

Rider's Manual (US Model)

R 1200 S



BMW Motorrad



The Ultimate Riding
Machine

Motorcycle/Retailer Data

Motorcycle data

Model

Vehicle Identification Number

Color number

First registration

Registration number

Retailer Data

Contact in Service

Ms./Mr.

Phone number

Retailer's 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. Familiarize 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 any questions concerning your motorcycle, your authorized BMW Motor-

rad retailer is always happy to provide advice and assistance.

We wish you many miles of safe and enjoyable riding

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 repair work carried out on your motorcycle will be documented in Chapter 10. Proof of the maintenance work performed is a prerequisite for generous treatment of claims. Should you want to sell your BMW one day, please also remember to turn over the Rider's Manual to the new owner; it is an important part of your 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.

 Special information on operating and inspecting your motorcycle as well as maintenance and adjustment procedures.


◀ 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 accessory or equipment-dependent information.

 Tightening torque.



Technical data.

OE Optional equipment BMW equipment available only as a factory installed option.

OA Optional accessories BMW optional accessories can be purchased and installed at your authorized BMW Motorrad retailer.

EWS Electronic immobilizer.

ABS Anti-Lock Brake System.

DWA Anti-theft alarm.

Equipment

When you ordered your BMW motorcycle, you chose various items of custom equipment. This Rider's Manual describes optional equipment (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 is equipped with options or accessories not described in this Rider's Manual, then this equipment is described in a separate operating manual.

Technical data

All dimensions, weights and outputs in the Rider's Manual refer to the Deutsche Institut für Normung e. V. (DIN) and comply with its tolerance regulations. Versions for individual countries may differ.

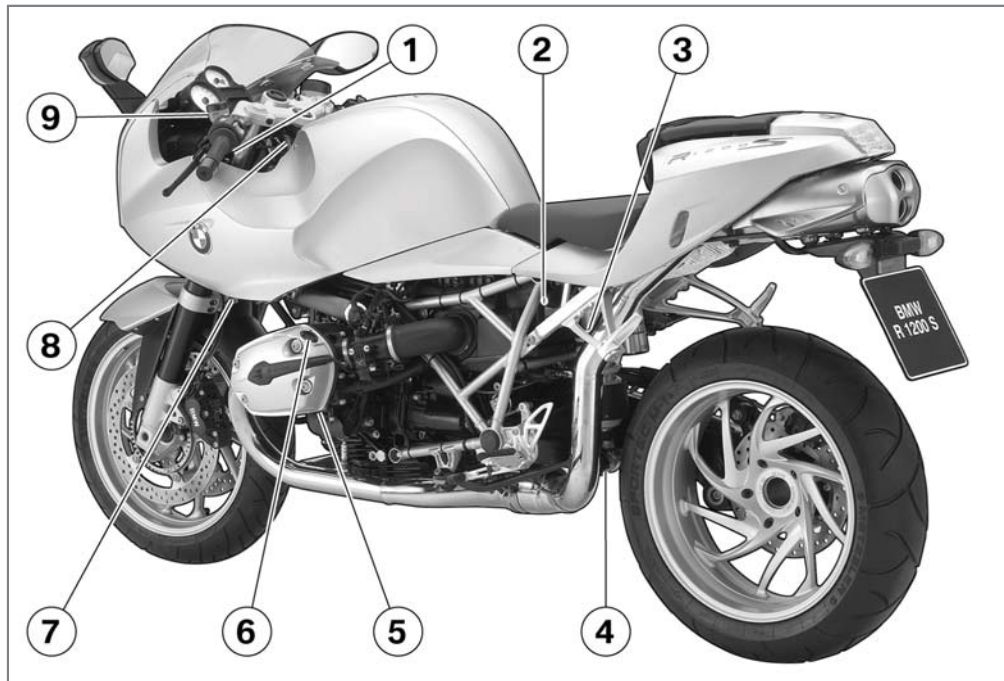
Currentness of this manual

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. In addition, BMW Motorrad cannot guarantee the total absence of errors. 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 Headlight adjustment (vertical) beneath instrument cluster (➡ 40)
- 2 Seat lock (➡ 42)
- 3 Adjuster, spring preload, rear (➡ 45)
- 4 Adjusting rear damping on standard running gear (➡ 45)
- 5 Oil sight glass (➡ 71)
- 6 Filler neck, engine oil (➡ 72)
- 7 Adjusting front damping on sport running gear (OE) (➡ 45)
- 8 Adjusting front spring preload on sport running gear (OE) (➡ 45)
- 9 Clutch fluid reservoir (➡ 76)

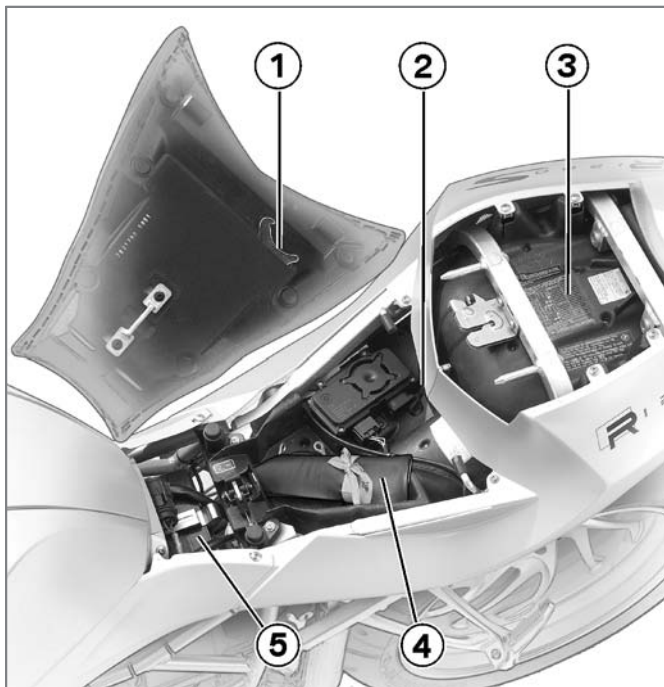


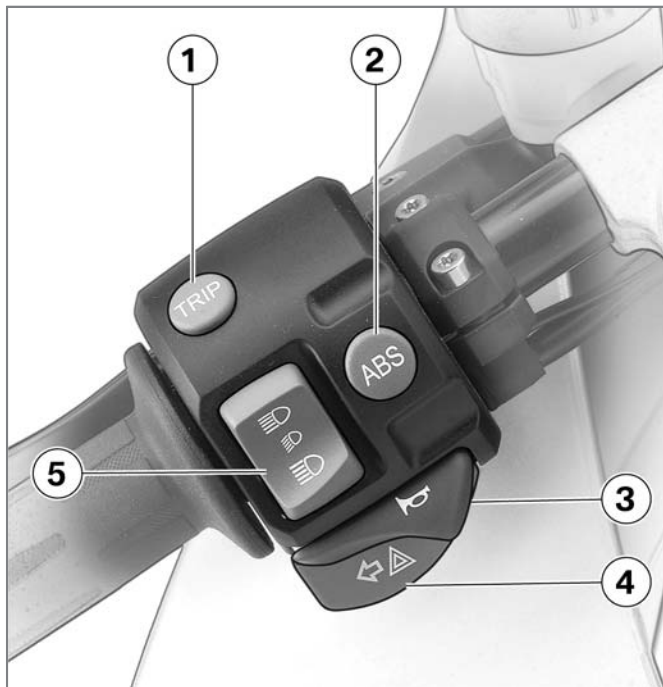
General view, right side

- 1 Onboard socket (➡ 66)
- 2 Fill location for fuel (➡ 60)
- 3 Brake-fluid reservoir, front (➡ 74)
- 4 Brake-fluid reservoir, rear (➡ 75)
- 5 Adjusting rear rebound-stage damping on sport running gear (OE) (➡ 45)
- 6 Adjusting rear pressure-stage damping on sport running gear (OE) (➡ 45)

Underneath seat

- 1 Hook wrench
- 2 Unlocking passenger seat (→ 42)
- 3 Table of tire pressures
- 4 Onboard toolkit (→ 94)
- 5 Battery (→ 94)





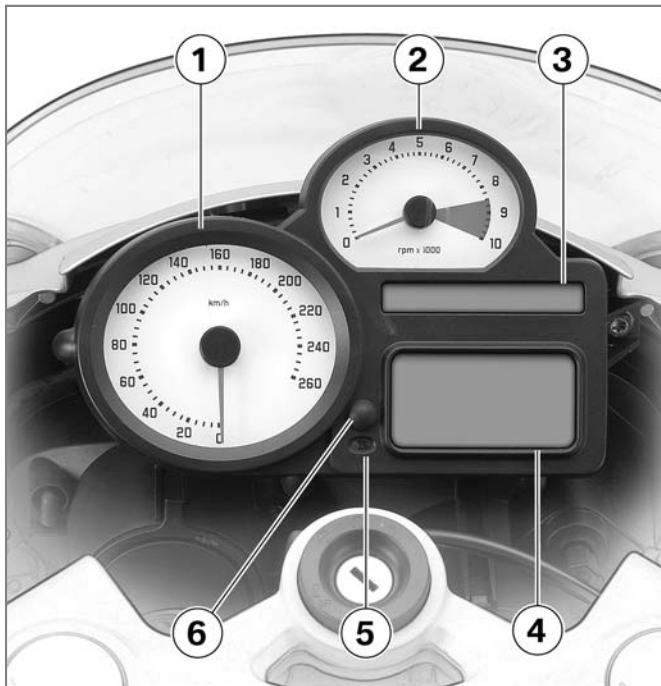
Left handlebar fitting

- 1 Tripmaster button (➡ 33)
- 2 ABS button (OE) (➡ 44)
- 3 Pushbutton, horn
- 4 Button for left turn indicator and hazard warning flashers (➡ 40) (➡ 32)
- 5 Switch, high-beam headlight and headlight flasher (➡ 38)

Handlebar fitting, right

- 1 Emergency ON/OFF switch (➔ 36)
- 2 Pushbutton, starter (➔ 56)
- 3 With OE Heated handlebar grips:
Heated hand grips (➔ 36)
- 4 Button for right turn indicator and hazard warning flashers (➔ 41) (➔ 32)
- 5 Off button for turn indicator and hazard warning flashers (➔ 41) (➔ 33)





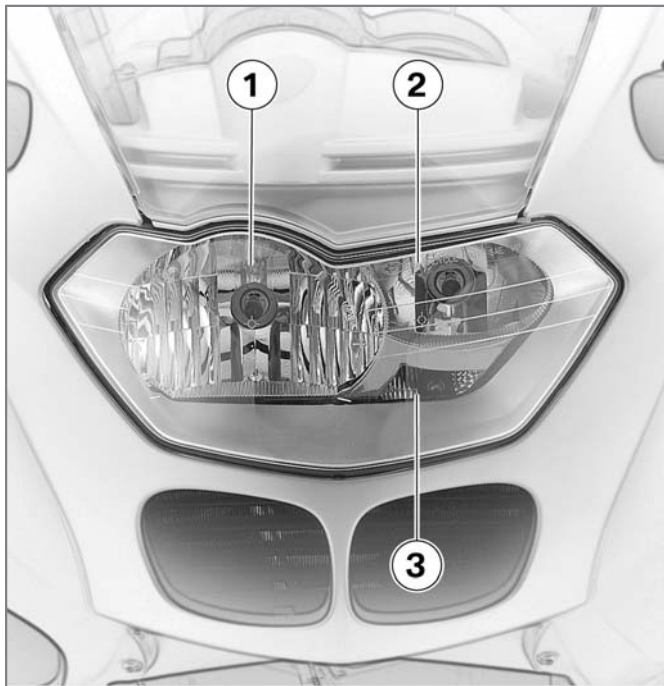
Instrument cluster

- 1 Speedometer
- 2 Tachometer
- 3 Warning and indicator lights (➡ 21)
- 4 Multifunction display (➡ 21)
- 5 Indicator light for anti-theft alarm (OE) and sensor for instrument cluster lighting
- 6 Clock setting and Trip-master operation (➡ 35) (➡ 33)

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

Headlight

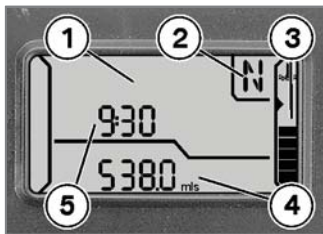
- 1 Low-beam headlight
- 2 High-beam headlight
- 3 Parking lights



Status indicators

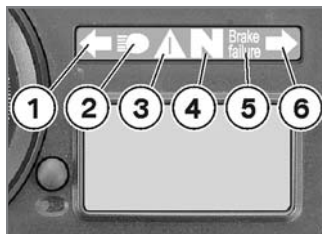
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Multifunction display



- 1 Area for warning symbols (⇒ 21)
- 2 Gear indicator (⇒ 20)
- 3 Engine-oil temperature display (⇒ 20)
- 4 Display, Tripmaster (⇒ 33)
- 5 Clock (⇒ 35)

Warning and indicator lights



- 1 Indicator light, left turn indicator
- 2 Indicator light, high-beam headlight
- 3 Warning light, general
- 4 Indicator light, neutral
- 5 ABS warning light (OE)
- 6 Indicator light, right turn indicator

ABS warning lamp^{OE}

In some countries a different display of the ABS warning lamp is possible.



Alternative display of ABS warning lamp.

Function indicators

Gear



Engaged gear is indicated.

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

Engine oil temperature



The lateral bars under the temperature symbol show the engine oil temperature level.

General warning indicators












Display

General warnings are displayed by means of texts and symbols in the multifunction display. In some cases, an additional general warning light lights up red or yellow. A number of warnings may be issued simultaneously.

Overview of warning indicators

Display

Meaning

	Lights up yellow		EWS ! warning appears.	Electronic immobilizer is active (⇒ 23)
	Lights up yellow		FUEL ! warning appears.	Fuel down to reserve (⇒ 23)
	Lights up yellow		Is indicated	Engine electronics (⇒ 23)
	Flashes red 4x per second		Is indicated	Engine oil pressure insufficient (⇒ 24)
	Lights up red		Is indicated	Battery charge current insufficient (⇒ 24)
	Lights up yellow		LAMPR ! warning appears.	Rear bulb defective (⇒ 25)
			LAMPF ! warning appears.	Front bulb defective (⇒ 25)
	Lights up yellow		LAMPS ! warning appears.	Bulbs defective (⇒ 25)
			DWA ! warning appears.	Anti-theft alarm battery weak (⇒ 26)
	Lights up yellow		DWA ! warning appears.	Anti-theft alarm battery drained (⇒ 26)

Electronic immobilizer is active



General warning lamp lights up yellow.

EWS ! warning appears.

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

- Remove other vehicle keys from the ignition key ring.
- Use the reserve key.
- Have the defective key replaced, preferably by an authorized BMW Motorrad retailer.

Fuel down to reserve



General warning lamp lights up yellow.

FUEL ! warning appears.



A fuel shortage can lead to misfiring and to the engine dying unexpectedly. Misfiring can damage the catalytic converter, and the engine dying unexpectedly can lead to accidents.

Do not drive until the fuel tank is completely empty. ◀



The Tripmaster indicates the probable residual operating range. ◀

At the most, the fuel tank still contains the reserve fuel quantity.



Reserve share of fuel capacity

1.1 gal (4 l)

- Refueling (➡ 60)

Engine electronics



General warning lamp lights up yellow.



Engine electronics symbol is displayed.



The engine is running in emergency operating mode. Engine power may be reduced, and this can cause hazardous situations, particularly if you attempt to overtake other road users.

Adapt your style of riding to the reduced level of engine power. ◀

The engine-electronics control unit has diagnosed a fault. In exceptional cases, the engine stops and can no longer be started. Otherwise, the engine runs in emergency operating mode.

- Continued driving is possible, however the accustomed engine performance may not be available.
- Have the malfunction corrected as soon as possible

by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Engine oil pressure insufficient



General warning lamp flashes red four times per second.



Engine oil pressure symbol is displayed.

The oil pressure in the lubricating oil circuit is too low.



The warning on insufficient engine oil pressure is no substitute for the function of an oil-level indicator. The correct engine oil level can only be checked at the oil sight glass. ◀

The cause of the warning on insufficient engine oil pressure can be an insufficient engine oil level.

- Checking engine oil level (➡ 71)

When oil level is too low:

- Topping up engine oil (➡ 72)

If the warning on insufficient engine oil pressure appears despite a correct engine oil level:



In addition to an insufficient engine oil level, other problems in the engine can lead to the warning on insufficient engine oil pressure. Continuing to ride in these cases can cause engine damage.

If this warning appears, do not continue to ride even though the engine oil level might be correct. ◀

- Do not continue driving.
- Have the malfunction corrected as soon as possible by a specialized workshop,

preferably an authorized BMW Motorrad retailer.

Battery charge current insufficient



General warning lamp lights up red.



Battery charge current symbol is displayed.



A discharged battery can result in the engine cutting out unexpectedly, causing a hazardous situation. Have faults eliminated as soon as possible. ◀



If the battery is no longer charged, continued driving can lead to deep discharging, and therefore to the destruction of the battery. If possible, do not continue driving. ◀

The battery is not being charged.

- Continued driving is possible until the battery is discharged. However, the engine can die suddenly and the battery can be exhaustively discharged and therefore destroyed.
- Have the malfunction corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Rear bulb defective



General warning lamp lights up yellow.

LAMP R ! warning appears.



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. ◀

Rear light or brake light bulb defective.

- Have the fault eliminated by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Front bulb defective

LAMP F ! warning appears.



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, high-beam headlight, parking light or turn indicator bulb defective.

- Replacing high-beam/low-beam bulb (⇒ 85)
- Replacing side light bulb (⇒ 87)
- Replacing front turn indicator bulb (⇒ 89)
- Replacing rear turn indicator bulb (⇒ 90)

Bulbs defective



General warning lamp lights up yellow.

LAMP S ! warning appears.



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. ◀

A combination of several bulb defects is present.

- See the fault descriptions above.

Anti-theft alarm battery weak

DWA! warning appears.

The anti-theft alarm battery no longer has its full capacity. The operation of the anti-theft alarm is only ensured for a limited time with the motorcycle battery disconnected.

- Contact a specialized workshop, preferably an authorized BMW Motorrad retailer.

Anti-theft alarm battery drained



General warning lamp lights up yellow.

DWA! warning appears.

The anti-theft alarm battery has no capacity. The operation of the anti-theft alarm is no longer ensured with the motorcycle battery disconnected.

- Contact a specialized workshop, preferably an authorized BMW Motorrad retailer.

ABS warning indicators^{OE}

Display

ABS warnings are indicated by the ABS warning light. The warning light can light up continuously or flash 1x per second.

The ABS warning lamp is shown in two versions depending on country:



Display 1.






Display 2.

The warning indicators in this chapter are described using display 1.

Overview of warning indicators

Display

Meaning

	Flashes 1x per second	Self-diagnosis not completed (➡ 28)
	Lights up	ABS error (➡ 28)
	Lights up	ABS deactivated (➡ 28)

Self-diagnosis not completed



ABS warning lamp flashes once per second.

The ABS function is not available, because the self-diagnosis has not been completed. To check the wheel sensors, the motorcycle must be driven a few yards.

- Ride off slowly. It must be noted that the ABS function is not available until the self-diagnosis has been completed.

ABS error



ABS warning lamp ON.

The ABS control unit has detected an error. The ABS function is not available.

- Continued driving is possible. It must be noted

that the ABS function is not available. Observe additional information on situations which can lead to an ABS error (➡ 64).

- Have the malfunction corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

ABS deactivated



ABS warning lamp ON.

The ABS system has been deactivated by the driver. With OE Anti-Lock Brake System (ABS):

- Switching on ABS function (➡ 44)

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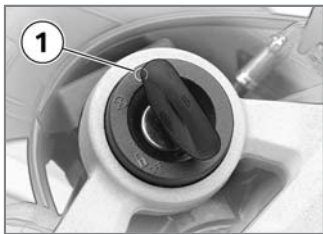
Ignition switch and steering lock

Keys

You receive one master key and one spare key. If a key is lost, please note the information on the electronic immobilizer (EWS) (➔ 31).

▶ Ignition key and steering lock, seat lock and tank filler cap lock are all operated with the same key.◀

Switching on ignition



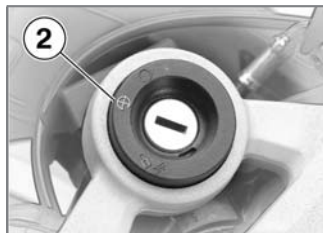
- Turn key to position **1**.

- » Parking lights and all function circuits switched on.
- » Engine can be started.
- » Pre-ride check is performed. (➔ 57)

With OE Anti-Lock Brake System (ABS):

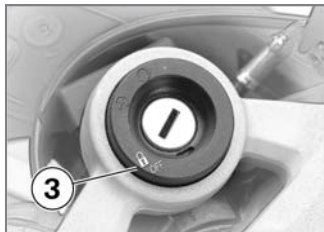
- Turn key to position **1**.
- » Parking lights and all function circuits switched on.
- » Engine can be started.
- » Pre-ride check is performed. (➔ 57)
- » ABS self-diagnosis is performed. (➔ 58)◀


Switching off ignition



- Turn key to position **2**.
- » Light switched off.
- » Handlebars not locked.
- » Key can be removed.
- » Electrically powered accessories remain operational for a limited period of time.
- » Battery can be recharged via onboard socket.

Locking handlebars



 When you prop the motorcycle on the side stand, the surface of the ground will determine whether it is better to turn the handlebars to the left or right. However, the motorcycle is more stable on a level surface with the handlebars turned to the left than with the handlebars turned to the right. On level ground, always turn the handlebars to the left to set the steering lock. ◀

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

Electronic immobilizer


Theft protection

The BMW Motorrad electronic immobilizer helps protect your 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 immobilizer can be started only with the keys that belong to the motorcycle. You can also have your authorized BMW Motorrad retailer dis-

able particular keys, for example in the event that you lose your keys. The engine cannot be started with a key that has been barred.

Electronics in the key

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 antenna in the ignition lock. The ignition is not enabled for starting until the key has been recognized as "authorized" 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 warning EWS is shown in the multifunction display.

Always store the spare key separately from the ignition key. ◀

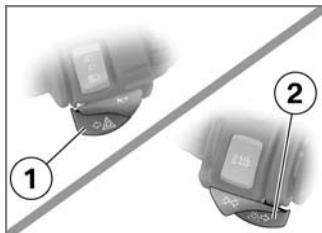
Replacement and extra keys

Replacement and spare keys are only available through an authorized BMW Motorrad retailer. The keys are part of an integrated security system, so the retailer 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 must bring along all 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 ignition.



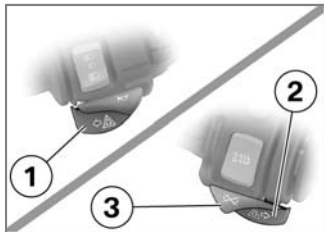
- Press button for left turn indicator **1** and right turn indicator **2** simultaneously.

▶ The hazard warning flashers place a strain on the battery. Do not use the hazard warning flashers for longer than absolutely necessary. ◀

▶ If a turn indicator button is pressed with the ignition switched on, the flashing function replaces the emergency flashing function as long as the button is pressed. If the turn indicator button is released, the emergency flasher function becomes active again. ◀

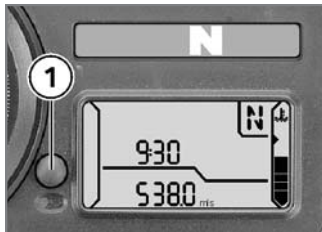
- » Hazard warning flashers in operation.
- » Left/right turn indicator lights flash.
- Switch off ignition.
- » Hazard warning flashers continue to operate.
- » Left/right turn indicator lights off.

Switching off hazard warning flashers



- Press turn-indicator cancel button **3**.
- » Hazard warning flashers are switched off.
- Alternative: Press button for left turn indicator **1** and right turn indicator **2** simultaneously.
- » Hazard warning flashers are switched off.

Tripmaster Tripmaster operation



The operation of the Tripmaster described in the following can also be carried out with the button **1** in the instrument cluster as an alternative.

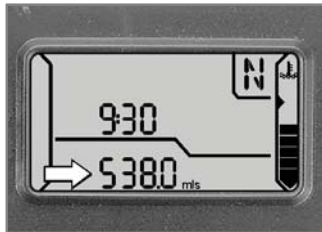
Selecting readings

- Switch on ignition.

▶ When you switch on the ignition, the information shown by the Tripmaster when the ignition was switched off always reappears on the multifunction display.◀



- Press Tripmaster button **1** once briefly.



The following sequence is shown in the display field of the Tripmaster:

- Total distance covered

- Tripmeter 1 (Trip I)
- Tripmeter 2 (Trip II)
- Operating range (after reaching reserve fuel quantity)

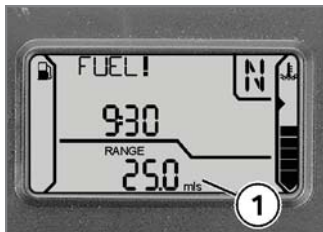
Resetting tripmeter

- Switch on ignition.
- Select desired tripmeter.



- Press and hold Tripmaster button **1** until display changes.
- » Tripmeter is reset to zero.

Residual range



The residual operating range **1** is displayed together with the lettering RANGE only after the reserve fuel level is reached. It is calculated on the basis of your style of riding and the amount of fuel in the tank; the reading indicates the estimated distance you can travel before the fuel supply runs out. If the motorcycle is resting on its side stand, the level in the tank cannot be measured correctly, then this estimate of

residual operating range will be inaccurate.

When refueling, fuel is not registered by the Tripmaster until the quantity added is approx. one gallon (several liters).

▶ The determined residual range is an approximate reading. BMW Motorrad therefore recommends that you do not try to use the full remaining range before refueling. ◀

Clock

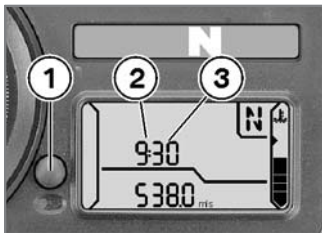
Setting clock



The setting of the clock described in the following can also be carried out with the Tripmaster button **1** as an alternative.

Setting clock

- Switch on ignition.



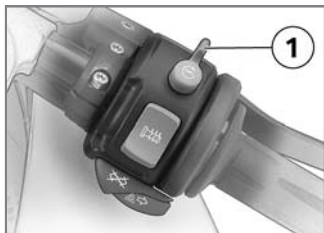
! Attempting to set the clock while riding the motorcycle can lead to accidents.

Adjust the clock only when the motorcycle is stationary. ◀

- Press the button **1** repeatedly until the Tripmaster indicates the total mileage.
- Press and hold button **1** until display changes.
 - » Hours reading **2** starts to flash.
- Press button **1**.

- » The hour increments by one each time you press the button.
- Press and hold button **1** until display changes.
 - » Minutes reading **3** starts to flash.
- Press button **1**.
 - » The minute increments by one each time you press the button.
- Press and hold button **1** until display changes.
 - » The display stops flashing.
 - » Clock setting ended.

Emergency ON/OFF switch

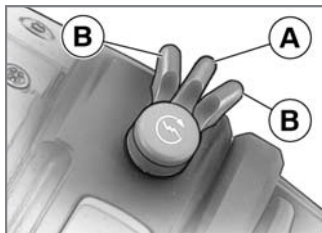


1 Emergency ON/OFF switch.

! Actuating the emergency ON/OFF switch while driving can cause the rear wheel to lock up, resulting in a fall.

Do not operate the emergency ON/OFF switch while riding. ◀

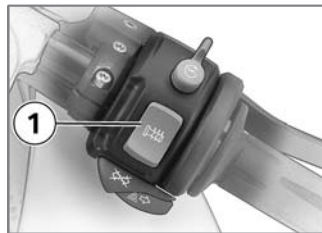
The engine can be easily and quickly switched off using the emergency ON/OFF switch.



A Operating position.
B Engine switched off.

▶ The engine can only be started in the operating position. ◀

Heated hand grips^{OE}

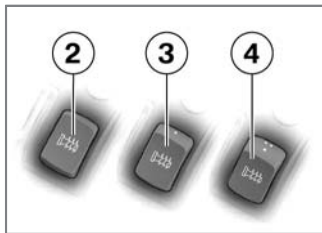


1 Heated hand grips switch

The handlebar grips can be heated at two different levels. The heated hand grips function can only be activated when the engine is running.

▶ The increase in power consumption caused by the heated hand grips can drain the battery if you are riding at low engine speeds. If the battery is inadequately charged, the heated hand

grips are switched off to ensure starting capability. ◀



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

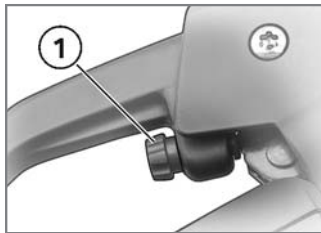
Clutch

Adjusting clutch lever

! If the position of the clutch fluid reservoir is changed, air can enter the clutch system. Do not reposition the handle-

bar controls on the handlebars or the handlebars in their mounts. ◀

! Attempting to adjust the clutch lever while riding the motorcycle can lead to accidents. Adjust the clutch lever only when the motorcycle is stationary. ◀



- Turn adjusting screw **1** clockwise.

▷ The adjusting screw has a limit position and can be turned more easily when

you press the clutch lever forward. ◀


- » Distance between handlebar grip and clutch lever increases.
- Turn adjusting screw **1** counterclockwise.
- » Distance between handlebar grip and clutch lever decreases.

Brakes

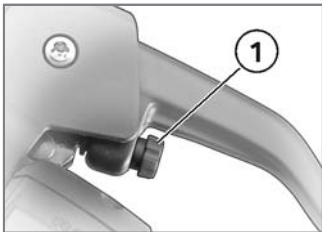
Adjusting handbrake lever

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


Do not reposition the handlebar controls on the handlebars or the handlebars in their mounts. ◀

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

Adjust the brake lever only when the motorcycle is stationary. ◀



- Turn adjusting screw **1** clockwise.

 The adjusting screw has a limit position and can be turned more easily when you press the handbrake lever forward. ◀

» Distance between handlebar grip and handbrake lever increases.


- Turn adjusting screw **1** counterclockwise.

» Distance between handlebar grip and handbrake lever decreases.

Lights


Switching on side lights

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

 The side lights are a strain on the battery. Do not leave the ignition switched on longer than absolutely necessary. ◀

Switching on low-beam headlight

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

 With the engine switched off, you can turn on the high beams either by turning them on while the ignition is switched on or by activating the headlight flasher. ◀

Switching on high-beam headlight




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

- » High-beam headlight is switched on.
- Move switch **1** for high-beam headlight to center position.
- » High-beam headlight is switched off.
- Press bottom part of switch **1** for high-beam headlight.
- » High-beam headlight is switched on as long as switch is pressed (headlight flasher).

Switching on parking light

- Switch off ignition.

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



- Press and hold left turn indicator switch **1** until side light is switched on.

Switching off parking light

- Switch on ignition.
- » Parking light switched off.

Headlight

Adjusting headlight for RHD/LHD traffic

When riding in countries where traffic drives on the opposite side of the road to that in which the motorcycle was

registered, the asymmetrical low headlight beam will dazzle oncoming traffic.

Have the headlight adjusted to the relevant conditions by a specialized workshop, preferably an authorized BMW Motorrad retailer.



Ordinary adhesive tape damages the plastic lens.

To prevent damage to the plastic lens, consult a specialized workshop, preferably an authorized BMW Motorrad retailer. ◀

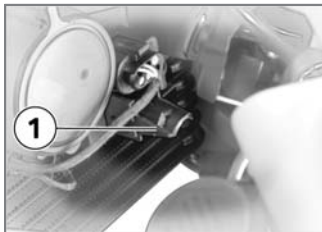
Headlight range and spring preload

The headlight range generally remains constant due to the adjustment of the spring preload to the loading state. Spring preload adjustment may only be insufficient when the motorcycle is very heav-

ily loaded. In this case, the headlight range must be adjusted to the weight.

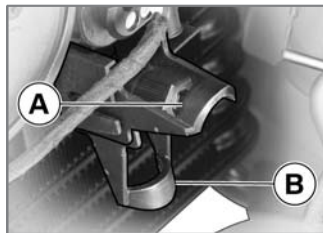
▶ If you are unsure whether the basic headlight setting is correct, consult a specialized workshop, preferably an authorized BMW Motorrad retailer. ◀

Adjusting headlight range



- 1** Headlight range adjustment

To avoid dazzling oncoming traffic, the headlight adjustment can be corrected by adjusting the swivel lever.



- A** Neutral position
B Position with heavy payload

Turn indicators

Switching on left-hand turn indicator

- Switch on ignition.



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

Switching on right-hand turn indicator

- Switch on ignition.

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

Switching off turn indicator



- Press turn-indicator cancel button **3**.

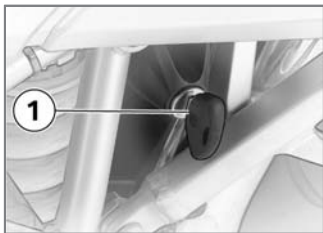
▶ After driving for approx. ten seconds or after covering a distance of approx. 650 ft (200 m), the turn indicators are automatically switched off. ◀

- » Turn indicator is switched off.
- » Turn indicator lights in indicator light panel are off.

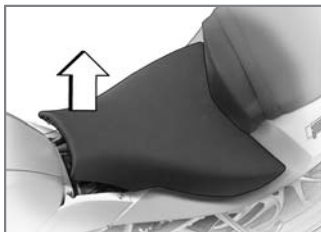
Front and rear seats

Removing driver's seat

- Make sure the ground is level and firm and park the motorcycle.

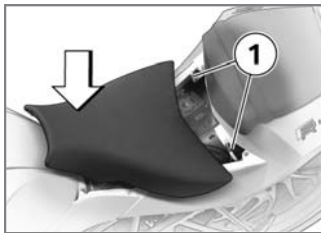


- Turn key **1** in seat lock clockwise while pressing down on front region of driver's seat.



- Lift front of seat and remove toward upward.

Installing driver's seat



- Insert driver's seat in mounts **1** and press down firmly in front area

» Driver's seat clicks audibly into place.

Removing passenger seat

- Make sure the ground is level and firm and park the motorcycle.
- Removing driver's seat (→ 42)



- Pull and hold unlocking loop **1** and pull out passenger seat toward front.

Installing passenger seat

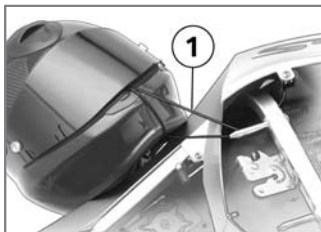


- Insert passenger seat in mounts **1** and slide toward rear
- » Passenger seat clicks audibly into place twice.

Helmet holder

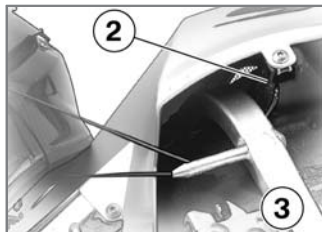
Using helmet holder

- Make sure the ground is level and firm and park the motorcycle.
- Removing passenger seat (➡ 42)



! The helmet catch can scratch the paneling. When hooking on the helmet, watch the position of the helmet lock.◀

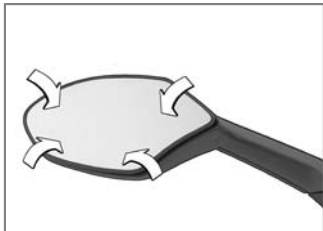
- Secure helmet on helmet holder **1** using steel cable available as an optional accessory.



- Pull steel cable through under rear frame **3** and thread eyes of steel cable into helmet holder slit **2**.
- Installing passenger seat (➡ 43)

Mirrors

Adjusting mirrors



- Move the mirrors into the desired position by pressing lightly on one of the corners.

ABS^{OE}

Switchable ABS function

When driving on a loose road surface or during racing training, it may be advisable to deactivate the ABS function. For this reason, the ABS func-

tion of this motorcycle can be switched off.

Observe additional information on the ABS system from (➔ 62).

Switching off ABS function

- Switch on ignition or bring motorcycle to a stop.



- Hold down ABS button **1**.




ABS warning lamp ON.

- Release ABS button within five seconds after ABS warning light lights up.

▶ The warning indicators for ABS fault and ABS switched off are identical. ◀

- » ABS function is switched off.

 ABS warning lamp continues to light up.


Switching on ABS function

- Stop motorcycle.



- Hold down ABS button **1**.

- » ABS warning light goes out.
- Release ABS button within five seconds after the ABS warning light goes out.
- » ABS warning light remains off.
- » ABS function is switched on.
- As an alternative to pressing the ABS button, the ignition can also be switched off and then on again.

 If the ABS light continues to light up after switching the ignition off and then on again, an ABS fault has occurred. ◀

Chassis settings

Spring preload and weight

The spring preload on the rear wheel must be adapted to the load of the motorcycle. Increase spring preload

when the motorcycle is heavily loaded and reduce spring preload accordingly when the motorcycle is lightly loaded.

Spring preload and road condition with sport running gear^{OE}


The spring preload on the front wheel can be adjusted to the weight of the driver in dependence on the conditions of the terrain and the purpose.

Damping and spring preload

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

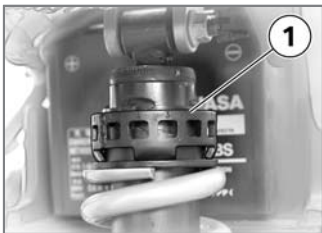
Settings on standard running gear

Adjusting spring preload for rear wheel

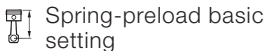
 Your motorcycle's handling will suffer if you do not match the spring-preload and damping-characteristic settings.

Adjust the damping characteristic to suit the spring preload. ◀

- Make sure the ground is level and firm and park the motorcycle.



- To increase spring preload, turn adjustment ring **1** clockwise using onboard toolkit.
- To decrease spring preload, turn adjustment ring **1** counterclockwise using onboard toolkit.



Turn adjustment ring to Level 2. (Full tank of gas, with rider 187 lbs (85 kg))

Adjusting damping on rear wheel



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

Adjust the damping characteristic to suit the spring preload. ◀

- Make sure the ground is level and firm and park the motorcycle.

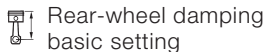


- Adjust rear wheel damping, using a screwdriver to turn adjusting screw **1**.



- To increase absorption, turn adjusting screw **1** in arrow direction H.

- To reduce absorption, turn adjusting screw **1** in arrow direction S.

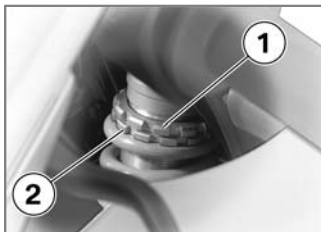


Screws adjusting screw completely to right (H), then back a 3/4 turn. (Full tank of gas, with rider 187 lbs (85 kg))

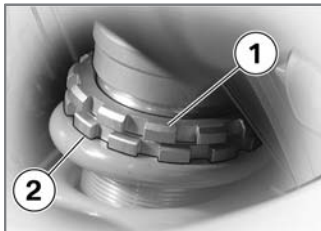
Settings on sport running gear^{OE}

Adjusting spring preload on front wheel

- Make sure the ground is level and firm and park the motorcycle.



- Adjust spring preload with adjustment rings **1** and **2**.



- Lock adjustment ring **2** with onboard toolkit.
- To loosen locking, turn adjustment ring **1** counter-

clockwise with onboard toolkit.

- To increase spring preload, turn adjustment ring **2** clockwise.
- To decrease spring preload, turn adjustment ring **2** counterclockwise.



With OE Sport suspension: 7.2 in (184 mm) (Full tank of gas, with driver 187 lbs (85 kg))<

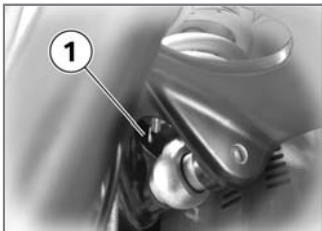
- After adjusting spring preload, lock adjustment ring **2** with onboard toolkit.
- Turn adjustment ring **1** with onboard toolkit clockwise against adjustment ring **2**.

Adjusting damping on front wheel

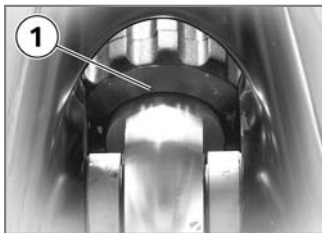
! The motorcycle's handling will suffer if you do not match the spring-preload and damping-characteristic settings.

Adjust the damping characteristic to suit the spring preload. ◀


- Make sure the ground is level and firm and park the motorcycle.



- Adjust damping on adjustment ring **1**.



- To increase damping, turn adjustment ring **1** counter-clockwise.
- To decrease damping, turn adjustment ring **1** clockwise.

 Rebound-stage basic setting

With OE Sport suspension:
Turn lower adjustment wheel completely to right, then back 16 clicks. (Full tank of gas, with rider 187 lbs (85 kg)) ◀

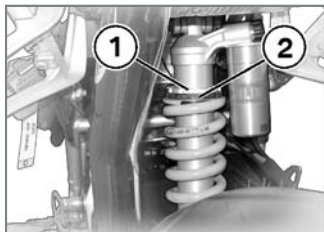
Adjusting spring preload for rear wheel

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

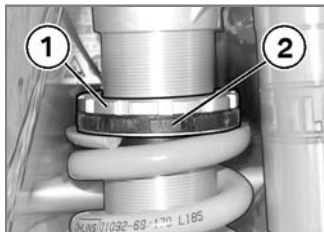
Adjust the damping characteristic to suit the spring preload. ◀

! Adjusting the spring preload while the motorcycle is being ridden can lead to accidents. Adjust the spring preload only when the motorcycle is stationary. ◀

- Make sure the ground is level and firm and park the motorcycle.



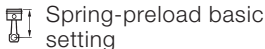
- Adjust spring preload with adjustment rings **1** and **2**.



- Lock adjustment ring **2** with onboard toolkit.
- To loosen locking, turn adjustment ring **1** counter-

clockwise with onboard toolkit.

- To increase spring preload, turn adjustment ring **2** clockwise.
- To decrease spring preload, turn adjustment ring **2** counterclockwise.



With OE Sport suspension:
 187 lbs (85 kg) (Full tank of gas, with rider)
 6.2 in (158 mm) (Spring length (rear wheel not loaded))<

Adjusting rebound-stage damping for rear wheel

- Make sure the ground is level and firm and park the motorcycle.

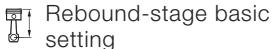


- Adjust rebound-stage damping on adjustment ring **1**.



- To increase rebound-stage damping, turn adjustment ring **1** counterclockwise.

- To decrease rebound-stage damping, turn adjustment ring **1** clockwise.



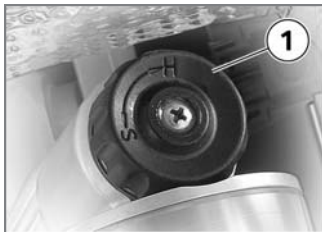
With OE Sport suspension:
Turn lower adjustment wheel (on piston rod) completely to right, then back 16 clicks. (Full tank of gas, with rider 187 lbs (85 kg))<

Adjusting pressure-stage damping for rear wheel

- Make sure the ground is level and firm and park the motorcycle.

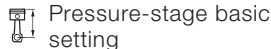


- Adjust pressure-stage damping on adjustment ring **1**.



- To increase pressure-stage damping, turn adjustment ring **1** in direction H.

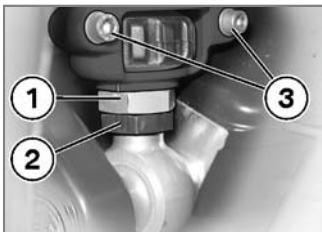
- To decrease pressure-stage damping, turn adjustment ring **1** in direction S.



With OE Sport suspension:
Turn upper adjustment wheel (on expansion tank) completely to right, then back 14 clicks. (Full tank of gas, with rider 187 lbs (85 kg))<

Adjusting suspension strut length

- Make sure the ground is level and firm and park the motorcycle.
- Removing rear wheel (➡ 81)



- Loosen screws **3** of splash guard.
- Unscrew nut **2** by turning clockwise.
- To increase suspension strut length, turn nut **1** counterclockwise.
- To decrease suspension strut length, turn adjustment ring **1** counterclockwise.
- After adjusting desired length, lock nut **2** by turning counterclockwise.


 Suspension-strut length basic setting

With OE Sport suspension:
Screw lower spring plate completely down. (Full tank of gas, with rider 187 lbs (85 kg))◀


- Align splash guard as shown in illustration.
- Tighten screws **3** of splash guard.
- Installing rear wheel (➡ 82)

Tires

Checking tire pressures


 Incorrect tire pressure worsens handling of the motorcycle and can lead to accidents.

Ensure proper tire pressure.◀

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


To avoid a sudden loss of tire pressure, use a metal valve cap with rubber sealing ring

on the rear wheel and tighten it securely.◀

 Incorrect tire pressure reduces the life of the tires.


Ensure proper tire pressure.◀

- Check the tire pressure using the following data.

 Front tire pressure

31.9 psi (2.2 bar) (Single rider, with cold tire)

36.3 psi (2.5 bar) (Driver with passenger and/or load, with cold tire)

 Rear tire pressure

36.3 psi (2.5 bar) (Single rider, with cold tire)

42.1 psi (2.9 bar) (Driver with passenger and/or load, with cold tire)

In case of insufficient tire pressure:

- Correct tire pressure.

Riding

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Checklist	56
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Parking your motorcycle	59
Refueling	60
General brake system	61
Brake system with BMW Motorrad ABS ^{OE}	62

Safety instructions

Rider's equipment

Do not ride without the correct clothing. Always wear:

- Helmet
- Rider's suit
- Gloves
- Boots


This applies even to short journeys, and to every season of the year. Your authorized BMW Motorrad retailer will be glad to advise you and has 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 tire pressure
- poor tire tread
- etc.

Correct loading

 Overloading and uneven loading can diminish the riding stability of the motorcycle.

Do not exceed the gross weight limit and observe the loading information. ◀

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 colorless and odorless but highly toxic.

 Inhaling 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 closed rooms. ◀

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 run the engine with the spark-plug cap removed
- Stop the engine immediately if it misfires
- Use unleaded fuel only
- 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.

Make sure that no highly flammable materials can come in 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. After starting, ride off immediately. ◀

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

 Tampering with control unit of 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 control unit of electronic engine-management system can result in mechanical loads that the motorcycle's components 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
- Front and rear brake fluid levels
- Clutch
- Clutch fluid level
- Shock absorber setting and spring preload
- Tread depth and tire pressure
- Firm seating of cases and luggage

At regular intervals:

- Engine oil level (every time you refuel)
- Brake pad wear (during every third stop for refueling)

Starting

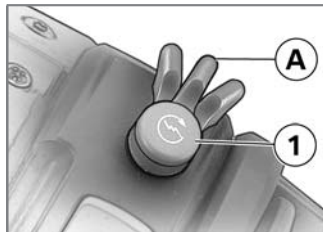
Side stand

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 transmission in neutral and then engage a gear before retracting the side stand.

Transmission

You can start the engine when the transmission is in neutral or if you pull the clutch with a gear engaged. Do not engage the clutch until after switching on the ignition, as otherwise the engine cannot be started. When the transmission is in neutral, the green neutral indicator light is on and the gear indicator in the multifunction display shows 0.

Starting engine



- Emergency ON/OFF switch **1** in operating position **A**.
- Switch on ignition.
 - » Pre-ride check is performed. (➡ 57)

With OE Anti-Lock Brake System (ABS):

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



- Press starter button **1**.

▶ At extremely low temperatures it may be necessary to operate the throttle twist grip during starting. At ambient temperatures below 32 °F (0 °C), actuate 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.
- » Consult the troubleshooting chart if the engine refuses to start. (➔ 104)

Pre-ride check


After the ignition is switched on, the instrument cluster carries out a general warning lamp test. In the process the warning lamp first lights up yellow and then red for checking. This test, called a "Pre-Ride Check", is indicated by the lettering CHECK! in the display. If the engine is started during the test, the test is canceled.

Phase 1


 General warning lamp lights up red.

- CHECK! warning appears.

Phase 2

 General warning lamp lights up yellow.


- CHECK! warning appears. If the general warning lamp is not shown:

 If the general warning light cannot be displayed, several malfunctions cannot be indicated.

Watch the display of the general warning light in red and yellow. ◀

- Have the malfunction corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

ABS warning lamps^{OE}

 Display 1.



Display 2.

The following description is made based on display 1.

ABS self-diagnosis^{OE}

The readiness for operation of the BMW Motorrad ABS is checked by the self-diagnosis. Self-diagnosis is performed automatically when you switch on the ignition. To check the wheel sensors, the motorcycle must be driven a few yards.

Phase 1

- » Checking the diagnosable system components while stopped.



ABS warning lamp flashes once per second.

Phase 2

- » Checking the wheel sensors while starting off.



ABS warning lamp flashes once per second.

Phase 3

- » ABS self-diagnosis completed.
- » The ABS warning light goes out.

If an ABS fault is indicated after the ABS self-diagnosis is completed:

- Continued driving is possible. It must be noted that the ABS function is not available.
- Have the malfunction corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Running in

The first 600 miles (1,000 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.

Adhere to the specified engine run-in speeds. ◀

- Do not exceed the engine run-in speeds.




Engine run-in speed

4000 min⁻¹

- Do not accelerate at full throttle.
- Avoid low engine speeds at full load.
- After 300 - 750 miles (500 - 1,200 km), have the first inspection performed.


Brake pads

New brake pads must "bed down" and therefore do not achieve their optimum friction levels during the first 300 miles (500 km). This initial reduction in braking efficiency can be compensated for by exerting greater pressure on the levers.

 New brake pads can extend stopping distance by a significant margin. Brake early. ◀


Tires

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

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


Parking your motorcycle

Placing 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 handbrake lever.
- Hold motorcycle upright and balanced.
- Use your left foot to extend 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 motorcycle to side until its weight is taken by stand and dismount to left.

 When you prop the motorcycle on the side stand, the surface of the ground will determine whether it is better to turn the handlebars to the left or right. However, the motorcycle

is more stable on a level surface with the handlebars turned to the left than with the handlebars turned to the right.

On level ground, always turn the handlebars to the left to set the steering lock.◀

- Turn handlebars to full left or right lock position.
- Check that motorcycle is standing firmly.

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

Remove from side stand

- Unlock steering lock.
- From the left, grip the handlebars with both hands.
- Pull handbrake lever.
- Swing right leg over seat while lifting motorcycle into upright position.

- Hold 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 vehicle.◀

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

Refueling

⚠ Fuel is highly flammable. Fire at the fuel tank can result in fire and explosion. Do not smoke. Never bring a naked flame near the fuel tank.◀

⚠ Fuel expands when exposed to heat. When the tank is overfilled, fuel can escape and get onto the rear wheel. This results in a danger of falling.

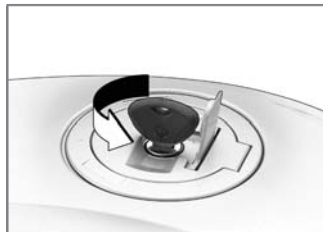
Do not fill the tank past the bottom edge of the filler neck.◀

⚠ Fuel attacks plastic surfaces, making them cloudy or unattractive.

Wipe off any fuel that gets on to plastic parts immediately.◀


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


- Make sure the ground is level and firm and park the motorcycle.




- Open protective cap.

- Open fuel tank cap with ignition key by turning counterclockwise.
- Fill tank with fuel of quality listed below.


 The nominal value for mileage and consumption apply for the recommended fuel type. ◀

 Recommended fuel type

Super Plus unleaded (98 RON/88 MON)

 Fuel type can be used with poorer performance and consumption

Super unleaded (95 RON/85 MON)

 Usable fuel capacity

4.5 gal (17 l)


 Reserve share of fuel capacity

1.1 gal (4 l)


- Close fuel tank cap with firm pressure.
- Remove key and close protective cap.

General brake system

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 disks and pads


might be wet and the brakes might not take effect immediately.

Brake early until the brakes are dry or braked until dry. ◀

Salt on brakes

 The full braking effect can be delayed if the motorcycle is ridden on salt-covered roads and the brakes are not applied for some time. Brake early until the salt layer of the brake disks and brake pads has been braked off. ◀


Oil or grease on brakes

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


Especially after repair and maintenance tasks, make sure that the brake disks and

brake pads are free of oil and grease. ◀

Dirt or mud on brakes

 When the motorcycle is ridden on loose surfaces or muddy roads, the brakes may fail to take effect immediately because of dirt or moisture on the disks or brake pads.

Brake early until the brakes are braked clean. ◀

 Driving on unpaved or dirty roads leads to increased brake pad wear. Check the brake pad thickness more often and replace the brake pads sooner. ◀

Brake system with BMW Motorrad ABS^{OE}

How does ABS work?

The maximum braking force that can be transferred to the road surface is partially dependent on the friction coefficient of the road surface. Gravel, ice, snow and wet roads offer a considerably poorer friction coefficient than a dry, clean asphalt surface. The poorer the friction coefficient of the road surface is, the longer the braking distance will be.

If the maximum transferrable braking force is exceeded when the driver increases the brake pressure, the wheels begin to block and driving stability is lost, and a fall can result. Before this situation occurs, ABS intervenes and adjusts the brake pressure

to the maximum transferrable braking force. This enables the wheels to continue to turn and maintains driving stability regardless of the road surface condition.

What happens when rough roads are encountered?

Bumpy or rough roads can briefly lead to a loss of contact between the tires and the road surface, until the transferrable braking force is reduced to zero. If braking is carried out in this situation, ABS must reduce the brake pressure to ensure driving stability when restoring contact to the road. At this point in time, the BMW Motorrad ABS must assume extremely low friction coefficients (gravel, ice, snow) so that the running wheels

turn in every imaginable case and the driving stability is ensured. After detecting the actual conditions, the system adjusts the optimum brake pressure.

How is the shortest braking distance achieved?

The dynamic load distribution between the front and rear wheel changes during braking. The heavier you brake, the more the front wheel is loaded. The greater the wheel load, the more braking force can be transferred.

To achieve the shortest possible braking distance, the front brake must be applied quickly and with increasing force. This optimally utilizes the dynamic load increase on the front wheel. At the same time, the clutch should also

be actuated. With the "forced braking" often practiced in which the brake pressure is generated as quickly as possible and with great force, the dynamic load distribution cannot follow the increased deceleration and the braking force cannot be completely transferred to the road surface. To prevent the front wheel from locking, the ABS system must intervene and reduce the brake pressure; the braking distance increases.

Reserves for safety

But remember: 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 during severe braking, a high level of tire 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 braking, bear in mind that the ABS control cannot

be relied on in all circumstances to prevent the rear wheel from lifting clear of the ground. ◀

What are the design characteristics of the BMW Motorrad ABS?

The BMW Motorrad ABS ensures driving stability on any surface within the limits of driving physics. The system is not optimized for special requirements resulting under extreme weather conditions offroad or on the racetrack.

Special situations

To detect the tendency of the wheels to lock up, the speeds of the front and rear wheel are compared. If implausible values are detected over a longer period of time, the ABS function is deactivated for safety reasons and an ABS

fault is indicated. The condition for a fault message is the completed self-diagnosis. In addition to problems on the BMW Motorrad ABS, unusual driving conditions can also lead to a fault message.

Unusual driving conditions:

- Driving on the rear wheel (wheely) for a longer period.
- Rear wheel spinning in place with front brake pulled (burn out).
- Heating up on the main or auxiliary stand at idle or with gear engaged.
- Locked-up rear wheel for a longer period of time, e.g. when riding downhill offroad.

Should a fault message result due to one of the driving conditions described above, the ABS function can be reacti-

vated by switching the ignition off and then on again.

How important is regular maintenance?



Any technical system is always only as good as its maintenance condition.

To ensure that the BMW Motorrad Integral ABS is in an optimally maintained condition, it is vital that the specified inspection intervals be complied with. ◀

Accessories

General instructions	66
Onboard socket	66

General instructions

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

Your authorized BMW Motorrad retailer is the right place to go for genuine BMW parts and accessories, other BMW-approved products, and 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 these products.

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



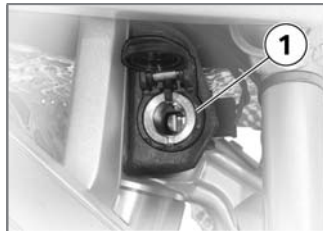
BMW Motorrad cannot examine or test each product of outside origin to

ensure that it can be used on or in connection with BMW motorcycles without constituting a safety hazard. Nor is this guarantee provided when the official approval of a specific country has been granted. 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. The motorcycle must not infringe on national road-vehicle construction and use regulations.

Onboard socket

Ratings



The supply to the 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. Approx. 15 minutes after switching

off the ignition and/or during starting, the onboard socket is switched off to take the load off the vehicle electrical system.

Cable routing

The cables from the onboard 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



Improperly routed cables can impede the rider.

Route the cables as described above. ◀

Maintenance

General instructions	70	Jump-starting	91
Onboard toolkit	70	Battery	92
Supplemental onboard toolkit for sport running gear (OE)	70		
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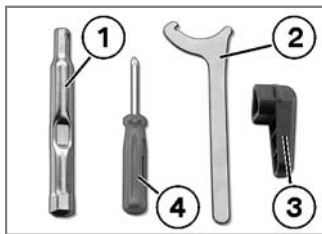
General instructions

The 'Maintenance' chapter describes work involving the checking and replacement of wear parts that can be performed with a minimum of effort.

If special tightening torques are to be taken into account for assembly, these are listed. An overview of all required tightening torques is contained in the chapter "Technical Data".

Information on additional maintenance and repair work is provided in the Repair Manual for your motorcycle on CD-ROM (RepROM), which you can obtain from your authorized BMW Motorrad retailer.

Onboard toolkit

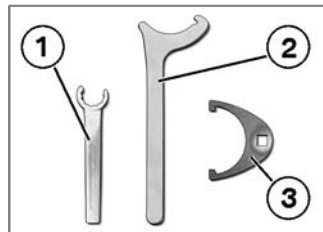


- 1 Extension for hook wrench
- 2 Hook wrench
- 3 Lever for oil filler cap
- 4 Multi-blade screwdriver with Phillips/straight blade

▶ For additional maintenance work on your motorcycle, BMW Motorrad offers a supplemental set for the onboard toolkit. Additional information is available from

your authorized BMW Motorrad retailer. ◀


Supplemental onboard toolkit for sport running gear (OE)





- 1 Wrench for adjusting suspension strut length
- 2 Second hook wrench
- 3 Hook wrench for adjusting front spring preload can be used in conjunction with 3/8" tool

Engine oil

Checking engine oil level

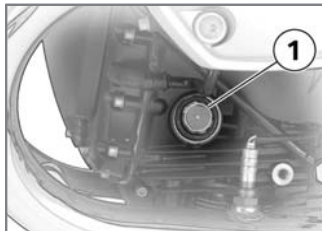
 The engine can seize if the oil level is low, and this can lead to accidents. Always make sure that the oil level is correct. ◀

 The oil level varies with the temperature of the oil. The higher the temperature, the higher the level of oil in the sump. Checking the oil level with the engine cold or after a short trip leads to misinterpretations and therefore to incorrect oil fill quantities. To ensure that the display of the engine oil level is correct, only check the oil level after a longer trip. ◀

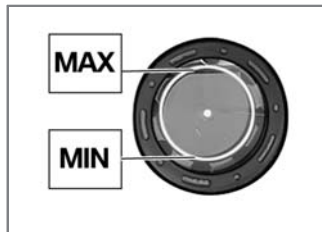
 The warning on insufficient engine oil pressure is no substitute for the function of an oil-level indica-


tor. The correct engine oil level can only be checked at the oil sight glass. ◀

- Make sure the ground is level and firm and park the motorcycle at operating temperature.
- Wait five minutes after switching off the engine.
- Hold the motorcycle is vertical.



- Read off the oil level from the engine oil level display **1**.



 Specified level of engine oil

between MIN and MAX marking

If the oil level is below the MIN mark:

- Top up engine oil.

If the oil level is above the MAX mark:

- Have oil level corrected by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Topping up engine oil

- Checking engine oil level (➔ 71)



! Both too little and too much engine oil can lead to engine damage. Always make sure that the oil level is correct. ◀

- Wipe the area around the filler neck clean.
- Remove cap of fill location for engine oil **1** with onboard toolkit.
- Add engine oil up to specified level.

- Install cap of fill location for engine oil with onboard toolkit.

General brake system

Brake safety

A properly functioning 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.

In this case, have the brake system checked by a specialized workshop, preferably by an authorized BMW Motorrad retailer.

! Incorrect working practices endanger the reliability of the brakes.

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

by an authorized BMW Motorrad retailer. ◀

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 no clear pressure points are perceptible:

- Have the brakes checked by a certified workshop, preferably an authorized BMW Motorrad retailer.

Brake pads

Checking front brake pad thickness

! Brake pads worn past the minimum permissible thickness can impair braking efficiency and under cer-

tain circumstances they can cause damage to the brake system.

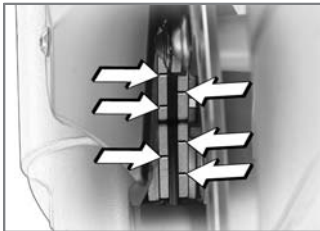
In order to ensure the operating reliability of the brake system, make sure that the brake pads are not worn beyond their minimum thickness. ◀


- Make sure the ground is level and firm and park the motorcycle.



- Visually inspect left and right brake pads to ascertain their thickness. Direction of view: between

wheel and fork tube at brake caliper.




 Front brake-pad wear marking

The wear markings must be clearly visible on the brake pads.

If the wear indicating marks are no longer clearly visible:

- Have the brake pads replaced by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Checking brake pad thickness at rear

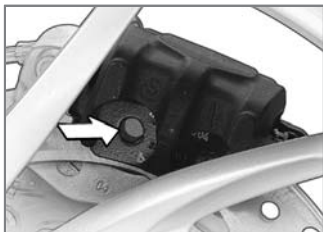
 Brake pads worn past the minimum permissible thickness can impair braking efficiency and under certain circumstances they can cause damage to the brake system.

In order to ensure the operating reliability of the brake system, make sure that the brake pads are not worn beyond their minimum thickness. ◀

- Make sure the ground is level and firm and park the motorcycle.



- Check brake pads on rear brake caliper with visual inspection from left.



Rear brake-pad thickness

Brake disk must not be visible through bore hole of inner brake pad.

If the brake disk is visible:

- Have the brake pads replaced by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Brake fluid

Checking front brake fluid level



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

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

- Move handlebars into straight-ahead position.




- Read off brake fluid level at front brake-fluid reservoir **1**.



The brake fluid level in the brake-fluid reservoir drops due to brake pad wear. ◀




 Front brake fluid level

The brake fluid level must not fall below the MIN mark. (Motorcycle standing upright with handlebars straight ahead)

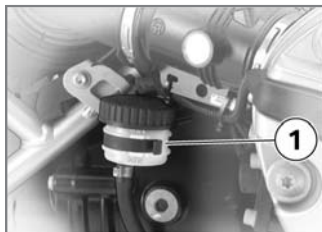
If the brake fluid level drops below the permissible level:

- Have the defect corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.


Checking rear brake fluid level

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


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



- Read off brake fluid level at rear brake-fluid reservoir **1**.

 The brake fluid level in the brake-fluid reservoir drops due to brake pad wear. ◀



 Rear brake fluid level

The brake fluid level must not fall below the MIN mark. (Vehicle is standing straight)

If the brake fluid level drops below the permissible level:

- Have the defect corrected as soon as possible by a specialized workshop,

preferably an authorized BMW Motorrad retailer.

Clutch

Checking clutch operation

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

If no clear pressure point can be felt:

- Have the clutch checked by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Checking clutch fluid level

- Make sure the ground is level and firm and hold the motorcycle vertically.
- Move handlebars into straight-ahead position.



- Read off the clutch fluid level at the reservoir **1**.

▶ Due to clutch wear, the fluid level rises in the clutch fluid reservoir.◀


▶ The clutch system is filled with a special hydraulic fluid that does not require changing.◀



Clutch fluid level

The clutch fluid level must not drop.


If the fluid level drops:

 Unsuitable hydraulic fluids could cause damage to the clutch system. No fluids may be poured in.◀


- Have the defect corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Tires

Checking tire tread depth

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

- Make sure the ground is level and firm and park the motorcycle.
- Measure the tire tread depth in the main tread grooves with wear indicating marks.

 Tires have wear indicators integrated into the main tread grooves. If the tire tread has worn down to the level of the marks, the tire is completely worn. The locations of the marks are indicated on the edge of the tire, e.g. by the letters TI, TWI or by an arrow. ◀

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

- Replace tire.

Rims

Checking rims

- Make sure the ground is level and firm and park the motorcycle.
- Visually inspect the rims for defects.
- Have damaged rims checked and, if necessary, replaced by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Wheels

Approved wheels and tires

For every size of tire, BMW Motorrad has tested certain makes and approved those it has found to be roadworthy. If you use wheels and tires that have not been approved, BMW Motorrad cannot assess their suitability or pro-

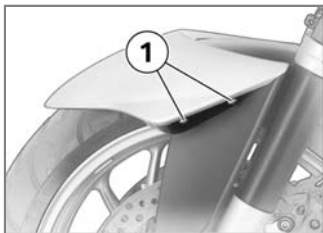
vide any guarantee as to their road safety.

Use only wheels and tires that BMW Motorrad has approved for your type of motorcycle.

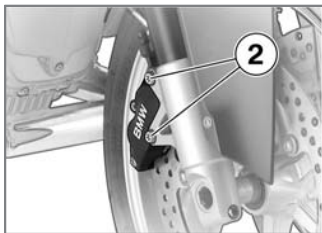
Extensive information is available at your authorized BMW Motorrad retailer or on the Internet at www.bmw-motorrad.com.

Removing front wheel

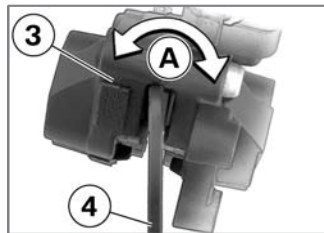
- Place motorcycle on an auxiliary stand; BMW Motorrad recommends BMW Motorrad rear wheel stand.
- Installing rear wheel stand (➡ 84)



- Remove screws **1** on left and right.
- Lift off mudguard toward front while pressing part somewhat to side.



- !** 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 disk on reassembly. Do not operate the handbrake lever when the brake calipers have been removed. ◀
- Remove securing screws **2** of left and right brake calipers.



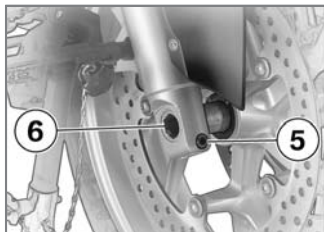
- Press brake pads in brake caliper **3** somewhat apart with rotary movements **A** against brake disks **4**.
- Mask off area of wheel rim that could be scratched in process of removing brake calipers.
- Carefully pull brake calipers back and out until clear of brake disks.

With OE Anti-Lock Brake System (ABS):

- When pulling off left brake caliper, make sure that

ABS sensor cable is not damaged.◀

- Raise front of motorcycle until front wheel can rotate freely. To lift motorcycle, BMW Motorrad recommends using BMW Motorrad front wheel stand.
- Fitting front wheel stand (➡ 83)



- Remove axle clamping screw **5**.
- Remove quick-release axle **6** while supporting wheel.

▶ BMW Motorrad offers an adapter piece for removing the quick-release axle. This adapter can be combined with any commercially available 22-mm open-end or ring wrench. The adapter with the BMW special tool number 363691 can be obtained from your authorized BMW Motorrad retailer.

The supplemental onboard toolkit available as an optional accessory also contains a tool for removing the quick-release axle.◀

- Roll front wheel forward to remove.

With OE Anti-Lock Brake System (ABS):

- When rolling out wheel, watch ABS sensor on left side.◀



- Remove spacing bushing **7** on left side from wheel hub.

Installing front wheel

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

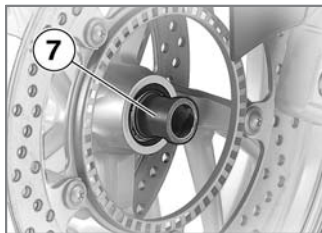
Always have the tightening torques checked by a specialized workshop, preferably an authorized BMW Motorrad retailer.◀

! During the following work, parts of the front brake, in particular of the BMW Motorrad ABS, can be damaged.

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.

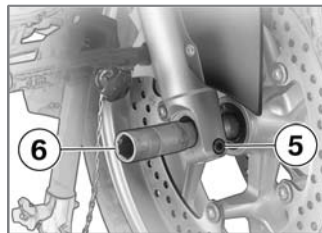
Observe the direction of rotation arrows on the tires or on the rim. ◀





- Mount spacing bushing **7** on left side on wheel hub.
- Roll front wheel into front forks.

With OE Anti-Lock Brake System (ABS):


- When rolling in wheel, watch ABS sensor on left side. ◀



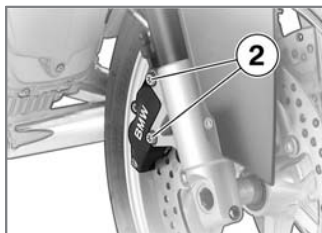
- Lift front wheel and install quick-release axle **6** with appropriate torque.
 -  Quick-release axle in axle mount
- 37 lb/ft (50 Nm)
- Tighten axle clamping screw **5** with appropriate torque.
 -  Clamping screw for quick-release axle
- 14 lb/ft (19 Nm)
- Remove front wheel stand.
- Ease brake calipers onto brake disks.

With OE Anti-Lock Brake System (ABS):




 The cable of the ABS sensor could chafe through if it comes into contact with the brake disk. Ensure installation of the ABS sensor cable close to the front suspension. ◀

- Route ABS sensor cable **4** as shown in picture. ◀

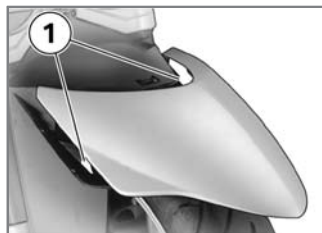


- Install mounting screws **2** with appropriate torque.

 Brake caliper on slider tube


22 lb/ft (30 Nm)

- Remove adhesive tape from wheel rim.



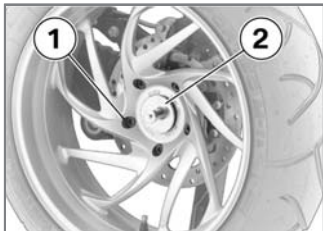
- Insert mudguard in bracket **1**.
- Install screws on left and right.
- Operate brakes several times until brake pads contact brake disk.
- Remove a rear wheel stand if mounted.

Removing rear wheel

 Components of the exhaust system can be hot.


Do not touch hot parts of the exhaust system. ◀

- Place motorcycle on an auxiliary stand; BMW Motorrad recommends BMW Motorrad rear wheel stand.
- Installing rear wheel stand (➔ 84)
- Shift into first gear.



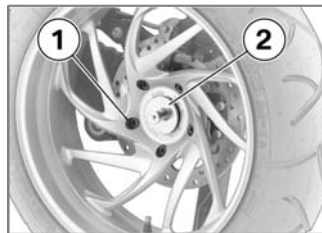
- Remove the 5 studs **1** from the rear wheel while supporting the wheel.
- Remove lock washer **2** of rear wheel stand if necessary.
- Lower rear wheel to ground.
- Roll rear wheel out toward rear.

Installing rear wheel


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

Always have the tightening torques checked by a specialized workshop, preferably an authorized BMW Motorrad retailer. ◀

- Make sure that the wheel mount and wheel hub are grease-free.
- Place the rear wheel on the wheel mount.



- Remove lock washer **2** of auxiliary stand if necessary.
- Screw in the wheel studs **1** hand-tight and tighten diagonally with appropriate torque.

 Rear wheel on wheel carrier

44 lb/ft (60 Nm)


Tightening sequence: Diagonally

- Remove auxiliary stand.

Front wheel stand

Use

A front wheel stand for simple, safe changing of the front wheel is available from BMW Motorrad. The front wheel stand with the BMW special tool number 36 3 970 can be obtained from your authorized BMW Motorrad retailer.

 The BMW Motorrad front wheel stand is not designed for holding motorcycles without a center or other auxiliary stands. A motorcycle standing on the front wheel stand and the rear wheel alone can fall over. Place the motorcycle on the center stand or an auxiliary stand before lifting it with the BMW Motorrad front wheel stand. ◀

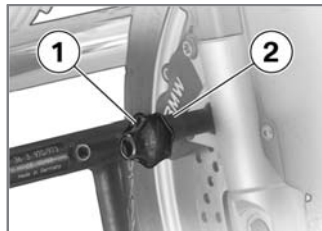
Fitting front wheel stand


- Place motorcycle on an auxiliary stand; BMW Motorrad recommends BMW Motorrad rear wheel stand.
- Installing rear wheel stand (➔ 84)



- Loosen adjusting screws **1**.
- Push two mounting pins **2** far enough apart that front forks fit between them.
- Use locating pins **3** to set front wheel stand to desired height.
- Center the front wheel stand relative to the front wheel

and push it against the front axle.



- Push two mounting pins **2** through triangles of brake caliper support toward inside so that front wheel can still be rolled through.
-  With BMW Motorrad ABS, the ABS sensor ring can be damaged. Only push the mounting pin so far inward that it does not touch the sensor ring of the BMW Motorrad ABS. ◀
- Tighten adjusting screws **1**.



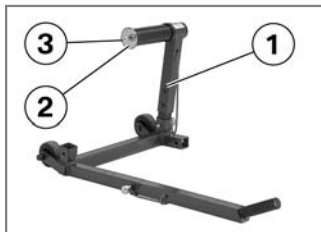
- Apply uniform pressure to push the front wheel stand down and raise the motorcycle.

Rear wheel stand

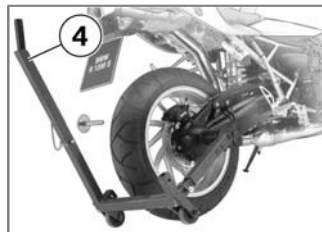
Rear wheel stand

In order to be able to work safely on motorcycles without center stands, BMW Motorrad offers a rear wheel stand. This rear wheel stand with the BMW special tool number 36 3 980 can be obtained from your authorized BMW Motorrad retailer.

Installing rear wheel stand



- Set the desired height of the rear wheel stand using the bolts **1**.
- Remove the lock washer **2**; to do so, press the unlock button **3**.



- Push the rear wheel stand from the right into the rear axle.
- Apply the retaining disk from the left; to do so, press the unlock button.
- Place your left hand on the passenger grab handle of the motorcycle and your right hand on the lever of the rear wheel stand **4**.




- Raise the motorcycle, simultaneously pressing the lever downwards until the motorcycle stands vertically.
- Press the lever onto the ground.

Lamps


General instructions

A bulb failure is signaled to you in the multifunction display by a warning indicator.


 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 pressurized and can cause injury if damaged.

Wear eye and hand protection when replacing bulbs. ◀

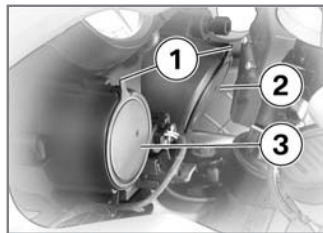
 An overview of the bulb types installed in your motorcycle is provided in the chapter "Technical Data". ◀

 Do not touch the glass of new bulbs with your fingers. For installation, use a clean, dry cloth. Dirt deposits, in particular oil and grease, interfere with heat radiation from the bulb. Overheating and therefore short service life of the bulbs are the consequence. ◀

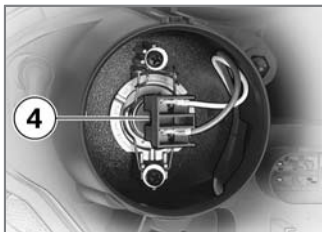
Replacing high-beam/low-beam bulb

 If it is not standing firmly, the motorcycle could topple in the course of the operations described below. Make sure that the motorcycle is steady on its stand. ◀

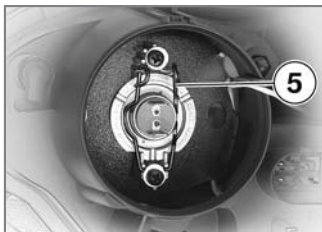
- Make sure the ground is level and firm and park the motorcycle.
- Switch off ignition.



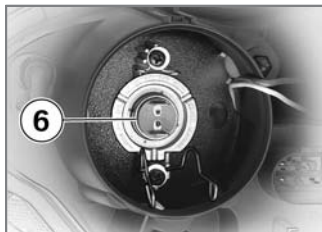
- Remove cover **2** (low beam) or cover **3** (high beam) by pulling on lever **1**.



- Disconnect plug **4**.



- Remove spring strap **5** from detents and fold to side.



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



High-beam headlight bulb

H7 / 12 V / 55 W

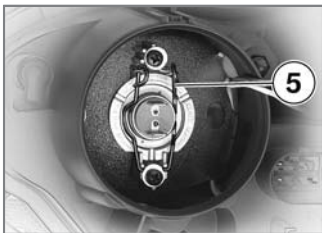


Low-beam headlight bulb

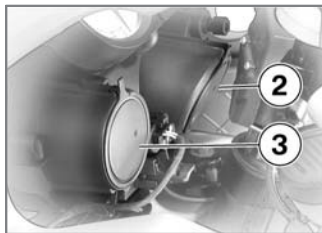
H7 / 12 V / 55 W



- Install bulb while ensuring correct position of lug **7** (high beam bottom/low beam top) and make sure that bulb is properly engaged.



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

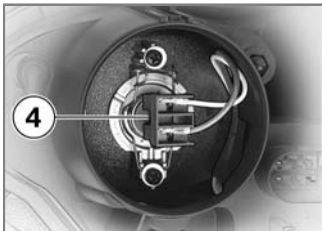


- Install cover **2** (low beam) or cover **3** (high beam).

Replacing side light bulb

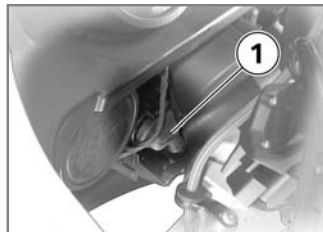
! If it is not standing firmly, the motorcycle could topple in the course of the operations described below. Make sure that the motorcycle is steady on its stand. ◀

- Make sure the ground is level and firm and park the motorcycle.
- Switch off ignition.

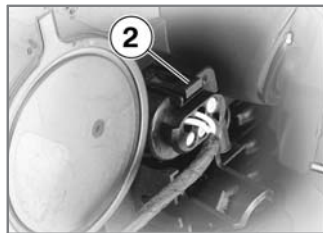


- Close connector **4**.

▶ To achieve better accessibility, turn the handlebars to the left. ◀



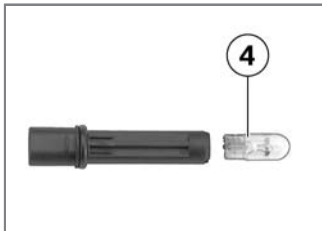
- Take off cover cap **1**.




- Disconnect connector **2**.

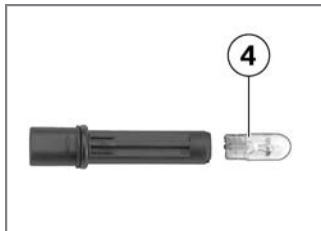


- Remove bulb socket **3** by turning counterclockwise.



- Remove bulb **4** from bulb holder.
- Replace defective bulb.

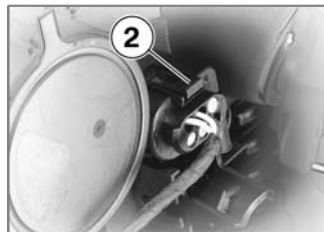
 Side-light bulb
W5W / 12 V / 5 W



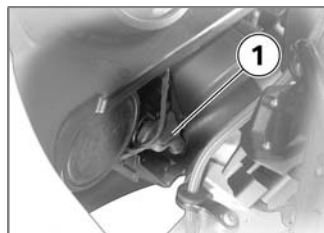
- Press bulb **4** into socket.



- Install bulb socket **3** by turning clockwise.




- Close connector **2**.

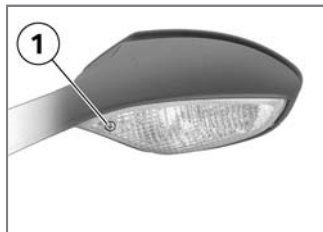


- Install cover cap **1**.

Replacing front turn indicator bulb

 If it is not standing firmly, the motorcycle could topple in the course of the operations described below. Make sure that the motorcycle is steady on its stand. ◀

- Make sure the ground is level and firm and park the motorcycle.
- Switch off ignition.




- Remove screw **1**.



- Pull lamp housing on screw connection side out of mirror housing.



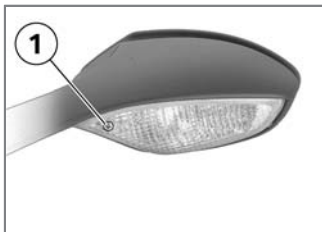
- Remove bulb holder **2** from lamp housing by turning it counterclockwise.

- Remove bulb **3** from bulb holder.
 - Replace defective bulb.
-  Bulb of front turn indicators

R10W / 12 V / 10 W



- Insert bulb **3** into bulb socket.
- Install bulb socket **2** in lamp housing by turning clockwise.
- Insert lamp housing in mirror housing.



- Install screw **1**.

Replacing rear turn indicator bulb

! If it is not standing firmly, the motorcycle could topple in the course of the operations described below. Make sure that the motorcycle is steady on its stand. ◀

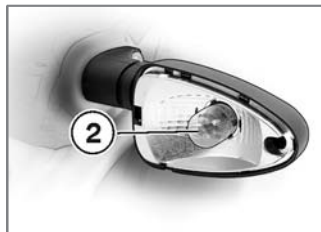
- Make sure the ground is level and firm and park the motorcycle.




- Remove screw **1**.

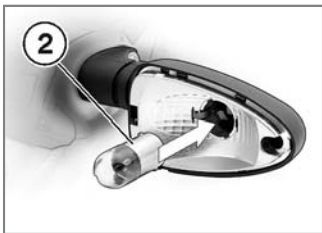


- Pull glass on screw connection side out of mirror housing.



- Remove bulb **2** from light housing by turning it counterclockwise.
 - Replace defective bulb.
-  Bulb of rear turn indicators

R10W / 12 V / 10 W



- Install bulb **2** by turning clockwise in lamp housing.



- Install screw **1**.

Jump-starting

! The wires leading to the onboard 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 motorcycle electronics.

Do not use the onboard socket to jump-start the motorcycle. ◀



- Insert inside end of lens into lamp housing and close.

! 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. ◀

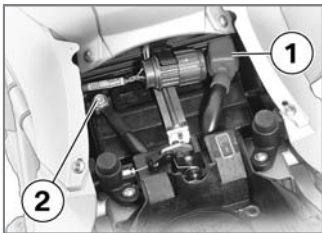
! A short-circuit can result if the crocodile clips of the jump leads are accidentally brought into contact with the motorcycle.

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 motorcycle electronics. The battery of the donor vehicle must have a voltage of 12 V. ◀


- Make sure the ground is level and firm and park the motorcycle.

- Removing driver's seat (➡ 42)
- When jump-starting engine, do not disconnect battery from onboard electrical system.



- Remove protective cap from positive battery terminal **1**.
- Run engine of donor vehicle during jump-starting.
- Begin by connecting one end of red jump lead to positive terminal of discharged battery and other end to positive terminal of donor battery.

- Connect black jump lead to negative terminal of donor battery and then to negative terminal **2** of discharged battery.
- Start engine of motorcycle with discharged battery in usual way; if engine refuses to start, wait a few minutes before repeating attempt to protect starter and supporting battery.
- Allow both engines to idle for a few minutes before disconnecting jump leads.
- First disconnect jump lead from negative terminal **2**, then from positive terminal **1**.

 To start the engine, do not use start sprays or similar items. ◀

- Installing driver's seat (➡ 42)

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 maximize 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 onboard electronics (clock etc.) will drain the battery.

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

During periods when the motorcycle is not being used, of more than four weeks, disconnect the battery from the motorcycle or connect a 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 when the motorcycle is not being used without having to disconnect the battery from the motorcycle's onboard systems. Additional information is available at your authorized BMW Motorrad retailer. ◀

Charging battery when connected



Charging the connected battery directly at the battery terminals can damage the motorcycle electronics. To charge the battery via the battery terminals, disconnect the battery first. ◀



Charging the battery via the onboard socket is only possible with suitable chargers. Unsuitable chargers can result in damage to the motorcycle electronics. Use BMW chargers with the part numbers 71 60 7 688 864 (220 V) or 71 60 7 688 865 (110 V). If in doubt, charge the disconnected battery directly at the terminals. ◀



If you switch on the ignition and the multifunction display and

indicator lights fail to light up, the battery is completely flat. Attempting to charge a completely flat battery via the onboard socket can cause damage to the motorcycle's electronics.

Always charge a completely drained battery directly at the terminals of the disconnected battery. ◀

- Charge disconnected battery via onboard socket.
- Comply with operating instructions of charger.



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

Charging disconnected battery

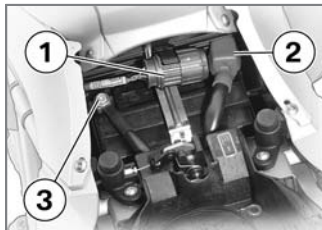
- Charge battery using a suitable charger.
- Comply with operating instructions of charger.
- Once battery is fully charged, disconnect charger terminal clips from battery terminals.

▶ In the case of longer periods when the motorcycle is not being used, the battery must be recharged regularly. See the instructions for caring for your battery. Always fully recharge the battery before returning it to use. ◀

Removing battery

- Make sure the ground is level and firm and park the motorcycle.

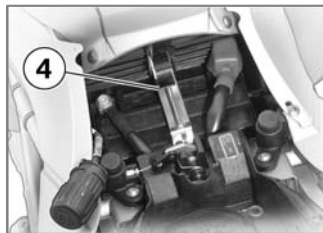
- Removing driver's seat (→ 42)
- Switch off ignition.



- Remove diagnosis plug **1** from holder.

⚠ An incorrect disconnection sequence increase the risk of short-circuiting. Always observe the proper sequence. ◀

- Remove negative cable **3** first.
- Then take off protective cap **2** of positive terminal and remove positive cable.



- Remove screw and take off battery retaining strap **4**.
- Lift out battery upward; if it is difficult to move, moving it back and forth will help.

Installing battery

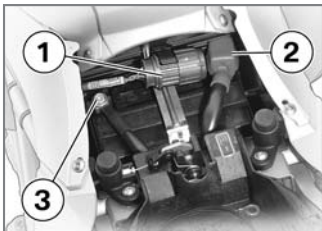
- Make sure the ground is level and firm and park the motorcycle.
- Switch off ignition.
- Insert battery into battery compartment, with positive terminal on right in direction of travel.




- Push battery retaining strap **4** over battery and install screw.

Always observe the proper sequence.
Never install the battery without the protective cap. ◀

- Install positive cable.
- Push on protective cap **2**.
- Install negative cable **3**.
- Install diagnosis plug **1** into holder.
- Installing driver's seat (⇒ 42)
- Setting clock (⇒ 35)




 An incorrect installation sequence increases the risk of short-circuiting.

Care

Care products	98
Washing your motorcycle	98
Cleaning sensitive motorcycle parts	99
Paint care	100
Protective wax coating	100
Storing motorcycle	100
Returning motorcycle to use	100

Care products

BMW Motorrad recommends that you use cleaning and care products available at your authorized BMW Motorrad retailer. BMW Care Products have been materials tested, laboratory tested, and field tested and provide optimum care and protection for the materials used in your motorcycle.

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


For cleaning, do not use any solvents such as nitro-thinners, cold cleaning agents, fuel or similar, and do not use cleaning agents that contain alcohol. ◀

Washing your motorcycle

BMW Motorrad recommends that you use BMW Insect Remover to soften and wash off insects and stubborn dirt from painted parts before washing the motorcycle.


To prevent stains, do not wash the motorcycle immediately after it has been exposed to bright 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 disks and pads

might be wet and the brakes might not take effect immediately.

Brake early until the brakes are dry or braked until dry. ◀

 Warm water intensifies the effect of salt.

Only use cold water to remove 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 sensitive motorcycle parts

Plastics


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

- Windshields and wind deflectors
- Headlight lens made of plastic
- Covering glass 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.

'Fly sponges' or sponges with hard surfaces can also lead to scratches. ◀

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

Windshield

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

 Fuel and chemical solvents attack the windshield material; the windshield becomes cloudy or dull. Do not use cleaning agents. ◀


Chrome

Especially in the case of road salt, carefully clean chrome parts with plenty of water and BMW auto shampoo. 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.

When cleaning the radiator, ensure that the fins are not bent. ◀

Rubber

Treat rubber components with water or BMW rubber protection coating agent.

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

Do not use silicon 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, e.g. tree resin or pollen.

However, remove particularly aggressive materials immediately; otherwise changes in the paint or discoloration can occur. These include spilled fuel, oil, grease, brake fluid as well as bird droppings. BMW Car Polish or BMW Paint Cleaner are recommended for this.

Contamination of the paint finish is particularly easy to see after the motorcycle has been washed. Remove this type of soiling with cleaning naphtha or spirit on a clean cloth

or cotton ball. BMW Motorrad recommends removing tar spots with BMW Tar Remover. Then add a protective wax coating to the paint at these locations.

Protective wax coating


To preserve the finish of your motorcycle, BMW Motorrad recommends using BMW Car Wax or agents that contain carnauba or synthetic waxes. A sure sign that the paint must be protected, is the fact that water no longer pearls up on it.

Storing motorcycle

- Clean the motorcycle.
- Remove the battery.
- Spray the brake and clutch lever, the side stand pivot and, if necessary, the main

stand pivot with a suitable lubricant.

- Coat bare metal and chrome-plated parts with an acid-free grease (e.g. Vaseline).
- Park the motorcycle in a dry room so that both wheels are unloaded.

 Before storing the vehicle, have the engine oil and the oil filter element changed by a specialized workshop, preferably an authorized BMW Motorrad retailer. Combine work for storing/returning to use with maintenance service or an inspection. ◀

Returning motorcycle to use

- Remove protective wax coating.
- Clean motorcycle.

- Install a charged battery.
- Before starting: Observe checklist.

Technical data

Troubleshooting chart	104
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Troubleshooting chart

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

Possible cause	Remedy
Emergency ON/OFF switch activated.	Emergency ON/OFF switch in operating position.
Side stand extended and gear engaged.	Retract side stand (➡ 56).
Gear engaged and clutch not operated.	Place transmission in neutral or disengage clutch (➡ 56).
Clutch disengaged with ignition switched off.	Switch on ignition first, then disengage clutch.
No fuel in tank.	Refueling (➡ 60)
Battery not adequately charged.	Charging battery when connected (➡ 93)

Threaded fasteners

Front wheel	Value	Valid
Clamping screw for quick-release axle		
M8 x 35	14 lb/ft (19 Nm)	
Quick-release axle in axle mount		
M24 x 1.5	37 lb/ft (50 Nm)	
Brake caliper on slider tube		
M8 x 32	22 lb/ft (30 Nm)	
Rear wheel	Value	Valid
Rear wheel on wheel carrier		
M10 x 40 x 1.25	Diagonally	
	44 lb/ft (60 Nm)	

Engine

Engine design	Longitudinally mounted four-stroke opposed twin with one overhead camshaft each, air-cooled with oil-cooled exhaust section and electronic engine management
Effective displacement	1170 cc (1170 cm ³)
Cylinder bore diameter	4 in (101 mm)
Piston stroke	2.9 in (73 mm)
Compression ratio	12.5:1
Rated output	122 hp (90 kW), - at engine speed: 8250 min ⁻¹
Maximum torque	83 lb/ft (112 Nm), - at engine speed: 6800 min ⁻¹
With OE Power reduction:	75 lb/ft (102 Nm), - at engine speed: 4800 min ⁻¹
Idle speed	1150 ^{±50} min ⁻¹

Fuel

Recommended fuel type	Super Plus unleaded (98 RON/88 MON)
Fuel type can be used with poorer performance and consumption	Super unleaded (95 RON/85 MON)
Usable fuel capacity	4.5 gal (17 l)

Reserve share of fuel capacity	1.1 gal (4 l)
Engine oil	
Engine oil capacity	1.1 gal (4 l), with filter change
Lubricant	Engine oil 20W-50
Engine oil top-up quantity	0.5 quarts (0.5 l), difference between MIN and MAX
Oil grades	Engine oils of the API classification SF or better. Engine oils of the ACEA classification A2 or better. BMW Motorrad recommends not using synthetic oils for the first 6,000 miles (10,000 km). Ask your BMW Motorrad retailer for engine oils suitable for your motorcycle.
Permissible viscosity classes	
SAE 5 W- ≥ 30	-4...68 °F (-20...20 °C), Operation at low temperatures
SAE 10 W-40	14...86 °F (-10...30 °C), Operation at moderate temperatures
SAE 15 W- ≥ 40	≥ 32 °F (≥ 0 °C)
SAE 20 W- ≥ 40	≥ 32 °F (≥ 0 °C)
SAE 5 W- ≥ 50	≥ -4 °F (≥ -20 °C), High-quality and synthetic oil for operation at all temperatures

SAE 10 W- ≥ 50	≥ -4 °F (≥ -20 °C), High-quality and synthetic oil for operation at all temperatures
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Riding specifications

Top speed	>124 mph (>200 km/h)
Acceleration 0-62 mph (0-100 km/h)	3.15 s

Clutch

Clutch design	single dry plate with high-leverage pressure plate
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Transmission

Transmission design	Helical 6-speed transmission with integrated torsional vibration damper, claw shifting via sliding sleeves
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Gear ratios

Transmission primary gear ratio	1.824 (31:17 teeth)
Gear ratio in 1st gear	2.277 (41:18 teeth)
Gear ratio in 2nd gear	1.583 (38:24 teeth)
Gear ratio in 3rd gear	1.259 (34:27 teeth)

Gear ratio in 4th gear	1.033 (31:30 teeth)
Gear ratio in 5th gear	0.903 (28:31 teeth)
Gear ratio in 6th gear	0.805 (29:36 teeth)

Rear-wheel drive

Rear-wheel drive design	Shaft drive with bevel gears
Rear-wheel drive gear ratio	2.62:1

Running gear

Front suspension design	BMW Telelever, leading link mounted in engine and on telescopic fork, centrally positioned spring strut supported on leading link and main frame
With OE Sport suspension:	BMW Telelever, leading link mounted in engine and on telescopic fork, centrally positioned spring strut with adjustable rebound-stage damping and adjustable spring preload, supported on leading link and main frame.

Design of front suspension strut	Central spring strut with coil pressure spring and twin-tube gas-pressure shock absorber
With OE Sport suspension:	Central spring strut with coil pressure spring and twin-tube gas-pressure shock absorber, adjustable rebound-stage damping and adjustable spring preload.
Total spring travel of front suspension	4.3 in (110 mm), On wheel
Rear suspension design	BMW Paralever, consisting of rear-wheel swinging arm with centrally arranged suspension strut, torque strut supported on rear axle housing and on frame.
Rear-wheel suspension design	Central spring strut with single-tube gas-filled shock absorber, travel-dependent pressure-stage damping, steplessly adjustable rebound-stage damping and adjustable spring preload
With OE Sport suspension:	Central spring strut with single-tube gas-filled shock absorber, external expansion tank, adjustable rebound-stage damping and travel-dependent pressure-stage damping, steplessly adjustable spring preload and length adjustment
Total spring travel on rear wheel	4.7 in (120 mm)

Brakes

Front-wheel brake design	Hydraulic two-disk brake with 4-piston fixed calipers and floating brake disks
Front brake-pad material	Sintered metal
Rear-wheel brake design	Hydraulically actuated disk brake with 2-piston floating caliper and brake disk mounted on rear-wheel drive
Rear brake lining material	Organic

Wheels and tires

Front wheel design	Cast aluminum wheel with 5 double spokes, MT H2
Front-wheel rim size	3.50" x 17"
Front tire designation	120/70-17
Rear wheel design	Cast aluminum wheel with 5 double spokes, MT H2
Rear-wheel rim size	5.50" x 17"
With OE Wide tires:	6.00" x 17"
Rear tire designation	180/55-17
With OE Wide tires:	190/50-17

Tire pressures

Front tire pressure	31.9 psi (2.2 bar), Single rider, with cold tire 36.3 psi (2.5 bar), Driver with passenger and/or load, with cold tire
Rear tire pressure	36.3 psi (2.5 bar), Single rider, with cold tire 42.1 psi (2.9 bar), Driver with passenger and/or load, with cold tire

Electrical system

Capacity of onboard socket	5 A
Fuses	The electrical circuits are electronically protected. If an electronic fuse trips and de-energizes a circuit, the circuit is active as soon as the ignition is switched on after the fault has been rectified.

Battery

Battery design	AGM (Absorbent Glass Matt) battery
Battery voltage	12 V
Battery capacity	14 Ah

Spark plugs

Spark plug manufacturer and designation	Bosch YR5LDE
Spark-plug electrode gap	0.03±0.01 in (0.8±0.1 mm), New
Spark-plug electrode gap	0.04 in (1 mm), Wear limit

Bulbs

High-beam headlight bulb	H7 / 12 V / 55 W
Low-beam headlight bulb	H7 / 12 V / 55 W
Side-light bulb	W5W / 12 V / 5 W
Bulb of front turn indicators	R10W / 12 V / 10 W
Bulb of rear turn indicators	R10W / 12 V / 10 W

Frame

Frame design	Lattice-tube frame with steel front and center section, aluminum rear section and carrying drive unit
Location of type plate	On inside right of front panel carrier
Location of frame number	Upper midsection of frame front

Dimensions

Motorcycle length	84.7 in (2151 mm)
Motorcycle height	46.3 in (1177 mm), in DIN normal-load position; with mirrors
Vehicle width	34.3 in (870 mm), Across mirrors
Driver's seat height	32.7 in (830 mm), At unladen weight

Weights

Unladen weight	470 lbs (213 kg), DIN unladen weight, ready for road, 90 % full tank of gas, without OE
Permissible gross weight	904 lbs (410 kg)
Maximum payload (without OE)	434 lbs (197 kg)

Service

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BMW Motorrad Service

Advanced technology requires specially adapted methods of maintenance and repair.



If this maintenance and repair work is performed inexpertly, there is a danger of damage and associated safety risks.

BMW Motorrad recommends having corresponding work on your motorcycle carried out by a specialized workshop, preferably by an authorized BMW Motorrad retailer. ◀

You can contact your authorized BMW Motorrad retailer for information on the procedures included in BMW service, inspections and the annual inspection.

Have all maintenance and repair work carried out con-

firmed in the "Service" chapter in this manual.

Your authorized BMW Motorrad retailer is supplied with all the latest technical information, and therefore possesses the necessary technical know-how. BMW Motorrad recommends that you refer any questions about your motorcycle to your authorized BMW Motorrad retailer.

BMW Motorrad Service Quality

BMW Motorrad means not only quality workmanship and high reliability, but also an outstanding quality of service. To ensure that your BMW is always in optimum condition, BMW Motorrad recommends that you adhere to the regular maintenance schedule for your motorcycle, preferably having the work done by your

authorized BMW Motorrad retailer. For generous treatment of claims submitted after the warranty period has expired, evidence of regular maintenance is essential.

In addition, certain signs of wear may otherwise not be noticed until it is too late to correct them at moderate cost. The workshop personnel at BMW Motorrad retailers have thorough knowledge of your motorcycle and can take action before minor problems can turn into major trouble. 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

With all new BMW motorcycles, the BMW Motorrad Service Card protects you in the event of a breakdown with an extensive range of services such as breakdown assistance, motorcycle transportation etc. (differing regulations are possible in individual countries). In the case of a breakdown, contact the Mobile Service of BMW Motorrad. Here you will find our specialists ready to help with both advice and action. Important country-specific contact addresses and the relevant after-sales service organization phone numbers as well as information on Mobile Service and the retail network

can be found in the "Service Kontakt/Service Contact" brochures.

BMW Motorrad Service Network

With its worldwide service network, BMW Motorrad can attend to you and your motorcycle in over 100 countries around the globe. In Germany alone, there are approximately 200 authorized BMW Motorrad retailers ready to assist you.

All information on the international retail network is contained in the "Service Contact Europe" brochure and "Service Contact Africa, America, Asia, Australia and Oceania".

Maintenance work Intervals

Some maintenance tasks must 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 300 miles (500 km) and 750 miles (1,200 km).

BMW Annual Inspection

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

BMW Service

After the first 6,000 miles (10,000 km) and every additional 12,000 miles (20,000 km) (18,000 miles, 30,000 miles, 42,000 miles etc. (30 000 km, 50 000 km, 70 000 km etc.)) if this distance is covered within a year.

BMW Inspection

After the first 12,000 mi/20,000 km and every additional 12,000 mi/20,000 km (24,000 mi/40,000 km, 36,000 mi/60,000 km, 48,000 mi/80,000 km etc.), if this distance is covered within a year.

Maintenance schedules

The maintenance schedule for your motorcycle depends on the equipment installed, and on the motorcycle's age and the distance it has covered. Your authorized BMW Motorrad retailer 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 properly in accordance with workshop specifications.

Date, stamp, signature

BMW Running-In Check

Carried out properly in accordance with workshop specifications.

Odometer reading_____

Brake fluid changed

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out properly in accordance with workshop specifications.

Odometer reading_____

- Brake fluid changed

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out properly in accordance with workshop specifications.

Odometer reading_____

- Brake fluid changed

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out properly in accordance with workshop specifications.

Odometer reading_____

- Brake fluid changed

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out properly in accordance with workshop specifications.

Odometer reading _____

- Brake fluid changed

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out properly in accordance with workshop specifications.

Odometer reading _____

- Brake fluid changed

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out properly in accordance with workshop specifications.

Odometer reading _____

- Brake fluid changed

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out properly in accordance with workshop specifications.

Odometer reading _____

- Brake fluid changed

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out properly in accordance with workshop specifications.

Odometer reading _____

- Brake fluid changed

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out properly in accordance with workshop specifications.

Odometer reading _____

- Brake fluid changed

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out properly in accordance with workshop specifications.

Odometer reading _____

- Brake fluid changed

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out properly in accordance with workshop specifications.

Odometer reading _____

- Brake fluid changed

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out properly in accordance with workshop specifications.

Odometer reading _____

- Brake fluid changed

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 refueling

Fuel	
Recommended fuel type	Super Plus unleaded (98 RON/88 MON)
Fuel type can be used with poorer performance and consumption	Super unleaded (95 RON/85 MON)
Usable fuel capacity	4.5 gal (17 l)
Reserve share of fuel capacity	1.1 gal (4 l)
Tire pressures	
Front tire pressure	31.9 psi (2.2 bar), Single rider, with cold tire 36.3 psi (2.5 bar), Driver with passenger and/or load, with cold tire
Rear tire pressure	36.3 psi (2.5 bar), Single rider, with cold tire 42.1 psi (2.9 bar), Driver with passenger and/or load, with cold tire

BMW recommends 

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02.2006, 1st Edition



Please attach this sticker to the inside back cover page of your Rider's Manual

Reporting Safety Defects

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying BMW of North America, LLC.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in

individual problems between you, your dealer, or BMW of North America, LCC.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236

(TTY: 1-800-424-9153); go to <http://www.safercar.gov>, or write to: Administrator, NHTSA, 400 Seventh Street, SW., Washington, DC 20590. You can also obtain other information about motor vehicle safety from <http://www.safercar.gov>.

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