
- Jack, wheel stud wrench, wheel chock, adapter for the proof wheel studs, hexagonal wrench for wheel stud covers and ball head for trailer tow hitch.

- The rear flap conceals the following:
  - Spare wheel and storage compartment with sub-divisions.

**Flaps in load area side trims**

Press the release button to open.

**Auxiliary power socket**

Can be used as a power socket for electrical equipment rated at up to approx. 250 W at 12 V.

Take care not to damage the socket by unsuitable plugs.
Reinforced load-area roller cover

Pull out the cover using the handle and engage it in the sockets at the rear. The roller cover has a load-bearing capacity of 25 kg.

Important: Heavy or hard objects should only be transported on the roller cover if the load area dividing rail is in position. Make sure that such objects will not be flung through the dividing rail, e.g. as a result of braking manoeuvres.

Before pushing back, place the handle in the last fold of the cover.

When extended, the cover can be opened from behind the rear seat back, e.g. for access to the load area from the rear seat while in transit.

Push back the cover at the front rod, a certain amount of initial resistance needs to be overcome. To do so, move the first rod gently into the sockets. Ensure that the short front tab is resting on the side supports.

Installing:

Tilt the cover forwards and introduce it together with the two cartridge into the holders (arrow on the cartridges indicates front). Push forward and then press down to engage.

Note:

To engage the cartridge properly, the top side must be flush with the guide rails so that the rods can slide smoothly when extended.

Removing:

Grip the cover at both outer ends, push forward (1), lift back (2) and then raise to the rear to remove (3).

Alternatively, carefully follow the above procedure for each side separately.

Note:

When removed, take care that the rods are kept in the cartridge.

When not installed, this item should therefore ideally be carried as illustrated.

If the rods should inadvertently slide out, they must be inserted in the cartridge at both ends simultaneously.
Seat belts

The car's occupants should put on their seat belts before each journey starts. The seat belt catch should be heard to engage when the belt tongue is inserted into the buckle.

Releasing the seat belt catch:

Press the thumb button on the catch. Guide the belt back into the automatic retractor if necessary.

Wipe the belt across the palms and fingers, making sure that it is not twisted. Do not pass the belt over hard orbreakable objects in your pockets or clothing. The belt adjusts itself according to body movements.

The belt should be as close to the body as possible, therefore avoid wearing thick and heavy clothing and do not sit too far back. Take up slack regularly by pulling up the belt at the shoulder.

Important:

For the following reasons, it is essential for the belt not to be worn slack and for the belt to be fastened correctly:

- In the event of a head-on collision, the lap belt would slip over the hips and injure the lower part of the wearer's body. Furthermore, the retraction effect of the seat belt is reduced by the belt being too slack.

- Pregnant women should always wear the seat belt, making sure that the lap belt passes low down over the hips and does not cross against the lower part of the abdomen.

- The height of the upper belt anchorage point is automatically adjusted as the seat is moved forward and back, to suit occupants of various heights.

- The seat belt must not pass over the neck, become jammed or be allowed to rub against any sharp edges.

Important:

Never carry babies or small children on your lap when being driven. Use suitable child restraint systems for children up to 15 years old.

Babies up to 9 months old can be carried in a shell-type seat secured to the front passenger's or rear seat by means of the standard seat belts and facing to the rear.

There is the BMW Vario system for children aged between 9 months and 3 years, and between 3 and 9 years.

For children aged between 9 months and 3 years, the seat is secured at both 2 catchers on the front passenger's seat; children aged between 3 and 9 years (BMW Vario system) and the standard seat belt, facing the front.

- A further three-section child seat consisting of seat shell, seat back and restraint device is generally suitable for children between 2 and 12 years old.

- It is mounted facing forward, using the standard seat belt.

- Whenever child restraint systems are used, always observe the manufacturer's instructions. The mounting points of the rear are available as standard.

Important:

Child restraint systems may not be used on the front passenger's seat if a front passenger airbag is fitted.

Do not tamper with any occupant restraint system.

If any damage or severe stress is incurred by a belt system, including the belt-catcher tensioner and BMW child restraint systems, the affected components must be renewed by a BMW service station and the belt anchoring points checked.

If the belt catcher tensioner is triggered off there will be a gap of app. 20 mm between the belt catch and the tracing wheel.

The belt locking mechanism will act when:

- The belt is pulled too fast.
- The car is braked or accelerated abruptly.
- Taking corners.
- The car is at a steep angle.

Note:

Please explain three points concerning the seat belts to any passengers traveling with you, and make sure that the seat belts are used properly.

Notes on care: See Page 125.

Airbag restraint system

- Driver airbag
- Front passenger airbag

The airbag restraint system protects the driver and front passenger in a head-on collision. The inflated airbag restrains forward movement of the driver's and front passenger's seat and protects the upper body against injury.

The picture shows the area within which the airbag system is triggered off.

In less severe accidents and if the car rolls over, is side-impact or struck from the rear, protection is provided by the seat belt.

Warning:

The airbag is an additional safety feature, and must not be regarded as an alternative to wearing the seat belt.

Airbag light

The airbag light comes on for about 6 seconds or 2 seconds and then goes out.

System diagnostics:

- The tell-tale light comes on for about 6 seconds or 2 seconds, goes out briefly and then comes on again.
- The tell-tale light flashes for 5 minutes during "jogging", then remains on permanently.
- The light is permanently on during a journey or when the key is turned to position 1 or beyond.

In these cases there is a risk that the system will not be triggered off in the event of a sufficiently severe accident, and, under these conditions, the airbag may not exert its full protective effect.

When what happens when the system is triggered off:

The airbags, which are contained in the padded flap in the steering wheel and instrument panel, are inflated rapidly, bursting through the perforated aperture and filling the space in the front passenger's airbag.

The entire process, in which a considerable amount of energy is released, takes only one-twentieth of a second.

* Airbag restraint system fitted in sports steering wheel.
Once an airbag system has been triggered off, all components must be renewed. All work on the airbag system must be carried out by a BMW service station.

Any careless or unskilled interference with the system could lead to its failure or to accidental triggering off with the risk of injury. If an airbag generator has to be scraped, the safety precautions issued by BMW must always be complied with. They can be studied at any BMW service station.

Chord restraint systems mounted on the front passenger's seat are not permitted on cars with a front-passenger airbag, in certain countries it is in any case required by law that children under the age of 12 may only travel at the rear.

Not explain the points concerning the airbag system to the front passenger, and make sure that they are observed.

Mirrors

Electric remote-control door mirror

Open the mirror switch to reposition the mirror as necessary.

Electric mirror heating

The heating element is operated and controlled automatically in ignition key position 1 (Engine Running). Passenger's door mirror

Operate the changeover switch and then the mirror switch to move this mirror to the desired position.

Warning:
The mirror has a convex glass. Objects seen in it are closer than they appear to be, so that it is not always possible to estimate their distance behind the car accurately. This also applies to the outer section of the aspherical wide-angle mirrors.

Aspherical wide-angle mirrors

The outer section of the mirrors is convex and reflects an enlarged, but slightly distorted, area behind the car. The inner section of the mirror reflects the near-view area. This improves the driver's range of rearview vision and eradicates the "blinding spot" at the rear and side of the car.

Manual mirror operation

Position the mirror by moving the glass at the edges.

For mirror memory, see Page 15.

Automatic-dip inside mirror

The mirror dips automatically and steplessly in accordance with the intensity of the light received (ambient light) and the effect of following headlights. The mirror automatically switches to the standard, non-dipped position when rear view gear is engaged.

Automatic-dip inside mirror in conjunction with infrared-transmitter remote control

Turn the knob beneath the mirror. Position 0: normal position. Position 1: anti-glare position. Sun visors

These can be pivoted in front of the side windows if necessary. The make-up mirrors are located behind a sliding cover. Make-up mirrors with light:

The light comes on when the sun visor is folded down and the car's lights are on. Slide the cover to one side as necessary.

Automatic-dip inside mirror * The mirror dips automatically and steplessly in accordance with the intensity of the light received (ambient light) and the effect of following headlights. The mirror automatically switches to the standard, non-dipped position when rear view gear is engaged.

Automatic-dip inside mirror in conjunction with infrared-transmitter remote control

Turn the knob beneath the mirror. Position 0: automatic-dip function off. Position 1: automatic-dip function as described above.

Note:

Remove the photo-cells unobstructed and clean in order to preserve the mirror's function.
**Important notes**

**Warning:**

Never run the car's engine in an enclosed space. The exhaust contains carbon monoxide which, although colourless and odourless, is extremely toxic. Inhaling exhaust gas constitutes a severe health risk and can lead to loss of consciousness with fatal consequences.

Never pull out the ignition key when the car is moving.

Otherwise, the ignition lock will engage and make it impossible to steer the car.

Always remove the ignition key and take it with you when leaving the car. Make sure that the steering lock has engaged.

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**Instrument cluster**

1. Fuel gauge with telltale
2. Speedometer
3. Tachometer, high beam and trailer feather indicators
4. Revolution counter with Energy Control
5. Coolant temperature gauge
6. Warning lights for low engine oil pressure, ABS, airbag, brake hydraulics, brake pad wear and headlight applied
7. Automatic transmission selector lever position indicator (with program indicators and tailgate light for electronic shift control unit)
8. Total and trip distance recorders, Service Interval indicator
9. Reset knob for trip distance recorder
10. Front and rear fog light telltale and battery charge telltale; additionally on BMW 520i/tt/tsa: warning light for electronic fuel injection system control; telltale for preheating

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**Ignition/starter switch and steering lock**

1. Steering unlocked.
2. Ignition switched on:
   - BMW 520i/tt/tsa: multistage ignition.
   - All other items of electrical equipment can be operated.
   - A well-charged battery is essential if electrically operated equipment is to operate reliably and full driving convenience be maintained. When the engine is idling or in the course of a short journey, the alternator only charges the battery very slightly. You are recommended to switch off electrical equipment with a high current consumption temporarily unless absolutely necessary, for example seat heating or heated rear window, in slow-speed city driving or nose-to-tail traffic.

   To maintain various memories intact, a very slight current continues to flow. This should be remembered in particular when leaving the car out of use for more than four weeks.

   To prevent the battery from becoming depleted if the car is to be left out of use for a lengthy period, it should be disconnected at the negative terminal (see Page 91).

   - Do not depress the accelerator pedal while starting the engine.
   - On cars with automatic transmission, the engine can only be started in selector lever positions P or N.

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Instrument cluster

1. Fuel gauge with triptrace
2. Speedometer
3. Turn indicator: high beam and trailer flasher signals
4. Revolution counter with Energy Control
5. Coolant temperature gauge
6. Warning lamps for handbrake, brake hydraulic, anti-lock braking system (ABS) and airbag
7. Check Control
8. Automatic transmission selector lever position/lamps and program display
9. Check Control display
10. Engine oil pressure warning lamp, triptrace for ASC+T and electronic differential system on BMW M55X
11. Service indicator
12. Total and trip distance recorder
13. Reset knob for trip distance recorder
14. Battery charge and front and rear fog light triptraces

Daytime lights setting

If desired, the light switch can remain at stage 2: when the ignition is turned off, the vehicle lights go out.
Depending on version, the daytime lights come on automatically in ignition key position 2 even if the light switch is at 0.

Main light switch

Stage 1: side lights
Stage 2: low headlight beams
If the ignition is switched off with the headlight on, they will go out, but the side lights will remain on.
Cars without Check Control:
When the ignition key is turned back to 0, a buzzer sounds for a few seconds as a reminder that the main light switch is on. The buzzer can be switched off by pressing the trip distance recorder reset knob.
Cars with Check Control:
The reminder appears on the Check Control display.

Instrument lighting

Turn the knurled wheel to adjust the light intensity.

Turn Indicator and High/low beam lever

1. High headlight beam (blue triptrace)
2. Headlight flasher
3. Turn indicators (green triptrace: lamp flashes and the flasher relay emits a ticking sound).

If the headlight lamp flashes faster and the flickering occurs more frequently than normal, one of the turn indicator bulbs has blown.

Brief operation of turn indicators
When pulling away from the roadside or changing lanes, you need only move the lever slightly away from its rest position. When released, it will cancel immediately.

Parking lights, right or left
Move the turn indicator lever beyond the normal indicating position and allow it to engage.
The time before the wipers are again switched on from position 0 to position 1 is the programmed interval (min. 20 s; twice as long when the car is standing still). To cancel the programmed interval, return the lever to 0 or switch off the engine.

2. Normal wiper speed
   - The wipers operate intermittently when the car is standing still.
   - Automatic windshield wash
     - Washing water is sprayed onto the windshield and the wipers are operated briefly (Exception: When the lever is actuated briefly, washing water is sprayed onto the windshield without the windshield wipers coming on.)
   - Automatic intensive cleaning
     - As function 5, with intensive cleaning fluid additionally sprayed onto the windshield first.

Heated windshield washer jets
   - Switched on automatically when ignition key is in position 2.

Warning:
- Do not use the windshield washer if there is any chance of the liquid freezing to the glass and interfering with your view of the road and traffic ahead.
- Do not operate the windshield washer when its fluid reservoir is empty, or else the pump will be damaged.
- Detach wiper blades which have frozen to the glass before operating the windshield wipers, to avoid overheating or damaging the system.

BWM touring
1. Intermittent setting for rear window wipers
2. Automatic cleaning system for rear window (one-touch function)

Reservoir: see Page 89.

Distance recorder
This shows the total number of kilometres or miles driven by the car.

Trip recorder
Records journey distances up to 699.9 km or miles.

Press the button to reset to zero (ignition key turned to position 1 or off);
To display the distance recorder or trip distance recorder total with the ignition key is moved or in position 0, press the reset but-
ton, the total will be displayed for a short period.

Revolution counter
Avoid engine speeds in the red warning zone.

The fuel supply is interrupted in this zone to protect the engine, which runs unevenly as a result.

Energy Control
Shows fuel consumption in litres per 100 km.

The dial clearly indicates whether the car is being driven economically or not.

When the car is idling, the needle will drift to the top end of the scale.

Wash/wipe system
1. Intermittent wiper
2. Normal wiper speed
3. Post-wiper speed
4. Short wipe
5. Automatic windshield wash
6. Automatic intensive cleaning

Cleaning system* for headlights and front fog lights
Every fifth time the automatic windshield wash or intensive cleaning system is acti-
vated, the headlights are also simulta-
neously cleaned if the vehicle lights are switched on.

Reservoir: see Page 89.

1. Intermittent action

The interval depends on vehicle speed. If fa-
cility for programming is available*
Move briefly to position 1 from position 0 to program the interval period.
Fuel gauge

The telltale lamp comes on to indicate that there are approx. 3 litres (7.5 imp. gal) of fuel remaining in the tank. After the ignition has been switched on, the telltale light may go on for a short period to confirm that it is operating correctly.

Coolant temperature gauge

Blue: engine cold. Drive at moderate engine and road speeds.
Red: COOLANT TEMP warning (in Check Control): engine too hot. Stop the engine immediately and allow it to cool down.
Between the two coloured zones: normal operating temperature. If outside temperatures are very high or the engine has been working very hard, the needle may approach the red zone.
Checking coolant level, see page 86.

Service Indicator

Green light-emitting diodes (LED): the timer is on, the sooner the next service will be due.
Yellow LED in conjunction with OILSERVICE or INSPECTION: comes on when the next service routine is due.
Red LED: a service routine is overdue.
Check symbol in conjunction with INSPECTION: shows that brake fluid renewal is due.

Note:

Periods during which the battery has been disconnected are ignored by the display. Any such times must be taken into account to ensure that the brake fluid is changed according to schedule (every two years), i.e.

Telltale and warning lamps

Left/right flashing turn indicators
Flashes in the same rhythm as the turn indicators when these are being operated.

High headlight beam
Comes on when the high-beam headlights are on and when the flasher is operated.

Trailer turn indicators*
Operates together with the vehicle turn indicator telltale when towing a trailer.
For further notes see page 117.

Brake lining wear
Comes on when the ignition is turned on and goes out after the engine has started.
If the lamp comes on during a journey, the ABS is faulty and out of operation. The brakes can be operated conventionally, with no loss of effect.
For further notes see page 120.

Handbrake

Goes out after the engine has started.
Comes on when the handbrake is applied.

Brake hydraulics

Goes out after the engine has started.
If the lamp comes on during a journey, brake fluid level is too low.
For further notes see pages 67 and 99.

Antilock braking system (ABS)

Goes out after the engine has started.
If the lamp comes on during a journey, the ABS is faulty and out of operation. The brakes can be operated conventionally, with no loss of effect.
For further notes see page 120.

Fasten seat belt*

(possibly together with acoustic signal and/ or Check Control message*)
Comes on briefly when the ignition is switched on, then goes out (depending on version, only after the seat belt has been fastened).
Engine oil pressure

Engine oil pressure is maintained at the correct level by the engine oil pressure control system. If the pressure drops below the specified level, the control system will signal the driver to add oil. If the pressure remains low, the system will shut off the engine. If the pressure remains low even after the engine is restarted, consult a BMW service station.

Battery charge

Battery charge is maintained by the alternator. If the battery is not charged, the engine will start but will not run. If the battery charge is low, consult a BMW service station.

BMW 520tds/10s

Preheating

Preheating is recommended to warm up the engine and improve its performance. Before starting the engine, turn on the preheating system. The preheating system will warm up the engine and improve its performance.

Electronic fuel injection control

The electronic fuel injection control system is designed to provide optimal fuel delivery for the engine. The system monitors the engine's performance and adjusts the fuel delivery accordingly.

Front fog lights

Front fog lights are activated by pressing the fog light switch. The lights are designed to provide better visibility in low-visibility conditions.

Heated rear window

The heated rear window is activated by pressing the heated rear window switch. The lights are designed to prevent condensation on the rear window and improve visibility.

Hazard warning flashers

The hazard warning flashers are activated by pressing the hazard warning switch. The lights are designed to alert other drivers to the vehicle's presence in hazardous conditions.

Consult a BMW service station if any of the above issues persist. It is recommended to have the vehicle serviced regularly to maintain optimal performance.
**Check Control**

The following system faults are displayed in the form of inscriptions, and a going warning is signalled. A distinction is made between three levels of priority.

**Priority 1**

**Display**

LOW BRAKE FLUID

Level is too low to ensure safe braking. Have the cause of the brake fluid loss rectified by a BMW service station.

ENGINE OIL PRESS

Oil pressure too low to allow safe driving. Have the cause of the low oil pressure rectified by a BMW service station.

COOLANT TEMP

Coolant temperature too high to allow safe driving. Have the cause of the high coolant temperature rectified by a BMW service station.

HANDBRAKE ON

The handbrake is on. Release the handbrake before starting to drive.

NO BRAKE LIGHT

Brake light failure – bulbs failed or fuse blown. Check the fuse block and replace the fuse if necessary (see page 187 or 190).

BRAKE LIGHT (ELECTR.)

Check for a wiring fault. If the brake lights still do not function, have the circuit checked by a BMW service station.

**Priority 2**

**Display**

TRANSPROG.

Automatic transmission:

- Display of oil level in transmission (see page 11).
- Display of oil pressure (see page 10).

BRAKE LINING

Top up at the earliest opportunity (see page 20).

BRAKE LIGHT

Bulb blown (see page 10).

DIF BEAM

- Display of oil level in differential (see page 10).
- Circuit check (see page 20).

TAIL LIGHT

- Display of oil level in tail light (see page 20).
- Circuit check (see page 20).

UIC PLATE LIGHT

- Display of oil level in UIC plate light (see page 20).
- Circuit check (see page 20).

TRAILER LIGHT

Trailer lighting fuse blown or circuit failure (see page 20).

The displays appear when the ignition key is turned to position 2 (prior to 1 faults occur, these are automatically suppressed). After the display has gone out, the reminder symbol remains. If a plus sign (•) appears, this means that there are further displays which should be called up by pressing the CC key.

**Priority 3**

**Display**

ENGINE OIL LOW

Engine oil level has dropped to MINI check level and is too low at next opportunity (when refilling), (see page 86).

COOLANT LEVEL

Content is too low at next opportunity (see page 86).

OIL LEVEL SENSOR

Sensor for engine oil level fault/detonation monitor (BMW service station at the next opportunity). Important: low oil level is not indicated with this fault specific.

CHECK CONTROL

Electronics defect, various announcements cannot be indicated, consult BMW service station at the next opportunity.

LIGHTS ON

Displayed at end of journey when drivers door is opened.

FASTEN SEAT BELT

Possible together with warning light and/or acoustic signal.

The displays primarily appear at the end of the journey, when the ignition key is turned back to position 0; several displays may appear in succession, with priority displays shown after priority 2 and 1 displays. Even after removing the ignition key, the display can be called up again by pressing the CC key for about another 3 minutes.

Displays also appear before the journey starts, when the ignition key is turned to position 2; they disappear after about 3 minutes or when the journey is started, and no reminder symbols remain. A repeat display appears only when the ignition is turned to position 2.

If a plus sign appears, call up further displays by pressing the CC key.

**General information**

If the OWNER'S HANDBOOK display appears, see "Instruction/remedy" for notes on the display concerned.

The "Owner's Handbook" display can be cancelled by pressing the CC key.

Checking operation of the Check Control display (only if no messages displayed)

Press the CC key with ignition key in position 2; the display CHECK CONTROL must appear.

**SUSP LEVELING**

Car is overloaded (overload load limit exceeded) or self-leveling suspension is actuating. A fail-safe/load on car is consulted by a BMW service station (do not drive more than 70 km/h [110 mph] – see page 99).

Note: the SUSP LEVELING display alternates with a "Max. 710 km/h" warning if this speed is exceeded. The warning is cancelled if the car's speed is reduced sufficiently below this speed.

**SPEED LIMIT**

Displayed if the legal road speed limit is exceeded. Comply with local regulations.

The above faults are displayed immediately, accompanied by a warning horn and flashing warning symbol (if more than one fault occurs at once, the displays are shown in succession). These displays cannot be cancelled with the Check Control (CC) key (3).

**Note:** with the CC key, displays can be cancelled before actual cancelling takes place, and other stored displays indicated by symbols can be called up.
To switch the system on again:
Press the button a second time. The telltale light will go out.

If the telltale light flashes:
The system is active, that is to say, it is compensating for fluctuations in traction caused by the road surface.
If the telltale light does not go out after the engine has been started or comes on during the journey:
The system is defective, but the car itself is fully operational with the exception of the ASC+T stability control function. Consult a BMW service station regarding repair of the fault.
For further information, see Page 121.

Handbrake
The handbrake engages automatically when pulled up, and the "P" telltale lamp in the instrument cluster comes on.
To release the handbrake, pull the lever up slightly, press in the knob and push the lever fully down.
The handbrake acts on the rear wheels.
Do not apply it too hard when the car is being driven, to avoid excessive rear-wheel braking and the possibility of the rear of the car skidding.

Manual gearbox
The next position for the gear lever is in the 5th-gear position. When the lever is moved out of gear, it springs automatically to the neutral position.

All models are equipped with synchronmesh.

Warning - BMW 540i
Make quite sure that the gear lever is pressed to the light when attempting to select 5th or 6th gear, to prevent 3rd or 4th gear from being selected in error.

Selecting reverse
With the car standing still, press the gear lever to the left until the slightest resistance is overcome.

Reversing lights
These come on when reverse gear is selected and the ignition is switched on.

Warning:
On a gradient, do not try to keep the car still by slipping the clutch. Always apply the handbrake. A slipping clutch will suffer premature and excessive wear.
Automatic transmission

Selector lever positions (1): P (Park) 1 (Drive) 2 (Low) 3 (Overdrive) 4 (Reverse) D (Drive) S (Sport) M (Manual) 0 (Neutral)

In addition, 3 different shift programs (2) can be selected at the program switch:
E (Economy) 6 (Sport) 4 (Winter)

1. Manual program

For driving conditions in which the selected gear is to be held, e.g. in other words, the vehicle is held while the gear is also pulled away in this gear, and does not shift down when the car is accelerated. When this program is selected, the car travels only in 3rd gear in position D, or in gear 1 in position 1.

2. Inclines or towing a trailer, for example, it is beneficial to drive in selector lever position P or 2. In winter conditions on icy roads, position 4 is recommended for pulling away smoothly with no gear shifts.

3. Manual program

For driving conditions in which the selected gear is to be held, e.g. in other words, the vehicle is held while the gear is also pulled away in this gear, and does not shift down when the car is accelerated. When this program is selected, the car travels only in 3rd gear in position D, or in gear 1 in position 1.

4. Inclines or towing a trailer, for example, it is beneficial to drive in selector lever position P or 2. In winter conditions on icy roads, position 4 is recommended for pulling away smoothly with no gear shifts.
Adaptive transmission control

AGS

Two programs can be selected at the program switch:
A = "Adaptive" program
S = "Sport" program

Push the switch in the desired direction. The selected program is then displayed in the instrument cluster (see Page 42).

A = "Adaptive" program
This is the initial position every time the engine is started. When a forward speed is selected, the adaptive transmission control automatically selects the most advantageous shift program. The control system adapts continuously to the driver's style (e.g., restrained or enthusiastic approach), the properties of the road surface (slippery, sharp, rutty), and the

Special functions
In program A, the adaptive transmission control influences speed selection by means of various special functions.
Certain shifting processes which were previously common are now suppressed, and in special situations, gear shifts which previously did not occur now take place.

Suppressing upshifts
If the accelerator is let out rapidly while cornering at high speeds and on steep downward gradients, upshifts are usually suppressed. The engine's braking effect can thus be used and the occurrence of unpleasant upshifts when the car is being driven in an enthusiastic manner is significantly reduced.

Shifting down
The comments on Page 43 on the kickdown function also apply to the AGS. In many instances, however, depressing the accelerator pedal rapidly will be sufficient to cause the transmission to shift down; it will then not be necessary to bring the kickdown function into operation.
If the vehicle is braked on a sharp downhill gradient, up to a certain engine speed the transmission shifts down a gear. This increases the engine's braking effect.

Selection of winter driving program
When driving on a slippery surface (snow and ice), a winter program is automatically selected. The car pulls away in 2nd or 3rd gear and shifts up to higher gears at relatively low speeds. This program facilitates driving in winter conditions, and the vehicle's traction and dynamic stability are enhanced.

The winter program is left whenever the AGS recognizes that the car is on a high-grip surface, the "Sport" program is selected or the AGS+ is switched off.

Warning:
Never carry out any work in the engine compartment when a gear (speed range) has been selected.
Never leave children unattended inside the car.
For towing away, tow-starting and starting with a flat battery see Pages 95 and 96.
3 – Slide control for lower air distribution
Air enters through the front and rear footwell outlets. Vent holes in the windshield are adjusted to keep the slide control at least half open, except when deflecting the windshield so that the temperature sensor of the electronic temperature control remains operational.

4 – Rotary temperature selector
4.6 – Rotary temperature selectors for the driver's and passenger's side
The controls are intended as an approximate guide to the temperature inside the car. The selected temperature is reached as soon as possible after the car has been started, and does not normally need to be altered after the electronic temperature control system.

5 – On/off switch and rotary airflow volume control
Position 0: System switched off, air entry shut off.
Turned clockwise away from detent: minimum airflow and blower rating. Turned further to right: airflow volume increases, minimum blower rating.

6 – Setting for maximum windscreen and side window defrosting
Stratified temperatures for freedom from fatigue on long journeys: feet warm, head cool.

7 – Setting for maximum windscreen and side window defrosting (removing existing ice or condensation, keeping glass free)
Maximum defrosting effect is not obtained until the engine reaches its norm operation temperature.

For maximum effect, keep the ventilation outlets to the rear seat area closed.

If the windows fog over, this is usually caused by internal temperature differences (condensation) or by high atmospheric humidity. The only cure is to dry the glass by increasing the flow of air and its temperature.

Heating and ventilation
1 – Slide control for upper air distribution
Slide control at right: fully open
Slide control at left: closed
Slide control at center: set to any position between fully open and fully closed

2 – Slide control for centre distribution
Air enters through the directionally adjustable, controlled-flow grilles in the centre of the facia and front doors, and through the controlled-flow grille on the top of the facia.

3 – Slide control for lower air distribution
Air enters through the front and rear footwell outlets. Vent holes in the windshield are adjusted to keep the slide control at least half open, except when deflecting the windshield so that the temperature sensor of the electronic temperature control remains operational.

Rear ventilation
The rear can be ventilated independently of the slide control via the directionally adjustable, controlled-flow grilles in the end of the centre console. Air drawn emerges from these grilles.

1 – Slide control for upper air distribution
Air enters through the defroster outlets for the windscreen and the front side windows.

2 – Slide control for centre distribution
Air enters through the directionally adjustable, controlled-flow grilles in the centre of the facia and front doors, and through the controlled-flow grille on the top of the facia.
Heatng and ventilation/air conditioning

1. - Side control for upper air distribution
2. - Control for setting air distribution
3. - Control for lower air distribution
4. - Temperature selector wheel
5. - On-off switch and rotary air volume knob
6. - Temperature selector wheel, right side
7. - Settings for maximum windscreen and side window defrosting
8. - Pushbutton for AUTO±, or recirculated air operation
9. - Pushbutton for air conditioning
10. - Control for recirculated air
11. - 3 control switches for air distribution

The desired distribution of heated or fresh air can be steplessly adjusted.

For correct operation of the electronic temperature control system, the rotary control should always be turned to at least the 12 o'clock position.

For most rapid windscreen and side window defrosting:

- Settings for maximum windscreen and side window defrosting (removing existing ice or condensation, keeping glass free of fog).

- Maximum defrosting effect is not obtained until the vehicle reaches its normal operating temperature.

- For maximum effect, keep the ventilation outlets to the rear seat area closed.

- If the windows fog over, this is caused by too low a temperature difference (condensation) or by high atmospheric humidity.

- The only cure is to dry the glass in freezing air by blowing the air over it.

* Pushbutton for AUTO Automatic Recirculating Air Control*

This system identifies peak loads caused by recirculation and prevents it from entering the car's interior.

Press the button as often as necessary to obtain the following three measures in succession:

- LEDs of normal fresh-air operation (left LED: sensor measures degree of outside air pollution. If the level is too high, the fresh-air flaps are automatically closed and the system is operated in the recirculated air mode).

- Next LED: recirculated-air operation

Pushbutton for recirculated air operation

- Recommended when driving through heavily contaminated air without the car is recirculated and no outside air permitted to enter.

- The full-time pushbutton comes on to indicate recirculated-air operation.

- Although the air-conditioning is automatically switched on to improve the quality of the air by removing excess moisture, the recirculated-air setting should not be used for 20 minutes or more.

Note: If the windows fog over during recirculated-air or AUTO operation, change to normal fresh-air operation and switch on air conditioning with pushbutton 9.

* Pushbutton for air conditioning*

This button is used to turn on the air distribution to the air vents and the windshield. The table indicates that the system is operating.

- The air is cooled and dried.

- The atmospheric pressure is very high, it is best to turn the air conditioning off without delay (before inclining condensate can reach the evaporator) to dry the air and prevent the windows from fogging over. Take care not to direct cooled air onto the windshield, as it could otherwise melt off on the outside.

- Improper cooling performance is indicated, the system switches automatically to recirculated air operation (with a small proportion of additional fresh air).

- Stratifred temperatures for freedom from fatigue on long journeys: feet warm, head cool.

- Knurled wheel: 1 varies the temperature of the air emerging from the side grilles and front door outlets (except when maximum cooling performance has been selected).

- Up: warmer

- Down: cooler
For optimum operation of the automatic air distribution system, all of the following must be closed at the same time.

Air supply to all outlets and grilles, without automatic air distribution control.

This program is recommended for warmer weather in particular, when special ventilation or cooling of the lower part of the car's interior is required.

Note: Press this button, increase the air flow if necessary and close up the ventilation outlets if it becomes too cold during a journey and you do not wish to press button 7.

Air distribution to front and rear footwell outlets only.

The defroster outlets are only slightly open, and cool air is supplied at the rear end of the centre console.

Note: This program is only recommended at high altitudes or in regions with a low air pressure. When this button is pressed, the air is blown out very weakly at first and then more strongly as the vehicle reaches 30 C, air emerges from the defroster outlet.

This setting is suitable for all normal conditions with very few exceptions, and supplies air of a pleasant and acceptable quality to the interior.

LEDS off; normal fresh-air operation

If maximum cooling performance is needed, the system switches automatically to recirculated air operation (with a small proportion of outside air from the ceiling), and the defroster outlets are closed.

Push button for maximum windscreen and side window defrosting/defogging

If the window fog over, this is caused by temperature differences (condensation) or by high atmospheric humidity. The only cure is to dry the glass by, for example, increasing the flow of air and its temperature.

When this button is pressed, maximum windscreen and side window de-frosting is selected automatically, with no additional control in the car interior.

Maximum de-frosting effect is not obtained until the engine reaches its normal operating temperature.

When this button is released, the previous control settings are automatically restored.

Note: The temperature selected for the rear window heating is also in operation.

Notice: After the car's engine has been switched off and the air conditioning system is not in use, the air in the interior will still be cooled for some time.
Important notes on air conditioning operation
1. The moisture condenser which forms at the evaporator is discharged underneath the car. Depending on humidity, up to 2 litres of water may be discharged per hour.
2. The air conditioning must be used briefly at least once a month to prevent the compressor shaft seals from drying out and allowing refrigerant to escape. This is particularly important during the winter.
3. If any malfunction occurs in the air conditioning system, for instance if it is set for maximum cooling, the side temperature selector wheel or rotary knob fully to left but no cooled air is supplied, it must be switched off immediately and the car taken to a BMW service station.

Microfilter*
Fresh air is drawn in through a microfilter. This filters out up to 100 % of pollen and 80 % of dust particles. The filter is changed during the usual maintenance work. Any reduction in the air flow rate indicates that the filter should be changed before the next inspection.

Stratified temperatures for freedom from fatigue on long journeys: foot warm, head cool.

Driver and front passenger: knurled wheel 1 varies the temperature of the air emerging from the face grille (except when maximum cooling performance has been selected).

Rear seat passengers: open and alter the direction of the grille at the rear end of the centre console as required. These grilles supply fresh air only to orid air (the air con-

rater is in operation).

Rear seat air ventilation is shut off automatically in the driver's-side programme.
- AUTO (cold-weather only)
- air distribution to footwell outlets only.

Interior light
1. Lights come on when a door is opened (door contact switch) and remain on for several seconds after the door has been closed, even with the ignition off, and after an accident.
2. Lights permanently off
3. Lights permanently on

The reading lights* next to the front interior light are operated similarly.

Automatic interior light*
(In conjunction with heated driver's door lock)
In addition to the above functions, the light comes on for a few seconds (max. three seconds) when the vehicle is locked and the driver's door handle is lifted.

Cigarette lighter
Press the knob to operate. When the spiral element has heated up, the lamp glows to its original position and can be removed.

Warning: Always take hold of the cigarette lighter by its knob, never by its heating element or at the sides.

Cigarette lighter socket
This can also be used as a power socket for a hand lamp, car vacuum cleaner etc. rated up to approx. 12 V/0.30 W. Be careful not to damage the socket by inserting a plug of the wrong pattern.

Ashtrays
Front ashtray
To extinguish a cigarette, first knock off excess ash, then insert it into the funnel-shaped section of the ashtrey. Do not press it in hard.
Rechargeable hand lamp
The plug for rechargeable hand lamp is located at the top left side of glove box. It has a bush -movements -and -can -therefore -remain -plugged in all the time, so that it is fully charged whenever needed.
It must, however, be taken out if the battery is disconnected or removed.
Warning: do not plug the lamp in while it is switched on.

Other storage compartments:
On the facia, in the front doors, on the centre console in a compartment and in a compartment with lid to the left of the steering wheel.

Glove box
Open by pulling the handle, when the igni-
tion key is in position 1 or beyond, this light comes on. Fold the lid back up to close.

Warning: To avoid the risk of injury, close the glove box immediately after use.

Lock with a master key.
To renew the light bulb (3 Watt), press out the lamp with a screwdriver blade and change the bulb.

Electric window lifter
To operate, the ignition key must be in position 2.
Individual switches are provided under the rear door windows.

One-touch function*, by touching the appropriate switch momentarily, the driver's door window can be opened or closed and the other windows opened. A further touch halts window movement.

Safety switch (arrow) To prevent operation of the rear windows from the rear switches, e.g. by children.

Convenience circuit
After the ignition has been switched off these can still be operated (for a maximum of approx. 15 minutes) when:
- the key is in position 1 or 0,
- the key has been removed, or
- the doors have been opened once.

After closing the doors, hold the key in the "lock" position in the door lock for locking modes, the remote lock can also be used if you want to close the windows (convenient closure system).

Warning: Careless or negligent closing of the win-
dows, particularly with the remote con-
trol, could cause injury.
If children are carried in the rear seat it is particularly important to keep the safety switch (arrow) pressed in.
Always remove the ignition key and take it with you when leaving the car.
An automatic electronic circuit breaker protects the system against overcharging and faults.

Sliding/tilt roof

To operate, the ignition key must be in position 2.

Raising: press the switch. Opening: slide the switch to the rear. Closing: slide the switch towards.

One-touch function*, to open or close a partly open window, just operate the switch briefly in the desired direction. A further touch halts the movement.

To prevent unpleasant draughts or a feeling of low air pressure inside the car when the roof is open and in particular when in the raised position, keep the air entry grilles open and increase the incoming airflow if necessary.
Convenience circuit

After the ignition has been switched on, it can still be operated (for a maximum of approx. 15 minutes) when the ignition key is position 1 or 0.

- The key has been removed, or
- the doors have been opened once.

After the doors have been closed, hold the key in the door lock in the "lock" position to close the sliding lift roof (see service manual in closure function).

Warning: Careless or negligent closing of the sliding lift roof, particularly with the remote control, could cause injury. Always remove the ignition key and take it with you when leaving the car.

An electronic automatic circuit breaker protects the system against overloading and faults. If an electrical fault should develop, the electric sliding roof can be closed manually (see Page 100).

Double-panel sunroof

For ventilation, the front roof can be raised and both roofs can be slid open either individually or synchronously.

Operation in ignition key position 2:

One-touch function: Automatic operation of the roofs by pressing the switch briefly in the desired direction. A further touch halts the movement.

Push the switch to the rear or touch briefly:

The front roof is raised.

Note: As it is raised, the sunroof lining moves a short distance downwards. With the roof fully raised, push the switch or press briefly, the front roof opens to the rear.

Press the switch or touch briefly:

The double sliding lift roof is closed from all positions.

Push the switch forward or touch briefly:

The front roof is raised.

With the front roof fully raised, push the switch or press briefly; the rear roof opens to the front.

When fully open, the rear roof moves together with the front roof. When the switch is pressed, both roofs can be adjusted as desired.

When slid, both roofs are coordinated to reach a defined, optimum ventilation position in the closed positions.

Safety functions:

In the interests of safety, every one-touch movement can be interrupted.

If the rear roof encounters resistance with the sliding cover via the one-touch function or the door lock, its movement is interrupted and it opens again.

If the switch is operated for longer than 10 seconds without the roof moving, an overpressure failure (e.g. if the battery has been disconnected), the roof control system must be reset after 30s. To do this, hold the switch pressed until the roof is completely closed or, if the roof is already closed, push the switch briefly.

To prevent unnecessary closing or opening of low air pressure inside the car when the roof is open and in particular when in the raised position, keep the air entry grille open and increase the incoming airflow if necessary.

Convenience circuit

After the ignition has been switched on, it can still be operated (for a maximum of approx. 15 minutes) when:

- the key is in position 1 or 0,
- the key has been removed, or
- the doors have been opened once.

After the doors have been closed, hold the key in the door lock to engage the lock in the "lock" position to close the double-panel sunroof (see service manual in closure function).

Warning: Careless or negligent closing of the double-panel sunroof, particularly with the remote control, could cause injury. Always remove the ignition key and take it with you when leaving the car.

An electronic automatic circuit breaker protects the system against overloading and faults.

If an electrical fault should develop, the double-panel sunroof can be closed manually (see Page 100).

Note:

When loading the ski carrier, ensure that the bindings of the skis are supported on the rack at the front to leave sufficient space for the raising function.

We recommend use of the appropriate roof rack system for your BMW touring from the BMW accessories range.

Electric seat heating

The seat base cushion and the seat back rest are heated. Heating only takes place in ignition switch position 2.

Press the desired symbol on the switch:

(1) Rapid heating while the symbol is illuminated. Automatic changeover to regular heating.

(2) Regular heating. Cuts out automatically when the switch is no longer illuminated.

To switch over while heating: press the non-illuminated switch symbol.

To switch off permanently: press the illuminated section of the switch.

Rear centre armrest

Fold the panel to extend.

Opening storage compartment:

Pull the button at the front.

Front armrests:

To remove the catch, press the button at the front.
Headlight beam throw adjustment

The dipped headlights can be adjusted to compensate for the load the vehicle is car-
rrying.

Salooning and touring without self-leveling suspension:
0 = 1-2 persons, no luggage
1 = 3 persons, with or without luggage
2 = 1 person, luggage compartment full

Salooning with self-leveling suspension:
0 = 1-2 persons, no luggage
1 = 3 persons, with or without luggage
2 = 1 person, luggage compartment full

BMW 325xi, 525 touring, 540 touring:
0 = 1-2 persons, no luggage
1 = 3 persons, with or without luggage
2 = 1 person, luggage compartment full

Note rear axle load limit.

If the headlight setting is very low, the head-
light beam throw adjustment system is faulty.

Electric roller sun blind for rear window:
Touch the roller switch briefly to activate.

Mechanical roller sun blind for rear win-
dow:
Roller sun blinds for rear side windows:
Press down the sun blind by the strap and secure at the catch.

Outside temperature display and digital clock:
In addition to the actual time, the date and the outside temperature can be displayed and the MENU key used to select an hourly reminder signal.

In ignition key position 0, time and date can be read off after selecting the appropriate function key. In ignition key position 1 and beyond, the time is displayed. Numerical values can be input or modified.

Time and date inputs
After the power supply has been interrupted (traction input, flashing dot), the time can be in-
put without first pressing the function key (HOUR) by way of the two input keys h/DAT and en/DAT. To input the date, the DATE function key must first be pressed.

Each time an input key is pressed or held in for half a second, the numerical value in-
creases by one.

The clock function is shown by a symbol, the date function by the DATE display.

To start the clock to the nearest second, press the HOUR key. To start the calendar program, press the DATE key. The dot will then cease to flash.

Before any other input actions, keep the appropriate function key (HOURS or DATE) pressed until a flashing dot appears be-
 tween the hours and minutes or between the day and month.

If another function is selected after making an input, the previous input will remain valid.

The program does not accept unrealistic inputs. The display display synerges keeps track of the years and must therefore be corrected manually.

Notes for 12-hour clock
The change from AM to PM takes place every 12 hours and is shown in front of the numerical value. To allow for various na-
tional versions of the digital clock and out-
side temperature display, the time and tem-
perature functions can be reset as follows:

24 h and °C
12 h and °F
24 h and °C
12 h and °F
on the rear cover of the unit. When changing from 24 h to 12 h, the input key automati-

cally change their functions from day and
month to month and day (US method of writ-
ing date).
Once the desired figure has been selected, the appropriate switch-on time can be input.
Press the TIMER key until the dot between the hours and minutes display begins to flash.
Input the desired switch-on time with the h, dAT and min, dAT keys.
Press the TIMER key again: the dot will stop flashing. The switch-on time is then programmed.

Activating the programmed switch-on time:
After selecting the switch-on time, press the SET/RES key. The LED comes on until the time for the independent heater/ventilation system to start automatically is reached.

The LED above the ON key then confirms that the system is in operation.
After selecting the switch-on time after selecting the switch-on time, press the SET/RES key again: the LED will go out.

In the event of power failure, a switch-on time can be activated and de-activated with the SET/RES key as often as required. It remains programmed until a new time input is made.

If the car is equipped with an on-board computer, the system is operated with the TIMER and SIR keys.

Automatic air conditioning:
Heated air automatically emerges through the defroster outlets and the front and rear footwell outlets. Air distribution by means of the pushbuttons is possible only when the ignition key is in position 6. Both with air conditioning or air conditioning (automatic or automatic) the interior temperature can be pre-selected at the rotary controls or selector wheels when the ignition key is in position 1. In ignition key position 0, maximum heat output is always obtained.

Once the desired figure has been selected, the switch-on time can be input.
Press the TIMER key until the dot between the hours and minutes display begins to flash.
Input the desired switch-on time with the h, dAT and min, dAT keys.
Press the TIMER key again: the dot will stop flashing. The switch-on time is then programmed.

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The LED above the ON key then confirms that the system is in operation.
After selecting the switch-on time after selecting the switch-on time, press the SET/RES key again: the LED will go out.

In the event of power failure, a switch-on time can be activated and de-activated with the SET/RES key as often as required. It remains programmed until a new time input is made.

If the car is equipped with an on-board computer, the system is operated with the TIMER and SIR keys.
Automatic cruise control *

Any desired driving speed above approx. 40 km/h (25 mph) can be held constant and memorised.

1 - ACCEL

Moving the lever briefly in this direction: The car's road speed is increased. Each time the lever is moved again in this direction, the road speed is increased by approx. 1 km/h. Holding the lever in this position: The car accelerates; the accelerator pedal is not pressed down. As soon as the lever is released, the road speed then reached is kept as long as the lever remains in this position.

The controlled speed is abandoned and must be selected again if the car exceeds the memorised value by more than 10 km/h for longer than 1 minute.

2 - DECEL

Holding the lever in this position: The throttle is automatically closed, and the car follows the road in a controlled manner. When the lever is released, the car will be kept at that speed and, if the road speed is increased, the car will move up to the speed set by the lever. If the road speed is decreased, the car will move down to the speed set by the lever. If the lever is released while the car is in the controlled mode, the car will be held at the speed set by the lever.

3 - RESUME

Moving the lever briefly in this direction: The speed last memorised is recalled and maintained.

4 - OFF

Moving the lever briefly in this direction: The cruise control is switched off, regardless of any other operating conditions of the traffic situation.

The cruise control is also switched off if the car deaccelerates at more than 1.5 m/s². When the brakes are applied, the cruise control is also switched off if the braking power is more than 30 m (95 ft) per hour. When the cruise control is switched off, the car will be held at the speed set by the lever. If the lever is released while the car is in the controlled mode, the car will be held at the speed set by the lever.

PDC - Park Distance Control *

When activated, four ultrasonic sensors in the rear bumper measure the distance from the nearest object and indicate it by means of an audible signal. The measuring zone for the two central sensors begins approx. 30 cm (12 in) and ends approx. 60 cm (2 ft) from the bumper. The measuring zone for the two outer sensors ends approx. 1.5 m (5 ft) to 11 ft.

The distance is indicated by an intermittent tone. As the car approaches the external obstacle, the warning signal sounds at more frequent intervals, changing to a continuous tone if the object is less than 50 cm (12 in) away.

The system is activated automatically in ignition key position 2 when reverse gear is selected. It is activated in the automatic-transmission selector lever.

The system switches itself off when reverse gear is disengaged, but is re-activated if reverse gear is selected again.

If this device does not approach an obstruction identified by the corner sensors more closely, for example if it is driven parallel too fast, the warning signal is interrupted after three seconds.

Any malfunction is indicated by a short, higher-pitched continuous tone when the system is activated.

Have the cause of the malfunction traced and rectified by a BMW service station.

Note:

Despite PDC, it remains the driver's responsibility to check obstacles and ensure that the car keeps clear of them, particularly since the physical limits of the ultrasonic measuring system can be reached at any time for instance in the case of closing hitches and couplings and thin or painted obstacles. Obstructions in the dead zone not covered by the sensors are not identified, nor is a warning signal emitted. Keep the sensors clean and free from ice to ensure that they remain fully operational.
Acoustic-signal burglar alarm

If an unauthorized person attempts to open a door or lid, an alarm sounds for 10 seconds and the ignition is put out of action. The hazard warning flashers are simultaneously activated for 2 minutes, with the dipped headlamps flashing in time with the hazard warning flashers. If the thief is not deterred and tries, for example, to start the engine or interfere with the radio, the alarm sounds for another 30 seconds each time such an attempt is made. If the car is pushed away, the alarm sounds after a short delay.

The system is activated and deactivated only by the remote control. The hazard warning flashes come on once to confirm that the system is active.

When the system is active, the LED on top of the facia flashes continuously.

If the LED flashes when the system is being activated, a door or the engine or luggage compartment is not properly closed. Even if this situation remains uncorrected, the remaining closed windows will be protected and the LED flashes continuously after 10 seconds.

The LED goes out when the system is deactivated.

If the alarm has been triggered off, the LED subsequently flashes continuously. When the system is deactivated, the LED flashes for 10 seconds to indicate that the car has been tampered with.

The luggage compartment on the sedan version is also accessible with the remote control. The LED flashes for 10 seconds as a reminder if the luggage compartment lid has been closed but not locked to lock, turn key to right and pull out.

Interior protective circuit and tilt alarm sensor

If the rear window or a side window is smashed (all side windows should be kept closed, but a gap of up to 10 mm may be left in order to ventilate the interior during hot weather), again the alarm will sound. The same applies if the vehicle's position or angle is altered e.g. if an attempt is made to remove the wheels or to tow the car away, the tilt sensor is activated.

When the system is being activated, the LED flashes if a side window is open by more than the permitted amount. Even if the window in question is not subsequently closed, the remaining closed windows will be protected after 10 seconds and the LED flashes continuously.

To prevent an unwanted alarm signal being set off by the tilt alarm sensor, for example when the car is parked in a two-level garage, the tilt alarm sensor can be overridden immediately after activating the anti-theft alarm system, repeat the activating routine (in other words, operate the remote control a second time).

The LED will come on for a short time, then flash continuously. The tilt alarm sensor is then put out of action.

Important:
As far as possible, do not interrupt the conventional closing process for windows and the sliding roof by activating the theft-preventing device.

If this process is interrupted within the first 10 seconds and then restarted, the tilt alarm sensor will inadvertently be inactivated at the same time.

If this is the case, the system will have to be deactivated and then activated again for the tilt alarm sensor to function.

If the system cannot be de-activated by the normal routine, follow this emergency procedure:

- Open the door with the key, the alarm will sound for 30 s.
- Enter the car, close the door and turn the ignition key to position 1. The alarm will sound again for 30 s.
- Wait for approx. 15 minutes (LED goes out after about 5 minutes), then wait a further 10 minutes. Do not open the door during this period, nor turn the ignition key away from position 1.

The system is now inactivated, leave it checked by a BMW service station.
The on-board computer can supply the following information outputs for safety and economical driving.

- **HINT DATE**: Time of day
- **CONSUM**: Average fuel consumption
- **RANGE**: Range on remaining fuel
- **SPEED**: Average speed
- **TEMP**: Outside temperature
- **TIMER**: Switch and 2 switch-on times for independent fuel-burning heat/ventilation system
- **ARR**: Estimated time of arrival
- **DIST**: Distance from destination
- **LIMIT**: Speed limit warning
- **CR**: Immobilization of car

Press the appropriate information key to obtain the following displays (no other input is necessary):
- **Average speed**: Average fuel consumption 1 and 2
- **Range on remaining fuel**: Outside temperature
- **Temperature**: Switch-on times for independent fuel-burning heat/ventilation system

After pressing one of the information buttons:
- **Average speed**: Average fuel consumption 1 and 2
- **Temperature**: Switch-on times for independent fuel-burning heat/ventilation system

Press the SIR button (left) to restart or stop the computer; in the HOUR function, an hourly signal is programmed or erased.

Numerical inputs for:
- **Speed limit warning**: Switch-on times 1 and 2 for independent fuel-burning heat/ventilation system
- **Distance from destination**: Used to optimize the time of arrival
- **Immobilization of car**: Are described on the following pages.

After selecting the appropriate information key, the unit of measurement changeover key (1) can be used to display any individual item of information not applicable to CODE in either metric or imperial units.

If the power supply to the on-board computer is interrupted, e.g. when changing the battery, all stored data are erased.

Once the power supply is reconnected, the required information data (time, date, speed limit warning and switch-on time if required) must be input again.

Contact a BMW service station if the fault display PRR-PROD 01 appears.

Remote control

If the turn indicator lever is pushed in briefly:

Information is displayed additionally on the instrument panel (except BMW 520i/525td models). Items can be called up in succession. The on-board computer display remains unchanged when other items are shown on the instrument panel.

To erase the display on the instrument panel, press the Check Control button on the panel or the CODE key.

Note: The display of Check Control warnings takes priority over information from the on-board computer.

If you wish to have all the information available for display on the instrument panel, proceed as follows:

- Press the turn indicator lever (in 3 seconds; the PROG 1 display will appear (P 1 of the on-board computer).
- Press the SIR key.

If only a limited amount of information is required on the instrument panel display, proceed as follows:

- Press the turn indicator lever (in 3 seconds; only the PROG 1 display appears on the on-board computer: P 1).
- Press the desired information key.

Note: For average fuel consumptions 1 and 2, switch-on times 1 and 2 for independent fuel-burning heat/ventilation and the date, the following should be taken into account:

- For fuel consumption values, if displayed, for instance, the CONSUM key must be pressed twice. If the average fuel consumption 2 but not average fuel consumption 1 is required, press the units of measurement key after the CONSUM key. Each time the changeover key is pressed again, fuel consumption readings 1 and 2 will alternate. The same procedure applies to switch-on times 1 and 2 and the date.
- Press the SIR key.
Computer data input and information displays

Input sequence for numbers:
The memory will not accept illogical inputs.
When a number is input, the number stored in
the memory is erased; digits can be ad-
Input press keys in the sequence illustrated.

Info. display if an unwanted output is displayed, press appropriate information key.

Time (Date)

Average consumption 1 and 2

Range

Average speed

Notes on input and information display

If display is ---- HOUR (after power failure), input time again. Clock can be started after input to the nearest sec-
ond by pressing the S/R key. E.g., if a radio time signal is
missed, date input for 12 hours. After pressing the S/R key the year is displayed; input the correct year if necessary and
press the S/R key again.

To obtain date display from other information: press HOUR/ DATE key. To correct the time or date display, alter the
numbers and then press the S/R key.

Hourly signal: HOUR function, press S/R key, a sound-

wave symbol is displayed. These pips are heard just before
each full hour. The time is displayed briefly on the instru-

mental panel strip.

To switch off reminder signal in the HOUR function, press S/R key again.

To obtain time and date display in ignition key position 0, press the HOUR/DATE key.

Recalculated based on start of journey when S/R key is

Repeated use of the CONSUM key selects average consump-
tion values 1 and 2, alternatively; an indication of which
value has been selected appears on the digital display for a
short time.

Plus sign (+) in front of display indicates "full tank".

Recalculated from start of journey when S/R key is

Notes on input and information display

Outside temperature

Stop watch - Start

Intermediate time

Stop

Independent heater/ventilation system

Direct switch on - Direct switch off

Preselecting switch on times 1 or 2

Input is possible only when the clock is in operation. When the TIMER function is selected, press the key once only for
switch-on time (T), press it again (continued on display).

When the LED comes on, the heater-ventilation system is run for 30 minutes from the selected switch-on time. During the
actual period of operation, the LED flashes. It goes out when
the system is switched off. To correct this switch-off time, follow the same procedure as for initial inputs.

After selecting the switch-on time inputs 1 or 2, activate or de-activate the timer by pressing the S/R key. When acti-
vated, the appropriate LED comes on.
### Further information on the on-board computer

**Distance to destination**

- If the speed limit is exceeded, the additional distance is still counted, but preceded by a minus sign.

**Notes on input and information display**

- The probable arrival time on the basis of the distance input is calculated according to driving style at any given moment.
- The information is only available after a distance input has previously been made.
- The distance has already been completed, the DEST function appears instead of the ARR function. It is selected from another function. — ARR is displayed.

**Estimated time of arrival**

- If the distance is exceeded, the total time is displayed.
- The time display shows a second and half a second for the first minute, then minutes and seconds, and hours and minutes after the first hour. The clock is 1-second delayed when the ignition is turned to position 0, and restarts when turned to position 1 or beyond.

**Further information**

- The warning goes on if the temperature has increased to +6°C (43°F) at least twice since the last warning signal, then dropped below +3°C (37.5°F) again.
- Note that the temperature limit is a low-temperature warning that does not mean that the engine may not have formed at a temperature above +3°C (37.5°F), for example on bridges in the shadow.

**Code for autonomous cars**

- Code numbers from 0000 to 9999 can be input.
- Important: memorize the code number!
- Ignition key turned to 0: LED comes on for up to 36 hours.

**Warning:** If 3 incorrect inputs are made consecutively, or 3 attempts are made to start the engine, an alarm sounds for 30 seconds.

---

**Note:**

- If the engine compartment is not properly closed or the radio is removed, the LED flashes for 10 seconds when the ignition key is turned to 0.
- If the ignition key is turned to 0 or 1 with the system activated, the going will sound and a — CODE display will appear. This requires the code to be input. If the engine is started without a code input having been made, the going warning sound continues.

---

**Emergency starting procedure if the code has been forgotten:**

- Disconnect and after 5 minutes, reconnect the battery (see Page 051), alarm sounds.
- Turn the ignition key to position 1. Allow the door to open and remain open for 15 seconds. After 15 minutes, the engine can be started.
- If the code is remembered, it can be input during the waiting period of 15 minutes.
- Press the CODE key.
- Input the desired code.
- Press the START key.
**Ski bag**

The ski bag is safe, clean method of carrying 3 to 4 max pairs of skis.

With the ski of the ski bag and the space represented by the length of the luggage compartment back to 0.1 m bag can be carried. Note that if several pairs of skis are carried in the bag, the available space inside is reduced where the bag becomes narrower so that only 2 pairs with maximum length of 2.1 m can be carried.

**Loading the ski bag**

Fold down the centre armrest of the rear seat and detach the trim at the upper burr fastener.
Press together the two locking levers and lift out the centre armrest.

**Important**

When installing the centre armrest, ensure that the mounting lugs engage in the guides in the aperture.

To release the loading flap in the luggage compartment, press the round handle, then disengage the retaining loop at the upper buckle and lower it.

Spread the ski bag out between the front seats. A zip fastener is fitted for ease of access to the stored objects and to allow any moisture in the ski bag to dry out more effectively.

**Secure the loading flap from the luggage compartment side against the underside of the man-window shelf, using the magnetic retainer.**

Make sure that the ski are clean before they are inserted into the bag, and that there are no sharp edges which could damage it.

**Centre armrest with storage compartment**

Fold down the centre armrest (do not remove). Release the trim at the upper burr fastener and lay it forward over the armrest.

If more space is required, the centre armrest can be removed:

Fold out the armrest halfway, remove the trim at the top at the burr fastener and lay it down to the front. Insert the armrest with one hand, reach behind the armrest with the other hand and tug upwards in a forward direction to remove.

Installation:

Introduce the armrest into the holders on both sides in the same position as for removal and press down with a light to ensure.

Caution:

When removing and installing, take care that the pins on either side do not damage the seat upholstery.

**BMW touring**

Fold down the centre armrest (do not remove it).

Detach the trim at the upper burr fastener and lay it down on the armrest.

Press button 1 down and fold cover down to the front.

Press button 2 to disengage the flap in the load area.

The material from which the ski bag is made is waterproof, and moist ice or moisture condensate should therefore be wiped off after use.

If it is not used for a lengthy period, make sure that it is folded in a dry condition.
Radio operation

The strength of the signal received by your car radio aerial, and thus its output quality, depends on the position of the receiver and the height and direction of location of the aerial.

In this respect, certain concessions have to be made for mobile radio such as that in a car. The position of the radio is constantly changing, and it is impossible to keep the aerial aligned with the direction of signal transmission. The rectangular heating elements also act as a radio aerial, on the AM band, the aerial wires are in the left-hand near side window (other disturbance factors are high-tension overhead wires, poor or missing interference suppression on other vehicles, buildings and nearby substations.

If your car aerial is perfectly tuned and your car is equipped with interference suppression, unavoidable noise and poor high-quality sound can be quite severe.

Climatic effects such as fog, drizzle and snow can interfere with good reception.

As the strength of sunlight increases, long, medium and short wave reception is adversely affected. These wavebands can be heard best after dark, when the ionosphere reflects more of the transmitted signals back to earth.

The medium (MW), long (LW) and short (SW) wavebands provide a more extensive range, in some cases, exceptionally wide reception range, since the signals are dispersed not only as ground waves, but also as space waves, which are reflected back to earth by the ionosphere.

There are physical reasons why the quality of medium wave reception is not as good as on FM. Long-distance reception, however, is quite acceptable, particularly at night, but a large number of stations can be picked up. However, station density is such that mutual interference often occurs.

On the long waveband, transmitters still farther away than on medium wave can be picked up.

Short wave offers the longest theoretical reception distance. Maximum station density and subject to basic physical limitations, best sound quality, are obtained in the 49-metre band.

The very high frequency (VHF) broadcasting system uses the frequency modulation (FM) principal, which offers far better sound quality than the other wavebands. However, reception is limited to about 100 km (62 miles) from the transmitter, since the radio waves are emitted in a straight line. As the distance between the transmitter and receiver increases, background noise becomes more of a problem, and finally the station can no longer be heard or is disturbed by a more powerful one which the car is approaching. This situation can only be avoided by returning to a stronger signal.

Strong natural auroral and solar radiation, and snow can interfere with quality of reception.

Hissing, sizzling and splashing noises occur when reflected signals are picked up by the aerial, a fraction of the reflected (reverberated) wave is transmitted. These sounds appear in the earphone as noise, often quite loudly.

Continuous background noise normally indicates that the edge of the transmission zone has been reached, or that the car has been driven into a ‘dead’ area, where no direct signals can be received. The frequency level also varies, sometimes rising to a dangerous level.

Sobering and TMZs are the initials of the factory which itself indicates that the signals being received are free of extraneous noise. This helps to reduce the level of interference significantly.

D-net telephones are not recommended by BMW, can also cause interference if the limit of their capacity is reached, with the boundaries crossing the various areas. A similar effect is sometimes heard when driving along tree-lined roads.
Starting the engine

- Apply the handbrake.
- Move the gear lever to neutral (the automatic transmission selector lever to P or N).
- In particular at low outside temperatures, switch off all electric power consumers and fully depress the clutch pedal.

DO NOT DEPRESS THE ACCELERATOR PEDAL WHEN STARTING THE ENGINE. However, if the engine does not start at the first attempt, e.g. in very cold weather or hot conditions, press the accelerator pedal half-down when trying again.

Additional notes

- Run the starter long enough for the engine to start, but not longer than 20 seconds at a time. Release the ignition key as soon as the engine starts.
- Starter motor locked long. Before repeating an attempt to start the engine, turn the ignition key back from 1 to 0. This is to prevent re-engagement of the starter pinion while the engine is still turning.

- Avoid repeated starting attempts at short intervals, or else the spark plugs will become cold.

When moving:

Observe a 20 to 30-second pause between attempts to start the engine in order to protect the battery.

Energy-conscious driving:

- Fuel consumption is influenced above all by driving style.
- Do not warm the engine up to operating temperature at idle speed and never allow the engine to idle for long periods.
- Do not run the engine up to maximum speed in 1st gear; use it for pulling away only.
- Shift up to a higher gear in good time and make full use of the highest and more economical 3rd, 4th or 5th gears.
- Avoid driving for long periods at full throttle.
- Do not carry any unnecessary weight.
- Comply with the recommended tyre pressure.

Furthermore:

- Energy-conscious driving reduces engine and exhaust noise levels.

Warning:

The car should never be left unattended with the engine running; this constitutes a very serious potential hazard.

The engine is automatically controlled to run at a idle speed appropriate to the operating conditions in each case.
Do not wait for the engine to reach its normal operating temperature with the car standing still, but drive off weightlessly at a moderately advanced engine speed.

Switching off the engine

- Turn off the ignition key to position 1 or 0.

Catalyst models

The catalytic converter fitted in the exhaust system reduces the exhaust emissions in the exhaust gas.

Warning:

- High temperatures build up at the catalytic converter (on all cars with this form of exhaust emission control). Make sure that no one comes into contact with the hot exhaust system when the car is driving, idling or parked. If the material were to ignite and cause a fire, very serious injuries or damage could result.
- Do not remove the heat shields from the exhaust system, or apply underseal to them.
- Spark-ignition engines:

These cars must only be run on unleaded fuel.

Even minute amounts of lead in the fuel will cause irreparable damage to the lambda probe and catalytic converter.

The following points must be observed if the engine is to remain fully functional and the hot damge:
- Always keep the prescribed maintenance work carried out.
- Never run the fuel tank completely empty.
- If the engine misfires, switch it off immediately.
- Only tow-start when the engine is cold, as otherwise unburned fuel will reach the catalytic converter. It is preferable to use jump leads to start the car.

- Avoid other situations in which unburned or incompletely burned fuel could reach the catalytic converter, e.g. frequent, prolonged operation of the starter motor within a short period, or repeated unsuccessful starting attempts (Stopping and restarting the engine when functioning properly will prevent no problems).

- Allow the engine to run with the spark plugs disconnected.

If unburned fuel reaches the catalytic converter as a result of misfiring in the air-fuel mixture preparation malfunctions, overavers and parts in the exhaust system may suffer damage.

Diesel engines:

If a catalytic converter is engaged, no petrol is allowed to enter the diesel oil in winter to prevent paraffin separation must be un-leaded (see page 106).

Engine refinement is influenced by the exhaust emission purification technology, fuel consumption and the quality of the fuel supplied.

The modified operating conditions are largely taken into account by the electronic measurement and control functions and the high-quality design and workmanship of individual components, e.g. individual features such as the electronic ignition and fuel injection system.

The car's altered engine and road behaviour, for instance when accelerating from a low speed or when braking or cornering, gives the driver an impression of much higher road speed after the cruise control has been in operation and when the engine is running at a low speed. It may be the result of the reduced weight of the fuel under these circumstances and the semi-dry road roughness, which improves environmental acceptability and luxury driving. These differences constitute no cause for concern.

The Digital Motor Electronics system fitted for optimum engine operation causes a certain degree of uneven running when this system has been disconnected from the power supply and reconnected again.

The engine will retain its customary refined running since it has passed through all emission phases at operating temperature.
Tyres
The production methods used in the tyre in-
dustry result in brand-new tyres having less
than their designed road-surface adhesion.
For this reason, you are urged to drive with
 restraint for the first 300 km (app. 200
miles).
Brakes
As a means of achieving uniform wear pat-
terns and a good friction coefficient on new
brake linings, try to brake only at moderate
speeds during the first 300 km (app. 200
miles), and also prolonged severe loads,
such as when descending steeply mountain
passes.
Brake linings and discs need the distance
and treatment stated above to bed down
depth properly and avoid premature wear.
The handbrake operates separately from
the foot brake system, with its own drums,
and therefore also has to be run in.
If the braking effect declines noticeably with
time, the driver can repeat the bedding-
down process provided due care is exer-
cised.
If road surface, weather and traffic condi-
tions permit (care must be taken not to ob-
sctruct other road users), the desired effect
may be achieved by applying the handbrake
lightly at about 40 km (25 mph) until
definite resistance is felt. Then pull up the
lever to the next notch and drive the car
about another 100 meters before releasing the
handbrake completely.
Fuel consumption
The standard test method used to deter-
mine fuel consumption (DIN 70000). Part 1
obtains values which are by no means iden-
tical with the car's average fuel consump-
tion in everyday driving. After all, this de-
pends on a variety of factors, such as driving
style, load, road conditions, traffic density
and flow, weather, tire pressures etc.
For fuel consumption according to DIN
standard see page 129.
Additional practical tips
Do not allow the engine to warm up too quick-
ly at idle or at idling speed.
At exceptionally low temperatures however,
allow the engine to run for about half a
minute at a fast idle to ensure that oil
reaches all parts of the engine.
Never run a cold engine at high speed, as
this will cause rapid wear and shorten its op-
erative life.
When driving under load, accelerating or
climbing hills, try to prevent engine speed
taking below 1500 rpm. Shift to a lower gear
in good time, particularly on uphill gra-
duates.
When decelerating, press the clutch pedal
down fully. During normal driving, do not re-
rest the foot on the clutch pedal.
Warning
Do not rest your foot on the brake pedal
while driving the car. Even slight constant
pressure on the brake pedal can cause over-
heating, past wear and possible failure of
the complete brake system.
Recommendations
After a lengthy period in heavy city traffic
or in a slow moving queue of vehicles, let the
engine breathe deeply by driving for a few
kilometers at engine speeds above
3300 rpm. This will charge any worn depo-
sits in the combustion chambers.
Warning
When the car is driven on a wet or slushy
surface, wedges of water can build up be-
tween the tyres and the road. This is known
as aquaplaning, and can even lead to the
tyre losing contact with the surface, so that
the car cannot be steered or braked prop-
erly. Always reduce speed as a precaution
on wet surfaces.
Always keep the luggage compartment id
open when driving along to prevent dan-
gerous exhaust fumes entering the car.
If you have to load or unload the luggage compa-
tment id open, when transporting a bulky
load for example, you are advised to close
to all of the windows and the sliding roof
(if fitted) and to run the heating/ventilation
blower at a medium to high setting.
Warning
Do not leave any heavy or hard objects on
the rear window shelf, or else they could in-
jure the car's occupants when the brakes
are applied suddenly.
If you hang clothing from the hooks pro-
made sure that the driver's view is not
obstructed.
Do not hang very heavy articles from these
hooks, in case they cause injury to the car's
occupants when the brakes are applied.
**Engine compartment lid**

To unlock the lid, pull the lever on the left under the instrument panel.

**Warning:**

Stop the engine and allow it to cool down before removing any work inside the engine compartment.

The battery must be disconnected before performing any work on the car's electrical system and any other repair and maintenance work, particularly inside the engine compartment.

Carpet and handling of parts and materials when working on the car may involve personal risk. Please observe the relevant notes and instructions. If you are unfamiliar with the regulations or instructions which must be complied with, have any such work performed by your BMW service station.

A built-in spring mechanism slides the lid forwards automatically to make it easy to open.

**Engine compartment light**

Come on when the lid is opened and the vehicle lights on.

To close the lid, push the front evenly on both sides until it is heard to engage. Raise slightly to ensure that the catches are holding the lid securely.

**Warning:**

If you notice that the engine compartment lid is not shut and held firmly in the closed position, even when you are driving the car, shop as soon as possible and close it correctly.

**Vehicle identification number**

In the engine compartment, next to the right windscreen washer pivot (arrow), or possibly on the top left of the fascia.

**Maker's plate**

In the engine compartment, ahead of the right wheel arch.

The information on the maker's plate and the vehicle identification number must correspond with the data stated in the car's documents.

These data are used as a basis for all queries, checks and warranty and parts requirements.

**Principal items in the engine compartment - BMW 518i**

1. Intake manifold
2. Air filter
3. Battery
4. Engine oil filter
5. Fuel filter
6. Brake fluid reservoir
7. Oil reservoir for power steering
8. Coolant expansion tank
9. Engine oil dipstick
Principal items in the engine compartment – BMW 520i, 525i/X

1. Intensive cleaning fluid reservoir
2. Windscreen, headlight and fog light washer fluid tank
3. Engine oil filter
4. Fuse box
5. Brake fluid reservoir
6. Engine oil dipstick
7. Oil reservoir for power steering and self-leveling suspension hydraulics
8. Coolant equalizing tank

Principal items in the engine compartment – BMW 530i, 540i

1. Engine oil dipstick
2. Engine oil filter
3. Intensive cleaning fluid reservoir
4. Windscreen, headlight and fog light washer fluid tank
5. Coolant equalizing tank
6. Fuse box
7. Oil reservoir for power steering and self-leveling suspension hydraulics
8. Brake fluid reservoir
Checking engine oil level

Like fuel consumption, engine oil consumption depends on the way in which the car is driven and on operating conditions. For this reason, the oil level should be checked regularly, e.g. every 1000 km (600 miles), or sooner if the engine has been driven extensively. When checking, the car should be standing on a level surface.

For maximum accuracy:
Check the oil level before starting the engine, while it is cold. If the engine is warm, a low level for the oil to drain back into the sump, for instance, as long as it takes you to fill the oil tank.

Insert the dipstick fully.
The oil level must be between the two marks on the dipstick.

Adding engine oil
If necessary, add engine oil at the filler on the cylinder head cover. Do not fill above the maximum mark on the dipstick.
The quantity of oil represented by the space between the two marks on the dipstick is app. 1 litre (1.6 pints).
Adding too much oil serves no useful purpose and harms the engine. Since excess oil is turned off readily, the engine would appear to be consuming excessive oil.
Do not add oil until the level has reached the lower mark on the dipstick. However, never allow the oil level to fall below this mark.

BMW engines are designed to operate without oil additives provided that a highly-developed brand name lubricating oil is used. Indeed, additives may actually lead to engine damage. The same applies to the manual gearbox, automatic transmission, final drive and power steering.

Engine oil specifications

The grades of engine oil to be used are exclusively approved by the CCMC or API specification. Here are the required quality stages.

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<tr>
<th>Spark-</th>
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<tr>
<td>ignition</td>
<td>permitted:</td>
<td>CCMC-G4</td>
<td>API SG</td>
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<td>CCMC-G5/SGD</td>
<td>AR 5221</td>
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<td>API SG/CE</td>
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1) If engine oils to CCMC-G5 or CCMC-G5/SGD specification are to be used in spark-ignition engines, BMW Service should be consulted regarding its suitability for use all the year round.
2) The oil must comply with both specifications (SG and PG).

When disposing of old engine oil, comply with local environmental protection regulations.

A recommendation: always use oil change carried out by a BMW service station.
The correct SAE viscosity grade to be used depends on outside temperatures, and therefore on the time of year.

This chart indicates the correct SAE grade of engine oil for various prevailing air temperatures. Note that the temperature limits quoted may be departed from, but only for brief periods.

Caution: Continuous contact with used engine oil has caused cancer in laboratory tests. Wash skin thoroughly with soap and water after handling. Always keep oils, greases etc. out of reach of children! Please note precautions on containers.

Power steering and self-leveling suspension *: checking oil level

With the engine at a standstill, unscrew the knurled nut and take off the reservoir cover. The oil level must rise slightly above the base of the strainer (app. 5 mm or 0.2 in) with the car unloaded.

Add fresh oil if necessary. Always use Pentosin CHF 115 if at all available, BMW if the vehicle is serving a load, add 0.25 / Pentosin CHF 115 but stop adding if the oil level reaches the base of the strainer. Check the oil level again with the car unloaded.

Fit the reservoir cap and tighten the knurled nut. Ensure that the cap is properly fitted.

Steering hydraulics: checking oil level

With the engine at a standstill, unscrew the reservoir cover and fit again.

The oil level must be between the two marks on the dipstick.

Top up oil if necessary. BMW service stations know the approved grades.

Allow the engine to run for a while. Top up the oil if necessary until the level is between the two marks.

Switch off the engine. The oil level may rise app. 5 mm (0.2 in) above the upper mark.

Screw the reservoir cap on tight.

Brake fluid reservoir

The oil level must be up to the top (MAX) mark. The level can be checked without removing the cap.

BMW service stations know the approved grades of brake fluid (DOT 4).

Warning: brake fluid is hygroscopic. That is to say, it gradually absorbs moisture from the atmosphere. To ensure that the brakes on your car remain fully operational, have the brake fluid changed every two years by a BMW service station. See also the note on pages 81 and 105.

Brake fluid is toxic (poisonous) and also attacks the car's paintwork. It must therefore always be kept tightly sealed in the original pack, and stored out of children's reach. Comply with environmental protection laws when disposing of brake fluid or packs which have contained it.

Warning: Do not spill brake fluid. Add it only up to the MAX mark on the reservoir. If brake fluid comes into contact with hot parts of the engine, it can ignite and cause serious burns.
Reservoir for hydraulic clutch fluid
BMW 530/540i only
Add brake fluid as far as the upper mark.

Checking coolant level

The level must be up to the COLD or MAX mark (arrows) on the transparent equalising tank when the engine is cold. Failure to do so may cause overheating of the engine and severe damage.

Warning: Never add water to the radiator while the engine is hot.

Windscreen washer jets

The jets of fluid should strike the windscreen at a suitable point to ensure effective cleaning even at high road speeds.

If necessary, adjust by inserting a needle and moving the knots.

Headlight, fog light and rear-window cleaning system jets

Your BMW service station will reposition these jets on request.

Windscreen, headlight*, fog light* and intensive cleaning system reservoirs

Illustrated: BMW 528i, 525iX. Other models: see “Principal items in the engine compartment.”

Capacity:
Windscreen washer system:
app. 2.5 l (89 fl. oz) – BMW 518i, 520i, 530i, 540i
app. 3.2 l (110 fl. oz) – BMW 525iX, 528iX/540i

In conjunction with headlight and fog light cleaning system:
app. 2.0 l (68 fl. oz) – BMW 518i, 520i, 525i
app. 2.0 l (68 fl. oz) – BMW 525iX/540iX
app. 2.5 l (88 fl. oz) – BMW 525iS
app. 7.5 l (258 fl. oz) – BMW 535i, 528i

Top up with water and, when necessary and in particular at low outside temperatures, antifreeze in accordance with the manufacturer’s instructions.

Intensive cleaning system: capacity app. 1 l (3.4 fl. oz)

Top up with intensive cleaning fluid ( frost protection down to -47 °C; available from BMW service stations).

BMW touring
Reservoir for rear-window cleaning system
Capacity: app. 2.5 l (89 fl. oz)

Top up with water and, when necessary, and in particular at low outside temperatures, antifreeze in accordance with the manufacturer’s instructions.

Warning: Only and cleaning agents and antifreeze when mixed with water and not in their concentrated form, to prevent damage to the rear lights.
Battery

The battery needs no maintenance and complies with DIN 43220 standard. Part 2. The electrolyte added initially should normally last for the life of the battery, which is located beneath the rear seat.

BMW 518t: the battery is located in the engine compartment. If the acid level falls too low, for instance after a long stay in hot climates, top up with distilled water (not acid).

The acid level should be level with the marks visible in the oil opening, approx. 5 mm (0.2 in) above the tops of the plates.

Keep the upper part of the battery dry and clean.

Starting with a flat battery: see page 93.

Please read the following notes before performing any work on the battery:

- Always wear eye protection.
- Always wear protective gloves and goggles. Do not tilt the battery; otherwise gas could leak through the gas vents.
- Battery acid is caustic. Always wear protective gloves and goggles. Do not tilt the battery; otherwise gas could leak through the gas vents.
- Keep the acid and battery out of the reach of children.

- Never bring a naked flame near the battery or cause sparks in its vicinity. Do not expose when handling the battery. Avoid creating sparks when handling leads and electrical equipment. Avoid short-circuits. Never short-circuit the battery terminals, as the resulting arc could cause severe injury.

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

If acid comes into contact with the eyes, rinse immediately with clean water for several minutes and consult a physician without delay. Neutralise acid spillage on the skin or clothes immediately with soap and rinse off with plenty of water. If acid has been swallowed, consult a physician immediately.

In order to protect the housing against ultraviolet radiation, do not expose batteries to direct sunlight. As batteries which run flat could freeze, store in a place where there is no frost.

Never detach the battery leads when the engine is running, or else an overvoltage will occur and damage the car’s electrical equipment beyond repair.

Disconnect the negative terminal first, then the positive terminal. Release the battery screw connection.

With the terminals again connected, positive terminal first, followed by the negative terminal.

Only recharge the battery when the engine is at a standstill if still fitted to the car. On cars with the battery located beneath the rear seat, the easiest way to recharge the battery is via the terminal in the engine compartment (positive terminal) and earth (see page 4 of the section ‘Starting with a flat battery’).

Before attempting any work on the car’s electrical system, always disconnect the negative lead from the battery to avoid the risk of short-circuits.

To do this, an earth (ground) connection on the right of the seat base can be disconnected: access to the battery itself is then not necessary:
- Pull off cover
- Release connectors and remove hoper
- Remove nut and take off earth lead
- If a second battery is installed in the luggage compartment, the battery must also be disconnected.

If the car is not used for more than four weeks, the battery’s negative terminal should be disconnected from the on-board power supply.

If the car is not used for more than four weeks, the battery’s negative terminal should be disconnected from the on-board power supply.

When indicating the next change of brake fluid, the service indicator does not take into account periods during which the battery has been disconnected.

Any such times must be taken into account to ensure that the brake fluid is changed according to schedule every two years, i.e. it will be necessary to change the brake fluid before the clock symbol lights up.

Access to the battery beneath the rear seat

Lift up rear seat.

BMW touring:
- Leaver off stoppers on both belt catch arms with a screwdriver.
- Introduce a drift or thin screwdriver sp.
- Slowly turn the nut, and press; the cover is now released.
- Pull the cover forward and up to remove.
- Lift up seat to the front and remove.
- When installing, press on the belt catch until they engage and insert the stoppers.

Hand in spares for another at a collection point for used batteries or at your BMW service station. Batteries filled with acid should be transported and stored upright. Protect batteries against falling over when in transit.

Note:

When indicating the next change of brake fluid, the service indicator does not take into account periods during which the battery has been disconnected.

Access to the battery beneath the rear seat

Lift up rear seat.

BMW touring:
- Leaver off stoppers on both belt catch arms with a screwdriver.
- Introduce a drift or thin screwdriver sp.
- Slowly turn the nut, and press; the cover is now released.
- Pull the cover forward and up to remove.
- Lift up seat to the front and remove.
- When installing, press on the belt catch until they engage and insert the stoppers.

Hand in spares for another at a collection point for used batteries or at your BMW service station. Batteries filled with acid should be transported and stored upright. Protect batteries against falling over when in transit.
Fuses
If an item of electrical equipment should fail, switch it off and check the fuse.
The fuse box (power distribution box), with spare fuses, relays and plastic tweezers, is located in the engine compartment on the left.
Take off the fuse box cover by pressing the flap in one side.
Pull the blown fuse out of its socket with the plastic tweezers. If the metal wire inside the fuse has melted, the fuse must be renewed, using a fuse of the same rating.
Never attempt to repair blown fuses.

To close the fuse box, push the cover down and press the hop-on at the side. If a fuse blows repeatedly, have the fault repaired by a BMW service station.

Further fuses are located under the rear seat on the left. On models with Check Control and a trailer tow hitch, the trailer lights are also protected by fuses in the trailer module in the luggage compartment, behind the left-hand side trim. The fuse for the permanent positive line is located on the right beneath the rear seat in a separate fuse box next to the battery.

BMW 525i: The four-wheel-drive system is protected by two fuses in separate locations in front of the fuse box. When the braking and engine performance are being tested on a dynamometer, the A fuse must be removed so that the system is deactivated without a fault being registered in the memory.

A list of fuses together with their rating and equipment supplied is on the fuse box cover.

Starting with a flat battery
Do not use any cold-start sprays to help start the engine.
If the battery is flat, the engine can still be started by connecting jump leads to the second vehicle.

1. Check that the second car has a 12 V electrical system and a battery of approximately the same capacity in Amp hours (this will be marked on the battery).
2. Leave the flat battery connected to the car's electrical system.
3. Do not allow the bodywork of the two cars to touch, or a short-circuit may be caused.

4. Connect the positive terminals of the two batteries with jump leads. If the BMW's battery is not in the engine compartment, a special connection is provided for this purpose (see illustration; BMW 320 and 520: pull both side flaps). Then connect the batteries' negative terminals. To do this, first connect one of the jumper leads to the negative terminal of the second battery or to part of the engine or body of the second vehicle, then connect it to the earth (ground) of the engine or body of the car that needs to be started (nuts on the spring strip dome).

Caution:
Observe the correct order when jump-starting other vehicles, to avoid generating sparks at the battery.

5. If the battery of the second car is also weak, use its engine to boost the charge. Start your own car's engine in the usual way and keep it running. After the engine has started and before disconnecting the jump leads, switch on the oven, window heater and maximum heater (on a 12 V system) to avoid an overstrain between the generator and consumer equipment. Disconnect the jump leads in the opposite order to that described above. Depending on the cause of the fault, have the battery recharged.
First aid box

BMW 525iX

When towing with one axle off the ground, the following points must be observed to protect the transfer box:
- Gear lever on automatic transmission selection lever should be in neutral
- The engine must not be switched on
- Maximum towing speed: 30 km/h
- Maximum towing distance: 150 km

Warning: If the car is towed for any greater distance, the rear propshaft must be dismantled if the front wheels are raised, or the front propshaft disconnected if the rear wheels are raised.

Warning: When the engine is not running, the power assistance for the brakes and steering does not operate. Increased effort is then required to operate these systems.

Toolkit

The toolkit is located on the underslides of the baggage compartment lid (BMW touring sedan only).

Warning triangle

This item is stored ready to hand in the tool kit.

Comply with legal requirements with regard to carrying a warning triangle.

Fire extinguisher

Holder on the driver’s seat.

To ensure full operational reliability, have the fire extinguisher examined by the manufacturer’s authorized service station every 2 years.

If you service stations are not on the exit, the or any documentation available to you, please consult the local directory or the "yellow pages" at the telephone service to obtain the address.

Towing eyes

Front towing eye on right: Remove the cover after propelling to the locking catch (arrow).

Rear towing eye: Press the cover panel out, using a screwdriver inserted at the arrow.

Use nylon tarpaulin or covers which are resistant enough to protect both vehicles against sudden jerking. Alternatively, a towbar may be used.

When using a towbar, both cars’ towing eyes should be on the same side.

If both towbars run at an angle, note the following:

- The angle of the towbar gives rise to lateral forces particularly dangerous on slippery road surfaces.
- Do not attempt to steer the car being towed along the same line as the towing vehicle.

There is a danger of the towed car jack-knifing when the towing vehicle is braked.

Important: The vehicle being towed should not be heavier than the towing vehicle.
Wheel changing

Apply the handbrake and select '1st or reverse gear. On automatic transmission cars, select 'R'. If a tire puncture, park the car by switching on the hazard warning flashes and position a warning triangle or flashing lamp at an appropriate distance behind the car. Note legal requirements in this respect.

Spare wheel

Located under the luggage compartment floor mat. Unravel the wing nut by hand. BMW touring: Under the rear flap in load area floor.

Wheel chock

The wheel chock is located in the luggage compartment next to the jack and hard to prevent noise. Depending on the slope, place the chock in front of or behind the oppos- site rear wheel to prevent the car from roll- ing away when it is lifted by the jack.

Car jack and wheel stud wrench

Located on the right of the luggage com- partment. Lift up the luggage compartment floor mat. Take off the trim by opening the quick-release fasteners. To prevent noise, after putting the jack back in the luggage compartment, retract it fully and secure it in its original position with the wing nut. BMW touring: Under the front flap in load area floor.

Wheel chock

The wheel chock is located in the luggage compartment next to the jack and hard to prevent noise. Depending on the slope, place the chock in front of or behind the oppos- site rear wheel to prevent the car from roll- ing away when it is lifted by the jack.

Pressed-steel wheels: remove the full-width wheel cover by hand.

Light-alloy wheels: press off the wheel stud cover with a screwdriver. Light-alloy wheels with wheel studs in the form of a large hexagon: turn this anti-clockwise with a hexa- gon socket wrench and with the aid of the wheel stud wrench to release. The large hexagon wrench is kept under the spare wheel cover at the luggage compartment, or under the front flap in the load area on the BMW touring.

Loosen the wheel studs.

Attach the jack to one of the four pick-up points so that the front or the jack is squarely on the ground. Turn the jack handle until the wheel is clear of the ground.

Warning:

Use the car jack only for wheel changing.

Never try to use it to raise a different car or any other kind of load, or else accidents and personal injury may occur.

Warning: never lie underneath a jack-ed- up car, or else you risk a fatal accident.

Unscrew and remove the wheel studs and take off the tire, if necessary.

Offer up the new wheel, inserting the cen- tering pin. From the tool kit together with the plastic fitting into one of the tapped holes if necessary, and tighten the wheel studs in a crosswise manner (remove centering pin) and tighten evenly.

Lower the car with the jack. Tighten the wheel stud firmly in a crosswise pattern (first one stud, then another on the opposite side of the wheel). For safety reasons, have the tightening torque (110 Nm) checked with a calibrated torture wrench at the earliest opportunity.

When a wheel is installed for the first time (e.g. the spare wheel), check the tightening torque after the first 100 km (60 miles). When fitting other than Genuine BMW light-alloy wheels, it may be necessary to use the corresponding wheel studs in place of the standard BMW studs. To tighten the full-width wheel cap cover, the centering pin must be at the bottom. First place the cap cover against the rim at the valve side, then fit it in this position with the foot and press it up with both hands.

Light-alloy disc wheel: press on wheel stud cover.

Wheel stud cover shaped as large hexago- nal type not: apply the cover centrally. While pressing on, turn the wheel right until the wheel stud cover engages in position. On cross-axis wheels, mark the marker arrow on the wheel stud cover with

the mark on the wheel and press on the cover.

Have the flat tire repaired and the wheel bal- anced as soon as possible.

Tire repair

A tire puncture should be attended to at a BMW service station or specialist tire dealer. Always examine the tire to de- termine the full extent of potentially con- cealed damage.

Important: When replacing or renewing tubeless tires, the rubber valve must always be removed as well as a safety precaution.

Size 235/40 ZR 17 type * on the rear wheels

In the event of a puncture or tire failure the spare wheel, which has a size 235/40 ZR 17 tyr, may have to be fitted at the rear. This wheel and tire may be used for all vehicle starts and mild speeds, but a tire of this spec- ified 235/40 ZR 17 size should never- theless be fitted again as soon as possible.
Lockable wheel studs *

Take off the end cap, using the edge of the key if necessary.
Invert the key in the lock, turn it app. 90° in either direction and lift off the key.
0 = Locked 1 = Unlock
Fit the lock by following the same procedure, but in the reverse sequence. Hold the lock tightly when pulling out the key.

Note: The lockable wheel stud should always be fitted opposite the tyre valve.

Recommendation: to ensure that the lockable wheel studs can always be removed when necessary (in the workshop, for example), keep a key in the car’s toolkit.

Thiefproof wheel studs *

1 Cap (not on wheel with wheel stud cover)
2 Wheel stud for adaptor
3 Adaptor (supplied in toolkit)

To remove:
- Turn the cap (1) slightly to the left with the wheel stud wrench and remove it.
- Take the adaptor (3) from the car’s toolkit or out of the compartment under the front flap in the load area on the BMW touring and insert it into the wheel stud.
- Unscrew the wheel stud (2).

After inserting and tightening the wheel stud again, remove the adaptor and press on the cap.

The code number is stamped on the face of the adaptor. Please note this number and keep this information in a safe place in case the adaptor is lost.

Brake system

If the warning light for the brake hydraulics comes on (LOW BRAKE FLUID check control display), the level of brake fluid is indicated by increased brake pedal travel.

Failure of one brake circuit

Pete: brake travel increased and greater pedal effort will be needed.

The car can still be driven satisfactorily with only one circuit in operation. As for all brake system faults, the car should be brought to a BMW service station for immediate repair.

Power steering

If the steering becomes stiff, check the oil level (see Pages 87).
If the steering is stiff only when the wheel is turned quickly, the V-valve is stuck or faulty. Have it inspected or renewed.
If these measures prove ineffective, consult a BMW service station.

Cars with Servotronic *

If steering becomes increasingly light in areas at high road speeds, there is a malfunction in the electronic control system.

Warning:
If the power assistance fails, a great force than usual must be applied to the steering wheel to steer the car.

Self-levelling suspension *

If the SLIP/SLIP LEVELING display appears in the Check Control:
- If the car is considerably overloaded (rear end of car has dropped noticeably), reduce the load on the car to comply with the permitted rear axle load limit.
- If normal operating conditions have been restored, the display will disappear.
- If there is a defect in the self-levelling system, consult a BMW service station.

BMW 525i/tds

Warning light for electronic fuel injection control

If this light comes on while the car is being driven:
Electronic fuel injection system malfunction.
Unless the engine fails to run at all, the car can still be driven with the aid of a stored emergency program, though engine power output may be lowered. However, you should have the fault repaired at a BMW service station as soon as possible.

Windscreen wipers

Removing a wiper blade:
Lift up the wiper arm.
Torch down the tension on the driver’s side, first pull the outer retaining spring and then the inner one around until the wiper blade can be disengaged.
There is only one retaining spring on the front passenger’s side.
Pull the wiper blade towards the wiper arm to remove.
**Rear-window wiper**

Changing wiper blade:
Push retaining spring (arrow) to the side and unplug wiper blade from the holder.

**Sliding/vent roof**

Manual operation in the event of electrical failure:
- Take off the cover.
- Insert the Allen key from the car's tool kit into the hexagon socket on the shaft (arrow 1) and turn it to move the sunroof panel in the desired direction.

Note: The sunroof panel will move more easily if the plug (arrow 2) is pulled off first.

Have the fault repaired without delay by a BMW service station.

**Double-panel sunroof**

Manual operation in the event of electrical failure:

Closing the front roof:
- Remove the cover in front of the roof aperture, insert the Allen key located on the cover in the socket of the front drive motor (see arrow 1 in illustration on left) and turn it in a counterclockwise direction only.

Closing the rear roof:
- Pull out the stopper behind the roof aperture, if necessary with the aid of a screwdriver. Turn the Allen key in a counterclockwise direction only.

Important:
- This roof may only be closed manually, not opened; always close it in the following order:
  - First the front roof, then the rear roof.
- Fix both nuts, note that below inserting the Allen key in the socket, it is essential to press off the bushing on the hexagon socket with the flat end of the key. Push the bushing back in after manual operation of the roof.
- Have the fault notified immediately by a BMW service station.

**Low beam headlights (1)**

55 Watt H1 halogen bulb
- Remove the headlight cover, turn the plastic cap to the left and pull it off the rear of the headlight unit.
- Release the wire spring clip, pull the plug off the bulb and renew the bulb.

**High beam headlights (2)**

55 Watt H1 halogen bulb
- Same bulb-changing procedure as low beam headlight.
- To prevent water entering through loose outer covers, make sure that all three pins of the bayonet catch engage when attaching the covers.

**Changing bulbs**

When performing any work on the car's electrical system, always switch off the item concerned or disconnect the battery negative lead to avoid the risk of short circuits.
- Do not hold new bulbs with bare fingers. Use a clean cloth, paper towel or similar, and only hold the base of the bulb.
- A box of spare bulbs for emergency use is available from BMW service stations.

**Parking and side lights (3)**

5 Watt bulb.
- Press the bulb holder in slightly and turn it to the left to remove. Pull out the bulb.

**Front fog lights**

55 Watt H1 halogen bulb
- Take off the cover next to the headlight (see 'Touring pack'), remove the Phillips head screw (arrow) and swing the light assembly out. Turn the cover to the left and remove it from the back of the light. Release the wire spring clip and renew the bulb after tightening the plug from it.
Rear light cluster

Rear lights: 10 Watt bulb
Other lights: 21 Watt bulb

Lights in rear bulkhead:
- Lift up the luggage compartment floor mat and take off the rear panel trim after opening the quick-release fasteners.
- Gently press in the holder of the affected bulb and turn it to the left to remove. Remove the bulb from the holder in the same way.
- BMW touring: The bulbs are located behind the toolbox trim on the back of the luggage trim. Change the bulb as described above.

BMW touring:
- Open the flap in the left-hand side compartment of the load area and take off the trim. Change the bulb as described above.

Lights in luggage compartment lid:
- Lift up the trim sufficiently, gently press in the holder of the affected bulb and turn it to the left to remove. Remove the bulb from the holder in the same way.

BMW touring:
- The bulbs are located behind the toolbox trim on the back of the luggage trim. Change the bulb as described above.

Central brake light *
21 Watt bulb

Open the luggage compartment, turn the bulb holder to the left while pressing it in slightly, and take it out. Remove the bulb from the holder in the same way.

Front turn indicators
21 Watt bulb

Squeeze the bulb holder tabs gently to the right and pull out the bulb holder. Press the bulb in gently and turn to the left to remove from the holder.

Side turn indicator repeaters *
5 Watt bulb

Remove the Phillips-head screw and push the housing forwards out of the side panel. Turn the bulb-gently to the left to remove.

Licence plate light
5 Watt bulb

Remove the Phillips-head screw and take off the lens frame with rubber seal. Pull the bulb out of the contact blades.

BMW touring:
- Under the bulb at both sides with the aid of a screwdriver, press the retaining spring to one side and change the bulb.
Interior lights
Front: 15Watt bulbs
Press out lens with a screwdriver at the left-hand noes. Pull the bulb out of the contact tongue.
In conjunction with reading lights: Interior light: 15 Watt bulbs
Reading light: 10 Watt bulbs
Press out the bulb with a screwdriver at the left-hand recess.
Reading light: press back the plastic tab on the reflector, open the reflector and re-
 Insert the bulb,
Reading light: press the bulb in slightly and turn to the left to remove.
Rear: 10 Watt bulbs
Press out the bulb with a screwdriver at the side recess. Fold open the reflector and re-
Insert the bulb,
Reading light: press the bulb in slightly and turn to the left to remove.

Luggage compartment lights
10 Watt bulbs
Light on underside of rear shelf.
Press out the bulb with a screwdriver at the side recess and change the bulb.
Lights in luggage compartment lid: pull off the glass and change the bulb.

BMW touring
Load area light
24 Watt bulbs
Lift off lens (with the aid of a screwdriver if necessary) and change the bulb.

Engine compartment light
12 Watt bulb
Press the clip away from the glass with a screwdriver, take off the glass and renew the bulb.

Laying up up out of use
In the car to be laid up out of use for more than three months, we recommend that the following maintenance work be carried out by a BMW service station to prevent deterioration during the storage period.

1. Clean and apply protective or preservative treatment to the engine, engine compartment, underbody, axles and other mechanical assemblies in accordance with BMW factory instructions. Wash the body, clean the interior and clean or protect the paintwork and chromium-plated parts as necessary. Clean rubber seals on doors and lids, and rub them with silicone or glycerine.
2. Change the engine oil and replace the filter element while the engine is at normal operating temperature. An additional air filter/carbon monoxide indicator will be fitted to the engine oil to conform with the supplier's instruction.
3. Check coolant level and concentration, and correct if necessary.
4. Check and load in the battery cells and top up with distilled water if necessary.
5. Drain the windscreen washer fluid tank and wash.
6. The fuel tank should be filled to prevent moisture condensation from forming.
7. Increase tire pressures to 4.0 bar (approx. 57 lbf/in²).

Drive the car immediately before it is to be taken out of use and apply the handbrake and the handbrake until sufficient heat is generated to dry out the brake pads and linings, and pressure to the brake drums comes to a complete stop.
Store the car in a dry, well-ventilated place. Select reverse gear (P on cars with automatic transmission). Do not apply the handbrake. If necessary, check the wheel to prevent the car rolling away. Remove the battery, recharge it and store in a cool place where it will be protected against frost. The battery must be recharged at least every 3 months, or it will be unsuitable for further use. Every time the battery runs flat, particularly if it is left in the state for any length of time, the circuit is reduced.

Note: That the car's registration was allowed to lapse if the car was officially taken out of use, the proper legal procedure and the time limits for re-registration must be carefully observed, or else the car's operating permit may be revoked. Comply with your national regulations.

Restoring car to use
First recharge the battery or renew it if necessary.
An authorised BMW service station should then perform inspection I.
Winter operation
The winter months often bring with them severe changes of weather, and you must not only adopt a correspondingly cautious attitude to driving but also take certain precautions to ensure that your car comes through the winter months safely and without breakdowns.

On winter roads, your tyres grip is very often poor and the driver must remember that braking distances are much greater than usual in many situations.

Before the cold season of the year comes round, it is advisable to take your car to a BMW service station for the necessary winter preparations to be carried out. Complete adherence to the owner's requirements, and don't wait until the snow falls to install the engine with winter-grade oil if the weather turns cold suddenly.

After checking all oil levels, no special winter operating precautions are needed on the mattrass. However, check that drain plug, power steering, hydraulic brake system or self-levelling suspension.

There could be a reduction in tire traction and fuel efficiency in winter. This is because of a reduction in tire traction and fuel efficiency in winter.

In cold weather, we recommend carrying the following items in case of emergency.

A quantity of sand to add to the sand covered slopes.

A shovel to dig out the car or snow from the snow.

A block to act as a support for the car's jack.

A brush and ice swimmer to clear the windscreen, door and body panels covered with snow or ice.

BMW snow chain * for all severe winter driving conditions. These may be fitted on summer and winter tyres, always on pairs in the driving direction. Always, use the type that the manufacturer recommends.

BMW 525K.

In an emergency, up to 30% regular grade (2 star) petrol, gasoline can be added to the diesel oil to prevent the oil being precipitated out. (Use only unleaded fuel for cars with catalytic converters.) However, this measure will have an adverse effect on consumption and driving characteristics.

Winter driving hints
When planning a long journey in winter, allow plenty of time in case of severe weather conditions and bad roads are encountered. Local newspapers, radio and TV, the telephone and the automobile clubs provide information on local road conditions, and whether certain mountains are covered or not.

Before starting the journey, remove ice and snow from the windscreen, door windows and lights. After a heavy fall of snow, clear the roof and the engine and luggage compartment, and check that the entry, grills for the heating/cooling system in front of the window. Be sure that the air is not piped.

Before getting into the car, try to remove all the ice on the engine as far as possible.

In driving in snow, it is difficult to determine the speed of the vehicle, so the driver should rely on the speedometer and avoid over-speeding the car.

Before starting a cold engine, particularly if the temperatures below -15°C (-3°F), the car is cold and the car may start. There may be a delay in starting the car.

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Warning: If the car becomes immobilized in snow or sand, make sure that the exhaust pipes and the surrounding area are clear of snow or sand when the engine is running. There is otherwise an risk of; forging, but highly toxic carbon monoxide entering the car and rend- ering the occupants unconscious, or even falling irresistible consequences. Open a window slightly on the side of the car away from the movement of air to ensure an adequate supply of fresh air.

Snow chains are permitted only in pairs on the driven front wheels (BMW 2002 - see preceding page). If available, fit them in good time. They increase driving safety on snow and ice, enabling the car to climb hills without slipping and reduce breaking distances.

However, the driver must become accustomed to the car's changed handling characteristics. Remove the snow chains as soon as possible, as they wear out very quickly on dry roads.

During a break in the journey or when filling the tank, carefully and repeatedly check from inside the wheel arches, to ensure that the wheel and suspension movements are not impeded.

When parking your car, prevent it from rolling away by placing chocks or a block under one or both rear wheels to provide extra grip before the car's engine is switched off. If something else is available, use the car's floor mats.

Observe guidance in the event of potential side movements. With a degree of skill, the car can be 'hooked' out of the holes, but only with the greatest of care in severe, rearward gear and reverse in quick succession, and accelerate only when the car is moving in the desired direction. Avoid skidding; however, or the car will leave the road.

A handbrake can be applied lightly to prevent rear wheels from spinning.

Useful information on disc brakes

A disc brake system offers optimum braking efficiency, smooth response and high load capacity. The high temperatures which occur during brake applications, for instance when driving hard in hilly areas, necessitate maximum cooling. This is provided by air and by the speed of rotation of the brake discs.

The service life of the brake discs depends on the temperature of the brake fluid and the pads; overheating may reduce braking efficiency or cause "fading", increased pedal travel and possibly the need for extra effort to be applied at the pedal. However, the boiling point of modern brake fluids is so high that only a very small reduction of the fluid amount to consciousness on the driver's part should cause unnecessary loss of braking power.

In wet conditions, dirt, sand spread on the roads in winter and brake discs corrosion can impair braking performance. Cold climate and environmental conditions can impair normal braking; the condition of the brakes affects the efficiency of the brake discs. Brake pads are made to operate reliably even in the worst possible weather conditions.

Another problem in this connection is brake squeal, which tends to increase instrength as the brake discs become hotter or when they are cold. Air pressure and environmental conditions can cause a"fading" in the brake discs and also cause a change in the brake pads in particular weather conditions.

Gentle use of the brakes, although in itself not undesirable, can encourage brake disc corrosion and allow the pads to become dirty, since the minimum pressure needed for the disc brake's self-cleaning action is not attained between pad and disc.

Corroded brake discs may result in a knocking effect when the brakes are applied; this cannot always be eliminated by prolonged braking.

On the other hand, slight corrosion and surface roughness can be removed by fitting brake pads with an abrasive non-conductive coating. Any BMW service station can provide information on breaking during the running in period, use of these brake pads etc.

Dirt burnt into the brake pads (placing of rubberized area leads to scoring of the brake discs and also is changing, abrasive dust in brake fluid).

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Rectified driving procedure for disc brakes

At intervals when traffic conditions allow, disc brakes should be applied quite hard once or twice in high speed. The resulting high braking pressure ensures that the brake pads and discs are heat treated.

Similarly when stopping in poor weather conditions, preferably in winter if salt has been spread on the roads, firm and even braking should be applied with the brake pedal firmly on the floor to break down the brake pads and increase their efficiency in the prevailing conditions that will be experienced at temperatures and braking points, but also results in a self-cleaning action to ensure that they are ready to operate throughout the wet driving season.

Brake loss can be caused by weather and when rain is actually fall- ing, the driver should apply the brakes to the extent that the brake discs are heated enough to ensure some braking effectiveness. All climatic and environmental conditions can affect the performance of the brake discs, the efficiency of which is available for a given pedal position. The coefficient of friction changes even at normal braking pressure, the car impresses uneven or pulls to one side.

Before parking the car after driving through rain, sweat on the surface of road, lightly brake the car into a hard stand so that the brake discs are dried and concomitantly cleared.

If the brake discs already show signs of corrosion, the problem can be cured in early stages by applying the brakes hard several times. Take care not to endanger other road users, and avoid locking the wheels.
What you should know about tires
Information for your safety
The factory-approved radial-ply tires have been chosen to suit your car and provide both optimum road safety and the desired level of ride comfort.

The condition of the tires and maintenance of the tire pressure do not only influence tire life but also road safety to a very considerable extent. Incorrect tire pressures are often a cause of tire problems. They also have a considerable effect on the roadholding of your BMW.

For your own safety, you are recommended to check the tire pressure regularly. Before starting a long journey and in any case at least once every two weeks.

Make sure in particular that the specified tire pressures are maintained if the load on the car increases and when driving at high speeds for extended periods. Lower pressures tend to reduce brake efficiency and cornering grip, and it may be necessary to increase the tire pressure occasionally.

The associated higher rolling resistance will cause fuel consumption to decrease and could lead to tire damage and accidents.

Never drive with the clutch pedal depressed, the gear lever or automatic transmission selector in neutral or - still more dangerous - with the engine switched off at the ignition. In neutral, engine braking is entirely lost, and if the engine is switched off the brake booster servo is no longer able to reduce brake pressure in the normal way.

Warning: Incorrect movement of the brake clutch and accelerator pedals must never be attempted by the door, seat, carpet or any other object.

BMW 525i Warning: Always insert brake checks to your BMW service station.

It should be remembered that if a tire suffers punctured damage it may only fall much later or when exposed to a loss severe load. If a tire loses pressure severely always have the cause investigated and put right. Remember to check the spare tire's pressure too, and keep it up.

D 250 (3-4 psi) higher than the specified value for heavier loads, so that the tire can always be filled without having to be inflated further. Higher tire pressure reduces comfort and leads to premature tread wear.

Warning: Over-inflating the tires can cause tire damage or, in certain circumstances, sudden loss of pressure because the tires are more sensitive to loose objects on the road or sharp-edged protrusions.

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Since the danger of aquaplaning always increases with the car's road speed, this should be kept down if the road is wet and the tires as shown to be fairly well worn. We recommend fitting new tires when the treads are 3 mm deep. If a tire remains in use after this, wear indicators 3.4 mm from the main rubber surface are exposed as a warning. Although the legal wear limit has been reached.

The mounting of tire treads for this car is for the road, because of the risk of the tire carcass already having been damaged.

A sharp object may penetrate the tire and cause a blowout puncture. This requiring loss of air can only be detected if tire pressures are checked regularly. If damage of this kind is suspected, the tire should be inspected without delay by a BMW service station or an authorized tire repair shop.

Drive with extreme care and at moderate speed when on roads or in areas where there is danger of objects such as kerbstone, so that the tire carcass does not suffer any damage visible to the naked eye.
When parking the car or driving over loading conditions, e.g. when carrying heavy loads, the sides of the tyres are not damaged by violent contact with obstacles.

Warning: Avoid overloading the car. This can cause the tyres' load capacity limit to be exceeded, so that they overheat and internal damage may occur at a rate which cannot be detected from the outside, possibly leading to sudden, rapid loss of all forms of tyre damage (which could in the worst case lead to sudden and total loss of pressure and/or serious or even fatal injury to the car's occupant(s) or others in the vicinity.

Never try to drive any further if a tyre goes flat (except tyres of TD type). If a tyre loses its pressure it is seriously affecting the car's handling and braking, and can even cause the driver to lose control.

New tyres
To maintain the car's good road behaviour, always fit tyres of the same make and tread pattern to all wheels. BMW does not approve of the use of reworked tyres on this car, since their carcasses may differ in internal construction and have aged sufficiently to cast doubt on their durability and therefore in certain circumstances on their road behaviour and safety.

Interchanging wheels and tyres between the axles
Depending on individual vehicle operating conditions, tires should be interchanged at the front and rear wheels. In order to avoid misalignment of the wheels and tyres after a period of operation.

Wheels and tyres
Use only BMW-approved tyres. On models with a top speed in excess of 240 km/h (149 mph), certain tyre makes and sizes are compulsory. Details are available from any BMW service station.

Comply in addition with any relevant national regulations.

The code on the side wall of a radial-ply tyre tells you:
- the size of the tyre (tread width and height)
- the type of construction (radial or bias-ply)
- the load-bearing capacity
- the speed for which the tyre is approved

The speed code letter indicates the maximum permissible speed at which the tyre is to be spanned.

- On summer tyres:
  S = up to 180 km/h
  T = up to 200 km/h
  H = up to 240 km/h
  V = up to 280 km/h
  Z = over 240 km/h

- On winter tyres:
  Q = up to 100 km/h
  M+S = up to 130 km/h
  T = up to 150 km/h
  H = up to 180 km/h

Marks on steel or light alloy wheels:
- Rim width in inches
- Shoulder pattern code letter
- Lift for over 3 bar base rim
- Rim diameter
- Inner and outer rim flanges
- Hubcap for both rim shoulders

Protect dirt from entering the tyre valves with screw-on dual caps. Dirt in the tyre valve can often lead to a gradual loss of air pressure.

Winter tyres
If the car is driven in winter conditions, we recommend that winter tyres (M+S radial-ply tyres) be fitted. Although all-year tyres are available, and are superior in winter performance to summer tyres of H, V, ZR and W speed ratings, they do not normally achieve the performance of purpose-designed winter tyres.

If winter tyres are fitted, the same make and tread pattern should be used on all four wheels (and preferably on the same wheel axis) so that the effects of good directional stability and steering response.

Note:
- Lack of expert knowledge in incorrect handling of tyres can cause damage and lead to accidents.
- Tyre work on the car should be carried out only by experts. BMW service stations will gladly assist you.

- Tyres in a cold, dry, and preferably dark place when not in use. Protection against contamination by oil, grease and fuel.

Fit only winter tyres approved by BMW. A wrong choice of tyres may lead to serious damage to your car and can cause it to lose control. Always note that a wrong choice may seriously affect your car's mileage.

In the Federal Republic of Germany, a notice stating the maximum permitted speed with winter tyres fitted must be displayed in the front window of the car (in winter conditions). This notice is available from tyre suppliers or BMW service stations.

Below a tread depth of 4 mm, winter tyres must not be used. In summer conditions, it is recommended that the tyres be replaced at the end of the driving season and should therefore be stored without undue delay for safety reasons.

Keep the stored tyre pressures and have the unused tyres checked the same as new ones.
Approved BMW wheel and tyre sizes for summer and winter tyres:

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Technical modifications to the car by a BMW service station will not affect you on the practical value, legal position and factory attitude before modifications are undertaken; please consult the vehicle identification number and, where appropriate, the engine number.
Adjusting headlight beam setting for countries where traffic drives on the opposite side of the road

If crossing a border into a country with a different "rule of the road", that is to say where the traffic drives on the opposite side of the road.

Have the necessary adjustment work carried out beforehand by a BMW service station.

Re-registration abroad

Each car is supplied in accordance with the road vehicle use regulations of the country for which it is intended.

If the owner moves abroad and wishes to re-register the car locally, information should be obtained well in advance as to possible import and licensing restrictions or differences in the legal position.

Information can be obtained on telephone 049-85-51861, if the model, vehicle identification number and date first registered are quoted.

Roof rack

A loaded roof rack can seriously affect the handling and steering characteristics of the car by displacing its centre of gravity. When loading items on to a roof rack, make sure that the permitted roof load, gross weight and axle loads are not exceeded.

To ensure the lowest possible roof load and optimum drop coefficient, only a BMW-approved luggage rack or ski rack. When retaining a roof rack, make sure that the mounting arms are attached securely to the roof rail and are located as far apart as possible.

The roof load must be evenly distributed and not too large in surface area. Always store the heaviest objects at the bottom.

Make sure that luggage on the roof is secured tightly in the correct manner so that there is no danger of it slipping or even falling off and endangering other road users during the journey.

Drive smoothly, avoiding jerky starts and sharp braking, and do not over-tire too fast. Luggage on the roof increases the car's frontal area, so that fuel consumption suffers and the load on the car's roof panel is increased.

You are recommended to remove the roof rack whenever it is not needed.

Note and comply with national regulations when loading your car.

Roof rack system

The cross-members are secured in the mounting holes in the roof rail.

Mounting procedure:

- Remove covers on mounting slots with the aid of a screwdriver.
- Open the lockable cover on the cross-member and slacken off securing bolts for blocks.
- Fit on cross-member, with the prongs of the front cross-member facing forwards and the prongs of the rear cross-member facing the rear, and insert the securing blocks in the rectangular hole.

- Push the front cross-member as far as the front stop and move the rear cross-member back accordingly.

- Tighten the securing bolts for the blocks with the aid of a wrench.

See the separate installation instructions for notes on mounting the various carrier systems.

Important:

Always check before use that the roof rack system is attached securely and tightens the mountings if necessary.

Note:

Cars with double-panel sunroof: When loading the sun roof ensure that the bindings of the glass are supported on the rack at the front, to leave sufficient space for the opening function of the front roof.

Use the appropriate roof rack system for your BMW touring from the BMW accessories range.

Towing a trailer

Driving with a trailer always imposes more severe demands on both car and driver. The trailer not only makes the car less manoeuvrable, but also affects its ability to climb hills and its acceleration, braking and cornering behaviour.

The trailer load limit and the towing down draft at a given weight are shown in this section headed "technical data"; the trailer load limit may also be stated in the car's licensing documents.

All BMW service stations will be able to inform you of the scope for boosting trailer weight.

Trailer down draft or nose weight is the vertical force exerted by the trailer on the towing vehicle and can be measured with the aid of bathroom scales or bathroom scales.

In Germany, for instance, a minimum nose weight of 25 kg (55 lb) is laid down by law.

At trailing loads above 160 kg (350 lb), the nose weight must be at least 80 kg (176 lb).

Without exceeding the limit, try to make full use of the maximum permissible nose weight if possible.

When loading the trailer, make sure that the additional load is spread as low and as close to the axle as possible. Allow centre of gravity on the trailer increases the safety of the complete outfit when on the move.

The gross trailer weight limit and the car's trailer load limit must all be complied with, note that the limit is represented by whichever of these values is reached first.

Since the nose weight is a considered part of the car's payload, it must not cause the car's gross weight limit and rear axle load limit to be exceeded. The payload is reduced by the weight of the trailer coupling, and no trailer towing also by the nose weight of the trailer.

The trailer coupling with detachable ball head should be of a pattern tested and approved by BMW. The trailer coupling type for electrically controlled brake systems (in Germany only) must be correctly installed by a BMW service station.

After connecting the detachable ball-ended towbars, it should be kept greased so that it can be installed again without difficulty.
Note on electrical system

If the trailer towing hitch is factory-fitted, the car will have trailer-towing suspension fitted as standard. These ratings compen-
sate for the trailer weight and optimise load behaviour when driving without a trailer. If the trailer towing hitch is fitted subse-
quentlv, we also recommend the installation of trailer-towing suspension.

Self-leveling rear suspension is the ideal solution for frequent trailer towing. Unless the rear axle load is exceeded, the car always returns to its designed static ride height regardless of the load carried and whether the trailer is attached or not.

BMW has not tested or approved any other suspension devices sold by the automotive accessory trade.

Note:

The trailer tow hitch is fitted, the effect of the regenerating rear bumper system will be reduced.

The installation of a stabilising device is recommended, particularly with heavy trailers. BMW service stations can provide details.

If the standard door mirror is inadequate with the trailer attached, the law requires two outside mirrors to be fitted which enable the driver to see both near corners of the trailer. Your BMW service station can supply suitable, trailer mirrors, including types with swivellable arms or detachable versions for driving without the trailer.

In the interests of unobstructed traffic flow and maximum road safety, the maximum trailer weight permitted at state level is restricted to 12% of the GAW (in 8.6 m) or with trailers of greater weight, 10% of the GAW (in 12.5 m).

Engine performance gradually declines at increasing altitudes. When driving in mount-
ainous terrain, the engine should therefore be restrin-
ted that the car's ability to pull away on steep inclines is not adversely affected. In such driving conditions, the vehicle and trailer should not be driven with their maximum permitted payload.

Remember that the effect of the trailer hitch may be relatively limited, particularly when descending steep gradients. Select the next lower gear long before the drop and down as far as first gear (automatic tran-
mission speed range) if necessary to keep the outfit's speed low. Operate the foot brake only for limited periods at a time, to prevent fade.

Before starting a journey on which steep gradients are likely to be encountered, the performance of the trailer brakes should al-
ways be checked by an authorised service station.

The ABS will prevent the wheels from lock-
ing. We therefore recommend brake ap-
plications in situations where the ABS will respond. Briskly, steady brake applica-
tions will yield the shortest stopping dis-
tances for the car-trailer combination, par-
ticularly on low-friction surfaces (icy roads).

The maximum speed limit when towing a trailer in Germany is 80 km/h (50 mph) on all roads. The permissible trailer load limits have been chosen to ensure optimum vehi-

cle stability at this speed. Even if higher speed limits are authorised by some au-
torities, you are still recommended not to ex-
ceed 80 km/h for safety reasons. Should the vehicle’s progress be significantly dis-
turbed at fairly high speeds, and the trailer begins to skid, the outfit must be sta-
bled immediately by applying the brakes.

Correct tyre pressures are of particular importance.

For the trailer, comply with the manufac-
turer's recommendations for pressures. Always check operation of the trailer’s rear lights before starting the journey.
Driving a car equipped with ABS.

After the engine has been started, the yellow ABS warning light on the instrument panel will go out. The system itself is then in working order, but does not come into action until road speed exceeds approx. 3 kmh (2 mph). After this minimum control speed limit has been reached, the ABS prevents the wheels from locking when the driver applies the brakes.

If the speed drops below approx. 3 kmh (2 mph), the ABS ceases to operate, so that in theory the wheels could still lock at the very end of a brake application, though the ABS is not normally critical at such a slow speed. The ABS regulating circle is performed repeatedly within fractions of a second.

To inform the driver that his brake application has caused the ABS to come into action, a pulsating light is noticed at the brake pedal, together with a characteristic brake pedal clicking sound. This acts as a warning that grip between the tire and the road is being lost (at least in the brakes). It will therefore generally stop the brake application speed accordingly.

ABS is capable of achieving the highest possible braking distances in any given conditions, allowing the tires to maintain traction on wet asphalt, ice, or snow surfaces.

Warning: On roads which are firm but with a loose surface, such as gravel or snow, the braking distance with ABS in action may actually be longer than if the wheels lock. The same applies when snow chains are fitted. However, the advantages of dynamic stability and the ability to steer the car are retained.

In order to keep it fully functional, no modifications may be made to the anti-lock braking system. Any work on the ABS must only be carried out by authorized, skilled personnel.

Proper functioning may be impaired if either a tire is underinflated, a tire is fitted that is the wrong size and the space wheel. Change back as soon as possible.

The yellow ABS warning light on the instrument panel comes on to indicate any malfunctions. The ABS system then operates conventionally and with precisely the same standard of control as on cars not equipped with ABS.

In order to prevent any multiple faults from causing the brake system, the necessary repair work should be carried out at the next possible opportunity.

Automatic Stability plus Traction Control (ASC+T)

As a means of ensuring improved dynamic stability, particularly when accelerating and cornering, BMW has extended its ABS system to include ASC+T, which prevents the driven wheels from spinning even if driving and road conditions are unfavourable.

The traction and vehicle locating force which the tires can transmit to the road surface depends on a number of factors. The engine's power output, road and surface condition (wet, slippery, snow-covered) and the weight imposed by other factors should not be exceeded, or else the car may become difficult to keep under control.

ASC+T is a highly responsive system which uses the ABS wheel sensors to detect wheel individual tolerances, and reduces engine power if these speeds differ.

This continuous wheelpath monitoring system identifies the rear of a wheel spinning it is called upon to transmit too much power and prevents the power output of the necessary action of the brakes on the more wheels until reliable brake grip is as-

sured.

Although the driver may find this automatic reduction of engine power difficult to ac-
cept, there is no denying that when a difficult situation arises (poor road surface, sharp corner, etc.), the instant response of the ASC+T system is a way of ensuring optimum traction and acceleration.
Multi-disc limited-slip differential

In very unfavorable driving conditions, the conventional form of differential may be unable to transmit torque to the road without 'wheelie' occurring. The limited slip differential (25% action) greatly reduces the tendency for one wheel to spin.

In practice, this means improved traction when putting away, accelerating and cornering at speed in poor driving conditions. A car also tends to spin round its vertical axis (a yawing moment) when the power output is high or when road irregularities occur on surfaces with a varying degree of grip. A good deal of skill is required to control such skidding or spinning, particularly when driving in a highly enthusiastic manner.

The limited slip differential has the advantage of improving the car's handling and grip when needed. It does not have to be engaged and disengaged by the driver.

Four-wheel drive

Power is transmitted permanently to the four driven wheels via a transfer box which is locked electromagnetically if necessary. The locking moment required at the rear axle is regulated by the ABS, which boosts the braking pressure at whichever wheel is spinning.

The electronically controlled differential lock system works without intervention by the driver, according to the road situation and the condition of the road surface.

In normal circumstances, the torque split between front and rear wheels is 35% to 65%. When necessary, the torque flow is modified instantaneously and adapted to the driving situation.

The BMW 2562/touring is not an off-road vehicle and the permanent four-wheel drive should rather be considered as a means of ensuring high dynamic stability and traction in all road conditions and for overcoming critical situations, for instance in severe winter conditions on snowy or ice surfaces.

When the brakes are applied, the effect of the differential lock is delayed only for a moment so that the ABS can achieve its full effect.

Care of the car

The car's high-quality paint finish is chosen not only to appeal to the owner's personal colour preferences, but also to provide maximum body protection. It consists of several layers for reliable corrosion-proofing; the body carcases are not only primed by cataphoretic dipping, but also treated with materials specially developed for this purpose in lengthy tests. The entire floor pan is given a layered-in resin PVC coating followed by complete wax-based undercoating.

Regular care and maintenance make a big contribution to safety and to your car's resale value.

A large number of environmental influences can affect the car's paintwork, some of them purely visible in origin. There is therefore the amount of care the car's paintwork and body receives, and how often the car is washed, that is attended to.

Road dust and dirt, tar, stains, dead insects, animal excretions (high level of alkali forming) as well as freestain paint materials (main pollutant) all contain chemicals which, if allowed to remain on the car for any length of time, can damage the paintwork by causing patches, blisters, corrosion, erosion, flaking of the top coat, etc.

In industrial areas, the horizontal panels of the body in particular may suffer from deposits of fly ash, oil, oily soil or substances containing sulphur dioxide (united rain) as well as other less easily identified deposits. Only regular care of the paintwork can avoid damage in such circumstances.

In coastal regions the high salt content and humidity of the atmosphere greatly increase the risk of body panel corrosion.

In tropical climates, ultraviolet radiation damage can also be very significant. The air in the valleys is very humid and temperatures can exceed 40°C (104°F) in the shade. Light painted car panels, in particular, can heat up to 80°C (176°F) and dark painted car panels can exceed 100°C (212°F). Prolonged exposure could cause the paint film to lose its traction, particularly on horizontal surfaces.

In the event of mechanical damage caused by road salt, grit, etc., the attention of the owner should be called to the fact that corrosion can penetrate to the underbody of the car and cause serious damage, and in extreme cases the car may even require professional attention.

Since the cars paintwork is exposed to so many potential environmental hazards, automobile manufacturers and paint suppliers are constantly working on further improvements to the strength and durability of paint finishes.

In the composition of the paints used by BMW and the manner in which they are applied is in accordance with the very latest standards in this specialised area.

If you choose to look after the car yourself, all BMW service stations are fully trained and tested Original BMW care agencies.

Care of paintwork

To protect the car from the start against gradual deterioration of the paintwork against the effects of high atmospheric pollution or where industrial pollution could damage the paint finish (industrial areas, railways, shipyards and refineries, trees, fumes, bird droppings). It is advisable to wash the car once a week. In severe cases, wash the car whenever the body finish is seen to be dirty or contaminated.

Remove applied fuel, oil, grease or brake fluid at once, as they can attack the paint and change its colour.

Best results should also be achieved without delay, or they will cause the paintwork to disintegrate.

A new BMW can be put through an automatic car wash, washed by hand, or soaped by hand, but, as it is used on the road.

In automatic car washes, make sure that any projecting body elements (e.g. spoilers) cannot become damaged.

If necessary, point them out to the person in charge of the car wash before using it.

Dust in car should be sucked and wiped off before the main car wash.
Washing the car

Do not wash the car if the engine compartment lid is still hot. If the car has been standing in strong sunlight, or else patches may form on the paint surface.

When using an automatic car wash, try to choose one without excessive brush pressure and with an ample supply of rinsing water. Most modern car washes satisfy these requirements. However, the areas not fully reached by the washing water, door rails, panel folds and seams on doors and fenders etc., should be cleaned by hand.

During the cold season of the year, particularly in the city, it is advisable for the car to be washed more frequently, before heavy dust deposits and settled dirt wash out and injure the paintwork.

After washing, rinse the car down again thoroughly with the washer to dry it. If it has been washed carefully, the clean car should stand out clearly without discoloured patches where the water has not been removed.

To protect the paintwork, a paint-care product can be added to the water used for washing the car.

If washing with water alone is insufficient, it car shampoo or similar cleaner which stores the fats content of the paintwork can be applied on the car up to the flat part pack. After this, rinse down with plenty of water.

Note: after washing, the car's brakes may be wet and therefore less effective in action. Apply them briefly if the car is driven immediately afterwards, to dry the discs.

Any local dirt patches or other contamination of the paint surface can best be seen after the car has been washed. Remove them as soon as possible, such as smoking or sitting on the car seat. Remove dirt stains or water spots by wiping down with a dry cloth or similarly mild cleaner.

Polish the paintwork at these points to remove the dirt and to make the car shine better. Please use only paint care products containing carnauba or silicone waxes.

It is quite easy to decide whether the car's paint work needs polishing or preservative treatment: water runs down the front as well as a larger number of long, large brown spots on the painted areas. In this case, as a rule, washing is not sufficient. It is advisable to use a paint care product.

Minor paint damage can be touched up with spray paint in color-matching "kemilax"."

Conceal scratches, chips, or similar defects that are small and not severe or obvious cases. Remember that all scratches, chipped areas and paint scuffs are removed by a layer of polish to expose paint which may still be in good condition. Only if the resulting new paint surface is most carefully protected will the overall brilliance of your car's paintwork be retained.

After care of the car's paintwork, remove traces of the products used from the windows with a suitable glass cleaner.

Annual cleaning and protection or treat-ment of the entire car, underbody, axles and other mechanical assemblies can be carried out with special equipment by a BMW service station. This treatment is particularly important at the end of the winter season.

Chromium-plated and polished metal parts—brushes, trim strips, chrome trim, etc. should be cleaned regularly with BMW's all-purpose cleaner; with a car shampoo, it can be acid free re-peatedly with a soft sponge. After a few days, polish the improved area and apply a suitable car polish.

More extensive paint damage should be professionally repaired by the BMW service workshop. Again, the entire word is improved materials in accordance with the recommendations of the manufacturer.

Important note:

If a tarpaint or similar cover is used to protect the car from winter damage and is then not removed, the car can also become covered in tar. The car will then need to be thoroughly washed to remove the tar. Please also ensure that the car is not washed in an automatic car wash. Such washes can be supplied with a special tar-cleaner, particularly during the cold season. Do not use abrasive ac-acidic products on chrome-plated parts, or on争创 or plastics. Allergic reactions should be avoided if the car is cleaned in the car wash at a temperature higher than 60°C (140°F).

Wax the car regularly to ensure that the car is properly waxed. The car should be kept clean and polished. Any streaks on the car will be removed by a car shampoo, with a suitable glass cleaner. Never use car polish containing plastic or abrasive (quarz) cleaners.

Plastic components, leatherette upholstery, rubber linings, light glass and similar water-resistant material should be cleaned with water to which a car shampoo may be added. Do not allow the roof lining to become wet out right though. Necessary, fresh paint components with a suitable cleaner for synthetic materials. Never use solvents or other aggressive substances, such as fuel.

Rubber components should only be cleaned with water or treated with a rubber cleaner or silicon spray.

Seats should be cleaned with a soft cloth and a warm, damp cloth, then left to dry. If it is not cleaned properly, it can become water stains to the seat. A good seat should be washed with a cloth and dried with a clean cloth. After washing, it should be left to dry for a few days.

Floor mats and carpets® can be cleaned with an interior cleaner; if very dirty, floor mats can be removed for more thorough cleaning of the car's interior.
Care of upholstery fabrics
If certain areas of the seats acquire an unwanted gloss after heavy use as a result of heat and moisture they should be brushed "against the pile" with a slightly moistened brush.
The pile of velour material tends to lie flat in use; as with many furnishing fabrics and clothing materials this is unavoidable and does not detract from its quality.

PLUSH on the upholstery fabrics and abrasive textile or leather particles are best removed with a suitable "felt brush" or "burlap brush". Clean off stains or large area marks at once with lukewarm water, interior cleaner, stain remover and a soft detergent. Afterwards, brush the fabric to restore its pile.

Seat upholstery fabrics can acquire a static electrical charge, particularly when atmospheric humidity is low. Persons touching metal parts of the body after leaving the car may then receive an unpleasant but harmless electric shock. Remember to touch an exposed metal part of the car while getting out; this will discharge the electric charge without the person being noticed.

Antistatic products which prevent the build-up of static electricity can be applied if desired.

If the car is parked for a long time in bright sunlight, it is advisable to cover the seats to prevent the colours from fading.

Care of leather
The upholstery leather is a high grade natural product treated by the latest processes. It carefully looked after, it will retain its high quality for many years.

Like all natural products, however, due consideration must be given to its properties, to certain limitations in use and to the special care which leather needs.

Regular cleaning and care are essential since dirt and dust make the surface to wear and become brittle.

If the car is parked for a long time in bright sunlight, it is advisable to cover leather surfaces to prevent the colours from fading, or cover the windows.

Moisten a cotton or woollen cloth slightly with water and clean the leather surface without allowing the water to become wet through. After drying, the leather should be rubbed down with a soft, clean cloth.

Water buffalo leather
Use only a special leather spray for regular care, according to the manufacturer's instructions.

Wipe off spots of water immediately, and try to avoid wetting the surface severely (soaking and drenching), or cleaning the car in rain.

To remove severe dirt marks, use a mild detergent without brightening agent or table-spoon of table-spoon to 1 litre (1 3/4 pints) of water.

Water buffalo leather is left in its natural state and may therefore exhibit areas of slightly varying colour. Natural features such as scars caused by scratches and insect stings, faults in the grain, small holes, unusual grain etc., are typical of this material, which acquires a certain patina in use.

When new, water buffalo leather may mark light-coloured clothing slightly if moisture is present.

* Obtainable from BMW service stations.
### Engine data, fuel consumption

<table>
<thead>
<tr>
<th>BMW 520i/touring</th>
<th>BMW 525i/touring</th>
<th>BMW 525Xi/touring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Displacement (cm³)</td>
<td>1736</td>
<td>1991</td>
</tr>
<tr>
<td>Number of cylinders</td>
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<td>6</td>
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<tr>
<td>Max. output (kW)</td>
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<td>110</td>
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<tr>
<td>at engine speed (rpm)</td>
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<td>5900</td>
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<td>Max. torque (Nm)</td>
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<td>193</td>
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<tr>
<td>at engine speed (rpm)</td>
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<td>Compression ratio</td>
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<td>Stroke/bore (mm)</td>
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<td>85/60</td>
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<td>Mixture preparation</td>
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<table>
<thead>
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<th>BMW 520i</th>
<th>BMW 520i</th>
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<tbody>
<tr>
<td>Fuel consumption (DIN 70 030/1)</td>
<td>5-speed gearbox</td>
<td>Automatic</td>
</tr>
<tr>
<td>At 80 km/h</td>
<td>5.8</td>
<td>6.2</td>
</tr>
<tr>
<td>(55 miles/h)</td>
<td>41.5</td>
<td>45.5</td>
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<tr>
<td>At 120 km/h</td>
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<td>(75 miles/h)</td>
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<tr>
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<th>BMW 525i</th>
<th>BMW 525Xi</th>
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<td>Fuel consumption (DIN 70 030/1)</td>
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<td>8.3</td>
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<td>(75 miles/h)</td>
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<td>36.6</td>
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<th>BMW 525d/touring</th>
<th>BMW 525tds</th>
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<td>Automatic</td>
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<td>At 80 km/h</td>
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<td>5.7</td>
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<td>(55 miles/h)</td>
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<td>At 120 km/h</td>
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<td>(75 miles/h)</td>
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<td>Average</td>
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<td>(55 miles/h)</td>
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<td>At 120 km/h</td>
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<tr>
<td>(75 miles/h)</td>
<td>39.8</td>
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*BMW 525Xi: A performance test may be carried out on a suitable roller dynamometer.*
### Weight

<table>
<thead>
<tr>
<th>Dimensions and weights</th>
<th>BMW 518i</th>
<th>BMW 520i</th>
<th>BMW 525i</th>
<th>BMW 525xi</th>
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<tbody>
<tr>
<td><strong>Length</strong> mm</td>
<td>4720 (185.8 in)</td>
<td>4720 (185.8 in)</td>
<td>4720 (185.8 in)</td>
<td>4720 (185.8 in)</td>
</tr>
<tr>
<td><strong>Width</strong> mm</td>
<td>1751 (68.9 in)</td>
<td>1751 (68.9 in)</td>
<td>1751 (68.9 in)</td>
<td>1751 (68.9 in)</td>
</tr>
<tr>
<td><strong>Height</strong> mm</td>
<td>1412/1415 (55.6/55.5 in)</td>
<td>1412 (55.5 in)</td>
<td>1421 (55.9 in)</td>
<td>1421 (55.9 in)</td>
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<tr>
<td><strong>Wheelbase</strong> mm</td>
<td>2761 (108.7 in)</td>
<td>2761 (108.7 in)</td>
<td>2761 (108.7 in)</td>
<td>2761 (108.7 in)</td>
</tr>
<tr>
<td><strong>Front overhang</strong> mm</td>
<td>846 (33.3 in)</td>
<td>846 (33.3 in)</td>
<td>846 (33.3 in)</td>
<td>846 (33.3 in)</td>
</tr>
<tr>
<td><strong>Rear overhang</strong> mm</td>
<td>1113 (43.8 in)</td>
<td>1113 (43.8 in)</td>
<td>1113 (43.8 in)</td>
<td>1113 (43.8 in)</td>
</tr>
<tr>
<td><strong>Front track</strong> mm</td>
<td>1470 (57.6 in)</td>
<td>1470 (57.6 in)</td>
<td>1470 (57.6 in)</td>
<td>1470 (57.6 in)</td>
</tr>
<tr>
<td><strong>Rear track</strong> mm</td>
<td>1495 (58.9 in)</td>
<td>1495 (58.9 in)</td>
<td>1495 (58.9 in)</td>
<td>1495 (58.9 in)</td>
</tr>
<tr>
<td><strong>Min. turning circle (wheels)</strong> m</td>
<td>16.2 (33.6 in)</td>
<td>16.2 (33.6 in)</td>
<td>16.2 (33.6 in)</td>
<td>16.2 (33.6 in)</td>
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<tr>
<td><strong>Min. turning circle (overall)</strong> m</td>
<td>17.0 (34.1 in)</td>
<td>17.0 (34.1 in)</td>
<td>17.0 (34.1 in)</td>
<td>17.0 (34.1 in)</td>
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### Weights

<table>
<thead>
<tr>
<th>Weight category</th>
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<th>BMW 520i</th>
<th>BMW 525i</th>
<th>BMW 525xi</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unladen weight (ready to drive, full tank, without special equipment)</strong> kg</td>
<td>1360 (2998 lb)</td>
<td>1445 (3186 lb)</td>
<td>1480 (3263 lb)</td>
<td>1570 (3461 lb)</td>
</tr>
<tr>
<td><strong>Gross weight limit</strong> kg</td>
<td>1870 (4132 lb)</td>
<td>1955 (4301 lb)</td>
<td>1990 (4387 lb)</td>
<td>2080 (4586 lb)</td>
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<tr>
<td><strong>Front axle load limit</strong> kg</td>
<td>890 (1958 lb)</td>
<td>950 (2094 lb)</td>
<td>970 (2136 lb)</td>
<td>1030 (2271 lb)</td>
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<tr>
<td><strong>Rear axle load limit</strong> kg</td>
<td>822 (1812 lb)</td>
<td>1100 (2425 lb)</td>
<td>1130 (2492 lb)</td>
<td>1160 (2571 lb)</td>
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<tr>
<td><strong>Trailer load limits (specified by factory or as laid down by law in Germany)</strong> kg</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td><strong>braked</strong></td>
<td>1700 (3721 lb)</td>
<td>1700 (3721 lb)</td>
<td>1700 (3721 lb)</td>
<td>1700 (3721 lb)</td>
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<tr>
<td><strong>unbraked</strong></td>
<td>1600 (3528 lb)</td>
<td>1600 (3528 lb)</td>
<td>1600 (3528 lb)</td>
<td>1600 (3528 lb)</td>
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<tr>
<td><strong>Max. towing downwind</strong> kg</td>
<td>75 (165 lb)</td>
<td>75 (165 lb)</td>
<td>75 (165 lb)</td>
<td>75 (165 lb)</td>
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</tbody>
</table>

**Max. roof load** kg: 110 (240 lb)

**Luggage capacity acc. to VDA test**: 440 (16.2 cu. ft)

Different values may apply to national-market specifications and special models. Please always follow the data in the vehicle papers or on the manufacturer's type plate.

1) Please consult a BMW service station with regard to higher trailer load limits. Different values may apply to national-market versions.

2) With automatic transmission.
## Weights – touring models

<table>
<thead>
<tr>
<th></th>
<th>BMW 518i</th>
<th>BMW 520i</th>
<th>BMW 525i</th>
<th>BMW 525iX</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Unladen weight (ready to drive, full tank, without special equipment)</strong></td>
<td>kg</td>
<td>kg</td>
<td>kg</td>
<td>kg</td>
</tr>
<tr>
<td></td>
<td>1445</td>
<td>1533</td>
<td>1573</td>
<td>1650</td>
</tr>
<tr>
<td></td>
<td>(316 lb)</td>
<td>(337 lb)</td>
<td>(342 lb)</td>
<td>(363 lb)</td>
</tr>
<tr>
<td><strong>Gross weight limit</strong></td>
<td>kg</td>
<td>kg</td>
<td>kg</td>
<td>kg</td>
</tr>
<tr>
<td></td>
<td>2075</td>
<td>2075</td>
<td>2075</td>
<td>2075</td>
</tr>
<tr>
<td><strong>Front axle load limit</strong></td>
<td>kg</td>
<td>kg</td>
<td>kg</td>
<td>kg</td>
</tr>
<tr>
<td></td>
<td>1020</td>
<td>1020</td>
<td>1020</td>
<td>1020</td>
</tr>
<tr>
<td><strong>Rear axle load limit</strong></td>
<td>kg</td>
<td>kg</td>
<td>kg</td>
<td>kg</td>
</tr>
<tr>
<td></td>
<td>1160</td>
<td>1160</td>
<td>1160</td>
<td>1160</td>
</tr>
<tr>
<td><strong>Trailer load limits (specified by factory or as laid down by law in Germany)</strong></td>
<td>kg</td>
<td>kg</td>
<td>kg</td>
<td>kg</td>
</tr>
<tr>
<td>unbraked</td>
<td>750</td>
<td>750</td>
<td>750</td>
<td>750</td>
</tr>
<tr>
<td>brake, max. gradient 12 % (1 in 8.5)</td>
<td>750</td>
<td>750</td>
<td>750</td>
<td>750</td>
</tr>
<tr>
<td>brake, max. gradient 8 % (1 in 12.5)</td>
<td>750</td>
<td>750</td>
<td>750</td>
<td>750</td>
</tr>
<tr>
<td><strong>Max. towbar downforce</strong></td>
<td>kg</td>
<td>kg</td>
<td>kg</td>
<td>kg</td>
</tr>
<tr>
<td></td>
<td>75</td>
<td>75</td>
<td>75</td>
<td>75</td>
</tr>
<tr>
<td><strong>Max. roof load</strong> (do not exceed max. axle loads or gross weight limit when carrying loads on roof)</td>
<td>kg</td>
<td>kg</td>
<td>kg</td>
<td>kg</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td><strong>Luggage capacity acc. to VDA test</strong></td>
<td>litres</td>
<td>litres</td>
<td>litres</td>
<td>litres</td>
</tr>
<tr>
<td></td>
<td>460 (16.2 cu ft)</td>
<td>460 (16.2 cu ft)</td>
<td>460 (16.2 cu ft)</td>
<td>460 (16.2 cu ft)</td>
</tr>
</tbody>
</table>

Different values may apply to national-market specifications and special models. Please always follow the data in the vehicle papers or on the manufacturer’s type plate.

1) Please consult a BMW service station with regard to higher trailer load limits. Different values may apply to national-market versions.
2) An auxiliary fan must be fitted on vehicles with automatic transmission if trailer loads in excess of 1000 kg (2200 lb) are towed.

### Different values may apply to national-market specifications and special models. Please always follow the data in the vehicle papers or on the manufacturer’s type plate.

1) Only in conjunction with BMW self-levelling suspension.
2) Please consult a BMW service station with regard to higher trailer load limits. Different values may apply to national-market versions.
3) With automatic transmission.
<table>
<thead>
<tr>
<th>Weight</th>
<th>BMW 520i</th>
<th>BMW 525i</th>
<th>BMW 525td</th>
<th>BMW 525tds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unladen weight (ready to drive, full tank, without special equipment)</td>
<td>kg</td>
<td>1630 (3593 lb)</td>
<td>1680 (3694 lb)</td>
<td>1545 (3394 lb)</td>
</tr>
<tr>
<td>- with automatic transmission</td>
<td>kg</td>
<td>1660 (3661 lb)</td>
<td>1725 (3813 lb)</td>
<td>1580 (3438 lb)</td>
</tr>
<tr>
<td>Gross weight limit</td>
<td>kg</td>
<td>2180 (4790 lb)</td>
<td>2220 (4892 lb)</td>
<td>2055 (4534 lb)</td>
</tr>
<tr>
<td>- with automatic transmission</td>
<td>kg</td>
<td>2210 (4881 lb)</td>
<td>2275 (5005 lb)</td>
<td>2130 (4680 lb)</td>
</tr>
<tr>
<td>Front axle load limit</td>
<td>kg</td>
<td>1090 (2407 lb)</td>
<td>1050 (2315 lb)</td>
<td>985 (2165 lb)</td>
</tr>
<tr>
<td>Rear axle load limit</td>
<td>kg</td>
<td>1300 (2866 lb)</td>
<td>1280 (2822 lb)</td>
<td>1265 (2787 lb)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>(2796/2996/3050)</td>
<td>(2796/2996/3050)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Trailer load limits (specified by factory or as laid down by law in Germany)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>unbraked</td>
<td>kg</td>
<td>750 (1648 lb)</td>
<td>750 (1648 lb)</td>
<td>750 (1648 lb)</td>
</tr>
<tr>
<td>braked, max. gradient 12% (1 m in 8.3 ft)</td>
<td>kg</td>
<td>1940 (4290 lb)</td>
<td>1940 (4290 lb)</td>
<td>1940 (4290 lb)</td>
</tr>
<tr>
<td>braked, max. gradient 8% (1 m in 12.5 ft)</td>
<td>kg</td>
<td>1900 (4190 lb)</td>
<td>1900 (4190 lb)</td>
<td>1900 (4190 lb)</td>
</tr>
<tr>
<td>Max. towbar downthrust</td>
<td>kg</td>
<td>75 (165 lb)</td>
<td>75 (165 lb)</td>
<td>75 (165 lb)</td>
</tr>
<tr>
<td>Max. roof load</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(incl. exceed max. axle loads or gross weight limit when carrying loads on roof)</td>
<td>kg</td>
<td>200 (441 lb)</td>
<td>200 (441 lb)</td>
<td>200 (441 lb)</td>
</tr>
</tbody>
</table>

Luggage capacity acc. to VDA/TEX tests | 400-1400 (192-505 cu ft) |

Performance:

<table>
<thead>
<tr>
<th>Top speed</th>
<th>km/h</th>
<th>(mile/h)</th>
<th>BMW 510i</th>
<th>BMW 516 tour.</th>
<th>BMW 520i</th>
<th>BMW 520 tour.</th>
</tr>
</thead>
<tbody>
<tr>
<td>- with automatic transmission</td>
<td>106 (65.9)</td>
<td>106 (65.9)</td>
<td>211 (129.6)</td>
<td>217 (136)</td>
<td>208 (127)</td>
<td>209 (128)</td>
</tr>
<tr>
<td>Acceleration</td>
<td>km/h</td>
<td>(mile/h)</td>
<td>0-50</td>
<td>0-60</td>
<td>0-100</td>
<td>0-120</td>
</tr>
<tr>
<td></td>
<td>s</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-50</td>
<td>4.8</td>
<td>4.8</td>
<td>7.1</td>
<td>7.1</td>
<td>8.2</td>
<td>8.2</td>
</tr>
<tr>
<td>0-60</td>
<td>8.4</td>
<td>8.4</td>
<td>10.6</td>
<td>10.6</td>
<td>12.7</td>
<td>12.7</td>
</tr>
<tr>
<td>0-100</td>
<td>13.2</td>
<td>13.2</td>
<td>15.2</td>
<td>15.2</td>
<td>17.2</td>
<td>17.2</td>
</tr>
<tr>
<td>0-120</td>
<td>16.4</td>
<td>16.4</td>
<td>18.4</td>
<td>18.4</td>
<td>20.4</td>
<td>20.4</td>
</tr>
<tr>
<td>30-120 km/h (66-75 mile/h)</td>
<td>m/s</td>
<td>11.5</td>
<td>11.5</td>
<td>13.2</td>
<td>13.2</td>
<td>13.2</td>
</tr>
<tr>
<td>0-120</td>
<td>3.5</td>
<td>3.5</td>
<td>4.2</td>
<td>4.2</td>
<td>4.9</td>
<td>4.9</td>
</tr>
<tr>
<td>0-100</td>
<td>13.2</td>
<td>13.2</td>
<td>14.2</td>
<td>14.2</td>
<td>16.4</td>
<td>16.4</td>
</tr>
</tbody>
</table>

Different values may apply to national-market specifications and special models. Please always follow the data in the vehicle papers or on the manufacturer's type plate. 1 Only in conjunction with BMW self-leveling suspension. 2 Please consult a BMW service station with regard to higher trailer load limits. Different values may apply to national-market versions. 3 Cars with automatic transmission: An auxiliary fan must be fitted. If trailer loads in excess of 1000 kg (2200 lb) are towed.
Performance

<table>
<thead>
<tr>
<th>Top speed (km/h)</th>
<th>BMW 520i</th>
<th>BMW 530i touring</th>
<th>BMW 540i</th>
<th>BMW 540i touring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without automatic transmission</td>
<td>227 (144)</td>
<td>250 (155)</td>
<td>250 (155)</td>
<td>250 (155)</td>
</tr>
<tr>
<td>With automatic transmission</td>
<td>232 (144)</td>
<td>250 (155)</td>
<td>230 (135)</td>
<td>250 (155)</td>
</tr>
<tr>
<td>Acceleration (sec)</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
</tr>
<tr>
<td>0–50 km/h</td>
<td>2.7</td>
<td>2.7</td>
<td>2.3</td>
<td>2.3</td>
</tr>
<tr>
<td>0–80 km/h</td>
<td>5.6</td>
<td>5.6</td>
<td>4.7</td>
<td>4.8</td>
</tr>
<tr>
<td>80–100 km/h</td>
<td>7.7/8.0*</td>
<td>8.3/9.0*</td>
<td>6.4/6.5*</td>
<td>6.4/6.5*</td>
</tr>
<tr>
<td>100–120 km/h</td>
<td>11.0</td>
<td>11.2</td>
<td>9.6</td>
<td>9.0</td>
</tr>
<tr>
<td>80–120 km/h in 6th gear</td>
<td>8.8</td>
<td>8.8</td>
<td>6.9</td>
<td>7.2</td>
</tr>
<tr>
<td>Starting-start kilometre</td>
<td>28.4/29.3*</td>
<td>28.9/30.6*</td>
<td>26.3/29.8*</td>
<td>26.4/27.2*</td>
</tr>
</tbody>
</table>
| Technical data

<table>
<thead>
<tr>
<th>Gear ratios</th>
<th>5- and 6-speed manual</th>
<th>5-speed automatic</th>
<th>5-speed automatic (luggage compartment)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st</td>
<td>5.10</td>
<td>4.23</td>
<td>4.50</td>
</tr>
<tr>
<td>2nd</td>
<td>2.77</td>
<td>2.52</td>
<td>2.49</td>
</tr>
<tr>
<td>3rd</td>
<td>1.72</td>
<td>1.67</td>
<td>1.57</td>
</tr>
<tr>
<td>4th</td>
<td>1.22</td>
<td>1.02</td>
<td>1.24</td>
</tr>
<tr>
<td>5th</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>Rev</td>
<td>4.45</td>
<td>4.04</td>
<td>3.89</td>
</tr>
</tbody>
</table>

| Electrical system

<table>
<thead>
<tr>
<th>Battery</th>
<th>BMW 518i</th>
</tr>
</thead>
<tbody>
<tr>
<td>Capacity</td>
<td>12.5 Ah</td>
</tr>
<tr>
<td>Voltage</td>
<td>12 V</td>
</tr>
<tr>
<td>Weight</td>
<td>12 V 65 Ah</td>
</tr>
<tr>
<td>Ignition</td>
<td>12 V 65 Ah</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Alternator</th>
<th>BMW 518i, 520i, 525i, 525i touring, 530i touring</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
<td>BMW 525i, 525i touring, 525i touring</td>
</tr>
<tr>
<td>Voltage</td>
<td>12 V, 65 Ah</td>
</tr>
</tbody>
</table>

*With automatic transmission.

Additional equipment or optional extras can have a significant effect on consumption and performance figures, since the car's weight and drop coefficient are usually altered (roof rack, wider tires, additional mirrors, etc.).
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Engine power output 128
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Filling capacities

<table>
<thead>
<tr>
<th>Description</th>
<th>Litres (Imp. units)</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fuel tank</td>
<td>approx. 80</td>
<td></td>
</tr>
<tr>
<td>Windscreen washer</td>
<td>app. 2.5</td>
<td></td>
</tr>
<tr>
<td>Windscreen wiper</td>
<td>app. 1.5</td>
<td></td>
</tr>
<tr>
<td>Intensive cleaning system</td>
<td>app. 1.0</td>
<td></td>
</tr>
<tr>
<td>Coolant tank (incl. heater)</td>
<td>app. 6.5</td>
<td></td>
</tr>
<tr>
<td>Engine with oil filter renewal</td>
<td>4.3</td>
<td></td>
</tr>
<tr>
<td>Gearbox (manual)</td>
<td>1.319</td>
<td></td>
</tr>
<tr>
<td>Automatic transmission</td>
<td>0.015</td>
<td></td>
</tr>
<tr>
<td>Final drive (rear axle)</td>
<td>1.7</td>
<td></td>
</tr>
<tr>
<td>Final drive (front axle)</td>
<td>0.7</td>
<td></td>
</tr>
</tbody>
</table>

* Authorised BMW service stations know the correct grades.

For details, see Page 88
Brand names HD oil for spark ignition engines for diesel engines on BMW 520i/525i see Page 86 for oil grades
For your safety – check tyre pressures regularly

Incorrect tyre pressures can impair the car's stability or lead to tyre damage, which in turn could result in an accident.

**Tyre pressures** in bar (gauge pressure) when cold (at ambient temperature), values in brackets in kg/cm². **Note:** As the tyres become hot (e.g. after fast main-road driving), pressure in them rises by approx. 0.3 bar (approx. 0.04 bar). For every change in temperature of 10°C, tyre pressure varies by 0.1 bar (1.4 bar).**

<table>
<thead>
<tr>
<th>BMW model</th>
<th>Radial-ply tyres</th>
<th>Tubeless</th>
</tr>
</thead>
<tbody>
<tr>
<td>206i 1.5/154 V</td>
<td>2.0 (2)</td>
<td>2.1 (5)</td>
</tr>
<tr>
<td>225i 1.5/156 V</td>
<td>(2)</td>
<td>(5)</td>
</tr>
<tr>
<td>228i 1.5/156 V</td>
<td>2.0 (2)</td>
<td>2.1 (5)</td>
</tr>
<tr>
<td>228i XDrive 32Li</td>
<td>(2)</td>
<td>(5)</td>
</tr>
<tr>
<td>518i</td>
<td>2.0 (2)</td>
<td>2.1 (5)</td>
</tr>
<tr>
<td>520d</td>
<td>(2)</td>
<td>(5)</td>
</tr>
<tr>
<td>520d</td>
<td>2.0 (2)</td>
<td>2.1 (5)</td>
</tr>
<tr>
<td>520d</td>
<td>(2)</td>
<td>(5)</td>
</tr>
<tr>
<td>525i</td>
<td>2.0 (2)</td>
<td>2.1 (5)</td>
</tr>
<tr>
<td>525i</td>
<td>(2)</td>
<td>(5)</td>
</tr>
<tr>
<td>525i XDrive 32Li</td>
<td>2.0 (2)</td>
<td>2.1 (5)</td>
</tr>
<tr>
<td>525i XDrive 32Li</td>
<td>(2)</td>
<td>(5)</td>
</tr>
</tbody>
</table>

**Notes:**
- BMW 518i, 520d: the tyre speed code letter “H” is permitted instead of “V” for summer tyres.
- Instead of all the ZR tyres stated here, tyres with speed code letter “W” are permitted if they are of the same authorised size and load, and with at least the equivalent load index (L). Exception: BMW 540i touring with 235/45 ZR 17 front tyres and 255/40 ZR 17 rear tyres.

**V-belts**

BMW 518i
- Alternator, coolant pump, power steering, 8.8 kV x 1095
- Air conditioning compressor, 4.4 kW x 995

BMW 520d, 520d/3
- Alternator, coolant pump, power steering, 8.8 kV x 1095
- Air conditioning compressor, 5.5 kW x 990

BMW 520d/3/6
- Alternator, coolant pump, power steering, 7.1 kW x 1065
- Air conditioning compressor, 5.5 kW x 990

BMW 525i/6/6
- Alternator, coolant pump, power steering, 8.8 kW x 1185
- Air conditioning compressor, 5.5 kW x 1815

**Tyre pressure (continued)**

<table>
<thead>
<tr>
<th>BMW model</th>
<th>Radial-ply tyres</th>
<th>Tubeless</th>
</tr>
</thead>
<tbody>
<tr>
<td>206i 1.5/154 V</td>
<td>2.0 (2)</td>
<td>2.1 (5)</td>
</tr>
<tr>
<td>225i 1.5/156 V</td>
<td>(2)</td>
<td>(5)</td>
</tr>
<tr>
<td>228i 1.5/156 V</td>
<td>2.0 (2)</td>
<td>2.1 (5)</td>
</tr>
<tr>
<td>228i XDrive 32Li</td>
<td>(2)</td>
<td>(5)</td>
</tr>
<tr>
<td>518i</td>
<td>2.0 (2)</td>
<td>2.1 (5)</td>
</tr>
<tr>
<td>520d</td>
<td>(2)</td>
<td>(5)</td>
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<td>2.0 (2)</td>
<td>2.1 (5)</td>
</tr>
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<td>2.1 (5)</td>
</tr>
<tr>
<td>525i</td>
<td>(2)</td>
<td>(5)</td>
</tr>
<tr>
<td>525i XDrive 32Li</td>
<td>2.0 (2)</td>
<td>2.1 (5)</td>
</tr>
<tr>
<td>525i XDrive 32Li</td>
<td>(2)</td>
<td>(5)</td>
</tr>
</tbody>
</table>

**Notes:**
- Tyre not for BMW 518i/320i.
When changing wheels or in the event of tyre failure:

If your BMW's wheels are secured with threadproof (lockable) studs, always carry the adapter or key in the car's toolkit. BMW touring adapter is under front load area flap. This makes it easier for the workshop or breakdown service to perform the necessary work with no loss of time. See also Page 93.

<table>
<thead>
<tr>
<th>BMW model</th>
<th>Radial-ply tyres (rubber)</th>
<th>For touring models (continued):</th>
</tr>
</thead>
<tbody>
<tr>
<td>530i touring</td>
<td>200/60 R 15 94 V</td>
<td>2.1 (33) 2.4 (34) 2.5 (36) 3.9 (43)</td>
</tr>
<tr>
<td>525i touring</td>
<td>235/40 ZR 17</td>
<td>2.1 (33) 2.4 (34) 2.5 (36) 3.9 (43)</td>
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<tr>
<td>525i touring</td>
<td>235/40 ZR 17</td>
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1) This type size is for BMW 525i touring, or for BMW 525i touring and 525i/s/3 touring with self-levelling suspension. BMW 525i touring: speed code letter "F" is permissible instead of "V" on summer tyres.

2) These values apply to the BMW 520i and BMW 525i touring (with self-levelling suspension in each case), and to the BMW 525i touring.

When touring a highway, only the tyre pressure values for the heaviest load category are to be used.

These pressure values apply to the makes of tyres recommended by BMW and known to the BMW Service organisation. If other makes of tyres are fitted, higher pressures may be needed.

There is a tyre pressure information label on the driver's door post; this will show any different tyre pressures applying to non-standard vehicles.

Spark plugs
Boesch F 71, DLO C
NSK BMW 8 E 5 K