BMW
MOTORRAD

RIDER'S MANUAL (US MODEL)

R nineT Scrambler

MAKE LIFE A RIDE

Vehicle data

Model

Vehicle identification number

Color number

First registration

License plate

Retailer data

Contact in Service

Ms./Mr.

Phone number

Retailer's address/Phone (company stamp)

YOUR BMW.

We are pleased that you have chosen a BMW Motorrad vehicle and welcome you to the family of BMW riders. Familiarize yourself with your new vehicle so that you can ride safely and confidently in all traffic situations.

About these operating instructions

Read these operating instructions before starting your new BMW. It contains important notes about operating the vehicle that will enable you to make full use of the technical assets of your BMW.

You will also obtain preventive maintenance and care instructions, which are beneficial to operating and road safety and help retain the value of your vehicle as much as possible.

If you should decide to sell your BMW one day, please remember to hand over these operating instructions as well. They are an important part of your vehicle.

We wish you many miles of safe and enjoyable riding with your BMW

BMW Motorrad.

GENERAL INSTRUCTIONS

01

4 GENERAL INSTRUCTIONS

QUICK & EASY REFERENCE

Chapter 2 of these operating instructions will provide you with an initial overview of your motorcycle. All maintenance and repair procedures carried out on your motorcycle will be documented in the "Service" chapter. Documentation of the maintenance work performed is a prerequisite for generous treatment of claims.
If you should decide to sell your BMW at some point in the future, please remember to hand over these operating instructions; they are an important part of the 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.

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

- • Instruction.
- » Result of a repair procedure.
- Reference to a page with more detailed information.
- ◁ Indicates the end of accessory or equipment-dependent information.
- Tightening torque.
- Technical data.
- OE Optional equipment. BMW Motorrad optional equipment is already completely installed during motorcycle production.

OA	Optional accessories. BMW Motorrad optional accessories can be purchased and retrofitted at your authorized BMW Motorrad retailer.
ABS	Anti-Lock Brake System.
ASC	Automatic Stability Control.
DTC	Dynamic Traction Control.
DWA	Anti-theft alarm.
EWS	Electronic immobilizer.
MSR	Engine drag torque control.

EQUIPMENT

When you ordered your BMW Motorrad, you chose various custom equipment items. This rider's manual describes optional equipment (OE) and selected optional accessories (OA) offered by BMW. 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 Institute for Standardization i.e. DIN (Deutsches Institut für Normung e. V.) 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 or requested from your BMW Motorrad retailer or other qualified service partner or repair shop. The information on the vehicle documents always takes precedence over the information in this rider's manual.

6 GENERAL INSTRUCTIONS

CURRENTNESS OF THIS MANUAL

The high safety and quality levels of BMW motorcycles are maintained by constant development work on design, equipment and accessories. For this reason, some aspects of your vehicle may vary from the descriptions in this rider's manual. In addition, BMW Motorrad cannot guarantee the total absence of errors. We hope you will appreciate that no claims can be recognized that are based on the data, illustrations or descriptions in this manual.

ADDITIONAL SOURCES OF INFORMATION

Authorized BMW Motorrad retailer

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 **bmw-motorrad.com/manuals**.

CERTIFICATES AND OPERATING PERMITS

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

DATA MEMORY

General information

Control units are installed in the vehicle. 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 riding assistance, such as rider 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 license plate and with the help of the relevant authorities. There are also other ways to trace data obtained from the vehicle back to the rider or vehicle owner, such as via the ConnectedDrive Account that was used.

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 privacy 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 on the Internet.
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 vehicle's legally mandated diagnostic socket.

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. The provision of 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 this include:

- Status messages from the vehicle and its individual components, such as wheel RPM, wheel centrifugal velocity and deceleration
- Ambient conditions, such as temperature
- 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 riding situations, such as the activation of riding dynamics systems
- Information about events causing damage to the vehicle

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:

The data is necessary for providing control unit functions. 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 vehicle's legally mandated diagnostic socket 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 a repair or servicing.

Data input and data transfer in the vehicle

General information

Depending on the equipment, comfort settings and individualized settings in the vehicle can be saved and changed or reset at any time.
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 combination with a communication system or integrated navigation system
- Entered 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.

Incorporating mobile end devices

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

This enables audio and visual output from mobile end devices through the multimedia system. At the same time, certain information is transmitted to the mobile end device. This includes, for instance, position data and other general vehicle information, depending on the type of incorporation, and makes it possible to optimize the use of selected apps, such as those for navigation or audio 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 information

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 the 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.

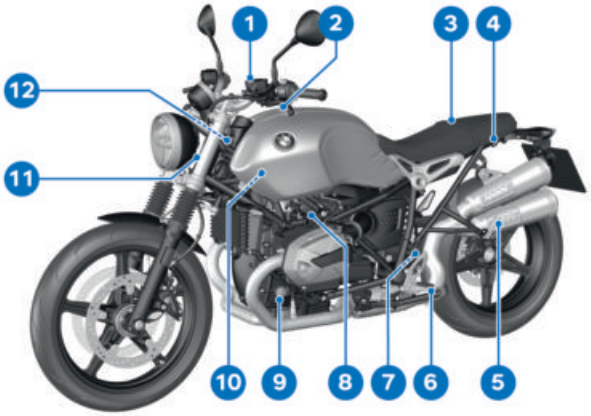
Services of other providers

When using the online services of other providers, these services are subject to the responsibility and the term of data protection and use 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

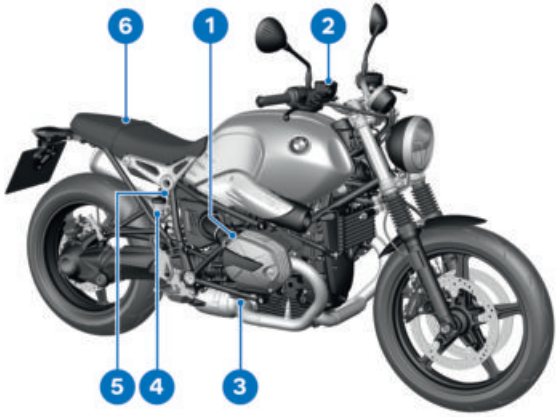
02

OVERALL VIEW, LEFT SIDE



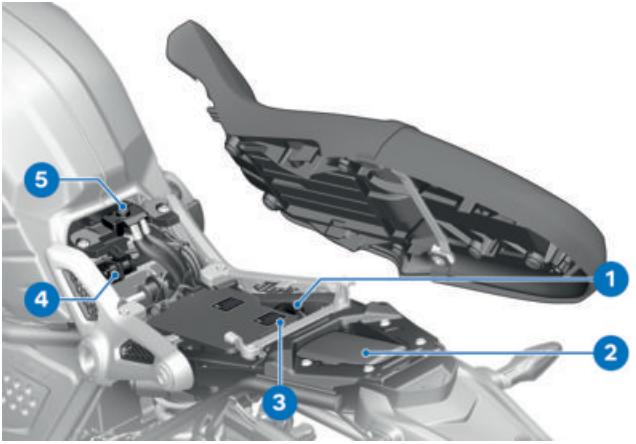
1 Checking the clutch function (➠ 108)
2 Fuel filler opening (➠ 82)
3 Grab strap
4 Correct loading (➠ 72)
5 Passenger footrest
6 Rider footrest
7 Adjusting damping at the rear wheel (➠ 64)
8 USB charging socket (➠ 126)
9 Checking the engine oil level (➠ 102)
10 Connector for optional accessories (under the tank)
11 Nameplate (on the left on the steering-head bearing) Checking tire pressure (➠ 108)
12 Connector for rotational-speed sensor (optional accessories)

OVERALL VIEW, RIGHT



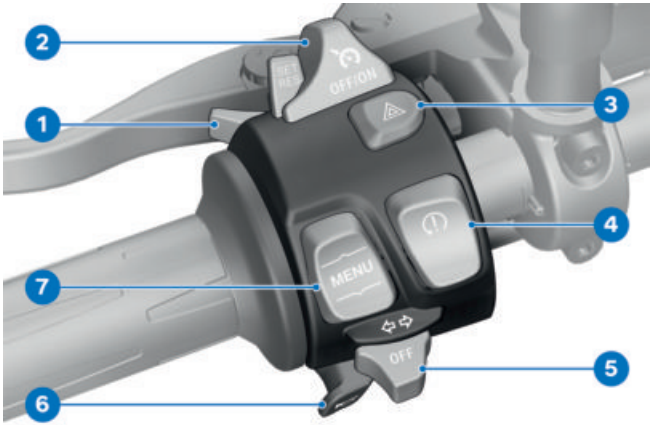
1 Topping up the engine oil (➠ 103)
2 Checking the front brake fluid level (➠ 106)
3 Vehicle identification number
4 Checking the rear brake fluid level (➠ 107)
5 Adjusting the spring preload at the rear wheel (➠ 64)
6 Removing the seat (➠ 57)

UNDERNEATH THE SEAT



1 Detaching the diagnostic socket (➠ 122)
2 Onboard vehicle tool kit (➠ 100)
3 Payload table
4 Fuse box (➠ 121)
5 Jump-start terminal (➠ 118)

MULTIFUNCTION SWITCH, LEFT



1 High beams and headlight flasher (➠ 41)
2 Cruise control (➠ 54)
3 Hazard warning system (➠ 42)
4 Traction control (ASC/ DTC) (➠ 52)
5 Turn signals (➠ 42)
6 Horn
7 Rocker button MENU (➠ 43)

MULTIFUNCTION SWITCH, RIGHT

1 Operating heated grips (➠ 56)
2 Select riding mode (➠ 53)
3 Emergency-off switch (➠ 40)
4 Starter button (➠ 75)

INSTRUMENT CLUSTER

1 Speedometer

2 Indicator and warning lights (➠ 22)

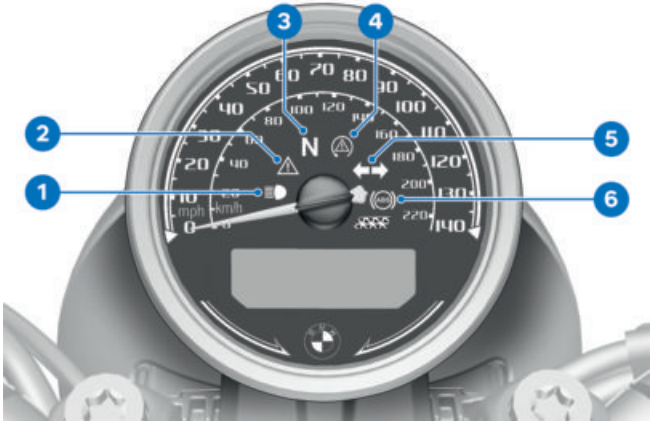
3 Photodiode for brightness control in the multifunction display
–with anti-theft alarm system (DWA) OE
DWA LED (➠ 50)

4 Multifunction display (➠ 23)

DISPLAYS

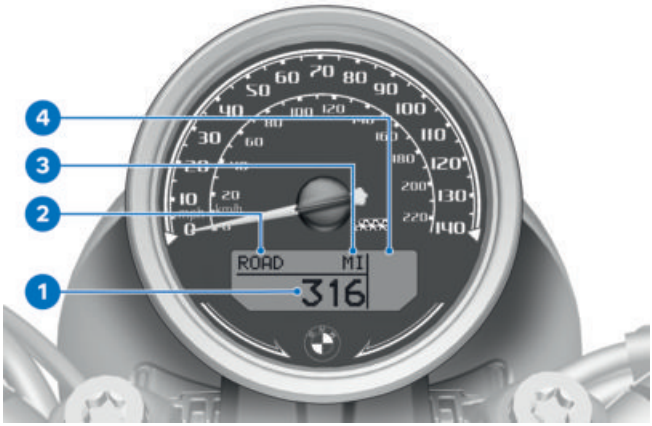
03

WARNING AND INDICATOR LIGHTS



1 High beam indicator light (➠ 41)
2 General warning light Display in combination with warning symbols in the multifunction display (➠ 24)
3 Neutral indicator light
4 ASC/DTC indicator and warning light (➠ 30)
5 Turn signal indicator light (➠ 42)
6 ABS indicator and warning light

MULTIFUNCTION DISPLAY



1 Value

2 Select riding mode
(➠ 53)

3 Trip computer
Selecting displays in the speedometer (➠ 43)
Unit of the selected display

4 Status
Warning symbol (➠ 24)

INDICATOR LIGHTS

Layout

Warnings are indicated by the corresponding warning light. If two or more warnings occur at the same time, all the appropriate warning lights appear. Warnings are displayed in alternation with warning symbols associated with them.
You will find an overview of the potential warnings on the following pages.

Warnings that do not have their own warning light are shown as a warning symbol **1** in the multifunction display in conjunction with the general warning light **2**. The general warning light lights up or blinks, depending on the urgency of the warning.

Overview of warning indicators

Indicator and warning lights	Display text	Meaning
 lights up.	 is displayed.	Electronic immobilizer is active (➠ 27)
 lights up.	 is displayed.	Engine in emergency operation mode (➠ 27)
 lights up.	 is displayed.	Engine temperature sensor malfunction (➠ 27)
 flashes.	 is displayed.	Engine warning (➠ 28)
 flashes.	 is displayed.	Severe drive malfunction (➠ 28)
 lights up.	 is displayed.	Vehicle voltage critical (➠ 28)
 lights up.	 is displayed.	Voltage of the vehicle electrical system too low (➠ 29)
	 is displayed.	External temperature warning (➠ 29)
 lights up.	 is displayed.	Light source defective (➠ 29)
 flashes.		ABS self-diagnosis not completed (➠ 30)
 lights up.		ABS error (➠ 30)
 flashes rapidly.		ASC/DTC intervention (➠ 30)

Indicator and warning lights	Display text	Meaning
 flashes.		ASC/DTC self-diagnosis not completed (➠ 31)
 lights up.		ASC/DTC switched off (➠ 31)
 lights up.		ASC/DTC fault (➠ 31)
	 is displayed.	Anti-theft alarm battery discharged (➠ 31)
 lights up.	 and odometer KM R or MI R are displayed.	Fuel down to reserve volume (➠ 32)
	 is displayed.	Service due (➠ 32)
 lights up.	 is displayed.	Service overdue (➠ 33)

Electronic immobilizer is active

 lights up.

 is displayed.

Possible cause:

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

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

Engine in emergency operation mode

 lights up.

 is displayed.

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. In exceptional cases, the engine stops and can no longer be started. Otherwise, the engine runs in emegency operation mode.

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

Engine temperature sensor malfunction

 lights up.

 is displayed.

Possible cause:

The engine temperature sensor is faulty or the communication between the engine temperature sensor and engine electronics is faulty.

- Only ride in partial load range.
- Have the malfunction corrected as soon as possible at a specialist workshop, preferably an authorized BMW Motorrad retailer.

Engine warning

 flashes.

 is displayed.

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 emergency operation mode.

- Avoid high load and engine speed ranges if possible.
- Have the malfunction corrected as soon as possible at a specialist workshop, preferably an authorized BMW Motorrad retailer.

» Continued driving is possible, however it is not recommended.

Severe drive malfunction

 flashes.

 is displayed.

Possible cause:

The engine control unit has diagnosed a fault which can lead to damage of the exhaust system.

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

» You may continue riding, but it is not recommended.

Vehicle voltage critical

 lights up.

 is displayed.

Generator power is no longer sufficient to supply all consumers and charge the battery. In order to ensure that the engine can be started and the vehicle ridden, the vehicle electronics switch off individual electrical consumers.

Possible cause:

Too many electrical consumers are turned on. Vehicle voltage tends to drop particularly when the engine is running at low rpms or idling.

- When riding at low rotational speeds, switch off electrical consumers that are not necessary for driving safety (e.g. heating vests).

Voltage of the vehicle electrical system too low

 lights up.

 is displayed.

WARNING

Failure of vehicle systems

Accident hazard

- Do not continue riding.

Possible cause:

The battery is faulty.

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

External temperature warning

 is displayed.

Possible cause:

 The outside temperature measured on the motorcycle is less than:
Approx. 37 °F (Approx. 3 °C)

WARNING

Risk of black ice, even above Approx. 37 °F (Approx. 3 °C)

Risk of accident

- At a low outside temperature, icy conditions must expected on bridges and in shady road areas.

- Use caution when riding.

Light source defective

 lights up.

 is displayed.

WARNING

Overlooking the vehicle in traffic due to a defective light source on the vehicle
Safety risk
- Replace defective light sources as quickly as possible. For details please contact a specialist service facility, preferably an authorized BMW Motorrad Retailer.

ABS self-diagnosis not completed


flashes.

Possible cause:

ABS self-diagnosis not completed
ABS is not available, as the self-diagnosis routine was not completed. (The motorcycle must reach a specified minimum speed before the system can check operation of the wheel speed sensors: 3 mph (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


lights up.

Possible cause:
The ABS control unit has detected an error. The ABS function is not available.
- It is possible to continue riding if you make allowance for the failed ABS function. You should also take account of the additional information on situations that can lead to an ABS fault (➠ 89).
- Have the malfunction corrected as soon as possible at a specialist workshop, preferably an authorized BMW Motorrad retailer.

ASC/DTC intervention


flashes rapidly.

ASC/DTC has detected instability at the rear wheel and responded by reducing the torque. The ASC/DTC indicator and warning light flashes longer than the ASC/DTC intervention lasts. This provides the driver with visual feedback for the control action that was taken even after the critical situation has passed.

ASC/DTC self-diagnosis not completed

 flashes.

Possible cause:

 ASC/DTC self-diagnosis not completed
The ASC/DTC function is not available, as the self-diagnosis function has not been completed. (To check wheel speed sensors, motorcycle must reach a minimum speed with engine running: min 3 mph (min 5 km/h))

- Ride off slowly. It must be noted that the ASC/DTC function and the dynamic engine brake control are not available until the self-diagnosis has been completed.

ASC/DTC switched off

 lights up.

Possible cause:

The ASC/DTC system has been switched off by the driver.

- Turning on the ASC/DTC function (➠ 52).

ASC/DTC fault

 lights up.

Possible cause:

The ASC/DTC control unit has detected a fault. The ASC/DTC function and the engine drag torque control are not available at all or are restricted.

- You may continue riding. Note that the ASC/DTC function and the dynamic engine brake control are not available at all or are restricted. Observe additional information on situations that can lead to a ASC/DTC fault (➠ 92).
- Have the malfunction corrected as soon as possible at a specialist workshop, preferably an authorized BMW Motorrad retailer.

Anti-theft alarm battery discharged

–with anti-theft alarm system (DWA) OE

 is displayed.

 This fault message is only shown for a short time immediately following the Pre-Ride-Check.

Possible cause:
The DWA battery no longer has any charging capacity. Operation of the DWA is no longer guaranteed when the vehicle battery is disconnected.
- Contact a specialist workshop, preferably an authorized BMW Motorrad retailer.

Fuel reserve

The fuel quantity in the fuel tank when the low-fuel warning light turns on depends on the riding dynamics. The more the fuel moves around in the fuel tank (due to frequently changing lean angles, frequent braking and acceleration), the harder it is to accurately determine the fuel reserve. For this reason, the fuel reserve cannot be indicated precisely.


After the low-fuel warning light is switched on, the odometer for the fuel reserve KM R or MI R is displayed automatically.
The distance that can still be traveled with the fuel reserve depends on the riding style (on the consumption) and on the fuel quantity that was still available at the switch-on point.
The trip distance recorder for the fuel reserve is reset when the fuel quantity after refueling is greater than the fuel reserve.

Fuel down to reserve volume


lights up.


and odometer KM R or MI R are displayed.

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

 Fuel reserve
Approx. 3.7 quarts (Approx. 3.5 l)

- Fuel quality (➠ 82).

Service due


is displayed.

Possible cause:
Service is due because of the mileage or the date.
- Have service performed regularly by a specialist workshop, preferably an authorized BMW Motorrad retailer.

» The operating safety and road safety of the vehicle remains unchanged.
» The best-possible value retention of the vehicle is ensured.

Service overdue

 lights up.

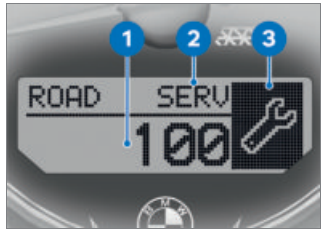
 is displayed.

Possible cause:
Service is overdue because of the riding performance or the date.
- Have service performed regularly by a specialist workshop, preferably an authorized BMW Motorrad retailer.

» The operating safety and road safety of the vehicle remains unchanged.
» The best-possible value retention of the vehicle is ensured.

SERVICE DISPLAY

If service is due within a month, the icon for service **3** and the service due date **1** are displayed. SERV **2** is displayed briefly after the Pre-Ride-Check, or if called up on the onboard computer.



If service is due within 600 miles (1000 km), the icon for service **3** and the remaining distance **1** are displayed and counted down in increments of 100 miles/kilometers. SERV **2** is displayed briefly after the Pre-Ride-Check, or if called up on the onboard computer.

If the service display appears more than one month before the service date, the date stored in the instrument cluster must be set. This situation may occur if the battery is disconnected from the vehicle.

OPERATION

04

IGNITION SWITCH/STEERING LOCK

Ignition keys

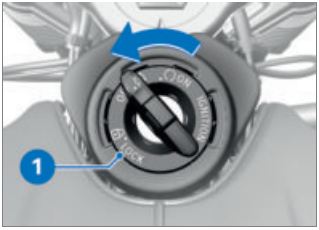
You are provided with 2 ignition keys and one key for removing the seat (➠ 57).
Should you lose your keys, refer to the notes regarding the electronic immobilizer (EWS) (➠ 39).
The ignition key fits the ignition steering lock and fuel filler cap.

Locking the steering lock

ATTENTION

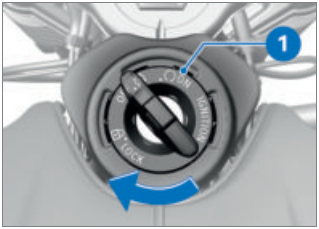
Handlebars turned in wrong direction when motorcycle propped on side stand.
Component damage cause by tipping over
- On level ground, always turn the handlebars to the left to set the steering lock.
- Otherwise the angle of the ground determines whether the handlebars are set to the left or right.

- Turn handlebars to left.



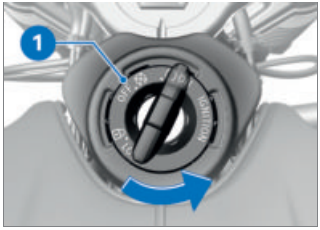
- Turn the ignition key to position **1** while moving the handlebars somewhat.
» Ignition, lights and all electrical circuits are switched off.
» Steering lock is locked.
» The ignition key can be removed.

Turning on the ignition



- Turn the ignition key to position **1**.
» Parking lights and all function circuits are turned on.
» Engine can be started.
» ABS self-diagnosis is performed (➠ 76)
» ASC/DTC self-diagnosis is performed. (➠ 77)

Turning off the ignition



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

» Light is turned off.
» Steering lock is not locked.
» The ignition key can be removed.
» Electrically powered accessories remain operational for a limited period of time.

Electronic immobilizer (EWS)

The motorcycle's electronics monitor the data stored in the ignition key through a ring antenna incorporated in the ignition switch / steering lock. The engine control unit does not enable engine start until this key has been recognized as "authorized" for your motorcycle.

An additional ignition key attached to the same ring as the ignition key used to start the engine could "irritate" the electronics, in which case the enabling signal for a start is not issued. The warning is displayed in the multifunction display with the key symbol. Always store ignition keys separately from the ignition key used for starting the vehicle.

If you lose an ignition key, you can have it disabled by your authorized BMW Motorrad retailer.
For this purpose, you should also bring all of the motorcycle's remaining ignition keys with you. The engine can no longer be started using a disabled ignition key; however, a disabled ignition key can be enabled again.
Ignition keys can only be obtained from an authorized BMW Motorrad retailer. The ignition keys are part of an integrated safety system, so the retailer is under obligation to check the legitimacy of all applications for spare keys.

EMERGENCY-OFF SWITCH

1 Emergency-off switch

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.

The engine can be turned off easily and quickly using the emergency-off switch.

A Engine turned off
B Operating position

The engine can only be started in the operating position.

LIGHTING

Low beams

- Turning on the ignition (➠ 38).
- Starting the engine (➠ 75).

- Alternative: With the ignition turned on, pull the switch **1**.

Parking lights

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

The parking light is a load on the battery. Turn on the ignition only for a limited period.

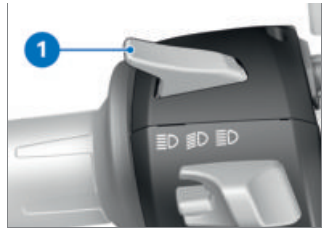
High beams and headlight flasher

- Turning on the ignition (➠ 38).

- Press switch **1** forward to turn on high beams.
- Pull switch **1** toward rear to actuate headlight flasher.

Headlight courtesy delay feature

- Turning off the ignition (➠ 39).



- Immediately after turning off the ignition, pull switch **1** back and hold until the headlight courtesy delay feature turns on.

» The vehicle lighting lights up for one minute and then turn off automatically.

– This can be used, for example, to light the path to your front door after the vehicle is parked.

Roadside parking lights

- Turning off the ignition (➠ 39).

- Immediately after switching off the ignition, push button **1**

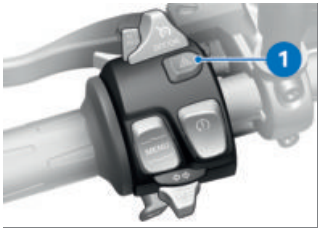
to the left and hold it until the parking lights turn on.
- Turn ignition on and then off again to turn off the roadside parking lights.

Hazard warning system

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

If a turn indicator button is pressed when hazard warning lights are on, the turn indicator function replaces the hazard warning light function for the duration of turn indicator operation. Once the turn indicator button is no longer being pressed, the hazard warning light function will resume.

- Turning on the ignition (➠ 38).



- Press button **1** to turn on the hazard warning system.

» Ignition can be turned off.
- To turn off the hazard warning system, turn on the ignition and press button **1** again.

Turn signals

- Turning on the ignition (➠ 38).

- Press button **1** to the left or right to turn on the turn signals.

» The turn signals automatically switch off when the distance covered has been reached.
- Alternative: Press button **1** to turn off the turn signals.

DISPLAY

SELECTING DISPLAYS IN THE SPEEDOMETER

WARNING

Distraction from traffic conditions and loss of control
Risk of accident through the use of integrated information systems and communication devices during the journey
- Operate these systems or devices only if the traffic situation allows.
- If necessary, stop and operate the system or devices at a standstill.

- Turning on the ignition (➠ 38).

» The trip computer is displayed.

- Repeatedly short-press button **1** until desired value is displayed.

Possible displays:
– Odometer: `MI`
– Trip odometer 1: `MI 1`
– Automatic trip odometer: `MI A`, is automatically reset if at least 6 hours have passed since the ignition was turned off and the date has changed.

–Distance covered after reaching the fuel reserve level: MI R, can only be selected for the fuel reserve.
–Outside temperature: °F
–Engine temperature: bar display
–Clock: AM/PM
–Service date: SERV can only be selected if service is due within one month, or if service is overdue.
–Remaining distance until service: SERV can only be selected if service is due within 600 mi (1000 km) or if service is overdue.
–Call up the settings menu: SETUP ENTER, can only be selected when the vehicle is at a standstill.

Resetting the trip odometer

- Turning on the ignition (➠ 38).

- Briefly press button **1** repeatedly until the trip odometer to be reset **2** is displayed.
- Press and hold button **1** until the trip odometer **2** is reset.

SETTINGS IN THE INSTRUMENT CLUSTER

Selecting SETUP

Requirement

The vehicle is stationary.

- Briefly press button **1** repeatedly until SETUP ENTER is displayed.
- Press and hold button **1** to start SETUP.
- Briefly press button **1** in each case to select the following parameters in SETUP:

–Adjust the brightness of the backlighting for the instrument cluster BRIGHT.

–with anti-theft alarm system (DWA) OE

–Activate alarm function of anti-theft alarm system automatically after switching off the ignition DWA ON or leave switched off DWA OFF.◁

–Set time display CLOCK.

–Set date DATE.

–Set units UNIT.

–Reset displays RESET.

–Exit the SETUP menu SETUP EXIT.

Adjusting the display brightness

- Turning on the ignition (➠ 38).
- Selecting SETUP (➠ 46).

- Briefly press button **1** repeatedly until SET BRIGHT is displayed.
- Briefly press button **2** repeatedly until the desired value for display brightness **3** is set.

» A value from 1 to 5 (dark to light) is set for display brightness.

- Press and hold button **1** to exit SET BRIGHT.

» SETUP ENTER is displayed.

Setting the clock

- Turning on the ignition (➠ 38).
- Selecting SETUP (➠ 46).

- Briefly press button **1** repeatedly until SET CLOCK is displayed.
- Press and hold button **2** until hours **3** blink.
- Briefly press button **1** to increment hours.
- Briefly press button **2** to decrement hours.

» The hours are set.

- Press and hold button **2** until minutes **4** blink.
- Briefly press button **1** to increment minutes.
- Briefly press button **2** to decrement minutes.

» The minutes are set.

- Press and hold button **2** until minutes no longer blink.

» The clock is set.

- Press and hold button **1** to exit SET CLOCK.

» SETUP ENTER is displayed.

Setting the date

- Turning on the ignition (➠ 38).
- Selecting SETUP (➠ 46).

- Briefly press button **1** repeatedly until SET DATE is displayed.
- Press and hold button **2** until day **4** blinks.
- Briefly press button **1** to increment day.
- Briefly press button **2** to decrement day.

» The day is set.

- Press and hold button **2** until month **3** blinks.
- Briefly press button **1** to increment month.
- Briefly press button **2** to decrement month.

» The month is set.

- Press and hold button **2** until SET YEAR is displayed.

- Briefly press button **1** to increment year **5**.
- Briefly press button **2** to decrement year **5**.
- Press and hold button **2** until year no longer blinks.

» The year is set.

- Press and hold button **1** to exit SET YEAR.

» The date is set.

» SETUP ENTER is displayed.

Setting units

Requirement

The vehicle is stationary.

- Turning on the ignition (➠ 38).
- Selecting SETUP (➠ 46).

- Briefly press button **1** repeatedly until SET UNIT ENTER is displayed.
- Press and hold button **2** to activate SET UNIT.

» UNIT SPEED is displayed.

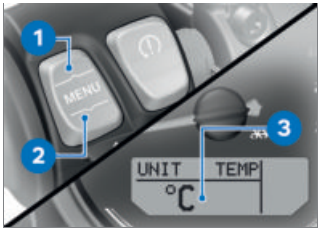
- Briefly press button **1** in each case to select the following parameters in SET UNIT:

– Change fuel consumption display indicator to L/100, MPG or KM/L

– Change temperature display unit to °C or °F

– Change the time display to 24H or 12H

– Change date format to DMY or MDY



- Briefly press button **2** until each desired unit **3** is set.
- If you want to complete the configuration, press button **1** repeatedly until SET UNIT EXIT is displayed.
- Press and hold button **2** to exit SET UNIT.

» SETUP RESET is displayed.

- If you want to reset the units to the factory setting, press button **1** repeatedly until SET UNIT RESET is shown.
- Press and hold button **2** until the RESET display **3** blinks.

» The units have been reset to the factory settings.

» The SET UNIT EXIT display is shown.

- Press and hold button **2** to exit SET UNIT.

» SETUP RESET is displayed.

Resetting SETUP

- Turn on the ignition.
- Selecting SETUP (➠ 46).

- Briefly press button **1** repeatedly until SETUP RESET is displayed.
- Press and hold button **2** until the RESET display **3** blinks.

The SETUP RESET function also resets the date and time to their standard values.

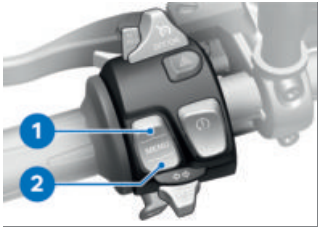
» SETUP EXIT is displayed.

- Exiting SETUP (➠ 49).

Exiting SETUP

Requirement

There are four ways to exit SETUP.



- Press and hold button **1**.

» SETUP ENTER is displayed.

» Settings have been saved.

- Alternative: Briefly press button **1** repeatedly until SETUP EXIT is displayed.
- Press and hold button **2**.

» SETUP ENTER is displayed.

» Settings have been saved.

- Alternative: Turn the ignition off and on again.

» SETUP ends without saving the settings.

- Alternative: Ride off.

Speed for using SETUP
max 6 mph (max 10 km/h)

» When the permissible speed for operation is exceeded, SETUP ends without saving the settings.

» MI is displayed.

ANTI-THEFT ALARM SYSTEM (DWA)

–with anti-theft alarm system (DWA) OE

Activating the DWA

- Turning on the ignition (➠ 38).
- Setting the DWA (➠ 51).
- Switch off the ignition.

» If the DWA is activated, the DWA will automatically be activated after the ignition is switched off.

» Activation takes approximately 30 seconds to complete.

–Turn signals are illuminated twice.

» DWA is armed.

Alarm signal

The DWA alarm can be set off by:

–Motion sensor

–Switching on the ignition with an unauthorized ignition key.

–Disconnecting the DWA from the vehicle battery (DWA battery takes over the power supply – alarm sound only, hazard warning lights do not flash).

If the DWA battery is discharged all functions remain operational; the only difference is that the alarm cannot be set off if the system is disconnected from the motorcycle battery.

The duration of the alarm signal is approx. 26 seconds. During the DWA alarm, an alarm tone sounds and the turn indicators flash. The type of alarm tone can be set by a BMW Motorrad partner.

If a DWA alarm was set off while the motorcycle was unattended, the rider is notified accordingly by an alarm tone sounding once when the ignition is switched on. The DWA LED then signals the reason for the DWA alarm for one minute.

Light signals on DWA LED:

- 1 flash: motion sensor 1
- 2 flashes: motion sensor 2
- 3 flashes: ignition turned on with unauthorized ignition key
- 4 flashes: DWA disconnected from motorcycle battery
- 5 flashes: motion sensor 3

Deactivating the DWA

- Turning on the ignition (➠ 38).

» Turn indicators are illuminated once.

» DWA is switched off.

Setting the DWA

- Turning on the ignition (➠ 38).
- Selecting SETUP (➠ 46).

- Briefly press button **1** repeatedly until SET DWA is displayed.
- Briefly press button **2** to change the adjusted value.

The following settings are available:

- DWA ON: DWA is activated or is activated automatically when the ignition is switched off.
- DWA OFF: DWA is deactivated.

- Press and hold button **1** to exit SET DWA.

» SETUP ENTER is displayed.

TRACTION CONTROL (ASC/DTC)

Turning off the ASC/DTC function

- Turning on the ignition (➠ 38).

The ASC/DTC function can also be deactivated while you are riding.

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

starts to light up.

» The ASC/DTC function is switched off.

Turning on the ASC/DTC function

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

goes out, and if self-diagnosis has not been completed, it begins to flash.

» The ASC/DTC function is switched on.

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

If the ASC/DTC indicator and warning light do not go dark after the ignition has been switched off and then on again and riding has continued after this at the following minimum speed, an ASC/DTC fault has occurred.

min 3 mph (min 5 km/h)

- For more information on ASC/DTC traction control,

see Chapter "Technology in detail" (➠ 91).

RIDING MODE

Use of the riding modes

BMW Motorrad has developed riding scenarios for your vehicle from which you can select the one matching your situation:

Standard

–RAIN: Riding on roads that are slick from rain.

–ROAD: Riding on dry roads.

–with riding modes Pro [OE]

–without lowered [OE]

With Pro riding modes and without lowered suspension additionally

–DIRT: For off-road riding with road tires.

–with riding modes Pro [OE]

–with lowered [OE]

With Pro riding modes and lowered suspension additionally

–DYNA: Dynamic riding on dry roads.

The optimum interaction between engine characteristics, ABS control, and ASC/DTC control is provided for each of these scenarios.

More detailed information about the riding modes can be found in the "Technology in detail" Chapter (➠ 93).

Select riding mode

- Turning on the ignition (➠ 38).

- Press button **1**.

» The current riding mode **2** is displayed.

- Press button **1** repeatedly until the desired riding mode **2** is displayed.

» When the vehicle is at a standstill, the selected riding mode is activated after approx. 2 seconds.

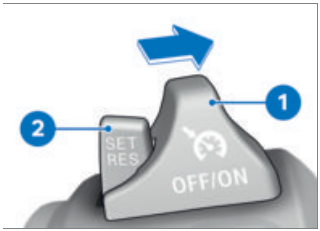
» The new riding mode is activated while the vehicle is in

motion under the following conditions:
– The throttle grip is in Neutral.
– Brake is not engaged.
– with cruise control OE
» Additionally, for vehicles with adaptive cruise control:
– Adaptive cruise control is deactivated.◁
» The riding mode that is set and its corresponding adjustments of engine characteristics and ABS control and ASC/DTC control are retained even after the ignition is switched off.

CRUISE CONTROL

– with cruise control OE

Turning on cruise control



• Slide switch **1** to the right.

Cruise control is available only after exiting the DIRT riding mode.

» Button **2** is unlocked.

Saving the speed

• Briefly push button **1** forward.

Adjustment range of cruise control (gear-dependent)
12...130 mph (20...210 km/h)

is displayed.

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

Accelerating

• Briefly push button **1** forward.
» The speed is increased by 1 mph (1.6 km/h) each time the button is pressed.

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

» The speed increases continuously.

» If button **1** is no longer pressed, the speed reached is maintained and saved.

Decelerating

- Briefly press button **1** backward.

» The speed is decreased by 1 mph (1.6 km/h) each time the button is pressed.

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

» The speed is reduced continuously.

» If button **1** is no longer pressed, the speed reached is maintained and saved.

Deactivating the adaptive cruise control

- Actuate the brakes, coupling or throttle grip (ease the throttle beyond the default setting) to deactivate the adaptive cruise control.

During ASC/DTC interventions, the adaptive cruise control is automatically deactivated for safety reasons.

» Icon for adaptive cruise control disappears.

Resuming previous cruising speed

- Briefly push button **1** back to return to the speed saved beforehand.

Cruise control is not deactivated by accelerating. If you release the throttle grip, the motorcycle will decelerate only to the cruising speed saved in memory, even though you might have wanted to slow down to a lower speed.

 is displayed.

Turning off cruise control

- Push switch **1** to the left.

» The system is switched off.

» Button **2** is locked.

HEATED GRIPS

–with heated grips OE

Operating heated grips

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

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

- Starting the engine (➠ 75).

- Press button **1** repeatedly until desired heating level **2** is displayed.

The following settings are available:

Heating off

Low heater output

High heater output

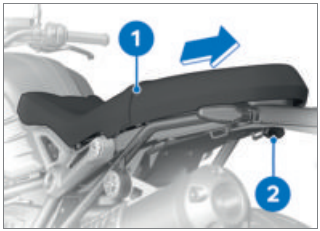
» High heater output is used for fast heating of the grips; the switch should then be switched back to a lower heater output.

» If no further changes are made, the selected heating level is set and the heated grip icon is hidden.

SEAT

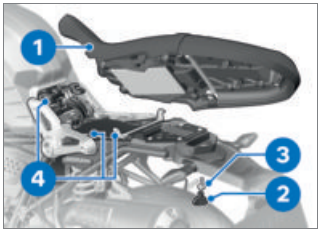
Removing the seat

- Park the motorcycle, making sure the ground is level and firm.



- Remove the screw with the motorcycle seat key **2**.
- Pull seat **1** backward and remove.

Installing the seat



- Place seat **1** centrally and push it forward into the lugs **4**.
- Install the screw **3** with the motorcycle seat key **2**.

SETTING

05

MIRRORS

Adjusting the mirrors

- Move mirrors into desired position by rotating them.

–with Option 719 Billet pack Classic II[OE]

or

–with Option 719 Billet pack Shadow II[OE]

DANGER

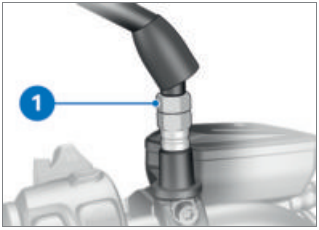
Function impaired by incorrect installation position

Risk of a fall or accident

- Do not change the installation position of the mirror.

- Move mirror body into desired position by twisting it.◁

Adjusting the mirror arm



- Slide up the protective cap over the threaded connection on the mirror arm.
- Loosen nut **1** with tool from on-board toolkit.
- Turn the mirror arm into the desired position.
- Tighten nut **1** while holding mirror arm firmly.

	Mirror (lock nut) on adapter
M10 x 1.25	
16 lb/ft (22 Nm) (Left-hand thread)	

- Slide the protective cap over the threaded connection.

HEADLIGHTS

Headlight adjustment, right-hand/left-hand traffic

This motorcycle's headlight features a symmetrical low beam. No special measures 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).

Headlight beam throw and spring preload

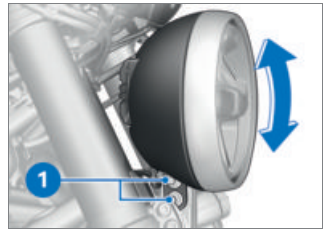
The headlight beam throw generally remains constant due to the adjustment of the spring preload to the load status. However, in the case of very high payloads, the available spring preload adjustment might not be adequate. If that is the case, the headlight beam throw must be adapted to the weight.

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.

Adjusting the headlight range

Requirement

Despite adjustment of the spring preload, oncoming traffic is still blinded when the vehicle has a high payload.



- Slacken screws **1**.
- Swivel the headlight to adjust the headlight range.
- Tighten screw **1** while holding the headlight.

	Headlight on bracket
M8 x 40	
14 lb/ft (19 Nm)	

If the motorcycle is ridden again with lower payload:

- Have the headlight base setting readjusted by a specialist workshop, preferably an authorized BMW Motorrad retailer.

CLUTCH

Adjusting the clutch lever

WARNING

Modified position of the clutch fluid reservoir

Air in the clutch system

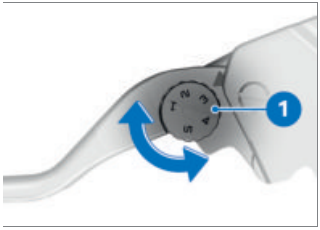
- Do not twist the handlebar fitting or the handlebars.

WARNING

Adjusting the clutch lever while driving

Accident hazard

- Adjust the clutch lever when the motorcycle is stationary.



- Turn the adjustment screw **1** into the desired position by applying gentle pressure from the rear.

The adjusting screw is easier to turn when the clutch lever is pressed forward.

» Adjustment options:

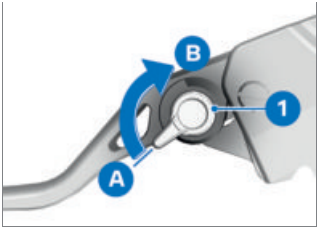
– From position 1: Shortest distance between handlebar grip and clutch lever

– To position 5: Longest distance between handlebar grip and clutch lever

– with Option 719 Billet pack Classic II OE

or

– with Option 719 Billet pack Shadow II OE



- Turn the adjustment lever **1** to the desired position.

» Adjustment options:

– From position **A**: Shortest distance between handlebar grip and clutch lever.

– Five steps toward position **B** to increase the distance between the handlebar grip and the clutch lever.◁

BRAKES

Adjusting the brake lever

WARNING

Modified position of the brake fluid reservoir

Air in the brake system

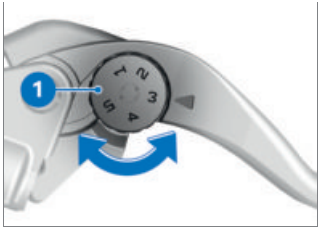
- Do not twist the handlebar fitting or the handlebars.

WARNING

Adjusting the brake lever while driving

Risk of accident

- Do not attempt to adjust the brake lever unless the motorcycle is at a standstill.



- Turn the adjustment screw **1** into the desired position by applying gentle pressure from the rear.

The adjustment screw is easier to turn when the brake lever is pressed forward.

» Adjustment options:

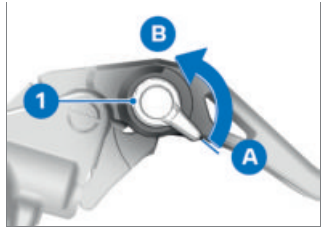
– From position 1: Shortest distance between handlebar grip and brake lever

– To position 5: Longest distance between handlebar grip and brake lever

– with Option 719 Billet pack Classic II OE

or

– with Option 719 Billet pack Shadow II OE



- Turn the adjustment lever **1** to the desired position.

» Adjustment options:

– From position **A**: Shortest distance between handlebar grip and brake lever.

– Five steps toward position **B** to increase the distance between the handlebar grip and the handbrake lever.◁

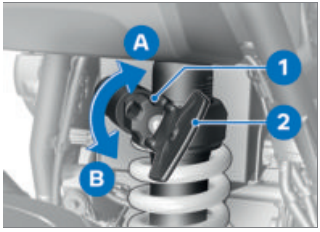
SPRING PRELOAD

Adjustment on rear wheel

It is essential to set the spring preload at the rear wheel to suit the load carried by the motorcycle. Increase spring preload if the payload increases and reduce spring preload accordingly if the payload decreases.

Adjusting the spring preload at the rear wheel

- Park the motorcycle, making sure the ground is level and firm.



WARNING

Uncoordinated settings of spring preload and spring strut damping.

Poorer handling.

- Adjust damping characteristic to changed spring preload.

- To increase the spring preload, insert the key **2** at the adjustment wheel **1** and turn in direction **A**.
- To decrease the spring preload, insert the key **2** at the adjustment wheel **1** and turn in direction **B**.
- Adjust the damping to the changed spring preload.

A recommendation on the chassis calibration is provided in the "Technical Data" chapter under "Chassis".

- Adjusting damping at the rear wheel (➠ 64).

DAMPING

Setting

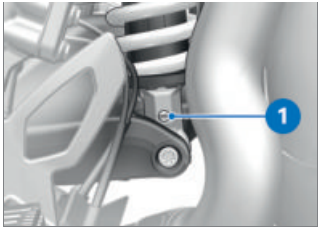
Damping must be adjusted to the road condition and the spring preload.

–A rough road requires softer damping than a smooth road.

–An increase in spring preload requires firmer damping, a reduction in spring preload requires softer damping.

Adjusting damping at the rear wheel

- Park the motorcycle, making sure the ground is level and firm.



CAUTION

Adjusting the spring strut damping when the silencer is hot

Burn hazard

- Allow the muffler to cool down.

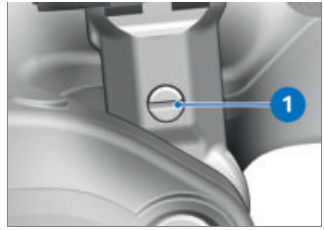
CAUTION

Working with hot components

Burn hazard

- Wear protective gloves.

- Use on-board toolkit to adjust damping via adjustment screw **1**.



- To increase damping, turn the adjustment screw **1** clockwise.
- To reduce damping, turn the adjustment screw **1** counterclockwise.

Recommendation on chassis and suspension adjustment for one-up operation
Turn adjustment wheel counterclockwise up to stop (Spring preload)
Turn adjustment screw clockwise up to stop, then turn back by 2 turns (Damping)

Recommendation on chassis and suspension adjustment for two-up mode
Turn adjustment wheel clockwise up to stop (Spring preload)
Turn adjustment screw up to stop, then turn back 1 turn (Damping)

FOOTREST SYSTEM

–with Option 719 Billet pack Classic II[OE]

or

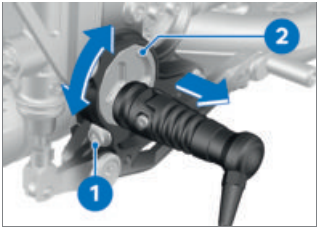
–with Option 719 Billet pack Shadow II[OE]

Adjusting the rotor

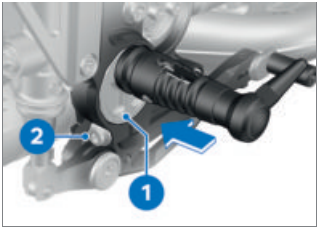
WARNING

Greater inclinations can lead ground contact of hard components when cornering.
Accident hazard
- Do not use the footrest as an indicator for critical inclinations.

- The rotor is adjusted in the same way on the left and right.
- The position of the rotor must be adjusted the same way on the left and right.



- The foot distance and a higher foot position can be adjusted on the rotor **2**.
- Loosen the bolt **1** far enough that the rotor **2** can be pulled out.
- The rotor **2** is adjustable in 12 positions. To set the highest position, turn the rotor **2** to the left or right by 180°.



- Install the rotor **1** in the desired position and tighten the screw **2**.

Rotor on base plate
M6 x 25
15 lb/ft (20 Nm)

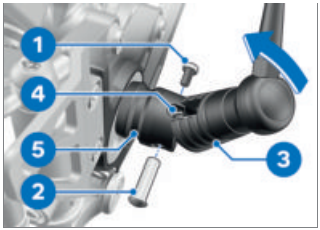
WARNING

Incorrectly adjusted footrest due to the rotor being moved.
Accident hazard
- If the rotor is moved, the footrest adjustment must be adapted accordingly.

- The footrest can only fold upward and slightly backward.

Adjusting the footrest joint

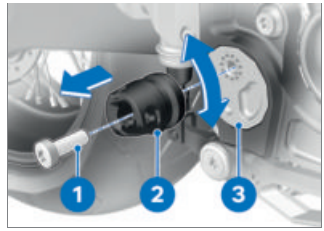
- The footrest joint is adjusted the same way on the left and right.



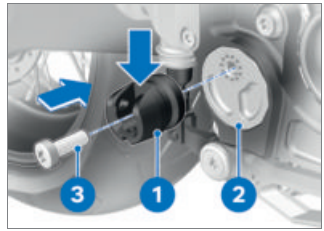
- Remove screw **1** and bolt **2**.
- Fold the footrest body **3** in direction of arrow.

» The spring is relaxed.

- Disengage spring **4** from footrest joint **5**.

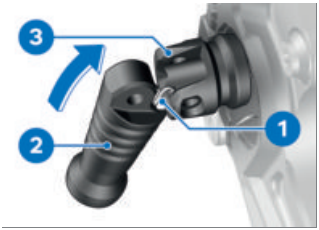


- Remove screw **1**.
- Pull the footrest joint **2** from the rotor **3**.
- To change the position of the footrest joint **2**, turn it clockwise or counterclockwise.

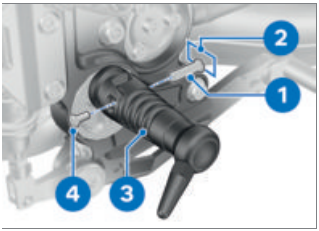


- When ultimately installed on the rotor **2**, the opening **arrow** of the footrest joint **1 must** point upward or slightly to the rear and upward.
- Install screw **3**.
- Remove and install the footrest joint on the side of the switch unit in the same way.

Footrest joint on rotor
M8 x 20
15 lb/ft (20 Nm)



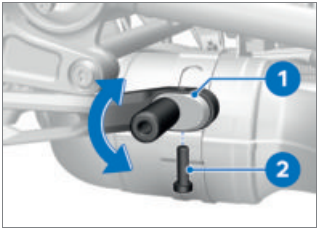
- Attach the spring **1** to the eye on the footrest joint **3**.
- Fold the footrest body **2** upward in the footrest joint **3**.



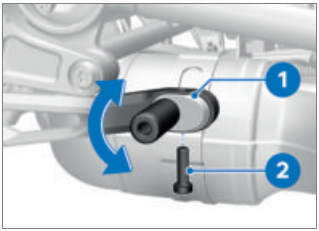
- Install bolt **1** with flattened head **2** flush to the footrest joint and footrest body **3**.
- Install screw **4**.
- Remove and install the footrest body on the side of the switch unit in the same way.

Footrest body on footrest joint
M4 x 8
2 lb/ft (3 Nm)

Adjusting the footbrake lever foot plate



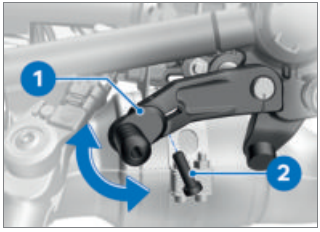
- The horizontal and vertical distance of the foot relative to the foot plate **1** can be adjusted by turning it to different positions.
- Remove screw **2**.



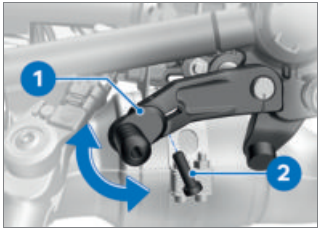
- Clean the thread.
- Turn the foot plate **1** to the desired position.
- Install the **new** screw **2**.

Foot piece on footbrake lever
M6 x 20
Thread-locking compound: micro-encapsulated
7 lb/ft (10 Nm)

Adjusting the gearshift lever foot plate



- The horizontal and vertical distance of the foot relative to the foot plate **1** can be adjusted by turning it to different positions.
- Remove screw **2**.



- Clean the thread.
- Turn the foot plate **1** to the desired position.
- Install the **new** screw **2**.

Foot piece to gearshift lever
M6 x 20
Thread-locking compound: micro-encapsulated
7 lb/ft (10 Nm)

RIDING

06

SAFETY INSTRUCTIONS

Rider's equipment

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

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

WARNING

Seizure of loose textile fabrics, luggage items or straps in open running rotating vehicle parts (wheels, prop shaft)
Risk of accident
- Make sure that no loosely worn textile fabrics can get caught in open, running and rotating vehicle parts.
- Keep luggage items as well as tension belts and lashing straps away from open, running and rotating vehicle parts.

Correct loading

WARNING

Reduced riding stability caused by overloading and uneven loading
Accident hazard
- Do not exceed the gross weight limit and observe the loading information.

- Set spring preload, suspension damping rate settings and tire pressures for the current gross vehicle weight.
- Pack heavy pieces of luggage and cargo as low and as close to the center of the motorcycle as possible.

–with tank bag OA
- Observe maximum payload of the tank bag.

 Payload of tank bag
max 11 lbs (max 5 kg)◁

–with rear bag OA
- Observe maximum payload of the rear bag.

 Payload of rear bag
max 22 lbs (max 10 kg)◁

Speed

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

– Incorrect adjustment of the spring strut
– Unevenly distributed load
– Loose clothing
– Tire pressure too low
– Tire tread in poor condition
– Attached luggage systems, such as a tank bag or rear bag.

Risk of poisoning

Exhaust gas contains carbon monoxide, which is colorless and odorless but highly toxic.

WARNING

Harmful exhaust gas

Danger of suffocation

- Do not inhale exhaust fumes.
- Do not run the engine in closed rooms.

WARNING

Inhalation of vapors that are harmful to health

Damage to health

- Do not inhale vapors from operating fluids and plastics.
- Only use the vehicle outdoors.

Burn hazard

CAUTION

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

There is a danger of overheating and damage if misfiring causes unburned fuel to enter the catalytic converter.

For this reason, observe the following points:

– Do not run the fuel tank dry.
– Do not run the engine with the spark-plug socket removed.

–Stop the engine immediately if it misfires.
–Use unleaded fuel only.
–Comply with all specified maintenance intervals.

ATTENTION

Unburned fuel in the catalytic converter
Damage to catalytic converter
• Note the points listed for protection of the catalytic converter.

Danger of overheating

ATTENTION

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.

REGULAR CHECK

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

Always before riding off
–Check operation of the brake system (➠ 104).
–Check operation of the lighting and signal system.
–Check clutch function (➠ 108).
–Check tire tread depth (➠ 109).
–Check tire pressure (➠ 108).
–Check that luggage is securely held in place.

At every third refueling stop

–Check engine oil level (➠ 102).
–Check front brake pad thickness (➠ 104).
–Check rear brake pad thickness (➠ 105).
–Check front brake fluid level (➠ 106).
–Check rear brake fluid level (➠ 107).

STARTING

Starting the engine

- Turning on the ignition (➠ 38).

» ABS self-diagnosis is performed (➠ 76)

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

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

- For cold start and at low temperatures:

» Pull clutch.

- Press starter button **1**.

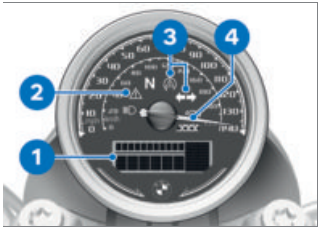
The starting procedure is automatically canceled if the battery voltage is too low. Recharge the battery before you attempt to start the engine again, or use jump-starting. More detailed information can be found in the Maintenance chapter under Jump-starting.

» Engine starts.
» Consult the troubleshooting chart if the engine refuses to start. (➠ 136)

Pre-Ride Check

After the ignition is switched on, the instrument cluster performs a test of the instrument dials, the indicator and warning lights, and the display—this is referred to as the Pre-Ride-Check. Starting the engine before the test is completed will cancel the remainder of the test.

Phase 1



All segments are shown in the display **1**.
At the same time, all indicator and warning lights **3** are switched on.

Phase 2

The general warning light **2** changes from being continuously lit to blinking.
The needle **4** for the speedometer moves to maximum speed.

Phase 3

The needle **4** for the speedometer drops to zero.
The indicator and warning lights go out or adopt their functions for operation.

The display reverts to the standard format. The trip computer is displayed.

If the needle has not moved, an indicator and warning light has not been turned on, or segments are missing in the display:

- Have the malfunction corrected as soon as possible at a 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 starts automatically when you start the ignition.

Phase 1

» Check system components capable of diagnosis while vehicle is at a standstill.

flashes.

Phase 2

» Check wheel speed sensors while riding off.

flashes.

ABS self-diagnosis completed

» ABS warning light goes out.

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

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

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

ASC/DTC self-diagnosis

The self-diagnosis routine is determining whether BMW Motorrad ASC/DTC is ready for operation. The self-diagnosis runs automatically when you turn on the ignition.

Phase 1

» Check of system components with diagnostic capability while the vehicle is at a standstill.

 flashes.

Phase 2

» Check of the system components with diagnostic capability while the vehicle is in motion.

 flashes.

ASC/DTC self-diagnosis completed

» The ASC/DTC indicator and warning light goes out.

- Check the display of all indicator and warning lights.

 ASC/DTC self-diagnosis not completed
The ASC/DTC function is not available, as the self-diagnosis function has not been completed. (To check wheel speed sensors, motorcycle must reach a minimum speed with engine running: min 3 mph (min 5 km/h))

If an ASC/DTC error is displayed after the ASC/DTC self-diagnosis is completed:

- You may continue riding. It must be noted that the ASC/DTC function is not available.
- Have the malfunction corrected as soon as possible at a specialist workshop,

preferably an authorized BMW Motorrad retailer.

BREAKING IN

Engine

- In the period preceding the break-in service, 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 load status during break-in.

 Load condition when breaking in
No full throttle (Odometer reading 0...621 miles (0...1000 km))

- Note the break-in speeds.

 Break-in speeds
0 to 1000 km
max 31 mph (max 50 km/h) (1st gear)
max 43 mph (max 70 km/h) (2nd gear)
max 56 mph (max 90 km/h) (3rd gear)
max 68 mph (max 110 km/h) (4th gear)
max 78 mph (max 125 km/h) (5th gear)

 Break-in speeds
max 87 mph (max 140 km/h) (6th gear)

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

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

Brake pads

New brake pads have to be broken in before they can achieve their optimum frictional force. This initial reduction in braking effect 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.

Tires

New tires have a smooth surface. They must be roughened by riding in a restrained manner at varying 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.

BRAKES

How do you achieve the shortest braking distance?
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 possible braking distance, the front wheel brake must be applied quickly and with progressively greater levels of force. This procedure provides ideal exploitation of the extra weight transfer to the front wheel. The clutch should also be disengaged at the same time. With the frequently trained extreme emergency 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.
Locking up of the front wheel is prevented by BMW Motorrad ABS.

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.

Descending mountain passes

WARNING

Braking should be done predominantly using the rear wheel brake when riding on downhill routes
Loss of braking effect, destruction of the brakes due to overheating
- Apply the front and rear wheel brake and use the engine brake.

Wet, soiled brakes

Moisture and dirt on the brake discs and the brake pads result in a decrease in the braking effect.
Delayed or poorer braking effect must be expected in the following situations:
- When driving in the rain and through puddles.
- After washing the motorcycle.
- When driving on roads spread with salt.
- After working on the brakes due to oil or grease residues.
- When driving on soiled roads or offroad.

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.

ABS Pro
Physical riding limits

WARNING

Braking in curves
Danger of falling despite ABS Pro
- The rider is always responsible for adapting his/her driving style.
- Do not reduce the system's extra safety margin with careless riding or unnecessary risks.

Falling cannot be excluded

Although ABS Pro and Dynamic Brake Control represent valuable support and an enormous safety advantage for the rider when braking in an inclined position, they by no means redefine the physical riding limits. It is still possible to exceed those

limits through misjudgments or riding errors. In extreme cases this my result in a fall.

Use on public roads

On public roads, ABS Pro and Dynamic Brake Control help make riding your motorcycle even safer. When braking due to unexpected hazards in curves, ABS Pro prevents blocking and slipping of the wheels within the scope of the physical riding limits. In the event of emergency braking, Dynamic Brake Control enhances the braking effect and intervenes if the throttle grip is accidentally actuated during braking.

ABS Pro was not developed to increase the individual braking performance in the inclined position.

PARKING THE MOTORCYCLE

Side stand

- 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

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.

- Fold out side stand and park motorcycle.
- If the slope of the road permits, turn the handlebars to the left.
- On slopes point the motorcycle uphill and engage 1st gear.

REFUELING

Fuel quality

Requirement

For optimal fuel consumption, the fuel should be sulfur-free or very low in sulfur content.

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.

- Observe the maximum ethanol content of the fuel.

Fuel additives clean the fuel injection system and the combustion area. Fuel additives should be used when refueling with low-quality fuels or during longer periods of downtime. Your authorized BMW Motorrad retailer can provide you with more detailed information.

Recommended fuel quality
Super unleaded (max. 15% ethanol, E15) 89 AKI (95 ROZ/RON) 90 AKI

Alternative fuel quality
Regular 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

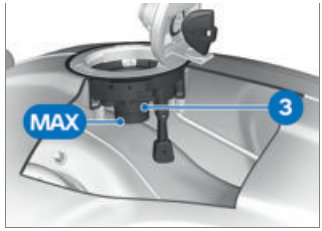
Component damage
Component damage due to overfilled fuel tank
- If the fuel tank is overfilled, the excess fuel will flow into the carbon canister and lead to component damage there.
- Only fill the fuel tank to the lower edge of the fuel filler neck.

ATTENTION

Contact of fuel and plastic surfaces
Damage to surfaces (become unattractive or cloudy)
- Immediately clean plastic surfaces after contact with fuel.

- Park the motorcycle, making sure the ground is level and firm.

- Open the protective flap **2**.
- Unlock the fuel tank cap **1** in a clockwise direction using the ignition key and fold it up.



- Refuel with a fuel quality as specified below, but no higher than the lower edge of the fuel filler neck **3**. This is the maximum level.

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.

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.

Fuel tank capacity
Approx. 4.5 gal (Approx. 17 l)
Fuel reserve
Approx. 3.7 quarts (Approx. 3.5 l)

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

LASHING DOWN MOTORCYCLE IN PLACE FOR TRANSPORTATION

- Protect all components from being scratched where tensioning belts are routed – for example, by using adhesive tape or soft cloths.

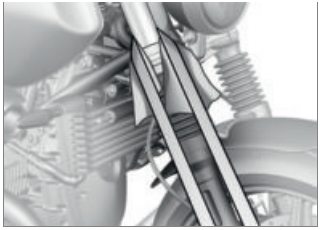
ATTENTION

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.

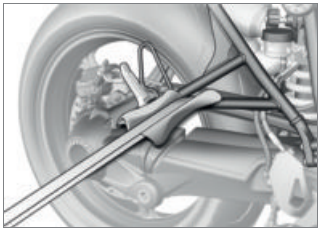
- Push the motorcycle onto the transport surface, and do not prop it on its side stand.



ATTENTION

Pinching of components
Component damage
- Do not pinch components, e.g. brake lines or wiring harnesses.

- Lay tensioning belts over the lower fork bridge in front on both sides.
- Tension tensioning belts downward.



- Secure and fasten the tensioning belts at the rear on the frame for the passenger footrests on both sides.
- Tighten all tensioning belts evenly.

» The vehicle is lashed down securely (suspension is compressed).

TECHNOLOGY IN DETAIL

07

GENERAL NOTES

More information on the topic of technology is available at:
bmw-motorrad.com/technik

ANTILOCK BRAKING SYSTEM (ABS)

How does ABS work?

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

What happens when rough roads are encountered?

Rough roads can briefly lead to a loss of contact between the tires and the road surface. The transferable braking force is then 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, ABS must assume extremely low coefficients of friction (gravel, ice, snow) so that the wheels turn in every imaginable case and driving stability is ensured. After detecting the actual conditions, the system adjusts the optimum brake pressure.

Lifting off rear wheel

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

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.

What are the design features of the BMW Motorrad ABS?
The BMW Motorrad ABS ensures riding stability on any surface within the limits of riding physics.

At speeds greater than min 2 mph (min 4 km/h), the BMW Motorrad ABS can ensure riding stability on any surface within the limits of riding physics. At lower speeds, the BMW Motorrad ABS cannot provide optimal support on all surfaces due to system limitations.

The system is not optimized for the special requirements encountered under the extreme conditions of competitive off-road and racetrack use.

Special situations
To detect the tendency of the wheels to lock up, the speeds of the front and rear wheel are compared. If implausible values are detected over a longer period of time, the ABS function is switched off for safety reasons, and an ABS error is displayed. A self-diagnosis routine must be completed before the fault memory entry will be displayed.
Apart from problems with the BMW Motorrad ABS, unusual riding conditions can also cause a fault memory entry to be generated:
- Riding on rear wheel (wheelie) for a longer period
- Rear wheel spinning when stationary with front wheel brake engaged (burn-out)
- Heating up on the main or auxiliary stand in neutral or with gear engaged
- Blocked rear wheel for an extended period of time, e.g., when riding downhill offroad

Should a fault memory entry occur due to an unusual driving condition, the ABS function can be reactivated by switching the ignition off and then on again.

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.

WARNING

Braking in curves
Risk of accident despite ABS
- The rider is always responsible for adapting his/her driving style.
- Do not reduce the additional safety function with careless riding or unnecessary risks.

ABS Pro

ABS Pro increases safety, in particular when braking in corners. ABS Pro stops the wheels from locking up, even if the brakes are actuated quickly. ABS Pro reduces abrupt changes in steering forces, especially during shock braking, and therefore decreases the risk of an undesirable "rearing up" of the vehicle.

ABS control

From a technical standpoint, ABS Pro adjusts the ABS control to the angle of inclination of the motorcycle in dependence on the respective riding situation. Signals for the roll and yaw rate and the lateral acceleration are used to determine the inclination of the motorcycle. The signals come from the angular rate sensor, which is already used for Dynamic Traction Control DTC.
With an increasing inclination, the brake pressure gradient is increasingly limited at the start of braking. This results in a slower pressure buildup. In addition, the pressure modulation in the range of the ABS control is more uniform.

Advantages for the rider

The advantages of ABS Pro for the rider are sensitive response and high braking and riding stability with the best possible deceleration, even in curves.

DYNAMIC BRAKE CONTROL

–with riding modes Pro OE

Dynamic Brake Control function

The Dynamic Brake Control function helps the rider in the event of emergency braking.

Detection of emergency braking

–Emergency braking is detected when the front wheel brake is applied quickly and with force.

Behavior during emergency braking

–If hazard braking is applied at a speed of more than min 6 mph (min 10 km/h), in addition to the ABS function, the Dynamic Brake Control function will also be activated.

Behavior in the event of accidental activation of the throttle grip

–If the throttle grip is accidentally actuated during emergency braking (throttle position >5%), the intended braking effect is ensured by the Dynamic Brake Control ignoring the opening process of the throttle grip. This ensures the effectiveness of emergency braking.

–If the gas is shut off (throttle position <5%) during the intervention of the Dynamic Brake Control, the engine torque required by the ABS brake system will be restored.

–If hazard braking is stopped and the throttle grip is still under actuation, the Dynamic Brake Control adjusts the engine torque back to the rider's choice.

TRACTION CONTROL (ASC/ DTC)

How does traction control work?

Traction Control is available in two versions

–**Without** taking the angle into account: Automatic Stability Control ASC

–ASC is a rudimentary function intended to prevent falls.

–**With** taking the angle into account: Dynamic Traction Control DTC

–The additional inclined position and acceleration informa-

tion enables the DTC to make more precise and comfortable adjustments.

The traction control compares the wheel centrifugal velocities of the front and rear wheels. The slip, and with it the stability reserves at the rear wheel, are determined from the speed difference. The engine control adapts the engine torque when the slip limit is exceeded.
The BMW Motorrad ASC/DTC is designed as an assistance system for the rider and for riding on public roads. The extent to which the rider affects ASC/DTC control can be considerable (weight shifts when cornering, loose luggage on the motorcycle), especially when approaching the limits imposed by the laws of physics.

–with riding modes Pro[OE]
–without lowered[OE]
The DIRT riding mode should be activated for riding on a loose surface. In this mode, the adjusting intervention by the ASC/DTC is performed later, enabling controlled drifting.

The system is not optimized for the special requirements encountered under the extreme conditions of competitive off-road and racetrack use. The BMW Motorrad ASC/DTC can be switched off in such instances.

WARNING

Risky riding style
Accident hazard despite ASC/DTC
- The rider is always responsible for adapting his/her driving style.
- Do not reduce the system's extra safety margin with careless riding or unnecessary risks.

Special situations
As lean angles increase, acceleration capability is also progressively restricted by the laws of physics. This can result in delayed acceleration when exiting very tight curves

The system compares the rotation speeds of the front and rear wheels to detect any tendency for the rear wheel to spin or lose traction. If the system registers implausible data for an extended period of time,

it will deactivate the ASC/DTC functionality as a safety precaution and an ASC/DTC error will be displayed. A self-diagnosis must be completed before the fault memory entry will be displayed.
For the following unusual riding statuses, this can lead to a BMW Motorrad ASC/DTC error message:

Unusual riding conditions:

- Riding on the rear wheel (performing Wheelies) for an extended period with the ASC/DTC deactivated.
- Rear wheel spinning in place with front brake engaged (Burn Out).
- Heating up on auxiliary stand at idle speed or with gear engaged.

By switching the ignition off, then on again, and subsequently riding at a minimum speed, the ASC/DTC is activated again.

 Minimum speed for ASC/DTC activation
min 3 mph (min 5 km/h)

- without riding modes Pro [OE]

On a slippery surface, the throttle grip should never be suddenly throttled back completely unless the clutch is disengaged at the same time. The engine's braking torque could cause the rear wheel to block, resulting in unstable motorcycle conditions. BMW Motorrad ASC is unable to intervene effectively under these conditions.

RIDING MODE

Selection

To adjust the motorcycle to the road condition and the desired riding experience, you can select from the following riding modes:

- RAIN
- ROAD
- with riding modes Pro [OE]
- without lowered [OE]
- DIRT
- with riding modes Pro [OE]
- with lowered [OE]
- DYNA

For each of these riding modes, there is a coordinated setting for the ABS and ASC/DTC systems as well as for the throttle response.

ASC/DTC can be switched off in any riding mode. The following explanations always refer to the riding safety systems that are turned on.

Throttle response

–In RAIN riding mode: reserved
–In riding mode ROAD: Optimal

–with riding modes Pro OE
–without lowered OE
–In DIRT riding mode: reserved

–with riding modes Pro OE
–with lowered OE
–In DYNA riding mode: direct

ABS

–Rear wheel lift-off detection is active in all riding modes.
–In the RAIN and ROAD riding modes, all ABS Pro functions are available. The stand-up tendency the motorcycle has when braking in curves is reduced to a minimum.
–In the RAIN and ROAD riding modes, the ABS is set for road use.

–with riding modes Pro OE
–without lowered OE
–In DIRT riding mode, ABS is set for off-road use with road tires.
–In DIRT riding mode, ABS Pro is available only when there are good traction conditions. The support is reduced compared to ROAD riding mode and is instead aimed at achieving the greatest braking effect.

–with riding modes Pro OE
–with lowered OE
–In the DYNA riding mode, the ABS is set for road use.
–In the DYNA riding mode, all ABS Pro functions are available. The stand-up tendency the motorcycle has when braking in curves is reduced to a minimum.

ASC

–ASC is set for road use.
–In ROAD riding mode, ASC provides high riding stability, and in RAIN riding mode it provides maximum riding stability.

–with riding modes Pro [OE]

DTC

Tires

–In the DTC settings RAIN and ROAD, the DTC is set for road use with road tires.

–without lowered [OE]

–In the DTC setting DIRT, the DTC is set for off-road use with road tires.

–with lowered [OE]

–In the DTC setting DYNA, the DTC is set for road use with road tires.

Riding stability

–In the DTC setting RAIN, DTC intervenes early enough to ensure that maximum riding stability is achieved.

–In the DTC setting ROAD, the DTC intervenes later than in RAIN riding mode. Rear wheel spinning without traction is avoided wherever possible.

–In the DTC settings RAIN and ROAD, the front wheel is prevented from lifting off.

–without lowered [OE]

–In the DTC setting DIRT, the DTC intervenes later than in the DTC setting ROAD. The DTC intervention is set for off-road use so that longer drifts and brief wheelies at the end of curves are also possible.

–with lowered [OE]

–In the DTC setting DYNA, the DTC intervenes later than in the DTC setting ROAD, which enables minor drifts at the end of curves and brief wheelies.

Switchover

Riding modes can be changed when the vehicle is at a standstill with the ignition switched on. A changeover while riding is possible under the following conditions:

–No drive torque at rear wheel.

–No brake pressure in the braking system.

For a changeover while riding, the following steps must be carried out:

–Turn back throttle grip.

–Do not actuate brake lever.

–with cruise control OE
–Deactivate the adaptive cruise control.

First, the desired riding mode is preselected. The switchover does not take place until the affected systems are in the required state.
The selection menu does not disappear from the display until the riding mode has been switched over.

ENGINE DRAG TORQUE CONTROL

–with riding modes Pro OE

How does dynamic engine brake control work?
The purpose of the dynamic engine brake control is to safely prevent unstable riding conditions that are related to excess drag torque at the rear wheel. Depending on the road condition and riding dynamics, excess drag torque can make the slip at the rear wheel increase severely and impede riding stability. The engine drag torque control reduces slip at the rear wheel to a safe, setpoint slip that is dependent on the mode.

Causes of excess slip at the rear wheel:
–Riding in coasting overrun on a road with low coefficient of friction (e.g. wet leaves).
–Hopping when shifting gears down.
–Hard brake onset in sporty riding style.

Like the BMW Motorrad ASC, the dynamic engine brake control compares the wheel circumferential velocities of the front and rear wheel. The dynamic engine brake control can determine the slip, and therefore the stability reserve, on the rear wheel using the speed difference.
If the slip exceeds the respective limit value, the engine torque is increased by slightly opening the throttle valves. The slip is reduced, and the vehicle is stabilized.

Effect of the dynamic engine brake control
–In the RAIN and ROAD riding modes: Maximum stability

–without lowered [OE]
–In the DIRT riding mode: Maximum performance. Stability may be impaired on poorly surfaced roads or if using unsuitable tires.

–with lowered [OE]
–In the DYNA riding mode: Reduced intervention when compared to the RAIN and ROAD riding modes

ADAPTIVE HEADLIGHT

–with Adaptive Lights [OE]

Function

In addition to the low beams, high beams and daytime running lights or parking lights, the headlight is equipped with separate LED elements with their own reflectors. Depending on the angle, the LED elements are also switched on for the low beams in order to improve the illumination of the interior range of the curve. The adaptive front lighting is optimized for an angle of up to 25°.
The adaptive headlights are activated under the following conditions:

–The angle is greater than 7°.
–The speed is min 6 mph (min 10 km/h).
–The low beams are switched on.

MAINTENANCE

08

GENERAL NOTES

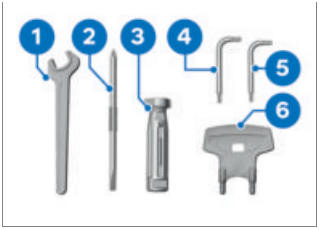
The "Preventive maintenance" chapter describes work involving the checking and replacement of wearing parts that can be performed with a minimum of effort.
If specific tightening torques are to be taken into account for installation, these are listed. An overview of all required tightening torques is contained in the chapter "Technical data".

Microencapsulated screws

The microencapsulation is a chemical threadlocker. An adhesive is used to create a solid connection between screw and nut or component. Microencapsulated screws, therefore, are suitable for single use only. After removal, the internal thread must be cleaned to remove adhesive. During installation, a new microencapsulated screw must be used. Therefore, before removal, ensure that you have suitable tools for cleaning the thread and have a replacement screw. If you carry out the work improperly, the locking function of the screw might no longer be guaranteed, which puts you in danger!

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

ONBOARD VEHICLE TOOL KIT



1 Open-ended wrench
Key range: 14 mm
–Adjusting the mirror arm (➠ 60).

2 Reversible screwdriver insert
with Phillips and slotted blade
–Adjusting damping at the rear wheel (➠ 64).

3 Screwdriver handle
–Topping up the engine oil (➠ 103).
–Use with screwdriver insert

4 TORX wrench, T25
– Disconnect the positive battery terminal.
5 Torx wrench T20
6 Valve wheel wrench for adjusting spring preload
– Adjusting the spring preload at the rear wheel (➠ 64).

FRONT-WHEEL STAND

Attaching the front wheel stand

ATTENTION

Use of the BMW Motorrad front wheel stand without an auxiliary stand
Component damage cause by tipping over
- Place the motorcycle on an auxiliary stand before lifting the front wheel with the BMW Motorrad front-wheel stand.

- Ensure that the motorcycle is standing securely.
- Place motorcycle on an auxiliary stand; BMW Motorrad recommends the BMW Motorrad auxiliary stand.
- Attaching the rear-wheel stand (➠ 102).

- For a description of the correct installation, please refer to the instructions for the front wheel stand.
- BMW Motorrad offers a suitable auxiliary stand for each motorcycle. Your authorized BMW Motorrad retailer will be very happy to assist you in choosing the suitable auxiliary stand.

REAR-WHEEL STAND

Attaching the rear-wheel stand

- For a description of the correct installation, please refer to the instructions for the rear-wheel stand.
- BMW Motorrad offers a suitable auxiliary stand for each motorcycle. Your authorized BMW Motorrad retailer will be very happy to assist you in choosing the suitable auxiliary stand.

ENGINE OIL

Checking the engine oil level

ATTENTION

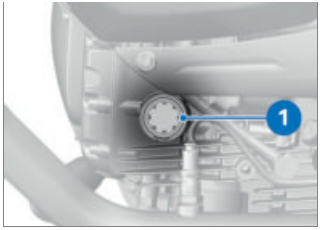
Misinterpretation of the oil filling quantity, as the oil level is temperature-dependent (the higher the temperature, the higher the oil level)

Engine damage

- Only check the oil level after a longer journey or when the engine is warm.

- Turn off engine at operating temperature.
- Hold the motorcycle upright, making sure that the ground is firm and level.
- Wait five minutes to allow oil to drain into the oil pan.

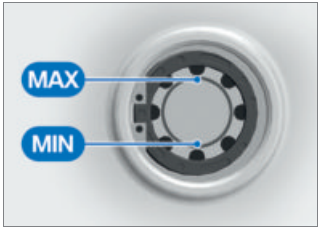
BMW Motorrad recommends occasionally checking the engine oil after a journey of min 31 miles (min 50 km) in order to reduce the environmental impact.



ATTENTION

Lateral tipping of the vehicle
Component damage cause by tipping over
- Secure the vehicle from tipping over laterally, preferably with the support of a second person.

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

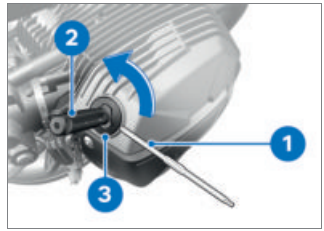


Specified level of engine oil
Between **MIN** and **MAX** mark

If the oil level is below the **MIN** mark:
- Topping up the engine oil (➠ 103).

If the oil level is above the **MAX** mark:
- Have the oil level corrected at a specialist workshop, preferably an authorized BMW Motorrad retailer.

Topping up the engine oil
- Park the motorcycle, making sure the ground is level and firm.



- Clean the area around the oil filler opening.
- To be able to apply force more easily, insert the interchangeable screwdriver insert **1** Phillips-end first, into the screwdriver handle **2** (from on-board toolkit).
- Position the tool on the cap **3** and turn it counterclockwise.

- Remove cap **3** of oil filler opening.

ATTENTION

Use of too little or too much engine oil
Engine damage
- Always make sure that the oil level is correct.

- Top up the engine oil to the specified level.

Engine oil, quantity for topping up
max 0.5 quarts (max 0.5 l) (Difference between **MIN** and **MAX**)

- Checking the engine oil level (➠ 102).
- Install the cap **3**.

BRAKE SYSTEM

Checking function of brakes

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

If pressure points are not clearly perceptible:

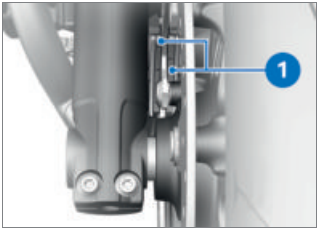
ATTENTION

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.

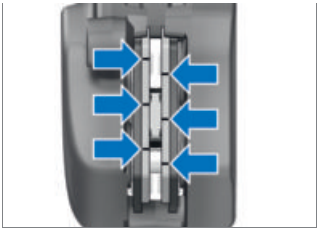
- Have the brakes checked by a specialist workshop, preferably an authorized BMW Motorrad dealer.

Checking the front brake pad thickness

- Park the motorcycle, making sure the ground is level and firm.



- Visually inspect the brake pad thickness on the left and right. Viewing direction: between wheel and front suspension toward brake pads **1**.



Front brake-pad wear limit
0.04 in (1.0 mm) (Only friction material without carrier plate. The wear marks (grooves) must be clearly visible.)

If the wear marks are no longer clearly visible:

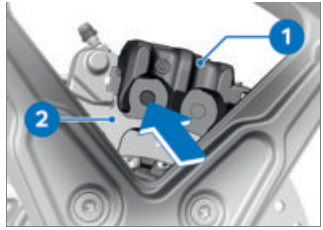
WARNING

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.

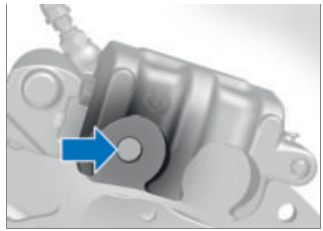
- Have brake pads renewed at a specialist workshop, preferably an authorized BMW Motorrad retailer.

Checking the rear brake pad thickness

- Park the motorcycle, making sure the ground is level and firm.



- Visually inspect the brake pad thickness. Direction of view: from left to brake caliper **1**.



Rear brake-pad wear limit
0.04 in (1.0 mm) (Only friction material without carrier plate. Brake disc must not be visible through the drilled hole in the inner brake pad.)

If the brake disc **2** is visible:

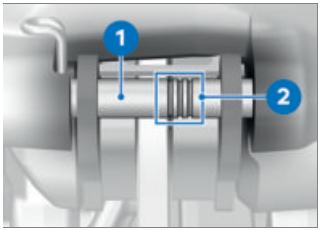
WARNING

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 renewed at a specialist workshop, preferably an authorized BMW Motorrad retailer.

Brake pad wear

The rear wheel brake has a brake pad wear indicator.



The axle **1** with the three ring marks **2** is located between the brake pads.

How to interpret the marks:
- 3 rings visible: at least 75% brake pad thickness
- 2 rings visible: brake pad thickness is at least 50%
- 1 ring visible: brake pad thickness is at least 25%
- No ring visible: wear limit has been reached, check as described earlier

Checking the front brake fluid level

WARNING

Insufficient or contaminated brake fluid in the brake fluid reservoir
Considerably reduced braking power caused by air, dirt or water in the brake system
- Stop riding immediately until fault is rectified.
- Check brake fluid level regularly.
- Make sure that the lid of the brake fluid reservoir is cleaned before opening.
- Make sure that brake fluid is used from a sealed container only.

- Park the motorcycle, making sure the ground is level and firm.

- Align the handlebars so that the brake fluid reservoir is positioned horizontally.
- Check the brake fluid level in the sight glass **1**.

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

Front brake fluid level
Brake fluid, DOT4
The brake fluid level must not fall below the **MIN** mark (Brake fluid reservoir horizontal, vehicle standing upright.)

If the brake fluid level falls below the approved level:

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

Checking the rear brake fluid level

WARNING

Insufficient or contaminated brake fluid in the brake fluid reservoir

Considerably reduced braking power caused by air, dirt or water in the brake system

- Stop riding immediately until fault is rectified.
- Check brake fluid level regularly.
- Make sure that the lid of the brake fluid reservoir is cleaned before opening.
- Make sure that brake fluid is used from a sealed container only.

- Park the motorcycle, making sure the ground is level and firm. Hold vehicle straight.

- Check the brake fluid level at the brake fluid reservoir **1**.

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

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

If the brake fluid level falls below the approved level:

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

CLUTCH

Checking clutch function

- Pull back the clutch lever.

» There is a clearly perceptible pressure point.

If no clear pressure point can be felt:

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

TIRES

Checking tire 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. Ensure that the ground is firm and level.
- Check tire pressure against data below.

 Front tire pressure
36.3 psi (2.5 bar) (with tire cold)

 Rear tire pressure
42.1 psi (2.9 bar) (with tire cold)

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

Checking 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. Ensure that the ground is firm and level.
- Measure tire tread depth in main tread grooves with wear marks.

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 tire.

RIMS

Checking wheel rims

- Park motorcycle. Ensure that the ground is firm and level.
- Visually inspect rims for defects.
- Have damaged rims checked and, if necessary, renewed by a specialist workshop, preferably an authorized BMW Motorrad retailer.

Checking spokes

–with cross spoke wheels[OE]
or
–with spoke wheels[OE]

- Park motorcycle. Ensure that the ground is firm and level.
- Run the handle of a screwdriver or similar object over the spokes and listen to the sound pattern.

If the sound pattern is uneven:

- Have spokes checked by a specialist workshop, preferably by an authorized BMW Motorrad retailer.

WHEELS

Effect of wheel sizes on suspension control systems

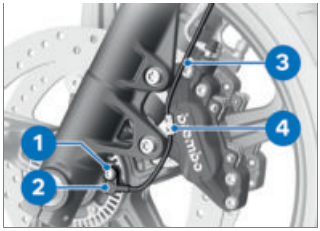
The wheel sizes play an important role with suspension control systems such as ABS. The diameter and width of the wheels stored in the control unit have particular significance as the basis for all necessary calculations. A change in these sizes resulting from conversion to wheels not installed as standard equipment can seriously affect the control efficiency of these systems.
The sensor rings required for wheel speed detection must also match the installed control systems and may not be replaced.
If you want to convert your motorcycle to different wheels, please contact a specialist workshop, preferably a BMW Motorrad retailer. In some cases the data stored in the control units must be adapted to the new wheel sizes.

Removing the front wheel

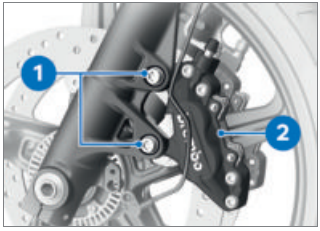
- Place the motorcycle on an auxiliary stand. BMW Motorrad recommends

you use the BMW Motorrad rear-wheel stand.

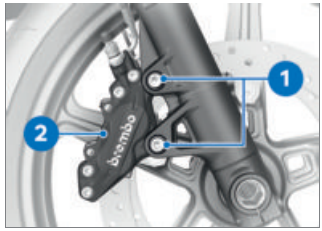
- Attaching the rear-wheel stand (➠ 102).
- Raise the front of motorcycle, preferably using a BMW Motorrad front wheel stand, until the front wheel rotates freely.
- Attaching the front wheel stand (➠ 101).



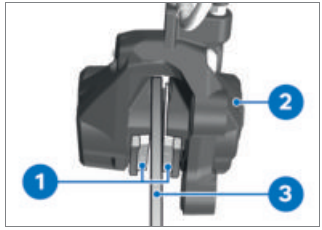
- Remove screw **1**.
- Loosen the wheel speed sensor **2**.
- Detach cable **3** from holder **4**.



- Remove screws **1**.
- Loosen the left-hand brake caliper **2**.



- Remove screws **1**.
- Loosen the right-hand brake caliper **2**.



- Push the brake pads **1** apart slightly by turning the brake caliper **2** against the brake disc **3**.

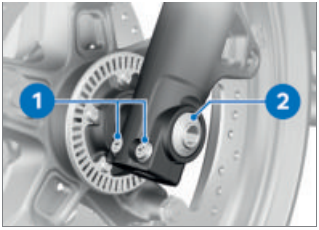
ATTENTION

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.

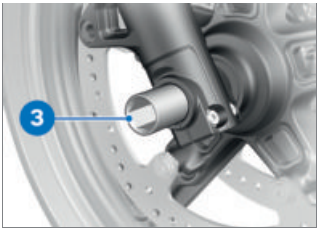
ATTENTION

Using hard or sharp-edged objects near the component
Component damage
- Do not scratch components, if necessary tape off or cover.

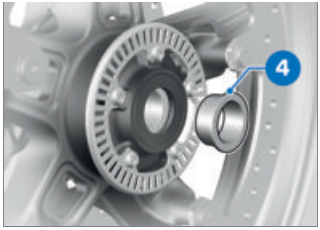
- Carefully pull the brake calipers back and outward to remove them from the brake disks.



- Slacken the clamping bolts **1** on the left and right.
- Slacken the screw **2** but **do not remove it**.
- Slightly press the quick-release axle inward for a better grip on the right side.
- Remove screw **2**.



- Pull out the quick-release axle **3** while supporting the front wheel.
- Place front wheel down and roll it forward out of the front suspension.



- Remove the spacer bushing **4** from the wheel hub.

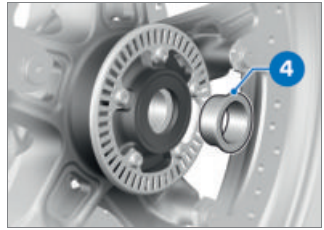
Installing the front wheel

WARNING

Use of a wheel which does not comply with series specifications
Malfunctions during control interventions by ABS and ASC/DTC
- Please see the information on the effect of wheel sizes on the ABS and ASC/DTC chassis control systems 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.



- Lubricate the contact surface on the spacer bushing **4**.

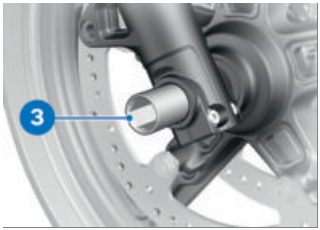
Lubricant
Optimoly TA

- Insert the spacer bushing **4** into the wheel hub on the left side with the collar facing outwards.

ATTENTION

Front wheel installation opposite the running direction
Accident hazard
- Observe running direction arrows on tire or rim.

- Roll the front wheel into the front suspension.



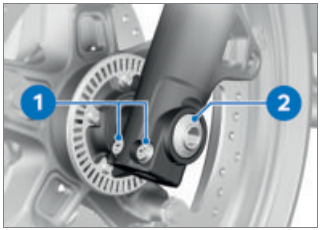
- Lubricate the quick-release axle **3**.

Lubricant
Optimoly TA

WARNING

Improper installation of quick-release axle
Loosening of the front wheel
- After the brake caliper is fastened and the spring fork is relaxed, tighten the quick-release axle and axle clamping with the specified torque.

- Lift the front wheel and install the quick-release axle **3**.
- Remove front wheel stand and firmly compress front forks. Do not actuate hand-brake lever at the same time.
- Attaching the front wheel stand (➠ 101).

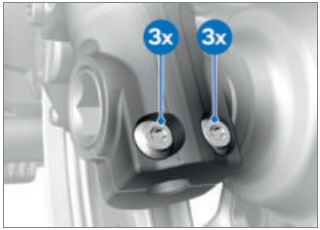


- Install screw **2**. Brace quick-release axle on the right side at the same time.

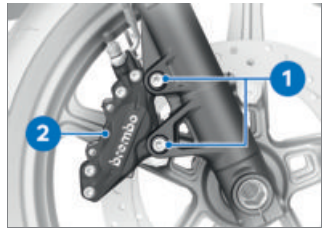
Screw on quick-release axle
M20 x 1.5

Screw on quick-release axle
37 lb/ft (50 Nm)

- Tighten the clamping bolts **1** on left and right to the appropriate torque.

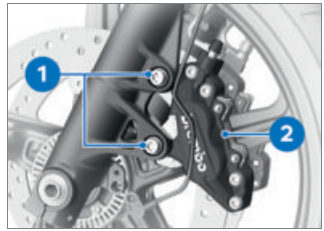


Clamping bolts in subframe
Tightening sequence: Tighten the screws 6 times, alternating between one and the other each time
M8 x 35
14 lb/ft (19 Nm)



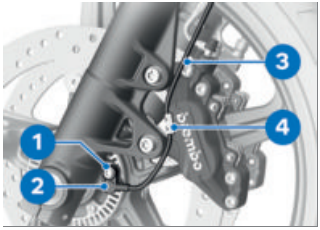
- Position brake caliper **2** on right and install screws **1**.

Brake caliper on telescopic forks
M10 x 40 x 1.25
28 lb/ft (38 Nm)



- Position brake caliper **2** on left and install screws **1**.

Brake caliper on telescopic forks
M10 x 40 x 1.25
28 lb/ft (38 Nm)



- Position wheel speed sensor **2**.
- Install screw **1**.

	Wheel speed sensor on fork
M6 x 20	
6 lb/ft (8 Nm)	

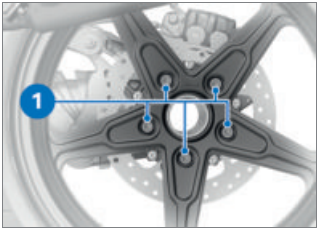
- Fasten cable **3** in holder **4**.

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 until the brake pads make contact with the discs.
- Remove the front wheel stand.
- Fold out the side stand.
- Remove the rear-wheel stand.
- Put the motorcycle on its side stand.

Removing the rear wheel
- Raise motorcycle, preferably using a BMW Motorrad rear-wheel stand.
- Attaching the rear-wheel stand (➠ 102).
- Engage first gear.



- Remove screws **1** while supporting wheel.
- Roll rear wheel out toward rear.

Installing the rear wheel

WARNING

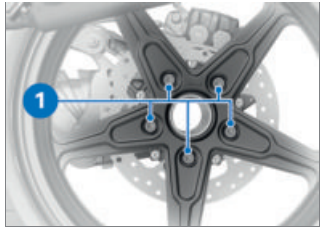
Use of a wheel which does not comply with series specifications
Malfunctions during control interventions by ABS and ASC/DTC
- Please see the information on the effect of wheel sizes on the ABS and ASC/DTC chassis control systems at the beginning of this chapter.

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.

If the tread type is changed from studded to road tires or vice versa, the ASC/DTC must be reprogrammed accordingly.

- When changing the profile type, have ASC/DTC programmed by a specialist workshop, preferably by a BMW Motorrad retailer.
- Clean wheel centering and contact surfaces.
- Place the rear wheel on the wheel carrier.



- Install screws **1**.

Rear wheel on wheel carrier
Tightening sequence: Tighten crosswise
M10 x 53 x 1.25
44 lb/ft (60 Nm)

- Fold out the side stand.
- Remove the rear-wheel stand.
- Put the motorcycle on its side stand.

LIGHT SOURCE

Replacing the LED light source

WARNING

Overlooking the vehicle in traffic due to a defective light source on the vehicle
Safety risk
- Replace defective light sources as quickly as possible. For details please contact a specialist service facility, preferably an authorized BMW Motorrad Retailer.

All light sources on the vehicle are LED light sources. The service life of the LED light sources is longer than the assumed service life of the vehicle. If an LED light source is faulty, please contact a specialist workshop, 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.

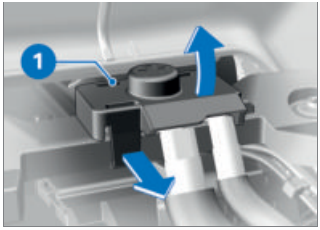
ATTENTION

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.

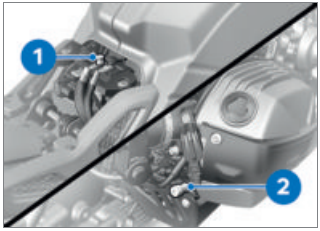
ATTENTION

Jump-starting with a voltage higher than 12 V
Damage to the motorcycle's electronics
- The battery of the donor motorcycle must have a voltage of 12 V.

- Park the motorcycle, making sure the ground is level and firm.
- Removing the seat (➠ 57).



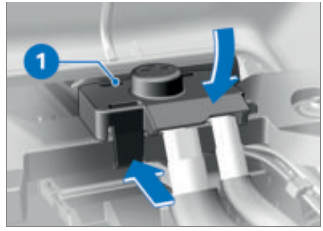
- Unclip cover panel **1** at bottom (**arrow**) and lift off.



- Begin by connecting one end of the red jumper cable to the jump-start terminal **1** on the discharged battery and the other end to the positive terminal of the donor battery.
- Use the black jumper cable to connect the ground jump-start terminal **2** to the negative terminal of the second battery.
- Let the engine of the donor vehicle run during the jump-starting procedure.
- Start the engine of the vehicle with the empty battery in the usual way; if the engine does not start, wait a few minutes before repeating the attempt to start the engine to protect the starter motor and the donor battery.

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

- Allow both engines to idle for a few minutes before disconnecting the jumper cables.
- First, disconnect the jumper cable from the ground jump-start terminal **2** and then from the remote positive terminal **1**.



- Install cover **1**.
- Installing the seat (➠ 57).

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.
- Observe the notes on charging 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.

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

Charging 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.

- Charge a disconnected battery directly on the terminals.

Charging a disconnected battery

- Charge battery using a suitable charger.
- Comply with operating instructions of charger.

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

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

Replacing the battery

Contact a specialist workshop, preferably an authorized BMW Motorrad retailer, if the battery is faulty.

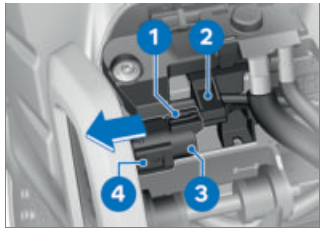
FUSES

Replacing fuses

ATTENTION

Bypassing defective fuses
Risk of short circuit and fire
- Do not bypass defective fuses.
- Replace defective fuses with new fuses.

- Turn off the ignition.
- Park the motorcycle, making sure the ground is level and firm.
- Removing the seat (➠ 57).



- Press hook **1**.

» The fuse box is unlocked and can be pulled to the left and detached from holder **2**.

- Pull the fuse box out of holder **2**.
- Press lock **4** on both sides and remove cap **3**.

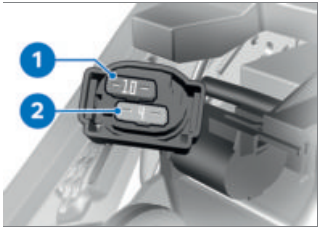
If the fuses blow frequently, have the electrical system checked by an authorized specialized workshop, preferably an authorized BMW Motorrad retailer.

- Replace defective fuse in accordance with following fuse assignment diagram.

» Fuse layout (➠ 122)

- Install cap **3** again. Make sure that the lock **4** engages.
- Slide the fuse box into holder **2** until hook **1** engages.
- Installing the seat (➠ 57).

Fuse layout



Fuse 1	
10 A (Instrument cluster, anti-theft alarm system DWA, ignition switch, OBD diagnostic socket, coil for cut-off relay)	
Fuse 2	
4 A (Sensor box, multifunction switch on left)	

DIAGNOSTIC SOCKET

Detaching the diagnostic socket

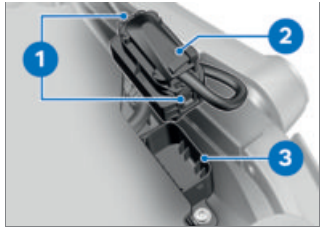
CAUTION

Incorrect procedure when disconnecting the diagnostic socket for onboard diagnosis

Vehicle experiences malfunctions

- Do not have the diagnostic socket disconnected except during BMW Motorrad service by a specialist workshop or other authorized persons.
- Have work carried out by appropriately trained personnel.
- Observe the specifications of the vehicle manufacturer.

- Removing the seat (➠ 57).



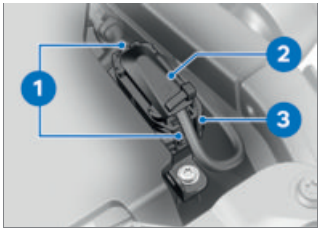
- Press locking mechanisms **1**.

- Detach the diagnostic socket **2** from the holder **3**.

» The interface for the diagnostics and information system can be connected to the diagnostic socket **2**.

Fastening the diagnostic socket

- Disconnect the interface for the diagnostics and information system.



- Insert the diagnostic socket **2** into the holder **3**.

» The locks **1** engage.

- Installing the seat (➠ 57).

ACCESSORIES

09

GENERAL NOTES

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, function and suitability of the parts and accessory products have been thoroughly tested by BMW. Therefore, BMW assumes responsibility for these products. BMW shall not be held liable for unapproved parts and accessory products of any kind.
Comply with the legal requirements for any modifications.
Consult the road traffic licensing regulations of your country.
Your authorized BMW Motorrad retailer offers you qualified advice for choosing genuine BMW parts, accessories and other products.
More information on the topic of accessories is available at: **bmw-motorrad.com/equipment**

USB CHARGING SOCKET

Notes about use:

Charge current
This is a 5 V USB charging socket providing a maximum charge current of 2.4 A (maximum charge power of 12 W).

Automatic shutoff
The USB charging sockets are automatically switched off under the following conditions:
- If the battery voltage is too low to retain the starting capability of the vehicle.
- If the maximum load capacity specified in the technical data is exceeded.
- During the starting procedure.

Connecting electrical devices

The ignition must be switched on before electrical devices connected to USB charging sockets can be operated. To relieve the electrical system, the USB high-voltage charging sockets are switched off 60 seconds ignition has been turned off.

To protect the connected device, the device should be unplugged when riding in rain. When no device is connected, the cover should be closed to prevent soiling.

Cable layout

Observe the following when routing cables from USB charging sockets to additional devices:

- Cables must not impede the rider.
- Cables must not restrict the steering angle and handling characteristics.
- Cables must not become trapped.

LUGGAGE

Securing luggage on the motorcycle

WARNING

Reduced riding stability caused by overloading and uneven loading

Accident hazard

- Do not exceed the gross weight limit and observe the loading information.

- Secure luggage (e.g. rear bag) on lashing eyes **1**.
- Observe maximum payload.

Payload of rear bag
–with rear bag OA
max 22 lbs (max 10 kg)◁

» Additional information on the luggage systems and their attachment is available from your authorized BMW Motorrad retailer.

CARE

10

CARE PRODUCTS

BMW Motorrad recommends that you use cleaning and care products available at your authorized BMW Motorrad retailer. BMW Motorrad Care Products 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.

ATTENTION

Use of highly acidic or alkaline cleaning agents

Damage to motorcycle parts

- Observe the dilution ratio on the packaging of the cleaning agents.
- Do not use highly acidic or alkaline cleaning agents.

WASHING THE VEHICLE

BMW Motorrad recommends that you use BMW Insect Remover to soften and wash off insects and stubborn dirt from painted parts before washing the motorcycle.

To prevent stains, do not wash the vehicle immediately after it has been exposed to bright sunlight and do not wash it in the sun.

Make sure that the vehicle is washed frequently, especially during the winter months.

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

After rides in the rain, in high humidity and after the vehicle is washed, condensation can form inside the headlight. During this process, the headlight can become foggy for a while. If moisture accumulates in the headlight on an ongoing basis, contact a specialist workshop, preferably an authorized BMW Motorrad retailer.

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.

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.

Trim panel components

Clean trim panel components with water and BMW Motorrad cleaning agent.

Headlight diffuser and turn indicator glass made of plastic

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

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

Clean with water and sponge only.


Do not use chemical cleaning agents.

Chrome

Carefully clean chrome parts with plenty of water and BMW Motorrad Care Products motorcycle cleaner. This is required in particular for removing road salt.
Use BMW Motorrad metal polish for additional treatment.

Radiator

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

ATTENTION

Bending of radiator fins
Damage to radiator fins
- When cleaning, ensure that the cooler fins are not bent.

Rubber

Treat rubber parts with water or BMW rubber care product.

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.

CARE OF PAINTWORK

Washing the vehicle 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.
At the same time, you should remove particularly aggressive materials immediately; otherwise changes in the paint and discoloration can occur. These include spilled fuel, oil, grease and brake fluid as well as bird droppings. BMW Motorrad recommends using a cleaning agent 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 benzene

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.

PAINT PRESERVATION

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 for paint preservation.

Chrome lacquer must not be preserved with chrome polish.
Only use the agents recommended by BMW Motorrad.

STORING THE MOTORCYCLE

- Completely fill the motorcycle's fuel tank.

Fuel additives clean the fuel injection system and the combustion area. Fuel additives should be used when refueling with low-quality fuels or during longer periods of downtime. Your authorized BMW Motorrad retailer can provide you with more detailed information.

- Clean the motorcycle.
- Remove battery.
- Spray brake lever and clutch lever as well as side stand pivots with a suitable lubricant.
- Coat bare metal and chrome plated parts with an acid-free grease (petroleum jelly).
- Park motorcycle in a dry room, raising it to remove weight from both wheels (preferably using the front-wheel and rear-wheel stands offered by BMW Motorrad).

PUTTING THE MOTORCYCLE INTO OPERATION

- Remove the protective wax coating.
- Clean the motorcycle.
- Install the battery.
- Observe checklist (➠ 74).

TECHNICAL DATA

11

TROUBLESHOOTING CHART

Engine does not start.

Possible cause	Remedy
Side stand is extended and gear is engaged.	Fold in side stand.
Gear is engaged and clutch is not operated.	Shift transmission to neutral or disengage clutch.
Fuel tank is empty.	Fuel quality (➠ 82).
Battery is drained.	Charging a connected battery (➠ 120).
Overheating protection for starter motor has triggered. Starter motor can only be actuated for a limited period.	Leave the starter motor to cool down for around 1 minute until it becomes available again.

SCREW CONNECTIONS

Front wheel	Value	Valid
Brake caliper on telescopic forks		
M10 x 40 x 1.25	28 lb/ft (38 Nm)	
Clamping bolts in subframe		
M8 x 35	**Tightening sequence: Tighten the screws 6 times, alternating between one and the other each time**	
	14 lb/ft (19 Nm)	
Screw on quick-release axle		
M20 x 1.5	37 lb/ft (50 Nm)	
Wheel speed sensor on fork		
M6 x 20	6 lb/ft (8 Nm)	

Rear wheel	Value	Valid
Rear wheel on wheel carrier		
M10 x 53 x 1.25	**Tightening sequence: Tighten crosswise**	
	44 lb/ft (60 Nm)	

Mirror arm	Value	Valid
Mirror (lock nut) on adapter		
M10 x 1.25	Left-hand thread, 16 lb/ft (22 Nm)	
Adapter to clamping block		
M10	18 lb/ft (25 Nm)	
Mirror on spacer sleeve		
M5 x 20	2 lb/ft (3 Nm)	–with Option 719 Billet pack Classic II[OE] or –with Option 719 Billet pack Shadow II[OE]

FUEL

Recommended fuel quality	Super unleaded (max. 15% ethanol, E15) 89 AKI (95 ROZ/RON) 90 AKI
Alternative fuel quality	Regular unleaded (max. 15% ethanol, E15) 87 AKI (91 ROZ/RON) 87 AKI
Fuel tank capacity	Approx. 4.5 gal (Approx. 17 l)
Fuel reserve	Approx. 3.7 quarts (Approx. 3.5 l)
Fuel consumption	46 mpg (5.1 l/100 km), in accordance with WMTC
CO2 emissions	119 g/km, in accordance with WMTC
Emission standard	TIER 2, measured in accordance with FTP75

ENGINE OIL

Engine oil, capacity	max 1 gal (max 3.95 l), with filter replacement
Specification	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

BMW recommends ADVANTEC ORIGINAL BMW ENGINE OIL

Engine oil, quantity for topping up	max 0.5 quarts (max 0.5 l), Difference between **MIN** and **MAX**

BMW recommends ADVANTEC ORIGINAL BMW ENGINE OIL

ENGINE

Engine number location	On crankcase at lower right, below cylinder
Engine type	A72B12A
Engine design	Air-/oil-cooled two-cylinder four-stroke opposed-twin engine with double overhead camshaft and a counterbalance shaft
Displacement	1170 cc (1170 cm^3)
Cylinder bore	4 in (101 mm)
Piston stroke	2.9 in (73 mm)
Compression ratio	12:1
Nominal capacity	107 hp (80 kW), at RPM: 7250 min^{-1}
Torque	86 lb/ft (116 Nm), at engine speed: 6000 min^{-1}
Maximum engine speed	max 8500 min^{-1}
Idle speed	$1150^{\pm 50}$ min^{-1}, Engine at operating temperature

CLUTCH	
Clutch design	Single-plate dry clutch

TRANSMISSION	
Transmission design	Dog-engagement 6-speed manual transmission with helical gearing
Transmission gear ratios	1.737, Primary gear ratio 2.375 (38:16 teeth), 1st gear 1.696 (39:23 teeth), 2nd gear 1.296 (35:27 teeth), 3rd gear 1.065 (33:31 teeth), 4th gear 0.939 (31:33 teeth), 5th gear 0.848 (28:33 teeth), 6th gear

REAR-WHEEL DRIVE	
Type of final drive	Cardan shaft drive with bevel gears
Type of rear-wheel guide	Cast aluminum single-sided swinging arm with BMW Motorrad Paralever
Gear ratio of rear-wheel drive	2.909
Rear axle differential oil	SAE 70W-80 / hypoid axle G3

FRAME	
Frame design	Lattice-tube frame with supporting drive unit
Location of type plate	Frame at front left on steering head
Location of the vehicle identification number	Main frame front bottom right

CHASSIS	
Front wheel	
Type of front suspension	Telescopic forks
Spring travel, front	4.9 in (125 mm), on wheel
–with lowered[OE]	4.7 in (120 mm), on wheel
Rear wheel	
Design of rear-wheel suspension	Directly linked spring strut with adjustable spring preload
Spring travel on the rear wheel	5.5 in (140 mm)
–with lowered[OE]	4.7 in (120 mm)
Recommendation on chassis and suspension adjustment for one-up operation	Turn adjustment wheel counterclockwise up to stop, Spring preload Turn adjustment screw clockwise up to stop, then turn back by 2 turns, Damping
Recommendation on chassis and suspension adjustment for two-up mode	Turn adjustment wheel clockwise up to stop, Spring preload Turn adjustment screw up to stop, then turn back 1 turn, Damping

BRAKES	
Front wheel	
Type of front wheel brake	Twin disc brake with 4-piston fixed caliper
Front brake pad material	Sintered metal
Front brake disc thickness	min 0.16 in (min 4 mm), Wear limit

Rear wheel	
Type of rear wheel brake	Single-disc brake with 2-piston floating caliper
Rear brake pad material	Organic
Rear brake disc thickness	min 0.18 in (min 4.5 mm), Wear limit

WHEELS AND TIRES	
Recommended tire combinations	An overview of the current tire approvals is available from your authorized BMW Motorrad retailer.
Speed category of front/rear tires	V, minimum requirement: 149 mph (240 km/h)
Front wheel	
Front wheel design	Aluminum cast wheel
–with cross spoke wheels OE or –with cross spoke wheels design option OE	Cross spoke wheel
–with spoke wheels OE –with lowered OE	Spoked wheel
Front-wheel rim size	3.0" x 19"
–with lowered OE	3.5" x 17"
Front tire designation	120 / 70 R 19
–with lowered OE	120 / 70 ZR 17
Load index for front tire	At least 60
Permitted front wheel imbalance	max 0.2 oz (max 5 g)

Rear wheel	
Rear wheel design	Aluminum cast wheel
–with cross spoke wheels [OE] or –with cross spoke wheels design option [OE]	Cross spoke wheel
–with spoke wheels [OE] –with lowered [OE]	Spoked wheel
Rear-wheel rim size	4.50" x 17"
–with lowered [OE]	5.50" x 17"
Rear tire designation	170 / 60 R 17
–with lowered [OE]	180 / 55 ZR 17
Load index for rear tire	At least 72
Permitted rear wheel imbalance	max 0.2 oz (max 5 g)
Tire pressures	
Front tire pressure	36.3 psi (2.5 bar), with tire cold
Rear tire pressure	42.1 psi (2.9 bar), with tire cold

ELECTRICAL SYSTEM

Fuses	
Fuse 1	10 A, Instrument cluster, anti-theft alarm system DWA, ignition switch, OBD diagnostic socket, coil for cut-off relay
Fuse 2	4 A, Sensor box, multifunction switch on left

Battery	
Battery design	AGM battery (Absorbent Glass Mat)
Battery voltage	12 V
Battery capacity	14 Ah
Spark plugs	
Spark plugs, manufacturer and designation	NGK MAR8AI-10DS
Light sources	
All light sources	LED

DIMENSIONS	
Motorcycle length	85.6 in (2175 mm), measured over rear wheel
–with lowered OE	82.9 in (2105 mm), measured over rear wheel
Motorcycle height	52.4 in (1330 mm), measured over mirrors, at DIN unloaded vehicle weight
–with lowered OE	49.6 in (1260 mm), measured over mirrors, at DIN unloaded vehicle weight
Motorcycle width	34.1 in (865 mm), measured across hand levers
Front-seat height	32.3 in (820 mm), measured without rider, at DIN unloaded vehicle weight
–with lowered OE	31.1 in (790 mm), measured without rider, at DIN unloaded vehicle weight

Rider's inside-leg arc, heel to heel	72 in (1830 mm), measured without rider, at DIN unloaded vehicle weight
–with lowered[OE]	69.9 in (1775 mm), measured without rider, at DIN unloaded vehicle weight

WEIGHTS	
Unloaded vehicle weight	492 lbs (223 kg), DIN unloaded vehicle weight, ready for road, 90% full tank of gas, without OE
Gross vehicle weight	948 lbs (430 kg)
Maximum payload	463 lbs (210 kg)

PERFORMANCE DATA	
Maximum speed	>124 mph (>200 km/h)

SERVICE

12

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.
Canadian customers who wish to report a safetyrelated defect to Transport Canada, Defect Investigations and Recalls, may call the toll-free hotline 1–800–333–0510. You can also obtain other information about motor vehicle safety from http:// www.tc.gc.ca/roadsafety.

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 reliably conduct all preventive maintenance and repair procedures on 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 is always in optimum condition, BMW Motorrad recommends that you comply with the maintenance intervals specified for your motorcycle.
Have all preventive maintenance and repair procedures that have been carried out confirmed in the Service chapter in this manual. Documented proof of scheduled preventive 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 Motorrad 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 History (eSH), service-related data is stored on the central IT sys-

tems 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 History.

Objection
At the BMW Motorrad retailer or specialist workshop, the vehicle owner can object to the entry of data in the electronic Service History 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 History.

BMW MOTORRAD MOBILITY SERVICES

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

MAINTENANCE WORK

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
The BMW running-in check must be performed when the motorcycle has covered between 300 mi and 750 mi (500 km and 1200 km).

BMW Motorrad Service
BMW Motorrad service is carried out once a year.
The scope of the services performed may be dependent on the age of the vehicle and the distance covered.
Your BMW Motorrad retailer confirms that the service has been performed and enters the date for the next service.
For riders with a high annual distance traveled, it may be necessary to come in for service before the entered date.

In these cases, a corresponding maximum distance covered will also be entered in the confirmation of service. If this distance covered is reached before the next service appointment, service must be performed sooner.
The service display in the multi-function display reminds you of the next service date approximately one month or 621 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 vehicle can be found in the following maintenance schedule.

MAINTENANCE SCHEDULE

	500 - 1200 km 300 - 750 mls	10 000 km 6 000 mls	20 000 km 12 000 mls	30 000 km 18 000 mls	40 000 km 24 000 mls	50 000 km 30 000 mls	60 000 km 36 000 mls	70 000 km 42 000 mls	80 000 km 48 000 mls	90 000 km 54 000 mls	100 000 km 60 000 mls	12 months	24 months
1	X												
2												X	
3		X	X	X	X	X	X	X	X	X	X	X[a]	
4			X		X		X		X		X		X[b]
5		X	X	X	X	X	X	X	X	X	X		
6					X				X			X[c]	X[c]
7			X		X		X		X		X		
8			X		X		X		X		X		
9					X[d]				X[d]				
10												X[e]	X[e]

1 BMW Motorrad break-in inspection (including oil and oil filter change)
2 Standard scope of BMW Motorrad service
3 Engine oil change with filter
4 Oil change in the bevel gears
5 Check valve clearance
6 Change transmission oil
7 Replace all spark plugs
8 Replace the air filter insert
9 Replace the alternator belt
10 Change brake fluid in the entire system

[a] Annually or every 6000 mi (10000 km) (whichever comes first)
[b] annually or every 12000 mi (20000 km) (whichever comes first)
[c] For the first time after one year, then every two years or 24000 mi (40000 km) (whichever comes first)
[d] Every six years or every 24000 mi (40000 km) (whichever comes first)
[e] At first after one year, then every two years

BMW RUNNING-IN CHECK

BMW Motorrad break-in service

The BMW Motorrad break-in service repair procedures are listed below. The actual scope of maintenance required for your vehicle may differ.

- Setting the service date and remaining distance
- Perform a vehicle test with the BMW Motorrad diagnosis system
- Engine oil change with filter
- Change oil in the angular gearbox
- Adjusting the steering-head bearing
- Checking brake fluid level of front brake
- Checking brake fluid level for rear brake
- Check the tire tread depth and tire pressure
- Check the tension of the spokes and tighten as needed
- Checking the lighting and signal system
- Functional check for engine starting suppression
- Final inspection and check for road safety
- Run the vehicle test using the BMW Motorrad diagnostic system
- Confirm the BMW service in the vehicle literature

MAINTENANCE CONFIRMATIONS

BMW Motorrad Service standard scope

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

- Performing the vehicle test using the BMW Motorrad diagnostic system
- Visual inspection of the clutch system
- Checking steering-head bearing
- Visual inspection of the brake lines, brake hoses, and connections
- Checking the front brake pads and brake discs for wear
- Checking the front wheel brake fluid level
- Checking the rear brake pads and brake disc for wear
- Checking the rear wheel brake fluid level
- Checking the tire pressure and tread depth
- Check side stand for ease of movement
- Check the tension of the spokes and tighten as needed
- Checking the lighting and signal system
- Functional check for engine starting suppression
- Final inspection and road safety check
- Set the service date and remaining distance using the BMW Motorrad diagnostic system
- Checking charging state of battery
- Confirming the BMW Motorrad 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 Motorrad Service
performed

on_____
at km_____

Next service
latest
on_____
or, if reached earlier
at km_____

Work performed

	Yes	No
BMW Motorrad Service	☐	☐
Oil change in engine with filter	☐	☐
Oil change in bevel gears	☐	☐
Checking valve clearance	☐	☐
Changing gear oil	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Replacing alternator drive belt	☐	☐
Changing front brake fluid	☐	☐
Changing brake fluid, rear	☐	☐

Notes

Stamp, signature

BMW Motorrad Service
performed

on_____
at km_____

Next service
latest
on_____
or, if reached earlier
at km_____

Work performed

	Yes	No
BMW Motorrad Service	☐	☐
Oil change in engine with filter	☐	☐
Oil change in bevel gears	☐	☐
Checking valve clearance	☐	☐
Changing gear oil	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Replacing alternator drive belt	☐	☐
Changing front brake fluid	☐	☐
Changing brake fluid, rear	☐	☐

Notes

Stamp, signature

BMW Motorrad Service
performed

on_____
at km_____

Next service
latest
on_____
or, if reached earlier
at km_____

Work performed

	Yes	No
BMW Motorrad Service	☐	☐
Oil change in engine with filter	☐	☐
Oil change in bevel gears	☐	☐
Checking valve clearance	☐	☐
Changing gear oil	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Replacing alternator drive belt	☐	☐
Changing front brake fluid	☐	☐
Changing brake fluid, rear	☐	☐

Notes

Stamp, signature

BMW Motorrad Service
performed

on_____
at km_____

Next service
latest
on_____
or, if reached earlier
at km_____

Work performed

	Yes	No
BMW Motorrad Service	☐	☐
Oil change in engine with filter	☐	☐
Oil change in bevel gears	☐	☐
Checking valve clearance	☐	☐
Changing gear oil	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Replacing alternator drive belt	☐	☐
Changing front brake fluid	☐	☐
Changing brake fluid, rear	☐	☐

Notes

Stamp, signature

BMW Motorrad Service
performed

on_____
at km_____

Next service
latest
on_____
or, if reached earlier
at km_____

Work performed

	Yes	No
BMW Motorrad Service	☐	☐
Oil change in engine with filter	☐	☐
Oil change in bevel gears	☐	☐
Checking valve clearance	☐	☐
Changing gear oil	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Replacing alternator drive belt	☐	☐
Changing front brake fluid	☐	☐
Changing brake fluid, rear	☐	☐

Notes

Stamp, signature

BMW Motorrad Service
performed

on_____
at km_____

Next service
latest
on_____
or, if reached earlier
at km_____

Work performed

	Yes	No
BMW Motorrad Service	☐	☐
Oil change in engine with filter	☐	☐
Oil change in bevel gears	☐	☐
Checking valve clearance	☐	☐
Changing gear oil	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Replacing alternator drive belt	☐	☐
Changing front brake fluid	☐	☐
Changing brake fluid, rear	☐	☐

Notes

Stamp, signature

BMW Motorrad Service
performed

on_____
at km_____

Next service
latest
on_____
or, if reached earlier
at km_____

Work performed

	Yes	No
BMW Motorrad Service	☐	☐
Oil change in engine with filter	☐	☐
Oil change in bevel gears	☐	☐
Checking valve clearance	☐	☐
Changing gear oil	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Replacing alternator drive belt	☐	☐
Changing front brake fluid	☐	☐
Changing brake fluid, rear	☐	☐

Notes

Stamp, signature

BMW Motorrad Service
performed

on_____
at km_____

Next service
latest
on_____
or, if reached earlier
at km_____

Work performed

	Yes	No
BMW Motorrad Service	☐	☐
Oil change in engine with filter	☐	☐
Oil change in bevel gears	☐	☐
Checking valve clearance	☐	☐
Changing gear oil	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Replacing alternator drive belt	☐	☐
Changing front brake fluid	☐	☐
Changing brake fluid, rear	☐	☐

Notes

Stamp, signature

BMW Motorrad Service
performed

on_____
at km_____

Next service
latest
on_____
or, if reached earlier
at km_____

Work performed

	Yes	No
BMW Motorrad Service	☐	☐
Oil change in engine with filter	☐	☐
Oil change in bevel gears	☐	☐
Checking valve clearance	☐	☐
Changing gear oil	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Replacing alternator drive belt	☐	☐
Changing front brake fluid	☐	☐
Changing brake fluid, rear	☐	☐

Notes

Stamp, signature

BMW Motorrad Service
performed

on_____
at km_____

Next service
latest
on_____
or, if reached earlier
at km_____

Work performed

	Yes	No
BMW Motorrad Service	☐	☐
Oil change in engine with filter	☐	☐
Oil change in bevel gears	☐	☐
Checking valve clearance	☐	☐
Changing gear oil	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Replacing alternator drive belt	☐	☐
Changing front brake fluid	☐	☐
Changing brake fluid, rear	☐	☐

Notes

Stamp, signature

SERVICE CONFIRMATIONS

The table serves to provide evidence of maintenance and repair work, as well as installed optional accessories and special campaigns performed.

Work performed	at km	Date

Work performed	at km	Date

Declaration of Conformity

Radio equipment electronic immobiliser (EWS4)

For all countries without EU

Technical information
Frequency Band: 134 kHz
(Transponder: TMS37145 / Type DST80, TMS3705 Transponder Base Station IC)
Output Power: 50 dBµV/m

Manufacturer and Address
Manufacturer:
BECOM Electronics GmbH
Address: Technikerstraße 1, A-7442 Hochstraß

Argentina

RAMATEL
H-25246

Australia/New Zealand

R-NZ

Brunei

AITI
TA No: DTA-007061

United Arab Emirates

TRA
REGISTERED No:
ER89926/20

DEALER No:
DA96133I20

Philippiens

NTC
Type Approved
No.: ESD-RCE-2023298

South Africa

TA-2020/6131
ICASA
APPROVED

India

ETA-SD-20200905860

Belarus

TP BY

Indonesia

72790/SDPPI/2021
13349

Dilarang melakukan perubahan Spesifikasi yang dapat Menimbulkan gangguan fisik dan/atau elektromagnetik terhadap lingkungan sekitarnya

Paraquay

CONATEL

NR: 2020-11-I-0834

Singapore

Complies with
IMDA Standards
N3504-20

Taiwan

低功　電波　射性電機管　辦法
第十二條　經型式認證合格之低功率射頻電 機，非經許可，公司、商號或使用者均不得擅 自變更頻率、加大功率或變更原設計之特性及 功能。第十四條　低功率射頻電機之使用不 得影響飛航安全及干擾合法通信；經發現有干 擾現象時，應立即停用，並改善至無干擾時方 得繼續使用。 前項合法通信，指依電信法規定作業之無線電 通信。

Malaysia

MCMC

RFCL/47A/0920/S(20-3358)

Israel

מספר אישור אלחוטי של משרד התקשורת הוא 51-74908
אסור להחליף את האנטנה המקורית של המכשיר ולא
לעשות בו כל שינוי טכני אחר

United States (USA)

Contains FCC ID:
ODE-MREWS5012
FCC § 15.19 Labelling requirements
This device complies with part 15 of the FCC Rules and Industry Canada's licence-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) this device may not cause interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

FCC § 15.21 Information to user

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

RF Exposure Requirements

To comply with FCC RF exposure compliance requirements, the device must be installed to provide a separation distance of at least 20 cm from all persons.

Serbia

P1620118300

Canada

Contains IC:
10430A-MREWS5012
This device complies with part 15 of the FCC Rules and Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) this device may not cause interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes : (1) l'appareil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Vietnam

A1109091120AF04A3

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 will be entertained as a result of such discrepancies.
Dimensions, weights, fuel consumption and performance data are quoted to the customary tolerances.
The right to modify designs, equipment and accessories is reserved.
Errors and omissions excepted.

Original Rider's Manual, printed in Germany.

WARNING

Harmful substances
Operating and preventive maintenance of a passenger vehicle or off-road vehicle can expose you to substances such as exhaust gases, carbon monoxide, phthalates and lead, which are known to the State of California to be carcinogenic as well as detrimental to childbirth and reproduction.
- To minimize exposure, avoid breathing exhaust gases, do not put the engine in Neutral except as necessary, service your vehicle in a well-ventilated area and wear gloves or wash your hands frequently when servicing your vehicle.
- Further information is available at:
www.P65Warnings.ca.gov/passenger_vehicle

Important data for refueling stop:

Fuel	
Recommended fuel quality	Super unleaded (max. 15% ethanol, E15) 89 AKI (95 ROZ/RON) 90 AKI
Alternative fuel quality	Regular unleaded (max. 15% ethanol, E15) 87 AKI (91 ROZ/RON) 87 AKI
Fuel tank capacity	Approx. 4.5 gal (Approx. 17 l)
Fuel reserve	Approx. 3.7 quarts (Approx. 3.5 l)
Tire pressures	
Front tire pressure	36.3 psi (2.5 bar), with tire cold
Rear tire pressure	42.1 psi (2.9 bar), with tire cold

You can find further information on all aspects of your vehicle at:
bmw-motorrad.com

Order No.: 01 40 5 A66 663
01-2022, 3rd edition, 07