Rider's Manual (US Model)

F 800 ST



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 Motorrad 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 protect 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.

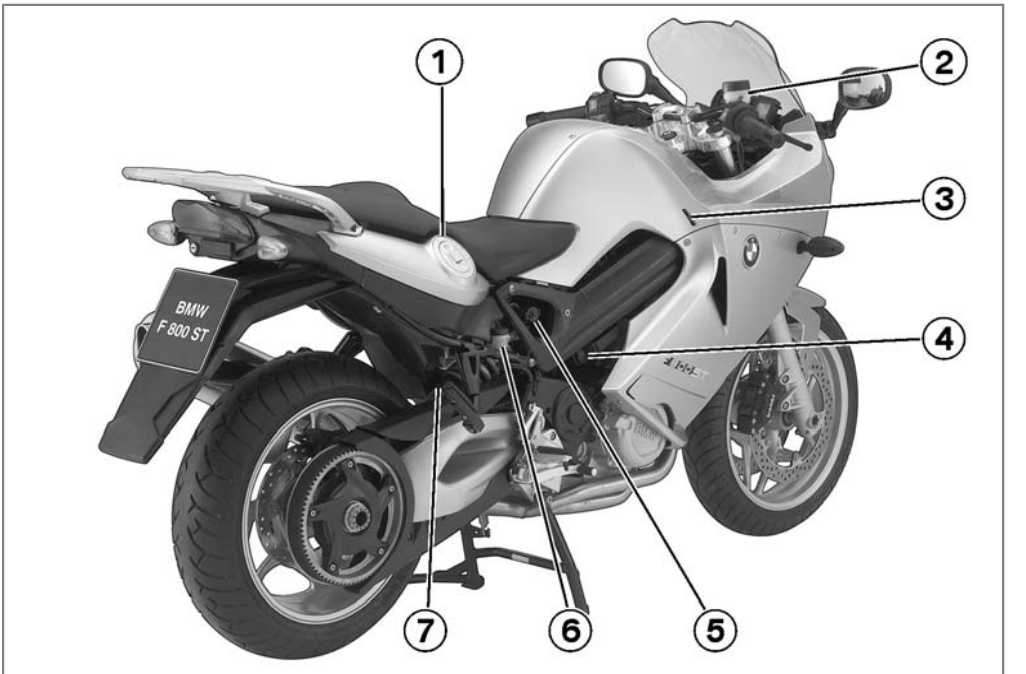
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General view, left side

1 Headlight adjustment (vertical) beneath instrument panel (➠ 46)
2 Seat lock (➠ 48)
3 Engine-oil fill location and oil dipstick (➠ 80)

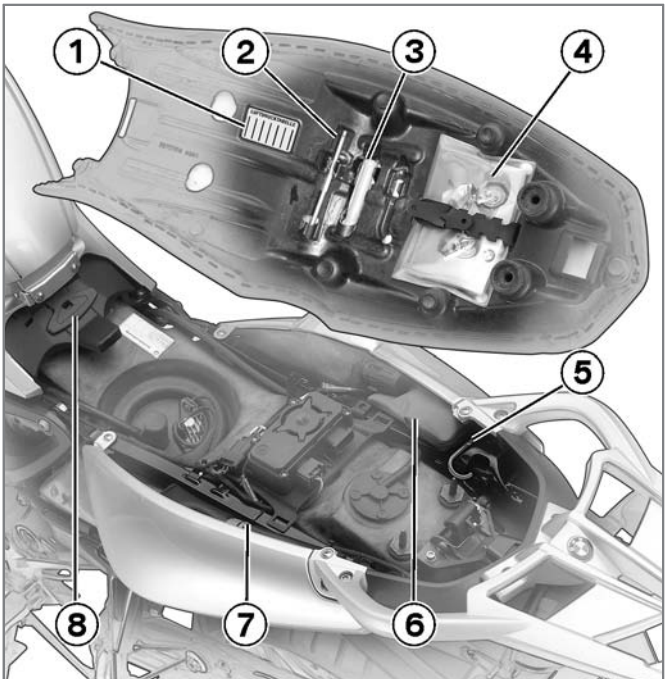

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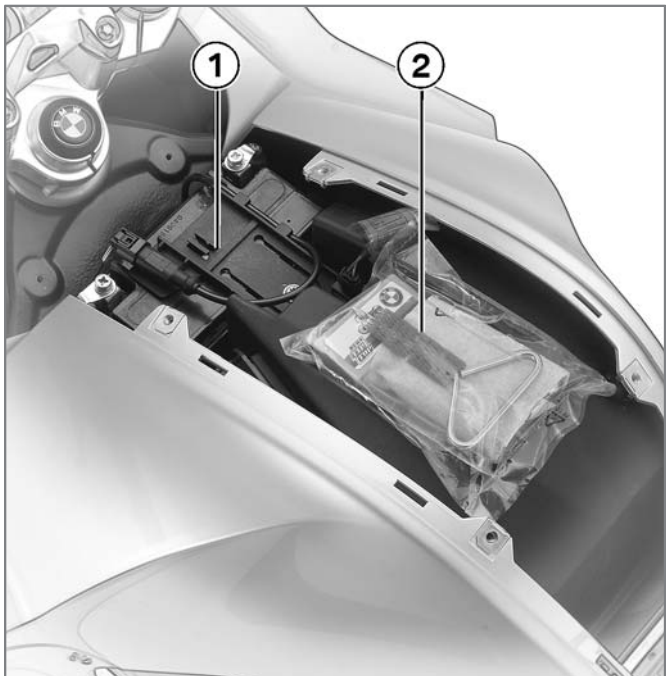
General view, right side

1 Filler neck, fuel tank (➡ 61)
2 Brake-fluid reservoir, front (➡ 84)
3 Coolant level indicator (➡ 85)
4 Onboard socket (➡ 68)
5 Adjuster, spring preload, rear (➡ 50)
6 Brake-fluid reservoir, rear (➡ 85)
7 Adjusting rear damping (➡ 51)

Underneath seat

1 Table of tire pressures
2 Torx 25/Phillips screwdriver blade
3 Screwdriver handle
4 Rider's Manual (US Model)
5 Helmet holder (➠ 49)
6 Location of first-aid kit (OA)
7 Supplemental toolkit set (OA) (➠ 80)
8 Tools for adjusting spring preload (➠ 50)



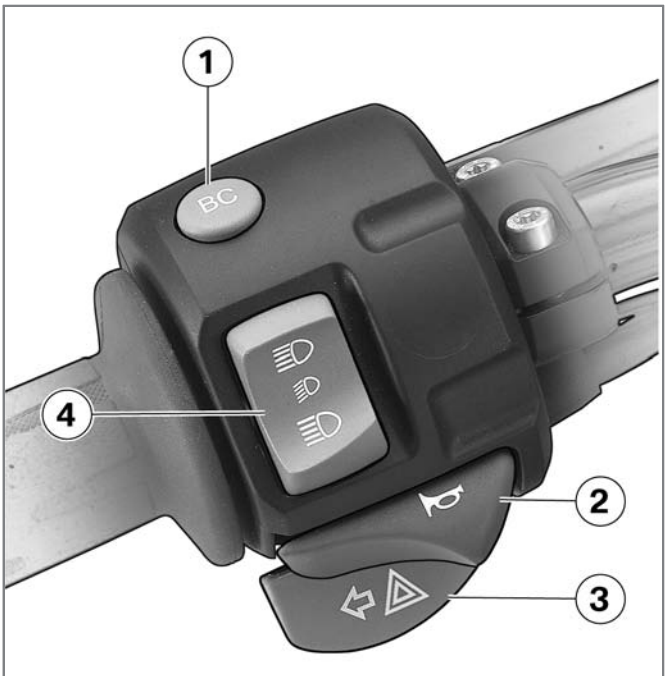


Under battery compartment cover

1 Battery (➡ 104)
2 Location of flat tire set (OA)

Left handlebar fitting

1 Onboard computer button (OE) (➡ 38)
2 Pushbutton, horn
3 Button for left turn indicator and hazard warning flashers (➡ 47) (➡ 34)
4 Switch, high-beam headlight and headlight flasher (➡ 45)





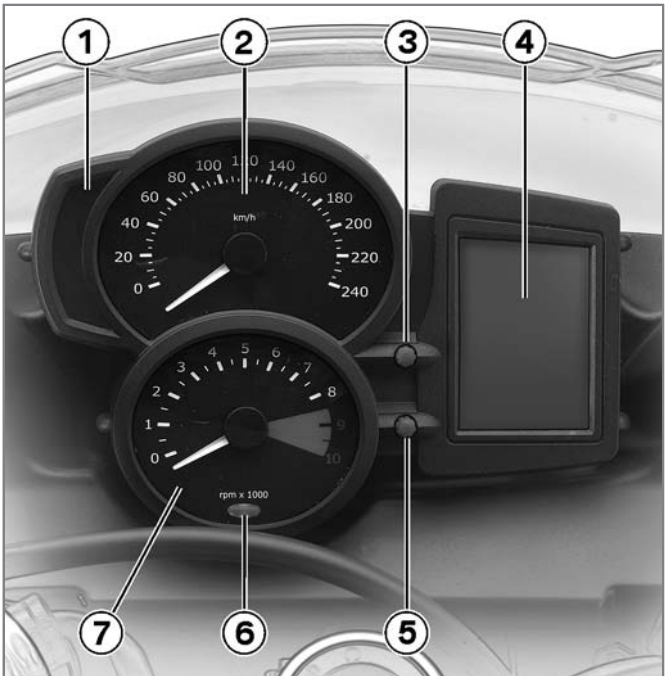
Handlebar fitting, right

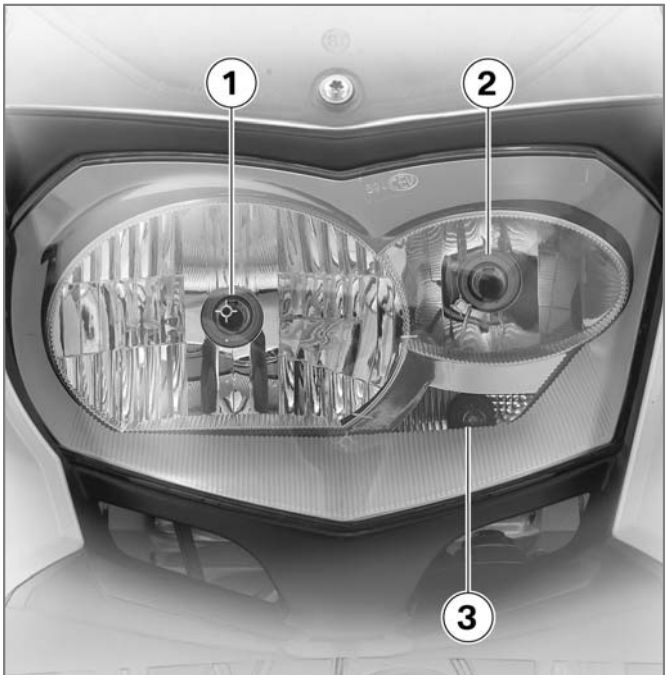
1 Emergency ON/OFF switch (➠ 42)
2 Pushbutton, starter (➠ 56)
3 With OE Heated handlebar grips:
Heated hand grips (➠ 43)
4 Button for right turn indicator and hazard warning flashers (➠ 47) (➠ 34)
5 Off button for turn indicators and hazard warning flashers (➠ 48) (➠ 35)

Instrument cluster

1 Warning and indicator lights (➡ 24)
2 Speedometer
3 Operation of clock and stopwatch (OE) (➡ 36) (➡ 40)
4 Multifunction display (➡ 22)
5 Operation of odometer and stopwatch (OE) (➡ 35) (➡ 40)
6 Anti-theft alarm indicator light (OE), instrument cluster lighting sensor and engine-speed warning indicator
7 Tachometer

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





Headlight

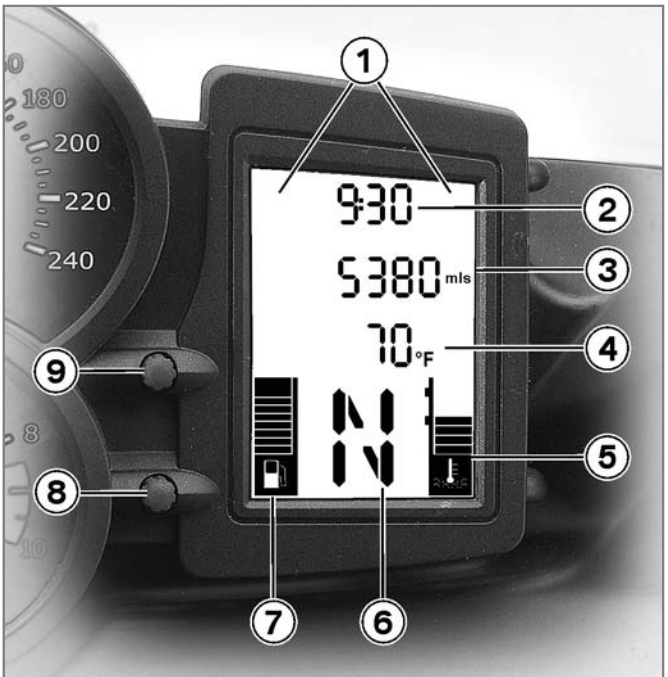
1 Low-beam headlight
2 High-beam headlight
3 Parking lights

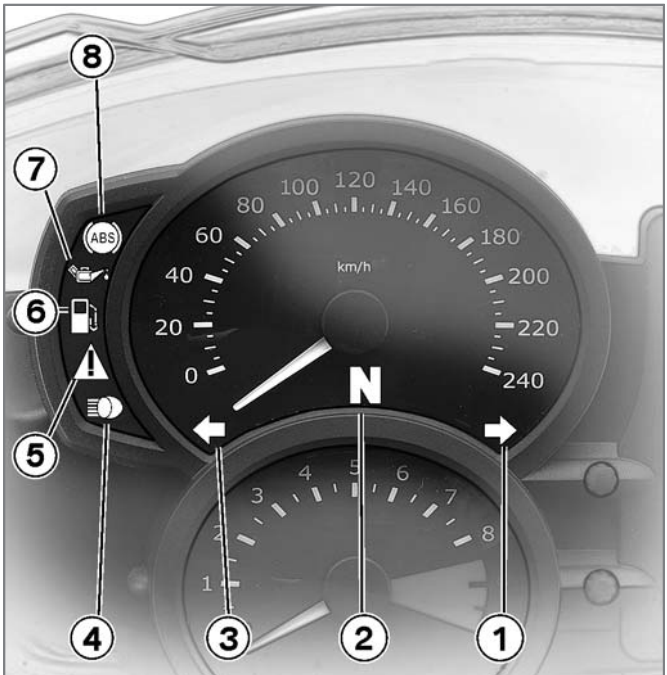
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Multifunction display

1 Area for warning symbols (➡ 24)
2 Clock (➡ 36)
3 Display of odometer and stopwatch (OE) (➡ 35) (➡ 40)
4 Area for displays of on-board computer (OE) (➡ 38)
5 Coolant temperature display (OE) (➡ 24)
6 Gear indicator (OE) (➡ 24)
7 Fuel level display (OE) (➡ 24)
8 Operation of odometer and stopwatch (OE) (➡ 35) (➡ 40)
9 Operation of clock and stopwatch (OE) (➡ 36) (➡ 40)





Warning and indicator lights

1 Indicator light, right turn indicator
2 Indicator light, neutral
3 Indicator light, left turn indicator
4 Indicator light, high-beam headlight
5 Warning light, general
6 Fuel-reserve warning light
7 Engine oil-pressure warning light
8 ABS warning light (OE)

Function indicators (OE)

Fuel capacity


The horizontal bars over the gas pump symbol indicate the remaining fuel quantity.

The top, enlarged horizontal bar is equivalent to approximately half the possible fuel tank volume.The remaining fuel tank volume is shown in greater detail with the smaller horizontal bars.

Gear


Engaged gear is indicated.

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

Coolant temperature


The horizontal bars over the temperature symbol show the coolant temperature level.

General warning indicators

Display

General warnings are displayed by means of information and symbols. In some cases, an additional general warning light lights up red or yellow.The symbols appear in the indicator light panel or in the multifunction display.


Warnings are shown with this symbol in the multifunction display.

A number of warnings may be issued simultaneously.

Overview of warning indicators

Display			Meaning
	Lights up yellow		Is displayed with note EWS	Electronic immobilizer is active (➡ 26)
			Appears	Fuel down to reserve (➡ 26)
	Lights up yellow		Flashes	Engine electronics (➡ 26)
			Flashes	Engine oil pressure insufficient (➡ 27)
	Lights up yellow		Is displayed with note LAMP	Bulb defective (➡ 27)
	Lights up yellow		Is displayed with note dWA	Anti-theft alarm battery (OE) dead (➡ 28)

Electronic immobilizer is active

General warning light lights up yellow.

Is displayed with note EWS.

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

Fuel reserve symbol appears.

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

1.1 gal (4 l)

- Refueling (➠ 61)

Engine electronics

General warning light lights up yellow.

Engine electronics symbol flashes.

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 the 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

 Engine oil pressure symbol flashes.

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 on the oil dipstick.◀

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

- Checking engine oil level (➠ 80)

When oil level is too low:

- Topping up engine oil (➠ 81)

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.

Bulb defective

 General warning light lights up yellow.

 Is displayed with note LAMP.

 A defective bulb places your safety at risk because it is easier for other users to oversee you and your motorcycle.
Replace defective bulbs as soon as possible; always carry a complete set of spare bulbs if possible.◀

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

- Locate defective bulb with visual check.
- Replacing high-beam/low-beam bulb (➠ 97)
- Replacing parking light bulb (➠ 99)

- Replacing brake light and tail light bulbs (➠ 100)
- Replacing front or rear turn indicator bulbs (➠ 101)

Anti-theft alarm battery (OE) dead

General warning light lights up yellow.


Is displayed with note dWA.

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.

Overview of warning indicators

Display		Meaning
	Flashes	Self-diagnosis not completed (➡ 30)
	Lights up	ABS error (➡ 30)

Self-diagnosis not completed

ABS warning light flashes.

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 light lights up.

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

- Continue 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 (➠ 65).
- Have the malfunction corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

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Front and rear seats 48
Helmet holder 49
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Tires 51

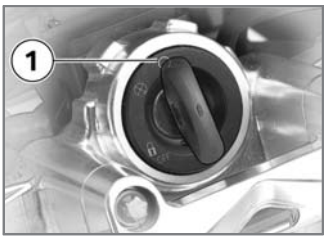
Ignition switch and steering lock

Keys

You receive one master key and one spare key.If a key is lost, please note the information on the electronic immobilizer (EWS) (➠ 33).

Ignition key and steering lock, tank filler cap lock and seat lock are all operated with the same key. On request the cases (OA) and the Topcase (OA) can be operated with the same key.◀

Switching on ignition



- Turn key to position **1**.

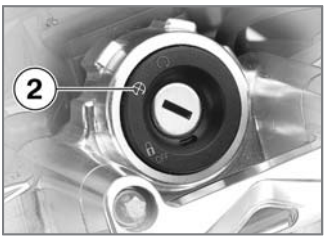
» Parking lights and all function circuits switched on.
» Engine can be started.
» Pre-ride check is performed. (➠ 57)

With OE Anti-Lock Brake System (ABS):

- Turn key to position **1**.

» In addition to the points named above, the ABS self-diagnosis is also carried out. (➠ 58)◁

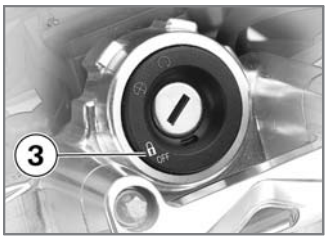
Switching off ignition



- 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 the onboard socket.

Locking handlebars



- Turn handlebars to left.
- 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 disable 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 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

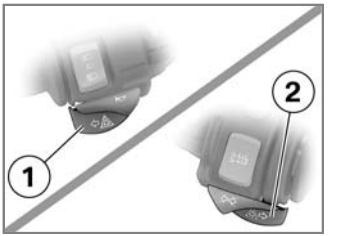
Replacement and spare keys are only available through an authorized BMW Motorrad retailer.The keys are part of an integrated security system, so the retailer is under an obligation to check the legitimacy

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.



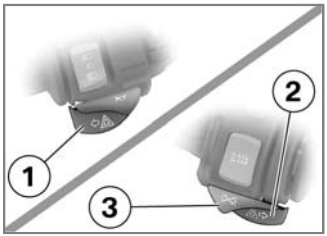
• Press button for left turn indicator **1** and right turn indicator **2** simultaneously.

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.

Odometer and tripmeters

Selecting readings

- Switch on ignition.



- If necessary, switch over from stopwatch to odometer with clock **1** button.
- Press odometer button **2** once briefly each time.



The following sequence is shown in the odometer display field:

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

Resetting tripmeter

- Switch on ignition.
- Select desired tripmeter.



- Press and hold odometer button **2** until display is reset.

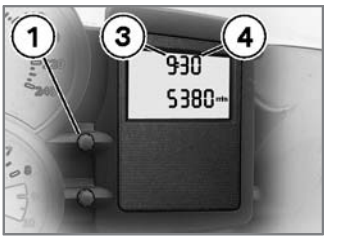
» The tripmeter is reset to zero.

Clock

Setting clock

⚠ Attempting to set the clock while riding the motorcycle can lead to accidents.
Adjust the clock only when the motorcycle is stationary.◀

- Switch on the ignition.



- Press button **1** for longer than 2 seconds.

» Hours reading **3** starts to flash.

- Briefly press button **1**.

» The hour increments by one each time you press the button.

- Press button **1** for longer than 2 seconds.

» Minutes reading **4** starts to flash.

- Briefly press button **1**.

» The minute increments by one each time you press the button.

- Press button **1** for longer than 2 seconds.

» Setting confirmed.

Engine speed warning

Display



The engine speed warning signals to the driver that the red engine speed range has been reached.This signal is shown in red by the flashing of the anti-theft alarm indicator light **1**.

The signal is maintained until the transmission is upshifted or the engine speed is reduced.It can be activated or deactivated by the driver.

Activating engine speed warning



- Press and hold button **1** and button **2** simultaneously until display changes.

» FLASH (display of indicator light) and ON or OFF are shown.

- Press button **2** until desired state is shown.

» ON: engine speed warning activated.

» OFF: engine speed warning deactivated.

- To confirm setting, press and hold button **1** and button **2** simultaneously until display changes.

» The settings are applied and the last display is shown.

» If no confirmation is made, the last setting is retained.

Onboard computer[OE]

Selecting readings

- Switch on ignition.



- Press BC button **1** once in each case.

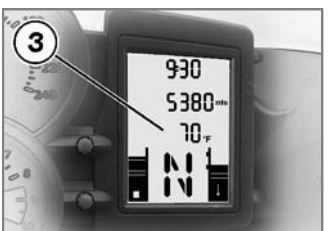


The following sequence is shown in the display field of the onboard computer:

– Ambient temperature

– Average speed
– Average consumption
– Current consumption
– Range

Ambient temperature



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

Average speed



The average speed **3** is calculated based on the elapsed time since the last "RESET".Times during which the engine was stopped are excluded from the calculation.

Resetting average speed



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

» Display shows ---.

Average consumption



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

Resetting average consumption



- Repeatedly press BC button **1** until average consumption appears in display.
- Press and hold BC button until average consumption is reset.

» Display shows ---.

Fuel consumption



The current fuel consumption **3** is displayed.

Range



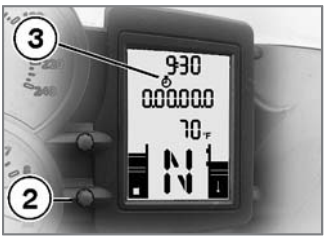
The range **3** indicates what distance can still be driven with the remaining fuel.The calculation is made using an average consumption stored for this purpose and the fuel level. The average consumption used for the calculation slowly adjust more slowly to a changed driving style than the value that can be shown in the display.

With a fuel level of more than half the fuel tank volume, a minimum range is specified, marked by a > symbol.When the fuel level drops below this level, the range is shown more exactly.

When refueling, fuel is not registered by the onboard computer 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.◀

Stopwatch



As an alternative to the odometer, the stopwatch **3** can be displayed.The display consists of hours, minutes, seconds and tenths of a second separated by dots.

To use the stopwatch as a Lap-Timer, it can also be operated via the BC button on the handlebar fitting instead of with the button **2**.If the operation of the stopwatch is set to the BC button, the onboard computer must be operated with the button **2**.

The stopwatch continues to run in the background when the display is temporarily switched over to the odometer.The stopwatch also continues to run when the ignition is temporarily switched off.

Activating stopwatch



- Switch between stopwatch and odometer with button **1**.

Operating stopwatch



- Press stopped stopwatch button **2**.

» Stopwatch runs starting from indicated time in steps of one-tenth of a second.

- Press button **2** with stopwatch running.

» Stopwatch shows the time measured.

- Press and hold button **2** until display resets.

» Stopwatch shows 0.00.00.0.

Using stopwatch as Lap-Timer



- Press and hold button **1** and button **2** simultaneously until display changes.

» FLASH (display of engine speed warning) and ON or OFF are shown.

- Press button **2**.

» LAP (Lap-Timer) and ON or OFF are shown.

- Press button **1** until desired state is shown.

» ON: operation of stopwatch with BC button on handlebar fitting.

» OFF: operation of stopwatch with button **2** in instrument cluster.
• To confirm setting, press and hold button **1** and button **2** simultaneously until display changes.
» The settings are applied and the last display is shown.
» If no confirmation is made, the last setting is retained.

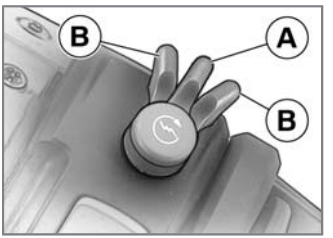
Emergency ON/OFF switch



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.◄

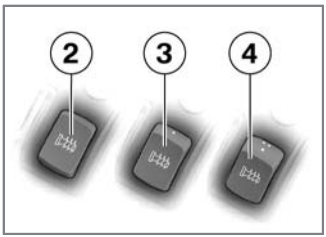
Heated hand grips[OE]



1 Heated hand grips switch

The handlebar grips can be heated at two different levels.The heated hand grips option 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.◀



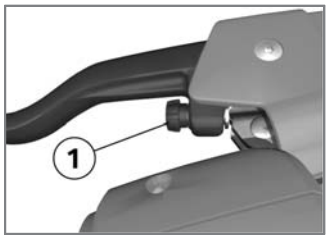
2 Heating function off.
3 50 % heat output (one dot visible).
4 100 % heat output (three dots visible).

Clutch

Adjusting clutch lever

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.

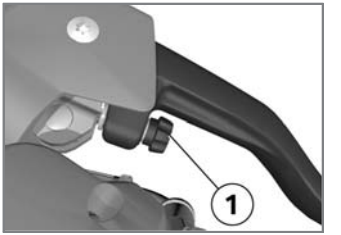
» Distance between handlebar grip and clutch lever decreases.

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 parking lights

The parking 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.

Switching on high-beam headlight



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

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.◀

» 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 button **1** until parking 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.

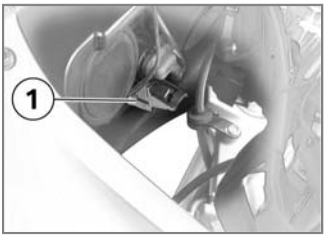
Ordinary adhesive tape damages the plastic lens.
To prevent damage to the plastic lens, consult a specialized workshop, preferably an authorized BMW Motorrad retailer.◀

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

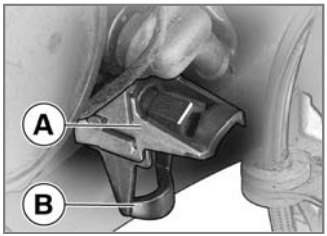
If you are unsure whether the basic headlight setting is correct, consult a specialized workshop, preferably an authorized BMW Motorrad retailer.◀

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.

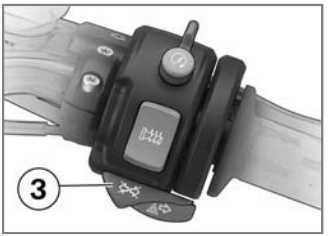


- Press right-hand turn indicator button **2**.

» 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**.

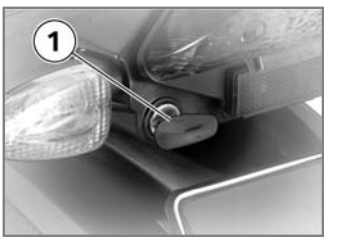
After driving for approx. ten seconds or after covering a distance of approx. 650 ft (200 m), the turn indicators are automatically switched off.◀

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

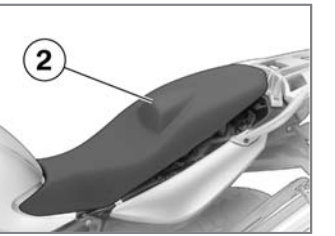
Front and rear seats

Removing seat

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

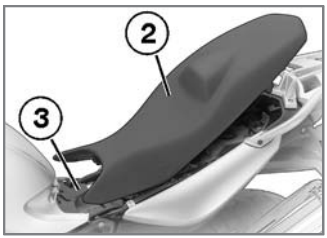


- Turn seat lock **1** counterclockwise with ignition key and hold.



- Raise seat **2** at rear and release key.
- Remove seat.
- Place seat on a clean surface with seat surface facing downward.

Installing seat

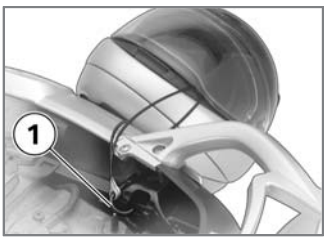


- Push seat **2** forward into retaining brackets **3**.
- Firmly press down on the seat at the rear.

» The seat can be heard to lock into place.

Helmet holder

Helmet holder under seat



The helmet holder **1** is located under the seat.A helmet can be attached to it using the steel cable available as an optional accessory.

Using helmet holder

- Make sure the ground is level and firm and park the motorcycle.
- Removing seat (➠ 48)

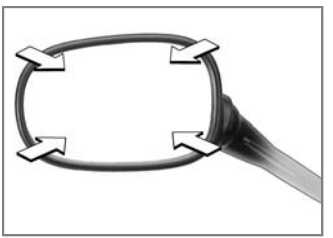


⚠ The helmet catch can scratch the paneling. When hooking on the helmet, watch the position of the helmet lock.◀

- Guide steel cable available as an optional accessory through helmet and push cable eyes onto helmet holder **1**.
- Installing seat (➠ 49)

Mirrors

Adjusting mirrors



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

Spring preload

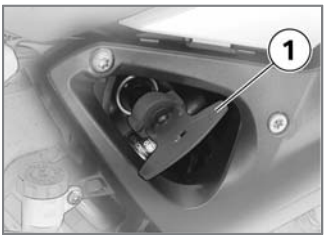
Spring preload and weight

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.

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 handwheel **1** clockwise using onboard toolkit.
- To decrease spring preload, turn handwheel **1** counterclockwise using onboard toolkit.

Basic setting of spring preload

Turn adjusting screw counterclockwise as far as possible and then turn back 12 clicks (Full tank of gas, with rider 187 lbs (85 kg))

Shock absorbers

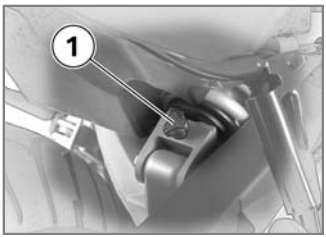
Damping and spring preload

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.

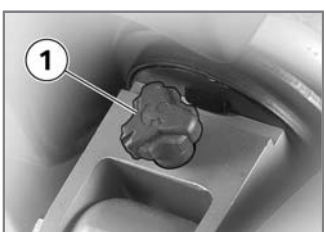
Adjusting damping on rear wheel

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 with adjusting screw **1**.



- To increase damping, turn adjusting screw **1** clockwise.
- To decrease damping, turn adjusting screw **1** counterclockwise.

Basic setting of rear wheel rear-wheel damping

Turn adjusting screw clockwise as far as possible and then turn back 1 1/2 clicks (Full tank of gas, with rider 187 lbs (85 kg))

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

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

 Rear tire pressure

40.6 psi (2.8 bar) (Single rider, with cold tire)
40.6 psi (2.8 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
Starting 56
Running in 59
Parking your motorcycle 59
Refueling 61
General brake system 62
Brake system with BMW Motorrad ABS[OE] 63

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
– 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

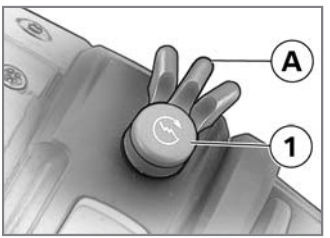
Side stand

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 N.

Starting engine



• Emergency ON/OFF switch **1** in operating position **A**.

⚠ Transmission lubrication is only ensured when the engine is running.Insufficient lubrication can lead to transmission damage.
Do not allow the motorcycle to roll for longer periods or push it over longer distances with the engine switched off.◀

- 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.

» If the engine fails to start, the troubleshooting table in the chapter "Technical Data" may provide assistance. (➠ 116)

Pre-ride check

After the ignition is switched on, the instrument cluster conducts a test of the pointer instruments and the warning and indicator lights.This so-called Pre-Ride-Check is canceled as soon as the engine is started.

Phase 1

The pointer of the tachometer and speedometer are run up to the end stop.

» At the same time, the following warning and indicator lights are switched on consecutively:

– Indicator light, high-beam headlight, and indicator light, left turn indicator

– General warning light in yellow and indicator light, idling

– Warning light, fuel reserve, and indicator light, right turn indicator

– Warning light, oil pressure

» with OE BMW Motorrad ABS:

– ABS warning light

Phase 2

General warning light changes from yellow to red.

Phase 3

The pointers of the tachometer and speedometer are run back.At the same time, all switched-on warning and indicator lights are switched off consecutively in the reverse order. The oil-pressure warning light does not go out until the necessary engine oil pressure has been built up after starting the engine.
If a pointer has not been moved, or if one of the specified warning and indicator lights has not been switched on:

If it was not possible to switch on the warning lights, possible malfunctions cannot be indicated.
Watch all warning and indicator lights on the display.◀

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

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 light flashes.

Phase 2

» Checking the wheel sensors while starting off.

ABS warning light flashes.

ABS self-diagnosis completed

» The ABS warning light goes out.

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

- Continue 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

5000 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 angels.
Avoid extreme heeling angels.◄

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 onto side stand until its weight is taken by stand and dismount to left.
- 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.
- Grip handlebars with both hands from left.
- Pull handbrake lever.
- Swing right leg over seat while lifting motorcycle into upright position.
- Hold the motorcycle upright and balanced.

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

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

Placing on center stand[OE]

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

- Switch off the engine.
- Dismount and keep left hand on left handlebar grip.
- Grasp passenger seat handle or rear frame with your right hand.
- Place right foot on extended arm of center stand, and press stand down until its curved feet touch ground.
- Place full weight of body on center stand while pulling motorcycle toward rear.

Excessive movements could result in the center stand retracting, and the motorcycle would topple as a result.
Do not sit on the motorcycle while it is resting on the center stand.◀

- Check that the motorcycle is standing firmly.

Pushing off center stand[OE]

- Unlock steering lock.
- Place left hand on left handlebar grip.
- With your right hand, grip rear grab handle or rear frame.
- Push motorcycle forward off center stand.
- Make sure that center stand is fully retracted.

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 onto 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 the 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 unleaded (95 RON/85 MON)

With OE Regular unleaded (RON 91):

Regular (91 RON/ 82.5 MON)◁

 Usable fuel quantity

4.2 gal (16 l)

 Reserve fuel quantity

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 reactivated 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 68
Onboard socket 68
Luggage 71
Case[OA] 74
Topcase[OA] 76

General instructions

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

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.

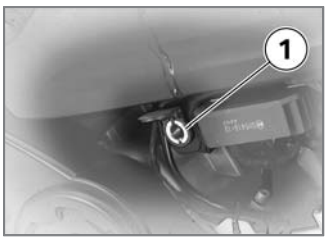
These parts and products have been tested by BMW for safety, function and suitability.BMW accepts product liability for these products. Conversely, BMW is unable to accept any liability whatsoever for parts and accessories which it has not approved.

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.◀


BMW
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Luggage

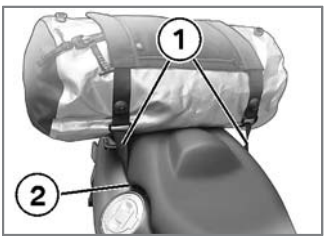
Correct loading

Overloading and uneven loading can diminish the riding stability of the motorcycle.
Do not exceed the gross weight limit and observe the loading information.◀

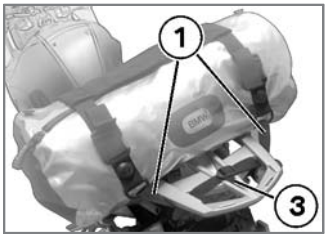
- Adjust setting of spring preload, damping characteristic and tire pressures to suit total weight.
- Ensure that case volumes on left and right are equal.
- Make sure that weight is uniformly distributed between right and left.
- Pack heavy items of luggage downwards and inwards.
- Max. load in each case (left and right): 18 lbs (8 kg).
- Max. load in tank rucksack 11 lbs (5 kg).
- Max. load in Topcase 11 lbs (5 kg).

Lashing down luggage

- Removing seat (➠ 48)



- Pull luggage belt **1** through under seat in area **2** of fuel-tank fill location.Make sure that belt is in front of bars on underside of seat.
- Installing seat (➠ 49)
- Guide luggage belt along piece of luggage in area provided to luggage rack.



- Pull luggage belt **1** through luggage rack **3** and lash down.
- Check piece of luggage for secure hold.

Case[OA]

Release levers

There is a release lever on the left and right of each case lock.
The gray lever marked OPEN is used to open and close the cases.
The black lever marked RELEASE is used to remove and attach the cases.

Opening case



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



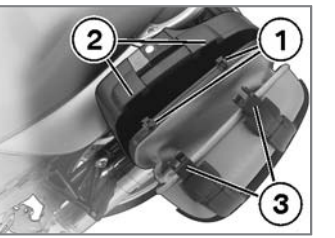
- Pull gray release lever (OPEN) upward.

» Lock straps **2** open.

- Pull gray release lever (OPEN) upward again.
- Pull case lid **3** out of retainer.

» Case completely opened.

Closing case



- Press catches **1** of case lid into retainers **2**.

» The catches can be heard to lock into place.

- Press catches **3** of lock straps into retainers **2**.

» The catches can be heard to lock into place.

Adjusting case volume

- Close case lid.



- Press lock straps **2** outward and pull out upward.

» The maximum volume has been set.

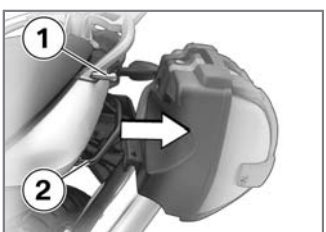


- Close lock straps **2**.
- Press case lid against case body.

» The case volume is adapted to the contents.

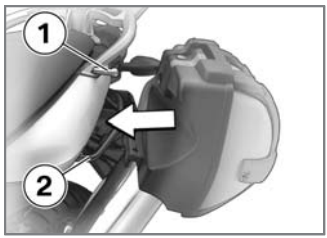
Removing case

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



- Pull case out of upper mount **1**.
- Lift case out of lower mount **2**.

Mounting case

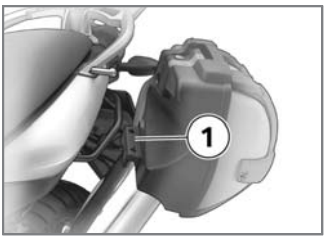


- Hook case into lower mounting **2**.
- Pull black release lever (RELEASE) upward.
- Press case into upper mounting **1**.
- Press black release lever (RELEASE) downward.

» The case is locked into place.

- Lock case.
- Check secure attachment of case.

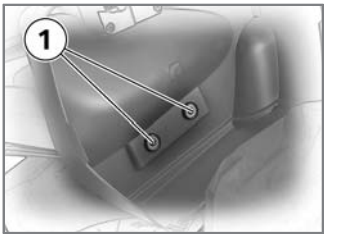
Secure hold



If a case wobbles or is difficult to fit, it must be adapted to the gap between the upper and lower mounting.To achieve this, the height of the lower bracket **1** on the case can be changed.

Adapting case

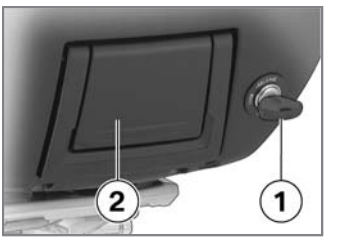
- Open case.



- Unfasten screws **1**.
- Adjust height of bracket.
- Tighten screws **1**.

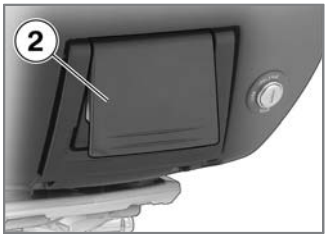
Topcase[OA]

Opening Topcase



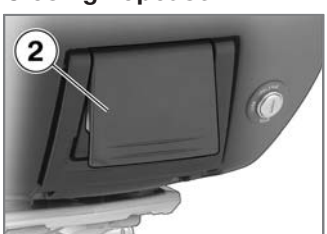
- Turn lock barrel **1** to position OPEN.
- Press lock barrel.

» Locking lever **2** pops out.



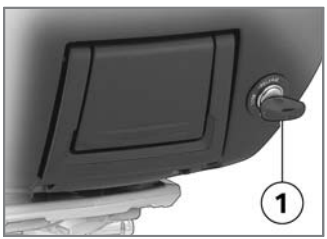
- Fully open locking lever **2**.
- Open lid.

Closing Topcase



- Fully open locking lever **2**.
- Close lid and press down.Check that nothing is trapped between the lid and the case.
- Press locking lever **2** down.

» Lever audibly engages.



- Turn lock barrel **1** to position LOCK.

» Topcase is locked.

Removing Topcase

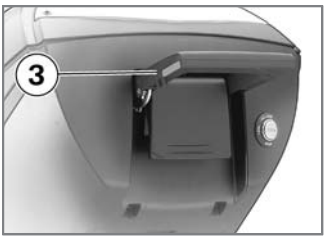


- Turn lock barrel in direction RELEASE.

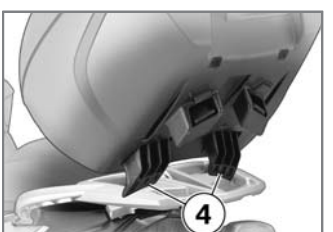
» Handle **3** pops out.

- Pull up handle **3** completely.
- Lift Topcase at rear and remove it from carrier plate.

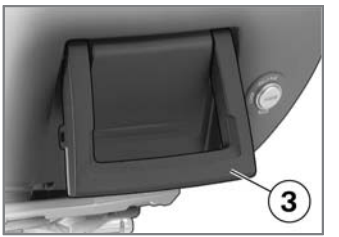
Mounting Topcase



- Pull up handle **3** completely.



- Hook the Topcase into position on the carrier.Make sure that hooks **4** are securely seated in corresponding mounts.



- Press down carrying handle **3** completely.

» Carrying handle audibly engages.

Maintenance

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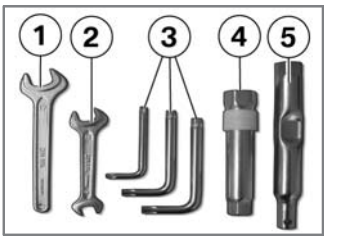
General instructions

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.

Supplemental toolkit set (OA)



1 17 mm open-end wrench
2 10/13 mm open-end wrench
3 Torx T30, Torx T45, Torx T50
4 Socket wrench, 17
5 Spark-plug socket wrench (in combination with screwdriver blade)

Engine oil

Checking engine oil level

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

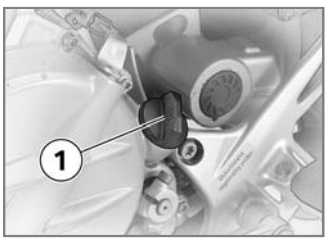
The oil level varies with the temperature of the oil.The higher the temperature, the higher the oil level in the oil tank. Check the engine oil level immediately after a longer journey.◄

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

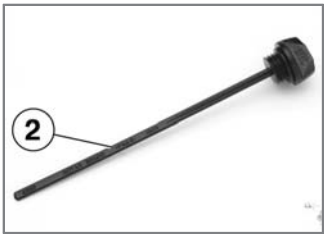
With OE Center stand:

- Make sure ground is level and firm and place motorcycle at operating temperature on its center stand.◁

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



- Remove cap from oil fill location **1** by turning counterclockwise.



- Clean oil dipstick **2** with a dry cloth
- Place oil dipstick on oil fill location.
- Remove oil dipstick and read off oil level.

Specified level of engine oil

between MIN and MAX markings on oil dipstick

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



- Top up engine oil up to specified level via fill location **1**.

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 handbrake lever.
» Pressure point must be clearly perceptible.
- Press footbrake lever.
» 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 dealer.

Brake pads

Checking front brake pad thickness

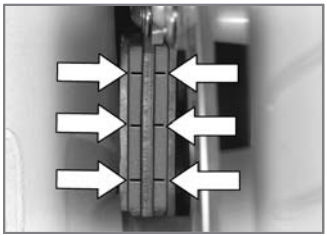
Brake pads worn past the minimum permissible thickness can impair braking efficiency and under certain circumstances they can cause damage to the brake system.

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.



- Visually inspect the left and right brake pads to ascertain their thickness.Direction of view: between wheel and fork tube at brake caliper.



Front brake-pad wear limit

0.04 in (1 mm) (Only friction material without carrier plate)

Wear marking (grooves) must be clearly visible.

If the wear indicating marks are no longer clearly visible:

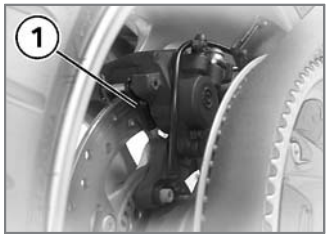
- Have the brake pads replaced by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Checking brake pad thickness at rear

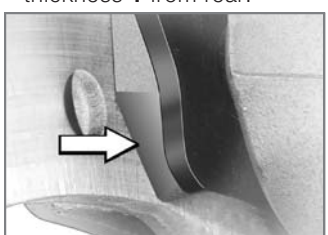
Brake pads worn past the minimum permissible thickness can impair braking efficiency and under certain circumstances they can cause damage to the brake system.

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.



- Visually check brake pad thickness **1** from rear.



Rear brake-pad wear limit

0.04 in (1 mm) (Only friction material without carrier plate)

Wear indicators must be clearly visible.

If the wear indicating mark is no longer 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.

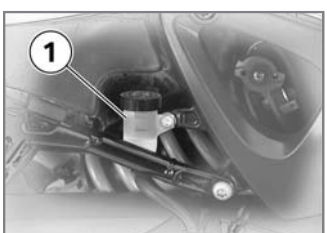
If the brake fluid level drops below the permissible level:

- 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.

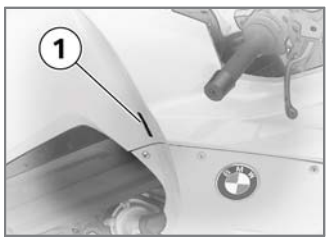
If the brake fluid level drops below the permissible level:

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

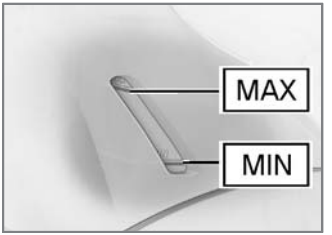
Coolant

Checking coolant level

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



- Check coolant level on scale **1** of coolant reservoir.



Coolant, specified level

between MIN and MAX marks on the expansion tank

If coolant level is too low:

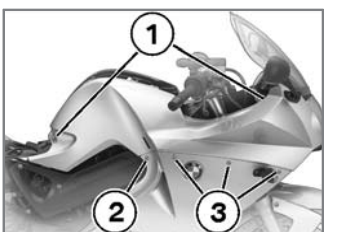
- Contact a specialized workshop, preferably an authorized BMW Motorrad retailer.

Topping up coolant

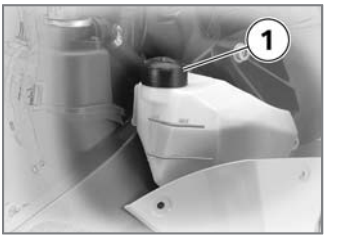
- Removing seat (➠ 48)
- Removing battery compartment cover (➠ 105)



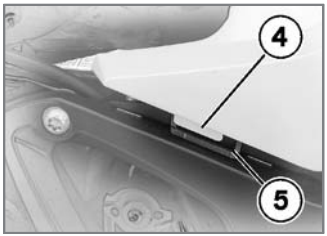
- Remove screws **1** of right mirror.
- Remove the mirror.



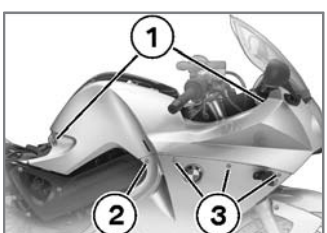
- Remove two screws **1**.
- Remove short screw **2**.
- Remove three screws **3**.
- Remove side panel upward.



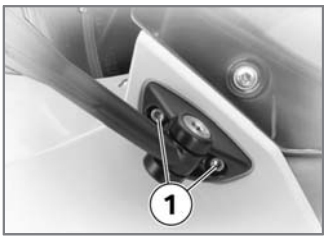
- Open cap of fill location for coolant **1** by turning counterclockwise.
- Pour in coolant up to specified level.
- Close cap of fill location for coolant by turning clockwise.



- Push side section behind lower side panel while making sure that guide **4** of side section grips into mount **5**.



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



- Position mirror.
- Install screws **1**.
- Installing battery compartment cover (➠ 106)
- Installing seat (➠ 49)

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.

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 provide any guarantee as to their road safety.

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

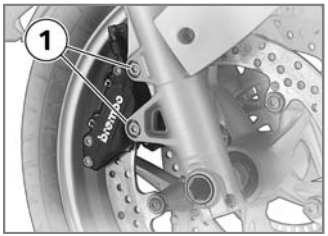
Extensive information is available at your authorized BMW Motorrad retailer or on the Internet at www.bmw-motorrad.com.

Removing front wheel

- Place motorcycle on an auxiliary stand; BMW Motorrad recommends BMW Motorrad rear wheel stand.
- Installing rear-wheel stand (➠ 96)

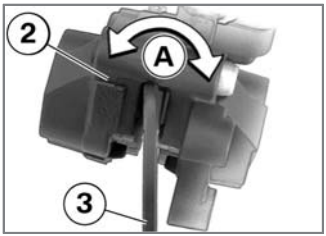
With OE Center stand:

- Place motorcycle onto center stand.◁



Once the calipers have been removed, there is a risk of the brake pads being pressed together to the extent that they cannot be slipped back over the brake disk on reassembly.
Do not operate the handbrake lever when the brake calipers have been removed.◀

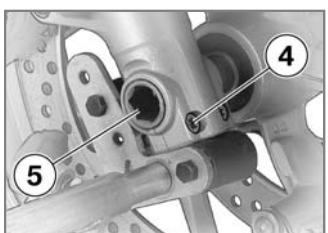
- Remove mounting bolts **1** of brake calipers on left and right.



- Press brake pads in brake caliper **2** somewhat apart with rotary movements **A** against brake disks **3**.
- 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.
- Mounting front wheel stand (➠ 94)



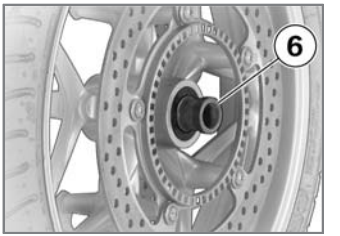
- Remove axle clamping screw **4**.
- Remove quick-release axle **5** while supporting wheel.

▷ 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.◁



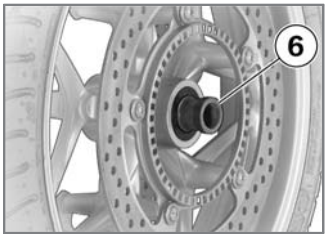
- Remove spacing bushing **6** on left side from wheel hub.

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.◀

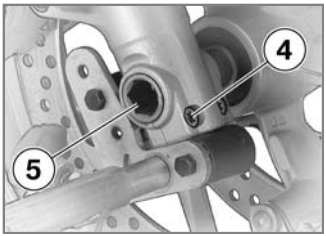
The front wheel must be installed right way round to rotate in the correct direction.
Observe the direction of rotation arrows on the tires or on the rim.◀



- Mount spacing bushing **6** 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 **5** with appropriate torque.

Quick-release axle in axle mount

37 lb/ft (50 Nm)

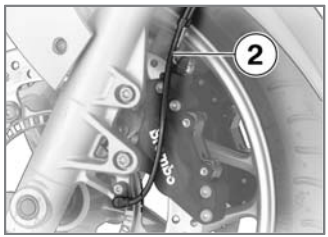
- Tighten axle clamping screw **4** with appropriate torque.

Pinch bolt of quick-release axle

15 lb/ft (20 Nm)

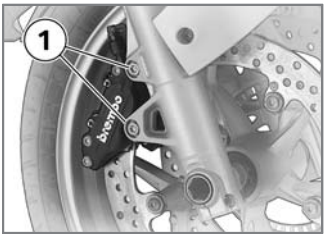
- Remove front wheel stand.
- Ease brake calipers onto brake disks.

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 **2** as shown in picture.◁



- Install mounting screws **1**.

Brake caliper on slider tube

22 lb/ft (30 Nm)

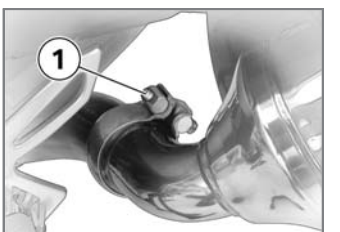
- Remove adhesive tape from wheel rim.
- Operate brakes several times until brake pads contact brake disk.
- Remove rear wheel stand if mounted.

Removing rear wheel

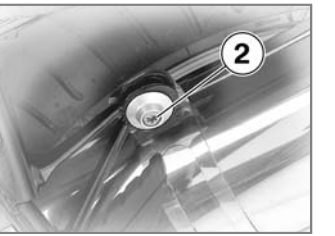
- Place motorcycle on an auxiliary stand; BMW Motorrad recommends BMW Motorrad rear wheel stand.
- Installing rear-wheel stand (➡ 96)

With OE Center stand:

- Place motorcycle onto center stand.◁



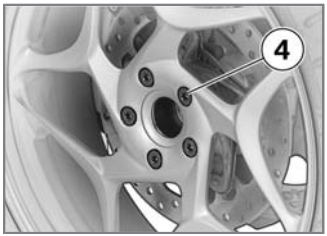
- Loosen screw **1** on muffler.
- Do not remove sealing grease from clamp.
- Support exhaust manifold with suitable object (e.g. wooden block).



- Remove screw **2** for bracket of end muffler from passenger footrest.



- Turn muffler **3** downward and lay aside.
- Shift into first gear.

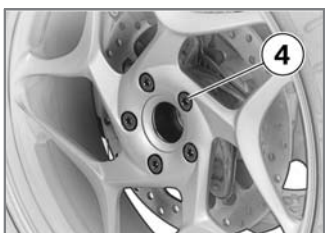


- Remove mounting bolts **4** of rear wheel, holding wheel as you do so.
- Lower rear wheel onto ground.
- Roll rear wheel out toward rear.

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.◀

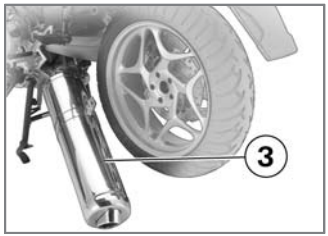
- Roll the rear wheel onto the rear wheel support.
- Place the rear wheel on the rear wheel support.



- Install wheel studs **4** diagonally with appropriate torque.

Rear wheel on drive shaft

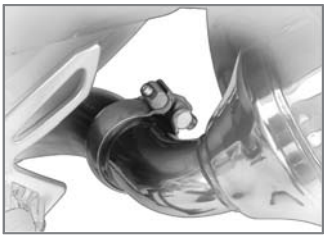
44 lb/ft (60 Nm)



- Turn the end muffler **3** to its initial position.



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



- Tighten clamp on end muffler to appropriate torque.

Muffler on manifold

26 lb/ft (35 Nm)
Thread-locking compound: Optimoly TA



- Tighten screw **2** for bracket of end muffler on passenger footrest with appropriate torque.

Muffler on rear frame

14 lb/ft (19 Nm)

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.

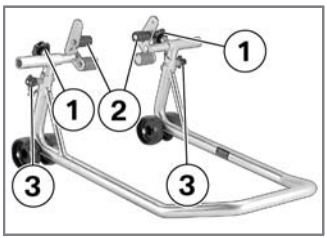
The BMW Motorrad front wheel stand is not designed for holding motorcycles without a center or other auxiliary stands. A motorcycle standing on the front wheel stand and the rear wheel alone can fall over. Place the motorcycle on the center stand or an auxiliary stand before lifting it with the BMW Motorrad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

Mounting front wheel stand

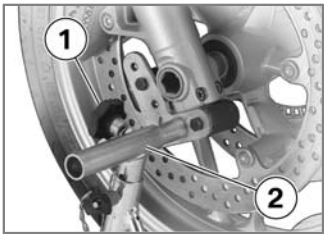
- Place motorcycle on an auxiliary stand; BMW Motorrad recommends BMW Motorrad rear wheel stand.
- Installing rear-wheel stand (➠ 96)

With OE Center stand:

- Place motorcycle onto center stand.◁



- Loosen adjusting screws **1**.
- Push two mounts **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.



- Align two mounts **2** so that front forks rest securely on them.
- Tighten adjusting screws **1**.



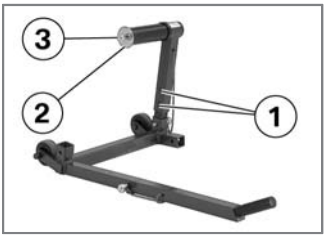
- Apply uniform pressure to push the front wheel stand down and raise the motorcycle.

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 onto 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 while simultaneously pressing the lever downward 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.◄

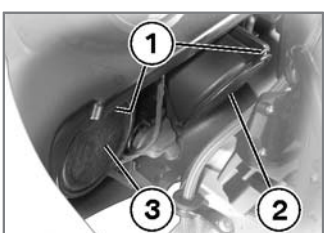
An overview of the bulb types installed in your motorcycle is provided in the chapter "Technical Data".◄

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.◄

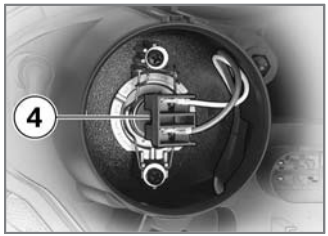
Replacing high-beam/low-beam bulb

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.



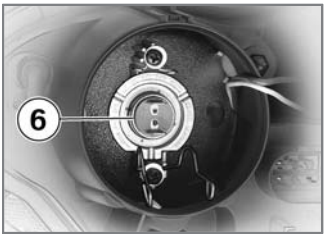
- Remove cover **2** (low beam) or cover **3** (high beam) by pulling on lever **1**.



- Disconnect plug **4**.



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



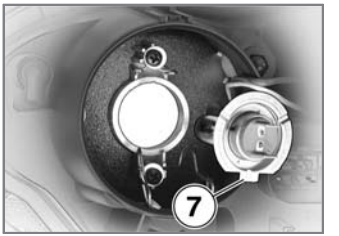
- Remove bulb **6**.
- Replace defective bulb.

High-beam headlight bulb

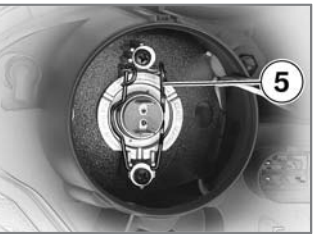
H7 / 12 V / 55 W

Low-beam headlight bulb

H7 / 12 V / 55 W



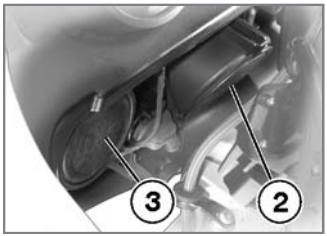
- Install bulb while ensuring correct position of lug **7** (high beam bottom/low beam top) and make sure that bulb is properly engaged.



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



- Close connector **4**.



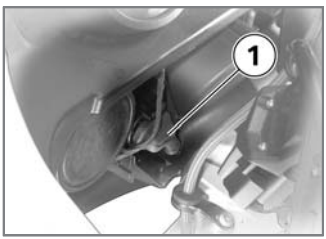
- Install cover **2** (low beam) or cover **3** (high beam).

Replacing parking light bulb

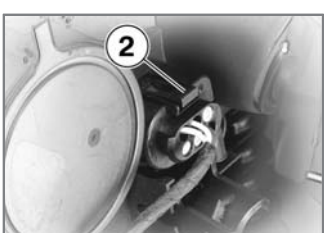
If it is not standing firmly, the motorcycle could topple in the course of the operations described below. Make sure that the motorcycle is steady on its stand.◀

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

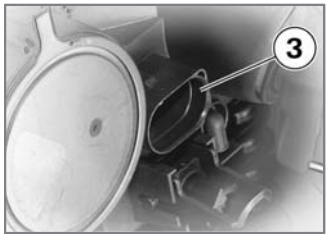
To achieve better accessibility, turn the handlebars to the left.◀



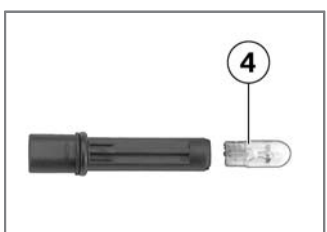
- Take off cover cap **1**.



- Disconnect connector **2**.



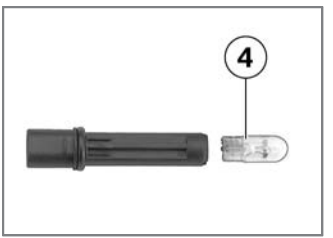
- Remove bulb socket **3** by turning counterclockwise.



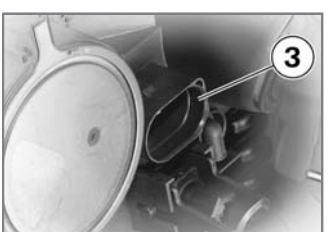
- Remove bulb **4** from bulb holder.
- Replace defective bulb.

Parking light bulb

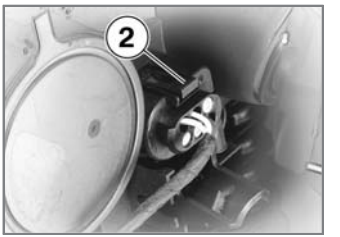
W5W / 12 V / 5 W



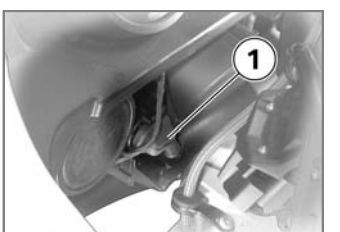
• Press bulb **4** into socket.



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



• Close connector **2**.

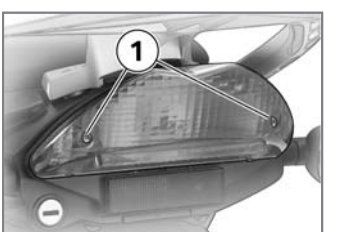


• Install cap **1**.

Replacing brake light and tail light bulbs

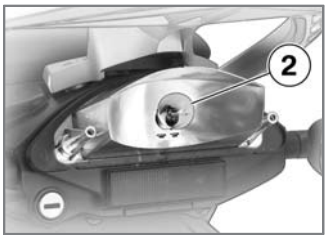
If it is not standing firmly, the motorcycle could topple in the course of the operations described below. Make sure that the motorcycle is steady on its stand.◀

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



• Remove screws **1**.

- Pull off light housing toward rear.

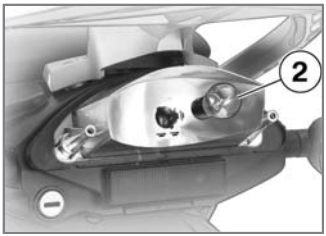


- Press bulb **2** into its socket and turn it counterclockwise to remove.
- Replace defective bulb.

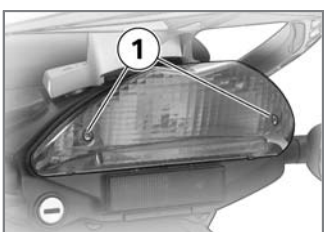
Bulb of tail/brake lights

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

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



- Press bulb **2** into the fitting and install turning clockwise.

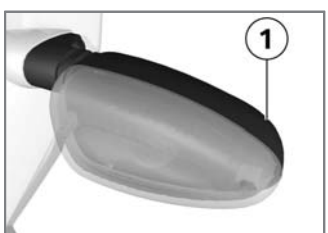


- Install light housing with screws **1**.

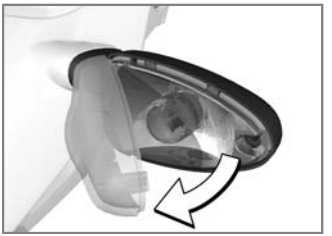
Replacing front or rear turn indicator bulbs

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 screw connection side of lens out from mirror housing.



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

- Replace defective bulb.

Bulb of front turn indicators

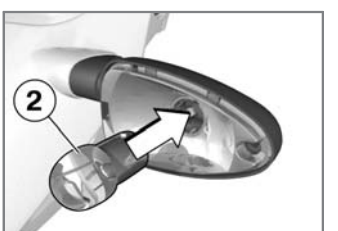
R10W / 12 V / 10 W

With OE White turn indicators:
RY10W / 12 V / 10 W◁

Bulb of rear turn indicators

R10W / 12 V / 10 W

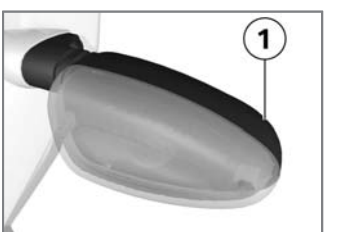
With OE White turn indicators:
RY10W / 12 V / 10 W◁



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



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



- Install screw **1**.

Jump-starting

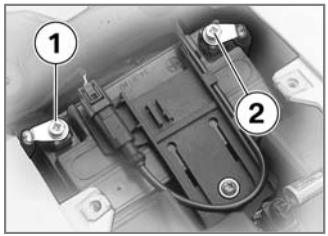
The wires leading to the onboard socket do not have a load-capacity rating adequate for jump-starting the engine. Excessively high current can lead to a cable fire or damage to the motorcycle electronics.
Do not use the onboard socket to jump-start the motorcycle.◀

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.◀

- Removing seat (➡ 48)
- Removing battery compartment cover (➡ 105)
- When jump-starting the engine, do not disconnect the battery from the onboard electrical system.



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

battery in the usual way; if the engine refuses to start, wait a few minutes before repeating the attempt to protect the starter and the supporting battery.

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

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

- Installing battery compartment cover (➡ 106)
- Installing seat (➡ 49)

Battery

Maintenance instructions

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

Compliance with the points below is important in order to 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 the disconnected battery via the onboard socket.
- Comply with the operating instructions of the charger.

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

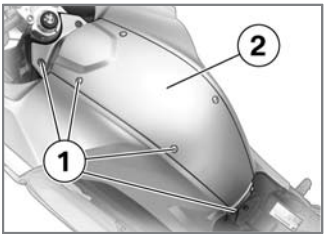
Charging disconnected battery

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

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.◀

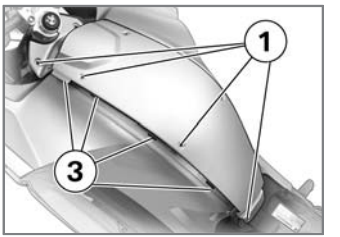
Removing battery compartment cover

- Removing seat (➠ 48)



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

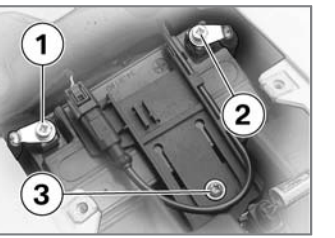
Installing battery compartment cover



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

Removing battery

- Make sure the ground is level and firm and park the motorcycle.
- Removing seat (➡ 48)
- Removing battery compartment cover (➡ 105)
- Switch off ignition.

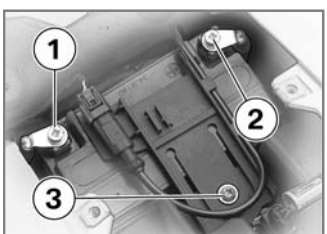


⚠ An incorrect disconnection sequence increase the risk of short-circuiting. Always observe the proper sequence.◀

- Remove negative cable **1** first.
- Then remove positive cable **2**.
- Remove screw **3** and take off battery retaining strap.
- Lift battery up and out, using tilting movements if it is difficult to move.

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 over battery and install screw **3**.

⚠ An incorrect connection sequence increases the risk of short-circuiting.

Always observe the proper sequence.◀

- Install positive cable **2**.
- Install negative cable **1**.
- Installing battery compartment cover (➠ 106)
- Installing seat (➠ 49)
- Setting clock (➠ 36)

Care

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Cleaning sensitive motorcycle parts 111
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Protective wax coating 112
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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 strong sunlight and do not wash it in the sun.
Make sure that the motorcycle is washed frequently, especially during the winter months.
To remove road salt, clean the motorcycle with cold water immediately after every trip.

After the motorcycle has been washed, ridden through water or ridden in the rain, the brake 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
- 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. The best way to see whether the paint has to be protected is that water no longer forms pearls.

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.

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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 (➡ 61)
Battery not adequately charged.	Charging battery when connected (➡ 105)

Threaded fasteners

Front wheel	Value	Valid
Pinch bolt of quick-release axle		
M8 x 40	15 lb/ft (20 Nm)	
Quick-release axle in axle mount		
M24 x 1.5	37 lb/ft (50 Nm)	
Brake caliper on slider tube		
M8 x 32 10.9	22 lb/ft (30 Nm)	

Rear wheel	Value	Valid
Rear wheel on drive shaft		
M10 x 1.25	44 lb/ft (60 Nm)	
Muffler on manifold		
M8 x 60 10.9 Apply thin coat between socket and ball, Optimoly TA	26 lb/ft (35 Nm)	
Muffler on rear frame		
M8 x 35	14 lb/ft (19 Nm)	

Engine

Engine design	Two-cylinder, four-stroke engine, DOHC control with toothed chain drive, 4 valves actuated by trailing valve levers, compensating connecting rods, liquid cooling for cylinders and cylinder head. Integrated water pump, 6-speed transmission and dry-sump lubrication
Effective displacement	798 cc (798 cm^3)
Cylinder bore diameter	3.2 in (82 mm)
Piston stroke	3 in (75.6 mm)
Compression ratio	12:1
Rated output	85 hp (62.5 kW), - at engine speed: 8000 min^{-1}
With OE Regular unleaded (RON 91):	83 hp (61 kW), - at engine speed: 8000 min^{-1}
With OE Power reduction:	34 hp (25 kW), - at engine speed: 7000 min^{-1}

Maximum torque	63 lb/ft (86 Nm), - at engine speed: 5800 min^{-1}
With OE Regular unleaded (RON 91):	61 lb/ft (83 Nm), - at engine speed: 5800 min^{-1}
With OE Power reduction:	41 lb/ft (55 Nm), - at engine speed: 3500 min^{-1}
Idle speed	$1250^{\pm 50}$ min^{-1}
Fuel	
Recommended fuel type	Super unleaded (95 RON/85 MON)
With OE Regular unleaded (RON 91):	Regular (91 RON/ 82.5 MON)
Usable fuel quantity	4.2 gal (16 l)
Reserve fuel quantity	1.1 gal (4 l)
Engine oil	
Engine oil capacity	3.2 quarts (3 l), with filter change
Lubricant	Engine oil 15W-40
Engine oil top-up quantity	0.3 quarts (0.3 l), difference between MIN and MAX

Oil grades	Mineral engine oils of the API classification SF to SH. BMW Motorrad does not recommend using oil additives, as these can worsen clutch operation. Ask your BMW Motorrad retailer for engine oils suitable for your motorcycle.
Permissible viscosity classes	
SAE 10 W-40	≥-4 °F (≥-20 °C), Operation at low temperatures
SAE 15 W-40	≥14 °F (≥-10 °C)

Riding specifications

Top speed	>124 mph (>200 km/h)
With OE Power reduction:	96 mph (155 km/h)
Acceleration	3.7 s, Speed: 0...62 mph (0...100 km/h)

Clutch

Clutch design	Multi-disk oil-bath clutch

Transmission

Transmission design	Claw-shifted 6-speed transmission integrated in engine housing
Gear ratios	
Transmission gear ratios	1.943 (35/68 teeth), Primary gear ratio 1:2.462 (13/32 teeth), 1st gear 1:1.750 (16/28 teeth), 2nd gear 1:1.381 (21/29 teeth), 3rd gear 1:1.174 (23/27 teeth), 4th gear 1:1.042 (24/25 teeth), 5th gear 1:0.960 (25/24 teeth), 6th gear

Rear-wheel drive

Rear-wheel drive design	Belt drive with jerk damping in its own housing

Running gear

Front suspension design	Telescopic forks
Total spring travel of front suspension	5.5 in (140 mm), On wheel
Rear-wheel suspension design	Directly articulated central spring strut with steplessly adjustable rebound-stage damping
Total spring travel on rear wheel	5.5 in (140 mm), On wheel

Brakes

Front-wheel brake design	Hydraulically operated twin disk brake with 4-piston fixed calipers and floating brake disks
Front brake-pad material	Sintered metal
Rear-wheel brake design	Hydraulic 2-piston floating calipers with fixed brake disk
Rear brake lining material	Sintered metal

Wheels and tires

Front wheel design	Cast aluminum, MT H2
Front-wheel rim size	3.5" x 17"
Front tire designation	120/70 ZR 17
Rear wheel design	Cast aluminum, MT H2
Rear-wheel rim size	5.5" x 17"
Rear-wheel tire designation	180/55 ZR 17

Tire pressures	
Front tire pressure	36.3 psi (2.5 bar), Single rider, with cold tire 36.3 psi (2.5 bar), Driver with passenger and/or load, with cold tire
Rear tire pressure	40.6 psi (2.8 bar), Single rider, with cold tire 40.6 psi (2.8 bar), Driver with passenger and/or load, with cold tire

Electrical system

Capacity of onboard socket	5 A, Per onboard socket
Fuses	All 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 (Absorptive Glass Mat) battery.
Battery voltage	12 V
Battery capacity	14 Ah

Spark plugs	
Spark plug manufacturer and designation	NGK DCPR 8 E
Spark-plug electrode gap	$0.04^{\pm 0}$ in ($0.9^{\pm 0.1}$ mm), New
	0.05 in (1.2 mm), Wear limit
Bulbs	
High-beam headlight bulb	H7 / 12 V / 55 W
Low-beam headlight bulb	H7 / 12 V / 55 W
Parking light bulb	W5W / 12 V / 5 W
Bulb of tail/brake lights	P25-2 / 12 V / 5...21 W
Bulb of front turn indicators	R10W / 12 V / 10 W
With OE White turn indicators:	RY10W / 12 V / 10 W
Bulb of rear turn indicators	R10W / 12 V / 10 W
With OE White turn indicators:	RY10W / 12 V / 10 W

Frame

Frame design	Aluminum delta-box frame
Location of type plate	Upper section of main frame on right
Location of vehicle identification number (VIN)	Steering head on right

Dimensions

Motorcycle length	86.4 in (2195 mm)
Motorcycle height (Up to upper edge of windshield)	48.2 in (1225 mm)
Vehicle width (Across mirrors)	33.9 in (860 mm)
Driver's seat height	32.3 in (820 mm), Without driver at unladen weight
With OE Low dual seat:	31.1 in (790 mm), Without driver at unladen weight

Weights

Unladen weight	450 lbs (204 kg), Ready for road, 90 % full tank of gas, without OE
Permissible gross weight	893 lbs (405 kg)
Maximum payload	443 lbs (201 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 confirmed 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.
Certain signs of wear, moreover, 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 must 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

Confirmation of service

The table is intended as proof of maintenance, warranty and repair work, the installed optional accessories and any special campaign (recall) work carried out.

Work carried out	Odometer reading	Date

Work carried out	Odometer reading	Date

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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.
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Fuel	
Recommended fuel type	Super unleaded (95 RON/85 MON)
With OE Regular unleaded (RON 91):	Regular (91 RON/ 82.5 MON)
Usable fuel quantity	4.2 gal (16 l)
Reserve fuel quantity	1.1 gal (4 l)
Tire pressures	
Front tire pressure	36.3 psi (2.5 bar), Single rider, with cold tire 36.3 psi (2.5 bar), Driver with passenger and/or load, with cold tire
Rear tire pressure	40.6 psi (2.8 bar), Single rider, with cold tire 40.6 psi (2.8 bar), Driver with passenger and/or load, with cold tire

BMW recommends Castrol

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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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