Rider's Manual (US Model)

K 1200 S



BMW Motorrad

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 motorcycle retailer will gladly provide advice and assistance.

We hope you enjoy reading this Rider's Manual and wish you many a pleasant, safe journey on your BMW motorcycle.

Best wishes,

BMW Motorrad

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General information

About this Rider's Manual

We have tried to make all the information in this Rider's Manual easy to find. The quickest access to a particular topic or item is by consulting the detailed index (➠ 149). The first chapter of this Rider's Manual will provide you with an initial overview of your motorcycle. When the time comes to sell your BMW, please remember to hand over this Rider's Manual; it is an important part of your motorcycle.

Symbols and abbreviations used

 Indicates warnings that you must comply with – for reasons of safety, 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.

(➠ 4) Reference to a page with more detailed information.

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

OA Optional accessories can be purchased and retrofitted at your authorized BMW motorcycle retailer.

EWS Electronic immobilizer.

ESA Electronic Suspension Adjustment.

DWA Anti-theft alarm.

ABS anti-lock braking system.

Custom 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. Country-specific deviations from the motorcycle illustrated are also possible. 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 power ratings stated in the Rider's Manual are quoted to the standards and comply with the tolerance requirements of the Deutsche Institut für Normung e. V. Configurations for individual countries may differ.

Improvements

The high safety and quality standards of BMW motorcycles are maintained by unceasing development work on designs, equipment and accessories. Because of the constant improvements, the information in this manual may not have kept pace with the improvements or changes present on your BMW motorcycle. Nor can errors and omissions be entirely ruled out. We hope you will appreciate that no claims can be entertained on the basis of the data, illustrations or descriptions in this manual.

BMW Service

Advanced technology requires the use of specially adapted maintenance and repair methods.

If this maintenance and repair work is performed inexpertly, there is a danger of damage and associated safety risks. BMW recommends only having work carried out on your motorcycle by an authorized BMW motorcycle retailer or a workshop which works with personnel trained in accordance with BMW specifications.◀

Your authorized BMW motorcycle retailer can provide information on the specified Service, Inspections and Annual Inspections required, or this information may be obtained from the Internet by visiting "www.bmw-motorrad.com/maintenance".

Have all maintenance and repair work carried out on your motorcycle entered in the chapter "Service" (➠ 140) of this manual.

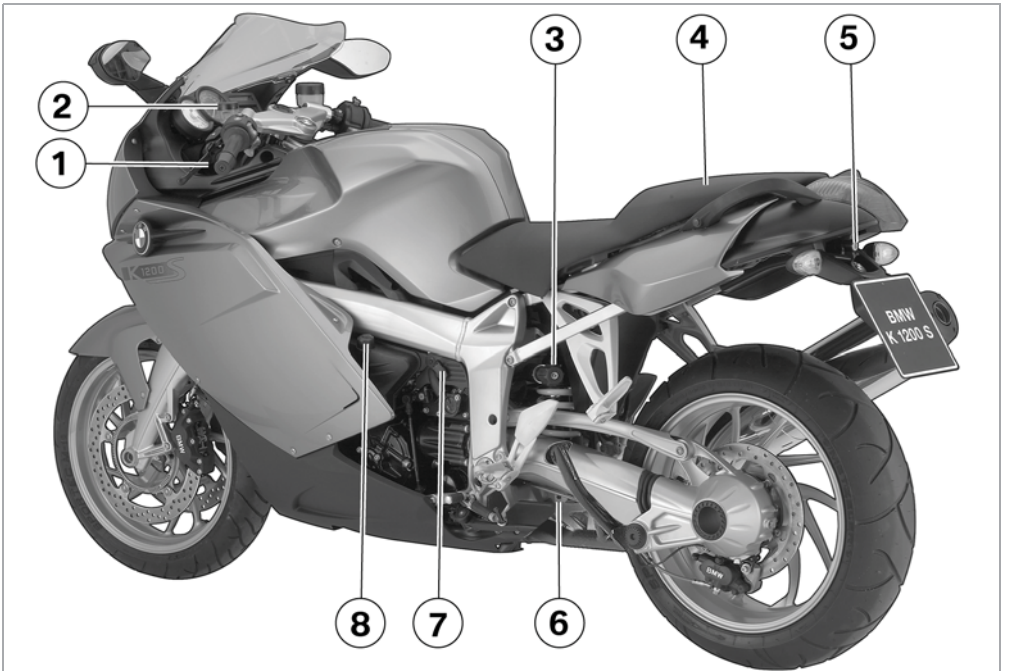
Your authorized BMW motorcycle retailer is supplied with all the latest technical information and therefore possesses the necessary technical know-how.
We therefore recommend that you consult your authorized BMW motorcycle retailer on all questions concerning your motorcycle.

Rider's equipment

It is foolish to ride without the right clothing. Always wear your
– Helmet
– Rider's suit
– Gloves
– Boots

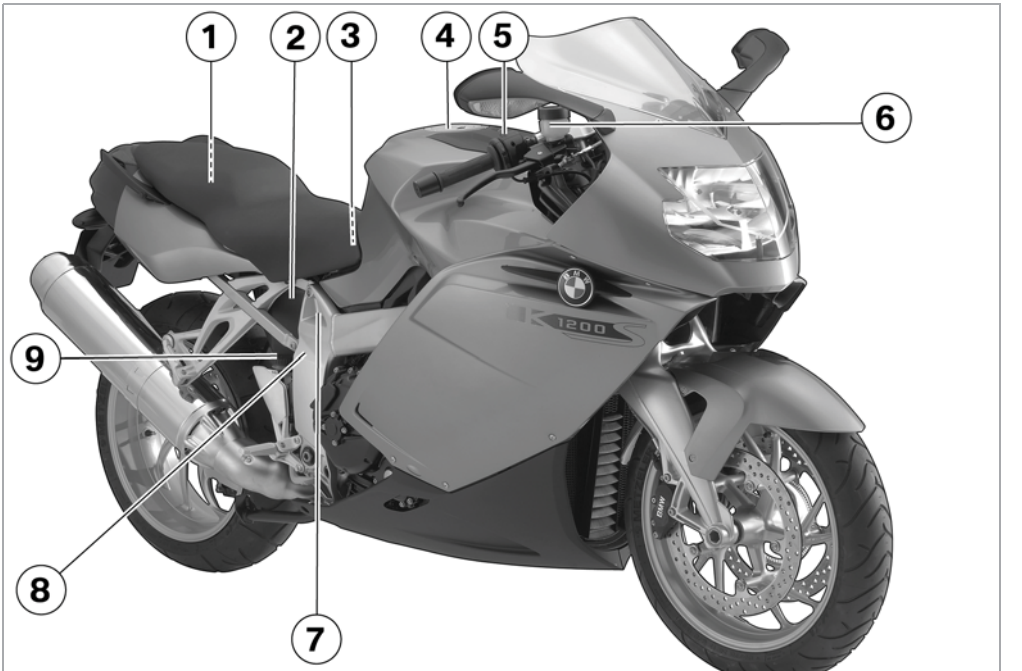
This applies even to short journeys, and to every season of the year. Your authorized BMW motorcycle retailer will be glad to advise you on the right clothing for every purpose.

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General view, left side

1 Headlight adjustment (vertical) (➠ 38)
beneath instrument panel
2 Clutch fluid reservoir (➠ 93)
3 Rear spring preload adjustment (➠ 43)
4 Helmet holder (➠ 41)
under seat
5 Seat lock (➠ 40)
beneath rear light
6 Rear shock absorber damping adjustment (➠ 44)
7 Power socket (➠ 74)
8 Coolant fill opening (➠ 88)

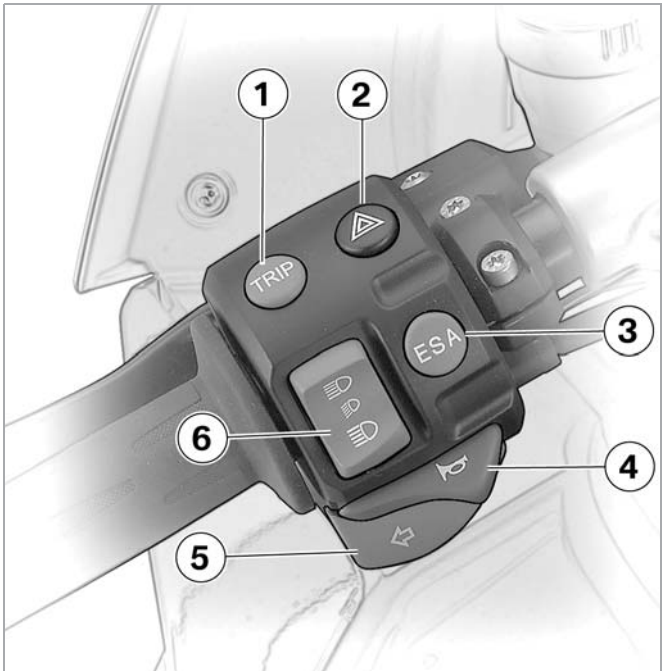

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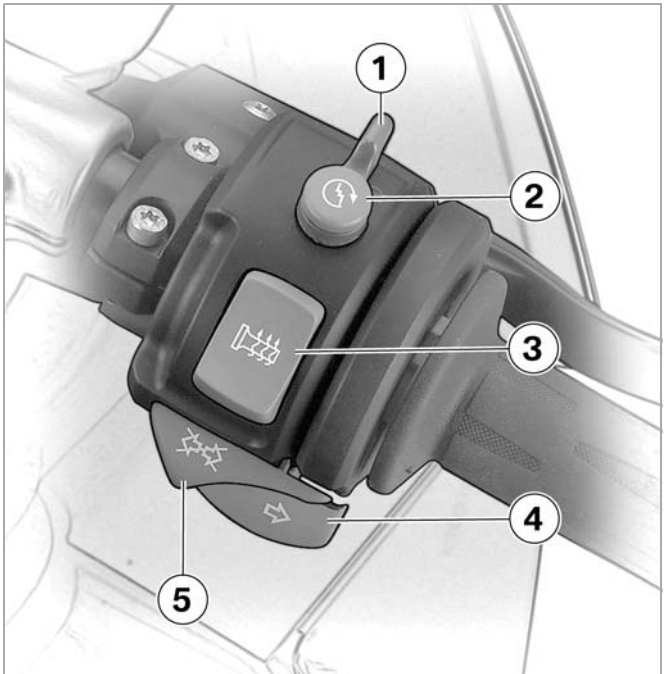
General view, right side

1 Vehicle toolkit (➠ 85) under the seat
2 Display for engine oil level (➠ 86)
3 Fill opening
Engine oil (➠ 87), under seat
4 Fuel-tank fill opening (➠ 67)
5 Battery compartment (➠ 115)
6 Front brake-fluid reservoir (➠ 91)
7 Type plate on rear cross tube
8 Vehicle identification number (VIN)
on front right side panel
9 Rear brake-fluid reservoir (➠ 91)

Left handlebar fitting

1 Button, Tripmaster (➠ 33)
2 Button, hazard warning flashers (➠ 32)
3 Button, ESA^{OA} (➠ 45)
4 Button, horn
5 Button, left turn signal (➠ 39)
6 Switch for high-beam headlight and headlight flasher (➠ 37)





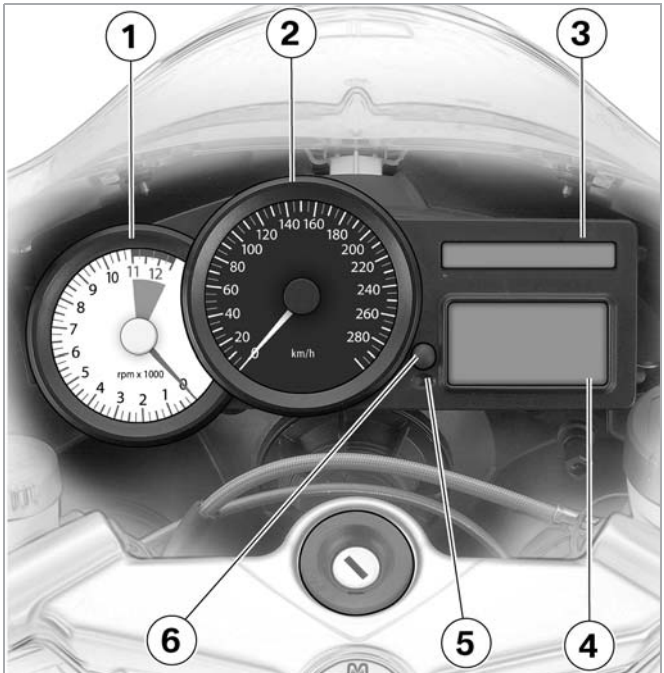
Right handlebar fitting

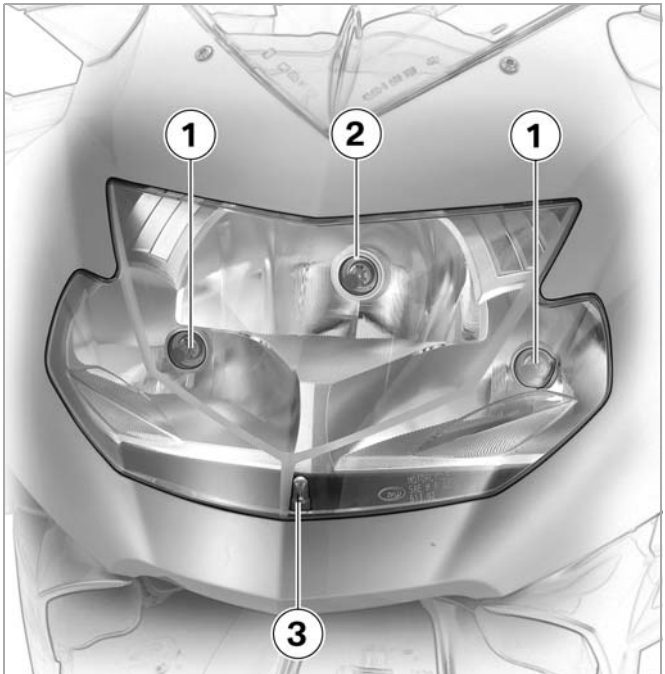
1 Emergency ON/OFF switch (➠ 34)
2 Button, starter
3 Switch for heated hand grips[OE] (➠ 35)
4 Button, right turn signal (➠ 39)
5 Button, turn signal off (➠ 40)

Instrument panel

1 Tachometer
2 Speedometer
3 Warning and indicator lights (➠ 18)
4 Multifunction display (➠ 18)
5 Indicator light DWA^{OE} and sensor for lighting of instrument panel
6 Adjustment of clock (➠ 35)

▷ The lighting of the instrument panel is equipped with an automatic day and night switchover.◀





Headlights

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

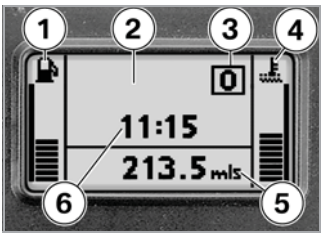
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Multifunction display



1 Fuel level display
2 Display area for warning symbols
3 Gear indicator
4 Display, coolant temperature
5 Display, Tripmaster (➠ 33)
6 Clock

Fuel level

The horizontal bars indicate the level of fuel in the tank. If only four bars are displayed, the reserve level has been reached.

Gear indicator

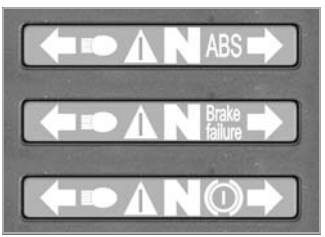
The gear display indicates the engaged gear. If no gear is engaged, the gear display indicates 0; the "neutral" indicator light also lights up.

Coolant temperature

The horizontal bars indicate the level of the coolant temperature.

Warning and indicator lights

The warning and indicator lights are shown in one of the following three variants depending on your country:



Indicator light, left turn signal

Indicator light, high-beam headlight

Warning light, general

Indicator light, neutral



Warning light, ABS, national-market specifi cation 1



Warning light for ABS, national-market specifi-cation 2


Warning light for ABS, national-market specifi-cation 3


Indicator light, right turn signal

Warning indicators

Warnings are displayed by means of symbols in the multi-function display. In some cases, an additional general warning light lights up in red or in yellow. A number of warnings may be issued simultaneously.

Overview

The following table lists the possible warnings and pages with additional information.

Light	Symbol	Meaning	Explanations
	EWS	Ignition key not authorized.	(➠ 22)
		Low-beam headlight, high-beam headlight, parking light or turn signal lamp defective.	(➠ 24)
		Bulb failure.	(➠ 24)
yellow		Fuel reserve reached.	(➠ 22)
yellow		Fault in engine electronics.	(➠ 23)
yellow		Rear light or brake light lamp defective.	(➠ 24)
red		Coolant temperature too high.	(➠ 22)
red		Engine oil pressure too low.	(➠ 23)

Light	Symbol	Meaning	Explanations
 red		Battery is no longer being charged.	(➠ 24)
 red		Brake switch defective.	(➠ 25)
	 1 flash per second	ABS starting-off test not completed.	(➠ 25)
	 4 flashes per second	ABS self-diagnosis not completed.	(➠ 25)
 red		Relay for ABS warning lights defective.	(➠ 26)
 red	 1 flash per second	ABS function not available.	(➠ 26)
 red	 4 flashes per second	ABS in residual braking function.	(➠ 27)
 1 red flash per second	 1 flash per second	Insufficient brake fluid.	(➠ 27)
 4 red flashes per second	 4 flashes per second	A number of ABS faults.	(➠ 28)

Electronic immobilizer EWS



EWS symbol is displayed.

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

- Remove other ignition keys located at the ignition key (➠ 30).
- Use the replacement key.
- Have the defective key replaced by an authorized BMW motorcycle retailer (➠ 32).

Fuel reserve


General warning light lights up in yellow.


Fuel reserve symbol is displayed and flashes 10 times.

The fuel tank contains a fuel reserve of maximum 4 liters. The Tripmaster indicates the probable residual operating range (➠ 34).


A fuel shortage can lead to the motor dying unexpectedly, and can therefore result in dangerous driving situations.
Do not drive until the fuel tank is completely empty.◀


A fuel shortage can lead to backfiring, and can therefore result in damage to the catalytic converter.
Do not drive until the fuel tank is completely empty.◀

- Refuel.

Coolant temperature


General warning light lights up in red.


Coolant temperature indicator flashes 10 times.

Coolant temperature too high.


Continued driving with an overheated engine can result in engine damage.
Always observe the measures listed below.◀

- Check coolant level, top up if necessary.
- If possible, ride in the part-load range to cool down the engine.
- In traffic jams, switch off the engine, but keep the ignition on so that the radiator fan continues to operate.

Engine electronics



General warning light lights up in yellow.



Engine electronics symbol is displayed.

Fault in engine electronics.
In exceptional cases, the engine stops and can no longer be started. Otherwise, the engine runs in emergency operating mode.
You can continue to ride, but bear in mind that the usual engine output is not available.

- Have the fault remedied as quickly as possible by a certified workshop, preferably an authorized BMW motorcycle retailer.

Engine oil pressure



General warning light lights up in red.



Engine oil pressure symbol is displayed.

Insufficient engine oil pressure.
The warning "engine oil pressure" indicates that there is no oil pressure or that the oil pressure in the lubricating oil circuit is too low; under no circumstances is the "engine oil pressure" warning light to be regarded as an indication of the engine oil level. Once the oil pressure has built up 1 – 2 seconds after the engine start, the warning indicator must go out.

If the warning "engine oil pressure" is displayed while the motorcycle is being ridden, take account of the traffic situation and:

- Disengage the gear.
- Move the kill switch.
- Bring the motorcycle safely to a halt.
- Check the engine oil level.



In addition to an insufficient engine oil level, other problems in the engine can lead to the warning "engine oil pressure". Continuing to ride in these cases can lead to engine damage.
If the warning "engine oil pressure" is issued, do not continue to ride even though the engine oil level might be correct.◀

- Have the fault remedied by a certified workshop, preferably an authorized BMW motorcycle retailer.

Battery charge current


General warning light lights up in red.


Battery charge current symbol is displayed.

The battery is no longer being charged. You can only continue to ride until the battery is discharged.


A discharged battery can lead to the motor dying unexpectedly, and can therefore result in dangerous driving situations.
Do not continue driving if possible.◀

- Have the fault remedied as quickly as possible by a certified workshop, preferably an authorized BMW motorcycle retailer.

Bulb failure


In the event of a bulb failure, there can be problems seeing and being seen.
Replace defective bulbs as quickly as possible.◀


General warning light lights up in yellow.


Defective lamp symbol with arrow pointing to the rear is displayed.

Rear light or brake light lamp defective.
- Replace bulbs (➠ 108).


Defective lamp symbol with arrow pointing to the front is displayed.

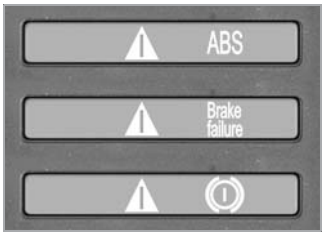
Low-beam headlight, high-beam headlight, parking light or turn signal defective.
- Replace bulbs (➠ 106-110).


Defective lamp symbol with two arrows is displayed.

A combination of the lamp defects described previously has occurred.
- Replace bulbs (➠ 106-110).

ABS warning indicators

The ABS warning light is shown in one of the following three variants depending on your country:



ABS warnings are indicated by a combination of the general warning light and the ABS warning light. Both warning lights can light up continuously or flash 1 time or 4 times per second.

Warning light, general

General warning light lights up in red.

Brake switch defective or incorrectly adjusted. The BMW Integral ABS detects the driver's request for braking by the pressure buildup from the brake lever. There can be an unusual response from the brake. You can continue to ride. However, bear in mind that the brake can respond in a manner to which you are not accustomed.

There is a defect in the brake system which can lead to unaccustomed braking behavior.
Brake with foresight and caution, and avoid heavy braking.◀

- Have the fault remedied as quickly as possible by a certified workshop, preferably an authorized BMW motorcycle retailer.

ABS warning light

ABS warning light flashes 1 time per second.

ABS function not available, as starting-off test (➠ 58) not completed.
You can continue to ride.
To prevent the wheels from locking:

- Do not use emergency braking until the starting-off test has been completed.

Without the ABS function the wheels may lock-up during braking.
Brake with foresight and caution, and avoid heavy braking.◀

ABS warning light flashes 4 times per second.

Only residual braking function available in both circuits, as self-diagnosis (➠ 55) not completed.
You can continue to ride. However, bear in mind that neither the ABS function nor the power braking assistance is available before the self-diagnosis has been completed.

Without the ABS function the wheels may lock-up during braking; without power braking assistance, much greater forces are required for braking.
Brake with foresight and caution, and avoid heavy braking.◀

- When circumstances permit, avoid pressing the brake lever until the self-diagnosis has been completed.

General warning light and ABS warning light

General warning light lights up in red.
ABS warning light lights up.

The relay for control of the ABS warning indicators is defective. No ABS faults can be displayed.
You can continue to ride, but bear in mind that any ABS faults that might occur can no longer be displayed.

ABS warning indicators are inoperative.
Brake with foresight and caution, and avoid heavy braking.◀

- Have the fault remedied as quickly as possible by a certified workshop, preferably an authorized BMW motorcycle retailer.

General warning light lights up in red.
ABS warning light flashes 1 time per second.

ABS function (➠ 71) unavailable in at least one braking circuit.
You can continue to ride. However, bear in mind that the ABS function is not available.

Without the ABS function the wheels may lock-up during braking.

Brake with foresight and caution, and avoid heavy braking.◀

- Have the fault remedied as quickly as possible by a certified workshop, preferably an authorized BMW motorcycle retailer.


General warning light lights up in red.



ABS warning light flashes 4 times per second.

Only residual braking function (➠ 71) available in at least one brake circuit.
You can continue to ride. However, bear in mind that neither the ABS function nor the power braking assistance is available.


Without the ABS function the wheels may lock-up during braking; without power braking assistance, much greater forces are required for braking.
Brake with foresight and caution, and avoid heavy braking.◀

- Have the fault remedied as quickly as possible by a certified workshop, preferably an authorized BMW motorcycle retailer.


General warning light flashes red 1 time per second.



ABS warning light flashes 1 time per second.

Fluid level in BMW Integral ABS too low.


This case involves a wheel brake circuit for which the fluid level cannot be read from the brake-fluid reservoirs.◀

Among other things, the trigger for this warning indicator can be extremely worn brake pads.


Worn brake pads can considerably increase the braking distance.
Brake with foresight and caution, and avoid heavy braking.◀


Worn brake pads can damage the brake discs.
Brake with foresight and caution, and avoid heavy braking.◀

- Stop and check the thickness of the brake pads (➠ 90).
- Have worn brake pads replaced as quickly as possible by a certified workshop, preferably an authorized BMW motorcycle retailer.

If the brake pad thickness is sufficient:

- Check the following functions:
  – Ignition off, brake pressure present at the brake levers.
  – Brakes acting on both wheels.
  – Brake system is free from leaks, no signs of brake fluid escaping.

The functions are not available:

 There is a defect in the brake system.
Do not continue driving.◀

If these functions are in order, you can continue riding. However, bear in mind that a loss of brake fluid that cannot be detected might be the cause of the warning.

 There is a fault in the brake system which can lead to deteriorating braking behavior.
Brake with foresight and caution, and avoid heavy braking.◀

- Have the fault remedied as quickly as possible by a certified workshop, preferably an authorized BMW motorcycle retailer.

 General warning light flashes red 4 times per second.



ABS warning light flashes 4 times per second.

There are two faults:

- Only residual braking function (➠ 71) available in at least one brake circuit, indicated by the general warning light lighting up and the ABS warning light flashing 4 times per second.
- Fluid level in the BMW Integral ABS is too low, indicated by the general and ABS warning lights flashing 1 time per second.

Please read the fault descriptions listed later in this manual.

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Ignition key and steering lock

Keys

You will receive one master key and one spare key. If you lose a key, read the information on the electronic immobilizer, EWS (➠ 22).

Ignition key and steering lock, tank filler cap lock and seat lock are all operated with the same key. System cases[OA] with locks for the same key can be ordered on request.◀

Switching on ignition



- Turn the key into position ⚆.

» Parking light and all function circuits switched on.
» Pre-ride check is performed (➠ 53).
» ABS self-diagnosis is performed (➠ 55).
» Engine can be started.

Switching off ignition



- Turn the key into position ⛒ .

» Light switched off.
» Steering lock unsecured.
» In this position, you can remove the key.

Securing steering lock



- Turn the handlebars to the full left or right lock position.
- Turn the key into position OFF, while moving the handlebars slightly.

» Ignition, light and all function circuits switched off.
» Steering lock secured.
» In this position, you can remove the key.

If the motorcycle is on the side stand, it depends on the features of the ground whether it is better to turn the handlebars to the left or right. On level ground, a secure stance occurs with the handlebars turned to the left.
On level ground, always turn the handlebars to the left to set the steering lock.◀

With the ignition switched off, the brake power assistance is unavailable. While the motorcycle is being ridden, do not switch off the ignition.◀

Electronic immobilizer

The electronic immobilizer helps protect your BMW 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 only be started with the keys that belong to the vehicle. You can also have your authorized BMW motorcycle retailer bar individual keys, for example if a particular key is lost. The engine cannot be started with a key that has been barred.

In-key security

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 displayed in the multifunction display.

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

Replacement and extra keys

You can obtain replacement keys only through an authorized BMW motorcycle 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 have to bring along all the keys that belong to the motorcycle. A key that has been barred can subsequently be cleared and reactivated for use.

Hazard warning flashers

Switching on hazard warning flashers



- Switch on the ignition.
- Press the hazard warning flashers button **1**.

» Hazard warning flashers in operation.
» Left/right turn signal indicator lights flash.

- Switch off the ignition.

» The hazard warning flashers continue to operate.

» Left/right turn signal indicator lights off.

The hazard warning flashers can also be switched on by simultaneously pressing the buttons for the left and right turn signals.◀

The hazard warning flashers places a load on the battery. Do not use the hazard warning flashers for longer than absolutely necessary.◀

Switching off hazard warning flashers

- Press the hazard warning flashers button **1** or switch on ignition.

» Hazard warning flashers cease to operate.

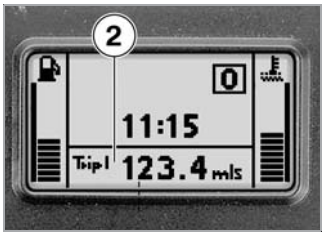
Tripmaster

Selecting display



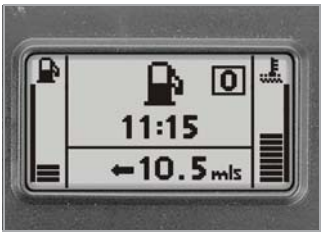
When you switch on the ignition, the information shown by the Tripmaster when the ignition was switched off always reappears on the multi-function display.◀

- Switch on the ignition.
- Press the Tripmaster button **1** once briefly.



» The following appear in the display field **2** in this order:
  – Total distance covered
  – Trip odometer 1 (Trip I)
  – Trip odometer 2 (Trip II)
  – Operating range

Operating range



The operating range is only displayed when the reserve level is reached. It is determined on the basis of the previous riding style and the available fuel.
If the motorcycle is resting on its side stand, the level in the tank cannot be measured correctly, so this estimate of residual operating range will be inaccurate.

The Tripmaster registers that you have refueled when approximately 5 pints (3 liters) have been added.

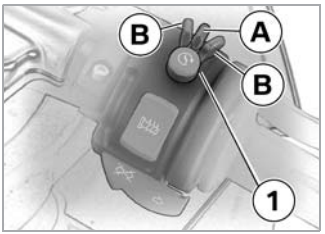
Resetting trip meter

- Switch on the ignition.
- Select the desired trip meter.
- Press the Tripmaster button **1** for longer than 2 seconds.

» The trip meter is set to zero.

Emergency ON/OFF switch

The engine can easily be switched off during or after a fall using the emergency ON/OFF switch.



Actuating the emergency ON/OFF switch while driving can cause the rear wheel to lock up, resulting in a fall.
Never actuate the emergency ON/OFF switch while driving.◀

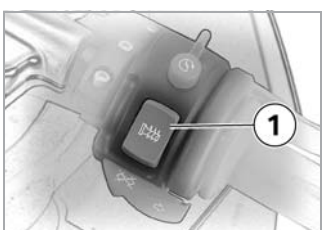
- Turn the emergency ON/OFF switch 1 to the left or right into position **B**.

» The engine electronics control unit switches the engine off.

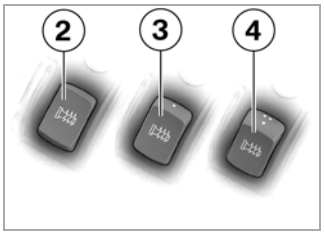
» The engine cannot be started in this position.

If the emergency ON/OFF switch is moved to position **B** when the ignition is on, the BMW Integral ABS is still functioning (➠ 50, 69).◀

Heated hand grips[OE]



1 Switch for heated hand grips



2 Heating function off
3 50% heat output (one point visible)
4 100% heat output (three points visible)

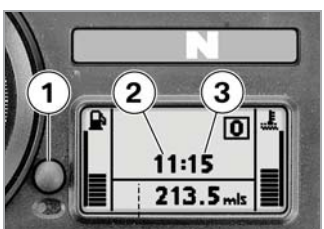
The heated hand grips option can only be activated when the engine is running.

The increased power consumption caused by operating the heated hand grips can lead to the battery discharging on journeys in the lower engine speed range.

If the battery is inadequately charged, the heated hand grips are switched off to ensure starting capability.◀

Clock

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



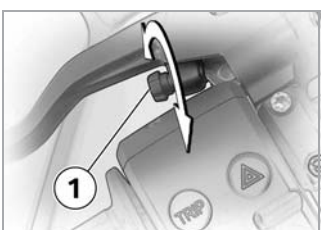
- Switch on the ignition.
- Press button **1** for longer than 2 seconds.

» The hour display **2** starts to flash.
• Press button **1** briefly.
» The hours are incremented upwards with every touch.
• Press button **1** for longer than 2 seconds.
» The minute display **3** starts to flash.
• Press button **1** briefly.
» The minutes are incremented upwards with every touch.
• Press button **1** for longer than 2 seconds.
» Adjustment completed.

Handlebar levers

Adjusting clutch lever

Adjusting the clutch lever while the motorcycle is being ridden can lead to accidents. Adjust the clutch lever only when the motorcycle is stationary.◀

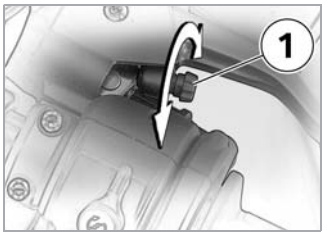


• Use the adjusting screw **1** to set the clutch lever reach.
» Turn clockwise: reach is increased.
» Turn counter-clockwise: reach is reduced.

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

Adjusting the handbrake lever

Adjusting the brake lever while the motorcycle is being ridden can lead to accidents.
Adjust the brake lever only when the motorcycle is stationary.◀



- Use the adjusting screw **1** to set the front brake lever reach.

» Turn clockwise: reach is increased.

» Turn counter-clockwise: reach is reduced.

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

Lights

Parking light

The parking light switches on automatically when the ignition is switched on.

The parking light places a load on the battery. Do not leave the ignition switched on longer than absolutely necessary.◀

Low-beam headlight

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

With the engine switched off, you can briefly switch on the light by switching on the high-beam headlight with the ignition switched on or by operating the headlight flasher.◀

High-beam headlight/ Headlight flasher



- Press the high-beam headlight **1** switch at the top.

» High-beam headlight switched on.

- Move the high-beam headlight **1** switch into the center position.

» High-beam headlight switched off.

- Press the high-beam headlight **1** switch at the bottom.

» Headlight flasher.

Parking light

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



- Switch off the ignition.
- Press the left-hand turn signal **1** switch.

» Parking light switched on.

- Switch the ignition on and off again.

» Parking light switched off.

Headlight setting RHD/ LHD traffic

When riding in countries with a different traffic rules from your own, the asymmetric low headlight beam will dazzle oncoming traffic.

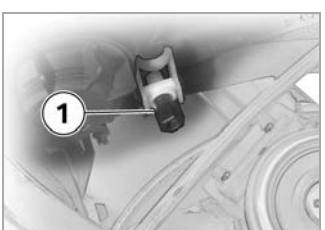
Adhesive films with unsuitable adhesives can damage the plastic surface of the headlight.
Only use suitable adhesive films.◀

- Have the headlight adjusted to the relevant conditions by a certified workshop, preferably an authorized BMW motorcycle retailer.

Headlight adjustment (vertical)

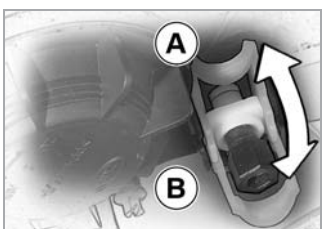
The headlight beam throw is kept constant when the spring preload is adjusted to suit the load.

- Adjust the spring preload and shock absorber damping to the expected load (➠ 47).
- If you are unsure that the basic headlight setting is correct consult a certified workshop, preferably anauthorized BMW motorcycle retailer.



In the case of very high payloads, the available spring preload adjustment might not be adequate. To avoid dazzling oncoming traffic:

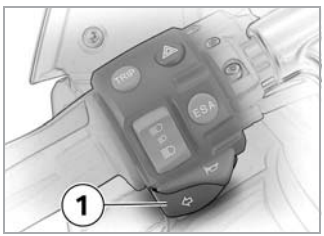
- Correct the headlight adjustment by adjusting the swiveling lever **1**.



A Neutral position
B High load

Turn signals

Switching on turn signals



- Press the left-hand turn signal button **1**.

» Left-hand turn signal switched on.

» Indicator light for left-hand turn signal flashes.

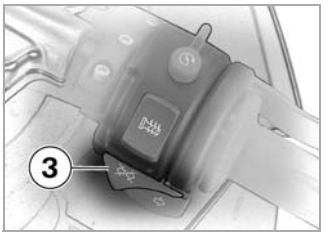


- Press the right-hand turn signal button **2**.

» Right-hand turn signal switched on.

» Indicator light for right-hand turn signal flashes.

Switching off turn signals



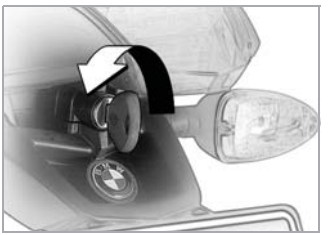
- Press the indicator button **3**.

» Turn signal off.

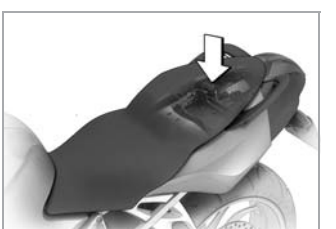
» Turn signal light in the indicator light panel is off.

Seat

Removing seat



- Turn the key counter-clockwise in the seat lock.



- In doing so, press the seat downwards for support.



- Raise the seat at the rear.
- Let go of the key and pull the seat from the retaining brackets towards the rear.

Where to put the seat

- Place the seat, cover side down, on a smooth and clean surface.

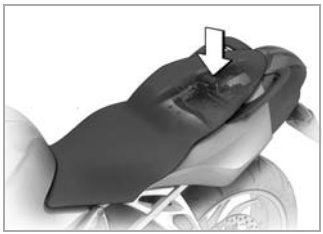
Place the seat, cover side down, on the fuel tank and the handlebars.◀

Installing seat

⚠ If too much pressure is applied in a forward direction, there is a danger that the motorcycle is pushed off its stand.
Make sure that the motorcycle is securely parked.◀



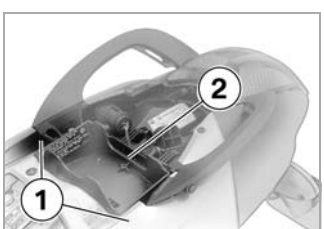
- Push the seat forward into the retaining brackets **1**.



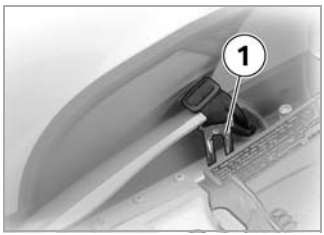
- Press the seat firmly downwards beyond the detent.

» The seat can be heard to lock into place.

Helmet holder



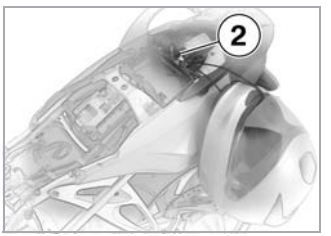
The helmet holders **1** and **2** are located under the seat.



A motorcycle helmet with chin strap can be attached to the helmet holders **1**.

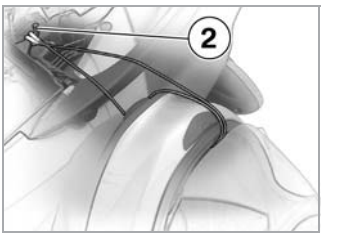
- (➠ 40) Remove the seat.
- Hook up the helmet chin strap in the holder.
- Refit the seat.

The helmet catch can scratch the paneling. When hooking up the helmet, keep an eye on the position of the helmet catch.◀



If cases are fitted or if the chin strap is too short, a steel cable can be used to secure the motorcycle helmet to the helmet holder **2**.

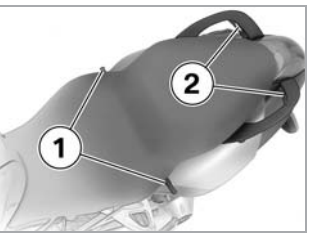
On the right-hand side of the motorcycle, the helmet could be damaged by heat from the end muffler. Only attach the helmet to the left-hand side of the motorcycle.◀



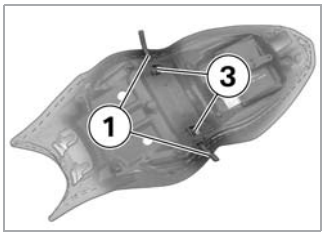
- Remove the seat.
- Pull the steel cable through the helmet and hook it up in the bracket **2**.
- Refit the seat.

You can obtain a suitable steel cable from your authorized BMW motorcycle retailer.◀

Luggage loops



The loops **1** for attaching luggage straps are located on the underside of the seat. In conjunction with the eyelets **2** on the grab handles, luggage can be strapped onto the rear seat.

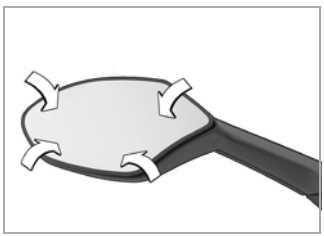


To make the loops accessible:

- Remove the seat and turn it around.
- Pull the loops **1** from the retaining brackets **3**.
- Turn the seat over and refit.

Mirrors

Adjusting mirrors



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

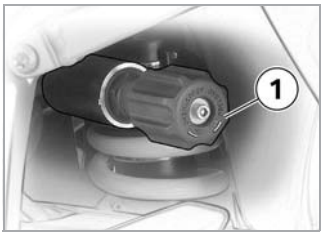
Spring preload

Adjusting spring preload on rear wheel

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

The spring preload must be adapted to the load of the motorcycle. An increase in the load requires an increase in the spring preload; less weight requires a correspondingly lower spring preload.

- Place the motorcycle on the center stand[OA] or side stand, ensuring that the ground is firm and level.



To increase the spring preload:

- Turn handwheel **1** in direction of arrow HIGH.

To decrease the spring preload:

- Turn handwheel **1** in direction of arrow LOW.

Basic setting for solo operation:

- Turn handwheel **1** as far as possible in direction of arrow LOW.
- Turn handwheel 15 clicks in direction of arrow HIGH.

One click corresponds to a half turn of the handwheel. The range of adjustment comprises 15 turns. The basic setting is based on a motorcycle with a full fuel tank and one person with 187 lbs (85 kg) weight.◀

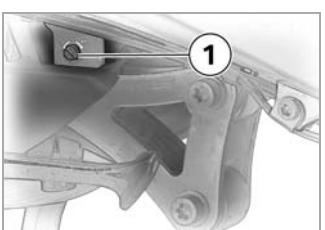
Adjustments to the spring preload and shock absorbers that are not coordinated lead to a deterioration in the handling characteristics of your motorcycle.
Adapt the shock absorbers to the spring preload.◀

Shock absorbers

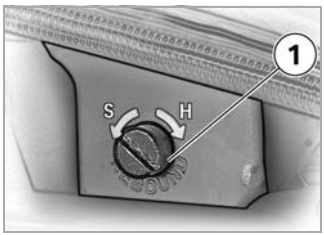
Adjusting shock absorber on rear wheel

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

- Place the motorcycle on the center stand[OA] or side stand, ensuring that the ground is firm and level.



- Adjust the rear wheel shock absorber using a screwdriver to turn the adjusting screw **1**.



To increase the damping:
- Turn the adjusting screw **1** in the direction of the arrow **H**.

To decrease the damping:
- Turn the adjusting screw **1** in the direction of the arrow **S**.

Basic setting for solo operation:
- Turn the adjusting screw **1** as far as possible in the direction of the arrow **H**.
- Turn the adjusting screw **1** one and a half turns in the direction of the arrow **S**.

The range of adjustment comprises three and a half turns of the adjusting screw. The basic setting is based on a motorcycle with a full fuel tank and one person with 187 lbs (85 kg) weight.◀

Adjustments to the spring preload and shock absorbers that are not coordinated lead to a deterioration in the handling characteristics of your motorcycle.
Adapt the shock absorbers to the spring preload.◀

ESA^{OE}

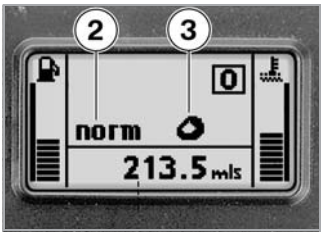
You can use the Electronic Suspension Adjustment, ESA, to make the following adjustments:
on the front wheel:
– Rebound-stage damping
on the rear wheel:
– Rebound and compression damping
– Spring preload

Calling up settings



- Switch on the ignition.
- Press button **1** briefly.

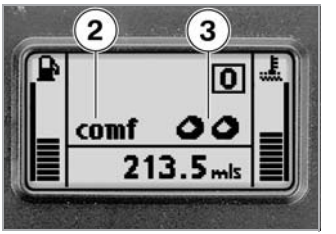
» The current setting is displayed.



2 set damping
3 set spring preload

If button **1** is not pressed for longer than two seconds, the display goes out.

Adjusting shock absorbers

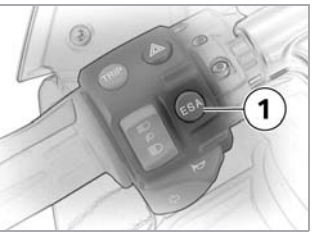


Three adjustments are possible; these are shown in field **2** as follows:

comf Comfort, soft damping

norm Normal, medium damping

sport Sport, hard damping



- Switch on the ignition.
- Press button **1** briefly.

» The current setting is displayed.

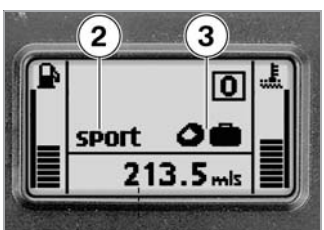
- Press button **1** once briefly.

» Starting from the current state, the display is in the following order:
  – Comfort
  – Normal
  – Sport

If button **1** is not pressed for longer than one second, the shock absorbers are set as displayed.
During the setting procedure, the display flashes.

Adjusting the spring preload

The spring preload cannot be adjusted while the motorcycle is being ridden.



Three adjustments are possible; these are shown in the field **3** as follows:


Solo operation


Solo operation with luggage


Operation with passenger (and luggage)



- Start the engine.
- Press button **1** briefly.

» The current setting is displayed.

- Press button **1** once for longer than one second.

» Starting from the current state, the display is in the following order:
  – Solo operation
  – Solo operation with luggage
  – Operation with passenger (and luggage)

If button **1** is not pressed for longer than one second, the spring preload is set as displayed. During the setting procedure, the display flashes.

Wheels

Checking tire pressure

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

Incorrect tire pressure reduces the life of the tires.
Ensure proper tire pressure.◀

The required tire pressures can be found in the technical data section (➠ 126).

At high road speeds, tire valves have a tendency to open as a result of centrifugal force.
To avoid sudden loss of tire pressure, use a metal valve cap with rubber sealing ring on the rear wheel and tighten it securely.◀

Safety instructions 50
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Starting..... 56
Riding 58
Running in..... 58
Shifting gear 59
Placing motorcycle on side stand..... 61
Removing motorcycle from side stand..... 63
Placing motorcycle on center stand[OA] 65
Pushing motorcycle off center stand[OA] 67
Fuel 67
Brake system 68

Safety instructions

Speed

When riding at high speed, various marginal conditions can negatively influence the handling characteristics of the motorcycle:

- adjustment of the spring-strut and shock absorber system
- unequally distributed load
- loose clothing
- insufficient tire pressure
- poor tire treads
- etc.

Correct loading

Overloading can diminish the riding stability of the motorcycle.
Do not exceed the permitted total weight and permitted wheel loads (➠ 137).◀

Alcohol and drugs

Even small amounts of alcohol or drugs can considerably diminish your perception, judgment and ability to make decisions as well as your reflexes. Taking medication can strengthen these impairments.
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 lead to electric shocks.
With the engine running, do not touch any parts of the ignition system.◀

Catalytic converter

If misfires cause unburned fuel to enter the catalytic converter, there is a danger of overheating and damage.
For this reason, observe the following points:

- Do not ride the motorcycle so long that the fuel tank is emptied.
- Do not run the engine with the spark-plug cap removed.
- In the event of engine misfires, stop the engine immediately.
- Use unleaded fuel only.
- Be sure to adhere to the prescribed maintenance intervals.


Unburned fuel destroys the catalytic converter. Observe the points listed for protection of the catalytic converter.◀

Risk of fire

High temperatures occur at the exhaust pipe.


If highly flammable materials (e.g. hay, leaves, grass, clothing and luggage, etc.) make contact with the hot exhaust pipe, they can start to burn.
Make sure that no highly flammable materials can come in contact with the hot exhaust system.◀


If the engine runs for a long period when the motorcycle is stationary, the cooling is inadequate and overheating can occur. In extreme cases the motorcycle can catch fire.
Do not let the engine run for unnecessary periods when the motorcycle is stationary. After starting, ride off immediately.◀

Modifications to engine electronics control unit


Modifications to the engine electronics control unit can cause damage to the motorcycle and lead to accidents.
Do not manipulate the engine electronics control unit.◀

Modifications to the engine electronics control unit can lead to mechanical loads for which the components of the motorcycle are not designed. The warranty shall be voided for any damage resulting from such modifications.
Do not manipulate the engine electronics control unit.◀

Safety check

Prior to every journey

Use the following list as a guide in checking important operating functions, settings and wear limits prior to every journey.

Checklist

– Brakes (➠ 92)
– Brake fluid level (➠ 91)
– Clutch function (➠ 92)
– Clutch fluid level (➠ 93)
– Warning and indicator lights (➠ 18)
– Shock absorber setting (➠ 44, 46) and spring preload (➠ 47)
– Rims (➠ 94), tread depth (➠ 94) and inflation pressure (➠ 48)
– Load, gross weight (➠ 137)
– Secure luggage system

At regular intervals:
– Engine oil level (every time you refuel) (➠ 86)
– Brake pads (every 2nd/3rd time you refuel) (➠ 90)

First time out

Secure handling of your motorcycle

Each motorcycle is unique with idiosyncrasies that you must familiarize yourself with:
– Acceleration capability
– Road holding
– Cornering characteristics
– Braking power

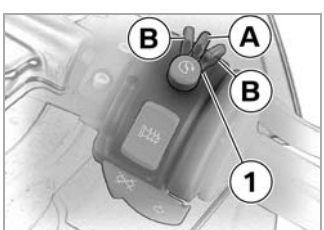
The engine also has to be run in during the first 600 miles (1000 km) (➠ 58).

You will find information on BMW Integral ABS from (➠ 69) onwards.

BMW Integral ABS incorporates power braking assistance, so braking power is significantly higher than with conventional brake systems. Especially when cornering, unwanted or unexpectedly strong braking can lead to dangerous situations. Practice braking with BMW Integral ABS in secure situations.◀

Before you start

Switching on ignition



- Read the information on the EWS (➠ 22).
- Emergency ON/OFF switch **1** in operating position **A**.
- Switch on the ignition.

» Pre-ride check is performed.
» With BMW Integral ABS: ABS self-diagnosis is performed.

Pre-ride check

After the ignition has been switched on, a pre-ride check is performed. Here, the functions of all warning lights and warning symbols are checked. The following are displayed in succession in the multifunction display:

Phase 1



General warning light lights up in red.

Engine oil pressure symbol is displayed.

Battery charge current symbol is displayed.

Phase 2

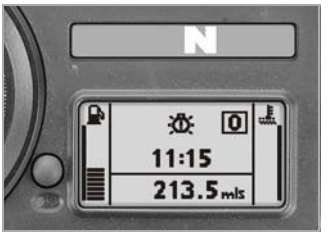


General warning light lights up in yellow.

Engine electronics symbol is displayed.

EWS symbol is displayed.

Phase 3



A warning light defect is displayed.

If one of the warning lights or a warning symbol cannot be displayed, any function fault in the corresponding system cannot be displayed.
Watch all lights and symbols on the display.◀

If one of the lights or symbols is not displayed:

- Have the fault remedied as quickly as possible by a certified workshop, preferably an authorized BMW motorcycle retailer.

After completion of the pre-ride check, the current values are displayed.

If the engine is started during the pre-ride check, the pre-ride check is canceled.◀

With BMW Integral ABS, the ABS self-diagnosis is also performed.

ABS self-diagnosis

The ABS warning light is shown in one of the following three variants depending on your country:



The operational readiness of the BMW Integral ABS is checked by the self-diagnosis and starting-off test (➠ 58). Self-diagnosis is performed automatically when you switch on the ignition.
Self-diagnosis is not performed unless both brake levers are in their fully released positions. Before conclusion of the self-diagnosis, only residual braking function (➠ 71) is available.

- Release the brake lever.
- Switch on the ignition.

Phase 1

General warning light lights up.

ABS warning light flashes 4 times per second.

Self-diagnosis is performed.

Phase 2

ABS warning light flashes 1 time per second.

Self-diagnosis is concluded.

The warning light goes out after completion of the starting-off test (➠ 58).

If the ignition is switched on with the brake lever operated and then the engine is started and the motorcycle is ridden off immediately, the BMW Integral ABS is still in the residual braking function (➠ 71). The self-diagnosis is performed as soon as the brake lever is released completely for the first time. During this period, neither the ABS function nor the power braking assistance is available.
When you start the engine, wait until the ABS self-diagnosis has been performed.◀

Starting on grades:
Switch on the ignition with the gear engaged, clutch lever released and brake lever

released. Then engage the front brake, disengage the clutch and start the engine.◀

Side stand

If the side stand is extended and a gear engaged, you cannot start the motorcycle.
If the motorcycle was started in the neutral position and then a gear is engaged with the side stand unfolded, the engine switches off.

Manual transmission

The motorcycle can be started with the transmission in neutral or with the transmission in gear and the clutch disengaged Disengage the clutch only after switching on the ignition.

In the neutral position, the "neutral" indicator light lights up in green and the gear display in the multifunction display shows 0.

Starting

Do not turn the throttle twistgrip when starting the engine. At ambient temperatures below 32 °F (0 °C), pull in the clutch lever after switching on the ignition.◀



- Press the starter button **1**.

» The engine starts.

- Observe warning and information displays (➠ 18-28).

The start attempt is automatically interrupted if the battery voltage is too low. Prior to renewed start attempts, charge the battery or obtain starting assistance (➠ 111).◀

High engine speeds with the engine cold lead to increased engine wear.
Avoid high engine speeds with the engine cold.◀

If you are unable to start the engine, the following troubleshooting chart can provide assistance.◀

Troubleshooting chart

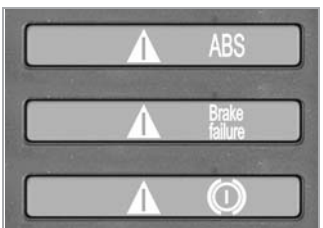
Fault: Engine does not start or only starts with difficulty.

Possible cause	Remedy	see page
Emergency ON/OFF switch activated	Emergency ON/OFF switch in operating position	(➠ 53)
Side stand extended and gear engaged	Retract side stand completely	(➠ 63)
Gear engaged, clutch not disengaged	Place transmission in neutral or disengage clutch	(➠ 56)
Clutch operated with ignition switched off	Switch on ignition first, then operate clutch	(➠ 53, 56)
No fuel in tank	Refuel	(➠ 67)
Battery not adequately charged	Recharge battery	(➠ 113)

Riding

ABS starting-off test

The ABS warning light is shown in one of the following three variants depending on your country:



ABS warning light flashes 1 time per second.

After starting off, the BMW Integral ABS checks the ABS sensors. The ABS warning light then goes out and the BMW Integral ABS is active.

Running in

- During the running-in period, ride in frequently changing load and engine speed ranges.
- Choose hilly routes with a large number of curves, but avoid freeways where possible.

Exceeding the running-in speeds increases engine wear.
Adhere to the guide values described below.◀

Up to 1,000 km distance ridden

- Engine speed max. 7000 rpm.
- No full-load acceleration.
- At full load, avoid low engine speeds.
- After 300 - 750 miles (500 – 1,200 km), be sure to 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 reduction in braking power can be compensated for by exerting greater pressure on the lever.

New brake pads can considerably increase the braking distance.
Brake with foresight and caution, and avoid heavy braking.◀

Tires

New tires have a smooth surface. This means that they have to be roughened by being run in with a moderate riding style through turns in alternating directions. It is only after tires have been run in that the contact faces achieve their full adhesive capability.

New tires do not yet have their full adhesion; there is a danger of accidents in extremely inclined positions. Avoid extremely inclined positions.◀

Shifting gear

Engine speed

Do not use the high end of the engine-revolutions range in any gear unless the engine is at operating temperature.

When the revolution counter needle enters the red zone on the dial, the throttle valve angle is limited in order to protect the engine against overrevving. The rev-limiter cuts in at 10,800 rpm.

Gear shifts



Shifting gear without disengaging the clutch can destroy the gearbox.
Only shift gears with the clutch disengaged.◀

The gear display in the multifunction display shows the engaged gear.◀



Placing motorcycle on side stand

No secure stance is possible on poor ground conditions.
In the area of the stand, make sure that you find an even and firm surface.◀

Sitting on the motorcycle:
- Switch off the engine.
- Set the handbrake.
- Balance the motorcycle in a vertical position.
- With your left foot extend the side stand as far as it will go (arrow).
- Slowly incline the motorcycle on the stand, relieving the load, and dismount to the left.
- Turn the handlebars to the full left or right lock position.
- Check that the motorcycle is standing firmly.

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

The side stand is only configured for the weight of the motorcycle.
Do not sit on the motorcycle while it is resting on the side stand.◀

If the road is at an incline, point the motorcycle "uphill" and engage 1st gear.◀

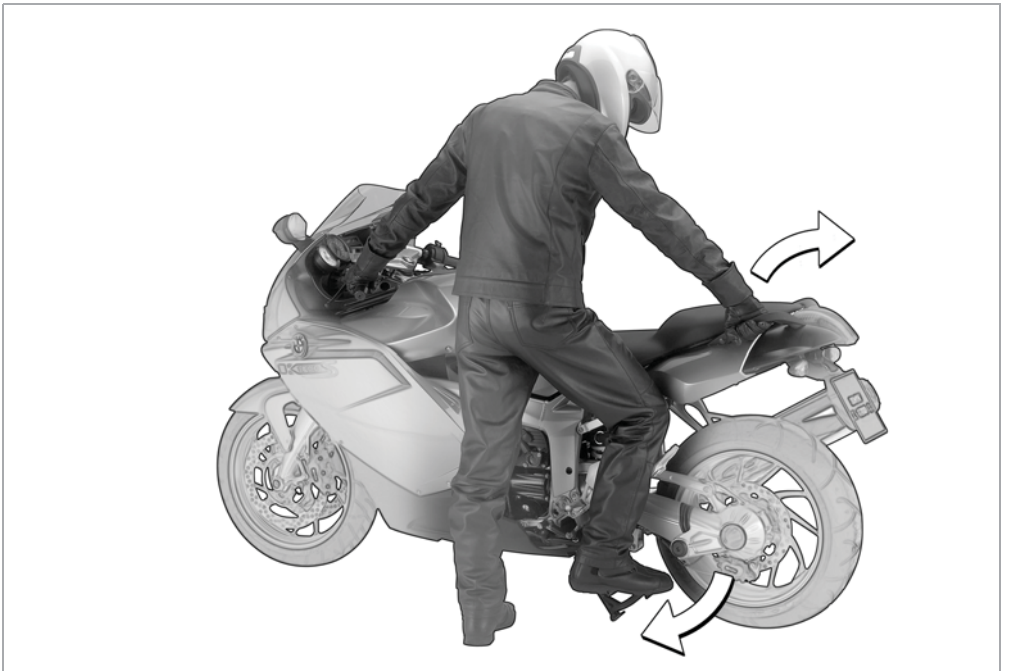


Removing motorcycle from side stand

With the ignition switched off, there is no brake power assistance; the motorcycle can begin to roll. Especially on inclines, switch on the ignition and wait for the ABS self-diagnosis (➠ 55).◀

- Unlock the ignition lock, switch on ignition.
- Wait for the ABS self-diagnosis.
- From the left, grip the handlebars with both hands.
- Set the handbrake.
- Swing your right leg over the seat, straightening the motorcycle as you do so.
- Balance the motorcycle in a vertical position.
- Seat yourself and fold back the side stand with your left foot.

An unfolded 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.◀

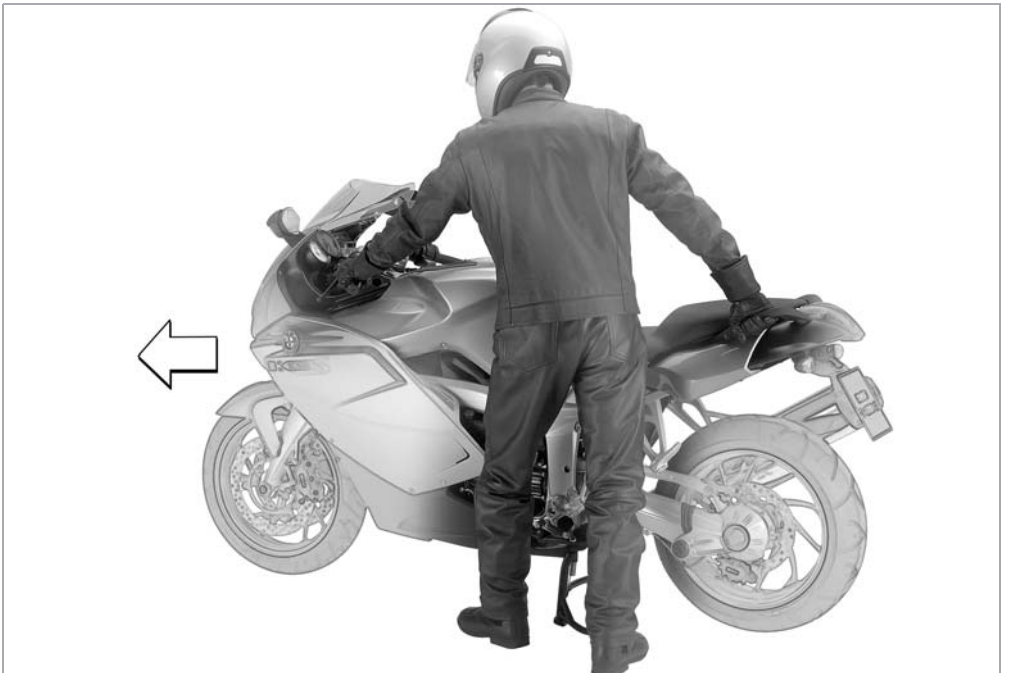


Placing motorcycle on center stand[OA]

⚠ No secure stance is possible on poor ground conditions.
In the area of the stand, make sure that you find an even and firm surface.◀

- Switch off the engine.
- Dismount, keeping your left hand on the handlebar grip.
- With your right hand, take hold of the passenger grab handle or rear frame.
- Place your right foot on the extended arm of the center stand and push the center stand downwards until the feet contact the ground.
- Place your full body weight on the center stand and at the same time pull the motorcycle backwards (arrow).
- Check that the motorcycle is standing firmly.

⚠ The center stand can retract if there is excessive motion and lead to the vehicle falling over.
Do not sit on the motorcycle while it is resting on the center stand.◀



Pushing motorcycle off center stand[OA]

With the ignition switched off, there is no brake power assistance; the motorcycle can begin to roll. Especially on inclines, switch on the ignition and wait for the ABS self-diagnosis (➠ 55).◀

- Unlock the ignition lock, switch on ignition.
- Wait for the ABS self-diagnosis.
- Place your left hand on the left handlebar grip.
- With your right hand, take hold of the passenger grab handle.
- Push the motorcycle forward off the center stand.
- Make sure that the center stand is fully retracted.

Fuel

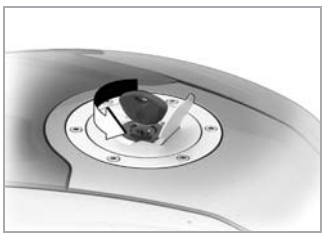
Refueling

Fuel is a fire hazard and explosive!
Do not smoke and ensure that no naked flames are present during all activities at the fuel tank.◀

Fuel expands under the influence of high temperatures and exposure to sunlight.
Fill only to the lower edge of the filler neck as a maximum.◀

Fuel can damage plastic parts.
Avoid contact between fuel and trim panel components.◀

- Place the motorcycle on the center stand[OA] or side stand, ensuring that the ground is firm and level.



- Open the protective cap.
- Open the fuel tank cap with the ignition key by turning counter-clockwise.



- Fill up the tank with fuel of the approved quality.
- Close the fuel tank cap with firm pressure.
- Remove the key and close the protective cap.

Fuel quality

Leaded fuel destroys the catalytic converter.
Use unleaded fuel only.◀

The engine is designed to run on:
– Premium grade unleaded fuel (98 ROZ/RON; 88 MOZ/MON)

Fill up with this fuel to comply with the nominal values for performance and fuel consumption.

The minimum fuel quality must be:
– Unleaded fuel (95 ROZ/RON; 85 MOZ/MON)

Capacity

– Usable volume of fuel: 5 gal (19 liters)
– Of which reserve volume: approx. 1 gal (4 liters)

The volume of fuel display in the multifunction display only works with the ignition switched on.◀

Brake system

General

Descending mountain passes

If only the rear brake is used when descending mountain passes, there is a danger of a loss of braking. Under extreme conditions, the brakes could overheat and suffer severe damage.
Use the front and rear brakes and engine brake.◀

Wet brakes

After washing the motorcycle, after riding through water or when it is raining, the braking effect can be delayed due to damp brake discs and brake pads.
Note that there will be an extended braking distance until the brakes have dried out or braking itself dries them.◀

Salt on brakes

The brakes may fail to take effect immediately if the motorcycle was ridden on salt-covered roads and the brakes were not applied for some time.
Note that there will be an extended braking distance until the salt layer on the brake discs and brake pads is removed by braking.◀

Oil or grease on brakes

Oil and grease deposits on brake discs and pads considerably reduce the braking effect.
Especially after repair and maintenance tasks, make sure that the brake discs and brake pads are free of oil and grease.◀

Dirt or mud on brakes

When riding on loose surfaces or muddy roads, the brakes may fail to take effect immediately because of dirt or moisture on the discs or brake pads.
Note that there will be an extended braking distance until the brakes have been cleaned by braking.◀

BMW Integral ABS

Sensitive electronic control

It takes skill and sensitive control of the brakes to stop safely on a motorcycle. If the front wheel brake locks and the wheel skids, the necessary longitudinal and lateral stabilizing forces are lost, and a fall can result. For this reason, the rider seldom makes full use of available braking performance in an emergency.
BMW Integral ABS provides improved braking deceleration by means of lock up protection for both wheels and braking force distribution by means of the integral braking function

(➠ 50, 69). Full use is made of technical braking capacity to considerably reduce braking distances, even when road conditions are poor. When driving straight ahead, the BMW Integral ABS enables safe, reliable braking optimized for the respective conditions.

Reserves for safety

But remember: the potentially shorter braking distances which BMW Integral 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 Integral ABS is unable to counteract their effects.

Integral brake

The integral braking function activates the front and rear brakes jointly, which means that the brakes for both wheels are applied when one brake lever is pressed. The electronics in the BMW Integral ABS controls the braking force distribution between the front and rear brakes. Braking-force distribution depends on load and is recalculated every time the ABS controller comes into action.

Partially integral brake configuration

Your motorcycle is equipped with a partially integral brake configuration. In this partially integral brake configuration, the integral braking function is activated only when you pull the handbrake lever. The footbrake lever acts only on the rear brake.

Power braking assistance

On braking, BMW Integral ABS boosts the brake force on the wheel by means of a hydraulic pump. By boosting the braking force in this way, BMW Integral ABS achieves higher braking efficiency than standard brake systems.

ABS anti-lock braking system

ABS prevents the wheels from locking on braking, making a major contribution to road safety.

Rising rear wheel

With strong adhesion between the tires and the road, the front wheel locks either very late or not at all when the brakes are applied strongly. Accordingly, the ABS control only needs to intervene very late or not at all. In this case, the rear wheel can rise, which can lead to the motorcycle rolling over.

Heavy braking can cause the rear wheel to rise. Bear in mind that the ABS control is unable to provide protection in every case where the rear wheel rises.◀

Residual braking function

With the ignition switched off, during the self-diagnosis and in the event of a fault in the BMW Integral ABS, the brake circuits concerned only have the residual braking function. The residual braking function is the braking power without the hydraulic servo assistance of the BMW Integral ABS. Under these circumstances, therefore, you must apply considerably higher pressure to the brake levers in question in order to apply the brakes, and lever travel is longer. When the residual braking function is active, the ABS function is unavailable in the brake system in question. When the residual braking function is active, the integral braking function is partially or entirely unavailable.

Without the ABS function the wheels may lock up during braking. Without power braking assistance, a much greater force is required for braking.
Brake with foresight and caution, and avoid heavy braking. Have the fault remedied as quickly as possible by a certified workshop, preferably an authorized BMW motorcycle retailer.◀


As the residual braking function means that the lever path before the brake pressure is built up can be longer, we recommend that a larger lever path be set at the handbrake lever (➠ 36).◀


In the case of residual braking function in both brake circuits, no pump noise can be heard when the brake lever is operated.◀

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General instructions

BMW recommends using parts and accessory products for your motorcycle which have been approved by BMW for this purpose. Your authorized BMW motorcycle retailer is the right source for genuine BMW parts and accessories, other products approved by BMW and the related qualified advice.

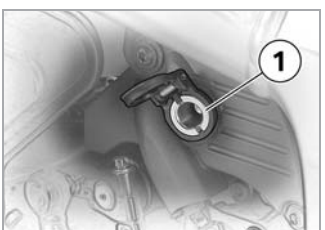
BMW has tested the safety, operation and suitability of these parts and products. BMW assumes the responsibility for these products. On the other hand, BMW can assume no liability for unapproved parts or accessory products of any kind.

⚠ BMW cannot evaluate whether every product of other manufacturers is suitable for use on BMW motorcycles without presenting a safety risk. Nor is this guarantee provided when the official approval of a specific country has been granted. Tests conducted in 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 such modifications, comply with all the legal requirements. The motorcycle must not infringe your national road-vehicle construction and use regulations.

Power socket



Sockets

The power socket **1** provides a voltage of 12 V and can carry a maximum load of 5 A.

If the battery voltage is too low and/or the maximum permissible load is exceeded, the power socket is automatically deactivated.

Operating additional devices

Additional devices can only be started up with the ignition switched on. The accessory remains operational if the ignition is subsequently switched off. Approx. 15 minutes after switching off the ignition and/or during the restart operation, the on-board socket is switched off to take the load off the vehicle electrical system.

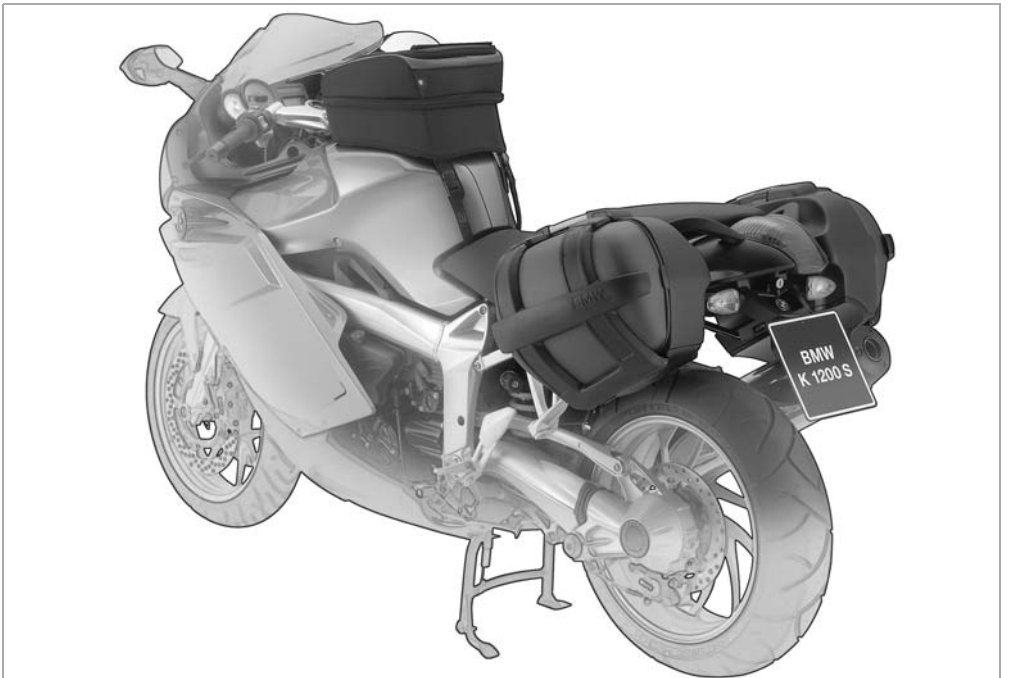
Cable routing

The cables from the power socket to the additional 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 pinched



Improperly routed cables can impede the rider. Route the cables as described above.◀


BMW
K 1200 S

Luggage system

Correct loading

⚠ Overloading and uneven loading can diminish the riding stability of your motorcycle.
Do not exceed the permitted total weight and permitted wheel loads (➠ 137). Observe the following information on loading.◀

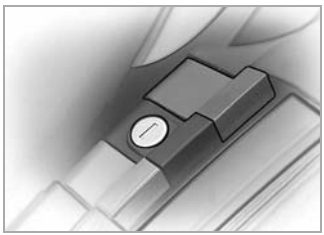
- Adjust the settings for spring preload (➠ 47), damping (➠ 44, 46) and tire pressure (➠ 126) to the total weight.
- Ensure that the case volumes on the left and right are equal.
- Ensure that the weight is equally distributed on the left and right.
- Pack heavy items of luggage downwards and inwards.
- Load the left-hand and right-hand cases[OA] with a maximum of 18 lbs (8 kg) each.
- Load the tank rucksack with a maximum of 11 lbs (5 kg).

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.

Key positions

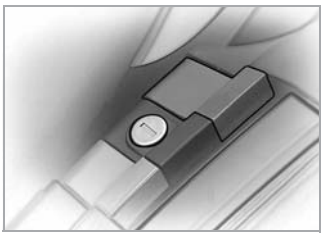
Cases locked and secured



- Lock in direction of travel.

» Cases locked.
» Cases secured.
» Key can be removed.

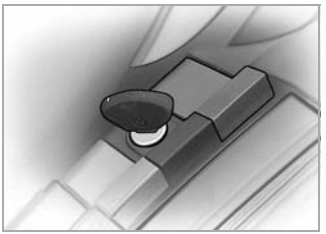
Cases not locked and secured



- Turn the lock on the right-hand case by 90° counter-clockwise.
- Turn the lock on the left-hand case by 90° clockwise.

» Case can be opened.
» Cases secured.
» Key can be removed.

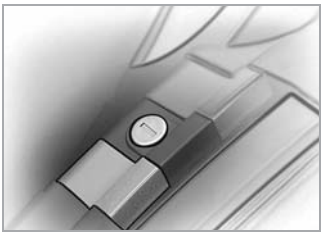
Case unsecured



- Turn the lock on the right-hand case by 45° clockwise.
- Turn the lock on the left-hand case by 45° counter-clockwise.

» Cases locked.
» Cases can be removed.
» Key cannot be removed.

Opening cases



- Turn the case lock to the position "case unlocked".
- Pull the gray release lever upwards.

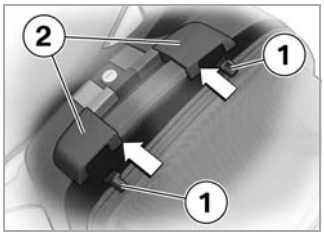


» The lock straps **1** open.
- Pull the gray release lever upwards once again.
- Pull the case lid **2** out of the retainer.

» Case completely opened.

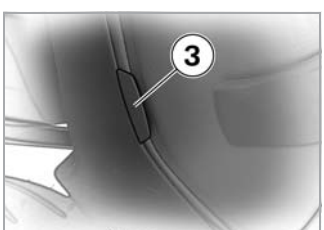


Closing cases

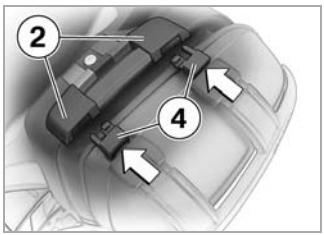


- Press the catches **1** of the case lid into the retainers **2**.

» The catches can be heard to lock into place.



When closing, ensure that the case lid remains within the limit **3**.◀

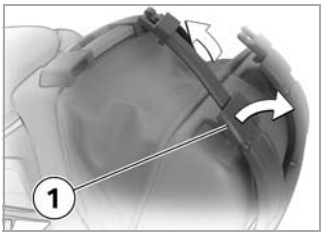


- Press the catches **4** of the lock straps into the retainers **2**.

» The catches can be heard to lock into place.

- Make sure catches are secure.

Adjusting case volume



- Close the case lid.
- Turn the lock strap buckles **1** of the lock straps outwards.
- Pull out the lock straps upwards.

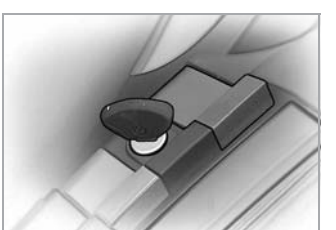
» The maximum volume has been set.



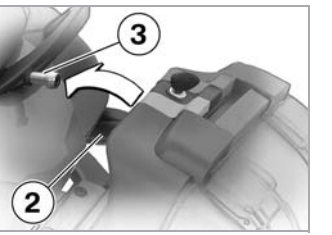
- Close the lock straps.
- Press the lock straps against the case body.

» The case volume is adapted to the contents.

Installing cases



- Turn the case lock to the position "case unsecured".

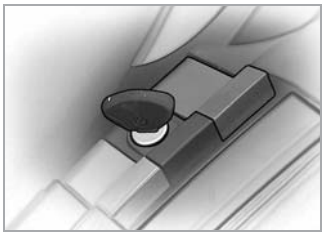


- Hook the case into the lower mounting **2**.
- Pull the black release lever upwards.
- Press the case into the upper mounting **3**.
- Press the black release lever downwards.

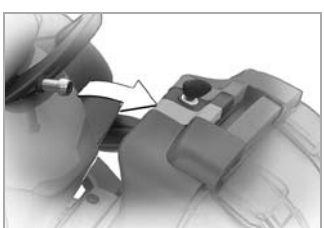
» The case is locked into place.

- Lock the case.
- Check secure locking.

Removing cases



- Turn the case lock to the position "case unsecured".
- Pull the black release lever upwards.

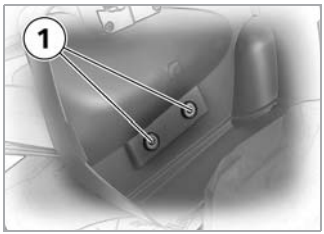


- Pull the case out of the upper mounting.
- Lift the case out of the lower mounting.

Adapting cases



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



- Open the case.
- Unfasten the screws **1**.
- Set the height of the bracket.
- Tighten the screws.

Flat tire kit for tubeless tires

The flat tire kit is located under the left-hand side panel. Please see the included description for the repair procedure and safety precautions.

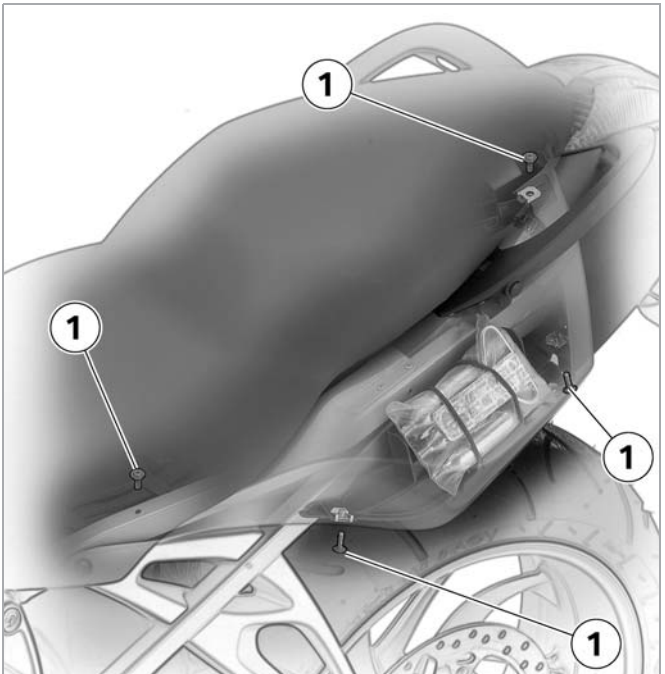
- Removing seat
- Remove the screws **1**.

You will find an overview of the types of screw used on (➠ 124).◀

- Removing side panel.

To protect the side panel from scratches, lay it on the seat.◀

- Open the securing strap and remove the flat tire kit.

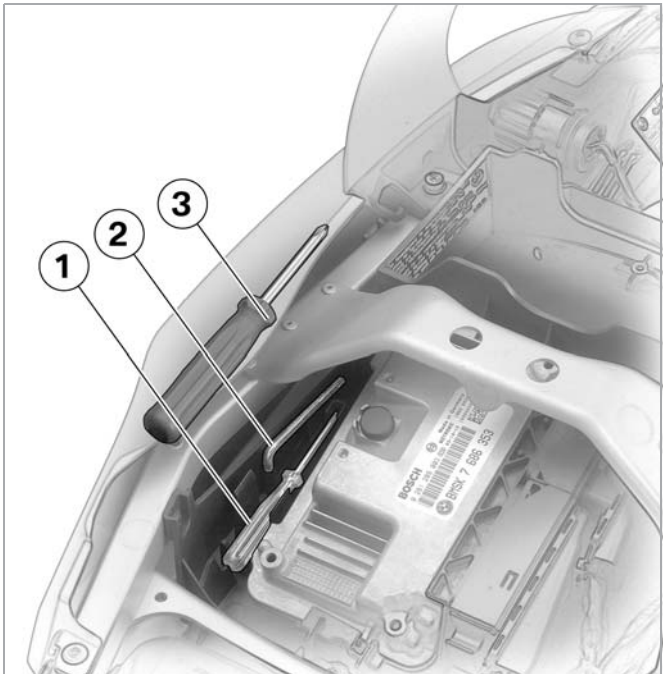


Toolkit **85**
Engine oil **86**
Coolant **88**
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Front-wheel stand **103**
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The "Maintenance" chapter describes work involving the replacement of wear parts that can be performed with a minimum of effort.

The types of screws used for the components concerned are listed in (➠ 124-125). You can use this chart to set aside the required tools.
If special tightening torques are to be taken into account for assembly, these are also listed. Screw connections for which there is a matching tool in the toolkit are marked additionally.

If you are interested in information on additional work, we recommend the Repair Manual for your motorcycle on CD-ROM. This is available from your authorized BMW motorcycle retailer.



Toolkit

The toolkit is located under the seat.

- (➠ 40) Remove the seat.

1 Reversible screwdriver

- Take out the screwdriver **1**.

» Accessible are:
2 Torx wrench T25
3 Screwdriver, small

Engine oil

Checking engine oil level

Check the oil level at regular intervals.

The oil level depends on the oil temperature. The higher the temperature the higher the oil level in the oil tank.
Check the engine oil level immediately after a longer journey.◀

After longer motorcycle immobilization periods, oil can collect in the oil pan; this must be pumped into the oil tank before the reading is taken. Here, the engine oil must be at operating temperature. Checking the oil level with the engine cold or after a short trip leads to misinterpretations and therefore to incorrect oil fill quantities.
To ensure that the display of the engine oil level is correct, only check the oil level after a longer trip.◀

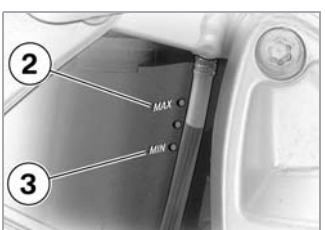
- With the motorcycle at operating temperature, hold it vertically or place it on the center stand[OA], ensuring that the ground is firm and level.
- Let the engine run in neutral for one minute.
- Switch off the ignition.
- Read off the oil level.

In the case of a motorcycle without center stand[OA], obtain assistance from another person when reading the oil level.◀



1 Display for engine oil level

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



2 maximum engine oil level
3 minimum engine oil level

The oil level must be located between the **MIN** and **MAX** marks. The difference is approx. 0.5 liters.

If the oil level is below the **MIN** mark:
- Top up engine oil.

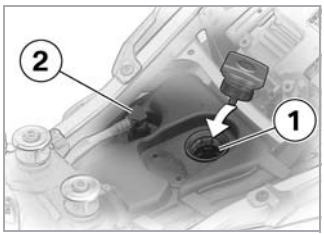
If the oil level is above the **MAX** mark:
- Drain off engine oil.

⚠ Too little but also too much engine oil can lead to engine damage.
Ensure that the engine oil level is correct.◀

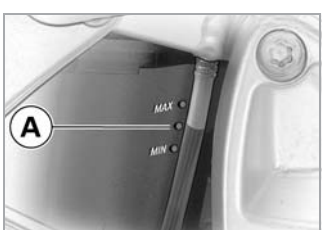
⚠ Insufficient engine oil can lead to the engine seizing up, resulting in accidents.
Ensure that the engine oil level is correct.◀

Topping up engine oil

- (➠ 40) Remove the seat.



- Clean the area around the fill opening.
- Unscrew the cap of the fill opening for engine oil **1**.



- Pour in engine oil up to the center marking **A**.
- Check the oil level.
- Repeat the filling and checking procedure until the engine oil level is located between the **MIN** and **MAX** marks.
- Screw on the cap of the fill opening for engine oil.

Draining off engine oil

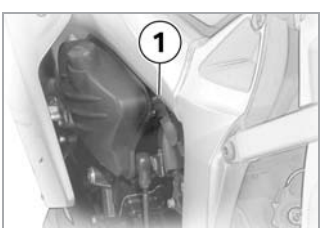
- Remove the seat (➠ 40).
- Press the retainer of the clear hose **2** on the left and right and pull out of the oil tank upwards.
- Pull the clear hose downwards out of the frame and drain off oil into a suitable container.
- Insert the clear hose in the oil tank and lock into place.
- Check the oil level.

- Repeat the draining and checking procedure until the engine oil level is located between the **MIN** and **MAX** marks.
- Store or dispose of excess engine oil in line with sound environmental principles.

Coolant

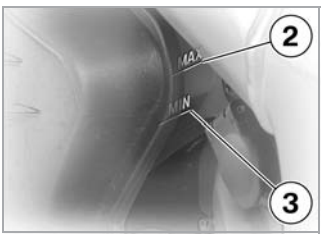
Checking coolant level

Check the coolant level at regular intervals.



1 Display for coolant level

- Read off the coolant level from the coolant display **1**.

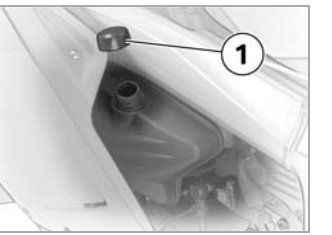


2 maximum coolant level
3 minimum coolant level

The coolant level must be located between the **MIN** and **MAX** marks.
If the coolant level is below the MIN mark:

- Top up coolant.

Topping up coolant



- Unscrew the cap of the fill opening for coolant **1**.
- Add coolant.
- Check the coolant level.
- Repeat the filling and checking procedure until the coolant level is located between the **MIN** and **MAX** marks.
- Screw on the cap of the fill opening for coolant.

Brakes

A properly functioning brake system is a basic requirement for the road safety of your motorcycle.

Improperly performed work endangers the operating reliability of the brake system.
Have all work on the brake system performed by a certified workshop, preferably by an authorized BMW motorcycle retailer.◀

Checking function

Do not ride the motorcycle if you have any doubts about the safety of the brake system.
In this case:

- Have the brake system checked by a certified workshop, preferably an authorized BMW motorcycle retailer.

Vehicles without ABS

- Pull in handbrake lever.
» A resistance point must be noticeable.
- Press the footbrake lever.
» A resistance point must be noticeable.

Vehicles with ABS

- Switch on the ignition.
- Wait for ABS self-diagnosis.
- Pull in handbrake lever.
» A resistance point must be noticeable.
» In the case of BMW Integral ABS, the hydraulic pump must be heard to run.
- Press the footbrake lever.
» A resistance point must be noticeable.
» In the case of BMW Integral ABS, the hydraulic pump must be heard to run.

Brake pads

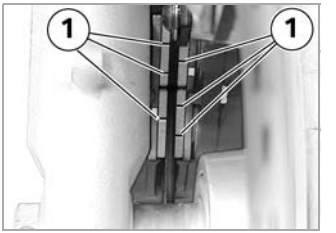
Continuing to use brake pads beyond the minimum pad thickness leads to reduced braking power and under certain circumstances to brake damage.
In order to ensure the operating reliability of the brake system, make sure that the brake pads are not worn beyond their minimum thickness.◀

Checking brake pad thickness at front

- Place the motorcycle on the center stand[OA] or side stand, ensuring that the ground is firm and level.



- Perform a visual inspection of the brake pad thickness on the left and right.

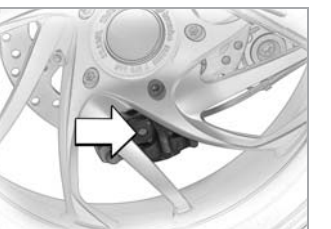


The brake pads must have a clearly visible wear indicating mark **1**. If the wear indicating mark is no longer clearly visible:

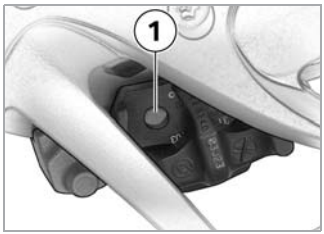
- Have the brake pads replaced by a certified workshop, preferably by an authorized BMW motorcycle retailer.

Checking brake pad thickness at rear

- Place the motorcycle on the center stand[OA] or side stand, ensuring that the ground is firm and level.



- Perform a visual inspection of the brake pad thickness from the right.

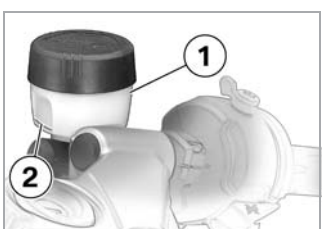


The brake disc must not be visible through the bore hole **1** of the inner brake pad. If the brake disc is visible:

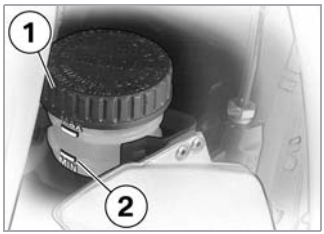
- Have the brake pads replaced, preferably by an authorized BMW motorcycle retailer.

Checking brake fluid level

If the position of the brake-fluid reservoir is changed, air can enter the brake system.
Do not reposition the handlebar controls on the handlebars or the handlebars in their mounts.◀



1 Front brake-fluid reservoir
2 **MIN** mark



1 Rear brake-fluid reservoir
2 **MIN** mark

- Hold the motorcycle vertically or place it on the center stand[OA], ensuring that the ground is firm and level.
- Place the handlebars in a straight ahead position.
- Read off the brake fluid level at the reservoir.

Vehicles without ABS


In the event of brake pad wear, the brake fluid level in the brake-fluid reservoir falls.◀

The brake fluid level must not fall below the **MIN** mark. If the brake fluid level falls below the **MIN** mark:


Air can get into the brake system if there is insufficient brake fluid in the brake-fluid reservoir. This leads to a considerable decrease in braking performance.
Brake with foresight and caution, and avoid heavy braking.◀

- Have the fault remedied as quickly as possible by a certified workshop, preferably an authorized BMW motorcycle retailer.

Vehicles with ABS


In the event of brake pad wear, the brake fluid level remains constant.◀

If the brake fluid level falls - even above the **MIN** mark - this indicates a defect in the brake system. If the brake fluid level falls:


Air can get into the brake system if there is insufficient brake fluid in the brake-fluid reservoir. This leads to a considerable decrease in braking performance.
Brake with foresight and caution, and avoid heavy braking.◀

- Have the fault remedied as quickly as possible by a certified workshop, preferably an authorized BMW motorcycle retailer.

Clutch

Checking function

- Pull in the clutch lever.

» A resistance point must be noticeable.

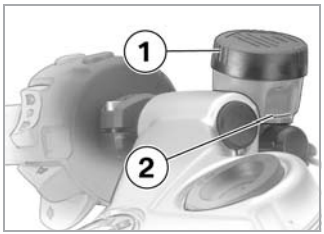
Do not ride the motorcycle if you have any doubts about the safety of the clutch. In this case:

- Have the clutch checked by a certified workshop, preferably an authorized BMW motorcycle retailer.

Check clutch fluid level

If the position of the clutch fluid reservoir is changed, air can enter the clutch system.
Do not reposition the handlebar controls on the handlebars or the handlebars in their mounts.◀

- Hold the motorcycle vertically or place it on the center stand[OA], ensuring that the ground is firm and level.
- Place the handlebars in a straight ahead position.
- Read off the clutch fluid level at the reservoir.



1 Clutch fluid reservoir
2 **MIN** mark

The clutch fluid level must not fall below the **MIN** mark. If the fluid level falls below the **MIN** mark, the clutch system must be checked immediately.
If the clutch fluid level falls - even above the **MIN** mark - this indicates a defect in the clutch system.

- Have the fault remedied as quickly as possible by a certified workshop, preferably an authorized BMW motorcycle retailer.

The fluid level in the reservoir falls as the clutch wears.◀

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

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

Wheels

For each tire size, certain tire makes have been tested by BMW Motorrad, classified as safe for road traffic and approved. If BMW Motorrad has not approved the wheels and tires, it cannot assess their suitability or provide any guarantee of road safety. Use only wheels and tires approved by BMW Motorrad for your type of motorcycle. You can obtain detailed information from your authorized BMW motorcycle retailer or on the Internet at www.bmw-motorrad.com.

Checking rims

- Place the motorcycle on the center stand[OA] or side stand, ensuring that the ground is firm and level.
- Perform a visual inspection to check for defective points.
- Have damaged rims checked and, if necessary, replaced by a certified workshop, preferably an authorized BMW motorcycle retailer.

Checking tire tread depth

The minimum tire tread depths legally prescribed in each country apply.



The handling characteristics of your motorcycle can deteriorate even before the legally prescribed minimum tread depth has been reached.
Have the tires replaced before this minimum tread depth is reached.◀



There is a wear indicating mark on each tire, integrated in 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.◀

- Only measure the tire tread depth in the main tread grooves with wear indicating marks.

Removing front wheel

You will find an overview of the types of screws used on (➠ 124).◀

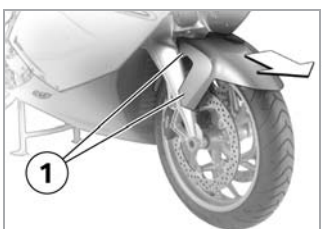
! During the following work, parts of the front brake, in particular of the BMW Integral ABS, can be damaged.
Ensure that no parts of the brake system are damaged, in particular the ABS sensor with cable and the ABS sensor ring.◀

Motorcycles without center stand[OA]:

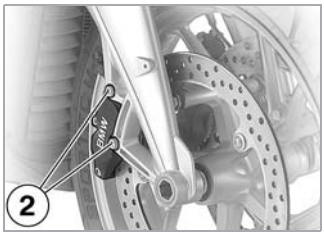
To ensure a secure stance of the motorcycle during the following work:

- Place the motorcycle on the BMW Motorrad rear wheel stand (➠ 104).
- The rest of the procedure is the same as for motorcycles with a center stand.

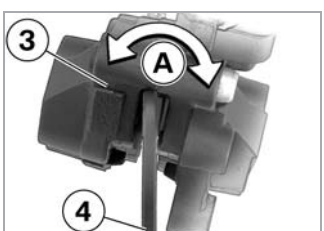
Motorcycles with center stand[OA]:



- Placing the motorcycle on the center stand[OA].
- Remove the screws **1** on the left and right.
- Pull out the front wheel mudguard towards the front.



- Remove the mounting bolts **2** of the brake calipers on the left and right.



- Press the brake calipers **3** apart slightly using rotary motions **A** against the brake discs **4**.

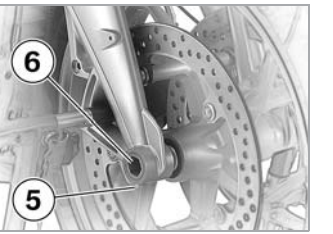
⚠ With the brake caliper removed, the brake pads can be pressed together to such a degree that the caliper with brake pads cannot be installed over the brake disc. Do not operate the handbrake lever when the brake calipers are removed.◀

- Mask off areas of the rim that could be scratched on removal of the brake calipers.
- Pull the brake calipers backwards and outwards from the brake discs.

⚠ If the motorcycle is on the center stand[OA]: If the front of the motorcycle is raised too far, the center stand rises from the ground and the motorcycle can fall over sideways.
Make sure that the center stand remains on the ground when the front is raised.◀



- Lift the motorcycle using the BMW Motorrad front-wheel stand (➠ 103) until the front wheel rotates freely.



- Remove the right-hand axle clamping screw **5**.
- Remove the quick-release axle **6**, holding the wheel as you do so.

⚠ Loosening or removing the left-hand axle clamping screw can lead to a failure of the ABS sensor.
Do not loosen or remove the left-hand axle clamping screw.◀

BMW Motorrad offers an adapter for removing the quick-release axle. This adapter can be combined with any commercially available 22 open-end or ring wrench. The adapter with BMW special tool number 363690 can be obtained from your authorized BMW motorcycle retailer.◀



- Place the front wheel in the front wheel guide on the ground.
- Roll out the front wheel forward.

Installing front wheel

An overview of the types of screw used and the corresponding tightening torques can be found on (➠ 124).◀

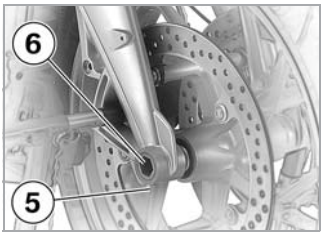
Screw connections tightened with the incorrect torque can come loose or damage the screw connection itself.
Be sure to have the tightening torques checked by a certified workshop, preferably by an authorized BMW motorcycle retailer.◀

During the following work, parts of the front brake, in particular of the BMW Integral ABS, can be damaged.
Ensure that no parts of the brake system are damaged, in particular the ABS sensor with cable and the ABS sensor ring.◀

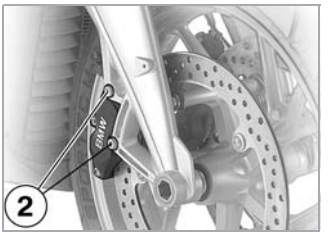
The front wheel must be fitted in the direction of rotation.
Observe the direction of rotation arrows on the tires or on the rim.◀



- Roll the front wheel into the front wheel guide.



- Raise the front wheel, fit the quick-release axle **6** and tighten with the appropriate tightening torque.
- Tighten the right-hand axle clamping screw **5** with the appropriate tightening torque.
- Remove the front-wheel stand.
- Fit the brake calipers onto the brake discs.



- Apply the mounting bolts **2** of the brake calipers on the left and right and use the appropriate tightening torque.

⚠ The cable of the ABS sensor can be rubbed through if it touches the brake disc.
Ensure taut routing of the ABS sensor cable.◀



- Fit the mudguard and tighten the mounting bolts **1** with the appropriate tightening torque.
- Remove the masking from the rim.

To align and position the brake pads relative to the brake discs, the front brake must be operated a number of times.

Without BMW Integral ABS
- Press the handbrake lever firmly a number of times until the resistance point is noticeable.

With BMW Integral ABS:
- Switch on the ignition.
- Wait for the self-diagnosis (➠ 55).
- Press the handbrake lever firmly a number of times until the resistance point is noticeable.

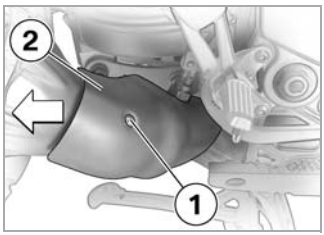
Brake pads that are not aligned and positioned relative to the brake discs may lead to delays in the braking effect.
Before beginning a journey, check that the braking effect kicks in without any delay.◀

Removing rear wheel

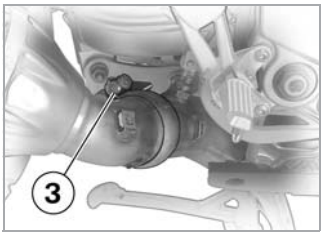
You will find an overview of the types of screw used on (➠ 124).◀

Motorcycle without center stand[OA]:
To ensure a secure stance of the motorcycle during the following work:
- Place the motorcycle on the BMW Motorrad rear wheel stand (➠ 104).
- The rest of the procedure is the same as for motorcycles with a center stand.

Motorcycles with center stands[OA]:



- Placing the motorcycle on the center stand[OA].
- Remove the bolt **1** of the muffler cover **2**.
- Pull off the cover towards the rear.

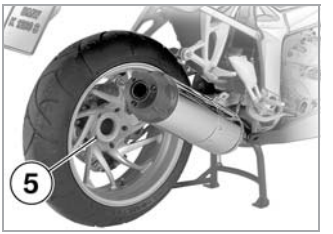


- Remove the clamp **3** on the muffler.

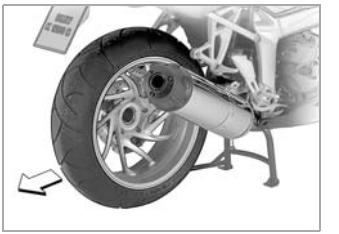
Do not remove the sealing grease from the clamp.◀



- Remove the bolt **4** of the bracket of the end muffler on the rear footrest.
- Turn the end muffler outwards.
- Engage first gear.



- Remove the mounting bolts **5** of the rear wheel, holding the wheel as you do so.
- If the BMW Motorrad rear wheel stand is used: remove the retaining disk.



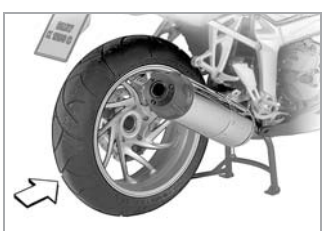
- Place the rear wheel on the ground.
- Roll the rear wheel out towards the rear.
- If the BMW Motorrad rear wheel stand is used: attach the retaining disk again.

Installing rear wheel

An overview of the types of screw used and the corresponding tightening torques can be found on (➠ 124).◀

Screw connections tightened with the incorrect torque can come loose or damage the screw connection itself.
Be sure to have the tightening torques checked, preferably by an authorized BMW motorcycle retailer.◀

- If the BMW Motorrad rear wheel stand is used: remove the retaining disk.



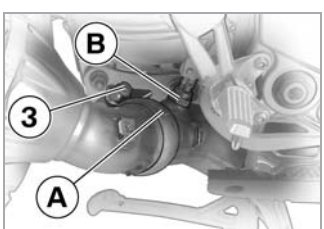
- Roll the rear wheel onto the rear wheel support.
- Place the rear wheel on the rear wheel support.
- If the BMW Motorrad rear wheel stand is used: attach the retaining disk again.



- Fit the wheel bolts **5** and tighten crosswise with the appropriate tightening torque.



- Turn the end muffler into its initial position.
- Fit the bolt **4** of the bracket of the end muffler to the rear footrest, but do not tighten.

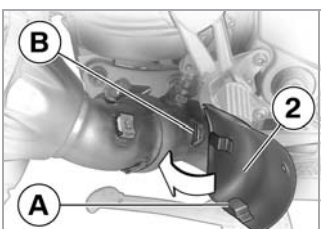


- Align the clamp **3** on the end muffler with the mark **A** (arrow) on the Lambda oxygen sensor **B**.
- Tighten the clamp **3** on the end muffler with the appropriate tightening torque.

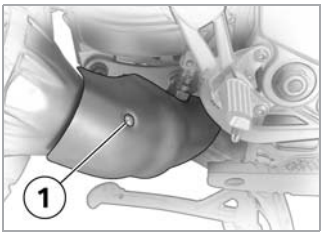


- Fit the bolt **4** of the bracket of the end muffler to the rear footrest with tightening torque.

⚠ If the gap between the rear wheel and the end muffler is too small, the rear wheel can overheat.
The gap between the rear wheel and the end muffler must be at least 0.4 in (10 mm).◀



- Push the muffler cover **2** with guides **A** into the brackets **B**.

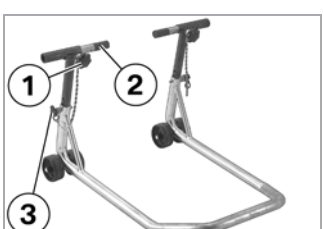


- Fit the bolt **1** and tighten with the appropriate tightening torque.
- Remove any auxiliary stands.

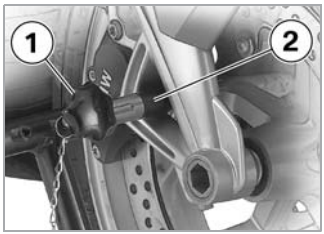
Front-wheel stand

To enable simple and secure changing of the front wheel, BMW Motorrad offers a front-wheel stand. The front-wheel stand with BMW special tool number 363971 can be obtained from your authorized BMW motorcycle retailer. In addition, you require the adapters with BMW special tool number 363973.

Installing front-wheel stand



- Place the motorcycle on the center stand[OA] or suitable auxiliary stand, e.g. BMW Motorrad rear wheel stand (➠ 104).
- Unfasten the adjusting screws **1**.
- Push the two mounting pins **2** far enough apart that the front wheel guide fits between them.
- Set the desired height of the front-wheel stand using the locating pins **3**.
- Align the front-wheel stand to the center of the front wheel and push it onto the front axle.



- Push the two mounting pins **2** through the triangles of the brake caliper support far enough that the front wheel can still be rolled through.

⚠ In the case of BMW Integral ABS, the ABS sensor ring can be damaged.
Only push the mounting pin so far inwards that it does not touch the sensor ring of the BMW Integral ABS.◀

- Tighten adjustment screws **1**.



- Press the front-wheel stand evenly downwards to raise the motorcycle.

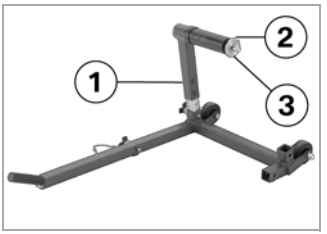
⚠ If the motorcycle is on the center stand[OA]: If the front of the motorcycle is raised too far, the center stand rises from the ground and the motorcycle can fall over sideways.

Make sure that the center stand remains on the ground when the front is raised.◀

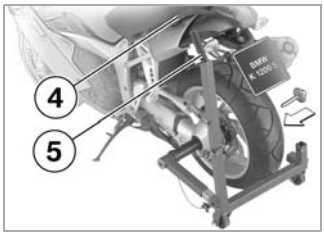
Rear-wheel stand

In order to be able to work safely also on motorcycles without center stands[OA], BMW Motorrad offers a rear wheel stand. The rear-wheel stand with BMW special tool number 363980 can be obtained from your authorized BMW motorcycle retailer.

Installing rear-wheel stand



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



- Push the rear wheel stand from the left into the rear axle.
- Apply the retaining disk from the right; to do so, press the unlock button.
- Place your left hand on the left grab handle of the motorcycle **4** and your right hand on the lever of the rear wheel stand **5**.



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



- Press the lever onto the ground.

Bulbs

Information on bulbs

The failure of a bulb is signaled in the display by the lamp defect symbol. If the brake or rear light fails, the general warning light also lights up in yellow.

If the rear light fails, the brake light is used as a substitute in that the luminosity of the second glow filament is reduced to rear light level. Failure of the rear light is still shown in the display.

In the event of a bulb failure, there can be problems seeing and being seen.
Replace defective bulbs as soon as possible, and consider carrying spare headlight, brake light and turn signal bulbs.◀

You will find an overview of the types of bulb used on (➠ 136).◀

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.◀

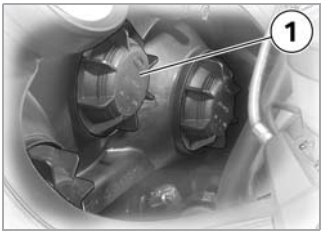
You will find an overview of the types of screws used on (➠ 124).◀

Replacing low-beam headlight bulb

During the work described in the following, a motorcycle that has been parked incorrectly can fall over.
Make sure that the motorcycle is securely parked.◀

The bulb is pressurized and can cause injuries when damaged.
Wear eye and hand protection when replacing bulbs.◀

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



- If necessary, switch off the ignition.
- Loosen the cover **1** by turning it counter-clockwise and remove it.



- Pull off the connector **2**.



- Remove the spring wire brackets **3** from their detents on the left and right and fold them up.



- Remove the bulb **4**.

Assembly is in reverse order.



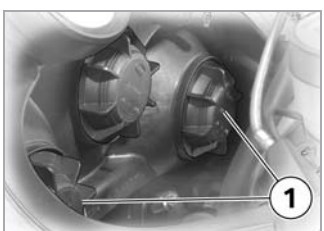
- On assembly, make sure that the lug **5** points upwards.

Replacing high-beam headlight bulb

⚠ During the work described in the following, a motorcycle that has been parked incorrectly can fall over.
Make sure that the motorcycle is securely parked.◀

⚠ The bulb is pressurized and can cause injuries when damaged.
Wear eye and hand protection when replacing bulbs.◀

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



1 Cover
High-beam headlight bulbs

- The high-beam headlight bulbs are changed in the same way as those of the low-beam headlight.

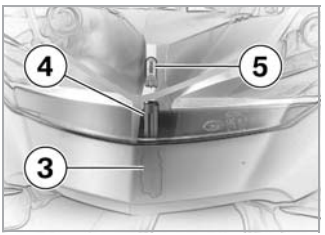
Replacing parking light

⚠ During the work described in the following, a motorcycle that has been parked incorrectly can fall over. Make sure that the motorcycle is securely parked.◀



1 Parking light

2 Access beneath the headlight



3 Connector
4 Bulb holder
5 Bulb

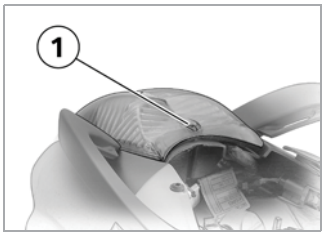
- If necessary, switch off the ignition.
- Pull off the connector **3** beneath the headlight.
- Remove the bulb holder **4** from the headlight housing by turning it counter-clockwise.
- Pull the bulb **5** from the bulb holder.

Assembly is in reverse order.
- To hold the new bulb, use a clean, dry cloth.

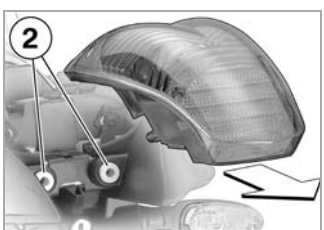
Replacing brake light and rear light bulbs

⚠ During the work described in the following, a motorcycle that has been parked incorrectly can fall over.
Make sure that the motorcycle is securely parked.◀

- If necessary, switch off the ignition.
- Remove the seat (➠ 40) .



• Remove the bolt **1**.



• Pull the lamp housing towards the rear from the brackets **2**.



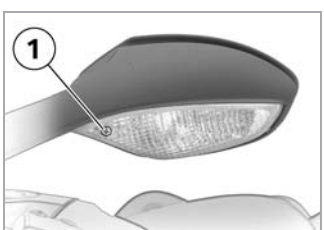
• Remove the bulb holder **3** from the lamp housing by turning it counter-clockwise.
• Press the bulb into the fitting and remove it by turning counter-clockwise.

Assembly is in reverse order.
• To hold the new bulb, use a clean, dry cloth.

Replacing front turn signal bulb

⚠ During the work described in the following, a motorcycle that has been parked incorrectly can fall over.
Make sure that the motorcycle is securely parked.◀

• If necessary, switch off the ignition.



• Remove the bolt **1**.



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



- Remove the bulb holder **2** from the lamp housing by turning it counter-clockwise.
- Remove the bulb **3** from the bulb holder.

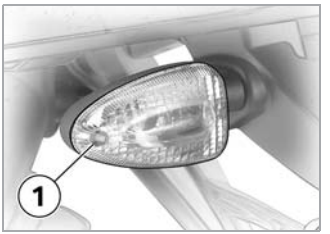
Assembly is in reverse order.

- To hold the new bulb, use a clean, dry cloth.

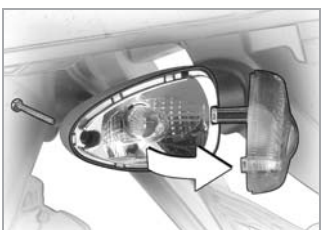
Replacing rear turn signal bulb

⚠ During the work described in the following, a motorcycle that has been parked incorrectly can fall over.
Make sure that the motorcycle is securely parked.◀

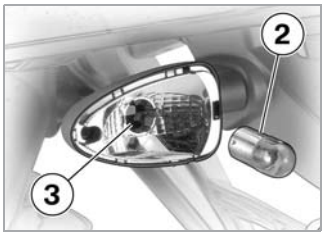
- If necessary, switch off the ignition.



- Remove the bolt **1**.



- Pull the lamp housing on the screw connection side out of the turn signal housing.



- Press the bulb **2** into the fitting **3** and remove it by turning it counter-clockwise.

Assembly is in reverse order.

- To hold the new bulb, use a clean, dry cloth.

Jump starting

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

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

Inadvertent contact between the terminal clips of the jump leads and the vehicle can lead to short circuits. Only use jumper cables with fully insulated terminal clips.◀

Jump-starting with a voltage greater than 12 V can damage the vehicle electronics.
The battery of the other vehicle must have 12 V system voltage.◀

- For jump-starting, do not disconnect the battery from the vehicle electrical system.
- Remove the cover of the battery compartment.
- Let the engine of the supporting vehicle run during the jump-starting process.
- First of all, use the red jump leads to connect the positive terminal of the discharged battery with the positive terminal of the supporting battery.

- Then connect one end of the black jump lead to the negative terminal of the supporting battery, and the other end to the negative terminal of the discharged battery.
- Start the engine of the vehicle 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.
- Disconnect the jump lead from the negative terminals first, then disconnect the second lead from the positive terminals.
- Screw down the cover of the battery compartment.

Touching live parts of the ignition system with the engine running can lead to electric shocks.
With the engine running, do not touch any parts of the ignition system.◀

Battery

Maintenance information

Your motorcycle is supplied with a maintenance-free battery.
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 next pages.
- Do not turn the battery upside down.

If the battery is not disconnected, the on-board 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. You can obtain additional information from your authorized BMW motorcycle retailer.◀

Charging battery when connected

If you switch on the ignition and the multifunction display and indicator lights fail to light up, the battery is completely flat.

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

Charging a completely drained battery via the onboard socket can result in damage to the motorcycle electronics.
A completely drained battery must always be charged directly at the terminals of the disconnected battery.◀

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

The motorcycle's onboard electronics know when the battery is fully charged. In this case, the power socket is switched off.◀

The BMW chargers with item numbers
71607676472 and
72607679040
are not suitable for charging this motorcycle via the power socket. Doing so may damage the charger.
We recommend consulting your BMW motorcycle retailer for information on suitable chargers.◀

If you are unable to charge the battery through the power socket, you may be using a charger that is not compatible with your motorcycle's electronics. In this case, please charge the battery directly at the terminals of the disconnected battery.◀

Charging disconnected battery

In the case of longer periods when the motorcycle is not being used, the battery must be recharged regularly. In this connection, comply with the instructions for the battery. Always fully recharge the battery before restoring it to use.◀

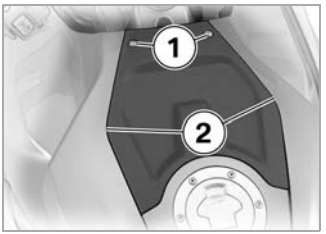
- Charge the battery using a suitable charger.
- Comply with the operating instructions of the charger.
- Once the battery is fully charged, disconnect the charger terminal clips from the battery terminals.

Removing battery

You will find an overview of the types of screw used on (➠ 125).◀

During the work described in the following, a motorcycle that has been parked incorrectly can fall over.
Make sure that the motorcycle is securely parked.◀

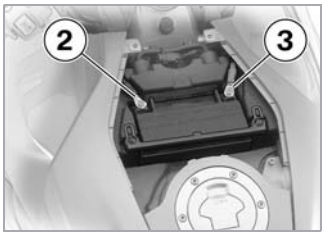
- If necessary, switch off the ignition.



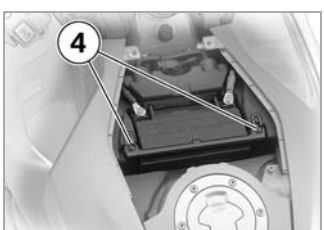
- Remove the screws **1**.

The battery compartment lid is locked at the positions **2**.◀

- Detach the battery compartment lid consecutively from the detents **2**.
- Take out the battery compartment lid in a forward and upward direction.



- Remove the battery ground wire **2** first.
- Then remove the positive battery cable **3**.



- Unfasten the screws **4** and pull the retaining bracket backwards.
- Lift the battery upwards; if it is difficult to move, moving it back and forth will help.

Installing battery

An overview of the types of screw used and the corresponding tightening torques can be found on (➠ 125).◀

During the work described in the following, a motorcycle that has been parked incorrectly can fall over.
Make sure that the motorcycle is securely parked.◀

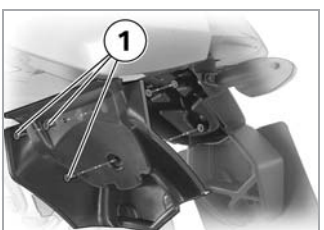
- If necessary, turn the ignition key to the "Ignition Off" position.
- Place the battery in the battery compartment, positive terminal on the right in the direction of travel.
- Push the retaining bracket over the battery; tighten the screws with the appropriate tightening torque.
- Fit the positive battery cable first; tighten with the appropriate tightening torque.
- Then fit the negative battery cable; tighten with the appropriate tightening torque.
- Fit the battery compartment lid; tighten the screws with the appropriate tightening torque.
- Switch on the ignition.
- Fully open the throttle once or twice.

» The engine management system records the throttle-valve position.

After connecting the battery, the time must be reset.◀

Splash guard

A splash guard is supplied with the motorcycle; if required, this can be fitted to the license plate holder.



- Use the screws **1** to fit the splash guard on the license plate holder from below.

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Cleaning and care

Regular cleaning, using the correct methods, is an important factor in maintaining the value of your motorcycle. It also ensures that safety-relevant parts remain in full working order.

Care products

We recommend that you use the cleaning and care products you can obtain from your authorized BMW motorcycle retailer. The materials in BMW Care Products have been tested in laboratories and in practice; they provide optimized care and protection for the materials used in your vehicle.



The use of unsuitable cleaning and care products can damage vehicle 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 motorcycle

We recommend that you use BMW insect remover to soften and wash off insects and resilient dirt on painted parts prior to washing the motorcycle. To prevent the formation of stains, do not wash the motorcycle immediately after it has been exposed to strong sunlight and do not wash it in the sun.

Especially during the winter months, make sure that the motorcycle is washed frequently.
To remove road salt, clean the motorcycle with cold water immediately after every trip.



Warm water reinforces the effects of the salt.
Only use cold water to remove road salt.◀



Wet brake discs reduce the braking effect.
After washing the motorcycle, dry the brakes by braking.◀



The high water pressure of steam jet cleaners can damage gaskets, the hydraulic brake system and the electrical equipment.
Do not use steam jet cleaners or high-pressure cleaners.◀

Plastics

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

- Windshields
- Headlight lenses made of plastic
- Covering glass of the instrument panel
- 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 resilient dirt and insects by applying a wet cloth.◀

Windshield

Remove dirt and insects with a soft sponge and plenty of water.

Fuel and chemical solvents attack the windshield material.
Do not use cleaning agents.◀

Chrome

Especially in the case of road salt, carefully clean chrome parts with a great deal 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.◀

Paint care

Regular washing of the motorcycle counteracts the long-term effects of materials that damage the paint, especially if your motorcycle is ridden in areas with high air pollution or natural sources of dirt, e.g. tree resins or pollen.

However, remove particularly aggressive materials immediately; otherwise changes in the paint or discoloration can occur. These include, e.g., spilt fuel, oil, grease, brake fluid as well as bird droppings. BMW auto polish or BMW paint cleaner are recommended here.
Contamination on the paint finish is particularly easy to see after the motorcycle as been washed. Remove stains of this kind immediately using gasoline or spirit on a clean cloth or cotton ball. We recommend removing tar spots with BMW tar remover. Then add a protective wax coating to the paint at these locations.

Protective wax coating

For the protective wax coating of paint, we recommend using only BMW auto 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.

Touching up

Your authorized BMW motorcycle retailer is equipped with suitable systems for fast, low-cost repair of minor paint damage. We recommend touching up minor paint defects with a BMW paint spray or a BMW paint pencil and having larger paint damage repaired at your BMW motorcycle retailer with professional repair paint according to workshop specifications with genuine BMW painting materials.

Rubber

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

The use of silicon sprays to care for rubber gaskets can lead to damage.
Do not use silicon sprays or other care products that contain silicon.◀

Storing

- Clean the motorcycle (➠ 118-120).
- Remove the battery (➠ 114).
- Spray the brake and clutch lever pivots and the main and side stand pivots with a suitable lubricant.

- Coat bright metal/chrome-plated parts with an acid-free grease (e.g. Vaseline).
- Place the motorcycle in a dry room on the center stand[OA] or rear wheel stand.
- Raise the engine with the front-wheel stand in such a way that both wheels are without load.

▷ Before storing the vehicle, have the engine oil and the oil filter element changed by a certified workshop, preferably your authorized BMW motorcycle retailer. Combine work for storing/restoring to use with a maintenance service or inspection.◀

Restoring to use

- Remove the protective wax coating.
- Clean the motorcycle (➠ 118-120).
- Install a charged battery (➠ 115).
- Perform the safety checks (➠ 52).
- Check the brakes (➠ 89-91).
- Check the tire pressure (➠ 48).

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Bolt connections

Activity	Type of screw connection	Tightening torque
Front wheel		
Mudguard	Internal TORX® T25 (1)	hand-tight
Brake caliper	Internal TORX® T45	30 Nm
Axle clamping screw	Internal TORX® T40	19 Nm
Quick-release axle	Allen screw 22	50 Nm
Rear wheel		
Clip cover	Internal TORX® T25 (1)	hand-tight
End muffler to footrest	Internal TORX® T45	16 Nm
Clamp on end muffler	Internal TORX® T45	35 Nm
Rear wheel	Internal TORX® T50	60 Nm
Lamp housing		
Brake and rear light	Phillips screw, large (1)	hand-tight
Front turn signals	Phillips screw, large (1)	hand-tight
Rear turn signals	Phillips screw, small (1)	hand-tight

Bolt connections

Activity	Type of screw connection	Tightening torque
Battery		
Battery compartment lid	Internal TORX® T25 (1)	hand-tight
Battery-terminal clamps	External hexagon 10 or slotted head screw, large (1)	hand-tight
Securing bracket	Internal TORX® T20	hand-tight
Splash guard		
Splash guard	Internal TORX® T25 (1)	hand-tight

(1) in the toolkit

Tire pressures

Tire pressures measured with cold tires.

Loading	Front	Rear
Solo operation	36.3 psi (2.5 bar)	42.0 psi (2.9 bar)
Solo operation with luggage	36.3 psi (2.5 bar)	42.0 psi (2.9 bar)
Operation with passenger (and luggage)	36.3 psi (2.5 bar)	42.0 psi (2.9 bar)

Engine

Engine	
Type	4-cylinder inline engine, fitted crossways, inclined 55°
Displacement	1,157 cc
Bore/stroke	3.1/2.3 in (79/59 mm)
Compression ratio	13 : 1
Power output	
Greatest rated power	123/74 kW
- at engine speed	10,250/7,000 rpm
Torque	
Max. torque	130/110 Nm
- at engine speed	8,250/5,250 rpm
Engine speeds	
Engine speed, maximum	11,000 rpm
Neutral speed	1,150 ± 50 rpm
Consumption	
Fuel consumption at constant 55 mph (90 km/h)	4.7 mpg (5.3 l/100 km)
Fuel consumption at constant 75 mph (120 km/h)	5.5 mpg (5.3 l/100 km)
Maximum oil consumption	1.7 quarts/1,000 miles (1 l/1,000 km)

Power transmission

Clutch	
Type	Hydraulic multi-disk wet clutch
Clutch disk diameter	6.8 in (172 mm)
Transmission	
Type	6-speed transmission
Overall ratios	1st gear = 3.93 2nd gear = 2.87 3rd gear = 2.27 4th gear = 2.01 5th gear = 1.78 6th gear = 1.582
Rear-wheel drive	
Power transmission from gearbox to rear-wheel drive	Universal shaft with integrated torsional damper
Rear-wheel drive	Bevel gears
Rear-axle gear ratio	1 : 2.82

Frame and suspension

Frame	
Type	Main and rear frame in light-alloy design
Location of type plate	on the rear cross frame tube
Location of vehicle identification number (VIN)	on the side frame section at the front right
Front brake	
Type	two floating brake discs with 4-piston fixed calipers, sintered metal brake pads
Rear brake	
Type	one fixed brake disc with 2-piston floating caliper, organic brake pads
Front wheel guide	
Type	BMW Duolever
Steering lock angle	2 x 29°
Front wheel castor in normal-load position	4.4 in (111.63 mm)
Rear wheel guide	
Type	BMW EVO Paralever swinging arm

Frame and suspension

Front suspension system	
Type	Central suspension strut with single-tube gas pressure shock absorber
Spring travel (bump)	2.36 in (60 mm)
Spring travel (rebound)	2.17 in (55 mm)
Total suspension travel	4.53 in (115 mm)
Rear suspension system	
Type	Central suspension strut with single-tube gas pressure shock absorber Spring preload and rebound-stage damping steplessly variable
Spring travel (bump)	3.94 in (100 mm)
Spring travel (rebound)	1.38 in (35 mm)
Total suspension travel (at wheel)	5.3 in (135 mm)

Wheels and tires

Front wheel	
Type	MTH2 angled rim shoulder with double tire retaining hump
Rim size	3.50 x 17"
Tire size	120/70-ZR17
Rear wheel	
Type	MTH2 angled rim shoulder with double tire retaining hump
Rim size	6.00 x 17"
Tire size	190/50-ZR17

Fuel and lubricants

Engine	
Engine oil	Brand-name HD oil of API classification SF, SG or SH; CD or CE amendments are permissible; or brand-name HD oil of CCMC classification G4 or G5; amendment PD2 is permissible. No engine oils of the viscosity classes SAE 20W-x may be used. Synthetic engine oils may only be used when they have been approved by BMW Motorrad for this motorcycle.
Top-up volume between MIN and MAX	1.1 pints (0.5 l)

Fuel and lubricants

Viscosity classes depending on outside temperature	
32 °F - 86 °F (0 °C – 30 °C)	SAE 30
68 °F - above 86 °F (20 °C – above 30 °C)	SAE 40
5 °F - above 86 °F (-15 °C – above 30 °C)	SAE 15 W-50
5 °F - 86 °F (-15 °C – 30 °C)	SAE 15 W-40
-4 °F - 68 °F (-20 °C – 20 °C)	SAE 10 W-40
-4 °F - 50 °F (-20 °C – 10 °C)	SAE 10 W-30
-4 °C - above 86 °F (-20 °C – above 30 °C)	SAE 10 W-X (X $\geq$ 40)
below -22 °F - above 86 °F (below -30 °C – above 30 °C)	SAE 5 W-X (X $\geq$ 40)

Oils with x $\geq$ 40 are available from your authorized BMW motorcycle retailer.
All engine oils supplied by BMW Motorrad are subject to regular BMW quality assurance checks.
Oil additives are not required and are not recommended.
Different engine oils may not be mixed.

Fuel and lubricants

Gearbox	
Gear oil	joint oil circuit with engine
Fuel	
Fuel grade	Premium grade unleaded fuel (98 ROZ/RON; 88 MOZ/MON)
Content of fuel tank	5 gal (19 l)
Reserve volume	1 gal (4 l)
Brakes	
Brake fluid	DOT 4 We recommend BMW brake fluids

Electrical system

Battery	
Type	12 V 14 Ah, maintenance-free
Low temperature test current	190 A
Spark plugs	
Approved spark plugs	BOSCH YR 5DDE
Electrode gap	0.02 in (0.7 mm)
Wear limit	0.04 in (1.0 mm)
Fuses	
	All circuits are electronically protected, so plug-in fuses are no longer necessary. 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.

Electrical system

Bulbs	
Design of headlight	Clear glass with three reflectors
High-beam headlight	2 H7 halogen bulbs, 12 V 55 W
Low-beam headlight	H7 halogen bulb 12 V 55 W
Parking light	12 V 5 W
Brake/rear lights	12 V 21/5 W
Front turn signals	12 V 16 W
Rear flashing turn signals	12 V 10 W
Power socket	
Ratings	12 V 5 A

Dimensions and weights

Dimensions	
Maximum length	87 in (2,214 mm)
Maximum width	33.8 in (858 mm)
Maximum height (without rider)	48 in (1,220 mm)
Seat height	32 in (820 mm)
Wheelbase in normal-load position	61.8 in (1,572 mm)
Ground clearance in normal-load position	4.7 in (120 mm)
Weights	
DIN wet weight	547 lbs (248 kg)
Permitted total weight	990 lbs (450 kg)
Maximum payload	445 lbs (202 kg)
Permissible wheel loads	
Front	353 lbs (160 kg)
Rear	640 lbs (290 kg)

Riding specifications

Speeds	
Top speed	over 127 mph (200 km/h)
Acceleration 0-100 km/h	2.8 s
Noises	
Riding noise to EU specification	80 dB (A)
Stationary noise to EU specification	94 dB (A) at 5,100 rpm

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BMW Motorrad Service

BMW Motorrad service quality

BMW Motorrad not only stands for excellent workmanship and a high level of reliability, but also for outstanding service quality.

To ensure that your BMW is always in optimum condition, we recommend that you comply with the maintenance work planned for your motorcycle - preferably at your BMW motorcycle retailer. Proof of regular maintenance is imperative for the provision of services as a gesture of good will after the warranty expires.

In addition, certain signs of wear may otherwise not be noticed until it is too late to put them right at moderate cost. Your authorized BMW motorcycle retailer knows your motorcycle exactly and can take action before minor problems 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 Motorcycle Service Card – breakdown service on the road

With all new BMW motorcycles you are protected with the BMW Motorcycle Service Card in the case of a breakdown with a broad range of services such as breakdown service, motorcycle transport etc. (conditions may differ in individual countries).

In the case of a breakdown, you contact the Mobile Service of BMW Motorrad. Our specialists will then provide you with advice and support.

Important country-specific contact addresses and their Service telephone numbers, as well as information on Mobile Service and the dealership network are contained in the Service Contact brochures.

BMW Motorrad Service Network

Our worldwide service network supports you and your motorcycle in over 100 countries around the globe. In Germany alone you are in excellent hands at approximately 200 BMW motorcycle retailers.

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

The right brochure for your country is included with your motorcycle, and both brochures are also available from your authorized BMW motorcycle retailer.

Maintenance

Maintenance is performed on the basis of time and distance traveled.

BMW running-in check

The BMW running-in check has to be performed when the motorcycle has covered between approx. 300 miles (500 km) and approx. 750 miles (1,200 km).

BMW Annual Inspection

Some maintenance tasks have to be performed 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 further 12,000 miles (20,000 km) (18,000 miles, 30,000 miles, 42,000 miles) (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 miles (20,000 km) and every further 12,000 miles (20,000 km) (24,000 miles, 36,000 miles, 48,000 miles) (40,000 km, 60,000 km, 80,000 km etc.) if this distance is covered within a year.

Maintenance schedules

If you like, you can view the current maintenance schedule for your motorcycle on the Internet and download the file from www.bmw-motorrad.com/maintenance.

Every authorized BMW motorcycle retailer has a fixed scale of charges based on work times and carefully calculated hourly rates. Fuel, lubricants and similar substances, filters, gaskets etc. are charged separately.◀

BMW Pre-delivery Check

Performed in accordance with manufacturer's instructions

Date, stamp, signature

BMW Running-In Check

Performed in accordance with manufacturer's instructions

Odometer reading_____

Brake fluid changed:

☐ Without BMW Integral ABS

☐ With BMW Integral ABS
- ☐ Wheel circuit
- ☐ Control circuit

Date, stamp, signature

Confirmation of maintenance work

BMW Service

- ☐ BMW Annual Inspection
- ☐ BMW Service
- ☐ BMW Inspection

Performed in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:

- ☐ Without BMW Integral ABS
- ☐ With BMW Integral ABS
  - ☐ Wheel circuit
  - ☐ Control circuit

_____

Date, stamp, signature

BMW Service

- ☐ BMW Annual Inspection
- ☐ BMW Service
- ☐ BMW Inspection

Performed in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:

- ☐ Without BMW Integral ABS
- ☐ With BMW Integral ABS
  - ☐ Wheel circuit
  - ☐ Control circuit

_____

Date, stamp, signature

BMW Service

- ☐ BMW Annual Inspection
- ☐ BMW Service
- ☐ BMW Inspection

Performed in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:

- ☐ Without BMW Integral ABS
- ☐ With BMW Integral ABS
  - ☐ Wheel circuit
  - ☐ Control circuit

_____

Date, stamp, signature

Confirmation of maintenance work

BMW Service

- ☐ BMW Annual Inspection
- ☐ BMW Service
- ☐ BMW Inspection

Performed in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:

- ☐ Without BMW Integral ABS
- ☐ With BMW Integral ABS
  - ☐ Wheel circuit
  - ☐ Control circuit

_____

Date, stamp, signature

BMW Service

- ☐ BMW Annual Inspection
- ☐ BMW Service
- ☐ BMW Inspection

Performed in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:

- ☐ Without BMW Integral ABS
- ☐ With BMW Integral ABS
  - ☐ Wheel circuit
  - ☐ Control circuit

_____

Date, stamp, signature

BMW Service

- ☐ BMW Annual Inspection
- ☐ BMW Service
- ☐ BMW Inspection

Performed in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:

- ☐ Without BMW Integral ABS
- ☐ With BMW Integral ABS
  - ☐ Wheel circuit
  - ☐ Control circuit

_____

Date, stamp, signature

Confirmation of maintenance work

BMW Service

☐ BMW Annual Inspection
☐ BMW Service
☐ BMW Inspection

Performed in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:

☐ Without BMW Integral ABS

☐ With BMW Integral ABS
- ☐ Wheel circuit
- ☐ Control circuit

_____
Date, stamp, signature

BMW Service

☐ BMW Annual Inspection
☐ BMW Service
☐ BMW Inspection

Performed in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:

☐ Without BMW Integral ABS

☐ With BMW Integral ABS
- ☐ Wheel circuit
- ☐ Control circuit

_____
Date, stamp, signature

BMW Service

☐ BMW Annual Inspection
☐ BMW Service
☐ BMW Inspection

Performed in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:

☐ Without BMW Integral ABS

☐ With BMW Integral ABS
- ☐ Wheel circuit
- ☐ Control circuit

_____
Date, stamp, signature

Confirmation of maintenance work

BMW Service

- ☐ BMW Annual Inspection
- ☐ BMW Service
- ☐ BMW Inspection

Performed in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:

- ☐ Without BMW Integral ABS
- ☐ With BMW Integral ABS
  - ☐ Wheel circuit
  - ☐ Control circuit

_____

Date, stamp, signature

BMW Service

- ☐ BMW Annual Inspection
- ☐ BMW Service
- ☐ BMW Inspection

Performed in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:

- ☐ Without BMW Integral ABS
- ☐ With BMW Integral ABS
  - ☐ Wheel circuit
  - ☐ Control circuit

_____

Date, stamp, signature

BMW Service

- ☐ BMW Annual Inspection
- ☐ BMW Service
- ☐ BMW Inspection

Performed in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:

- ☐ Without BMW Integral ABS
- ☐ With BMW Integral ABS
  - ☐ Wheel circuit
  - ☐ Control circuit

_____

Date, stamp, signature

Confirmation of service

The list is intended as a record of maintenance, warranty and repair work, the installation of optional accessories and, if appropriate, special campaign (recall) work.

Record of all work performed in workshop	
Work performed	**miles/ km** **Date**

Confirmation of service

Record of all work performed in workshop		
Work performed	miles/ km	Date

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Vehicle/dealership data

Vehicle data	**Dealership data**
Model	Contacts in Service Department
Vehicle identification number	Ms./Mr.
Color code	Phone number
First registration	
Registration number	Dealership address/phone (company stamp)

Details described or illustrated in this booklet may differ from the motorcycle's actual specification as purchased, the accessories fitted or the national-market specification. No claims will be entertained as a result of such discrepancies.
Dimensions, weights, fuel consumption and performance data are quoted to the customary tolerances.

The right to modify designs, equipment and accessories is reserved.
We are not responsible for errors and omissions.
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The most important data for a filling station stop can be found in the following chart:

Fuel		
Designation	Premium grade unleaded fuel	
ROZ/RON	98	
MOZ/MON	88	
Fuel tank capacity	5 gal (19 l)	
Tire pressures	Front	Rear
One-up	36.3 psi (2.5 bar)	42.0 psi (2.9 bar)
Solo operation with luggage	36.3 psi (2.5 bar)	42.0 psi (2.9 bar)
Operation with passenger (and luggage)	36.3 psi (2.5 bar)	42.0 psi (2.9 bar)

BMW Motorrad

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09.2004
2nd edition US / RF

The Ultimate Driving Machine

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

Reporting Safety Defects

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

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or BMW of North America, LCC.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1–888–327–4236 (TTY: 1–800–424–9153); go to *http://www.safercar.gov*; or write to: Administrator, NHTSA, 400 Seventh Street, SW., Washington, DC 20590. You can also obtain other information about motor vehicle safety from *http://www.safercar.gov.*

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How does ABS work?
The maximum braking force which can be transferred to the road surface is partially dependent on the coefficient of friction of the road surface. Gravel, ice, snow and wet road surfaces offer a considerably poorer coefficient of friction than a dry, clean layer of asphalt. The lower the coefficient of friction 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 applied, the wheels begin to lock and the driving stability is lost, resulting in a danger of falling. Before this situation occurs, the ABS intervenes and adjusts the brake pressure to the maximum transferrable braking force. As a result, the wheels continue to turn and the driving stability is maintained regardless of the road surface condition.

What happens on uneven road surfaces?
Wavy ground or uneven road surfaces can briefly result in a loss of contact between the tire and the road surface, and the transferrable braking force decreases to zero. If the brakes are applied in this situation, the ABS must reduce the brake pressure to ensure driving stability when contact with the road surface is restored. At this point in time the BMW Motorrad Integral ABS must assume extremely low coefficients of friction (gravel, ice or snow) so that the wheels turn in every imaginable case and the driving stability is ensured. After the actual conditions are detected, the system adjusts the brake pressure to the optimum value.

What must be observed during driving safety training?
Compared to normal braking, braking during which the ABS must intervene in a regulating manner requires a consider-

ably increased amount of current, which places a heavy load on the battery.
During normal driving the battery is constantly charged, and therefore has a sufficient capacity.
During driving breaks of several weeks, a trickle-charger available from an authorized BMW Motorrad retailer should be connected or the battery should be disconnected and recharged before the next time the motorcycle is driven.
During driving-safety training courses an unusually high number of ABS-controlled braking actions take place within a short time. Between those actions there are waiting and evaluation phases during which the motorcycle is not driven. The battery is heavily loaded by the ABS control actions, however at the same time it is not recharged, as virtually no driving takes place.
In isolated cases, braking actions of this kind in this artificially produced situation during which the brake lever is pulled with maximum force and extremely quickly, in combination with a decreasing electrical system voltage, push the ABS to technical limits at which the control function is no longer fulfilled.
Field observations by BMW Motorrad show that no comparable situations occur in road traffic or during circuit training.
During safety training the following instructions must be followed:

- Observe the warning and control lights before each braking exercise
- Drive a longer distance after a maximum of five braking exercises to charge the battery
- Switch off consumers like seat and hand grip heaters, radio, navigation system and accessories connected to the sockets
- Switch off the ignition during breaks and conversations. If the engine is switched off with the emergency ON/OFF switch, the light and all electronic systems remain switched on and load the battery

How can the shortest braking distance be achieved?

During braking the dynamic load distribution between the front and rear wheel changes. The heavier braking is, the higher the load on the front wheel. The greater the wheel load, the more braking force can be transferred.

To achieve the shortest possible braking distance, the front brake must be operated 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 disengaged.

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

What happens when the ABS control function fails?

A fault in the BMW Motorrad Integral ABS is indicated by a corresponding warning in the instrument cluster.

If only the ABS control function fails, the integral system and the brake booster continue to operate. If these systems also fail, the residual braking function is activated. In this case, the forces to be applied to the brake levers are considerably higher and the required lever travel increases.

The residual braking function is a mechanical function and is always available when the BMW Motorrad Integral ABS fails, regardless of the battery charging level. It meets all requirements of the worldwide legislation on the brake design of motor vehicles and enables the rider to brake the motorcycle.

When driving with the residual braking function, the following instructions must be followed:

- Adjust the brake levers to the maximum travel

- Always brake with the front and rear brakes
- In clear situations, carry out test braking to learn the response behavior of the brakes
- Observe the condition of the road surface and adapt the braking force applied accordingly
- As it is an emergency running function, you should drive to a specialized workshop, preferably an authorized BMW Motorrad retailer, as quickly as possible

How important is regular maintenance?



Any technical system is always only as good as its maintenance status.
To ensure that the BMW Motorrad Integral ABS is in optimum condition with regard to maintenance, the specified inspection intervals must always be complied with.◀

How is the BMW Motorrad Integral ABS designed?

The BMW Motorrad Integral ABS ensures the driving stability of the motorcycle on any surface within the physical limits of driving. The system is not optimized for special requirements resulting under extreme weather conditions on offroad terrain or on racing circuits.

BMW Motorrad

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The Ultimate Riding Machine