

Rider's Manual

HP2 Megamoto



BMW Motorrad



The Ultimate Riding
Machine

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)

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.

Table of Contents

You can also consult the index at the end of this Rider's Manual if you want to find a particular topic or item of information.

1 General instructions 5

Overview	6
Abbreviations and symbols	6
Equipment	6
Technical data	7
Currency	7

2 General views 9

General view, left side	11
General view, right side	13
Underneath the seat	15
Handlebar fitting, left	16
Handlebar fitting, right	17
Instrument cluster	18

3 Status indicators 19

Status indicators	20
Standard warnings	20
ABS warnings ^{OE}	26

4 Operation 29

Ignition switch and steering lock	30
Electronic immobiliser (EWS)	31
Clock	32
Multifunction display	32
Lights	34
Turn indicators	35
Hazard warning flashers	36
Emergency off switch (kill switch)	37
BMW Motorrad ABS ^{OE}	37
Clutch	38
Brakes	39
Mirrors	40
Handlebars	40
Spring preload	43
Damping	46
Motorcycle height	49
Tyres	55
Headlight	55
Seat	56

5 Riding 59

Safety instructions	60
Checklist	62
Starting	62
Running in	64
Brake system	65
Parking your motorcycle	66
Refuelling	67

6 Engineering details 71

Brake system with BMW Motorrad ABS ^{OE}	72
--	----

7 Accessories 75

General instructions	76
Power socket	76
Luggage	77

8 Maintenance 79

General instructions	80
Toolkit	80
Engine oil	80
Brake system	82
Brake pads	83
Brake fluid	85
Clutch	87

Tyres	88	Clutch	124
Rims	88	Transmission	125
Wheels	88	Rear-wheel drive	125
Front-wheel stand	94	Running gear	126
Rear-wheel stand	95	Brakes	127
Bulbs	96	Wheels and tyres	127
Jump starting	106	Electrics	129
Battery	107	Frame	130
Number-plate carrier	110	Dimensions	131
9 Care	113	Weights	132
Care products	114	Riding specifications	132
Washing motorcycle	114	11 Service	133
Cleaning easily damaged components	114	BMW Motorrad service	134
Paint care	115	BMW Motorrad service quality	134
Protective wax coating	116	BMW Motorrad Service Card: on-the-spot break- down assistance	134
Laying up motorcycle	116	BMW Motorrad service net- work	135
Restoring motorcycle to use	116	Maintenance work	135
10 Technical data	117	Confirmation of mainten- ance work	136
Troubleshooting chart	118	Confirmation of service	141
Threaded fasteners	119		
Engine	122		
Fuel	123		
Engine oil	123		

General instructions

Overview	6
Abbreviations and symbols	6
Equipment	6
Technical data	7
Currency	7

Overview

Chapter 2 of this Rider's Manual will provide you with an initial overview of your motorcycle. All maintenance and repair work on the motorcycle is documented in Chapter 11. 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.

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

The motorcycles are assembled complete with all the BMW optional extras originally 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).

ABS

Anti-lock brake system

Equipment

When you ordered your BMW motorcycle, you chose various items of custom equipment. This Rider's Manual describes option-

al 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

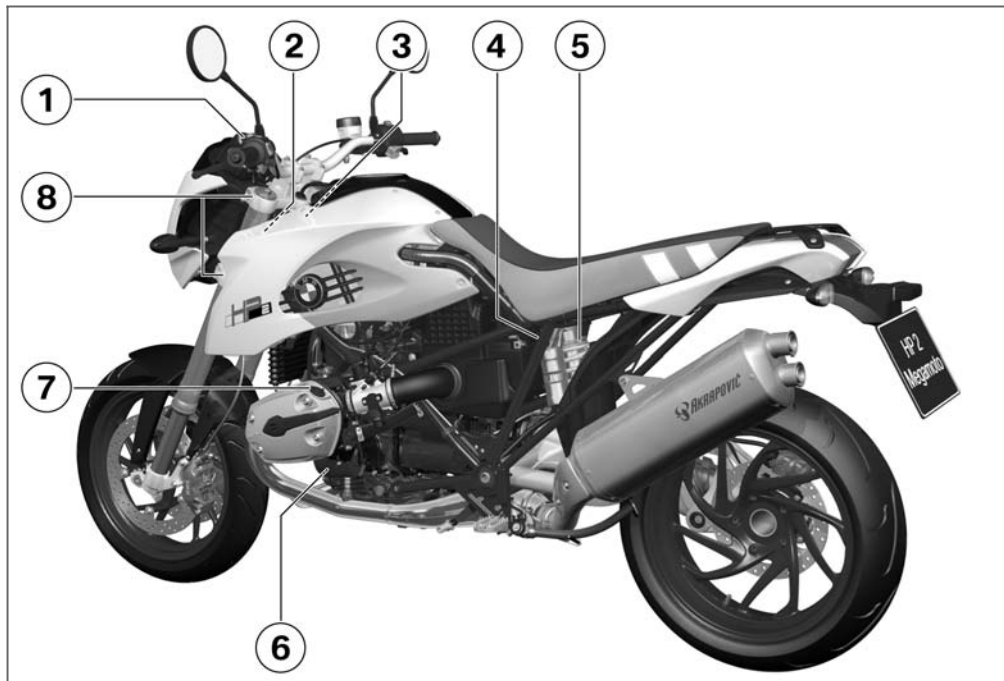
All dimensions, weights and power ratings stated in the Rider's Manual are quoted to the standards and comply with the tolerance requirements of the Deutsche Institut für Normung e. V. (DIN). Versions for individual countries may differ.

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.

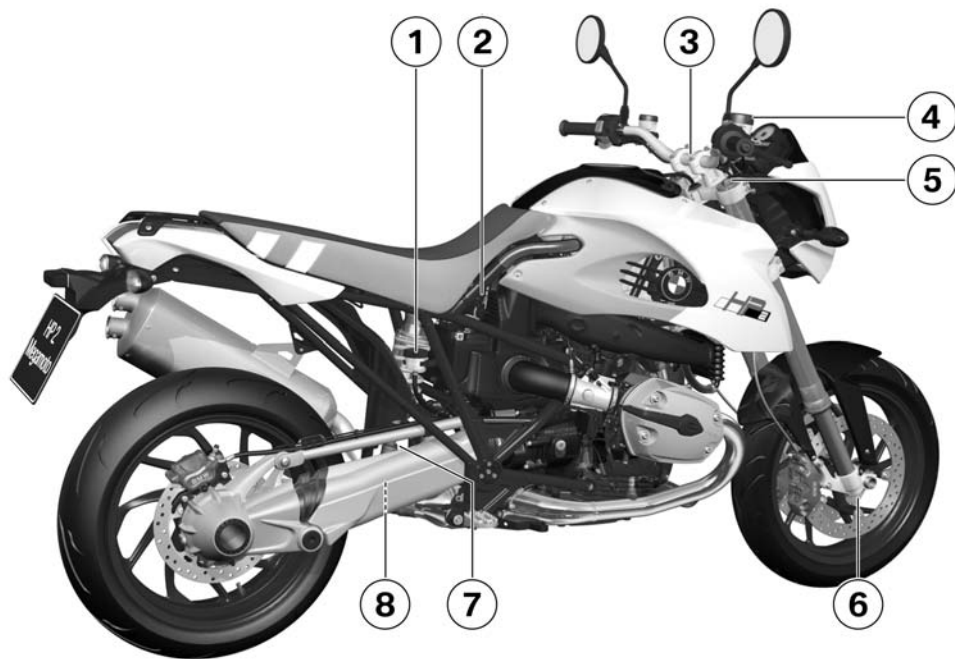
General views

General view, left side.....	11
General view, right side	13
Underneath the seat	15
Handlebar fitting, left	16
Handlebar fitting, right	17
Instrument cluster	18



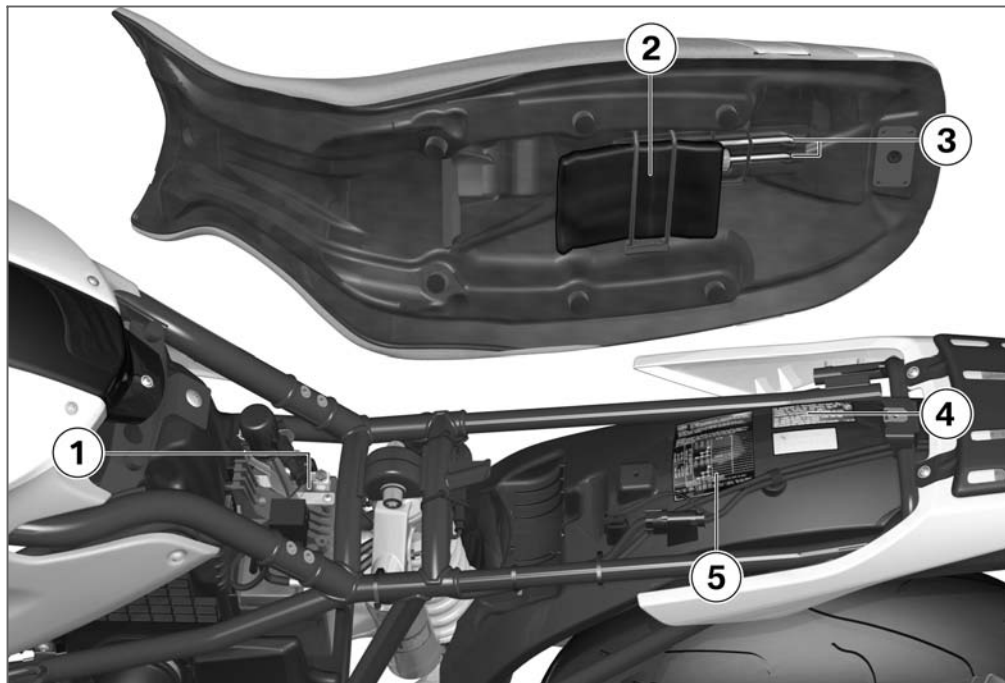
General view, left side

- 1** Clutch-fluid reservoir
( 87)
- 2** Fuel-level indicator on fuel tank ( 67)
- 3** VIN (on steering head, right)
- 4** Adjuster for damping characteristic, rear suspension (compression stage) ( 46)
- 5** Adjuster for spring preload, rear ( 43)
- 6** Engine oil level indicator
( 80)
- 7** Engine-oil filler neck
( 81)
- 8** Height adjustment of the telescopic forks ( 49)



General view, right side

- 1 Brake-fluid reservoir, rear
( 86)
- 2 Power socket ( 76)
- 3 Adjustable handlebars
( 40)
- 4 Brake-fluid reservoir, front
( 85)
- 5 Adjuster for damping characteristic, front suspension (rebound stage) ( 46)
- 6 Adjuster for damping characteristic, front suspension (compression stage) ( 46)
- 7 Adjuster for damping characteristic, rear suspension (rebound stage) ( 46)
- 8 Setting spring-strut length
( 49)

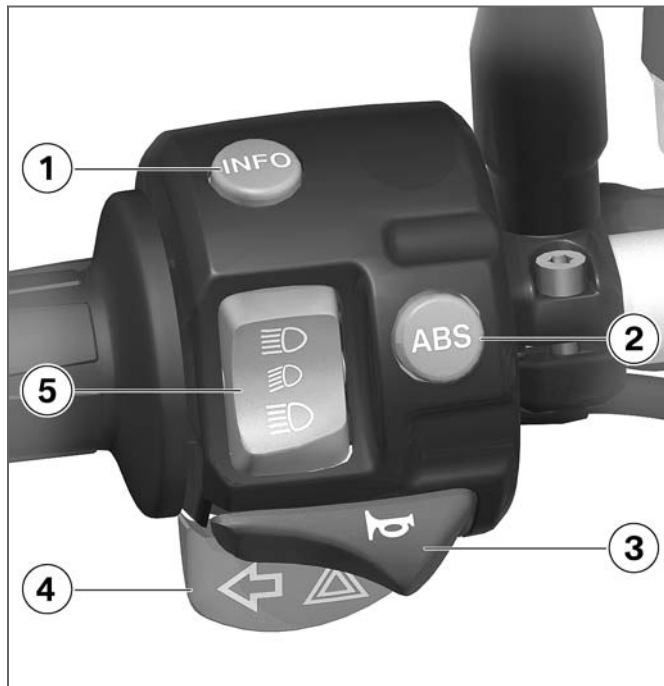


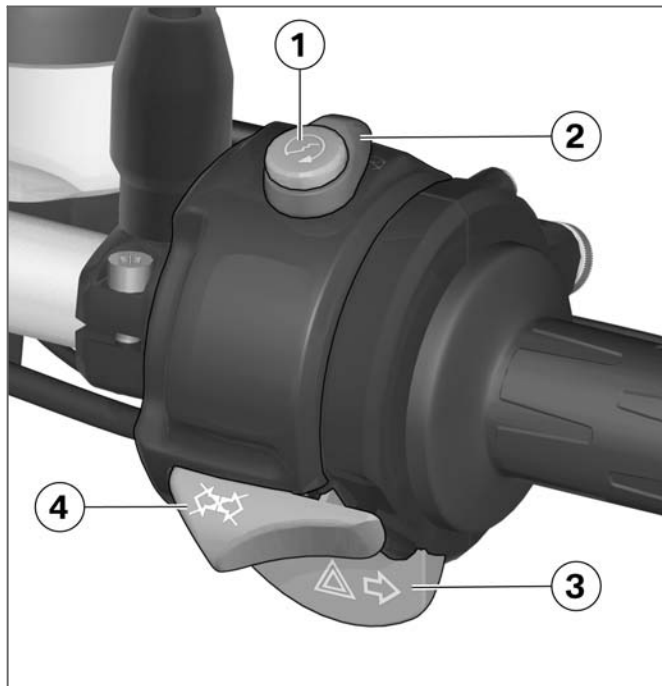
Underneath the seat

- 1 Battery (🔋 107)
- 2 Rider's Manual
- 3 Toolkit
- 4 Weights table
- 5 Table of tyre pressures

Handlebar fitting, left

- 1 Operating the multifunction display (➡ 32), Setting clock (➡ 32)
- 2 Operating the ABS^{OE} (➡ 37)
- 3 Horn
- 4 Flashing turn indicators, left (➡ 35), Hazard warning flashers (➡ 36)
- 5 Headlight flasher and high-beam headlight (➡ 34)



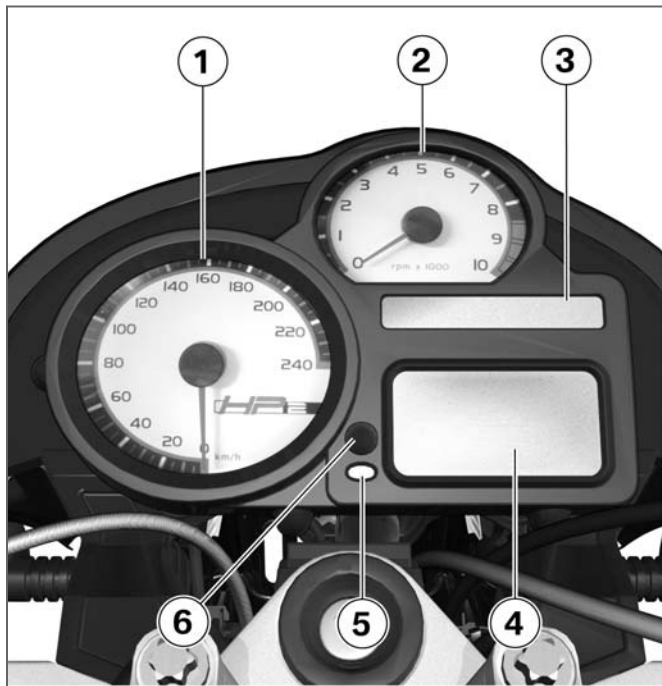


Handlebar fitting, right

- 1 Starter button (➡ 62)
- 2 Emergency off switch (kill switch) (➡ 37)
- 3 Flashing turn indicators, right (➡ 36), Hazard warning flashers (➡ 36)
- 4 Cancel button, flashing turn indicators (➡ 36), Pushbutton, cancel hazard warning flashers (➡ 37)

Instrument cluster

- 1 Speedometer
- 2 Rev. counter
- 3 Telltale lights (→ 20)
- 4 Multifunction display (→ 20)
- 5 Sensor for instrument lighting
- 6 Operating the multifunction display (→ 32)

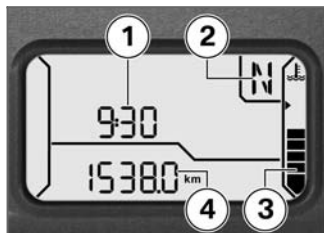


Status indicators

Status indicators	20
Standard warnings	20
ABS warnings ^{OE}	26

Status indicators

Multifunction display



- 1 Clock (→ 32)
- 2 Gear indicator (→ 20)
- 3 Engine temperature (→ 20)
- 4 Odometer and tripmeters (→ 32)

Telltale lights



- 1 Flashing turn indicators, left
- 2 High-beam headlight
- 3 Idle
- 4 Flashing turn indicators, right

Gear indicator

N The gear engaged or **N** for neutral appears on the display.

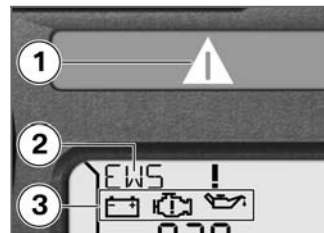
N If no gear is engaged, the 'neutral' telltale light also lights up.

Engine temperature

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

Standard warnings

Mode of presentation



Warnings are indicated by the 'General' warning light **1** showing in combination with a warning word, for example **2** or one of the warning symbols **3**. The 'General' warning light shows red or yellow, depending on the urgency of the warning. If two or more warnings occur at the same time,

all the appropriate warning symbols appear. Warnings in plain-text form alternate.

The possible warnings are listed on the next page.

Warnings, overview

Telltale lights

Status indicators

Meaning

	Lights up yellow	EWS ! appears on the display	Electronic immobiliser active (➡ 23)
	Lights up yellow	FUEL ! appears on the display	Fuel down to reserve (➡ 23)
	Lights up yellow	 Appears on the display	Engine in emergency-operation mode (➡ 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	LAMPR ! appears on the display	Rear light bulb defective (➡ 24)
		LAMPF ! appears on the display	Front light bulb defective (➡ 25)
	Lights up yellow	LAMPS ! appears on the display	Bulbs defective (➡ 25)

Electronic immobiliser active



General warning light shows yellow.

EWS ! appears on the display.
Possible cause:

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 shows yellow.

FUEL ! 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.◀

Possible cause:

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



Fuel reserve

— ≥4 l

- Refuelling (➡ 68)

Engine in emergency-operation mode



General warning light shows yellow.



Engine 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.◀

Possible cause:

The engine 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.



Oil-can symbol appears on the display.

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



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. ◀

Possible cause:

The engine-oil level is too low.

- Check the engine oil level (80)

If the oil level is too low:

- Top up the engine oil (81)

Possible cause:

The engine-oil pressure is insufficient.



Riding when engine-oil pressure is low can result in engine damage.

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 shows red.



Battery symbol appears on the display.



A discharged battery can render various systems unavailable, for example the lights,

the engine or the ABS. This can result in dangerous situations. If possible, do not continue your journey. ◀

Battery is not being charged. If you continue to ride the motorcycle the on-board electronics will drain the battery.

Possible cause:

Alternator or alternator drive belt defective

- 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 shows yellow.

LAMPR ! appears on the display.



A defective bulb places your safety at risk because it is easier for other users to oversee the motorcycle.

Replace defective bulbs as soon as possible; always carry a complete set of spare bulbs if possible. ◀

Possible cause:

Rear light or brake light bulb defective.

- Replacing brake light and rear light bulb (➡ 100)

Front light bulb defective

LAMPF ! appears on the display.



A defective bulb places your safety at risk because it is easier for other users to oversee the motorcycle.

Replace defective bulbs as soon as possible; always carry a complete set of spare bulbs if possible. ◀

Possible cause:

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

- Replacing low-beam and high-beam headlight bulb (➡ 97)
- Replacing parking-light bulb (➡ 98)
- Replacing turn indicator bulbs (➡ 103)

The number-plate carrier can be removed for sporty riding.

This fault message reminds you that the motorcycle is temporarily without turn indicators and number-plate light.

- Install the number-plate carrier (➡ 111)

Bulbs defective



General warning light shows yellow.

LAMPS ! appears on the display.



A defective bulb places your safety at risk because it is easier for other users to oversee the motorcycle.

Replace defective bulbs as soon as possible; always carry a complete set of spare bulbs if possible. ◀

Possible cause:

A combination of the bulb defects described above has occurred.

- See the fault descriptions above.

ABS warnings^{OE}

Mode of presentation



ABS warnings are indicated by ABS warning light **1**.

The way in which the ABS warning light indicates status can differ in some countries.



Possible national variant.

The detailed descriptions relating to BMW Motorrad ABS start on page (➡ 72), and you will find an overview listing the possible warnings on the next page.

Warnings, overview

Telltale lights

Status indicators

Meaning



Flashes

Self-diagnosis not completed (→ 28)



Lights up

ABS deactivated (→ 28)



Lights up

ABS fault (→ 28)

Self-diagnosis not completed



ABS warning light flashes.

Possible cause:

The ABS function is not available, because self-diagnosis did not complete. The motorcycle has to move forward a few metres for the wheel sensors to be tested.

- Pull away slowly. Bear in mind that the ABS function is not available until self-diagnosis has completed.

ABS deactivated



ABS warning light shows.

Possible cause:

The rider has switched off the ABS system.

– with BMW Motorrad ABS^{OE}

- Activate the ABS function (➡ 38)

ABS fault



ABS warning light shows.

Possible cause:

The ABS control unit has detected a fault. The ABS function is not available.

- You can continue to ride the motorcycle, but make due provision for the fact that the ABS function is not available. Bear in mind the more detailed information on situations that can lead to an ABS fault (➡ 73).
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad dealer.

Operation

Ignition switch and steering lock	30	Motorcycle height	49
Electronic immobiliser (EWS)	31	Tyres	55
Clock	32	Headlight	55
Multifunction display	32	Seat	56
Lights	34		
Turn indicators	35		
Hazard warning flashers	36		
Emergency off switch (kill switch)	37		
BMW Motorrad ABS ^{OE}	37		
Clutch	38		
Brakes	39		
Mirrors	40		
Handlebars	40		
Spring preload	43		
Damping	46		

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 (31).

Ignition switch and steering lock and the cap of the fuel tank are all operated with the same key.

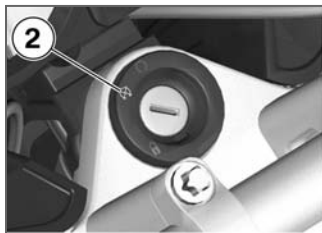
Switching on ignition



- Turn the key to position **1**.

- » Side light and all function circuits switched on.
- » Engine can be started.
- » Pre-ride check is performed. (63)
- with BMW Motorrad ABS^{OE}
- » ABS self-diagnosis is performed. (63)

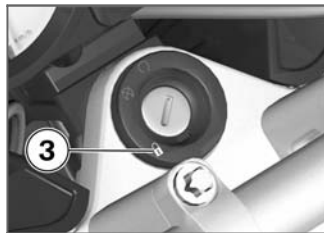
Switching off ignition



- 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 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

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.

Clock

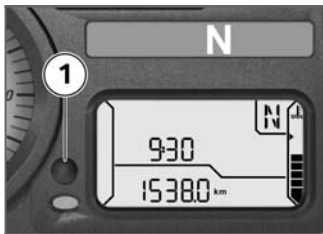
Setting clock



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

Set the clock only when the motorcycle is stationary. ◀

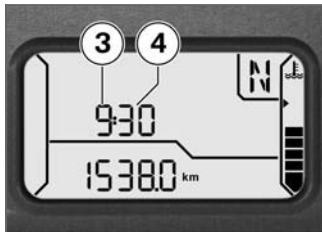
- Switch on the ignition.



- Repeatedly press button **1** until the odometer reading appears on the display.



- If you prefer, you can use button **2** for this purpose.



- Hold down the button.
- » Hours reading **3** flashes.
- Press the button.

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

- Hold down the button.

» Minutes reading **4** flashes.

- Press the button.

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

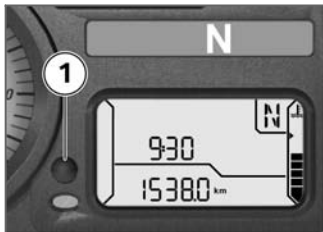
- Hold down the button.

» The clock is now set and the time appears on the display.

Multifunction display

Selecting readings

- Switch on the ignition.



- Press button **1**.



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)
- Residual range (once fuel level is down to reserve)

Resetting tripmeter

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



- Press and hold down button **1**.



- If you prefer, you can use button **2** for this purpose.



- If you prefer, you can use button **2** for this purpose.
 - » The tripmeter is reset to zero.

Residual range



Residual-range reading **1** appears accompanied by the word **RANGE** and 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 refuelling after running on reserve, make sure that you top up the tank to a level above reserve, as otherwise the sensor will not be able to register the new level. If the sensor can-

not register the new level the residual-range readout cannot be updated.

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

Lights

Side light

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. ◀

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 full-beam headlight switch **1**.

- » High-beam headlight switched on.
- Move full-beam headlight switch **1** to the centre position.
- » High-beam headlight switched off.
- Press the bottom section of full-beam headlight switch **1**.
- » The high-beam headlight is switched on until you release the button (headlight flasher).

Switching on parking lights

- Switch off the ignition.



- Immediately after switching off the ignition, press and hold down button **1** for the left turn indicators.
- » Parking light switches on.

Switching on parking lights

- Switch the ignition on and then off again.
- » Parking lights switched off.

Turn indicators

Switching on left flashing turn indicators

- Switch on the ignition.

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

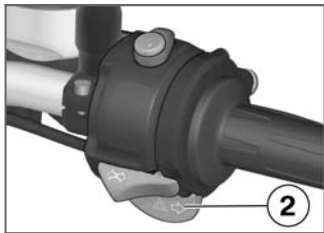


- Press button **1** for the left-hand turn indicators.
- » Left-hand turn indicators switched on.
- » Telltale light for left-hand turn indicators flashes.

Switching on right flashing turn indicators

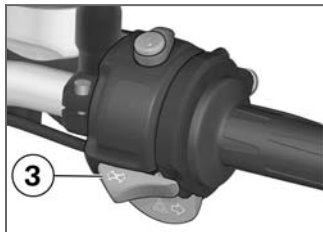
- Switch on the ignition.

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



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

Cancelling turn indicators



- Press turn-indicator cancel button **3**.
 - » Flashing turn indicators switched off.
 - » Turn indicator telltale lights off.

Hazard warning flashers

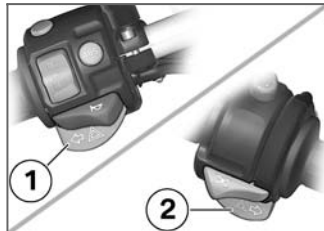
Switching on hazard warning flashers

- Switch on the ignition.

▶ The hazard warning flashers place a strain on the battery. Do not use the hazard

warning flashers for longer than absolutely necessary.◀

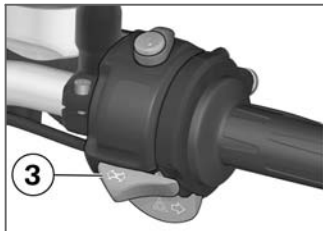
▶ If you press a turn-indicator button with the ignition switched on, the turn-indicator function is activated instead of the hazard warning flashers, and remains active until you release the button. The hazard warning flashers recommence flashing as soon as the button is released.◀



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

- » The hazard warning flashers are switched on.
- » Left and right turn indicator telltale lights flash.
- Switch off the ignition.
- » The hazard warning flashers continue to operate.
- » Left and right turn indicator telltale lights are off.

Switching off hazard warning flashers



- Press turn-indicator cancel button **3**.
- » Hazard warning flashers switched off.

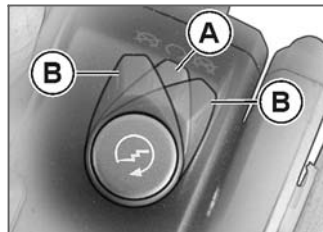
Emergency off switch (kill switch)



- 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.◀

BMW Motorrad ABS^{OE} Deactivating ABS function

- Bring the motorcycle to a stop or, if the motorcycle is at a standstill, switch on the ignition.



- Press and hold down ABS button **1** until the ABS warning light changes status.



ABS warning light shows.

- Release the ABS button within two seconds.



ABS warning light remains ON.

- » The ABS function is deactivated.

Activating ABS function



- Press and hold down ABS button **1** until the ABS warning light changes status.



ABS warning light goes out; if self-diagnosis has not completed it starts flashing.

- Release the ABS button within two seconds.



The ABS warning light remains off or continues to flash.

- » The ABS function is activated.
- You also have the option of switching the ignition off and then on again.

▶ If you switch the ignition off then on again and the ABS light comes back on, there is a fault in the ABS.◀

Clutch

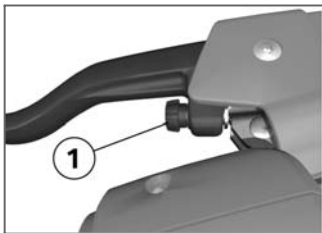
Adjusting clutch lever



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 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.

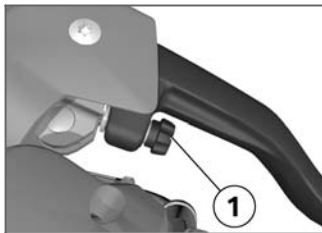
Brakes

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 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 handbrake lever decreases.

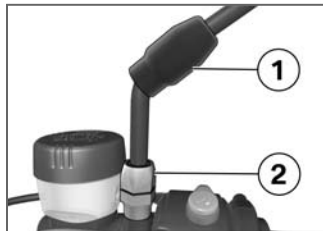
Mirrors

Adjusting mirrors



- Turn the mirror to the correct position.

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 the nut to the specified tightening torque, while holding the mirror arm to ensure that it does not move out of position.



Mirror to clamping piece

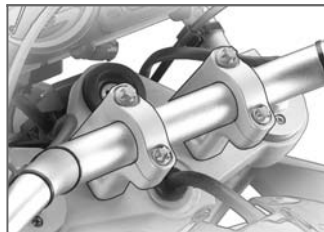
– 25 Nm

- Push the protective cap over the threaded fastener.

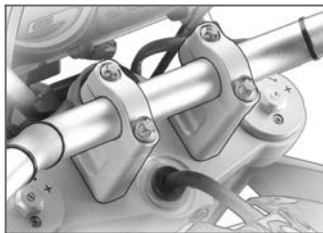
Handlebars

Adjustable handlebars

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



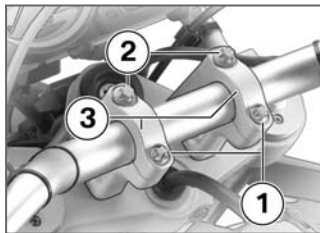
Short-reach position, handlebars toward rider.



Long-reach position, handlebars away from rider.

Adjusting handlebars

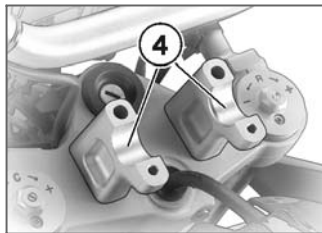
- Make sure the ground is level and firm and place the motor-cycle on its stand.



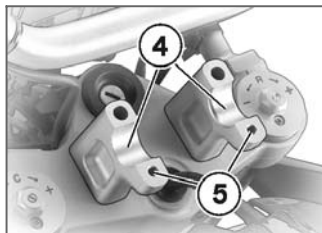
- Remove small screws **1**.

 Tilting the handlebars too far can allow air to enter the fluid reservoirs and make its way into the hydraulic systems. Hold the handlebars or lay them down in such a way that the reservoirs remain upright. ◀

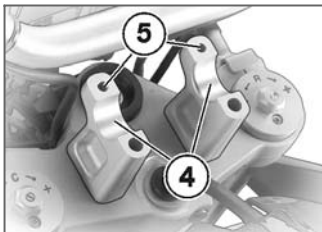
- While holding the handlebars, remove large screws **2**.
- Remove top clamping blocks **3**.
- Lift the handlebars clear of the bottom clamping blocks.



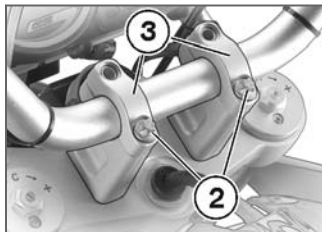
- Remove bottom handlebar clamping blocks **4**.



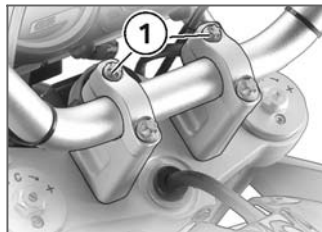
- Place bottom handlebar clamping blocks **4** in position with tapped holes **5** to the rear.
» Handlebars toward rider (shorter reach).



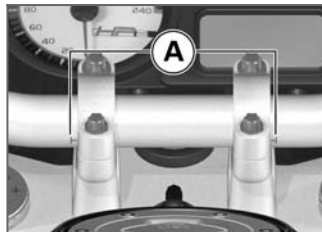
- Place bottom handlebar clamping blocks **4** in position with tapped holes **5** to the front.
 - » Handlebars away from rider (longer reach).
- Install the bottom handlebar clamping blocks in the desired position for the appropriate reach.



- 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.

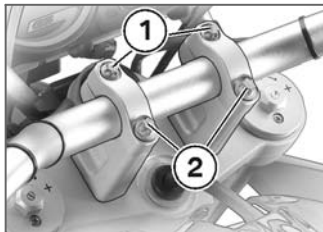


- Install small screws **1**, but do not tighten.



- Align the handlebars in the clamping blocks such that the centres of the marks **A** are in line with the gaps between

the top and bottom clamping blocks.



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. ◀

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



Handlebar clamping block to fork bridge

– 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

– 19 Nm

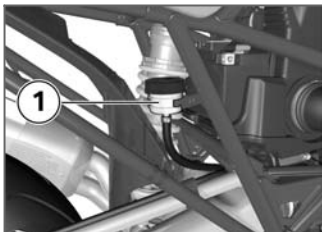
- » A gap remains between the handlebar clamping blocks on the side where the small screws are located.

Spring preload Setting

It is essential to set spring preload of the rear suspension to suit the load carried by the motorcycle. Increase spring preload when the motorcycle is heavily loaded and reduce spring preload accordingly when the motorcycle is lightly loaded.

Adjusting spring preload for rear wheel

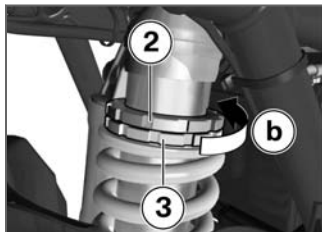
- Make sure the ground is level and firm and place the motorcycle on its stand.



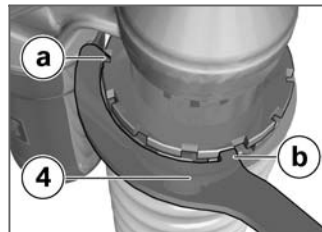
- Remove brake-fluid reservoir **1** from the holder, push the hose down slightly and lay the reservoir on the Paralever link.



- Use adjusting rings **2** and **3** to adjust spring preload.



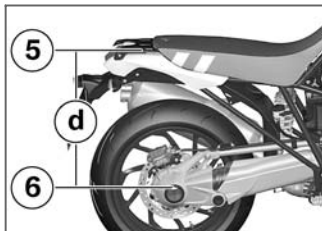
- Release the lock by turning adjusting ring **2** in direction **b** with the tool from the toolkit, while holding adjusting ring **3** with second tool from the toolkit.



- To turn the adjusting rings, engage tools **4** in such a way that hook **a** or hook **b** securely engages a groove.

▶ The adjusting rings can be turned in either direction without turning the tool over: simply engage the appropriate hook in a groove.◀

- Make sure there is no load on the motorcycle; remove all items of luggage, if carried.

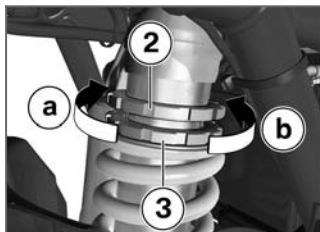


- Measure distance **d** between the bottom edge of luggage-plate recess **5** and the top edge of axle tube **6**.
- Apply the weight of the rider (and passenger, if applicable) to the motorcycle.
- With the assistance of a second person, measure distance **d** between points **5** and **6** again and calculate the difference between the two readings.



load-dependent adjustment of spring preload

– 40 mm (Negative spring displacement of rear wheel under load)



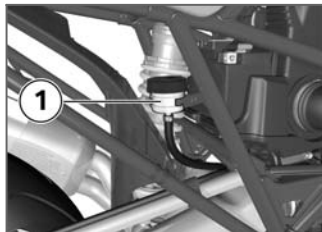
- If you want to reduce the difference (increase spring preload, in other words), turn adjusting ring **3** in direction **a**.
- If you want to increase the difference (reduce spring preload, in other words), turn adjusting ring **3** in direction **b**.

- Tighten the lock by tightening adjusting ring **2** in direction **a** with the tool from the toolkit, while holding adjusting ring **3** with second tool from the toolkit.



Locknut of spring basic setting at top spring retainer

– 5 Nm



- Seat brake-fluid reservoir **1** in the holder.
- Adjust the damping characteristic to suit spring preload.

Damping Setting

Damping must be adapted to suit the surface on which the motor-cycle is ridden and to suit spring preload.

- An uneven surface requires softer damping than a smooth surface.
- An increase in spring preload requires firmer damping, a reduction in spring preload requires softer damping.

Adjusting front rebound stage

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



- Use adjusting screws **1** on left and right to adjust the rebound stage. Make sure that the settings are identical on left and right.



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

the adjusting screws on left and right in the + direction.

- If you want to reduce damping, use a screwdriver to turn the adjusting screws on left and right in the - direction.

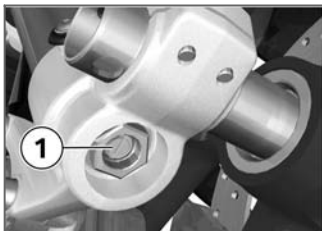


Rebound stage, basic setting, front

- Turn top adjusting screw as far as it will go in the "+" direction, then back it off 10 clicks in the "-" direction.

Adjusting front compression stage

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



Compression stage, basic setting, front

- Turn bottom adjusting screw as far as it will go in the clockwise direction, then back it off 10 clicks in the counter-clockwise direction.

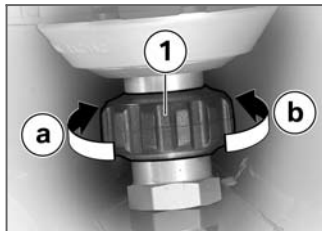
- Use adjusting screws **1** on left and right to adjust the compression stage. Make sure that the settings are identical.
- If you want to increase damping, use a screwdriver to turn the adjusting screws on left and right in the clockwise direction.
- If you want to reduce damping, use a screwdriver to turn the adjusting screws on left and right in the counter-clockwise direction.

Adjusting rear rebound stage

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



- Adjust the rebound stage by turning adjusting ring **1**.



- If you want to reduce the rebound stage, turn adjusting ring **1** in direction **a**.

- If you want to increase the rebound stage, turn adjusting ring **1** in direction **b**.



Rebound stage, basic setting, rear

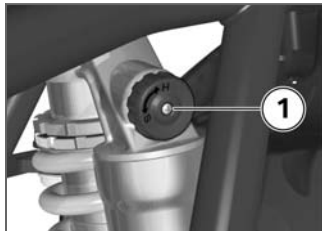
- Turn adjusting screw as far as it will go in the counter-clockwise direction, as viewed from above, then turn it 19 clicks in the clockwise direction.

Adjusting rear compression stage

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



- Adjust the compression stage by turning adjusting ring **1**.



- If you want to increase the compression stage, turn adjusting ring **1** in the H direction.

- If you want to reduce the compression stage, turn adjusting ring **1** in the S direction.



Compression stage, basic setting, rear

- Turn adjusting screw as far as it will go in the clockwise direction, then back it off 12 clicks in the counter-clockwise direction.

Motorcycle height

Setting

The telescopic forks and the sprig strut adjust to three different settings, which means that the height of the motorcycle and therefore the height of the seat can be varied. An extra-high seat is available as an optional accessory.

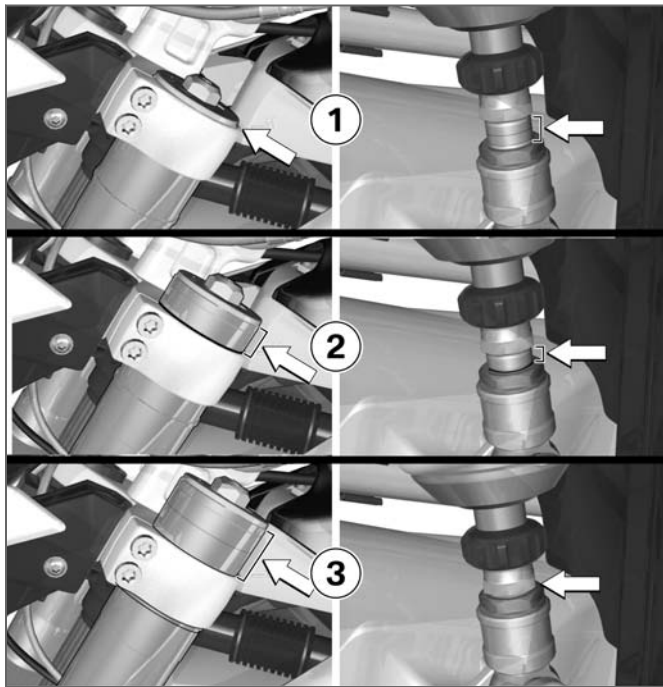
- The position of the fixed fork tubes in the fork bridges can be varied.
- The length of the sprig strut can be varied.

When changing the height of the motorcycle, always be sure to set the front and rear adjusters to the same settings.

BMW Motorrad recommends riding with the adjusters set for the high position.

Overview of possible motorcycle heights

- 1 Setting for telescopic forks and spring strut for maximum motorcycle height.
- 2 Setting for telescopic forks and spring strut for medium motorcycle height.
- 3 Setting for telescopic forks and spring strut for minimum motorcycle height.

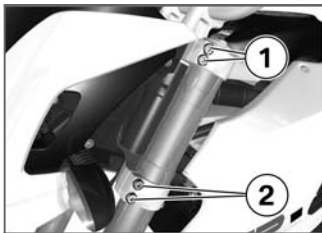


Adjusting fork height



Setting the telescopic forks and the spring strut to different heights would have a detrimental effect on handling. Always match the height settings of the telescopic forks and the spring strut.◀

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



- Slacken screws **1** and screws **2** for the left or right fixed fork tube.



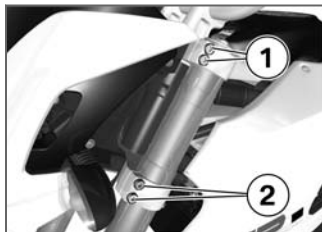
- Align the fixed fork tube so that the bottom edge of sealing cap **3** is flush with the top edge of top fork bridge **4**.
» Setting for maximum motorcycle height.



- Align the fixed fork tube so that ring mark **5** is flush with the top edge of top fork bridge **4**.
» Setting for medium motorcycle height.



- Push the fixed fork tube into top fork bridge **4** all the way to stop **6**.
- » Setting for minimum motor-cycle height.



 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. ◀

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



Fork bridge, bottom, to fork fixed tube

– Tightening sequence: 2x each side, alternately



Fork bridge, bottom, to fork fixed tube

– 10 Nm

- Tighten screws **1** to the specified tightening torque.



Fork bridge, top, to fork fixed tube

– Tightening sequence: 2x each side, alternately

– 24 Nm

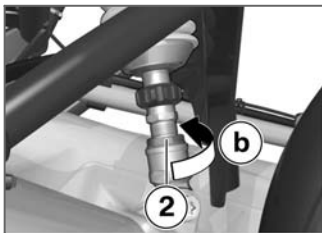
- Repeat the procedure for the second fixed fork tube. Make sure that the settings are identical for both fixed fork tubes.
- Adjust the spring-strut length (53)

Adjusting spring-strut length

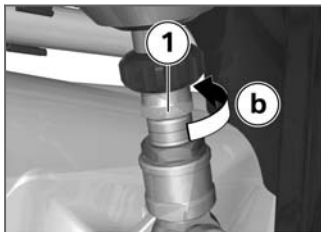


Setting the telescopic forks and the spring strut to different heights would have a detrimental effect on handling. Always match the height settings of the telescopic forks and the spring strut. ◀

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



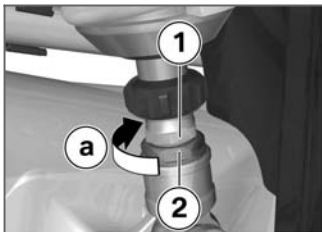
- Slacken nut **2** by turning it in direction **b**.



- Turn nut **1** all the way in direction **b**.
 - » Setting for maximum motorcycle height.



- Turn nut **1** until ring groove **3** is in line with the top edge of nut **2**.
 - » Setting for medium motorcycle height.



Locknut of length adjustment at bottom spring retainer

– 40 Nm

- Adjust the fork height (→ 51)

- Turn nut **1** all the way in direction **a**.
- » Setting for minimum motor-cycle height.



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. ◀

- Tighten nut **2** in direction **a** to lock the adjuster.

Tyres

Checking tyre pressure

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



Incorrect tyre pressures impair the motorcycle's handling characteristics and increase the rate of tyre wear.

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 valve caps with rubber seals and screw them on firmly to prevent sudden deflation.◀

- Check tyre pressures against the data below.



Tyre pressure, front

– 2.2 bar (one-up, tyre cold)



Tyre pressure, front

– with rear footrest^{OA}

– 2.2 bar (two-up and/or with luggage, tyre cold)◀



Tyre pressure, rear

– 2.5 bar (one-up, tyre cold)

– with rear footrest^{OA}

– 2.5 bar (two-up and/or with luggage, tyre cold)◀

If tyre pressure is too low:

- Correct tyre pressure.

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 oncoming traffic.

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

Headlight beam throw and spring preload

Headlight beam throw is generally kept constant when spring preload is adjusted to suit load. Spring preload adjustment might not suffice only if the motorcycle is very heavily loaded. Under these circumstances, headlight beam throw has to be adjusted

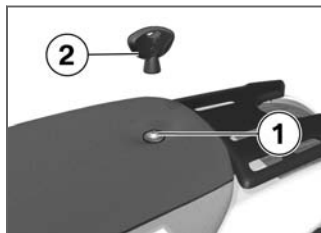
to suit the weight carried by the motorcycle.

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

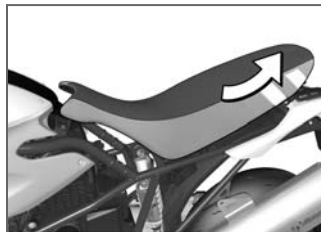
Seat

Removing seat

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

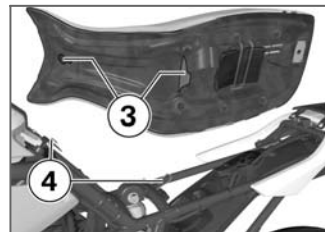


- Remove screw **1** with special key **2** for the seat.

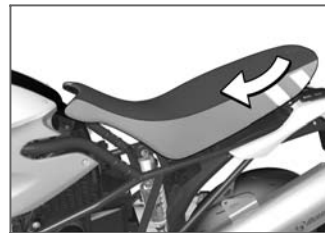


- Pull the seat back and out of the holders.

Installing seat



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

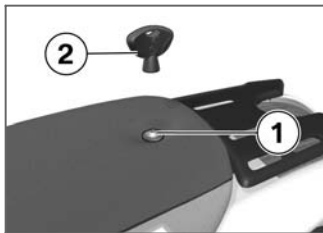


 If too much pressure is applied in the forward direction, there is a danger that the

motorcycle will be pushed off its stand.

Always make sure that the motorcycle is stable and firmly supported.◀

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



- Tighten screw **1** with special key **2** for the seat until it is hand-tight.

Riding

Safety instructions	60
Checklist	62
Starting	62
Running in	64
Brake system	65
Parking your motorcycle	66
Refuelling	67

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.

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. ◀

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. ◀

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 engine control unit

 Tampering with the engine control unit can damage the motorcycle and cause accidents.

Do not tamper with the engine control unit. ◀

 Tampering with the engine control unit 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 engine control unit. ◀

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
- Damping-characteristic setting and spring preload
- 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

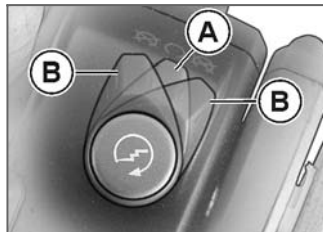
Side stand

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.

Starting engine



- Kill switch in run position **A**.
- Switch on the ignition.
 - » Pre-ride check is performed. (▣ 63)
 - with BMW Motorrad ABS^{OE}
 - » ABS self-diagnosis is performed. (▣ 63)



- 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. (➡ 118)

Pre-ride check

The instrument panel runs a test of the 'General' warning light when the ignition is switched on: this is the "Pre-Ride-Check". The test is aborted if you start the engine before it completes.

Phase 1



General warning light shows red.

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

Phase 2



General warning light shows yellow.

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

If the 'General' warning light does not show:



Some malfunctions cannot be indicated if the 'General' warning light cannot be displayed.

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

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

ABS self-diagnosis^{OE}

BMW Motorrad ABS performs self-diagnosis to ensure its operability. Self-diagnosis is performed automatically when you switch on the ignition. The motorcycle has to move forward at

a speed above 5 km/h for the wheel sensors to be tested.

Phase 1

» Test of the diagnosis-compatible system components with the motorcycle at a standstill.



ABS warning light flashes.



Possible national variant of the ABS warning light.

Phase 2

» Test of the wheel sensors as the motorcycle pulls away from rest.



ABS warning light flashes.



Possible national variant of the ABS warning light.

ABS self-diagnosis completed

» The ABS warning light goes out.

If an indicator showing an ABS fault appears when ABS self-diagnosis completes:

- You can continue to ride. Bear in mind that the ABS function is not yet available.
- 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. ◀

Brake system

How can stopping distance be minimised?

Each time the brakes are applied, a load distribution shift takes place with the load shifting forward from the rear to the front wheel. The sharper the motorcycle decelerates, the more load is shifted to the front wheel. The higher the wheel load, the more braking force can be transmitted without the wheel locking.

To optimise stopping distance, apply the front brakes rapidly and keep on increasing the force you apply to the brake lever. This makes the best possible use of the dynamic increase in load at the front wheel. Remember to pull the clutch at the same time. The rear wheel always has to be braked as well, in order to make braking more efficient.

In the "panic braking situations" that are trained so frequently braking force is applied as rapidly as possible and with the rider's full force applied to the brake levers; under these circumstances the dynamic shift in load distribution cannot keep pace with the increase in deceleration and the tyres cannot transmit the full braking force to the surface of the road. Under these circumstances the front wheel can lock up.

– with BMW Motorrad ABS^{OE} ABS has to intervene to keep the front wheel from locking; this increases stopping distance. ◀

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 the brakes in good time until the brakes have been cleaned.◀

 The brake pads will wear more rapidly if you ride fre-

quently on unsurfaced tracks or poor roads.

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

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.◀

- Lock the steering lock.

Removing motorcycle from side stand

- Unlock the steering lock.
- 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.

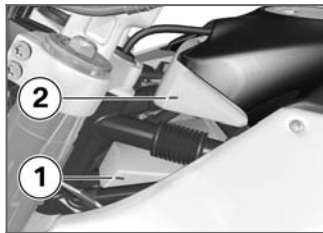
⚠ An extended side stand can catch on the ground when the motorcycle is moving and lead to a fall.

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 the 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. ◀

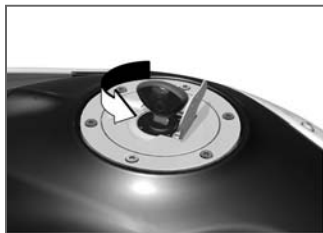
 Fuel expands when hot. Fuel escaping from an overfilled tank could make its way onto the rear tyre. This could cause a fall.

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

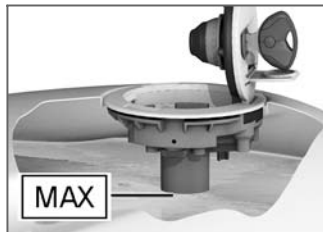
 Fuel attacks plastics, which become dull or unsightly. Wipe off plastic parts immediately if they come into contact with fuel. ◀

 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; do not fill the tank past the bottom edge of the filler neck.



Recommended fuel grade

– 98 ROZ/RON (Super plus (premium))

– 95 ROZ/RON (Premium unleaded (fuel grade, usable with power- and consumption-related restrictions))



Usable fuel capacity

– approx. 13 l

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

Engineering details

Brake system with BMW Motorrad

ABS^{OE} 72

Brake system with BMW Motorrad ABS^{OE}

How does ABS work?

The amount of braking force that can be transferred to the road depends on factors that include the coefficient of friction of the road surface. Loose stones, ice and snow or a wet road all have much lower coefficients of friction than a clean, dry asphalt surface. The lower the coefficient of friction, the longer the braking distance.

If the rider increases braking pressure to the extent that braking force exceeds the maximum transferrable limit, the wheels start to lock and the motorcycle loses its directional stability; a fall is imminent. Before this situation can occur, ABS intervenes and adapts braking pressure to the maximum transferrable braking force, so the wheels continue

to turn and directional stability is maintained irrespective of the condition of the road surface.

What are the effects of surface irregularities?

Humps and surface irregularities can cause the wheels to lose contact temporarily with the road surface; if this happens the braking force that can be transmitted to the road can drop to zero. If the brakes are applied under these circumstances the ABS has to reduce braking force to ensure that directional stability is maintained when the wheels regain contact with the road surface. At this instant the BMW Motorrad ABS must assume an extremely low coefficient of friction, so that the wheels will continue to rotate under all imaginable circumstances, because this is the precondition for ensuring directional stability. As soon as

is registers the actual circumstances, the system reacts instantly and adjusts braking force accordingly to achieve optimum braking.

Rear wheel lift

Under very severe and sudden deceleration, however, under certain circumstances it is possible that the BMW Motorrad ABS will be unable to prevent the rear wheel from lifting clear of the ground. If this happens the outcome can be a highside situation in which the motorcycle can flip over.



Severe braking can cause the rear wheel to lift off the ground.

When you brake, bear in mind that ABS control cannot be relied on in all circumstances to prevent the rear wheel from lifting clear of the ground. ◀

What is the design baseline for BMW Motorrad ABS?

Within the limits imposed by physics, BMW Motorrad ABS ensures directional stability on any surface. The system is not optimised for special requirements that apply under extreme competitive situations off-road or on the track.

Special situations

The speeds of the front and rear wheels are compared as one means of detecting a wheel's incipient tendency to lock. If the system registers implausible values for a lengthy period the ABS function is deactivated for safety reasons and an ABS fault message is issued. Self-diagnosis has to complete before fault messages can be issued.

In addition to problems with the BMW Motorrad ABS, exceptional

riding conditions can lead to a fault message being issued.

Exceptional riding conditions:

- Heating up with the motorcycle on the centre stand or an auxiliary stand, engine idling or with a gear engaged.
- Rear wheel locked by the engine brake for a lengthy period, for example while descending on a loose or slippery surface.

If a fault message is issued on account of exceptional riding conditions as outlined above, you can reactivate the ABS function by switching the ignition off and on again.

What significance devolves on regular maintenance?



Invariably, a technical system cannot perform beyond the abilities dictated by its level of maintenance.

In order to ensure that the BMW Motorrad ABS is always maintained in optimum condition, it is essential for you to comply strictly with the specified inspection intervals. ◀

Reserves for safety

The potentially shorter braking distances which BMW Motorrad ABS permits must not be used as an excuse for careless riding. ABS is primarily a means of ensuring a safety margin in genuine emergencies.

Take care when cornering. When you apply the brakes on a corner, the motorcycle's weight and

momentum take over and even BMW Motorrad ABS is unable to counteract their effects.

Accessories

General instructions.....	76
Power socket	76
Luggage	77

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.

Also bear in mind the information on the effect of wheel size on suspension-control systems (► 88).

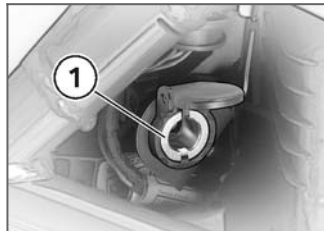


BMW Motorrad cannot assess each non-BMW product to determine whether it can be used on or in connection with BMW motorcycles without constituting a safety hazard. Country-specific official authorisation does not suffice as assurance. Tests conducted by these instances cannot make provision for all operating 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.

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 sys-

tem 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.◀

- Set spring preload, damping characteristic and tyre pressures to suit total weight.
- Note the maximum permissible payload of the tank rucksack.



Payload of tank rucksack

– with tank rucksack^{OA}

– ≤5 kg◀

- Note the maximum permissible payload of the rear-light protector.



Payload of cover for rear light

– max 1 kg

Maintenance

General instructions.....	80
Toolkit	80
Engine oil	80
Brake system	82
Brake pads	83
Brake fluid	85
Clutch	87
Tyres	88
Rims	88
Wheels	88
Front-wheel stand	94
Rear-wheel stand	95
Bulbs	96
Jump starting	106
Battery.....	107

Number-plate carrier	110
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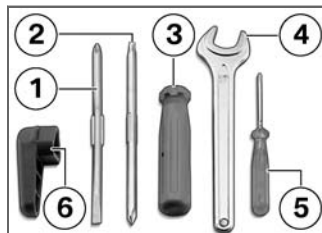
General instructions

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".

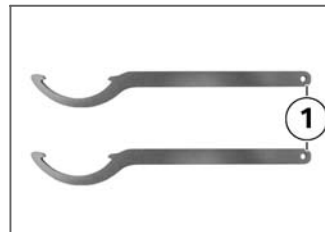
You will find information on more extensive maintenance and repair work in the Repair Manual on the CD or DVD that accompanies your motorcycle.

Toolkit Overview



- 1 Reversible screwdriver blade
With star-head and plain-tip ends
- 2 Reversible screwdriver blade
With star-head and Torx T25
- 3 Screwdriver handle
- 4 Open-ended spanner
Width across flats 17
- 5 Small screwdriver with plain tip
- 6 Tool for oil cap
For opening the oil filler cap

On-board toolkit, adjusting spring strut



- 1 Hook wrench
For adjusting spring preload

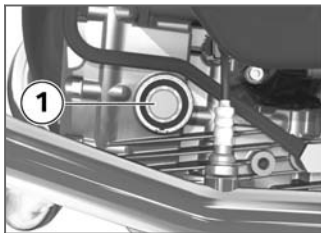
Engine oil

Checking engine oil level

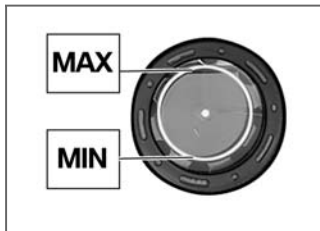
 The engine can seize if the oil level is low, and this can lead to accidents. Always make sure that the oil level is correct. ◀

 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. ◀

- Check that the engine is at operating temperature, make sure that the ground is level and firm and place the motorcycle on its 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 level

– max 0.5 l (Difference between MIN and MAX)

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 Motorraddealer.

Topping up engine oil

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



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 the tool from the toolkit to remove cap **1** from the engine oil filler neck.
- Top up the engine oil to the specified level.



Engine oil, quantity for topping up

– max 0.5 l (Difference between MIN and MAX)

- Check the engine oil level (III 80)
- Use the tool from the toolkit to install the cap of the engine-oil filler neck.

Brake system

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 operation of the brakes

- 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 front brake pad thickness



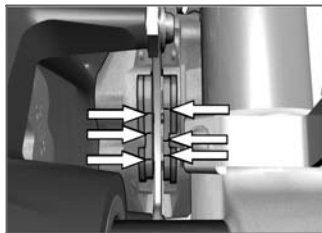
Brake pads worn past the minimum permissible thickness can cause a reduction in braking efficiency and under certain circumstances they can cause damage to the brake system.

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 left and right brake pads to ascertain their thickness. Viewing direction: Between wheel and slider tube toward the brake caliper.



Brake-pad wear limit, front

- min 1 mm (Friction pad only, without backing plate. The wear indicators (grooves) must be clearly visible.)

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.

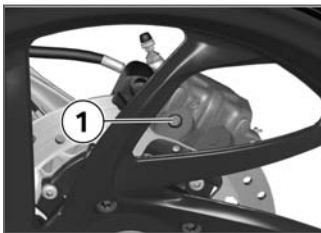
Checking rear brake pad thickness



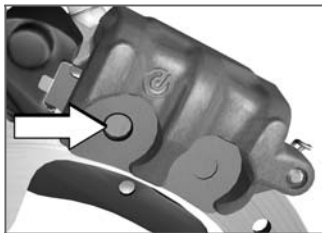
Brake pads worn past the minimum permissible thickness can cause a reduction in braking efficiency and under certain circumstances they can cause damage to the brake system.

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-pad wear limit, rear

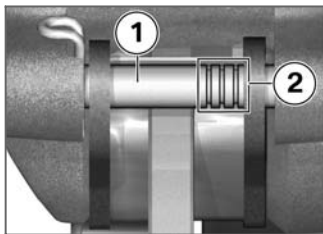
- 1 mm (Friction pad only, without backing plate. Make sure that the brake disc is not visible through the bore in the inboard brake block.)

If the brake disc is visible:

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

Brake-pad wear

The rear brake has a brake-pad wear indicator.



Shaft **1** with three marker rings **2** is between the brake pads.

How to interpret the marks:

- Three rings visible: brake-pad thickness is at least 75 %
- Two rings visible: brake-pad thickness is at least 50 %
- One ring visible: brake-pad thickness is at least 25 %
- No rings visible: brake pads worn to wear limit; check as described above

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 place the motor-cycle on its stand.
- 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
- It is impermissible for the brake fluid level to drop below the MIN mark. (Brake-fluid reservoir horizontal)

If the brake fluid level drops below the permitted level:

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

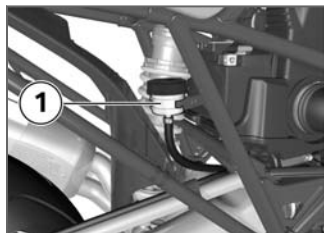
Checking brake-fluid level, rear brakes



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

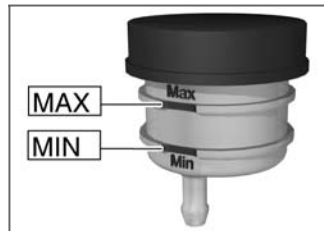
Check the brake-fluid level at regular intervals. ◀

- Make sure the ground is level and firm and hold the motor-cycle 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
- It is impermissible for the brake fluid level to drop below the MIN mark. (Brake-fluid reservoir horizontal)

If the brake fluid level drops below the permitted level:

- Have the defect rectified as quickly as possible by a spe-

cialist workshop, preferably an authorised BMW Motorrad dealer.

Clutch

Checking clutch operation

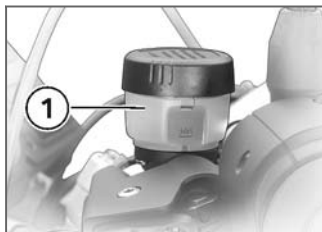
- Pull the clutch lever.
- » The pressure point must be clearly perceptible.

If the pressure point is not clearly perceptible:

- Have the clutch checked by a specialist workshop, preferably an authorised BMW Motorrad dealer.

Checking 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 (visual inspection)

- It is impermissible for the clutch fluid level to drop. (Motorcycle upright and handlebars in straight-ahead position.)

A drop in clutch-fluid level is indicative of a leak in the clutch system. 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

Measuring tread depth of tyres

- 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

Visual inspection

- 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

Tyre recommendation

For each size of tyre BMW Motorrad tests and classifies as roadworthy certain makes. BMW Motorrad cannot assess the suit-

ability or provide any guarantee of road safety for other tyres. BMW Motorrad recommends using only tyres tested by BMW Motorrad.

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

Effect of wheel size on suspension-control systems

Wheel size is very important as a parameter for the ABS. In particular, the diameter and the width of a motorcycle's wheels are programmed into the control unit and are fundamental to all calculations. Any change in these influencing variables, caused for example by a switch to wheels other than those installed ex-works, can have serious effects on the performance of the control systems.

The sensor rings are essential for correct road-speed calculation, and they too must match the motorcycle's ABS system and consequently cannot be changed.

If you decide that you would like to fit non-standard wheels to your motorcycle, it is very important to consult a specialist workshop beforehand, preferably an authorised BMW Motorrad dealer. In some cases, the data programmed into the control units can be changed to suit the new wheel sizes.

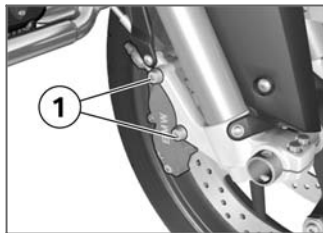
Remove the front wheel

- Place the motorcycle on an auxiliary stand; BMW Motorrad recommends the BMW Motorrad rear-wheel stand.
- Install the rear-wheel stand (➔ 95)

– with BMW Motorrad ABS^{OE}



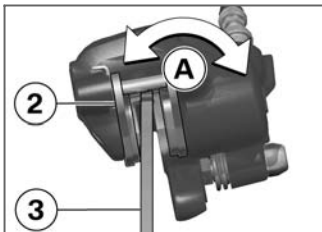
- Unclip the retaining clips holding the ABS sensor cable to the brake line. Do not open the cable tie.⚠
- Mask off the parts of the wheel rim that could be scratched in the process of removing the brake calipers.



 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.

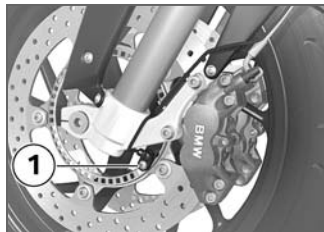
Do not operate the handbrake lever when the brake calipers have been removed.⚠

- Remove securing screws **1** of the brake calipers on left and right.



- Force the brake pads slightly apart by rocking brake calipers **2** back and forth **A** against brake discs **3**.
- Carefully pull the brake calipers back and out until clear of the brake discs.

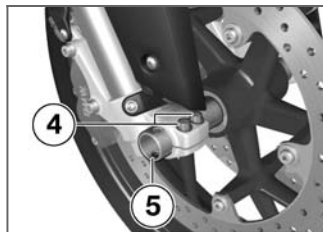
– with BMW Motorrad ABS^{OE}



- Remove screw **1** and remove the ABS sensor from its bore.◁
- Raise front of motorcycle until the front wheel can turn freely. BMW Motorrad recommends the BMW Motorrad front-wheel stand for lifting the motorcycle.
- Install the front-wheel stand (94)

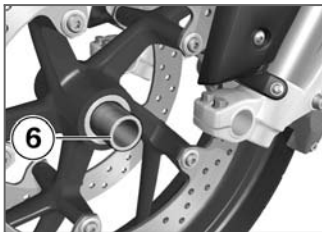


- Slacken left axle clamping screws **2**.
- Remove axle screw **3**.



- Slacken right axle clamping screws **4**.

- Use a screwdriver to remove axle **5**.
- Do not remove the grease from the axle.
- Roll the front wheel clear of the forks.



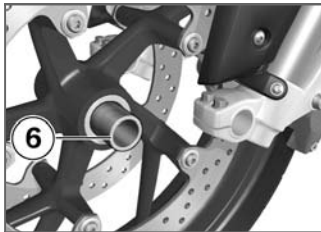
- Remove spacing sleeve **6**.

Installing front wheel

⚠ Possible malfunctions when the ABS system intervenes if non-standard wheels are installed.

See the information on the effect of wheel size on the ABS system at the start of this chapter.◀

⚠ 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.◀



- Install spacing sleeve **6**.

⚠ 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.◀

- Roll the front wheel into position between the forks.



- Insert axle **5**.



- Tighten axle screw **3** to the specified torque; if necessary

use a screwdriver to counter-hold at the other side.



Axle screw of front wheel
in axle holder

– Thread-locking compound:
Optimoly TA

– 50 Nm

- Remove the front-wheel stand.
- Without operating the brakes: firmly compress the forks and release; repeat the procedure several times.
- Tighten left axle clamping screws **2** to the specified tightening torque.



Pinch bolt of axle holder

– Tightening sequence: 2x
each side, alternately

– 8 Nm



- Tighten right axle clamping screws **4** to the specified tightening torque.



Pinch bolt of axle holder

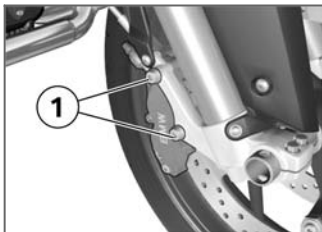
– Tightening sequence: 2x
each side, alternately

– 8 Nm

– with BMW Motorrad ABS^{OE}



- Insert the ABS sensor into its bore and install screw **1**.◁
- Ease the brake calipers on to the brake discs.



- Install securing screws **1** on left and right and tighten to specified tightening torque.



Brake caliper to slider tube

– 30 Nm

- Remove the adhesive tape from the wheel rim.



Braking efficiency is impaired if the brake pads are not correctly bedded against the discs.

Before riding off, always check that the brakes bite as soon as

the brake lever is pulled or the brake pedal depressed. ◀

- Operate the brake several times until the brake pads are bedded.

– with BMW Motorrad ABS^{OE}



- Close the retaining clips holding the ABS sensor cable to the brake line.



The cable of the ABS sensor could chafe through if it comes into contact with the brake disc.

Make sure that the ABS sensor cable is routed correctly. ◀

- Make sure that the ABS sensor cable is routed as shown here. ◀

- Remove the rear-wheel stand

Removing rear wheel

- Place the motorcycle on an auxiliary stand; BMW Motorrad recommends the BMW Motorrad rear-wheel stand.
- Install the rear-wheel stand (➡ 95)



- Remove 5 screws **1**.
- Remove the rear wheel.

Install the 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. ◀



- Check that the wheel centering spigot and contact surfaces of the wheel hub are free of grease.
- Seat the rear wheel on the wheel centering spigot.

- Hand-tighten 5 wheel studs **1** and then tighten to specified torque.



Rear wheel to wheel carrier

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

- Remove the rear-wheel stand

Front-wheel stand

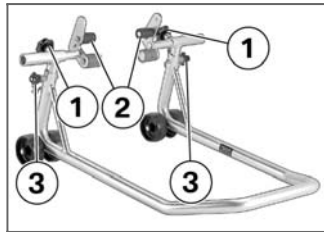
Installing front-wheel stand



The BMW Motorrad front wheel stand is not designed to support motorcycles not fitted with a centre stand or without other auxiliary stands. A motorcycle resting only on the front wheel stand and the rear wheel can topple. Place the motorcycle on its

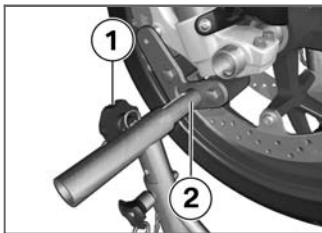
centre stand or another auxiliary stand before lifting the front wheel with the BMW Motorrad front-wheel stand. ◀

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Use basic stand with tool number (0 402 241) in combination with front-wheel adapter (0 402 242).



- Slacken adjusting screws **1**.
- Push the two adapters **2** apart until the front forks fit between them.

- Use locating pins **3** to set the front-wheel stand to the desired height.
- Centre the front-wheel stand relative to the front wheel and push it against the front axle.



- Align the two adapters **2** so that the front forks are securely seated.
- Tighten adjusting screws **1**.

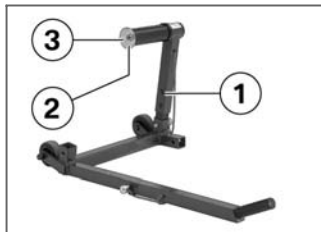


- Apply uniform pressure to push the front-wheel stand down and raise the motorcycle.

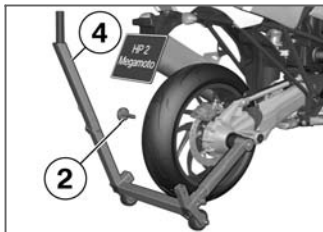
Rear-wheel stand

Installing rear-wheel stand

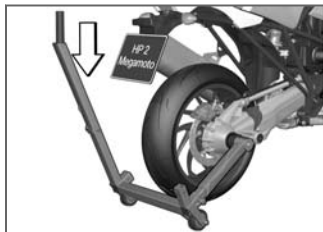
- Make sure the ground is level and firm and place the motorcycle on its stand.
- Use rear-wheel stand with tool number (0 402 244) with adapter shaft (0 402 250) appropriate to the motorcycle.



- Use screws **1** to set the rear-wheel stand to the desired height.
- Remove retaining disc **2**. To do so, press release button **3**.



- Push the rear-wheel stand from the right onto the rear axle.
- Push on retaining disc **2** from the left, while holding the unlock button down.
- Take a grip on the motorcycle with your left hand, and place your right hand on lever **4** of the rear-wheel stand.



- Lift the motorcycle upright, simultaneously pressing the lever down until the stand supports the motorcycle in the upright position.
- Press the lever down to the ground.

Bulbs

General instructions

A warning appears in the multi-function display if a bulb is defective. If the brake or rear light fails, the symbol is accompanied by the 'General' warning light, which lights 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 the 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.◀

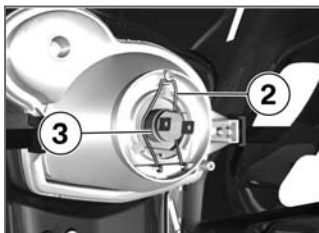
Replacing low-beam and high-beam headlight bulb

▶ The headlight bulbs are accessible from below, through the headlight surround. There is very little space inside the housing, so to facilitate identification of the bulbs and to avoid handling problems, the procedure for changing bulbs described below includes removal of the headlight surround.◀

- Removing headlight surround (→ 98)



- Remove rubber cap **1**.

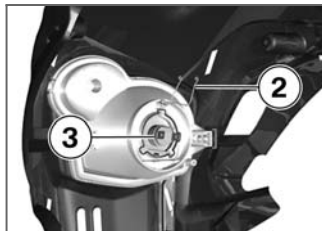


- Disengage spring clip **2** from the fastening and swing it up.
- Pull high-beam/low-beam bulb **3** out of the headlight housing.

- Replace the defective bulb.

 Bulb for low-beam and high-beam headlight

– H4 / 12 V / 60 W / 55 W



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



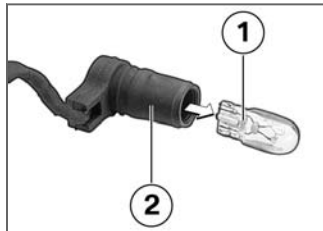
- Position the rubber cap **1** on the headlight housing and push it into place.
- Installing headlight surround (🔧 99)

Replacing parking-light bulb

▶ The headlight bulbs are accessible from below, through the headlight surround. There is very little space inside the housing, so to facilitate identification of the bulbs and to avoid handling problems, the procedure for changing

bulbs described below includes removal of the headlight surround. ◀

- Removing headlight surround (🔧 98)

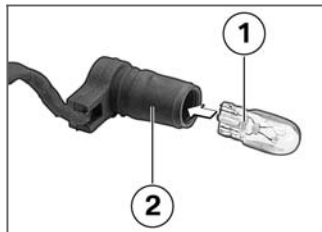


- Pull bulb **1** out of socket **2**.
- Replace the defective bulb.



Bulb for parking light

– W5W / 12 V / 5 W



- Push bulb **1** into socket **2**.
- Installing headlight surround (🔧 99)

Removing headlight surround

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

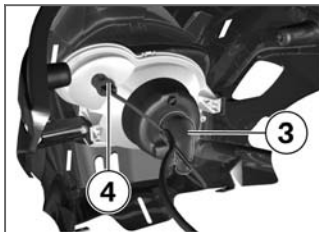


- Remove screws **1** on left and right.
- Remove the left and right headlight side panels.



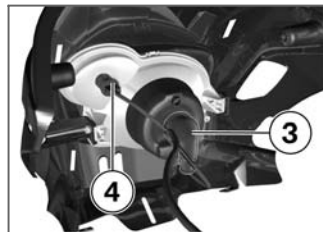
- Mark the position of screw **1** on the headlight surround.

- Remove screw **1** and screws **2** on left and right.
- Tilt the headlight surround forward, but do not remove it at this point.



- If applicable, switch off the ignition.
- Disconnect plug **3**.
- Pull bulb socket **4** out of the headlight housing.

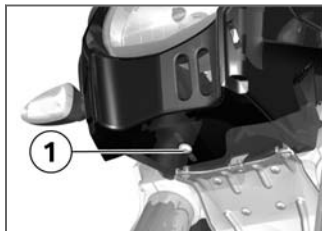
Installing headlight surround



- Press bulb socket **4** into the headlight housing.
- Connect plug **3**.



- Place the headlight surround in position.
- Install screw **1** and screws **2** on left and right, but do not tighten the screws at this point.



- Align the headlight surround with the mark on screw **1**.
- Tighten screw **1**.



- Tighten screws **2** on left and right.



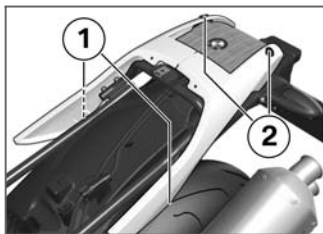
- Hold the left and right headlight side panels in position.
- Install screws **1** on left and right.

Replacing brake light and rear light bulb

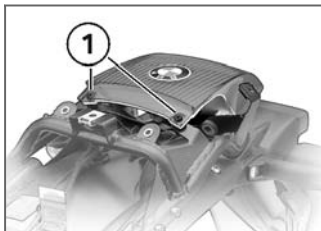
- Remove the seat (➡ 56)



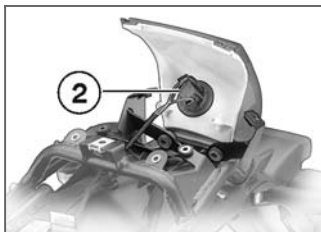
- Remove screws **1** and **2**.
- Remove rear-light protector **3**.



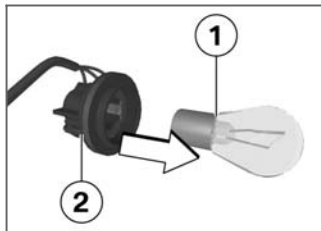
- Remove screws **1**.
- Remove the rear trim panels, taking care not to mislay aluminium bushes **2**.



- Remove screw **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.

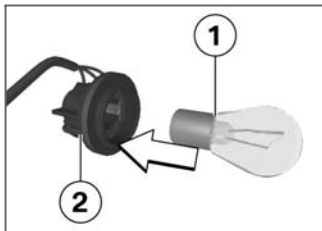


- Press bulb **1** into fitting **2** and remove by turning it counter-clockwise.
- Replace the defective bulb.



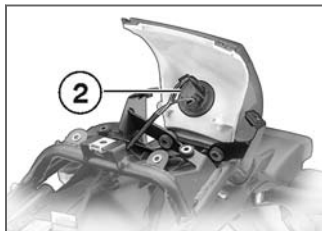
Bulb for tail light/brake light

– P21/5W / 12 V / 21 W / 5 W

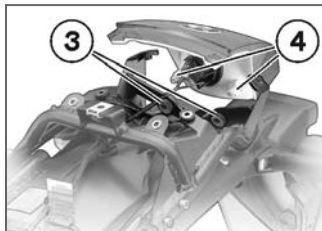


- Press bulb **1** into socket **2** and turn it clockwise to install.

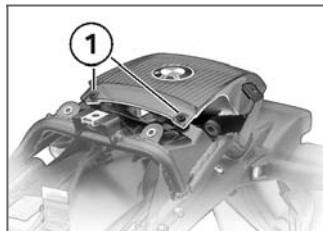
▶ There is only one position in which the bulb can be inserted into the socket.◀



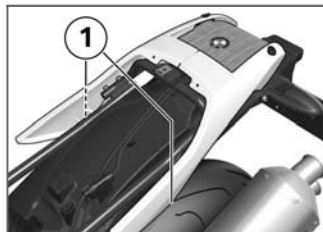
- Turn bulb socket **2** clockwise and install it in the rear light.



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



- Install screws **1**.



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



- Hold rear-light protector **3** in position.
- Install screws **1**.
- Install screws **2**.
- Install the seat (56)

Replacing turn indicator bulbs

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

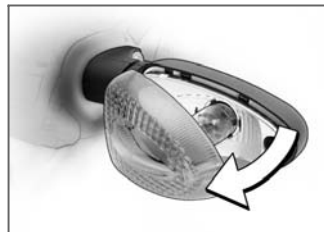
 If it is not standing firmly, the motorcycle could topple in the course of the operations described below.

Always make sure that the motorcycle is stable and firmly supported. ◀

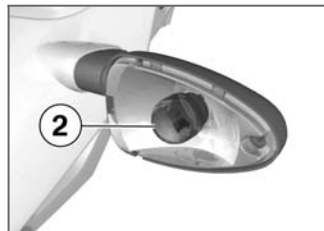
- Make sure the ground is level and firm and place the motorcycle on its stand.



- Remove screw **1**.



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



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

- Replace the defective bulb.



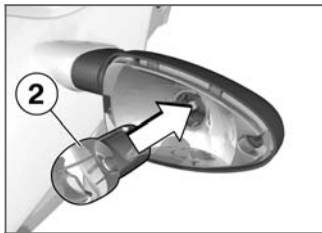
Bulbs for flashing turn indicators, front

– RY10W / 12 V / 10 W

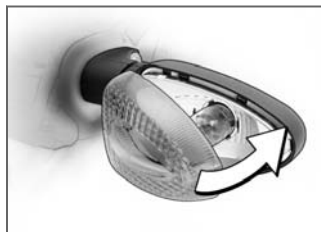


Bulbs for flashing turn indicators, rear

– RY10W / 12 V / 10 W



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



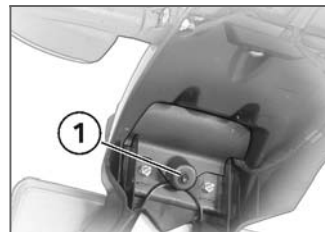
- Working from the inboard side, insert the glass into the bulb housing and close the housing.



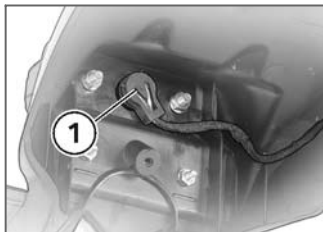
- Install screw **1**.

Replacing number-plate light bulb

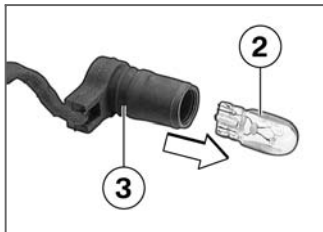
- Make sure the ground is level and firm and place the motor-cycle on its stand.



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

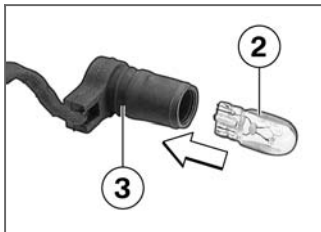


- Pull bulb holder **1** out of the light carrier.

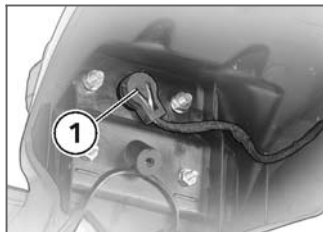


- Pull bulb **2** out of socket **3**.
- Replace the defective bulb.

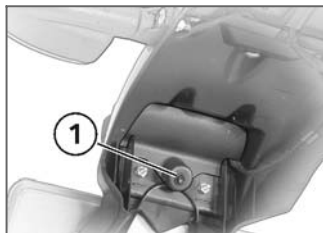
 Bulb for number-plate light
– W5W / 12 V / 5 W



- 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

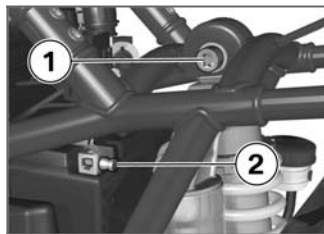
fully insulated crocodile clips at both ends. ◀



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. ◀

- Remove the seat (➡ 56)
- When jump-starting the engine, do not disconnect the battery from the on-board electrical system.
- Run the engine of the donor vehicle during jump-starting.



- Begin by connecting one end of the red jump lead to positive terminal **2** of the discharged battery and the other end to the positive terminal of the donor battery.
- Then connect one end of the black jump lead to the negative terminal of the donor battery, and the other end to the 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.◀

- Install the seat ( 56)

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 hap-

pens, 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 float 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's 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 battery

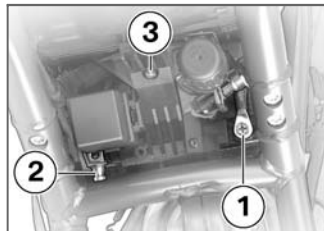
▶ Note that the tripmeters and the operating-hours counter are reset to zero if the battery is disconnected. ◀

- Remove the seat (→ 56)

! If it is not standing firmly, the motorcycle could topple 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.◀

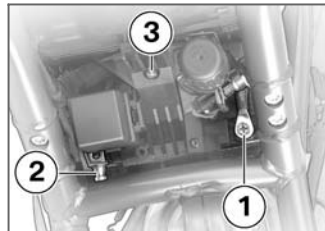
- Disconnect negative battery lead **1** first.
- Then disconnect positive battery lead **2**.
- Remove screw **3** of the battery holder.
- Without disconnecting the cables, manoeuvre the battery holder to the left and lay it over the frame.



- Tilt 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 battery 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. ◀

- Connect battery positive lead **2** first.
- The connect battery negative lead **1**.
- Install screw **3** of the battery holder.
- Install the seat (➡ 56)
- Set the clock (➡ 32)

Number-plate carrier

Removing number-plate carrier

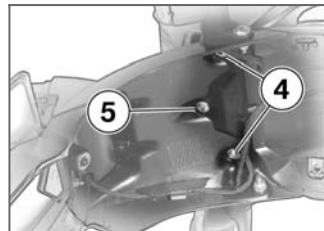
- Make sure the ground is level and firm and place the motor-cycle on its stand.



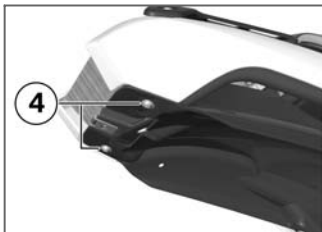
- Remove number-plate plug **1** from its holder and disconnect the plug.
- Remove protective plug **2** from its holder.
- Connect plug **1** to protective plug **2**.
- Push wiring-harness end of plug **1** into the holder of protective plug **2**.



- Remove screws **3** on left and right.



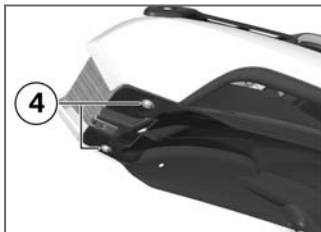
- Remove screws **4** and screw **5**.
- Remove the number-plate carrier and thread out the cables.



- Reinstall screws **4**.

Installing number-plate carrier

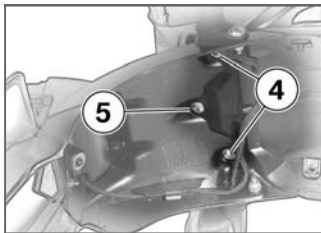
- Make sure the ground is level and firm and place the motorcycle on its stand.



- Remove screws **4**.
- Manoeuvre the cables into place and hold the number-plate carrier in position.



- Install screws **3** on left and right.
- Disconnect the number-plate plug and the protective plug.



- Install screws **4** and screw **5**.



- Remove wiring-harness end of plug **1** from the holder.

- Connect plug **1** and seat it in the holder.
- Seat protective plug **2** in its holder.

Care

Care products	114
Washing motorcycle	114
Cleaning easily damaged components.....	114
Paint care	115
Protective wax coating	116
Laying up motorcycle	116
Restoring motorcycle to use	116

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 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.

It is time to rewax the paintwork when water "puddles" on the surface, instead of forming beads.

Laying up motorcycle

- Clean the motorcycle.
- Remove the battery.
- Spray the brake and clutch lever pivots and the 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.

Technical data

Troubleshooting chart	118
Threaded fasteners	119
Engine	122
Fuel.....	123
Engine oil	123
Clutch	124
Transmission	125
Rear-wheel drive.....	125
Running gear	126
Brakes	127
Wheels and tyres	127
Electrics	129
Frame	130
Dimensions	131
Weights.....	132

Riding specifications	132
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Troubleshooting chart

Possible cause	Remedy
Emergency off switch (kill switch)	Kill switch in operating position
Side stand	Retract the side stand. (➡ 62)
Gear engaged and clutch not disengaged	Select neutral or pull clutch lever (➡ 62)
Clutch pulled before ignition was switched on	Switch on the ignition, then pull the clutch lever
No fuel in tank	Refuelling (➡ 68)
Battery flat	Charge the battery when connected (➡ 108)

Threaded fasteners

Handlebars	Value	Valid
Handlebar clamping block to fork bridge		
M10 x 100	38 Nm	
Handlebar to handlebar clamping block		
M8 x 30 - 10.9	19 Nm	
Mirrors	Value	Valid
Mirror to clamping piece		
M10	25 Nm	
Clamping piece to clamping block		
M10	30 Nm	
Front wheel	Value	Valid
Pinch bolt of axle holder		
M6 x 30	2x each side, alternately	
	8 Nm	

Front wheel	Value	Valid
Axle screw of front wheel in axle holder		
Lubricate thread, M22 x 1.5 Optimoly TA	50 Nm	
Brake caliper to slider tube		
M8 x 32 - 10.9	30 Nm	
Rear wheel	Value	Valid
Rear wheel to wheel carrier		
M10 x 40 x 1.25	Tighten in diagonally opposite sequence	
	60 Nm	
Spring strut, rear	Value	Valid
Locknut of spring basic setting at top spring retainer		
	5 Nm	
Locknut of length adjustment at bottom spring retainer		
	40 Nm	

Fork bridge	Value	Valid
Fork bridge, top, to fork fixed tube		
M8 x 30	2x each side, alternately	
	24 Nm	
Fork bridge, bottom, to fork fixed tube		
M8 x 30 - 10.9	2x each side, alternately	
	10 Nm	

Engine

Engine design	Four-stroke opposed twin, air-cooled with oil-cooled exhaust ports, installed longitudinally, two overhead camshafts, electronic engine management
Displacement	1170 cm ³
Cylinder bore	101 mm
Piston stroke	73 mm
Compression ratio	12 : 1
Nominal output	83 kW, Over: 7500 min ⁻¹
– with power reduction ^{OE}	79 kW, Over: 7500 min ⁻¹
Torque	115 Nm, Over: 6000 min ⁻¹
Maximum engine speed	max 8000 min ⁻¹
Idle speed	1150±50 min ⁻¹

Fuel

Recommended fuel grade	98 ROZ/RON, Super plus (premium) 95 ROZ/RON, Premium unleaded (fuel grade, usable with power- and consumption-related restrictions)
Usable fuel capacity	approx. 13 l
Fuel reserve	≥4 l

Engine oil

Engine oil, capacity	max 4 l, with filter change
Lubricant	Engine oil, 20W-50
Engine oil, quantity for topping up	max 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

Clutch

Clutch type	Single-plate dry clutch
-------------	-------------------------

Transmission

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

Rear-wheel drive

Type of final drive	Shaft drive with bevel gears
Gear ratio of final drive	2.82 : 1

Running gear

Front wheel

Type of front suspension	Upside-down telescopic fork
Spring travel, front	160 mm, At wheel
Projection of fork tube in fork bridge, top (with cap)	3 mm, for high seat height 16 mm, for medium seat height 30 mm, for low seat height

Rear wheel

Type of rear suspension	BMW EVO-Lever
Type of rear suspension	Directly pivot-mounted central spring strut with coil spring and single-tube gas-filled shock absorber
Spring travel, rear	160 mm, At wheel
Spring-strut length	400 mm, for high seat height 394 mm, for medium seat height 388 mm, for low seat height

Brakes

Type of front brake	Hydraulically operated twin disc brake with 4-piston fixed calipers and floating brake discs
Brake-pad material, front	Sintered metal
Type of rear brake	Hydraulically operated disc brake with 2-piston floating caliper and fixed disc
Brake-pad material, rear	Sintered metal

Wheels and tyres

Tyre combinations recommended at time of going to press	You can obtain an up-to-date list of approved tyres from your authorised BMW Motorrad dealer or on the Internet at " www.bmw-motorrad.com ".
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Front wheel

Front wheel, type	Cast aluminium wheel with 5 double spokes, MT H2
Front wheel rim size	3.50" x 17"
Tyre designation, front	120/70 X 17

Rear wheel

Rear wheel type	Cast aluminium wheel with 5 double spokes, MT H2
Rear wheel rim size	5.50" x 17"
Tyre designation, rear	180/55 - ZR17

Tyre pressures

Tyre pressure, front	2.2 bar, one-up, tyre cold
– with rear footrest ^{OA}	2.2 bar, two-up and/or with luggage, tyre cold
Tyre pressure, rear	2.5 bar, one-up, tyre cold
– with rear footrest ^{OA}	2.5 bar, two-up and/or with luggage, tyre cold
Tyre pressure for sport riding	2.1 bar, Front 2.1 bar, Rear

Electrics

Electrical rating of on-board socket	5 A
Fuses	Electronic fuses protect the circuits. 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, manufacturer and designation	YTZ 12 S
Battery type	AGM (Absorptive Glass Mat) battery
Battery rated voltage	12 V
Battery rated capacity	11 Ah

Spark plugs

Spark plugs, manufacturer and designation	Bosch YR5LDE NGK DCPR 8 EKC
Electrode gap of spark plug	0.8 $\pm$ 0.1 mm, When new max 1 mm, Wear limit

Lighting

Bulb for low-beam and high-beam headlight	H4 / 12 V / 60 W / 55 W
Bulb for parking light	W5W / 12 V / 5 W
Bulb for tail light/brake light	P21/5W / 12 V / 21 W / 5 W
Bulbs for flashing turn indicators, front	RY10W / 12 V / 10 W
Bulbs for flashing turn indicators, rear	RY10W / 12 V / 10 W
Bulb for 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
VIN location	on steering head, right

Dimensions

Length of motorcycle	2350 mm
Height of motorcycle	1420 mm, at DIN unladen weight, with mirrors
Width of motorcycle	922 mm, Across mirrors
Front-seat height	890 mm, high 877 mm, middle 860 mm, low
– with high front seat ^{OA}	910 mm, high 897 mm, middle 880 mm, low
Rider's inside-leg arc, heel to heel	1940 mm, high 1910 mm, middle 1880 mm, low
– with high front seat ^{OA}	1980 mm, high 1950 mm, middle 1920 mm, low

Weights

Unladen weight	199 kg, DIN unladen weight, ready for road, 90 % load of fuel
Permissible gross weight	380 kg
Maximum payload	181 kg

Riding specifications

Top speed	>200 km/h
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Service

BMW Motorrad service	134
BMW Motorrad service quality	134
BMW Motorrad Service Card: on-the-spot breakdown assistance	134
BMW Motorrad service network ...	135
Maintenance work	135
Confirmation of maintenance work	136
Confirmation of service	141

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 BMW services and the work undertaken as part of each service. 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 regularly, 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 break-

down, 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 brochure

"Service Contact Europe" or "Service Contact Africa, America, Asia, Australia, Oceania".

Maintenance work

BMW Pre-delivery Check

Your authorised BMW Motorrad dealer conducts the BMW pre-delivery check before handing over the motorcycle to you.

BMW Running-in Check

The BMW running-in check has to be performed when the motorcycle has covered between 500 km and 1200 km

BMW Service

The BMW Service is carried out once a year; the extent of servicing can vary, depending on the age of the motorcycle and the distance it has covered. Your authorised BMW Motorrad dealer confirms that the service work has been carried out and enters

the date when the next service will be due.

Riders who cover long distances in a year might have to bring in their motorcycles for service before the next scheduled date. It is to allow for these cases that a maximum odometer reading is entered as well in the confirmation of service. Servicing has to be brought forward if this odometer reading is reached before the next scheduled date for the service.

Confirmation of maintenance work

BMW Pre-delivery Check

Completed

on _____

Stamp, signature

BMW Running-in Check

Completed

on _____

Odometer reading _____

Next service
at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature

BMW Service

Completed

on _____

Odometer reading _____

Next service
at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature**BMW Service**

Completed

on _____

Odometer reading _____

Next service
at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature**BMW Service**

Completed

on _____

Odometer reading _____

Next service
at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature

BMW Service

Completed

on _____

Odometer reading _____

Next service

at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature**BMW Service**

Completed

on _____

Odometer reading _____

Next service

at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature**BMW Service**

Completed

on _____

Odometer reading _____

Next service

at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature

BMW Service

Completed

on _____

Odometer reading _____

Next service
at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature**BMW Service**

Completed

on _____

Odometer reading _____

Next service
at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature**BMW Service**

Completed

on _____

Odometer reading _____

Next service
at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature

BMW Service

Completed

on _____

Odometer reading _____

Next service

at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature**BMW Service**

Completed

on _____

Odometer reading _____

Next service

at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature**BMW Service**

Completed

on _____

Odometer reading _____

Next service

at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature

Confirmation of service

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.

Item	Odometer reading	Date

[illegible]

A

Abbreviations and symbols, 6

ABS

Control, 16

Operation, 37

Self-diagnosis, 63

Warnings, 26

Accessories

General instructions, 76

B

Battery, 15

Charging when connected, 108

Charging when
disconnected, 108

Installation, 109

Maintenance instructions, 107

Removal, 108

Warning, charge current, 24

BMW Motorrad service, 134

BMW Motorrad Service

Card, 134

Brake fluid

Checking fluid level, front
brakes, 85

Checking fluid level, rear
brakes, 86

Reservoir, front, 13

Reservoir, rear, 13

Brake lever

Footbrake lever, 13

Brake pads

Checking front, 83

Checking rear, 84

Running in, 64

Brakes

Checking operation, 82

Safety instructions, 65

Technical data, 127

Bulbs

General instructions, 96

Replacing brake light and rear
light bulb, 100

Replacing low-beam and high-
beam headlight bulb, 97

replacing number-plate light
bulbs, 104

Replacing parking-light bulb, 98

Replacing turn indicator
bulbs, 103

Technical data, 130

Warning, bulb failure, 24, 25

C

Care, 113

Checklist, 62

Cleaning, 113

Clock

Adjusting, 32

Clutch

Checking fluid level, 87

Checking operation, 87

Fluid reservoir, 11

Technical data, 124

Confirmation of maintenance
work, 136

Currency, 7

D

Damping

- Adjusting front compression stage, 46
- Adjusting front rebound stage, 46
- Adjusting rear compression stage, 48
- Adjusting rear rebound stage, 47

Dimensions

- Technical data, 131

E

Electrics

- Technical data, 129

Electronic immobiliser (EWS), 31

Emergency off switch (kill switch), 17, 37

Engine

- Starter, 17
- Starting, 62
- Technical data, 122
- Warning, engine electronics, 23

Engine oil

- Checking level, 80
 - Filler neck, 11
 - Oil sight glass, 11
 - Technical data, 123
 - Temperature gauge, 20
 - Warning, engine oil pressure, 24
- Equipment, 6

F

Fore-and-aft tilt indicator, 13

Frame

- Technical data, 130

Front-wheel stand, 94

Fuel

- Refuelling, 68
- Technical data, 4, 123
- Warning, fuel down to reserve, 23

Fuel tank

- Field of vision, 11, 67

Fuses, 129

G

Gear indicator, 20

H

Handlebar fittings

- General view, left side, 16
- General view, right side, 17

Handlebars

- Adjusting, 40, 41

Hazard warning flashers, 16

- Control, 16

- Switching off, 37

- Switching on, 36

Headlight

- Adjustment for driving on left/driving on right, 55
- Beam throw, 55

Headlight flasher, 16

High-beam headlight

- Control, 16

Horn, 16

I

Ignition

- Switching off, 30
- Switching on, 30

Ignition switch, 30

Immobiliser, 31
Warning, 23
Instrument cluster
Overview, 18
Sensor for lighting, 18

J

Jump starting, 106

K

Keys, 30, 31

L

Laying up, 116

Lights

Headlight flasher, 34
High-beam headlight, 34
Parking light, 35
Switching on the low-beam
headlight, 34
Switching on the side lights, 34
Low-beam headlight
Switching on, 34
Luggage
Correct loading, 77

M

Maintenance
General instructions, 80
Intervals, 135
Mirrors
Adjusting, 40
Motorcycle
Restoring to use, 116
Multifunction display, 18, 20
Selecting readings, 32

O

Odometer and tripmeters
Resetting, 33

P

Parking, 66
Power socket, 13, 76
Pre-ride check, 63

R

Rear-wheel drive
Technical data, 125
Rear-wheel stand, 95
Refuelling, 68

Reserve volume
Warning, 23
Residual range, 34
Restoring to use, 116
Rev. counter, 18
Rider's Manual, 15
Rims
Test, 88
Running gear
Adjusting treble setting, 53
Technical data, 126
Running in, 64

S

Safety instructions
Brakes, 65
Correct loading, 60
Riding, 60
Seat
Installation, 56
Removal, 56
Service, 134
Service Card, 134
Side light
Switching on, 34

- Spark plugs
 - Technical data, 129
- Speedometer, 18
- Spring preload, 43
 - Adjusting for rear wheel, 43
- Spring preload, rear, 13
- Starter, 17
- Starting, 62
- Status indicators, 20
 - See also warnings, 20
- Steering lock
 - Locking, 30
- Suspension damping, front
 - Rebound stage, 13
- Suspension damping, rear, 13

T

- Technical data
 - Brakes, 127
 - Bulbs, 130
 - Clutch, 124
 - Dimensions, 131
 - Electrics, 129
 - Engine, 122
 - Engine oil, 123

- Frame, 130
- Fuel, 4, 123
- Rear-wheel drive, 125
- Running gear, 126
- Spark plugs, 129
- Standards, 7
- Transmission, 125
- Tyre pressures, 4, 128
- Weights, 132
- Wheels and tyres, 127
- Telltale lights, 18, 20
- Toolkit, 15
- Torques, 119
- Transmission
 - Technical data, 125
- Troubleshooting chart, 118
- Turn indicators
 - Control, left, 16
 - Right, 17
 - Switching off, 17, 36
 - Switching on left, 35
 - Switching on right, 36
- Tyres
 - Checking inflation pressure, 55
 - Inflation pressures, 4, 128

- Recommendation, 88
- Running in, 65
- Table of tyre pressures, 15
- Technical data, 127
- Top speed, 60

V

- Vehicle
 - Care, 113
 - Cleaning, 113
 - General view, left side, 11
 - General view, right side, 13
 - Laying up, 116
 - Parking, 66
- Vehicle identification number, 11

W

- Warning lights, 18
- Warnings, 20
 - Mode of presentation, 20
 - With ABS, 26
- Warnings, overview, 22, 27
- Weights
 - Technical data, 132

Wheels

Change of size, 88

Install the rear wheel, 94

Installing front wheel, 91

Remove the front wheel, 89

Removing rear wheel, 93

Technical data, 127

Details described or illustrated in this booklet may differ from the motorcycle's actual specification as purchased, the accessories fitted or the national-market specification. No claims will be entertained as a result of such discrepancies.

Dimensions, weights, fuel consumption and performance data are quoted to the customary tolerances.

The right to modify designs, equipment and accessories is reserved.

Errors and omissions excepted.

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Important data for refuelling

Fuel

Recommended fuel grade	98 ROZ/RON, Super plus (premium) 95 ROZ/RON, Premium unleaded (fuel grade, usable with power- and consumption-related restrictions)
Usable fuel capacity	approx. 13 l
Fuel reserve	≥4 l

Tyre pressures

Tyre pressure, front	2.2 bar, one-up, tyre cold
– with rear footrest ^{OA}	2.2 bar, two-up and/or with luggage, tyre cold
Tyre pressure, rear	2.5 bar, one-up, tyre cold
– with rear footrest ^{OA}	2.5 bar, two-up and/or with luggage, tyre cold

BMW recommends



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