Rider's Manual (US Model)

F 650 GS

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.

Table of Contents

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

General instructions

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 accessory
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.

TPC/ RDC Tire Pressure Control (TPC).

Equipment

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

Technical data

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

Currentness of this manual

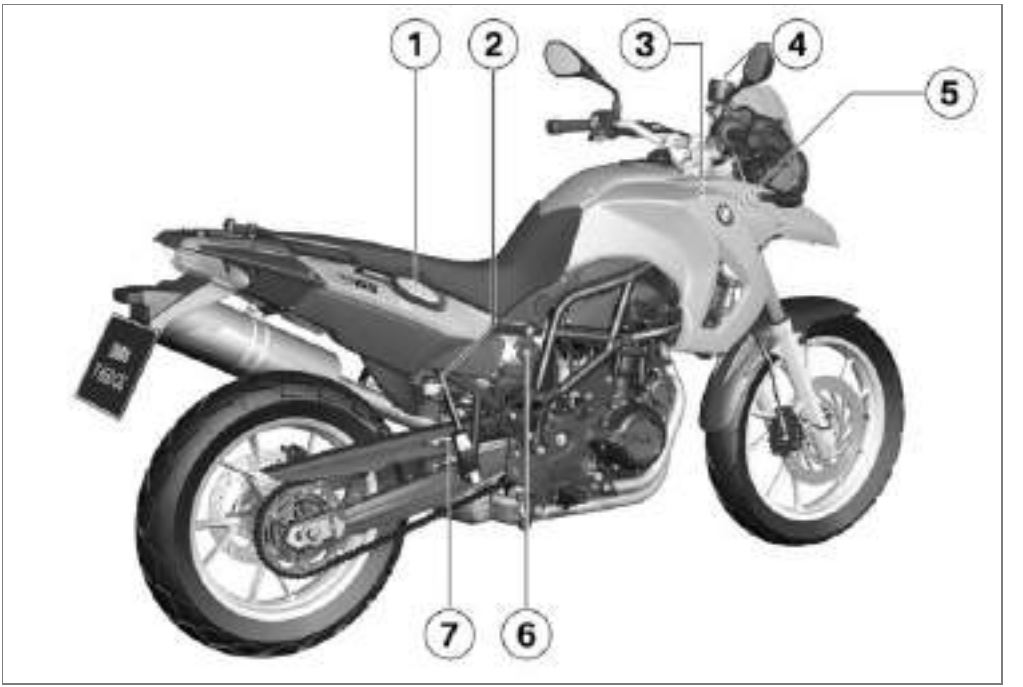
The high safety and quality standards of BMW motorcycles are maintained by constant development work on designs, equipment and accessories. Because of this, your motorcycle may differ from the information supplied in the Rider's Manual. In addition, BMW Motorrad cannot guarantee the total absence of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

Overviews


1
2
3

General view, left side

1 Onboard socket (➠ 76)
2 Seat lock (➠ 52)
3 Engine oil fill location and oil dipstick (➠ 87)

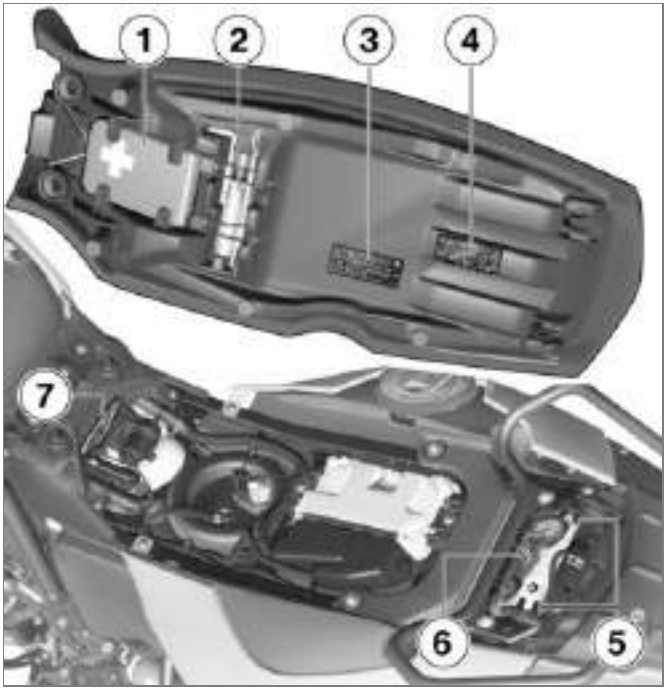

1
2
3
4
5
7
6

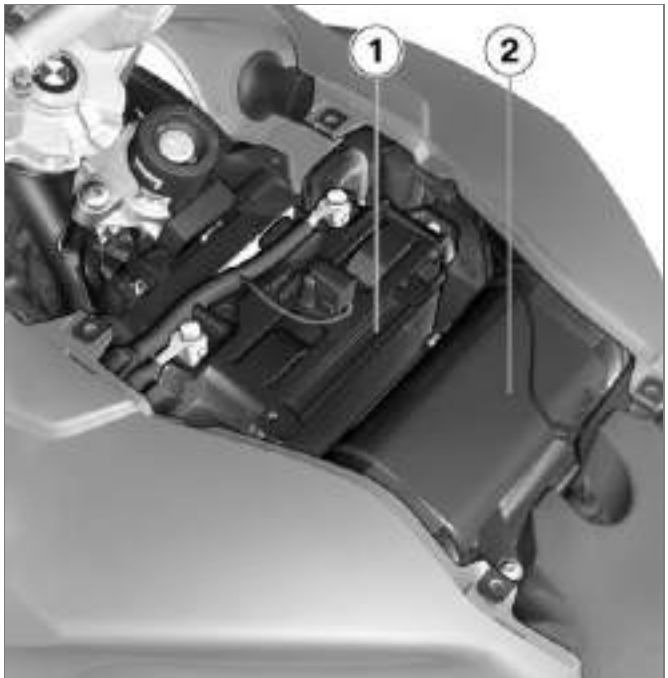
General view, right side

1 Fuel filler opening (🔗 65)
2 Brake-fluid reservoir, rear (🔗 91)
3 Vehicle Identification Number, type plate (on steering-head bearing)
4 Brake-fluid reservoir, front (🔗 90)
5 Coolant level indicator (behind side panel) (🔗 92)
6 Adjusting spring preload (🔗 49)
7 Adjusting damping (🔗 50)

Underneath seat

1 Storage space
– with first-aid kit OA
Storing first-aid kit
2 Standard tool kit (➠ 86)
3 Payload table
4 Tire inflation pressure table
5 Helmet holder (➠ 53)
6 Rider's Manual (US Model)
7 Tools for adjusting spring preload (➠ 49)





Under fairing

1 Battery (112)
2 Air filter housing (110)

Multifunction switch, left

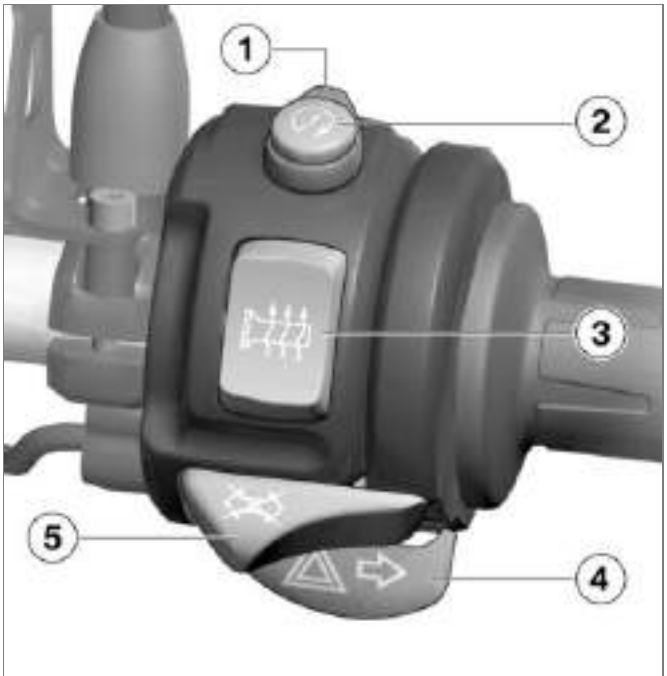
1 Select display in extended area (➠ 40)

2 – with BMW Motorrad ABS[OE]
ABS operation (➠ 46)

3 Horn

4 Flashing turn signals, left (➠ 43)
Hazard warning flashers (➠ 44)

5 Headlight high beam and flasher (➠ 43)



Multifunction switch, right

1 Emergency-off switch (kill switch) (➠ 45)

2 Starter button (➠ 59)

3 – with heated handlebar grips[OE]
Heated hand grip (➠ 45)

4 Turn signals, right (➠ 43)
Hazard warning flashers (➠ 44)

5 Turn signals off (➠ 43)
Hazard warning flashers off (➠ 44)

Instrument cluster

1 Warning and indicator lights (➠ 24)

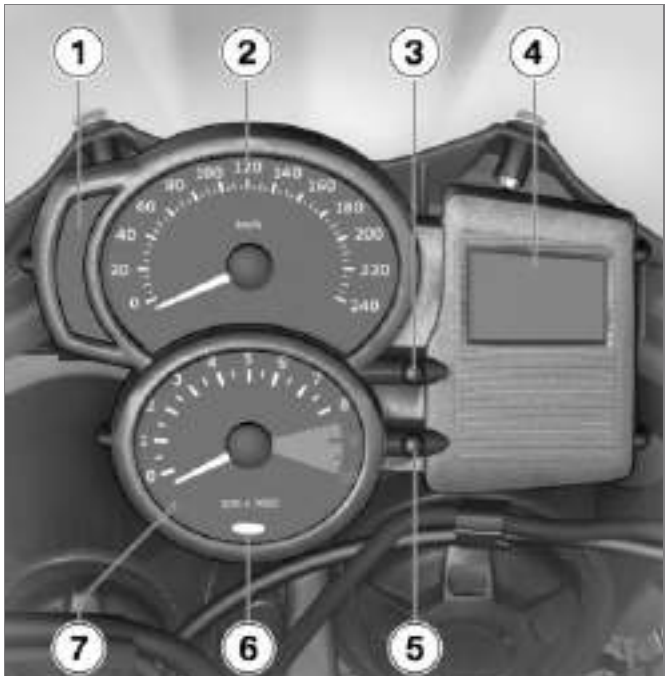
2 Speedometer

3 Setting clock (➠ 39).
– with onboard computer[OE]
Operation of stopwatch (➠ 41)

4 Multifunction display (➠ 22)

5 Select readings (➠ 40).
Resetting tripmeter (➠ 41).

6 Ambient light sensor (for brightness adjustment of instrument lighting)
– with anti-theft alarm[OE]
Anti-theft alarm indicator light (see anti-theft alarm operating instructions)
– with onboard computer[OE]
Engine speed warning (➠ 62)



7 Tachometer

Status indicators

Multifunction display

1 Trip odometer (➠ 40)
2 Warning for engine electronics (➠ 31)
3 – with onboard computer OE
Stopwatch (➠ 41)
4 Time (➠ 39)
5 – with Tire Pressure Control (TPC/RDC) OE
Tire inflation pressures (➠ 26)
6 Coolant-temperature warning indicator (➠ 30)
7 Service is due (➠ 25)
8 Reading display range (➠ 40)
9 – with onboard computer OE
Symbols for illustrating displayed value (➠ 23)

10 – With onboard computer (OE)
The horizontal bars indicate the level of the coolant temperature.

11 – With onboard computer (OE)
Gear indicator, "N" is shown for Neutral

12 – With onboard computer (OE)
Fuel level
The horizontal bars over the filling station symbol indicate the remaining fuel quantity. The top cross bar is shown enlarged and is equal to a considerably higher fuel level than the other cross bars.

13 – With onboard computer (OE)
Reading display range (➟ 40)

14 A warning appears in the reading display range (➟ 26)

Meaning of symbols

– with onboard computer[OE]


Distance driven after reaching reserve quantity in mls (➟ 25)


Average consumption in mpg


Average speed in mph


Current consumption in mpg


Ambient temperature in °F (➟ 26)

Warning and indicator lights

1 Oil-pressure warning light (➠ 31)

2 – with BMW Motorrad ABS[OE]
ABS warning light (➠ 32)

3 Fuel-reserve warning light (➠ 30)

4 General warning light, in conjunction with warning indicators in display (➠ 26)

5 High-beam headlight indicator light

6 Indicator light for right turn indicator

7 Neutral indicator light

8 Indicator light for left turn indicator

The ABS symbol can be shown differently depending on the country.◀

Service display

If the time remaining until the next service lies within a month, the service date **1** is briefly displayed following the pre-ride check. The month and year are shown with two and four digits respectively separated by a colon. In this example the display means "March 2011".

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 621 miles (1000 km), the remaining miles (kilometers) **2** are counted down in 62-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 appears more than a month before the service date, the stored date must be adjusted in the instrument cluster. 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.◀

Kilometers driven after reaching the reserve quantity

– with onboard computer OE

After the fuel reserve quantity is reached, the number of kilometers driven since that time are displayed. This odometer is reset if the total filling quantity which results during refueling is greater than the reserve quantity.

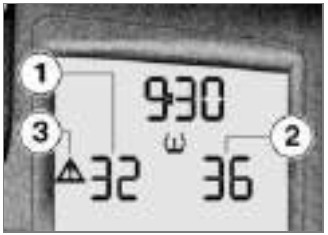
Ambient temperature

– with onboard computer[OE]

°F When the motorcycle is stopped, the engine heat can falsify the measurement of the ambient temperature. If the influence of the engine heat becomes too great, −− is temporarily shown in the display.
If the ambient temperature drops below 37 °F (3 °C), the temperature display flashes as a warning of possible icing-up. The display automatically switches from any other mode to the temperature reading when the temperature drops below this threshold for the first time.

Tire inflation pressures

– with Tire Pressure Control (TPC/RDC)[OE]



The displayed tire inflation pressures are based on a tire temperature of 68 °F (20 °C). The figure on the left side **1** indicates the front tire's inflation pressure, while the figure on the right **2** shows the inflation pressure in the rear tire. Immediately after switching on the ignition, "−− −−" is displayed, as the transfer of the inflation pressure values does not begin until a speed of 19 mph (30 km/h) is exceeded for the first time.

If the warning triangle **3** is also shown, a warning display is concerned. Critical inflation pressure flashes.
The universal warning lamp lights up in yellow when the critical figure is at the limit of the approved tolerance range. If the monitored tire inflation pressure is outside the specified range the universal warning lamp will flash in red.

Additional information on the BMW Motorrad Tire Pressure Monitor is provided starting on page (➡ 72).

Warning indicators

Display

Warnings are displayed with the corresponding warning light.

Warnings for which no separate warning light is available, are indicated with the 'General' warning light **1** in conjunction with a warning or a warning symbol in the multifunction display. The 'General' warning light shows red or yellow, depending on the urgency of the warning.

If the display in the value area **2** shows a warning, then this is symbolized with the warning triangle **3**. These warnings can be displayed in alternation with the odometers (40).

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

Warning light	Displays	Meaning
 Lights up yellow	 + "EWS" is indicated	Electronic immobilizer is active (➠ 30)
Lights up		Fuel down to reserve (➠ 30)
 Lights up red	 Flashes	Coolant temperature too high (➠ 30)
 Lights up yellow	 appears on the display	Engine in emergency-operation mode (➠ 31)
 Flashes		Engine oil pressure insufficient (➠ 31)
 Lights up yellow	 + "LAMP" is indicated	Bulb defective (➠ 31)
	"x.x °F" flashes	Ice warning (➠ 32)
 Lights up yellow	 + "dWA" is indicated	Anti-theft alarm battery drained (➠ 32)

Warning light	Displays	Meaning
 Flashes		ABS self-diagnosis not completed (➠ 32)
 Lights up		ABS deactivated (➠ 33)
 Lights up		ABS error (➠ 33)
 Lights up yellow	 + "x.x" flashes	Tire inflation pressure in limit area of permissible tolerance (➠ 33)
 Flashes red	 + "x.x" flashes	Tire inflation pressure outside permissible tolerance (➠ 33)
	 + "––" or "––––" is indicated	Transmission error (➠ 34)
 Lights up yellow	 + "––" or "––––" is indicated	Sensor defective or system fault (➠ 35)
 Lights up yellow	 + "RdC" is indicated.	Battery of tire-inflation pressure sensor weak (➠ 35)

Electronic immobilizer is active

General warning light shows yellow.

+ "EWS" is indicated.

Possible cause:

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

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

Fuel down to reserve

Fuel-reserve warning light lights up.

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 to the extent that the fuel tank is completely empty.◀

Possible cause:

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

Reserve fuel quantity
– Approx. 1.1 gal (Approx. 4 l)

- Refueling (65).

Coolant temperature too high

General warning light shows red.

The temperature symbol flashes.

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

Possible cause:

Coolant level is too low.

- Checking coolant level (92).

If coolant level is too low:

- Topping up coolant (93).

Possible cause:

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. Unusual engine response is a possibility.
Adapt your style of riding accordingly. Avoid accelerating sharply and overtaking.◀

Possible cause:

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


Engine oil-pressure warning light flashes.
The oil pressure in the lubricating oil circuit is too low. Stop immediately and switch off 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 on the oil dipstick.◀

Possible cause:

The engine oil level is too low.

- Checking engine oil level (▬ 87).

If oil level is too low:

- Topping up engine oil (▬ 88).

Possible cause:

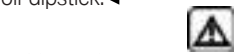
The engine oil pressure is insufficient.

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.

Bulb defective


General warning light shows yellow.


+ "LAMP" is indicated.

A defective bulb places your safety at risk because it is easier for other users to not see the motorcycle.
Replace defective bulbs as

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

Possible cause:

Bulb defective.

- Locate defective bulb with visual check.
- Replacing low-beam and high-beam bulb (➡ 103).
- Replacing parking light bulb (➡ 104).
- Replacing brake and tail light bulb (➡ 106).
- Replacing front and rear turn indicator bulbs (➡ 106).

Ice warning

– with onboard computer OE

"x.x °F" (the ambient temperature) flashes.

Possible cause:

The ambient 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). At low outside temperatures, black ice must especially be expected on bridges and in shady road areas.◀

- Think well ahead when driving.

Anti-theft alarm battery drained

– with anti-theft alarm OE

General warning light shows yellow.

+ "dWA" is indicated.

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

Possible cause:

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.

ABS self-diagnosis not completed

– with BMW Motorrad ABS OE

ABS warning light flashes.

Possible cause:

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 deactivated

– with BMW Motorrad ABS[OE]


ABS warning light lights up.

Possible cause:

The ABS system has been deactivated by the driver.

– with BMW Motorrad ABS[OE]

- Switching on ABS function (➡ 47).

ABS error

– with BMW Motorrad ABS[OE]


ABS warning light lights up.

Possible cause:

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

- Continued driving is possible. It must be noted that the ABS function is not available. Observe additional information on situations which can lead to an ABS error (➡ 71).
- Have the malfunction corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Tire inflation pressure in limit area of permissible tolerance

– with Tire Pressure Control (TPC/RDC)[OE]


General warning light shows yellow.


+ "x.x" (the critical inflation pressure) flashes.

Possible cause:

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.

Before adjusting the tire inflation pressure, observe the information on temperature compensation and on inflation pressure adjustment in the chapter "Technology in detail".◀

Tire inflation pressure outside permissible tolerance

– with Tire Pressure Control (TPC/RDC)[OE]


General warning light flashes red.

 + "x.x" (the critical inflation pressure) flashes.

Possible cause:

The measured tire inflation pressure is outside the permissible tolerance.

- Check tire for damage and drivability.

If it is 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

– with Tire Pressure Control (TPC/RDC)[OE]

 + "––" or "–– ––" is indicated.

Possible cause:

The motorcycle's speed has not exceeded the threshold of approx.19 mph (30 km/h). The TPC/RDC sensors do not transmit their signal until a speed above this threshold is reached (➡ 72).

- Watch TPC/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.

Possible cause:

There is a fault in the radio connection to the TPC/RDC sensors. Possible causes are radio systems in the surrounding area, which interfere with the connection between the TPC/RDC control unit and the sensors.

- Watch the TPC/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

– with Tire Pressure Control (TPC/RDC)[OE]

General warning light shows yellow.

+ "−−" or "−− −−" is indicated.

Possible cause:

Wheels without installed TPC/RDC sensors are mounted.

- Retrofit wheel set with TPC/RDC sensors.

Possible cause:

One or two TPC/RDC sensors have failed.

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

Possible cause:

A system fault has occurred.

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

Battery of tire-inflation pressure sensor weak

– with Tire Pressure Control (TPC/RDC)[OE]

General warning light shows yellow.

+ "RdC" is indicated.

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

Possible cause:

The battery of the tire inflation pressure sensor no longer has its full capacity. The operation of the tire inflation pressure control is only ensured for a limited time.

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

Operation

Steering and ignition lock

Keys

You receive two master keys and one emergency key. The emergency key is small and light so that it can be carried along, e.g. in a wallet. It can be used if no master key is available; it is not suitable for continuous use.
If a key is lost, please note the information on the electronic immobilizer (EWS) (➨ 39).
The ignition lock, tank lock and seat lock are operated with the same key.

– with case OE
– with Topcase OA

The cases and the Topcase can also be ordered with locks for the same key 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. (➨ 60)

– with BMW Motorrad ABS OE

» ABS self-diagnosis is performed. (➨ 60)

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

- Turn handlebars to left.

- Turn key to position **3** while moving handlebars slightly.

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

Electronic immobilizer EWS

The electronics in the motorcycle determine the data stored in the ignition key via a ring antenna in the ignition switch. The engine management system does not enable engine starting until the key has been detected 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 EWS warning is shown in the multifunction display.
Always store the spare key separately from the ignition key.◀

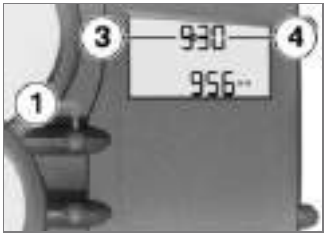
If you lose a key, you can have it disabled by your BMW Motorrad partner. For this purpose, you have to bring along all other keys that belong to the motorcycle. The motor can no longer be started using a disabled key; however, a disabled key can be enabled again.
Replacement and spare keys are only 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.

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.



- Press and hold button **1** until hours **3** flash.
- Press button repeatedly until desired hours are shown.
- Press and hold button until minutes **4** flash.
- Press button repeatedly until desired minutes are shown.
- Press and hold button until minutes no longer flash.

» Setting is completed.

Display

Selecting readings

- Switch on ignition.

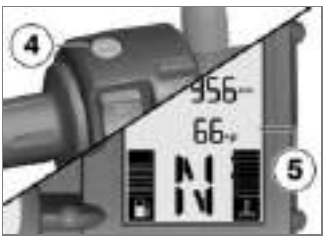
- Press button **2** to select display in value area **3**.

The following values can be displayed:

– Total kilometers (in illustration)
– Tripmeter 1 (Trip I)
– Tripmeter 2 (Trip II)
– with Tire Pressure Control (TPC/RDC)[OE]

Tire inflation pressures

– Warnings if necessary
– with onboard computer[OE]



- Press button **4** to select display in value area **5**.

The following values can be displayed:

– Ambient temperature (°F)

Average speed in mph

Average consumption in mpg

Current consumption in mph

Distance driven since reaching reserve quantity in mls◁

Resetting tripmeter

- Switch on ignition.
- Select desired tripmeter.

- Press and hold button **2** until tripmeter has been reset.

Resetting average data

– with onboard computer[OE]

- Switch on ignition.
- Select average fuel consumption or average speed.

- Press and hold button **1** until displayed value has been reset.◁

Stopwatch

– with onboard computer[OE]

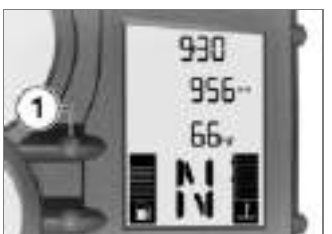
Stopwatch

As an alternative to the odometer, the stopwatch **3** can be displayed. The display consists of hours, minutes, seconds and tenths of a second separated by dots.

In enable improved operation of the stopwatch while driving (as a lap timer), the functions of the button **2** and the functions of the INFO button on the handlebar can be interchanged. The stopwatch and the odometer are then operated with the INFO button;

the onboard computer must be operated with the button **2**. The stopwatch continues to run in the background when the display is temporarily switched over to the odometer. The stopwatch also continues to run when the ignition is temporarily switched off.

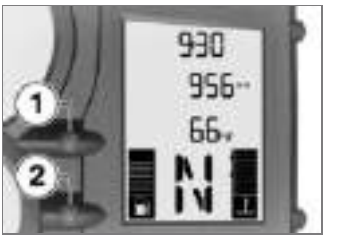
Operating stopwatch



- If necessary, switch over from odometer to stopwatch with button **1**.

- With stopwatch stopped, press button **2** to start stopwatch.
- With stopwatch running, press button **2** to stop stopwatch.
- Press and hold button **2** to reset stopwatch.

Interchanging button functions



- Press and hold button **1** and button **2** simultaneously until display changes.

» FLASH (engine speed warning indicator) and ON or OFF are shown.

- Press button **2**.

» LAP (Lap-Timer) and ON or OFF are shown.

- Press button **1** repeatedly until desired state is shown.

» ON: Operation of stopwatch with INFO button on handlebar fitting.

» OFF: operation of stopwatch with button **2** in instrument cluster.
- To save the setting made, press and hold button **1** and button **2** simultaneously until the display changes.

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.◀

Headlight high beam and flasher

- Press switch **1** at top to switch on high-beam headlight.
- Move switch **1** onto center position to switch off high-beam headlight.
- Pull switch **1** at bottom to operate headlight flasher.◁

Parking light

- Switch off ignition.

- Immediately after switching off the ignition press the **1** button and maintain pressure until the parking lights come on.
- Switch ignition on and then off again to switch off parking lights.◁

Turn signals

Operating turn signal

- Switch on ignition.

▷ After driving for approx. ten seconds or after covering a distance of approx. 300 m, the turn indicators are automatically switched off.◀

- Press button **1** to switch on left-hand turn signals.

- Press button **2** to switch on right-hand turn signals.

- Press button **3** to switch off turn signals.◁

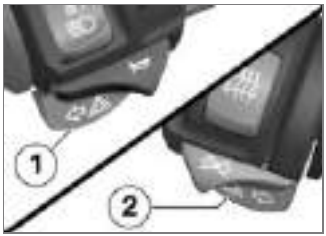
Hazard warning flashers

Operating 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 buttons **1** and **2** simultaneously to switch on the hazard warning flashers.

» Ignition can be switched off.

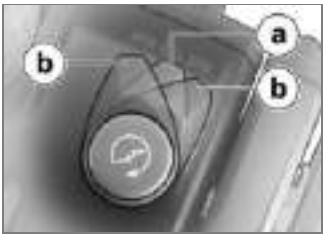
- Press button **3** to switch off hazard warning flashers.◁

Emergency-off switch (kill switch)

1 Emergency-off switch (kill 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 kill switch.



a Operating position
b Engine switched off.

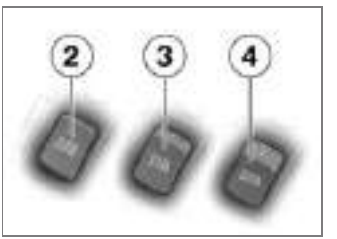
Heated handlebar grips

– with heated handlebar grips[OE]

1 Heated handlebar-grip switch

The handlebar grips can be heated at two different levels. The second level is used for fast heat-up of the grips; then the switch should be switched back to the first level. 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).

BMW Motorrad ABS

– with BMW Motorrad ABS OE

Switching off ABS function

- Stop motorcycle or switch on ignition with motorcycle stationary.

- Press and hold button **1** until ABS warning lamp changes its display behavior.

ABS warning light lights up.

- Release button **1** within two seconds.

ABS warning light continues to light up.

» ABS function is switched off.◁

Switching on ABS function

- Press and hold button **1** until ABS warning lamp's display changes.

ABS warning light goes out; if self-diagnosis has not been completed, it begins to flash.

- Release button **1** within two seconds.

ABS warning light remains off or continues to flash.

» ABS function is switched on.

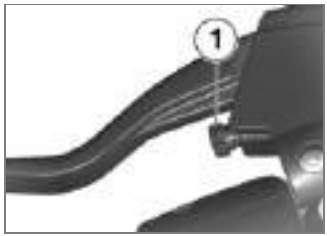
- As an alternative, the ignition can also be switched off and then on again.

If the ABS light continues to light up after switching the ignition off and then on again, an ABS fault has occurred.◀◁

Clutch

Adjusting clutch lever

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



- Turn adjusting screw **1** clockwise to increase distance between clutch lever and handlebar grip.
- Turn adjusting screw **1** counterclockwise to decrease distance between clutch lever and handlebar grip.

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

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

- Turn adjusting screw **1** clockwise to increase distance between brake lever and handlebar grip.
- Turn adjusting screw **1** counterclockwise to decrease distance between brake lever and handlebar grip.

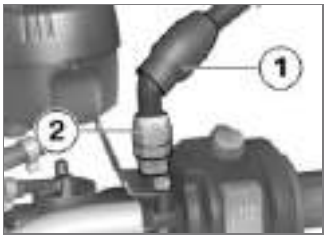
The adjusting screw can be turned more easily if you press the handbrake lever forward when doing so.◀

Mirrors

Adjusting mirrors

- Move mirror into desired position by twisting.

Adjusting mirror arm



- Slide protective cap **1** up over screw connection on mirror arm.◁
- Loosen the nut **2**.
- Turn mirror arm into desired position.
- Tighten the nut to the specified tightening torque, while holding the mirror arm to ensure that it does not move out of position.

	Locknut (mirror) on clamping piece
–	15 lb/ft (20 Nm)

- Slide protective cap over threaded fastener.

Spring preload

Setting

It is essential to set the 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

- Remove seat (52).

- Remove toolkit **1**.

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.◀

- To increase spring preload, turn handwheel **2** clockwise using toolkit.
- To decrease spring preload, turn handwheel **2** counterclockwise using toolkit.

Basic setting of spring preload, rear
– Turn adjusting screw counterclockwise as far as possible (Full tank of gas, with rider 187 lbs (85 kg))
– with lowering OE
– Turn adjusting screw counterclockwise as far as possible, then pretension spring with 5 clicks (Full tank of gas, with rider 187 lbs (85 kg))◁

- Remount toolkit.
- Install seat (53).

Damping

Setting

The damping must be adjusted to the road conditions and the spring preload.

– A rough road surface requires softer damping than a smooth road surface.
– 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 damping via 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 clockwise as far as possible and then turn back 2 clicks (Full tank of gas, with rider 187 lbs (85 kg))

Tires

Checking tire pressure

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

 At high road speeds, tire valves installed perpendicular to the wheel rim have a tendency to open as a result of centrifugal force.
To avoid a sudden loss of tire inflation pressure, use valve caps with a rubber sealing ring for valves installed vertically to the wheel rim and tighten firmly.◀

- Make sure ground is level and firm and park motorcycle.
- Check tire pressures against data below.

 Tire pressure, front
– 31.9 psi (2.2 bar) (One-up, at tire temperature 68 °F (20 °C))
– 34.8 psi (2.4 bar) (Driver with passenger and/or load, at tire temperature 68 °F (20 °C))

 Tire pressure, rear
– 34.8 psi (2.4 bar) (One-up, at tire temperature 68 °F (20 °C))
– 40.6 psi (2.8 bar) (Driver with passenger and/or load, at tire temperature 68 °F (20 °C))

If tire pressure is too low:
- Correct tire 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.

Headlight range and spring preload

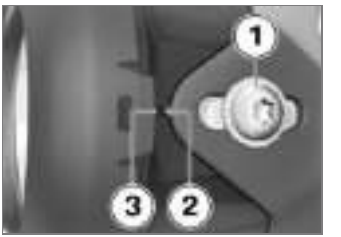
The headlight range generally remains constant due to the adjustment of the spring preload to the loading state.
Spring preload adjustment may only be insufficient when the motorcycle is very heavily loaded. In this case, the headlight range must be adjusted to the weight.

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

Adjusting headlight range

- Loosen screws **1** on left and right.
- Adjust headlight by tilting slightly.
- Tighten screws **1** on left and right.

Basic headlight range adjustment



- Loosen screws **1** on left and right.
- Adjust headlight by tilting slightly so that tip **2** points to marking **3**.
- Tighten screws **1** on left and right.

Seat

Removing seat

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

- Turn seat lock **1** to left with ignition key and hold while pressing seat downward at front to support movement.

- Raise seat **2** at front and release key.
- Take off seat and place on a clean surface with rubber buffers facing downward.

Installing seat

- Insert seat in brackets **3**.
- Firmly press down on seat at front.

» The seat can be heard to lock into place.

Helmet holder

Locking helmet on motorcycle

- Remove seat (52).

- Secure helmet on helmet holder **1** on left or right using a steel cable.

If the helmet is secured on the left-hand side of

the motorcycle, damage can be caused by the hot end muffler. Attach the helmet to the right-hand side of the motorcycle if possible.◀

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

- Guide steel cable through helmet and bracket and position as shown.
- Install seat (➡ 53).

Riding

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.

Reduced clearance in inclined position

– with lowering OE

Motorcycles with lowered running gear have a reduced clearance in inclined position and to the ground compared to motorcycles with standard running gear (see the chapter "Technical Data").

Danger of accident due to the motorcycle contacting the ground unexpectedly early. Observe the reduced ground clearance of lowered motorcycles in all positions.◀

Test the clearance of your motorcycle at an angle in safe situations. Remember to take the limited ground clearance of your motorcycle into account when driving over curbs and similar obstacles.

Lowering the motorcycle reduces the spring travel. A possible reduction in the accustomed driving comfort may result. Especially when riding with a passenger, the spring preload should be adjusted accordingly.

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.

– with case OE

- Ensure that case volumes on left and right are equal.
- Make sure that weight is uniformly distributed between right and left.
- Pack heavy pieces of luggage to bottom and inside of cases.
- Observe maximum payload and top speed according to label in case.◁

– with Topcase OA

- Observe maximum payload and top speed according to label in Topcase.◁

– with tank rucksack OA
• Observe maximum payload of tank rucksack and corresponding top speed.

 Payload of tank rucksack
– max 11 lbs (max 5 kg)

 Speed limit for driving with tank rucksack
– max 81 mph (max 130 km/h)◁

– with rear softbag OA
• Observe maximum payload of rear bag and corresponding top speed.

 Payload of rear bag
– max 3 lbs (max 1.5 kg)

 Speed limit for driving with rear bag
– max 81 mph (max 130 km/h)◁

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.

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.◀

Danger of burns

Engine and exhaust system become very hot when the motorcycle is in use. There is a risk of burn injuries by contact with hot surfaces, particularly at the silencer.
When you park the motorcycle make sure that no-one comes into contact with the engine and exhaust system.◀

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.◀

Danger of overheating

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.◀

Modifications

Modifications of the motorcycle (e.g. engine management system, throttle valves, clutch) can cause damage to the affected components and failure of safety-related functions. Damage caused in this way is not covered by the warranty.
Do not make any modifications.◀

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
– Damping 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)
– Tension and lubrication of drive chain

Starting

Starting the engine

- Emergency-off switch (kill switch) in normal operating position **a**.

⚠ Transmission lubrication is only ensured when the engine is running. Insufficient lubrication can lead to transmission damage.
Do not allow the motorcycle to roll for longer periods or push it over longer distances with the engine switched off.◀

- Switch on ignition.

» Pre-ride check is performed. (➠ 60)

– with BMW Motorrad ABS[OE]

» ABS self-diagnosis is performed. (➠ 60)

- Engage neutral, or pull back clutch lever if a gear is engaged.

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

- For cold starts and at low ambient temperatures: pull the lever to disengage the clutch and twist the throttle grip slightly.

- Press starter button **1**.

▷ 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.

» If the engine fails to start, the troubleshooting table in the chapter "Technical Data" may provide assistance. (➠ 120)◁

Pre-ride check

After the ignition is switched on, the instrument cluster conducts a test of the pointer instruments and the warning and indicator lights, i.e. the "Pre-Ride-Check". The test is aborted if the engine is started before it is completed.

Phase 1

The pointers of the tachometer and speedometer are run up to the end stop. At the same time, all warning and indicator lights are switched on consecutively.

Phase 2

» The general warning light changes from yellow to red.

Phase 3

The pointers of the tachometer and speedometer are run back. At the same time, all switched-on warning and indicator lights are switched off consecutively in the reverse order.

If a pointer has not been moved, or if one of the warning and indicator lights has not been switched on:

If it was not possible to switch on the warning lights, possible malfunctions cannot be indicated.
Watch all warning and indicator lights on the display.◀

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

ABS self-diagnosis

– with BMW Motorrad ABS OE

The readiness for operation of the BMW Motorrad 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 be driven a few yards.

Phase 1

» Checking the diagnosable system components while stopped.

ABS warning light flashes.

Phase 2

» Checking wheel sensors while starting off.

ABS warning light flashes.

ABS self-diagnosis completed

» The ABS warning light goes out.

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

- Continued driving is possible. It must be noted that the ABS 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 620 mls (1,000 km)

- While running in the motorcycle, vary the throttle opening and engine-speed range frequently; avoid driving for long periods at a constant speed.
- Choose curvy, slightly hilly sections of road if possible.
- Observe the engine run-in speeds.

 Engine run-in speed
– <5000 min^{-1}

- Have the first inspection carried out after 300 - 750 mls (500 - 1200 km).

Brake pads

New brake pads must be run in before they achieve their optimum friction force. This initial reduction in braking efficiency can be compensated for by exerting greater pressure on the brake 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.◀

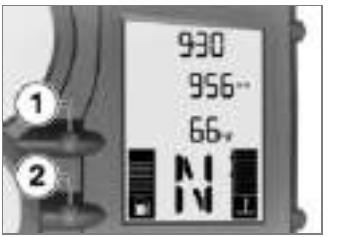
Speed

– with onboard computer OE

Engine speed warning

The engine speed warning signals to the driver that the red engine speed range has been reached. This signal is shown in red by the flashing of the anti-theft alarm indicator light **1**.
The signal is maintained until the transmission is upshifted or the engine speed is reduced. It can be activated or deactivated by the driver.

Activating engine speed warning



- Press and hold button **1** and button **2** simultaneously until display changes.

» FLASH (engine speed warning indicator) and ON or OFF are shown.

- Press button **1** until desired state is shown.

» ON: engine speed warning activated.

» OFF: engine speed warning deactivated.

- To save the setting made, press and hold button **1** and button **2** simultaneously until the display changes.

Offroad riding

After driving offroad

BMW Motorrad recommends that the following be observed after driving offroad:

Tire inflation pressure

A tire inflation pressure reduced for offroad driving leads to poorer handling of the motorcycle on paved roads and can result in accidents.
Ensure proper tire inflation pressure.◀

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.◀

Driving on unpaved or dirty roads leads to increased brake pad wear.
Check the brake pad thickness more often and replace the brake pads sooner.◀

Spring preload and damping

Spring preload and damping values that have been changed for offroad use reduce handling characteristics on paved surfaces.
Before returning to on-road use, reset correct spring preload and correct damping.◀

Rims
BMW Motorrad recommends checking the rims for possible damage after riding offroad.

Air filter insert

Engine damage due to soiled air filter insert.
When driving in dusty terrain, check air filter insert for soiling at short intervals and clean or replace if necessary.◀

Use under very dusty conditions (deserts, savannas, etc.) requires the use air filter inserts specially developed for these kinds of applications.

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. The front wheel can lock up.

– with BMW Motorrad ABS OE
Locking up of the front wheel is prevented by the BMW Motorrad ABS.◁

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, soiled brakes

Moisture and dirt on the brake disks and the brake pads result in a decrease in the braking action.
Delayed or poorer braking action must be expected in the following situations:

– When driving in the rain and through puddles.
– After washing the motorcycle.
– When driving on roads spread with salt.
– After working on the brakes due to oil or grease residues.
– When driving on soiled roads or offroad.

Poor braking action due to moisture and dirt.
Brake until brakes are dry or clean; clean if necessary.
Brake early until the full braking action is available again.◀

Parking your motorcycle

Side stand

• Switch off engine.

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.◀

• Fold out side stand and park motorcycle.

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.◀

• If the slope of the road permits, turn the handlebars to the left.
• On a grade, the motorcycle should always face uphill; select 1st gear.

Center stand

– with center stand OE

• Switch off engine.

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.◀

⚠ 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.◀

- Fold out center stand and jack up motorcycle.

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 road. This results in a danger of falling.
Do not overfill the fuel tank.◀

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

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

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

▷ The available fuel tank volume can only be optimally used with the vehicle standing on the side stand.◀

- Open protective cap.

- Unlock cap of fuel tank with ignition key and fold up.

- Refuel with quality listed below at most until lower edge of filler neck is reached.

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.◀

Recommended fuel quality
– Regular unleaded – 87 AKI (91 ROZ/RON) – 87 AKI

Usable fuel quantity
– Approx. 4.2 gal (Approx. 16 l)

Reserve fuel quantity
– Approx. 1.1 gal (Approx. 4 l)

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

Securing motorcycle for transport

- Protect all component surfaces against which straps are routed against scratching. For example, use adhesive tape or soft cloths.

The motorcycle can tip away to the side and fall over.

Secure the motorcycle against tipping away to the side.◀

- Push motorcycle onto transport surface, and do not place on side stand or center stand.

Components can be damaged.
Do not pinch components, e.g. brake lines or wiring harnesses.◀

- Secure straps at front on both sides on lower fork bridge and tension.◁

- Secure straps at rear on both sides on rear frame and tension.
- Tension all straps evenly; the motorcycle should be pulled down against its springs with the suspension compressed as much as possible.

Technology in detail

Brake system with BMW Motorrad ABS

– with BMW Motorrad ABS OE

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 transferable 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 transferable 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 transferable 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 MotorradABS 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.

Lifting off rear wheel

However, during extremely heavy and rapid decelerations it is possible that the BMW Motorrad ABS cannot prevent the rear wheel from lifting off the ground. In these cases, the motorcycle can also flip end over end.


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 ABS?

The BMW Motorrad 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 ABS, unusual driving conditions can also lead to a fault message.

Unusual driving conditions:

- Driving on the rear wheel (wheely) for a longer period.
- 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.
- Locked-up rear wheel for a longer period of time, 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 ABS permits must not be used as an excuse for careless riding. ABS is primarily a means of ensuring a safety margin in genuine emergencies.
Take care when cornering. When you apply the brakes on a corner, the motorcycle's weight and momentum take over and even BMW Motorrad ABS is unable to counteract their effects.

TPC Tire Pressure Control

- with Tire Pressure Control (TPC/RDC) OE

Function

A sensor is located in each tire, which measures the air temperature and the inflation 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. 18.5 mph (30 km/h) is reached. Before initial reception of the tire inflation 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/RDC sensors can be driven. If a TPC/RDC control unit is installed without the wheels being equipped with sensors, an error message is output.

Temperature compensation

The tire inflation pressure is temperature dependent, i.e. it increases or decreases together with the tire temperature. The tire temperature is dependent on the ambient temperature and on the driving style and duration.

The tire inflation pressures are shown temperature-compensated in the multifunction display; they refer to a tire temperature of 68 °F (20 °C). No temperature compensation takes place in the inflation pressure testers at filling stations, i.e. the measured tire inflation pressure is dependent on the tire temperature. As a result, the values displayed there do not match the values shown in the multifunction display in most cases.

Tire inflation pressure ranges

The TPC/RDC control unit distinguishes between three inflation pressure ranges matched to the motorcycle:

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

Adjusting inflation pressure

Compare the TPC/RDC value in the multifunction display with the value on the back cover of the Rider's Manual. The difference between the two values must be compensated with the air pressure tester at the filling station.

Example: According to the Rider's Manual, the tire inflation pressure is to be 36 psi (2.5 bar), however 33 psi (2.3 bar) is shown in the multifunction display. The tester at the filling station indicates 34.8 psi (2.4 bar). This value must be increased by 3 psi (0.2 bar) to 37.8 psi (2.6 bar) in order to produce the correct tire inflation pressure.

Accessories

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.
Observe the information on the importance of tire sizes for chassis control systems (96).

⚠ 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 of your country.

Onboard sockets

Information on using onboard sockets:

automatic switch-off
Onboard sockets are switched off automatically under the following conditions:
– In case of insufficient battery voltage to maintain the ability to start the motorcycle
– If the maximum loadability specified in the technical data is exceeded
– During starting

Operating electrical accessories
Additional devices connected to onboard sockets can only be put into operation when the ignition is switched on. The accessory remains operational if the ignition is subsequently switched off. Onboard sockets are switched off approx. 15 minutes after switch-

ing off the ignition to reduce the strain on the onboard electrical system.

Cable routing

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

– Do not impede the rider
– Do not restrict the steering angle and the driving characteristics
– Cannot be trapped

Luggage

Lashing down luggage

- Route luggage belts between motorcycle and along anti-slip locks **1**.

- Route luggage belt **2** as shown using example of a luggage roll.
- Check piece of luggage for secure hold.

Case

– with case OE

Opening case

- Turn key **1** in case lock perpendicular to direction of travel.
- Hold down yellow locking device **2** and fold out carrying handle **3**.

- Press yellow button **4** downward while opening case lid.

Closing case

- Turn key in case lock perpendicular to direction of travel.
- Close case lid.

» The lid clicks audibly into place.

If the carrying handle is folded down when the slot of the case lock is oriented in the direction of travel, the lock tab can be damaged.
Before folding down the carrying handle, make sure that the slot of the case lock is perpendicular to the direction of travel.◀

- Fold carrying handle **3** down.
- Turn key in case lock in the direction of travel and remove.

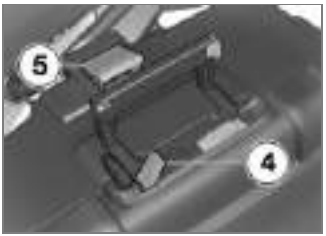
Adjusting case volume

- Open and empty case.

- Engage pivot lever **1** in upper end position to obtain smaller volume.
- Engage pivot lever **1** in lower end position to set larger volume.
- Close case.

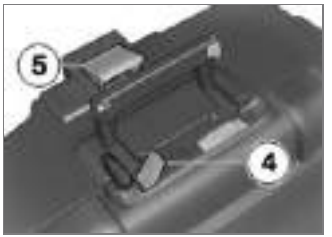
Removing case

- Turn key **1** in case lock perpendicular to direction of travel.
- Hold down yellow locking device **2** and fold out carrying handle **3**.



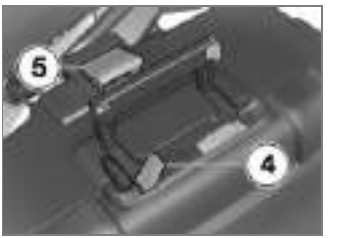
- Pull up red release lever **4**.
» Locking flap **5** pops up.
- Fold locking flap all the way open.
- Remove case from mount by its handle.

Mounting case



- Fold up locking flap **5** completely by pulling red release lever **4** upward if necessary.◁

- Insert case in case carrier **6**, then swing as far as possible onto mount **7**.



- Press locking flap **5** downward as far as possible and hold in place.
- Press red release lever **4** downward.

» The locking flap **5** clicks into place.

- Fold carrying handle down.
- Turn key in direction of travel and remove.

Topcase

– with Topcase[OA]

Opening Topcase

- Turn key **1** in Topcase lock into vertical position.

- Hold down yellow locking device **2** and fold out carrying handle **3**.

- Press yellow button **4** toward front while pressing Topcase lid upward.

Closing Topcase

- Close Topcase lid with firm pressure.

⚠ If the carrying handle is folded down when the slot of the Topcase lock is horizontal, the lock tab can be damaged. Before folding down the carrying handle, make sure that the slot of the Topcase lock is vertical.◀

- Fold carrying handle **3** down.
» Carrying handle audibly engages.
- Turn key in Topcase lock into horizontal position and remove.

Adjusting Topcase volume

- Open and empty Topcase.

- Engage pivot lever **1** in front end position to set larger volume.
- Engage pivot lever **1** in rear end position to set smaller volume.
- Close Topcase.

Removing Topcase

- Turn key **1** in Topcase lock into vertical position.
- Hold down yellow locking device **2** and fold down carrying handle **3**.

- Pull red lever **4** toward rear.

» Locking flap **5** pops up.

- Fold locking flap **5** all the way open.
- Remove Topcase from mounting by its handle.

Mounting Topcase

- Fold up locking flap **5** completely by pulling red release lever **4** toward rear if necessary.◁

- Hook Topcase into front holders **6** of Topcase retaining plate.
- Press Topcase onto Topcase retaining plate at rear.

- Fold locking flap **5** closed as far as possible and hold in place.
- Press red release lever **4** toward front.

» Locking flap clicks into place.

- Fold carrying handle down.
- Turn key into horizontal position and remove.

Maintenance

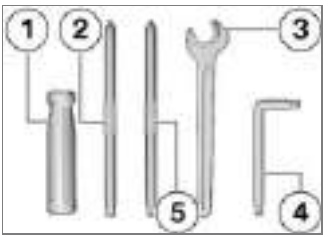
General instructions

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, which you can obtain from your authorized BMW Motorrad retailer.

Special tools and thorough specialized knowledge 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 tool kit

Standard tool kit

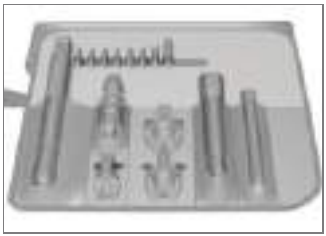


1 Screwdriver handle
2 Reversible screwdriver insert
with Phillips and straight blade
– Replacing front and rear turn indicator bulbs (➠ 106).
– Replacing license-plate bulb (➠ 107).
– Removing battery (➠ 113).

3 Open-ended wrench
Wrench size: 17 mm
– Adjust mirror arm (➠ 49).
4 Torx wrench T40
– Adjusting headlight range (➠ 52).
5 Reversible screwdriver insert
with Phillips and Torx T25 blade
– Removing center fairing panel (➠ 109).

Service tool kit

– with service toolkit OA



For expanded service work (e.g. removing and installing wheels), BMW Motorrad has put together a service tool kit matched to your motorcycle. You can purchase this tool kit from your authorized BMW Motorrad retailer.

Engine oil

Checking engine oil level

The oil level varies with the temperature of the oil. The higher the temperature, the higher the level of oil in the sump. Checking the oil level with the engine cold or after a short trip leads to misinterpretations and therefore to incorrect oil fill quantities.

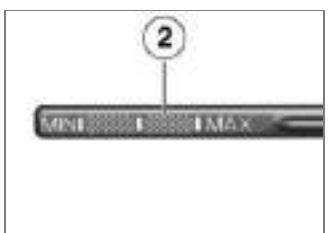
To ensure that the display of the engine oil level is correct, only check the oil level after a longer trip.◀

- Wipe area around oil filler location clean.
- Allow engine to idle until fan starts, then let it continue running for an additional minute.
- Switch off engine.
- Make sure ground is level and firm and hold motorcycle at operating temperature vertically.

– with center stand OE

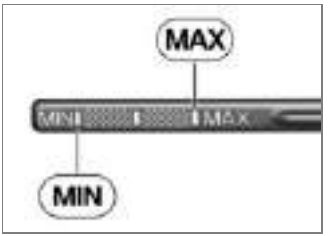
- Make sure ground is level and firm and place motorcycle at operating temperature on its center stand.◁

- Remove oil dipstick **1**.



- Wipe off the graduated section **2** with a dry cloth
- Position oil dipstick on oil filler opening, but do not screw in.

- Remove oil dipstick and read oil level.



Specified level of engine oil
– between MIN and MAX marking

If oil level is below MIN mark:
- Topping up engine oil (88).

If oil level is above MAX mark:
- Have oil level corrected by a specialized workshop, preferably an authorized BMW Motorrad retailer.
- Install oil dipstick.

Topping up engine oil

- Make sure ground is level and firm and park motorcycle.
- Wipe area around fill location clean.

- Remove oil dipstick **1**.

Both too little and too much engine oil can lead to engine damage.
Always make sure that the oil level is correct.◀

- Add engine oil up to specified level.
- Checking engine oil level (87).
- Install oil dipstick.

Brake system

Checking brake operation

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

If no clear pressure points are perceptible:

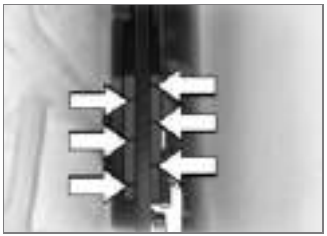
Incorrect working practices endanger the reliability of the brakes.
Have all work on the brake system carried out by specialists.◀

- Have the brakes checked by a certified workshop, preferably an authorized BMW Motorrad retailer.

Checking front brake pad 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 **1**.



Front brake-pad wear limit

– min 0.04 in (min 1.0 mm) (Only friction material without carrier plate. Wear markings (grooves) must be clearly visible.)

If the wear indicating marks are no longer clearly visible:

⚠ 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.◀

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

Checking brake pad thickness at rear

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

- Check the brake pad thickness with visual inspection. Direc-

tion of view: from rear at brake caliper **1**.

Rear brake-pad wear limit
– min 0.04 in (min 1.0 mm) (Only friction material without carrier plate. Wear indicators must be clearly visible.)

If the wear indicating mark is no longer visible:

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.◀

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

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 hold motorcycle vertically.

– with center stand OE

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

- Move handlebars into straight-ahead position.

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

The brake fluid level in the brake-fluid reservoir drops due to brake pad wear.◀◁

Front brake fluid level (visual check)

– Brake fluid (DOT4)

– The brake fluid level must not fall below the MIN mark.

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 hold motorcycle vertically.

– with center stand OE

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

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

The brake fluid level in the brake-fluid reservoir drops due to brake pad wear.◀

Rear brake fluid level (visual check)
– Brake fluid (DOT4)
– The brake fluid level must not fall below the MIN mark.

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.

Coolant

Checking coolant level

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

- Read off coolant level on expansion tank **1**. Viewing direction: from front through windshield and right-hand side panel.

Coolant, specified level
– Radiator antifreeze
– between MIN and MAX marks on the expansion tank

If coolant level drops below permissible level:

- Add coolant.

Topping up coolant

- Open cap **1** of expansion tank.
- Add coolant up to specified level using a suitable funnel.
- Close cap of expansion tank.

Clutch

Checking clutch operation

- Pull the clutch lever.

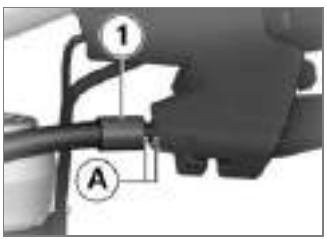
» Pressure point must be clearly perceptible.

If no clear pressure point can be felt:

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

Checking clutch play

- Turn handlebars to left.



- Pull clutch cable **1** as far away from clutch lever as possible.
- Measure clutch play **A** between handlebar fitting and clutch cable.

Clutch play
– 0.12 in (3 mm) (Turn handlebars to left, between handlebar fitting and clutch cable)

If clutch play is outside tolerance:

- Adjusting clutch play (93).

Adjusting clutch play

- Loosen the nut **3**.
- To increase clutch play: turn nut **2** upward.
- To decrease clutch play: turn nut **2** downward.

- Checking clutch play (93).
- Repeat work steps until clutch play is correctly adjusted.
- Tighten nut **3**.

Rims and Tires

Checking rims

- 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.

Checking 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.◀

When the minimum tread depth is reached:

- Replace tires concerned.

Chain

Lubricating chain

Dirt, dust and insufficient lubrication will considerably shorten the service life of the drive chain.
Clean and lubricate the drive chain regularly.◀

- Lubricate drive chain at least every 620 mls (1000 km). After driving though water or dust and dirt, carry out lubricate earlier accordingly.
- Switch off ignition and engage Neutral.
- Clean drive chain with suitable cleaning agent, dry and apply chain lubricant.
- Wipe off excess lubricant.

Checking chain sag

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

- Turn the rear wheel until the position with the lowest chain sag is reached.

- Press chain upward and downward using a screwdriver and measure difference **A**.

Chain sag
– 1.2...1.6 in (30...40 mm) (Motorcycle unloaded on side stand)
– with lowering OE

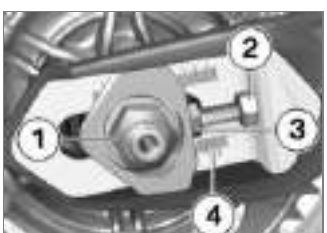
Chain sag
– 0.8...1.2 in (20...30 mm) (Motorcycle unloaded on side stand)◁

If the measured value is outside the permissible tolerance:

- Adjust chain sag (➠ 95).

Adjusting chain sag

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



- Loosen quick-release axle nut **1**.
- Loosen lock nuts **2** on left and right.
- Adjust chain sag with adjusting screws **3** on left and right.
- Checking chain sag (➠ 94).
- Make sure that the same scale value **4** is set on the left and right.
- Tighten locknuts **2** on left and right with appropriate torque.

Locknut of drive-chain tensioning screw
– 14 lb/ft (19 Nm)

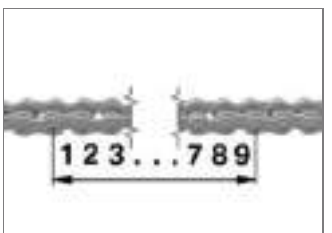
- Tighten quick-release axle nut **1** to appropriate torque.

Rear-wheel quick-release axle in swinging arm
– 74 lb/ft (100 Nm)

Checking chain wear

- Make sure ground is level and firm and park motorcycle.
- Engage 1st gear.

- Rotate rear wheel toward front of vehicle until the chain is tensioned.
- Determine chain length below the rear wheel swing arm with 9 rivets.



Permissible chain length
– max 5.7 in (max 144.30 mm) (Measured over 9 rivets, chain tensioned)

If the chain has reached the maximum approved length:

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

Wheels

Tire recommendation

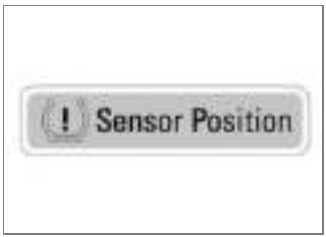
For every size of tire, BMW Motorrad has tested certain makes and approved those it has found to be roadworthy.
If you use wheels and tires that have not been approved, BMW Motorrad cannot assess their suitability or provide any guarantee as to their road safety.
Use only wheels and tires that BMW Motorrad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

Affect of wheel size on ABS

The wheel sizes play a major role with the ABS system. Especially the diameter and width of the wheels are stored in the control unit as the basis for all necessary calculations. A change in these sizes due to conversion to others than the wheels installed as standard equipment can seriously affect the control comfort of these systems.
The sensor wheels required for wheel speed detection must also match the control systems installed and may not be replaced.
If you want to equip your motorcycle with different wheels, please speak to a specialized workshop, and preferably a BMW Motorrad retailer. In some cases the data stored in the control units can be adapted to the new wheel sizes.

TPC/RDC sticker

– with Tire Pressure Control (TPC/RDC) OE



The TPC/RDC sensors can be damaged in case of improper tire mounting.
Inform the authorized BMW Motorrad retailer or the specialized workshop on the fact that the wheel is equipped with a TPC/RDC sensor.◀

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

Removing front wheel

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

– with BMW Motorrad ABS OE

- Remove screw **1** and take speed sensor out of hole.◁
- Place motorcycle on a suitable auxiliary stand.

– with center stand OE

- Make sure ground is level and firm and place motorcycle on center stand.◁
- Raise front of motorcycle until the front wheel can turn freely. To lift motorcycle, BMW Motorrad recommends using BMW Motorrad front wheel stand.
- Mounting front wheel stand (102).

- Remove axle clamping screw **2**.
- Remove axle **3** while supporting wheel.

- Do not remove grease on axle.

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.◀

- Roll front wheel forward to remove.

- Remove spacing bushing **4** on left side from wheel hub.

Installing front 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.◀

- Mount spacing bushing **4** on left side on wheel hub.

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.◀

- Roll front wheel into front suspension while guiding brake disk between brake pads.

- Lift front wheel and install axle **3** with appropriate torque.

	Front quick-release axle in axle mount
–	22 lb/ft (30 Nm)

- Remove front wheel stand.

– without center stand OE
- Remove auxiliary stand.◁

- Firmly compress the spring forks several times.

- Tighten axle clamping screw **2** with appropriate torque.

	Pinch bolt of quick-release axle
– 14 lb/ft (19 Nm)	

– with BMW Motorrad ABS OE

- Insert ABS sensor into hole and install screw **1**.

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

- Make sure that ABS sensor cable is routed as shown.◁

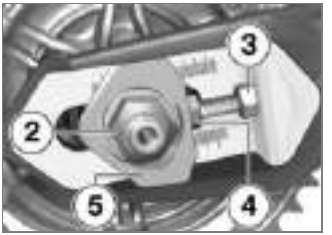
Removing rear wheel

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

- Remove screw **1** and take speed sensor out of hole.
- Make sure ground is level and firm and place motorcycle on a suitable auxiliary stand.

– with center stand OE

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



- Remove axle nut **2**.
- Loosen lock nuts **3** on left and right by turning counterclockwise.
- Loosen adjusting screws **4** on left and right by turning clockwise.
- Remove adjusting plate **5** and slide axle as far as possible toward inside.

- Remove quick-release axle **6** and take out adjusting plate **7**.

- Roll rear wheel as far forward as possible and remove chain **8** from chain sprocket.
- Roll rear wheel toward rear out of swinging arm.

▷ The chain sprocket and the spacer sleeves on the left and right are loosely inserted in the wheel. When removing, make sure that these parts are not damaged or lost.◀

Installing rear wheel

⚠ Malfunctions may occur during control interventions by ABS if a wheel other than the standard wheel is installed. Please see the information on the effect of wheel sizes on the ABS system at the beginning of this chapter.◀

⚠ 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 into swing arm while guiding brake disk between brake pads.

- Roll rear wheel as far forward as possible and lay chain **8** on chain sprocket.

- Mount left-hand adjusting plate **7** in swing arm and install quick-release axle **6** in brake caliper and rear wheel.
- Make sure that axle fits in cutout of adjusting plate.

- Insert right-hand adjusting plate **5**.

- Install axle nut **2** but do not yet tighten it down.

– without center stand OE
- Remove auxiliary stand.◁

- Insert speed sensor in hole and install screw **1**.

- Adjust chain sag (➡ 95).

Front wheel stand

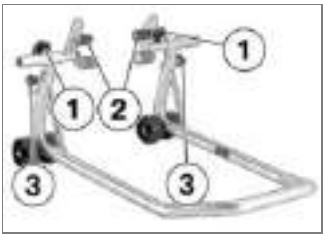
Mounting front wheel stand

⚠ The BMW Motorrad front wheel stand is not designed to support the motorcycle without the assistance of an auxiliary stand. A motorcycle standing on the front wheel stand and the rear wheel alone can fall over. Place the motorcycle on an auxiliary stand before lifting the front wheel with the BMW Motorrad front-wheel stand.◀

- Place motorcycle on a suitable auxiliary stand.

– with center stand OE

- Place motorcycle onto center stand.◁



- Use basic stand (83 30 0 402 241) with front wheel mount (83 30 0 402 242).
- Loosen adjusting screws **1**.
- Push two mounts **2** far enough apart that front suspension fits between them. Adjust support pin to match front suspension.
- 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.

- Align two mounts **2** so that front suspension rests securely on them.
- Tighten adjusting screws **1**.

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

– with center stand OE

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

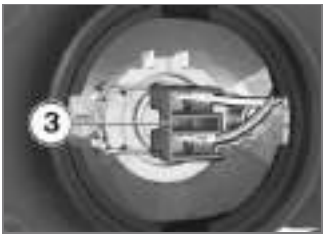
- Ensure motorcycle is standing securely.◁

Lamps

Replacing low-beam and high-beam bulb

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

- Remove cover **1** for high-beam headlight or cover **2** for low-beam headlight.



- Open connector **3**.

- Remove spring strap **4** from detents and fold to side.
- Take out bulb **5**.

- Replace defective bulb.

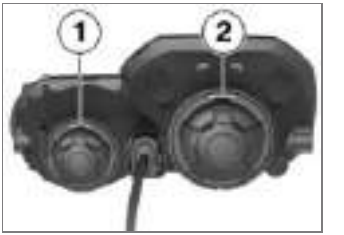
Bulb for high-beam headlight
– H7 / 12 V / 55 W

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

- To avoid contamination on the bulb's glass surface, never touch or hold the bulb anywhere other than on its metal socket base.

- Insert bulb while ensuring correct alignment at Position **6**.
- Close the spring clamp **4** and lock it in place.

- Close connector **3**.



- Install cover **1** or cover **2**.

Replacing parking light bulb

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

- Remove cover **2**.

- Pull bulb out of bulb socket.
- Replace defective bulb.

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

- To prevent contaminants from being deposited on the new bulb's glass surface, always use a clean, dry cloth to hold it.

- Press bulb into socket.

- Pull parking-light bulb **3** out of headlight housing.

- Insert parking-light bulb **3** into headlight housing.

- Install cover **2**.

Replacing brake and tail light bulb

- The diode taillight can only be completely replaced. Please contact a specialized workshop for this purpose, preferably an authorized BMW Motorrad retailer.

Replacing front and rear turn indicator bulbs

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

- Remove screw **1**.

- Pull glass on screw connection side out of mirror housing.

- Remove bulb **2** from light housing by turning it counterclockwise.
- Replace defective bulb.

Bulbs for flashing turn indicators, front
– R10W / 12 V / 10 W
– with white turn indicators OE
– RY10W / 12 V / 10 W◁
– with LED turn signals OA
– LED / 12 V◁

Bulbs for flashing turn indicators, rear
– R10W / 12 V / 10 W
– with white turn indicators OE
– RY10W / 12 V / 10 W◁
– with LED turn signals OA
– LED / 12 V◁

- To prevent contaminants from being deposited on the new bulb's glass surface, always use a clean, dry cloth to hold it.

- Install bulb **2** by screwing clockwise into light housing.

- Insert inside end of lens into light housing and close.

- Install screw **1**.

Replacing license-plate bulb

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

- Remove screw **1** of mudguard cover and take off cover.

- Pull bulb socket **2** out of bulb holder.

- Pull bulb out of socket.
- Replace defective bulb.

Bulb for license-plate light

– W5W / 12 V / 5 W

- To prevent contaminants from being deposited on the new bulb's glass surface, always use a clean, dry cloth to hold it.

- Mount bulb in socket.

- Insert bulb socket **2** into bulb holder.

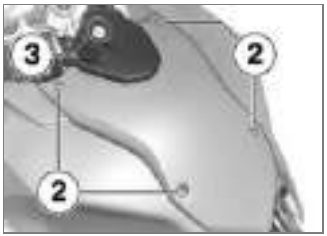
- Position mudguard cover and install screw **1**.

Fairings

Removing center fairing panel

- Remove seat (52).

- Remove screws **1** on left and right.

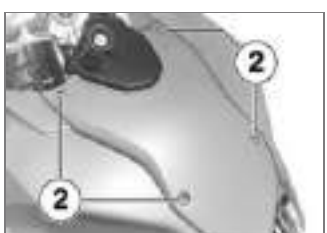


- Remove four screws **2**.
- Disconnect connector at onboard socket **3**.
- Remove center fairing panel.

Installing center fairing panel

- Connect connector to onboard socket.

- Lay on center fairing panel. Make sure that three tabs **4** on left and right grip into side panels.



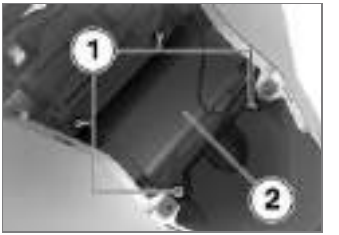
- Install four screws **2**.

- Install screws **1** on left and right.
- Install seat (➡ 53).

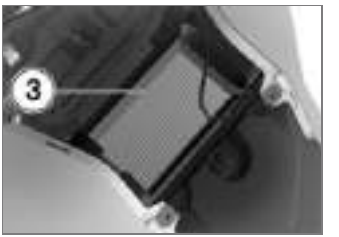
Air filter

Removing air filter

- Removing center fairing panel (➡ 109).

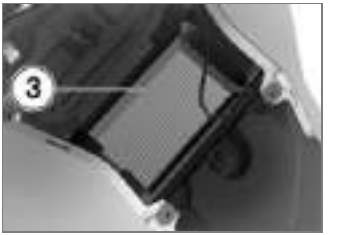


- Remove screws **1**.
- Remove air filter cover **2**.

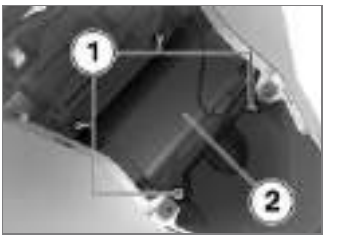


- Take out air filter **3**.

Installing air filter



- Install air filter **3**.



- Lay on air filter cover **2**.
- Install screws **1**.
- Installing center fairing panel (➡ 109).

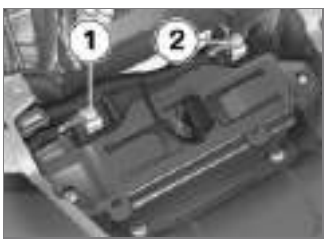
Jump-starting

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.◀

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.◀

- Removing center fairing panel (109).
- When jump-starting the engine, do not disconnect the battery from the onboard electrical system.



- First connect positive terminal of drained battery to positive terminal of charging battery with red jumper cable (positive terminal on this vehicle: Position **2**).
- Connect black jumper cable to negative terminal of charging battery and then to negative terminal of drained battery (negative terminal on this vehicle: Position **1**).

As an alternative to the negative battery terminal, the spring strut bolt can also be used.◀

- Run engine of donor vehicle during jump-starting.
- Start engine of motorcycle with discharged battery in usual way; if engine refuses to start, wait a few minutes before repeating attempt to protect starter and supporting battery.
- Allow both engines to run for several minutes before disconnecting jumper cables.
- Disconnect jump lead from negative terminals first, then disconnect second lead from positive terminals.

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

- Installing center fairing panel (109).

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 driving breaks of more than four weeks, a trickle-charger should be connected 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

- Remove devices connected to onboard power sockets.

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.◀

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.◀

If you switch on the ignition and the multifunction display and indicator lights fail to light up, the battery is completely flat (battery voltage below 9 V). 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.◀

- 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 battery is fully charged, disconnect charger's terminal clips from 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

- Make sure ground is level and firm and park motorcycle.
– with anti-theft alarm OE
- Switch off anti-theft alarm if necessary.◁
- Switch off ignition.
- Removing center fairing panel (109).

An incorrect disconnection sequence increase the risk of short-circuiting.

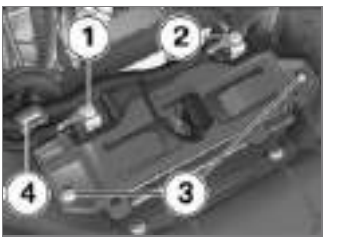
Always observe the proper sequence.◀

- Remove negative cable **1** first.
- Then remove positive cable **2**.
- Remove screws **3** on left and right and take off battery holder.
- Lift battery up and out, using tilting movements if it is difficult to move.

Installing battery

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.◀

- Switch off ignition.
- Insert battery into battery compartment, with positive terminal on right in direction of travel.



- Lay on battery holder while ensuring correct routing of cables to position **4**.
- Install screws **3** on left and right.

An incorrect connection sequence increases the risk of short-circuiting.
Always observe the proper sequence.◀

- Install positive cable **2**.
- Install negative cable **1**.
- Installing center fairing panel (109).
- Setting clock (39).

Care

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 brake disks and pads are dry.◀

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

The high water pressure of high-pressure cleaners (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

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.◀

Fairings
Clean body panels with water and BMW plastic care emulsion.

Windscreens and headlight lenses made of plastic
Clean off dirt and insects with a soft sponge and plenty of water.

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

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 Re-

mover. 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 the motorcycle.
- Removing battery (113).
- Spray the brake and clutch lever, the side stand pivot and, if necessary, the main stand pivot 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, raising it to remove weight from both wheels.

Returning motorcycle to use

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

Technical data

Troubleshooting chart

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

Possible cause	Remedy
Emergency-off switch (kill switch)	Emergency-off switch (kill switch) in normal operating position.
Side stand extended and gear engaged	Retract side stand.
Gear engaged and clutch not operated.	Place transmission in neutral or disengage clutch.
No fuel in tank	Refueling (→ 65).
Battery drained	Charging connected battery (→ 112).

Threaded fasteners

Front wheel	Value	Valid
Brake caliper on spring forks		
M10 x 40	28 lb/ft (38 Nm)	
Pinch bolt of quick-release axle		
M8 x 25	14 lb/ft (19 Nm)	
Front quick-release axle in axle mount		
M16 x 1.5	22 lb/ft (30 Nm)	

Rear wheel	Value	Valid
Locknut of drive-chain tensioning screw		
M8	14 lb/ft (19 Nm)	
Rear-wheel quick-release axle in swinging arm		
M16 x 1.5	74 lb/ft (100 Nm)	

Mirror arm	Value	Valid
Locknut (mirror) on clamping piece		
M14 x 1	15 lb/ft (20 Nm)	
Clamping piece (mirror) on clamping block		
M10	22 lb/ft (30 Nm)	

Engine

Engine design	Two-cylinder, four-stroke engine, DOHC control with toothed chain drive, 4 valves actuated by trailing valve levers, compensating connecting rods, liquid cooling for cylinders and cylinder head. Integrated water pump, 6-speed transmission and dry-sump lubrication
Displacement	798 cc (798 cm^3)
Cylinder bore	3.2 in (82 mm)
Piston stroke	3 in (75.6 mm)
Compression ratio	12:1
Rated output	71 hp (52 kW), at engine speed: 7000 min^{-1}
Torque	55 lb/ft (75 Nm), at engine speed: 4500 min^{-1}
Maximum engine speed	max 9000 min^{-1}
Idle speed	1250^{+50} min^{-1}

Fuel

Recommended fuel quality	Regular unleaded 87 AKI (91 ROZ/RON) 87 AKI
Usable fuel quantity	Approx. 4.2 gal (Approx. 16 l)
Reserve fuel quantity	Approx. 1.1 gal (Approx. 4 l)

BMW recommends the use of BP fuel 

Engine oil

Engine oil, capacity	3.1 quarts (2.9 l), with filter change
Viscosity classes recommended by BMW Motorrad	
SAE 10W-40	Engine oil for motorcycles with wet clutch, API SG/SH/JASO MA ≥-4 °F (≥-20 °C)
SAE 15W-40	Engine oil for motorcycles with wet clutch, API SG/SH/JASO MA ≥14 °F (≥-10 °C)

BMW recommends 

Oil additives	BMW Motorrad does not recommend using oil additives, as these can worsen the operation of the clutch. Ask your BMW Motorrad retailer for engine oils suitable for your motorcycle.

BMW recommends Castrol

Clutch

Clutch design	Multi-disk oil-bath clutch

Transmission

Transmission design	Claw-shifted 6-speed transmission integrated in engine housing
Transmission gear ratios	1.943 (35/68 teeth), Primary gear ratio 1:2.462 (13/32 teeth), 1st gear 1:1.750 (16/28 teeth), 2nd gear 1:1.381 (21/29 teeth), 3rd gear 1:1.174 (23/27 teeth), 4th gear 1:1.042 (24/25 teeth), 5th gear 1:0.960 (25/24 teeth), 6th gear

Rear-wheel drive

Type of final drive	Chain drive
Type of rear suspension	Two-arm cast aluminum swinging arm
Number of teeth of rear-wheel drive (Pinion/ sprocket)	17/41

Running gear

Front wheel	
Type of front suspension	Telescopic forks
Spring travel, front	7.1 in (180 mm), On wheel
Rear wheel	
Type of rear suspension	Two-arm cast aluminum swinging arm
Type of rear suspension	Directly articulated central spring strut with steplessly adjustable rebound-stage damping
Spring travel at rear wheel	6.7 in (170 mm), On wheel
– with lowering[OE]	5.3 in (135 mm), On wheel

Brakes

Front wheel	
Type of front brake	Hydraulic disk brake with 2-piston floating caliper and fixed brake disk
Brake-pad material, front	Sintered metal
Rear wheel	
Type of rear brake	Hydraulic disk brake with 1-piston floating caliper and fixed brake disk
Brake-pad material, rear	Organic

Wheels and tires

Recommended tire combinations	You can obtain an overview of the current tire approvals from your authorized BMW Motorrad retailer or on the Internet at www.bmw-motorrad.com.
Front wheel	
Front wheel design	Cast aluminum, MT H2
Front-wheel rim size	2.50" x 19"
Front tire designation	110/80 R 19

Rear wheel	
Rear wheel design	Cast aluminum, MT H2
Rear-wheel rim size	3.50" x 17"
Rear tire designation	140/80 R 17
Tire inflation pressure	
Tire pressure, front	31.9 psi (2.2 bar), One-up, at tire temperature: 68 °F (20 °C) 34.8 psi (2.4 bar), Driver with passenger and/or load, at tire temperature: 68 °F (20 °C)
Tire pressure, rear	34.8 psi (2.4 bar), One-up, at tire temperature: 68 °F (20 °C) 40.6 psi (2.8 bar), Driver with passenger and/or load, at tire temperature: 68 °F (20 °C)

Electrical system

Electrical rating of onboard sockets	5 A
Fuses	All electrical circuits are electronically protected. 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 design	AGM (Absorptive Glass Mat) battery.
Battery voltage	12 V
Battery capacity	12 Ah
Spark plugs	
Spark plugs, manufacturer and designation	NGK DCPR 8 E
Electrode gap of spark plug	0.03...0.04 in (0.8...0.9 mm), New
Bulbs	
Bulb for high-beam headlight	H7 / 12 V / 55 W
Bulbs for low-beam headlight	H7 / 12 V / 55 W
Bulb for parking light	W5W / 12 V / 5 W
Bulb for taillight/brake light	LED / 12 V
Maximum number of defective LEDs in taillight	6, Brake / taillight
Bulb for license-plate light	W5W / 12 V / 5 W

Bulbs for flashing turn indicators, front	R10W / 12 V / 10 W
– with white turn indicators OE	RY10W / 12 V / 10 W
– with LED turn signals OA	LED / 12 V
Bulbs for flashing turn indicators, rear	R10W / 12 V / 10 W
– with white turn indicators OE	RY10W / 12 V / 10 W
– with LED turn signals OA	LED / 12 V

Frame

Frame design	Lattice-tube frame
Location of type plate	Top front steering head
Location of vehicle identification number	Right steering head

Dimensions

Motorcycle length	89.8 in (2280 mm), Over front wheel to license-plate carrier
Motorcycle height	48.8 in (1240 mm), without driver at unladen weight
Motorcycle width	33.3 in (845 mm), Over handlebars without mirrors
Driver's seat height	32.3 in (820 mm), without driver at unladen weight
– with low dual seat OE – without lowering OE	31.1 in (790 mm), without driver at unladen weight
– with lowering OE	30.1 in (765 mm), without driver at unladen weight
Rider's inside-leg arc, heel to heel	71.3 in (1810 mm)
– with low dual seat OE – without lowering OE	69.3 in (1760 mm), without driver at unladen weight
– with lowering OE	67.3 in (1710 mm), without driver at unladen weight

Weights

Unladen weight	439 lbs (199 kg), DIN unladen weight, ready for road, 90 % load of fuel
Permissible gross weight	961 lbs (436 kg)
– with lowering OE	769 lbs (349 kg)
Maximum payload	522 lbs (237 kg)
– with lowering OE	331 lbs (150 kg)

Riding specifications

Top speed	max 118 mph (max 190 km/h)
– with power reduction OE	max 91 mph (max 147 km/h)

Service

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, LLC.

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.

BMW Motorrad Service

With its worldwide service network, BMW Motorrad can attend to you and your motorcycle in over 100 countries around the globe. BMW Motorrad retailers have the technical information and expertise needed to conduct reliable service and repairs covering every aspect of your BMW. You can find the nearest BMW Motorrad retailer by visiting our Internet site at "www.bmw-motorrad.com".

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.◀

To ensure that your BMW consistently remains in optimal condition BMW Motorrad urges you to observe the recommended service intervals.
Have all maintenance and repair work confirmed in the "Service" chapter in this manual. For generous treatment of claims submitted after the warranty period has expired (goodwill), evidence of regular maintenance is essential.

You can obtain information on the contents of the BMW Services from your BMW Motorrad retailer.

BMW Motorrad Mobility Services

The BMW Motorrad Mobility Services furnish you and your new BMW motorcycle with extra security by offering a wide array of assistance services in the event of a breakdown (Mobile Service, breakdown assistance, vehicle recovery and retrieval, etc.).
Contact your authorized BMW Motorrad retailer for additional information on available mobility-maintenance services.

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 must be carried out between 300 mls and 750 mls (500 km and 1200 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 620 miles (1000 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

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

Confirmation of service

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

Work carried out	Odometer reading	Date

Work carried out	Odometer reading	Date

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.

Printed in Germany.

Important data for refueling

Fuel	
Recommended fuel quality	Regular unleaded 87 AKI (91 ROZ/RON) 87 AKI
Usable fuel quantity	Approx. 4.2 gal (Approx. 16 l)
Reserve fuel quantity	Approx. 1.1 gal (Approx. 4 l)
Tire inflation pressure	
Tire pressure, front	31.9 psi (2.2 bar), One-up, at tire temperature: 68 °F (20 °C) 34.8 psi (2.4 bar), Driver with passenger and/or load, at tire temperature: 68 °F (20 °C)
Tire pressure, rear	34.8 psi (2.4 bar), One-up, at tire temperature: 68 °F (20 °C) 40.6 psi (2.8 bar), Driver with passenger and/or load, at tire temperature: 68 °F (20 °C)

BMW recommends Castrol

Order No.: 01 41 8 525 247
09.2011, 4th Edition