Rider's Manual (US Model)

G 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 vehicle'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.

01 41 8 543 727



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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.

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General instructions

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Overview

Chapter 2 of this Rider's Manual will provide you with an initial overview of your motorcycle. All maintenance and repair work carried out on your motorcycle will be documented in Chapter 11. Proof of the maintenance work performed is a prerequisite for generous treatment of claims. When the time comes to sell your BMW, please remember to hand over this Rider's Manual; it is an important part of the motorcycle.

Abbreviations and symbols

Indicates warnings that must be complied - 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
BMW Motorrad optional extras are already completely installed during motorcycle production.

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

ABS Anti-Lock Brake System.

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 separate operating 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.

Notice concerning current status

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

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General view, left side

1 Battery (under center fairing panel) (➠ 90)
2 Engine oil fill location and oil dipstick (➠ 66)
3 Seat release (in storage compartment) (➠ 38)
4 Tire inflation pressure table (on rear wheel swinging arm)
5 Onboard socket (➠ 58)
6 Coolant level indicator (behind side panel) (➠ 71)

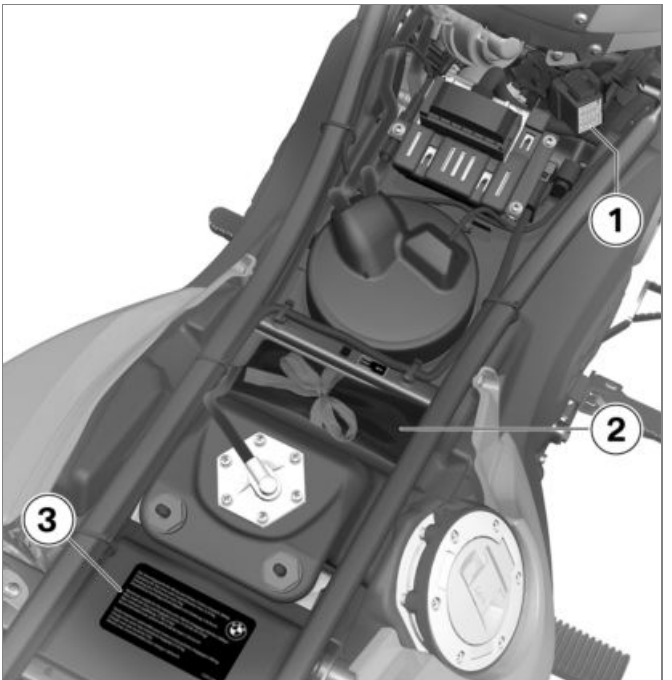

1
2
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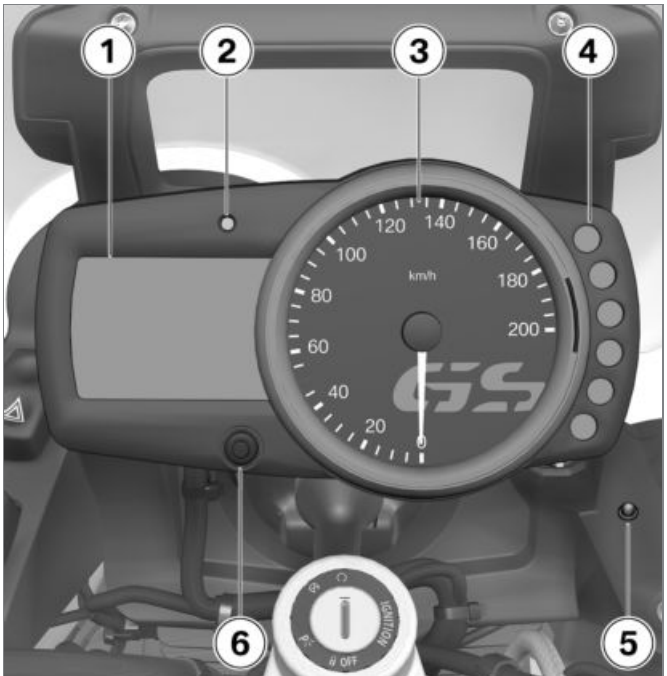
General view, right side

1 Fuel filler opening (➠ 50)
2 Brake-fluid reservoir, front (➠ 69)
3 Type plate (on right frame tube)
Vehicle Identification Number (on right steering-head bearing)
4 Air filter (under fairing side panel) (➠ 87)
5 Adjusting spring preload (➠ 35)
6 Adjusting damping (➠ 36)
7 Brake-fluid reservoir, rear (➠ 70)
8 Chain tension label (on rear wheel swinging arm)

Underneath seat

1 Fuse box (➠ 81)
2 Onboard toolkit (➠ 66)
3 Payload table
Storage tray for Rider's Manual



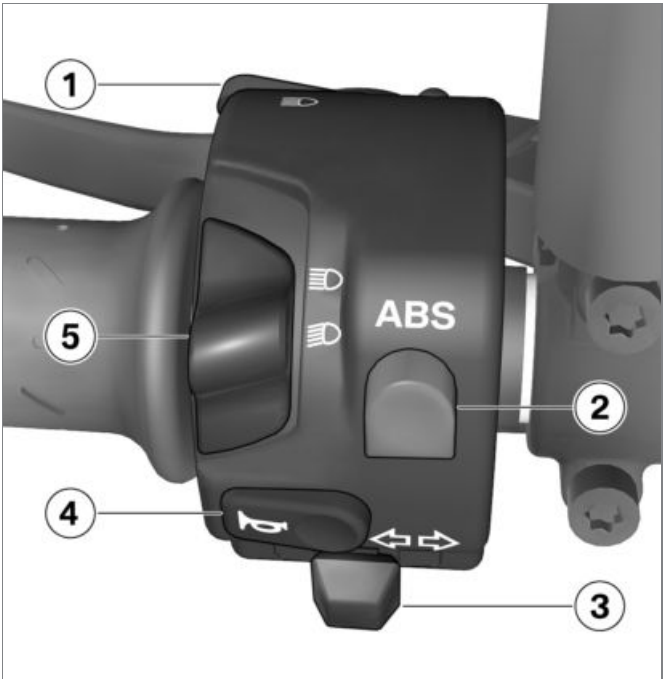


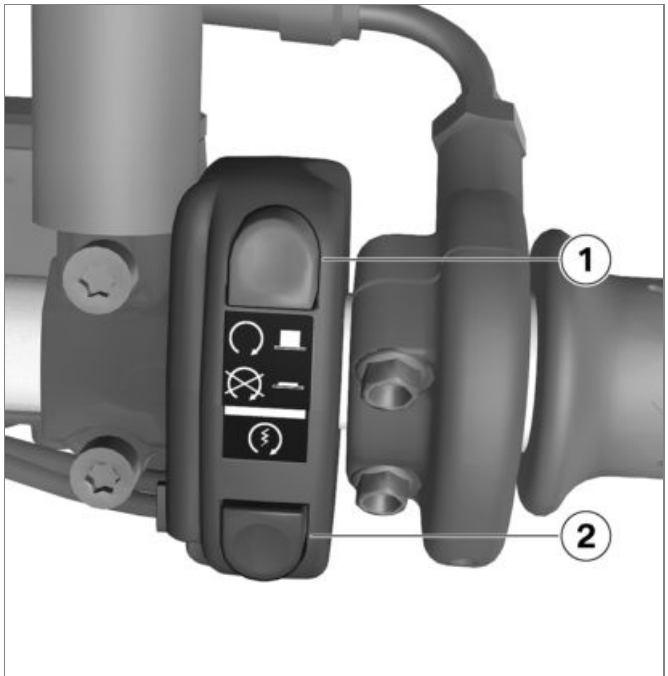
Instrument cluster

1 Multifunction display (➠ 20)
2 Engine speed warning (➠ 48)
3 Speedometer
4 Warning and indicator lamps (➠ 21)
5 Anti-theft alarm system status LED (refer to instruction manual for alarm system)
6 Operating clock (➠ 29)
Operating odometer (➠ 30)

Multifunction switch, left

1 Headlight flasher
2 ABS operation (➠ 33)
3 Turn indicator switch (➠ 31)
4 Horn
5 High-beam headlight (➠ 31)





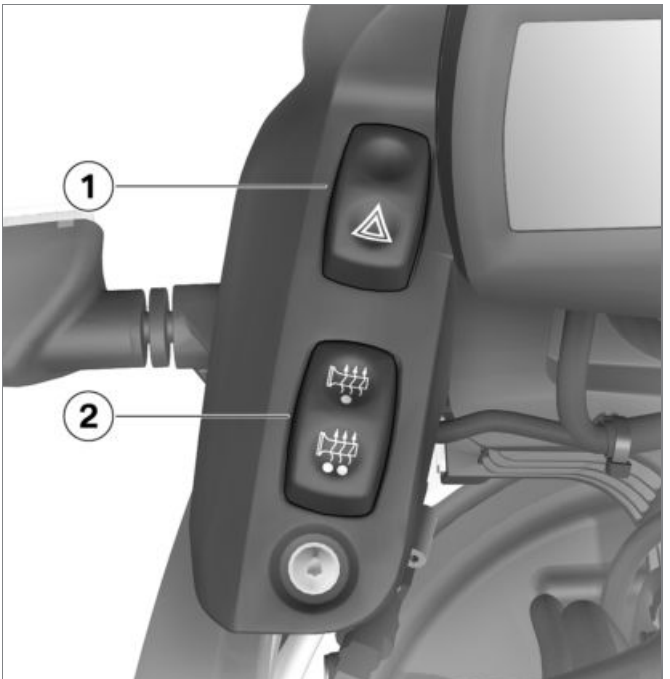
Multifunction switch, right

1 Emergency-off switch (kill switch) (➠ 32)
2 Starter button (➠ 44)

Auxiliary switch

1 Hazard warning flashers (➠ 31)

2 – with heated handlebar grips OE
Heated handlebar grips (➠ 32)

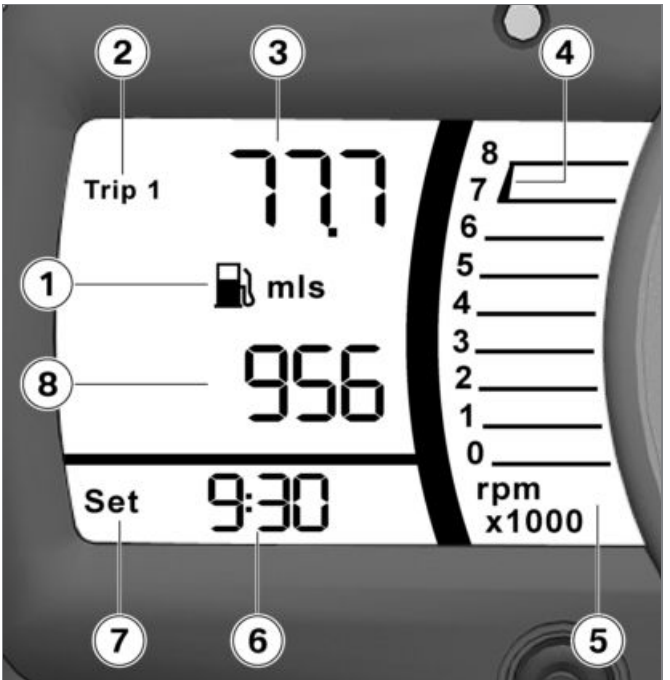


Status indicators

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Multifunction display

1 Symbol for milage covered since fuel reached reserve level (➠ 22)
2 Trip odometer symbold (Trip 1 or Trip 2) (➠ 30)
3 Display sector for trip odometer and milage covered since fuel reached reserve level
4 RPM limit
5 Tachometer
6 Clock
7 Symbol for setting clock (➠ 29)
8 Total distance





Warning and indicator lamps

1 Turn signal indicator lamp
2 Fuel-reserve warning lamp (➠ 24)
3 Neutral indicator lamp
4 ABS warning lamp (➠ 24)
5 Coolant warning lamp (➠ 24)
6 Headlight high beam indicator lamp

Distance covered since the fuel reached the reserve level



Once the fuel level falls to the reserve sector the distance covered since operation in the reserve range started appears in the display. This odometer is reset and no longer appears as soon as the tank is refuled to a level higher than the reserve level.
The trip odometer and the clock setting can still be accessed.

Warning indicators

Display

Warnings are displayed with the corresponding warning lamp.
The following page contains a list of potential warnings.

Overview of warning indicators

Warning and indicator lamps	Warning symbols in the display	Meaning
 Lights up		Fuel down to reserve (➠ 24)
 Lights up		Coolant temperature too high (➠ 24)
 Flashes		ABS self-diagnosis not completed (➠ 24)
 Lights up		ABS deactivated (➠ 25)
 Lights up		ABS error (➠ 25)

Fuel down to reserve

Fuel-reserve warning light lights up.

Fuel shortage can lead to engine misfires. This can result in unexpected engine deactivation (accident hazard) and damage to the catalytic converter.
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 (➠ 50).

Coolant temperature too high

Coolant-temperature warning light lights up.

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

Possible cause:

Coolant level too low.

- Checking coolant level (➠ 71).

If coolant level is too low:

- Topping up coolant (➠ 72).

Possible cause:

Radiator fan defective.
If the radiator fan fails to run with the coolant-temperature warning light switched on:

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

Possible cause:

Cooling is insufficient.

- 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.

ABS self-diagnosis not completed

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



ABS warning light lights up.

Possible cause:

The ABS system has been deactivated by the driver.

- Switch on the ABS function.

ABS error



ABS warning light lights up.

Possible cause:

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

- It remains possible to continue riding. It must be noted that the ABS function is not available. Observe additional information on conditions that can lead to an ABS error (➠ 55).
- Have the malfunction corrected as soon as possible at a specialist service facility, preferably an authorized BMW Motorrad retailer.

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Steering and ignition lock

Keys

Two main keys and one emergency key are provided with the vehicle. The emergency key features a light, compact design, allowing it to be carried in a wallet, etc. This key is intended for use when no main key is immediately available, and is not suitable for continuous use.

The ignition lock, tank lock and seat lock are operated with the same key.

– with Vario case OA
– with Topcase OA

The cases and the Topcase can also be ordered with locks for the same key on request. Please contact a specialist service facility for this purpose, preferably an authorized BMW Motorrad retailer.

Switching on ignition



- Turn key to position **1**.

» Parking light, low-beam headlight and all function circuits are switched on.
» Engine can be started.
» Pre-ride check is performed. (➠ 46)
» ABS self-diagnosis is performed. (➠ 46)

Switching off ignition



- Turn key to position **2**.

» Light switched off.
» Handlebars not locked.
» Key can be removed.

Locking steering lock with parking light

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

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

- Turn handlebars to full left or right lock position.

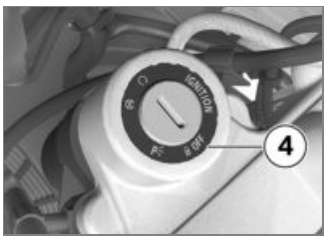


- Turn key to position **3** while moving handlebars slightly.

» Parking light switched on.
» Handlebars locked.
» Key can be removed.

Locking steering lock without parking light

- Locking steering lock with parking light (➠ 28).



- Turn key further to position **4**.

» Parking light switched off.
» Handlebars locked.
» Key can now be removed.

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 button **1** repeatedly until SET **2** is displayed.
- Press and hold button until hours display flashes.
- Press button repeatedly until desired hours are shown.
- Press and hold button until minutes display flashes.
- 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 **1** to select value in display.

The following values can be displayed:

– Tripmeter 1 (Trip 1)
– Tripmeter 2 (Trip 2)
– Kilometers driven after reaching the reserve quantity
– Clock setting (SET)

Resetting trip odometer

• Switch on ignition.
• Select desired trip odometer.



• Press and hold button **1** until trip odometer has been reset.

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.◄

Headlight low beam

The low-beam headlight switches on automatically when the ignition is switched on.

The low-beam headlight is a strain on the battery. Do not leave the ignition switched on longer than absolutely necessary.◄

High-beam headlight



- Slide the switch **1** upward to switch on the high beam.
- Slide the switch **1** downward to deactivate the high beam.

Headlight flasher



- Press button **1**.

» The high-beam headlight is switched on for as long as the button is pressed.

Turn indicators

Operating turn indicator

- Switch on ignition.



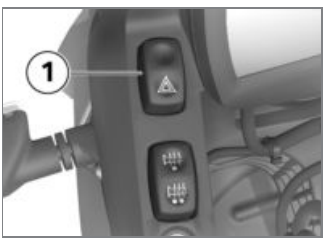
- Press button **1** toward left to switch on left-hand turn indicator.
- Press button **1** toward right to switch on right-hand turn indicator.
- Press button **1** into center position to switch off turn indicators.

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.◀



- Press the bottom of the hazard warning flasher switch **1** to activate the hazard warning flasher.
- Ignition can be switched off.
- Press the top of the hazard warning flasher switch **1** to deactivate the hazard warning flasher.

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.

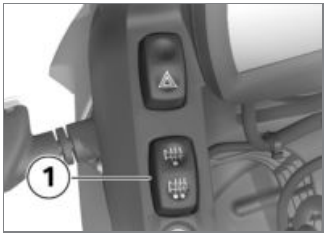


- Switch not activated: standard operating position
- Switch activated: engine switched off

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

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 grip heating place a strain on the battery. Only switch on the grip heating when the engine is running.◀



Press switch at top: 50 % heating output.

- Switch in center position: heating function off.

Press switch at bottom: 100 % heating output.

BMW Motorrad ABS

Switching off ABS function

- Stop motorcycle or switch on ignition with motorcycle stationary.



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

ABS warning light begins to light 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 light changes its display behavior.

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.

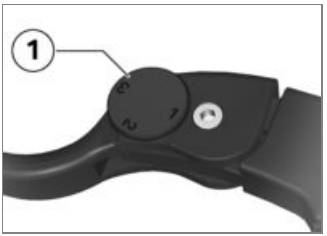
- As an alternative, the ignition can also be switched off and then on again.

If the ABS warning light lights up after switching the ignition off and on and then continued driving over 4 mph (5 km/h), an ABS error 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** into desired position.

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

» Adjustment options:
– from Position 1: smallest distance between handlebar grip and clutch lever
– to Position 3: largest distance between handlebar grip and clutch lever

Mirrors

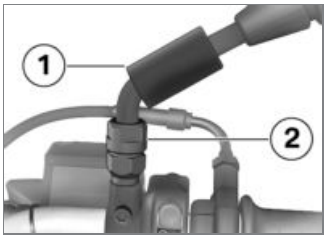
Adjusting mirrors



Adjusting the mirror while driving can result in accidents.
Only adjust the mirrors with the motorcycle stopped.◀

- 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.

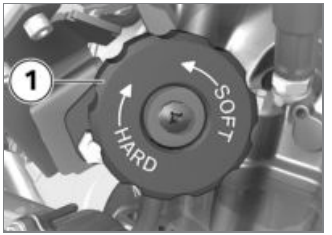
Spring preload

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

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



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

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

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

Basic setting of spring preload, rear
– Turn adjustment wheel completely to left, then back 15 clicks. (Full tank of gas, with rider 187 lbs (85 kg))

Damping

Setting

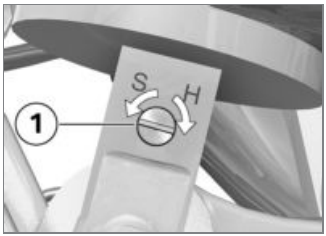
The damping must be adjusted to the spring preload and the road conditions.
An increase in spring preload requires firmer damping, a reduction in spring preload requires softer damping.
The stiffer the damping, the greater the compensating movement of the spring strut is damped when riding on rough road surfaces. When soft damping is set, the spring strut reacts correspondingly faster to rough roads.

Adjusting damping on rear wheel

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



- Adjust damping with the toolkit using the 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.

Rebound stage, basic setting, rear
– Turn lower adjusting screw as far as possible clockwise, then turn back 0.75 turns (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, vertically installed tire valves have a tendency to open on their own.
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) (With tire cold)
Tire pressure, rear
– 36.3 psi (2.5 bar) (Single rider, with cold tire)
– 42.1 psi (2.9 bar) (With passenger and payload, with cold tire)

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

Headlight

Adjusting headlight for RHD/LHD traffic

This motorcycle's headlight features a symmetrical low beam. No special adjustments or precedures are required prior to operating the motorcycle in a country

where traffic uses the opposite side of the road (left-hand drive to right-hand drive or vice versa).

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

Adjusting headlight range

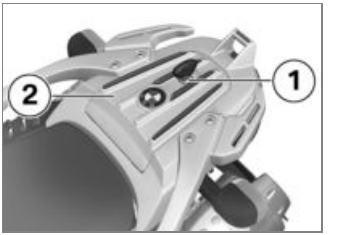


- Loosen screws **1** on left and right.
- Adjust headlight by tilting slightly.
- Tighten screws **1** on left and right.

Seat

Removing seat

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

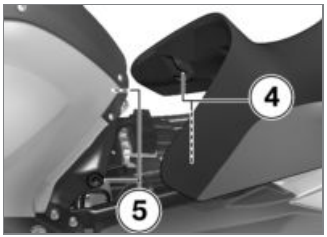


- Turn storage compartment lock **1** to right with motorcycle key.
- Take off cover **2**.



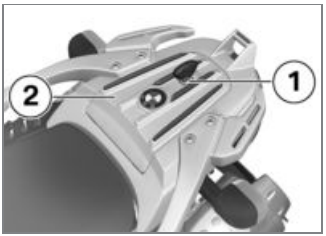
- Pull release lever **3** upward while assisting by pressing down seat at rear.
- Raise seat at rear and let go of release lever.
- Take off seat and place on a clean surface with upholstered side facing downward.

Installing seat



- Mount seat mounts **4** in holders **5** on left and right.
- Lay on seat and push forward as far as possible.
- Firmly press down on the seat at the rear.

» The seat can be heard to lock into place.



- Mount cover **2**.
- Lock storage compartment lock **1** with motorcycle key.

Riding

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Checklist 44
Starting 44
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Speed 48
Offroad riding 48
Brakes 49
Parking your motorcycle 50
Refueling 50
Securing motorcycle for transport 51

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.

Loading

Overloading and uneven loading can diminish the riding stability of the motorcycle. Do not exceed the gross weight limit and observe the loading information.◀

- Adjust spring preload, suspension damping rate settings and tire inflation pressures for the current gross vehicle weight.

– with Vario case OA

- Ensure that case volumes on left and right are equal.
- Make sure that weight is uniformly distributed between right and left.
- Pack heavy luggage and cargo as low and as close to the center of the motorcycle as possible.
- Observe maximum payload and top speed as indicated on label in case.◁

– with Topcase OA

- Observe maximum payload and top speed as indicated on label in Topcase.◁

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

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

 Speed limit for driving with tank rucksack
– ≤81 mph (≤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 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 vehicle is in use. There is a risk of burn injuries by contact with hot surfaces.
After parking the motorcycle, make sure that nobody 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 stand-

still: 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
– Shock absorber setting and spring preload
– Tread depth and tire 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) **1** in position for normal operation.

– with anti-theft alarm OE
- Deactivate the anti-theft alarm system as required.◁

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. (➠ 46)

» ABS self-diagnosis is performed. (➠ 46)

– with anti-theft alarm OE

When the alarm system's status LED is illuminated this indicates that the vehicle immobilizer is active. It is not possible to start the engine.

- Using the remote control to switch off the vehicle immobilizer.◁

- Wait until coolant-temperature warning lamp no longer flashes.

▷ After the ignition is switched on, the idling positioner is positioned. If positioning takes longer than the pre-ride check, this is signaled by the coolant-temperature warning light flashing. You should wait for this procedure to be completed to avoid problems during driving.◀

- 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 **2**.

▷ If the engine fails to start although the starter turns, insufficient battery voltage may be the reason. Recharge the battery before you start the engine, or use jump leads and a donor battery to start.◀

» Engine starts.

» Consult the troubleshooting chart if the engine refuses to start. (➠ 102)

Pre-ride check

After the ignition is switched on, the instrument cluster conducts a test of the warning and indicator lights and the display, the so-called "Pre-Ride-Check".

Phase 1

The indicator and warning lights and all segments of the multi-function display are switched on.

Phase 2

The pointer of the speedometer is moved back to the end stop again.

Phase 3

All lamps and segments are switched off.
The instrument cluster switches into normal operation.

If the pointer was not moved, if one of the indicator and warning lights was not switched on or if not all segments of the multi-function display were visible:

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

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.

Breaking in

Engine

- While running in the motorcycle, vary the throttle opening and engine-speed range frequently; avoid driving for long periods at a constant speed.
- Try to do most of your riding during this initial period on twisting, fairly hilly roads, avoiding highways if possible.
- Observe the engine run-in speeds.


Engine run-in speed

– max 5000 min^{-1} (for the first 621 miles (1000 km))

- Have the first inspection carried out after 300 - 750 mls (500 - 1,200 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 do not provide full tire traction. Accident hazards exist in particular on wet roads and at extreme angles. Always think well ahead and avoid extreme angles.◀

Speed

Engine speed warning



The engine rpm warning **1** alerts the rider that the red overspeed range **2** has been reached. The signal is maintained until the transmission is upshifted or the engine speed is reduced.

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 do you achieve the shortest stopping distances?

During braking the load distribution changes dynamically between the front and the rear wheel. The heavier you brake, the greater the weight transfer to the front wheel. Increases in the load at an individual wheel are accompanied by a rise in the effective braking force that the wheel can provide.
To achieve the shortest possible braking distance, the front brake must be applied quickly and with increasing force. This procedure provides ideal exploitation of the extra weight transfer to the front wheel. The clutch should also be disengaged at the same time. 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.

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

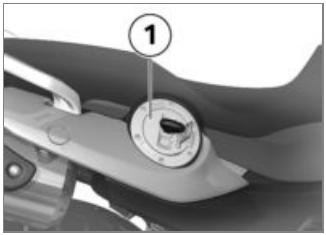
Fuel is highly flammable. Fire at the fuel tank can result in fire and explosion.
Do not smoke. Never bring a naked flame near the fuel tank.◀

Fuel attacks plastic surfaces, making them cloudy or unattractive.
Immediately wipe off plastic parts after contact with 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 **1** with motorcycle key and fold open.



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.◀

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

- 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 and the fuel warning lamp will not be switched off.◀

Recommended fuel quality
– Regular unleaded, (max. 10 % ethanol, E10) – 87 AKI (91 ROZ/RON) – 87 AKI

Usable fuel quantity
– Approx. 3.7 gal (Approx. 14 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 motorcycle against tipping away to the side, preferably with the help of a second person.◀

- 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.◀

- Fasten front straps on both sides on lower fork bridge.



- Fasten straps at rear on both sides on passenger footrests and tighten them.
- 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 54

Brake system with BMW Motorrad ABS

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 lock 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 Motorrad ABS must assume extremely low friction coefficients (gravel, ice, snow) so that the running wheels turn in every imaginable case and the driving stability is ensured. After detecting the actual conditions, the system adjusts the optimum brake pressure.

Lifting off rear wheel

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


Heavy braking can lead to the rear wheel lifting off the ground.
When braking, bear in mind that the ABS control cannot always be relied on 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 vehicle's weight and momentum take over and even BMW

Motorrad ABS is unable to counteract their effects.

Accessories

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Onboard sockets 58
Case 59
Topcase 61

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 (➠ 75).

⚠ 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:

Ratings

The load of the onboard sockets may not exceed the value specified in the technical data.

Operating electrical accessories

The operation of additional devices is a strain on the battery. The starting capacity of the battery must be maintained.

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

Case

– with Vario case[OA]

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 pulling case lid outward.

Closing case

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



- Close case lid.

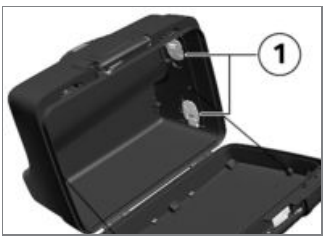
» The lid clicks audibly into place.

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 closed **3** downward.
- Turn key in case lock in the direction of travel and remove.

Adjusting case volume

- Open case and empty completely.



- Release locking levers **1** on left and right from detent and fold up.
- Slide outer case sleeve as far as possible inward or outward, depending on desired case volume.

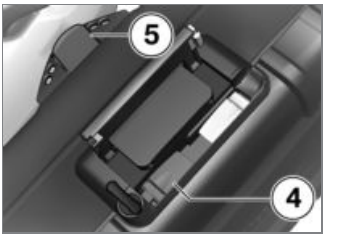
The locking levers can only be closed if the outer case sleeve is positioned at one of the two stops.◀

- Close locking levers **1** on left and right and engage.
- Closing 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.



- Hook case into case carrier **6**.
- Turn case toward motorcycle while sliding mounting on case as far as possible onto mushroom-headed fastener **7**.



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

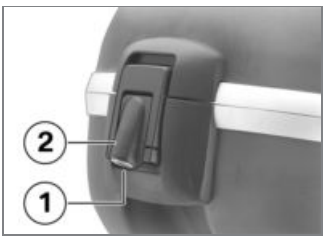
» Locking flap clicks into place.

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

Topcase

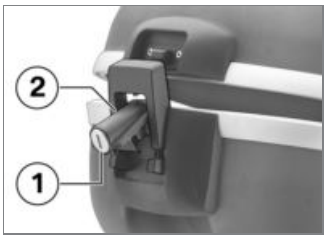
– with Topcase[OA]

Opening the Topcase



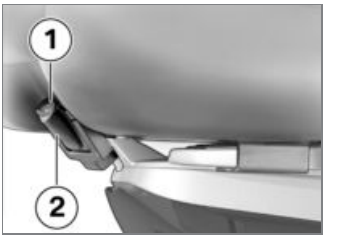
- Unlock Topcase lock **1** if necessary.
- Pull locking lever **2** upward and open Topcase lid.

Closing the Topcase



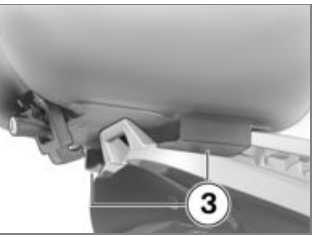
- Close Topcase lid and hold it down.
- Press locking lever **2** completely downward.
- Lock Topcase lock **1** if necessary.

Removing Topcase

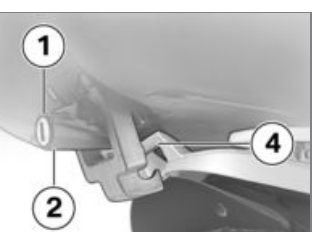


- Unlock Topcase lock **1** if necessary.
- Press locking lever **2** down.
- Pull Topcase toward rear off luggage rack.

Mounting Topcase



- Slide Topcase with guides **3** onto adapter plate as far as possible.



- Press locking lever **2** upward while making sure that lever at

position **4** grips into adapter plate.

» Locking lever audibly engages.

• Lock Topcase lock **1** if necessary.

Maintenance

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General instructions

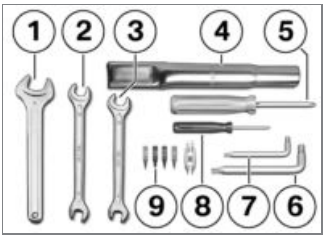
The "Maintenance" chapter describes work involving the checking and replacement of wear parts that can be performed with a minimum of effort.

If special tightening torques are to be taken into account for assembly, these are listed. An overview of all required tightening torques is contained in the chapter "Technical Data".

Information on additional maintenance and repair work is provided in the Repair Manual for your motorcycle on DVD, 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 toolkit



1 Open-ended wrench
Wrench size: 24 mm

2 Open-ended wrench
Wrench size: 17/19 mm

3 Open-ended wrench
Wrench size: 14/19 mm

4 Spark plug wrench

5 Reversible screwdriver with Phillips and straight blade

6 Torx wrench, T45

7 TORX wrench, T25

8 Small screwdriver with Phillips blade

9 Spare fuses with gripper
Miniature fuses: 4 A, 7.5 A, 10 A and 15 A

Engine oil

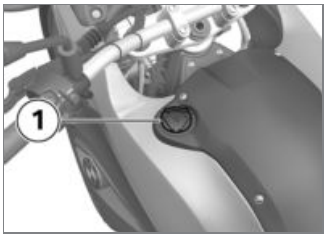
Checking engine oil level

- Wipe area around oil filler location clean.
- Make sure ground is level and firm and hold motorcycle at operating temperature vertically.

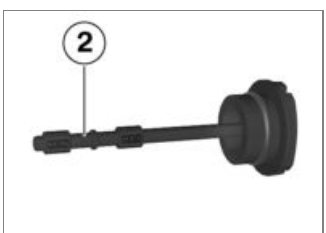
– with center stand OE

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

- Allow the engine to idle until the fan starts, then continue to let the engine run for an additional three minutes.
- Switch off engine.

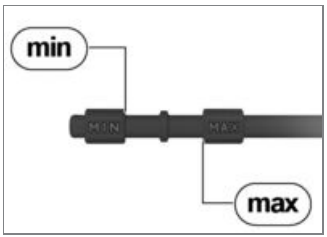


- Remove oil dipstick **1**.



- Clean measuring range **2** of oil dipstick with a dry cloth
- Position oil dipstick on oil filler opening, but do not screw in.

- Remove oil dipstick and read oil level.



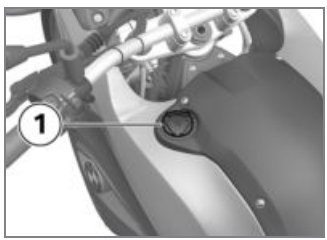
	Specified level of engine oil
–	between MIN and MAX marking

If oil level is below MIN mark:
- Topping up engine oil (➠ 67).

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

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 (➠ 66).

• Install oil dipstick.

Brake system

Checking brake operation

• Squeeze the brake lever.
» Pressure point must be clearly perceptible.
• Press footbrake lever.
» Pressure point must be clearly perceptible.

If no clear pressure points are perceptible:

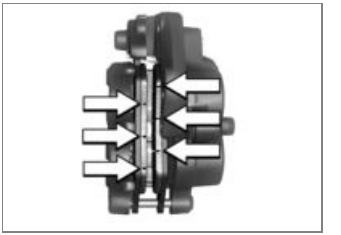
• Have the brakes checked at a specialist service facility, preferably an authorized BMW Motorrad retailer.

Checking front brake pad thickness

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



• Check the brake pad thickness with visual inspection. Direction of view: between wheel and front wheel control to brake pads.



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.◀

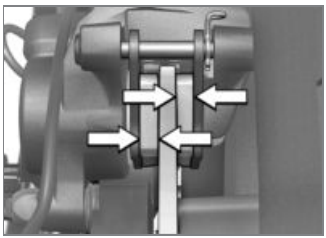
- Have the brake pads replaced by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Checking rear brake pad thickness

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



- Check the brake pad thickness with visual inspection. Direction 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.)

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.◀

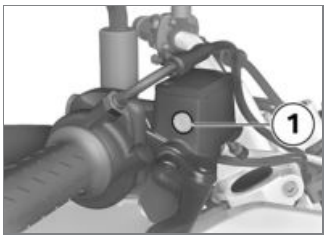
- Have the brake pads replaced by a specialized workshop, preferably an authorized BMW Motorrad retailer.

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.◀

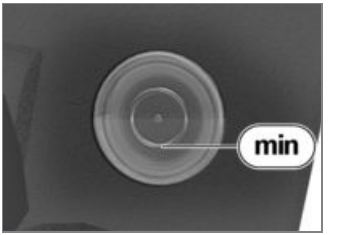
- Make sure ground is level and firm and hold motorcycle vertically.

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



- 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
– Brake fluid, DOT4
– The brake fluid level must not fall below the MIN mark. (Brake-fluid reservoir horizontal)

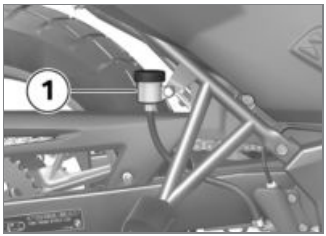
If brake fluid level drops below permissible level:
- Have the defect corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

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

– Brake fluid, DOT4

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

If brake fluid level drops below permissible level:

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

Coolant

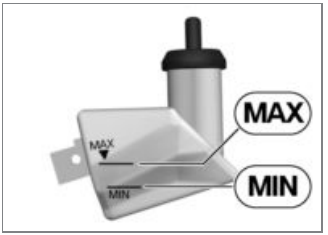
Checking coolant level

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



Danger of burns on hot engine.
Maintain distance from hot engine.
Do not touch hot engine.◀

- Read off the coolant level through the recessed GS lettering on the expansion tank **1**.



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

If coolant level drops below permissible level:

- Add coolant.

Topping up coolant

- Removing left fairing side panel (➠ 94).

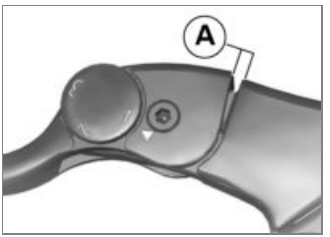


- Open cap **1** of coolant expansion tank and add coolant up to specified level.
- Checking coolant level (➠ 71).
- Close cap of coolant expansion tank.

- Installing left side panel fairing (➠ 95).

Clutch

Checking clutch lever play



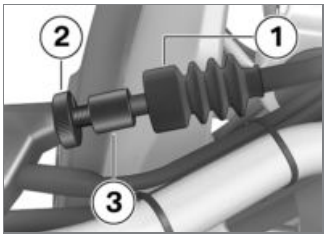
- Pull clutch lever until resistance is felt.
- Measure clutch lever play **A**.

Clutch hand-lever play
– 0.04...0.08 in (1.0...2.0 mm)

If clutch lever play is outside tolerance:

- Adjusting clutch lever play (➠ 73).

Adjusting clutch lever play



- Push back the rubber boot **1**.
- Loosen the nut **2**.
- To increase clutch play: screw in adjusting screw **3** clockwise.
- To decrease clutch play: turn adjusting screw **3** counterclockwise.
- Checking clutch lever play (➠ 72).
- Repeat work steps until clutch play is correctly adjusted.
- Tighten nut **2**.
- Pull rubber boot **1** over adjusting screw.

Chain

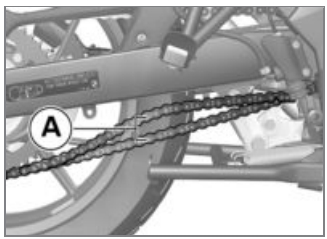
Lubricating chain

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 (1,000 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.



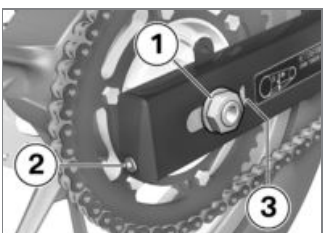
- Press chain upward and downward using a screwdriver and measure difference **A**.

Chain sag
– 1.4...1.8 in (35...45 mm) (Motorcycle unloaded on center stand)

If the measured value is outside the permissible tolerance:
- Adjusting chain sag (➠ 74).

Adjusting chain sag

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

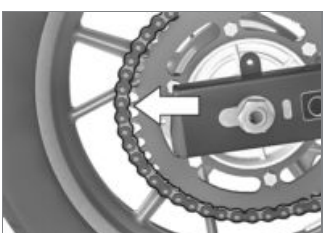


- Loosen quick-release axle nut **1**, while holding on left side if necessary.
- Adjust chain sag with adjusting screws **2** on left and right.
- Checking chain sag (➠ 73).
- Make sure that the same scale value **3** is set on the left and right.
- Tighten quick-release axle nut **1** with specified torque, while holding on left side if necessary.

Nut on quick-release axle (rear wheel)
– 74 lb/ft (100 Nm)

Checking chain wear

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



Increased wear.
If wear is identified on a component of the sprocket set, the entire set must be replaced.◀

- Pull chain toward rear at rearmost point of chain sprocket.

» The tooth tips must still be within the chain links.

If the chain can be pulled off beyond the tooth tips:
- Please contact a specialized workshop, preferably an authorized BMW Motorrad retailer.

Wheels

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.

Check spokes

– with spoke wheel OE

- Make sure ground is level and firm and park motorcycle.
- Sweep across spokes with a screwdriver handle or similar item, paying attention to resulting series of notes.

If you hear an uneven series of notes:

- Have spokes checked by an authorized 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 indicators.

Tread wear marks are integrated into the main grooves on every tire. 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 the worn tires.

Tire recommendation

For every size of tire, BMW Motorrad has tested and approved certain makes as roadworthy. BMW Motorrad cannot evaluate the suitability of other tires, and can therefore take no responsibility for their driving safety.

BMW Motorrad recommends only using the tires tested and approved by BMW Motorrad. Extensive information is available at your authorized BMW Motorrad retailer or on the Internet at www.bmw-motorrad.com.

Affect of wheel sizes on chassis control systems

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 the system.

The sensor wheels required for wheel speed detection must also

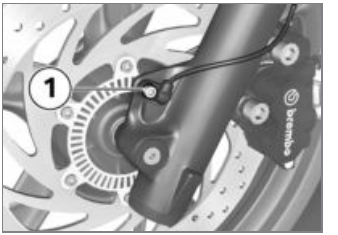
match the system installed and may not be replaced.
If you want to equip your motorcycle with different wheels, please speak to a specialized workshop, and preferably a BMW Motorrad retailer. In some cases the data stored in the control unit can be adapted to the new wheel sizes.

Removing front wheel

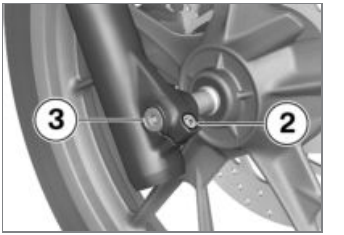
- Make sure ground is level and firm and place motorcycle on a suitable auxiliary stand.

– with center stand OE

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



- Remove screw **1** and extract the ABS sensor from its socket. Note whether or not a washer is installed.
- 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 (➠ 80).



- Remove axle clamping screw **2**.
- Remove axle **3** while supporting wheel.
- Do not remove grease on axle.
- When rolling out the front wheel take care to avoid damaging the ABS sensor and its wire.
- Roll front wheel forward to remove.

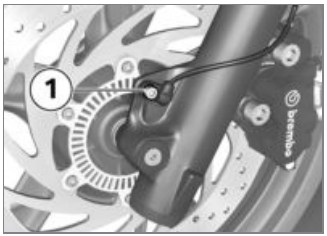


- Remove shims **4** and **5** from wheel hub.

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.◀

- Make sure that the ABS sensor and ABS cable are not damaged when installing the front wheel.



- Insert ABS sensor into hole and install screw **1**. Mount washer is present.

– without center stand OE

- Remove auxiliary stand.◁

Removing rear wheel

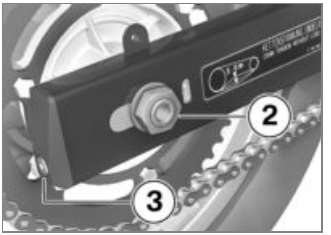
- Make sure ground is level and firm and place motorcycle on a suitable auxiliary stand.

– with center stand OE

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



- Detach the screw **1** and extract the wheel speed sensor from its bracket; a washer may also be installed at this location.



- Remove the nut **2**, applying counterpressure of the left side.
- Loosen adjusting screws **3** on left and right by turning counterclockwise.



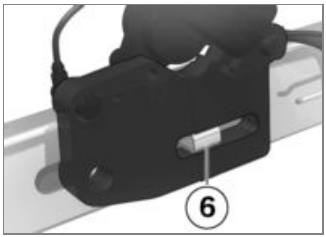
- Support the rear wheel (with a suitable block of wood, etc.) and remove the quick-release axle **4**.



- Push wheel as far forward as possible and remove chain from chain sprocket **5**.
- Roll rear wheel out of swing arm toward rear while holding brake caliper on left side.

▷ 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



- Make sure that brake caliper runs in guide **6**.
- Roll rear wheel into swing arm while guiding brake rotor between brake pads.



- Roll rear wheel as far forward as possible and lay chain on chain sprocket **5**.



- Raise the rear wheel (or support it with a suitable wooden block) and guide the quick-release axle **4** through the swing arm, the brake caliper and the rear wheel.



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



- Insert wheel speed sensor in bracket and install screw **1**, with shim as required.
- Adjusting chain sag (➠ 74).

– without center stand OE
- Remove auxiliary stand.◁

BMW Motorrad front wheel stand

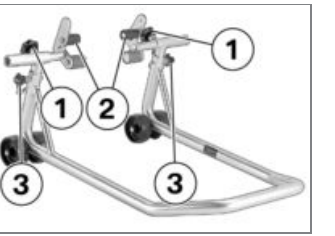
Mounting front wheel stand

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.◀

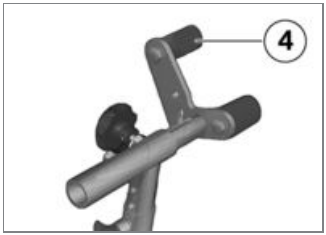
- Place motorcycle on a suitable auxiliary stand.

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

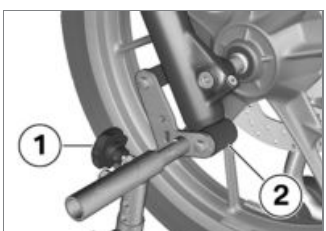
- Use basic stand with tool number (83 30 0 402 241) in combination with front-wheel adapter (83 30 0 402 242).



- 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.



- Install rubber buffer **4** on left and right in upper position.



- 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.◁

Fuses

Removing fuse

If defective fuses are bridged, this results in a danger of short-circuit and thus a danger of fire.
Replace defective fuses with new fuses.◀

- Switch off ignition.
- Removing seat (➠ 38).

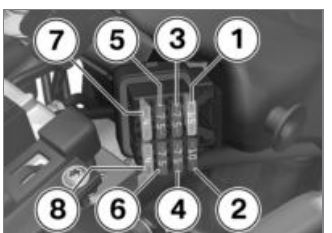


- Press together locking levers **1** and remove fuse cover.

- Pull defective fuse upward out of fuse box with toolkit.

If the fuses blow frequently, have the electrical system checked by an authorized specialized workshop, preferably a BMW Motorrad retailer.◀

Installing fuse



- Replace defective fuse with fuse with required amperage.

An overview of the fuse assignment and the required amperages is provided in the chapter "Technical Data". The numbers in the graphic match the fuse numbers.◀

- Close fuse cover.
» Latch audibly engages.
- Installing seat (➠ 39).

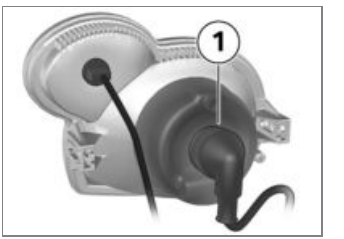
Lamps

Replacing low-beam and high-beam bulb

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



- Remove screw **1** and pull instrument cluster upward out of holders.
- Set down instrument cluster on side.
- Switch off ignition.



- Pull off connector **1** while bracing on bulb located below rubber cap.

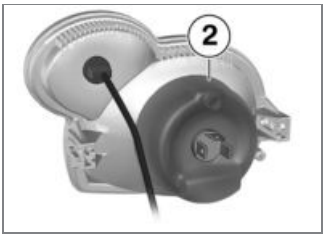


- Remove rubber cap **2**.

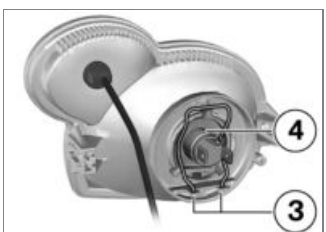
- Replace defective bulb.

	Bulb for low-beam and high-beam headlight
– H4 / 12 V / 55 W / 60 W	

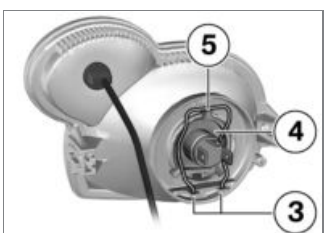
- To avoid contamination on the bulb's glass surface, never touch or hold the bulb anywhere other than on its metal socket base.



- Mount rubber cap **2**.



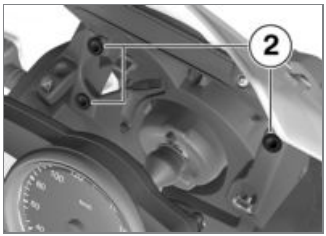
- Remove spring strap **3** from detents and fold up.
- Remove bulb **4**.



- Install bulb **4** while ensuring correct position of lug **5**.
- Insert spring clip **3**.



- Close connector **1**.



- Mount instrument cluster in holders **2**.



- Install screw **1**.

Replacing parking light bulb

- Make sure ground is level and firm and park motorcycle.
- Switch off ignition.
- Remove the instrument cluster using the procedure described in the previous section.



- Pull bulb socket **1** out of headlight housing.



- Pull bulb out of 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.



- Mount bulb in socket.



- Insert bulb socket **1** into headlight housing.
- Install the instrument cluster using the procedure described in the previous section.

Replacing front and rear turn indicator bulbs

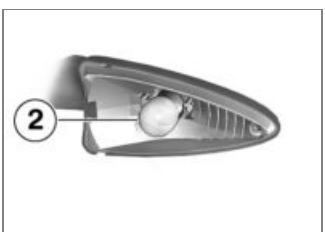
- Make sure ground is level and firm and park motorcycle.
- Switch off ignition.



- Remove screw **1**.



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



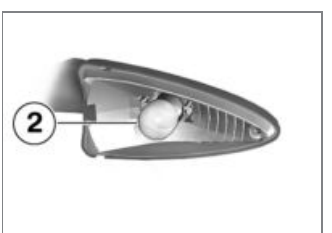
- Remove bulb **2** from light housing by turning it counterclockwise.

- Replace defective bulb.

Bulbs for flashing turn indicators, front
– RY10W / 12 V / 10 W

Bulbs for flashing turn indicators, rear
– RY10W / 12 V / 10 W

- 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.



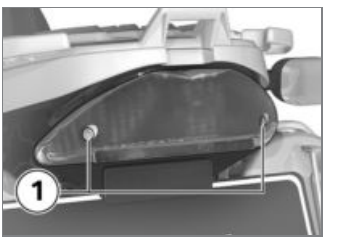
- Insert inside end of lens into light housing and close.



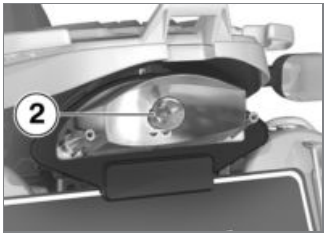
- Install screw **1**.

Replacing tail light and brake light bulb

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



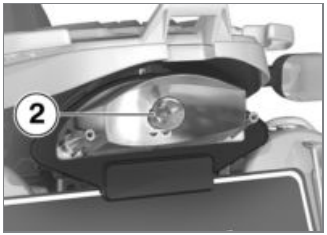
- Remove two screws **1** and take off tail light lens.



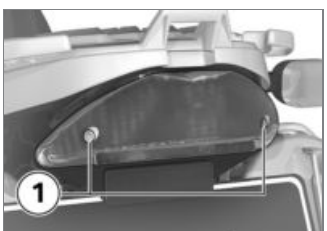
- Press bulb **2** into socket and turn counterclockwise to remove.
- Replace defective bulb.

	Bulb for taillight/brake light
– P25-2 / 12 V / 5 W / 21 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 **2** into fitting and install turning clockwise.

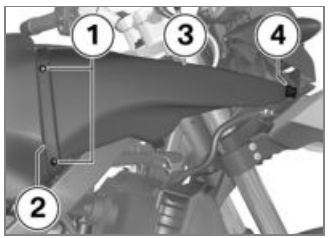


- Position tail light lens and install two screws **1**.

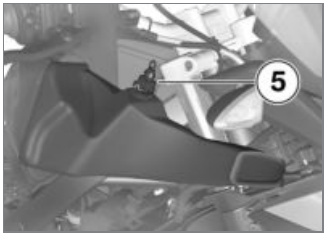
Air cleaner

Replacing air filter insert

- Removing right fairing side panel (➠ 93).



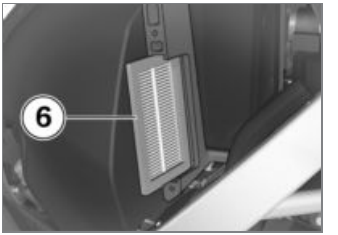
- Remove two screws **1**.
- Pull out connecting flange **2**.
- Pull suction pipe **3** off air filter housing, take out of mount **4** and turn to side.



• Disconnect plug **5**.



• Remove air filter insert **6**.



• Insert cleaned or new air filter insert **6**.



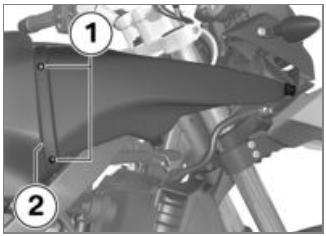
• Close connector **5**.



• Insert suction pipe in mount **4**.



• Insert suction pipe in guides **7** of air filter housing. Make sure rubber gaskets of air filter insert are not folded.



- Insert connecting flange **2**.
- Install two screws **1**.

- Installing right fairing side panel (➠ 94).

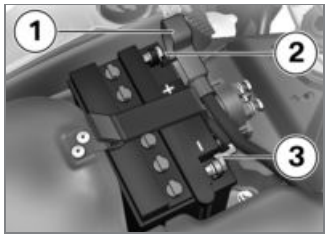
Jump-starting

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

- Make sure ground is level and firm and park motorcycle.
- Removing seat (➠ 38).
- Removing center fairing panel (➠ 92).
- When jump-starting the engine, do not disconnect the battery from the onboard electrical system.



- Slide back cover **1** of positive battery terminal.
- Begin by connecting one end of the red jump lead to the positive terminal **2** of the discharged battery and the other end to the positive terminal of the donor battery.
- Connect black jump lead to negative terminal **3** of donor battery and then to negative terminal of discharged battery.
- Allow the engine on the support vehicle to run while jump-starting.
- Start engine of the vehicle with discharged battery in usual

way; if engine does not start, wait a few minutes before repeating attempt in order to protect starter motor and donor battery.
- Allow both engines to run for several minutes before disconnecting jumper cables.
- Disconnect the jumper cable from the negative terminal first, then disconnect the second lead from the positive terminals.

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

- Attach cover panel **1** of the positive battery terminal.
- Installing center fairing panel (➠ 93).
- Installing seat (➠ 39).

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
– 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 4 weeks, a trickle-charger should be connected to the battery.◀

Charging connected battery

Charging the connected battery directly at the battery terminals can damage the motorcycle electronics.
To charge the battery via the battery terminals, disconnect the battery first.◀

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

- Only charge connected battery via onboard socket.
- Comply with operating instructions of charger.

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.

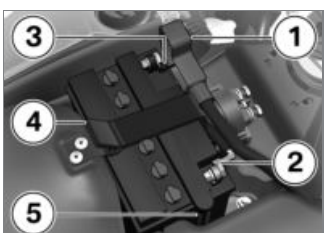
In the case of longer periods when the motorcycle is not being used, the battery must be recharged regularly. See the instructions for caring for your battery. Always fully recharge the battery before returning it to use.◀

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 (➠ 92).



- Slide back cover **1** of positive battery terminal.

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

Always observe the proper sequence.◀

- Remove negative cable **2** first.
- Then remove the positive battery cable **3**.
- Detach battery holding strap **4** and bleeding hose **5**.
- Lift out battery upward; if it is difficult to move, moving it back and forth will help.

Installing battery



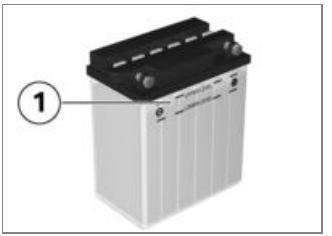
- Install battery and attach bleeding hose **5** when doing so.
- Mount battery holding strap **4**.
- First install positive cable **3**.

- Then install negative cable **2**.
- Slide cover **1** over positive battery terminal.
- Installing center fairing panel (➠ 93).

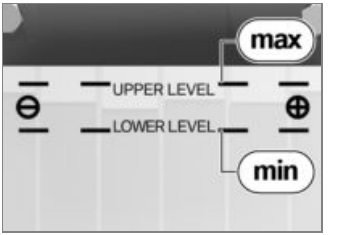
- Setting clock (➠ 29).

Checking battery acid level

- Check acid level approximately every three months.
- Removing battery (➠ 91).



- Read off acid level from marking **1**.



	Setpoint level of battery acid
– between MIN and MAX marking	

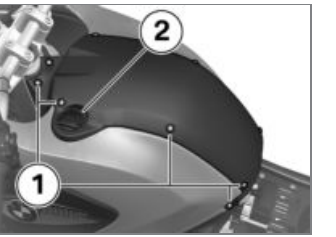
If acid level is below MIN marking:

- Add distilled water up to specified level.

Fairings and Panels

Removing center fairing panel

- Make sure ground is level and firm and park motorcycle.
- Removing seat (➠ 38).

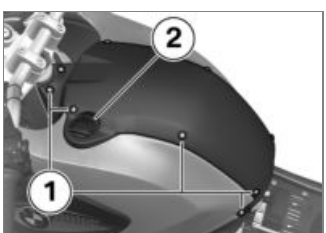


- Remove screws **1** on left and right.
- Extract the oil dipstick **2** and remove the center fairing panel section.
- Install oil dipstick.

Installing center fairing panel



- Remove oil dipstick **2**.



- Position center fairing panel and install oil dipstick **2**.
- Install the screws **1** on the left and right sides, starting with the center screw.
- Installing seat (➠ 39).

Removing right fairing side panel

- Make sure ground is level and firm and park motorcycle.
- Removing center fairing panel (➠ 92).

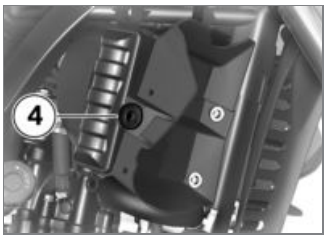


- Remove screws **1** and **2**.



- Remove screw **3**.
- Pull the side fairing panel in the sector **4** from its support and remove it.

Installing right fairing side panel



- Mount fairing side panel in mount **4**



- Install screw **3**.



- Install screws **1** and **2**.
- Installing center fairing panel (➠ 93).

Removing left fairing side panel

- Make sure ground is level and firm and park motorcycle.
- Removing center fairing panel (➠ 92).



- Remove screws **1** and **2**.



- Remove screw **3**.
- Pull the side fairing panel in the sector **4** from its support and remove it.

Installing left side panel fairing



- Slide the fairing side panel behind the upper section of fairing **5** then insert it in the fixture **4**



- Install screw **3**.



- Install screws **1** and **2**.
- Installing center fairing panel (➠ 93).

Care

Care products 98
Washing your motorcycle 98
Cleaning sensitive vehicle parts 98
Paint care 99
Protective wax coating 100
Storing motorcycle 100
Returning motorcycle to use 100

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 vehicle 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. 'Insect sponges' or sponges with hard surfaces can also lead to scratches.◀

Fairings

Clean body panels with water and BMW plastic care emulsion.

Plastic windshields and headlight lenses

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 silicone sprays or care products that contain silicone.◀

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

- Cleaning the motorcycle.
- Removing battery (➠ 91).
- 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.
- Observe checklist before starting.

Technical data

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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 disengaged	Place transmission in neutral or disengage clutch.
No fuel in tank	Refueling (➠ 50).
Battery drained	Charge battery.

Threaded fasteners

Front wheel	Value	Valid
Quick-release axle in telescopic fork		
M16 x 1.5	33 lb/ft (45 Nm)	
Clamping of front quick-release axle		
M8 x 20	14 lb/ft (19 Nm)	

Rear wheel	Value	Valid
Nut on quick-release axle (rear wheel)		
M16 x 1.5	74 lb/ft (100 Nm)	
Tensioning screws (drive chain) in swinging arm		
M8 x 70	7 lb/ft (10 Nm)	

Mirror arm	Value	Valid
Locknut (mirror) on clamping piece		
M18 x 1	15 lb/ft (20 Nm)	

Mirror arm	Value	Valid
Clamping piece (mirror) on clamping block		
M10 x 1.25	22 lb/ft (30 Nm)	

Engine

Engine design	Single-cylinder, four-stroke engine, DOHC control with bush roller-chain drive, 4 valves actuated by bucket tappets, compensating shaft, liquid cooling for cylinders and cylinder head. Integrated coolant pump, 5-speed transmission and dry-sump lubrication.
Displacement	652 cc (652 cm^3)
Cylinder bore	3.9 in (100 mm)
Piston stroke	3.3 in (83 mm)
Compression ratio	11.5:1
Rated output	50 hp (37 kW), at engine speed: 6500 min^{-1}
Torque	44 lb/ft (60 Nm), at engine speed: 4800 min^{-1}
Maximum engine speed	max 7500 min^{-1}
Idle speed	$1500^{\pm 100}$ min^{-1}

Fuel

Recommended fuel quality	Regular unleaded, (max. 10 % ethanol, E10) 87 AKI (91 ROZ/RON) 87 AKI
Usable fuel quantity	Approx. 3.7 gal (Approx. 14 l)
Reserve fuel quantity	Approx. 1.1 gal (Approx. 4 l)

Engine oil

Engine oil, capacity	2.4 quarts (2.3 l), Gesamtfüllmenge (mit Filterwechsel) 1.8 quarts (1.7 l), Ölbehälter - Vorabbefüllung 0.6 quarts (0.6 l), Ölbehälter - Auffüllen
Products recommended by BMW Motorrad	
BMW Motorrad High Performance Oil	SAE 15W-50, API SJ / JASO MA2
Oil grades	BMW Motorrad does not recommend using oil additives, as these can worsen the operation of the clutch. BMW Motorrad recommends not using synthetic oils for the first 6000 miles (10000 km). Ask your BMW Motorrad retailer for engine oils suitable for your motorcycle.

Clutch

Clutch design	Multi-disk oil-bath clutch

Transmission

Transmission design	Claw-shifted 5-speed transmission integrated in engine housing
Transmission gear ratios	1.946 (72:37 teeth), Primary gear ratio 2.750 (33:12 teeth), 1st gear 1.750 (28:16 teeth), 2nd gear 1.313 (21:16 teeth), 3rd gear 1.045 (23:22 teeth), 4th gear 0.875 (21:24 teeth), 5th gear

Rear-wheel drive

Type of final drive	Chain drive
Type of rear suspension	Two-arm box-section swinging fork
Secondary gear ratio	2.938

Running gear

Type of front suspension	Telescopic forks
Spring travel, front	6.7 in (170 mm), On wheel
– with lowering[OE]	5.5 in (140 mm), On wheel
Type of rear suspension	Two-arm box-section swinging fork
Spring travel, rear	6.5 in (165 mm), On wheel
– with lowering[OE]	5.1 in (130 mm), On wheel

Brakes

Type of front brake	Hydraulically disk brake with 2-piston floating caliper
Brake-pad material, front	Sintered metal
Type of rear brake	Hydraulically disk brake with 1-piston floating caliper
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
– with spoke wheel OE	Spoke wheel
Front-wheel rim size	2.50" x 19"
Front tire designation	110/80 - 19

Rear wheel	
Rear wheel design	Cast aluminum, MT H2
– with spoke wheel OE	Spoke wheel
Rear-wheel rim size	3.50" x 17"
Rear tire designation	140/80 - 17
Tire inflation pressure	
Tire pressure, front	31.9 psi (2.2 bar), With tire cold
Tire pressure, rear	36.3 psi (2.5 bar), Single rider, with cold tire 42.1 psi (2.9 bar), With passenger and payload, with cold tire

Electrical system

Battery	
Battery design	Lead-acid battery
Battery voltage	12 V
Battery capacity	12 Ah
Spark plugs	
Spark plugs, manufacturer and designation	NGK DR 8 EB
Electrode gap of spark plug	0.02...0.03 in (0.6...0.7 mm), New

Bulbs	
Bulb for low-beam and high-beam headlight	H4 / 12 V / 55 W / 60 W
Bulb for parking light	W5W / 12 V / 5 W
Bulb for taillight/brake light	P25-2 / 12 V / 5 W / 21 W
Bulbs for flashing turn indicators, front	RY10W / 12 V / 10 W
Bulbs for flashing turn indicators, rear	RY10W / 12 V / 10 W
Fuses	
Nominal current of fuse 1 (for engine electronics)	15 A
Nominal current of fuse 2 (for instrument cluster, hazard warning flashers, onboard socket, optional accessories and diagnosis plug)	10 A
Nominal current of fuse 3 (for horn and headlight flasher)	7.5 A
Nominal current of fuse 4 (for low-beam headlight)	7.5 A

Nominal current of fuse 5 (for high-beam headlight)	7.5 A
Nominal current of fuse 6 (for instrument cluster, turn indicators, hazard warning flashers, brake light and optional accessories)	7.5 A
Nominal current of fuse 7 (for tail light and parking lights)	4 A
Nominal current of fuse 8 (for heated handlebar grips)	4 A

Frame

Frame design	Bridge-type tube frame of steel profiles with bolted rear frame
Location of type plate	Upper right main frame
Location of the vehicle identification number	Right steering head

Dimensions

Motorcycle length	85.2 in (2165 mm)
Motorcycle height	54.7 in (1390 mm), without driver at DIN unladen weight
Motorcycle width	36.2 in (920 mm), Across mirrors
Driver's seat height	31.5 in (800 mm), without driver at unladen weight
– with lowering OE	30.3 in (770 mm), without driver at unladen weight
– with high seat OA	33.1 in (840 mm), without driver at unladen weight
Rider's inside-leg arc, heel to heel	71.3 in (1810 mm)
– with lowering OE	68.9 in (1750 mm)
– with high seat OA	74.4 in (1890 mm)

Weights

Unladen weight	423 lbs (192 kg), DIN unladen weight, ready for road, 90 % full tank of gas, without OE
Permissible gross weight	838 lbs (380 kg)
Maximum payload	max 414 lbs (max 188 kg)

Riding specifications

Top speed	106 mph (170 km/h)
– with reduced output[OA]	90 mph (145 km/h)

Service

Reporting safety defects 116
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Confirmation of service 124

Reporting safety defects

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

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

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

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 (500 km) and 750 mls (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.

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_____

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at the latest

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or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

on_____

Odometer reading_____

Next service
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on_____
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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.

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Work carried out	Odometer reading	Date

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

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Fuel	
Recommended fuel quality	Regular unleaded, (max. 10 % ethanol, E10) 87 AKI (91 ROZ/RON) 87 AKI
Usable fuel quantity	Approx. 3.7 gal (Approx. 14 l)
Reserve fuel quantity	Approx. 1.1 gal (Approx. 4 l)
Tire inflation pressure	
Tire pressure, front	31.9 psi (2.2 bar), With tire cold
Tire pressure, rear	36.3 psi (2.5 bar), Single rider, with cold tire 42.1 psi (2.9 bar), With passenger and payload, with cold tire

BMW recommends Castrol

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