Rider's Manual (US Model)

K 1200 GT

BMW Motorrad

The Ultimate Riding Machine

Motorcycle/Retailer Data

Motorcycle data

Model

Vehicle Identification Number

Color number

First registration

Registration number

Retailer Data

Contact in Service

Ms./Mr.

Phone number

Retailer's address/phone number (company stamp)

Welcome to BMW

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

We wish you many miles of safe and enjoyable riding

BMW Motorrad.

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General instructions

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Overview

Chapter 2 of this Rider's Manual will provide you with an initial overview of your motorcycle. All maintenance and repair work carried out on your motorcycle will be documented in Chapter 11. Proof of the maintenance work performed is a prerequisite for generous treatment of 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.

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

◀ Indicates the end of an item of information.

• Instruction.

» Result of an activity.

 Reference to a page with more detailed information.

◁ Indicates the end of accessory or equipment-dependent information.

 Tightening torque.

 Technical data.

OE Optional equipment
The motorcycles are assembled complete with all the BMW optional extras originally ordered.

OA Optional accessories
BMW optional accessories can be purchased and installed at your authorized BMW Motorrad retailer.

EWS Electronic immobilizer.

DWA Anti-theft alarm.

ABS Anti-Lock Brake System.

ASC Automatic Stability Control.

ESA Electronic Suspension Adjustment
Electronic suspension adjustment.

TPC Tire Pressure Control.

Equipment

When you ordered your BMW Motorrad, you chose various items of custom equipment. This Rider's Manual describes optional extras (OE) offered by BMW and selected optional accessories (OA). This explains why the manual may also contain descriptions of equipment which you have not ordered. Please note, too, that your motorcycle might not be exactly as illustrated in this manual on account of country-specific differences.
If your BMW is equipped with options or accessories not described in this Rider's Manual, then this equipment is described in a separate operating manual.

Technical data

All dimensions, weights and outputs in the Rider's Manual refer to the Deutsche Institut für Normung e. V. (DIN) and comply with its tolerance regulations. Versions for individual countries may differ.

Currentness of this manual

The high safety and quality standards of BMW motorcycles are maintained by constant development work on designs, equipment and accessories. Because of this, your motorcycle may differ from the information supplied in the Rider's Manual. In addition, BMW Motorrad cannot guarantee the total absence of errors. We hope you will appreciate that no claims can be entertained on the basis of the data, illustrations or descriptions in this manual.

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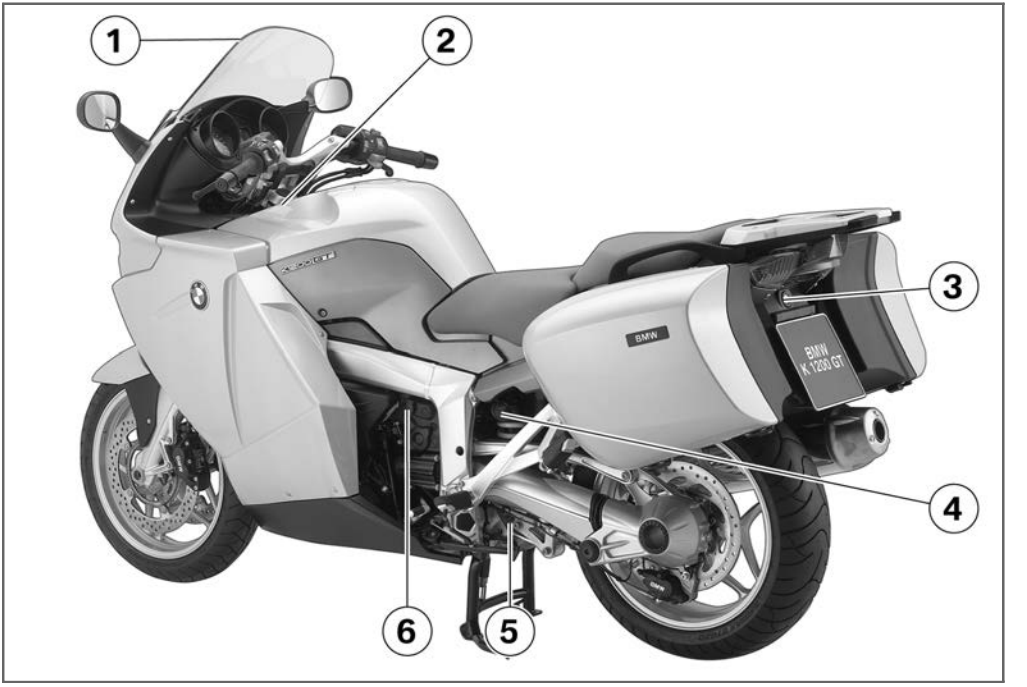
1
2
3
4
5
6
BMW
BMW
K 1200 GT

General view, left side

1 Windshield (➠ 63)
2 Battery compartment (➠ 131)
3 Seat lock (below tail light) (➠ 74)
4 Adjuster for spring preload, rear (➠ 68)
5 Adjustment of rear damping (➠ 69)
6 Onboard socket (➠ 96)


1
2
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4
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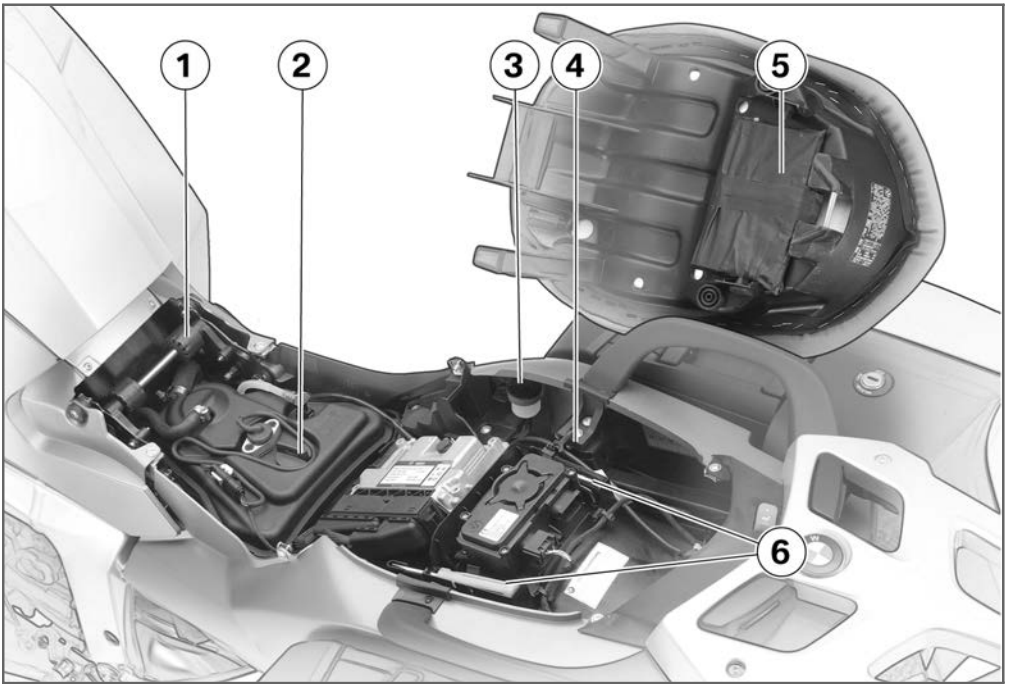
6
BMW
K 1200 GT
BMW

General view, right side

1 Fuel filler opening (➠ 86)
2 Adjustable handlebars (➠ 68)
3 Brake-fluid reservoir, front (➠ 109)
4 Headlight range adjustment (below instrument cluster) (➠ 73)
5 Storage compartment (➠ 66)
6 Vehicle Identification Number

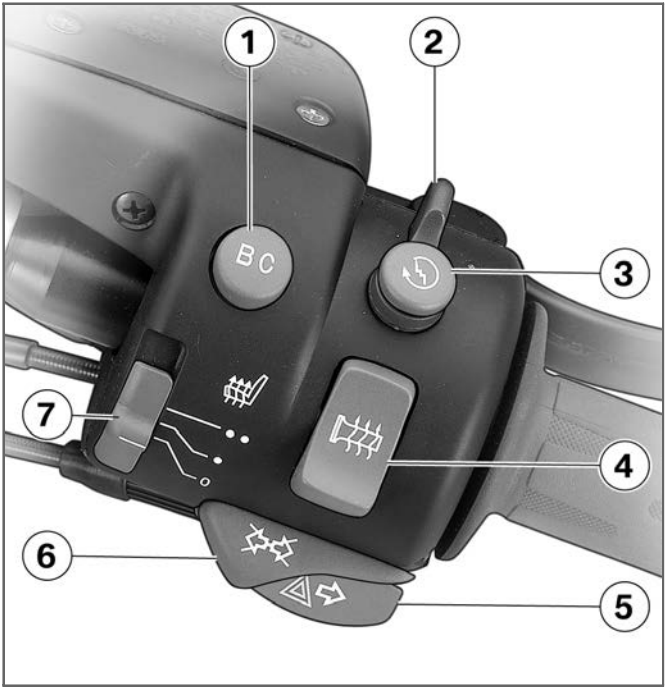

1
2
3
4
5
6

Underneath seat

1 Driver's seat height adjustment (➠ 62)
2 Oil dipstick (➠ 105), Engine oil fill location (➠ 107)
3 Brake-fluid reservoir, rear (➠ 110)
4 Helmet holder (➠ 76)
5 Rider's Manual (US Model)
6 Onboard toolkit (➠ 104)

Left handlebar fitting

1 Cruise-control system OE (➠ 63)
2 Operating ESA OE (➠ 70)
3 Operating ASC OE (➠ 62)
4 Windshield adjustment (➠ 63)
5 Horn
6 Flashing turn indicators, left (➠ 56), Hazard warning flashers (➠ 57)
7 High-beam headlight and headlight flasher (➠ 56)



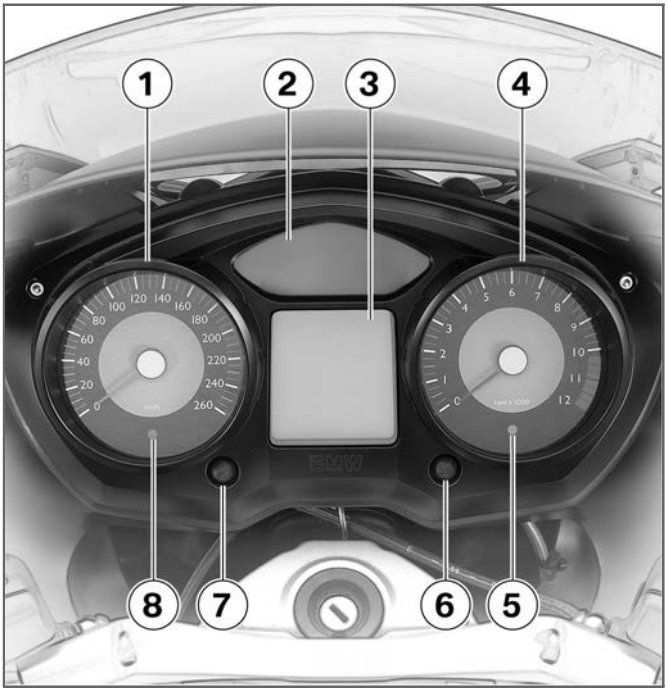
Handlebar fitting, right

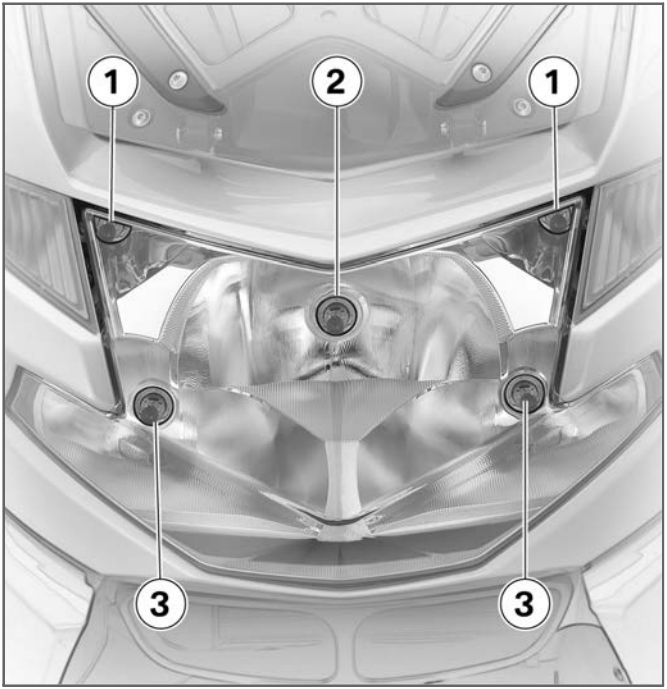
1 Operating onboard computer[OE] (➠ 51)
2 Emergency ON/OFF switch (➠ 59)
3 Starter button (➠ 80)
4 Heated hand grips[OE] (➠ 59)
5 Flashing turn indicators, right (➠ 57), Hazard warning flashers (➠ 57)
6 Turn indicators off (➠ 57), Hazard warning flashers off (➠ 58)
7 Driver's seat heater[OE] (➠ 60)

Instrument cluster

1 Speedometer
2 Indicator lights (➠ 22)
3 Multifunction display (➠ 22)
4 Tachometer
5 Anti-theft alarm indicator light (OE)
6 Setting clock (➠ 49)
Adjusting dimming (➠ 51)
7 Selecting odometer (➠ 49)
Resetting tripmeter (➠ 50)
8 Sensor for instrument lighting

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





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

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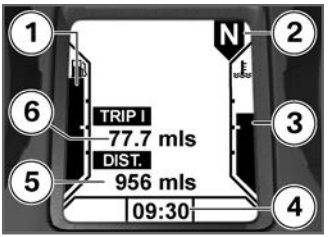
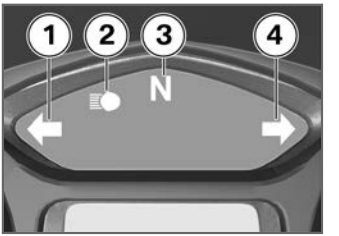
Standard displays

Multifunction display



1 Fuel capacity (➠ 22)
2 Gear indicator (➠ 22)
3 Coolant temperature (➠ 22)
4 Clock (➠ 49)
5 Odometer
6 Trip meter (➠ 49)

Indicator lights



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

Fuel capacity

The vertical bar under the gas pump symbol indicates the remaining fuel quantity. When the fuel in the tank is topped up the gauge briefly shows the original level, before the reading is updated.

Gear indicator

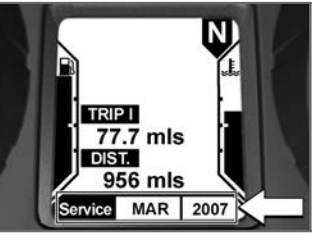
N The gear engaged or **N** for neutral appears on the display.

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

Coolant temperature

The vertical bar under the temperature symbol shows the coolant temperature level.

Service display



If the time remaining until the next service lies within a month,

the service date is briefly displayed following the pre-ride check. The month and year are shown with the SERVICE lettering; in this example the display means "March 2007".

If the motorcycle is driven long distances annually, it is possible that earlier service is required. If the odometer reading for the earlier service lies within 600 miles (1,000 km), the remaining miles (kilometers) are counted down in 60-mile (100-km) steps and briefly displayed following the pre-ride check.

If the service interval has been exceeded, the general warning light also lights up yellow in addition to the date or mileage display. The Service lettering is displayed continuously.

▷ If the service display already more than one month before the service date, or if the Service lettering does not stop after the service date is exceeded, then the date stored in the instrument cluster must be set. This situation can occur if the battery has been disconnected for a longer time.
Consult a certified workshop, preferably an authorized BMW Motorrad retailer, for setting of the date.◀

Displays with onboard computer[OE]

1 Onboard computer display area[OE] (➠ 51)

Displays with Tire Pressure Control TPC OE

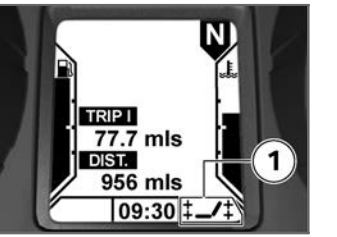
Motorcycles without onboard computer

1 Tire pressures as additional value of tripmeter OE (➠ 54)

Motorcycles with onboard computer

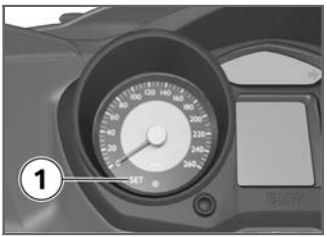
1 Tire pressures as additional value of onboard computer OE (➠ 54)

Displays with seat heater OE



1 Display of activated heating levels OE (➠ 60)

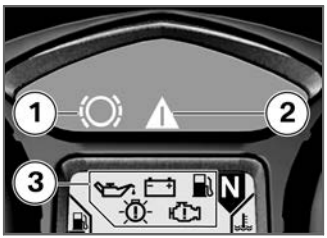
Indicator light with cruise-control system OE



1 Indicator light of cruise-control system

Standard warning indicators

Display



Warnings are indicated by the warning light **1** or by the general warning light **2** in combination with one of the warning symbols **3**. The 'General' warning light shows red or yellow, depending on the urgency of the warning.

If several warnings are active, all corresponding warning lights and symbols are displayed. The general warning light is shown in accordance with the most urgent warning.

The possible warnings are listed on the next page.

Overview of warning indicators

				Meaning
	Lights up yellow		EWS ! appears on the display.	Electronic immobilizer is active (➠ 27)
	Lights up yellow		Flashes	Fuel down to reserve (➠ 27)
	Lights up red		Temperature display flashes	Coolant temperature too high (➠ 27)
	Lights up yellow		Is indicated	Engine in emergency-operation mode (➠ 27)
	Flashes red		Is indicated	Engine oil pressure insufficient (➠ 28)
	Lights up red		Is indicated	Battery charge current insufficient (➠ 28)
	Lights up			Brake-pad wear limit reached (➠ 29)
	Lights up yellow		Is indicated	Rear bulb defective (➠ 29)
			Is indicated	Front bulb defective (➠ 29)
	Lights up yellow		Is indicated	Bulbs defective (➠ 30)

Electronic immobilizer is active


General warning light shows yellow.

EWS ! appears on the display. The key being used is not authorized for starting, or communication between the key and engine electronics is disrupted.

- Remove other ignition keys located on the ignition key.
- Use the reserve key.
- Have the defective key replaced, preferably by an authorized BMW Motorrad retailer.

Fuel down to reserve

General warning light shows yellow.


Fuel reserve symbol flashes


A fuel shortage can lead to misfiring and to the engine dying unexpectedly. Misfiring can damage the catalytic converter, and the engine dying unexpected can lead to accidents.
Do not drive until the fuel tank is completely empty.◀

At the most, the fuel tank still contains the reserve fuel quantity.

	Reserve fuel quantity
– ≥1.1 gal (≥4 l)	

- Refueling (➠ 86)

Coolant temperature too high

General warning light shows red.


Temperature display flashes.

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

The coolant temperature is too high.

- If possible, continue driving in the part-load range to cool down the engine.
- In traffic jams, switch off the engine, but keep the ignition switched on so that the radiator fan continues to operate.
- Should the coolant temperature frequently be too high, have the fault rectified as quickly as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Engine in emergency-operation mode

General warning light shows yellow.

Engine symbol appears on the display.

The engine is in the emergency operating mode. Only reduced engine performance

may be available, which can lead to danger driving situations, especially during passing maneuvers.
Adapt your driving style to the possibly reduced engine performance.◀

The engine control unit has diagnosed a fault. In exceptional cases, the engine stops and can no longer be started. Otherwise, the engine runs in the emergency operating mode.

- Continued driving is possible, however the accustomed engine performance may not be available.
- Have the malfunction corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Engine oil pressure insufficient


General warning light flashes red.


Oil-can symbol appears on the display.

The oil pressure in the lubricating oil circuit is too low. Stop immediately and switch off the engine.


The warning on insufficient engine oil pressure is no substitute for the function of an oil-level indicator. The correct engine oil level can only be checked at the oil sight glass.◀

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

- Checking engine oil level (➠ 105)

If oil level is too low:

- Topping up engine oil (➠ 107)

If the engine oil level is correct:


Driving with insufficient engine oil pressure can result in engine damage.
Do not continue driving.◀

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

Battery charge current insufficient


General warning light shows red.


Battery symbol appears on the display.

A discharged battery can result in the engine cutting out unexpectedly, causing a hazardous situation.
Have faults eliminated as soon as possible.◀

If the battery is no longer charged, continued driving can lead to deep discharging, and therefore to the destruction of the battery.
If possible, do not continue driving.◀

The battery is not being charged.
- Continued driving is possible until the battery is discharged. However, the engine can die suddenly and the battery can be exhaustively discharged and therefore destroyed.
- Have the malfunction corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Brake-pad wear limit reached


Warning light for brake pad wear lights up.

The electrical brake-pad wear detector has detected worn brake pads on the front or rear brake.
- Checking front brake pad thickness (➠ 107)
- Checking rear brake pad thickness (➠ 108)
- Have the worn brake pads replaced by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Rear bulb defective


General warning light shows yellow.


Lamp symbol with arrow pointing to the rear is displayed.

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.◀

Rear light or brake light bulb defective.
- Replacing brake light, tail light and rear turn indicator bulbs (➠ 124)

Front bulb defective


Lamp symbol with arrow pointing to the front is displayed.

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.◀

Low-beam headlight, high-beam headlight, parking light or turn signal bulb defective.
- Replacing low-beam and high-beam bulb (➠ 120)

- Replacing parking-light bulbs (➠ 123)
- Replacing front turn indicator bulbs (➠ 126)

Bulbs defective

General warning light shows yellow.

Lamp symbol with two arrows is displayed.

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.◀

A combination of several bulb defects is present.

- See the fault descriptions above.

Warning indicators of onboard computer OE

Display

Warnings of the onboard computer are shown in area **1**. The possible warnings are listed on the next page.

Overview of warning indicators

		Meaning
	`Oil !` appears on the display	Engine oil level too low (➠ 32)
	Is indicated	
	Ambient temperature display flashes	Ice warning (➠ 32)
	Flashes	

Engine oil level too low

`Oil !` appears on the display.

Oil level symbol appears on the display.

The electronic oil level sensor has detected a low engine oil level.

The exact engine oil level can only be determined by conducting a check with the oil dipstick. During the next refueling stop:

- Checking engine oil level (➠ 105)

If oil level is too low:

- Topping up engine oil (➠ 107)

If "Check oil level" appears in the display, although a correct oil level has been measured with the oil dipstick, the oil level sensor may be defective.

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

Ice warning

The ambient temperature display flashes.

Ice crystal symbol flashes.

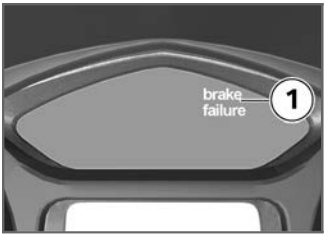
The air temperature measured at the motorcycle is lower than 37 °F (3 °C).

The ice warning does not mean that there is no risk of black ice forming at measured temperatures above 37 °F (3 °C). Always think well ahead when temperatures are low, especially on bridges and where the road is in the shade.◀

- Think well ahead when driving.

ABS warning indicators

Display



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

In some countries an alternative display of the ABS warning light is possible.

Possible country-dependent versions.

Additional information on the BMW Motorrad Integral ABS is provided from page (➠ 90); an

overview of the possible warnings
is provided on the following page.

Overview of warning indicators

		Meaning
brake failure	Flashes	Self-diagnosis not completed (➠ 35)
brake failure	Lights up	ABS error (➠ 35)

Self-diagnosis not completed

brake failure ABS warning light flashes.

The ABS function is not available, because the self-diagnosis has not been completed. To check the wheel sensors, the motorcycle must be driven a few yards.

- Ride off slowly. It must be noted that the ABS function is not available until the self-diagnosis has been completed.

ABS error

brake failure ABS warning light lights up.

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

- Continued driving is possible while taking the failed ABS function into account. Observe additional information on situations which can lead to an ABS error (➠ 91).
- Have the malfunction corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

ASC warning indicators OE

Display

ASC warnings are indicated by the ASC warning light **1**. Additional information on the BMW Motorrad ASC is provided from page (➠ 92); an overview of the possible warnings is provided on the following page.

Overview of warning indicators

		Meaning
	Flashes rapidly	ASC intervention (➠ 37)
	Flashes slowly	Self-diagnosis not completed (➠ 37)
	Lights up	ASC deactivated (➠ 37)
	Lights up	ASC error (➠ 37)

ASC intervention

ASC warning light flashes rapidly.

The ASC has detected instability at the rear wheel and has reduced the torque. The warning light flashes longer than the ASC intervention lasts. As a result, the driver is provided with optical feedback on the regulation carried out even after the critical driving situation.

Self-diagnosis not completed

ASC warning light flashes slowly.

The self-diagnosis was not completed; the ASC function is not available. So that the ASC self-diagnosis can be completed, the engine must be running and the motorcycle must be moved at a speed of at least 3 mph (5 km/h).

- Ride off slowly. It must be noted that the ASC function is not available until the self-diagnosis has been completed.

ASC deactivated

ASC warning light lights up.

The ASC system has been deactivated by the driver.
With OE Automatic Stability Control (ASC):

- Activating ASC function (➠ 62)

ASC error

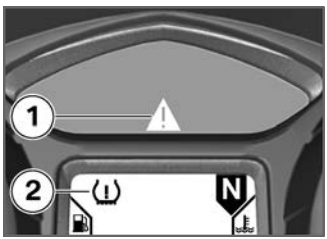
ASC warning light lights up.

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

- Continue driving is possible. It must be noted that the ASC function is not available. Observe additional information on situations which can lead to an ASC error (➠ 93).
- Have the malfunction corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

TPC warning indicators OE

Display

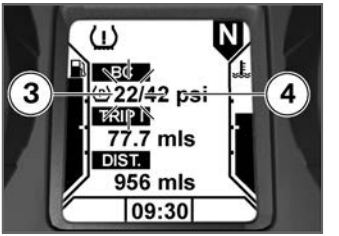


The warning symbol **2** signals a critical tire pressure and the corresponding display flashes. If the critical value is at the limit of the permissible tolerance, the general warning light **1** also lights up in yellow. If the determined

tire pressure is outside the permissible tolerance, the general warning light flashes in red.

The critical air pressure of the front wheel **3** or the rear wheel **4** flashes.

With OE Onboard computer:



The critical air pressure of the front wheel **3** or the rear wheel **4** flashes.◁

Additional information on the BMW Motorrad TPC is provided from page (➠ 93); an overview of the possible warnings is provided on the following page.

Overview of warning indicators

			Meaning
 Lights up yellow		Is indicated	Tire pressure in limit area of permissible tolerance (➠ 40)
		The critical air pressure flashes	
 Flashes red		Is indicated	Tire pressure outside permissible tolerance (➠ 40)
		The critical air pressure flashes	
		"- -" or "- - - -" is displayed	Transmission error (➠ 40)
Lights up yellow		Is indicated	Sensor defective or system fault (➠ 41)
		"- -" or "- - - -" is displayed	
 Lights up yellow		**RDC** is displayed	Battery of tire pressure sensor weak (➠ 41)
		Is indicated	

Tire pressure in limit area of permissible tolerance


General warning light shows yellow.


Tire symbol appears on the display.

Critical air pressure flashes.
The measured tire inflation pressure is in the limit area of the permissible tolerance.

- Correct tire inflation pressure in accordance with instructions on back of cover of Rider's Manual.


The pressure values on the back of the cover refer to a tire air temperature of 68 °F (20 °C). To also adapt the tire inflation pressure at other tire temperatures, proceed as follows: Calculate the difference between the nominal value according to the Rider's Manual and the value determine by the RDC system. Change the inflation pressure in the tire by this difference using an air pressure tester at a filling station.◀

Tire pressure outside permissible tolerance


General warning light flashes red.


Tire symbol appears on the display.

Critical air pressure flashes.
The measured tire inflation pressure is outside the permissible tolerance.

- Check tire for damage and drivability.

Is it still possible to drive with tire:


Incorrect tire inflation pressure result in poorer handling of the motorcycle.
Always adapt your driving style to the incorrect tire inflation pressure.◀

- Correct tire inflation pressure at next opportunity.
- Have the tire checked for damage by a specialized workshop, preferably an authorized BMW Motorrad retailer.

If you are unsure about the drivability of the tire:

- Do not continue driving.
- Inform roadside service.
- Have the tire checked for damage by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Transmission error

"- - -" or "- - - - -" is displayed.

The motorcycle's speed has not exceeded the threshold of approx. 20 mph (30 km/h). The RDC sensors do not transmit their signal until a speed above this threshold is reached (➠ 93).

- Watch RDC display at higher speed. A permanent fault has not occurred until the general

warning light also lights up. In this case:
- Have fault eliminated by a specialized workshop, preferably an authorized BMW Motorrad retailer.

There is a fault in the radio connection to the RDC sensors. Possible causes are radio systems in the surrounding area, which interfere with the connection between the RDC control unit and the sensors.
- Watch the RDC display in another environment. A permanent fault has not occurred until the general warning light also lights up. In this case:
- Have fault eliminated by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Sensor defective or system fault


General warning light shows yellow.


Tire symbol appears on the display.

"- -" or "- - - -" is displayed.
Wheels without installed RDC sensors are mounted.
- Retrofit wheel set with RDC sensors.

One or two RDC sensors have failed.
- Have fault eliminated by a specialized workshop, preferably an authorized BMW Motorrad retailer.

A system fault has occurred.
- Have fault eliminated by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Battery of tire pressure sensor weak


General warning light shows yellow.

RDC appears on the display.

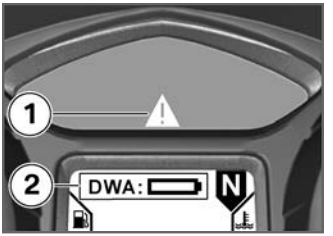

Battery symbol appears on the display.


This error message is only displayed for a short time following the pre-ride check.◀

The battery of the tire pressure sensor no longer has its full capacity. The operation of the tire pressure control is only ensured for a limited time.
- Contact a specialized workshop, preferably an authorized BMW Motorrad retailer.

Anti-theft alarm warning indicators OE

Display



Anti-theft alarm warning are shown in the area **2** in conjunction with the general warning light **1** following the pre-ride check and refer to the capacity of the internal anti-theft alarm battery.
The possible warnings are listed on the next page.

Overview of warning indicators

			Meaning
		Is indicated	Anti-theft alarm battery weak (➠ 44)
 Lights up yellow		Is indicated	Anti-theft alarm battery drained (➠ 44)

Anti-theft alarm battery weak


Battery symbol appears on the display.

DWA appears on the display.

This error message is only displayed for a short time following the pre-ride check.◀

The anti-theft alarm battery no longer has its full capacity. The operation of the anti-theft alarm is only ensured for a limited time with the motorcycle battery disconnected.

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

Anti-theft alarm battery drained


General warning light shows yellow.


Battery symbol appears on the display

DWA appears on the display.

This error message is only displayed for a short time following the pre-ride check.◀

The anti-theft alarm battery has no capacity. The operation of the anti-theft alarm is no longer ensured with the motorcycle battery disconnected.

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

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Ignition switch and steering lock

Keys

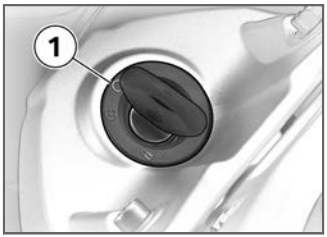
You receive one master key and one spare key. If a key is lost, please note the information on the electronic immobilizer (EWS) (➠ 48).

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

With OA Topcase:

A Topcase with a lock for the same key can be ordered on request. Please contact a specialized workshop for this purpose, preferably an authorized BMW Motorrad retailer.◁

Switching on ignition



- Turn key to position **1**.

» Parking lights and all function circuits switched on.

» Engine can be started.

» Pre-ride check is performed. (➠ 81)

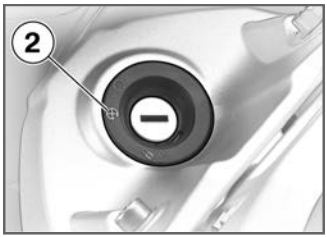
» ABS self-diagnosis is performed. (➠ 82)

With OE ASC:

- Turn key to position **1**.

» In addition to the points named above, the ASC self-diagnosis is also carried out. (➠ 82)◁

Switching off ignition



- Turn key to position **2**.

» Light switched off.

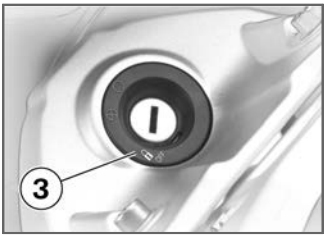
» Handlebars not locked.

» Key can be removed.

» Electrically powered accessories remain operational for a limited period of time.

» Battery can be recharged via onboard 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 handlebars to full left or right lock position.
- Turn key to position **3** while moving handlebars slightly.

» Ignition, lights and all function circuits switched off.
» Handlebars locked.
» Key can be removed.

Electronic immobilizer

Theft protection

The electronic immobilizer helps protect your BMW motorcycle from theft, and this enhanced security is at your disposal without any need for you to set parameters or activate additional systems. The engine of a motorcycle fitted with this electronic immobilizer can be started only with the keys that belong to the motorcycle. You can also have your authorized BMW Motorrad retailer disable particular keys, for example in the event that you lose your keys. The engine cannot be started with a key that has been barred.

Electronics in key

The motorcycle's electronics exchange certain continuously changing signals with the electronics in the key; these signals are specific to your motorcycle and they are transmitted via the ring antenna in the ignition lock. The ignition is not enabled for starting until the key has been recognized as "authorized" for your motorcycle.

A spare key attached to the same ring as the ignition key used to start the engine could "irritate" the electronics, in which case the enabling signal for starting is not issued. The warning EWS is shown in the multifunction display.
Always store the spare key separately from the ignition key.◀

Replacement and extra keys

Replacement and spare keys are only available through an authorized BMW Motorrad retailer. The keys are part of an integrated security system, so the retailer is under an obligation to check the legitimacy of all applications for replacement/extra keys. If you want to have a lost key barred, you must bring along all other keys that belong to the motorcycle. A key that has been barred can subsequently be cleared and reactivated for use.

Clock

Setting clock

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

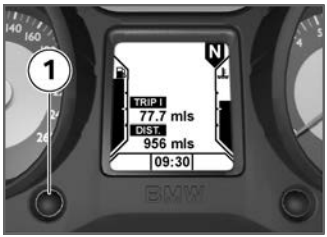
- Switch on ignition.

- Hold down button **1**.
» Hours **2** flash.
- Press button **1**.
» Hours increase by one each time button is pressed.
- Hold down button **1**.
» Minutes **3** flash.
- Press button **1**.
» Minutes increase by one each time button is pressed.
- Press and hold button **1** or no longer press.
» End setting; set time is displayed.

Odometer and tripmeters

Selecting odometer

- Switch on ignition.



- Press button **1**.

Each time the button is pressed, the display shows values starting with the current value in the following order:

– Tripmeter 1 (Trip I)
– Tripmeter 2 (Trip II)
– Operating range (after reaching reserve level)
– Tire pressures (OE)

The total mileage is shown in the DIST display line.

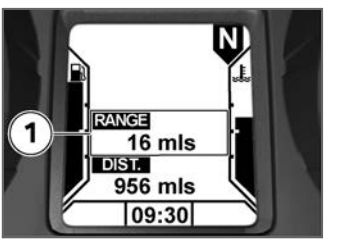
Resetting tripmeter

- Switch on ignition.
- Select desired tripmeter.

- Hold down button **1**.

» Tripmeter is reset.

Residual range



The operating range **1** is displayed below the lettering RANGE and indicates what distance can still be driven with the remaining fuel. It is only displayed after the fuel reserve is reached. This distance is calculated on the basis of fuel level and average consumption. When refueling, fuel is not registered until the quantity added is approx. one gallon (several liters). When refueling 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. Otherwise neither the fill level nor the operating range display can be updated.

The determined residual range is an approximate reading. BMW Motorrad therefore recommends that you do not try to use the full remaining range before refueling.◀

Multifunction display

Adjusting dimming

⚠ Adjusting the dimming while driving can lead to accidents.
Only adjust the dimming when the motorcycle is stationary.◀

- Press button **1**.

» The level of dimming appears in display field **2**.

- Press button **1** again.

» The display lighting becomes brighter by one level each time the button is pressed. Each time the button is pressed after maximum brightness is reached, brightness is reduced by one level.

Onboard computer OE

Selecting readings

- Switch on ignition.

- Press button **1**.

Each time the button is pressed, the display shows values starting with the current value in the following order:

- Ambient temperature
- Range
- Average speed
- Average consumption
- Oil level indicator
- Tire pressures (OE)

Ambient temperature

When the motorcycle is stopped, the engine heat can falsify the measurement of the ambient temperature **1**. If the influence of the engine heat becomes too great, - - is temporarily shown in the display.

If the ambient temperature drops below 3 °C, a warning of possible icing-up appears. The display automatically switches from any other mode to the temperature reading when the temperature drops below this threshold for the first time.

Range

The functional description of the operating range (➠ 50) also applies to the range. However, the range **1** can also be displayed before the fuel reserve is reached. To calculate the range, a special average consumption is used, which does not always match the value that can be shown on the display.

If the motorcycle is standing on the side stand, the fuel level cannot be correctly determined due to the inclined position. For this reason the range is only calculated while driving.

When refueling 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. Otherwise neither the fill level nor the range display can be updated.

The determined range is an approximate reading. BMW Motorrad therefore recommends that you do not try to use the full range before refueling.◀

Average speed

The average speed **1** is calculated based on the elapsed time since the last reset. Times during which the engine was stopped are excluded from the calculation.

Resetting average speed

- Switch on ignition.
- Select average speed.

- Hold down button **1**.

» Average speed is reset.

Average consumption

The average consumption **1** is calculated by dividing the distance covered since the last reset by the corresponding amount of fuel used.

Resetting average consumption

- Switch on ignition.
- Select average consumption.

- Hold down button **1**.

» Average consumption is reset.

Oil level indicator

The oil level indicator **1** provides information on the oil level in the engine. It can only be displayed when the motorcycle is stopped.

The conditions for the oil level indicator are as follows:
- Engine at operating temperature.
- Engine idling for at least 30 seconds.
- Side-stand retracted.
- Motorcycle is vertical.

The readings mean:

Oil level is correct

Check oil level at next refueling stop. If other information of the onboard computer is displayed, this symbol continues to be shown until the oil level is detected as correct again.

Oil level cannot be measured (conditions as stated above not satisfied).

The most recently measured level is displayed for 5 sec. when you next switch on the ignition.

If, despite a correct oil level on the oil sight glass, "Check oil level" continually appear on the display, the oil level sensor may be defective. In this case, please contact your authorized BMW Motorrad retailer.◀

Tire Pressure Control TPC OE

Displaying tire pressures

- Switch on ignition.

- Repeatedly press button **1** until the tire pressures appear in the odometer display area.

The tire pressures are displayed with the lettering **RDC**. The left-hand value indicates the air pressure of the front wheel, and the right-hand value the air pressure of the rear wheel. Immediately after switching on the ignition, - - - - is displayed, as the transfer of the air pressure values does not begin until a speed over 20 mph (30 km/h) is reached.

(P) Indicates the display of the tire pressures.

With OE Onboard computer:

- Repeatedly press button **1** until the tire pressures appear in the onboard computer display area.

The tire pressures are displayed as an additional value of the onboard computer.◁

Lights

Parking lights

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

The parking lights are a strain on the battery. Do not leave the ignition switched on longer than absolutely necessary.◀

Low-beam headlight

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

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

High-beam headlight

- Press top section of full-beam headlight switch **1**.

» High-beam headlight is switched on.

- Move full-beam headlight switch **1** to center position.

» High-beam headlight is switched off.

- Press bottom section of full-beam headlight switch **1**.

» High-beam headlight is switched on as long as switch is pressed (headlight flasher).

Switching on parking lights

- Switch off ignition.

- Immediately after switching off ignition, press and hold left-hand turn indicator button **1**.

» Parking light switches on.

Switching off parking lights

- Switch ignition on and then off again.

» Parking light switched off.

Turn indicators

Switching on left-hand turn indicator

- Switch on ignition.

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

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

» Left-hand turn indicator is switched on.

» Indicator light for left-hand turn indicator flashes.

Switching on right-hand turn indicator

- Switch on ignition.

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

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

» Right-hand turn indicator is switched on.

» Indicator light for right-hand turn indicator flashes.

Switching off turn indicator

- Press turn-indicator cancel button **3**.

» Turn indicator is switched off.

» Turn indicator lights in indicator light panel are off.

Hazard warning flashers

Switching on hazard warning flashers

- Switch on ignition.

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

If a turn indicator button is pressed with the ignition switched on, the flashing function replaces the emergency flashing function as long as the button is pressed. If the turn indicator button is released, the emergency flasher function becomes active again.◀

- Press left **1** and right-hand **2** turn indicator buttons simultaneously.

» Hazard warning flashers are switched on.

» Left/right turn indicator lights flash.

- Switch off ignition.

» Hazard warning flashers continue to operate.

» Left/right turn indicator lights off.

Switching off hazard warning flashers

- Press turn-indicator cancel button **3**.

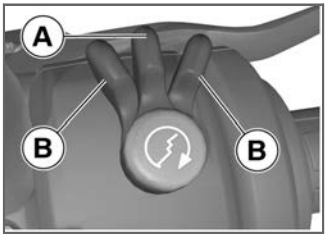
» Hazard warning flashers are switched off.

Emergency ON/OFF switch

1 Emergency ON/OFF switch

Operating the emergency ON/OFF switch when riding can cause the rear wheel to lock and thus cause a fall.
Do not operate the emergency ON/OFF switch when riding.◀

The engine can be switched off easily and quickly using the emergency ON/OFF switch.



A Operating position
B Engine switched off.

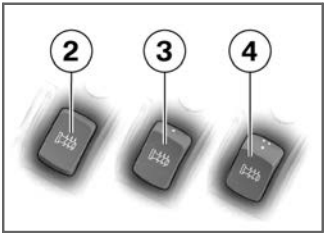
The engine can only be started in the operating position.◀

Heated hand grips OE

1 Heated hand grips switch

The handlebar grips can be heated at two different levels. The heated hand grips option can only be activated when the engine is running.

The increase in power consumption caused by the heated hand grips can drain the battery if you are riding at low engine speeds. If the battery is inadequately charged, the heated hand grips are switched off to ensure starting capability.◀



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

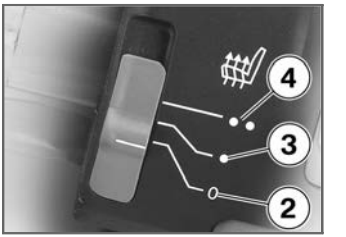
Seat heating[OE]

Seat heating, front seat

1 Switch for seat heating, front seat

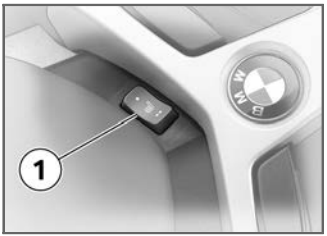
The driver's seat can be heated at two levels. Seat heating can be activated only when the engine is running.

The increase in power consumption caused by the heated seat can drain the battery if you are riding at low engine speeds. If the battery is inadequately charged, the heated seat is switched off to ensure starting capability.◀



2 Heating function off.
3 50 % heating power
4 100 % heating power

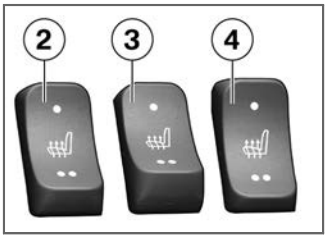
Seat heating of passenger seat



1 Switch for seat heating, rear seat

The passenger seat can be heated at two levels. Seat heating can be activated only when the engine is running.

The increase in power consumption caused by the heated seat can drain the battery if you are riding at low engine speeds. If the battery is inadequately charged, the heated seat is switched off to ensure starting capability.◀



2 Switch in middle position: Heating off.
3 Switch pressed toward right: 50 % heating capacity.
4 Switch pressed toward left: 100 % heating capacity.

Shown in multifunction display

- Switch on driver's or passenger heating.

The following symbols are shown in dependence on the selected heating level:

- Driver's seat 50 % heating capacity
- Driver's seat 100 % heating capacity
- Passenger seat 50 % heating capacity
- Passenger seat 100 % heating capacity

Automatic Stability Control ASC OE

Switching off ASC function

- Switch on ignition.

The ASC function can also be deactivated while driving.◀

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

ASC warning light begins to light up.

- Release ASC button within three seconds after ASC symbol lights up.

ASC warning lamp continues to light up.

» ASC function is deactivated.

Activating ASC function

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

ASC warning light goes out; if self-diagnosis is not completed, the ASC warning light begins to flash.

- Release ASC button within three seconds after ASC symbol goes out.

ASC warning light remains off or continues to flash.

» ASC function is activated.

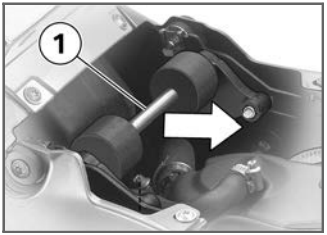
- As an alternative to pressing ASC button, ignition can also be switched off and then on again.

If the ASC warning light lights up after switching the ignition off and on and then continued driving over 5 mph (10 km/h), an ASC error has occurred.◀

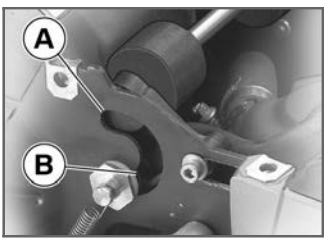
Seat height

Adjusting seat height

- Removing driver's seat (➠ 74)



- Pull the seat height adjustment **1** into the end position.



- Press the seat height adjustment forward as far as possible at the top or bottom.

» End position **A**: high seat position.
» End position **B**: low seat position.

- Installing driver's seat (➠ 75)

Windshield

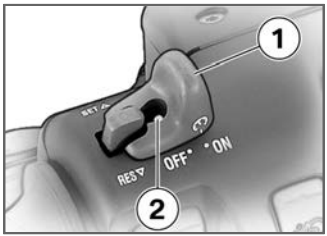
Adjusting windshield

- Switch on ignition.

- Press button **1** at top.
» Windshield is raised.
- Press button **1** at bottom.
» Windshield is lowered.

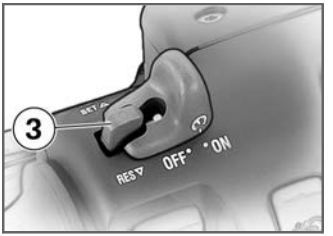
Cruise control OE

Switching on cruise control



- Move switch **1** to ON.
» Indicator light **2** in switch lights up red.

Setting road speed



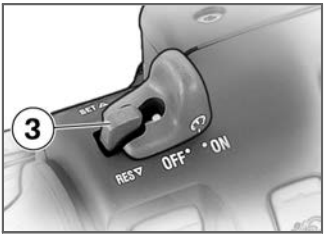
- Briefly push button **3** in SET direction

The cruise-control system can be used within a speed range of 30 mph to 112 mph (50 km/h to 180 km/h).◀

SET Indicator light for cruise-control system lights up.

» The motorcycle maintains your current cruising speed and the setting is saved.

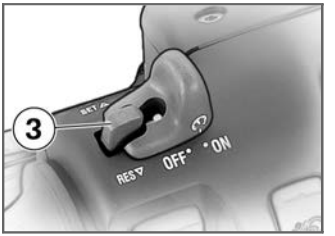
Step-by-step acceleration



- Briefly push button **3** in SET direction

» Speed is increased by 1 mph (2 km/h) each time button is pressed, and new setting is saved.

Stepless acceleration



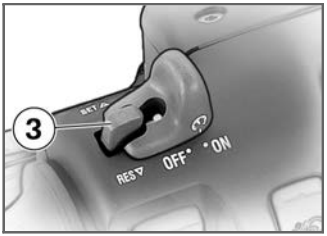
- Briefly press button **3** in SET direction and hold.

» The motorcycle accelerates steplessly.

- Release button **3**.

» The motorcycle maintains your current cruising speed and the setting is saved.

Step-by-step deceleration



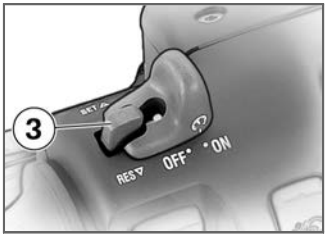
- Briefly push button **3** in RES direction.

» The speed is decreased by approx. 2 km/h each time you push the button, and the new setting is saved.

- Release button **3**.

» The motorcycle maintains your current cruising speed and the setting is saved.

Stepless deceleration



- Briefly press button **3** in RES direction and hold.

» The motorcycle decelerates steplessly.

- Release button **3**.

» The motorcycle maintains your current cruising speed and the setting is saved.

Deactivating cruise control

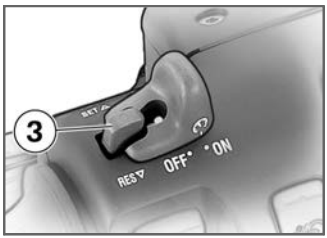
- Operate brakes or clutch or throttle twistgrip (reduce throttle beyond basic position).

» Cruise control is deactivated.

» Cruise-control indicator light goes out.

» Indicator light in switch remains on.

Resuming former cruising speed



- Push button **3** in RES direction.

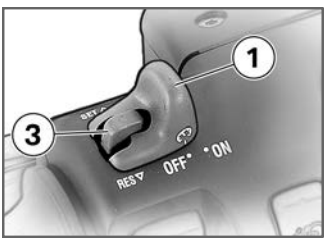
Opening the throttle does not deactivate the cruise-control system. If you release the twistgrip the motorcycle will decelerate only to the cruising speed saved in memory, even

though you might have intended slowing to a lower speed.◄

SET Indicator light for cruise-control system lights up.

» Stored speed is resumed.

Switching off cruise control



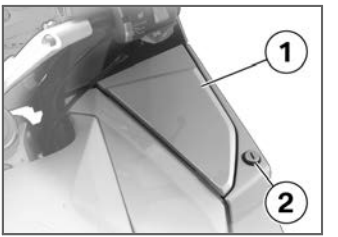
- Move switch **1** to OFF.

» The system is deactivated.

» Button **3** is locked.

Storage compartment

Opening storage compartment



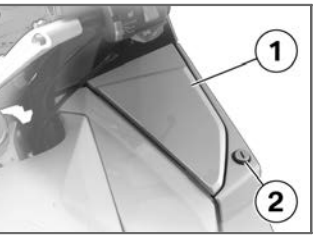
- Turn lock barrel **2** perpendicular to driving direction with ignition key.

» Lock of storage compartment is unlocked.

- Push in lock barrel.

» Lid **1** pops up.

Closing storage compartment



- Close lid **1** and press down.

» Lock engages with an audible click.

- Turn lock barrel **2** longitudinally to driving direction with ignition key.

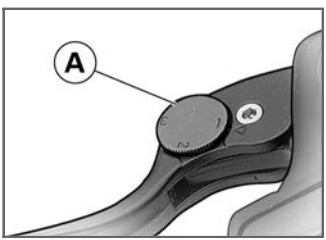
» Lock of storage compartment is locked.

Clutch

Adjusting clutch lever

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

Adjusting the clutch lever while driving can lead to accidents.
Only adjust the clutch lever when the motorcycle is stationary.◀



- Turn adjusting wheel **A** to position **1**.

The adjusting wheel can be turned more easily if you press the clutch lever forward when doing so.◀

» Minimum span
- Turn adjusting wheel **A** to position **3**.

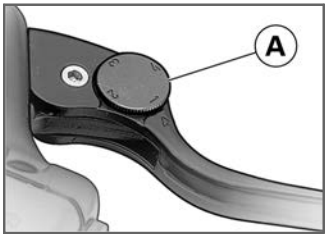
» Maximum span

Brakes

Adjusting handbrake lever

Changing the position of the brake-fluid reservoir can allow air to penetrate the brake system.
Do not reposition the handlebar controls on the handlebars or the handlebars in their mounts.◀

Adjusting the brake lever while driving can lead to accidents.
Only adjust the brake lever when the motorcycle is stationary.◀



- Turn adjusting wheel **A** to position **1**.

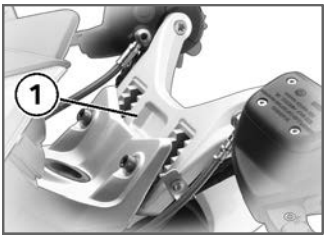
The adjusting wheel can be turned more easily if you press the handbrake lever forward when doing so.◀

» Minimum span
- Turn adjusting wheel **A** to position **3**.

» Maximum span

Handlebars

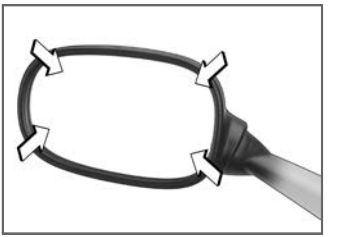
Adjustable handlebars



The height of the handlebars **1** is adjustable. Consult a certified workshop, preferably an authorized BMW Motorrad retailer, for adjustment of the handlebars.

Mirrors

Adjusting mirrors



- Move mirror into desired position by twisting.

Spring preload

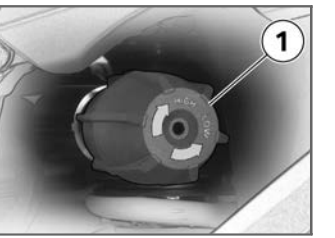
Setting

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 ground is level and firm and park motorcycle.

To achieve better accessibility, the handwheel can be pulled out and angled down.◀



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

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

- To increase spring preload, turn handwheel **1** in direction of arrow HIGH.
- To decrease spring preload, turn handwheel **1** in direction of arrow LOW.

Basic setting of spring preload, rear
– Turn handwheel as far as possible in direction of arrow LOW, then turn 15 clicks in direction of arrow HIGH (Full tank of gas, with rider 187 lbs (85 kg))

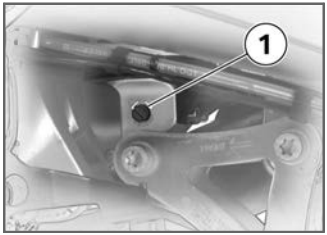
Damping

Setting

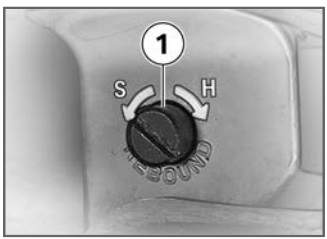
The damping must be adapted to the spring preload. An increase in spring preload requires firmer damping, a reduction in spring preload requires softer damping.

Adjusting damping on rear wheel

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



- Adjust rear shock absorber with onboard toolkit by turning adjusting screw **1**.



- To increase absorption, turn adjusting screw **1** in arrow direction H.

- To reduce absorption, turn adjusting screw **1** in arrow direction S.

Basic setting of rear wheel rear-wheel damping
– Turn adjusting screw as far as possible in direction of arrow H, then turn one and one-half turn in direction of arrow S (Single rider with one person 187 lbs (85 kg))

Electronic suspension adjustment ESA[OE]

Settings

Using the electronic suspension adjustment ESA you can conveniently adjust your motorcycle to its loading and the ground.

The damping setting is shown in the multifunction display in the area **1**, and the spring preload in the area **2**. The display of the clock is hidden as long as the ESA display is shown. Three spring preloads with three damping setting each can be combined to optimally adjust the motorcycle.

Adjusting spring preload

The ESA control unit is equipped with an overload protection device that interrupts the adjustment process for the spring preload in case of excessive current consumption. Especially at low temperatures and with a heavy payload, increased current consumption can briefly result, causing an interruption of the adjustment process.

At temperatures below 0 °C, BMW Motorrad recommends that the passenger should wait until the adjustment process to passenger mode is completed before taking a seat. In case of very long adjustment distances (adjustment from "single rider" to "operation with passenger and luggage"), BMW Motorrad also recommends unloading the motorcycle.

The ESA display flashes until the adjustment process has been completed.

An interrupted adjustment process is automatically continued as soon as the current consumption is reduced, e.g. with the measures described above.

Calling up settings

• Switch on ignition.

• Press button **1**.
» Current setting is displayed.
» Display goes out automatically after a few seconds.

Adjusting damping

• Switch on ignition.

The damping cannot be adjusted while the motorcycle is being ridden.◀

• Press button **1**.
» Current setting is displayed.
• Press button **1** once in each case.

Starting from the current state, the display is in the following order:

– COMF comfortable damping
– NORM normal damping
– SPORT sporty damping

» If button **1** is not pressed for a longer time, damping is set as indicated.

Adjusting spring preload

• Start engine.

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

• Press button **1**.
» Current setting is displayed.
• Press and hold button **1** until display changes each time.

Starting from the current state, the display is in the following order:

One-up

One-up with luggage

Two-up (with luggage)

- If button **1** is not pressed for a longer time, spring preload is set as indicated. During the setting procedure, the display flashes.

Tires

Checking tire pressure

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

Incorrect tire inflation pressure results in poorer handing characteristics of the motorcycle and reduces the life of the tires.
Ensure proper tire inflation pressure.◀

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

- Check correct tire inflation pressure using following data.

Tire pressure, front
– 36.3 psi (2.5 bar) (Single rider, with cold tire)
– 36.3 psi (2.5 bar) (Driver with passenger and/or load, with cold tire)
Tire pressure, rear
– 42.1 psi (2.9 bar) (Single rider, with cold tire)
– 42.1 psi (2.9 bar) (Driver with passenger and/or load, with cold tire)

If tire pressure is too low:
- Correct air pressure.

Headlight

Adjusting headlight for RHD/LHD traffic

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 adjusted to the relevant conditions by a specialized workshop, preferably an authorized BMW Motorrad retailer.

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

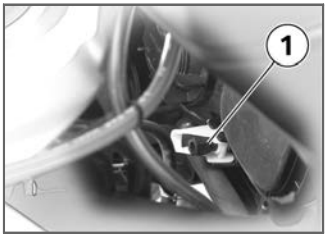
Headlight range and spring preload

The headlight range generally remains constant due to the adjustment of the spring preload to the loading state.

Spring preload adjustment may only be insufficient when the motorcycle is very heavily loaded. In this case, the headlight range must be adjusted to the weight.

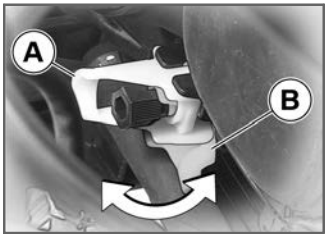
If you are unsure whether the basic headlight setting is correct, consult a specialized workshop, preferably an authorized BMW Motorrad retailer.◀

Headlight range adjustment



1 Headlight range adjustment

In the case of very high payloads, the available spring preload adjustment might not be adequate. To avoid dazzling oncoming traffic, the headlight adjustment can be corrected by adjusting the swivel lever.

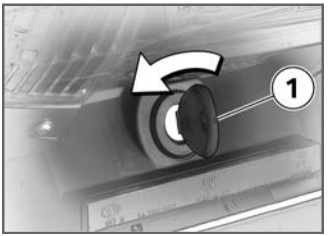


A Neutral position
B Position with heavy payload

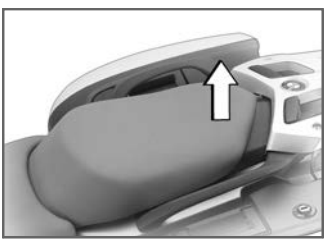
Front and rear seats

Removing passenger seat

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

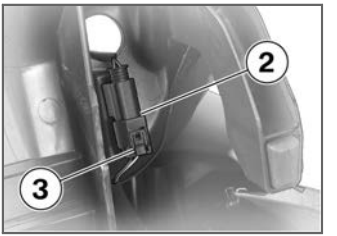


- Turn the key **1** counterclockwise in the seat lock.



- Lift the seat at the rear and release the key.

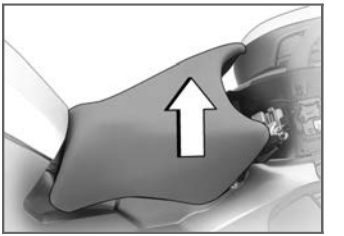
With OE Seat heating:



- Disconnect the connector **2** by pressing together the locking tabs **3** at the top and bottom.◁
- Pull the seat to the rear to release it from its holders.
- Lay the seat on the cover side on a clean surface.

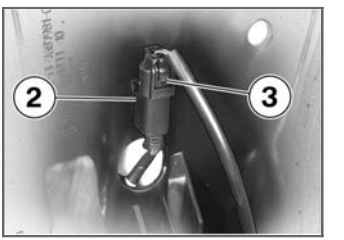
Removing driver's seat

- Removing passenger seat (➠ 73)



- Raise front seat at rear.

With OE Seat heating:

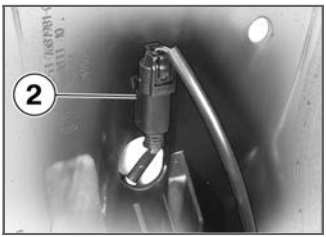


- Disconnect the connector **2** by pressing together the locking tabs **3** at the top and bottom.◁

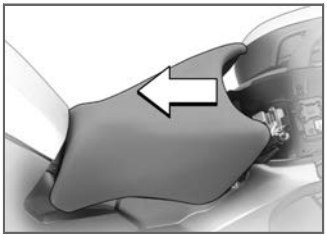
- Lift seat up to remove.
- Lay the seat on the cover side on a clean surface.

Installing driver's seat

With OE Seat heating:



- Close connector **2**.◁



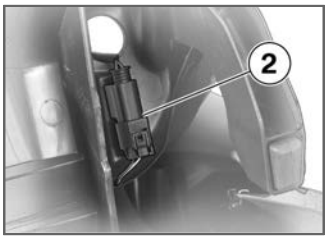
⚠ If too much pressure is applied in the forward direction, there is a danger that the motorcycle will be pushed off its stand.
Make sure that the motorcycle is steady on its stand.◀

- Slide driver's seat forward onto seat height adjustment. Check that the seat is correctly seated.
- Installing passenger seat (➠ 75)

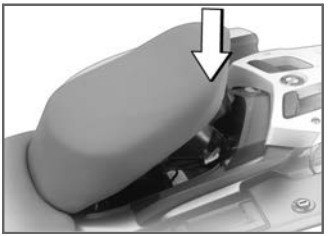
Installing passenger seat

- Installing driver's seat (➠ 75)

With OE Seat heating:



- Close connector **2**.◁



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

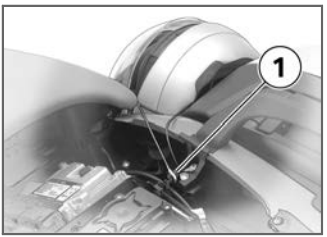
- Push passenger seat under driver's seat and press down firmly at rear.

» Seat engages with an audible click.

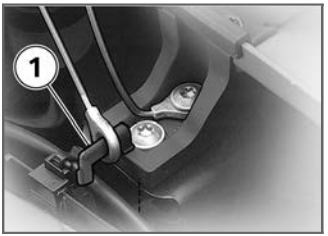
Helmet holder

Locking helmet on motorcycle

- Removing passenger seat (➠ 73)



- Secure helmet on helmet holder **1** using steel cable available as an optional accessory.



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

- To do this, screw on one end of steel cable, guide cable through helmet and push other end of cable onto holder **1**.
- Installing passenger seat (➠ 75)

Riding

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Checklist..... 79
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Running in 83
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Parking your motorcycle 85
Refueling 86

Safety instructions

Rider's equipment

Do not ride without the correct clothing. Always wear:
– Helmet
– Rider's suit
– Gloves
– Boots

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

Speed

If you ride at high speed, always bear in mind that various boundary conditions can adversely affect the handling of your motorcycle:
– Settings of spring-strut and shock absorber system
– Imbalanced load
– Loose clothing
– Insufficient tire inflation pressure
– Poor tire tread
– Etc.

Correct loading

Overloading and imbalanced loads can adversely affect the motorcycle's handling. Do not exceed the gross weight limit and observe the loading information.◀

Alcohol and drugs

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

Risk of poisoning

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

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

High voltage

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

Catalytic converter

If misfiring causes unburned fuel to enter the catalytic converter, there is a danger of overheating and damage.
For this reason, observe the following points:
- Do not run the fuel tank dry
- Do not run the engine with the spark-plug cap removed
- Stop the engine immediately if it misfires
- Use unleaded fuel only
- Comply with all specified maintenance intervals.

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

Risk of fire

Temperatures at the exhaust are high.

Flammable materials (e.g. hay, leaves, grass, clothing and luggage, etc.) could ignite if allowed to come into contact with the hot exhaust pipe.
Make sure that no highly flammable materials can come in contact with the hot exhaust system.◀

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

Tampering with control unit of electronic engine-management system

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
– Front and rear brake fluid levels
– Clutch
– Clutch fluid level
– Shock absorber setting and spring preload
– Tread depth and tire inflation pressure
– Firm seating of cases and luggage

At regular intervals:
– Engine oil level (every time you refuel)
– Brake pad wear (during every third stop for refueling)

Starting

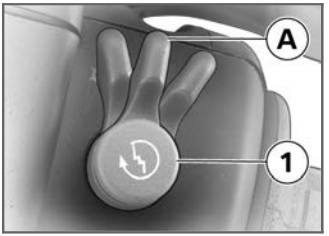
Side stand

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

Transmission

You can start the engine when the transmission is in neutral or if you pull the clutch with a gear engaged. Do not engage the clutch until after switching on the ignition, as otherwise the engine cannot be started. When the transmission is in neutral, the green neutral indicator light is on and the gear indicator in the multifunction display shows N.

Starting engine



- Emergency ON/OFF switch **1** in operating position **A**.
- Switch on ignition.

» Pre-ride check is performed. (➠ 81)
» ABS self-diagnosis is performed. (➠ 82)

With OE ASC:

- Switch on ignition.

» Pre-ride check is performed. (➠ 81)
» ABS self-diagnosis is performed. (➠ 82)

» ASC self-diagnosis is performed. (➠ 82)◁

• Press starter button **1**.

▷ At extremely low temperatures it may be necessary to operate the throttle twist grip during starting. At ambient temperatures below 32 °F (0 °C), actuate the clutch after switching on the ignition.◀

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

» Engine starts.

» Consult the troubleshooting chart if the engine refuses to start. (➠ 138)

Pre-ride check

The instrument cluster runs a test of the 'General' warning light when the ignition is switched on: this is the "Pre-Ride-Check" In the process, the warning light first lights up red and then yellow to test its function. 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.

SET On motorcycles with cruise-control system, the SET light lights up.

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

ABS self-diagnosis

The readiness for operation of the BMW Motorrad Integral ABS is checked by the self-diagnosis. Self-diagnosis is performed automatically when you switch on the ignition. To check the wheel sensors, the motorcycle must drive faster than 3 mph (5 km/h).

Phase 1

» Checking the diagnosable system components while stopped.

ABS warning light flashes.

Possible country-specific version of ABS warning light.

Phase 2

» Checking wheel sensors while starting off.

ABS warning light flashes.

Possible country-specific version of ABS warning light.

ABS self-diagnosis completed

» The ABS warning light goes out.

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

- Continue driving is possible. It must be noted that neither the ABS nor the integral function is available.
- Have the malfunction corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

ASC self-diagnosis[OE]

The readiness for operation of the BMW Motorrad ASC is checked by the self-diagnosis. Self-diagnosis is performed automatically when you switch on the ignition. So that the ASC self-diagnosis can be completed, the engine must be running and the motorcycle must drive at a speed of at least 3 mph (5 km/h).

Phase 1

» Checking the diagnosable system components while stopped.


ASC warning light flashes slowly.

Phase 2

» Checking the diagnosable system components while driving.


ASC warning light flashes slowly.

ASC self-diagnosis completed

» The ASC warning light goes out.

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

- Continue driving is possible. It must be noted that the ASC function is not available.
- Have the malfunction corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Running in

The first 600 miles (1,000 km)

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

Exceeding the specified engine speeds while running in will lead to increased engine wear.
Adhere to the specified engine run-in speeds.◀

- Do not exceed the engine run-in speeds.

Engine break-in speed
– <7000 min^{-1}

- Do not accelerate at full throttle.
- Avoid low engine speeds at full load.
- After 300 - 750 miles (500 - 1,200 km), have the first inspection performed.

Brake pads

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

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

Tires

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

New tires have not achieved their full adhesion yet. There is a danger of accidents when driving at extreme angles.
Avoid extreme angles.◀

Brakes

How is the shortest braking distance achieved?

The dynamic load distribution between the front and rear wheel changes during braking. The heavier you brake, the more the front wheel is loaded. The greater the wheel load, the more braking force can be transferred. To achieve the shortest possible braking distance, the front brake must be applied quickly and with increasing force. This optimally utilizes the dynamic load increase on the front wheel. At the same time, the clutch should also be actuated. With the "forced braking" often practiced in which the brake pressure is generated as quickly as possible and with great force, the dynamic load distribution cannot follow the increased deceleration and the braking force cannot be completely transferred to the road surface. To prevent the front wheel from locking, the ABS system must intervene and reduce the brake pressure; the braking distance increases.

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 washing the motorcycle, after driving through water or in the rain, braking can be delayed due to damp brake disks and brake pads.
Brake early until the brakes are dry or braked until dry.◀

Salt on brakes

The full braking effect can be delayed if the motorcycle is ridden on salt-covered roads and the brakes are not applied for some time.
Brake early until the salt layer of the brake disks and brake pads has been braked off.◀

Oil or grease on brakes

Oil and grease on the brake disks and pads considerably diminish braking efficiency.
Especially after repair and maintenance tasks, make sure that the brake disks and brake pads are free of oil and grease.◀

Dirt or mud on brakes

When the motorcycle is ridden on loose surfaces or muddy roads, the brakes may fail to take effect immediately because of dirt or moisture on the disks or brake pads.
Brake early until the brakes are braked clean.◀

Parking your motorcycle

Placing on side stand

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

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

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

- Slowly lean motorcycle to side until its weight is taken by stand and dismount to 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 handlebars to full left or right lock position.
- Check that the motorcycle is standing firmly.

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

- Lock steering lock.

Remove from side stand

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

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

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

Placing on center 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.
- Dismount and keep your left hand on left handlebar grip.
- Grasp passenger seat handle or rear frame with your right hand.
- Using your right foot, press center stand toward rear until feet rest on ground.
- Place full weight of body on center stand while pulling motorcycle toward rear.

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

- Check that the motorcycle is standing firmly.
- Lock steering lock.

Pushing off center stand

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

Refueling

Fuel is highly flammable. Fire at the fuel tank can result in fire and explosion.
Do not smoke. Never bring a naked flame near the fuel tank.◀

Fuel expands when exposed to heat. When the tank is overfilled, fuel can escape and get onto the rear wheel. This results in a danger of falling.
Do not fill the tank past the bottom edge of the filler neck.◀

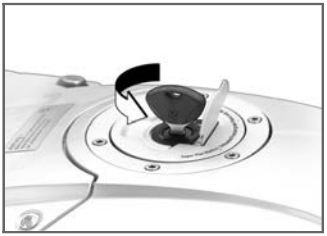
Fuel attacks plastic surfaces, making them cloudy or unattractive.
Wipe off any fuel that gets onto plastic parts immediately.◀

Fuel can attack the material of the windshield and the side wind deflectors, making them cloudy or unattractive.
Wipe off any fuel that gets onto

the windshield and wind deflectors immediately.◀

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

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



- Open protective cap.
- Open fuel tank cap with ignition key by turning counterclockwise.
- Refuel with quality listed below at most until lower edge of filler neck is reached.

Recommended fuel quality
– 98 ROZ/RON (Super Plus unleaded)
– 95 ROZ/RON (Super unleaded (fuel type can be used with reduced performance and consumption))

Usable fuel quantity
– 6.3 gal (24 l)

Reserve fuel quantity
– ≥1.1 gal (≥4 l)

- Close fuel tank cap with firm pressure.
- Remove key and close protective cap.

Technology in detail

Brake system with BMW Motorrad Integral ABS 90

Engine management with BMW Motorrad ASC[OE] 92

Tire Pressure Control TPC[OE] 93

Brake system with BMW Motorrad Integral ABS

Partially integral brake

Your motorcycle is equipped with a partially integral brake configuration. Both front and rear brakes are applied simultaneously when you pull the handbrake lever.
The footbrake lever acts only on the rear brake.
The BMW Motorrad Integral ABS adapts the braking force distribution between the front and rear wheel brake to the loading of the motorcycle during braking.

⚠ Spinning of the rear wheel with the front brake pulled (burn out) is made considerably more difficult by the integral function. The result may be damage to the rear wheel brake and the clutch.
Avoid burn-outs.◀

How does ABS work?

The maximum braking force that can be transferred to the road surface is partially dependent on the friction coefficient of the road surface. Gravel, ice, snow and wet roads offer a considerably poorer friction coefficient than a dry, clean asphalt surface. The poorer the friction coefficient of the road surface is, the longer the braking distance will be.
If the maximum transferrable braking force is exceeded when the driver increases the brake pressure, the wheels begin to block and driving stability is lost, and a fall can result. Before this situation occurs, ABS intervenes and adjusts the brake pressure to the maximum transferrable braking force. This enables the wheels to continue to turn and maintains driving stability regardless of the road surface condition.

What happens when rough roads are encountered?

Bumpy or rough roads can briefly lead to a loss of contact between the tires and the road surface, until the transferrable braking force is reduced to zero. If braking is carried out in this situation, ABS must reduce the brake pressure to ensure driving stability when restoring contact to the road. At this point in time, the BMW Motorrad Integral ABS must assume extremely low friction coefficients (gravel, ice, snow) so that the running wheels turn in every imaginable case and the driving stability is ensured. After detecting the actual conditions, the system adjusts the optimum brake pressure.

How is the BMW Motorrad Integral ABS noticeable to the rider?

If the ABS system must reduce the braking forces due to the conditions described above, then vibrations can be felt at the handbrake lever.

If the handbrake lever is pulled, then braking pressure is built up at the rear wheel with the integral function. If the footbrake pedal is first actuated after this, the brake pressure already built up can be felt earlier than the counter-pressure, than when the footbrake pedal is actuated before or together with the handbrake lever.

Lifting off rear wheel

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

⚠ Heavy braking can lead to the rear wheel lifting off the ground.

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

What are the design characteristics of the BMW Motorrad Integral ABS?

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

Special situations

To detect the tendency of the wheels to lock up, the speeds of the front and rear wheel are compared. If implausible values are detected over a longer period of time, the ABS function is deactivated for safety reasons and an ABS fault is indicated. The condition for a fault message is the completed self-diagnosis.

In addition to problems on the BMW Motorrad Integral ABS, unusual driving conditions can also lead to a fault message.

Unusual driving conditions:

– Heating up on the main or auxiliary stand at idle or with gear engaged.
– Rear wheel locked-up for a longer period of time by en-

gine brake, e.g. when riding downhill offroad.

Should a fault message result due to one of the driving conditions described above, the ABS function can be reactivated by switching the ignition off and then on again.

How important is regular maintenance?

Any technical system is always only as good as its maintenance condition.
To ensure that the BMW Motorrad ABS is in an optimally maintained condition, it is vital that the specified inspection intervals be complied with.◀

Reserves for safety

But remember: the potentially shorter braking distances which BMW Motorrad Integral ABS permits must not be used as an excuse for careless riding. ABS is primarily a means of ensuring a safety margin in genuine emergencies.
Take care when cornering. When you apply the brakes on a corner, the motorcycle's weight and momentum take over and even BMW Motorrad Integral ABS is unable to counteract their effects.

Engine management with BMW Motorrad ASC[OE]

How does ASC work?

The BMW Motorrad ASC compares the wheel speeds of the front and rear wheel. From the speed difference the slip, and with it the stability reserves on the rear wheel are determined. When a slip limit is exceeded, the engine torque is adapted by the engine management system.

What are the design characteristics of the BMW Motorrad ASC?

The BMW Motorrad ASC is an assistance system for the driver and is designed for driving on public roads. Especially in at the limits of driving physics, the driver has a considerable influence on the control options of the ASC (shifting weight in curves, loose loads). The system is not optimized for special requirements resulting under extreme weather conditions offroad or on the racetrack. The BMW Motorrad ASC can be deactivated for these cases.

Even with ASC, physical laws cannot be overridden. The driver is always responsible for adapting his/her driving style. Do not reduce the additional safety provided with risky driving.◀

Special situations

At an increasing angle, the acceleration performance is increasingly limited in accordance with physical laws. This can result in delayed acceleration when coming out of very tight curves.

To detect spinning or slipping away of the rear wheel, the speeds of the front and rear wheel are compared. If implausible values are detected over a longer period of time, the ASC function is deactivated for safety reasons and an ASC fault is indicated. The condition for a fault message is the completed self-diagnosis.
In the following unusual driving states, the BMW Motorrad ASC can be automatically deactivated.

Unusual driving conditions:

- Driving on the rear wheel (wheely) for a longer period with ASC deactivated.
- Rear wheel spinning in place with front brake pulled (burn out).
- Heating up on the main or auxiliary stand at idle or with gear engaged.

The ASC is reactivated by switching the ignition on and off and then driving at a speed above 10 km/h.

If the front wheel loses contact to the ground during extreme acceleration, the ASC reduces the engine torque until the front wheel touches the ground again. In this case, BMW Motorrad recommends turning back the throttle twist grip somewhat to achieve a stable driving state again as quickly as possible.

On a slippery surface, the throttle twist grip should never be suddenly turned back completely without pull the clutch at the same time. The engine braking torque can cause the rear wheel to block, resulting in an unstable driving state. This case cannot be controlled by the BWM Motorrad ASC.

Tire Pressure Control TPC OE

Function

A sensor is located in each tire, which measures the air temperature and the air pressure inside the tire and sends these values to the control unit.
The sensors are equipped with a centrifugal controller, which does not enable the transmission of the measured values until a speed of approx. 20 mph (30 km/h) is reached. Before initial reception of the tire pressure, - - is shown in the display for each tire. The sensors continue to transmit the measured values

for approx. 15 minutes after the motorcycle comes to a stop. The control unit can manage four sensors, and as a result two sets of wheels with TPC sensors can be driven. If a TPC control unit is installed, however the wheels have no sensors, then an error message is output.

Temperature compensation

The tire pressures are shown temperature-compensated in the multifunction display; they refer to a tire air temperature of 68 °F (20 °C). As the air-pressure testers at filling stations show a temperature-dependent tire pressure, they do not match the values indicated in the multifunction display in most cases.

Air pressure ranges

The TPC control unit distinguishes between three air pressure ranges matched to the motorcycle:

– Air pressure within the permissible tolerance.
– Air pressure at the limits of the permissible tolerance.
– Air pressure outside the permissible tolerance.

Accessories

General instructions 96
Onboard socket 96
Luggage 97
Case 98
Topcase[OA] 100

General instructions

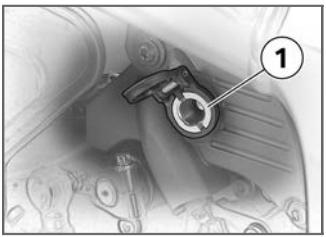
BMW Motorrad recommends the use of parts and accessories for your motorcycle that are approved by BMW for this purpose. Your authorized BMW Motorrad retailer is the right place to go for genuine BMW parts and accessories,other BMW-approved products, and expert advice on their installation and use.
These parts and products have been tested by BMW for safety, function and suitability. BMW accepts product liability for these products.
Conversely, BMW is unable to accept any liability whatsoever for parts and accessories which it has not approved.

BMW Motorrad cannot examine or test each product of outside origin to ensure that it can be used on or in connection with BMW motorcycles without constituting a safety hazard. Nor is this guarantee provided when the official approval of a specific country has been granted. Tests conducted by these instances cannot make provision for all operating conditions experienced by BMW motorcycles and, consequently, they are not sufficient in some circumstances.
Use only parts and accessories approved by BMW for your motorcycle.◀

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

Onboard socket

Ratings



When the battery voltage is insufficient, and when the maximum loading capacity of the standard onboard socket **1** and the additional socket (OA) is exceeded, these sockets are automatically switched off.

Operating electrical accessories

You can start using electrical accessories only when the ignition is switched on. The accessory remains operational if the igni-

tion is subsequently switched off. Approx. 15 minutes after switching off the ignition and/or during starting, the onboard socket is switched off to take the load off the motorcycle electrical system.

Cable routing

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

– Do not impede the rider
– Do not restrict or obstruct the steering angle and handling characteristics
– Cannot be trapped

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

Luggage

Correct loading

Overloading and imbalanced loads can adversely affect the motorcycle's handling. Do not exceed the gross weight limit and observe the loading information.◀

- Adjust setting of spring preload, damping characteristic and tire inflation pressures to suit total weight.
- Adjusting spring preload for rear wheel (➠ 68)
- Checking tire pressure (➠ 72)
- Adjusting damping on rear wheel (➠ 69)
- Ensure that case volumes on left and right are equal.
- Make sure that weight is uniformly distributed between right and left.
- Pack heavy items of luggage downwards and inwards.
- Observe maximum payload of case and corresponding top speed.

Payload of case
– ≤18 lbs (≤8 kg)

Speed limit for driving with case
– ≤112 mph (≤180 km/h)

- Observe maximum payload of Topcase and corresponding top speed.

Payload of Topcase
With OA Topcase:
– ≤11 lbs (≤5 kg)◁

Payload of Topcase
With OA Large Topcase:

Payload of Topcase
– ≤22 lbs (≤10 kg)◁

Speed limit for driving with Topcase
With OA Topcase:
– ≤112 mph (≤180 km/h)◁

- Observe maximum payload of tank rucksack.

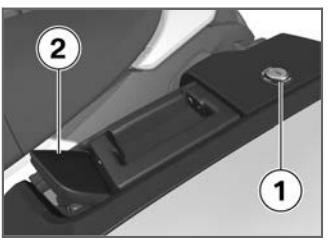
Payload of tank rucksack
With OA Tank rucksack:
– ≤11 lbs (≤5 kg)◁

Case

Opening case

- Turn key in case lock to OPEN position.

» Case is unlocked.



- Press lock barrel **1**.

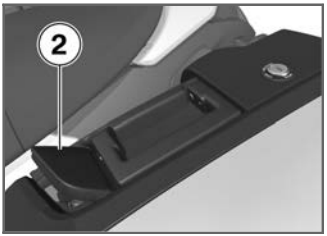
» Unlocking lever **2** pops up.

- Pull release lever upward.

» Case lid opens.

Closing case

- Pull up red release lever **2** completely.
- Close case lid and press down. Check that nothing is trapped between lid and case.



- Press release lever **2** down.

» Release lever engages.

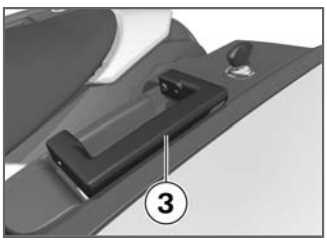
- Turn key in case lock to LOCK position.

» Case is locked.

Removing case

- Turn key in case lock to RELEASE position.

» Handle pops out.

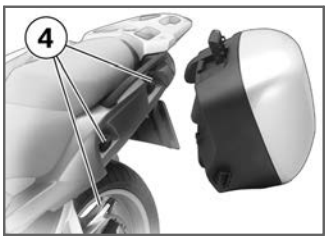


- First pull handle **3** out, then pull upward as far as possible.

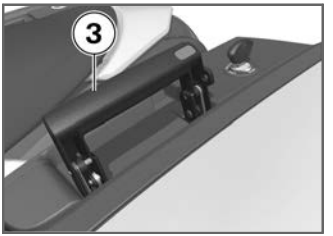
» Case is released and can be removed.

Mounting case

- Pull up handle as far as possible.



- Insert case in brackets **4**.



- Press handle **3** down until it engages.

» Case is correctly engaged on its holders.

- Turn key in case lock to LOCK position.

» Case is locked.

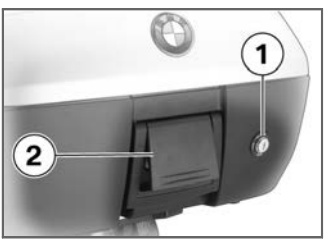
- Check case for firm seating.

Topcase OA

Opening Topcase

- Turn key in Topcase lock to OPEN position.

» Topcase is unlocked.



- Press lock barrel **1**.

» Unlocking lever **2** pops up.

- Pull release lever upward.

» Topcase lid opens.

Closing Topcase

- Pull up red release lever **2** completely.
- Close Topcase lid and press down. Check that nothing is trapped between lid and case.

- Press release lever **2** down.

» Release lever engages.

- Turn key in Topcase lock to LOCK position.

» Topcase is locked.

Removing Topcase

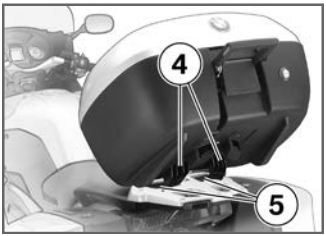
- Turn key in Topcase lock to RELEASE position.

» Handle pops out.

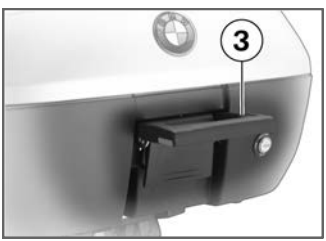
- Pull up handle **3** completely.
- Lift Topcase at rear and pull off luggage rack.

Mounting Topcase

- Pull up handle as far as possible.



- Hook Topcase into luggage rack. Make sure that hooks **4** are securely seated in corresponding mounts **5**.



- Press handle **3** down until it engages.

» Topcase is locked.
• Turn key in Topcase lock to LOCK position.
» Topcase is locked.
• Check Topcase for firm seating.

Maintenance

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Clutch 111
Tires 111
Rims 111
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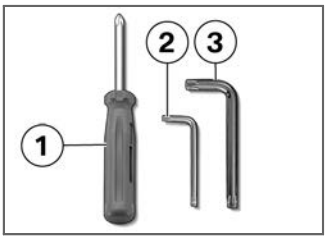
General instructions

The 'Maintenance' chapter describes work involving the checking and replacement of wear parts that can be performed with a minimum of effort.
If special tightening torques are to be taken into account for assembly, these are listed. An overview of all required tightening torques is contained in the chapter "Technical Data".
Information on additional maintenance and repair work is provided in the Repair Manual for your motorcycle on DVD/CD-ROM (RepROM), which you can obtain from your authorized BMW Motorrad retailer.

Special tools and a thorough knowledge of motorcycles are required to carry out some of the work described here. If you are in doubt, consult a certified workshop, preferably your authorized BMW Motorrad retailer.

Onboard toolkit

Standard onboard toolkit



1 Screwdriver, reversible blade

- Removing and installing front turn indicator glasses
- Disconnecting battery terminals

2 Torx wrench, T25

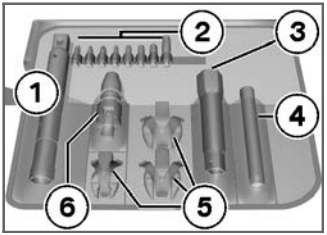
- Removing and installing body panels
- Removing and installing battery retaining strap
- Removing and installing brake light, tail light and turn indicator bulbs

3 Torx wrench, T45

- Adjusting handlebars

Onboard-toolkit service set

Your BMW Motorrad retailer offers the onboard-toolkit service set for additional work.
Information on conducting this work is provided in the Repair Manual on DVD/CD-ROM, which is also available from your BMW Motorrad retailer.



1 Pull-out tool holder

– Holding of all tools with adapter

2 1/4" bits

– 5x Torx, e.g. removing and installing rear wheel
– 2x Phillips
– 1x Straight-blade

3 3/8" Allen key, 22 mm

– Removing and installing front axle

4 Flashlight

– LED technology

5 Socket wrench

– 3x Open-ended wrench, various wrench sizes

6 Bit adapter

– Mount for 1/4" bits
– 9x12 mm and 3/8" jointed adapter

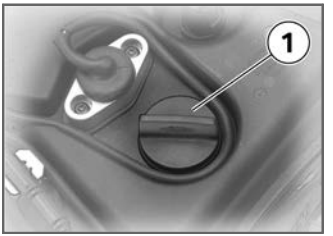
Engine oil

Checking engine oil level

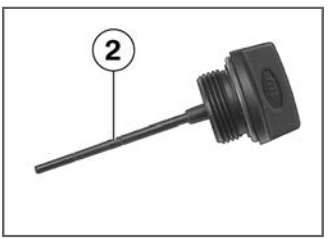
The engine can seize if the oil level is low, and this can lead to accidents.
Always make sure that the oil level is correct.◀

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

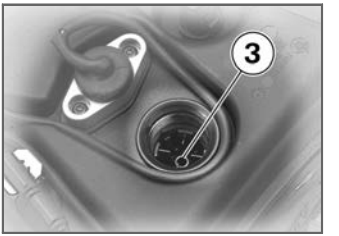
- Make sure ground is level and firm and place motorcycle at operating temperature on its center stand.
- Let the engine run in neutral for one minute.
- Switching off ignition
- Removing driver's seat (➠ 74)
- Wipe area around oil fill location clean.



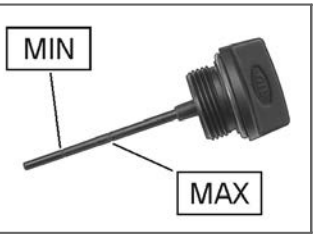
- Remove cap from oil fill location **1** by turning counterclockwise.



- Clean oil dipstick **2** with a dry cloth



- Place oil dipstick on oil fill location, but do not install. Make sure that dipstick is inserted into guide **3**.
- Remove oil dipstick and read off oil level.



Specified level of engine oil
– between MIN and MAX marking (Place oil dipstick on oil fill location, but do not install)

If oil level is below MIN mark:

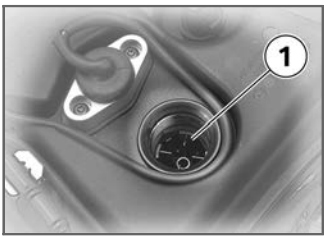
- Top up engine oil.

If oil level is above MAX mark:

- Have oil level corrected by a specialized workshop, preferably an authorized BMW Motorrad retailer.

- Install oil dipstick.
- Installing driver's seat (➠ 75)

Topping up engine oil



- Top up engine oil up to specified level via fill location **1**.
- Checking engine oil level (➠ 105)

General brake system

Operating safety

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. In this case, have the brake system checked by a specialized workshop, preferably by an authorized BMW Motorrad retailer.

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

Checking brake operation

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

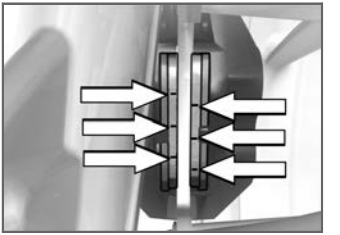
Brake pads

Checking front brake pad thickness

Dropping below the minimum pad thickness leads to reduced braking performance and may result in damage to the brakes.
In order to ensure the operating reliability of the brake system, make sure that the brake pads are not worn beyond their minimum thickness.◀

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

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



Front brake-pad wear limit
– Min 0.04 in (Min 1 mm) (Only friction material without carrier plate)
– Wear markings (grooves) must be clearly visible.

If the wear indicating mark is no longer clearly visible:

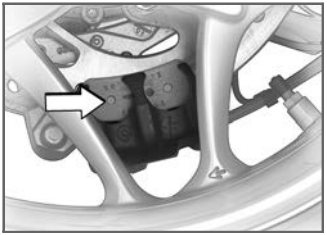
- Have the brake pads replaced by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Checking rear brake pad thickness

Dropping below the minimum pad thickness leads to reduced braking performance and may result in damage to the brakes.

In order to ensure the operating reliability of the brake system, make sure that the brake pads are not worn beyond their minimum thickness.◀

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



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

Rear brake-pad wear limit
– Min 0.04 in (Min 1 mm) (Wear limit, only friction lining without carrier plate)
– Brake disk must not be visible through bore hole of inner brake pad.

If brake disk is visible:

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

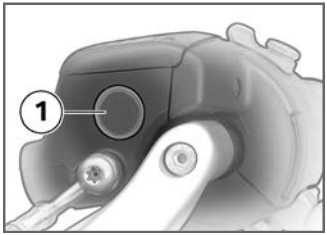
Brake fluid

Checking front brake fluid level

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

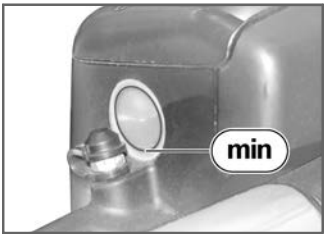
Check brake fluid level regularly.◀

- Make sure ground is level and firm and place motorcycle on its center stand.
- Turn handlebars one time each completely to left and right, then move into straight-ahead position.



- Read off brake fluid level at brake-fluid reservoir **1**.

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



Front brake fluid level

– Brake fluid DOT4

– The brake fluid level must not fall below the MIN mark. (Brake-fluid reservoir horizontal. Turn handlebars once completely to left and right before reading.)

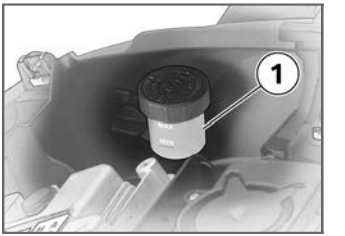
If brake fluid level drops below permissible level:

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

Checking rear brake fluid level

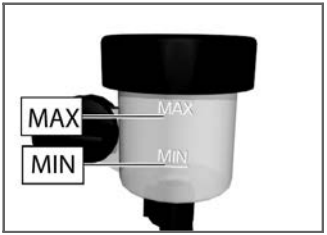
A low fluid level in the brake reservoir can allow air to penetrate the brake system. This significantly reduces braking efficiency.
Check brake fluid level regularly.◀

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



- Read off brake fluid level at brake-fluid reservoir **1**.

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



Rear brake fluid level

– Brake fluid DOT4

– The brake fluid level must not fall below the MIN mark. (Brake-fluid reservoir horizontal)

If brake fluid level drops below permissible level:

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

Clutch

Checking clutch operation

- Pull the clutch lever.

» Pressure point must be clearly perceptible.

If no clear pressure point can be felt:

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

Tires

Measuring tire tread depth

The handling of your motorcycle can already change for the worse before the legally prescribed minimum tread depth is reached.
Have tires replaced even before the minimum tread depth is reached.◀

- Make sure ground is level and firm and park motorcycle.
- Measure tire tread depth in main tread grooves with wear indicating marks.

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

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

- Replace tires concerned.

Rims

Visual inspection

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

- Visually inspect rims for defects.
- Have damaged rims checked and, if necessary, replaced by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Wheels

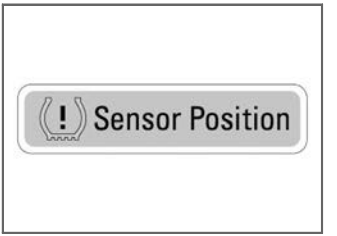
Recommended tires

For every size of tire, BMW Motorrad has tested certain makes and approved those it has found to be roadworthy. If you use wheels and tires that have not been approved, BMW Motorrad cannot assess their suitability or provide any guarantee as to their road safety.

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

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

TPC sticker OE



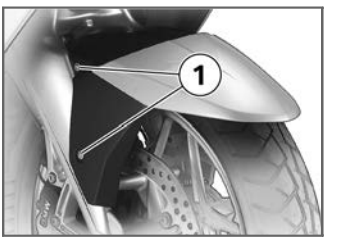
The TPC sensors can be damaged by improper tire mounting.

Inform the BMW Motorrad retailer or the specialized workshop that the wheel is equipped with a TPC sensor.◀

On motorcycles equipped with TPC, a corresponding sticker is located on the wheel rim at the position of the TPC sensor. During a tire change it must be ensured that the TPC sensor is not damaged. Inform the BMW Motorrad retailer or the specialized workshop of the TPC sensor.

Removing front wheel

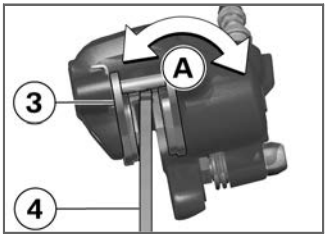
- Make sure ground is level and firm and place motorcycle on its center stand.



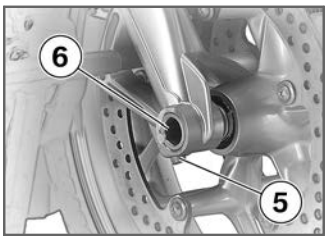
- Remove screws **1** on left and right.
- Pull out the front wheel mudguard towards the front.

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

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



- Push brake pads in brake caliper **3** apart slightly by rocking back and forth **A** in relation to brake disks **4**.
- Mask off area of wheel rim that could be scratched in process of removing brake calipers.
- Carefully pull brake calipers back and out until clear of brake disks.
- When pulling off left brake caliper, make sure that ABS sensor cable is not damaged.
- When pulling off right brake caliper, make sure that sensor cable of brake-pad wear detector is not changed.
- Raise front of motorcycle until the front wheel can turn freely. BMW Motorrad recommends the BMW Motorrad front-wheel stand for lifting the motorcycle.
- Mounting front wheel stand (➠ 119)



- Remove right-hand axle clamping screw **5**.

⚠ The left axle clamping screw fixes the threaded bush in place in the front suspension. A poorly aligned threaded bush results in incorrect

spacing between the ABS sensor ring and the ABS sensor, and therefor to ABS malfunctions or destruction of the ABS sensor.
To ensure the proper alignment of the threaded bush, do not loosen or remove the left axle clamping screw.◀

- Remove quick-release axle **6** while supporting wheel.
- Place the front wheel in the front wheel guide on the ground.

The ABS sensor can be damaged when rolling out the front wheel.
Watch the ABS sensor when rolling out the front wheel.◀

- Roll front wheel forward to remove.

Installing front wheel

ABS malfunctions due to incorrect speed signals.
There are differently segmented sensor wheels which may not be interchanged. Only install the correct sensor wheel for the corresponding construction status.◀

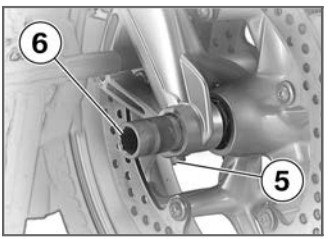
Threaded fasteners not tightened to the specified torque can work loose or their threads can suffer damage.
Always have the tightening torques checked by a specialized workshop, preferably an authorized BMW Motorrad retailer.◀

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

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

The ABS sensor can be damaged when rolling out the front wheel.
Watch the ABS sensor when rolling out the front wheel.◀

- Roll front wheel into front wheel guide.



- Lift front wheel and install quick-release axle **6** with torque.

Quick-release axle in threaded bush
– 37 lb/ft (50 Nm)

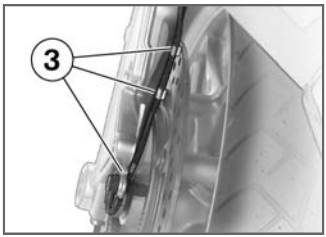
- Tighten the right-hand axle clamping screw **5** with the appropriate torque.

Clamping screw on quick-release axle in wheel carrier
– 14 lb/ft (19 Nm)

- Remove front wheel stand.

- Install securing screws **2** on left and right with specified torque.

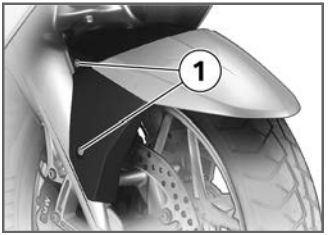
Front brake caliper on wheel carrier
– 22 lb/ft (30 Nm)



The cable of the ABS sensor could chafe through if it comes into contact with the brake disk.
Make sure that ABS sensor cable is routed correctly.◀

- Insert ABS sensor cable in three retaining clips **3**.

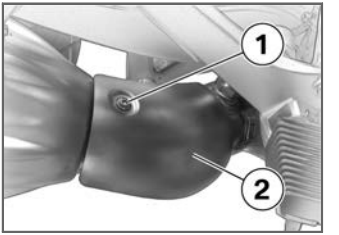
- Route ABS sensor cable between brake caliper and front suspension as shown in illustration.
- Remove adhesive tape from wheel rim.



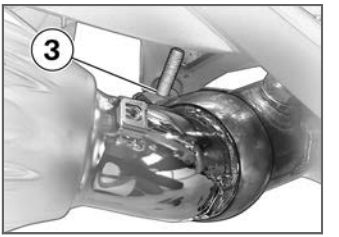
- Install front mudguard and screws **1** on right and left.
- Press the handbrake lever firmly a number of times until the resistance point is noticeable.

Removing rear wheel

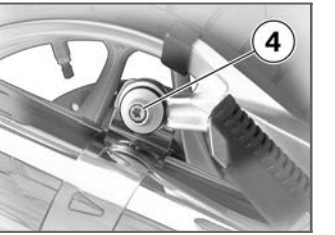
- Make sure ground is level and firm and place motorcycle on its center stand.



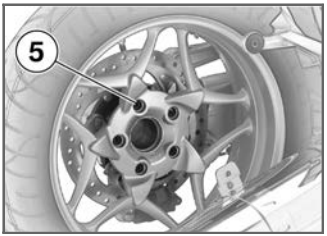
- Remove bolt **1** of muffler cover **2**.
- Pull cover towards rear.



- Remove clamp **3** on muffler.
- Do not remove sealing grease from clamp.



- Remove screw **4** for bracket of muffler from passenger footrest.
- Turn muffler downward.
- Shift into first gear.

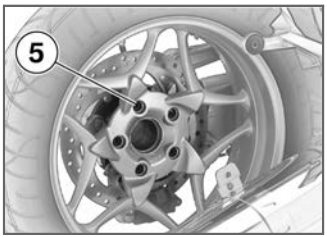


- Remove mounting bolts **5** of rear wheel, holding wheel as you do so.
- Lower rear wheel to ground.
- Roll rear wheel out toward rear.

Installing rear wheel

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

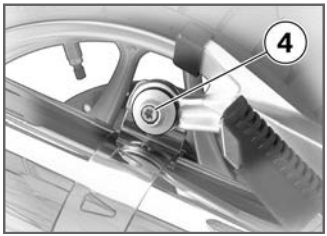
- Roll rear wheel onto rear wheel support.
- Place rear wheel on rear wheel support.



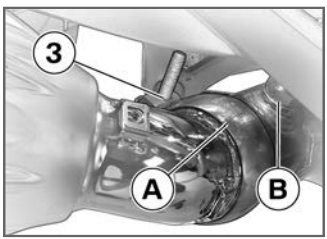
- Mount wheel bolts **5** and tighten diagonally with specified torque.

Rear wheel on wheel flange
– Tightening sequence: Tighten diagonally
– 44 lb/ft (60 Nm)

- Turn muffler to its initial position.



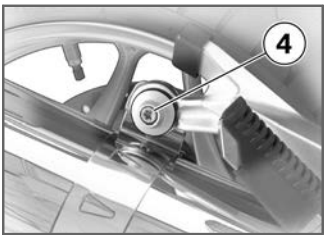
- Install screw **4** for muffler bracket in rear footrest, but do not tighten it at this point.



- Align clamp **3** on muffler with marking **A** (arrow) on lambda probe **B**.

- Tighten clamp **3** on muffler to appropriate torque.

Muffler on manifold
– 26 lb/ft (35 Nm)

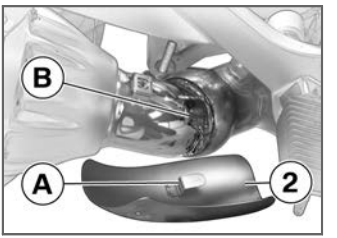


If the gap between the rear wheel and the muffler is too small, the rear wheel can overheat.

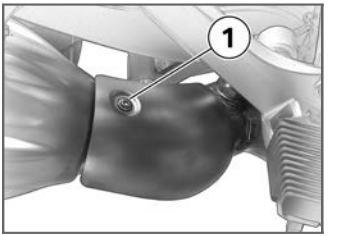
The gap between the rear wheel and the muffler must be at least 15 mm.◄

- Install screw **4** for bracket of muffler on passenger footrest with appropriate torque.

Muffler on passenger footrest
– 16 lb/ft (22 Nm)



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



- Install bolt **1** of muffler cover.

Front wheel stand

Use

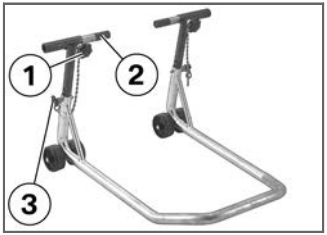
A front-wheel stand for simple, safe changing of the front wheel is available from BMW Motorrad. The front wheel stand with the BMW special tool number 36 3 971 can be obtained from your authorized BMW Motorrad retailer. You also need the adapters with the BMW special tool number 36 3 973.

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

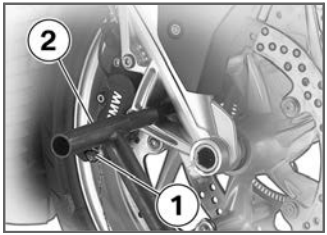
Place the motorcycle on the center stand or an auxiliary stand before lifting it with the BMW Motorrad front wheel stand.◀

Mounting front wheel stand

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



- Loosen adjusting screws **1**.
- Push two mounting pins **2** far enough apart that front suspension fits between them.
- Use locating pins **3** to set front wheel stand to desired height.
- Center front wheel stand relative to front wheel and push it against front axle.

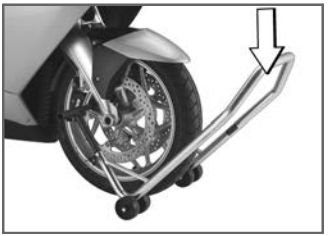


- Push two mounting pins **2** through triangles of brake caliper support toward inside so that front wheel can still be rolled through.

With BMW ABS the ABS sensor ring can be damaged.

Only push the mounting pin so far inward that it does not touch the sensor ring of the BMW ABS.◀

- Tighten adjusting screws **1**.



If the motorcycle is raised too far at the front the center stand will lift clear of the ground and the motorcycle could topple to one side.
When raising the motorcycle, make sure that the center stand remains on the ground.◀

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

Lamps

General instructions

The failure of a bulb is signaled in the display by the lamp defect symbol. The same bulbs are used for the brake light and the tail light. The luminosity is controlled accordingly.

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 pressurized and can cause injury if damaged.
Wear eye and hand protection when replacing bulbs.◀

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

Do not touch the glass of new bulbs with your fingers. For installation, use a clean, dry cloth. Dirt deposits, in particular oil and grease, interfere with heat radiation from the bulb. Overheating and therefore short service life of the bulbs are the consequence.◀

Replacing low-beam and high-beam bulb

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

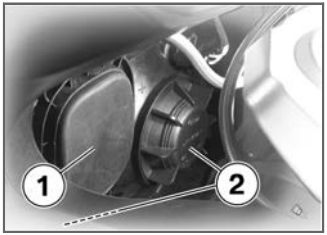
With OE Xenon light:

Xenon light operates with high voltage. There is a danger to life and limb if work is not carried out properly.

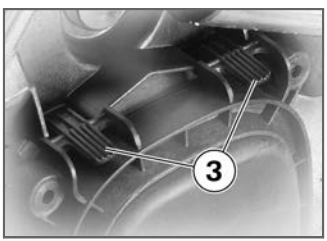
Have all work on the xenon light system including bulb replacements carried out by a specialist workshop, preferably an authorized BMW Motorrad retailer.◀

- Temporarily drive with high beams switched on.
- To avoid dazzling oncoming traffic, set the headlight range adjustment to maximum payload.
- Have lamp replaced by a specialized workshop as quickly as possible, preferably an authorized BMW Motorrad retailer.◁

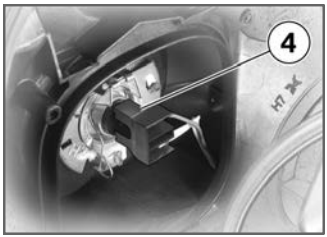
- Make sure ground is level and firm and park motorcycle.
- Switch off ignition.



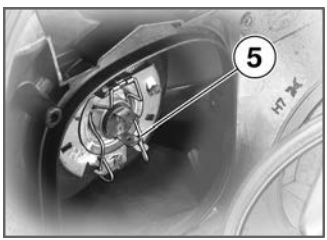
- Remove cover **1** (low beam) or covers **2** (high beam).
- Remove covers of high-beam bulbs by turning counterclockwise.



- To remove cover of high-beam bulbs, press locking lever **3** downward, fold cover toward rear and remove.

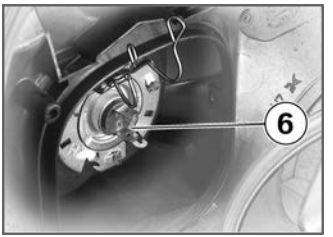


- Disconnect connector **4**.



- Remove spring strap **5** from detents and fold up.

▷ The alignment of the spring strap may differ from the illustration depending on the bulb.◀



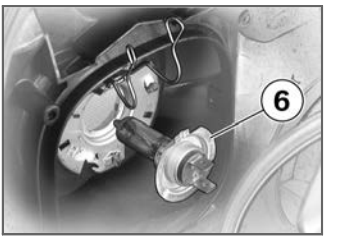
- Remove bulb **6**.
- Replace defective bulb.

Bulb for high-beam headlight
– H7 / 12 V / 55 W

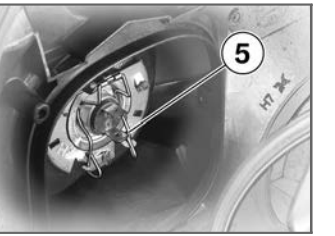
Bulb for low-beam headlight
– H7 / 12 V / 55 W

Bulb for low-beam headlight
With OE Xenon light:
– D2R / 35 W◁

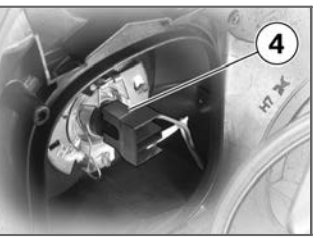
- Use a clean, dry cloth to hold new bulb.



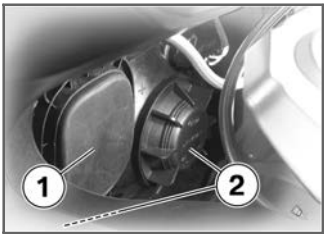
- Install bulb **6**.



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



- Close connector **4**.

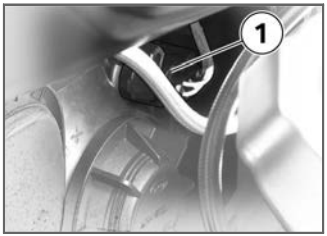


- Install cover **1** (low beam) or covers **2** (high beam).

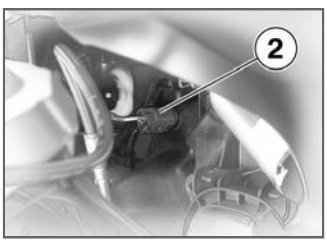
Replacing parking-light bulbs

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

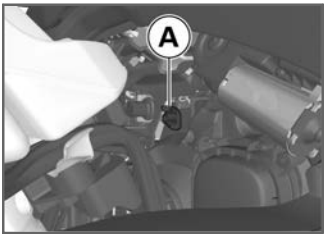
- Make sure ground is level and firm and park motorcycle.
- Switch off ignition.



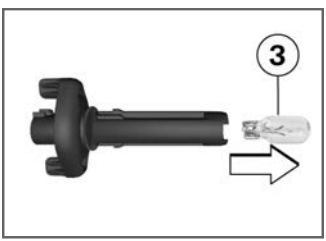
- Right side lamp: disconnect connector **1**.



- Left side lamp: disconnect connector **2**.



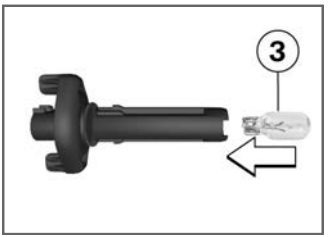
- Remove bulb socket by turning lever **A** counterclockwise.



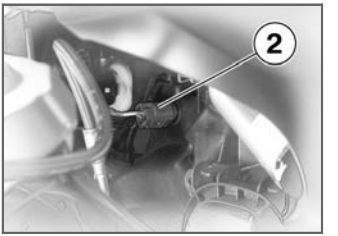
- Remove bulb **3** from bulb holder.
- Replace defective bulb.

Bulb for parking light
– W5W / 12 V / 5 W

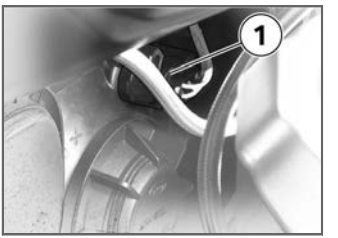
- Use a clean, dry cloth to hold new bulb.



- Insert bulb **3** into bulb socket.
- Install bulb socket by turning clockwise.



- Left side lamp: connect connector **2**.

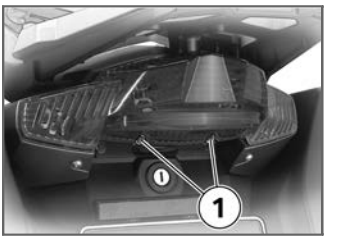


- Right side lamp: connect connector **1**.

Replacing brake light, tail light and rear turn indicator bulbs

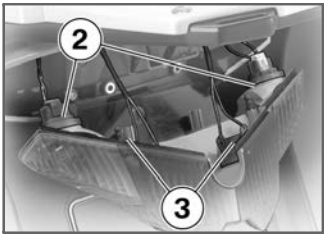
If it is not standing firmly, the motorcycle could topple in the course of the operations described below.
Make sure that the motorcycle is steady on its stand.◀

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

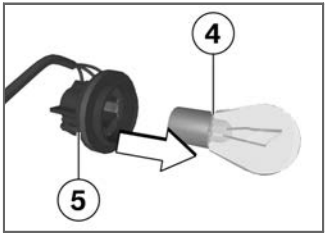


- Remove screws **1**.

- Pull lamp housing toward rear out of brackets.



- Remove bulb socket **2** (turn indicator bulb) or **3** (brake light/ turn indicator bulb) from lamp housing by turning counterclockwise.

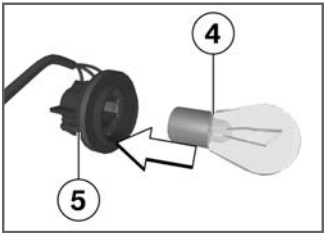


- Press bulb **4** into fitting **5** and remove it by turning it counterclockwise.
- Replace defective bulb.

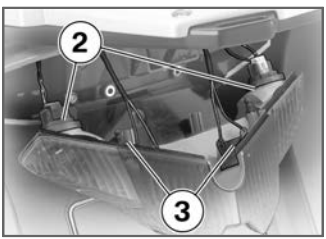
Bulb for taillight/brake light
– P21W / 12 V / 21 W

Bulbs for flashing turn indicators, rear
– P21W / 12 V / 21 W

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

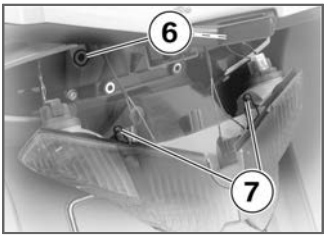


- Press the bulb **4** into the fitting **5** and install it by turning it clockwise.

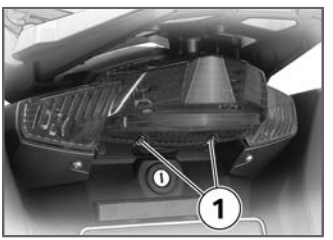


- Install bulb socket **2** (turn indicator bulb) or **3** (brake light/tail

light bulb) in lamp housing by turning clockwise.



- Insert lamp housing with retaining pins **7** in brackets **6**. Make sure cables are not pinched.

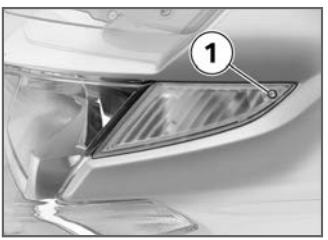


- Install screws **1**.

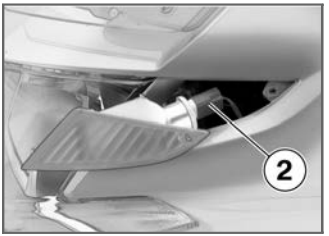
Replacing front turn indicator bulbs

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

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

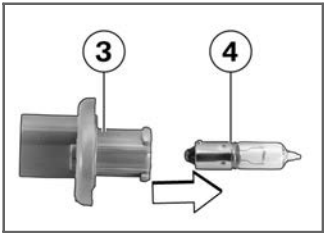


- Remove screw **1**.
- Pull out lamp housing toward front



- Disconnect connector **2**.

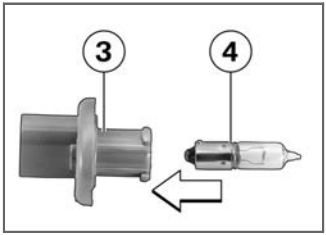
- Turn bulb holder **3** counterclockwise to remove it from bulb housing.



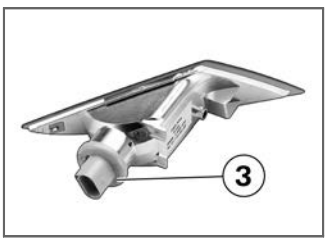
- Press bulb **4** into bulb socket **3** and remove it by turning it counterclockwise.
- Replace defective bulb.

Bulbs for flashing turn indicators, front
– H21W / 12 V / 21 W

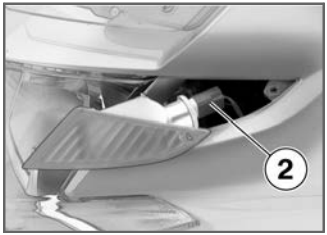
- Use a clean, dry cloth to hold new bulb.



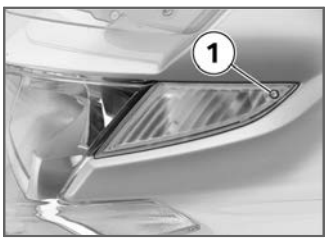
- Press bulb **4** into fitting **3** and install it by turning it clockwise.



- Install bulb socket **3** in lamp housing by turning clockwise.



- Close connector **2**.



- Insert lamp housing into trim.
- Install 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 motorcycle electronics.
Do not use the onboard 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 motorcycle electronics.
The battery of the donor vehicle must have a voltage of 12 V.◀

- When jump-starting the engine, do not disconnect the battery from the onboard electrical system.
- Removing battery compartment cover (➠ 130)
- Run engine of donor vehicle during jump-starting.
- Begin by connecting one end of red jump lead to positive terminal of discharged battery and other end to positive terminal of donor battery.
- Then connect one end of black jumper lead to negative terminal of donor battery, and other end to negative terminal of discharged battery.
- Start the engine of the vehicle with the discharged battery in the usual way; if the engine does not start, wait a few minutes before repeating the attempt in order to protect the starter motor and the donor battery.
- Allow both engines to idle for a few minutes before disconnecting jump leads.
- Disconnect jump lead from negative terminals first, then disconnect second lead from positive terminals.
- Installing battery compartment cover (➠ 131)

Battery

Maintenance instructions

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

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

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

If the battery is not disconnected, the onboard electronics (clock etc.) will drain the battery. This can cause the battery to run flat. If this happens, warranty claims will not be accepted.

During periods when the motorcycle is not being used, of more than four weeks, disconnect the battery from the motorcycle or connect a trickle charger to the battery.◀

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

Charging connected battery

Charging the connected battery directly at the battery terminals can damage the motorcycle electronics.

To charge the battery via the battery terminals, disconnect the battery first.◀

If you switch on the ignition and the multifunction display and indicator lights fail to light up, the battery is completely flat. Attempting to charge a completely flat battery via the onboard socket can cause damage to the motorcycle's electronics. Always charge a completely drained battery directly at the terminals of the disconnected battery.◀

Charging the battery via the onboard socket is only possible with suitable chargers. Unsuitable chargers can result in

damage to the motorcycle electronics.
Use BMW chargers with the part numbers 71 60 7 688 864 (220 V) or, as applicable, 71 60 7 688 865 (110 V). If in doubt, charge the disconnected battery directly at the terminals.◀

- Charge disconnected battery via onboard socket.

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

- Comply with operating instructions of charger.

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

Charging disconnected battery

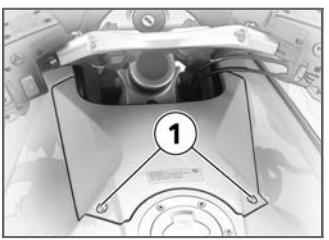
- Charge battery using a suitable charger.
- Comply with operating instructions of charger.
- Once the battery is fully charged, disconnect the charger's terminal clips from the battery terminals.

▷ In the case of longer periods when the motorcycle is not being used, the battery must be recharged regularly. See the instructions for caring for your battery. Always fully recharge the battery before returning it to use.◀

Removing battery compartment cover

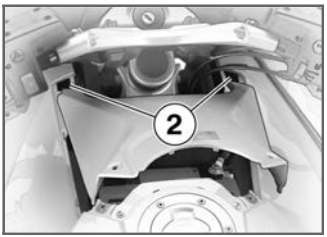
⚠ If it is not standing firmly, the motorcycle could topple in the course of the operations described below.
Make sure that the motorcycle is steady on its stand.◀

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

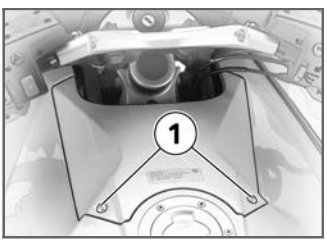


- Remove screws **1**.
- Take out the battery compartment lid toward rear and upward.

Installing battery compartment cover



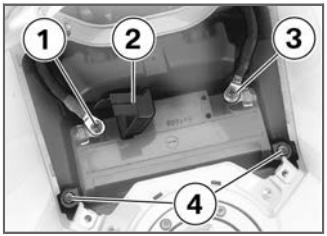
- Insert battery compartment cover in mountings **2**



- Install screws **1**.

Removing battery

- Removing battery compartment cover (➠ 130)

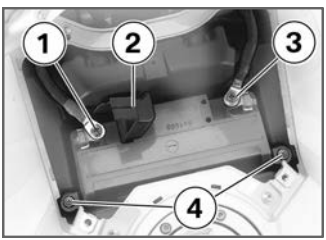


⚠ An incorrect disconnection sequence increase the risk of short-circuiting.
Always observe the proper sequence.◀

- Remove negative cable **3** first.
- Remove protective cap **2** from positive terminal.
- Then remove positive cable **1**.
- Unscrew screws **4** and pull retaining bracket toward rear.
- Lift battery up and out, using tilting movements if it is difficult to move.

Installing battery

- Switch off ignition.
- Place battery in battery compartment with positive terminal on left in driving direction.



- Push retaining strap over battery and install screws **4**.

⚠ An incorrect installation sequence increases the risk of short-circuiting.
Always observe the proper sequence.

Never install the battery without the protective cap.◀

- First install positive battery cable **1**.
- Mount protective cap **2** on positive terminal.
- Then install negative battery cable **3**.
- Switch on ignition.

If the motorcycle was disconnected from the battery for a longer time, the current date must be entered in the instrument cluster to ensure the proper operation of the service display.
Consult a certified workshop, preferably an authorized BMW Motorrad retailer, for setting of the date.◀

- Fully open throttle once or twice.

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

- Installing battery compartment cover (➠ 131)
- Setting clock (➠ 49)

Care

Care products 134
Washing your motorcycle 134
Cleaning sensitive motorcycle parts 134
Paint care 135
Protective wax coating 136
Storing motorcycle 136
Returning motorcycle to use 136

Care products

BMW Motorrad recommends that you use cleaning and care products available at your authorized BMW Motorrad retailer. BMW Care Products have been materials tested, laboratory tested, and field tested and provide optimum care and protection for the materials used in your motorcycle.

The use of unsuitable cleaning and care products can damage motorcycle components.
For cleaning, do not use any solvents such as nitro-thinners, cold cleaning agents, fuel or similar, and do not use cleaning agents that contain alcohol.◀

Washing your motorcycle

BMW Motorrad recommends that you use BMW Insect Remover to soften and wash off insects and stubborn dirt from painted parts before washing the motorcycle.
To prevent stains, do not wash the motorcycle immediately after it has been exposed to bright 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 washing the motorcycle, after driving through water or in the rain, braking can be delayed due to damp brake disks and brake pads.
Brake early until the brakes are dry or braked until dry.◀

Warm water intensifies the effect of salt.
Only use cold water to remove road salt.◀

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

Cleaning sensitive motorcycle parts

Plastics

Clean plastic parts with water and BMW plastic care emulsion.
This includes in particular:
- Windshields and wind deflectors
- Headlight lens made of plastic
- Covering glass of the instrument cluster

– Black, unpainted parts

If plastic parts are cleaned using unsuitable cleaning agents, the surfaces can be damaged.
Do not use cleaning agents that contain alcohol, solvents or abrasives to clean plastic parts.
'Fly sponges' or sponges with hard surfaces can also lead to scratches.◀

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

Windshield

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

Fuel and chemical solvents attack the windshield material; the windshield becomes cloudy or dull.
Do not use cleaning agents.◀

Chrome

Especially in the case of road salt, carefully clean chrome parts with plenty of water and BMW auto shampoo. Use chrome polish for additional treatment.

Radiator

Clean the radiator regularly to prevent overheating of the engine due to inadequate cooling. For example, use a garden hose with low water pressure.

Cooling fins can be bent easily.
When cleaning the radiator, ensure that the fins are not bent.◀

Rubber

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

Using silicone sprays for the care of rubber seals can cause damage.
Do not use silicon sprays or other care products that contain silicon.◀

Paint care

Washing the motorcycle regularly will help counteract the long-term effects of substances that damage the paint, especially if your motorcycle is ridden in areas with high air pollution or natural sources of dirt, e.g. tree resin or pollen.
However, remove particularly aggressive materials immediately; otherwise changes in the paint or discoloration can occur. These include spilled fuel, oil, grease, brake fluid as well as bird droppings. BMW Car Polish or BMW Paint Cleaner are recommended for this.
Contamination of the paint finish is particularly easy to see after the motorcycle has been washed. Remove this type of soiling with

cleaning naphtha or spirit on a clean cloth or cotton ball. BMW Motorrad recommends removing tar spots with BMW Tar Remover. Then add a protective wax coating to the paint at these locations.

Protective wax coating

To preserve the finish of your motorcycle, BMW Motorrad recommends using BMW Car Wax or agents that contain carnauba or synthetic waxes.
A sure sign that the paint must be protected, is the fact that water no longer pearls up on it.

Storing motorcycle

- Clean motorcycle.
- Remove battery.
- Spray brake and clutch lever, and main and side stand pivots with a suitable lubricant.
- Coat bare metal and chrome-plated parts with an acid-free grease (e.g. Vaseline).
- Park motorcycle in a dry room so that both wheels are unloaded.

Before putting the motorcycle into storage, have the engine oil and the oil filter element changed by a specialist workshop, preferably an authorized BMW Motorrad retailer. Combine work for storing/returning to use with maintenance service or an inspection.◀

Returning motorcycle to use

- Remove the protective wax coating.
- Clean the motorcycle.
- Install a charged battery.
- Before starting: Observe checklist.

Technical data

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Weights 149
Riding specifications 150

Troubleshooting chart

Engine does not start at all or is very difficult to start

Possible cause	Remedy
Emergency ON/OFF switch activated.	Emergency ON/OFF switch in operating position.
Side stand extended and gear engaged.	Retract side stand (➠ 80).
Gear engaged and clutch not operated	Place transmission in neutral or disengage clutch (➠ 80).
Clutch disengaged with ignition switched off.	Switch on ignition first, then disengage clutch.
No fuel in tank.	Refueling (➠ 86)
Battery not adequately charged.	Charging connected battery (➠ 129)

Threaded fasteners

Front wheel	Value	Valid
Front brake caliper on wheel carrier		
M8 x 32 - 10.9	22 lb/ft (30 Nm)	
Clamping screw on quick-release axle in wheel carrier		
M8 x 30	14 lb/ft (19 Nm)	
Quick-release axle in threaded bush		
M24 x 1.5	37 lb/ft (50 Nm)	

Rear wheel	Value	Valid
Muffler on passenger footrest		
M8 x 30	16 lb/ft (22 Nm)	
Muffler on manifold		
M8 x 60 - 10.9	26 lb/ft (35 Nm)	
Rear wheel on wheel flange		
M10 x 1.25 x 40	**Tighten diagonally**	
	44 lb/ft (60 Nm)	

Handlebars	Value	Valid
Mounting of handlebar adjustment on lower handlebar bridge		
M8	15 lb/ft (20 Nm)	

Engine

Engine design	Transverse-mounted four-cylinder, four-stroke engine angled 55° toward front. DOHC control with toothed chain drive, 4 valves actuated by trailing valve levers, liquid cooling for cylinders and cylinder head. Integrated water pump, electronic fuel injection, integrated six-speed cassette transmission and dry-sump lubrication.
Displacement	1157 cc (1157 cm^3)
Cylinder bore	3.1 in (79 mm)
Piston stroke	2.3 in (59 mm)
Compression ratio	13:1
Rated output	152 hp (112 kW), at engine speed: 9500 min^{-1}
With OE 79 kW power reduction:	107 hp (79 kW), at engine speed: 8500 min^{-1}
Torque	96 lb/ft (130 Nm), at engine speed: 7750 min^{-1}
With OE 79 kW power reduction:	82 lb/ft (111 Nm), at engine speed: 5000 min^{-1}
Maximum engine speed	Max 10000 min^{-1}
Idle speed	$1050^{\pm 50}$ min^{-1}

Fuel

Recommended fuel quality	98 ROZ/RON, Super Plus unleaded 95 ROZ/RON, Super unleaded (fuel type can be used with reduced performance and consumption)
Usable fuel quantity	6.3 gal (24 l)
Reserve fuel quantity	≥1.1 gal (≥4 l)

Engine oil

Total engine oil capacity	3.7 quarts (3.5 l), with filter change 0.5 quarts (0.5 l), Difference between Min and Max
Lubricant	Castrol GPS 10W-40 (SAE 10W40; API SG; JASO MA)
Oil grades	Mineral engine oils of the API classification SF to SH. BMW Motorrad does not recommend using oil additives, as these can worsen clutch operation. Ask your BMW Motorrad retailer for engine oils suitable for your motorcycle.
Permissible viscosity classes	
SAE 10 W-40	≥-4 °F (≥-20 °C), Operation at low temperatures
SAE 15 W-40	≥14 °F (≥-10 °C)

Clutch

Clutch design	Multi-disk oil-bath clutch

Transmission

Transmission design	Claw-shifted 6-speed cassette transmission integrated in engine housing
Transmission gear ratios	1.559 (92:59 teeth), Primary gear ratio 2.294 (39:17 teeth), 1st gear 1.789 (34:19 teeth), 2nd gear 1.458 (35:24 teeth), 3rd gear 1.240 (31:25 teeth), 4th gear 1.094 (35:32 teeth), 5th gear 0.971 (33:34 teeth), 6th gear 1.045 (23:22 teeth), Angle drive

Rear-wheel drive

Type of final drive	Shaft drive with bevel gears
Type of rear suspension	BMW EVO Paralever, single-arm light-alloy cast swinging arm with two joints and torque support
Gear ratio of final drive	2.82

Running gear

Type of front suspension	Double leading link
Spring travel, front	4.9 in (125 mm), On wheel
Type of rear suspension	Lever-system-coupled central spring strut with coil pressure spring and single-tube gas-filled shock absorber. Spring preload with stepless hydraulic adjustment; rebound-stage damping with stepless adjustment
With OE Electronic Suspension Adjustment (ESA):	Lever-system-coupled central spring strut with coil pressure spring and single-tube gas-filled shock absorber. 3x spring base, tensile and compression stage each 3x adjustable
Spring travel, rear	5.3 in (135 mm), On wheel

Brakes

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

Wheels and tires

Tire combinations recommended at time of going to press (As at: 09.05.2007)	Front: Bridgestone, BT 020 F UU Radial, 120/70 ZR17 M/C (58W) Rear: Bridgestone, BT 020 R UU Radial, 180/55 ZR17 M/C (73W)
	Front, Metzeler, Roadtec Z6 C, 120/70 ZR17 M/C (58W) Rear: Metzeler, Roadtec Z6 K, 180/55 ZR17 M/C (73W)
Front wheel	
Front wheel design	Cast aluminum, MT H2
Front-wheel rim size	3.50" x 17"
Front tire designation	120/70 ZR 17

Rear wheel	
Rear wheel design	Cast aluminum, MT H2
Rear-wheel rim size	5.50" x 17"
Rear tire designation	180/55 ZR 17
Tire inflation pressure	
Tire pressure, front	36.3 psi (2.5 bar), Single rider, with cold tire 36.3 psi (2.5 bar), Driver with passenger and/or load, with cold tire
Tire pressure, rear	42.1 psi (2.9 bar), Single rider, with cold tire 42.1 psi (2.9 bar), Driver with passenger and/or load, with cold tire

Electrical system

Electrical rating of onboard socket	8 A, an onboard socket
With OE (Additional) onboard socket:	8 A, all onboard sockets together
Fuses	All circuits are electronically protected, so plug-in fuses are no longer necessary. If an electronic fuse trips and de-energizes a circuit, the circuit is active as soon as the ignition is switched on after the fault has been rectified.
Battery	
Battery manufacturer and designation	GEL 19
Battery design	Gel battery
Battery voltage	12 V
Battery capacity	19 Ah
Technical data	
Spark plugs, manufacturer and designation	NGK KR9CI
Electrode gap of spark plug	0.03 in (0.8 mm)

Bulbs	
Bulb for high-beam headlight	H7 / 12 V / 55 W
Bulb for low-beam headlight	H7 / 12 V / 55 W
With OE Xenon light:	D2R / 35 W
Bulb for parking light	W5W / 12 V / 5 W
Bulb for taillight/brake light	P21W / 12 V / 21 W
Bulbs for flashing turn indicators, front	H21W / 12 V / 21 W
Bulbs for flashing turn indicators, rear	P21W / 12 V / 21 W

Frame

Frame design	Cast light allow - welded design with screwed-on tubular steel rear frame
Location of type plate	On rear cross frame tube
Location of vehicle identification number	Front right side frame section

Dimensions

Motorcycle length	91.3 in (2318 mm)
Motorcycle width	38.7 in (982 mm), Across mirrors
Motorcycle height	56.6 in (1438 mm), At DIN unladen weight
Driver's seat height	32.3 in (820 mm), Without driver
With OE Low driver's seat:	31.5 in (800 mm), Without driver

Weights

Unladen weight	635 lbs (288 kg), DIN unladen weight, ready for road, 90 % full tank of gas, without OE
Permissible gross weight	1146 lbs (520 kg)
Maximum payload	Max 525 lbs (Max 238 kg)

Riding specifications

Top speed	>124 mph (>200 km/h)

Service

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BMW Motorrad Service

Advanced technology requires specially adapted methods of maintenance and repair.

If this maintenance and repair work is performed inexpertly, there is a danger of damage and associated safety risks. BMW Motorrad recommends having corresponding work on your motorcycle carried out by a specialized workshop, preferably by an authorized BMW Motorrad retailer.◀

You can obtain information on the contents of the BMW Services from your BMW Motorrad retailer.
Have all maintenance and repair work carried out confirmed in the "Service" chapter in this manual.
Your authorized BMW Motorrad retailer is supplied with all the latest technical information and therefore possesses the necessary technical know-how. BMW Motorrad recommends that you refer any questions about your motorcycle to your authorized BMW Motorrad retailer.

BMW Motorrad Service Quality

BMW Motorrad means not only quality workmanship and high reliability, but also an outstanding quality of service.
To ensure that your BMW is always in optimum condition, BMW Motorrad recommends that you adhere to the regular maintenance schedule for your motorcycle, preferably having the work done by your authorized BMW Motorrad retailer. For generous treatment of claims submitted after the warranty period has expired, evidence of regular maintenance is essential.
Certain signs of wear, moreover, may otherwise not be noticed until it is too late to correct them at moderate cost. The workshop personnel at BMW Motorrad retailers have thorough knowledge of your motorcycle and can take action before minor problems can turn into major trouble. By having the necessary repairs done properly and in good time, you save time and money in the long run.

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

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

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

BMW Motorrad Service Network

With its worldwide service network, BMW Motorrad can attend to you and your motorcycle in over 100 countries around the globe. In Germany alone, there are approximately 200 authorized BMW Motorrad retailers ready to assist you.
All information 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

The BMW pre-delivery check is carried out by your authorized BMW Motorrad retailer before it turns over the motorcycle to you.

BMW Running-in Check

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

BMW Service

BMW Service is carried out once a year. The scope of the services performed may be dependent on the vehicle owner and the mileage driven. Your BMW Motorrad retailer confirms that the service has been performed and enters the date for the next service.
For drivers who drive long distances annually, it may be necessary to come in for service before the entered date. In this case a corresponding maximum odometer reading will also be entered in the confirmation of service. If this odometer reading is reached before the next service date, service must be performed sooner.
The service display in the multifunction display reminds you of the next service date approx. one month or 600 miles (1,000 km) before the entered values.

Confirmation of maintenance work

BMW Pre-Delivery Check

Conducted

on_____

Stamp, Signature

BMW Running-in Check

Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____

or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

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Odometer reading_____

Next service
at the latest

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or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

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Odometer reading_____

Next service
at the latest

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or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

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Odometer reading_____

Next service
at the latest

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or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

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Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

Confirmation of service

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

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Work carried out	Odometer reading	Date

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Reporting Safety Defects

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

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

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

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

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The most important data for a filling station stop can be found in the following chart.

Fuel	
Recommended fuel quality	98 ROZ/RON, Super Plus unleaded 95 ROZ/RON, Super unleaded (fuel type can be used with reduced performance and consumption)
Usable fuel quantity	6.3 gal (24 l)
Reserve fuel quantity	≥1.1 gal (≥4 l)
Tire inflation pressure	
Tire pressure, front	36.3 psi (2.5 bar), Single rider, with cold tire 36.3 psi (2.5 bar), Driver with passenger and/or load, with cold tire
Tire pressure, rear	42.1 psi (2.9 bar), Single rider, with cold tire 42.1 psi (2.9 bar), Driver with passenger and/or load, with cold tire

BMW recommends Castrol

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