Rider's Manual (US Model)

K 1200 R



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

Chapter 1 of this Rider's Manual will provide you with an initial overview of your motorcycle. All maintenance and repair work performed will be documented in Chapter 9. Proof of the maintenance performed is required for the provision of services as a gesture of good will after the warranty expires.
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

Indicates warnings that you must comply with for reasons of your safety and the safety of others, and to protect your motorcycle against damage.◀

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

◀ Indicates the end of an item of information.

• Instruction.

» Result of an activity.

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

OE Optional equipment
Your motorcycle was assembled complete with all the optional equipment you ordered.

OA Optional accessory
You can obtain optional accessories through your authorized BMW motorcycle retailer; optional accessories have to be retrofitted to the motorcycle.

EWS Electronic immobilizer

ESA Electronic Suspension Adjustment.

DWA Anti-theft alarm

ABS Antilock 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. Please note, too, that your motorcycle might not be exactly as illustrated in this manual on account of country-specific differences.
If your BMW was supplied with equipment not described in this Rider's Manual, you will find these features described in separate manuals.

Technical data

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

Currency

The high safety and quality standards of BMW motorcycles are maintained by constant development work on designs, equipment and accessories. Because of this, your motorcycle may differ from the information supplied in the Rider's Manual. Nor can 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 specially adapted methods of maintenance and repair.

If maintenance and repair work is performed inexpertly, it could result in consequential damage and thus constitute a safety risk. BMW recommends that you have the necessary work on your motorcycle performed either by an authorized BMW motorcycle retailer or by a workshop that operates to BMW specifications and employs suitably trained personnel.◀

Your authorized BMW motorcycle retailer can provide information on the specified Service, Inspection and Annual Inspection work needed.

Have all maintenance and repair work carried out confirmed in the "Service" chapter (➠ 148) in this manual.

Authorized BMW motorcycle retailers are supplied with the latest technical information and have the necessary technical know-how. Consequently, we recommend that you contact your authorized BMW motorcycle retailer if you have any questions regarding your motorcycle.

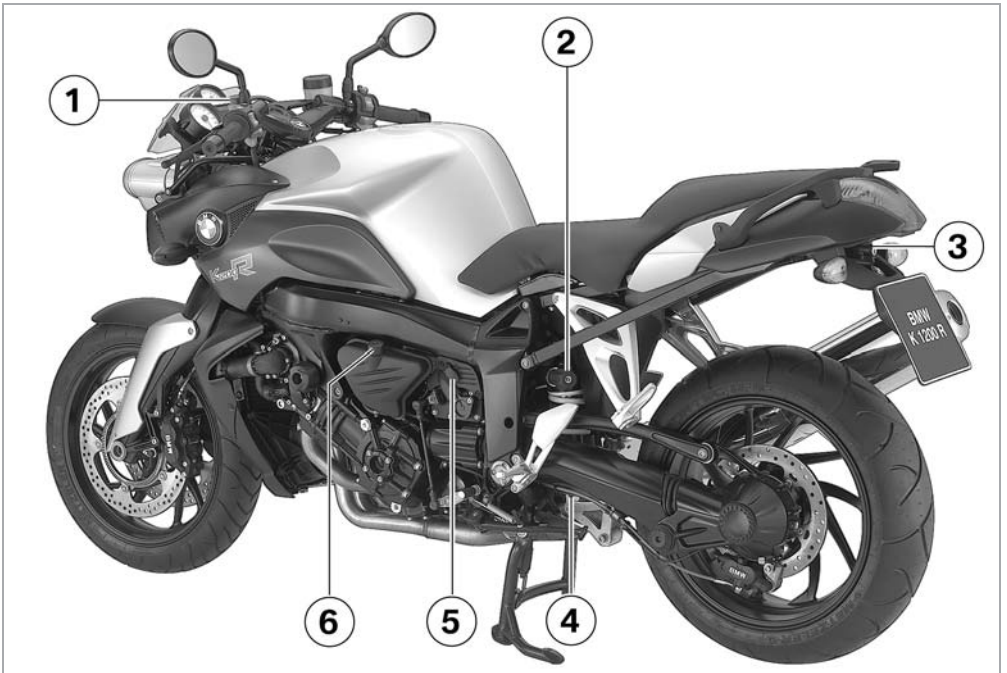
Rider's equipment

Do not ride without the correct clothing. Always wear:

- Helmet
- Motorcycling jacket and trousers
- Gloves
- Boots

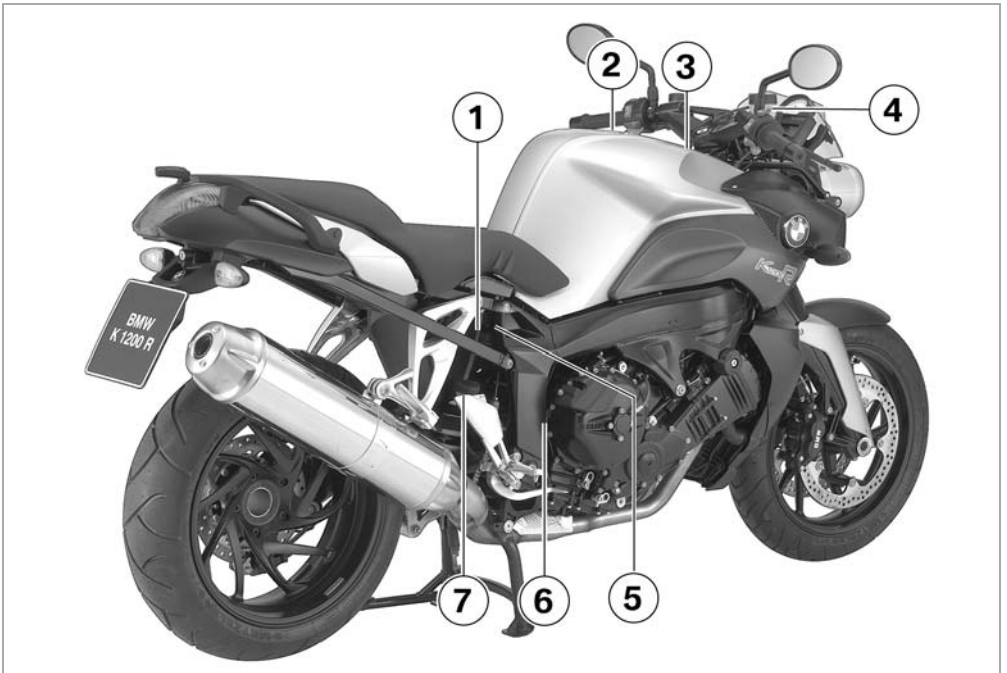
This applies even to short journeys, and to every season of the year. Your authorized BMW motorcycle retailer will be glad to advise you on the correct clothing for every purpose.

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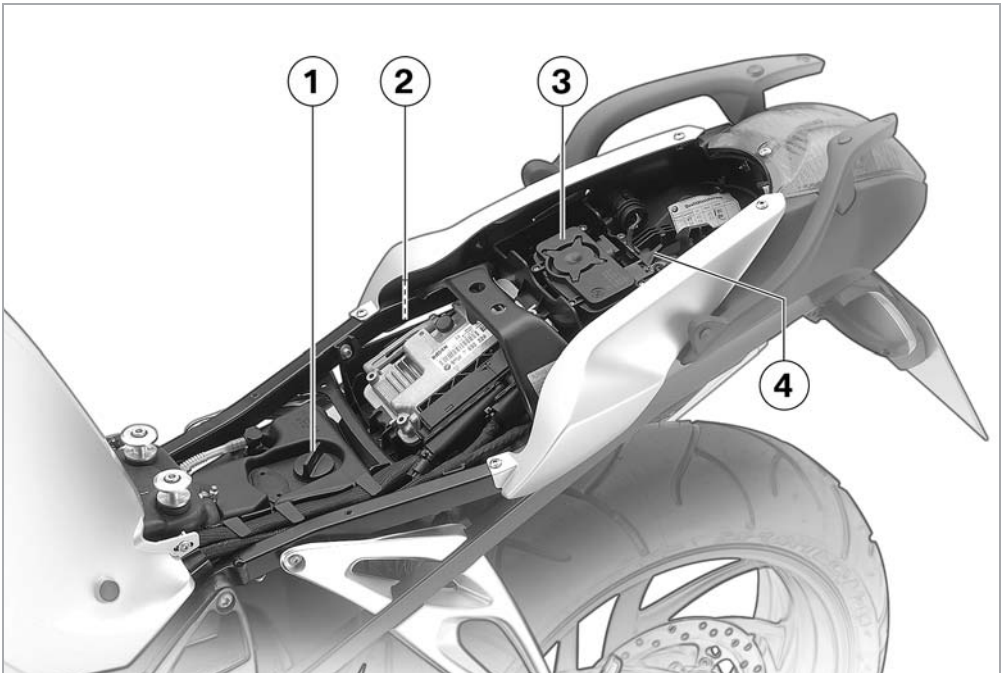
General view, left side

1 Clutch fluid reservoir (➠ 97)
2 Rear spring preload adjustment (➠ 47)
3 Seat lock (➠ 44) beneath rear light
4 Rear shock absorber damping adjustment (➠ 48)
5 Power socket (➠ 80)
6 Coolant fill opening (➠ 92)


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General view, right side

1 Display for engine oil level (➠ 89)
2 Fill location, fuel tank
3 Battery compartment (➠ 116)
4 Brake-fluid reservoir, front (➠ 95)
5 Type plate
6 Vehicle identification number
7 Brake-fluid reservoir, rear (➠ 95)


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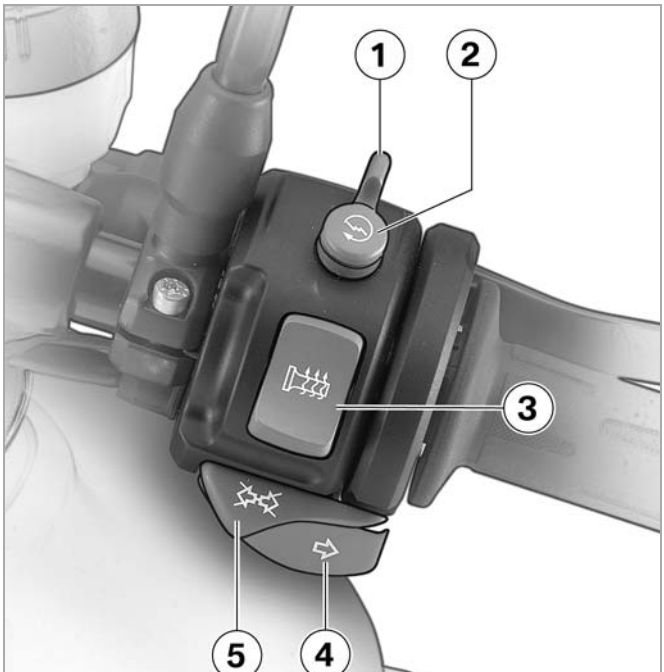
Underneath the seat

1 Fill location, engine oil (➠ 91)
2 Toolkit (➠ 89)
3 Anti-theft alarm[OE]
4 Helmet holder (➠ 45)

Handlebar fitting, left

1 Button, Tripmaster (➠ 37)
2 Pushbutton, hazard warning flashers (➠ 36)
3 Button, ESA^{OE} (➠ 49)
4 Pushbutton, horn
5 Pushbutton, left turn indicators (➠ 43)
6 Switch, high-beam headlight and headlight flasher (➠ 42)





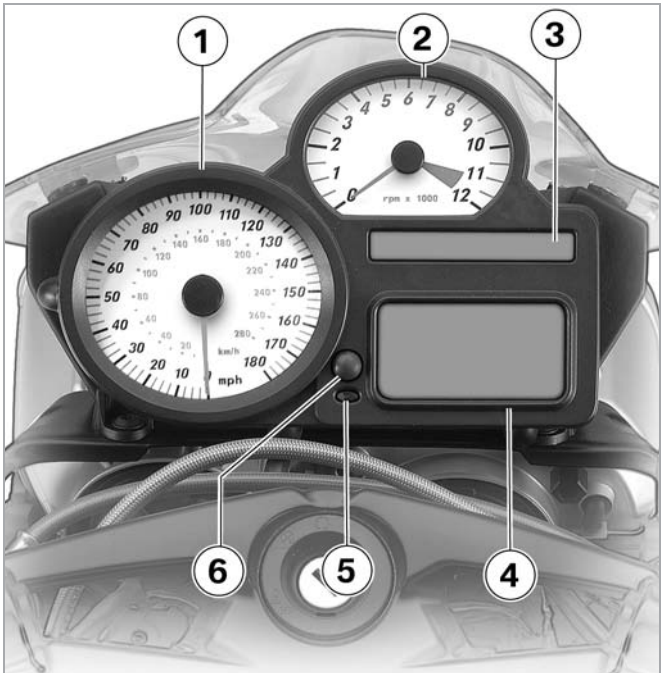
Handlebar fitting, right

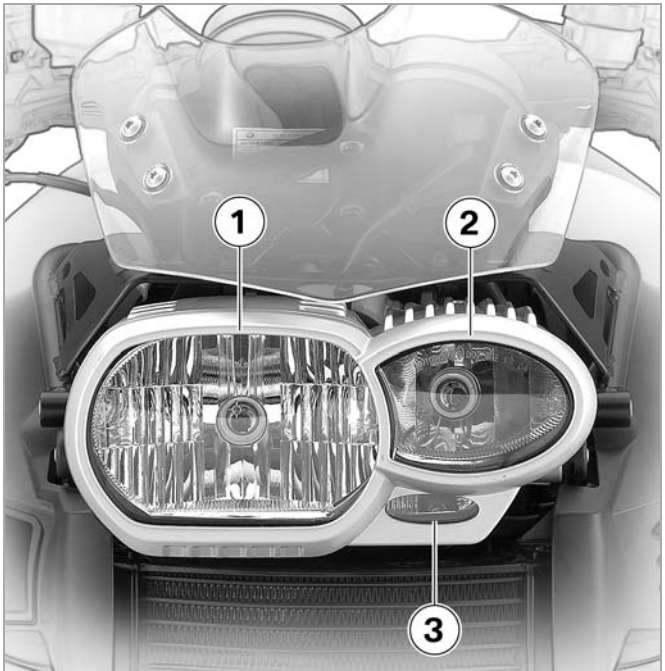
1 Emergency ON/OFF switch (➠ 38)
2 Pushbutton, starter
3 Switch, grip heating[OE] (➠ 39)
4 Pushbutton, right turn indicators (➠ 43)
5 Pushbutton, turn indicators off (➠ 43)

Instrument panel

1 Speedometer
2 Rev. counter
3 Warning and indicator lights (➠ 20)
4 Multifunction display (➠ 20)
5 Indicator light DWA^{OE} and sensor for instrument panel lighting
6 Adjuster, clock (➠ 40)

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



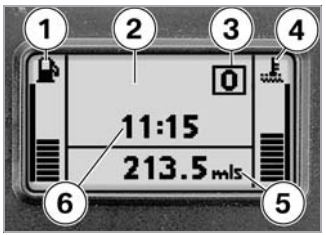


Headlight

1 Low-beam headlight
2 High-beam headlight
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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 (➠ 37)
6 Clock

Warning and indicator lights



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

Function indicators

Fuel capacity

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 indicator shows which gear is selected. If no gear is engaged, the gear indicator displays 0; the "neutral" indicator light also lights up.

Coolant temperature

The horizontal bars indicate the level of the coolant temperature.

Warning indicators

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

Overview

The warnings are listed in the table below, along with the page numbers of the pages you can refer to for more information.

Light	Symbol	Meaning	Explanations
	EWS	Ignition key not authorized.	(➠ 24)
		Low-beam headlight, high-beam headlight, parking light or turn indicator lamp defective.	(➠ 26)
		Bulb failure.	(➠ 26)
 yellow		Fuel reserve reached.	(➠ 24)
 yellow		Fault in the engine electronics.	(➠ 25)
 yellow		Rear light or brake light lamp defective.	(➠ 26)
 red		Coolant temperature too high.	(➠ 24)
 red		Engine-oil pressure too low.	(➠ 25)

Light	Symbol	Meaning	Explanations
 red		Battery is no longer being charged.	(➠ 26)
 red		Brake switch defective.	(➠ 27)
	 1 flash per second	ABS starting-off test not completed.	(➠ 27)
	 4 flashes per second	ABS self-diagnosis not completed.	(➠ 28)
 red		Relay for ABS warning lights defective.	(➠ 28)
 red	 1 flash per second	ABS function not available.	(➠ 29)
 red	 4 flashes per second	ABS in residual braking function.	(➠ 29)
 1 red flash per second	 1 flash per second	Insufficient brake fluid.	(➠ 29)
 4 red flashes per second	 4 flashes per second	A number of ABS faults.	(➠ 30)

Electronic immobilizer EWS

EWS Immobilizer symbol is displayed.

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

- Remove all other vehicle keys located near the ignition key (➠ 34).
- Use the reserve key.
- Have the defective key replaced, preferably by an authorized BMW motorcycle retailer (➠ 36).

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 a maximum of 4 liters. The Tripmaster indicates the probable residual operating range (➠ 38).

Lack of fuel can result in the engine cutting out unexpectedly and this could result in a hazardous situation. Do not run the fuel tank dry.◀

Lack of fuel could result in misfiring and this in turn could damage the catalytic converter.
Do not run the fuel tank dry.◀

- 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 yellow.



Engine electronics symbol is displayed.

Fault in the 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 rectified as soon as possible by a specialized workshop, preferably an authorized BMW motorcycle retailer.

Engine oil pressure



General warning light lights up red.



Engine oil pressure symbol is displayed.

Insufficient engine oil pressure
The "engine oil pressure" warning indicates that there is no oil pressure or that the oil pressure in the lubricating oil circuit is too low; under no circumstances is it to be regarded as fulfilling the function of an oil gauge. The warning must disappear when oil pressure builds up 1 to 2 seconds after the engine starts.

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

- Disengage the gear.
- Operate the emergency ON/OFF switch.
- Bring the motorcycle safely to a halt.
- Check the engine oil level.

There are other engine-related problems besides a low engine-oil level that can trigger the "engine-oil pressure" warning. Continuing to ride in these cases can cause engine damage.
If the "engine oil pressure" warning is issued, do not continue to ride if a check shows that the engine oil level is correct.◀

- Have the fault rectified by a specialized 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 continue to ride only until the battery is discharged.


A discharged battery can result in the engine cutting out unexpectedly, causing a hazardous situation. If possible, do not continue your journey.◀

- Have the fault rectified as soon as possible by a specialized 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 yellow.


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

Rear light or brake light bulb defective.
- Replace bulbs (➠ 109).


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

Low-beam headlight, high-beam headlight, side-light or turn-indicator bulb defective.
- Replace bulbs (➠ 109).


Defective bulb symbol with two arrows is displayed.

A combination of the bulb defects described above has occurred.
- Replace bulbs (➠ 109).

ABS[OE] warning indicators



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 at a rate of one or four flashes per second.

General warning light

General warning light lights up red.

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

A defect has occurred in the brake system which can lead to delayed braking action, and therefore to accidents.
Brake early, as delayed braking action must be expected.◀

- Have the fault rectified as soon as possible by a specialized workshop, preferably an authorized BMW motorcycle retailer.

ABS[OE] warning light

Brake failure ABS warning light flashes once per second.

ABS function not available because pull-away test (➠ 63) not completed.
You can continue to ride. To prevent the wheels from locking:

- Do not use emergency braking until the pull-away test has been completed.

Without the ABS function, the wheels may lock up during very hard braking, causing accidents.
Avoid hard braking whenever possible.◀

Brake failure ABS warning light flashes 4 times per second.

Only residual braking function available in both brake circuits, because self-diagnosis (➠ 59) has not completed. You can continue to ride. However, bear in mind that until self-diagnosis has completed, neither the ABS function nor the brake booster is available.

Without the ABS function, the wheels could lock during very hard braking. Without servo-assisted brakes, considerably greater force is required to brake. The altered braking behavior can lead to accidents.
Avoid hard braking whenever possible. Brake early, as increased braking force is required.◀

- If circumstances permit, do not apply the brakes until self-diagnosis has completed.

General warning light and ABS^{OE} warning light

General warning light red.

Brake failure ABS warning light ON.

The controller of the ABS warnings is defective. ABS faults cannot be displayed. You can continue to ride, but bear in mind that you will not receive warning of ABS faults, if they occur.

ABS warnings not available. The failure of functions of the BMW Integral ABS cannot be displayed. Brake early and avoid hard braking whenever possible, as functions of the BMW Integral ABS may have failed.◀

- Have the fault rectified as soon as possible by a specialized workshop, preferably an authorized BMW motorcycle retailer.

 General warning light red.

Brake failure ABS warning light flashes 1 time per second.

ABS function (➠ 76) unavailable in at least one brake 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 very hard braking, causing accidents.
Avoid hard braking whenever possible.◀

- Have the fault rectified as soon as possible by a specialized workshop, preferably an authorized BMW motorcycle retailer.

 General warning light lights up in red.

Brake failure ABS warning light flashes 4 times per second.

Only residual braking function (➠ 77) available in at least one brake circuit.
You can continue to ride. However, bear in mind that neither the ABS function nor the brake booster is available.

 Without the ABS function, the wheels could lock during very hard braking. Without servo-assisted brakes, considerably greater force is required to brake. The altered braking behavior can lead to accidents.
Avoid hard braking whenever possible. Brake early, as increased braking force is required.◀

- Have the fault rectified as soon as possible by a specialized workshop, preferably an authorized BMW motorcycle retailer.

 General warning light flashes red 1 time per second.

Brake failure 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.◀

Several factors, including very badly worn brake pads, can trigger this warning.

Worn brake pads can lengthen braking distance by a significant margin. Brake early.◀

Worn brake pads can damage the brake discs. Avoid hard braking whenever possible.◀

- Check brake pad thickness (➠ 94).
- Have worn brake pads replaced as soon as possible by a specialized workshop, preferably an authorized BMW motorcycle retailer.

If 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 leaktight, no signs of brake fluid escaping.

If any of the above criteria are not satisfied:

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

If these criteria are satisfied, 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 that can lead to decreased braking efficiency.
Avoid hard braking whenever possible.◀

- Have the fault rectified as soon as possible by a specialized workshop, preferably an authorized BMW motorcycle retailer.

General warning light flashes red 4 times per second.

Brake failure ABS warning light flashes 4 times per second.

There are two faults:
– Only residual braking function (➠ 77) available in at least one brake circuit, indicated by the general warning light 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 once per second.

See the fault descriptions above.

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Ignition switch and steering lock

Keys

You receive one master key and one spare key. If a key is lost, please note the information on the electronic immobilizer (EWS) (➠ 24).

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

Switching on ignition



- Turn the key to the ○ position.

» Side lights and all function circuits switched on.
» Pre-ride check is performed (➠ 57).
» ABS self-diagnosis is performed (➠ 59).
» Engine can be started.

Switching off ignition



- Turn the key to the ⊗ position.

» Light switched off.
» Handlebars not locked.
» In this position, you can remove the key.

Locking handlebars



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

» Ignition, lights and all function circuits switched off.
» Handlebars locked.
» In this position, you can remove the key.

When you prop the motorcycle on the side stand, the surface of the ground will determine whether it is better to turn the handlebars to the left or right. On level ground, a secure stance is ensured only with the handlebars turned to the left. On level ground, always turn the handlebars to the left and lock them in this position.◀

Brake servo assistance is not available when the ignition is off.
Do not switch off the ignition while the motorcycle is being ridden.◀

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 be started only with the keys that belong to the vehicle. You can also have your authorized BMW motorcycle retailer bar individual keys, for example if a key goes missing. 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 aerial 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 keep the spare key separate 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 must 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 hazard warning flashers button **1**.

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

- Switch off the ignition.

» The hazard warning flashers continue to operate.
» Left/right turn indicator lights off.

You can also switch on the hazard warning flashers by simultaneously pressing the buttons for the left and right turn indicators.◀

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

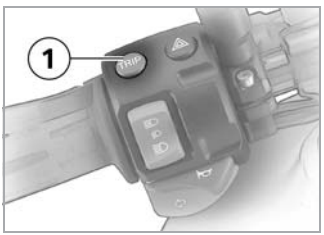
Switching off hazard warning flashers

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

» Hazard warning flashers cease to operate.

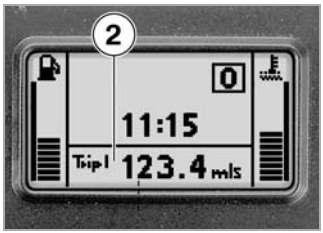
Tripmaster

Selecting display



When you switch on the ignition, the information shown by the Tripmaster when the ignition was switched off always reappears on the multifunction 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
– Tripmeter 1 (Trip I)
– Tripmeter 2 (Trip II)
– Operating range (not until reserve fuel level is reached)

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 3.2 quarts (3 liters) have been added.

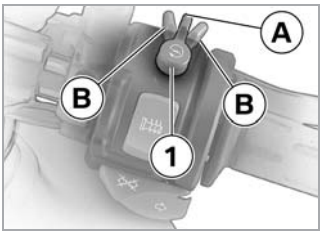
Resetting trip meter

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

» The tripmeter is reset to zero.

Emergency ON/OFF switch

The engine can be switched off quickly 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.

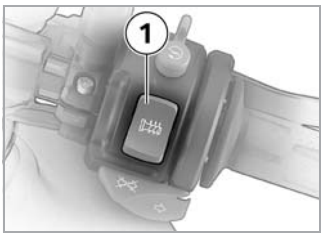
Do not operate the emergency ON/OFF switch when riding.◀

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

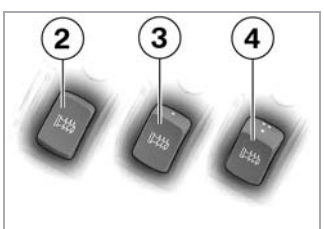
» The engine electronics control unit switches the engine off.
» The engine cannot be started while the switch is in this position.

If you move the emergency ON/OFF switch to the **B** position while the ignition is switched on, the BMW Integral ABS remains operational (➠ 75).◀

Grip heating[OE]



1 Grip heating switch



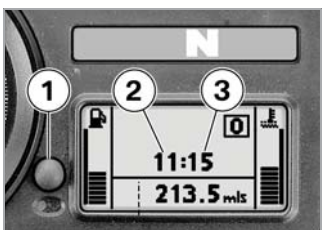
2 Heating function off
3 50% heating power (one dot)
4 100% heating power (three dots)

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 charge level is low, grip heating is switched off to ensure the battery's starting capability.◀

Clock

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



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

» Hours reading **2** starts to flash.

- Briefly press button **1**.

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

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

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

- Briefly press button **1**.

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

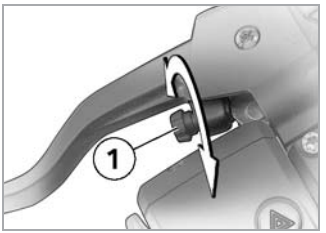
- Press button **1** for longer than 2 seconds.

» Setting confirmed.

Handlebar levers

Adjusting clutch lever

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



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

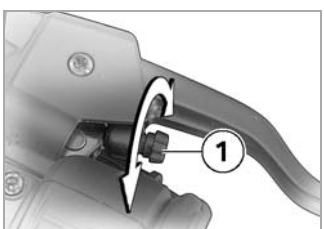
» Turn clockwise: reach is increased.

» 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 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

Side lights

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

The side lights are a strain on the battery. Do not switch the ignition on for 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 top part of switch **1** for the high-beam headlight.

» High-beam headlight switched on.

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

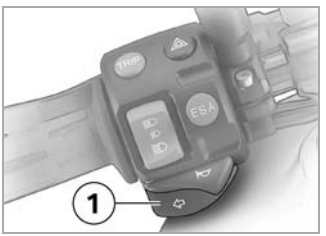
» High-beam headlight switched off.

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

» Headlight flasher.

Parking light

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



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

» Parking lights switched on.

- Switch the ignition on and off again.

» Parking lights switched off.

Headlight setting RHD/ LHD traffic

When riding in countries where traffic drives on the opposite side of the road to that in which the vehicle was registered, the asymmetric low headlight beam will dazzle oncoming traffic.

Adhesive films with unsuitable adhesives can destroy the plastic of the headlight lens.
Use only suitable adhesive films.◀

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

Turn indicators

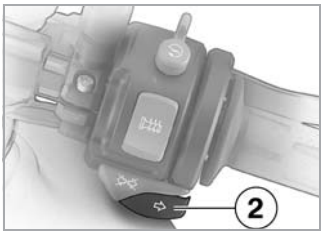
Switching on turn indicators



- Press left-hand turn indicator button **1**.

» Left-hand turn indicator switched on.

» Indicator light for left-hand turn indicator flashes.

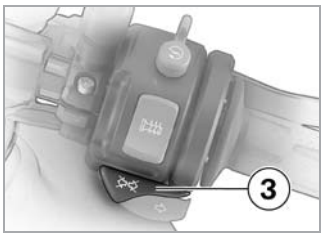


- Press right-hand turn indicator button **2**.

» Right-hand turn indicator switched on.

» Indicator light for right-hand turn indicator flashes.

Switching off turn indicators



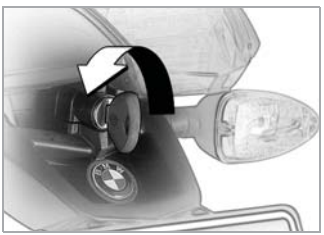
- Press cancel button **3**.

» Turn indicator off.

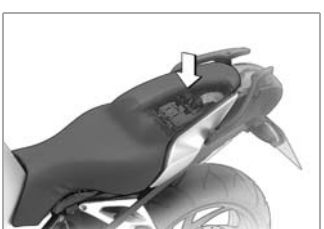
» Turn indicator light is off.

Seat

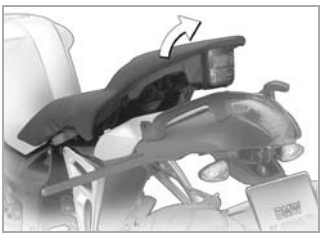
Removing seat



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



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



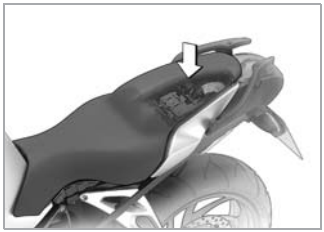
- Raise the seat at the rear.
- Let go of the key and pull the seat from the retaining brackets towards the rear.
- Place the seat, cover side down, on a smooth and clean surface.

Installing seat

If too much pressure is applied in the forward direction, there is a danger that the motorcycle will be pushed off its stand.
Make sure that the motorcycle is steady on its stand.◀



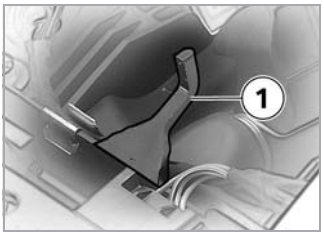
- Push the seat forward into the retaining brackets **1**.



- Press the seat firmly downwards beyond the detent.

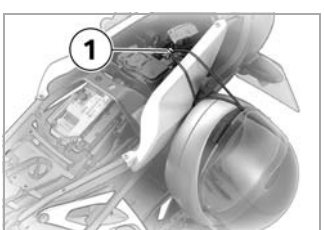
» The seat can be heard to lock into place.

Helmet holder



The helmet holder **1** is located under the seat. A motorcycle helmet can be attached to it.

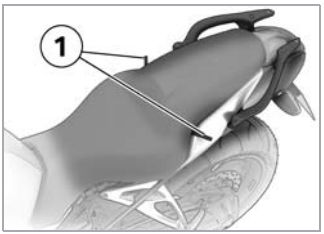
- Remove the seat (➠ 44).



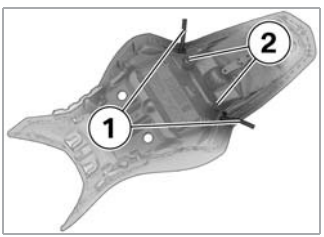
- Pull the steel cable through the helmet and hook it into the bracket.
- Install the seat.

⚠ 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.◀

Luggage loops



Loops **1** for attaching luggage straps are located on the underside of the seat.



To make the loops accessible:

- Remove the seat and turn it around.
- Pull the loops **1** from the retaining brackets. **2**
- Turn the seat over and refit.

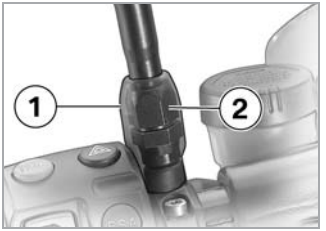
Mirrors

Adjusting mirrors



- Move the mirrors into the desired position by turning them.

If the mirror adjustment is insufficient, the mirror arm can also be adjusted:



- Push the protective cap **1** up over the threaded fastener on the mirror arm.
- Loosen the union nut **2**.
- Turn the mirror arm into the desired position.
- Tighten union nut.
- Pull the protective cap over the threaded fastener.

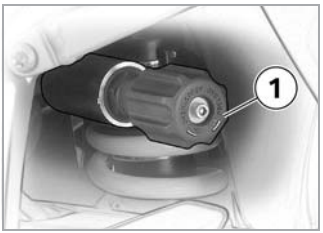
Spring preload

Adjusting spring preload on rear wheel

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

The spring preload must be adapted to the load of the motorcycle. Increase spring preload when the motorcycle is heavily loaded and reduce spring preload accordingly when the motorcycle is lightly loaded.

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



To increase spring preload:
- Turn knob **1** in the direction indicated by the HIGH arrow.

To decrease spring preload:
- Turn knob **1** in the direction indicated by the LOW arrow.

Basic setting for one-up riding:
- 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 refers to operation with one person with a weight of 187 lbs (85 kg).◀

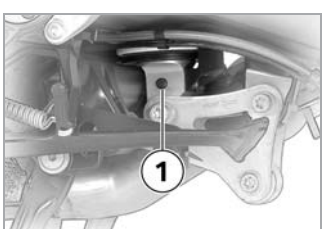
Your motorcycle's handling will suffer if you do not match the spring-preload and damping-characteristic settings.
Adjust the damping characteristic to suit spring preload.◀

Shock absorbers

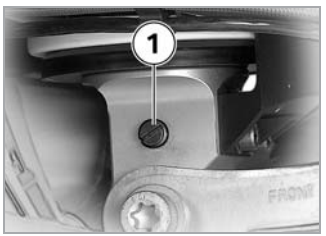
Adjusting rear shock absorber

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

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



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



Harder damping:

- Turn adjusting screw **1** in the direction indicated by the **H** arrow.

Softer damping:

- Turn adjusting screw **1** in the direction indicated by the **S** arrow.

Basic setting for one-up riding:

- Turn adjusting screw **1** all the way in the direction indicated by the **H** arrow.
- Turn the adjusting screw **1** one and a half turns in the direction of the arrow **S**.

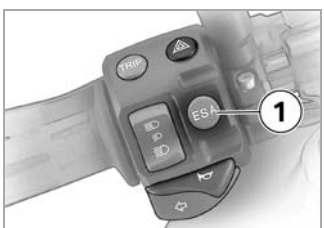
The range of adjustment comprises three and a half turns of the adjusting screw. The basic setting refers to operation with one rider with a weight of 187 lbs (85 kg).◀

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

ESA[OE]

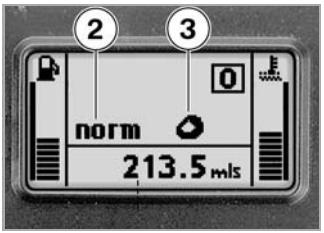
Using the ESA (Electronic Suspension Adjustment) you can conveniently adapt your motorcycle to different driving conditions.

Calling up settings



- Switch on the ignition.
- Briefly press button **1**.

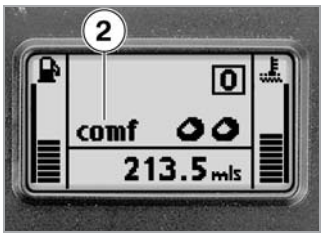
» The current setting is displayed.



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

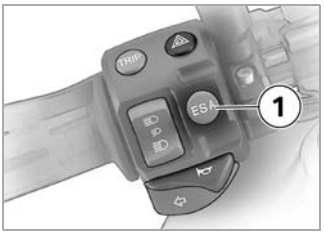


Three adjustments are possible; these are shown in field **2** as follows:

comf Comfort, soft damping

norm Normal, medium damping

sport Sport, hard damping



- Switch on the ignition.
- Briefly press button **1**.

» The current setting is displayed.

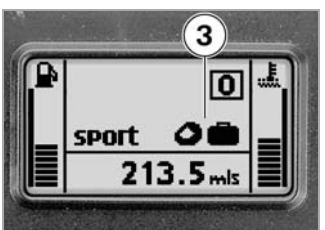
- Press button **1** once briefly.

» 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 spring preload

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

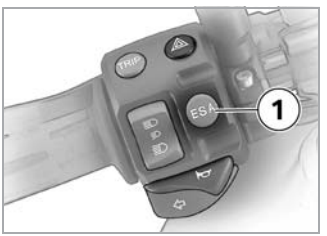


Three adjustments are possible; these are shown in the field **3** as follows:

Solo operation

Solo operation with luggage

Operation with passenger (and luggage)



- Start the engine.
- Briefly press button **1**.

» 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:

– One-up
– One-up with luggage
– Two-up (with 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 pressures adversely affect the handling of the motorcycle and can lead to accidents.
Always keep the tires inflated to the correct pressures.◀

Incorrect tire pressures result in accelerated tire wear.
Always keep the tires inflated to the correct pressures.◀

The required tire pressure can be found in the technical data section (➠ 130).

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 **54**
Safety check **56**
First time out **56**
Before you start **57**
Starting **61**
Riding **63**
Running in **63**
Shifting gear **64**
Placing on side stand **67**
Removing from side stand **69**
Placing on center stand[OE] **71**
Removing from center stand[OE] **73**
Fuel **73**
Brake system **74**

Safety instructions

Speed

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

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

Correct loading



Overloading can adversely affect the motorcycle's handling.
Do not exceed the permissible gross weight (➠ 140).◀

Alcohol and drugs



Even small amounts of alcohol or drugs will adversely affect your perception and your ability to assess situations and make decisions, and slow down your reflexes. Medication can exacerbate these effects.
Do not ride your motorcycle after consuming alcohol, drugs and/or medication.◀

Risk of poisoning

Exhaust fumes contain carbon monoxide, which is colorless and odorless but highly toxic.



Inhaling the exhaust fumes therefore represents a health hazard and can even cause loss of consciousness with fatal consequences.
Do not inhale exhaust fumes.
Do not run the engine in an enclosed space.◀

High voltage



Touching live parts of the ignition system with the engine running can lead to electric shocks.
Do not touch parts of the ignition system when the engine is running.◀

Catalytic converter

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

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


Unburned fuel will destroy the catalytic converter.
Note the points listed for protection of the catalytic converter.◀

Risk of fire

Temperatures at the exhaust are high.


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.
Do not permit flammable materials to come into 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 could catch fire.
Do not allow the engine to idle unnecessarily. Ride away immediately after starting the engine.◀

Tampering with engine management system


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


Tampering with control unit of electronic engine-management system can result in mechanical loads that the motorcycle's components are not designed to withstand. Damage caused in this way is not covered by the warranty.
Do not tamper with the control unit of the electronic engine-management system.◀

Safety check

Prior to every journey

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

Checklist

- Brakes (➠ 93)
- Brake fluid level (➠ 95)
- Clutch (➠ 96)
- Clutch fluid level (➠ 97)
- Warning and indicator lights (➠ 20)
- Shock absorber setting (➠ 48) and spring preload (➠ 47)
- Wheel rims (➠ 98), tread depth (➠ 98) and tire pressures (➠ 51, 130)
- Load, gross weight (➠ 140)
- Luggage system

At regular intervals:

- Engine oil level (every time you refuel) (➠ 89)
- Brake pads (every second/ third time you refuel) (➠ 93)

First time out

Safe handling of your motorcycle

You have to take the time to familiarize yourself with your motorcycle's unique character:

- Acceleration
- Roadholding
- Cornering
- Braking

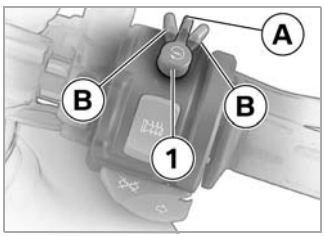
Bear in mind, too, that the engine has to be run in over the first 600 miles (1,000 km) (➠ 63).

The description of the BMW Integral ABS^{OE} starts on page (➠ 75).

⚠ BMW Integral ABS incorporates power braking assistance, so braking power is significantly higher than with conventional brake systems. Inadvertently severe braking can lead to dangerous situations, particularly when the motorcycle is cornering. Practice braking with BMW Integral ABS in secure situations.◀

Before you start

Switching on ignition



- See the notes on the electronic immobilizer (EWS) (➠ 24).
- Emergency ON/OFF switch **1** in operating position **A**.
- Switch on the ignition.

» Pre-ride check is performed.

» With BMW Integral ABS[OE]: ABS self-diagnosis is performed.

Pre-ride check

A pre-ride check is performed after you switch on the ignition. 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.◀

Phase 4 (only with DWA^{OE})



DWA The "DWA" battery warning for the anti-theft alarm appears if the voltage level of the batteries in the anti-theft alarm system^{OE} is too low.

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 a light or symbol is not displayed:
- Have the fault rectified as soon as possible by a specialist workshop, preferably an authorized BMW motorcycle retailer.

Once the pre-ride check completes, the various gauges and indicators show their current values.

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[OE] self-diagnosis



The BMW Integral ABS performs self-diagnosis and a pull-away test to ensure its operability (➠ 63). 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. Only the residual braking function (➠ 77) is available until self-diagnosis completes.
- Release the brake levers.
- Switch on the ignition.

Phase 1

General warning light lights up.

Brake failure ABS warning light flashes 4 times per second.

Self-diagnosis is in progress.

Phase 2

Brake failure ABS warning light flashes 1 time per second.

Self-diagnosis is complete.

The warning light goes out after completion of the starting-off test (➠ 63).



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 (➠ 77). Self-diagnosis is performed as soon as the brake levers are in their fully released positions for the first time. Until this completes the ABS function is not available; the same applies to power assistance for the brakes.
Wait for ABS self-diagnosis to complete before you start the engine.◀



Starting on grades:
Switch on the ignition with gear engaged, clutch lever released and both brake levers released. When self-diagnosis completes, apply the brakes, disengage the clutch, and start the engine.◀

Side stand

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

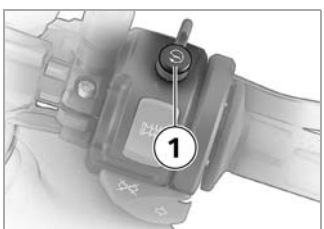
Transmission

You can start the engine when the transmission is in neutral or if you pull the clutch with a gear engaged. Switch on the ignition before you pull the clutch.
When the transmission is in neutral, the green neutral indicator light is on and the gear indicator 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), disengage the clutch after switching on ignition.◀

- Switch on the ignition.



- Press starter button **1**.

» The engine starts.

- Observe instruments and display for warnings and information (➠ 20).

The start attempt is automatically interrupted if the battery voltage is too low. Recharge the battery (➠ 117) before you start the engine, or use jump leads and a donor battery to start (➠ 115).◀

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

Consult the troubleshooting chart below if the engine refuses to start.◀

Troubleshooting chart

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

Possible cause	Remedy	see page
Emergency ON/OFF switch activated	Set the emergency ON/OFF switch to its RUN position	(➠ 57)
Side stand extended, gear engaged	Retract the side stand fully	(➠ 69)
Gear engaged, clutch not disengaged	Select neutral or pull clutch lever	(➠ 60)
Clutch disengaged, ignition switched off	Switch on the ignition, then pull the clutch lever	(➠ 57)
No fuel in tank	Refuel	(➠ 73)
Battery not adequately charged.	Recharge the battery	(➠ 117)

Riding

ABS starting-off test



Brake failure ABS warning light flashes 1 time per second.

The BMW Integral ABS checks the ABS sensors when you pull away after starting. The ABS warning light then goes out and the BMW Integral ABS is active.

Running in

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

⚠ Exceeding the running-in speeds increases engine wear.
Keep to the guideline values as stated below.◀

For the first 600 miles (1,000 km):

- Engine speed max. 7,000 rpm.
- No full-load acceleration.
- Avoid low engine speeds at full load.
- The first inspection should always be performed after 300 to 750 miles (500 to 1,200 km).

Brake pads

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

 New brake pads can considerably increase the braking distance.
Think well ahead and brake carefully; avoid hard braking.◀

Tires

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

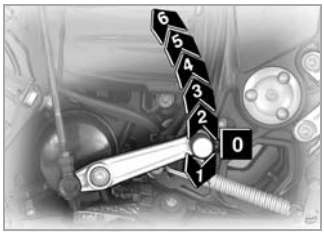
 New tires do not yet have their full adhesion; there is a danger of accidents in extremely inclined positions. Avoid extreme heeling angels.◀

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 11,000 rpm.

Gear shifts



Attempting to shift gear with the clutch engaged can damage the transmission. Always disengage the clutch in order to shift gears.◀

The gear indicator in the multifunction display tells you which gear is engaged.◀



Placing on side stand

No secure stance is possible on poor ground conditions.
Always check that the ground under the stand is level and firm.◀

You must be seated on the motorcycle:
- Switch off the engine.
- Pull the handbrake lever.
- Hold the motorcycle upright and balanced.
- Use your left foot to extend the side stand fully (arrow).
- Slowly lean the motorcycle to the side until its weight is taken by the stand and dismount to the left.
- Turn the handlebars to full left or right lock.
- Check that the motorcycle is standing firmly.

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 and lock them in this position.◀

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

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



Removing from side stand

With the ignition switched off, there is no brake power assistance; the motorcycle can begin to roll. Particularly when the motorcycle is parked on a gradient, switch on the ignition and wait for the ABS to complete its self-diagnosis (➠ 59).◀

- Unlock the ignition lock, switch on the ignition.
- Wait for ABS self-diagnosis to complete.
- From the left, grip the handlebars with both hands.
- Pull the handbrake lever.
- Swing your right leg over the seat and lift the motorcycle to the upright position.
- Hold the motorcycle upright and balanced.
- Seat yourself and fold back the side stand with your left foot.

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



Placing on center stand[OE]

⚠ No secure stance is possible on poor ground conditions.
Always check that the ground under the stand is level and firm.◀

- Switch off the engine.
- Dismount and keep your left hand on the left handlebar grip.
- With your right hand, grip the rear grab handle or the rear frame.
- Place your right foot on the extended arm of the center stand and push the center stand downwards until the feet contact the ground.
- Place the full weight of your body on the center stand, while pulling the motorcycle to the rear (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 lean or sit on the motorcycle with the center stand extended.◀



Removing from center stand[OE]

Brake servo assistance is not available when the ignition is off; the motorcycle can start to roll.
Particularly when the motorcycle is parked on a gradient, switch on the ignition and wait for the ABS to complete its self-diagnosis (➠ 59).◀

- Unlock the ignition lock, switch on the ignition.
- Wait for ABS self-diagnosis to complete.
- Place your left hand on the left handlebar grip.
- Grip the rear grab handle with your right hand.
- Push the motorcycle forward off the center stand.
- Make sure that the center stand is fully retracted..

Fuel

Fuel is a fire hazard and explosive!
Do not smoke. Never bring a naked flame near the fuel tank.◀

Fuel expands under the influence of high temperatures and exposure to sunlight.
Do not fill the tank past the bottom edge of the filler neck.◀

Fuel can damage plastic parts.
Do not permit fuel to come into contact with body panels.◀

Fuel grade

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

The engine is designed to run on:
– Premium grade unleaded fuel (98 RON)
Use fuel of this grade by preference, in order to achieve rated performance and fuel consumption.
In addition, the following fuel grade can be used:
– Premium grade unleaded fuel (RON + MON) / 2

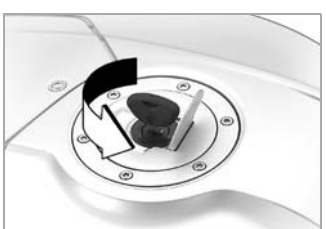
Capacity

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

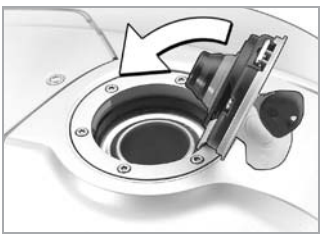
The fuel gauge in the multifunction display works only when the ignition is switched on.◀

Refueling

- Place the motorcycle on the center stand[OE] 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.



- Use specified fuel grades (➠ 73).
- Press the filler cap down firmly to close.
- Remove the key and close the protective cap.

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

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.
Bear in mind that this extends your stopping distance, because the brakes have to either dry out as you ride, or dry themselves when applied.◀

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.
Bear in mind that this extends your stopping distance, because the force of friction has to remove the layer of salt when the brakes are applied.◀

Oil or grease on brakes


Oil and grease deposits on brake discs and pads considerably reduce the braking effect.
It is particularly important to check the brake pads and discs after repair and maintenance work is carried out, to make sure they 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.
Bear in mind that this extends your stopping distance, because the brakes have to clean themselves when applied.◀

BMW Integral ABS[OE]

In extreme situations, it takes skill and sensitive control of the brakes to pull up safely on a motorcycle. If the front brakes lock 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.

By preventing both wheels from locking and optimizing braking-force distribution by means of the integral function, BMW Integral ABS offers improved braking efficiency. Making full use of the motorcycle's technical braking capacity will minimize braking distances noticeably, 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

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.

Partially integral brake

Your motorcycle is equipped with a partially integral brake configuration. Both front and rear brakes are applied when you pull the handbrake lever. The electronic controller in the BMW Integral ABS regulates braking-force distribution between front and rear wheels. Braking-force distribution depends on load and is recalculated every time the ABS controller comes into action. The footbrake lever acts only on the rear brake.

Brake booster

The hydraulic pump in the BMW Integral ABS boosts the braking force acting on the wheel when the brakes are applied. By boosting the braking force in this way, BMW Integral ABS achieves higher braking efficiency than standard brake systems.

ABS^{OE} anti-lock braking system

ABS prevents the wheels locking under braking, thus contributing significantly to road safety.

Rear wheel lift

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

Heavy braking can cause the rear wheel to rise. Bear in mind that ABS cannot be relied on in all circumstances to prevent the rear wheel from lifting clear of the ground.◀

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. Residual braking function is the remaining braking performance without hydraulic power braking assistance. 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.
Think well ahead and brake carefully; avoid severe braking. Have the fault rectified as soon as possible by a specialized 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 setting a larger lever path at the hand-brake lever (➠ 41).◀



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

General instructions **80**
Power socket **80**
Luggage system[OA] **83**

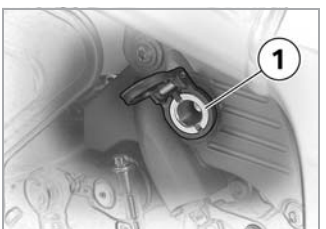
General instructions

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

BMW cannot examine or test each product of outside origin to ensure that it can be used on or in connection with BMW motorcycles without constituting a safety hazard. County-specific official authorization does not suffice as assurance. Tests conducted by these instances cannot make provision for all operating conditions experienced by BMW motorcycles and, consequently, they are not sufficient in some circumstances.
Use only parts and accessories approved by BMW for your motorcycle.◀

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

Power socket



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 electrical accessories

You can start using electrical accessories only when the ignition is switched on. The accessory remains operational if the ignition is subsequently switched off. Approx. 15 minutes after switching off the ignition and/or during 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 auxiliary device must be routed in such a way that they:

- do not impede the rider
- do not restrict or obstruct the steering angle and handling characteristics
- cannot be trapped



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


BMW
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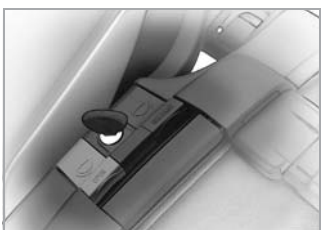
Luggage system[OA]

Correct loading

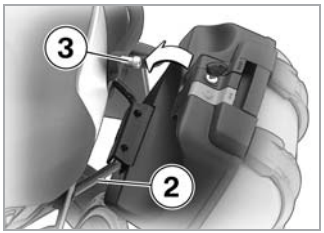
Fitting a luggage system will affect the handling of your motorcycle.
Never exceed the motorcycle's permissible gross weight (➠ 140). Comply with the instructions for loading below.◀

- Adjust the spring preload (➠ 47) and damping (➠ 48) to the total weight.
- Check the tire pressure (➠ 130).
- Ensure that the case volumes on the left and right are equal.
- Make sure that the weight is uniformly distributed between right and left.
- Pack heavy items at the bottom and toward the inboard side.
- Load the left-hand and right-hand cases[OA] with a maximum of 18 lbs (8 kg) each.

Installing cases



- Turn lock barrel toward RELEASE.

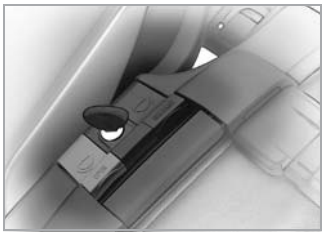


- Hook the case into the lower mounting **2**.
- Pull the black release lever upwards.
- Press the case into the upper mounting **3**.
- Press the black release lever downwards.

» The case is locked into place.

- Lock the case.
- Check secure locking.

Removing cases



- Turn lock barrel toward RELEASE.
- Pull the black release lever upwards.

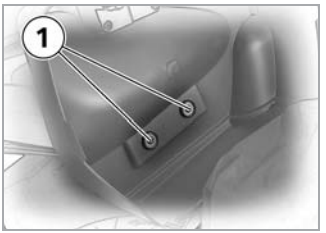


- Pull the case out of the upper mounting.
- Lift the case out of the lower mounting.

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.

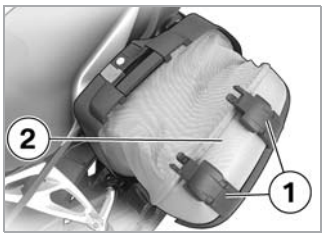


- Open the case.
- Loosen screw **1**.
- Set the height of the bracket.
- Tighten the screws.

Opening case



- Turn lock barrel toward OPEN.
- Pull the gray release lever upwards.



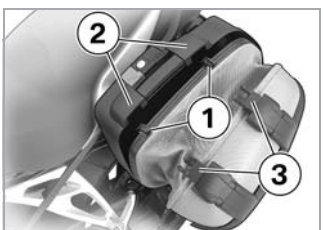
» The lock straps **1** open.

- Pull the gray release lever upwards once again.
- Pull the case lid **2** out of the retainer.



» Case completely opened.

Closing case



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

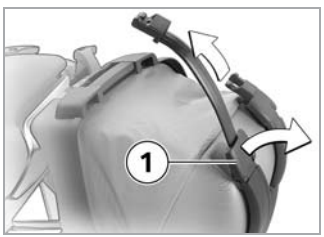
» The catches can be heard to lock into place.

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

» The catches can be heard to lock into place.

- Make sure catches are secure.

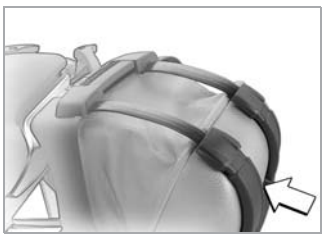
Adjusting case volume



- Close the case lid.
- Pull the lock strap buckles **1** of the lock straps outward.

- 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.

Toolkit **89**
Engine oil **89**
Coolant **92**
Brakes **93**
Clutch **96**
Wheels **98**
Front-wheel stand **107**
Rear-wheel stand **108**
Bulbs **109**
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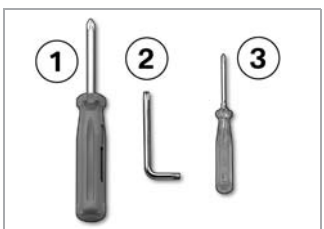
The 'Maintenance' chapter describes work involving the replacement of wear parts that can be performed with minimum effort.

The types of screws used for the components concerned are listed in (➠ 128). You can use this chart to set aside the required tools.
Special tightening torques are listed as applicable. Threaded fasteners for which a suitable tool is included in the toolkit are marked accordingly.

If you are interested in information on more extensive work, we recommend the repair manual on CD-ROM which applies to your particular motorcycle. You can obtain a copy from your authorized BMW motorcycle retailer.

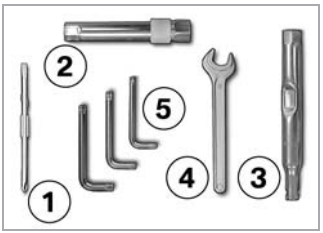
Toolkit

The toolkit is located on the underside of the seat.
You can obtain a more extensive, additional set of tools from your authorized BMW motorcycle retailer.



Contents of basic kit:

1 Reversible screwdriver
2 Torx wrench T25
3 Screwdriver, small



Contents of supplement kit[OA]:

1 Screwdriver blade
2 Socket wrench, 17
3 Spark-plug socket wrench
4 Open-ended wrench, 17 mm
5 TORX® wrench T40, T45, T50

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 lengthy journey.◀

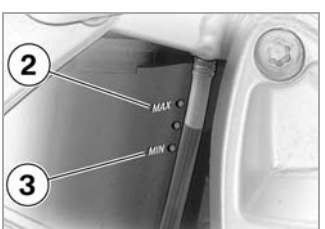
After longer motorcycle immobilization periods, oil can collect in the oil pan; this must be pumped into the oil tank before the reading is taken. Here, the engine oil must be at operating temperature. Checking the oil level with the engine cold or after a short trip leads to misinterpretations and therefore 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, 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.



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. 0.53 quart (0.5 liter).

If the oil level is below the **MIN** mark:

- Top up engine oil.

If the oil level is above the **MAX** mark:

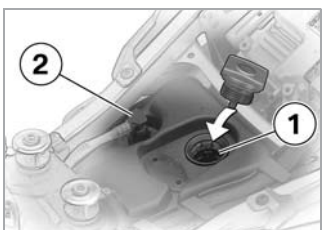
- Drain off engine oil.

Too little but also too much engine oil can lead to engine damage.
Always make sure that the oil level is correct.◀

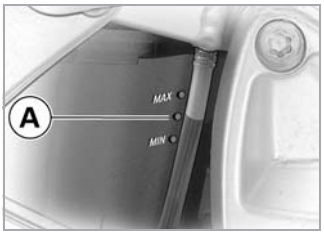
The engine can seize if the oil level is low, and this can lead to accidents. Always make sure that the oil level is correct.◀

Topping up engine oil

- Remove the seat (➠ 44).



- Wipe the area around the filler neck clean.
- 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.

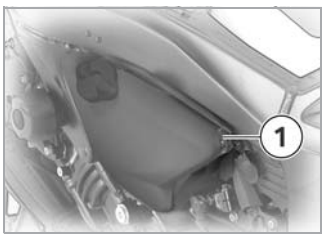
Draining off engine oil

- Remove the seat (➠ 44).
- 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

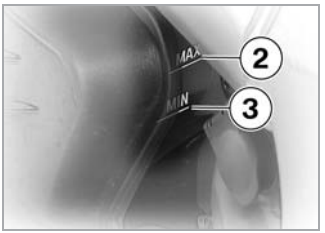
Checking coolant level

Check the coolant level at regular intervals.



1 Display for coolant level.

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

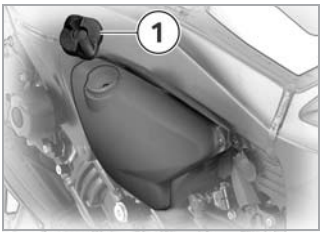


2 maximum coolant level
3 minimum coolant level

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



⚠ Do not add coolant to the cooling system when the engine is hot. Escaping coolant can cause burns.◀

- 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.

Incorrect working practices endanger the reliability of the brakes.Have all work on the brake system carried out by a specialized workshop, preferably an authorized BMW motorcycle retailer.◀

Checking function

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

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

Vehicles without ABS

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

Vehicles with ABS[OE]

- Switch on the ignition.
- Wait for ABS self-diagnosis to complete.
- Pull the handbrake lever.
» The pressure point must be clearly perceptible.
» The hydraulic pump must be heard to run.
- Press the footbrake lever.
» The pressure point must be clearly perceptible.
» The hydraulic pump must be heard to run.

Brake pads

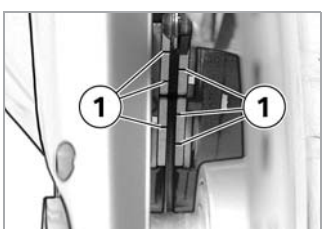
Brake pads worn past the minimum permissible thickness can impair braking efficiency and under certain circumstances they can cause damage to the brake system. In order to ensure the dependability of the brake system, do not permit the brake pads to wear past the minimum permissible thickness.◀

Checking brake pad thickness at front

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



- Visually inspect the left and right brake pads to ascertain their thickness.

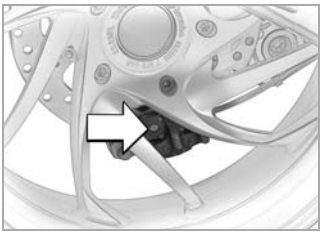


The brake pads must have a clearly visible wear indicating mark **1**. If the wear indicating mark is no longer clearly visible:

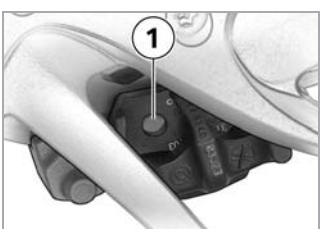
- Have the brake pads replaced by a specialized workshop, preferably an authorized BMW motorcycle retailer.

Checking brake pad thickness at rear

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



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



Make sure that the brake disk is not visible through bore **1** in the inboard brake pad. If the brake disk is visible:

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

Checking brake fluid level

A low fluid level in the brake reservoir can allow air to penetrate the brake system. This significantly reduces braking efficiency. Avoid hard braking whenever possible.◀



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, 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 significantly reduces braking efficiency. Think well ahead and brake carefully; avoid severe braking.◀

In normal operation, the brake fluid cannot drop below **MIN**.

- Check the brake pads.
- Check the brake system for leaks.
- Have the fault rectified as soon as possible by a specialized workshop, preferably an authorized BMW motorcycle retailer.

Vehicles with ABS^{OE}

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:

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

Clutch

Checking function

- Pull the clutch lever.

» The pressure point must be clearly perceptible.

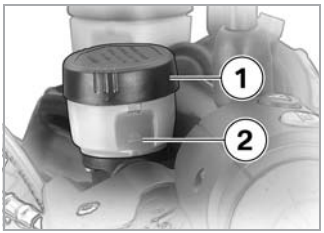
Do not ride the motorcycle if you have any doubts about the dependability of the clutch. In this case:

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

Checking 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[OE], 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.

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

The fluid level in the reservoir rises 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 size of tire BMW Motorrad tests certain makes, and approves those that it certifies as roadworthy. 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 by visiting
www.bmw-motorrad.com on the Internet

Checking rims

- Place the motorcycle on the center stand[OE] or side stand, ensuring that the ground is firm and level.
- Visually inspect the rims for defects.
- Have damaged rims checked and, if necessary, replaced by a specialized workshop, preferably an authorized BMW motorcycle retailer.

Checking tire tread depth

Do not allow the tires to wear past the minimum depth permitted by law in the country of use.

The handling characteristics of your motorcycle can deteriorate even before the legally prescribed minimum tread depth has been reached.
Have the tires changed in good time before they wear to the minimum permissible tread depth.◀

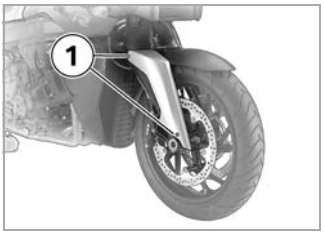
There is a wear indicating mark on each tire, integrated in the main tread grooves. If the tire tread has worn down to the level of the marks, the tire is completely worn. The locations of the marks are indicated on the edge of the tire, e.g. by the letters TI, TWI or by an arrow.◀

- Measure the tire tread depth only in the main tread grooves with wear indicating marks.

Removing front wheel

You will find an overview of the types of threaded fastener used on (➠ 128).◀

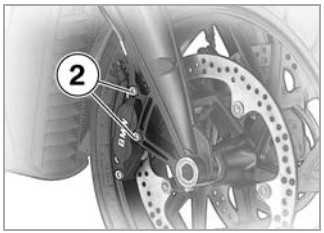
There is a risk of damaging parts of the front brakes, particularly the BMW Integral ABS, in the course of the procedure described below.
Take care not to damage the brake system, in particular the ABS sensor with cable and the ABS sensor ring.◀



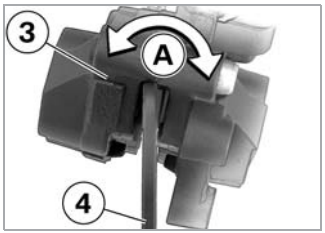
- Place the motorcycle on the center stand[OE] or a suitable auxiliary stand.

We recommend using the BMW rear-wheel stand for this purpose.◀

- Remove the screws **1** on the left and right.
- Remove the suspension trim.



- Remove securing screws **2** of the left and right brake calipers.



- Force brake calipers **3** slightly apart by rocking them back and **A** against the brake disks **4**.

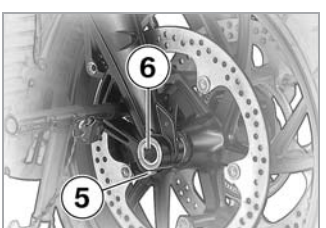
Once the calipers have been removed, there is a risk of the brake pads being pressed together to the extent that they cannot be slipped back over the brake disk on reassembly.
Do not operate the handbrake lever when the brake calipers have been removed.◀

- Mask off the parts of the wheel rim that could be scratched in the process of removing the brake calipers.
- Pull the brake calipers back and out until clear of the brake disks.

When the motorcycle is standing on its center stand[OE]: if the motorcycle is raised too far at the front the center stand will lift clear of the ground and the motorcycle could topple to one side. When raising the motorcycle, make sure that the center stand remains on the ground.◀



- Lift the motorcycle using the BMW Motorrad front-wheel stand (➠ 107) until the front wheel rotates freely.



- Remove the right-hand axle clamping screw **5**.
- Remove quick-release axle **6**, while supporting the wheel.

The left-hand axle clamping screw fixes the threaded bush in place in the front suspension. A poorly aligned threaded bush leads to an incorrect distance between the ABS sensor ring and the ABS sensor, and therefore to ABS malfunctions or to destruction of the ABS sensor.
To ensure the correct alignment of the threaded bush, 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 BMW special tool number is 363690 and the adapter is available from your authorized BMW motorcycle retailer.◀



- Lower the front wheel to the ground between the front forks.
- Roll the front wheel forward to remove.

Installing front wheel

The types of screw used are listed, complete with tightening torques, on (➠ 128).◀

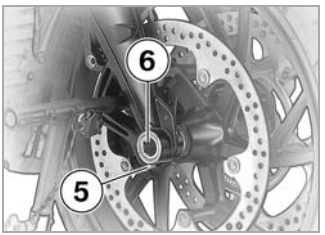
Threaded fasteners not tightened to the specified torque can work loose or their threads can suffer damage. Always have the security of the fasteners checked by a specialized workshop, preferably an authorized BMW motorcycle retailer.◀

During the following work, parts of the front brake, in particular of the BMW Integral ABS, can be damaged.
Take care not to damage the brake system, in particular the ABS sensor with cable and the ABS sensor ring.◀

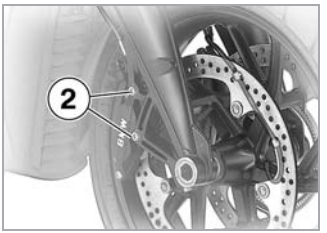
The front wheel must be fitted in the direction of rotation.
Note the direction-of-rotation arrows on the tire and the wheel rim.◀



- Roll the front wheel into the front wheel guide.

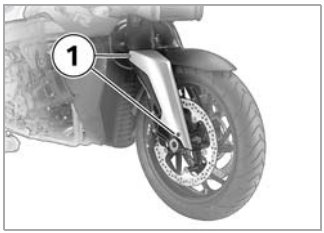


- Raise the front wheel, install the quick-release axle **6** and tighten to 50 Nm.
- Tighten the right-hand axle clamping screw **5** to 19 Nm.
- Remove the front-wheel stand.
- Ease the brake calipers on to the brake disks.



- Install securing screws **2** for the left and right brake calipers and tighten to 30 Nm.

The cable of the ABS sensor could chafe through if it comes into contact with the brake disk. Route the ABS sensor cable so that sufficient distance to the brake disk is provided.◀



- Install suspension trim and tighten securing bolts **1** hand-tight.
- Remove the adhesive tape from the wheel rim.

The front brakes have to be operated a few times to bed the brake pads against the brake disks.

Without BMW Integral ABS:

- Firmly pull the handbrake lever a number of times, until the pressure point is perceptible.

With BMW Integral ABS[OE]:

- Switch on the ignition.
- Wait for self-diagnosis to complete (➠ 59).
- Firmly pull the handbrake lever a number of times, until the pressure point is perceptible.

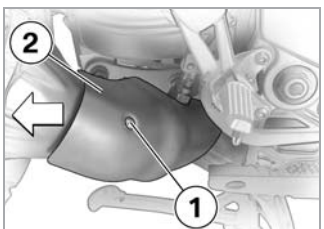
Braking efficiency is impaired if the brake pads are not correctly bedded against the disks.
Before beginning a journey, check that the braking effect kicks in without any delay.◀

Removing rear wheel

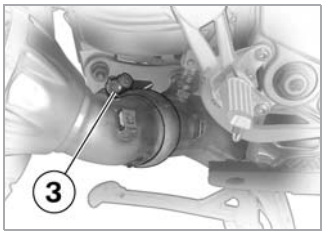
The types of screw used are listed on (➠ 128).◀

- Place the motorcycle on the center stand[OE] or a suitable auxiliary stand.

We recommend using the BMW rear-wheel stand (➠ 108) for this purpose.◀

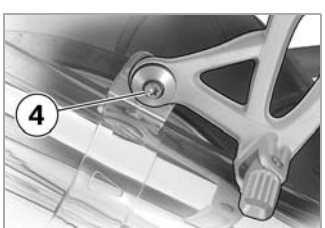


- Remove the bolt **1** of the muffler cover **2**.
- Pull off the cover towards the rear.



- 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 silencer out.
- 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: (➠ 108) remove the retaining disk.



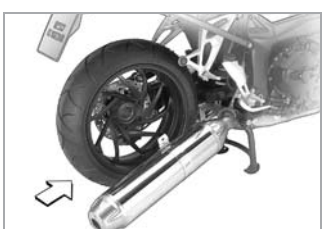
- Lower the rear wheel to the ground.
- Roll the rear wheel out toward the rear.
- If the BMW Motorrad rear-wheel stand is used: (➠ 108) attach the retaining disk again.

Installing rear wheel

The types of screw used are listed, complete with tightening torques, on (➠ 128).◀

Screw connections tightened with the incorrect torque can come loose or damage the screw connection itself.
Always have the security of the fasteners checked, preferably an authorized BMW motorcycle retailer.◀

- If the BMW Motorrad rear-wheel stand is used: (➠ 108) remove the retaining disk.



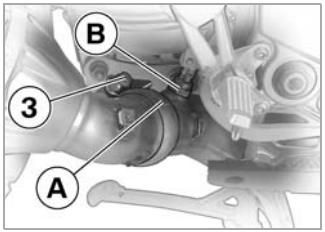
- Roll the rear wheel into position at the rear wheel hub.
- Lift the rear wheel onto the rear wheel hub.
- If the BMW Motorrad rear-wheel stand is used: attach the retaining disk again.



- Install wheel studs **5** and tighten in diagonally opposite sequence to 60 Nm.



- Turn the end silencer to its initial position.
- Install screw **4** for the bracket of the end silencer in the rear footrest, but do not tighten it at this point.



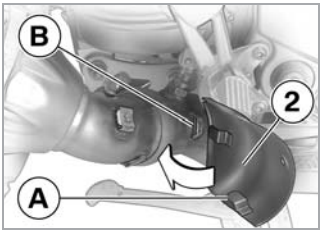
- Align the clamp **3** on the end muffler with the mark **A** (arrow) on the Lambda oxygen sensor **B**.
- Tighten the clamp **3** on the end muffler to 35 Nm.



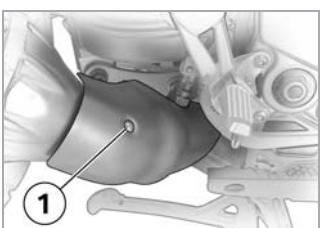
- Tighten screw **4** for the bracket of the end silencer in the rear footrest to 16 Nm.



⚠ A lack of clearance between the rear wheel and the end muffler can result in damage to the rear wheel. The clearance between rear wheel and end silencer is correct when the handle of screwdriver from the toolkit can be slipped between the two.◀



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

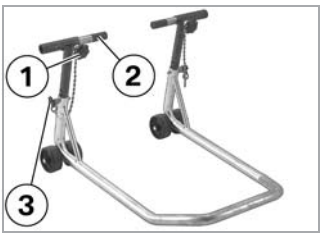


- Install bolt **1** and tighten hand-tight.
- Remove any auxiliary stands.

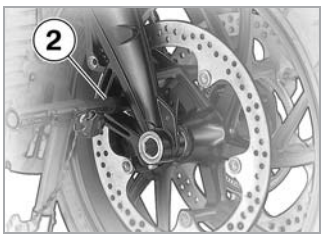
Front-wheel stand

A front-wheel stand for simple, safe changing of the front wheel is available from BMW Motorrad. The BMW special tool number is 363971 and the front-wheel stand is available 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[OE] or suitable auxiliary stand, e.g. BMW Motorrad rear-wheel stand (➠ 108).
- Slacken adjusting screws **1**.
- Push mounting pins **2** apart until the front suspension fits between them.
- Use locating pins **3** to set the front-wheel stand to the desired height.
- Center the front-wheel stand relative to the front wheel and push it against 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 adjusting screws **1**.



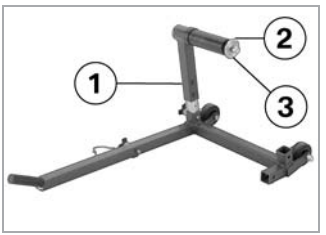
- Apply uniform pressure to push the front-wheel stand down and raise the motorcycle.

When the motorcycle is standing on its center stand: if the motorcycle is raised too far at the front the center stand will lift clear of the ground and the motorcycle could topple to one side. Make sure that the center stand remains on the ground when the front is raised.◀

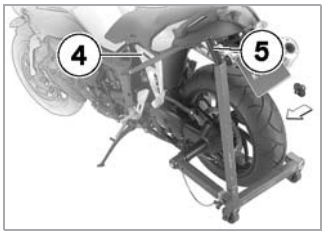
Rear-wheel stand

In order to also be able to work safely on motorcycles without center stands, 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.

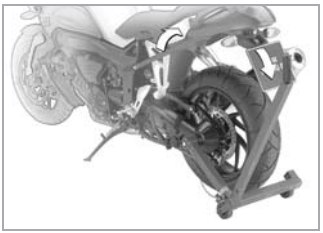
Installing rear-wheel stand



- 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 "bulb defect" symbol appears in the display if a bulb is defective. 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.

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

You will find an overview of the types of bulb used on (➠ 139).◀

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

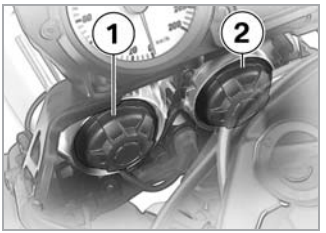
You will find an overview of the types of threaded fastener used on (➠ 128).◀

Replacing low-beam headlight bulb

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

The bulb is pressurized and can cause injury if damaged.
Wear protective goggles and gloves when changing bulbs.◀

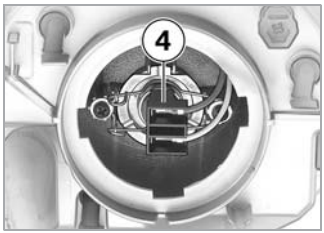
Turn the handlebars to the right to facilitate access.◀



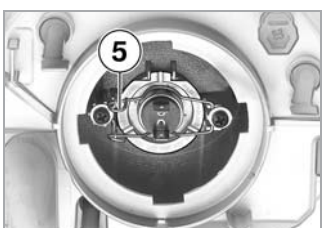
The high-beam headlight **1** and low-beam headlight **2** are accessible from the rear.



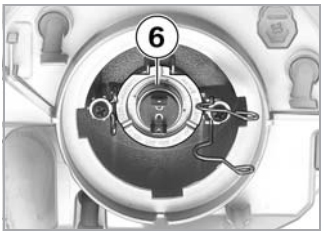
- Switch off the ignition.
- Turn cover **3** counter-clockwise and remove it.



• Disconnect plug **4**.

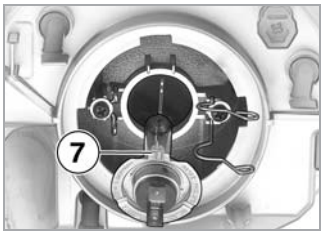


• Release spring strap **5** from catch and fold away.



• Remove bulb **6**.

Installation is the reverse of the removal procedure.



• On assembly, make sure that the lug **7** points upwards.

Replacing high-beam headlight bulb

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

⚠ The bulb is pressurized and can cause injuries when damaged.
Wear protective goggles and gloves when changing bulbs.◀

▷ Turn the handlebars to the left to facilitate access.◀

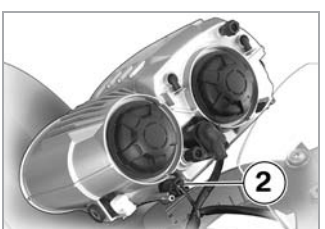
- The high-beam bulb is changed like the low-beam bulb. However, the high-beam bulb is secured with a single-leg, vertical spring clip.

Replacing parking light bulb

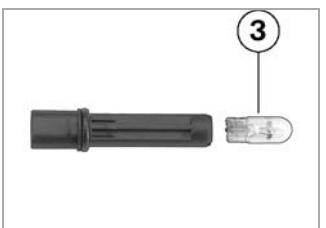
⚠ If it is not standing firmly, the motorcycle could topple in the course of the operations described below. Make sure that the motorcycle is steady on its stand.◀



- Switch off the ignition.
- Remove the securing screws **1** on both sides of the light housing.



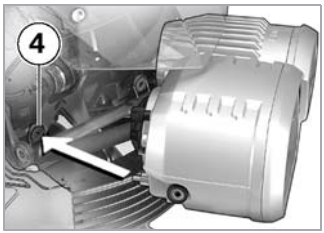
- Pull out the light housing toward the front and tilt it slightly downward.
- Remove the bulb holder **2** from the headlight housing by turning it counter-clockwise.



- Pull the bulb **3** from the bulb holder.

Installation is the reverse of the removal procedure.

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



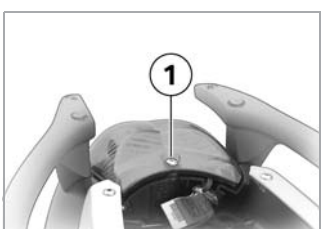
- Press the light housing into the mounts **4** on the frame and install the securing screws.

Incorrectly routed headlight cables can catch in the steering.
Secure the electrical lines on the rear wall of the headlight with the corresponding retaining clips.◀

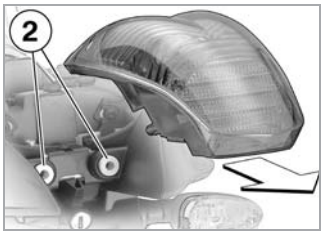
Replacing brake light and rear light bulbs

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

- Switch off the ignition.
- Remove the seat (➠ 44).



- Remove screw **1**.



- Pull the bulb housing to the rear until it is clear of holders **2**.



- Turn bulb holder **3** counterclockwise to remove it from the bulb housing.

- Press the bulb into its socket and turn it counter-clockwise to remove.

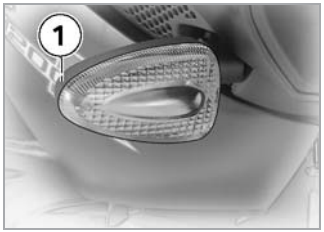
Installation is the reverse of the removal procedure.

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

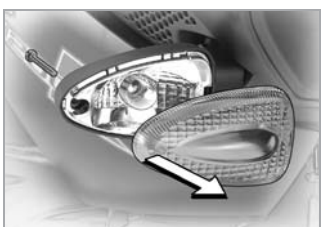
Replacing front/rear turn indicator bulbs

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

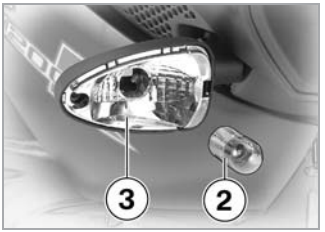
- Switch off the ignition.



- Remove screw **1**.



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



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

Installation is the reverse of the removal procedure.

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

Jump starting

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

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

Inadvertent contact between the terminal clips of the jump leads and the vehicle can lead to short circuits.
Use only jump leads fitted with fully insulated crocodile clips at both ends.◀

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

- When jump-starting the engine, do not disconnect the battery from the onboard electrical system.
- Remove the battery compartment cover (➠ 118).
- Run the engine of the donor vehicle during jump-starting.
- Begin by connecting one end of the red jump lead to the positive terminal of the discharged battery and the other end to the positive terminal of the donor battery.
- Then connect one end of the black jump lead to the negative terminal of the donor battery, and the other end to the negative terminal of the discharged battery.
- Start the engine of the vehicle with the discharged battery in the usual way; if the engine does not start, wait a few minutes before repeating the attempt in order to protect the starter and the donor battery.
- Allow both engines to idle for a few minutes before disconnecting the jump leads.

- Disconnect the jump lead from the negative terminals 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.
Do not touch parts of the ignition system when the engine is running.◀

Battery

Maintenance instructions

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

BMW Motorrad has developed a trickle-charger specially designed for compatibility with the electronics of your motorcycle. Using this charger, you can keep the battery charged during long periods when the motorcycle is not being used without having to disconnect the battery from the motorcycle's on-board systems. More information is available on request from your authorized BMW motorcycle retailer.◀

Charging battery when connected

If the indicator lights do not light up and the multifunction display remains blank when you switch on the ignition, 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.
If the battery is completely flat it must always be recharged directly at the terminals.◀

- Do not attempt to recharge a completely flat battery via the onboard socket; instead, disconnect the battery from the onboard system and connect the charger directly to the battery terminals.
- Comply with the operating instructions of the charger.

Your authorized BMW motorcycle retailer will be happy to provide information on suitable chargers.◀

If the battery is only partially discharged, it can be recharged via the onboard socket.

- If electrical accessories are connected to an additional onboard socket[OA], disconnect them before connecting the charger.
- Switch on the ignition.
- Plug the charger into the onboard socket. Comply with the operating instructions of the charger.
- Switch off the ignition.

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

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. If this happens, disconnect the battery from the onboard systems and connect the charger directly to the battery.◀

Charging disconnected battery

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

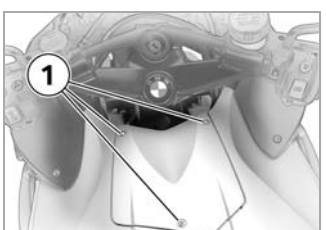
- Charge the battery using a suitable charger.
- Comply with the operating instructions of the charger.
- Once the battery is fully charged, disconnect the charger terminal clips from the battery terminals.

Removing battery

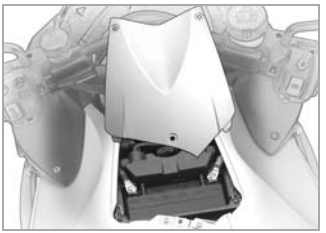
The types of screw used are listed on (➠ 128).◀

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

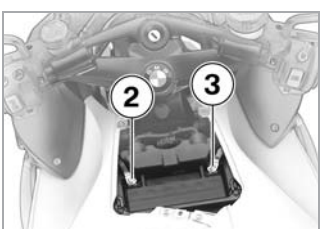
- Switch off the ignition.



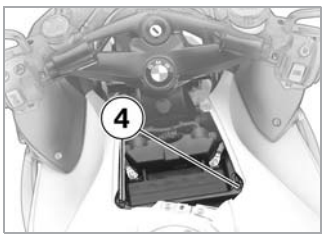
- Remove the screws **1**.



- Take out the battery compartment lid forward and upward.



- Remove the negative cable **2** first.
- Then remove the positive cable **3**.



- Unfasten the screws **4** and pull the retaining bracket backwards.
- Lift the battery up and out; work it slightly back and forth if it is difficult to remove.

Installing battery

The types of screw used are listed, complete with tightening torques, on (➠ 128).◀

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

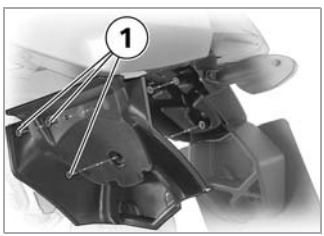
- Switch off the ignition.
- Place the battery in the battery compartment, positive terminal on the right in the direction of travel.
- Push the retaining hoop over the battery and tighten the screws hand-tight.
- Install the positive cable first and tighten hand-tight.
- Then install the negative cable and tighten hand-tight.
- Install the battery compartment lid and tighten the screws hand-tight.
- Switch on the ignition.
- Fully open the throttle once or twice.

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

Remember to reset the clock after reconnecting the battery.◀

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

Washing motorcycle

We recommend that you use BMW insect remover to soften and wash off insects and stubborn dirt on painted parts prior to washing the motorcycle. To prevent stains, do not wash the motorcycle immediately after it has been exposed to strong sunlight and do not wash it in the sun.
Make sure that the motorcycle is washed frequently, especially during the winter months.
To remove road salt, clean the motorcycle with cold water immediately after every trip.

Warm water reinforces the effects of the salt.
Use only cold water to wash off road salt.◀

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

The high pressure of steam cleaners can damage seals, the hydraulic brake system, the electrical system, adhesive labels and badges.
Do not use a steam jet or high-pressure cleaning equipment.◀

Plastics

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

– Windshields
– Headlight lens made of plastic
– Covering glass of the instrument cluster
– Black, unpainted parts


If plastic parts are cleaned using unsuitable cleaning agents, the surfaces can be damaged.
Do not use cleaning agents that contain alcohol, solvents or abrasives to clean plastic parts. Even fly-remover pads or cleaning pads with hard surfaces can produce scratches.◀


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

Windshield

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


Fuel and chemical solvents attack the windshield.
Do not use detergent products.◀

Chrome

Especially in the case of road salt, carefully clean chrome with plenty of water and BMW vehicle 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

Washing the motorcycle regularly will help counteract the long-term effects of substances that damage the paint, especially if your motorcycle is ridden in areas with high air pollution or natural sources of dirt, e.g. tree resin or pollen.

However, remove particularly aggressive materials immediately; otherwise changes in the paint or discoloration can occur. These include, e.g., spilt fuel, oil, grease, brake fluid as well as bird droppings. BMW vehicle 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 cleaning-grade benzene or petroleum spirit on a clean cloth or ball of cotton wool. We recommend that specks of tar be removed 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 that you use only BMW vehicle wax or agents that contain carnauba wax 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 rapid and low-cost correction of minor paint damage. We recommend that minor paintwork flaws be rectified with a BMW paint spray or a BMW paint pencil and larger paint damage be dealt with at your authorized BMW motorcycle retailer by a specialized repair paint job carried out in accordance with
works specifications with original BMW paints.

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 (➠ 122).
- Remove the battery (➠ 118).
- Spray the brake and clutch lever pivots and the center 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[OE] or rear-wheel stand.
- Raise the engine with the front-wheel stand in such a way that both wheels are clear of the ground.

▷ 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/returning to use with a maintenance service or inspection.◀

Returning to use

- Remove the protective wax coating.
- Clean the motorcycle (➠ 122).
- Install a charged battery (➠ 119).
- Perform the safety checks (➠ 56).
- Check the brakes (➠ 93).
- Check the tire pressures (➠ 51).

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Threaded fasteners

Activity	Type of threaded fastener	Tightening torque
Front wheel		
Mudguard	Internal TORX® T25 (1)	hand-tight
Suspension cover	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 silencer to footrest	Internal TORX® T45	16 Nm
Clamp on end muffler	Internal TORX® T45	35 Nm
Rear wheel	Internal TORX® T50	60 Nm
Bulb housing		
Brake and rear light	Phillips screw, large (1)	hand-tight
Front turn indicators	Phillips screw, small (1)	hand-tight
Rear turn indicators	Phillips screw, small (1)	hand-tight

Threaded fasteners

Activity	Type of threaded fastener	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	Phillips screw, large (1)	hand-tight

(1) in the toolkit

Tire pressures

Tire pressure measured when tires are cold.

Accessories and loads	Front	Rear
One-up	36.3 psi (2.5 bar)	42 psi (2.9 bar)
One-up with luggage	36.3 psi (2.5 bar)	42 psi (2.9 bar)
Two-up (with luggage)	36.3 psi (2.5 bar)	42 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	13.0 : 1
Power output	
Maximum rated output	120 kW
- at engine speed	10,250 rpm
Torque	
Max. torque	127
- at engine speed	8,250 rpm
Engine speeds	
Engine speed, maximum	11,000 rpm
Idle speed	1,150 ± 50 rpm
Consumption	
Fuel consumption at constant 55 mph (90 km/h)	50 mpg (4.7 l/100 km)
Fuel consumption at constant 75 mph (120 km/h)	43 mpg (5.5 l/100 km)
Maximum oil consumption	1.7 qt/1,000 miles (1 l/1,000 km)

Power transmission

Clutch	
Type	Hydraulic multi-disk wet clutch
Transmission	
Type	6-speed transmission
Overall ratios	1st gear = 2.524 2nd gear = 1.842 3rd gear = 1.455 4th gear = 1.287 5th gear = 1.143 6th gear = 1.015
Rear-wheel drive	
Transmission from transmission to rear wheel drive	Universal shaft with integrated torsional damper
Rear-wheel drive	Bevel gears
Final drive ratio	2.91:1

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 disks with 4-piston fixed calipers
Brake pads	Sintered metal
Rear brake	
Type	One fixed brake disk with 2-piston floating caliper
Brake pads	Organic
Front suspension	
Type	BMW Duolever
Steering lock angle	2 x 30.3°
Front wheel castor in normal-load position	4 in (101 mm)
Rear suspension	
Type	BMW EVO Paralever swinging arm

Frame and suspension

Front suspension system	
Type	Central suspension strut with single-tube emulsion 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)	5.31 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	5.50 x 17“ (OE: 6.00 x 17“)
Tire size	180/55-ZR17 (OE: 190/50-ZR17)

Fuel and lubricants

Engine oil	
Oil grade	Mineral engine oil of the API classification SF, SG or SH. When using special motorcycle oils, ensure suitability for wet clutches. Oil additives may not be used. Only synthetic engine oils approved for this motorcycle by BMW Motorrad may be used.
Capacity with filter change	3.7 quarts (3.5 l)
Top-up volume between MIN and MAX	0.53 quart (0.5 l)
Permissible viscosity classes	
5 °F – above 86 °F (-15 °C – above 30 °C)	SAE 15 W-40
-4 °F – 68 °F (-20 °C – 20 °C)	SAE 10 W-40

BMW recommends Castrol

Fuel and lubricants

Transmission	
Transmission oil	Joint oil circuit with engine
Fuel	
Fuel grade	Premium grade unleaded fuel, minimum octane content 98 ((RON + MON) / 2)
Capacity of fuel tank	5 gal (19 l)
Reserve volume	1 gal (4 l)
Brakes	
Brake fluid	DOT 4 We recommend BMW brake fluid

Electrical system

Battery	
Type	Maintenace-free AGM battery
Capacity	12 V 14 Ah
Spark plugs	
Spark plugs	BOSCH YR5DDE
Fuses	
	All circuits are electronically protected, so plug-in fuses are not 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	
High-beam headlight	H7 halogen bulb 12 V 55 W
Low-beam headlight	H7 halogen bulb 12 V 55 W
Side lights	12 V 5 W
Brake/rear light	12 V 21/5 W
Turn indicators	12 V 10 W
Power socket	
Ratings	12 V 5 A

Dimensions and weights

Dimensions	
Maximum length (luggage rack)	87.7 in (2,228 mm)
Maximum width (across mirrors)	33.7 in (856 mm)
Maximum width (across mirrors)	48.4 in (1,230 mm)
Seat height	32 in (820 mm)
Height of seat (low seat[OE])	31.1 in (790 mm)
Wheelbase in normal-load position	62.2 in (1,580 mm)
Ground clearance in normal-load position	4.65 in (118 mm)
Weights	
Curb weight (fuel tank full, ready for road)	523 lbs (237 kg)
Maximum payload	470 lbs (213 kg)
Permitted total weight	992 lbs (450 kg)

Riding specifications

Speed	
Top speed	over 125 mph (200 km/h)
Acceleration 0-100 km/h	2.9 s
Noises	
Riding noise to EU specification	80 dB (A)
Stationary noise to EU specification	94 dB (A) at 5,125 rpm

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Confirmations of service 152

BMW Motorrad Service

BMW Motorrad service quality

BMW Motorrad stands not only for good handling and a high degree of reliability, but also for an excellent quality of service.

To ensure that your BMW is always in optimum condition, we recommend that you have the regular maintenance work required for your motorcycle carried out, preferably by your authorized BMW motorcycle retailer. For generous treatment of claims submitted after the warranty period has expired, evidence of regular maintenance is essential.

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

BMW Motorrad Service Card - On-the-spot breakdown assistance

With all new BMW motorcycles, the BMW Motorrad Service Card protects you in the event of a breakdown with an extensive range of services such as breakdown assistance, motorcycle transportation etc. (differing regulations are possible in individual countries). In the event of a breakdown, contact BMW Motorrad's Mobile Service. Here you will find our specialists ready to help in both word and deed.

Important country-specific contact addresses and the relevant after-sales service organization phone numbers as well as information on Mobile Service and the dealership network can be found in the "Service Kontakt / Service Contact" brochures.

BMW Motorrad service network

Our extensive after-sales service organization network is able to look after you and your motorcycle in more than 100 countries. In Germany alone, you have the best possible access to approximately 200 authorized BMW motorcycle retailers.

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

You will be given the relevant brochure for your country together with your motorcycle; you can obtain both brochures from your authorized BMW motorcycle retailer.

Maintenance work

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

BMW Running-in Check

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

BMW Annual Inspection

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

BMW Service

After the first 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

The maintenance schedule for your motorcycle depends on the equipment fitted, and on the motorcycle's age and the distance it has covered. Your authorized BMW motorcycle retailer will be happy to supply a copy of the current maintenance schedule for your motorcycle on request.



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

BMW
Pre-delivery Check
Carried out in accordance with manufacturer's instructions

Date, stamp, signature

BMW Running-In Check

Carried out in accordance with manufacturer's instructions

Odometer reading_____

Brake fluid changed:
BMW Integral ABS
☐ Wheel circuit
☐ Control circuit

Date, stamp, signature

Confirmation of maintenance work

BMW Service

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

Carried out in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:

BMW Integral ABS

- ☐ Wheel circuit
- ☐ Control circuit

_____

Date, stamp, signature

BMW Service

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

Carried out in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:

BMW Integral ABS

- ☐ Wheel circuit
- ☐ Control circuit

_____

Date, stamp, signature

BMW Service

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

Carried out in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:

BMW Integral ABS

- ☐ Wheel circuit
- ☐ Control circuit

_____

Date, stamp, signature

Confirmation of maintenance work

BMW Service

☐ BMW Annual Inspection
☐ BMW Service
☐ BMW Inspection

Carried out in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:
BMW Integral ABS
☐ Wheel circuit
☐ Control circuit

Date, stamp, signature

BMW Service

☐ BMW Annual Inspection
☐ BMW Service
☐ BMW Inspection

Carried out in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:
BMW Integral ABS
☐ Wheel circuit
☐ Control circuit

Date, stamp, signature

BMW Service

☐ BMW Annual Inspection
☐ BMW Service
☐ BMW Inspection

Carried out in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:
BMW Integral ABS
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Date, stamp, signature

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Brake fluid changed:

BMW Integral ABS

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Date, stamp, signature

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- ☐ BMW Service
- ☐ BMW Inspection

Carried out in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:

BMW Integral ABS

- ☐ Wheel circuit
- ☐ Control circuit

_____

Date, stamp, signature

BMW Service

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

Carried out in accordance with manufacturer's instructions

Odometer reading _____

Brake fluid changed:

BMW Integral ABS

- ☐ Wheel circuit
- ☐ Control circuit

_____

Date, stamp, signature

Confirmations 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 carried out in workshop		
Work details	**Odometer reading**	**Date**

Confirmations of service

Record of all work carried out in workshop		
Work details	**Odometer reading**	**Date**

Confirmations of service

Instrument cluster replaced

at distance

_____

(odometer reading)

_____

Date, stamp, signature

Instrument cluster replaced

at distance

_____

(odometer reading)

_____

Date, stamp, signature

Instrument cluster replaced

at distance

_____

(odometer reading)

_____

Date, stamp, signature

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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.
Errors and omissions excepted.
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The most important data for a filling station stop can be found in the following chart:

Fuel		
Grade	Premium grade unleaded fuel	
RON	98	
MON	88	
Fuel tank capacity	5 gal (19 l)	
Tire pressures	Front	Rear
One-up	36.3 psi (2.50 bar)	42 psi (2.90 bar)
One-up with luggage	36,3 psi (2.50 bar)	42 psi (2.90 bar)
Two-up (with luggage)	36.3 psi (2.50 bar)	42 psi (2.90 bar)

BMW Motorrad

Order No.:
01 47 7 680 937
12.2004
1st 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.

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The Ultimate Riding Machine