



BMW Motorrad

Rider's Manual (US Model)

G310GS

Motorcycle/Retailer Data

Motorcycle Data

Model

Vehicle identification number

Color number

Initial registration

License plate

Retailer Data

Contact in Service

Ms./Mr.

Phone number

Retailer's address/phone number (company stamp)

Welcome to BMW

Congratulations on choosing a motorcycle from BMW Motorrad and welcome to the community of BMW motorcycle owners and riders. Familiarize yourself with your new motorcycle so that you can ride it safely and confidently in all highway traffic situations.

About this Rider's Manual

Please read this Rider's Manual carefully before starting to use your new BMW. It contains important information on how to operate the controls and how to get the most benefit from your BMW's advanced technical features.

In addition, it contains information on maintenance and care to help you maintain your motorcycle's reliability and safety, as well as its value.

Documentation confirming performance of scheduled maintenance is a precondition for generous handling of out-of-warranty claims and goodwill warranty treatment.

Should you want to sell your BMW one day, please also remember to turn over the Ride's Manual to the new owner. It is an important part of your motorcycle.

Suggestions and complaints

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 on your BMW

BMW Motorrad.

01 40 9 898 917



Table of Contents

1 General instructions	5	3 Displays	23	5 Setting	45
Quick & easy reference	6	Warning and indicator		Mirrors	46
Abbreviations and		lights	24	Headlight	46
symbols	6	Multifunction display	25	Spring preload	47
Equipment	6	Warning lights	26	6 Riding	49
Technical Data	7	Service display	32	Safety information	50
Notice concerning current sta-		Fuel reserve	33	Checklist	52
tus	7	Tachometer	33	Starting	52
Additional sources of informa-		4 Operation	35	Running in	55
tion	7	Ignition	36	Engine speed warner	55
Certificates and operating per-		Lights	38	Brakes	56
mits	8	Turn indicators	38	Parking your motorcycle	57
Data memory	8	Multifunction display	40	Refueling	58
2 Overviews	13	Time and date	41	Securing motorcycle for	
General view, left side	15	Resetting the trip		transport	60
General view, right side	17	distance	41	7 Technology in	
Underneath seat	18	Resetting average data	42	detail	63
Multifunction switch, left	19	Antilock Brake System		General instructions	64
Multifunction switch,		(ABS)	42	Anti-Lock Brake System	64
right	20	Seat	43	8 Maintenance	67
Instrument cluster	21			General instructions	68
				Tool kit	68
				Front wheel stand	69

Rear-wheel stand	70	10 Care	111	Dimensions	129
Engine oil	71	Care products	112	Weights	130
Brake system	72	Washing your motorcycle.....	112	Performance data	130
Clutch	77	Cleaning sensitive motorcycle parts.....	113	Accessories	130
Coolant.....	78	Paint care	114	12 Service	131
Rims and tires.....	80	Protective wax coating	114	Reporting safety defects	132
Wheels	81	Store motorcycle.....	114	BMW Motorrad Service ...	133
Chain.....	89	Return motorcycle to use	115	BMW Motorrad Service History	133
Light sources	91	11 Technical data	117	BMW Motorrad Mobility Services	134
Jump-starting	95	Troubleshooting chart.....	118	Maintenance procedures.....	134
Battery	96	Threaded fasteners	119	Maintenance schedule	137
Fuses	99	Fuel	121	Maintenance confirmations.....	138
Diagnostic connector.....	101	Engine oil	121	Service confirmations	152
9 Accessories	103	Engine	122	13 Index	154
General instructions	104	Clutch	123		
Heated handlebar grips ...	104	Transmission	123		
Power socket	105	Rear-wheel drive	124		
Topcase.....	105	Frame	124		
Topcase Light.....	108	Suspension	125		
Maximum payload and maximum speed	109	Brakes	125		
		Wheels and tires	126		
		Electrical system	128		

General instructions

Quick & easy reference	6
Abbreviations and symbols	6
Equipment	6
Technical Data	7
Notice concerning current status	7
Additional sources of information	7
Certificates and operating permits ...	8
Data memory	8

Quick & easy reference

This Rider's Manual has been designed to provide quick and efficient orientation. Go straight to the "Overviews" chapter if you would like an initial overview of your motorcycle.

Abbreviations and symbols



CAUTION Hazard with low risk. Failure to avoid this hazard can result in minor or moderate injury.



WARNING Hazard with moderate risk. Failure to avoid this hazard can result in death or serious injury.



DANGER Hazard with high risk. Failure to avoid this hazard results in death or serious injury.



ATTENTION Special instructions and precautionary measures. Non-compliance can cause damage to the vehicle or accessories and warranty claims may be denied as a result.



NOTICE 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.

ABS

Anti-Lock Brake System.

NV

National-market version.

OA

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

Equipment

When you ordered your BMW motorcycle, you chose various custom equipment items. 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 motorcycle features equipment that is not described here, you can find these features described in a separate manual.

Technical Data

All dimensions, weights and performance data contained in this Rider's Manual refer to the German DIN standards and comply with their tolerance specifications. The technical data and specifications in this Rider's Manual serve as points of reference. The vehicle-specific data may vary, for instance due to the selected optional equipment, national-market version or country-specific measuring procedures. Detailed values can be obtained from the

registration documents and the signs on the vehicle or from your authorized BMW Motorrad retailer or other qualified service partner or specialist workshop. The information on the vehicle documents always takes precedence over the information in this Rider's Manual.

Notice concerning current status

The high safety and quality standards of BMW motorcycles are maintained by consistent, ongoing development efforts embracing their design, equipment and accessories. For this reason, some aspects of your motorcycle may vary from the descriptions in these operating instructions. In addition, BMW Motorrad cannot guarantee the total absence of errors. We hope you will appreciate that no claims can be recognized based on the data, il-

lustrations or descriptions in this manual.

Additional sources of information

BMW Motorrad retailers

Your BMW Motorrad retailer is always happy to answer any of your questions.

Internet

The Rider's Manual for your vehicle, the operating and installation instructions for optional accessories and general BMW Motorrad information related to the technology or other features are available at **www.bmw-motorrad.com/service**.

Certificates and operating permits

The certificates for the vehicle and the official operating permits for possible accessories are available at www.bmw-motorrad.com/certification.

Data memory

General

Electronic control units are installed in the vehicle. Electronic control units process data received from vehicle sensors, self-generated data or data exchanged between control units, for example. Some control units are required for safe vehicle operation or provide driving assistance, such as driver assistance systems. Control units also make comfort and infotainment functions possible.

Information about the stored or exchanged data can be obtained

from the vehicle manufacturer, such as in the form of a separate booklet.

Personal references

Every vehicle is marked with a unique vehicle identification number. Depending on the country, the vehicle owner can be identified using the vehicle identification number and registration number and the help of the relevant authorities. There are also other ways to trace data obtained from the vehicle back to the driver or vehicle owner, such as via the used ConnectedDrive Account.

Data privacy laws

In accordance with applicable data privacy laws, vehicle users have certain rights over the vehicle manufacturer or company that collects or processes personal data.

Vehicle users have the right to obtain comprehensive information without charge from the locations that store the vehicle user's personal data.

These locations may be:

- The vehicle manufacturer
- Qualified service partners
- Specialist workshops
- Service providers

Vehicle users may request information about the type of personal data that is stored, the purpose for which the data will be used and the source of the data. This information can only be obtained by a registered owner or a person with written proof authorizing use of the vehicle.

The right to information also includes information related to data transmitted to other companies or locations.

The vehicle manufacturer's website contains the appropriate pri-

vacy policy notices. The privacy policy notices contain information on the right to delete or correct data. The vehicle manufacturer also provides the manufacturer contact information and the contact information of the data security officer.

The vehicle owner can have a BMW Motorrad retailer or other qualified service partner or specialist workshop read out the data stored in the vehicle for a fee if required.

The vehicle data is read out via the power socket required by law for on-board diagnosis (OBD) in the vehicle.

Legal requirements for the disclosure of data

The vehicle manufacture is required by the law applicable in this context to provide authorities with the data stored by the manufacturer. Providing this data

within the scope required is on a case-by-case basis, for instance to clarify a criminal offense.

Government agencies are authorized by the law applicable in this context to read out the data from the vehicle themselves in individual cases.

Operating data in the vehicle

Control units process data so that the vehicle can run.

Examples of these include:

- Status messages from the vehicle and its individual components, such as wheel RPM, wheel speed and deceleration
- Environmental conditions, such as temperature

The data is processed only in the vehicle itself and is usually temporary. The data is not stored beyond the period in which the vehicle is operating.

Electronic components such as control units contain components for storing technical information. This may be information about the vehicle's condition, component load, events or faults stored temporarily or permanently.

This information generally documents the condition of a component, module, system or the surrounding area; for example:

- Operating conditions of system components, such as fill levels and tire pressure
- Malfunctions and faults in key system components, such as lights and brakes
- Vehicle responses in specific driving situations, such as activation of dynamic driving systems
- Information about events causing damage to the vehicle

The data is necessary for providing control unit functions. In

In addition, it is used by the vehicle manufacturer to detect and eliminate malfunctions as well as to optimize vehicle functions.

The majority of this data is temporary and is processed only within the vehicle itself. Only a small amount of event-driven data is stored in the event data recorder and fault memory. When a vehicle is serviced, such as for repairs, servicing processes, warranty cases and quality assurance measures, this technical information can be read out from the vehicle together with the vehicle identification number.

The information can be read out by a BMW Motorrad retailer or other qualified service partner or specialist workshop. The power socket required by law for on-board diagnosis (OBD) in the vehicle is used to read out the data.

The data is collected, processed and used by the respective service network locations. The data documents the vehicle's technical states and helps with fault finding, compliance with warranty obligations and quality improvements.

The manufacturer also has product monitoring obligations arising from product liability law. The vehicle manufacturer requires technical data from the vehicle in order to fulfill these obligations. The data from the vehicle can also be used to verify customer warranty and guarantee claims. The fault memory and event data recorder in the vehicle can be reset by a BMW Motorrad retailer or other qualified service partner or specialist workshop as part of repair work or servicing.

Data input and data transfer in the vehicle

General

Depending on the equipment, comfort settings and individualized settings in the vehicle can be saved and changed or reset at any time.

Examples of these include:

- Windshield position settings
- Chassis and suspension adjustment settings

It is possible to introduce data into the vehicle entertainment and communication system via a smartphone, for instance.

Depending on the individual equipment, this includes:

- Multimedia data, such as music for playback
- Address book data for use in conjunction with a communication system or integrated navigation system
- Entered navigation destinations

- Data about the use of internet services. This data can be stored locally in the vehicle or is on a device connected to the vehicle, such as a smartphone, USB stick or MP3 player. If this data is saved in the vehicle, it can be deleted at any time.

This data is transmitted to third parties only upon personal request as part of the use of online services. The data transmitted depends on the selected settings when using the services.

Integrating mobile end devices

Depending on the equipment, mobile end devices connected to the vehicle, such as smartphones, are controlled using the vehicle's controls.

This enables audio and visual output from mobile end devices through the multimedia system. At the same time, certain infor-

mation is transmitted to the mobile end device. This includes for instance position data and other general vehicle data, depending on the type of integration, and makes it possible to optimize the use of selected apps, such as those for navigation or music playback.

The way the data is processed further is determined by the provider of the particular app used. The range of possible settings depends on the particular app and the operating system of the mobile end device.

Services

General

If the vehicle has a mobile phone connection, this connection makes it possible to exchange data between the vehicle and other systems. The mobile phone connection is made possible through the vehicle's

transmitter and receiver or via personally integrated mobile end devices such as smartphones. Online functions, as they are called, are used over this mobile phone connection. These include online services and apps provided by the vehicle manufacturer or other providers.

Vehicle manufacturer services

In the case of the vehicle manufacturer's online services, the particular functions are described at the appropriate location, such as in the Rider's Manual or on manufacturer's website. The relevant legal information on data privacy is also provided there. Personal data may be used in order to provide online services. The data is exchanged over a secure connection, i.e. with the vehicle manufacturer's IT systems which are intended for this purpose.

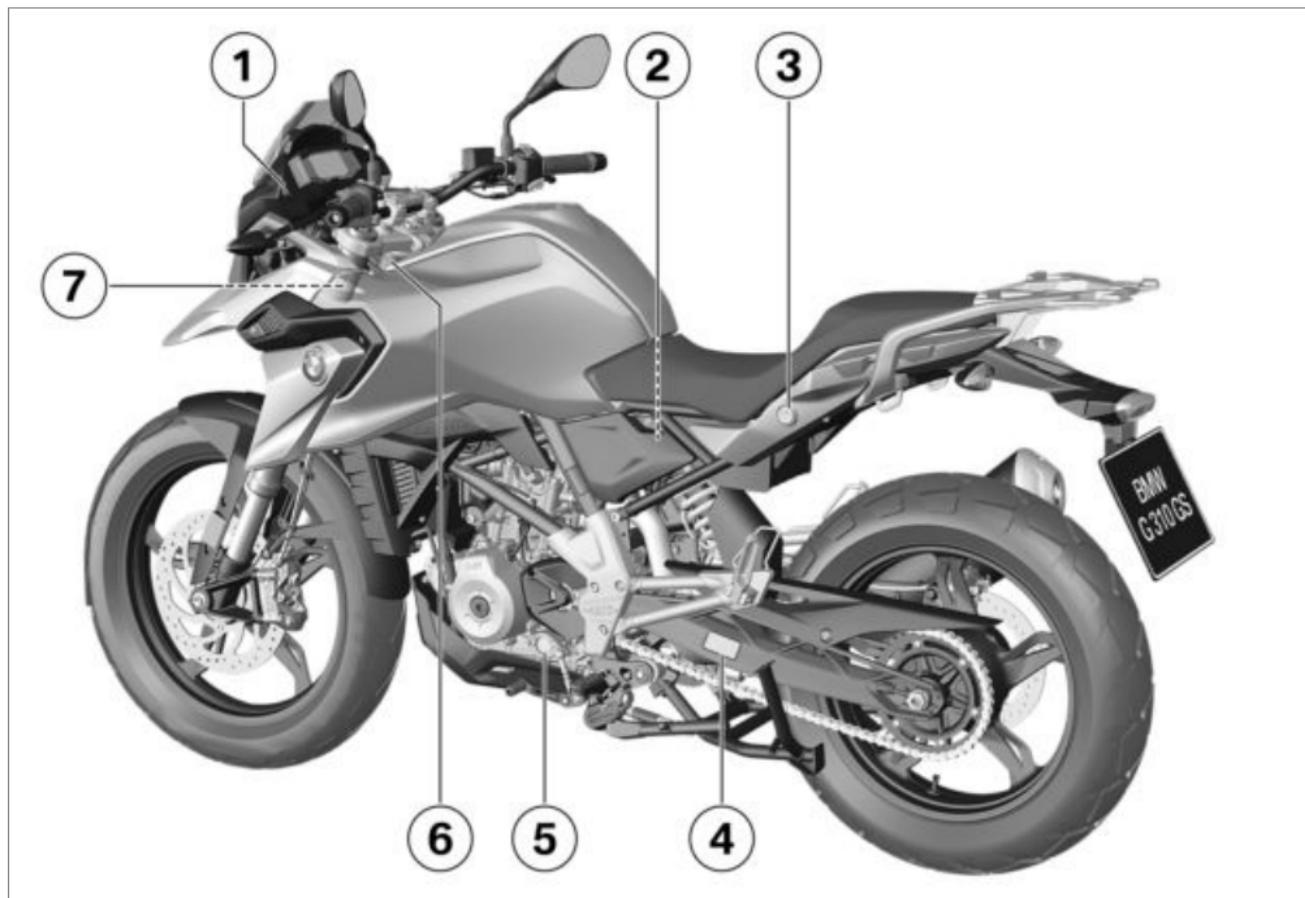
Any collection, processing and use of personal data that goes beyond the provision of services take place only as permitted by law, on the basis of a contractual agreement or as a result of consent. It is also possible to have the entire data connection activated or deactivated. This is not the case for legally prescribed functions.

Services of other providers

When using the online services of other providers, these services are subject to the responsibility and the data protection and usage conditions of the respective provider. The vehicle manufacturer has no control over the content exchanged via these services. Information about the type, scope and purpose of collecting and using personal data as part of third-party services can be obtained from the particular service provider.

Overviews

General view, left side.....	15
General view, right side	17
Underneath seat	18
Multifunction switch, left	19
Multifunction switch, right.....	20
Instrument cluster	21



General view, left side

- 1** – with additional onboard socket^{OA}
Power socket (▣▣▣▣ 105)
- 2** Adjusting ring for spring preload (behind the frame cover) (▣▣▣▣ 47)
- 3** Seat lock (▣▣▣▣ 43)
- 4** Chain adjustment values (▣▣▣▣ 90)
- 5** Engine oil level indicator (▣▣▣▣ 71)
- 6** Type plate (on the left steering head)
- 7** Tire pressure table (on the left fork leg) (▣▣▣▣ 80)

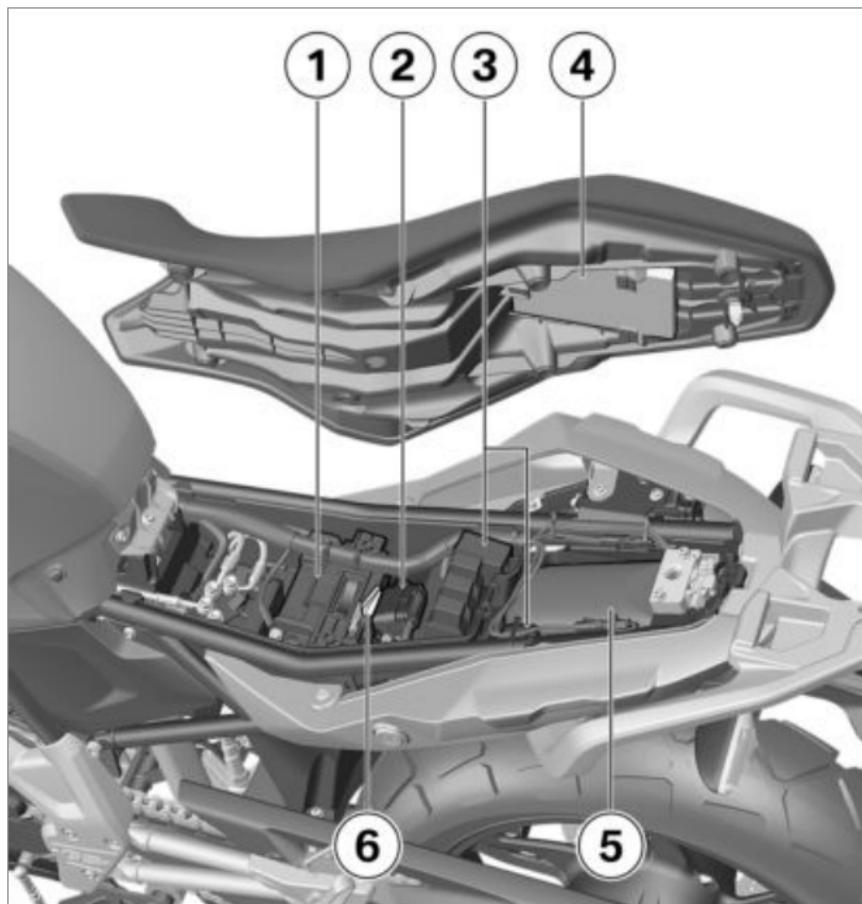


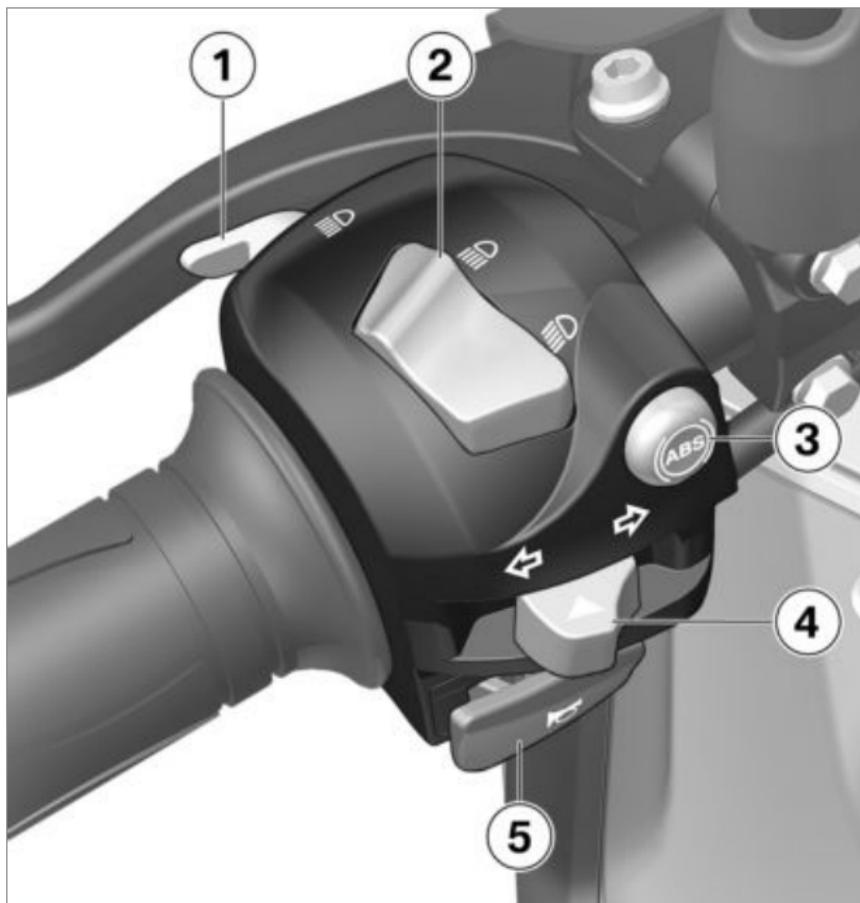
General view, right side

- 1 Fuel filler opening (►► 59)
- 2 Brake-fluid reservoir, front (►► 75)
- 3 Vehicle identification number
- 4 Coolant expansion tank (►► 78)
- 5 Oil fill location (►► 72)
- 6 Brake fluid reservoir, rear (behind the frame cover) (►► 76)
- 7 Grab handle (►► 50)

Underneath seat

- 1 Battery (➡ 96)
- 2 Data link connector (➡ 101)
- 3 Fuses (➡ 99)
- 4 Rider's Manual (US Model) (➡ 6)
- 5 Tool kit (➡ 68)
- 6 Spare fuses



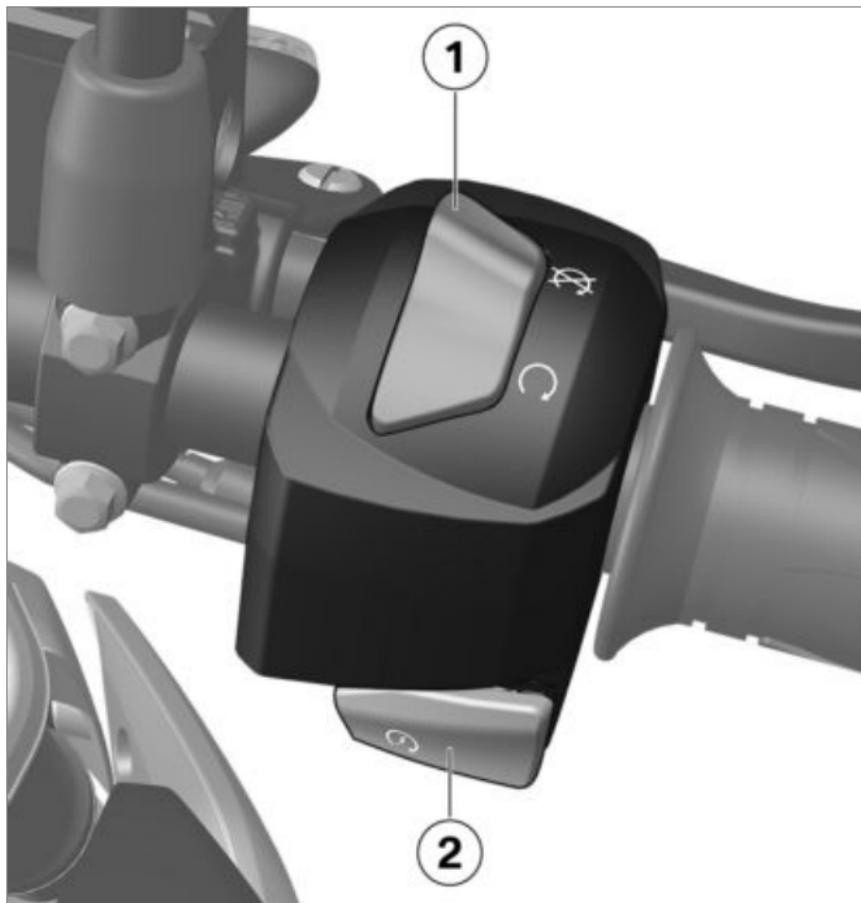


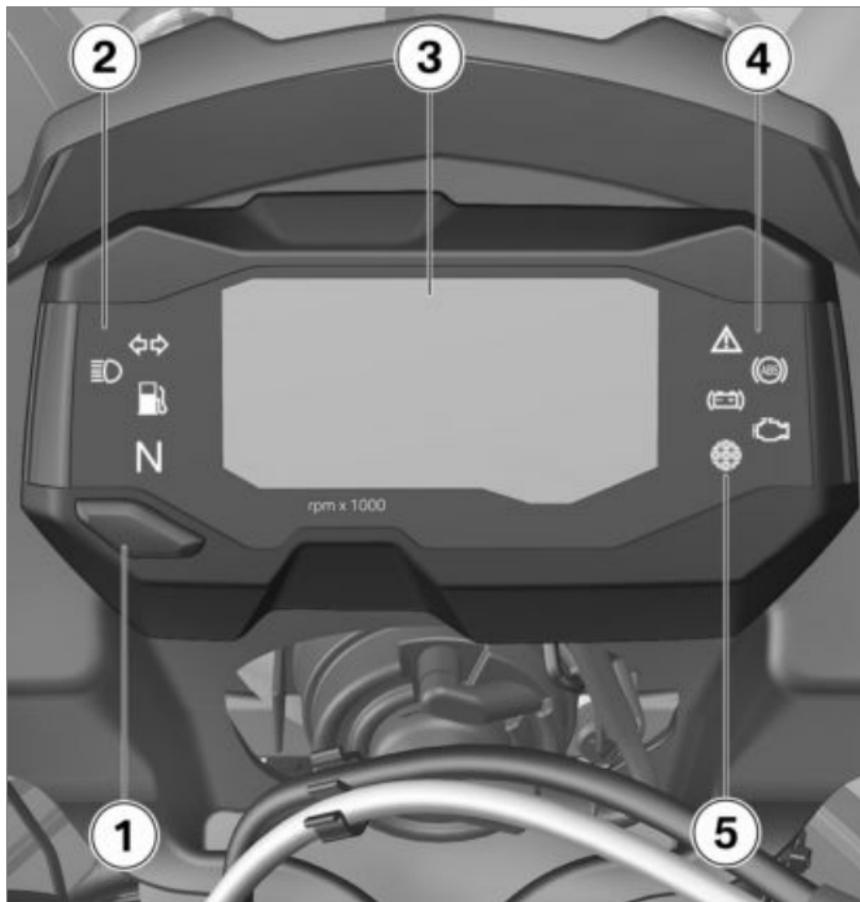
Multifunction switch, left

- 1 Headlight flasher (→ 38)
- 2 High beams/low beams rocker switch (→ 38)
- 3 ABS (→ 42).
- 4 Turn indicators (→ 38)
- 5 Horn

Multifunction switch, right

- 1 Emergency on/off switch (kill switch) (→ 37)
- 2 Starter button (→ 37) (→ 52)





Instrument cluster

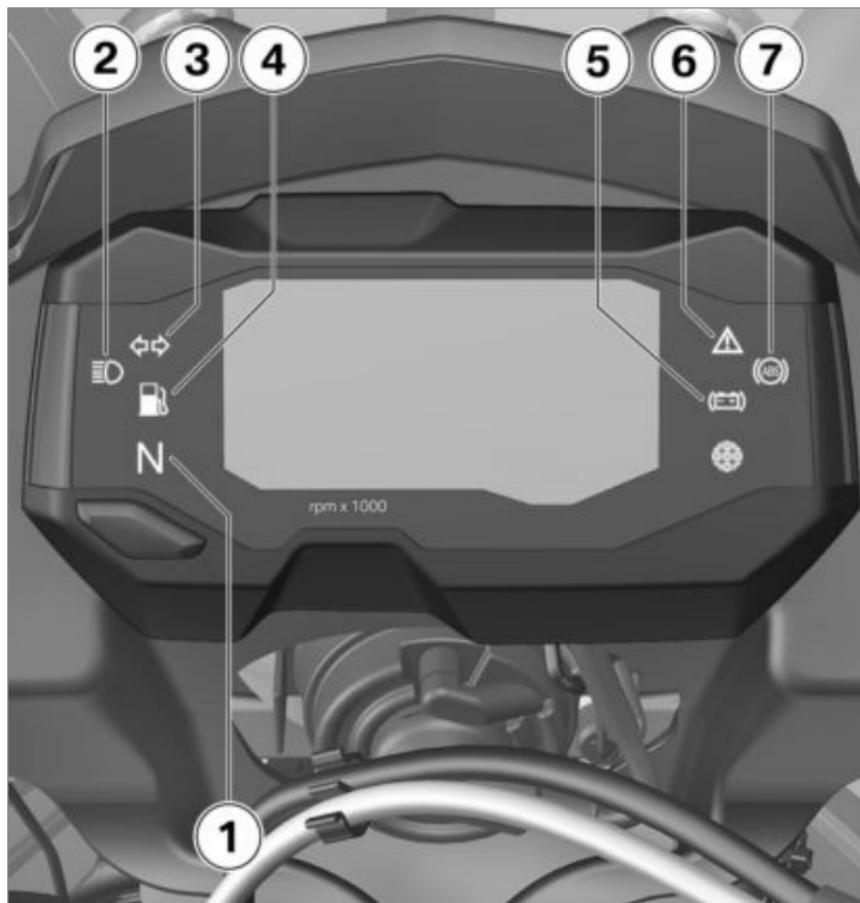
- 1 Button
Selecting display readings (➡ 40).
- 2 Indicator lights (➡ 24)
- 3 Multifunction display (➡ 25)
- 4 Warning lights (➡ 24)
- 5 Photosensor for brightness control in the multifunction display
Engine speed warner (➡ 55).

Displays

Warning and indicator lights.....	24
Multifunction display	25
Warning lights	26
Service display.....	32
Fuel reserve	33
Tachometer	33

Warning and indicator lights

- 1 Neutral indicator light
- 2 Headlight high beam indicator light (☰➔ 38)
- 3 Turn signal indicator light (☰➔ 38)
- 4 Low-fuel warning light (☰➔ 31) (☰➔ 33)
- 5 Warning light for vehicle voltage (☰➔ 29)
- 6 General warning light (☰➔ 26)
- 7 ABS warning light (☰➔ 30)





Multifunction display

- 1 Onboard computer (→ 40)
- 2 Indication range for values
- 3 Service display (→ 32)
- 4 Time (→ 41)
- 5 Warning symbols (→ 26)
- 6 Gear, "N" indicates neutral
- 7 Speed
- 8 Tachometer (→ 33)
- 9 Fuel level (→ 31) (→ 33)

Warning lights

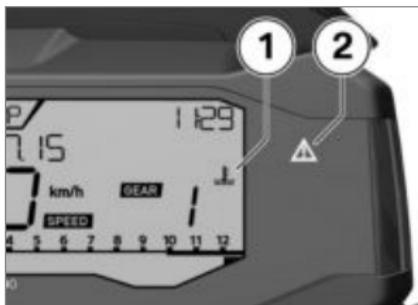
Displays

Warnings are displayed with appropriate warning lights.

If several warnings are active, all of the corresponding warning lamps and warning symbols will appear in the display.

You will find an overview of the potential warnings on the following pages.

in connection with the general warning lamp **2**. Depending on how urgent the warning is, the general warning lamp will either light up or flash red or yellow.



Warnings for which there are no separate warning lamps are represented by a warning symbol **1** in the multifunction display

Overview of warning indicators

Indicator and warning lights	Display text	Meaning
 Warning lamp for vehicle voltage lights up.		Vehicle voltage is too low (▬▬▬▶ 29)
 General warning light flashes red.	 Temperature symbol is displayed.	Coolant temperature too high (▬▬▬▶ 29)
 General warning light lights up yellow.	 The engine electronics symbol appears on the display.	Engine in emergency-operation mode (▬▬▬▶ 29)
 General warning light flashes yellow.	 The engine electronics symbol appears on the display.	Engine warning (▬▬▬▶ 30)
 ABS indicator light flashes.		ABS self-diagnosis not completed (▬▬▬▶ 30)
 ABS indicator light lights up.		ABS error (▬▬▬▶ 31)

Indicator and warning lights**Display text****Meaning**

ABS indicator light lights up.

ABS switched off (▬▬▬▶ 31)



Low-fuel warning light lights up.

Fuel down to reserve (▬▬▬▶ 31)



General warning light lights up yellow.

SERVICE is displayed continuously.

Service appointment has passed (▬▬▬▶ 32)

Vehicle voltage is too low



Warning lamp for vehicle voltage lights up.



WARNING

Failure of vehicle systems

Accident hazard

- Do not continue riding.◀

Possible cause:

Battery is faulty.

- Have the malfunction corrected as soon as possible at an authorized service facility, preferably an authorized BMW Motorrad Retailer.

Coolant temperature too high



General warning light flashes red.



Temperature symbol is displayed.



ATTENTION

Riding with overheated engine

Engine damage

- Be sure to observe the measures listed below.◀

Possible cause:

Coolant level is too low.

- Checking coolant level (➡ 78).

If coolant level is too low:

- Top up coolant (➡ 79).

Possible cause:

The radiator is dirty.

- Clean radiator (➡ 113).

Possible cause:

The fan or fan control is faulty.

- Have the malfunction corrected as soon as possible at an authorized service facility, preferably an authorized BMW Motorrad Retailer.

Possible cause:

The coolant circuit is faulty.

- If possible, allow the engine to cool down.
- Only ride in partial load range.
- If the coolant temperature is often too high, have the fault rectified as soon as possible by a specialist workshop, preferably an authorized BMW Motorrad retailer.

Engine in emergency-operation mode



General warning light lights up yellow.



The engine electronics symbol appears on the display.

WARNING

Unusual handling when the engine is in emergency operation

Accident hazard

- Avoid rapid acceleration and passing maneuvers. ◀

Possible cause:

The engine control unit has diagnosed a fault which impairs the engine performance or throttle response. The engine is running in the emergency-operation mode. In exceptional cases, the engine stops and can no longer be started.

- Have the malfunction corrected as soon as possible at an authorized service facility, preferably an authorized BMW Motorrad Retailer.
- » It is possible to continue riding, however the engine performance and engine speed range

may be impaired and not function as normal.

Engine warning



General warning light flashes yellow.



The engine electronics symbol appears on the display.

WARNING

Damage to engine during emergency operation

Accident hazard

- Drive slowly and avoid rapid acceleration and passing maneuvers.
- If possible, have the vehicle picked up and the fault eliminated at a specialist workshop, preferably an authorized BMW Motorrad retailer. ◀

Possible cause:

The engine control unit has diagnosed a fault, which can lead to a severe secondary fault. The engine is in the emergency-operation mode.

- Avoid high load and engine speed ranges if possible.
- Have the malfunction corrected as soon as possible at an authorized service facility, preferably an authorized BMW Motorrad Retailer.
- » Continued driving is possible, however it is not recommended.

ABS self-diagnosis not completed



ABS indicator light flashes.

Possible cause:



ABS self-diagnosis routine not completed

The ABS function is not available, as the self-diagnosis function has not been completed. (The motorcycle must reach a specified minimum speed before the system can check operation of the wheel sensors: min 3 mph (min 5 km/h))

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

ABS error



ABS indicator light lights up.

Possible cause:

The ABS control unit has detected an error. The ABS function is not available at all or is restricted.

- It is possible to continue riding the motorcycle if you make allowance for the failed or limited ABS function. You should also take account of the additional information on situations that can lead to an ABS fault (▶▶▶ 65).
- Have the malfunction corrected as soon as possible at an authorized service facility, preferably an authorized BMW Motorrad Retailer.

ABS switched off



ABS indicator light lights up.

Possible cause:

The ABS system has been deactivated by the rider.

- Activating ABS (▶▶▶ 43).

Fuel down to reserve



Low-fuel warning light lights up.



WARNING

Rough engine running or switching off of the engine due to a fuel shortage

Accident hazard, damage to catalytic converter

- Do not drive to the extent that the fuel tank is completely empty. ◀

Possible cause:

The fuel has all been used up; only the fuel reserve remains.



Fuel reserve

Approx. 1.1 quarts (Approx. 1 l)

- Refueling (➡ 59).

Service appointment has passed



General warning light lights up yellow.

SERVICE is displayed continuously.

Possible cause:

The driving performance or the date indicate that servicing is due.

- Have your motorcycle serviced regularly by a specialist workshop, preferably an authorized BMW Motorrad retailer.
- » The motorcycle remains operationally safe and is suitably road-safe.

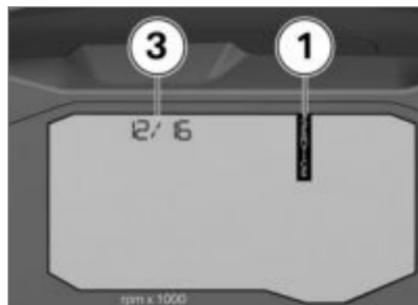
» The value of the motorcycle is preserved to the greatest possible extent.

Service display

Remaining distance until service is due and service due date



If service is due within 700 miles, the SERVICE inscription **1** and the remaining distance covered **2** will be displayed and counted down in steps of 100 miles. It is briefly displayed following the Pre-Ride-Check.



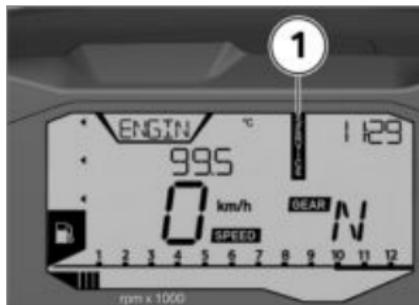
If service is due within a month, the SERVICE inscription **1** and the service date **3** are shown.



If service is due because of the distance covered and the date, the SERVICE inscription **1**, the remaining distance covered **2**

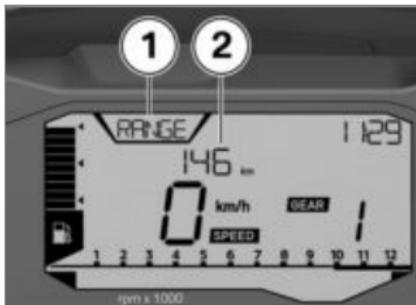
and the service date **3** will be shown.

Permanent SERVICE inscription



If the service appointment is overdue or the service distance covered is exceeded, **SERVICE 1** will be permanently displayed during operation.

Fuel reserve Cruising range



The range **RANGE 1** indicates how far you can ride **2** with the remaining fuel in the tank. This distance is calculated based on fuel quantity and average consumption.

- If the motorcycle is standing on its side stand, the motorcycle's inclined position will prevent the fuel level from being registered accurately. This is the reason why the range is recalculated only when the side stand is folded in.

- The travel range automatically appears in the multifunction display after the fuel reserve level is reached.
- After a refueling stop, the range is recalculated if the quantity of fuel in the tank is greater than the reserve quantity.
- The determined range is an approximate reading.

Tachometer



- 1** Unit for tachometer: 1000 revolutions per minute

- 2 Low engine speed range
- 3 Segments for tachometer
- 4 High engine speed range
- 5 Engine speed warner
( 55).

Operation

Ignition.....	36
Lights.....	38
Turn indicators.....	38
Multifunction display	40
Time and date	41
Resetting the trip distance	41
Resetting average data	42
Antilock Brake System (ABS)	42
Seat	43

Ignition

Vehicle keys

You are provided with 2 vehicle keys.

A single key fits the steering and ignition lock, the fuel filler cap and the seat lock.

Locking handlebars



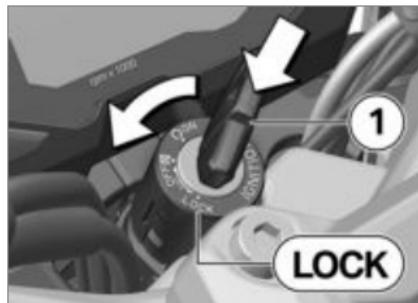
ATTENTION

Handlebars turned in wrong direction when motorcycle propped on side stand.

Component damage cause by tipping over

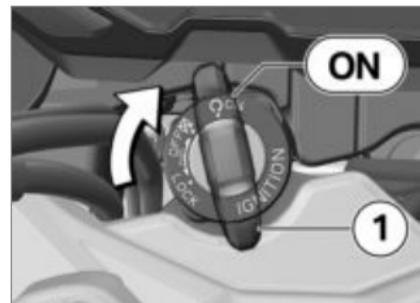
- On level ground, always turn the handlebars to the left to set the steering lock.
- Otherwise the angle of the ground determines whether the handlebars are set to the left or right. ◀

- If the slope of the road permits, turn the handlebars to the left.



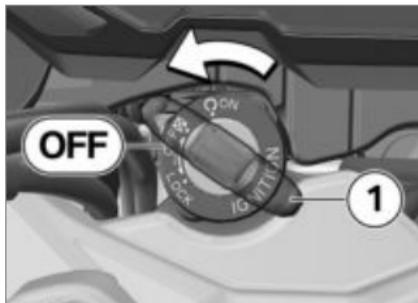
- Push the ignition key **1** into the steering lock and turn to the **LOCK** position while moving the handlebars slightly.
 - » Ignition, lights and all electrical circuits are switched off.
 - » Handlebars are locked.
 - » The vehicle key can now be removed.

Switching on ignition



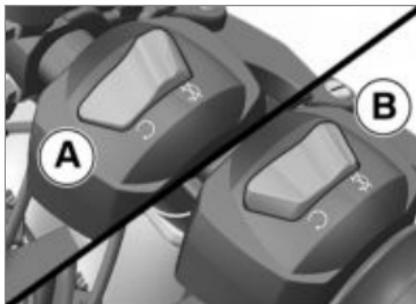
- Insert ignition key **1** into ignition switch/steering lock and turn to the **ON** position.
 - » Parking lights, lowbeam headlight, and all functional circuits are switched on.
 - » Engine can be started.
 - » Pre-Ride-Check is carried out. (▶▶▶ 53)
 - » ABS self-diagnosis is performed (▶▶▶ 54)

Switch off ignition



- Turn the ignition key **1** to the **OFF** position.
 - » Handlebars are not locked.
 - » The vehicle key can now be removed.

Emergency on/off switch (kill switch)



A = Operation mode



B = Emergency off (engine is off)

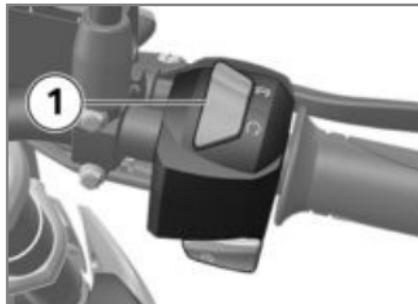
Emergency off or operation mode

! WARNING

Operation of the emergency ON/OFF switch when riding

Danger of falling due to blocking of rear wheel

- Do not operate the emergency ON/OFF switch when riding. ◀



- Push the emergency off switch **1** forwards to turn off the engine quickly and easily.
- Push the emergency off switch **1** back to start the engine.

Lights

Low-beam headlight and parking lights

The low beam and parking lamps turn on automatically when the ignition is switched on.



NOTICE

The low beam and the parking lamps drain the battery. Do not leave the ignition switched on longer than absolutely necessary. ◀

Operating high-beam headlight



- Press switch **1** forwards.
- » High beams are switched on.



High beam indicator light lights up.

- Press switch **1** backwards.
- » The blue high beam indicator light goes out.
- » Low beams are switched on.

Operating headlight flasher



- Press button **1**.
- » The high beams are switched on for the duration of the operation.

Turn indicators

Operating turn signals

- Switching on ignition (▶▶ 36).



- Press switch **1** to left.
 - » Left turn signal is turned on.
-  Indicator light of turn indicator flashes.
- Press switch **1** to right.
 - » Right turn signal is switched on.
-  Indicator light of turn indicator flashes.
- Press switch **1** into center position to turn off turn signals.

Multifunction display

Selecting display readings

Requirement

The motorcycle is stopped.

- Switch on the ignition.
 - » The onboard computer is displayed.
- Press the button **1** briefly and repeatedly until the desired value is displayed.

Possible displays:

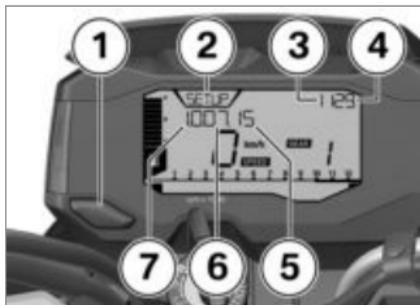
- Total distance traveled: ODO
- Trip distance 1: TRIP1
- Trip distance 2: TRIP2
- Coolant temperature: ENGIN
- Range: RANGE
- Average fuel consumption: CONS1
- Current fuel consumption: CONSA
- Average speed: SPEED
- Date: DATE
- Settings: SETUP



Time and date

Set clock

- Selecting display readings (☰ 40).
- » SETUP 2 is displayed.

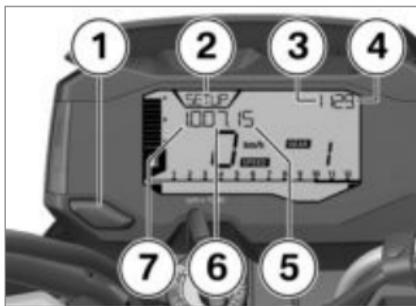


- Press and hold button 1.
- » The hours 3 flash.
- Briefly press button 1 to increment the hours 3.
- When the hours have been set as desired, press and hold button 1.
- » The minutes 4 flash.
- Briefly press button 1 to increment the minutes.

- When the minutes have been set as desired, press and hold button 1.
- » The time has not yet been saved!
- Setting the date (☰ 41).

Setting the date Requirement

Clock has been set.

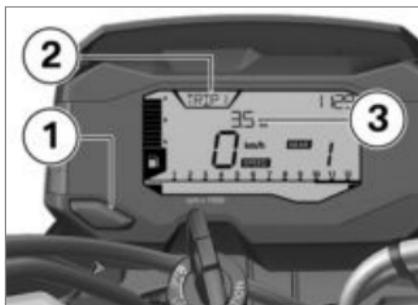


- Briefly press button 1 to increment the month 7.
- When the month has been set as desired, press and hold button 1.

- » Day 6 flashes.
- Briefly press button 1 to increment the day.
- When the day has been set as desired, press and hold button 1.
- » Year 5 flashes.
- Briefly press the button 1 to increment the year.
- When the year has been set as desired, press and hold button 1.
- » The clock and date settings have been saved.

Resetting the trip distance

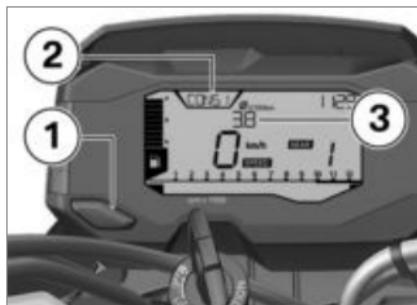
- Selecting display readings (☰ 40).
- » The trip distance to be reset 2 was selected.
- "TRIP1" or "TRIP2" is indicated.



- Press and hold button **1** until the value **3** has been reset.

Resetting average data

- Selecting display readings (►► 40).
 - » The average value to be reset **2** was selected.
- "CONSI" or "SPEED" is indicated.



- Press and hold button **1** until the value **3** has been reset.

Antilock Brake System (ABS)

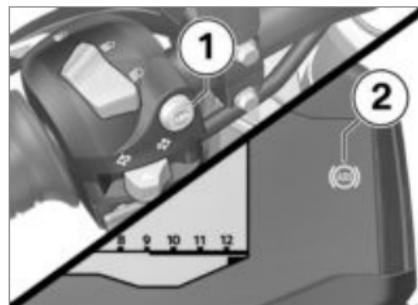
Deactivate ABS

- Switching on ignition (►► 36).



NOTICE

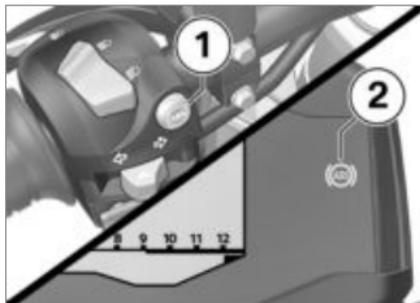
The ABS function can also be deactivated while driving.◀



- Press and hold button **1** until the ABS indicator and warning light lights up.
- Release button **1**.
-  ABS indicator light lights up.

» ABS is deactivated.

Activating ABS



- Press and hold button **1** until the ABS indicator and warning light **2** changes its display behavior.

 ABS indicator light goes out, and starts to flash if self-diagnosis has not been completed.

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



If the ABS indicator and warning light lights up after switching the ignition off and on and then continuing driving above the minimum speed, an ABS fault has occurred.

min 3 mph (min 5 km/h)

Seat

Removing seat

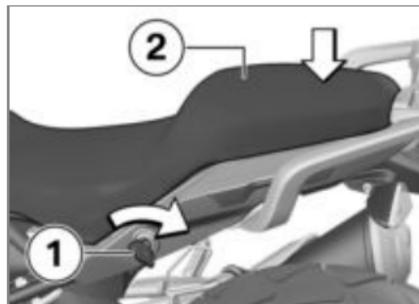


ATTENTION

Unstably parked motorcycle

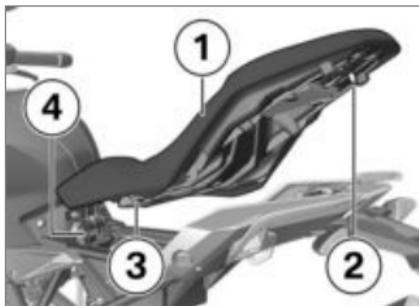
Component damage cause by tipping over

- Park motorcycle safely. ◀
- Park motorcycle, ensuring that support surface is firm and level.



- Push down on the rear part of the seat **2** to relieve the strain on the lock and at the same time unlock the seat lock with the vehicle key **1** by turning it clockwise.
- Lift seat at rear and remove.
- Lay the seat on a clean surface.

Install seat



- Insert seat **1** with the mount **3** centered into the battery tray **4**.
- Put on detent pin **2** and press into the locking mechanism.

Setting

Mirrors	46
Headlight	46
Spring preload	47

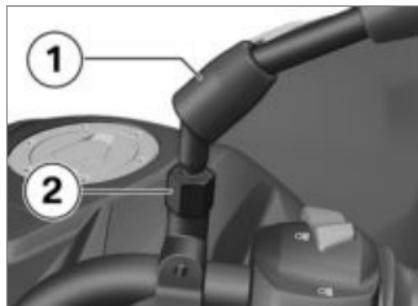
Mirrors

Adjusting mirrors



- Move mirror to the desired position by turning it.

Adjust mirror arm



- Slide up protective cap **1** for threaded connection on mirror arm.
- Loosen lock nut **2**.
- Turn mirror arm into desired position.
- Tighten lock nut to specified torque while holding mirror arm in place.



Right mirror (lock nut) to adapter

16 lb/ft (22 Nm) (Left-hand thread)



Left mirror (lock nut) to adapter

16 lb/ft (22 Nm)

- Slide protective cap **1** over screw fitting.

Headlight

Adjusting headlight for RHD/LHD traffic

This motorcycle's headlight features a symmetrical low beam. No special adjustments or procedures are required prior to operating the motorcycle in a country where traffic travels on the side of the road opposite to that of your home country (left-hand drive to right-hand drive or vice versa).

Headlamp range and spring preload

The headlight range generally remains constant due to the adjustment of the spring preload to the loading state. The headlight range is correctly adjusted at the factory.

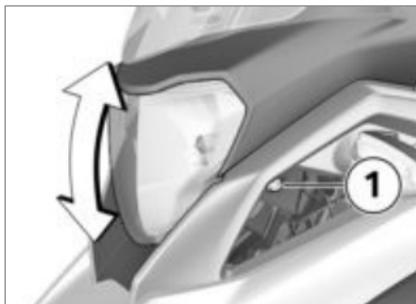
NOTICE

If there are doubts as to the correct headlight range, have the adjustment checked by a specialized workshop, preferably by an authorized BMW Motorrad retailer. ◀

Headlight range adjustment

Requirement

Despite adjustment of the spring preload, oncoming traffic is still blinded when the vehicle is heavily loaded.



- Loosen the screw **1** on both sides.
- Turn the headlamp around the screw axis to set the headlamp range.
- Tighten the screw **1** on both sides.

If the motorcycle is ridden again with lower payload:

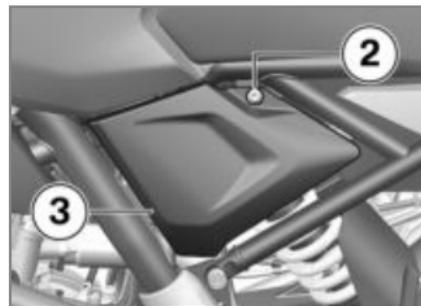
- Readjust the headlamp range.

Spring preload Setting

The spring preload must be adjusted to the weight of the rider, passenger and load. Higher weight requires a higher spring preload, lower weight requires a lower spring preload.

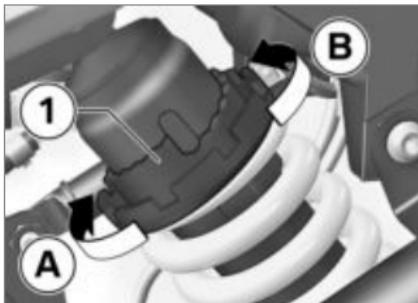
Adjusting spring preload at rear wheel

- Park motorcycle, ensuring that support surface is firm and level.



- Remove the screw **2**.

- Pull frame cover **3** out of the grommets and take off.



- To increase the spring preload, turn adjustment ring **1** in direction **A** using the vehicle tools.
- To decrease the spring preload, turn adjustment ring **1** in direction **B** using the vehicle tools.

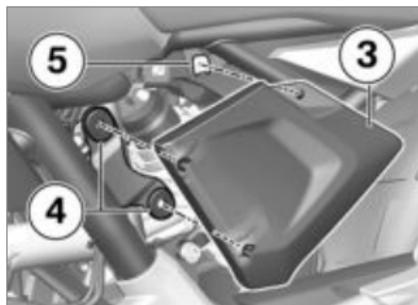


Basic setting of spring
preload, rear

Stage 1 (One-up without load)

Stage 5 (One-up with load)

Stage 10 (Two-up and load)



- Insert frame cover **3** into grommets **4**.
- Align frame cover **3** with push-in nut **5**.



- Install screw **2**.

Riding

Safety information	50
Checklist.....	52
Starting	52
Running in	55
Engine speed warner	55
Brakes	56
Parking your motorcycle	57
Refueling	58
Securing motorcycle for transport	60

Safety information

Rider's Equipment

Do not drive without the correct clothing:

- 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.

Load

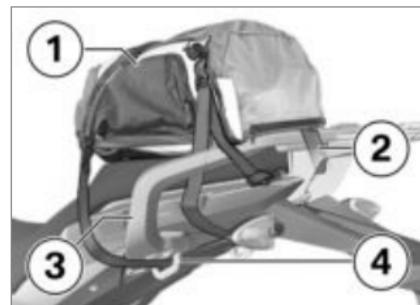


WARNING

Reduced riding stability caused by overloading and uneven loading

Accident hazard

- Do not exceed the gross weight limit and observe the loading information.◀
- Adjust spring preload settings to the gross vehicle weight.
 - with topcase^{OA}
 - or
 - with topcase Light^{OA}
- Observe the maximum payload and maximum speed as indicated on the label in the topcase (see also the chapter "Accessories").◀
- Make sure that weight is uniformly distributed between right and left.
- Store heavy pieces of luggage below.



- Securely lash down luggage **1**.
- Thread the straps **2** through the eyes **4** of the luggage rack **3** and tighten.

Speed

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

- Wrong spring system setting
- Unevenly distributed load
- Loose clothing
- Insufficient tire inflation pressure

- Tire tread in poor condition
- Etc.

Maximum speed



Maximum speed of the motorcycle is higher than the permissible maximum rated speed of the tires.

Risk of accident due to tire damage at high speed.

- Observe the maximum permissible speed for the tyres.◀

Risk of poisoning

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



Harmful exhaust gas

Danger of suffocation

- Do not inhale exhaust fumes.

- Do not run the engine in closed rooms.◀

Burn hazard



Intense heating up of engine and exhaust system while riding

Burn hazard

- After parking the motorcycle, make sure that no persons or objects come 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 remove the spark plug connector while the engine is running.
- Stop the engine immediately if it misfires.
- Use unleaded fuel only.
- Comply with all specified maintenance intervals.



Unburned fuel in the catalytic converter

Damage to catalytic converter

- Note the points listed for protection of the catalytic converter.◀

Danger of overheating



Engine idling for a lengthy period while at a standstill

Overheating due to insufficient cooling; in extreme cases vehicle fire

- Do not allow the engine to idle unnecessarily.
- After starting, ride off immediately. ◀

Modifications



ATTENTION

Modifications to the motorcycle (e.g. engine control unit, throttle valves, clutch)

Damage to the affected parts, failure of safety-relevant functions, expiration of warranty

- Do not make any modifications. ◀

Checklist

Observe checklist

- Use the following checklist to check your motorcycle at regular intervals.

Always before riding off

- Check brake operation (▣▣▣ 72).
- Check that the lights and signaling equipment function.
- Check clutch function (▣▣▣ 77).
- Check tire tread depth (▣▣▣ 80).
- Checking tyre pressure (▣▣▣ 80).
- Check that the luggage is secure.

At every third refueling stop

- Checking the engine oil level (▣▣▣ 71).
- Check front brake pad thickness (▣▣▣ 73).
- Check rear brake pad thickness (▣▣▣ 74).
- Checking front brake fluid level (▣▣▣ 75).
- Checking rear brake fluid level (▣▣▣ 76).
- Checking coolant level (▣▣▣ 78).
- Lubricate chain (▣▣▣ 90).
- Check chain tension (▣▣▣ 90).

Starting

Starting engine

- Switch on the ignition.
 - » Pre-Ride-Check is carried out. (▣▣▣ 53)
 - » ABS self-diagnosis is performed (▣▣▣ 54)
- Shift to neutral.



Idle mode indicator lamp lights up.



Idle mode appears on the display.

- Alternatively: when the gear is engaged, pull the clutch.



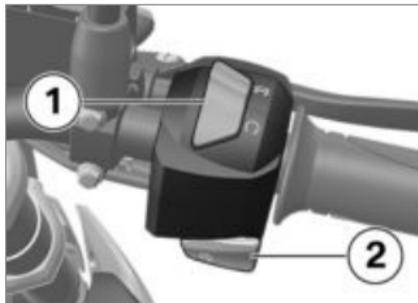
NOTICE

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. ◀

NOTICE

Hold the throttle grip closed, or only operate it slightly.◀

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



- Set the emergency-off switch **1** to operation.
-  Switch is in operation mode.
- Press the starter button **2**.

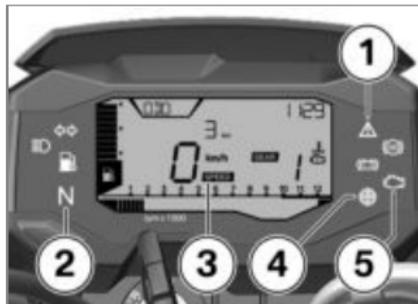
 Engine starts.

- » Consult the troubleshooting chart if the engine refuses to start. (▶▶ 118)

Pre-Ride-Check

After the ignition is switched on, the instrument cluster runs a test on the warning and indicator lights and the display, known as the "Pre-Ride-Check". Starting the engine before the test routine is completed will cancel the remainder of the routine.

Phase 1



The general warning light **1** lights up red.

The indicator lights **2** light up.

The display **3** shows the last active display.

The engine speed warning **4** lights up.

The warning lights **5** light up.

Phase 2

The general warning light **1** changes from red to yellow.

Phase 3

The warning and indicator lights and the engine speed warner go out or adopt their functions for the operation.

If the service is due, this is displayed for a short time.

If one of the warning and indicator lights is **not** displayed:



WARNING

Defective warning lights

Lack of display of malfunctions

- Check the display of all indicator and warning lights. ◀
- Have the malfunction corrected as soon as possible at an authorized specialist workshop, preferably an authorized BMW Motorrad retailer.

ABS self-diagnosis

The self-diagnosis routine is determining whether BMW Motorrad ABS is ready for operation. The self-diagnosis routine launches automatically when you switch on the ignition.

Phase 1

- » Check on system components monitored by diagnostic system while motorcycle is parked.



ABS indicator light flashes.

Phase 2

- » Check wheel sensors while starting off.



ABS indicator light flashes.

ABS self-diagnosis completed

- » The ABS indicator and warning light goes out.



ABS self-diagnosis routine not completed

The ABS function is not available, as the self-diagnosis function has not been completed. (The motorcycle must reach a specified minimum speed before the system can check operation of the wheel sensors: min 3 mph (min 5 km/h))

If an ABS error is displayed after the ABS self-diagnosis is completed:

- It remains possible to continue riding. It must be noted that the ABS function is not available.
- Have the malfunction corrected as soon as possible at an authorized specialist workshop, preferably an authorized BMW Motorrad retailer.

Running in Engine

- In the period preceding the initial inspection attempt to change rpm and engine load as frequently as possible, avoiding extended periods at constant rpm.
- Choose curvy, slightly hilly sections of road if possible.
- Observe the engine run-in speeds.

 Engine run-in speed
<6000 min ⁻¹ (Mileage 0...186 miles (0...300 km))
no full throttle (Mileage 0...621 miles (0...1000 km))

- Observe mileage, after which the running-in check should be performed.

 Mileage until running-in check
311...746 miles (500...1200 km)

Brake pads

New brake pads have to bedded in before they can achieve their optimum frictional force. This initial reduction in braking efficiency can be compensated for by exerting greater pressure on the brake levers.

WARNING

New brake pads

Extension of the braking distance, accident hazard

- Brake early.◀

Tyres

New tires have a smooth surface. This must be roughened by riding in a restrained manner at various lean angles until the tires are run in. Only once the surface has been roughened can the tires achieve maximum grip.

WARNING

Loss of adhesion of new tires on wet roads and at extreme angles

Accident hazard

- Always think well ahead and avoid extreme angles.◀

Engine speed warner Requirement

The vehicle is not yet in 6th gear and the maximum acceleration is to be reached.



- Accelerate.

 The engine speed warning **1** lights up when the following engine speed is reached:
 $>10000 \text{ min}^{-1}$

- Ensure that the following speed is not exceeded:



Maximum engine speed

$\text{max } 10800 \text{ min}^{-1}$

- Shift up to the next gear.

Brakes

How do you achieve the shortest stopping distances?

The dynamic load distribution between the front and rear wheel changes during braking. The heavier you brake, the greater the weight transfer to the front wheel. Increases in the load on an individual wheel are accompanied by a rise in the effective braking force that the wheel can provide.

To achieve the shortest braking distance, the front wheel brake must be rapidly pulled to the point where ABS activates, the pressure point must be held and the rear wheel brake must be activated at the same time. This procedure provides ideal exploitation of the extra weight transfer to the front wheel. The clutch

should also be disengaged at the same time.

Locking up of the front wheel is prevented by BMW Motorrad ABS.

With the frequently instructed "forced braking," in which the brake pressure is generated as quickly as possible and with great force, dynamic load distribution lags behind the progressive increases in deceleration rate and the braking force cannot be completely transferred to the road surface. Due to the missing wheel load, the ABS must prevent a tendency of the front wheel to lock up even with minimal braking action. This results in a reduced braking action.

Descending mountain passes

WARNING

Braking only with the rear-wheel brake when descending mountain passes

Reduced of braking action, destruction of the brakes caused by overheating

- 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 rotors 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 off-road

WARNING

Poorer braking action due to moisture and dirt

Accident hazard

- 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.
- On slopes point the motorcycle uphill and engage 1st gear.

ATTENTION

Poor ground conditions in area of stand

Component damage cause by tipping over

- Always check that the ground under the stand is level and firm.◀
- Fold out side stand and park motorcycle.

ATTENTION

Loading of the side stand with additional weight

Component damage cause by tipping over

- Do not sit on the motorcycle when it is parked on the side stands. ◀
- If the slope of the road permits, turn the handlebars to the left.

Center stand

– with center stand^{OA}

- Switch off engine.



ATTENTION

Poor ground conditions in area of stand

Component damage cause by tipping over

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



ATTENTION

Center stand folds if subject to sharp movements.

Component damage cause by tipping over

- Do not sit on the motorcycle while it is resting on the center stand. ◀
- Fold out center stand and jack up motorcycle.
- On slopes point the motorcycle uphill and engage 1st gear.

Refueling

Fuel specifications Requirement

To achieve optimal fuel consumption, the fuel should be sulfur-free or very low in sulfur content wherever possible.



ATTENTION

Refueling with leaded fuel

Damage to catalytic converter

- Do not refuel with leaded gasoline or gasoline with metallic additives, e.g. manganese or iron. ◀



ATTENTION

Use of Ethanol E85 as fuel

Damage to the engine and fuel supply

- Do not refuel with E85, i.e. fuel with an ethanol content of 85 %, or with Flex Fuel. ◀
- Pay attention to the fuel grade.



Recommended fuel quality

Normal unleaded (max. 15 % ethanol, E15)
87 AKI (91 ROZ/RON)
87 AKI

Refueling procedure

WARNING

Fuel is highly flammable

Fire and explosion hazard

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

ATTENTION

Component damage

Component damage due to over-filled fuel tank

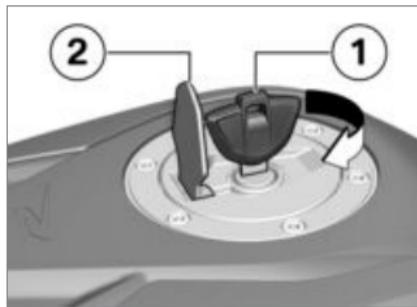
- If the fuel tank is overfilled, the excess fuel will flow into the carbon canister and lead to component damage there.
- Only fill the fuel tank to the lower edge of the fuel filler neck.◀

ATTENTION

Contact of fuel and plastic surfaces

Damage to surfaces (become unattractive or cloudy)

- Immediately clean plastic surfaces after contact with fuel.◀
- Make sure ground is level and firm and place motorcycle on side stand.



- Open protective cap **2**.
- Unlock fuel-tank cap **1** with ignition key by turning clockwise, then swivel it up.



- Refuel with a fuel quality meeting the specifications listed above, continuing until fuel is no higher than lower edge of filler neck **3**. While doing so, pay attention to the bridge in the filler neck and use caution so that fuel does not spray out.

NOTICE

If refueling is carried out after running on fuel reserve, the resulting filling capacity must be greater than the fuel reserve so that the new fill level is detected

and the fuel reserve indicator light is switched off.◀



NOTICE

The "usable fuel quantity" specified in the technical data is the fuel quantity, which can be refueled if the fuel tank was completely emptied, i.e., if the engine dies off due to lack of fuel.◀



Usable fuel quantity

Approx. 2.9 gal (Approx. 11 l)



Fuel reserve

Approx. 1.1 quarts (Approx. 1 l)

- Unlock fuel tank cap **1** with ignition key by turning clockwise and close with firm pressure.
- Remove vehicle key and close protective cap.

Securing motorcycle for transport

- Protect against scratching all components where tensioning straps are routed. For example, use adhesive tape or soft cloths.



ATTENTION

Motorcycle tips to the side when raising

Component damage cause by tipping over

- Secure the motorcycle against tipping to the side, preferably

with the assistance of a second person.◀

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



ATTENTION

Pinching of components

Component damage

- Do not pinch components, e.g. brake lines or wiring harnesses.◀
- Lay straps at front over lower fork bridge on both sides.

- Tension straps downward.



- Fasten rear straps on both sides to the brackets for the passenger footrests and then tighten them.
- Tighten all straps evenly.
- » The vehicle is pulled down against its springs with the suspension compressed strongly.

Technology in detail

General instructions.....	64
Anti-Lock Brake System	64

General instructions

You'll find more information on the subject of technology at: bmw-motorrad.com/technik

Anti-Lock Brake System

How does the 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 brake force is exceeded when the driver increases the brake pressure, the wheels begin to lock and driving stability is lost. A fall can occur. Before

this situation can occur, ABS intervenes and adapts brake pressure to the maximum transferable brake force, so the wheels continue to turn and driving stability is maintained irrespective of the condition of the road surface.

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 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.

WARNING

Lifting off of the rear wheel due to heavy braking

Accident hazard

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

Special situations

To detect the tendency of the wheels to lock up, the speeds of the front and rear wheel are compared. If the system registers implausible data for an extended period of time it will deactivate the ABS as safety precaution and a display will alert you to an ABS error. A self-diagnosis routine must be completed before the error will be displayed. Apart from problems on the BMW Motorrad ABS, unusual

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

Unusual riding conditions:

- Heating up on an auxiliary stand at idle speed or with gear engaged.
- Rear wheel locked-up for a longer period of time by engine brake, e.g. when riding down steep hills.

How important is regular maintenance?

WARNING

Brake system not regularly serviced

Accident hazard

- To ensure that the BMW Motorrad ABS is in a

properly maintained condition, it is vital that the specified service intervals are kept to. ◀

Reserves for safety

The potentially shorter stopping 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.

Be careful in curves! When you apply the brakes on a corner, the motorcycle's weight and momentum take over and even BMW Motorrad ABS is unable to counteract their effects.

Maintenance

General instructions.....	68
Tool kit	68
Front wheel stand	69
Rear-wheel stand	70
Engine oil	71
Brake system	72
Clutch	77
Coolant	78
Rims and tires	80
Wheels	81
Chain	89
Light sources	91
Jump-starting.....	95
Battery.....	96
Fuses	99

Diagnostic connector	101
----------------------------	-----

General instructions

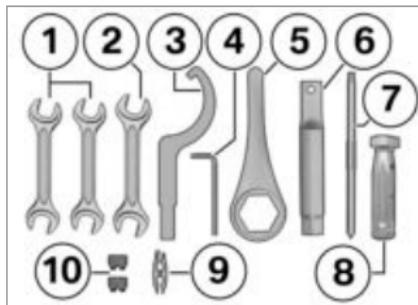
The 'Maintenance' chapter describes work involving the checking and replacement of wear parts that can be performed with a minimum of effort.

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 an authorized workshop, preferably your authorized BMW Motorrad retailer.

Tool kit



- 1** Open-ended wrench
Wrench size: 12/13 mm
– Adjust chain tension (▣▣▣ 89).
- 2** Open-ended wrench
Wrench size: 10/16 mm
– Adjust mirror arm (▣▣▣ 46).
– Removing battery (▣▣▣ 97).
- 3** Hook wrench
– Adjusting spring preload at rear wheel (▣▣▣ 47).
- 4** Allen screw
5 mm
- 5** – Headlight range adjustment (▣▣▣ 47).
- 6** Box wrench
Wrench size: 27 mm
– Removing rear wheel (▣▣▣ 85).
– Adjust chain tension (▣▣▣ 89).
- 7** Extension for hook wrench and ring wrench
- 8** Reversible screwdriver insert with cross heads
– Replacing front and rear turn indicator light sources (▣▣▣ 93).
- 9** Screwdriver handle
- 10** Gripping clamp
Gripping clamp is affixed to the battery carrier.
– Replace fuses (▣▣▣ 99).
- 10** Fuses
10 A, 15 A and 30 A

- 10** – Reserve fuses are stuck in the fuse box and hang on the cable for the data link connector.

Front wheel stand

Mount front wheel stand



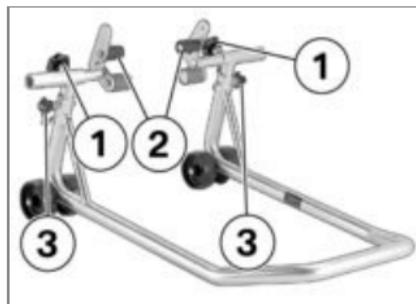
Use of the BMW Motorrad front wheel stand without an additional center or auxiliary stand

Component damage cause by tipping over

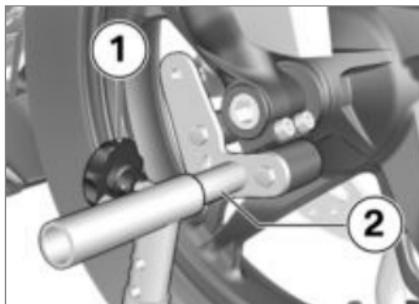
- Place the motorcycle on the center stand or an auxiliary stand before lifting it with the BMW Motorrad front wheel stand.◀
- with center stand^{OA}
- Place motorcycle on center stand, ensuring that it is rest-

ing on a firm and level support surface.◀

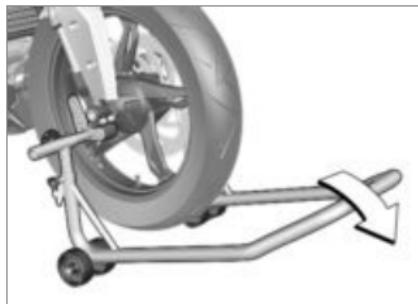
- without center stand^{OA}
- Place motorcycle on an auxiliary stand; BMW Motorrad recommends the BMW Motorrad auxiliary stand.
- Mounting rear-wheel stands (►► 70).◀
- Use basic stand with front wheel mount.
 - » The base stand and its accessories are available through your authorized BMW Motorrad retailer.



- Loosen clamping screws **1**.
- Push two mounts **2** outward, continuing until front suspension fits between them.
- Use locating pins **3** to set front wheel stand to desired height.
- Center front wheel stand relative to front wheel and push it against front axle.



- Align two mounts **2** so that front suspension rests securely on them.
- Tighten the clamping bolts **1**.



ATTENTION

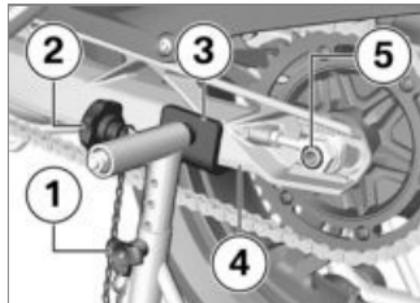
Center stand retracts if motorcycle is lifted too high.

Component damage caused by tipping over

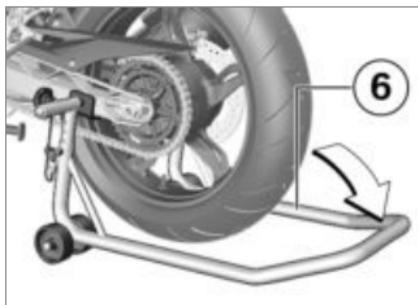
- When raising the motorcycle, make sure that the center stand remains on the ground. ◀
- Apply uniform pressure to push front wheel stand down and raise motorcycle.

Rear-wheel stand

Mounting rear-wheel stands



- Set the height of the stand **3** so that it raises the rear wheel slightly off the ground.
- Ensure that the stand height is the same on the left and right, and secure the mount **3** on either side with the bolts **1**.
- Set the mounts **3** to the width of the rear wheel swinging arm **4** and secure using clamping bolts **2**.
- Ensure you do not cover the axle **5**.



- Position the rear-wheel stand **6**.

ATTENTION

Motorcycle tips to side

Component damage cause by tipping over

- Secure motorcycle against tipping away to side.◀
- Push the rear-wheel stand down until the motorcycle is standing upright and the handle of the rear-wheel stand is resting on the floor.

Engine oil

Checking the engine oil level

Requirement

The engine is at operating temperature.

ATTENTION

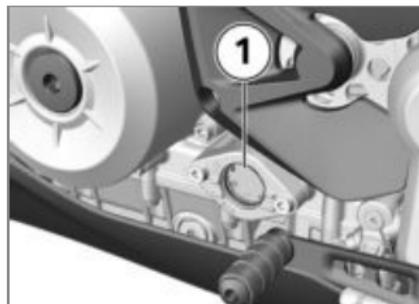
Use of too little or too much engine oil

Engine damage

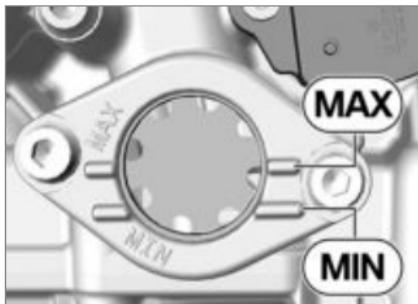
- Always make sure that the oil level is correct.◀
 - with center stand^{OA}
- Place motorcycle on center stand, ensuring that it is resting on a firm and level support surface.◀
- without center stand^{OA}
- Place motorcycle on an auxiliary stand; BMW Motorrad rec-

ommends the BMW Motorrad auxiliary stand.

- Alternatively: hold the motorcycle upright, preferably with the assistance of a second person.◀



- Read oil level on the display **1**.



Specified level of engine oil

Between the **MIN** and **MAX** marks (Engine at operating temperature, vehicle is vertical)



Engine oil, quantity for topping up

max 185 ml (Difference between **MIN** and **MAX**)

If oil level is below the minimum mark **MIN**:

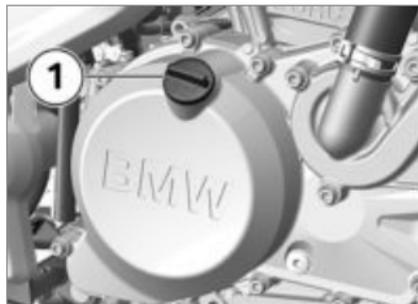
- Topping up engine oil (➡ 72).

If oil level is above the maximum mark **MAX**:

- Have oil level corrected at an authorized service facility, preferably an authorized BMW Motorrad retailer.

Topping up engine oil

- Park motorcycle, ensuring that support surface is firm and level.
- Wipe area around oil fill location to clean it.



- Remove cap **1** of oil fill location.



ATTENTION

Use of too little or too much engine oil

Engine damage

- Always make sure that the oil level is correct. ◀
- Add engine oil up to specified level.
- Checking the engine oil level (➡ 71).
- Install cap of oil fill location **1**.

Brake system

Check brake operation

- Operate the brake lever.
 - » There is a clearly perceptible pressure point.
- Actuate the footbrake lever.
 - » There is a clearly perceptible pressure point.

If no clear pressure points are perceptible:



ATTENTION

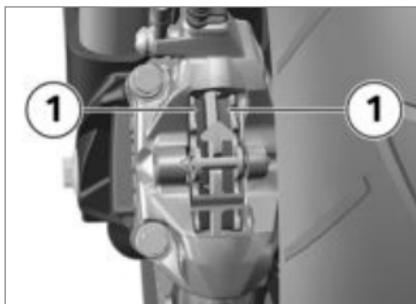
Improper working on the brake system

Endangering of the operating safety of the brake system

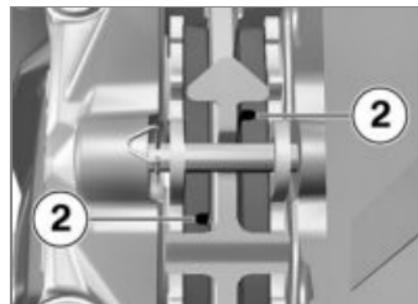
- Have all work on the brake system carried out by experts. ◀
- Have the brakes checked at an authorized workshop, preferably an authorized BMW Motorrad retailer.

Check front brake pad thickness

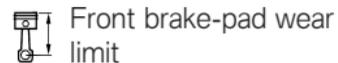
- Park motorcycle, ensuring that support surface is firm and level.



- Turn handlebars to the right.
 - » The brake pads **1** can be seen from the rear.
- Conduct a visual inspection of the brake pad thickness.



- Check the wear indicators **2**.



min 0.04 in (min 1.0 mm)
(Friction lining without carrier plate)

If the wear indicating marks are no longer visible:

WARNING

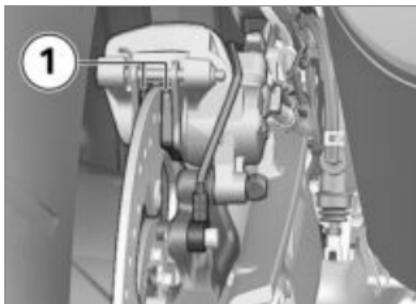
Dropping below the minimum pad thickness

Reduced braking action, damage to the brake

- 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 brake pads replaced at an authorized service facility, preferably an authorized BMW Motorrad retailer.
- BMW Motorrad recommends you only install genuine brake pads from BMW Motorrad.

Check rear brake pad thickness

- Park motorcycle, ensuring that support surface is firm and level.

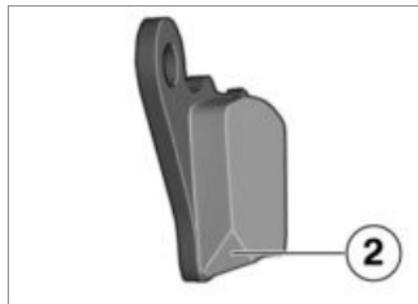


WARNING

Dropping below the minimum pad thickness

Reduced braking action, damage to the brake

- In order to ensure the operating reliability of the brake system, make sure that the brake pads are not worn beyond their minimum thickness. ◀
- Conduct a visual inspection of the brake pad thickness. Direction of view: From rear looking at brake pads **1**.



- Inspect the chamfer **2**.



Rear brake-pad wear limit

min 0.04 in (min 1.0 mm)
(Friction material without carrier plate)

If the chamfer is no longer visible:

- Have brake pads replaced at an authorized service facility, preferably an authorized BMW Motorrad retailer.

Checking front brake fluid level

WARNING

Insufficient brake fluid in the brake-fluid reservoir

Considerably reduced braking performance caused by air in the brake system

- Adjust the riding mode immediately until the fault is rectified.
- Check brake fluid level regularly. ◀



- Set the handlebars so that the brake fluid reservoir is horizontal.
- Check the brake fluid level in the sight glass **1**.

NOTICE

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



 Front brake fluid level

Brake fluid, DOT4

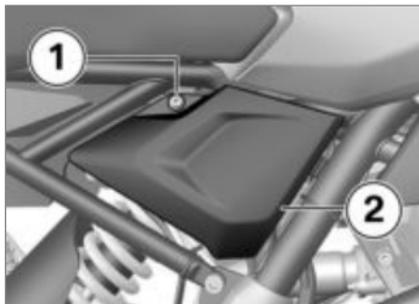
You should never allow the brake fluid level to drop below the **MIN** mark. (Brake-fluid reservoir horizontal)

If brake fluid level falls below the approved level:

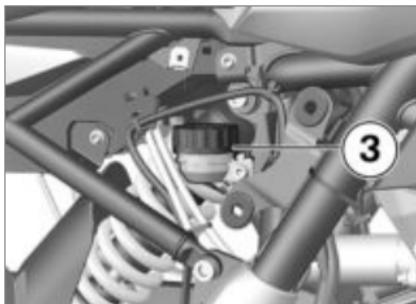
- Have defect corrected as soon as possible by an authorized workshop, preferably an authorized BMW Motorrad retailer.

Checking rear brake fluid level

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



- Remove the screw **1**.
- Pull frame cover **2** out of the grommets and take off.



- Check brake fluid level in brake fluid reservoir **3**.

NOTICE

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



Rear brake fluid level

Brake fluid, DOT4

You should never allow the brake fluid level to drop below the **MIN** mark. (Brake-fluid reservoir horizontal)

If brake fluid level falls below the approved level:

WARNING

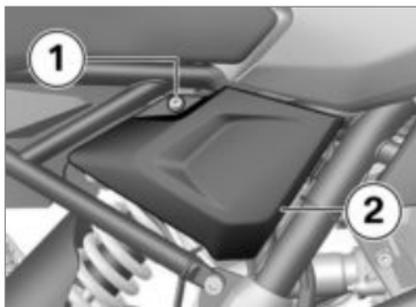
Insufficient brake fluid in the brake-fluid reservoir

Considerably reduced braking performance caused by air in the brake system

- Adjust the riding mode immediately until the fault is rectified.
- Check brake fluid level regularly. ◀
- Have defect corrected as soon as possible by an authorized workshop, preferably an authorized BMW Motorrad retailer.



- Insert frame cover **2** into grommets **4**.
- Align frame cover **2** with push-in nut **5**.



- Fit the screw **1**.

Clutch

Check clutch function

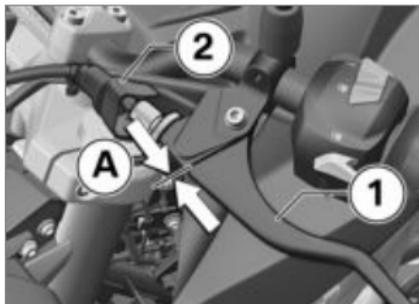
- Pull back the clutch lever.
 - » The clutch must fully disengage. Signs that the clutch is fully disengaged:

- Easy to change gear
- Easy to switch to idling

If this is not the case, or there is a lack of power transmission after the clutch has engaged:

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

Checking clutch lever play



- Loosen the cover **2**.
- Operate clutch lever **1** until resistance is felt.
- In this position, measure the clutch lever play **A** between the clutch lever fitting and the clutch lever.



Clutch lever play

0.04...0.08 in (1...2 mm) (on the handlebar fitting, handlebars in straight-ahead position, with cold engine)

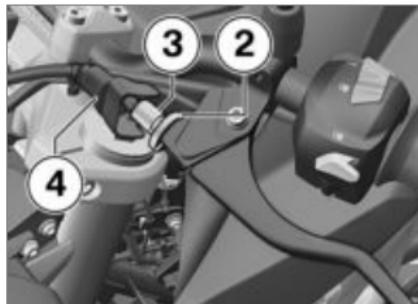
If clutch lever play is outside tolerance:

- Adjusting clutch lever play (▶▶▶ 78).

If clutch lever play is within tolerance:

- Install cover **2**.

Adjusting clutch lever play



- Loosen the cover **4**.
- Loosen the knurled nut **2**.
- Lift the clutch cable to relieve the adjusting sleeve **3**.

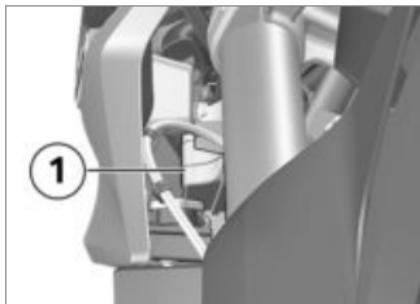
- To increase clutch lever play: screw the adjusting sleeve **3** into the handlebar lever.
- To reduce clutch lever play: unscrew the adjusting sleeve **3** away from the handlebar lever.
- Lock the adjusting sleeve **3** using the knurled nut **2**.
- Checking clutch lever play (▶▶▶ 78).
- Repeat the steps until the clutch lever play is set correctly.
- Install cover **4**.

Coolant

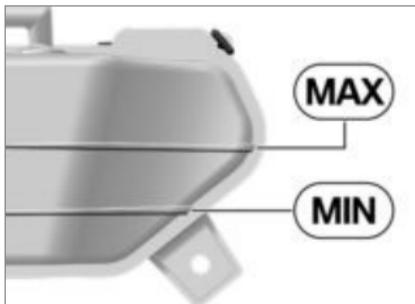
Checking coolant level Requirement

The engine is cold.

- Hold the motorcycle upright, preferably with the assistance of a second person.



- Read off coolant level on the coolant expansion tank **1**. Direction of view: from front looking at inside of right-hand side panel.

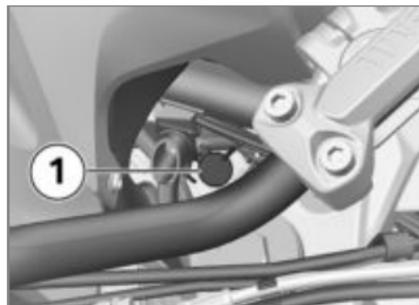



 Coolant, specified level
 between **MIN** and **MAX** marks on the expansion tank (Engine is cold, motorcycle is upright.)

If coolant level drops below approved level:

- Top up coolant (➡ 79).

Top up coolant



- Turn handlebars to left.
- Open cap **1** of the coolant expansion tank.
- Add coolant up to specified level. To do this, use a funnel with a filler neck or hose.


 Coolant top-up quantity
 Antifreeze and anti-corrosion agent
 150 ml (Difference between the **MIN** and **MAX** markings)

- Checking coolant level (▣▣▣▣➔ 78). When the set level for coolant is reached:
- Close the cap of the coolant expansion tank.

Rims and tires

Checking wheel rims

- Park motorcycle, ensuring that support surface is firm and level.
- Subject wheel rims to visual inspection for defects.
- Have damaged rims checked and, if necessary, replaced by a specialist service facility, preferably an authorized BMW Motorrad retailer.

Check tire tread depth



WARNING

Riding with heavily worn tyres

Risk of accident due to poorer rideability

- If necessary, replace the tyres before the legally specified minimum tread depth is reached.◀
- Park motorcycle on a level, firm surface.
- Measure tire tread depth in main tread grooves with wear indicators.



NOTICE

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.

Checking tyre pressure



WARNING

Incorrect tire inflation pressure

Poorer handling characteristic of motorcycle, reduction of tire service life

- Ensure proper tire inflation pressure.◀



WARNING

Valve inserts open of their own accord at high speeds

Sudden loss of tire inflation pressure

- Use valve caps with rubber sealing ring and screw on firmly.◀

- Park motorcycle, ensuring that support surface is firm and level.
- Check tyre pressures against data below.

 Tire pressure, front
24.7 psi (1.7 bar) (with cold tires, one-up and two-up riding)
 Tire pressure, rear
27.6 psi (1.9 bar) (with cold tires, one-up and two-up riding)

If tyre pressure is too low:

- Correct tyre pressure.

Wheels

Affect of wheel sizes on suspension control systems

The wheel sizes are very important for the ABS. The diameter and width of the wheels stored in the control unit have particular significance as the basis for all necessary calculations. Any change to these sizes, caused for example by a switch to wheels other than the standard installed ones, can seriously affect handling.

The sensor rings are essential for correct wheel speed detection; they too must match the motorcycle's control systems and consequently cannot be replaced. If you want to equip your motorcycle with different wheels, please contact a specialist service facility, preferably a BMW Motorrad retailer.

Removing front wheel

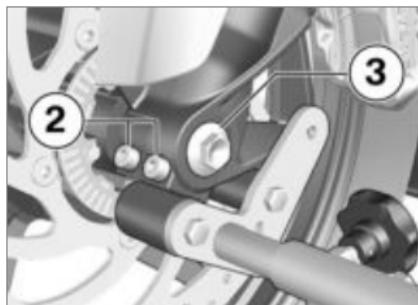
- with center stand^{OA}
- Place motorcycle on center stand, ensuring that it is resting on a firm and level support surface.<1
- without center stand^{OA}
- Place the motorcycle on an auxiliary stand. BMW Motorrad recommends you use the BMW Motorrad rear-wheel stand.
- Mounting rear-wheel stands (► 70).<1
- Raise front of motorcycle, preferably using a BMW Motorrad front wheel stand, continuing until the wheel rotates freely.
- Mount front wheel stand (► 69).
- Mask off the parts of the wheel rim that could be scratched

when removing the brake caliper.

- Push apart the brake pads a little.



- Loosen clamping screws **1**.



- Remove screw **3**.
- Loosen clamping screws **2**.
- Slightly press the quick-release axle inward for a better grip on the right side.



- Pull quick-release axle **4** out while supporting the front wheel.
- Place front wheel down and roll it forward out of the front suspension. Ensure you do not damage the wheel speed sensor in the process.



ATTENTION

Unintentional pressing together of brake pads

Component damage when mounting the brake caliper or when pressing the brake pads apart

- Do not actuate the brakes with the brake caliper removed.◀
- Remove spacer bushing **5** from the wheel hub.

Install front wheel

WARNING

Use of a wheel which does not comply with series specifications

Malfunctions in ABS operation

- Please see the information on the effect of wheel sizes on the ABS system at the beginning of this chapter.◀

ATTENTION

Tightening of screwed connections with incorrect tightening torque

Damage or loosening of screwed connections

- Always have the tightening torques checked by a specialized workshop, preferably an authorized BMW Motorrad retailer.◀



- Mount spacing bushing **5** on left side in wheel hub.

ATTENTION

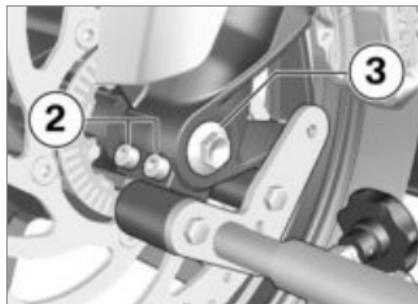
Front wheel installation opposite the running direction

Accident hazard

- Observe running direction arrows on tire or rim.◀
- Roll front wheel into front suspension. When doing so, make sure that the wheel speed sensor is not damaged.



- Lift front wheel and install quick-release axle **4**.
- Remove front wheel stand and firmly compress front forks. Do not operate the brake lever at the same time.
- Mount front wheel stand (▮▮▮▮▶ 69).



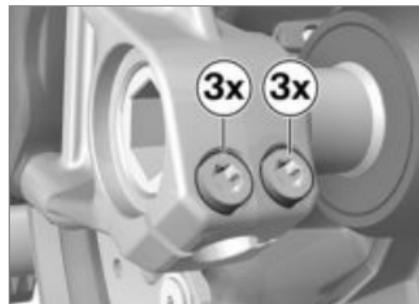
- Install screw **3** with specified torque. Brace quick-release axle on the right side at the same time.



Screw in front wheel quick-release axle

37 lb/ft (50 Nm)

- Tighten clamping bolts **2** to appropriate torque.



Clamping screw in axle adapter

Tightening sequence: Tighten the screws 6 times, alternating between one and the other each time

14 lb/ft (19 Nm)



- Tighten clamping bolts **1** to appropriate torque.



Clamping screw in axle adapter

Tightening sequence: Tighten the screws 6 times, alternating between one and the other each time

14 lb/ft (19 Nm)

- Remove front wheel stand.
- Remove adhesive tape from the wheel rim.



WARNING

Brake pads do not contact the brake disc

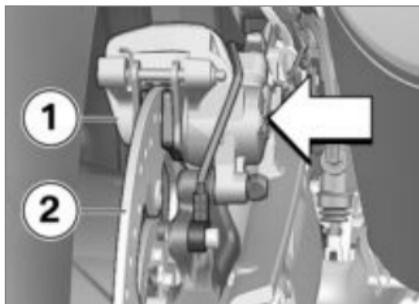
Risk of accident due to delayed braking effect.

- Before driving off, check that the braking effect kicks in without any delay.◀
- Engage the brakes repeatedly, continuing until the brake pads seat against the rotors.

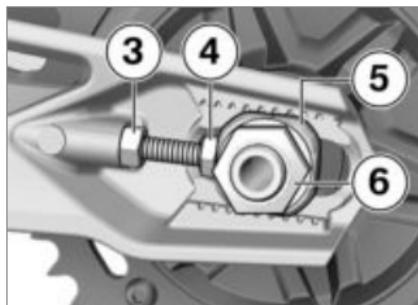
Removing rear wheel

- with center stand^{OA}
- Place motorcycle on center stand, ensuring that it is resting on a firm and level support surface.<
- without center stand^{OA}
- Raise motorcycle, preferably with a BMW Motorrad rear-wheel stand.
- Mounting rear-wheel stands (▶▶ 70).<
- Support the rear wheel, e.g., with a wooden block, so that

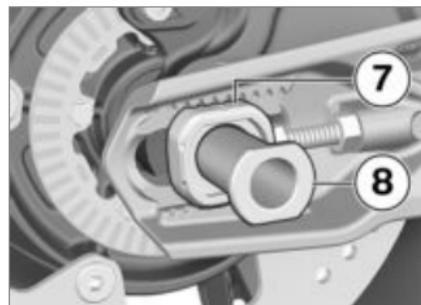
it cannot fall down after the quick-release axle is removed.



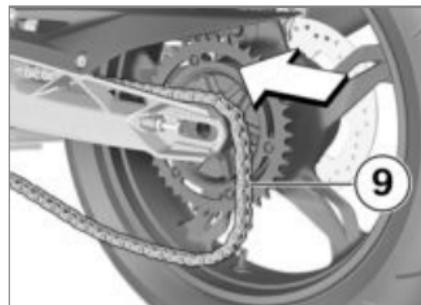
- Press brake caliper **1** against brake disk **2**.
- » Brake piston has been pushed back.



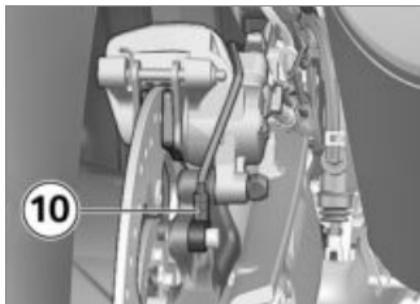
- Remove nut **6** using the right tool from the toolkit.
- Remove washer.
- Loosen lock nuts **3** on left and right.
- Screw in the adjusting bolts **4** on the left and right.
- Remove the chain tensioner **5** and push the quick-release axle to the right as far as it will go.



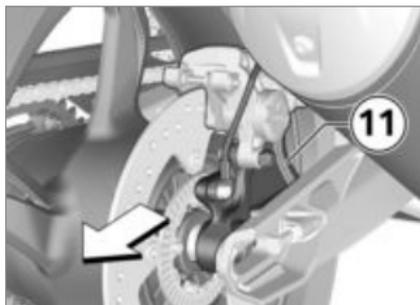
- Remove the quick-release axle **8** and remove the chain tensioner **7**.



- Roll rear wheel as far forward as possible and remove chain **9** from chain sprocket.



- Make sure that the wheel speed sensor **10** is not damaged when rolling out the rear wheel.



- Roll rear wheel toward rear out of swing arm while pulling brake caliper carrier **11** toward

rear until rear-wheel rim can be guided past it.

NOTICE

The camshaft sprocket and the spacing bushings on the left and right are loosely inserted in the wheel. During removal, make sure that the parts are not damaged or lost. ◀

Install rear wheel

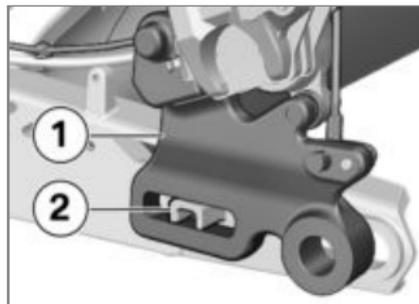
ATTENTION

Tightening of screwed connections with incorrect tightening torque

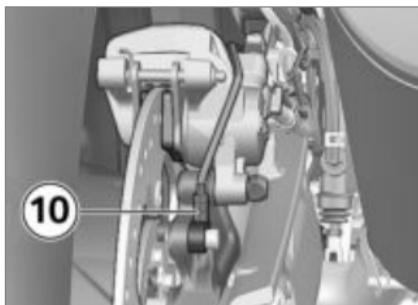
Damage or loosening of screwed connections

- Always have the tightening torques checked by a specialized workshop, preferably an authorized BMW Motorrad retailer. ◀

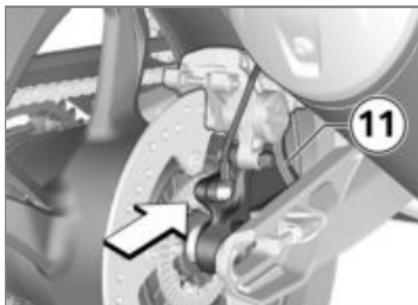
- Roll rear wheel on support into swing arm until brake-caliper support can be installed.



- Place brake-caliper support **1** on the guide **2**.

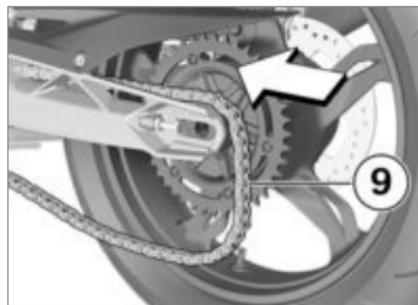


- Make sure that wheel speed sensor **10** is not damaged when rolling in rear wheel.

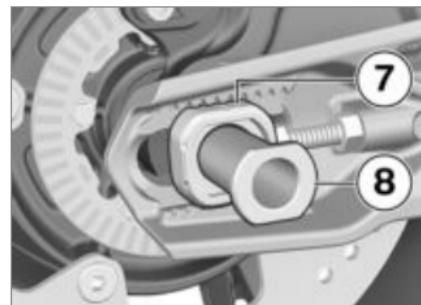


- Roll rear wheel further into swing arm while simultaneously

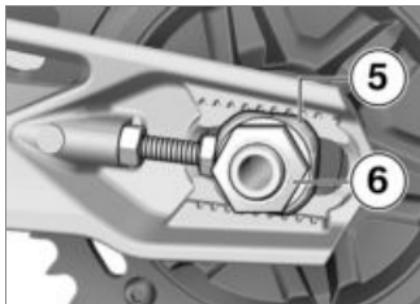
pushing brake caliper carrier **11** toward the front.



- Roll rear wheel as far forward as possible and lay chain **9** on sprocket.



- Insert quick-release axle **8** and chain tensioner **7** in the swinging arm; insert brake-caliper support and rear wheel, making sure that the quick-release axle interlocks into chain tensioner.



- Insert chain tensioner, left **5**.
- Install nut **6** with washer, however do not tighten yet.

⚠ WARNING

Brake pads do not contact the brake disc

Risk of accident due to delayed braking effect.

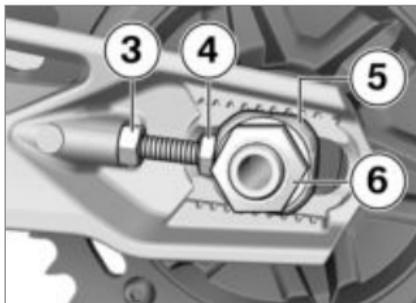
- Before driving off, check that the braking effect kicks in without any delay. ◀
- Engage the brakes repeatedly, continuing until the brake pads seat against the rotors.

- Adjust chain tension (➡ 89).

Chain

Adjust chain tension

- Park motorcycle, ensuring that support surface is firm and level.



- Loosen the nut **6**.
- Loosen lock nuts **3** on left and right.
- Adjust chain tension with adjusting screws **4** on left and right.
- Check chain tension (➡ 90).

- Ensure that the notch in the chain tensioner **5** is adjusted to the same scale value on the right and left.
- Tighten locknuts **3** on left and right to the specified torque.

 Locknut of drive-chain tensioning screw

14 lb/ft (19 Nm)

- Tighten nut **6** to the specified torque.

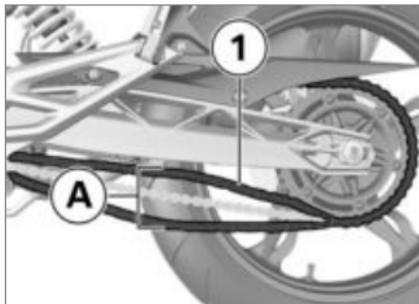
 Rear-wheel quick-release axle in swinging arm

74 lb/ft (100 Nm)

- Once you have tightened the rear wheel quick-release axle, complete the following task again:
- Check chain tension (➡ 90).

Check chain tension

- Park motorcycle, ensuring that support surface is firm and level.
- Turn the rear wheel until the position with the lowest chain sag is reached.



- Using a screwdriver, push chain **1** up and down in the middle between the chain take-up roller and chain sprocket and measure the chain tension **A**.



Chain sag

1.6...2 in (40...50 mm) (Motorcycle unloaded on side stand)

If the chain tension is outside the approved tolerance:

- Adjust chain tension (☛ 89).

Lubricate chain



ATTENTION

Insufficient cleaning and lubrication of the drive chain

Increased wear

- Clean and lubricate the drive chain regularly. ◀
- Lubricate the drive chain every third fuel stop.
- After driving through water or dust and dirt perform the lubrication at shorter intervals.
- Switch off ignition and engage Neutral.

- Clean drive chain with suitable cleaning agent, dry and apply chain lubricant.
- To extend and maximize the chain's service life BMW Motorrad recommends using BMW Motorrad chain lubricant or:



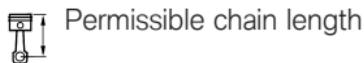
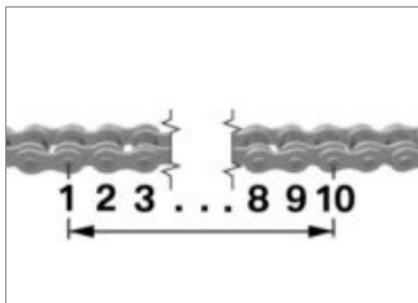
Lubricant

Chain spray

- Wipe off excess lubricant.

Check chain wear

- Engage 1st gear.
- Rotate rear wheel toward front of motorcycle until the chain is tensioned.
- Determine chain length below rear wheel swinging arm.



Permissible chain length

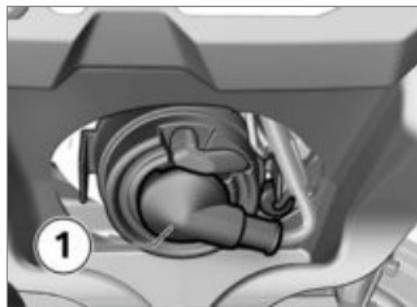
max 5.7 in (max 144.30 mm)
(measured over the **center** of
10 rivets, chain under tension)

If the chain has reached the maximum approved length:

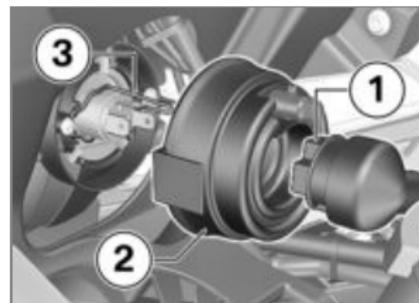
- Contact an authorized service facility, preferably an authorized BMW Motorrad retailer.

Light sources

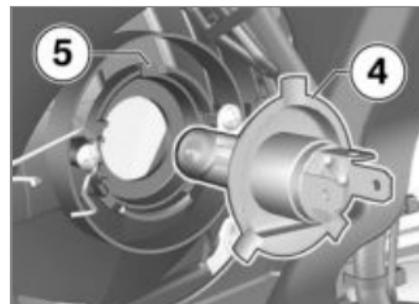
Replacing light sources for low-beam and high-beam headlight



- Loosen connector **1**.



- Remove cover **2**.
- Loosen wire spring **3** from the locking and open.



- Pull light source **4** out of socket **5**.

- Replace defective light source.

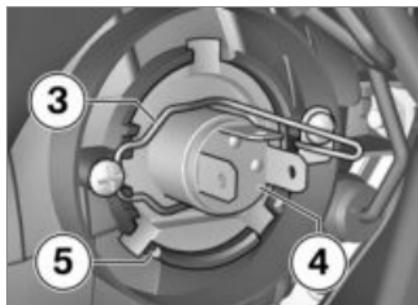
NOTICE

Light sources featuring specification ratings for higher levels of illumination are commercially available as special accessories. These light sources have a shorter service life than conventional light sources and also generate more heat. Under some circumstances the high levels of heat radiation can damage the headlight assembly. ◀

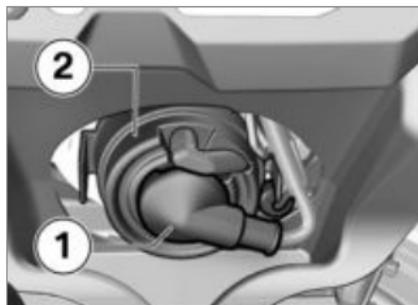
 Bulb for low-beam and high-beam headlight

H4 / 12 V / 60 W / 55 W

- To protect the glass against soiling, grasp the light source **4** by the base only.

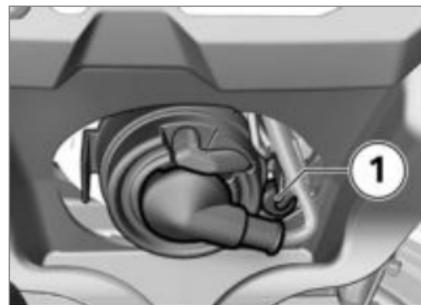


- Align the light source **4** and press into the socket **5**.
- Install wire spring **3**.

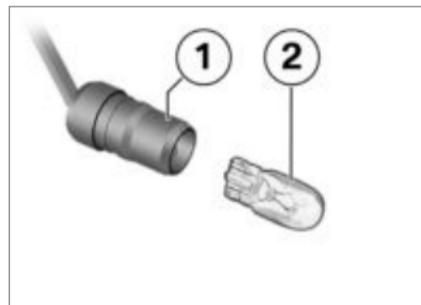


- Install cover **2**.
- Attach plug **1**.

Replacing parking light light source

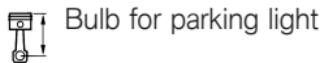


- Pull the socket **1** out of the headlight housing.



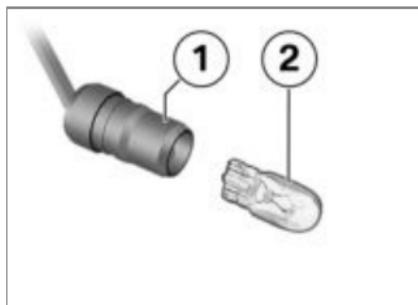
- Pull light source **2** out of socket **1**.

- Replace defective light source.

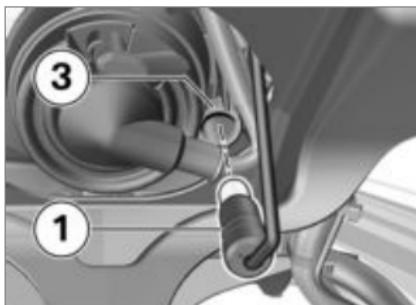


W5W / 12 V / 5 W

- To prevent contaminants from being deposited on the glass surface, always use a clean, dry cloth to hold the light source.



- Insert light source **2** into socket **1**.



- Insert socket **1** into the headlight housing **3**.

Replacing front and rear turn indicator light sources

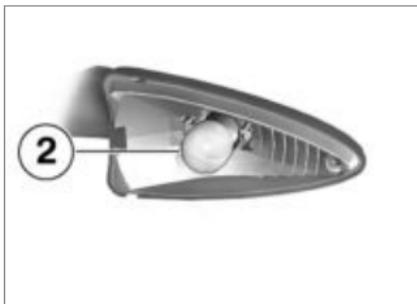
- Park motorcycle, ensuring that support surface is firm and level.
- Turn off ignition.



- Remove the screw **1**.



- Remove the lens from the housing by pulling it outward on the side with the screw.



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



Bulbs for flashing turn indicators, front

RY10W / 12 V / 10 W

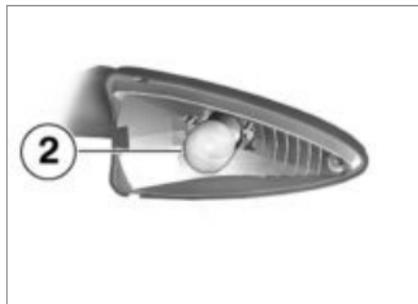


Bulbs for flashing turn indicators, rear

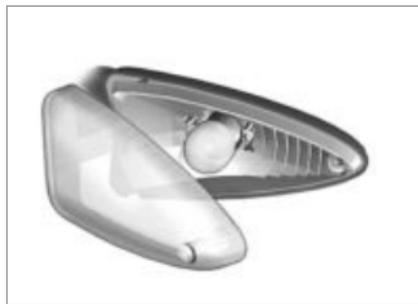
RY10W / 12 V / 10 W

- To prevent dirt from being deposited on the glass surface,

always use a clean, dry cloth to hold the light source.



- Install light source **2** by turning clockwise in light housing.



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



- Fit the screw **1**.

Replacing LED tail light

If the LEDs in the tail lamp fail, the tail lamp must be replaced. In this case:

- Contact an authorized service facility, preferably an authorized BMW Motorrad retailer.

Replace license plate light

If the LEDs for the license plate lamp in the tail lamp fail, the tail lamp must be replaced. In this case:

- Contact an authorized service facility, preferably an authorized BMW Motorrad retailer.

Jump-starting

CAUTION

Touching live parts of the ignition system when the engine is running

Electrocution

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

ATTENTION

Current too high when jump-starting the motorcycle

Cable fire or damage to the motorcycle electronics

- Do not jump-start the motorcycle using the power socket, only via the battery terminal.◀

ATTENTION

Contact between crocodile clips of jump leads and motorcycle

Danger of short circuit

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

ATTENTION

Jump-starting with a voltage higher than 12 V

Damage to the motorcycle's electronics

- The battery of the donor vehicle must not exceed a voltage of 12 V.◀
- Do not disconnect battery from onboard electrical system for jump-starting procedure.
- Removing seat (► 43).

- Allow engine on support motorcycle to run while jump-starting.
- Begin by clamping one end of the red jumper cable to the positive terminal of the discharged battery and clamping the other end to the positive terminal of the donor battery.
- Then connect one end of the black jump cables to the negative terminal of the donor battery, and the other end to the negative terminal of the discharged battery.
- Start engine of motorcycle 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 idle for a few minutes before disconnecting the jump cables.

- Disconnect the jump cable from the negative terminal first, then disconnect the second cable from the positive terminal.
- Install seat (➡ 44).

Battery

Maintenance instructions

Correct battery maintenance combined with proper charging and storage procedures extends the battery's service life, and is also required for warranty claims. Compliance with the points below is important in order to maximize battery life:

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

- Do not turn the battery upside down.



ATTENTION

Discharging of the connected battery by the vehicle electronics (e.g. clock)

Total discharge of battery leading to a rejection of warranty claims

- During riding breaks of more than 4 weeks, connect a trickle-charger to the battery.◀

Charging a connected battery



ATTENTION

Charging the battery connected to the vehicle using the battery terminals

Damage to the motorcycle's electronics

- Disconnect the battery before charging on the battery terminals.◀
- Disconnect battery from motorcycle (➡ 97).

Charging a disconnected battery

- Disconnect battery from motorcycle (➡ 97).
- 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.



NOTICE

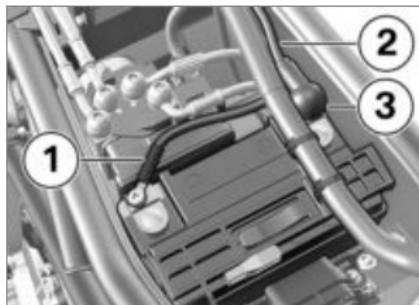
In the case of longer periods when the motorcycle is not being used, the battery must be recharged regularly. See the instructions for caring for your battery. Always fully recharge

the battery before returning it to use.◀

- Connect battery to vehicle (▣▣▣ 97).

Disconnect battery from motorcycle

- Park motorcycle, ensuring that support surface is firm and level.
- Removing seat (▣▣▣ 43).



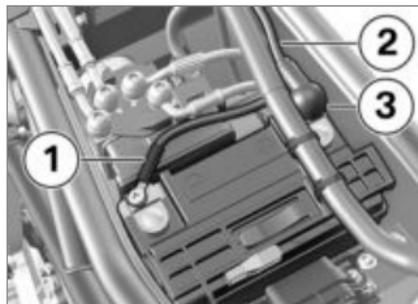
ATTENTION

Incorrect battery disconnection

Danger of short circuit

- Follow the disconnection sequence.◀
- Disconnect the battery earth lead **1** first.
- Then push the protective cap **3** to the side and disconnect the positive battery cable **2**.

Connect battery to vehicle

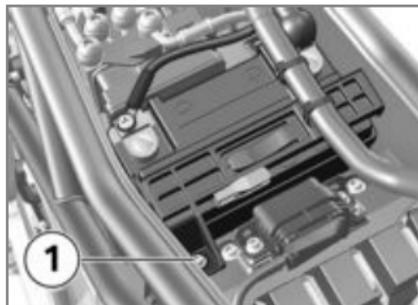


- First install the positive battery cable **2** and cover with the protective cap **3**.
- Then install negative battery cable **1**.

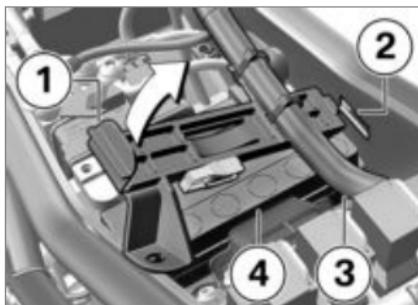
- Install seat (▣▣▣ 44).

Removing battery

- Removing seat (▣▣▣ 43).
- Disconnect battery from motorcycle (▣▣▣ 97).

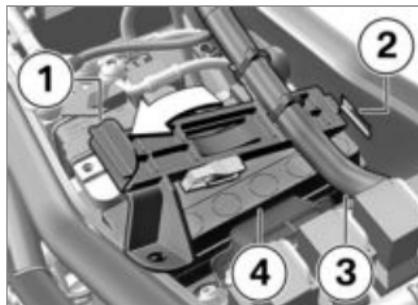


- Remove the screw **1**.

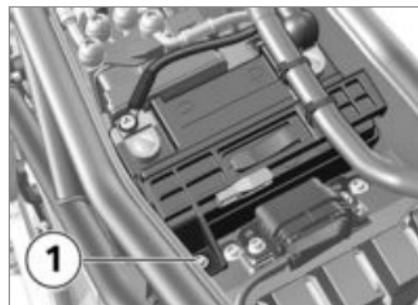


- Unhook and lift up the holder **1** on the left.
- Unloosen the holder from the battery tray **2** on the right.
 - » The holder is now only attached to the wiring harness **3**.
- Push the holder and the wiring harness to the right out of the way.
 - » You can now remove the battery.
- Lift the battery **4** up and out. Work it back and forth slightly if it is difficult to remove.

Install battery



- Place the battery **4** in the battery compartment with the positive terminal on the right in the direction of travel.
- Attach the right side of the holder to the battery tray **2**.
- Fold the holder **1** down and attach on the left.
 - » The wiring harness **3** is now back in its initial position.



- Fit the screw **1**.
- Connect battery to vehicle (▣▣▣ 97).
- Install seat (▣▣▣ 44).

NOTICE

If the vehicle has been disconnected from the battery for a long time, the current date must be entered in the instrument cluster to make sure the service display is working properly.◀

- Setting the date (▣▣▣ 41).

Fuses

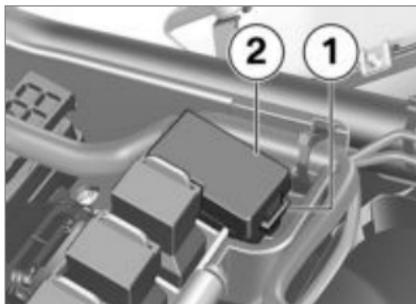
Replace fuses

ATTENTION

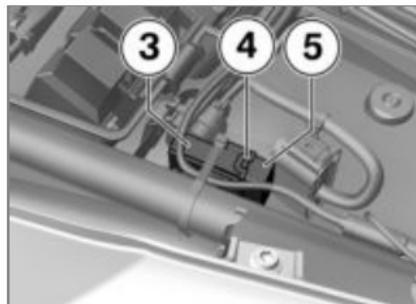
Bypassing defective fuses

Risk of short circuit and fire

- Do not bypass defective fuses.
- Replace defective fuses with new fuses.◀
- Switch off ignition.
- Park motorcycle, ensuring that support surface is firm and level.
- Removing seat (➡ 43).



- Press locking device **1**.
- Open the fuse box **2**.
- Replace defective fuse in accordance with following fuse assignment diagram.
 - » Fuse assignments (➡ 100)
- Close the fuse box **2** again. Make sure that the lock **1** has engaged.



- Press the lock **4** in on both sides.
- Remove the cap **5**.
- Replace defective fuse in accordance with following fuse assignment diagram.
 - » Fuse assignments (➡ 100)
- Replace the cap **5**. Make sure that the lock **4** on the fuse box **3** engages.

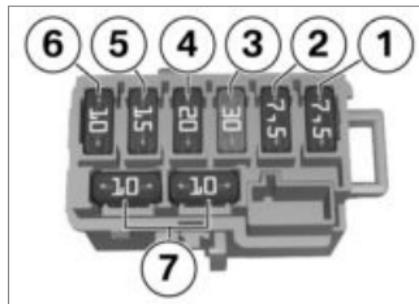
NOTICE

If the fuses blow frequently, have the electrical system checked by an authorized specialized work-

shop, preferably an authorized BMW Motorrad retailer. ◀

- Install seat (➡ 44).

Fuse assignments



Fuse 1

7.5 A (Oxygen sensor, evaporative emission valve, secondary air system, injection system, electric fuel pump)



Fuse 2

7.5 A (Heated grips, data link connector, engine control unit, additional onboard socket, ABS pressure modulator)



Fuse 3

30 A (Main fuse)



Fuse 4

20 A (ABS pressure modulator)



Fuse 5

15 A (Lighting, horn)



Fuse 6

10 A (Instrument cluster, engine control unit)

– Spare fuses **7**



Fuse **8** for radiator fan



Fuse for radiator fan

7.5 A (Radiator fan)

Diagnostic connector

Removing the diagnostic connector

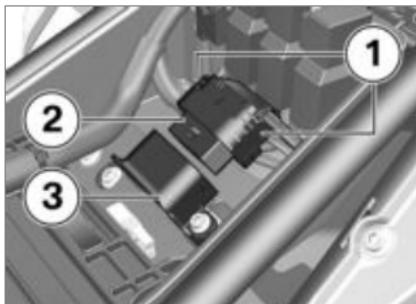


CAUTION

Incorrect procedure followed when disconnecting the data link connector for the On-Board Diagnostics.

Motorcycle experiences malfunctions

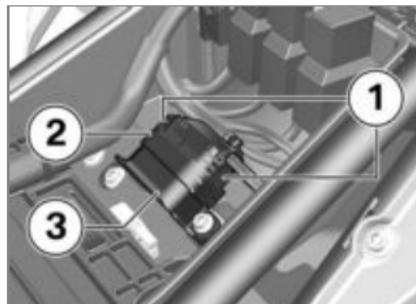
- Only have the data link connector disconnected by a specialist workshop or other authorized persons during your next BMW Service appointment.
- Have the work performed by appropriately trained staff.
- Refer to the vehicle manufacturer specifications. ◀
- Removing seat (▣► 43).



- Press the locks **1** together.
- Remove the diagnostic connector **2** from the bracket **3**.
 - » The diagnosis and information system interface can be connected at the diagnostic connector **2**.

Securing data link connector

- Disconnect the diagnosis and information system interface.



- Seat diagnostic connector **2** into the bracket **3**.
 - » The locks **1** engage.
- Install seat (▣► 44).

Accessories

General instructions.....	104
Heated handlebar grips	104
Power socket	105
Topcase	105
Topcase Light	108
Maximum payload and maximum speed.....	109

General instructions

CAUTION

Use of products from other manufacturers

Safety risk

- 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.◀

The safety, operation and suitability of the parts and accessory products have been checked extensively by BMW. Therefore, BMW assumes responsibility for these products. BMW shall not be liable for unapproved parts and accessory products of any kind.

Whenever you are planning modifications, comply with all the legal requirements. The motorcycle must not infringe on national road-motorcycle construction and use regulations of your country. Your authorized BMW Motorrad retailer offers you qualified advice in choosing genuine BMW parts, accessories and other products. More information on the topic of accessories is available at: bmw-motorrad.com/accessories

Heated handlebar grips

– with heated grips^{OA}

Operating heated grips

- Start engine.

NOTICE

The heated grips option can only be activated when the engine is running.◀

NOTICE

The increase in power consumption caused by the heated grips can drain the battery if you are riding at low engine speeds.◀

NOTICE

The handlebar grips can be heated at two different levels. The second stage is intended for rapid heating of the grips. Once they are warm, you should switch back to the first stage.◀



- Operate rocker switch **1** on the side with two dots to switch to the high heater output.
- Operate rocker switch **1** on the side with one dot to switch to the low heater output.
- Return switch **1** to its center position to switch off the heating.

Power socket

- with additional onboard socket^{OA}

Connection of electrical devices

- The ignition must be switched on before electrical devices connected to the power sockets can be operated.

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.
- Cable routing must not restrict the steering angle and the handling characteristics.
- Cables must not be trapped.

Topcase

- with topcase^{OA}

Mount topcase



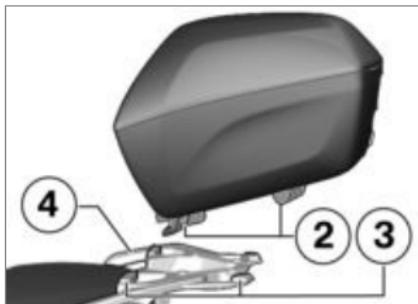
Topcase not properly secured

Driving safety is impaired

- Topcase must not shake and must be fastened clearance-free. ◀



- Pull handle **1** up as far as it will go.



- Hook the topcase into the luggage rack **4**. Make sure that the hooks **2** fit securely into the corresponding mountings **3**.
- Press handle **1** down until it engages.



- Turn key in topcase lock into Position **1** and remove.

Opening the topcase



- Turn the key in the topcase lock to position **1**.



- Press the lock cylinder **1** to the front.
 - » The release lever **2** pops up.
- Pull release lever all the way up.
 - » Topcase lid opens.

Close topcase



- Pull release lever **1** all the way up.
- Close topcase lid and hold it down. Ensure that no items are trapped between cover and case.



NOTICE

The Topcase can also be locked if the lock is in the LOCK position. Under such circumstances, ensure that the key is not in the Topcase.◀



- Press release lever **1** down until it engages.
- Turn key in topcase lock into **LOCK** position and remove.

Remove topcase



- Turn key in topcase lock into Position **1**.
» Handle pops out.



- Fold handle **1** all the way up.

- Raise the rear of the topcase and pull it off luggage rack.

Topcase Light

- with luggage rack^{OA}
- with topcase Light^{OA}

Installing topcase Light



WARNING

Topcase not properly secured

Driving safety is impaired

- Topcase must not shake and must be fastened clearance-free.◀
- Turn the key until it is vertical in the lock.



- Insert the base **5** into the slot **4**.
- Fit the mounting **6** onto the hook **2**.
- Ensure that the release lever **1** engages and the topcase is connected securely to the adapter **3**.
- To lock the release lever, turn the key until it is horizontal in the lock and pull it out.

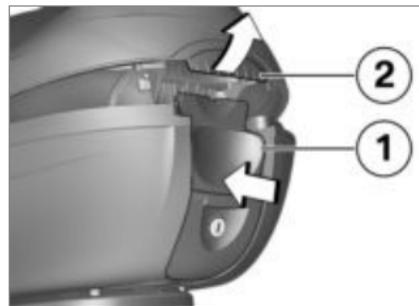
Opening topcase Light

- Turn the key until it is vertical in the lock.



NOTICE

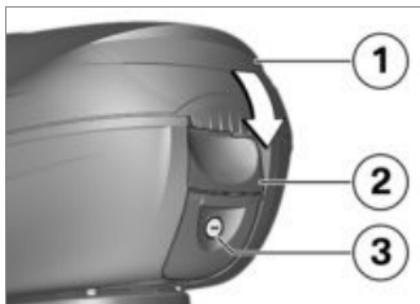
The release levers are locked in the key's horizontal position.◀



- Push the release lever **1** in the direction of the arrow.
- Open the topcase lid **2**.

Closing topcase Light

- Turn the key until it is vertical in the lock.



- Close Topcase lid **1**. Check that nothing is trapped between the lid and case and that the release lever **2** clicks into place.
- Turn the key in the topcase lock **3** until it is horizontal and remove the key from the lock.
 - » The release levers are locked. You can neither open the topcase nor remove it from the adapter.

Removing the topcase Light

- Turn the key until it is vertical in the lock.



- Push the release lever **1** in the direction of the arrow.
- Lift the topcase at the rear and remove from the adapter **3**.

Maximum payload and maximum speed

Observe maximum payload and maximum speed as indicated on label in the topcase.

Contact your authorized BMW Motorrad retailer if you cannot find your combination of vehicle and topcase on the label. The following values apply to the combination described here:

 Maximum speed when riding with a loaded topcase

- with topcase^{OA} or
- with topcase Light^{OA}

max 81 mph (max 130 km/h)<

 Payload of Topcase

- with topcase^{OA}
- with topcase Light^{OA}

max 11 lbs (max 5 kg)<

max 7 lbs (max 3 kg)<

Care

Care products	112
Washing your motorcycle	112
Cleaning sensitive motorcycle parts	113
Paint care	114
Protective wax coating	114
Store motorcycle	114
Return motorcycle to use	115

Care products

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



ATTENTION

Use of unsuitable cleaning and care agents

Damage to motorcycle parts

- Do not use any solvents such as nitro thinners, cold cleaners, 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 on painted parts prior to 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.

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



WARNING

Damp brake disks and brake pads after washing the motorcycle, after riding through water or in the rain

Poorer braking action, accident hazard

- Brake early until the brake rotors and brake pads are dry. ◀



ATTENTION

Increased effect of salt caused by warm water

Corrosion

- Only use cold water to remove road salt. ◀



ATTENTION

Damage caused by high water pressure from high-pressure cleaners or steam-jet devices

Corrosion or short circuit, damage to labels, to seals, to hydraulic brake system, to the electrical system and the seat

- Exercise caution when using high-pressure or steam-jet devices. ◀

NOTICE

The case and Topcase do not have surface coating. The best possible appearance is preserved by applying the following care measures:

Remove road salt and corrosive deposits immediately after completion of a trip with cold water.◀

Cleaning sensitive motorcycle parts

Plastics

ATTENTION

Use of unsuitable cleaning agents

Damage to plastic surfaces

- Do not use abrasive cleaners or cleaners containing alcohol or solvents.
- Do not use insect sponges or sponges with a hard surface.◀

Fairings and panels

Clean trim panel components with water and BMW Motorrad solvent cleaner.

NOTICE

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

Topcase Light

ATTENTION

Use of unsuitable cleaning and care agents

Surface damage

- Clean the surface with water and a microfiber cloth only.◀

Chrome

Carefully clean chrome parts with plenty of water and BMW Motorrad Care Products motorcycle cleaner. This is

particularly important in the case of road salt.

Use BMW Motorrad metal polish for additional treatment.

Radiator

ATTENTION

Bending of radiator fins

Damage to radiator fins

- When cleaning, ensure that the cooler fins are not bent.◀
- Clean radiator regularly. Use a hose with low water pressure to do this.
 - » This prevents the engine from overheating due to insufficient cooling.

Rubber

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



ATTENTION

Use of silicone sprays for care of rubber seals

Damage to rubber seals

- 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, such as 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 and brake fluid as well as bird droppings. BMW Motorrad

recommends using a solvent cleaner and then applying a BMW Motorrad high gloss polish to preserve the paint.

Contamination on 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 stains with BMW tar remover. Then add a protective wax coating to the paint at these locations.

Protective wax coating

Apply a preservative when water fails to bead up on the painted surface.

BMW Motorrad recommends BMW Motorrad high gloss polish or agents that contain carnauba or synthetic wax to protect the paint finish.

Store motorcycle

- Clean the motorcycle.
- Completely fill the motorcycle's fuel tank.
- Removing battery (▶▶▶ 97).
- Spray the brake and clutch lever, and the center and side stand pivots with a suitable lubricant.
- Protect metal and chrome-plated parts with an acid-free grease (Vaseline).
- Park the motorcycle in a dry space in such a way that both wheels are under no load (preferably by using the front and rear-wheel stands available from BMW Motorrad).

Return motorcycle to use

- Remove the protective wax coating.
- Clean the motorcycle.
- Install battery (▣▣▣▣▶ 98).
- Observe checklist (▣▣▶ 52).

Technical data

Troubleshooting chart	118	Performance data	130
Threaded fasteners	119	Accessories	130
Fuel	121		
Engine oil	121		
Engine	122		
Clutch	123		
Transmission	123		
Rear-wheel drive	124		
Frame	124		
Suspension	125		
Brakes	125		
Wheels and tires	126		
Electrical system	128		
Dimensions	129		
Weights	130		

Troubleshooting chart

Engine does not start.

Possible cause	Remedy
Side stand extended and gear engaged	Fold in side stand.
Emergency on/off switch (kill switch)	Set emergency off switch to operation mode (▣▶ 37).
Gear engaged and clutch not disengaged	Operate the clutch or put the transmission into idle so that the idle indicator lamp lights up.
No fuel in tank	Refueling (▣▶ 59).
Battery drained	Charging a disconnected battery (▣▶ 96).

Threaded fasteners

Front wheel	Value	Valid
Screw in front wheel quick-release axle		
M12 x 20	37 lb/ft (50 Nm)	
Clamping screw in axle adapter		
M8 x 30	Tightening sequence: Tighten the screws 6 times, alternating between one and the other each time	
	14 lb/ft (19 Nm)	
Rear wheel	Value	Valid
Locknut of drive-chain tensioning screw		
M8	14 lb/ft (19 Nm)	
Rear-wheel quick-release axle in swinging arm		
M18 x 1.5	74 lb/ft (100 Nm)	

Mirrors	Value	Valid
Right mirror (lock nut) to adapter		
M10 x 1.25	Left-hand thread, 16 lb/ft (22 Nm)	
Left mirror (lock nut) to adapter		
M10 x 1.25	16 lb/ft (22 Nm)	

Fuel

Recommended fuel quality	Normal unleaded (max. 15 % ethanol, E15) 87 AKI (91 ROZ/RON) 87 AKI
Usable fuel quantity	Approx. 2.9 gal (Approx. 11 l)
Fuel reserve	Approx. 1.1 quarts (Approx. 1 l)
Fuel consumption according to WMTC	71 mpg (3.3 l/100 km)

Engine oil

Engine oil, capacity	Approx. 1.7 quarts (Approx. 1.65 l), with filter replacement
Viscosity rating	
SAE 15W-50, API SJ/JASO MA2	Additives (for instance, molybdenum-based substances) are prohibited, because they would attack the coatings on engine components, BMW Motorrad recommends BMW Motorrad ADVANTEC Pro Oil
Engine oil, quantity for topping up	max 185 ml, Difference between MIN and MAX

BMW recommends **ADVANTEC**
ORIGINAL BMW ENGINE OIL

Engine

Engine number location	Lower part of crankcase, right
Engine type	A82A03A
Engine design	Water-cooled 1-cylinder four-stroke engine with four valves (operated via rocker arms), two overhead camshafts and a counterbalance shaft
Displacement	313 cc (313 cm ³)
Cylinder bore	3.1 in (80 mm)
Piston stroke	2.4 in (62.1 mm)
Compression ratio	10.9:1
Rated output	34 hp (25 kW), at engine speed: 9500 min ⁻¹
Torque	21 lb/ft (28 Nm), at engine speed: 7500 min ⁻¹
Maximum engine speed	max 10800 min ⁻¹
Idle speed	1600 ^{±100} min ⁻¹ , Engine at operating temperature
Emission standard	Euro 4

Clutch

Clutch design	Multi-disk wet clutch
Clutch lever play	0.04...0.08 in (1...2 mm), on the handlebar fitting, handlebars in straight-ahead position, with cold engine

Transmission

Transmission design	Claw-shifted 6-speed transmission integrated in engine housing
Transmission gear ratios	3.083, Primary gear ratio 1:3.000, 1st gear 1:2.063, 2nd gear 1:1.588, 3rd gear 1:1.286, 4th gear 1:1.095, 5th gear 1:0.955, 6th gear

Rear-wheel drive

Type of final drive	Endless Z-ring chain with rear damper in rear wheel hub
Chain sag	1.6...2 in (40...50 mm), Motorcycle unloaded on side stand
Permissible chain length	max 5.7 in (max 144.30 mm), measured over the center of 10 rivets, chain under tension
Number of teeth of rear-wheel drive (Pinion/ sprocket)	16/40
Secondary gear ratio	2.500

Frame

Frame design	Lattice-tube frame
Location of type plate	Frame at front left on steering head
Location of the vehicle identification number	Frame at front right on steering head

Suspension

Front wheel

Type of front suspension	Upside-down telescopic forks
Spring travel, front	7.1 in (180 mm), on wheel

Rear wheel

Type of rear suspension	Two-arm aluminum swinging arm
Spring travel, rear	7.1 in (180 mm), on wheel

Brakes

Front wheel

Type of front brake	4-piston fixed caliper
Front brake pad material	Sintered metal
Front brake-disk thickness	0.2 in (5.0 mm), New min 0.18 in (min 4.5 mm), Wear limit

Rear wheel

Type of rear brake	1-piston floating caliper
Rear brake pad material	Organic
Rear brake-disk thickness	0.18 in (4.5 mm), New min 0.16 in (min 4 mm), Wear limit
Blow-by clearance of footbrake lever	0.08...0.1 in (2.0...2.5 mm), between footbrake lever and stop at footrest plate

Wheels and tires

Speed category of front/rear tires	H, minimum requirement: 130 mph (210 km/h)
------------------------------------	--

Front wheel

Front wheel design	Aluminum cast wheel
Front-wheel rim size	2.50-19 MTH2
Front tire designation	110/80 R 19
Load index for front tire	59
Permissible front-wheel imbalance	max 0.2 oz (max 5 g)

Rear wheel

Rear wheel design	Aluminum cast wheel
Rear-wheel rim size	4.0 " x 17 "
Rear tire designation	150/70 R 17
Load index for rear tire	69
Permissible rear-wheel imbalance	max 1.6 oz (max 45 g)

Tire inflation pressure

Tire pressure, front	24.7 psi (1.7 bar), with cold tires, one-up and two-up riding
Tire pressure, rear	27.6 psi (1.9 bar), with cold tires, one-up and two-up riding

Electrical system

Fuses

Fuse 1	7.5 A, Oxygen sensor, evaporative emission valve, secondary air system, injection system, electric fuel pump
Fuse 2	7.5 A, Heated grips, data link connector, engine control unit, additional onboard socket, ABS pressure modulator
Fuse 3	30 A, Main fuse
Fuse 4	20 A, ABS pressure modulator
Fuse 5	15 A, Lighting, horn
Fuse 6	10 A, Instrument cluster, engine control unit
Fuse for radiator fan	7.5 A, Radiator fan

Battery

Battery design	AGM battery (Absorbent Glass Mat)
Battery voltage	12 V
Battery capacity	8 Ah

Spark plugs

Spark plugs, manufacturer and designation	NGK LMAR9D-J
---	--------------

Light sources

Bulb for low-beam and high-beam headlight	H4 / 12 V / 60 W / 55 W
Bulb for parking light	W5W / 12 V / 5 W
Bulb for taillight/brake light	LED
Light source for license plate light	LED integrated into tail light
Bulbs for flashing turn indicators, front	RY10W / 12 V / 10 W
Bulbs for flashing turn indicators, rear	RY10W / 12 V / 10 W

Dimensions

Motorcycle length	81.7 in (2075 mm), over license-plate carrier
Motorcycle height	48.4 in (1230 mm), over windshield, at DIN unladen weight
Motorcycle width	34.6 in (880 mm), using handlebar levers 33.9 in (860 mm), without mounted parts
Rider's seat height	32.9 in (835 mm), without rider, at DIN unladen weight
Rider's inside-leg arc, heel to heel	73.6 in (1870 mm), without rider, at DIN unladen weight

Weights

Vehicle curb weight	374 lbs (169.5 kg), DIN unladen weight, ready for road, 90 % full tank of gas, without OE
Permissible gross weight	761 lbs (345 kg)
Maximum payload	387 lbs (175.5 kg)

Performance data

Top speed	89 mph (143 km/h)
-----------	-------------------

Accessories

Maximum speed when riding with a loaded top-case	
– with topcase ^{OA} or – with topcase Light ^{OA}	max 81 mph (max 130 km/h)
Payload of Topcase	
– with topcase ^{OA}	max 11 lbs (max 5 kg)
– with topcase Light ^{OA}	max 7 lbs (max 3 kg)

Service

Reporting safety defects	132
BMW Motorrad Service	133
BMW Motorrad Service History	133
BMW Motorrad Mobility Services	134
Maintenance procedures	134
Maintenance schedule	137
Maintenance confirmations	138
Service confirmations	152

Reporting safety defects

If you think that your motorcycle has a fault which may cause an accident, injury or death, you must inform the NHTSA (National Highway Traffic Safety Administration) immediately and BMW of North America, LLC.

If the NHTSA receives other similar complaints, it may open an investigation. If it finds that a safety defect exists in a group of vehicles, the NHTSA may order the manufacturer to perform a recall and remedy campaign. However, the NHTSA cannot become involved in individual problems between you, your authorized BMW Motorrad retailer, or BMW of North America, LLC.

You can contact the NHTSA by calling the Vehicle Safety Hotline on 1-888-327-4236 (Teletypewriter TTY for the hearing impaired: 1-800-424-9153) for free, by visiting the website at <http://www.safercar.gov> or by writing to Administrator, NHTSA, 400 Seventh Street, SW., Washington, DC 20590. Further information on vehicle safety is available at <http://www.safercar.gov>.

BMW Motorrad Service

With its worldwide retailer network, BMW Motorrad can attend to you and your motorcycle in over 100 countries around the globe. Authorized BMW Motorrad retailers have the technical information and expertise needed to conduct reliable service and repairs covering every aspect of your BMW.

You will find the nearest authorized BMW Motorrad retailer to you at our website:

bmw-motorrad.com

WARNING

Improperly performed maintenance and repair work

Accident hazard caused by subsequent damage

- BMW Motorrad recommends having corresponding work on the 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. Documentation confirming regular maintenance is essential for generous treatment of claims submitted after the warranty period has expired (goodwill).

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

BMW Motorrad Service History

Entries

Maintenance work that has been performed is recorded in the diagnostics and information system. Like a Service Booklet, these entries provide proof of regular maintenance.

If an entry is made in the vehicle's electronic Service Manual, service-related data is stored on the central IT systems of BMW AG in Munich, Germany.

When there is a change in vehicle owner, the data entered in the electronic Service History can also be viewed by the new vehicle owner. A BMW Motorrad retailer or specialist workshop can view the data entered in the electronic Service Manual.

Objection

At the BMW Motorrad retailer or specialist workshop, the vehicle owner can object to the entry of data in the electronic Service Manual with the related storage of data in the vehicle and the transfer of data to the vehicle manufacturer during his time as the vehicle owner. In this case, no entry is made in the vehicle's electronic Service Manual.

BMW Motorrad Mobility Services

As the owner of a new BMW motorcycle, in the event of a breakdown you can benefit from the protection afforded by the various BMW Motorrad mobility services (e.g. BMW Roadside Assistance, breakdown service, vehicle recovery service). Contact your authorized BMW Motorrad retailer for

additional information on available mobility-maintenance services.

Maintenance procedures

BMW pre-delivery check

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

BMW running-in check



Mileage until running-in check

311...746 miles
(500...1200 km)

BMW Service

BMW Service is carried out once a year. The scope of the services performed may be dependent on the motorcycle 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 riders who drive long distances annually, it may be necessary to come in for service before the entered date. In this case a corresponding maximum odometer reading will also be entered in the confirmation of service. If this odometer reading is reached before the next service date, service must be performed sooner.

The service display in the multi-function display reminds you of the next service date approx. one month or 620 miles (1000 km) before the entered values.

More information on the topic of service is available at:

bmw-motorrad.com/service

The required scope of maintenance work for your motorcycle can be found in the following maintenance plan:

Maintenance schedule

- 1** BMW Running-in check (including oil change)
- 2** Standard BMW Service
- 3** Engine oil change with filter
- 4** Replace air cleaner insert
- 5** Replace spark plug
- 6** Check valve clearance
- 7** Telescopic fork oil change
- 8** Replace fuel filter and fuel hoses
- 9** Replace hoses from intake silencer to cylinder head and evaporative emission valve
- 10** Change brake fluid in entire system
 - a** annually or every 6000 miles (10000 km) (whichever comes first)
 - b** for the first time after one year, then every 2 years

c every 24000 miles (40000 km) or every 4 years (whichever comes first)

Maintenance confirmations

BMW Service standard scope

The repair procedures belonging to the BMW Service standard package are listed below. The actual maintenance work applicable for your vehicle may differ.

- Perform a vehicle test with the BMW Motorrad diagnosis system
- Checking coolant level
- Checking/adjusting clutch play
- Checking accelerator Bowden cable for ease of movement, chafing and kinks, and play
- Checking the front brake pads and brake disc for wear
- Checking rear brake pads and brake disk for wear
- Visually inspecting the brake lines, brake hoses and connections
- Checking tire inflation pressure and tread depth
- Checking and lubricating the chain drive
- Checking the brake fluid level of the front wheel brake
- Checking the brake fluid level of the rear wheel brake
- Checking steering-head bearing
- Lubricating the side stand
- Checking the lighting and signal system
- Functional check for engine starting suppression
- Final inspection and check for road safety
- Setting the service due date and remaining distance before next service using the BMW Motorrad diagnosis system
- Checking charging state of battery
- Confirming the BMW service in the vehicle literature

BMW pre-delivery check

performed

on _____

Stamp, signature

BMW Running-in Check

performed

on _____

at km _____

Next service

latest

on _____

or, if reached earlier

at km _____

Stamp, signature

BMW Service

performed

on _____

at km _____

Next service

latest

on _____

or, if reached earlier

at km _____

Stamp, signature

Work performed

BMW Service

Engine oil change with filter

Checking valve clearance

Replacing air cleaner element

Oil change - telescopic fork

Replacing all spark plugs

Replacing fuel filters and fuel hoses (at maintenance)

Replace the hose from intake silencer to cylinder head and tank vent valve (in maintenance)

Changing brake fluid in entire system

Yes

No

Information

BMW Service

performed

on _____

at km _____

Next service

latest

on _____

or, if reached earlier

at km _____

Work performed

BMW Service

Engine oil change with filter

Checking valve clearance

Replacing air cleaner element

Oil change - telescopic fork

Replacing all spark plugs

Replacing fuel filters and fuel hoses (at maintenance)

Replace the hose from intake silencer to cylinder head and tank vent valve (in maintenance)

Changing brake fluid in entire system

Yes No

Information

Stamp, signature

BMW Service

performed

on _____

at km _____

Next service

latest

on _____

or, if reached earlier

at km _____

Stamp, signature

Work performed

BMW Service

Yes

No

Engine oil change with filter

Checking valve clearance

Replacing air cleaner element

Oil change - telescopic fork

Replacing all spark plugs

Replacing fuel filters and fuel hoses (at maintenance)

Replace the hose from intake silencer to cylinder head and tank vent valve (in maintenance)

Changing brake fluid in entire system

Information

BMW Service

performed

on _____

at km _____

Next service

latest

on _____

or, if reached earlier

at km _____

Work performed

BMW Service

Engine oil change with filter

Checking valve clearance

Replacing air cleaner element

Oil change - telescopic fork

Replacing all spark plugs

Replacing fuel filters and fuel hoses (at maintenance)

Replace the hose from intake silencer to cylinder head and tank vent valve (in maintenance)

Changing brake fluid in entire system

Yes No

Information

Stamp, signature

BMW Service

performed

on _____

at km _____

Next service

latest

on _____

or, if reached earlier

at km _____

Stamp, signature

Work performed

BMW Service

Yes

No

Engine oil change with filter

Checking valve clearance

Replacing air cleaner element

Oil change - telescopic fork

Replacing all spark plugs

Replacing fuel filters and fuel hoses (at maintenance)

Replace the hose from intake silencer to cylinder head and tank vent valve (in maintenance)

Changing brake fluid in entire system

Information

BMW Service

performed

on _____

at km _____

Next service

latest

on _____

or, if reached earlier

at km _____

Work performed

BMW Service

Engine oil change with filter

Checking valve clearance

Replacing air cleaner element

Oil change - telescopic fork

Replacing all spark plugs

Replacing fuel filters and fuel hoses (at maintenance)

Replace the hose from intake silencer to cylinder head and tank vent valve (in maintenance)

Changing brake fluid in entire system

Yes No

Information

Stamp, signature

BMW Service

performed

on _____

at km _____

Next service

latest

on _____

or, if reached earlier

at km _____

Stamp, signature

Work performed

BMW Service

Engine oil change with filter

Checking valve clearance

Replacing air cleaner element

Oil change - telescopic fork

Replacing all spark plugs

Replacing fuel filters and fuel hoses (at maintenance)

Replace the hose from intake silencer to cylinder head and tank vent valve (in maintenance)

Changing brake fluid in entire system

Yes

No

Information

BMW Service

performed

on _____

at km _____

Next service

latest

on _____

or, if reached earlier

at km _____

Stamp, signature

Work performed

BMW Service

Engine oil change with filter

Checking valve clearance

Replacing air cleaner element

Oil change - telescopic fork

Replacing all spark plugs

Replacing fuel filters and fuel hoses (at maintenance)

Replace the hose from intake silencer to cylinder head and tank vent valve (in maintenance)

Changing brake fluid in entire system

Information

Yes No

BMW Service

performed

on _____

at km _____

Next service

latest

on _____

or, if reached earlier

at km _____

Stamp, signature

Work performed

BMW Service

Engine oil change with filter

Checking valve clearance

Replacing air cleaner element

Oil change - telescopic fork

Replacing all spark plugs

Replacing fuel filters and fuel hoses (at maintenance)

Replace the hose from intake silencer to cylinder head and tank vent valve (in maintenance)

Changing brake fluid in entire system

Yes

No

Information

BMW Service

performed

on _____

at km _____

Next service

latest

on _____

or, if reached earlier

at km _____

Work performed

BMW Service

Engine oil change with filter

Checking valve clearance

Replacing air cleaner element

Oil change - telescopic fork

Replacing all spark plugs

Replacing fuel filters and fuel hoses (at maintenance)

Replace the hose from intake silencer to cylinder head and tank vent valve (in maintenance)

Changing brake fluid in entire system

Yes No

Information

Stamp, signature

BMW Service

performed

on _____

at km _____

Next service

latest

on _____

or, if reached earlier

at km _____

Stamp, signature

Work performed

BMW Service

Engine oil change with filter

Checking valve clearance

Replacing air cleaner element

Oil change - telescopic fork

Replacing all spark plugs

Replacing fuel filters and fuel hoses (at maintenance)

Replace the hose from intake silencer to cylinder head and tank vent valve (in maintenance)

Changing brake fluid in entire system

Information

Yes

No

BMW Service

performed

on _____

at km _____

Next service

latest

on _____

or, if reached earlier

at km _____

Work performed

BMW Service

Engine oil change with filter

Checking valve clearance

Replacing air cleaner element

Oil change - telescopic fork

Replacing all spark plugs

Replacing fuel filters and fuel hoses (at maintenance)

Replace the hose from intake silencer to cylinder head and tank vent valve (in maintenance)

Changing brake fluid in entire system

Yes No

Information

Stamp, signature

A

Abbreviations and symbols, 6

ABS

Indicator and warning light, 30

Operating, 42

Self-diagnosis, 54

Technology in detail, 64

Accessories

General instructions, 104

Onboard power socket, 105

Topcase, 105, 108

Anti-Lock Brake System ABS, 56

Average values

Displaying average fuel consumption (CONS1), 40

Displaying average speed (SPEED), 40

Resetting, 42

B**Battery**

Charging a disconnected battery, 96

Connect to vehicle, 97

Disconnect from vehicle, 97

Installing, 98

Maintenance instructions, 96

Position on vehicle, 18

Recharging connected battery, 96

Removing, 97

Technical data, 128

Vehicle voltage is too low, 29

Brake fluid

Check fluid level at rear, 76

Check front fluid level, 75

Front reservoir, 17

Rear reservoir, 17

Brake pads

Breaking in, 55

Check front, 73

Check rear, 74

Brakes

Checking operation, 72

Safety information, 56

Technical Data, 125

Breaking in, 55**Bulbs**

Replace license plate light, 94

Replacing front and rear turn indicator light sources, 93

Replacing LED tail light, 94

Replacing light sources for low-beam and high-beam headlight, 91

Replacing parking light light source, 92

Technical Data, 129

C**Care**

Care products, 112

Chrome, 113

Fairings and panels, 113

Paint preservation, 114

Plastics, 113

Radiator, 113

Rubber, 113

Washing your motorcycle, 112

Chain

Adjust tension, 89

Adjustment values, 15

Checking tension, 90

Checking wear, 90

Lubricating, 90

Checklist, 52

Clock
 Adjusting, 41

Clutch
 Adjust play, 78
 Checking operation, 77
 Checking play, 78
 Technical Data, 123

Coolant
 Check fill level, 78
 Fluid level indicator, 17
 Topping up, 79
 Warning light for
 overtemperature, 29

Coolant temperature
 Displaying (ENGIN), 40
 too high, 29

Cruising range
 Displaying (RANGE), 40

D

Date
 Adjusting, 41
 Displaying (DATE), 40
 Service due date, 32

Diagnostic connector
 fasten, 101
 Loosen, 101

Dimensions
 Technical Data, 129

E

Electrical system
 Technical Data, 128

Emergency on/off switch (kill
 switch)
 Emergency off, 37
 Operating, 37
 Operation mode, 37
 Position on motorcycle, 20

Engine
 In emergency operation, 29
 Parking, 37
 Severe fault, 30
 Starting, 52
 Technical Data, 122

Engine oil
 Checking the filling level, 71
 Oil fill location, 15
 Technical Data, 121

 Topping up, 71, 72

Engine speed warning, 55

Equipment, 6

F

Fairing
 Front trim panel, removing and
 installing, 47

Frame
 Technical Data, 124

Front wheel stand
 Mounting, 69

Fuel
 Displaying current fuel
 consumption (CONSA), 40
 Filling location, 17, 59
 Fuel specifications, 58
 Refueling, 59
 Technical Data, 121

Fuel reserve
 Cruising range, 33
 Indicator lamp, 31

Fuses
 Position on vehicle, 18
 Replacing, 99
 Technical Data, 128

H

- Headlight
 - Adjusting, 46
 - Adjusting for RHD/LHD traffic, 46
 - Headlamp range and spring preload, 47
 - Headlight range adjustment, 47
- Headlight flasher
 - Operating, 38
- Headlight range
 - Adjusting, 47
- Heated handlebar grips
 - Operating, 104
- High-beam headlight
 - Switching on, 38
- Horn, 19

I

- Ignition
 - Switching off, 37
 - Switching on, 36
- Indicator lights, 21
 - Fuel reserve, 31
 - Overview, 24

Instrument cluster

- Engine speed warning, 21
- Overview, 21
- Photosensor, 21
- Warning and indicator lights, 21

J

- Jump-start, 95

K

- Keys, 36

L**Lights**

- Adjusting headlight, 46
- Control, 19
- Operating headlight flasher, 38
- Operating high-beam headlight, 38
- Operating low-beam headlight, 38
- Operating parking lights, 38

- Low-fuel warning light, 31

Luggage

- Grab handle, 17
- Loading information, 50

M**Maintenance**

- General instructions, 68
 - Maintenance intervals, 134
 - Maintenance schedule, 137
- Maintenance confirmations, 138**

Mirrors

- Adjusting, 46

Mobility Services, 134**Motorcycle**

- Care, 111
- Cleaning, 111
- Parking, 57
- Returning to use, 115
- Storage, 114
- Tying down, 60

Multifunction display, 21

- Overview, 25
- Select display readings, 40

Multifunction switch

- General view, left, 19
- General view, right, 20

N

- Notice concerning current status, 7

- O**
 - Odometer
 - Displaying (ODO), 40
 - Resetting, 41
 - Onboard power socket
 - Information on use, 105
 - Position on motorcycle, 15
 - Onboard tool kit
 - Contents, 68
 - Position on vehicle, 18
 - Overview of warning indicators, 27
 - Overviews
 - Instrument cluster, 21
 - Left side of vehicle, 15
 - Left-side multifunction switch, 19
 - Multifunction display, 25
 - Right side of vehicle, 17
 - Right-hand multifunction switch, 10
 - Underneath seat, 18
 - Warning and indicator lights, 24
- P**
 - Performance data
 - Technical data, 130
 - Photosensor, 21
 - Pre-Ride-Check, 53
- R**
 - Rear-wheel drive
 - Technical Data, 124
 - Rear-wheel stand
 - Mounting, 70
 - Refueling, 59
 - Fuel specifications, 58
 - Rider's Manual (US Model)
 - Position on vehicle, 18
- S**
 - Safety instructions
 - On braking, 56
 - On riding, 50
 - Seat
 - Installing, 44
 - Locking mechanism, 15
 - Removing, 43

- Service, 133
 - Display, 32
 - Electronic Service Manual, 133
 - Reporting safety defects, 132
- Service display, 32
- Settings
 - Displaying (SETUP), 40
 - Headlight, 46
 - Mirrors, 46
 - Spring preload, 47
- Spark plugs
 - Technical data, 128
- Speedometer, 25
- Spring preload
 - Adjusting, 47
 - Rear adjuster, 15
- Starting, 52
 - Control, 20
- Steering lock
 - Locking, 36
- Storing, 114
- Suspension
 - Technical Data, 125
- Switching off, 57

T

- Tachometer
 - Tachometer, 33
- Technical data
 - Battery, 128
 - Brakes, 125
 - Clutch, 123
 - Dimensions, 129
 - Electrical system, 128
 - Engine, 122
 - Engine oil, 121
 - Frame, 124
 - Fuel, 121
 - Fuses, 128
 - General notes, 7
 - Light sources, 129
 - Performance data, 130
 - Rear-wheel drive, 124
 - Spark plugs, 128
 - Standards, 7
 - Suspension, 125
 - Transmission, 123
 - Weights, 130
 - Wheels and tires, 126
- Threaded fasteners, 119

Tires

- Breaking in, 55
- Checking tire tread depth, 80
- Checking tyre pressure, 80
- Inflation pressures, 127
- Maximum speed, 51
- Technical Data, 126
- Tire inflation pressure table, 15

Topcase

- Operating, 105, 108

Torques, 119**Transmission**

- Technical Data, 123

Tripmeter

- Displaying (TRIP1, TRIP2), 40

Troubleshooting chart, 118**Turn indicators**

- Control, 19
- Operating, 38

Type plate

- Position on motorcycle, 15

V

- Vehicle identification number
 - Position on motorcycle, 17

VIN

- Vehicle identification number, 17

W**Warning lamps, 21**

- ABS, 30
- Coolant temperature, 29
- Displays, 26
- Electrical system voltage, 29
- Engine warning, 30
- Overheating, 29
- Overview, 24
- Symbol for engine electronics, 29

Weights

- Load capacity table, 15
- Technical Data, 130

Wheels

- Checking wheel rims, 80
- Install front wheel, 83
- Install rear wheel, 87
- Removing front wheel, 81
- Removing rear wheel, 85

Size change, 81
Technical Data, 126

The descriptions and illustrations in this manual may vary from your own motorcycle's actual equipment, depending upon its equipment level and accessories as well as your specific national version. No claims stemming from these differences can be recognized.

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.

© 2018 Bayerische Motoren Werke Aktiengesellschaft
80788 Munich, Germany
Reprints and duplication of this work, in whole or part, are prohibited without the express written approval of BMW Motorrad, Aftersales.

Original Rider's Manual, printed in Germany.

WARNING

Harmful substances

Operating, servicing and maintaining a passenger vehicle or off-road vehicle can expose you to chemicals including engine exhaust, carbon monoxide, phthalates and lead, which are known to the State of California to be carcinogenic or detrimental to childbirth or reproduction.

- To minimize exposure, avoid breathing exhaust, do not idle the engine except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle.
- For more information visit: www.P65Warnings.ca.gov/passenger-vehicle ◀

