



BMW Motorrad



**The Ultimate Riding
Machine**

Rider's Manual

HP2 Enduro

Motorcycle data/dealership details

Motorcycle data

Model

Vehicle identification number

Colour code

Date of first registration

Registration number

Dealership details

Person to contact in Service department

Ms/Mr

Phone number

Dealership address/phone number
(company stamp)

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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Printed in Germany.

Important data for refuelling

Fuel

Recommended fuel grade	98 ROZ/RON, Super plus (premium) 91 ROZ/RON, Regular unleaded (fuel grade, usable with power- and consumption-related restrictions)
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Usable fuel capacity	13 l
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Reserve fuel	4 l
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Tyre pressures

Tyre pressure, front	2.2 bar, One-up, tyre cold
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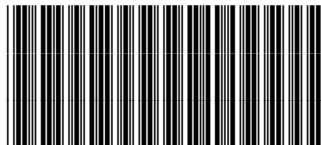
with OA Rear footrest:	2.2 bar, Two-up and/or with luggage, tyre cold
------------------------	--

Tyre pressure, rear	2.5 bar, One-up, tyre cold
---------------------	----------------------------

with OA Rear footrest:	2.5 bar, Two-up and/or with luggage, tyre cold
------------------------	--

BMW recommends 

Order No. 01 41 7 706 211
06.2006, 2nd edition



Welcome to BMW

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

authorised BMW Motorrad dealer will gladly provide advice and assistance.

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

BMW Motorrad.

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General instructions

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Overview

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

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

This Rider's Manual is accompanied by the "Maintenance Instructions for Sporty Off-roading", containing additional information on off-roading.

Abbreviations and symbols



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



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



Indicates the end of an item of information.



Instruction.



Result of an activity.



Reference to a page with more detailed information.



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



Tightening torque.



Item of technical data.

OE


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

OA

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

EWS Electronic immobiliser (Elektronische Wegfahrsicherung).

Air Damping System

This motorcycle has an air-filled rear suspension system. This Air Damping System, as it is known, does not work in the same way as a conventional steel-spring shock-absorber system. The detailed description of this system starts on page  45).

Equipment

When you ordered your BMW motorcycle, you chose various items of custom equipment. This Rider's Manual describes optional extras (OE) offered by BMW and selected optional accessories (OA). This explains why the manual may also contain descriptions

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

Technical data

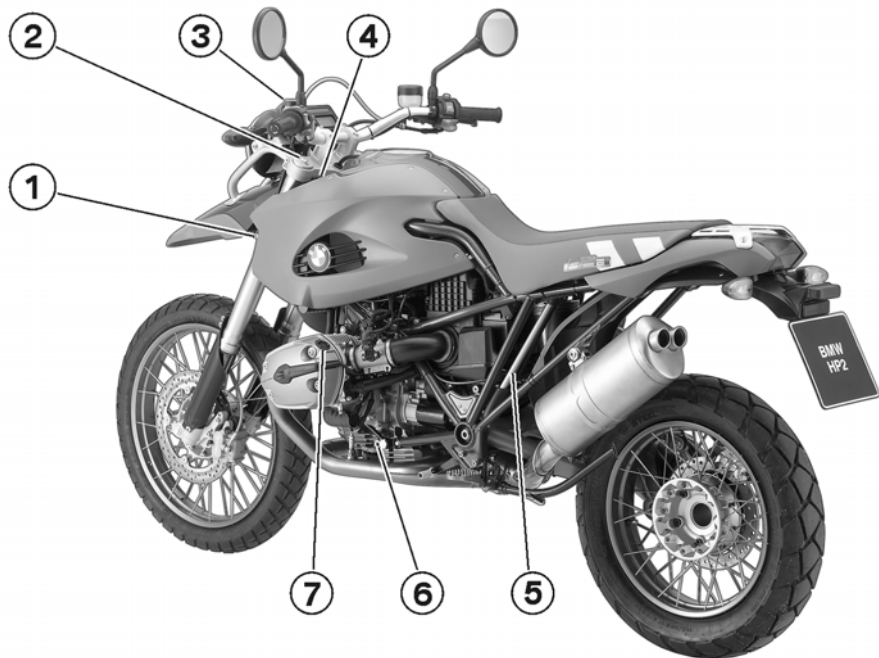
All dimensions, weights and power ratings stated in the Rider's Manual are quoted to the standards and comply with the tolerance requirements of the Deutsche Institut für Normung e.V. (DIN). (DIN). Versions for individual countries may differ.

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 BMW Motorrad entirely rule out errors and omissions. We hope you will appreciate that no claims can be entertained on the basis of the data, illustrations or descriptions in this manual.

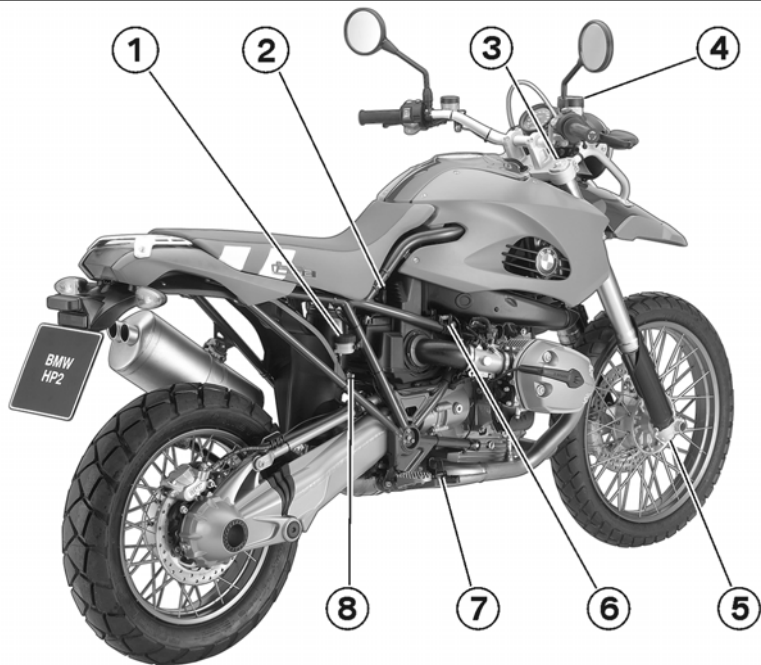
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



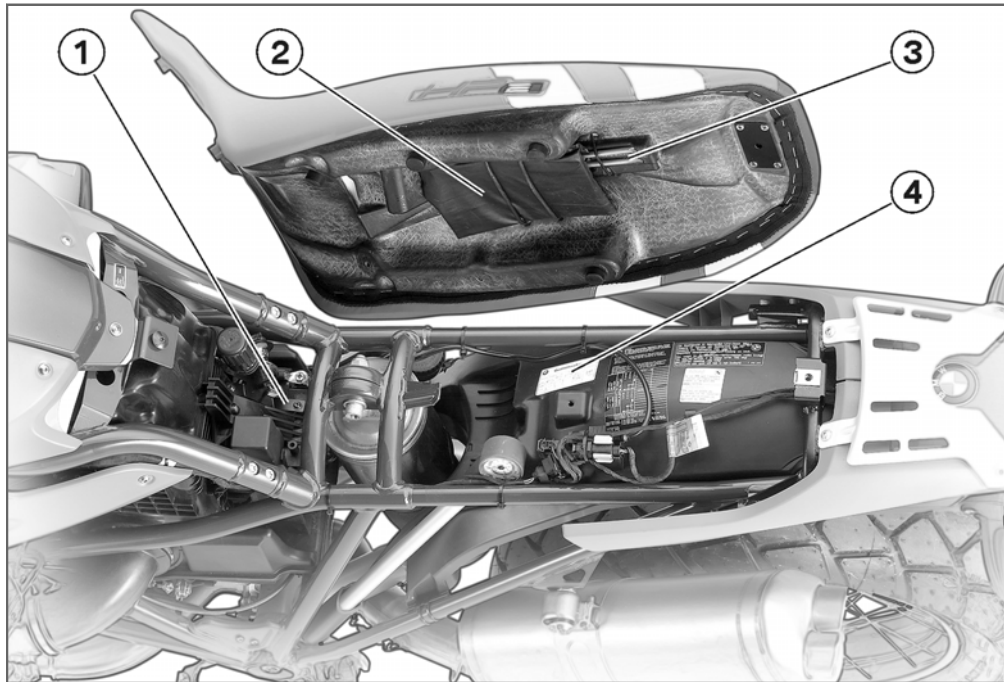
General view, left side

- 1 Fuel-level indicator on fuel tank (▮▮▮ 62)
- 2 Adjuster, progressive characteristic of compression stage, front (▮▮▮ 50)
- 3 Clutch-fluid reservoir (▮▮▮ 77)
- 4 VIN on steering head, right
- 5 Pneumatic pump (▮▮▮ 44)
- 6 Oil sight glass (▮▮▮ 70)
- 7 Filler neck, engine oil (▮▮▮ 71)



General view, right side

- 1 Brake-fluid reservoir, rear
( 76)
- 2 Power socket ( 67)
- 3 Adjuster for rebound stage, front ( 48)
- 4 Brake-fluid reservoir, front ( 75)
- 5 Adjuster, linear characteristic of compression stage, front ( 48)
- 6 Fore-and-aft tilt indicator
( 45)
- 7 Adjustable footbrake lever ( 36)
- 8 Adjuster for air pressure, spring strut ( 45), Adjuster, damping, rear
( 51)

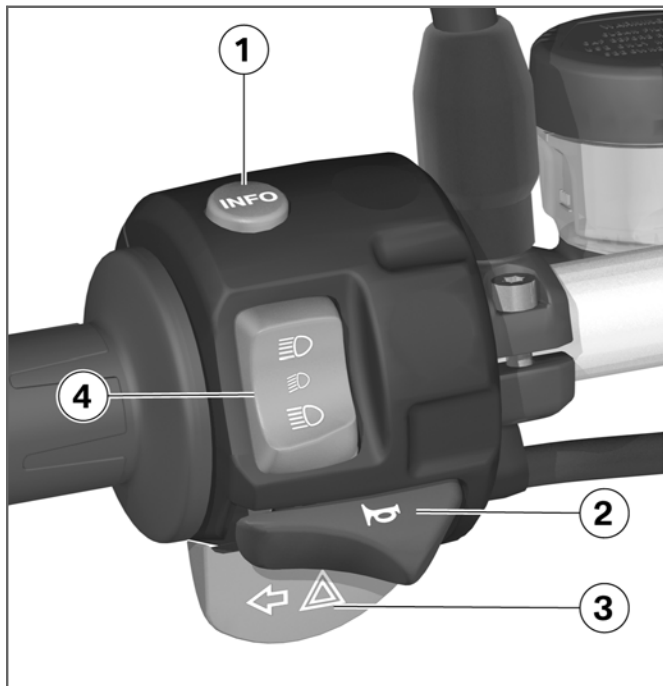


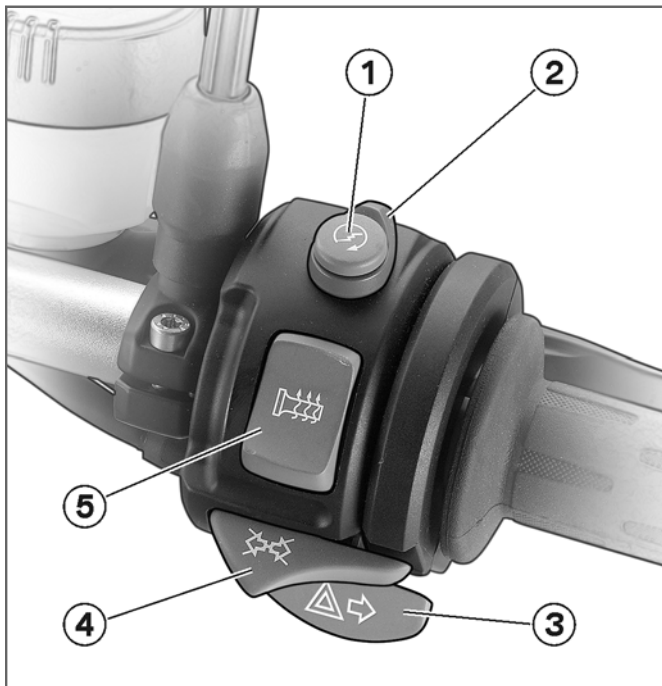
Underneath the seat

- 1 Battery (🔌 95)
- 2 Rider's Manual
- 3 Toolkit (🔌 70)
- 4 Table of tyre pressures

Handlebar fitting, left

- 1 Control, odometer (➡ 31), Adjuster, clock (➡ 34)
- 2 Pushbutton, horn
- 3 Pushbutton, left flashing turn indicators (➡ 41), Pushbutton, hazard warning flashers (➡ 30)
- 4 Switch, high-beam headlight (➡ 40)





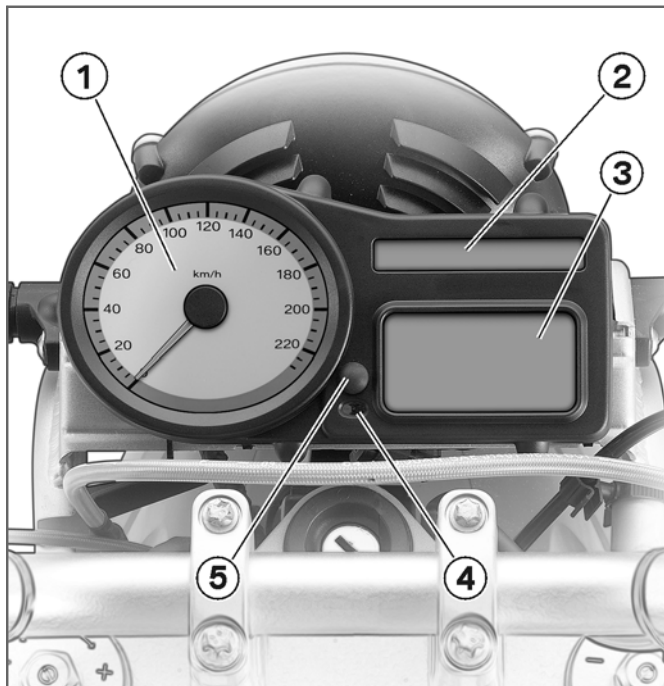
Handlebar fitting, right

- 1** Pushbutton, starter (➡ 59)
- 2** Emergency off switch (kill switch) (➡ 33)
- 3** Pushbutton, right flashing turn indicators (➡ 41), Pushbutton, hazard warning flashers (➡ 30)
- 4** Cancel button, flashing turn indicators (➡ 42), Pushbutton, cancel hazard warning flashers (➡ 31)
- 5** Grip heating switch^{OA} (➡ 66)

Instrument cluster

- 1 Speedometer
- 2 Warning and telltale lights
- 3 Multifunction display
- 4 Sensor for instrument cluster lighting
- 5 Adjuster, clock (►► 34), Control, odometer (►► 31)

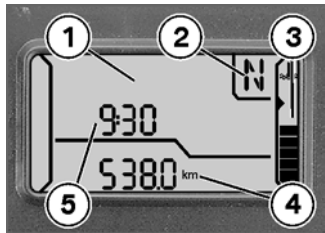
► The instrument-cluster lighting has automatic day and night switchover. ◀



Status indicators

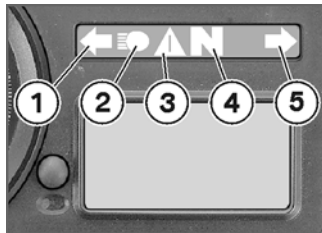
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Multifunction display



- 1 Panel for warnings (➡ 20)
- 2 Gear indicator (➡ 20)
- 3 Engine temperature readout (➡ 20)
- 4 Odometer reading (➡ 31)
- 5 Clock

Warning and telltale lights



- 1 Telltale light, left turn indicator
- 2 Telltale light, high-beam headlight
- 3 Warning light, general
- 4 Telltale light, neutral
- 5 Telltale light, right turn indicator


Function indicators

Gear

N Shows which gear is engaged.

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

Engine temperature

 The horizontal bars below the temperature symbol indicate the engine temperature.

Warnings, general

Mode of presentation

General warnings are displayed by means of texts and symbols in the multifunction display. In some cases, they are accompanied by the 'General' warning light showing red or yellow. If two or more warnings occur at the

same time, all the appropriate telltale lights and warning symbols appear. Warnings in text form alternate.

Warnings, overview**Mode of presentation****Meaning**

Lights up yellow

The EWS ! warning appears on the display.

Electronic immobiliser active (►► 23)



Lights up yellow

The FUEL ! warning appears on the display.

Fuel down to reserve (►► 23)



Lights up yellow



Appears on the display

Engine electronics (►► 23)



Flashes red



Appears on the display

Insufficient engine oil pressure (►► 24)



Lights up red



Appears on the display

Insufficient battery charge current (►► 24)



Lights up yellow

The LAMPR ! warning appears on the display.

Rear light bulb defective (►► 25)

The LAMPF ! warning appears on the display.

Front light bulb defective (►► 25)




Lights up yellow

The LAMPS ! warning appears on the display.

Bulbs defective (►► 26)

Electronic immobiliser active


 General warning light lights up yellow.

The EWS ! warning appears on the display.


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


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

Fuel down to reserve

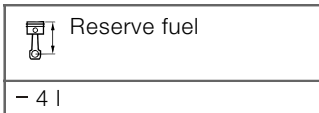
 General warning light lights up yellow.

The FUEL ! warning appears on the display.

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


 The estimated residual range appears on the display. ◀


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




- Refuelling (➡ 63)

Engine electronics

 General warning light lights up yellow.

 Engine electronics symbol appears on the display.

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

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

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

specialist workshop, preferably an authorised BMW Motorrad dealer.

Insufficient engine oil pressure



General warning light flashes red.



Engine oil pressure symbol appears on the display.

The oil pressure in the lube-oil system is too low. Stop immediately and switch off the engine if the warning light shows.



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

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

- Checking engine oil level (→ 70)

If the oil level is too low:

- Top up the engine oil.

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



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

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

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

Insufficient battery charge current



General warning light lights up red.



Battery charge current symbol is displayed.



A discharged battery can cause the engine to die suddenly, and this could result in a dangerous situation in traffic.

Have faults rectified as soon as possible. ◀



If the battery is not charging, continuing to ride can cause it to discharge

completely, in which case it will suffer irreparable damage. If possible, do not continue your journey.◀

Battery is not being charged.

- You can continue to ride until the battery is discharged. Bear in mind, however, that the engine could cut out suddenly and that the battery could discharge until completely flat, in which case it might have suffered irreparable damage.
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad dealer.

Rear light bulb defective



General warning light lights up yellow.

The LAMPR! warning appears on 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.◀

Rear light or brake light bulb defective.

- Replacing brake light and rear light bulb (➡ 88)

Front light bulb defective

The LAMPF! warning appears on 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.◀

Low-beam headlight, high-beam headlight, side light or turn signal bulb defective.

- Replacing low-beam and high-beam headlight bulb (➡ 85)
- Replacing parking-light bulb (➡ 86)
- Replacing turn indicator bulbs (➡ 91)

The number-plate carrier can be removed for sporty off-roading. This fault message reminds you that the motorcycle is temporarily without turn indicators and number-plate light.

- Install the license-plate carrier.

Bulbs defective



General warning light
lights up yellow.

The LAMPS ! warning appears on 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. ◀

A combination of the bulb defects described above has occurred.

- See the fault descriptions above.

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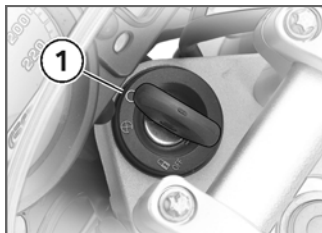
Ignition switch and steering lock

Keys

You receive one master key and one spare key, plus a key for removing the seat. Please consult the information on the electronic immobiliser (EWS) if a key is lost or mislaid (► 29).

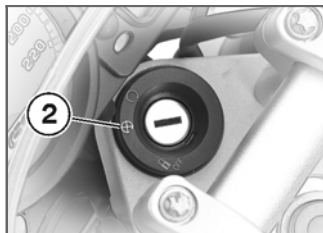
► Ignition switch and steering lock, seat lock and tank filler cap lock are all operated with the same key.◀

Switching on the ignition



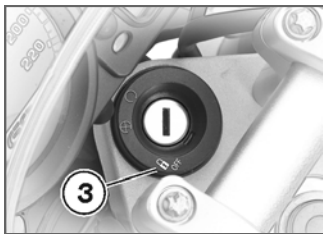
- Turn the key to position **1**.
 - » Side lights and all function circuits switched on.
 - » Engine can be started.
 - » Pre-ride check is performed. (► 59)


Switching off the ignition



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

Locking the handlebars



 If the motorcycle is on the side stand, the surface of the ground will determine whether it is better to turn the handlebars to the left or right. However, the motorcycle is more stable on a level surface with the handlebars turned to the left than with the handlebars turned to the right.

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

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

Electronic immobiliser (EWS)


Protection against theft

The electronic immobiliser helps protect your BMW motorcycle from theft, and this enhanced security is at your disposal without any need for you to set parameters or activate additional systems. The engine of a motorcycle fitted with this electronic immobiliser can be started only with the keys that belong to the vehicle. You can also have

your authorised BMW Motorrad dealer bar individual keys, for example if a particular key goes missing. The engine cannot be started with a key that has been barred.

In-key electronics

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

 A spare key attached to the same ring as the ignition key used to start the engine could "irritate" the

electronics, in which case the enabling signal for starting is not issued. The EWS warning appears in the multifunction display.

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

Replacement and extra keys

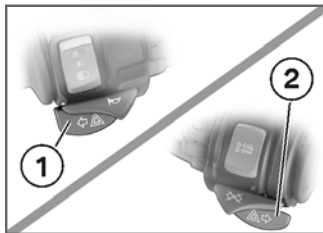
You can obtain replacement/extra keys only through an authorised BMW Motorrad dealer. The keys are part of an integrated security system, so the dealer is under an obligation to check the legitimacy of all applications for replacement/extra keys. If you want to have a lost key barred, you have to bring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

subsequently be cleared and reactivated for use.

Hazard warning flashers

Switching on hazard warning flashers

- Switch on the ignition.



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

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

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

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

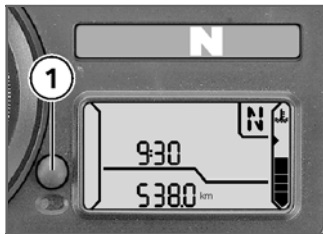
Switching off hazard warning flashers



- Press cancel button **1**.
» Hazard warning flashers switched off.

Odometer and tripmeters

Operating the odometer



You have the option of using pushbutton **1** in the instrument cluster to operate the odometer as described below.

Selecting readings

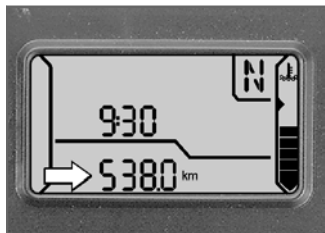
- Switch on the ignition.

▶ When you switch on the ignition, the odometer reading shown when the ignition was switched off always

reappears on the multifunction display. ◀



- Briefly press INFO button **1** once to proceed to each subsequent step in the cycle.



The odometer's display field starts with the current value and cycles through the following sequence:

- Total distance covered
- Tripmeter 1 (Trip I)
- Tripmeter 2 (Trip II)
- Operating hours
- Residual range

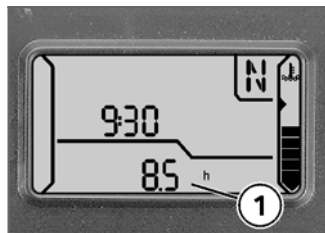
Resetting tripmeter

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



- Press and hold down INFO button **1** until the reading changes.
- » The tripmeter is reset to zero.

Operating-hours counter



The "Maintenance Instructions for Sporty Off-roading" describe maintenance work that has to be performed on the basis of off-roading hours, as logged by operating-hours counter **1**.

Resetting operating-hours counter

- Switch on the ignition.
- Select the operating-hours counter.

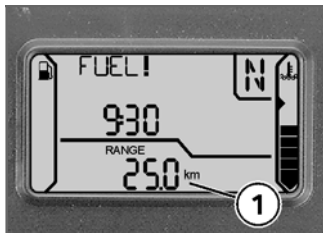


- Press and hold down INFO button **1** until the reading changes.

▶ The operating-hours counter, too, is reset if the battery is disconnected from the on-board system.◀

- » The operating-hours counter is reset to zero.

Residual range



The residual-range readout **1** indicates how far you can ride with the fuel remaining in the tank. This reading is not displayed until fuel level has dropped to reserve. This distance is calculated on the basis of fuel level and average consumption.


When you refuel, the increase in fuel level is not registered unless several litres are added to the fuel already in the tank.

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

Emergency off switch (kill switch)



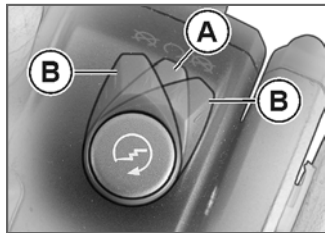
- 1** Emergency off switch (kill switch).

 Operating the kill switch when riding can cause

the rear wheel to lock and thus cause a fall.

Do not operate the kill switch when riding. ◀

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



A Normal operating position (run)

B Engine switched off.

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

Clock

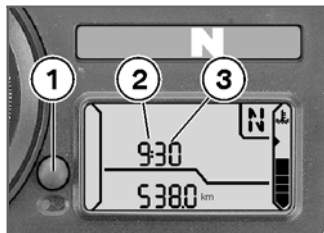
Setting the clock



You have the option of using INFO button **1** to set the clock as described below.

Setting clock

- Switch on the ignition.



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


Set the clock only when the motorcycle is stationary. ◀

- Repeatedly press button **1** until the total distance covered reading appears on the display.
- Press and hold down button **1** until the reading changes.
 - » Hours reading **2** starts to flash.
- Press button **1**.


- » The hour increments by one each time you press the button.
- Press and hold down button **1** until the reading changes.
- » Minutes reading **3** starts to flash.
- Press button **1**.
- » The minute increments by one each time you press the button.
- Press and hold down button **1** until the reading changes.
- » The reading stops flashing.
- » The time is now set.

Clutch

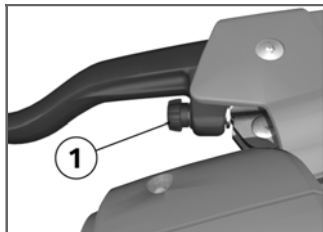
Adjusting clutch lever

 If the position of the clutch fluid reservoir is changed, air can enter the clutch system.


Do not twist the handlebar fitting or the handlebars.◀

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

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




- Turn adjusting screw **1** clockwise.

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


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

Brakes

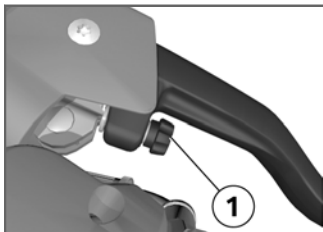
Adjusting handbrake lever

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

Do not twist the handlebar fitting or the handlebars.◀

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

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



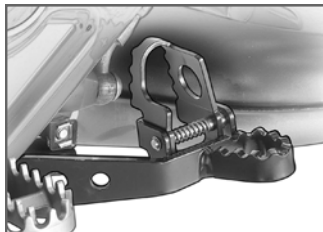
- Turn adjusting screw **1** clockwise.

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

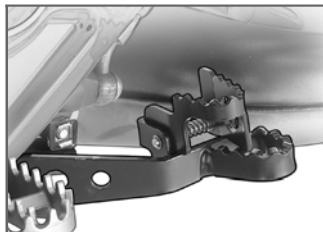
- » Span between handlebar grip and handbrake lever increases.
- Turn adjusting screw **1** counter-clockwise.
- » Span between handlebar grip and handlebar lever decreases.

Adjustable footbrake lever

You can adjust the footbrake lever for riding seated or standing on the footrest pegs.



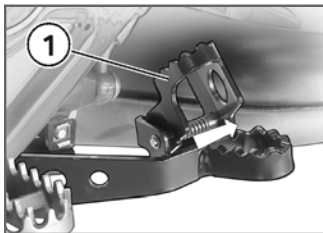
Position of the footbrake lever for riding seated.



Position of the footbrake lever for riding standing on the pegs.

Adjusting footbrake lever

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

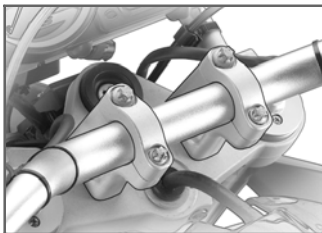


- Push swivel lever **1** of the brake lever forward and turn it to the correct limit position.
- » The swivel lever engages with an audible click.

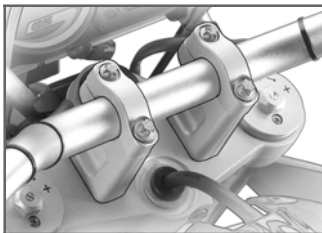
Handlebars

Adjustable handlebars

You can turn the handlebar clamping blocks 180° to increase or decrease handlebar reach.



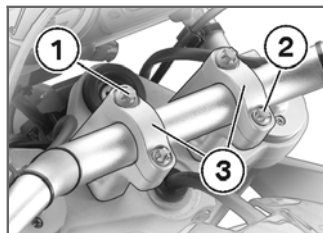
Short-reach position, handlebars toward rider.



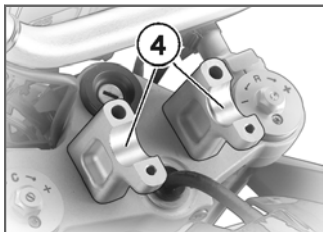
Long-reach position, handlebars away from rider.

Adjusting handlebars

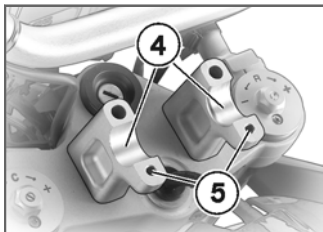
- Make sure the ground is level and firm and place the motorcycle on its stand.



- Remove small screws **1**.
- While holding the handlebars, remove large screws **2**.
- Remove top clamping blocks **3**.
- Lift the handlebars clear of the bottom clamping blocks.

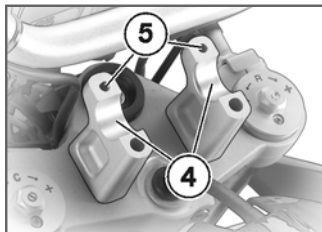


- Remove bottom handlebar clamping blocks **4**.

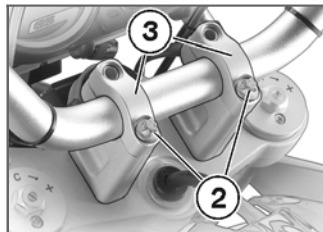


- Place bottom handlebar clamping blocks **4** in position with tapped holes **5** to the rear.

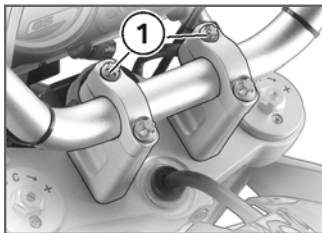
» Handlebars toward rider (shorter reach).



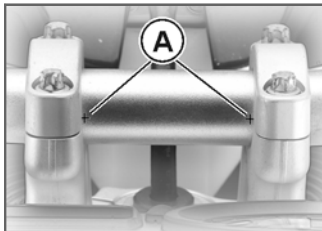
- Place bottom handlebar clamping blocks **4** in position with tapped holes **5** to the front.
- » Handlebars away from rider (longer reach).
- Install the bottom handlebar clamping blocks in the desired position for the appropriate reach.



- Position the handlebars and top handlebar clamping blocks **3** on the bottom handlebar clamping blocks, and hold the handlebars in position.
- Install large screws **2**, but do not tighten.

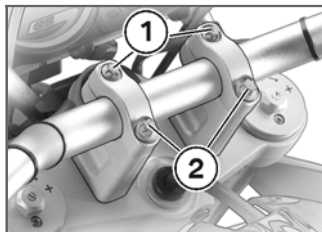


- Install small screws **1**, but do not tighten.



- Align the handlebars in the clamping blocks such that the points of intersection of crosses **A** are in line with the gaps between the

top and bottom clamping blocks.



- Tighten large screws **2** to the specified tightening torque.



Handlebar clamping block to fork bridge

– Thread-locking compound: Optimoly TA

– 38 Nm

- » Make sure that there is no gap between the handlebar clamping blocks on the side

where the large screws are located.

- If necessary, slacken screws **1** and retighten screws **2** to the specified tightening torque.
- Tighten small screws **1** to the specified tightening torque.



Handlebar to handlebar clamping block

– Thread-locking compound: Optimoly TA

– 19 Nm

- » A gap remains between the handlebar clamping blocks on the side where the small screws are located.

Lights

Switching on the side lights

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

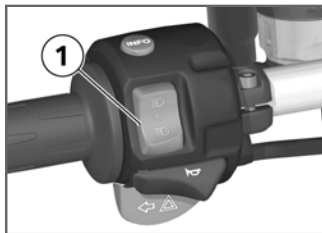
▶ The side lights place a strain on the battery. Do not switch the ignition on for longer than absolutely necessary. ◀

Switching on the low-beam headlight

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

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

Switching on high-beam headlight



- Press the top section of switch **1** for the high-beam headlight.
 - » High-beam headlight switched on.
- Move switch **1** for the high-beam headlight to the centre position.
 - » High-beam headlight switched off.
- Press the bottom section of switch **1** for the high-beam headlight.

» The high-beam headlight is switched on until you release the button (headlight flasher).

Switching on parking lights

- Switch off the ignition.

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



- Press and hold down button **1** for the left turn indicator.

ators until the parking lights are ON.

Switching off parking lights

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

Headlight

Adjusting headlight for driving on left/driving on right

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

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

Beam throw and air pressure in the Air Damping System

Headlight beam throw is generally kept constant when the air pressure in the Air Damping System is adjusted to suit load.

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

Turn indicators

Switching on left flashing turn indicators

- Switch on the ignition.



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

Switching on right flashing turn indicators

- Switch on the ignition.



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

Cancelling turn indicators



- Press cancel button **3**.

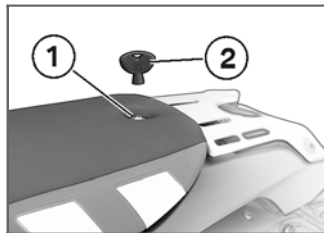
▶ The turn indicators are cancelled automatically after you have ridden for approximately 10 seconds, or covered a distance of about 200 m. ◀

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

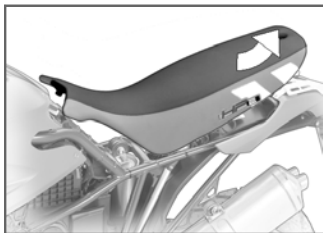
Seat

Removing the seat

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




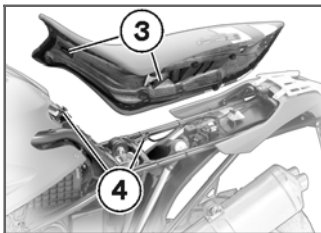
- Remove screw **1** with special key **2** for the seat.



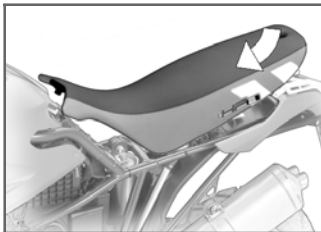
- Pull the seat back and out of the holders.

Installing the seat

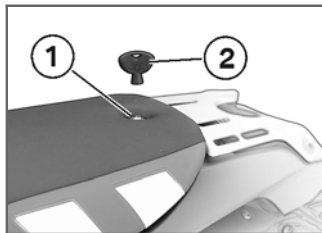
 If too much pressure is applied in the forward direction, there is a danger that the motorcycle will be pushed off its stand. Always make sure that the motorcycle is stable and firmly supported. ◀



- Engage seat mounts **3** in holders **4**.



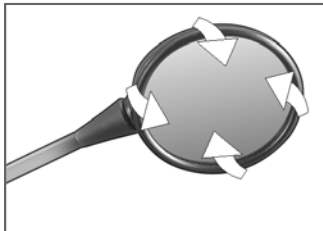
- Push the seat forward into the holders as far as it will go.



- Tighten screw **1** with special key **2** for the seat until it is hand-tight.
- Installing the pneumatic pump (➡ 45)

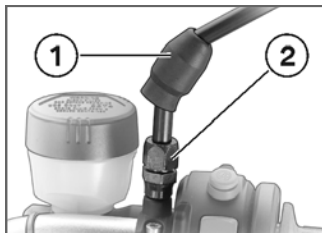
Mirrors

Adjusting mirrors



- Pivot the mirror to the correct position by pressing gently at the edge.

Adjusting mirror arm



- Push protective cap **1** up over the threaded fastener on the mirror arm.
- Slacken nut **2**.
- Turn the mirror arm to the appropriate position.
- Tighten nut **2**, while holding the mirror arm to ensure that it does not move out of position.



Mirror to clamping piece

– 25 Nm

- Push protective cap **1** over the threaded fastener.

Pneumatic pump

Use

You can use the pump to check the pressure in the Air Damping System (➡ 45) and in the tyres, and increase pressure when necessary.

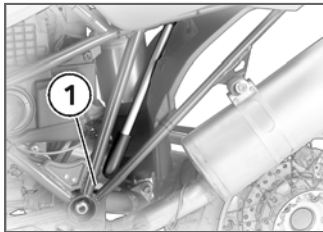
Removing pneumatic pump



- Release the pump from the retaining clip.

- Take a grip close to the top of the pump, compress the pump and disengage it from the top mount.
- Tilt the pump in toward the motorcycle and remove it from the bottom holder.
- Remove the pump from the frame.

Installing the pneumatic pump



- Manoeuvre the pump behind the frame and seat the bottom of the pump in bottom mount **1**.

- Take a grip close to the top of the pump, compress the pump and engage it in the top mount in the seat shell.
- Pull the retaining strap tight around the pump and the frame tube.

Spring preload

Air Damping System

This motorcycle has an air-filled rear suspension system known as the Air Damping System.

In this system, it is a volume of air in an enclosed chamber, not a steel spring, that absorbs the shocks transmitted by the wheel to the suspension.

Spring preload of the Air Damping System is adjusted to suit total weight (motorcycle plus rider, plus luggage) by changing the air pressure in this system. You

can use the valve on the Air Damping System to reduce pressure, or you can increase pressure by connecting the pump to this valve.

Fore-and-aft tilt indicator

The fore-and aft tilt indicator on the motorcycle has much the same function as a spirit level, and indeed it is very similar in appearance to an ordinary bubble level. The air-pressure setting is ideal when the fore-and-aft tilt indicator shows that the motorcycle carrying rider and load is horizontal.

Always check the air pressure before riding off.

Adjusting air pressure

It is essential to set the pressure in the Air Damping System to suit the load carried on the motorcycle. Increase

air pressure when the motorcycle is heavily loaded and reduce air pressure accordingly when the motorcycle is lightly loaded.

You read the fore-and-aft tilt indicator by sitting on the seat in such a way that you can keep the motorcycle balanced with your feet, but the motorcycle is supporting as much of your weight as possible. BMW Motorrad recommends setting the air pressure in the Air Damping System marginally higher than would be necessary for the weight of the rider plus the expected weight of the load. You can then reduce the air pressure while sitting on the motorcycle.

Air pressure and temperature

When the Air Damping System is working hard to absorb shocks, the air inside the system becomes warmer. This causes the air pressure to rise, which increases spring preload, a welcome effect for off-roading.

In order to ensure that spring preload is set correctly, however, you must always check and adjust the air pressure when the Air Damping System is cold, in other words not immediately after the motorcycle has been used for off-roading.

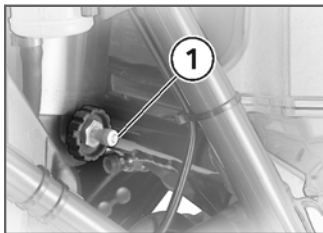
Lengthy periods of disuse

If it is going to be out of use for more than two months, support the motorcycle in such a way that the wheels are not taking any weight, for

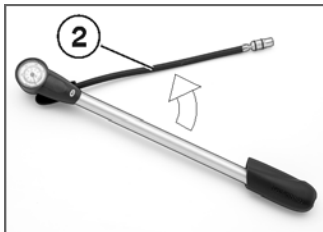
example by lifting it onto the BMW auxiliary stand. Check the air pressures before removing the motorcycle from the auxiliary stand. You can use the pressure gauge on the pneumatic pump for this check.

Adjusting spring preload for rear wheel

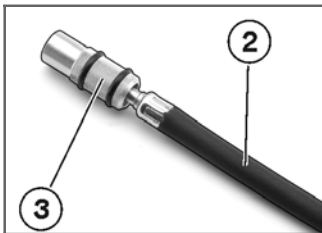
- Make sure the ground is level and firm and place the motorcycle on its stand.
- Remove the pneumatic pump (➡ 44)



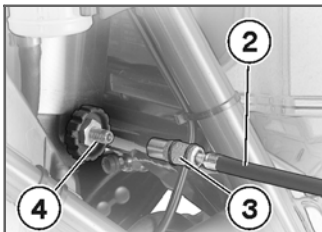
- Remove the valve cap from Air Damping System valve **1**.



- Pull tube **2** out of the handle of the pump and pivot it forward.



- Turn hose **2** counter-clockwise to back it as far as possible out of threaded adapter **3**.



- Connect threaded adapter **3** to valve **4**, allowing the

pump to turn with the adapter.

- » The pneumatic pump now has an airtight connection to the valve.
- Turn hose **2** clockwise to screw it as far as possible into threaded adapter **3**.
- » The valve is now open.
- Pressurise the Air Damping System as per the guideline values below.



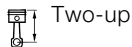
One-up

– 6.5 bar (Person weighing 80 kg)



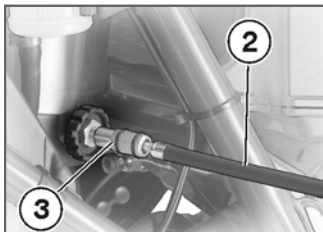
One-up

– 7.5 bar (Person weighing 100 kg)



Two-up

- 9 bar



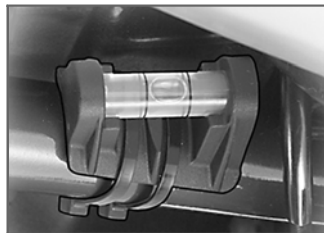
- Turn hose **2** counter-clockwise to back it as far as possible out of threaded adapter **3**.
- » The valve is now closed.
- Disconnect threaded adapter **3** from the valve, allowing the pump to turn with the adapter.

- Screw the valve cap onto the Air Damping System valve.
- Sit on the motorcycle, hold it upright and allow as much of your weight as possible to rest on the motorcycle.



- Push in the valve pin, allow air to escape from the Air Damping System and check the level.

▶ You can use the point of the valve cap to push in the valve pin.◀



- Continue to allow air to escape until the fore-and-aft tilt indicator shows horizontal.
- Installing the pneumatic pump (➡ 45)

Damping

Telescopic-fork damping

You can fine-tune the suspension to the road surface by adjusting both the compression-stage and rebound-stage damping characteristics of the telescopic forks.

The rebound-stage setting controls the way the suspension reacts as it extends, whereas the compression-stage setting influences compression of the front forks under load.

The harder the setting, the more the movement that the forks can make to absorb surface irregularities is damped. When you choose a soft setting the forks respond all the more rapidly to surface irregularities.

You can adjust both the linear and progressive components of the telescopic-fork compression-stage damping characteristic.

The linear component is the basic damping setting, while the progressive component determines the extent to which the suspension

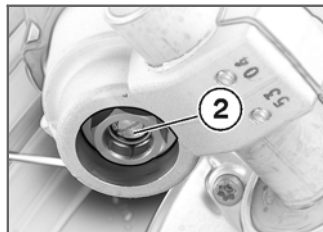
becomes harder as spring travel increases.

Adjusting linear component of compression-stage characteristic for the telescopic forks

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



- Remove rubber cap **1**.



- You adjust the linear component of the compression-stage characteristic by turning adjusting screw **2**.
- If you want harder damping, use a screwdriver to turn the adjusting screw in the clockwise direction.
- If you want softer damping, use a screwdriver to turn the adjusting screw in the counter-clockwise direction.



Basic setting,
linear component
of compression-stage
characteristic

- Turn adjusting screw as far as it will go in the clockwise direction, then back it off 15 clicks in the counter-clockwise direction.

Adjusting progressive component of compression-stage characteristic for the telescopic forks

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



- You adjust the progressive component of the compression-stage characteristic by turning adjusting screw **1**.



- If you want harder damping, use a screwdriver to turn

the adjusting screw in the **+** direction.

- If you want softer damping, use a screwdriver to turn the adjusting screw in the **-** direction.



Basic setting, pro-
gressive component
of compression-stage char-
acteristic

- Turn adjusting screw as far as it will go in the **+** direction, then back it off 15 clicks in the **-** direction.

Adjusting rebound stage for the telescopic forks

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



- You adjust the rebound-stage characteristic by turning adjusting screw **1**.



- If you want harder damping, use a screwdriver to turn

the adjusting screw in the + direction.

- If you want softer damping, use a screwdriver to turn the adjusting screw in the - direction.



Basic setting, rebound stage

- Turn adjusting screw as far as it will go in the "+" direction, then back it off 15 clicks in the "-" direction.

Damping effect of the Air Damping System

The Air Damping System has two settings so that it can be adjusted to suit the type of surface on which you intend riding.

You can turn the adjusting screw any distance in either direction.

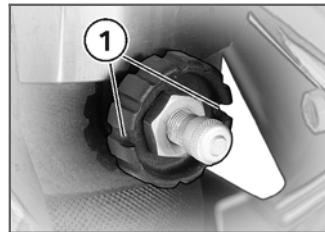
Adjusting damping for rear wheel



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

Adjust the damping characteristic to suit spring preload. ◀

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





- Turn adjusting screw until marks **1** are horizontal.


- » Hard damping, adjusting screw engages with an audible click.
- Turn adjusting screw until marks **1** are vertical.
- » Soft damping, adjusting screw engages with an audible click.

Tyres

Checking tyre pressures



 Incorrect tyre pressures impair the motorcycle's handling characteristics and can lead to accidents. Always check that the tyre pressures are correct.◀

 At high road speeds, tyre valves have a tendency to open as a result of centrifugal force. Fit metal valve caps with rubber seals and screw them on firmly to prevent sudden deflation.◀

 Incorrect tyre pressure reduces the operating life of the tyres.

Always check that the tyre pressures are correct.◀

- Check tyre pressures against the data below.

 Tyre pressure, front
– 2.2 bar (One-up, tyre cold)
with OA Rear footrest:
– 2.2 bar (Two-up and/or with luggage, tyre cold)◀
 Tyre pressure, rear
– 2.5 bar (One-up, tyre cold)
with OA Rear footrest:
– 2.5 bar (Two-up and/or with luggage, tyre cold)◀


If tyre pressure is too low:

- Correct tyre pressure.

Two valves

The motorcycle's rear-wheel rim can accommodate a tyre holder (optional accessory). If no tyre holder is fitted, a second rubber valve is inserted in its place.

If you have tubeless tyres mounted on the motorcycle, either valve can be used to adjust tyre pressure. If the tyre has a tube, use only the tube valve to adjust the tyre pressure. The tube valve has a projecting shank made entirely of metal, and a locknut is screwed onto the thread.

 Tube tyres do not form an airtight seal against the rims. Air escapes unless it is pumped in through the tube valve.

Use only the tube valve to inflate the tyre.◀

Riding

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Safety instructions

Rider's equipment

Do not ride without the correct clothing. Always wear:

- Helmet
- Motorcycling jacket and trousers
- Gloves
- Boots

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

Speed

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

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

Maximum speeds for tyres



The motorcycle's top speed might be higher than the maximum speed permitted for the tyres. Excessive speeds can damage the tyres and this could cause accidents.

Comply with the tyre-specific speed restrictions.◀

Correct loading



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

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

Alcohol and drugs




Even small amounts of alcohol or drugs will adversely affect your perception and your ability to assess situations and make decisions, and slow down your reflexes. Medication can exacerbate these effects.


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

Risk of poisoning

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

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


High voltage

 Touching live parts of the ignition system with the engine running can cause electric shock. Do not touch parts of the ignition system when the engine is running.◀

Catalytic converter


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

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


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

Risk of fire


Temperatures at the exhaust are high.

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

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

 Cooling would be inadequate if the engine were allowed to idle for a lengthy period with the motorcycle at a standstill: overheating would result. In extreme cases, the motorcycle could catch fire. Do not allow the engine to idle unnecessarily. Ride away immediately after starting the engine.◀

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

 Tampering with the control unit of the electronic engine-management system can damage the motorcycle and cause accidents.

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



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

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

Checklist

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

- Brakes
- Brake-fluid levels, front and rear
- Clutch
- Clutch fluid level
- Shock-absorber setting and air pressure in the Air Damping System
- Tyre-tread depth and tyre pressures
- Security of the luggage

At regular intervals:

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

Starting

Side stand

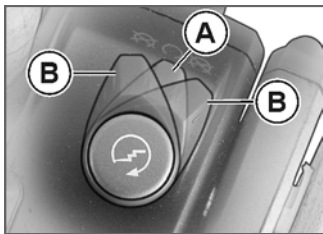
You cannot start the motorcycle with the side stand extended and a gear engaged. The engine will switch itself off if you start it with the gearbox in neutral and then engage a

gear before retracting the side stand.

Gearbox

You can start the engine when the gearbox is in neutral or if you pull the clutch with a gear engaged. Do not pull the clutch until after you have switched on the ignition, as otherwise the engine will refuse to start. When the gearbox is in neutral, the green neutral telltale light is on and the gear indicator in the multifunction display shows N.

Starting engine



- Kill switch in run position **A**.
- Switch on the ignition.
- » Pre-ride check is performed. (► 59)



- Press starter button **1**.

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

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

- » The engine starts.
- » Consult the troubleshooting chart below if the engine refuses to start. (► 106)

Pre-ride check

The instrument cluster runs a test of the 'General' warning light when the ignition is switched on. The warn-

ing light shows first yellow and then red, so that you can check that it is in working order. This pre-ride check is indicated by the word **CHECK!** appearing in the display. The test is aborted if you start the engine before it completes.

Phase 1



General warning light lights up red.

- The **CHECK!** reminder appears on the display.

Phase 2



General warning light lights up yellow.

- The **CHECK!** reminder appears on the display.

If the 'General' warning light is not displayed:



Some malfunctions cannot be indicated if the

'General' warning light cannot be displayed.

Check that the 'General' warning light comes on, and that it lights up yellow and then red. ◀

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

Running in

The first 1000 km

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



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

Keep to the specified engine speeds for running in. ◀

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



Running-in speed

– 4000 min⁻¹

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

Brake pads

New brake pads must "bed down" and therefore do not achieve their optimum friction levels during the first 500 km. You can compensate for this

initial reduction in braking efficiency by exerting greater pressure on the levers.



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

Apply the brakes in good time. ◀

Tyres


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



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


Riding off-road


Tyre pressures

 Tyre pressures reduced for off-road riding impair the motorcycle's handling characteristics on surfaced roads and can lead to accidents.

Always check that the tyre pressures are correct. ◀

Dirt or mud on brakes


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

 The brake pads will wear more rapidly if you ride

frequently on unsurfaced tracks or poor roads.

Check the thickness of the brake pads more frequently and replace the brake pads in good time. ◀


Suspension settings

 The off-road settings for air pressure in the Air Damping System and the front and rear shock-absorber damping characteristics will impair the motorcycle's handling characteristics on surfaced roads.

If you have been off-roading, remember to correct the air pressure in the Air Damping System and the shock-absorber damping characteristics before you return to surfaced roads. ◀


Parking your motorcycle

Placing motorcycle on side stand

 If the ground is soft or uneven, there is no guarantee that the motorcycle will rest firmly on the stand.

Always check that the ground under the stand is level and firm. ◀

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

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

- Slowly lean the motorcycle to the side until its weight is taken by the stand and dismount to the left.

⚠ If the motorcycle is on the side stand, the surface of the ground will determine whether it is better to turn the handlebars to the left or right. However, the motorcycle is more stable on a level surface with the handlebars turned to the left than with the handlebars turned to the right.

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

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

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

Removing motorcycle from side stand

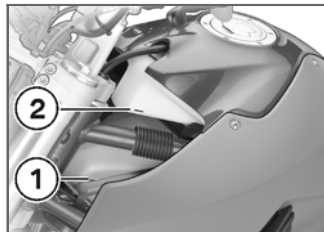
- Unlock the steering lock.
- Switch on the ignition.
- From the left, grip the handlebars with both hands.
- Pull the handbrake lever.
- Swing your right leg over the seat and lift the motorcycle to the upright position.
- Hold the motorcycle upright and balanced.

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

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


Refuelling

Fuel level




The fuel tank is made of semi-transparent material, so the level of fuel in the tank is visible. If you look back from the direction of the telescopic forks, you can quickly check how much fuel is in the tank. The 5-litre level **1** and an 11-litre level **2** are marked on the fuel tank.


Refuelling


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

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

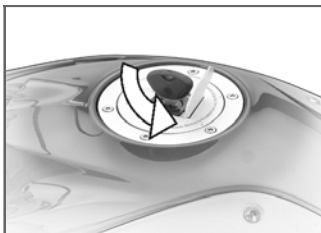
 Fuel expands when hot. Fuel escaping from an overfilled tank could make its way onto the rear tyre. This could cause a fall.

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


 Fuel attacks plastics, which become dull or unsightly. Wipe off plastic parts immediately if they come into contact with fuel. ◀

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

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



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

 The ratings for performance and consumption

are quoted for the recommended grade of fuel. ◀



Recommended fuel grade

- 98 ROZ/RON (Super plus (premium))
- 91 ROZ/RON (Regular unleaded (fuel grade, usable with power- and consumption-related restrictions))




Usable fuel capacity

- 13 l


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

Brake system

Descending mountain passes


 There is a danger of the brakes fading if you use only the rear brakes when descending mountain passes. Under extreme conditions, the brakes could overheat and suffer severe damage. Use both front and rear brakes, and make use of the engine's braking effect as well. ◀

Wet brakes

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


until the brakes have dried out. ◀

Salt on brakes

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


Apply the brakes in good time until the salt layer on the brake discs and brake pads has been removed. ◀


Oil or grease on brakes

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

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

Dirt or mud on brakes

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

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

Accessories

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General instructions

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

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

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

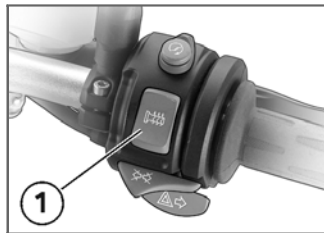
Conversely, BMW is unable to accept any liability whatsoever for parts and accessories which it has not approved.



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

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

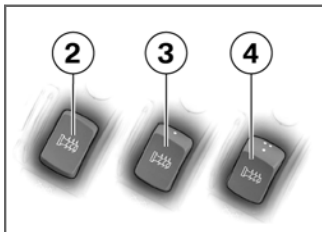
Grip heating switch^{OA}



1 Grip heating switch

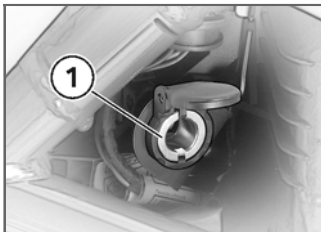
The handlebar grips have two-stage heating. Grip heating can be activated only when the engine is running.

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



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

Power socket Ratings



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

Operating electrical accessories

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

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

Cable routing

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

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



Incorrectly routed cables can impede the rider.

Route the cables as described above.◀

Luggage

Correct loading



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

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

It is particularly important to comply with the instructions below for loading the HP2 Enduro:

- Set the and tyre pressures and the air pressure and the damping characteristic of the Air Damping System to suit total weight.
- Make sure that the weight is uniformly distributed between right and left.
- Max. load in tank rucksack 5 kg.

- Maximum load on guard for rear light 1 kg.

Sporty off-roading

Parts supplied with the motorcycle

You took delivery of your BMW complete with certain components that can be fitted for sporty off-roading. See the "Maintenance Instructions for Sporty Off-roading" for details of how to install these components.

- Cylinder guard
- Hand protectors
- Guard for the final drive
- Deflector for the footbrake lever
- Headlight guard
- Adhesive frame protectors

Maintenance

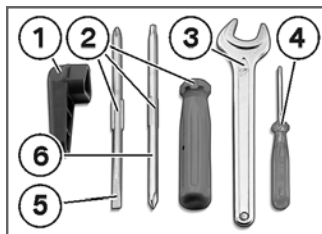
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General instructions

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

The "Maintenance Instructions for Sporty Off-roading" describe maintenance work that has to be performed if the motorcycle is used for sporty off-roading. You will find information on more extensive maintenance and repair work in the Repair Manual on the DVD/CD-ROM that accompanies your motorcycle.

Toolkit





- 1 Lever for cap, oil filler neck
- 2 Screwdriver, reversible, with two blades, underneath the seat
- 3 Open-ended spanner, w/f 17
- 4 Flat-tip screwdriver, small
- 5 Star-head and flat-tip blade
- 6 Star-head and TORX T25 blade

▶ A special toolkit has been assembled for the HP2 Enduro and is available from your authorised BMW Motorrad dealer. The enclosed brochure contains more information.◀

Engine oil

Checking engine oil level

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

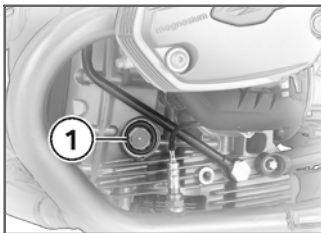
 The oil level varies with the temperature of the oil. The higher the temperature, the higher the level of oil in the sump. Checking the oil level with the engine cold or after no more than a short ride will lead to misinterpretation; this in turn, means that the engine will be operated

with the incorrect quantity of oil.

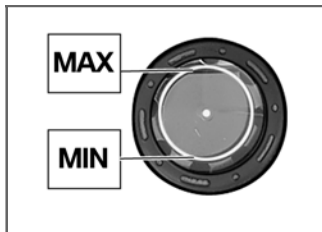
In order to ensure that the engine oil level is read correctly, check the oil level only after a lengthy trip. ◀

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

- Hold the motorcycle upright or place it on its centre stand.
- Wait five minutes after switching off the engine at operating temperature.
- Hold the motorcycle upright.



- Check the oil level in oil-level indicator **1**.



Engine oil, specified level

– between MIN and MAX marks

If the oil level is below the MIN mark:

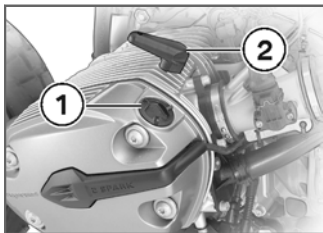
- Top up the engine oil.

If the oil level is above the MAX mark:

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

Topping up the engine oil

- Checking engine oil level (→ 70)



! Damage to the engine can result if it is operated without enough oil, but the same also applies if the oil level is too high. Always make sure that the oil level is correct.◀

- Wipe the area around the filler neck clean.
- Use tool **2** from the toolkit to remove cap **1**.
- Top up the engine oil to the specified level.



Engine oil, quantity for topping up

– 0.5 l (difference between MIN and MAX)

- Use tool **2** from the toolkit to install cap **1**.

Brake system, general

Dependability of the brake system

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

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

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



Incorrect working practices endanger the reliability of the brakes.


Have all work on the brake system performed by a specialist workshop, preferably an authorised BMW Motorrad dealer.◀

Checking brake function

- Pull the handbrake lever.
 - » The pressure point must be clearly perceptible.
 - Press the footbrake lever.
 - » The pressure point must be clearly perceptible.
- If pressure points are not clearly perceptible:
- Have the brakes checked by a specialist workshop, preferably an authorised BMW Motorrad dealer.

Brake pads

Checking brake-pad thickness, front brakes

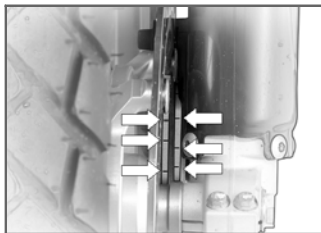
 Brake pads worn past the minimum permissible thickness can cause a reduction in braking efficiency and under certain circumstances they can cause damage to the brake system.


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

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



- Visually inspect the brake pads to ascertain their thickness. Viewing direction: Between wheel and slider tube toward the brake caliper.



 Brake pads, front wheel, wear-indicating marks

- The wear-indicating marks must be clearly visible on the pads.

If the wear indicating marks are no longer clearly visible:

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

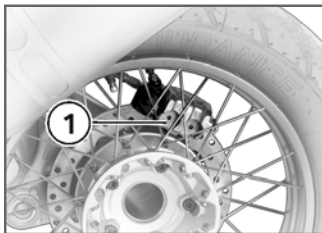
Checking brake pad thickness, rear brakes



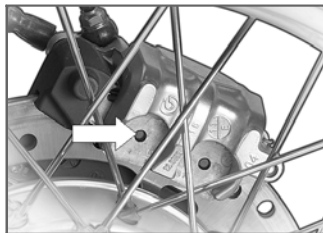
Brake pads worn past the minimum permissible thickness can cause a reduction in braking efficiency and under certain circumstances they can cause damage to the brake system.

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

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



- Visually inspect the brake pads of rear brake caliper **1** from the left to ascertain their thickness.



Brake pads, rear wheel, wear indicator


- Make sure that the brake disc is not visible through the bore in the inboard brake pad.

If the brake disc is visible:

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

Brake fluid


Checking brake-fluid level, front brakes

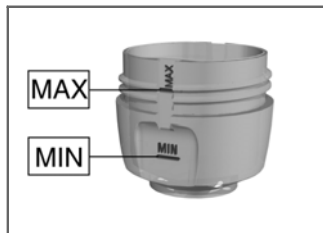
 A low fluid level in the brake reservoir can allow air to penetrate the brake system. This significantly reduces braking efficiency. Check the brake-fluid level at regular intervals. ◀


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



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


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



 Brake fluid level, front

- DOT4 brake fluid
- Do not permit the brake fluid level to drop below the MIN mark. (Brake-fluid reservoir horizontal)


If the brake fluid level drops below the permitted level:

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

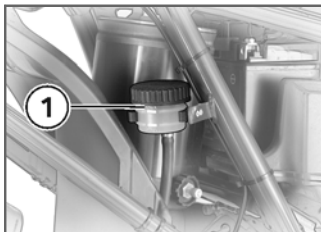
Check the brake-fluid level at regular intervals.◀

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


Checking brake-fluid level, rear brakes

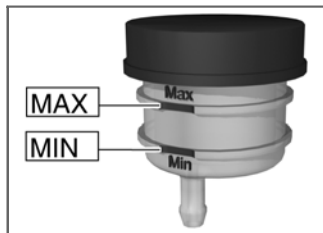
 A low fluid level in the brake reservoir can allow air to penetrate the brake system. This significantly reduces braking efficiency. Check the brake-fluid level at regular intervals.◀

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



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


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



Brake fluid level, rear

- DOT4 brake fluid
- Do not permit the brake fluid level to drop below the MIN mark. (Brake-fluid reservoir horizontal)

If the brake fluid level drops below the permitted level:

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

Check the brake-fluid level at regular intervals.◀

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

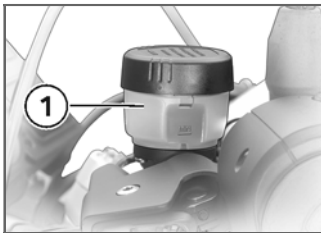
Clutch

Checking clutch operation

- Pull the clutch lever.
» The pressure point must be clearly perceptible.
If the pressure point is not clearly perceptible:
- Have the clutch checked by a specialist workshop, preferably an authorised BMW Motorrad dealer.

Checking the clutch fluid level

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Move the handlebars to the straight-ahead position.



- Check the clutch fluid level in reservoir 1.

▶ Wear of the clutch causes the fluid level in the clutch fluid reservoir to rise.◀

▶ The clutch system is filled with a special hydraulic fluid that does not have to be changed.◀



Clutch fluid level

- Do not permit the clutch fluid level to drop. (motorcycle upright and handlebars in straight-ahead position)

If the fluid level drops:



Unsuitable hydraulic fluids could cause damage to the clutch system.

Do not attempt to top up the system with fluids of any kind. ◀

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

Tyres

Checking tyre tread depth



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

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



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

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

- Replace tyre.

Rims

Checking rims

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

Wheels

Approved wheels and tyres

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

ility or provide any guarantee of road safety.

Use only wheels and tyres approved by BMW Motorrad for your type of motorcycle.

You can obtain detailed information from your authorised BMW Motorrad dealer or on the Internet at www.bmw-motorrad.com.

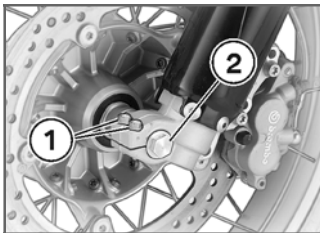
Massive-bar tyres

This motorcycle is supplied as standard fitted with massive-bar tyres with a rated maximum speed of 160 km/h (100 mph). The permitted maximum speed can differ if other tyres are fitted.

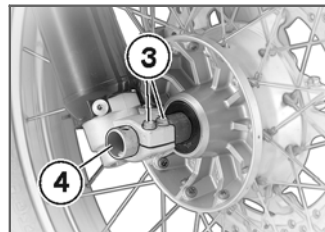
Removing front wheel

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

- Fitting the auxiliary stand (➡ 83)
- Placing motorcycle on auxiliary stand (➡ 84)



- Slacken left axle clamping screws **1**.
- Remove axle screw **2**.



- Slacken right axle clamping screws **3**.
- Use a screwdriver to remove axle **4**.
- Do not remove the grease from the axle.

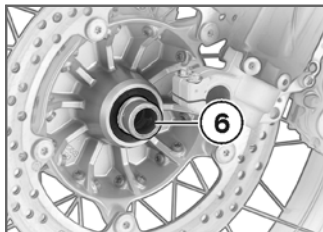


- Hold left slider tube **5** and turn the front wheel left and right to push the brake pads apart.

⚠ Once the calipers have been removed, there is a risk of the brake pads being pressed together to the extent that they cannot be slipped back over the brake disc on reassembly.

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

- Roll the front wheel clear of the forks.



- Remove spacer sleeve **6**.

Installing front wheel

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

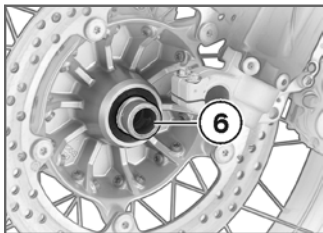
Always have the security of the fasteners checked by a specialist workshop, preferably an authorised BMW Motorrad dealer.◀

⚠ The front wheel must be installed right way round

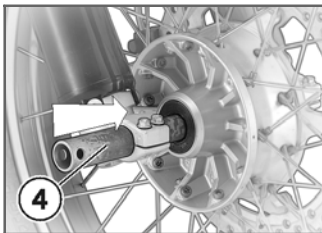
to rotate in the correct direction.

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

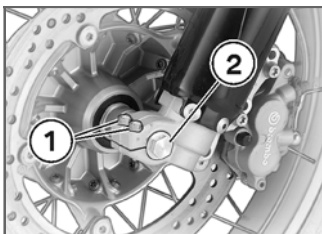
▶ The brake caliper does not have to be removed for the work described in this manual. If the brake caliper has to be removed for some other reason, be sure to use the bottom holes in the fork tube when reinstalling the caliper if massive-bar tyres are fitted. Proceed in accordance with the Installation Instructions if the motorcycle is fitted with road wheels.◀



- Install spacer sleeve **6**.
- Roll the front wheel into position between the forks, making sure that the brake disc passes between the brake pads.



- Insert axle **4**.



- Install axle screw **2**.



Front wheel, axle screw in axle holder

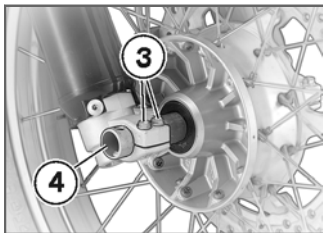
- Thread-locking compound: Optimoly TA
- 40 Nm

- Without operating the brakes: firmly compress the forks and release; repeat the procedure several times.
- Tighten left axle clamping screws **1**.



Pinch bolt, axle holder

- Tightening sequence: 2x each side, alternately
- 8 Nm



- Tighten right axle clamping screws **3**.



Pinch bolt, axle holder

– Tightening sequence: 2x each side, alternately

– 8 Nm

- Firmly pull the brake lever several times to seat the brake pads against the brake disc.

Removing rear wheel

- Make sure the ground is level and firm and place

the motorcycle on its side stand.

- Fitting the auxiliary stand (► 83)
- Placing motorcycle on auxiliary stand (► 84)
- Engage first gear.



- Place a support underneath the rear wheel and remove 5 studs **1**.
- Lower the rear wheel to the ground.
- Roll the rear wheel out toward the rear.

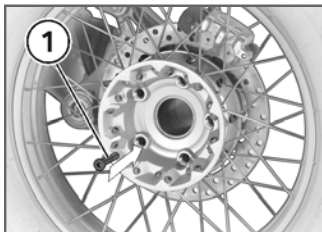
Installing rear wheel



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

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

- Degrease the wheel adapter and the wheel hub.
- Place the rear wheel on the wheel adapter.



- Tighten wheel studs **1** until hand-tight and then tighten to specified torque in diagonally opposite sequence.



Rear wheel to wheel carrier

- Tightening sequence:
Tighten in diagonally opposite sequence
- 60 Nm

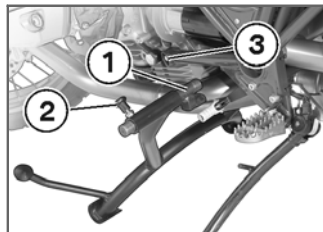
Auxiliary stand

Use

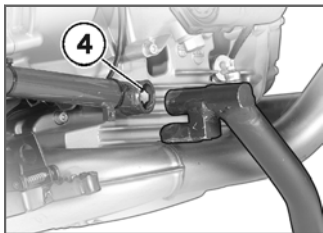
BMW Motorrad offers a service stand that holds the motorcycle securely upright for maintenance work. You can obtain the service stand from your authorised BMW Motorrad dealer.

Fitting the auxiliary stand

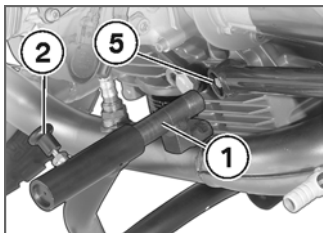
- Make sure the ground is level and firm and place the motorcycle on its side stand.
- Place auxiliary stand (001651) underneath the motorcycle with the skids to the front and the lever on the left.



- Push adjustable pin **1** all the way out with the aid of locking pin **2**.
- Manoeuvre auxiliary stand (001651) up at the narrowest point of the exhaust system until it is positioned at attachment point **3** above the exhaust manifold.

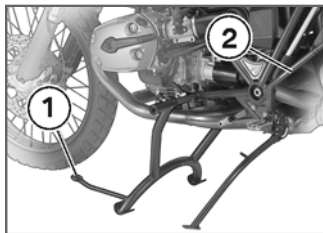


- On the right-hand side, engage auxiliary stand (001651) in mount **4**.



- Push adjustable pin **1** into mount **5**.
» Locking pin **2** engages.

Placing motorcycle on auxiliary stand



- Hold the motorcycle upright and balanced, so that both skids of the auxiliary stand are on the ground.
- Place your left foot on lever **1**.
- Take a firm grip of **2** with your right hand.
- Keeping plenty of weight on the lever, push the motorcycle forward until the auxiliary stand is seated against the frame.

Bulbs


General instructions

A warning appears in the multifunction display if a bulb is defective. If the brake light or rear light fails, the warning is accompanied by the General warning light lighting up yellow. If the rear light fails the second filament of the brake light shines at reduced brightness to double as a rear light. Even though you have this substitute rear light, the indicators in the display tell you that a bulb defect has occurred.





A defective bulb places your safety at risk because it is easier for other users to oversee you and your motorcycle. Replace defective bulbs as soon as possible; always

carry a complete set of spare bulbs if possible.◀

 The bulb is pressurised and can cause injury if damaged.

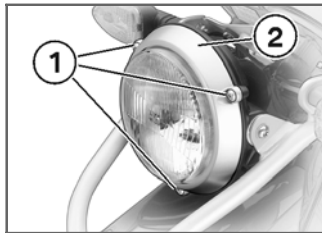
Wear protective goggles and gloves when changing bulbs.◀

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

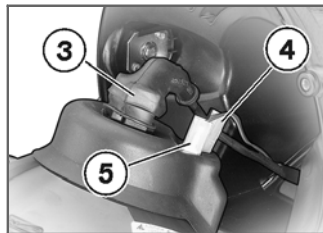
 Do not touch the glass of new bulbs with your fingers. Use a clean, dry cloth to hold the bulbs when handling them. Dirt deposits, in particular oil and grease, interfere with heat radiation from the bulb. This leads to overheating and shortens the bulb's operating life.◀

Removing headlight

Ignition is switched OFF



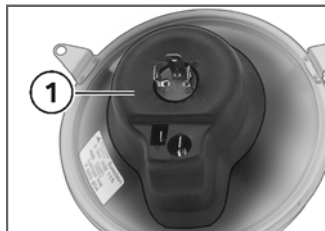
- While holding the headlight, remove three screws **1**.
- Remove cover panel **2**.



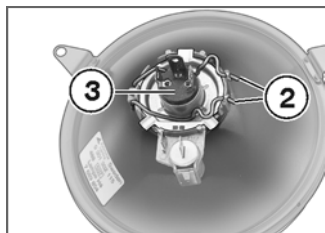
- Disconnect plugs **3**, **4** and **5**.

Replacing low-beam and high-beam headlight bulb

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Removing headlight (➡ 85)



- Remove rubber cap **1**.



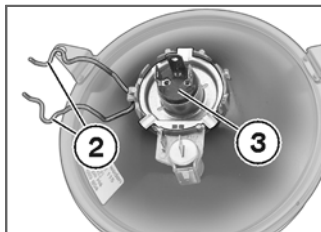
- Disengage spring clip **2** from the fastenings and swing it aside.

- Pull high-beam/low-beam bulb **3** out of the headlight housing.
- Replace the defective bulb.

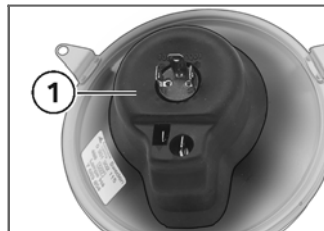


Bulb of low-beam and high-beam headlight

– H4 / 12 V / 55 W / 60 W



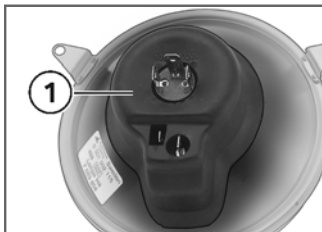
- Insert bulb **3** into the headlight housing.
- Close and lock spring clips **2**.



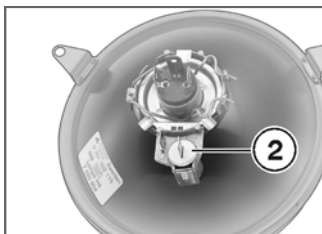
- Position the rubber cap **1** on the headlight housing and push it into place.
- Install the headlight (►► 88)

Replacing parking-light bulb

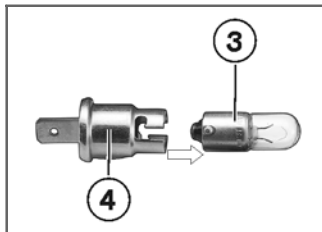
- Make sure the ground is level and firm and place the motorcycle on its stand.
- Removing headlight (►► 85)



- Remove rubber cap **1**.



- Pull bulb socket **2** out of the headlight housing.

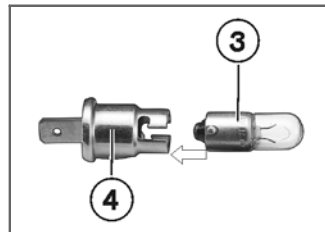


- Press bulb **3** into fitting **4** and remove by turning it counter-clockwise.
- Replace the defective bulb.

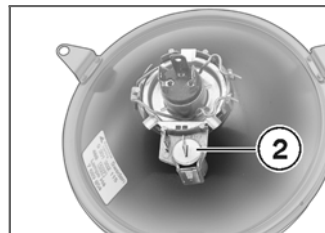


Parking-light bulb

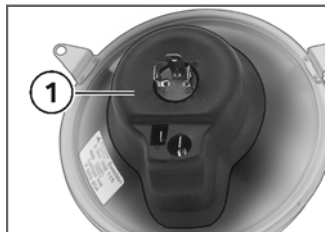
– W5W / 12 V / 5 W



- Press bulb **3** into socket **4** and turn it clockwise to install.



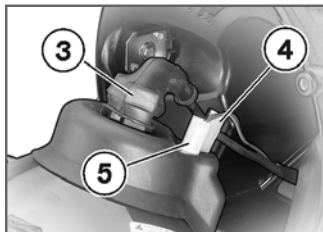
- Insert bulb holder **2** into the headlight housing.



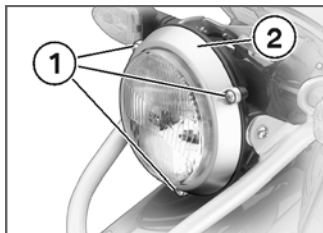
- Position the rubber cap **1** on the headlight housing and push it into place.
- Install the headlight (➡ 88)

Installing headlight

Ignition is switched OFF.



- Connect plugs **3**, **4** (with blue cable) and plug **5** (with brown cable).

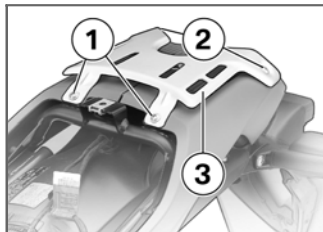


- Seat the headlight with cover **2** in the headlight housing.

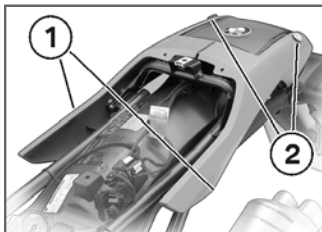
- Install three screws **1**.

Replacing brake light and rear light bulb

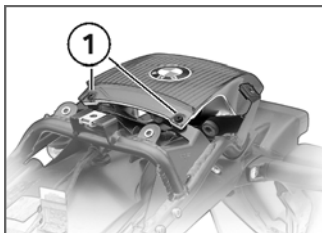
- Make sure the ground is level and firm and place the motorcycle on its stand.
- Removing the seat (➡ 42)



- Remove screws **1**, **2**.
- Remove rear-light protect or **3**.

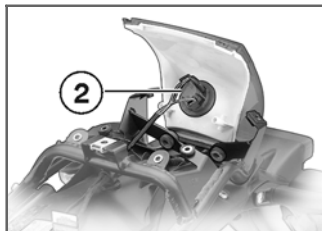


- Remove screws **1**.
- Remove the rear trim panels, taking care not to mislay aluminium bushes **2**.

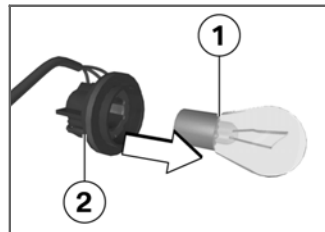


- Remove screws **1**.


- Pull the rear light back and out of the holders.



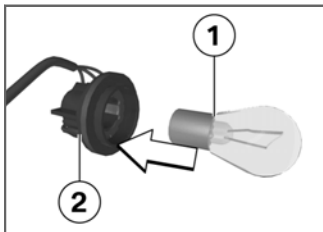
- Turn bulb socket **2** counter-clockwise and pull it out of the rear light.



- Press bulb **1** into fitting **2** and remove by turning it counter-clockwise.
- Replace the defective bulb.

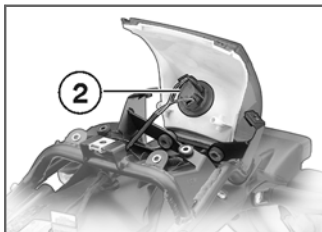
 Bulb of tail light/brake light

– P21/5W / 12 V / 5 W / 21 W

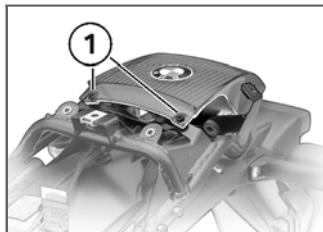


- Press bulb **1** into socket **2** and turn it clockwise to install.

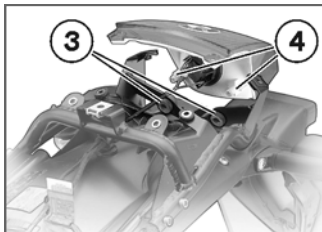
▶ There is only one position in which the bulb can be inserted into the socket. ◀



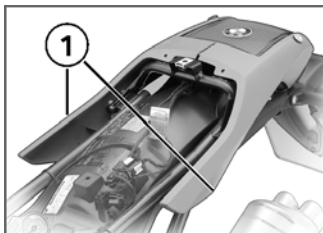
- Turn bulb socket **2** clockwise and install it in the rear light.



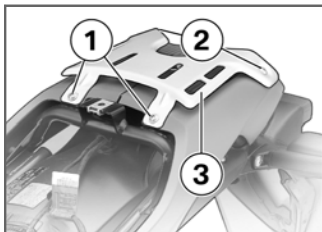
- Install screws **1**.



- Press the rear-light unit with holders **3** into mounts **4**.



- Install rear trim panels with screws **1**.



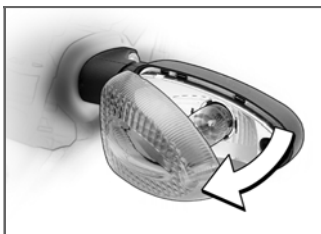
- Hold rear-light protector **3** in position.
- Install screws **1**.
- Install screws **2**.
- Installing the seat (➡ 43)

Replacing turn indicator bulbs

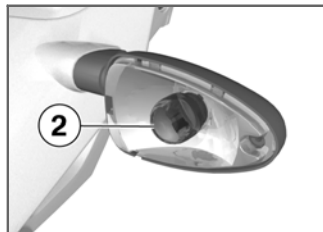
- Make sure the ground is level and firm and place the motorcycle on its stand.




- Remove screw **1**.




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



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

 Front flashing turn indicator bulbs

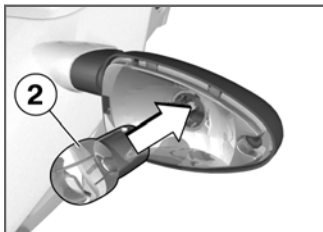
– R10W / 12 V / 10 W

 Rear flashing turn indicator bulbs

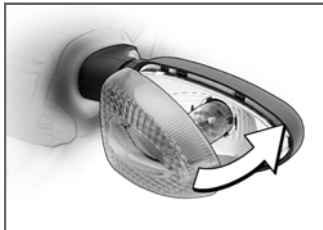
– R10W / 12 V / 10 W

with OA White flashing turn indicators:

– RY10W / 12 V / 10 W<



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



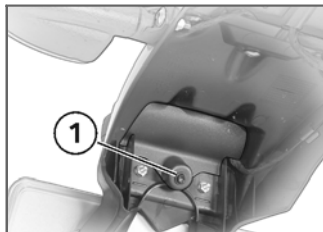
- Working from the inboard side, insert the glass into the bulb housing and close the housing.



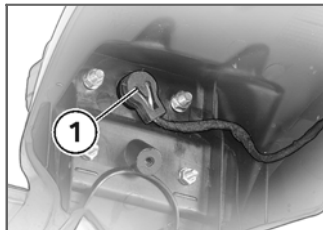
- Install screw **1**.

Replacing number-plate light bulb

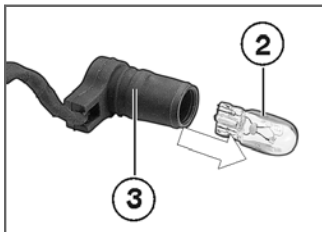
- Make sure the ground is level and firm and place the motorcycle on its stand.




- Remove screw **1**.
- Remove the cable protector.



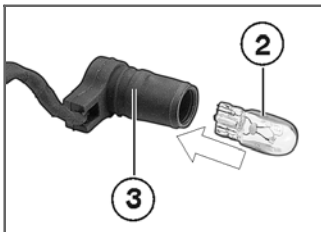
- Pull bulb holder **1** out of the light carrier.



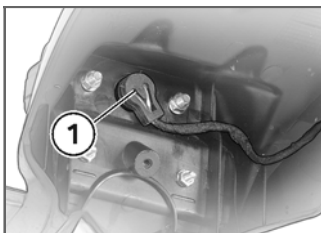
- Pull bulb **2** out of socket **3**.
- Replace the defective bulb.

 Bulb of number-plate light

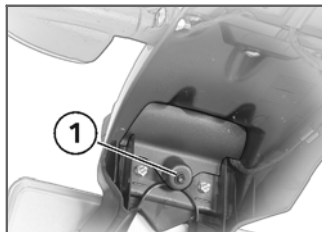
– W5W / 12 V / 5 W



- Push bulb **2** into socket **3**.




- Pull bulb holder **1** into the light carrier.



- Install the cable protector with screw **1**.

Jump starting

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

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

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

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

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

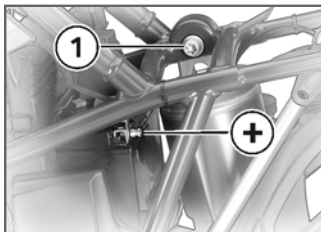
Use only jump leads fitted with fully insulated crocodile clips at both ends. ◀

⚠ Jump-starting with a donor-battery voltage higher than 12 V can damage the vehicle electronics.

Make sure that the battery of the donor vehicle has a voltage rating of 12 V. ◀

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

- Removing the seat (➡ 42)
- When jump-starting the engine, do not disconnect the battery from the on-board electrical system.
- Remove the protective cap from the battery's positive terminal.
- 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 pos-

itive 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 ground of the vehicle with the flat battery. If the battery of your motorcycle is flat, use spring-strut screw **1** as the connection to ground.
- Start the engine of the vehicle with the discharged battery in the usual way; if the engine does not start, wait a few minutes before repeating the attempt in order to protect the starter motor and the donor battery.
- Allow both engines to idle for a few minutes before disconnecting the jump leads.

- Disconnect the jump lead from the ground connection first, then disconnect the second lead from the positive terminals.

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

- Installing the seat (➡ 43)


Battery

Maintenance instructions


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

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


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


 If the battery is not disconnected, the on-board electronics (e.g. clock, etc.) gradually drain the battery. This can cause the battery to run flat. If this happens, warranty claims will not be accepted.


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

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

Charging battery when connected


 Charging the connected battery directly at the battery terminals can damage the vehicle electronics. Always disconnect the battery from the on-board circuits before recharging it with a charger connected directly to the battery posts.◀

 Only chargers suitable for this mode of charging can be used to recharge the battery via the on-board socket. Unsuitable chargers could cause damage to the motorcycle's on-board electrics. Use BMW chargers with the part numbers 71 60 7 688 864 (220 V) or, as applicable, 71 60 7 688 865 (110 V). If you are in doubt, disconnect the battery from the on-board systems and connect the charger directly to the battery.◀

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

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


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

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


Charging battery when disconnected

- Charge the battery using a suitable charger.
- Comply with the operating instructions of the charger.


- Once the battery is fully charged, disconnect the charger terminal clips from the battery terminals.

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

Removing the battery

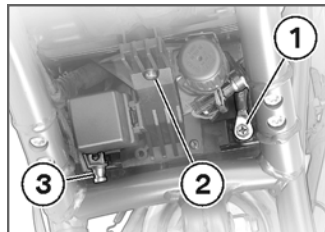
 Note that the tripmeters and the operating-hours counter are reset to zero if the battery is disconnected.◀


- Make sure the ground is level and firm and place the motorcycle on its stand.
- Removing the seat (➡ 42)

 If it is not standing firmly, the motorcycle could

tumble in the course of the operations described below. Always make sure that the motorcycle is stable and firmly supported.◀

- Switch off the ignition.



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

Always proceed in the correct sequence.◀

- Disconnect negative battery lead **1** first.

- Then disconnect positive battery lead **2**.
- Remove screw **3** of the battery holder.
- Without disconnecting the cables, manoeuvre the battery holder to the left and lay it over the frame.



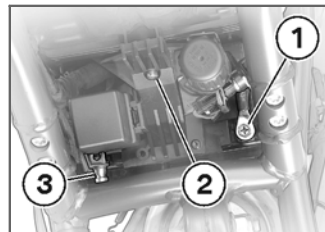
- Turn the battery 90° and lift it clear of the motorcycle.


Installing battery

- Switch off the ignition.
- Hold the battery upright to manoeuvre it into the bat-

tery holder, then turn it to the correct position.

- » The positive terminal is on the left as viewed in the forward direction of travel.
- Centre the battery between the ribs on the air-filter box.



 Installation in the wrong sequence increases the risk of short-circuits. Always proceed in the correct sequence. Never install the battery without the protective cap.◀


- Connect battery positive lead **2** first.
- The connect battery negative lead **1**.
- Install screw **3** of the battery holder.
- Installing the seat (➡ 43)
- Set the clock (➡ 34)

Care

Care products	100
Washing the motorcycle	100
Cleaning easily damaged components	101
Paint care	101
Protective wax coating	102
Laying up the motorcycle	102
Restoring motorcycle to use	102

Care products

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

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


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

Washing the motorcycle

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


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

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


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

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

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

 Warm water intensifies the effect of salt.

Use only cold water to wash off road salt.◀

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


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

Cleaning easily damaged components

Plastics

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


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

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

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

Even fly-remover pads or cleaning pads with hard

surfaces can produce scratches. ◀

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


Chrome

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

Radiator

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


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

 Cooling fins can be bent easily.

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

Rubber

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

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

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

Paint care

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

Remove particularly aggressive substances immediately, however, as otherwise the paint can be affected or become discoloured. Substances of this nature include spilt fuel, oil, grease, brake fluid and bird droppings. We recommend BMW vehicle polish or BMW paint cleaner for this purpose.

Marks on the paintwork are particularly easy to see after the motorcycle has been washed. Remove stains of this kind immediately, using cleaning-grade benzene or petroleum spirit on a clean cloth or ball of cotton wool. BMW Motorrad recommends using BMW tar remover for removing specks of tar. Remember to wax the parts treated in this way.

Protective wax coating

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

The best way to see whether the paint has to be protected is that water no longer forms pearls.

Laying up the motorcycle

- Clean the motorcycle.
- Remove the battery.
- Spray the brake and clutch lever pivots and the main and side stand pivots with a suitable lubricant.
- Coat bright metal and chrome-plated parts with an acid-free grease (e.g. Vaseline).
- Stand the motorcycle in a dry room in such a way

that there is no load on either wheel. Authorised BMW Motorrad dealers can provide suitable auxiliary stands.

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

Restoring motorcycle to use

- Remove the protective wax coating.
- Clean the motorcycle.
- Install a charged battery.
- Before starting: work through the checklist.
- Before removing the auxiliary stand, check the air

pressure in the Air Damping System and adjust if necessary.

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Troubleshooting chart

Engine does not start or is difficult to start

Possible cause	Remedy
Kill switch activated.	Kill switch in operating position (run).
Side stand extended and gear engaged.	Retract the side stand (►► 58).
Gear engaged and clutch not disengaged.	Select neutral or pull clutch lever (►► 58).
Clutch pulled when ignition was OFF	Switch on the ignition, then pull the clutch lever.
No fuel in tank.	Refuelling (►► 63)
Battery not adequately charged.	Charge the battery when connected (►► 95)

Threaded fasteners

Handlebars	Value	Valid
Handlebar clamping block to fork bridge		
M10 x 100, grease thread Optimoly TA	38 Nm	
Handlebar to handlebar clamping block		
M8 x 30, grease thread Optimoly TA	19 Nm	
Mirror arm	Value	Valid
Mirror to clamping piece		
M10	25 Nm	
Front wheel	Value	Valid
Pinch bolt, axle holder		
M6 x 30	2x each side, alternately	
	8 Nm	
Front wheel, axle screw in axle holder		

Front wheel	Value	Valid
Grease threads, M22 x 1.5 - Elox H Optimoly TA	40 Nm	
Rear wheel	Value	Valid
Rear wheel to wheel carrier		
M10 x 53 x 1.25	Tighten in diagonally opposite sequence	
	60 Nm	

Engine

Engine, type	Four-stroke opposed twin, air-cooled with oil-cooled exhaust ports, installed longitudinally, two overhead camshafts, electronic engine management.
Effective displacement	1170 cm ³
Cylinder bore	101 mm
Piston stroke	73 mm
Compression ratio	11.0 : 1
Nominal output	77 kW, - at engine speed: 7000 min ⁻¹

Max. torque	115 Nm, - at engine speed: 5500 min ⁻¹
Maximum permissible engine speed	7800 min ⁻¹
Idle speed	1150±50 min ⁻¹

Fuel

Recommended fuel grade	98 ROZ/RON, Super plus (premium) 91 ROZ/RON, Regular unleaded (fuel grade, usable with power- and consumption-related restrictions)
Usable fuel capacity	13 l
Reserve fuel	4 l

Engine oil

Engine, oil capacity	4 l, with filter change
Lubricant	Engine oil, 20W-50
Engine oil, quantity for topping up	0.5 l, difference between MIN and MAX

Oil grades	Engine oils of API classification SF or better. Engine oils of ACEA classification A2 or better. BMW Motorrad recommends not using synthetic oils for the first 10,000 km. Please do not hesitate to contact your authorised BMW Motorrad dealer if you have any questions relating the choice of a suitable engine oil for your motorcycle.
Permissible viscosity classes	
SAE 5 W- ≥ 30	-20...20 °C, Operation at low temperatures
SAE 10 W-40	-10...30 °C, Operation at moderate temperatures
SAE 15 W- ≥ 40	≥ 0 °C
SAE 20 W- ≥ 40	≥ 0 °C
SAE 5 W- ≥ 50	≥ -20 °C, High-grade and synthetic oils, operation in all temperature ranges
SAE 10 W- ≥ 50	≥ -20 °C, High-grade and synthetic oils, operation in all temperature ranges

Riding specifications

Top speed	200 km/h
Maximum speed with massive-bar tyres	comply with tyre-specific speed restrictions

Clutch

Clutch, type	Single dry plate with high-leverage pressure plate
--------------	--

Transmission

Gearbox type	Fully helical 6-speed gearbox with integral reaction damper, claw-action shift by sliding sleeves
--------------	---

Gear ratios

Gearbox transmission ratios	1.824 (31:17 teeth), Primary transmission ratio 2.277 (41:18 teeth), 1st gear 1.583 (38:24 teeth), 2nd gear 1.259 (34:27 teeth), 3rd gear 1.033 (31:30 teeth), 4th gear 0.903 (28:31 teeth), 5th gear 0.805 (29:36 teeth), 6th gear
-----------------------------	---

Final drive

Rear wheel drive, type	Shaft drive with bevel gears
Final drive gear ratio	2.82 : 1

Running gear

Front suspension, type	upside-down telescopic fork
Front suspension, total suspension travel	270 mm, at wheel
Rear suspension, type	Pneumatic shock-absorber element (Air damping Element) with two-way adjustable bypass, adjustment by means of manually operated pump and pressure gauge
Rear suspension, total suspension travel	250 mm, at wheel

Brakes

Front brake, type	hydraulically operated single-disc brake with 2-piston floating caliper and floating brake disc
Brake pads, front wheel, material	Sintered metal
Rear brakes, type	hydraulically operated disc brake with 2-piston floating caliper and fixed disc
Brake pads, rear wheel, material	Sintered metal

Wheels and tyres

Front wheel, type	Cross-spoked wheel with 40 spokes, MT H2
Front wheel, rim size	1.85" x 21"
Front wheel, tyre designation	90/90-21
Rear wheel, type	Cross-spoked wheel with 40 spokes, MT H2
Rear wheel, rim size	2.50" x 17"
Rear wheel, tyre designation	140/80-17

Tyre pressures

Tyre pressure, front	2.2 bar, One-up, tyre cold
with OA Rear footrest:	2.2 bar, Two-up and/or with luggage, tyre cold
Tyre pressure, rear	2.5 bar, One-up, tyre cold
with OA Rear footrest:	2.5 bar, Two-up and/or with luggage, tyre cold

Electrics

On-board socket, rating	5 A
Fuses	The circuits are electronically protected, so plug-in fuses are no longer necessary. If an electronic fuse trips and de-energises a circuit, the circuit is active as soon as the ignition is switched on after the fault has been rectified.

Battery

Battery, type	AGM (Absorptive Glass Mat) battery
Battery rated voltage	12 V
Battery rated capacity	11 Ah

Spark plugs

Spark plug, manufacturer and designation	Bosch YR5LDE
Spark plug, electrode gap (When new)	0.8±0.1 mm
Spark plug, electrode gap (Wear limit)	1 mm

Lighting

Bulb of low-beam and high-beam headlight	H4 / 12 V / 55 W / 60 W
Parking-light bulb	W5W / 12 V / 5 W
Bulb of tail light/brake light	P21/5W / 12 V / 5 W / 21 W
Front flashing turn indicator bulbs	R10W / 12 V / 10 W
Rear flashing turn indicator bulbs	R10W / 12 V / 10 W
with OA White flashing turn indicators:	RY10W / 12 V / 10 W
Bulb of number-plate light	W5W / 12 V / 5 W

Frame

Frame, type	Tubular steel spaceframe, drive unit not load-bearing
Type plate, location	on steering head, left
Vehicle identification number (VIN), location	on steering head, right

Dimensions

Length of motorcycle	2350 mm
Height of motorcycle	1260 mm, in DIN normal-load position; without mirrors
maximum width across front footrests	550 mm
Front-seat height	925 mm, at unladen weight

Weights

Unladen weight	195 kg, DIN unladen weight, ready for road, 90 % load of fuel, without optional extras
Permitted gross weight	380 kg
Maximum payload	185 kg

Service

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BMW Motorrad service

Advanced technology requires specially adapted methods of maintenance and repair.



If maintenance and repair work is performed inexpertly, it could result in consequential damage and thus constitute a safety risk. BMW Motorrad recommends you to have all the associated work on your motorcycle carried out by a specialist workshop, preferably an authorised BMW Motorrad dealer. ◀

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

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

BMW Motorrad service quality

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

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

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

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

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

In the event of a breakdown, the BMW Motorrad Service Card issued with each new BMW motorcycle enables you to access an extensive range of services such as breakdown assistance, motorcycle transportation etc. (details can differ from country to country). In the event of a breakdown, contact the Mobile Service organisation of BMW Motorrad. The specialists will provide the necessary advice and assistance. You will find important country-specific contact addresses and the after-sales service organisation phone numbers in the "Service Kontakt / Service Contact"

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

BMW Motorrad service network

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

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

Maintenance work Intervals

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

BMW Running-in Check

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

BMW Annual Inspection

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

BMW Service

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

BMW Inspection

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

Maintenance schedules

The maintenance schedule for your motorcycle depends on the equipment fitted, and on the motorcycle's age and the distance it has covered. A current maintenance schedule is included in the Repair Manual on DVD/CD-ROM, and is available on request

from your authorised BMW Motorrad dealer.

Maintenance work for sporty off-roading

Sporty off-roading, particularly in muddy, sandy and wet terrain, can result in above-average wear of components such as the drivetrain, the suspension and running gear, and the brakes. Consequently, wear parts might require maintenance and replacement sooner than as stated in the standard maintenance schedule. See the "Maintenance Instructions for Sporty Off-roading" for details.

Please bear in mind that if the motorcycle is used for sporty off-roading, you must comply with these additional maintenance instructions in order to

ensure correct operability of the motorcycle.

Confirmation of maintenance work

BMW Pre-delivery Check

Carried out in accordance with manufacturer's instructions

Date, stamp, signature

BMW Running-in Check

Carried out in accordance with manufacturer's instructions

Odometer reading_____

☐ Brake fluid, new

Date, stamp, signature

BMW Service

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

Carried out in accordance with manufacturer's instructions

Odometer reading_____

- ☐ Brake fluid, new

Date, stamp, signature

BMW Service

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

Carried out in accordance with manufacturer's instructions

Odometer reading_____

- ☐ Brake fluid, new

Date, stamp, signature

BMW Service

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

Carried out in accordance with manufacturer's instructions

Odometer reading_____

- ☐ Brake fluid, new

Date, stamp, signature

BMW Service

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

Carried out in accordance with manufacturer's instructions

Odometer reading_____

- ☐ Brake fluid, new

Date, stamp, signature

BMW Service

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

Carried out in accordance with manufacturer's instructions

Odometer reading_____

- ☐ Brake fluid, new

Date, stamp, signature

BMW Service

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

Carried out in accordance with manufacturer's instructions

Odometer reading_____

- ☐ Brake fluid, new

Date, stamp, signature

BMW Service

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

Carried out in accordance with manufacturer's instructions

Odometer reading_____

- ☐ Brake fluid, new

Date, stamp, signature

BMW Service

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

Carried out in accordance with manufacturer's instructions

Odometer reading_____

- ☐ Brake fluid, new

Date, stamp, signature

BMW Service

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

Carried out in accordance with manufacturer's instructions

Odometer reading_____

- ☐ Brake fluid, new

Date, stamp, signature

BMW Service

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

Carried out in accordance with manufacturer's instructions

Odometer reading_____

- ☐ Brake fluid, new

Date, stamp, signature

BMW Service

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

Carried out in accordance with manufacturer's instructions

Odometer reading_____

- ☐ Brake fluid, new

Date, stamp, signature

BMW Service

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

Carried out in accordance with manufacturer's instructions

Odometer reading_____

- ☐ Brake fluid, new

Date, stamp, signature

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

[illegible]

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