

Rider's Manual

F 800 ST



BMW Motorrad



The Ultimate Riding
Machine

Motorcycle data/dealership details

Motorcycle data

Model

Vehicle identification number

Colour code

Date of first registration

Registration number

Dealership details

Person to contact in Service department

Ms/Mr

Phone number

Dealership address/phone number
(company stamp)

Welcome to BMW

We congratulate you on your choice of a motorcycle from BMW and welcome you to the community of BMW riders. Familiarise yourself with your new motorcycle so that you can ride it safely and confidently in all traffic situations. Please read this Rider's Manual carefully before starting to use your new BMW motorcycle. It contains important information on how to operate the controls and how to make the best possible use of all your BMW's technical features. In addition, it contains information on maintenance and care to help you maintain your motorcycle's reliability and safety, as well as its value. If you have questions concerning your motorcycle, your

authorised BMW Motorrad dealer will gladly provide advice and assistance.

We hope that you will enjoy riding your BMW and that all your journeys will be pleasant and safe.

BMW Motorrad.

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General instructions


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Overview


Chapter 2 of this Rider's Manual will provide you with an initial overview of your motorcycle. All maintenance and servicing work on the motorcycle is documented in Chapter 10. This record of the maintenance work you have had performed on your motorcycle is a precondition for generous treatment of goodwill claims.

When the time comes to sell your BMW, please remember to hand over this Rider's Manual; it is an important part of the motorcycle.

Abbreviations and symbols

 Indicates warnings that you must comply with for reasons of your safety and the safety of others, and to pro-


tect your motorcycle against damage.

 Specific instructions on how to operate, control, adjust or look after items of equipment on the motorcycle.


◀ Indicates the end of an item of information.

• Instruction.

» Result of an activity.

 Reference to a page with more detailed information.

◁ Indicates the end of a passage relating to specific accessories or items of equipment.

 Tightening torque.



Item of technical data.

OE Optional extra
Your motorcycle was assembled complete with all the BMW optional extras you ordered.

OA Optional accessory
You can obtain optional accessories through your authorised BMW Motorrad dealer; optional accessories have to be retrofitted to the motorcycle.

EWS Electronic immobiliser (Elektronische Wegfahrsicherung).

ABS Anti-lock brake system

DWA Anti-theft alarm (Diebstahlwarnanlage)

Equipment

When you ordered your BMW motorcycle, you chose various items of custom equipment. This Rider's Manual describes optional extras (OE) offered by BMW and selected optional accessories (OA). This explains why the manual may also contain descriptions of equipment which you have not ordered. Please note, too, that your motorcycle might not be exactly as illustrated in this manual on account of country-specific differences. If your BMW was supplied with equipment not described in this Rider's Manual, you will find these features described in separate manuals.

Technical data

All dimensions, weights and power ratings stated in the Rider's Manual are quoted to the standards and comply with the tolerance requirements of the Deutsche Institut für Normung e.V. Versions for individual countries may differ.

Currency

The high safety and quality standards of BMW motorcycles are maintained by constant development work on designs, equipment and accessories. Because of this, your motorcycle may differ from the information supplied in the Rider's Manual. Nor can BMW Motorrad entirely rule out errors and omissions. We hope you will appreciate that no claims can be entertained on the basis of the

data, illustrations or descriptions in this manual.

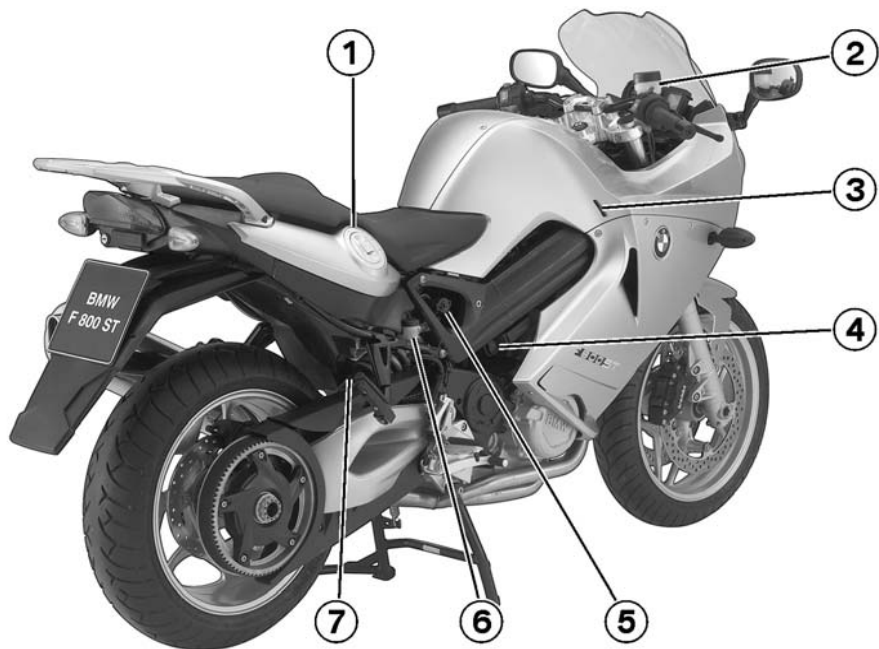
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General view, left side

- 1 Adjuster for headlight beam throw underneath the instrument cluster (➡ 46)
- 2 Seat lock (➡ 48)
- 3 Filler neck for engine oil and oil dipstick (➡ 80)

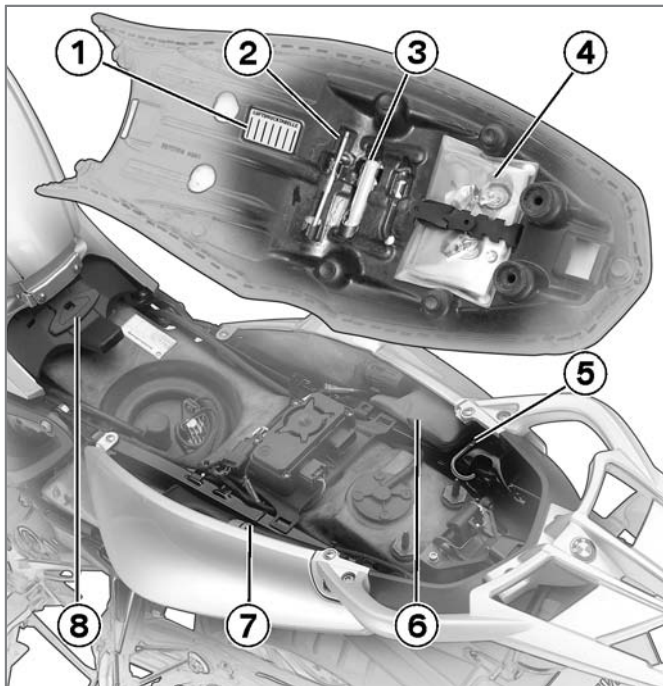


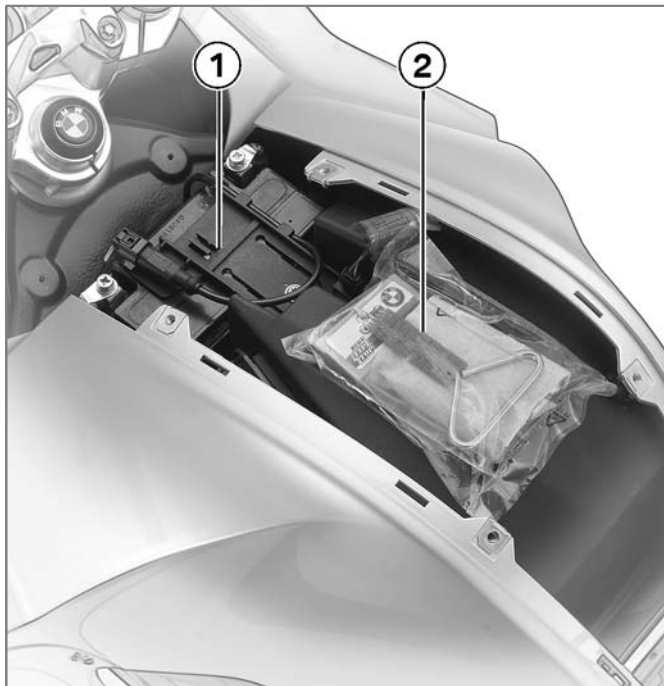
General view, right side

- 1 Filler neck, fuel tank
(⇒ 61)
- 2 Brake-fluid reservoir, front (⇒ 84)
- 3 Indicator for coolant level
(⇒ 85)
- 4 Power socket (⇒ 68)
- 5 Adjuster, spring preload, rear (⇒ 50)
- 6 Brake-fluid reservoir, rear
(⇒ 85)
- 7 Adjuster, damping, rear
(⇒ 51)

Underneath the seat

- 1 Table of tyre pressures
- 2 Screwdriver blade, cross-head/Torx 25
- 3 Screwdriver handle
- 4 Rider's Manual
- 5 Helmet holder (➔ 49)
- 6 Location of first-aid kit (OA)
- 7 Supplementary on-board toolkit (OA) (➔ 80)
- 8 Tool for adjusting spring preload (➔ 50)





Underneath the battery-compartment cover

- 1 Battery (→ 104)
- 2 Location of puncture-repair kit (OA)

Handlebar fitting, left

- 1 On-board computer button (OE) (➔ 38)
- 2 Pushbutton, horn
- 3 Pushbutton, left flashing turn indicators and hazard warning flashers (➔ 47) (➔ 34)
- 4 Switch, high-beam headlight and headlight flasher (➔ 45)





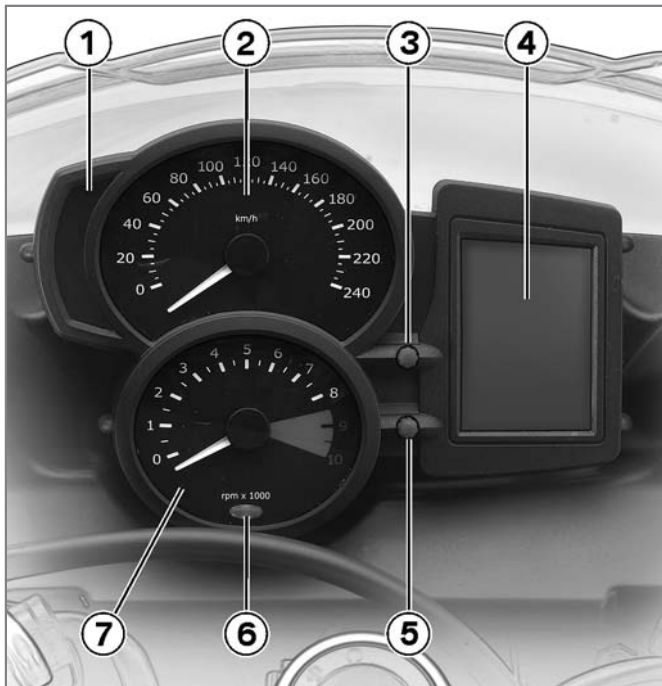
Handlebar fitting, right

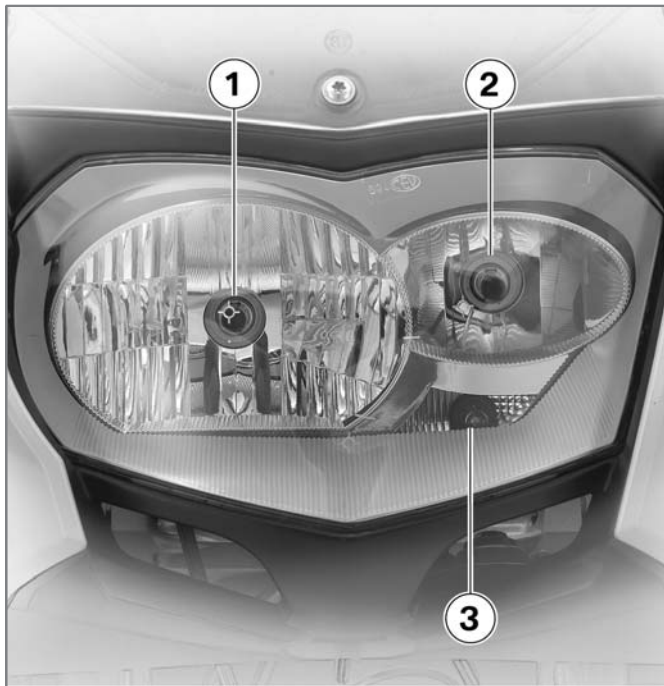
- 1 Emergency off switch (kill switch) (➡ 42)
- 2 Pushbutton, starter (➡ 56)
- 3 With OE Heated handlebar grips:
Grip heating (➡ 43)
- 4 Pushbutton, right flashing turn indicators and hazard warning flashers (➡ 47) (➡ 34)
- 5 Pushbutton, cancel flashing turn indicators and hazard warning flashers (➡ 48) (➡ 35)

Instrument cluster

- 1 Warning and telltale lights (➔ 24)
- 2 Speedometer
- 3 Controls for clock and stopwatch (OA) (➔ 36) (➔ 40)
- 4 Multifunction display (➔ 22)
- 5 Controls for odometer and stopwatch (OA) (➔ 35) (➔ 40)
- 6 Telltale light for anti-theft alarm (OE), sensor for instrument cluster lighting and redline warning indicator
- 7 Rev. counter

▶ The instrument-cluster lighting has automatic day and night switchover. ◀





Headlight

- 1 Low-beam headlight
- 2 High-beam headlight
- 3 Side lights

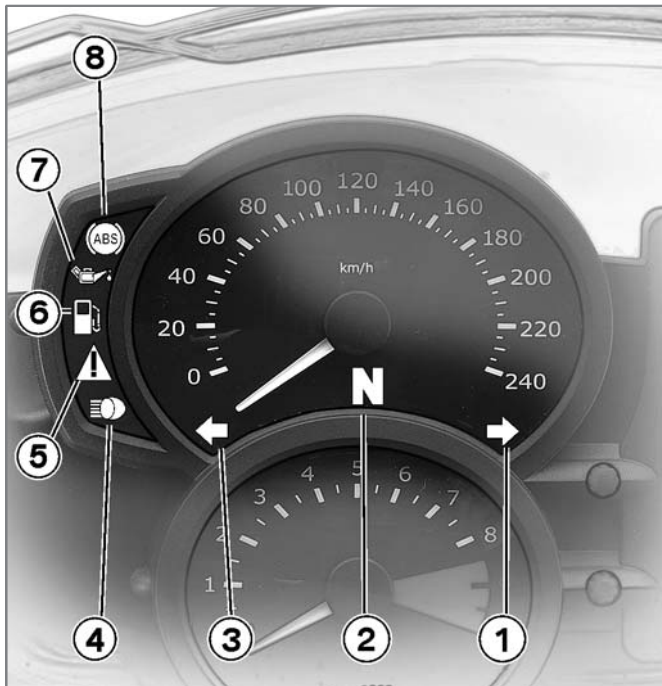
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Multifunction display

- 1 Panel for warnings (➡ 24)
- 2 Clock (➡ 36)
- 3 Odometer and stopwatch readings (OA) (➡ 35) (➡ 40)
- 4 Panel for the on-board computer's (OE) status indicators (➡ 38)
- 5 Coolant temperature readings (OE) (➡ 24)
- 6 Gear indicator (OE) (➡ 24)
- 7 Fuel-gauge readings (OE) (➡ 24)
- 8 Controls for odometer and stopwatch (OA) (➡ 35) (➡ 40)
- 9 Controls for clock and stopwatch (OA) (➡ 36) (➡ 40)





Warning and telltale lights

- 1 Telltale light, right turn indicator
- 2 Telltale light, neutral
- 3 Telltale light, left turn indicator
- 4 Telltale light, high-beam headlight
- 5 Warning light, general
- 6 Warning light, fuel down to reserve
- 7 Warning light, engine-oil pressure
- 8 Warning light, ABS (OE)

Function indicators (OE)

Fuel capacity



The horizontal bars above the fuel-pump symbol indicate the remaining quantity of fuel.

The large bar at the top corresponds to about half the available tank capacity.

The smaller bars provide a more accurate estimate of the amount of fuel left in the tank.

Gear



Shows which gear is engaged.

If no gear is engaged, the gear indicator shows N and the 'neutral' telltale light also lights up.

Coolant temperature



The horizontal bars above the temperature symbol indicate the coolant temperature.

Warnings, general

Mode of presentation

General warnings are displayed by means of indicators and symbols. In some cases, they are accompanied by the 'General' warning light showing red or yellow. The symbols appear in the telltale and warning lights panel or in the multifunction display.













This symbol in the multifunction display indicates a warning.

Two or more warnings can be issued at the same time.


Warnings, overview


Mode of presentation

Meaning

 Lights up yellow	 Appears on the display, accompanied by the letters EWS.	Electronic immobiliser active (➡ 26)
	 Appears on the display	Fuel down to reserve (➡ 26)
 Lights up yellow	 Flashes	Engine electronics (➡ 26)
	 Flashes	Insufficient engine oil pressure (➡ 27)
 Lights up yellow	 Appears on the display, accompanied by the letters LAMP.	Bulb defective (➡ 27)
 Lights up yellow	 Appears on the display, accompanied by the letters dWA.	Anti-theft alarm battery flat (OE) (➡ 28)

Electronic immobiliser active


 General warning light lights up yellow.


 Appears on the display, accompanied by the letters EWS.


The key being used is not authorised for starting, or communication between key and engine electronics is disrupted.

- Remove all other vehicle keys from the same ring as the ignition key.
- Use the reserve key.
- Have the defective key replaced, preferably by an authorised BMW Motorrad dealer.

Fuel down to reserve

 The fuel-reserve symbol appears on the display.

 Lack of fuel can result in the engine misfiring and cutting out unexpectedly. Misfiring can damage the catalytic converter; a hazardous situation can result if the engine cuts out unexpectedly. Do not run the fuel tank dry. ◀

 The Tripmaster calculates the residual operating range and shows this estimated figure on the display. ◀


The fuel tank contains no more than the reserve quantity of fuel.


 Reserve fuel


4 l

- Refuelling (➡ 61)

Engine electronics

 General warning light lights up yellow.

 Engine electronics symbol flashes.

 The engine is running in emergency operating mode. Engine power might be reduced and this can cause hazardous situations, particularly if you attempt to overtake other road users. Engine power level might be lower than normal: adapt your style of riding accordingly. ◀

The engine electronics control unit has diagnosed a fault. In exceptional cases, the engine stops and refuses to start. Otherwise, the engine runs in emergency operating mode.

- You can continue to ride, but bear in mind that the usual engine power might not be available.
- Have the fault rectified as quickly as possible by a specialist workshop, prefer-

ably an authorised BMW Motorrad dealer.

Insufficient engine oil pressure



Engine-oil pressure symbol flashes.

The oil pressure in the lube-oil system is too low.



The insufficient oil pressure warning does not fulfil the function of an oil gauge. The only way of checking whether the oil level is correct is to check with the oil dipstick. ◀

A low oil level is one reason why a warning indicating insufficient oil pressure is issued.

- Checking engine oil level (➡ 80)

If the oil level is too low:

- Top up the engine oil (➡ 81)

If the warning indicating insufficient engine oil level is issued and a check indicates that the engine oil level is correct:



Other engine problems besides a low oil level can cause the insufficient engine oil pressure warning to be issued. Continuing to ride in these cases can cause engine damage.

If this warning is issued even though the engine oil level is correct: do not continue to ride. ◀

- Do not continue your journey.
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad dealer.

Bulb defective



General warning light lights up yellow.



Appears on the display, accompanied by the letters LAMP.



A defective bulb places your safety at risk because it is easier for other users to oversee you and your motorcycle.

Replace defective bulbs as soon as possible; always carry a complete set of spare bulbs if possible. ◀

Low-beam headlight, parking light, rear-light, brake-light or turn-indicator bulb defective.

- Visually inspect to ascertain which bulb is defective.
- Replacing high-beam/low-beam headlight bulb (➡ 97)
- Replacing parking-light bulb (➡ 98)

- Replacing the brake light and rear light bulbs (➡ 100)
- Replacing turn indicator bulbs, front or rear (➡ 101)

Anti-theft alarm battery flat (OE)



General warning light lights up yellow.



Appears on the display, accompanied by the letters dWA.

The integral battery in the anti-theft alarm has lost its entire original capacity. There is no assurance that the anti-theft alarm will be operational if the motorcycle's battery is disconnected.

- Seek the advice of a specialist workshop, preferably an authorised BMW Motorrad dealer.

ABS warning indicators^{OE}

Mode of presentation



ABS warnings are indicated by the ABS warning light. The warning light can show continuously or flash.


Warnings, overview

Mode of presentation

Meaning



Flashes

Self-diagnosis not completed
( 30)



Lights up

ABS fault ( 30)

Self-diagnosis not completed



ABS warning light flashes.

The ABS function is not available, because self-diagnosis did not complete. The motorcycle has to move forward a few metres for the wheel sensors to be tested.

- Pull away slowly. Bear in mind that the ABS function is not available until self-diagnosis has completed.

ABS fault



ABS warning light ON.

The ABS control unit has detected a fault. The ABS function is not available.

- You can continue to ride. Bear in mind that the ABS function is not available. Bear in mind the more de-

tailed information on situations that can lead to an ABS fault (➡ 65).

- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad dealer.

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Ignition switch and steering lock

Keys

You receive one master key and one spare key. Please consult the information on the electronic immobiliser (EWS) if a key is lost or mislaid (➔ 33).

▶ Ignition switch and steering lock, tank filler cap lock and seat lock are all operated with the same key. On request, the cases and the topcase available as optional accessories can be arranged to lock with the same key.◀

Switching on ignition



- Turn the key to position **1**.
 - » Side lights and all function circuits switched on.
 - » Engine can be started.
 - » Pre-ride check is performed. (➔ 57)

With OE Anti-lock braking system (ABS):

- Turn the key to position **1**.
 - » ABS self-diagnosis is performed in addition to the checks outlined above. (➔ 58)◀

Switching off ignition



- Turn the key to position **2**.
 - » Lights switched off.
 - » Handlebars not locked.
 - » Key can be removed.
 - » Electrically powered accessories remain operational for a limited period of time.
 - » The battery can be recharged via the on-board socket.

Locking handlebars



- Turn handlebars all the way to the left
- Turn the key to position **3**, while moving the handlebars slightly.
- » Ignition, lights and all function circuits switched off.
- » Handlebars locked.
- » Key can be removed.


Electronic immobiliser (EWS)

Protection against theft

The electronic immobiliser helps protect your BMW Motorrad motorcycle from theft, and this enhanced security is at your disposal without any need for you to set parameters or activate additional systems. The engine of a motorcycle fitted with this electronic immobiliser can be started only with the keys that belong to the vehicle. You can also have your authorised BMW Motorrad dealer bar individual keys, for example if a particular key goes missing. The engine cannot be started with a key that has been barred.

In-key electronics

An electronic component is integrated into each of your keys. The motorcycle's electronics exchange certain continuously changing signals with the electronics in the key; these signals are specific to your motorcycle and they are transmitted via the ring aerial in the ignition lock. The ignition is not enabled for starting until the key has been recognised as "authorised" for your motorcycle.

 A spare key attached to the same ring as the ignition key used to start the engine could "irritate" the electronics, in which case the enabling signal for starting is not issued. The EWS warning appears in the multifunction display.

Always keep the spare key

separately from the ignition key. ◀

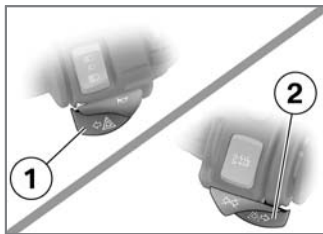
Replacement and extra keys

You can obtain replacement/extra keys only through an authorised BMW Motorrad dealer. The keys are part of an integrated security system, so the dealer is under an obligation to check the legitimacy of all applications for replacement/extra keys. If you want to have a lost key barred, you have to bring with you all the other keys that belong to the motorcycle. A key that has been barred can subsequently be cleared and reactivated for use.

Hazard warning flashers

Switching on hazard warning flashers

- Switch on the ignition.



- Simultaneously press button **1** for left turn indicators and button **2** for right turn indicators.

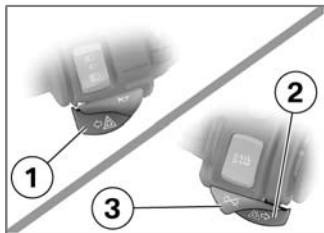
▶ The hazard warning flashers place a strain on the battery. Do not use the hazard warning flashers

for longer than absolutely necessary. ◀

▶ If you press a turn-indicator button with the ignition switched on, the turn-indicator function is activated instead of the hazard warning flashers, and remains active until you release the button. The hazard warning flashers recommence flashing as soon as the button is released. ◀

- » Hazard warning flashers in operation.
- » Left/right turn indicator tell-tale lights flash.
- Switch off the ignition.
- » The hazard warning flashers continue to operate.
- » Left/right turn indicator tell-tale lights off.

Switching off hazard warning flashers



- Press cancel button **3**.
 - » Hazard warning flashers switched off.
- Alternative: Simultaneously press button **1** for left turn indicators and button **2** for right turn indicators.
 - » Hazard warning flashers switched off.

Odometer and tripmeters

Selecting readings

- Switch on the ignition.



- If necessary, use clock button **1** to switch from the stopwatch to the odometer.
- Briefly press odometer button **2** once to proceed to each subsequent step in the cycle.



The odometer's display field cycles through the following sequence:

- Total distance covered
- Tripmeter 1 (Trip I)
- Tripmeter 2 (Trip II)

Resetting tripmeter


- Switch on the ignition.
- Select the desired tripmeter.



- Press and hold down odometer button **2** until the reading is reset.
- » The tripmeter is reset to zero.

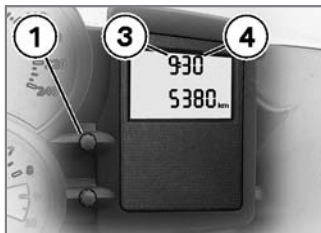
Clock

Setting clock

 Attempting to set the clock while riding the motorcycle can lead to accidents.

Set the clock only when the motorcycle is stationary. ◀

- Switch on the ignition.

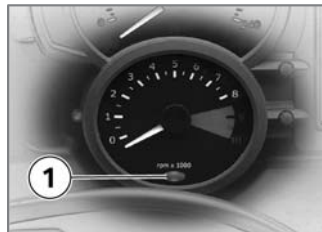


- Press button **1** for longer than 2 seconds.
- » Hours reading **3** starts to flash.
- Briefly press button **1**.
- » The hour increments by one each time you press the button.
- Press button **1** for longer than 2 seconds.
- » Minutes reading **4** starts to flash.
- Briefly press button **1**.

- » The minute increments by one each time you press the button.
- Press button **1** for longer than 2 seconds.
- » Setting confirmed.

Redline warning

Mode of presentation



The redline warning indicates that engine revolutions have reached the rev. counter's red segment. The anti-theft alarm telltale light **1** flashes red to indicate that the engine is redlining.

The signal remains active until you shift up or reduce engine speed. You can activate or deactivate the redline warning.

Activating redline warning



- Press button **1** and button **2** at the same time and hold them down until the reading changes.
- » FLASH (telltale light shows) appears, along with ON or OFF.

- Repeatedly press button **2** until the reading shows the mode you want.
 - » ON: Redline warning activated.
 - » OFF: Redline warning deactivated.
- To confirm the setting, press button **1** and button **2** at the same time and hold them down until the reading changes.
- » The settings are accepted and the display returns to its most recent reading.
- » The most recent setting is retained if you do not confirm the new settings.

On-board computer^{OE} Selecting readings

- Switch on the ignition.



- Press BC button **1** once.



The on-board computer's display field cycles through the following sequence:

- Ambient temperature
- Average speed

- Average consumption
- Current consumption
- Range

Ambient temperature



The current ambient temperature **3** is displayed.

Average speed



Average speed **3** is calculated on basis of the time elapsed since the last RESET. Times during which the engine was stopped are excluded from the calculation.

Resetting average speed



- Repeatedly press BC button **1** until the average speed appears in the display.
- Press and hold down the BC button until the average-speed reading is reset.
- » The display shows ---.

Average consumption



Average consumption **3** is calculated by dividing the distance covered since the last RESET by the corresponding amount of fuel used.

Resetting average consumption



- Repeatedly press BC button **1** until the average fuel consumption appears in the display.
- Press and hold down the BC button until the average-consumption reading is reset.
 - » The display shows ---.

Fuel consumption



The figure for current consumption **3** appears on the display.

Range



The range readout **3** indicates how far you can ride with the fuel remaining in the tank. This distance is calculated on the basis of fuel level and a figure for average consumption stored in the processor's memory for this purpose. The average-value figure used to calculate range adapts to changes in riding style more slowly than the figure you can call up on the display.

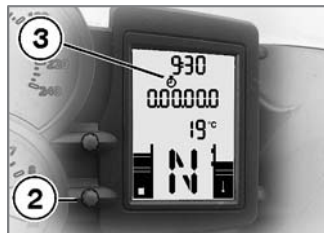
While the tank is more than half full the readout shows a minimum range, accompan-

ied by a > character as an indicator. Once the fuel level drops below half full a more accurate figure is shown for residual range.

When you refuel, the on-board computer does not register the increase in fuel level unless several litres are added to the fuel already in the tank.

▶ The calculated range is an approximate value. Consequently, BMW Motorrad recommends that you should not try to use the full residual range before refuelling. ◀

Stopwatch



You can switch from the odometer reading to a stopwatch **3**. The readout is in hours, minutes, seconds and tenths of a second, with dots as separators.

If you want to use the stopwatch as a Lap-Timer, you can operate it by means of the BC button on the handlebar fitting, instead of using button **2**. If you set the controls so that the stopwatch is operated by means of the BC button, you must use button **2**

to operate the on-board computer.

The stopwatch continues to time in the background if you switch back temporarily to the odometer reading. Similarly, the stopwatch continues timing if you temporarily switch off the ignition.

Activating stopwatch



- Use button **1** to toggle between the stopwatch and the odometer.

Operating stopwatch



- Press button **2** while the stopwatch is stopped.
 - » The stopwatch begins timing in tenths of a second from the time originally shown.
- Press button **2** while the stopwatch is running.
 - » The stopwatch shows the stopped time.
- Press and hold down button **2** until the reading is reset.
 - » The stopwatch shows 0.00.00.0.

Using stopwatch as Lap-Timer




- Press button **1** and button **2** at the same time and hold them down until the reading changes.
 - » FLASH (redline warning) appears, along with ON or OFF.
- Press button **2**.
 - » LAP (Lap-Timer) appears, along with ON or OFF.
- Repeatedly press button **1** until the reading shows the mode you want.

- » ON: Stopwatch operated by means of the BC button on the handlebar fitting.
- » OFF: Stopwatch operated by means of button **2** in the instrument cluster.
- To confirm the setting, press button **1** and button **2** at the same time and hold them down until the reading changes.
- » The settings are accepted and the display returns to its most recent reading.
- » The most recent setting is retained if you do not confirm the new settings.

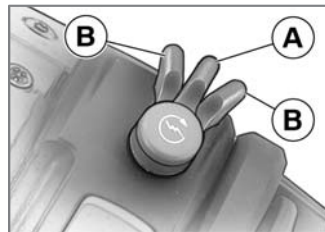
Emergency off switch (kill switch)




- 1** Emergency off switch (kill switch).

 Operating the kill switch when riding can cause the rear wheel to lock and thus cause a fall. Do not operate the kill switch when riding.◀

The emergency off switch is a kill switch for switching off the engine quickly and easily.



- A** Normal operating position (run)
B Engine switched off.

 You cannot start the engine unless the kill switch is in the run position.◀

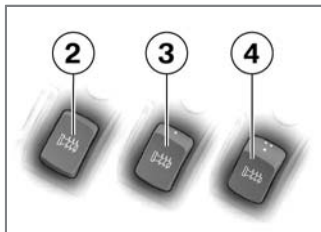
Grip heating^{OE}



1 Grip heating switch

The handlebar grips have two-stage heating. Grip heating can be activated only when the engine is running.

▶ The increase in power consumption caused by the grip heating can drain the battery if you are riding at low engine speeds. If the charge level is low, grip heating is switched off to ensure the battery's starting capability.◀



- 2 Heating off.
- 3 50 % heat output (one dot visible).
- 4 100 % heat output (three dots visible)

Clutch

Adjusting clutch lever



Attempting to adjust the clutch lever while riding the motorcycle can lead to accidents.

Do not attempt to adjust the clutch lever unless the motorcycle is at a standstill.◀




- Turn adjusting screw 1 clockwise.

▶ The adjusting screw is indexed and is easier to turn if you push the clutch lever forward.◀


- » Span between handlebar grip and clutch lever increases.
- Turn adjusting screw 1 counter-clockwise.
- » Span between handlebar grip and clutch lever decreases.

Brakes

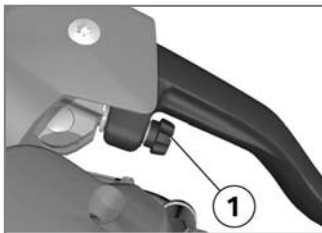
Adjusting handbrake lever

 Changing the position of the brake-fluid reservoir can allow air to penetrate the brake system.


Do not twist the handlebar fitting or the handlebars. ◀

 Attempting to adjust the brake lever while riding the motorcycle can lead to accidents.

Do not attempt to adjust the brake lever unless the motorcycle is at a standstill. ◀



- Turn adjusting screw **1** clockwise.


 The adjusting screw is indexed and is easier to turn if you push the handbrake lever forward. ◀

- » Span between handlebar grip and handbrake lever increases.
- Turn adjusting screw **1** counter-clockwise.
- » Span between handlebar grip and handlebar lever decreases.

Lights

Switching on side lights

The side lights switch on automatically when the ignition is switched on.

 The side lights place a strain on the battery. Do not switch the ignition on for longer than absolutely necessary. ◀

Switching on low-beam headlight

The low-beam headlight switches on automatically when you start the engine.

Switching on high-beam headlight



- Press the top part of switch **1** for the high-beam headlight.

▶ When the engine is not running you can switch on the high-beam headlight by switching on the ignition and either switching on the high-beam headlight or operating the headlight flasher.◀

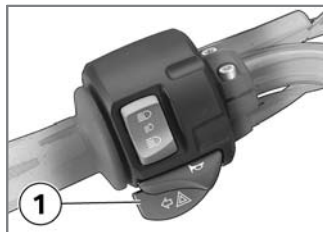
- » High-beam headlight switched on.

- Move switch **1** for the high-beam headlight to the centre position.
 - » High-beam headlight switched off.
- Press the bottom part of switch **1** for the high-beam headlight.
 - » The high-beam headlight is switched on until you release the button (headlight flasher).

Switching on parking lights

- Switch off the ignition.

▶ You can switch on the parking lights only immediately after switching off the ignition.◀



- Press and hold down button **1** for the left turn indicators until the parking lights are ON.

Switching off parking lights


- Switch on the ignition.
 - » Parking lights switched off.

Headlight

Adjusting headlight for driving on left/driving on right

If the motorcycle is ridden in a country where the opposite rule of the road applies, its asymmetric low-beam headlight will tend to dazzle oncoming traffic.

Have the headlight set accordingly by a specialist workshop, preferably an authorised BMW Motorrad dealer.


 Commercially available adhesive tape will damage the plastic lens of the light.

Consult a specialist workshop, preferably an authorised BMW Motorrad dealer, in order to avoid damaging the plastic lens of the light. ◀

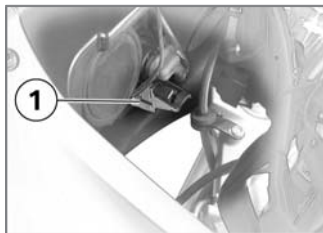
Headlight beam throw and spring preload

Headlight beam throw is generally kept constant when spring preload is adjusted to suit load.

Spring preload adjustment might not suffice only if the motorcycle is very heavily loaded. Under these circumstances, headlight beam throw has to be adjusted to suit the weight carried by the motorcycle.

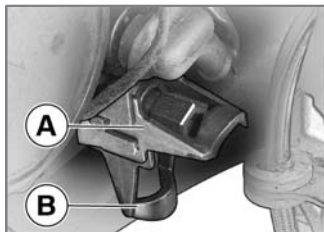
 Consult a specialist workshop, preferably an authorised BMW Motorrad dealer, if you are unsure whether the headlight basic setting is correct. ◀

Adjusting headlight beam throw



1 Headlight beam-throw adjustment

Moving the pivot lever adjusts headlight beam throw so as not to dazzle oncoming traffic.

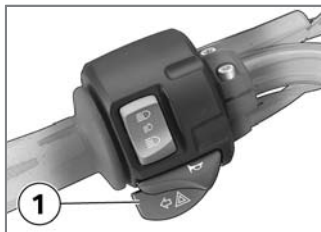


- A** Neutral position
- B** Position for heavy load

Turn indicators

Switching on left flashing turn indicators

- Switch on the ignition.



- Press left-hand turn indicator button **1**.
 - » Left-hand turn indicators switched on.
 - » Telltale light for left-hand turn indicators flashes.

Switching on right flashing turn indicators

- Switch on the ignition.



- Press right-hand turn indicator button **2**.
 - » Right-hand turn indicators switched on.
 - » Telltale light for right-hand turn indicator flashes.

Cancelling turn indicators



- Press cancel button **3**.

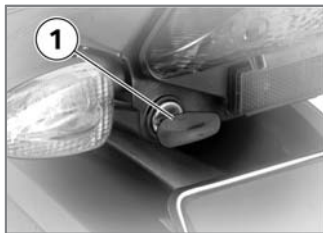
▶ The turn indicators are cancelled automatically after you have ridden for approximately 10 seconds, or covered a distance of about 200 m. ◀

- » Flashing turn indicators switched off.
- » Turn indicator telltale light is off.

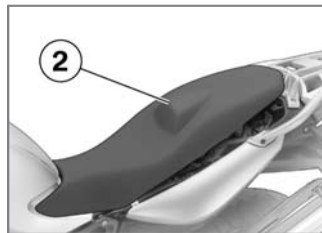
Front and rear seats

Remove the seat

- Make sure the ground is level and firm and place the motorcycle on its stand.

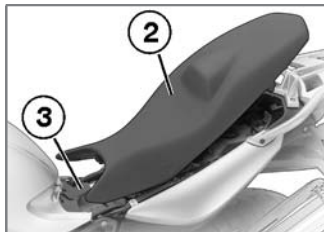


- Use the ignition key to turn seat lock **1** counter-clockwise and hold it in this position.



- Lift seat **2** at the rear and release the key.
- Remove the seat.
- Place the seat, upholstered side down, on a clean surface.

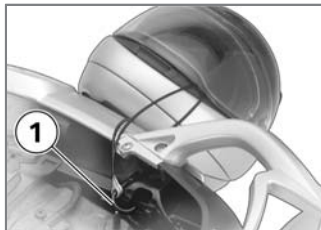
Installing seat



- Push seat **2** forward into holder **3**.
- Firmly press down on the seat at the rear.
- » The seat engages with an audible click.

Helmet holder

Helmet holder underneath seat




Helmet holder **1** is underneath the seat. You can use the wire rope available as an optional extra to secure a helmet to the helmet holder.

Using helmet holder

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Remove the seat (➔ 48)

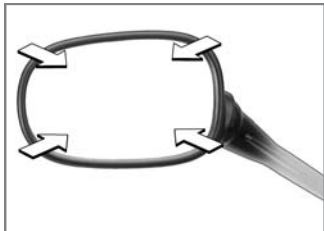


 The helmet catch can scratch the panelling. Make sure the lock is out of the way when you hook the helmet into position.◀

- Pass the wire rope available as an optional accessory through the helmet and slip the eyes of the wire rope over helmet holder **1**.
- Install the seat (➔ 49)

Mirrors

Adjusting mirrors



- Move the mirror to the desired position by pressing it lightly at the corner.

Spring preload

Spring preload and weight

It is essential to set spring preload of the rear suspension to suit the load carried by the motorcycle. Increase spring preload when the motorcycle is heavily loaded and

reduce spring preload accordingly when the motorcycle is lightly loaded.

Adjusting spring preload for rear wheel



Your motorcycle's handling will suffer if you do not match the spring-preload and damping-characteristic settings.

Adjust the damping characteristic to suit spring preload. ◀

- Make sure the ground is level and firm and place the motorcycle on its stand.



- If you want to increase spring preload, use tool **1** from the on-board toolkit to turn the knob clockwise.
- If you want to reduce spring preload, use tool **1** from the on-board toolkit to turn the knob counter-clockwise.



Basic setting of spring preload

Turn adjusting screw as far as it will go counter-clockwise, then back it off 12 clicks. (Full load of fuel, with rider 85 kg)

Shock absorbers

Shock-absorber settings and spring preload

Damping must be adapted to suit spring preload. An increase in spring preload requires firmer damping, a reduction in spring preload requires softer damping.

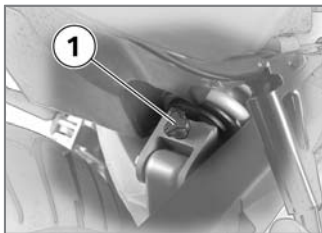
Adjusting damping for rear wheel



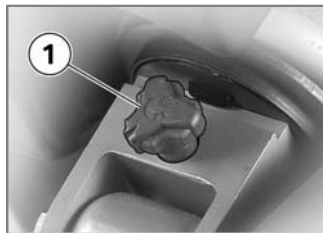
Your motorcycle's handling will suffer if you do not match the spring-preload and damping-characteristic settings.

Adjust the damping characteristic to suit spring preload. ◀

- Make sure the ground is level and firm and place the motorcycle on its stand.



- You adjust the damping characteristic of the rear shock absorber by turning adjusting screw **1**.



- If you want to increase damping, turn adjusting screw **1** clockwise.
- If you want to reduce damping, turn adjusting screw **1** counter-clockwise.



Basic setting of rear-suspension damping characteristic

Turn adjusting screw as far as it will go clockwise, then back it off 1 1/2 turns. (Full load of fuel, with rider 85 kg)

Tyres

Checking tyre pressures



Incorrect tyre pressure adversely affects the handling characteristics of the motorcycle and can lead to accidents.

Always check that the tyre pressures are correct. ◀



At high road speeds, tyre valves have a tendency to open as a result of centrifugal force.

In order to avoid a sudden loss of tyre pressure, fit a metal valve cap with rubber sealing ring to the rear tyre and make sure that the cap is screwed on firmly. ◀



Incorrect tyre pressure reduces the operating life of the tyres.

Always check that the tyre pressures are correct. ◀

- Check tyre pressures against the data below.



Tyre pressure, front

2.5 bar (One-up, tyre cold)

2.5 bar (Two-up and/or with luggage, tyre cold)



Tyre pressure, rear

2.8 bar (One-up, tyre cold)

2.8 bar (Two-up and/or with luggage, tyre cold)

If tyre pressure is too low:

- Correct tyre pressure.

Riding

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Safety instructions

Rider's equipment

Do not ride without the correct clothing. Always wear:

- Helmet
- Motorcycling jacket and trousers
- Gloves
- Boots

This applies even to short journeys, and to every season of the year. Your authorised BMW Motorrad dealer will be glad to advise you on the correct clothing for every purpose.

Speed

If you ride at high speed, always bear in mind that various boundary conditions can adversely affect the handling of your motorcycle:

- Settings of the spring-strut and shock-absorber system
- Imbalanced load
- Loose clothing
- Insufficient tyre pressure
- Poor tyre tread
- Etc.

Correct loading



Overloading and imbalanced loads can adversely affect the motorcycle's handling.

Do not exceed the permissible gross weight and be sure to comply with the instructions on loading. ◀

Alcohol and drugs



Even small amounts of alcohol or drugs will adversely affect your perception and your ability to assess situations and make decisions, and slow down your

reflexes. Medication can exacerbate these effects.

Do not ride your motorcycle after consuming alcohol, drugs and/or medication. ◀

Risk of poisoning


Exhaust fumes contain carbon monoxide, which is colourless and odourless but highly toxic.



Inhaling the exhaust fumes therefore represents a health hazard and can even cause loss of consciousness with fatal consequences.

Do not inhale exhaust fumes. Do not run the engine in an enclosed space. ◀

High voltage

 Touching live parts of the ignition system with the engine running can cause electric shock.


Do not touch parts of the ignition system when the engine is running.◀

Catalytic converter

If misfiring causes unburned fuel to enter the catalytic converter, there is a danger of overheating and damage.

For this reason, observe the following points:


- Do not run the fuel tank dry.
- Do not attempt to start or run the engine with a spark-plug cap disconnected.
- Stop the engine immediately if it misfires.
- Use only unleaded fuel.
- Comply with all specified maintenance intervals.

 Unburned fuel will destroy the catalytic converter.


Note the points listed for protection of the catalytic converter.◀

Risk of fire

Temperatures at the exhaust are high.


 Flammable materials (e.g. hay, leaves, grass, clothing and luggage, etc.) could ignite if allowed to come into contact with the hot exhaust pipe.


Do not permit flammable materials to come into contact with the hot exhaust system.◀

 Cooling would be inadequate if the engine were allowed to idle for a lengthy period with the motorcycle at a standstill: overheating would result.

In extreme cases, the motorcycle could catch fire. Do not allow the engine to idle unnecessarily. Ride away immediately after starting the engine.◀

Tampering with the control unit of the electronic engine-management system

 Tampering with the control unit of the electronic engine-management system can damage the motorcycle and cause accidents. Do not tamper with the control unit of the electronic engine-management system.◀

 Tampering with the control unit of the electronic engine-management system can result in mechanical loads that the motorcycle's com-

ponents are not designed to withstand. Damage caused in this way is not covered by the warranty.

Do not tamper with the control unit of the electronic engine-management system. ◀

Checklist

Use the following checklist to check important functions, settings and wear limits before you ride off.

- Brakes
- Brake-fluid levels, front and rear
- Clutch
- Shock absorber setting and spring preload
- Tyre-tread depth and tyre pressures
- Cases correctly installed and luggage secured

At regular intervals:

- Engine oil level (every refuelling stop)
- Brake-pad wear (every third refuelling stop)

Starting

Side stand

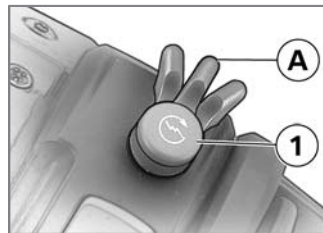
You cannot start the motorcycle with the side stand extended and a gear engaged. The engine will switch itself off if you start it with the gearbox in neutral and then engage a gear before retracting the side stand.

Gearbox


You can start the engine when the gearbox is in neutral or if you pull the clutch with a gear engaged. Do not pull the clutch until after you have switched on the ignition, as otherwise the engine will refuse to start. When the gearbox is in neutral, the

green neutral telltale light is on and the gear indicator in the multifunction display shows N.

Starting engine



- Kill switch **1** in run position **A**.

 Gearbox lubrication is ensured only when the engine is running. Inadequate lubrication can result in damage to the gearbox. Do not allow the motorcycle to roll for a lengthy period of time or push it a long

distance with the engine switched off. ◀

- Switch on the ignition.
- » Pre-ride check is performed. (➡ 57)

With OE Anti-lock braking system (ABS):

- Switch on the ignition.
- » Pre-ride check is performed. (➡ 57)
- » ABS self-diagnosis is performed. (➡ 58) ◀



- Press starter button 1.

▶ If ambient temperatures are very low, you might find it necessary to open the throttle slightly when starting the engine. At ambient temperatures below 0 °C, disengage the clutch after switching on the ignition. ◀

▶ The start attempt is automatically interrupted if battery voltage is too low. Recharge the battery before you start the engine, or use jump leads and a donor battery to start. ◀

- » The engine starts.
- » If the engine refuses to start, consult the troubleshooting chart in the section entitled "Technical data". (➡ 116)

Pre-ride check

The instrument cluster runs a test of the instruments and

the telltale and warning lights when the ignition is switched on. This Pre-Ride-Check, as it is known, is aborted as soon you start the engine.

Phase 1

The rev. counter and speedometer needles both swing to the limit values on their scales.

- » At the same time, the following warning lights and telltale lights are switched on in succession:
 - Telltale light for high-beam headlight and left turn indicator telltale light
 - General warning light, showing yellow, and neutral telltale light
 - Warning light for fuel down to reserve and right turn indicator telltale light
 - Warning light for oil pressure

- » with the BMW Motorrad ABS optional extra:
 - ABS warning light

Phase 2



General warning light changes from yellow to red.

Phase 3

The rev. counter and speedometer needles both swing back to rest. At the same time, all the warning lights and telltale lights switched on in the initial phase are switched off in reverse sequence. The warning light for the engine oil pressure does not go out until the engine has been started and the requisite engine oil pressure has built up.

If a needle did not move or if a warning light or telltale light did not show as specified above:



Some malfunctions cannot be indicated if one of the warning lights fails to show.

Make sure that all the warning and telltale lights come on in the pre-ride check. ◀

- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad dealer.

ABS self-diagnosis^{OE}

BMW Motorrad ABS performs self-diagnosis to ensure its operability. Self-diagnosis is performed automatically when you switch on the ignition. The motorcycle has to move

forward a few metres for the wheel sensors to be tested.

Phase 1

- » Test of the diagnosis-compatible system components with the motorcycle at a standstill.



ABS warning light flashes.

Phase 2

- » Test of the wheel sensors as the motorcycle pulls away from rest.



ABS warning light flashes.

ABS self-diagnosis completed

- » The ABS warning light goes out.


If an indicator showing an ABS fault appears when ABS self-diagnosis completes:

- You can continue to ride. Bear in mind that the ABS function is not available.
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad dealer.

Running in

The first 1000 km

- While running in the motorcycle, vary the throttle opening and engine-speed range frequently.
- Try to do most of your riding during this initial period on twisting, fairly hilly roads, avoiding high-speed main roads and highways if possible.

 Exceeding the specified engine speeds while running in will lead to increased engine wear.

Keep to the specified engine speeds for running in. ◀

- Do not exceed the rpm limits recommended for running in.



Running-in speed

5000 min⁻¹

- No full-load acceleration.
- Avoid low engine speeds at full load.
- Do not omit the first inspection after 500 - 1200 km.

Brake pads

New brake pads must "bed down" and therefore do not achieve their optimum friction levels during the first 500 km. You can compensate for this initial reduction in braking efficiency by exerting greater pressure on the levers.



New brake pads can extend stopping distance by a significant margin. Apply the brakes in good time. ◀

Tyres


New tyres have a smooth surface. This must be roughened by riding in a restrained manner at various heel angles until the tyres are run in. This running in procedure is essential if the tyres are to achieve maximum grip.




Tyres do not have their full grip when new and there is a risk of accident at extreme angles of heel. Avoid extreme angles of heel. ◀

Parking your motorcycle


Placing motorcycle on side stand

 If the ground is soft or uneven, there is no guarantee that the motorcycle will rest firmly on the stand. Always check that the ground under the stand is level and firm. ◀

- Switch off the engine.
- Pull the handbrake lever.
- Hold the motorcycle upright and balanced.
- Use your left foot to extend the side stand fully.


 The side stand is designed to support only the weight of the motorcycle. Do not lean or sit on the motorcycle with the side stand extended. ◀

- Slowly lean the motorcycle to the side until its weight is taken by the stand and dismount to the left.
- Turn the handlebars to full left or right lock.
- Check that the motorcycle is standing firmly.

 On a gradient, the motorcycle should always face uphill; select 1st gear. ◀


Removing motorcycle from side stand

- Unlock the steering lock.
- From the left, grip the handlebars with both hands.
- Pull the handbrake lever.
- Swing your right leg over the seat and lift the motorcycle to the upright position.
- Hold the motorcycle upright and balanced.

 An extended side stand can catch on the ground when the motorcycle is moving and lead to a fall. Retract the side stand before moving the motorcycle. ◀


- Sit on the motorcycle and use your left foot to retract the side stand.

Placing motorcycle on centre stand^{OE}

 If the ground is soft or uneven, there is no guarantee that the motorcycle will rest firmly on the stand. Always check that the ground under the stand is level and firm. ◀

- Switch off the engine.
- Dismount and keep your left hand on the left handlebar grip.

- With your right hand, grip the rear grab handle or the rear frame.
- Place your right foot on the pin of the centre stand, and press the stand down until its curved feet touch the ground.
- Place your full body weight on the centre stand and at the same time pull the motorcycle to the rear.

 Excessive movements could cause the centre stand to retract, and the motorcycle would topple in consequence.


Do not lean or sit on the motorcycle with the centre stand extended.◀

- Check that the motorcycle is standing firmly.


Removing motorcycle from centre stand^{OE}

- Unlock the steering lock.
- Place your left hand on the left handlebar grip.
- With your right hand, grip the rear grab handle or the rear frame.
- Push the motorcycle forward off the centre stand.
- Check that the centre stand has fully retracted.

Refuelling


 Fuel is highly flammable. A naked flame close to the fuel tank can cause a fire or explosion.

Do not smoke. Never bring a naked flame near the fuel tank.◀


 Fuel expands when hot. Fuel escaping from an overfilled tank could make its

way onto the rear tyre. This could cause a fall.

Do not fill the tank past the bottom edge of the filler neck.◀

 Fuel attacks plastics, which become dull or unsightly.


Wipe off plastic parts immediately if they come into contact with fuel.◀


 Leaded fuel will destroy the catalytic converter. Use only unleaded fuel.◀

- Make sure the ground is level and firm and place the motorcycle on its stand.




- Open the protective cap.
- Open the fuel tank cap with the ignition key by turning it counter-clockwise.
- Refuel with fuel of the grade stated below.

 The ratings for performance and consumption are quoted for the recommended grade of fuel. ◀


 Recommended fuel grade

Super unleaded (95 RON / 85 MON)

With OE Regular unleaded (RON 91):
Regular (91 RON / 82.5 MON) ◀

 Usable fuel capacity

16 l


 Reserve fuel

4 l

- Press the filler cap down firmly to close.
- Remove the key and close the protective cap.


Brake system, general

Descending mountain passes

 There is a danger of the brakes fading if you use only the rear brakes when descending mountain passes. Under extreme conditions, the brakes could overheat and suffer severe damage.


Use both front and rear brakes, and make use of the engine's braking effect as well. ◀

Wet brakes

 After the motorcycle has been washed, ridden through water or ridden in the rain, the brake discs and pads might be wet and the brakes might not take effect immediately.

Apply the brakes in good time until the brakes have dried out. ◀


Salt on brakes

 The brakes may fail to take effect immediately if the motorcycle was ridden on salt-covered roads and the brakes were not applied for some time.

Apply the brakes in good time until the salt layer on the


brake discs and brake pads has been removed. ◀


Oil or grease on brakes

 Oil and grease on the brake discs and pads considerably diminish braking efficiency.

Especially after repair and maintenance work, make sure that the brake discs and brake pads are free of oil and grease. ◀

Dirt or mud on brakes

 When riding on loose surfaces or muddy roads, the brakes may fail to take effect immediately because of dirt or moisture on the discs or brake pads. Apply brakes in good time until the brakes have been cleaned. ◀

 The brake pads will wear more rapidly if you ride frequently on unsurfaced tracks or poor roads. Check the thickness of the brake pads more frequently and replace the brake pads in good time. ◀

Brake system with BMW Motorrad ABS^{OE} **How does ABS work?**

The amount of braking force that can be transferred to the road depends on factors that include the coefficient of friction of the road surface. Loose stones, ice and snow or a wet road all have much lower coefficients of friction than a clean, dry asphalt surface. The lower the coefficient of friction, the longer the braking distance.

If the rider increases braking pressure to the extent that braking force exceeds the maximum transferrable limit, the wheels start to lock and the motorcycle loses its directional stability; a fall is imminent. Before this situation can occur, ABS intervenes and adapts braking pressure to the maximum transferrable braking force, so the wheels continue to turn and directional stability is maintained irrespective of the condition of the road surface.

What are the effects of surface irregularities?

Humps and surface irregularities can cause the wheels to lose contact temporarily with the road surface; if this happens the braking force that can be transmitted to the road can drop to zero. If

the brakes are applied under these circumstances the ABS has to reduce braking force to ensure that directional stability is maintained when the wheels regain contact with the road surface. At this instant the BMW Motorrad ABS must assume an extremely low coefficient of friction, so that the wheels will continue to rotate under all imaginable circumstances, because this is the precondition for ensuring directional stability. As soon as it registers the actual circumstances, the system reacts instantly and adjusts braking force accordingly to achieve optimum braking.

How can stopping distance be minimised?

Each time the brakes are applied, a load distribution shift takes place with the load shifting forward from the rear to the front wheel. The sharper the motorcycle decelerates, the more load is shifted to the front wheel. The higher the wheel load, the more braking force can be transmitted without the wheel locking.

To optimise stopping distance, apply the front brakes rapidly and keep on increasing the force you apply to the brake lever. This makes the best possible use of the dynamic increase in load at the front wheel. Remember to pull the clutch at the same time. In the "panic braking situations" that are trained so frequently braking force is ap-

plied as rapidly as possible and with the rider's full force applied to the brake levers; under these circumstances the dynamic shift in load distribution cannot keep pace with the increase in deceleration and the tyres cannot transmit the full braking force to the surface of the road. ABS has to intervene to keep the front wheel from locking; this increases stopping distance.

Reserves for safety

The potentially shorter braking distances which BMW Motorrad ABS permits must not be used as an excuse for careless riding. ABS is primarily a means of ensuring a safety margin in genuine emergencies.

Take care when cornering. When you apply the brakes

on a corner, the motorcycle's weight and momentum take over and even BMW Motorrad ABS is unable to counteract their effects.

Rear wheel lift

Even under severe braking, a high level of tyre grip can mean that the front wheel does not lock up until very late, if at all. Consequently, ABS does not intervene until very late, if at all. Under these circumstances the rear wheel can lift off the ground, and the outcome can be a highsiding situation in which the motorcycle can flip over.



Severe braking can cause the rear wheel to lift off the ground. When you brake, bear in mind that ABS control cannot be relied on in all circumstances

to prevent the rear wheel from lifting clear of the ground. ◀

What is the design baseline for BMW Motorrad ABS?

Within the limits imposed by physics, BMW Motorrad ABS ensures directional stability on any surface. The system is not optimised for special requirements that apply under extreme competitive situations off-road or on the track.

Special situations

The speeds of the front and rear wheels are compared as one means of detecting a wheel's incipient tendency to lock. If the system registers implausible values for a lengthy period the ABS function is deactivated for safety reasons and

an ABS fault message is issued. Self-diagnosis has to complete before fault messages can be issued. In addition to problems with the BMW Motorrad ABS, exceptional riding conditions can lead to a fault message being issued.

Exceptional riding conditions:

- Riding for a lengthy period with the front wheel lifted off the ground (wheely).
- Rear wheel rotating with the motorcycle held stationary by applying the front brake (burn-out).
- Heating up with the motorcycle on the centre stand or an auxiliary stand, engine idling or with a gear engaged.
- Rear wheel locked for a lengthy period, for example while descending off-road.

If a fault message is issued on account of exceptional riding conditions as outlined above, you can reactivate the ABS function by switching the ignition off and on again.

What significance devolves on regular maintenance?



Invariably, a technical system cannot perform beyond the abilities dictated by its level of maintenance.

To ensure that the BMW Motorrad Integral ABS is always maintained in optimum condition, it is essential for you to comply strictly with the specified inspection intervals.◀

Accessories

General instructions	68
Power socket	68
Luggage	71
Case ^{OA}	74
Topcase ^{OA}	76

General instructions

BMW Motorrad recommends the use of parts and accessories for your motorcycle that are approved by BMW for this purpose.

Genuine BMW parts and accessories and other products which BMW has approved can be obtained from your authorised BMW Motorrad dealer, together with expert advice on their installation and use.

These parts and products have been tested by BMW for safety, function and suitability. BMW accepts product liability for them.

Conversely, BMW is unable to accept any liability whatsoever for parts and accessories which it has not approved.

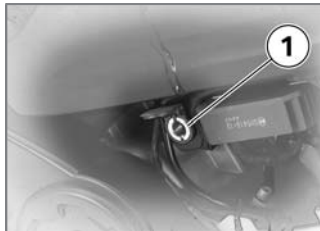


BMW Motorrad cannot assess each non-BMW product to determine whether it can be used on or in connection with BMW motorcycles without constituting a safety hazard. Country-specific official authorisation does not suffice as assurance. Tests conducted by these instances cannot make provision for all operating conditions experienced by BMW motorcycles and, consequently, they are not sufficient in some circumstances. Use only parts and accessories approved by BMW for your motorcycle. ◀

Whenever you are planning modifications, comply with all the legal requirements. Make sure that the motorcycle does not infringe national road-vehicle construction and use regulations.

Power socket

Ratings



The supply to socket **1** is cut off automatically if battery voltage is low or the load exceeds the maximum rating.

Operating electrical accessories

You can start using electrical accessories only when the ignition is switched on. The accessory remains operational if the ignition is subsequently switched off. In order to ensure that the drain on the on-

board power supply system is minimised, the supply to the power socket is cut off approximately 15 minutes after the ignition is switched off, and it is also temporarily interrupted during the start procedure.

Cable routing

The cables from the power socket to the auxiliary device must be routed in such a way that they:

- Do not impede the rider
- Do not restrict or obstruct the steering angle and handling characteristics
- Cannot be trapped



Incorrectly routed cables can impede the rider.

Route the cables as described above. ◀



Luggage

Correct loading



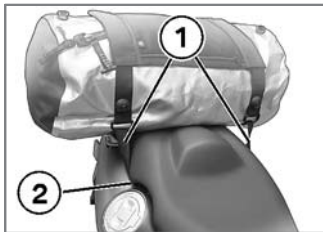
Overloading and imbalanced loads can adversely affect the motorcycle's handling.

Do not exceed the permissible gross weight and be sure to comply with the instructions on loading. ◀

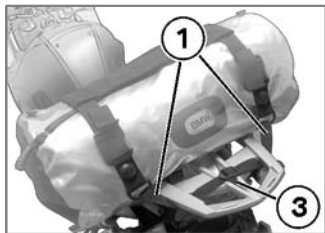
- Set spring preload, damping characteristic and tyre pressures to suit total weight.
 - Ensure that the case volumes on the left and right are equal.
 - Make sure that the weight is uniformly distributed between right and left.
 - Pack heavy items at the bottom and toward the in-board side.
 - Max. load in each case (left and right): 8 kg.
- Max. load in tank rucksack 5 kg.
 - Max. load in topcase 5 kg.

Lashing luggage

- Remove the seat (➔ 48)



- Pull luggage strap **1** through underneath the seat in the vicinity **2** of the filler neck of the fuel tank. Make sure that the strap is in front of the ribs on the underside of the seat.
- Install the seat (➔ 49)
- Position the luggage strap appropriately to hold the item of luggage and down to the luggage rack.



- Pass luggage strap **1** through luggage rack **3** and pull it tight.
- Check that the luggage is secure.

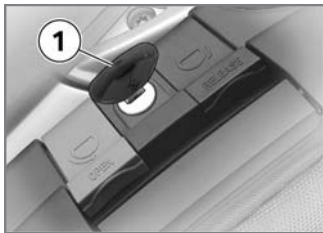
Case^{OA}

Release levers

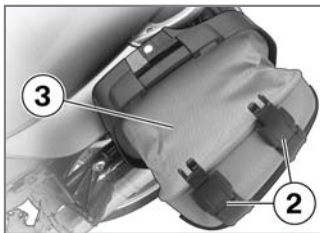
Each case has two levers, one on each side of the lock. The grey lever marked OPEN is for opening and closing the case.

The black lever marked RELEASE is for removing and attaching the case.

Opening case

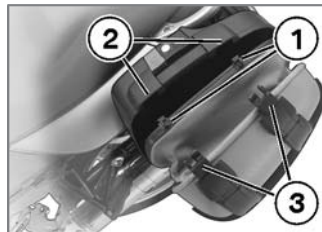


- Turn lock barrel **1** to the OPEN position.



- Pull the grey release lever (OPEN) up.
 - » Lock straps **2** open.
- Pull the grey release lever (OPEN) up again.
- Pull case lid **3** out of the retainer.
 - » Case fully opened.

Closing case



- Press catches **1** of the case lid into retainers **2**.
 - » The catches engage with an audible click.
- Press catches **3** on the lock straps into retainers **2**.
 - » The catches engage with an audible click.

Adjusting case volume

- Close the case lid.



- Push lock straps **2** out and pull them up.
» This expands the case to maximum volume.

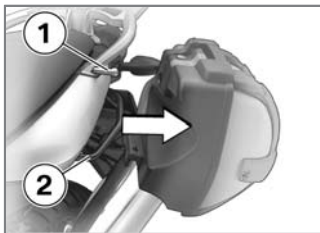


- Close lock straps **2**.

- Press the case lid against the case body.
» The case volume adapts to the contents.

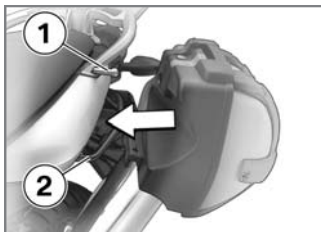
Removing case

- Turn the lock barrel in the RELEASE direction.
- Pull the black release lever (RELEASE) up.



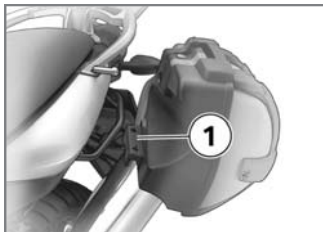
- Pull the case out of top holder **1**.
- Lift the case out of bottom holder **2**.

Installing case



- Hook the case into bottom holder **2**.
- Pull the black release lever (RELEASE) up.
- Press the case into top holder **1**.
- Push the black release lever (RELEASE) down.
» The case is locked into place.
- Lock the case.
- Check that the case is secure.

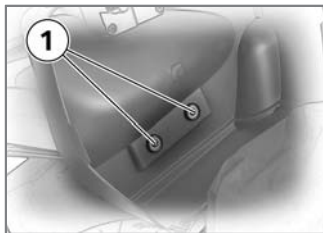
Secure attachment



If a case wobbles or is difficult to fit, it has to be adapted to the gap between the top and bottom holders. Bottom holder **1** on the case can be moved up or down for this purpose.

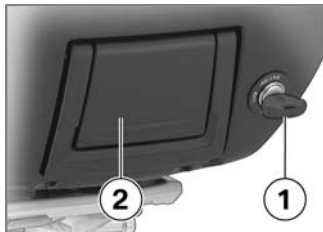
Adapting case

- Open the case.



- Remove screws **1**.
- Adjust the height of the holder.
- Tighten screws **1**.

Topcase^{OA} Opening topcase



- Turn lock barrel **1** to the OPEN position.
- Press the lock barrel.
» Locking lever **2** pops out.



- Fully open locking lever **2**.
- Open the lid.

Closing topcase



- Fully open locking lever **2**.
- Snap the lid of the compartment closed and push

it down. Check that nothing is trapped between the lid and the case.

- Push locking lever **2** down.
 - » The lever engages with an audible click.



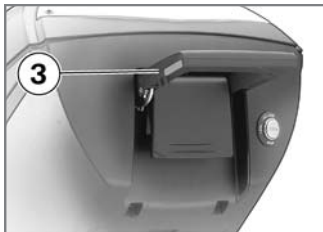
- Turn lock barrel **1** to the LOCK position.
 - » The topcase is locked.

Removing topcase

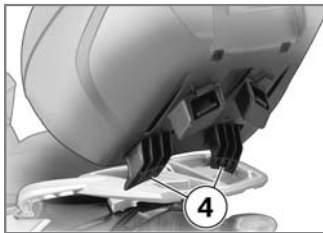


- Turn the lock barrel in the RELEASE direction.
 - » Handle **3** pops out.
- Pull handle **3** up as far as it will go.
- Lift the topcase at the rear and pull it off the carrier plate.

Installing topcase

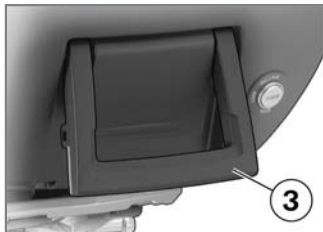


- Pull handle **3** up as far as it will go.



- Hook the topcase into position on the carrier. Make sure that hooks **4** are se-

curely seated in the corresponding keepers.



- Push handle **3** fully down.
» The handle engages with an audible click.

Maintenance

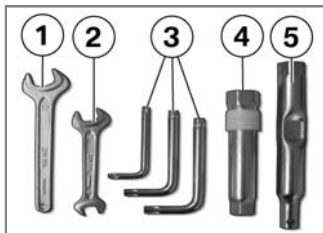
General instructions	80	Jump starting	103
Supplementary on-board toolkit (OA)	80	Battery	104
Engine oil	80		
Brake system, general	82		
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Brake fluid	84		
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Wheels	88		
Front-wheel stand	94		
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General instructions

The Maintenance chapter describes straightforward procedures for checking and replacing certain wear parts. Special tightening torques are listed as applicable. The tightening torques for the threaded fasteners on your motorcycle are listed in the section entitled "Technical data".

You will find information on more extensive maintenance and repair work in the Repair Manual on CD-ROM (ReproROM) for your motorcycle, which is available from your authorised BMW Motorrad dealer.

Supplementary on-board toolkit (OA)



- 1 Open-ended spanner, w/f 17
- 2 Open-ended spanner, w/f 10/13
- 3 Torx T30, Torx T45, Torx T50
- 4 Socket wrench, w/f 17
- 5 Spark-plug socket (use with screwdriver blade as tommy bar)

Engine oil

Checking engine oil level

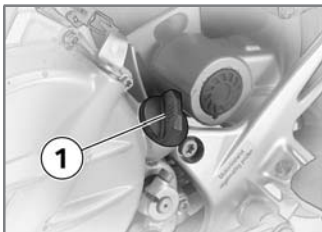
⚠ The engine can seize if the oil level is low, and this can lead to accidents. Always make sure that the oil level is correct.◀

▶ The oil level varies with the temperature of the oil. The higher the temperature the higher the oil level in the oil tank. Check the engine oil level immediately after a lengthy journey.◀

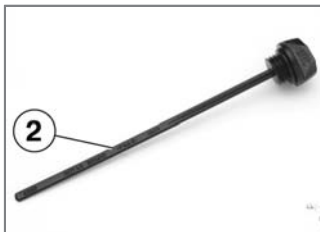
- Make sure the engine is at operating temperature and hold the motorcycle upright.
- With OE Centre stand:
- Check that the engine is at operating temperature, make sure the ground is level and firm and place

the motorcycle on its centre stand.<

- Allow the engine to idle until the fan starts up, then let it idle for another minute.
- Wipe the area around the oil filler neck clean.



- Remove oil filler cap **1** by turning it counter-clockwise.



- Use a dry cloth to wipe oil dipstick **2** clean
- Insert the oil dipstick until the edge is resting on the oil filler neck.
- Remove the oil dipstick and check the oil level.



Engine oil, specified level

between MIN and MAX marks on the oil dipstick

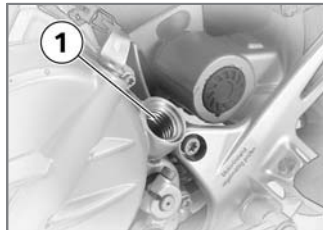
If the oil level is below the MIN mark:

- Top up the engine oil.

If the oil level is above the MAX mark:

- Have the oil level corrected by a specialist workshop, preferably an authorised BMW Motorrad dealer.

Topping up the engine oil



- Pour engine oil in through filler neck **1** until it reaches the specified level.


Brake system, general

Dependability of the brake system

A fully functional brake system is a basic requirement for the road safety of your motorcycle.

Do not ride the motorcycle if you have any doubts about the dependability of the brake system.

Under these circumstances have the brake system checked by a specialist workshop, preferably an authorised BMW Motorrad dealer.

 Incorrect working practices endanger the reliability of the brakes.

Have all work on the brake system performed by a specialist workshop, preferably

an authorised BMW Motorrad dealer. ◀

Checking brake operation


- Pull the handbrake lever.
 - » The pressure point must be clearly perceptible.
- Press the footbrake lever.
 - » The pressure point must be clearly perceptible.

If pressure points are not clearly perceptible:

- Have the brakes checked by a specialist workshop, preferably an authorised BMW Motorrad dealer.

Brake pads

Checking brake-pad thickness, front brakes

 Brake pads worn past the minimum permissible thickness can cause a reduction in braking efficiency and

under certain circumstances they can cause damage to the brake system.

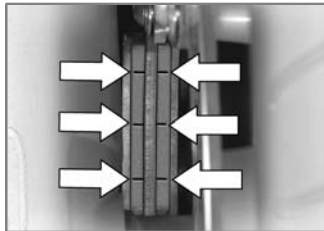
In order to ensure the dependability of the brake system, do not permit the brake pads to wear past the minimum permissible thickness. ◀


- Make sure the ground is level and firm and place the motorcycle on its stand.



- Visually inspect the left and right brake pads to ascertain their thickness. Viewing direction: Between wheel

and fork tube toward the brake caliper.



 Brake-pad wear limit, front

1 mm (Friction pad only, without backing plate)

The wear indicators (grooves) must be clearly visible.

If the wear indicating marks are no longer clearly visible:

- Have the brake pads replaced by a specialist workshop, preferably an authorised BMW Motorrad dealer.

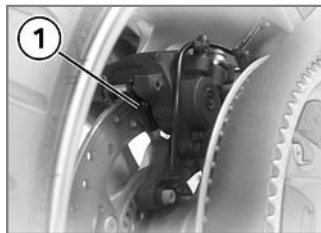
Checking brake pad thickness, rear brakes



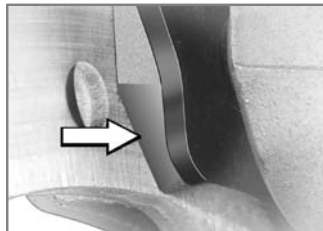
Brake pads worn past the minimum permissible thickness can cause a reduction in braking efficiency and under certain circumstances they can cause damage to the brake system.


In order to ensure the dependability of the brake system, do not permit the brake pads to wear past the minimum permissible thickness.◀

- Make sure the ground is level and firm and place the motorcycle on its stand.



- Visually inspect brake pads **1** from the right to ascertain their thickness.



 Brake-pad wear limit, rear

1 mm (Friction pad only, without backing plate)


The wear indicators must be clearly visible.

If the wear indicating mark is no longer visible:

- Have the brake pads replaced by a specialist workshop, preferably an authorised BMW Motorrad dealer.

Brake fluid

Checking brake-fluid level, front brakes


 A low fluid level in the brake reservoir can allow air to penetrate the brake system. This significantly reduces braking efficiency. Check the brake-fluid level at regular intervals. ◀

- Make sure the ground is level and firm and hold the motorcycle upright.


- Move the handlebars to the straight-ahead position.



- Check the brake fluid level in front reservoir **1**.

 Wear of the brake pads causes the brake fluid level in the reservoir to sink. ◀




 Brake fluid level, front

Do not permit the brake fluid level to drop below the MIN mark.

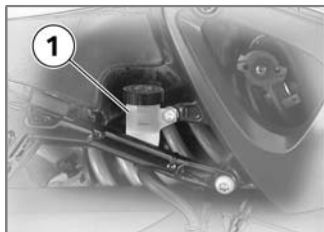
If the brake fluid level drops below the permitted level:

- Have the defect rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad dealer.


Checking brake-fluid level, rear brakes

 A low fluid level in the brake reservoir can allow air to penetrate the brake system. This significantly reduces braking efficiency. Check the brake-fluid level at regular intervals.◀


- Make sure the ground is level and firm and hold the motorcycle upright.



- Check the brake fluid level in rear reservoir **1**.

 Wear of the brake pads causes the brake fluid level in the reservoir to sink.◀



 Brake fluid level, rear

Do not permit the brake fluid level to drop below the MIN mark.

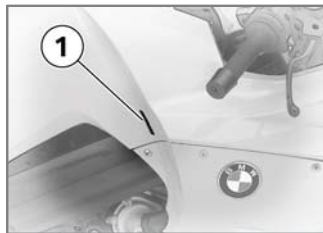
If the brake fluid level drops below the permitted level:

- Have the defect rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad dealer.

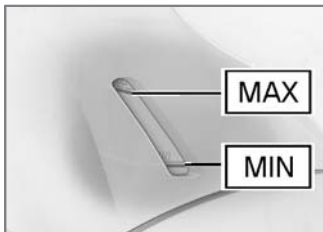
Coolant

Checking coolant level

- Make sure the ground is level and firm and place the motorcycle on its stand.



- Read off the coolant level on scale **1** on the coolant reservoir.



Coolant, specified level

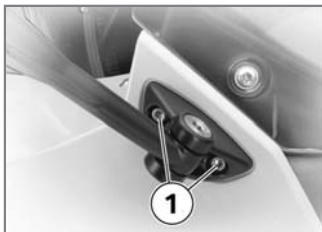
between MIN and MAX marks on the expansion tank

If the coolant level is too low:

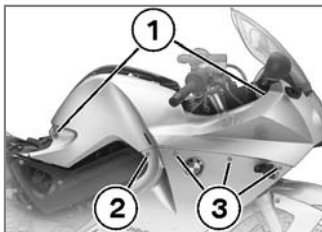
- Seek the advice of a specialist workshop, preferably an authorised BMW Motorrad dealer.

Topping up coolant

- Remove the seat (⇒ 48)
- Removing battery-compartment cover (⇒ 106)

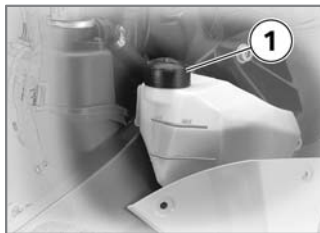


- Remove screws **1** securing the right mirror.
- Remove the mirror.

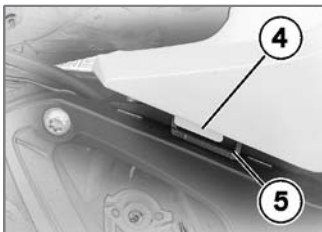


- Remove two screws **1**.
- Remove short screw **2**.
- Remove three screws **3**.

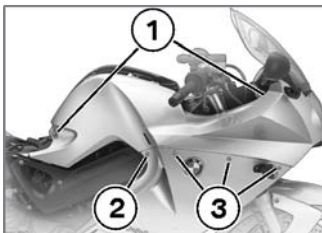
- Lift the side panel up to remove.



- Turn cap of the coolant filler neck **1** counter-clockwise to open.
- Top up the coolant to the specified level.
- Turn the cap of the coolant filler neck clockwise to close.

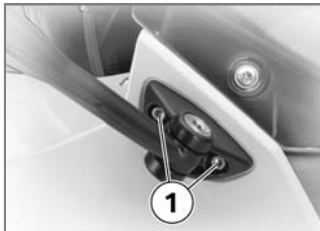


- Slip the side section behind the bottom side panel, making sure that guide 4 of the side section engages mount 5.



- Install three screws 3.

- Install short screw 2.
- Install two screws 1.



- Hold the mirror in position.
- Install screws 1.
- Installing battery-compartment cover (➔ 106)
- Install the seat (➔ 49)

Clutch

Checking clutch operation


- Pull the clutch lever.
 - » The pressure point must be clearly perceptible.

If the pressure point is not clearly perceptible:

- Have the clutch checked by a specialist workshop, preferably an authorised BMW Motorrad dealer.

Tyres

Checking tyre tread depth

 Your motorcycle's handling and grip can be impaired even before the tyres wear to the minimum tyre tread depth permitted by law. Have the tyres changed in good time before they wear to the minimum permissible tread depth. ◀

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Measure the tyre tread depth in the main tread grooves with wear marks.

▶ Tyres have wear indicators integrated into the main tread grooves. The tyre is worn out when the tyre tread has worn down to the level of the marks. The locations of the marks are indicated on the edge of the tyre, e.g. by the letters TI, TWI or by an arrow.◀

If the tyre tread no longer complies with the minimum legally required tread depth:

- Replace tyre.

Rims

Checking rims

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Visually inspect the rims for defects.
- Have damaged rims checked and, if necessary, replaced by a specialist

workshop, preferably an authorised BMW Motorrad dealer.

Wheels

Approved wheels and tyres

For each size of tyre BMW Motorrad tests certain makes, and approves those that it certifies as roadworthy. If BMW Motorrad has not approved the wheels and tyres, it cannot assess their suitability or provide any guarantee of road safety.

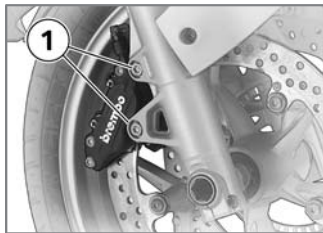
Use only wheels and tyres approved by BMW Motorrad for your type of motorcycle. You can obtain detailed information from your authorised BMW Motorrad dealer or on the Internet at www.bmw-motorrad.com.

Remove the front wheel

- Place the motorcycle on an auxiliary stand; BMW Motorrad recommends the BMW Motorrad rear-wheel stand.
- Fit the rear-wheel stand (▶ 95)

With OE Centre stand:

- Place the motorcycle on its centre stand.◀

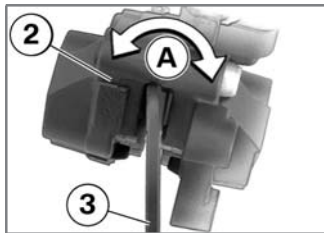


⚠ Once the calipers have been removed, there is a risk of the brake pads being pressed together to the extent that they cannot be

slipped back over the brake disc on reassembly.

Do not operate the handbrake lever when the brake calipers have been removed. ◀

- Remove securing screws **1** of the brake calipers on left and right.



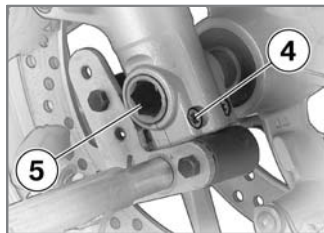
- Force the brake pads slightly apart by rocking brake calipers **2** back and forth **A** against brake discs **3**.
- Mask off the parts of the wheel rim that could be

scratched in the process of removing the brake calipers.

- Carefully pull the brake calipers back and out until clear of the brake discs.

With OE Anti-lock braking system (ABS):

- When removing the left brake caliper, take care not to damage the ABS sensor cable. ◀
- Raise the front of the motorcycle until the front wheel can rotate freely. BMW Motorrad recommends the BMW Motorrad front-wheel stand for lifting the motorcycle.
- Fit the front-wheel stand (➔ 94)



- Remove axle clamping screw **4**.
- Remove quick-release axle **5**, while supporting the wheel.

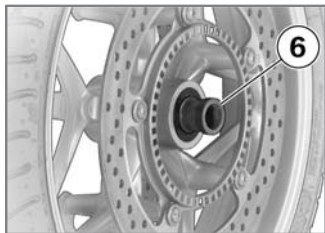
▶ BMW Motorrad can supply an adapter for removing the quick-release axle. This adapter can be combined with any commercially available w/f 22 open-end or ring spanner. The BMW special tool number is 363691 and the adapter is available from your authorised BMW Motorrad dealer.

The supplementary toolkit available as an optional accessory also includes a tool for removing the quick-release axle. ◀

- Roll the front wheel forward to remove.


With OE Anti-lock braking system (ABS):

- Do not damage the ABS sensor on the left-hand side when rolling out the wheel. ◀




- Remove spacing bushing **6** from the left-hand side of the wheel hub.


Installing front wheel

 Threaded fasteners not tightened to the specified torque can work loose or their threads can suffer damage.

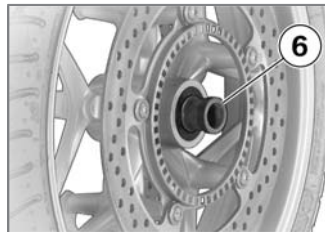
Always have the security of the fasteners checked by a specialist workshop, preferably an authorised BMW Motorrad dealer. ◀

 There is a risk of damaging parts of the front brake, particularly the BMW Motorrad ABS, in the course of the procedure described below.

Take care not to damage the brake system, in particular the ABS sensor with cable and the ABS sensor ring. ◀

 The front wheel must be installed right way round to rotate in the correct direction.

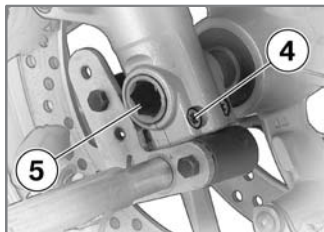
Note the direction-of-rotation arrows on the tyre or the wheel rim. ◀



- Slip spacing bushing **6** onto the left-hand side of the wheel hub.
- Roll the front wheel into position between the front forks.

With OE Anti-lock braking system (ABS):

- Do not damage the ABS sensor on the left-hand side when rolling in the wheel. ◀



- Raise the front wheel, insert quick-release axle **5** and tighten to specified torque.



Quick-release axle in axle holder

50 Nm

- Tighten axle clamping screw **4** to the specified torque.

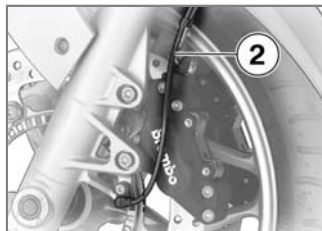


Clamp, quick-release axle

20 Nm

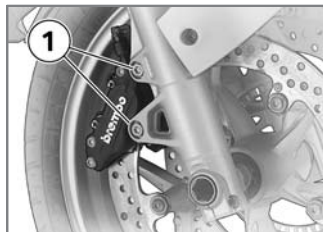
- Remove the front-wheel stand.
- Ease the brake calipers on to the brake discs.


With OE Anti-lock braking system (ABS):



The cable of the ABS sensor could chafe through if it comes into contact with the brake disc. Make sure that the ABS sensor cable is routed snugly along the front suspension. ◀

- Route ABS sensor cable **2** as illustrated here. ◀



- Install securing screws **1**.
 Brake calipers to slider tube

30 Nm

- Remove the adhesive tape from the wheel rim.
- Operate the brake several times until the brake pads are bedded.
- Remove the rear-wheel stand, if installed.

Removing rear wheel

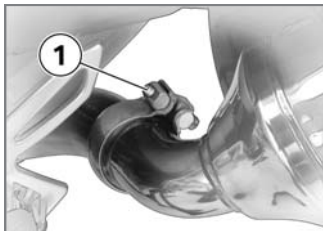
- Place the motorcycle on an auxiliary stand; BMW Motor-

rad recommends the BMW Motorrad rear-wheel stand.

- Fit the rear-wheel stand (→ 95)

With OE Centre stand:

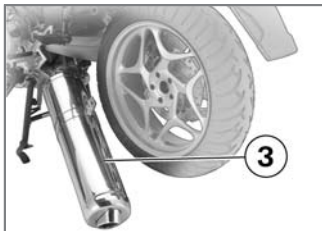
- Place the motorcycle on its centre stand. ◀



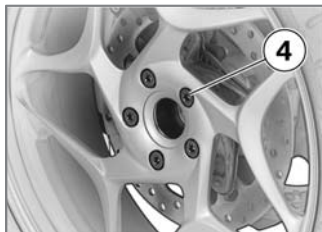
- Slacken screw **1** on the silencer.
- Do not remove the sealing grease from the clamp.
- Place a suitable support (e.g. wooden block) underneath the exhaust manifold to take its weight.



- Remove screw **2** for the bracket of the end silencer from the rear footrest.




- Turn silencer **3** down and lay it down.
- Engage first gear.



- Remove studs **4** from the rear wheel, holding the wheel as you do so.
- Lower the rear wheel to the ground.
- Roll the rear wheel out toward the rear.

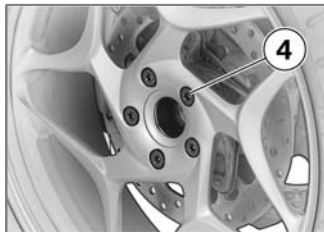
Installing rear wheel

 Threaded fasteners not tightened to the specified torque can work loose or their threads can suffer damage.


Always have the security of the fasteners checked by a specialist workshop, prefer-

ably an authorised BMW Motorrad dealer. ◀

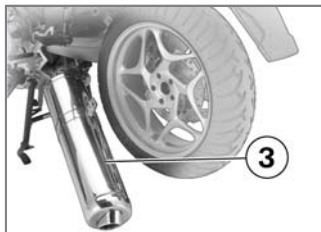
- Roll the rear wheel into position at the rear-wheel adapter.
- Seat the rear wheel on the rear-wheel adapter.



- Install wheel studs **4** and tighten to specified torque in diagonally opposite sequence.

 Rear wheel to drive shaft

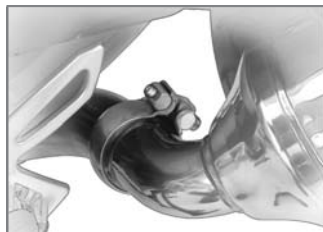
60 Nm




- Turn end silencer **3** to its initial position.



- Install screw **2** for the bracket of the end silencer in the rear footrest, but do not tighten it at this point.



- Tighten the clamp on the end silencer to the specified tightening torque.


 Silencer to manifold

35 Nm

Thread-locking compound:
Optimoly TA



- Tighten screw **2** for the bracket of the end silencer in the rear footrest to the specified torque.

 Silencer to rear frame


19 Nm

Front-wheel stand

Use


A front-wheel stand for simple, safe changing of the front wheel is available from BMW Motorrad. The BMW special tool number is 36 3 970 and the front-wheel

stand is available from your authorised BMW Motorrad dealer.

 The BMW Motorrad front wheel stand is not designed to support motorcycles not fitted with a centre stand or without other auxiliary stands. A motorcycle resting only on the front wheel stand and the rear wheel can topple.

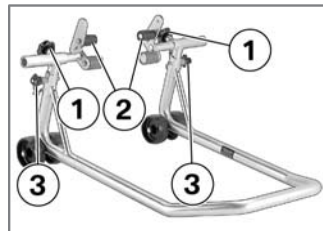
Place the motorcycle on its centre stand or another auxiliary stand before lifting the front wheel with the BMW Motorrad front-wheel stand. ◀

Fit the front-wheel stand

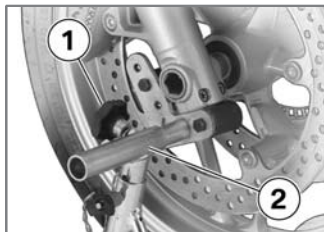
- Place the motorcycle on an auxiliary stand; BMW Motorrad recommends the BMW Motorrad rear-wheel stand.
- Fit the rear-wheel stand ( 95)

With OE Centre stand:

- Place the motorcycle on its centre stand. ◀



- Slacken adjusting screws **1**.
- Push the two adapters **2** apart until the front forks fit between them.
- Use locating pins **3** to set the front-wheel stand to the desired height.
- Centre the front-wheel stand relative to the front wheel and push it against the front axle.



- Align the two adapters **2** so that the front forks are securely seated.
- Tighten adjusting screws **1**.



- Apply uniform pressure to push the front-wheel stand

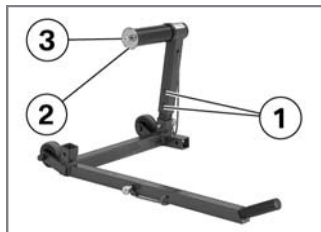
down and raise the motorcycle.

Rear-wheel stand

Rear-wheel stand

BMW Motorrad offers a rear-wheel stand for holding motorcycles (including those without centre stands) securely upright for maintenance work. The BMW special tool number is 36 3 980 and the rear-wheel stand is available from your authorised BMW Motorrad dealer.

Fitting rear-wheel stand



- Use screws **1** to set the rear-wheel stand to the desired height.
- Remove retaining disc **2**. To do so, press release button **3**.



- Push the rear-wheel stand from the right onto the rear axle.
- Push the retaining disc on from the left, while holding the unlock button down.
- Grip the rear grab handle of the motorcycle with your left hand and use your right to grip the lever of the rear-wheel stand **4**.




- Lift the motorcycle upright, simultaneously pressing the lever down until the stand supports the motorcycle in the upright position.
- Press the lever down to the ground.

Bulbs


General instructions

A warning appears in the multifunction display if a bulb is defective.


 A defective bulb places your safety at risk because it is easier for other


users to oversee you and your motorcycle.

Replace defective bulbs as soon as possible; always carry a complete set of spare bulbs if possible. ◀

 The bulb is pressurised and can cause injury if damaged.


Wear protective goggles and gloves when changing bulbs. ◀

 The types of bulb fitted to your motorcycle are listed in the section entitled "Technical data". ◀

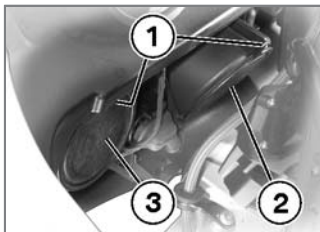
 Do not touch the glass of new bulbs with your fingers. Use a clean, dry cloth to hold the bulbs when handling them. Dirt deposits, in particular oil and grease, interfere with heat radiation from the bulb. This leads to

overheating and shortens the bulb's operating life. ◀

Replacing high-beam/low-beam headlight bulb

 If it is not standing firmly, the motorcycle could topple in the course of the operations described below. Always make sure that the motorcycle is stable and firmly supported. ◀

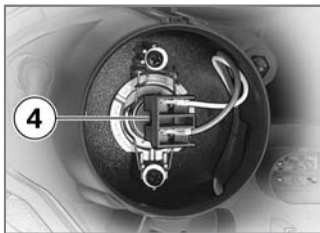
- Make sure the ground is level and firm and place the motorcycle on its stand.
- Switch off the ignition.



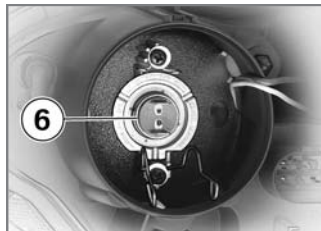
- Remove cover **2** (low-beam headlight) or cover **3** (high-beam headlight) by pulling lever **1**.




- Disengage spring clips **5** from the fastenings and swing them aside.




- Disconnect plug **4**.



- Remove bulb **6**.
- Replace the defective bulb.

 High-beam headlight bulb

H7 / 12 V / 55 W

 Low-beam headlight bulb

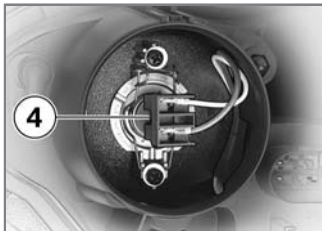
H7 / 12 V / 55 W



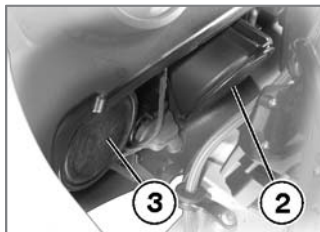
- Insert the bulb; make sure that projection **7** is correctly positioned (high-beam headlight down / low-beam headlight up) and make check that the bulb engages correctly.



- Close and lock spring clips **5**.




- Connect plug **4**.




- Install cover **2** (low-beam headlight) or cover **3** (high-beam headlight).

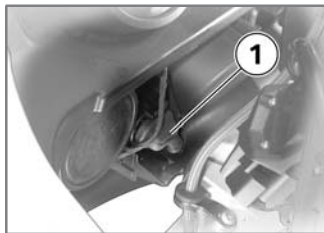
Replacing parking-light bulb

 If it is not standing firmly, the motorcycle could topple in the course of the operations described below. Always make sure that the motorcycle is stable and firmly supported. ◀

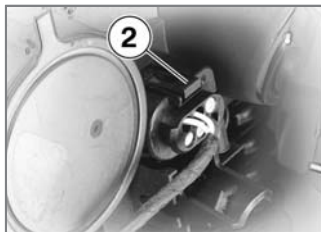
- Make sure the ground is level and firm and place the motorcycle on its stand.

- Switch off the ignition.

 Turn the handlebars to the left to facilitate access. ◀



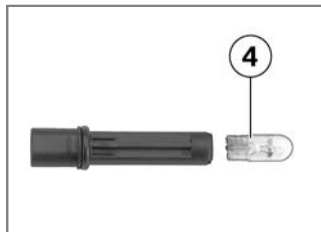
- Remove cap **1**.




- Disconnect plug **2**.

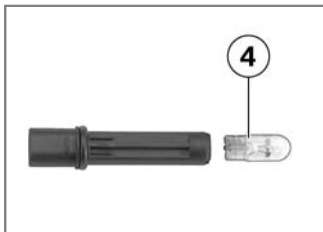


- Turn bulb socket **3** counter-clockwise to remove.

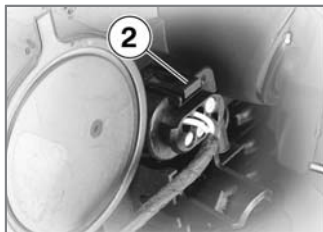


- Remove bulb **4** from the bulb holder.
 - Replace the defective bulb.
-  Bulb of parking lights

W5W / 12 V / 5 W



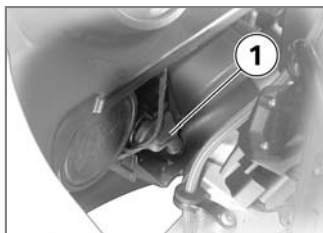
- Push bulb **4** into its socket.



- Connect plug **2**.




- Turn bulb socket **3** clockwise to install.

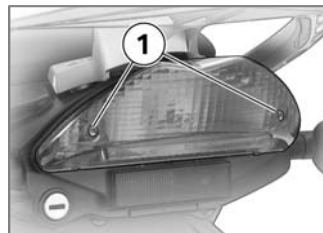


- Install cap **1**.

Replacing the brake light and rear light bulbs

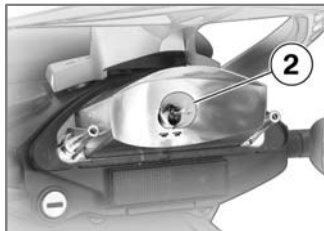
 If it is not standing firmly, the motorcycle could topple in the course of the operations described below. Always make sure that the motorcycle is stable and firmly supported. ◀

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Switch off the ignition.

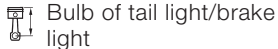


- Remove screws **1**.

- Pull the bulb housing to the rear to remove.

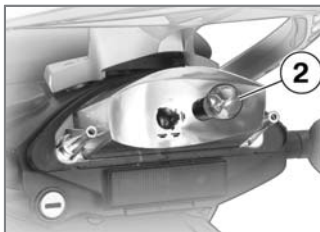


- Press bulb **2** into its socket and turn it counter-clockwise to remove.
- Replace the defective bulb.

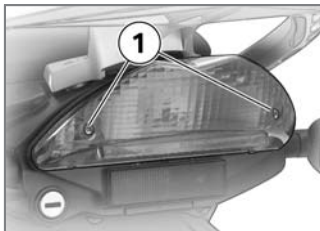


P25-2 / 12 V / 5...21 W

- Use a clean, dry cloth to hold the new bulb.




- Press bulb **2** into its socket and turn it clockwise to install.



- Install the bulb housing with screws **1**.

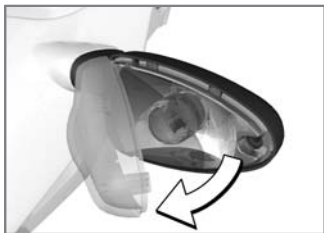
Replacing turn indicator bulbs, front or rear

 If it is not standing firmly, the motorcycle could topple in the course of the operations described below. Always make sure that the motorcycle is stable and firmly supported. ◀

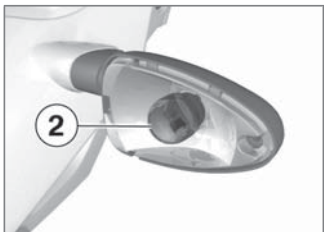
- Make sure the ground is level and firm and place the motorcycle on its stand.




- Remove screw **1**.



- Pull the glass out of the reflector housing at the threaded-fastener side.




- Turn bulb **2** counter-clockwise and remove it from the bulb housing.

- Replace the defective bulb.
-  Front flashing turn indicator bulbs

R10W / 12 V / 10 W

With OE White turn indicators:

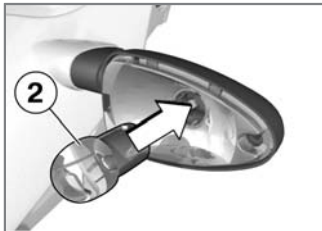
RY10W / 12 V / 10 W<

-  Rear flashing turn indicator bulbs

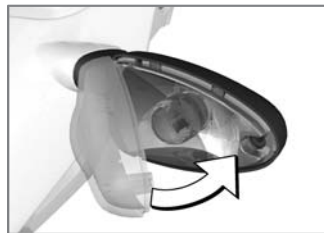
R10W / 12 V / 10 W

With OE White turn indicators:

RY10W / 12 V / 10 W<



- Turn bulb **2** clockwise to install it in the bulb housing.




- Working from the inboard side, insert the glass into the bulb housing and close the housing.




- Install screw **1**.


Jump starting

 The wires leading to the power socket do not have a load-capacity rating adequate for jump-starting the engine. Excessively high current can lead to a cable fire or damage to the vehicle electronics.

Do not use the on-board socket to jump-start the engine of the motorcycle. ◀


 Touching live parts of the ignition system with the engine running can cause electric shock.

Do not touch parts of the ignition system when the engine is running. ◀

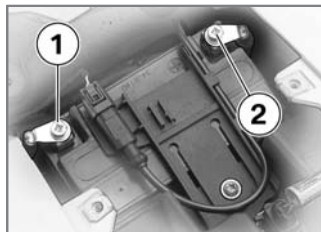
 A short-circuit can result if the crocodile clips of the jump leads are accidentally brought into contact with the motorcycle.

Use only jump leads fitted

with fully insulated crocodile clips at both ends. ◀

 Jump-starting with a donor-battery voltage higher than 12 V can damage the vehicle electronics. Make sure that the battery of the donor vehicle has a voltage rating of 12 V. ◀


- Remove the seat (➔ 48)
- Removing battery-compartment cover (➔ 106)
- When jump-starting the engine, do not disconnect the battery from the on-board electrical system.



- Run the engine of the donor vehicle during jump-starting.
- Begin by connecting one end of the red jump lead to positive terminal **2** of the discharged battery and the other end to the positive terminal of the donor battery.
- Then connect one end of the black jump lead to the negative terminal of the donor battery and the other end to negative terminal **1** of the discharged battery.
- Start the engine of the vehicle with the discharged

battery in the usual way; if the engine does not start, wait a few minutes before repeating the attempt in order to protect the starter motor and the donor battery.

- Allow both engines to idle for a few minutes before disconnecting the jump leads.
- Disconnect the jump lead from the negative terminals **1** first, then disconnect the second jump lead from the positive terminals **2**.

 Do not use proprietary start-assist sprays or other products to start the engine. ◀

- Installing battery-compartment cover (⇒ 106)
- Install the seat (⇒ 49)

Battery

Maintenance instructions

Correct upkeep, recharging and storage will prolong the life of the battery and are essential if warranty claims are to be considered.

Compliance with the points below is important in order to maximise battery life:


- Keep the surface of the battery clean and dry
- Do not open the battery
- Do not top up with water
- Be sure to read and comply with the instructions for charging the battery on the following pages
- Do not turn the battery upside down




If the battery is not disconnected, the on-board electronics (e.g. clock, etc.) gradually drain the battery.

This can cause the battery to run flat. If this happens, warranty claims will not be accepted.


If the motorcycle is to be out of use for more than four weeks, disconnect the battery or connect a suitable trickle charger to the battery. ◀

 BMW Motorrad has developed a trickle-charger specially designed for compatibility with the electronics of your motorcycle. Using this charger, you can keep the battery charged during long periods of disuse, without having to disconnect the battery from the motorcycle's on-board systems. You can obtain additional information from your authorised BMW Motorrad dealer. ◀

Charging battery when connected


 Charging the connected battery directly at the battery terminals can damage the vehicle electronics.

Always disconnect the battery from the on-board circuits before recharging it with a charger connected directly to the battery posts. ◀

 Only chargers suitable for this mode of charging can be used to recharge the battery via the on-board socket. Unsuitable chargers could cause damage to the motorcycle's on-board electrics.


Use BMW chargers with the part numbers 71 60 7 688 864 (220 V) or, as applicable, 71 60 7 688 865 (110 V). If you are in doubt, disconnect the battery from the on-board systems and

connect the charger directly to the battery. ◀

 If you switch on the ignition and the multifunction display and telltale lights fail to light up, the battery is completely flat. Attempting to charge a completely flat battery via the on-board socket can cause damage to the motorcycle's electronics.


If a battery has discharged to the extent that it is completely flat, it has to be disconnected from the on-board circuits and charged with the charger connected directly to the battery posts. ◀

- Charge via the power socket, with the battery connected to the motorcycle's on-board electrical system.
- Comply with the operating instructions of the charger.

 The motorcycle's on-board electronics know when the battery is fully charged. The on-board socket is switched off when this happens. ◀

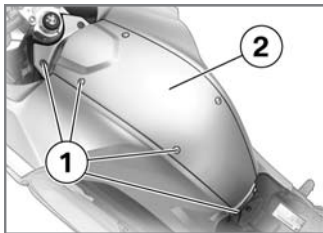
Charging battery when disconnected

- Charge the battery using a suitable charger.
- Comply with the operating instructions of the charger.
- Once the battery is fully charged, disconnect the charger terminal clips from the battery terminals.

 The battery has to be recharged at regular intervals in the course of a lengthy period of disuse. See the instructions for caring for your battery. Always fully recharge the battery before restoring it to use. ◀

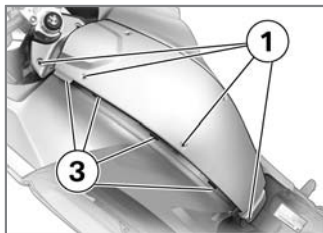
Removing battery-compartment cover

- Remove the seat (⇒ 48)



- Remove four screws **1** on left and right and remove battery-compartment cover **2**.

Installing battery-compartment cover

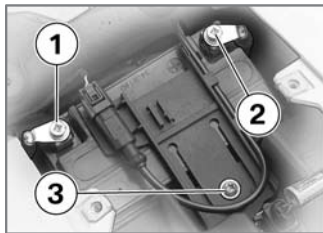


- Seat the battery-compartment cover in guides **3** on left and right.
- Install four screws **1** on left and right.
- Install the seat (⇒ 49)

Removing battery

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Remove the seat (⇒ 48)

- Removing battery-compartment cover (⇒ 106)
- Switch off the ignition.



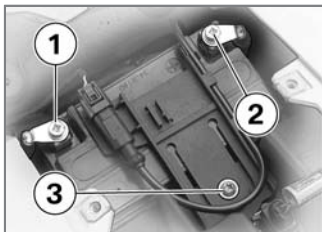
⚠ Disconnection in the wrong sequence increases the risk of short-circuits. Always proceed in the correct sequence. ◀

- Disconnect negative lead **1** first.
- Then disconnect positive lead **2**.

- Remove screw **3** and remove the battery retainer.
- Lift the battery up and out; work it slightly back and forth if it is difficult to remove.

Installing battery

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Switch off the ignition.
- Insert the battery into the battery compartment, with the positive terminal on the right in the direction of travel.



- Slip the battery retainer over the battery and install screw **3**.



Connection in the wrong sequence increases the risk of short-circuits.

Always proceed in the correct sequence. ◀

- Connect positive lead **2** to the battery's positive terminal.
- Connect negative lead **1** to the battery's negative terminal.


- Installing battery-compartment cover (➡ 106)
- Install the seat (➡ 49)
- Set the clock (➡ 36)

Care

Care products	110
Washing motorcycle	110
Cleaning easily damaged components	111
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Laying up the motorcycle	112
Restoring motorcycle to use	113

Care products

BMW Motorrad recommends that you use the cleaning and care products you can obtain from your authorised BMW Motorrad dealer. The substances in BMW Care Products have been tested in laboratories and in practice; they provide optimised care and protection for the materials used in your vehicle.

 The use of unsuitable cleaning and care products can damage vehicle components.


Do not use solvents such as cellulose thinners, cold cleaners, fuel or the like, and do not use cleaning products that contain alcohol. ◀

Washing motorcycle

BMW Motorrad recommends that you use BMW insect remover to soften and wash off insects and stubborn dirt on painted parts prior to washing the motorcycle.


To prevent stains, do not wash the motorcycle immediately after it has been exposed to strong sunlight and do not wash it in the sun. Make sure that the motorcycle is washed frequently, especially during the winter months.

To remove road salt, clean the motorcycle with cold water immediately after every trip.


 After the motorcycle has been washed, ridden through water or ridden in the rain, the brake discs and pads might be wet and the

brakes might not take effect immediately.

Apply the brakes in good time until the brakes have dried out. ◀

 Warm water intensifies the effect of salt.

Use only cold water to wash off road salt. ◀

 The high pressure of steam cleaners can damage seals, the hydraulic brake system, the electrical system, and the seat.


Do not use a steam jet or high-pressure cleaning equipment. ◀

Cleaning easily damaged components

Plastics

Clean plastic parts with water and BMW plastic care emulsion. This includes in particular:


- Windscreen
- Headlight lens made of plastic
- Glass cover of the instrument cluster
- Black, unpainted parts

 If plastic parts are cleaned using unsuitable cleaning agents, the surfaces can be damaged.

Do not use cleaning agents that contain alcohol, solvents or abrasives to clean plastic parts.


Even fly-remover pads or cleaning pads with hard

surfaces can produce scratches. ◀

 Soften stubborn dirt and insects by covering the affected areas with a wet cloth. ◀

Windscreen

Clean off dirt and insects with a soft sponge and plenty of water.

 Fuel and chemical solvents attack the material of the windscreen; the windscreen becomes opaque or dull.

Do not use cleaning agents. ◀


Chrome

Use plenty of water and BMW shampoo to clean chrome, particularly if it has been exposed to road salt. Use chrome polish for additional treatment.

Radiator

Clean the radiator regularly to prevent overheating of the engine due to inadequate cooling.


For example, use a garden hose with low water pressure.

 Cooling fins can be bent easily.

Take care not to bend the fins when cleaning the radiator. ◀

Rubber

Treat rubber components with water or BMW rubber-care products.

 Using silicone sprays for the care of rubber seals can cause damage.

Do not use silicone sprays or other care products that contain silicon. ◀

Paint care

Washing the motorcycle regularly will help counteract the long-term effects of substances that damage the paint, especially if your motorcycle is ridden in areas with high air pollution or natural sources of dirt, for example tree resin or pollen. Remove particularly aggressive substances immediately, however, as otherwise the paint can be affected or become discoloured. Substances of this nature include spilt fuel, oil, grease, brake fluid and bird droppings. We recommend BMW vehicle polish or BMW paint cleaner for this purpose.

Marks on the paintwork are particularly easy to see after the motorcycle has been washed. Remove stains of

this kind immediately, using cleaning-grade benzene or petroleum spirit on a clean cloth or ball of cotton wool. BMW Motorrad recommends BMW tar remover for removing specks of tar. Remember to wax the parts treated in this way.

Protective wax coating

BMW Motorrad recommends applying only BMW car wax or products containing carnauba wax or synthetic wax.

It is time to rewax the paintwork when water "puddles" on the surface, instead of forming beads.

Laying up the motorcycle

- Clean the motorcycle.
- Remove the battery.

- Spray the brake and clutch lever pivots, the side stand pivots and the centre stand pivots (if the motorcycle is fitted with a centre stand) with a suitable lubricant.
- Coat bright metal and chrome-plated parts with an acid-free grease (e.g. Vaseline).
- Stand the motorcycle in a dry room in such a way that there is no load on either wheel.

▶ Before laying the vehicle up out of use, have the engine oil and the oil filter element changed by a specialist workshop, preferably an authorised BMW Motorrad dealer. Combine work for laying up/restoring to use with a BMW service or inspection.◀

Restoring motorcycle to use

- Remove the protective wax coating.
- Clean the motorcycle.
- Install a charged battery.
- Before starting: work through the checklist.

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Troubleshooting chart

Engine does not start at all or is difficult to start.

Possible cause	Remedy
Kill switch activated.	Kill switch in operating position (run).
Side stand extended and gear engaged.	Retract the side stand (➡ 56).
Gear engaged and clutch not disengaged.	Select neutral or pull clutch lever (➡ 56).
Clutch pulled when ignition was OFF	Switch on the ignition, then pull the clutch lever.
No fuel in tank.	Refuelling (➡ 61)
Battery not adequately charged.	Charge the battery when connected (➡ 105)

Threaded fasteners

Front wheel	Value	Valid
Clamp, quick-release axle		
M8 x 40	20 Nm	
Quick-release axle in axle holder		
M24 x 1.5	50 Nm	
Brake calipers to slider tube		
M8 x 32 10.9	30 Nm	
Rear wheel	Value	Valid
Rear wheel to drive shaft		
M10 x 1.25	60 Nm	
Silencer to manifold		
M8 x 60 10.9 Apply thin coat between socket and ball, Optimoly TA	35 Nm	
Silencer to rear frame		
M8 x 35	19 Nm	

Engine

Engine design	Two-cylinder four-stroke, DOHC with chain-and-sprocket drive, 4 valves operated by cam followers, balancing conrod, liquid-cooled cylinders and heads, integral water pump, 6-speed gearbox and dry sump lubrication
Effective displacement	798 cm ³
Cylinder bore	82 mm
Piston stroke	75.6 mm
Compression ratio	12 : 1
Nominal output	62.5 kW, - at engine speed: 8000 min ⁻¹
With OE Regular unleaded (RON 91):	61 kW, - at engine speed: 8000 min ⁻¹
With OE Power reduction:	25 kW, - at engine speed: 7000 min ⁻¹
Maximum torque	86 Nm, - at engine speed: 5800 min ⁻¹
With OE Regular unleaded (RON 91):	83 Nm, - at engine speed: 5800 min ⁻¹
With OE Power reduction:	55 Nm, - at engine speed: 3500 min ⁻¹
Idle speed	1250±50 min ⁻¹

Fuel

Recommended fuel grade	Super unleaded (95 RON / 85 MON)
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With OE Regular unleaded (RON 91):	Regular (91 RON / 82.5 MON)
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Usable fuel capacity	16 l
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Reserve fuel	4 l
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Engine oil

Engine oil, capacity	3 l, with filter change
----------------------	-------------------------

Lubricant	Engine oil, 15W-40
-----------	--------------------

Engine oil, quantity for topping up	0.3 l, Difference between MIN and MAX
-------------------------------------	---------------------------------------

Oil grades	Mineral oils of API classification SF through SH. BMW Motorrad recommends not using oil additives, because they can have a detrimental effect on clutch operation. Please do not hesitate to contact your authorised BMW Motorrad dealer if you have any questions relating the choice of a suitable engine oil for your motorcycle.
------------	--

Permissible viscosity classes

SAE 10 W-40	≥ -20 °C, Operation at low temperatures
SAE 15 W-40	≥ -10 °C

Riding specifications

Top speed	>200 km/h
With OE Power reduction:	155 km/h
Acceleration	3.7 s, Speed: 0...100 km/h

Clutch

Clutch type	Multiplate clutch running in oil bath
-------------	---------------------------------------

Transmission

Gearbox type	Claw-shift 6-speed gearbox, integrated into engine block
--------------	--

Gear ratios

Gearbox transmission ratios	1.943 (35/68 teeth), Primary transmission ratio 1:2.462 (13/32 teeth), 1st gear 1:1.750 (16/28 teeth), 2nd gear 1:1.381 (21/29 teeth), 3rd gear 1:1.174 (23/27 teeth), 4th gear 1:1.042 (24/25 teeth), 5th gear 1:0.960 (25/24 teeth), 6th gear
-----------------------------	---

Final drive

Final drive, type	Belt drive with damper in special housing
-------------------	---

Running gear

Front suspension	Telescopic forks
Front suspension - total suspension travel	140 mm, At wheel
Rear suspension type	Direct-pivot central spring strut with steplessly adjustable rebound-stage damping
Total spring travel at rear wheel	140 mm, At wheel

Brakes

Front brakes, type	Hydraulically operated twin disc brake with 4-piston fixed calipers and floating brake discs
Brake-pad material, front	Sintered metal
Rear brakes, type	Hydraulically actuated 2-piston floating caliper with fixed brake disc
Brake-pad material, rear	Sintered metal

Wheels and tyres

Front wheel, type	Cast aluminium, MT H2
Front wheel rim size	3.5" x 17"
Tyre designation, front	120/70 ZR 17
Rear wheel type	Cast aluminium, MT H2
Rear wheel rim size	5.5" x 17"
Rear wheel, tyre designation	180/55 ZR 17

Tyre pressures

Tyre pressure, front	2.5 bar, One-up, tyre cold 2.5 bar, Two-up and/or with luggage, tyre cold
Tyre pressure, rear	2.8 bar, One-up, tyre cold 2.8 bar, Two-up and/or with luggage, tyre cold

Electrics

Rating of on-board socket	5 A, Per on-board socket
Fuses	Electronic fuses protect all the circuits. If an electronic fuse trips and de-energises a circuit, the circuit is active as soon as the ignition is switched on after the fault has been rectified.

Battery

Battery type	AGM (Absorbent Glass Mat) battery
Battery rated voltage	12 V
Battery rated capacity	14 Ah

Spark plugs

Spark plug manufacturer and designation	NGK DCPR 8 E
Spark plug electrode gap	0.9±0.1 mm, When new
	1.2 mm, Wear limit

Lighting

High-beam headlight bulb	H7 / 12 V / 55 W
Low-beam headlight bulb	H7 / 12 V / 55 W
Bulb of parking lights	W5W / 12 V / 5 W
Bulb of tail light/brake light	P25-2 / 12 V / 5...21 W

Front flashing turn indicator bulbs	R10W / 12 V / 10 W
With OE White turn indicators:	RY10W / 12 V / 10 W
Rear flashing turn indicator bulbs	R10W / 12 V / 10 W
With OE White turn indicators:	RY10W / 12 V / 10 W

Frame

Frame, type	Aluminium deltabox frame
Type plate, location	Main frame top rail, right
Vehicle identification number (VIN), location	Steering head, right

Dimensions

Length of motorcycle	2195 mm
Height of motorcycle (To top edge of wind-screen)	1225 mm
Width of motorcycle (Across mirrors)	860 mm
Front-seat height	820 mm, without rider at unladen weight
With OE Double seat, low:	790 mm, without rider at unladen weight

Weights

Unladen weight	204 kg, ready for road, 90 % load of fuel, without optional extras
Permissible gross weight	405 kg
Maximum payload	201 kg

Service

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BMW Motorrad service

Advanced technology requires specially adapted methods of maintenance and repair.



If maintenance and repair work is performed inexpertly, it could result in consequential damage and thus constitute a safety risk.

BMW Motorrad recommends you to have all the associated work on your motorcycle carried out by a specialist workshop, preferably an authorised BMW Motorrad dealer. ◀

Your authorised BMW Motorrad dealer can provide information on the specified Service, Inspection and Annual Inspection work needed. Have all maintenance and repair work carried out

confirmed in the "Service" chapter in this manual.

Authorised BMW Motorrad dealers are supplied with the latest technical information and have the necessary technical know-how. BMW Motorrad recommends that you contact your authorised BMW Motorrad dealer if you have questions regarding your motorcycle.

BMW Motorrad service quality

Along with its reputation for engineering quality and high reliability, BMW Motorrad is a byword for excellent quality of service.

To ensure that your BMW is always in optimum condition, BMW Motorrad recommends that you have the maintenance work required for your motorcycle carried out reg-

ularly, preferably by your authorised BMW Motorrad dealer. For generous treatment of claims submitted after the warranty period has expired, evidence of regular maintenance is essential.

Certain signs of wear, moreover, may otherwise not be noticed until it is too late to put them right at moderate cost. Your authorised BMW Motorrad dealer's mechanics know every detail of your motorcycle and can take remedial action if necessary before minor faults develop into serious problems. By having the necessary repairs done properly and in good time, you save time and money in the long run.

BMW Motorrad Service Card: on-the-spot breakdown assistance

In the event of a breakdown, the BMW Motorrad Service Card issued with each new BMW motorcycle enables you to access an extensive range of services such as breakdown assistance, motorcycle transportation etc. (details can differ from country to country). In the event of a breakdown, contact BMW Motorrad's Mobile Service. The specialists will provide the necessary advice and assistance.

You will find important country-specific contact addresses and the after-sales service organisation phone numbers in the "Service Kontakt / Service Contact"

brochures, along with information on Mobile Service and the dealership network.

BMW Motorrad service network

BMW Motorrad has an extensive after-sales service network in place to look after you and your motorcycle in more than 100 countries. In Germany alone, you have the best possible access to approximately 200 authorised BMW Motorrad dealers.

All information concerning the international dealership network can be found in the brochures entitled "Service Contact Europe" and "Service Contact Africa, America, Asia, Australia, Oceania".

Maintenance work Intervals

Some maintenance tasks have to be performed after a certain time, others depend on the distance covered by the motorcycle.

BMW Running-in Check

The BMW running-in check has to be performed when the motorcycle has covered between 500 km and 1,200 km

BMW Annual Inspection

Some maintenance work has to be carried out at least once a year. Other tasks depend on the distance the motorcycle has covered.

BMW Service

After the first 10,000 km and every additional 20,000 km (30,000 km, 50,000 km, 70,000 km, etc.) if this distance is covered within a year.

BMW Inspection

After the first 20,000 km and every additional 20,000 km (40,000 km, 60,000 km, 80,000 km, etc.) if this distance is covered within a year.

Maintenance schedules

The maintenance schedule for your motorcycle depends on the equipment fitted, and on the motorcycle's age and the distance it has covered. Your authorised BMW Motorrad dealer will be happy to supply

a copy of the current maintenance schedule for your motorcycle on request.

Confirmation of maintenance work

BMW Pre-delivery Check

Carried out in accordance with manufacturer's instructions

Date, stamp, signature

BMW Running-in Check

Carried out in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid, new

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out in accordance with manufacturer's instructions

Odometer reading _____

- Brake fluid, new

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out in accordance with manufacturer's instructions

Odometer reading _____

- Brake fluid, new

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out in accordance with manufacturer's instructions

Odometer reading _____

- Brake fluid, new

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out in accordance with manufacturer's instructions

Odometer reading_____

- Brake fluid, new

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out in accordance with manufacturer's instructions

Odometer reading_____

- Brake fluid, new

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out in accordance with manufacturer's instructions

Odometer reading_____

- Brake fluid, new

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out in accordance with manufacturer's instructions

Odometer reading _____

- Brake fluid, new

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out in accordance with manufacturer's instructions

Odometer reading _____

- Brake fluid, new

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out in accordance with manufacturer's instructions

Odometer reading _____

- Brake fluid, new

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out in accordance with manufacturer's instructions

Odometer reading_____

- Brake fluid, new

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out in accordance with manufacturer's instructions

Odometer reading_____

- Brake fluid, new

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out in accordance with manufacturer's instructions

Odometer reading_____

- Brake fluid, new

Date, stamp, signature

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Details described or illustrated in this booklet may differ from the motorcycle's actual specification as purchased, the accessories fitted or the national-market specification. No claims will be entertained as a result of such discrepancies.

Dimensions, weights, fuel consumption and performance data are quoted to the customary tolerances.

The right to modify designs, equipment and accessories is reserved.

Errors and omissions excepted.

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Important data for refuelling.

Fuel	
Recommended fuel grade	Super unleaded (95 RON / 85 MON)
With OE Regular unleaded (RON 91):	Regular (91 RON / 82.5 MON)
Usable fuel capacity	16 l
Reserve fuel	4 l
Tyre pressures	
Tyre pressure, front	2.5 bar, One-up, tyre cold 2.5 bar, Two-up and/or with luggage, tyre cold
Tyre pressure, rear	2.8 bar, One-up, tyre cold 2.8 bar, Two-up and/or with luggage, tyre cold

BMW recommends 

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