BMW
MOTORRAD

RIDER'S MANUAL

R 1300 GS Adventure



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 this rider's manual 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 this rider's manual as well. It is an important part of your vehicle.

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

BMW Motorrad.

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GENERAL INSTRUCTIONS

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4 GENERAL INSTRUCTIONS

QUICK & EASY REFERENCE

This rider's manual has been designed to provide quick and efficient orientation. The quickest way for you to find information on specific topics is to consult the comprehensive index at the end of the rider's manual. If you would like to start with a quick overview of your vehicle, this information has been provided in chapter 2. All preventive maintenance and repair procedures carried out on your motorcycle will be documented in the chapter "Service". Documentation of the maintenance work performed is a prerequisite for generous treatment of claims.

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.
- NV National-market version.

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 dealer.
ABS	Anti-Lock Brake System.
ACC	Distance control (Active Cruise Control).
ASA	Automated shift assistant.
DSA	Dynamic Suspension Adjustment.
DTC	Dynamic Traction Control.
DWA	Anti-theft alarm.
EWS	Electronic immobilizer.
FCW	Forward Collision Mitigation.
MSR	Engine drag torque control.
RECW	Rear-end impact warning (Rear End Collision Warning).
TPC	Tire Pressure Control (TPC).
SWW	Lane change warning.

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. Please bear in mind that it may also contain descriptions of equipment that you might not have selected. 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.

6 GENERAL INSTRUCTIONS

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 deviate from these, for example, as a result of the selected optional equipment, the national-market version or country-specific measuring procedures. Detailed values can be obtained from the registration documents or requested from your authorized BMW Motorrad dealer 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.

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. At the time of manufacturing of the motorcycle, the rider's manual is the most current source. Due to updates after the press date, there can be differences between the printed rider's manual and the online version.
Updated information is available at **bmw-motorrad.com/service**.

ADDITIONAL SOURCES OF INFORMATION

Authorized BMW Motorrad dealer

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

Internet

The rider's manual for your vehicle, the Owner's Manual 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 General Operating Permits for optional accessories are available at **bmw-motorrad.com/certification**.

Open source software

Open source software is used in some vehicle components. Information about open source software is 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 informa-

tion without charge from the locations that store the vehicle user's personal data.
These locations may be:
–The vehicle manufacturer
–Qualified, authorized BMW Motorrad dealer
–Repair shops
–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 also pay an authorized BMW Motorrad dealer or a repair shop to read out the data stored in the vehicle.
The vehicle data is exported using the vehicle's legally mandated 12 V diagnostic socket for on-board diagnostics (OBD).

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 speed, wheel centrifugal velocity and deceleration
–Ambient conditions, such as temperature

The data is processed only in the vehicle itself and is usually temporary. The data is not stored beyond the period in which the vehicle is operating.
Electronic components such as control units contain components for storing technical information. This may be information about the vehicle's condition, component load, events or faults stored temporarily or permanently.
This information generally documents the condition of a com-

ponent, module, system or the surrounding area; for example:
– Operating states of system components, such as fill levels and tire pressure
– Malfunctions 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 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 an authorized BMW Motorrad dealer or a repair shop. The data is read out using the legally prescribed 12 V socket for on-board diagnostics (OBD) provided on the vehicle.
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 an authorized BMW Motorrad dealer or repair shop during repair or servicing work.

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

If the vehicle manufacturer provides online services, the particular functions are described in 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.

BLUETOOTH®

Bluetooth is a close-range wireless technology. Bluetooth devices are short-range devices (transmitting with a limited range) on the license-free ISM frequency band (Industrial, Scientific, Medical) between 2.402...2.480 GHz. They can be operated anywhere in the world without a license being required.
Although Bluetooth is designed for establishing robust connections over short distances, faults are possible as with any other wireless technology. Connections can be subject to interference, can be briefly interrupted or lost entirely. Especially when several devices are operated in one Bluetooth network, there is no guarantee for smooth operation in every situation.

Possible sources of interference:
- Interference fields due to transmission towers and similar.
- Devices with incorrectly implemented Bluetooth radio standard.
- By nearby Bluetooth-capable devices.
- Shielding by metals or bodies.

CONNECTIVITY FUNCTIONS

Connectivity functions include media, telephony and navigation. Connectivity functions can be used if the instrument cluster is connected to a mobile terminal and a helmet (➠ 84). You can find more information on the Connectivity functions at:
bmw-motorrad.com/connectivity

Depending on the mobile terminal, the scope of the Connectivity functions may be limited.

BMW Motorrad Connected App
With the BMW Motorrad Connected App, you can call up information about the vehicle and usage. To use some functions such as navigation, the app must be installed on the mobile terminal and be connected to the instrument cluster. The app starts the route guidance and adapts the navigation.

On some mobile terminals, e.g. with operating system iOS, you must go to the BMW Motorrad Connected App before use.

INTELLIGENT EMERGENCY CALL

–with intelligent emergency call OE

Principle

The intelligent emergency call system makes it possible to place manual or automatic emergency calls in the event of an accident, for example. The emergency calls are answered by an emergency call center authorized by the vehicle manufacturer.
For information on operating intelligent emergency call and its functions, see the "Operation" chapter (➠ 100).

Legal basis

The intelligent emergency call system processes personal data in ways that comply with the following regulations:
–Protection of personal data: Directive 95/46/EC of the European Parliament and of the Council.

–Protection of personal data: Directive 2002/58/EC of the European Parliament and of the Council.

The legal bases for the activation and operation of the intelligent emergency call system are the signed ConnectedRide contract for this function, and the corresponding laws, regulations, and directives of the European Parliament and European Council.
The relevant regulations and directives govern the protection of individuals when processing personal data.
The intelligent emergency call system processes personal data in compliance with European guidelines concerning personal data protection.
The intelligent emergency call system processes personal data only with the consent of the vehicle owner.
The intelligent emergency call system and other services with additional benefits may only process personal data with the express consent of the individual affected by the data processing, for example, the vehicle owner.

SIM card

The intelligent emergency call system is operated via mobile communications using the SIM card installed in the vehicle.
The SIM card is permanently registered to the mobile phone network to enable a fast con-

nection setup. The data is sent to the vehicle manufacturer in the event of an emergency.

Quality improvement

The data transmitted in the event of an emergency call is also used by the vehicle manufacturer to improve the quality of products and services.

Position finding

The vehicle position can be determined exclusively by the mobile phone network provider based on their mobile phone cell towers. The service provider cannot link the vehicle identification number to the phone number of the installed SIM card. Only the vehicle manufacturer can link the vehicle identification number and phone number of the installed SIM cards.

Emergency call log data

The emergency call log data is stored in the vehicle memory. The oldest log data is deleted regularly. The log data includes for example information about when and where an emergency call was initiated. The log data can be read out from the vehicle memory in exceptional cases. The log data is usually read out only by court order and can only be read out when the relevant devices are connected directly to the vehicle.

Automatic emergency call

The system is designed so that an emergency call is triggered automatically in the event of an accident of a particular severity detected by sensors in the vehicle.

Transmitted information

If the intelligent emergency call system makes an emergency call, it forwards the same information to the authorized emergency call center as the eCall legal emergency call system forwards to the public emergency call center.
Furthermore, the intelligent emergency call system also sends the following additional information to an emergency call center authorized by the vehicle manufacturer and to the public emergency operations center if necessary:

– Accident data, such as the direction of impact detected by the vehicle sensors in order to facilitate planning of the deployment of emergency services.

– Contact information, such as the phone number of the installed SIM card and that of the rider, if available, in order to expedite contact with the individuals involved in the accident.

Data storage

The data related to a triggered emergency call is stored in the vehicle. The data contains information about the emergency call, such as the emergency call location and time.
Audio recordings of emergency calls are stored at the emergency call center.
Customer audio recordings are stored for 24 hours in case the details of the emergency call need to be analyzed. The audio recordings are then deleted.
Emergency call center employee audio recordings are stored for 24 hours for quality assurance purposes.

Disclosure of personal data

The data processed as part of the intelligent emergency call is processed only for the purpose of providing the emergency call service. The vehicle manufacturer discloses information about the data that it processes or continues to store if necessary as part of its legal obligation.

Regional limitation

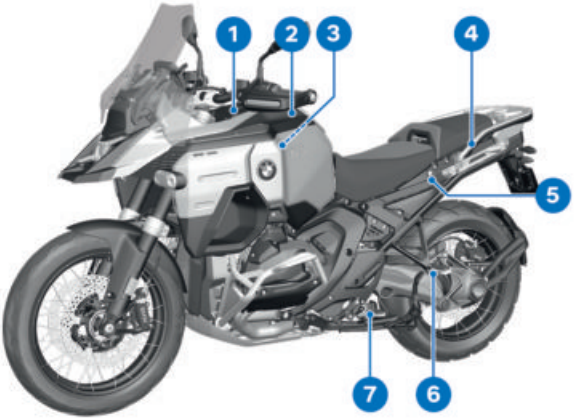
For the installed Intelligent Emergency Call system to function properly, the respective national-market vehicle must support the current region.
For more information on regional limitations:
support.bmw-motorrad.com

OVERVIEWS

02

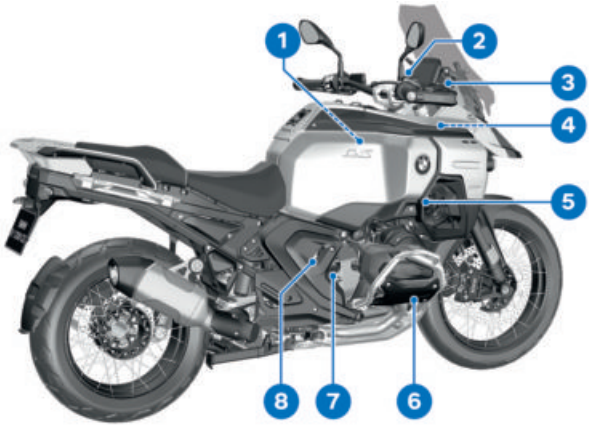
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MULTIFUNCTION SWITCH, RIGHT 23
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OVERALL VIEW, LEFT SIDE



1 USB charging socket (below the storage compartment flap) (➠ 242)
2 Fuel filler opening (➠ 171)
3 Air filter (under side trim panel on left) (➠ 225)
4 Passenger grab handle
5 Seat lock (➠ 137)
6 Passenger footrest
7 Rider footrest

OVERALL VIEW, RIGHT SIDE



1 Air filter (under side trim panel on right) (➠ 225)

2 Brake fluid reservoir for front wheel brake (➠ 211)

3 Socket (➠ 240)

4 Vehicle identification number (on the steering head)
Type plate (on frame at front right)
Tire pressure table (on the front panel carrier)
Payload table (on the front panel carrier)

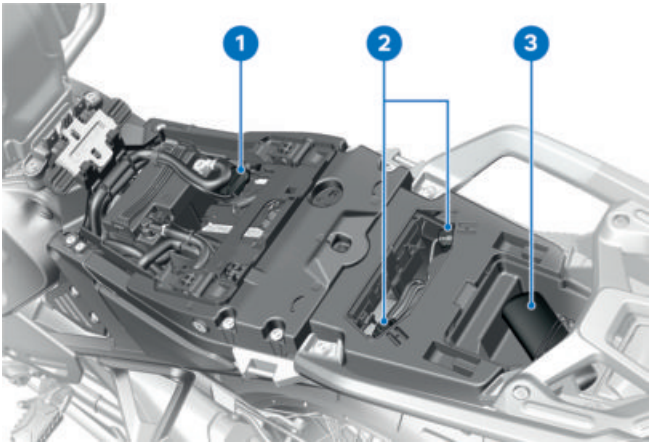
5 Coolant level indicator (➠ 213)
Coolant tank (➠ 214)

6 Engine oil indicator (➠ 206)

7 Oil filler opening (➠ 207)

8 Brake fluid reservoir for rear wheel brake (➠ 212)

UNDERNEATH THE SEAT



1 Diagnostic connector (➠ 237)
2 Fuses (➠ 235)
3 Onboard vehicle tool kit (➠ 205)

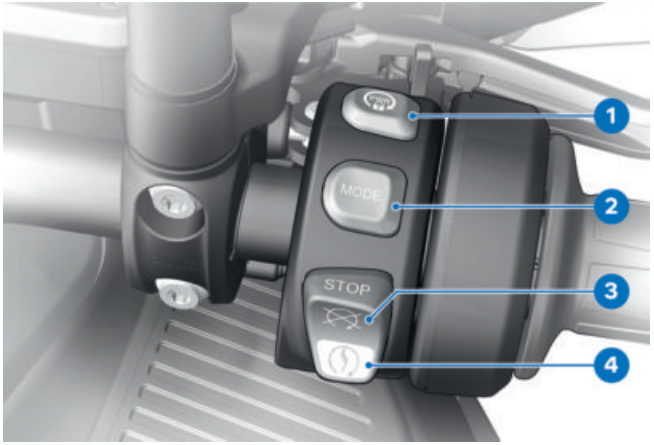
MULTIFUNCTION SWITCH, LEFT



1 High beams and headlight flasher (➠ 103)
2 Cruise control (➠ 113)
3 Hazard warning system (➠ 104)
4 Multiple rocker switch (➠ 80)
5 Driving lights automatic (➠ 103)
6 Automated shift assistant (ASA) (➠ 111)
7 Turn signals (➠ 104)
8 Horn
9 Rocker button MENU (➠ 79)
10 Multi-Controller (➠ 78)
11 Function list (➠ 80)

MULTIFUNCTION SWITCH, RIGHT

–without intelligent emergency call[OE]



1 Steering lock
Central locking system
Ignition (➠ 95)

2 Riding mode (➠ 107)

3 Emergency-off switch (➠ 99)
Immobilizer (➠ 164)

4 Starting the engine (➠ 158)

MULTIFUNCTION SWITCH, RIGHT

–with intelligent emergency call[OE]



1 Steering lock
Central locking system
Ignition (➠ 95)

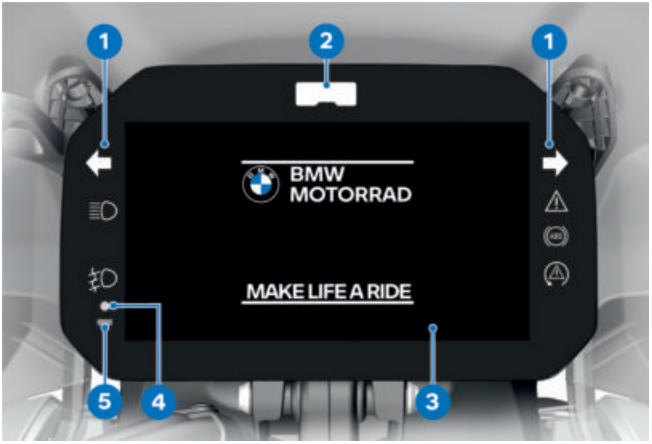
2 Riding mode (➠ 107)

3 Emergency-off switch
(➠ 99)
Immobilizer (➠ 164)

4 Starter button (➠ 158)

5 SOS button
Intelligent emergency call
(➠ 158)

INSTRUMENT CLUSTER



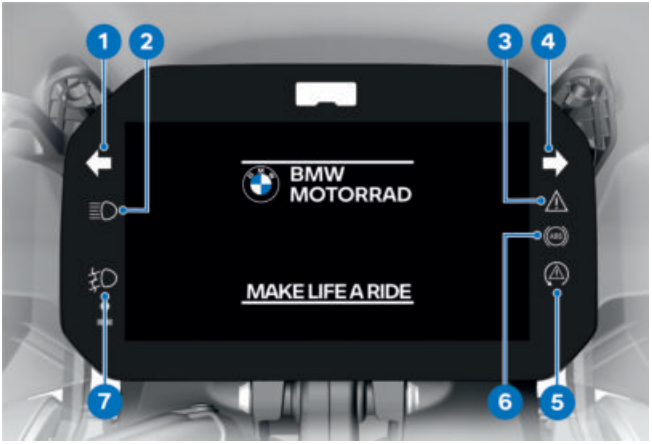
1 Indicator and warning lights (➠ 28)
2 Shiftpoint light (➠ 128)
3 Instrument cluster (➠ 30)
4 Indicator light
DWA (➠ 130)
Keyless Ride (➠ 95)
5 Photodiode (for automatic measurement of the ambient brightness)

DISPLAYS

03

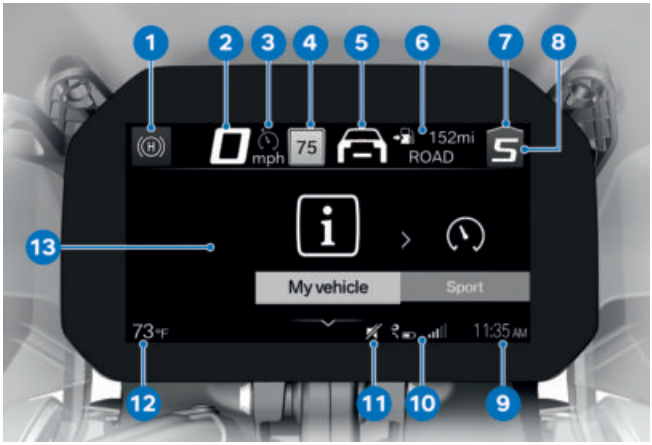
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INDICATOR AND WARNING LIGHTS



1 Turn signal, left (➠ 104)
2 High beams (➠ 103)
3 General warning light (➠ 37)
4 Turn signal, right (➠ 104)
5 DTC (➠ 62)
6 ABS (➠ 61)
7 Auxiliary headlights (➠ 104)

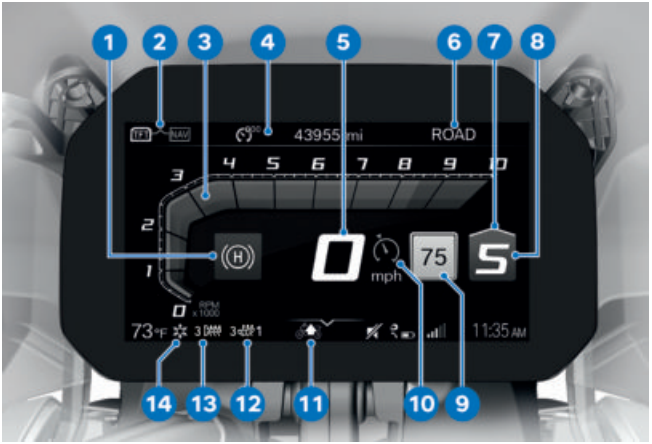
MENU VIEW



1 Hill Start Control (➠ 67)
2 Speedometer
3 Cruise control (➠ 113)
4 Speed Limit Info (➠ 89)
5 Distance control (➠ 120)
Forward Collision Mitigation (➠ 122)
6 Rider info. status line (➠ 83)
7 Upshift recommendation (➠ 32)
8 Gear display
9 Clock (➠ 84)
10 Connection status
11 Muting (➠ 84)
12 Outside temperature (➠ 47)
13 Menu area

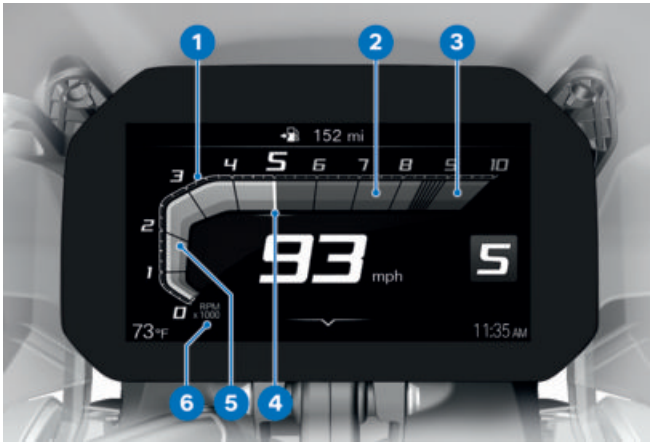
PURE RIDE VIEW

START SCREEN



1 Hill Start Control (➠ 67)
2 Changing operating focus (➠ 86)
3 Tachometer (➠ 31)
4 Rider info. status line (➠ 83)
5 Speedometer
6 Riding mode (➠ 107)
7 Upshift recommendation (➠ 32)
8 Gear display
9 Speed Limit Info (➠ 89)
10 Cruise control (➠ 113)
11 Ride height (➠ 107)
12 Seat heating (➠ 133)
13 Heated grips (➠ 133)
14 External temperature warning (➠ 47)

TACHOMETER



1 Scale
2 Rotational speed range
3 High / red engine speed range
4 Needle
5 Drag pointer
6 Unit for tachometer: 1000 RPM

The RPM range shaded in red changes depending on the coolant temperature:
The colder the engine, the lower the rotational speed at which the red-shaded rotational speed range begins.
The warmer the engine, the higher the rotational speed at which the red-shaded rotational speed range begins.

The solid red rotational speed range indicates the current maximum speed, depending on, for example, break-in service or faults in the engine control.

When the shift light flashes, the revolution counter also flashes.

Range



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

–When the vehicle is propped on its side stand, the resulting angle of inclination means that the sensor cannot register the fuel quantity correctly. For this reason, the range is only recalculated when the side stand is folded in.
–The range is output together with a warning after the fuel reserve level is reached.
–After refueling, the range is recalculated if the fuel quantity is greater than the fuel reserve.
–The calculated range is only an approximate figure.

Upshift recommendation



The upshift recommendation in the **1** status line or in the Pure Ride **2** view signals the economically best time for an upshift.

–with Automated shift assistant OE

In automatic mode D, the upshift recommendation is inactive.◁

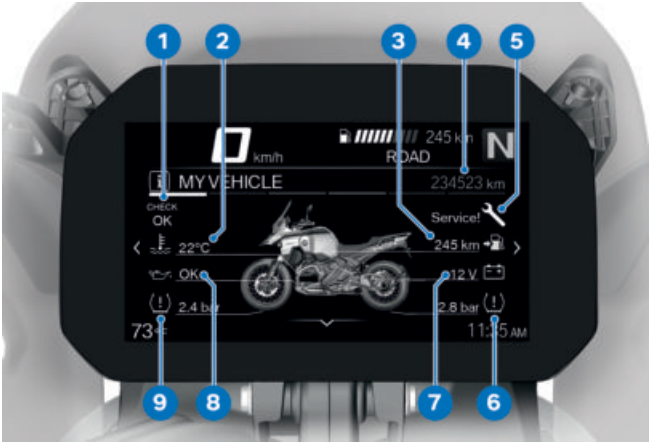
SPORT VIEW



1 Maximum DTC torque reduction
2 Current DTC torque reduction
3 Rotational-speed sensor
4 Maximum angle of inclination to left
5 Current angle of inclination during cornering for left and right
6 Maximum angle of inclination to right
7 Current deceleration during braking
8 Maximum deceleration

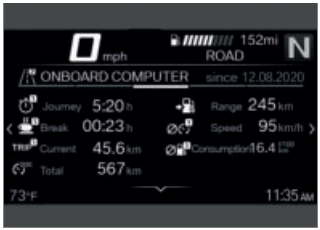
MY VEHICLE VIEW

START SCREEN



1 Check Control display Layout (➠ 37)
2 Coolant temperature (➠ 53)
3 Range (➠ 32)
4 Odometer
5 Service display (➠ 73)
6 Rear tire pressure (➠ 35)
7 Voltage of the vehicle electrical system (➠ 230)
8 Engine oil level (➠ 53)
9 Front tire pressure (➠ 35)

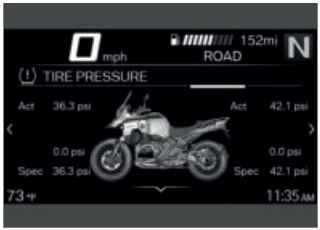
On-board computer and travel on-board computer



The ONBOARD COMPUTER and TRIP COMPUTER menu windows show the vehicle and trip data, e.g. average values.

Tire pressure

In addition to the MY VEHICLE menu screen and the Check Control messages, there is also the TIRE PRESSURE screen to display the tire pressures:



The values on the left refer to the front wheel, and the values on the right refer to the rear wheel.

The pressure differential is indicated by the current and set-point tire pressure.
Immediately after the ignition is turned on, only dashes are displayed. The transmission of the tire pressure values does not begin until the following minimum speed is exceeded for the first time:

RDC sensor is not active
min. 19 mph (min. 30 km/h) (The RDC sensor transmits its signal to the vehicle only once the minimum speed has been exceeded.)
The tire pressures are shown in the instrument cluster with temperature compensation and are always based on the following tire air temperature:
68 °F (20 °C)

If the tire icon appears yellow or red at the same time, the display is a warning. The pressure differential is highlighted with an exclamation mark of the same color.

If the value in question is within the limit range of the permitted tolerance, the general warning light also lights up yellow.

If the determined tire pressure is outside the permitted tolerance, the general warning light blinks red.

For further information about the BMW Motorrad tire pressure control (TPM), see the Technology in detail (➠ 195) chapter.

Service display



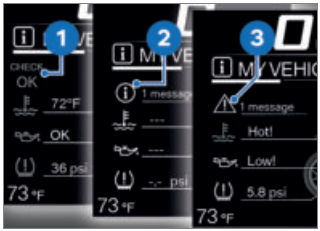
If the time remaining until the next service is less than a month, or if the next service is due within 620 mi (1000 km), a white Check Control message is displayed.

INDICATOR LIGHTS

Layout

Warnings are indicated by the corresponding warning light. Warnings are indicated by the general warning light in combination with a dialog in the instrument cluster. The general warning light lights up in either yellow or red, depending on the urgency of the warning.

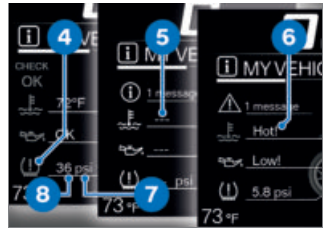
The general warning light lights up for whichever warning is most urgent at the current time.
You will find an overview of the potential warnings on the following pages.



Check Control display

The messages in the display are shown differently in the display. Different colors and characters are used depending on the priority:

–Green CHECK OK **1**: no message, optimal values.
–White circle with lowercase "i" **2**: information.
–Yellow warning triangle **3**: warning, value not optimal.
–Red warning triangle **3**: warning, value critical



Value display

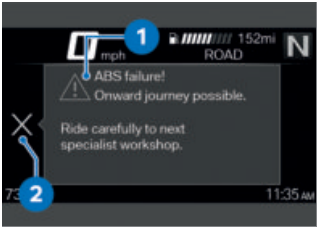
The icons **4** are displayed differently. Different colors are used depending on the assessment of value. Instead of numerical values **8** with units **7**, texts **6** are also displayed:

Color of the icon

–Green: (`OK`) Current value is optimal.
–Blue: (`Cold!`) Current temperature is low.
–Yellow: (`Low!`/`High!`) Current value is too low or too high.
–Red: (`Hot!`/`High!`) Current temperature or value is too high.

–White: (---) There is no valid value. Instead of the value, dashes **5** are displayed.

The evaluation of the individual values is possible in part only after a certain riding duration or speed. If a measured value cannot yet be displayed due to unfulfilled measurement conditions, dashes are displayed instead as placeholders. As long as no valid measured value is available, no evaluation is carried out in the form of a colored symbol.



Check Control dialog

Messages are output as Check Control dialog **1**.

–If the icon **2** is active, you can acknowledge this by tilting the Multi-Controller to the left.
–Check Control messages are dynamically added to the screens in the `My vehicle` menu as additional tabs. You can go back to the message as long as the fault is present.

Overview of warning indicators

Indicator and warning lights	Display text	Meaning
	 is displayed.	External temperature warning (➠ 47)
 lights up yellow.	 Remote key not in range.	Radio-operated key outside reception range (➠ 47)
 lights up yellow.	 Keyless Ride failure!	Keyless Ride malfunction (➠ 48)
 lights up yellow.	 Remote key battery low.	Replacing the battery of the radio-operated key (➠ 48)
 lights up yellow.	 Vehicle voltage critical!	Voltage of the vehicle electrical system is critical (➠ 48)
 blinks yellow.	 Battery critically low!	Charging voltage critical (➠ 49)
 lights up yellow.	 Fault in the on-board battery.	Fault in the vehicle battery (➠ 49)
 lights up yellow.	 On-board battery overheated.	Vehicle battery overheated (➠ 49)
 blinks red.	 Serious fault in the power supply!	Severe fault in the voltage supply (➠ 50)

Indicator and warning lights	Display text	Meaning
 lights up yellow.	 The faulty light source is displayed.	Faulty light source (➠ 50)
 blinks yellow.	 The faulty light source is displayed.	
 lights up yellow.	 Light control failure!	Light control unit failed (➠ 51)
	 Anti-theft alarm batt. capacity low.	Anti-theft alarm system battery is weak (➠ 52)
 lights up yellow.	 Anti-theft alarm battery discharged.	Anti-theft alarm system battery discharged (➠ 52)
 lights up yellow.	 Anti-theft alarm system failure.	DWA malfunction (➠ 52)
lights up yellow.	 Engine oil level Check engine oil level.	Low engine oil level (➠ 53)
lights up yellow.	 Engine too hot!	Engine temperature high (➠ 53)
lights up red.	Engine overheating!	Engine overheated (➠ 54)
 lights up yellow.  lights up.	 No communication with engine control.	Engine control malfunction (➠ 55)
lights up yellow.	Fault in the engine control.	Engine in emergency operation mode (➠ 55)

Indicator and warning lights	Display text	Meaning
 blinks red.	 Serious fault in the engine control.	Serious fault in the engine control (➠ 55)
 lights up yellow.	 Tire pressure not at setpoint.	Tire pressure is the limit range of approved tolerance (➠ 56)
 blinks red.	 Tire pressure not at setpoint.  Tire Press. Monitor. Loss of pressure.	Tire pressure is outside the approved tolerance range (➠ 56)
	 "---"	Transmission fault (➠ 57)
 lights up yellow.	 "---"	Sensor faulty or system fault (➠ 58)
 lights up yellow.	 Tire Press. Monitor failure!	Tire Pressure Monitor (TPM) malfunction (➠ 58)
 lights up yellow.	 TPM sensors battery low.	Battery of the tire pressure sensor weak (➠ 58)
	 Fall sensor faulty.	Malfunction of fall sensor (➠ 59)
	 Cannot start engine.	Motorcycle has fallen over (➠ 59)

Indicator and warning lights	Display text	Meaning
 lights up yellow.	 Emergency call system restricted.	Emergency call function has limited availability (➠ 59)
 lights up yellow.	 Emergency call system failure.	Emergency call function failed (➠ 60)
 lights up yellow.	 Side stand monitoring faulty	Malfunction of side stand monitor (➠ 60)
 lights up yellow.	 Center stand not folded in completely.	Center stand not fully folded in (➠ 60)
 flashes regularly.		ABS self-diagnosis not completed (➠ 61)
 lights up yellow.  lights up.	 Limited ABS availability!	ABS fault (➠ 61)
 lights up yellow.  lights up.	 ABS failure!	ABS failure (➠ 61)
 lights up yellow.  lights up.	 ABS Pro failure!	ABS Pro failure (➠ 62)
 flashes irregularly.		ABS-control on front wheel only (➠ 62)

Indicator and warning lights	Display text	Meaning
 blinks rapidly.		DTC intervention (➠ 62)
 blinks slowly.		DTC self-diagnosis not completed (➠ 63)
 lights up.	 Off!  Traction control deactivated.	DTC turned off (➠ 63)
 lights up yellow.  lights up.	 Traction control limited.	Limited DTC availability (➠ 63)
 lights up yellow.  lights up.	 Traction control failure!	DTC error (➠ 63)
 lights up yellow.	 Damping adjustment failed.	Fault when adjusting damper (➠ 64)
 lights up yellow.	 Suspension adjustment limited.	Chassis adjustment restricted (➠ 64)
 lights up yellow.	 Suspension adjustment failed.	Chassis adjustment failed (➠ 64)
 lights up yellow.	 Ride height. Lowering not possible.	DSA fault – lowering chassis (➠ 65)

Indicator and warning lights	Display text	Meaning
 lights up yellow.	 Ride height. Raising not possible.	DSA fault – raising chassis (➠ 65)
	 Jacking aid temporarily disabled.	Prop-up assistant temporarily deactivated (➠ 66)
lights up yellow.	 Load compensation failed.	Vehicle load compensation malfunction (➠ 66)
 lights up yellow.	 Low fuel.	Fuel has reached reserve volume (➠ 66)
	 is displayed in green.	Hill Start Control active (➠ 67)
	 blinks yellow.	Hill Start Control automatically deactivated (➠ 67)
	 is displayed. HSC not available. Engine not running.	Hill Start Control cannot be activated (➠ 67)
lights up yellow.	 Cruise control not functioning.	Cruise control malfunctioned (➠ 67)
lights up yellow.	 ACC temporarily failed.	Distance control has failed temporarily (➠ 68)
lights up yellow.	Distance control failed.	Distance control failed (➠ 68)

Indicator and warning lights	Display text	Meaning
 lights up yellow.	 Front-collision warning temporarily failed.	Temporary Forward Collision Mitigation malfunction (➠ 68)
 lights up yellow.	 Front-collision warning failed.	Forward Collision Mitigation malfunction (➠ 69)
 lights up yellow.	 Lane change warning temporarily failed.	Temporary lane change warning malfunction (➠ 69)
 lights up yellow.	 Lane change warning failed.	Lane change warning malfunction (➠ 69)
	 Gear indicator flashes.	Gear not taught in (➠ 70)
	 Gear indicator flashes.	Shifting to Neutral failed (➠ 70)
 lights up yellow.	 Gearshift faulty!	Gearshift malfunction (➠ 70)
 lights up yellow.	 Gearbox fault.	Fault in the transmission (➠ 71)
 lights up yellow.	 Clutch temperature high!	Clutch temperature high (➠ 71)
 lights up red.	 Clutch faulty!	Clutch malfunction (➠ 72)
 lights up red.	 Gearbox damaged!	Serious fault in the transmission (➠ 72)

Indicator and warning lights	Display text	Meaning
	 blinks.	Immobilizer not activated (➠ 72)
 flashes in green.  flashes in green.		Hazard warning flasher switched on (➠ 73)
	 is displayed in white. `Service due!`	Service due (➠ 73)
 lights up yellow.	 is displayed in yellow. `Service overdue!`	Service appointment overdue (➠ 73)

Outside temperature

The outside temperature is displayed in the status line of the instrument cluster.

Engine heat can lead to spurious measurement readings of the outside temperature when the vehicle is stationary. If the effect of the motor heat becomes excessive, dashes are temporarily displayed instead of the value.

If the outside temperature falls below the limit value of approx. 37 °F (approx. 3 °C), there is a risk of black ice formation.

The first time the temperature drops below this value, the ice crystal symbol flashes in the status line of the instrument cluster.

External temperature warning

is displayed.

Possible cause:

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

WARNING

Risk of black ice, also above approx. 37 °F (approx. 3 °C)

Risk of accident

- At low outside temperatures, icy conditions must expected on bridges and in shady road areas.
- Use caution when riding.

Radio-operated key outside reception range

lights up yellow.

`Remote key not in range. It is not possible to turn on the ignition again.`

Possible cause:

The communication between the radio-operated key and the engine electronics is faulty.

- Check the battery in the radio-operated key.
- Replace the battery of the radio-operated key. (➠ 97)
- Use the wallet key for further driving.
- Battery of radio-operated key is dead or radio-operated key is lost. (➠ 96)
- If the Check Control dialog appears while riding, remain

calm. You can continue riding; the engine will not turn off.
- Have a faulty radio-operated key replaced by an authorized BMW Motorrad retailer.

Keyless Ride malfunction

 lights up yellow.

 `Keyless Ride failure! Do not stop engine. Engine restart may not be possible.`

Possible cause:

The Keyless Ride control unit has diagnosed a communication fault.
- Do not shut off the engine. Visit a repair shop immediately if possible, ideally an authorized BMW Motorrad dealer.

» Engine start can no longer be turned on using Keyless Ride.
» DWA can no longer be activated.

Replacing the battery of the radio-operated key

 lights up yellow.

 `Remote key battery low. Function limited. Change battery.`

Possible cause:
- The battery for the radio-operated key is no longer charged to full capacity. Operation of the radio-operated key is only ensured for a limited time.
- Replace the battery of the radio-operated key. (➠ 97)

Voltage of the vehicle electrical system is critical

 lights up yellow.

 `Vehicle voltage critical! Consumers were switched off Check battery condition.`

WARNING

Failure of vehicle systems
Accident hazard
- Do not continue riding.

The vehicle voltage is critical. The vehicle electronics will drain the battery.
Possible cause:

Electrical loads with high electrical consumption, e.g. heating vests, are in operation; too many electrical loads are in operation at the same time, or the battery is defective.
- Switch off electrical loads that are not needed or disconnect

them from the electrical system.
- If the fault persists or occurs without any electrical loads connected, have the fault corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Charging voltage critical

 blinks yellow.

 Battery critically low! Risk of accident. Do not continue to operate vehicle.

WARNING

Failure of vehicle systems
Accident hazard
- Do not continue riding.

The battery is not being charged. The vehicle electronics will drain the battery.
Possible cause:

Alternator is malfunctioning, battery is defective or fuse is burned through.
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Fault in the vehicle battery

 lights up yellow.

 Fault in the on-board battery. Limited onward journey possible. Drive carefully to nearest specialist workshop.

Possible cause:

Communication with the vehicle battery is disrupted.
- Have the fault corrected at a repair shop, preferably an authorized BMW Motorrad dealer.

Possible cause:

A battery type is being used that does not correspond to the coding of the control unit.
- After changing the battery type, have the coding checked by a repair shop, preferably an authorized BMW Motorrad dealer.

Vehicle battery overheated

 lights up yellow.

 On-board battery overheated. Turn off the engine or continue with limited journey to cool down.

Possible cause:

The temperature sensor has detected a high temperature in the vehicle battery.

- If possible, ride in the partial load range or shut off the engine to cool off the vehicle battery.
- If the vehicle battery temperature is frequently too high, have the fault rectified as quickly as possible by a repair shop, preferably an authorized BMW Motorrad dealer.

Severe fault in the voltage supply

 blinks red.

 `Serious fault in the power supply! Stop immediately! Have it checked by a specialist workshop.`

WARNING

Failure of vehicle systems

Accident hazard

- Do not continue riding.

Possible cause:

The temperature sensor has detected a critical temperature in the vehicle battery or the electrical system voltage is too high. The engine is about to be shut off.

- Stop the vehicle immediately.
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Faulty light source

 lights up yellow.

 The faulty light source is displayed:

 `High beam faulty!`

 `Turn indicator front left faulty!` or `Turn indicator front right faulty!`

 `Low beam faulty!`

 `Front parking lamp faulty!`

 `Left auxiliary headlight faulty!` or `Right auxiliary headlight faulty!`

 `Tail light faulty!`

 `Brake light faulty!`


Rear left turn signal faulty! or Rear right turn signal faulty!


License plate light faulty!

–Have checked by a specialist workshop.


blinks yellow.


The faulty light source is displayed:


Active headlamp faulty.

WARNING

Overlooking the vehicle in road traffic due to failure of the lighting on the vehicle

Safety risk

- Replace defective lighting as soon as possible. Please contact a repair shop for this purpose, preferably an authorized BMW Motorrad dealer.

Possible cause:

One or more light sources are faulty.

- Identify faulty lights by visually inspecting them.
- Have the LED light source replaced in full; for details please contact a repair shop, preferably an authorized BMW Motorrad retailer.

Light control unit failed


lights up yellow.


Light control failure! Have checked by a specialist workshop.

WARNING

Overlooking the vehicle in road traffic due to failure of the vehicle lighting

Safety risk

- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

The vehicle lighting has failed partially or completely.

Possible cause:

The light control unit has diagnosed a communication fault.

- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Anti-theft alarm system battery is weak

–with anti-theft alarm system (DWA) OE



Anti-theft alarm batt. capacity low. No limitations. Arrange an appointment at a specialist workshop.



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

Possible cause:

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

- Contact a repair shop, preferably an authorized BMW Motorrad dealer.

Anti-theft alarm system battery discharged

–with anti-theft alarm system (DWA) OE



lights up yellow.



Anti-theft alarm battery discharged. No independent alarm. Arrange an appointment at a specialist workshop.

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

Possible cause:

The DWA battery is discharged. Alarm triggering is not possible after the vehicle battery is disconnected. All other functions of the DWA are functional.

- Contact a repair shop, preferably an authorized BMW Motorrad dealer.

DWA malfunction

–with anti-theft alarm system (DWA) OE



lights up yellow.



Anti-theft alarm system failure. Have checked by a specialist workshop.

Possible cause:

The DWA control unit has diagnosed a communication fault.

- Contact a repair shop, preferably an authorized BMW Motorrad dealer.

» DWA can no longer be activated or deactivated.

» False alarm possible.

Electronic oil-level check


The electronic oil-level check evaluates the oil level in the engine as `OK` or `Low!`

The following conditions must be satisfied in order to use the electronic oil-level check; multiple measurements may be necessary:
- Engine in Neutral for at least 20 seconds.
- Engine is at operating temperature.
- Vehicle stands vertically on a level surface.
- Side stand is folded in.

If the measurement is incomplete or the conditions specified above are not fulfilled, an assessment of the oil level is not possible. Dashes (`---`) are shown in place of the notice.

Low engine oil level


lights up yellow.


`Engine oil level Check engine oil level.`

Possible cause:

The electronic oil level sensor has detected a low engine oil level. If the motorcycle is not standing vertically on a level surface, the message can also appear even when the oil level is correct. At next refueling stop:
- Check engine oil level. (➠ 206)

If oil level is too low:
- Top up engine oil. (➠ 207)

If the oil level is correct:
- Check whether the conditions for the electronic oil level check are fulfilled.

If the notice appears multiple times even though the oil level is slightly below the **MAX** mark:
- Contact a repair shop, preferably an authorized BMW Motorrad dealer.

Engine temperature high


lights up yellow.


`Engine too hot! Continue driving at low revs to cool engine.`

ATTENTION

Riding with overheated engine
Engine damage
- Be sure to observe the measures listed below.

Possible cause:

Coolant level is too low.
- Check the coolant level. (➠ 213)

If coolant level is too low:
- Allow the engine to cool down. Top up coolant. Have the cooling system checked at a repair shop, preferably by an authorized BMW Motorrad dealer.

Possible cause:

The temperature sensor has detected a high temperature in the engine.
- Ride in the partial load range if possible to cool the engine.
- If the engine temperature is more frequently too high, have the fault rectified as quickly as possible by a repair shop, preferably an authorized BMW Motorrad retailer.

Engine overheated

 lights up red.


Engine overheating!
Come to a safe stop,
then stop the engine.

ATTENTION

Riding with overheated engine
Engine damage
- Be sure to observe the measures listed below.

Possible cause:

Coolant level is too low.
- Check the coolant level. (➠ 213)

If coolant level is too low:
- Allow the engine to cool down. Top up coolant. Have the cooling system checked at a repair shop, preferably by an authorized BMW Motorrad dealer.

Possible cause:

Engine is overheated.
- Carefully come to a stop and turn off the engine until it has cooled down.
- If the engine overheats more frequently, have the fault corrected as soon as possible by a repair shop, preferably an

authorized BMW Motorrad dealer.

Engine control malfunction

 lights up yellow.

 lights up.



No communication with engine control. Multiple sys. affected. Ride carefully to the next specialist workshop

Possible cause:

Communication with the engine control unit has malfunctioned.

- You may continue riding. Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Engine in emergency operation mode

 lights up yellow.



Fault in the engine control. Onward journey possible. Ride carefully to next specialist workshop.

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 emergency operation.

- Continued riding is possible, however, the accustomed engine power may not be available.
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Serious fault in the engine control

 blinks red.



Serious fault in the engine control. Onward journey possible. Damage possible. Have checked by a workshop.

WARNING

Emergency operation mode can damage the engine
Risk of accident
- Drive slowly and refrain from accelerating quickly and overtaking other vehicles.
- If possible, have the vehicle picked up and let the malfunction be corrected at a repair shop, preferably an authorized BMW Motorrad dealer.

Possible cause:
The fill level in the fuel tank is too low or the engine control unit has diagnosed a fault. Serious faults can occur as a result. The engine is in emergency operation mode.
- Continued riding is possible, however it is not recommended.
- Avoid high load and engine speed ranges if possible.
- Refueling procedure. (➠ 171)
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Tire pressure is the limit range of approved tolerance
 lights up yellow.

 `Tire pressure not at setpoint. Check tire pressure.`
Possible cause:
The measured tire pressure is within the limit range of the permissible tolerance.
- Correct the tire pressure.
- Before adjusting the tire pressure, check the information on temperature compensation and tire pressure adjustment in the Technology in detail chapter:

» Temperature compensation (➠ 195)
» Tire pressure adjustment (➠ 196)
» The target tire pressures can be found in the following locations:
– On the back cover of the rider's manual
– Instrument cluster in the `TIRE PRESSURE` view
– Tire pressure table

Tire pressure is outside the approved tolerance range
 blinks red.

⚠ Tire pressure not at setpoint. Stop immediately! Check tire pressure.

⚠ Tire Press. Monitor. Loss of pressure. Stop immediately! Check tire pressure.

WARNING

Tire pressure is outside the approved tolerance range.
Risk of accident, deterioration in the handling characteristics of the vehicle.
- Adjust the driving style.

Possible cause:

The measured tire pressure is outside of the permissible tolerance.
- Check tire for damage and ridability.

If the tire is still ridable:
- Correct the tire pressure at the next opportunity.
- Before adjusting the tire pressure, check the information on temperature compensation and tire pressure adjustment in the Technology in detail chapter:

» Temperature compensation (➠ 195)
» Tire pressure adjustment (➠ 196)
» The target tire pressures can be found in the following locations:
– On the back cover of the rider's manual
– Instrument cluster in the TIRE PRESSURE view
– Tire pressure table
- Have the tire checked by a repair shop for damage, preferably by an authorized BMW Motorrad dealer.

If you are unsure about the tire's ridability:
- Do not continue riding.
- Contact roadside service.

Transmission fault

⚠ "– – –"

Possible cause:

The vehicle has not reached the minimum speed (➠ 195).

RDC sensor is not active
min. 19 mph (min. 30 km/h) (The RDC sensor transmits its signal to the vehicle only once the minimum speed has been exceeded.)

- Observe the TPM display at higher speed. This is a permanent fault only when the

general warning light also lights up. In this case:
- Have the fault corrected at a repair shop, preferably an authorized BMW Motorrad dealer.

Possible cause:

There is a fault in the radio link to the RDC sensors. Possible causes are radio systems in the surrounding area, which interfere with the connection between the TPM control unit and the sensors.
- Observe the RDC display in a different environment. This is a permanent fault only when the general warning light also lights up. In this case:
- Have the fault corrected at a repair shop, preferably an authorized BMW Motorrad dealer.

Sensor faulty or system fault

 lights up yellow.

 "---"

Possible cause:

Wheels without RDC sensors are installed.
- Retrofit wheel set with RDC sensors.

Possible cause:

One or two RDC sensors have failed or a system fault has occurred.
- Have the fault corrected at a repair shop, preferably an authorized BMW Motorrad dealer.

Tire Pressure Monitor (TPM) malfunction

 lights up yellow.

 `Tire Press. Monitor failure! Function limited. Have checked by a specialist workshop.`

Possible cause:

The TPM control unit has diagnosed a communication fault.
- Contact a repair shop, preferably an authorized BMW Motorrad dealer.

» Tire pressure warnings not available.

Battery of the tire pressure sensor weak

 lights up yellow.

 `TPM sensors battery low. Function limited. Have checked by a specialist workshop.`

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

Possible cause:

The battery for the tire pressure sensor is no longer charged to full capacity. Operation of the Tire Pressure Monitor is only ensured for a limited time.

- Contact a repair shop, preferably an authorized BMW Motorrad dealer.

Malfunction of fall sensor

Fall sensor faulty. Have checked by a specialist workshop.

Possible cause:

The fall sensor is not functioning.

- Contact a repair shop, preferably an authorized BMW Motorrad dealer.

Motorcycle has fallen over

Cannot start engine. Stand motorcycle upright. Switch ignition on/off. Start the engine.

Possible cause:

The fall sensor has detected a fall and turned off the engine.

- Raise the vehicle to upright position and check for possible damage.
- Turn ignition off and then on again or turn emergency-off switch on and then off again.

Emergency call function has limited availability

–with intelligent emergency call OE



lights up yellow.

Emergency call system restricted. If it occurs again, have it checked by a specialist workshop.

Possible cause:

The emergency call cannot be established automatically or via BMW.

- Please refer to page (➠ 100) for information on using the intelligent emergency call.
- Contact a repair shop, preferably an authorized BMW Motorrad dealer.

Emergency call function failed
–with intelligent emergency call OE

 lights up yellow.

 Emergency call system failure. Schedule an appointment at a specialist workshop.

Possible cause:

The control unit of the Assist system has diagnosed a fault. The assist system has failed.

- Note that the emergency call cannot be placed.
- Contact a repair shop, preferably an authorized BMW Motorrad dealer.

Malfunction of side stand monitor

 lights up yellow.

 Side stand monitoring faulty Onward journey possible. Stop engine when stationary! Have checked by workshop.

Possible cause:

	The side support switch or its wiring is damaged
The engine is turned off if the speed falls below the minimum limit. The journey cannot be continued.	
min. 3 mph (min. 5 km/h)	

- Contact a repair shop, preferably an authorized BMW Motorrad dealer.

Center stand not fully folded in
–with center stand OE

 lights up yellow.

 Center stand not folded in completely. Come to a safe stop and check center stand.

Possible cause:

The center stand has not been completely folded in.

- Stop carefully and check the center stand.
- Make sure that the center stand is fully folded in.
- If the malfunction persists, have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

ABS self-diagnosis not completed

 blinks.

Possible cause:

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

- Ride off slowly. Note that the anti-lock braking system function is only available after the self-diagnosis has been completed.

ABS fault

 lights up yellow.

 lights up.

 `Limited ABS availability! Onward journey possible. Ride carefully to next specialist workshop.`

Possible cause:

The ABS control unit has detected an error. The ABS function is limited.

- You may continue riding. Take note of additional information on special situations that can lead to an ABS fault message (➠ 180).
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

ABS failure

 lights up yellow.

 lights up.

 `ABS failure! Onward journey possible. Ride carefully to next specialist workshop.`

Possible cause:

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

- You may continue riding. Take note of additional information on special situations that can lead to an ABS fault message (➠ 180).
- Have the malfunction corrected as soon as possible at a repair shop, preferably

an authorized BMW Motorrad dealer.

ABS Pro failure

 lights up yellow.

 lights up.

 `ABS Pro failure! Onward journey possible. Ride carefully to next specialist workshop.`

Possible cause:

The monitoring of the ABS Pro function has detected a fault. The ABS Pro function is not available. The ABS function remains available. ABS only supports braking in straight-ahead riding.

- You may continue riding. Observe additional information on special situations that can lead to a ABS Pro fault message (➠ 180).
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

ABS-control on front wheel only

–with riding modes Pro[OE]

 flashes irregularly.

Possible cause:

The ABS control for the rear wheel is turned off in the currently selected riding mode. The rear wheel brake can block the rear wheel.

- Check the settings of the riding mode.
- More detailed information on configuring the riding modes can be found in the "Technology in detail" chapter (➠ 190).

DTC intervention

 blinks rapidly.

Possible cause:

DTC has detected instability at the rear wheel and responded by reducing the torque.

The indicator and warning light flashes longer than the DTC intervention lasts. This provides the rider with visual feedback for the control action that was taken even after the critical riding situation has passed.

- You may continue riding. Use caution when riding.

DTC self-diagnosis not completed

 blinks slowly.

Possible cause:

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

- Ride off slowly. Note that the DTC function is only available after the self-diagnosis has been completed.

DTC turned off

 lights up.

 `Off!`

 `Traction control deactivated.`

Possible cause:

The DTC system was turned off by the rider.

- Operate the DTC. (➠ 105)

Limited DTC availability

 lights up yellow.

 lights up.

 `Traction control limited. Onward journey possible. Ride carefully to next specialist workshop.`

Possible cause:

The engine control unit has detected a DTC fault.

- Note that the DTC function and other electronic stability control systems are available with limitations only.
- You may continue riding. Observe additional information on situations that can lead to a DTC fault (➠ 182).
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

DTC error

 lights up yellow.

 lights up.

 `Traction control failure! Onward journey possible. Ride`

carefully to the next specialist workshop.

Possible cause:

The engine control unit has detected a DTC fault.

- Note that the DTC function and other electronic stability control systems are not available.
- You may continue riding. Observe additional information on situations that can lead to a DTC fault (➠ 182).
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Fault when adjusting damper

 lights up yellow.

 Damping adjustment failed. Limited onward journey possible. Drive carefully to nearest workshop.

Possible cause:

Components of the electronic damping adjustment are faulty or the communication with the control unit is disrupted. Motorcycle damping is in this condition very firm and riding is rather uncomfortable - in particular on rough roads.

- Note that the option of setting the damping is not available.
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Chassis adjustment restricted

 lights up yellow.

 Suspension adjustment limited. Onward journey possible. Have checked by workshop.

Possible cause:

Components of the electronic chassis and suspension adjustment are faulty or the communication with the control unit is disrupted.

- Bear in mind that damping and riding position setting options are not available or only available to a limited extent.
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Chassis adjustment failed

 lights up yellow.


Suspension adjustment failed. Limited onward journey possible. Ride carefully to nearest workshop.

Possible cause:

Components of the electronic chassis and suspension adjustment are faulty or the communication with the control unit is disrupted.

- Bear in mind that damping and riding position setting options are not available.
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

DSA fault – lowering chassis

–with OE adaptive vehicle height control

or

–with Adaptive vehicle height control Comfort OE


lights up yellow.


Ride height. Lowering not possible. Caution when stopping. Have checked by a workshop.

Possible cause:

Components of the electronic chassis and suspension adjustment are faulty or the communication with the control unit is disrupted.

- Note that the ride height cannot be lowered.
- You may continue riding. When stopping, note the raised seat position.
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

DSA fault – raising chassis

–with OE adaptive vehicle height control

or

–with Adaptive vehicle height control Comfort OE


lights up yellow.


Ride height. Raising not possible. Caution when at angle. Have checked by a workshop.

Possible cause:

Components of the electronic chassis and suspension adjustment are faulty or the communication with the control unit is disrupted.

- Note that the ride height cannot be raised.
- You may continue riding. Always think well ahead and avoid high lean angles.
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Prop-up assistant temporarily deactivated

–with OE adaptive vehicle height control

or

–with Adaptive vehicle height control Comfort OE



`Jacking aid temporarily disabled. Activating too frequently can cause damage. Switch ignition on/off.`

Possible cause:

The prop-up assistant was actuated multiple times in succession.

- To maintain the battery charge, avoid actuating the prop-up assistant multiple times.
- Before actuating the prop-up assistant again, turn the ignition off and on again.

Vehicle load compensation malfunction



lights up yellow.



`Load compensation failed. Observe riding position. Have checked by a workshop.`

Possible cause:

Components of the electronic chassis and suspension adjustment are faulty or the communication with the control unit is disrupted. Riding the motorcycle may be uncomfortable, particularly on rough roads.

- Note that the vehicle load compensation is not available.
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Fuel has reached reserve volume



lights up yellow.



`Low fuel. Ride to the next filling station.`

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 most, the fuel tank contains only the reserve volume.

 Reserve fuel quantity
approx. 1.1 gal (approx. 4 l)

- Refueling procedure. (➠ 171)

Hill Start Control active

 is displayed in green.

Possible cause:
The Hill Start Control (➠ 198) was activated by the rider.
- Turn off the Hill Start Control.
- Operate Hill Start Control. (➠ 125)

Hill Start Control automatically deactivated

 blinks yellow.

Possible cause:
Hill Start Control was deactivated automatically.
- Side stand was folded out.
» Hill Start Control is deactivated when the side stand is folded out.
- Engine was stopped.
» Hill Start Control is deactivated when the engine is shut off.
- Operate Hill Start Control. (➠ 125)

Hill Start Control cannot be activated

 is displayed.

`HSC not available. Engine not running.`
Possible cause:
The Hill Start Control cannot be activated.
- Fold in side stand.
» Hill Start Control only functions when the side stand is folded away.
- Start engine.
» Hill Start Control only functions with the engine running.

Cruise control malfunctioned

 lights up yellow.

 `Cruise control not functioning. Onward`

journey possible. Testing by workshop required

Possible cause:

The control unit has detected a fault.

- Note that the cruise control is not available.
- You may continue riding. Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Distance control has failed temporarily

–with Riding Assistant OE



lights up yellow.



ACC temporarily failed. Check front radar sensor for damage.

Possible cause:

The front radar sensor function is impaired.

- Note that the distance control (ACC) is temporarily unavailable. Cruise control is still available.
- You may continue riding. Check the front radar sensor. Remove contamination or objects covering the radar sensor.
- Observe the vehicle care and cleaning instructions (➠ 260).

Distance control failed

–with Riding Assistant OE



lights up yellow.



Distance control failed. Have it checked by a specialist workshop.

Possible cause:

The control unit has detected a fault.

- Bear in mind that Active Cruise Control (ACC) is not available. Cruise control is still available.
- You can continue to ride. Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Temporary Forward Collision Mitigation malfunction

–with Riding Assistant OE



lights up yellow.



Front-collision warning temporarily failed. Check front radar sensor for damage.

Possible cause:

The front radar sensor function is impaired.

- Note that Forward Collision Mitigation is temporarily unavailable.
- You may continue riding. Check the front radar sensor. Remove contamination or objects covering the radar sensor.
- Observe the vehicle care and cleaning instructions (➠ 260).

Forward Collision Mitigation malfunction

–with Riding Assistant[OE]

 lights up yellow.

 `Front-collision warning failed. Have checked by a specialist workshop.`

Possible cause:

The control unit has detected a fault.

- Note that Forward Collision Mitigation is not available.
- You may continue riding. Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Temporary lane change warning malfunction

–with Riding Assistant[OE]

 lights up yellow.

 `Lane change warning temporarily failed. Onward journey possible. Check radar sensor for impairment.`

Possible cause:

The rear radar sensor function is impaired.

- Note that the lane change warning is temporarily unavailable.
- You may continue riding. Check the rear radar sensor. Remove contamination or objects covering the radar sensor.
- Observe the vehicle care and cleaning instructions (➠ 260).

Lane change warning malfunction

–with Riding Assistant[OE]

 lights up yellow.

 `Lane change warning failed. Onward journey possible. Check by specialist workshop needed.`

Possible cause:

The control unit has detected a fault.

- Note that the lane change warning is not available.
- You may continue riding. Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Gear not taught in

–with Gearshift Assistant Pro OE


Gear indicator flashes.

Possible cause:

The transmission sensor has not been completely taught in.

- Start engine. (➠ 158)
- Shift to neutral N.
- Fold the side stand out and back in; do not operate the gearshift lever while doing this.
- Shift all gears with clutch control. In the respective gear, put the throttle grip in the idle position multiple times and then accelerate again.

» The gear display stops blinking when the transmission sensor has been successfully taught in.

–Once the transmission sensor has been fully taught in, the Gear Shift Assistant Pro functions as described (➠ 196).

- If the teach-in procedure is unsuccessful, have the fault corrected at a repair shop, preferably an authorized BMW Motorrad dealer.

Shifting to Neutral failed

–with Automated shift assistant OE


Gear indicator flashes.

Possible cause:

Shifting to Neutral has failed.

- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Gearshift malfunction

–with Automated shift assistant OE


lights up yellow.


`Gearshift faulty! Onward journey possible. Engine start may not be possible. Check at workshop.`

Possible cause:

The control unit has detected a malfunction of the shift actuator.

- Note that the gearshift function is no longer available. It may not be possible to engage neutral N.
- You may be able to continue riding in the currently engaged gear. It may not be possible to restart the engine.
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Fault in the transmission

–with Automated shift assistant OE

 lights up yellow.

 `Gearbox fault. Limited onward journey possible. Have it checked by a specialist workshop.`

WARNING

Restricted shift operations

Risk of accident

- Drive carefully and avoid overtaking maneuvers.

Possible cause:

The control unit has detected an actuator or sensor fault.

- Note that the gearshift function is available with limitations only.
- Driving off may be more difficult.
- You may continue riding. Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Clutch temperature high

–with Automated shift assistant OE

 lights up yellow.

 `Clutch temperature high! Onward journey possible. Apply brake when stopped.`

Possible cause:

The clutch has been subjected to excessive stress. The engine torque is reduced.

- Apply the brake when stopping on uphill gradients.
- Avoid fast acceleration from a standstill at short intervals.

Clutch malfunction
–with Automated shift assistant[OE]

 lights up red.

 `Clutch faulty! Stop when it is safe to do so. Stop carefully! Have checked by a specialist workshop.`

Possible cause:

The control unit has detected a malfunction of the clutch actuator. Clutch control is out of order.

- Note that the clutch may no longer be able to disengage.
- Carefully bring the vehicle to a stop and shut down the engine using the emergency-off switch if necessary.
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Serious fault in the transmission
–with Automated shift assistant[OE]

 lights up red.

 `Gearbox damaged! Stop when it is safe to do so. Have the fault rectified by a specialist workshop.`

Possible cause:

The control unit has detected a serious malfunction of an actuator or the sensor system.

- Note that the clutch is disengaged automatically. Drive power is completely interrupted.
- Carefully bring the vehicle to a stop and shut down the engine using the emergency-off switch if necessary.
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

Immobilizer not activated
–with Automated shift assistant[OE]

 blinks.

Possible cause:

Engaging the immobilizer has failed.

- Move the motorcycle forwards or backwards briefly.

Hazard warning flasher switched on

 flashes in green.

 flashes in green.

Possible cause:

The hazard warning flasher was switched on by the rider.

- Operate hazard warning flashers. (➠ 104)

Service display

 If service is overdue, the due date or the odometer reading at which service was due is accompanied by the general warning light in yellow.

If service is overdue, a yellow Check Control message is displayed. The displays for service, service appointment, and remaining distance are also highlighted with exclamation marks in the menu windows MY VEHICLE and SERVICE REQUIREMENTS.

 If the service display appears more than a month before the service date, the current day's date must be reset. This situation can occur if the battery was disconnected.

Service due

 is displayed in white.

`Service due! Have a service performed at a specialist workshop.`

Possible cause:

Service is due because of the mileage or the date.

- Have service performed regularly by a repair shop, preferably an authorized BMW Motorrad dealer.

» The operating safety and road safety of the vehicle remains unchanged.

» The best-possible value retention of the vehicle is ensured.

Service appointment overdue

 lights up yellow.

 is displayed in yellow.

`Service overdue! Have a service performed at a specialist workshop.`

Possible cause:

Service is overdue because of the riding performance or the date.

- Have service performed regularly by a repair shop, preferably an authorized BMW Motorrad dealer.

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

INSTRUMENT CLUSTER

04

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WARNINGS

WARNING

Operation of a smartphone while riding

Risk of accident

- Observe the valid road traffic regulations.
- Do not use any smartphone while riding. Applications that do not involve operation are exempt, such as phone calls using a hands-free system.

WARNING

Distraction from traffic conditions and loss of control

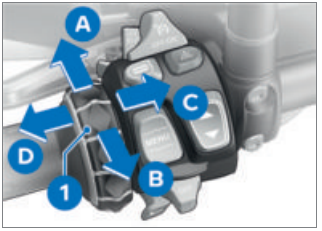
Risk of accident through the use of integrated information systems and communication devices during the journey

- Operate these systems or devices only if the traffic situation allows.
- If necessary, stop and operate the system or devices at a standstill.

When performing functions that can only be operated when the vehicle is stationary, operating feedback is shown in the instrument cluster.

OPERATING ELEMENTS

Multi-Controller



1 Multi-Controller

A Move the cursor up in lists
Increases the volume

B Move the cursor down in lists
Decrease volume

C Activate the function according to the feedback
Confirm selection/setting
Browsing through menu screens

D Activate or deactivate the function according to the feedback
After settings, return to menu view
Change one hierarchy level up
Browsing through menu screens

Rocker button MENU



Briefly press the top of the MENU 1:
–In Menu view: Change a hierarchy level up.
–In Pure Ride view: Changing the display for rider info. status line.

Press and hold the top of the MENU 1:
–In Menu view: Open Pure Ride view.
–In Pure Ride view: Reset onboard computer value.
–Change the operating focus to the navigator.

Press the bottom of the MENU 1:
–Change a hierarchy level down.
–Confirm the selection/setting.

Press and hold the bottom of the MENU 1:
–Return to the last menu, after a menu change has been previously carried out by pressing and holding the top of the rocker button.

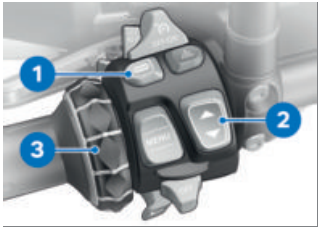
Navigation instructions are displayed as a dialog if you have not gone to the `Navigation` menu. Operation of the MENU rocker button is temporarily restricted.

MULTIPLE ROCKER SWITCH

Principle

The multifunction rocker switch enables operation of individually assigned functions.
In the `MULTI-ROCKER SWITCH` menu, you can assign a function and select a second function as the fast recall function.
Settings made with the multifunction rocker switch are retained even after the ignition is turned off.

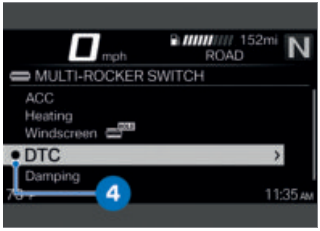
Assigning a function



- Press button **1**.

» The MULTI-ROCKER SWITCH menu opens.

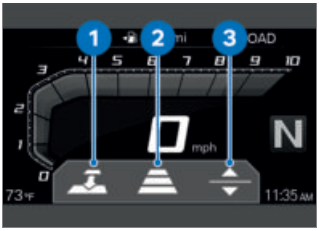
- Select the desired function using the Multi-Controller **3**.
- Press the Multi-Controller **3** briefly to the right.



The function **4** is assigned to the multifunction rocker switch.

- Set the value of the function using the multifunction rocker switch **2**.

The first keystroke displays the current status of the function. The second keystroke changes the function value.

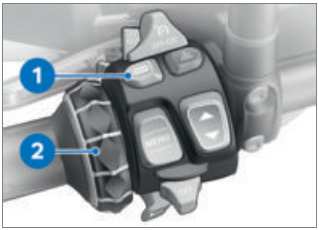


The operating feedback shows the icon of the respective function **1** and the status of the function **2**. The arrows **3** show the respective setting options.

Fast recall function

The fast recall function can be used for temporarily changing between the assigned function and another function.

Selecting the fast recall function

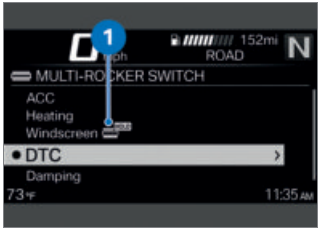


- Press button **1**.

» The MULTI-ROCKER SWITCH menu opens.

- Select the desired function using the Multi-Controller **2**.

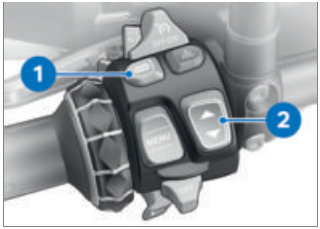
- Press and hold the Multi-Controller **2** to the right.



The icon **1** indicates that the function is selected as a fast recall function.

Operating the fast recall
Requirement

The MULTI-ROCKER SWITCH menu distinguishes between the currently assigned function and the fast recall function.



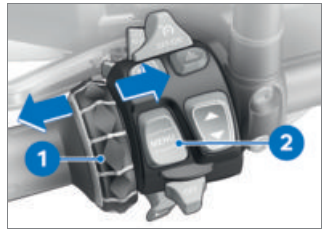
- Press and hold button **1**.
» Operating feedback from the fast recall function is displayed.
- While the operating feedback is displayed, press the multifunction rocker switch **2** to change the function value of the fast recall function.

After the operating feedback is hidden, the assignment of the multifunction rocker switch to the currently selected function is reset.

MENUS

Requirement

The Pure Ride view is displayed.



- Press and hold the top of the rocker button MENU **2** to display the Pure Ride view.
- Press down the bottom of the rocker button MENU **2**.
- Briefly press the Multi-Controller **1** to the right repeatedly until the desired menu item is highlighted.
- Press down the bottom of the rocker button MENU **2** to open the respective menu.

MY VEHICLE

Calling up the on-board computer

- Go to the My vehicle menu.
- Scroll to the right until the ONBOARD COMPUTER menu screen is displayed.

Resetting the on-board computer

- Go to the My vehicle menu.
- Call up ONBOARD COMPUTER menu screen.
- Press down the bottom of the rocker button MENU.
- Select Reset all values or Reset individual values and confirm.
- Alternative: Switch to Pure Ride view.
- Briefly press the top of the rocker button MENU to select the value in the upper status line.
- Press and hold the top of the rocker button MENU to reset the selected value.

The following values can be reset individually:


Break


Journey



Current


Speed


Consump.

Calling up the travel on-board computer

- Go to the on-board computer. (➠ 82)
- Scroll to the right until the TRIP COMPUTER menu screen is displayed.

Resetting the travel on-board computer

- Go to the My vehicle menu.
- Call up TRIP COMPUTER menu screen.
- Press down the bottom of the rocker button MENU.
- Select Automatic reset or Reset all values and confirm.

» If Automatic reset is selected, the travel on-board computer is automatically reset if at least 6 hours have passed since the ignition was switched off and the date has changed.

SETTINGS

Selecting content of upper status line

- Switch to Pure Ride view.

» In the instrument cluster, all of the information neces-

sary for operating the vehicle on public roads is made available from the instrument cluster (e.g. TRIP 1) and the travel on-board computer (e.g. TRIP 2). The information can be displayed in the upper status line.

- Go to menu Settings, Display, Status line content.
- Turn on desired displays.

» It is possible to change between the selected displays in the upper status line. If no displays are selected, only the range is shown.

Changing display of upper status line

- Select content of upper status line. (➠ 82)



- Switch to Pure Ride view.
- Press button **1** briefly to select the value in the upper status line **2**.

The following values can be displayed:

- Total distance
- Current distance 1
- Current distance 2
- Consumption 1 (average)
- Consumption 2 (average)
- Riding time 1
- Riding time 2
- Break 1
- Break 2
- Speed 1 (average)
- Speed 2 (average)
- Tire pressure
- Fuel tank level
- Range

Adjusting the volume

- Connect the rider's helmet and the passenger helmet. (➠ 86)
- Increase volume: Turn the Multi-Controller up.
- Decrease volume: Turn the Multi-Controller down.
- Mute: Turn the Multi-Controller all the way down.

Configuring system settings

- Call up menu `Settings`, `System settings`.

» The following system settings can be configured here:

–`Date and time`
–`Units`
–`Language`

Switch GPS synchronization on or off

–with preparation for navigation system OE

Requirement

The ConnectedRide Navigator or a mobile end device is connected with the vehicle via navigation preparation.

- Go to menu `Settings`, `System settings`, `Date and time`.
- Turn `GPS synchronization` on or off.

» The time is taken from the Navigator or the mobile end device.

Adjusting brightness

- Go to menu `Settings`, `Display`, `Brightness`.
- Adjust brightness.

» The brightness of the display is dimmed to the set value if ambient brightness falls below a defined value.

Resetting all settings

- Go to the `Settings` menu.
- Select `Reset all` and confirm.

The settings of the following menus are reset to the factory setting:

–`Vehicle settings`
–`System settings`
–`Connections`
–`Display`
–`Information`

» The pairing of the vehicle with the current BMW Motorrad ConnectedRide account is reset.

BLUETOOTH PAIRING

Pairing

Two Bluetooth devices have to recognize each other before they can communicate. This process of mutual recognition is known as pairing. When two devices have paired they remember each other, so the pairing process is conducted only once, on initial contact.

On some mobile terminals, e.g. with operating system iOS, you must go to the BMW Motorrad Connected App before use.

During the pairing process, the instrument cluster searches for other Bluetooth-compatible devices within its reception range. The conditions that have to be satisfied before a device can be detected are as follows:
– The Bluetooth® function of the device must be activated
– The device must be "visible" to others
– Other Bluetooth-capable devices must be OFF (e.g. mobile phones and navigation systems).

Please consult the operating instructions for your communication system.

Carrying out pairing
- Call up menu `Settings`, `Connections`.

» Bluetooth connections can be established, managed, and deleted in the `CONNECTIONS` menu. The following Bluetooth connections are displayed:
– `Mobile device`
– `Rider's helmet`
– `Passenger helm.`

The connection status for mobile end devices is displayed.

Connecting a mobile end device
- Carry out pairing. (➠ 85)
- Activate the Bluetooth function of the mobile end device (see operating instructions for the mobile end device).
- Select `Mobile device` and confirm.
- Select `Pair new mobile device` and confirm.

Mobile end devices are searched for.


blinks in the lower status line during pairing.

Visible mobile end devices are displayed.
- Select the mobile end device and confirm.
- Observe the instructions for the mobile end device.
- Confirm that the codes match.

» The connection is established and the connection status is updated.

» If the connection cannot be established, the troubleshooting chart in the Technical data chapter may provide assistance. (➠ 267)

Connect the rider's helmet and the passenger helmet

- Carry out pairing. (➠ 85)
- Select `Rider's helmet` or `Passenger helm.` and confirm.
- Show the communication system of the helmet.
- Select `Pair new rider's helmet` or `Pair new passeng. helmet` and confirm.

Helmets are searched for.

 blinks in the lower status line during pairing.

Visible helmets are displayed.

- Select helmet and confirm.

» The connection is established and the connection status is updated.

» If the connection cannot be established, the troubleshooting chart in the Technical data chapter may provide assistance. (➠ 267)

Deleting connections

- Call up menu `Settings`, `Connections`.
- Select `Delete connections`.
- To delete an individual connection, select the connection and confirm.
- To delete all connections, select `Delete all connections` and confirm.

OPERATING FOCUS

–with preparation for navigation system OE

Changing operating focus

When the Navigator is connected, you can change between operation of the Navigator and of the instrument cluster.

Changing the operating focus

If a ConnectedRide Navigator is switched on and connected to the vehicle, the interface focus automatically switches to the Navigator.

- Securely fasten the navigation device. (➠ 252)
- Press and hold the top of the rocker button MENU.

» Dialog menu with progress bar is displayed.

The following selection is possible:

–`Navigator`
–`Pure ride view`

In Pure Ride view:

–`Navigator`
–`Reset BC value`

- Press and hold the top of the rocker button MENU until the progress bar reaches its maximum or confirm `Navigator`.

» The operating focus changes to the Navigator.

» Operating the navigation system (➠ 254)
- To switch the operating focus to the instrument cluster, briefly press the bottom of the rocker button MENU.

NAVIGATION

Prerequisite

The vehicle is connected to a compatible mobile end device via Bluetooth.

The BMW Motorrad Connected app is installed on the connected mobile terminal.

On some mobile terminals, e.g. with operating system iOS, you must go to the BMW Motorrad Connected App before use.

Entering destination address
- Connect mobile terminal. (➠ 85)
- Go to the BMW Motorrad Connected app and start the guidance.
- Go to the `Navigation` menu.

» Active destination guidance is displayed.

» If the active destination guidance is not displayed, the troubleshooting chart in the Technical data chapter may provide assistance. (➠ 267)

Select destination from most recent destinations
- Call up menu `Navigation`, `Recent destinations`.
- Select destination and confirm.
- Select `Start route guidance`.

Select destination from favorites
- The `FAVORITES` menu shows all destinations that have been saved as a favorite in the BMW Motorrad Connected app. It is not possible to create new favorites in the instrument cluster.
- Call up menu `Navigation`, `Favorites`.
- Select destination and confirm.
- Select `Start route guidance`.

Entering special destinations
- Call up menu `Navigation`, `POIs`.

The following locations can be selected:
- `At current location`
- `At destination`
- `Along the route`
- Select in which location you want to search for special destinations.

The following point of interest can be selected:

–Filling station
- Select special destination and confirm.
- Select Start route guidance and confirm.

Specifying route criteria
- Call up menu Navigation, Route criteria.

The following criteria can be selected:
–Route type
–Avoid
- Select desired Route type.
- Turn desired Avoid on or off.

The number of enabled avoidances is displayed in brackets.

Display route info
- Go to the Navigation, Settings menu, then select the Route info menu item.

You can select between the following options:
–Destination
–Waypoint
- Select desired option.

» The remaining distance and time are displayed.

Editing guidance
- Call up menu Navigation, New destination.

You can select between the following destinations:
–Recent destinations
–Favorites
–POIs
- Select destination from one of the three destination categories.
- Select Edit route guidance in the destination entry.
- Select Add stop to add the selected destination as a waypoint.
- Select Start guidance to overwrite the current destination.

Ending route guidance
- Tilt the Navigation Multi-Controller to the left while in the menu.
- Alternatively, select Active route guidance Option End route guidance from the menu and confirm.

Switching spoken instructions on or off
- Connect the rider's helmet and the passenger helmet. (➠ 86)
- The navigation can be read aloud. To do this, the Spoken instructions must be turned on.
- Call up menu Navigation, Active route guidance.
- Turn Spoken instructions on or off.

Repeating the last spoken instruction

- Call up menu Navigation, Active route guidance.
- Select Current instruction and confirm.

Turning Speed Limit Info on or off

Requirement

The vehicle is connected to a compatible mobile end device. The BMW Motorrad Connected app is installed on the mobile end device.

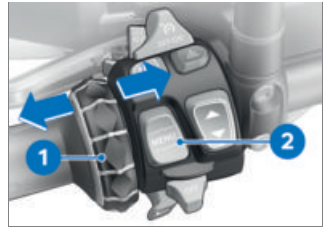
- Speed Limit Info displays the currently permitted maximum speed insofar as this information is provided by the editor of the maps in the navigation system.
- Call up menu Settings, Display.
- Turn Speed Limit Info on or off.

MEDIA

Prerequisite

The vehicle is connected to a compatible mobile end device and a compatible helmet.

Controlling audio playback



- Go to the Media menu.
- Adjust the volume. (➠ 84)
- Next title: Briefly tilt the Multi-Controller **1** to the right.
- Last title or beginning of the current title: Briefly tilt the Multi-Controller **1** to the left.
- Fast forward: Tilt and hold the Multi-Controller **1** to the right.
- Fast rewind: Tilt and hold the Multi-Controller **1** to the left.
- Go to context menu: Press button **2** downward.

Depending on the mobile terminal, the scope of the Connectivity functions may be limited.

» The following functions can be used in the context menu:

– Playback or Pause.

– For search and playback, select the category Now playing, All artists, All albums or All tracks.

–Select Playlists.

In the Audio settings submenu, the following settings are possible:
–Turn Shuffle on or off.
–Select Repeat: Off, One (current track) or All.

TELEPHONE

Prerequisite

The vehicle is connected to a compatible mobile end device and a compatible helmet.

Making a phone call



- Go to the Telephone menu.
- Accepting a call: Tilt the Multi-Controller **1** to the right.
- Rejecting a call: Tilt the Multi-Controller **1** to the left.
- Ending a call: Tilt the Multi-Controller **1** to the left.

Muting

The microphone in the helmet can be muted during active conversations.

Conversations with multiple users

A second telephone call can be accepted during a conversation. The first conversation will be put on hold. The number of active calls is displayed in the Telephone menu. It is possible to switch between two conversations.

Telephone data

Depending on the mobile end device, telephone data is transferred to the vehicle automatically after pairing (➠ 84).
Phone book: List of contacts saved in the mobile terminal
Call list: List of calls with the mobile terminal
Favorites: List of favorites saved in the mobile terminal

SOFTWARE VERSION

- Go to menu Settings, Information, Software version.

LICENSE INFORMATION

- Go to menu Settings, Information, Licenses.

OPERATION

05

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IGNITION

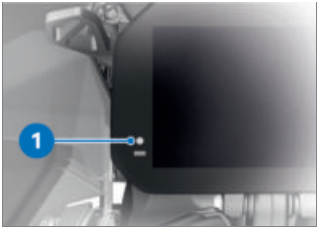
Radio-operated key

The motorcycle is shipped with one radio-operated key and one wallet key. If you lose your keys, observe the notes regarding the electronic immobilizer (EWS) (➠ 96).

If the range of the radio-operated key is exceeded, the vehicle cannot be started. If the radio-operated key continues to be missing, the ignition will be turned off after approx. 90 seconds to protect the battery.

Range of Keyless Ride radio-operated key
approx. 3.3 ft (approx. 1 m)

The connection status is indicated by an indicator light in the instrument cluster after the ignition is turned on (➠ 95).



–Indicator light **1** is flashing: Radio-operated key is being searched for.
–Indicator light **1** is lit: Radio-operated key was not detected.
–Indicator light **1** is flashing slowly: Radio-operated key has not been enabled. Move the radio-operated key and turn on the ignition again (➠ 95).
–Indicator light **1** goes out: Radio-operated key detected and approved.

Locking the steering lock

Requirement

Handlebars are turned to the left. Radio-operated key is enabled.



- Press and hold button **1**.
» Steering lock audibly locks.
» Ignition, lights and all electrical circuits turned off.
- To unlock the steering lock, briefly press button **1**.

Turning on the ignition
Requirement
Radio-operated key is enabled.



- The steering lock can be unlocked by switching on the ignition.
» If the ignition cannot be turned on, the troubleshooting chart can help. (➠ 266)

Steering lock is unlocked:
- Briefly press button **1**.
» Lights and all function circuits are turned on.
» Engine can be started.

Steering lock is locked:
- Press and hold button **1**.
» Steering lock is unlocked.
» Lights and all function circuits switched on.
» Engine can be started.

Turning off the ignition
Requirement
Radio-operated key is enabled.



- The steering lock can be locked by switching off the ignition.

Switch off the ignition and lock the steering lock:
- Turn handlebars to left.
- Press and hold button **1**.
» Light is turned off.
» Steering lock is locked.

Switch off the ignition and do not lock the steering lock:
- Briefly press button **1**.

» Light is turned off.
» Steering lock is not locked.

Electronic immobilizer (EWS)

The motorcycle's electronics monitor the data stored in the ignition key by means of a ring antenna. The engine control unit does not enable engine start until this radio-operated key has been recognized as "authorized" for your motorcycle.

An additional ignition key fastened to the same ring as the ignition key used to start the engine could "irritate" the electronics, in which case the enabling signal for an engine 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 dealer. For this purpose, you must bring all of the motorcycle's remaining ignition keys with you. The engine can no longer be started by a disabled vehicle key; however, a disabled vehicle key can be enabled again. Ignition keys are only available from authorized BMW Motorrad dealers. The vehicle keys are part of an integrated safety system, so the dealer is under obligation to check the legitimacy of all applications for spare keys.

Battery of radio-operated key is dead or radio-operated key is lost



- If you lose your keys, refer to the notes regarding the electronic immobilizer (EWS) (96).
- Should you lose the radio-operated key while riding, the vehicle can be started by using the spare key.
- If the radio-operated key battery is dead, you can start the vehicle simply by inserting the folded-in key into the ring antenna under the vehicle's seat.

- Remove the rider's seat. (➠ 138)
- Insert the wallet key or the dead, folded radio-operated key **2** into the ring antenna **1**.

The emergency key or dead folded-out radio-operated key must be **inserted** into the opening of the ring antenna.

Period in which the engine must be started. Then unlocking must be repeated.
30 s

» Pre-Ride-Check is carried out.
–Key has been detected.
–Engine can be started.

- Install the rider's seat. (➠ 139)
- Start engine. (➠ 158)

Checking the battery voltage of the radio-operated key



The battery voltage of the radio-operated key is indicated by the color of the LED **2**.

- Press button **1**.

» LED is lit green: Battery voltage is normal
» LED is lit orange: Low battery voltage
» LED is lit red: Battery voltage is critical

If the LED is lit red, the battery of the radio-operated key must be replaced.

- Replace the battery of the radio-operated key. (➠ 97)

Replacing the battery of the radio-operated key

If the radio-operated key does not respond when a button is pressed for a short or long time:

- The battery for the radio-operated key no longer has full capacity.

Remote key battery low. Function limited. Change battery.

DANGER

Swallowing a battery

Risk of injury or death

- An ignition key contains a button cell as a battery. Batteries or button cells can be swallowed and cause severe or fatal injuries within two hours, e.g. due to internal burns or chemical burns.
- Keep ignition keys and batteries out of the reach (range) of children.
- If it is suspected that a battery or button cell has been swallowed or is inside a body part, seek medical attention immediately.

- Change battery.



- Press button **1**.

» Key bit folds open.

- Press battery cover **2** upward.
- Remove battery **3**.
- Dispose of the old battery in accordance with legal regulations. Do not dispose of the battery in the household waste.

ATTENTION

Unsuitable or improperly inserted batteries

Component damage

- Use a battery compliant with the manufacturer's specifications.
- When inserting the battery, make sure that the polarity is correct.

- Insert the new battery with the positive terminal facing up.

Battery type
For Keyless Ride radio-operated key
CR 2032

- Install battery cover **2**.

» The indicator light in the instrument cluster blinks.

» The radio-operated key is working again.

EMERGENCY-OFF SWITCH

Function



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

Emergency-off switch with automated shift assistant (ASA)
–with Automated shift assistant OE

To enable safe stopping, the automated shift assistant performs the following functions after the emergency-off switch is pressed:
–Disconnect the clutch.
–Shift to the neutral position.
–Turn off engine.

The emergency-off switch can also be used to activate the immobilizer (➠ 164).

INTELLIGENT EMERGENCY CALL

–with intelligent emergency call OE

Emergency call via BMW

Only press the SOS button in an emergency.

Emergency call cannot be ensured if the conditions are unfavorable for technical reasons, e.g. in regions where there is no cellphone reception.

During an emergency call, the position of the vehicle, the selected language and any accident data are transmitted to BMW (➠ 13). Under unfavorable conditions, data transfer can be limited or delayed. This can lead to delayed processing of the emergency call.

Even if an emergency call via BMW is not possible, a call to a public emergency call number may be established. This depends on the respective mobile phone network and the national regulations.

Language for emergency call

Each vehicle is assigned a language depending on the market for which it was intended. The BMW Call Center responds in this language.

Only your authorized BMW Motorrad dealer is able to change the language for the emergency call. This language assigned to the vehicle is different from the language that the rider can choose as the display language in the instrument cluster.

Manual emergency call

Requirement

An emergency has arisen. The vehicle is stationary. The ignition is turned on.

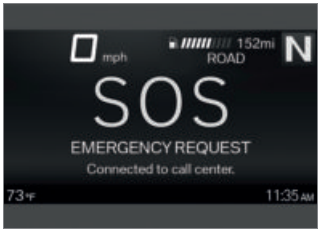


- Open cover **1**.
- Briefly press SOS button **2**.



» The time until an emergency call is placed is displayed. The emergency call can be aborted during this time.
- Cancel emergency call: Press and hold the SOS button **2** for two seconds or turn off the ignition.
- Press the emergency-off switch to stop the engine.
- Remove your helmet.

» Once the timer has expired, a voice connection will be established with the BMW Call Center.



The connection has been established.



- Communicate information for the rescue services using the microphone **3** and speakers **4**.

Automatic emergency call

The intelligent emergency call is automatically active once the ignition is switched on and will react if you are involved in a fall.

Emergency call in the event of a minor fall

- A light fall or crash has been detected.

» An acoustic signal is emitted.



» The time until an emergency call is placed is displayed.

The emergency call can be aborted during this time.

- Cancel emergency call: Press and hold the SOS button for two seconds or turn off the ignition.
- If possible, remove helmet and stop the engine.

» Voice contact to the BMW Call Center is established.



The connection has been established.



- Open cover **1**.
- Communicate information for the rescue services using the microphone **3** and speakers **4**.

Emergency call in the event of a heavy fall

- A heavy fall or crash has been detected.

» The emergency call is sent automatically without delay.

LIGHTING

Low beams and parking lights

The parking lights turn on automatically when the ignition is turned on.

The parking lights are a strain on the battery. Only turn on the ignition briefly.

The low-beam headlight switches on automatically when the engine is started.

Function of automatic lights –with adaptive light modes OE

The automatic lights create adaptive illumination of the road and enable visual guidance in darkness that is adapted to the driving situation. Illumination of the road in this case depends on speed, lean angle and the selected headlights (➠ 200).

Operating the driving lights automatic

–with adaptive light modes OE

- Turn on the ignition. (➠ 95)
- Start engine. (➠ 158)



- Press button **1**.

» The automatic lights are turned on.

lights up.

- Press button **1** once more to turn off the driving lights automatic.

High beams and headlight flasher

- Turn on the ignition. (➠ 95)



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

Headlight courtesy delay feature

- Turn off the ignition. (➠ 95)



- 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 turns off automatically.

–This can be used, for example, to light the path to your

front door after the vehicle is parked.

Roadside parking lights

- Turn off the ignition. (➠ 95)



- Immediately after turning off the ignition, push button **1** to the left and hold it until the roadside parking lights turn on.
- Turn ignition on and then off again to turn off the roadside parking lights.

Auxiliary headlights

The auxiliary headlights are permitted as fog lamps and may only be used in poor weather conditions. Comply with the country-specific road traffic regulations.

- Start engine. (➠ 158)
- In the `Settings`, `Vehicle settings`, `Lights` menu, turn on the `Additional headlight` function.

 lights up.

Hazard warning system

- Turn on the ignition. (➠ 95)

The hazard warning system places a load on the battery. Only switch the hazard warning lights system on briefly.



- 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 the button **1** again.

Turn signals

- Turn on the ignition. (➠ 95)
- Go to the `Settings`, `Vehicle settings` menu, then select the `Lights` menu item.
- Turn `Comfort turn indicator` on or off.



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

» If the comfort turn signal is turned on, the turn signal automatically switches off once the speed-dependent distance has been covered.

- Alternative: Press button **1** to turn off the turn signals.

DYNAMIC TRACTION CONTROL (DTC)

Operate DTC

- Turn on the ignition. (➠ 95)
- Assign the `DTC ON/OFF` function to the (➠ 79) multiple rocker switch.
- Set the desired system status.



The first time the multifunction rocker switch is pressed, the current system status **1** is displayed.

- Press and hold the bottom of the multifunction rocker switch to turn off the DTC.

» The indicator on the display flashes in sync with the indicator light on the instrument cluster.

 blinks yellow.

- Press the top of the multifunction rocker switch to turn on the DTC. Alternative: Turn the ignition off and on again.

 goes out, in the event of incomplete self-diagnosis, the DTC indicator and warning light starts flashing.

- More detailed information on the Dynamic Traction Control (DTC) can be found in the Technology in detail chapter (➠ 181).

CHASSIS AND SUSPENSION ADJUSTMENT (DSA)

Adjusting damping

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

- Turn on the ignition. (➠ 95)
- Assign the `Damping` function to the (➠ 79) multiple rocker switch.
- Select the appropriate setting.



Depending on the riding mode, the damping can be set to various settings **1**.

In the ECO, RAIN, ROAD, DYNAMIC and DYNAMIC PRO riding modes, you can select from the following settings:
–`Road`
–`Dynamic`

In the ENDURO and ENDURO PRO riding modes, the `Enduro` setting is active.

For more customization, you can adjust the damping properties of the settings in five levels.

- To adjust the settings, go to the `Settings`, `Assist`, `Damping` menu.
- Select the `Road`, `Dynamic` or `Enduro` setting and go to the `Damping configuration` menu.
- Select the `–1` or `–2` setting to decrease the damping.
- Select the `+1` or `+2` setting to increase the damping.

Effects of damping on vehicle handling

The aim of adjusting this setting is to adapt the damping to suit the spring preload, road conditions, desired vehicle handling and load state.

Increased damping
–Direct vehicle handling.
–Increased response to road conditions.
–Reduced vibration tendency.
–Loss of comfort when driving over series of bumps.

Reduced damping
–Comfortable vehicle handling.
–Reduced response to road conditions.
–Increased vibration tendency.

Adjusting the ride height

–with OE adaptive vehicle height control

or

–with Adaptive vehicle height control Comfort OE

- Turn on the ignition. (➠ 95)
- Assign the `Ride height` function to the (➠ 79) multiple rocker switch.
- Select the appropriate setting.



The ride height can be set in two levels **1**.

In the ECO, RAIN, ROAD, DYNAMIC and DYNAMIC PRO riding modes, you can select from the following settings:

–Automatic ride height setting

Continuously high ride height

In the ENDURO and ENDURO PRO riding modes, you can select from the following settings:

Continuously high ride height

Continuously low ride height

» When you stop, the DSA automatically returns to the low ride height and thereby makes it easier for you to reach the ground.

RIDING MODE

Use of the riding modes

BMW Motorrad provides you with pre-configured modes corresponding to the intended use:

Series

–ECO: Range-optimized riding.

–RAIN: Riding on wet roads.

–ROAD: Riding on dry roads.

–ENDURO: Driving off-road with road tires.

–with riding modes Pro OE

With Pro riding modes

–DYNAMIC: Brisk riding on dry roads.

–DYNAMIC PRO: Dynamic riding on dry roads taking into account settings made by the rider.

–ENDURO PRO: Off-road riding with knobby off-road tires taking into account settings made by the rider.

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

In the factory setting, the ABS control for the rear wheel is deactivated when the ENDURO PRO riding mode is active.

The chassis and suspension adjustments can also be adapted in the selected scenario.
More detailed information about the riding modes can be found in the "Technology in detail" chapter (➠ 190).

Riding mode preselection
–with riding modes Pro[OE]

With the aid of the riding mode preselection, individually preferred riding modes can be compiled in a preselection.
Two to a maximum of four riding modes can be added to the riding mode preselection.
Factory setting:
ECO, RAIN, ROAD and ENDURO

Preselecting the riding mode
–with riding modes Pro[OE]

- Turn on the ignition. (➠ 95)
- Go to menu `Settings`, `Vehicle settings`, `Riding mode preselection`.
- Activate or deactivate riding modes for the riding mode preselection.

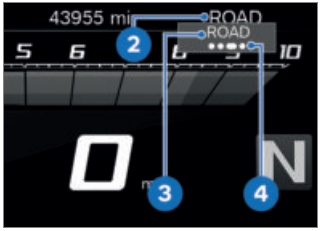
» The activated riding modes are available for selection.
» If fewer than two riding modes are activated, the following message appears: `Action not possible. Min. number reached.`
» The compilation of the riding modes in the riding mode preselection is retained, even after the ignition is switched off.

Selecting the riding mode
- Turn on the ignition. (➠ 95)

–with riding modes Pro[OE]
- Preselect the riding mode. (➠ 108)◁



- Press button **1**.



The active riding mode **2** fades into the background and is displayed in the pop-up **3**. The guide **4** shows how many riding modes are available.

ATTENTION

Turning on off-road mode (ENDURO and ENDURO PRO) when in road mode

Risk of falling due to unstable riding conditions when braking or accelerating in the ABS or DTC control range

- Switch on off-road mode (ENDURO and ENDURO PRO) during off-road riding only.

- Repeatedly press button **1** until the riding mode you want is displayed.

–with riding modes Pro OE

In the factory setting, the ABS control for the rear wheel is deactivated when the ENDURO PRO riding mode is active.◁

–with riding modes Pro OE

Depending on the riding mode or its configuration, the intervention of electronic stability control systems can be restricted.

Possible restrictions are displayed as a pop-up message, e.g. `Caution! ABS setting.`.

The ABS indicator light flashes irregularly.

You can find more detailed information regarding road handling control systems such as ABS in the chapter "Technology in detail".◁

» The availability of riding modes depends on how the rider has configured the riding modes preselection function.
» With the motorcycle at a standstill, the selected riding mode is activated after approximately two seconds.
» The following conditions must be met to activate a new riding mode while riding:
– Throttle grip is in idle position.
– Brake is not engaged.
– Cruise control is not active.
» The selected riding mode and the corresponding adjustments to the engine characteristics, DTC, ABS and MSR are retained even after the ignition has been switched off.

PRO RIDING MODE

– with riding modes Pro[OE]

Adjustment options

The Pro riding modes can be adjusted individually.

Select Pro riding mode

- Turn on the ignition. (➠ 95)
- Go to menu `Settings`, `Vehicle settings`, `Riding mode preselection`.
- Select `ENDURO PRO riding mode` or `DYNAMIC PRO riding mode`.

Adjusting Enduro Pro

– with riding modes Pro[OE]

- Select Pro riding mode. (➠ 110)
- Call up `Configuration`.



The `Engine` system is selected. The current setting is displayed as a diagram **1** with explanations on the system **2**.

- Select and confirm the system.



You can scroll through the possible settings **3** and the related descriptions **4**.

- Adjust the system.

» The Engine, DTC, and ABS systems can all be adjusted in the same way.

Adjusting Dynamic Pro

- Select Pro riding mode. (➠ 110)
- Set systems as for ENDURO PRO riding mode.

Riding mode settings reset

- Select Reset and confirm.

» The following factory settings apply to ENDURO PRO RIDING MODE:

– ENGINE: Road
– DTC: Enduro Pro
– ABS: Enduro Pro

» The following factory settings apply to DYNAMIC PRO RIDING MODE:

– ENGINE: Dynamic
– DTC: Road
– ABS: Dynamic

AUTOMATED SHIFT ASSISTANT (ASA)

– with Automated shift assistant OE

Function

The automatic Gearshift Assistant (ASA) enables automated gear shifts without input from the rider.

Two transmission modes are available for gear selection:

– Manual mode M: Gear shift by actuation of the gearshift lever.
– Automatic mode D: Automated gear selection with consideration of the current riding situation.

In automated riding mode, gear shifts are triggered by the following conditions:

– Riding mode
– RPM
– Throttle grip actuation
– Brake actuation
– Inclined position

Regardless of the selected transmission mode, driving off and stopping are also controlled by the automated shift assistant (ASA).

For more information on the automated shift assistant

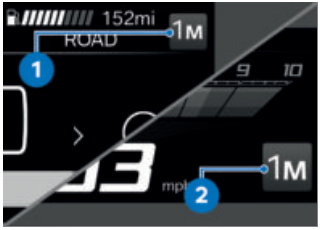
(ASA), see the Riding chapter (➠ 163).

Selecting the transmission mode

–with Automated shift assistant[OE]

- Establish ride readiness. (➠ 163)

» The manual mode M is active.



The gear selected by the rider with indicator M for the manual mode is displayed in the status line **1** or in the Pure Ride **2** view.



- Briefly press button **1**.

» The automatic mode D is activated.



The indicator for the automatic mode D and the current gear are displayed in the status line **1** or in the Pure Ride **2** view.

- Press button **1** again briefly to switch back into manual mode.

The transmission mode can also be changed while riding.

CRUISE CONTROL

Displayed value while adjusting (Speed Limit Info not active)



The icon **1** for cruise control is displayed in the Pure Ride view and in the upper status line.

Displayed value while adjusting (Speed Limit Info active)



The icon **1** for cruise control is displayed in the Pure Ride view and in the upper status line.

Turning on cruise control
Requirement

ECO, RAIN, ROAD, DYNAMIC or DYNAMIC PRO riding mode is selected.

The cruise control is not available in the ENDURO and ENDURO PRO riding modes.



- Slide switch **2** to the right.

» Button **1** can be operated.

Saving the speed



- Briefly press 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 press 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 is increased in increments of 5 mph (8 km/h).

» 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 decreased in increments of 5 mph (8 km/h).

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

Deactivating cruise control

- Apply the brake or turn the throttle back past the basic setting to deactivate cruise control.

–without Automated shift assistant OE

If the clutch remains pulled for more than 1.5 seconds, cruise control is deactivated.◁

During ABS or DTC interventions, the cruise control is automatically deactivated for safety reasons. If

the rider deactivates DTC, the cruise control is also deactivated.

 is displayed in gray.

Automatic deactivation

Cruise control is deactivated automatically in the following situations:

– When engine speed drops below the minimum threshold (to prevent stalling).
– After several seconds of the vehicle being ridden at maximum engine speed.
– During ABS or DTC interventions.
– If a system error occurs.

If cruise control is automatically deactivated, a message to this effect is displayed.

Resuming previous cruising speed

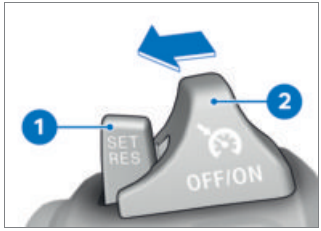


- Briefly push button **1** back to return to the speed saved beforehand.

Cruise control is not deactivated by accelerating, it only overrules it for a short time. Once the throttle grip is released, the speed falls to the stored value. If further deceleration is desired, the cruise control must be deactivated, e.g. by braking.

 Cruise control indicator light lights up.

Turning off cruise control



- Push switch **2** to the left.

» The system is turned off.

 is hidden.

» Button **1** is locked.

Configuring the character of the cruise control

- Turn on the ignition. (➠ 95)
- Go to the `Settings`, `Assist` menu, then select the `Cruise control` menu item.
- Select the `ACC characteristics` menu item.

- Select desired setting.

» The following settings for the acceleration and deceleration behavior are possible:

– `Comfortable`: Smooth acceleration and deceleration of the vehicle.

– `Dynamic`: More pronounced acceleration and deceleration for more dynamic riding style.

RADAR-BASED RIDER ASSISTANCE SYSTEMS

– with Riding Assistant OE

Safety instructions

Distance control (ACC), Forward Collision Mitigation (FCW) and lane change warning (SWW) are radar-based rider assistance systems. Functional limitations and limits of the systems must be observed.

WARNING

Riders not released from their own responsibility

Risk of accident due to misjudgment by the systems

- The rider assistance systems are not safety systems. The rider is ultimately responsible for correctly gaging visibility conditions and the traffic situation, and for intervening accordingly.

WARNING

Radar cannot detect all objects and traffic situations

Risk of accident

- Radar-based rider assistance systems only detect moving vehicles. This means that pedestrians, animals and stationary vehicles, for example, are not detected. Cyclists cannot be reliably detected.
- Object detection can be limited, for example, if the road is curvy or uneven or if you are riding unstably or at an angle within a lane.
- The front radar (ACC, FCW) does not react to oncoming vehicles and can only detect vehicles swerving into your lane ahead with a delay.
- Depending on the system, these limitations can result in a late warning and hard braking or in the lack of a warning and braking.
- Observe the traffic and actively intervene in the respective situations.

WARNING

Radar is not functional in certain situations

Risk of accident if there is no braking or warning

- The radar sensors require a clear visible area for object detection to work well. During heavy rain, fog or snow and when the radar sensors are dirty or covered, object detection is limited.
- Object detection can be impeded by environmental conditions, e.g. by strong reflections and electromagnetic interference.
- After any accident or after the motorcycle hits the vehicle ahead or tips over, the installation position of the radar sensors must be checked.
- Observe the traffic and actively intervene in the respective situations.

ATTENTION

Radar can misdetect certain objects and traffic situations
Risk of accident
- Radar-based rider assistance systems can react to certain objects and complex traffic situations without good reason. For example, narrowed lanes (e.g. road construction) or objects in the air (e.g. bouncing ball or plastic bag) can lead to ACC or FCW issuing a warning or decelerating the vehicle.
- Observe the traffic and actively intervene in the respective situations.

DISTANCE CONTROL (ACC)

–with Riding Assistant OE

Safety instructions

The safety instructions for radar-based rider assistance systems must also be observed (➠ 116).

WARNING

ACC cannot compensate for excessive speed differences
Risk of accident
- ACC cannot perform emergency braking. The deceleration and buildup of deceleration are limited.
- The system cannot compensate for high speed differences, for example when approaching a truck rapidly or when another vehicle swerves into your lane ahead of you.
- When the adjustment range of ACC is exceeded, object detection might be delayed on account of the high speed. Therefore, heightened caution is mandatory.
- Observe the traffic and actively intervene in the respective situations.

WARNING

ACC can lose track of detected objects
Risk of accident
- When ACC deselects a detected object erroneously, the motorcycle will accelerate to the set speed. This can be the case when riding around curves, for instance.
- Observe the traffic and actively intervene in the respective situations.

WARNING

ACC (front-collision warning) cannot decelerate the vehicle sufficiently when cornering at high speed
Risk of accident
- If distance control is active and the lean angle is too great, cornering control reduces the driving speed. When a vehicle has been detected, the motorcycle decelerates more slowly when at a leaning angle.
- Select an appropriately low speed.

When riding in other countries, the country-specific provisions for operating radar sensors must be observed. The radar sensor must be disconnected if the radar sensor is not licensed within a certain country and the country-specific regulations require it to be disconnected. It is advisable to consult an authorized BMW Motorrad dealer.

Switchover between cruise control and ACC
- Turn on the ignition. (➠ 95)
- Configure the character of the cruise control. (➠ 115)

WARNING

Reduced support after switchover to cruise control
Risk of accident
- Unlike ACC, cruise control does not respond to the traffic ahead but adjusts the speed to the stored value.
- Observe the traffic and actively intervene in the respective situations.

- Go to `Settings`, `Assist` menu, select `Cruise control`.
- Activate or deactivate the `Activate ACC`.
- **Alternatively**: Assign the `ACC` function to the (➠ 79) multiple rocker switch.

ACC is inactive:
- Briefly press the bottom of the multifunction rocker switch to display the current status.
- Briefly press the bottom of the multifunction rocker switch again to activate ACC.

» A switchover between cruise control and ACC takes place.

ACC is active:
- Press and hold the top of the multifunction rocker switch to display the current status.
- Press and hold the top of the multifunction rocker switch again to deactivate ACC.

» This switches between ACC and cruise control.

- Note automatic deactivation (➠ 115).
- For more information on the distance control (ACC), see the Technology in detail (➠ 185) chapter.

Operating ACC

Requirement

`Activate ACC` is activated.

ACC is not available in the ENDURO and ENDURO Pro riding modes.

- Turn on cruise control. (➠ 113)


is displayed in gray.

- Save the speed. (➠ 113)

If the speed is above the setting range of 19...99 mph (30...160 km/h), the speed will be adjusted to the maximum speed of 99 mph (160 km/h).

- Briefly press the multifunction rocker switch.



The currently set distance **1** is displayed.

Indicators in the instrument cluster

The following icons may be displayed in the instrument cluster when ACC is operating:

Indicator lights

» No object is detected:


is displayed in green.

» An object is detected:

 is displayed in green.

» Rider exceeds the set speed by turning the throttle grip:
 is displayed in green.

Warning lights

» The system caused the ACC control to be switched off:
 is displayed in red.

» A hazardous situation has been detected and cannot be avoided.
 blinks red.

If a warning light appears in the instrument cluster:
- Take action to avoid potential danger.

Setting distance
- Assign the ACC function to the (➠ 79) multiple rocker switch.
- Briefly press the multifunction rocker switch.



The currently set distance **1** is displayed.

WARNING

Selected distance is too short for the traffic situation

Risk of accident
- Adjust the distance according to the traffic and weather conditions.
- Maintain the legally prescribed safety distance.

- Select the appropriate setting.

» The following settings are available:

 Short distance

 Medium distance

 Long distance

» If ACC detects an object moving ahead, a car is shown as well as the displayed icon.

» The distance setting remains unchanged even after the ignition has been turned off.

FORWARD COLLISION MITIGATION (FCW)

–with Riding Assistant[OE]

Safety instructions

The safety instructions for radar-based rider assistance systems must also be observed (➠ 116).

WARNING

FCW can lose track of detected objects

Risk of accident

- If FCW loses track of a detected object, a warning might not be issued or the braking might be canceled. This can be the case when riding around curves, for instance.
- Observe the traffic and actively intervene in the respective situations.

WARNING

FCW (front-collision warning) cannot decelerate the vehicle sufficiently when cornering at high speed

Risk of accident

- If the angle is too high, the FCW issues a warning with a weaker warning pulse and more slowly builds the brake assist up to a lower maximum value.
- Select an appropriately low speed.

Forward Collision Mitigation behavior

FCW is available only in the ECO, RAIN, ROAD and DYNAMIC riding modes.

More information about the FCW can be found in the chapter "Technology in detail" (➠ 186).

Warning lights

If the FCW detects a critical driving situation, the following icons can be displayed in the instrument cluster:

Prewarning

» Warning pulse is activated:  lights up red.

» Warning pulse is deactivated:  blinks red.

Acute warning

» Brake assist is activated:  blinks red.

» Brake assist is deactivated:  flashes red over the entire screen.

If a warning light appears in the instrument cluster:

- Take action to avoid potential danger.

Adjusting the time of the warning

- Go to `Settings`, `Assist` menu, select `Front-collision warning`.
- Select `Warning`.

The following times can be selected:

–`Early`
–`Medium`
–`Late`

Adjusting the warning pulse

- Go to `Settings`, `Assist` menu, select `Front-collision warning`.
- Select `Warning pulse`.

» The following settings are available:

–Activated: When the prewarning is output, an attention-getting brake pulse is triggered in addition to the warning display.
–Deactivated: When the prewarning is output, only a warning display appears.

Adjusting the brake assist

The brake assist is designed to mitigate critical driving situations and bridge the response time of the rider. However, manual intervention by the rider is still necessary.

- Go to `Settings`, `Assist` menu, select `Front-collision warning`.
- Select `Braking assistance`.

» The following settings are available:

–Activated: When the acute warning is output, a supporting braking maneuver is initiated in addition to the warning display.
–Deactivated: When the acute warning is output, only a warning display appears.

Deactivating the FCW

- Go to `Settings`, `Assist` menu, select `Front-collision warning`.
- Go to the `Warning` menu item and deactivate it with `Off`.

Haptic interventions of the function can be individually activated or deactivated in the `Front-collision warning` menu without a need to deactivate the function completely.

The FCW is manually deactivated in the menu or by selecting the Pro or ENDURO riding mode.

» FCW is deactivated:

is displayed.

- More information about the FCW can be found in the chapter "Technology in detail" (➠ 186).

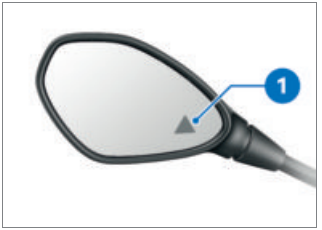
LANE CHANGE WARNING (SWW)

–with Riding Assistant OE

Lane change warning behavior

The safety instructions for radar-based rider assistance systems must also be observed (➠ 116).

If the lane change warning is active and there is a critical driving situation for a lane change, the warnings behave as follows:



Information warning

–The warning triangle **1** lights up until the critical driving situation has passed.

Acute warning

–If the rider operates the turn signal in the direction of the lit warning triangle, intending to make a lane change, the warning triangle **1** flashes because a safe lane change is not possible.

If the Urg. only setting is selected, only the acute warning with flashing warning triangle is issued.

For more information on the lane change warning, see the "Technology in detail" chapter (➠ 188).

The brightness of the warning triangle depends on the ambient brightness or the brightness of the instrument cluster (➠ 84).

Setting the lane change warning

- Go to Settings, Assist menu, select LCW.

In the factory setting, the lane change warning is active. A change to the setting is retained after the ignition is turned off.

» The following settings are available:

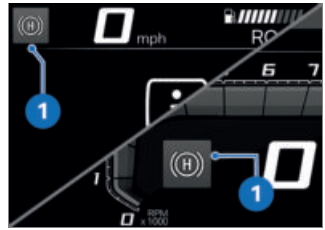
–Off: SWW is deactivated; neither information warnings nor acute warnings are output.

–On: SWW is activated; both information warnings and acute warnings are output.

–Urg. only: SWW is activated; only acute warnings are output.

HILL START CONTROL (HSC)

Display



The icon **1** is displayed in the Pure Ride view or in the upper status line.

Turn Hill Start Control on and off

- Turn on the ignition. (➠ 95)
- Call up menu Settings, Vehicle settings.
- Turn Hill Start Control on or off.

Operating Hill Start Control

Requirement

Vehicle is at a standstill with the engine running.

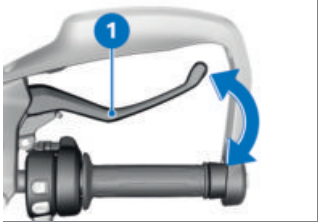
ATTENTION

Failure of the Hill Start Control

Risk of accident

- Secure the vehicle through manual braking.

Hill Start Control is only a comfort system to make driving off on hills easier and should therefore not be confused with a parking brake.



- Apply brake lever **1** or footbrake lever firmly and then release again.

is displayed in green.

» Hill Start Control has been activated.

- To turn off Hill Start Control, activate the brake lever **1** or footbrake lever again.

is hidden.

- Alternatively, ride off in 1st or 2nd gear.

For driving off with Hill Start Control, the throttle grip must be actuated as the motorcycle starts driving off.

disappears after the brake has been released completely.

» Hill Start Control is deactivated.

- More information about the Hill Start Control can be found in the chapter "Technology in detail" (➠ 198).

Operating Hill Start Control Pro

–with riding modes Pro[OE]

Requirement

Vehicle is at a standstill with the engine running.

ATTENTION

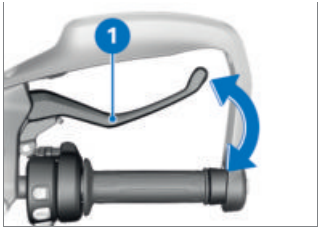
Failure of the Hill Start Control

Risk of accident

- Secure the vehicle through manual braking.

Hill Start Control Pro is only a comfort system to make driving off on hills easier and should therefore not be confused with a parking brake.

Hill Start Control Pro should not be used for gradients of more than 40%.



- Apply brake lever **1** or footbrake lever firmly and then release again.
- Alternatively, apply the brake for about one second after the vehicle has come to a standstill, with a gradient of at least 3%.

Ⓗ is displayed in green.

» Hill Start Control Pro has been activated.

- To turn off Hill Start Control Pro, activate the brake lever **1** or footbrake lever again.

If Hill Start Control Pro was deactivated using the brake lever, then automatic Hill Start Control is deactivated for the next 13.1 ft (4 m).

Ⓗ is hidden.

- Alternatively, ride off in 1st or 2nd gear.

For driving off with Hill Start Control Pro, the throttle grip must be actuated as the motorcycle starts driving off.

Ⓗ disappears after the brake has been released completely.

» Hill Start Control Pro is deactivated.

- More information about the Hill Start Control Pro can be found in the chapter "Technology in detail" (➠ 198).

Adjusting Hill Start Control Pro

–with riding modes Pro[OE]

- Turn on the ignition. (➠ 95)
- Call up menu `Settings`, `Vehicle settings`.
- Select `HSC Pro`.
- To turn off Hill Start Control Pro, select `Off`.

» Hill Start Control Pro is deactivated.

- To turn on manual Hill Start Control Pro, select `Manual`.

» Hill Start Control Pro can be activated by firmly applying the handbrake or footbrake lever.

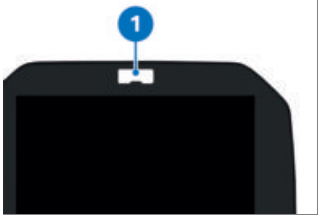
- To turn on automatic Hill Start Control Pro, select `Auto`.

» Hill Start Control Pro can be activated by firmly applying

the handbrake or footbrake lever.
» During brake actuation for approximately one second after the vehicle has come to a standstill and on a slope with at least a 3% gradient, Hill Start Control Pro is activated automatically.
» The selected setting is retained even after the ignition is turned off.

SHIFTPOINT LIGHT

Function



The shiftpoint light **1** signals to the rider the rotational speed at which the rider needs to shift to the next highest gear.
– Shiftpoint light blinks at the set frequency: Shifting speed has been reached

Turning the shiftpoint light on and off

- Call up menu `Settings`, `Vehicle settings`.
- Turn `Shift light` on or off.

Setting shifting flash

– with Automated shift assistant OE

In automatic mode `D`, the shiftpoint light is inactive.

◁

- Turn on the `Shift light` function.
- Go to menu `Settings`, `Vehicle settings`, `Configuration` (under `Shift light`).

» The following settings are available:
– `Start RPM`
– `End RPM`
– `Brightness`
– `Frequency`. A flashing frequency of 0 Hz corresponds to continuous lighting.
» Changes to the brightness and the flashing frequency are signaled by the shiftpoint light lighting up or flashing.

ANTI-THEFT ALARM SYSTEM (DWA)

– with anti-theft alarm system (DWA) OE

Automatic activation

- Turn on the ignition. (➠ 95)
- Adjust the anti-theft alarm system. (➠ 131)
- Turn off the ignition. (➠ 95)

» If `Arm automatically` the DWA is activated, the DWA is

automatically activated after the ignition is switched off.
» Activation takes approximately 30 seconds.
» Turn signals flash twice.
» Confirmation tone sounds twice (if activated).
» DWA is armed.

Activation with radio-operated key

- Turn off the ignition. (➠ 95)



- Press the button **1** of the radio-operated key once.

» Activation takes approximately 30 seconds.
» Turn signals flash twice.
» Confirmation tone sounds twice (if activated).
» Anti-theft alarm system is active.

–with topcase carrier OE
–with aluminum topcase OA



- Press the button **1** on the radio-operated key twice.

» Activation takes approximately 30 seconds.
» Turn signals flash twice.
» Confirmation tone sounds twice (if activated).
» Anti-theft alarm system is active.◁

Activating transport mode

- If the motorcycle is transported by train or trailer, strong movements can trigger an alarm. To deactivate the tilt sensor, press the **1** button on the remote control key again during the activation phase.
- Alternatively, the tilt sensor can be deactivated using the menu `Settings`, `Vehicle settings`, `Alarm system` (➠ 131).

» Turn signals flash three times.

» Confirmation tone sounds three times (if activated).
» Tilt sensor is deactivated.

Alarm signal

The DWA alarm signal can be triggered by:
– Tilt alarm sensor
– Switch-on attempt with an unauthorized ignition key.
– Disconnection of the DWA from the vehicle battery (DWA battery takes over the power supply – alarm tone only, turn signals do not flash)

If the DWA battery is discharged, all functions remain operational; the only difference is that the alarm cannot be triggered if the system is disconnected from the vehicle battery.

The alarm lasts approx. 30 seconds. During the alarm, an alarm tone sounds and the turn signals blink. You can adjust the type of alarm tone in the menu `Settings`, `Vehicle settings`, `Alarm system` (➠ 131).



A triggered alarm can be canceled at any time by pressing the **1** button of the radio-operated key without deactivating the DWA.

If an alarm signal has been triggered while the motorcycle was unattended, the rider is notified accordingly by an alarm tone sounding once when the ignition is turned on. The DWA anti-theft alarm LED on the instrument cluster then signals the reason for the alarm for one minute.

Light signals on indicator light:
– 1x flash: Tilt sensor 1
– 2x flashes: Tilt sensor 2
– 3x flashes: Ignition is turned on using an unauthorized ignition key
– 4x flashes: DWA disconnected from vehicle battery
– 5x flashes: Tilt sensor 3

Deactivation

If the alarm function is deactivated using the radio-operated key and the ignition is not turned on then, the alarm function will be reactivated automatically after approximately 30 seconds if `Arm automatically` is turned on.

- Turn on the ignition. (➠ 95)



- Alternatively, press the button **1** on the radio-operated key once.

» Turn signals flash once.
» Confirmation tone sounds once (if activated).
» DWA is turned off.

Adjusting the anti-theft alarm system

- Turn on the ignition. (➠ 95)
- Go to menu `Settings`, `Vehicle settings`, `Alarm system`.

» The following settings are available:

–Adapting `Warning signal`
–Turning `Tilt sensor` on and off
–Turning `Arming tone` on and off
–Turning `Arm automatically` on and off

» Possible settings (➠ 131)

Possible settings

`Warning signal`: Set increasing and decreasing or intermittent alarm tone.

`Tilt sensor`: Deactivate the tilt sensor to activate transport mode. The inclination of the vehicle is not monitored in transport mode.

Deactivate the tilt sensor when transporting the vehicle to avoid triggering the DWA.

`Arming tone`: Confirmation alarm tone after activating/deactivating the DWA in addition to flashing turn signals.

`Arm automatically`: Automatic activation of the alarm function when the ignition is switched off.

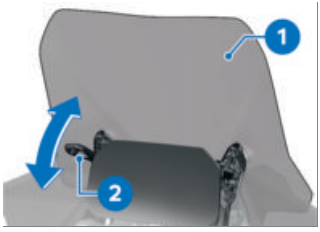
TIRE PRESSURE MONITOR (TPM)

Switching setpoint pressure warning on or off

- If the minimum tire pressure is reached, a target pressure warning can be displayed.
- Go to menu `Settings`, `Vehicle settings`, `RDC`.
- Turn `Target pressure warn.` on or off.

WINDSHIELD

Adjusting the windshield



WARNING

Adjusting the windshield while driving

Accident hazard

- Only adjust the windshield when the motorcycle is stationary.

- Pull the lever **2** downward to raise the windshield **1**.
- Push the lever **2** upward to lower the windshield **1**.

Electrically adjusting the windshield

–with electrically adjustable windshield OE

- Turn on the ignition. (➠ 95)

» When riding off, the windshield automatically moves to its last position before the ignition was turned off.

- Assign the `Windscreen` function to the (➠ 79) multiple rocker switch.
- Select the appropriate setting.



The windshield **1** is set right when the multifunction rocker switch is pressed for the first time.

- Turn off the ignition. (➠ 95)

» The windshield automatically moves to the lower end position.

If the windshield encounters resistance before reaching the end position, the pressure-sensitive finger guard system activates. The windshield is stopped and moves upwards

slightly. After several seconds, the windshield will attempt to move to the end position again.
- Ensure clearance of the windshield.

» The windshield does not respond when the multifunction rocker switch is pressed.
- Please contact a repair shop, preferably an authorized BMW Motorrad dealer.

If a windshield has been installed that is not approved by BMW Motorrad, correct functioning of the anti-trap mechanism cannot be guaranteed.
- In this case: Ensure clearance of the windshield before you turn off the ignition.

HEATING

Operating the grip heating

Grip heating is only active when the engine is running and the side stand is retracted.

The increase in electrical consumption caused by grip heating can cause the battery to discharge when driving in the lower rotational speed range. If the battery charge level is too low, grip heating will be switched off to retain the vehicle's starting capability.

- Start engine. (➠ 158)
- Assign the `Grip heating` function to the (➠ 79) multiple rocker switch.
- Select the appropriate setting.



The handlebar grips have three heating levels **1**. The high heater output is used to heat up quickly; then it should be switched back to a lower heater output.

Operating the grip heating and seat heating

Grip heating and seat heating are only active when the engine is running and the side stand is retracted.
- Start engine. (➠ 158)
- Assign the `Heating` function to the (➠ 79) multiple rocker switch.
- Press the multiple rocker switch at the top to adjust the grip heating.

- Press the multiple rocker switch at the bottom to adjust the seat heating.



The handlebar grips **1** and rider's seat **2** each have three heating levels. The high heater output is used to heat up quickly; then it should be switched back to a lower heater output.

Operating the passenger seat heater

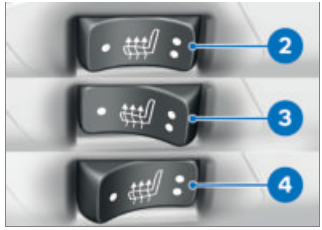
–with passenger package OE

- Start engine. (➠ 158)

Seat heating is only active when the engine is running and the side stand is retracted.

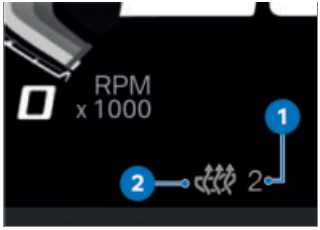


- Select the desired heating level with **1** switch.



The passenger seat has two-level heating. The second level is used for heating the seat quickly. It is advisable to switch back to the first level as soon as the seat is warm.

–Move switch **2** to the center position: Heating off.
–Switch **3** in one-dot position: Low heating output.
–Switch **4** in two-dot position: High heating output.



The selected heating level **1** and heated seat symbol **2** are displayed.

CENTRAL LOCKING SYSTEM

–with topcase carrier OE
–with aluminum topcase OA

Locking



- Turn off the ignition. (➠ 95)
- Press button **1**.

» The topcase is locked.

Unlocking

The central locking system automatically unlocks when you turn on the ignition.



- Press button **1**.

» The topcase is unlocked.
» Once the lock has been locked manually, it subsequently has to be unlocked manually as well.

Automatic locking system

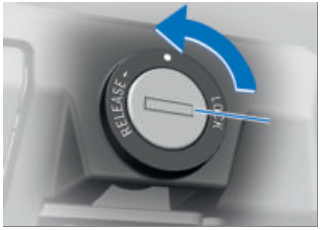
- Go to the `Settings`, `Vehicle settings` menu.
- Activate the `Lock with ignition off` function.

» After the ignition is turned off, the topcase is automatically locked.

Emergency unlocking

Requirement

If the central locking system can no longer be opened and the topcase is locked and detached, you can open the topcase manually as follows:



- Turn the key to the **RELEASE** position.



- Fully open the locking mechanism **1**.

» Topcase is unlocked.

STORAGE COMPARTMENT

Using the storage compartment

ATTENTION

High temperatures in the storage compartments, especially in summer

Damage to objects housed here, particularly electronic devices such as mobile phones

- Do not place objects that are sensitive to heat in the storage compartment during the summer.
- Ask the manufacturer about possible limits of use and observe them.

ATTENTION

Vibrations during riding

Damage to stored mobile phones

- Make sure that the stored mobile phone is suitable for use on the vehicle. To do so, ask the manufacturer about limits of use and observe them.



- To open, push the slide **2** and flip open the storage compartment flap **1**.
- To close, flip the storage compartment flap **1** shut.

The storage compartment cannot be locked. You can block access to the storage compartment by turning the handlebars and locking the steering lock.

Dimensions

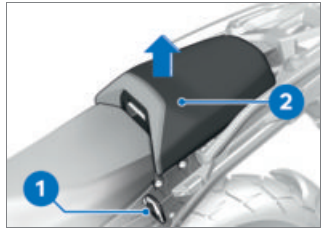
The storage compartment is suitable for smartphones with dimensions up to a maximum of 6.4 in (162 mm) x 3.1 in (78 mm) x 0.35 in (8.8 mm).

For more information on the USB charging port in the storage compartment, see the "Accessories" chapter (➠ 241).

RIDER'S SEAT AND PASSENGER SEAT

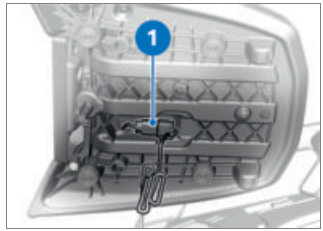
Removing the passenger seat

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



- Turn the ignition key **1** counterclockwise and hold.
- Lift the passenger seat **2** at the front and release the ignition key.

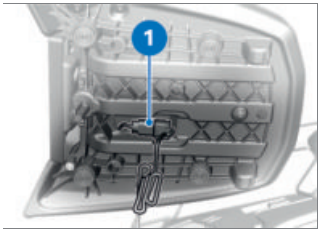
–with seat heating OE



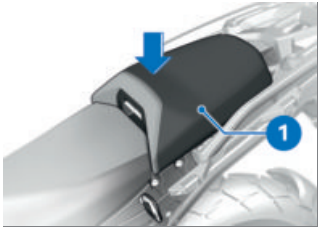
- Disconnect the plug connection **1** of the seat heater.◁
- Lay the passenger seat on a clean, dry surface with the upholstered side down.

Installing the passenger seat

–with seat heating OE



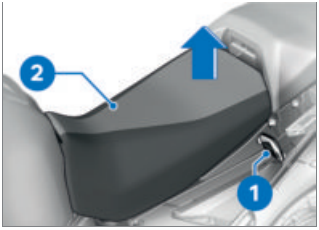
- Connect the plug connection **1** for the seat heater.◁



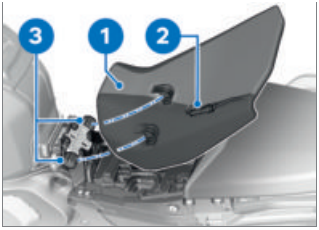
- Insert the passenger seat **1** into the rear frame at the back and press it down at the front.

» Passenger seat audibly engages.

Removing the rider's seat



- Turn the ignition key **1** clockwise and hold it.
- Raise the rider's seat **2** at the rear.

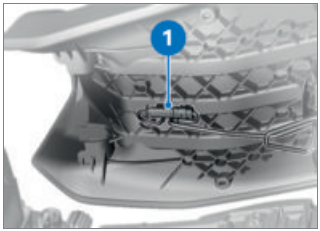


- Remove the rider's seat **1** from the bearing block **3**.

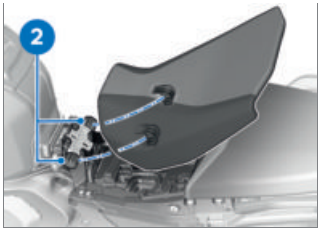
–with seat heating OE

- Disconnect the plug connection **2** of the seat heater.◁
- Lay the rider's seat on a clean, dry surface with the upholstered side down.
- Adjust the rider's seat height and tilt. (➠ 139)

Installing the rider's seat
–with seat heating OE



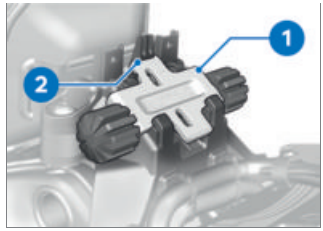
- Connect the plug connection **1** for the seat heater.◁



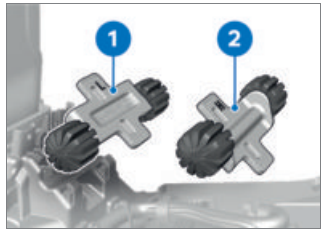
- Insert the rider's seat into the bearing blocks **2** on the left and right and place it loosely on the motorcycle.
- Press driver's seat lightly forward in rear area and then firmly downward.

Adjusting the rider's seat height and inclination

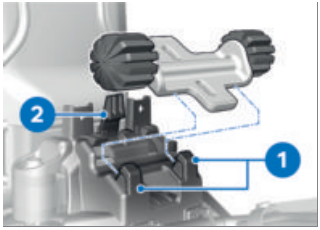
- Remove the rider's seat. (➠ 138)



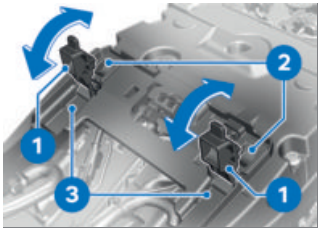
- To remove the front height adjustment **1** push the lock **2** forwards and remove the height adjustment in an upwards direction.



- To set the low seat position, install the front height adjustment in **1** alignment (**L** mark).
- To set the high seat position, install the front height adjustment in **2** alignment (**H** mark).



- First, slide the front height adjustment under the mounts **1**. Then press into locking mechanism **2** until it engages.



- In order to adjust the low seat position, swivel the rear height adjustment **1** to the **3** position (**L** mark).
- In order to adjust the high seat position, swivel the rear height adjustment **1** to the **2** position (**H** mark).

If seat tilt should be changed:

- Position the front and rear height adjustment differently.
- Install the rider's seat. (➠ 139)

SETTING

06

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HEADLIGHTS 145
CLUTCH 146
GEARSHIFT LEVER 147
BRAKES 148
FOOTRESTS 149
HANDLEBARS 149

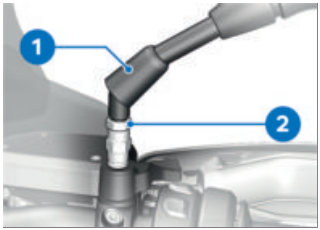
MIRRORS

Adjusting the mirrors



- Move mirror into desired position by twisting.

Adjusting the mirror arm

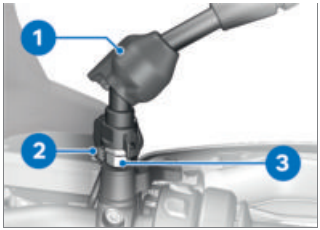


- Slide the protective cap **1** up over the lock nut **2** on the mirror arm.
- Loosen the lock nut with left-hand thread **2**.
- Turn the mirror arm into the desired position.
- Tighten the lock nut **2** to the specified torque while holding the mirror arm in place.

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

- Slide protective cap **1** over threaded connection.

–with Riding Assistant OE



- Slide the protective cap **1** upwards over the threaded connection on the mirror arm.
- Unclip the plug connection **2** on the mirror base.
- Loosen the lock nut with left-hand thread **3**.
- Turn the mirror arm into the desired position.
- Tighten the lock nut **3** to the specified torque while holding the mirror arm in place.

Mirror (lower lock nut) on adapter
M10 x 1.5
16 lb/ft (22 Nm)

- Clip in the plug connection **2** on the mirror base.
- Slide protective cap **1** over threaded connection.◁

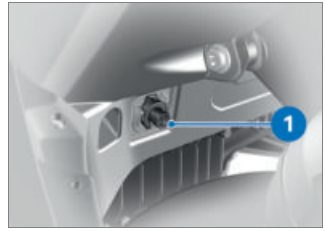
HEADLIGHTS

Headlight range and spring preload

The headlight range generally remains constant due to the adjustment of the spring preload to the load status. Only with a very heavy payload can adjustment of the spring preload be insufficient. 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 setting checked by a repair shop, preferably by an authorized BMW Motorrad dealer.

Readjusting the headlight range



If the spring preload adjustment is no longer able to maintain the correct beam height to avoid dazzling oncoming traffic owing to high vehicle payloads:

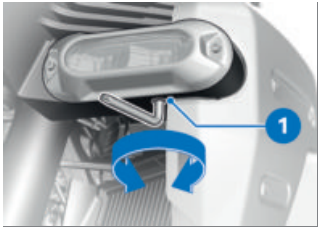
- Turn on the ignition. (➠ 95)
- Start engine. (➠ 158)
- Adjust the headlight range at the adjustment screw **1** using the onboard toolkit.

If the motorcycle is ridden again with lower payload:

- Restore basic setting of headlight.

Readjusting the auxiliary headlight range

The steps described here for the left auxiliary headlight also apply to the right side.



If the spring preload adjustment is no longer able to maintain the correct beam height to avoid dazzling oncoming traffic owing to high vehicle payloads:
- Turn on the ignition. (➠ 95)
- Start engine. (➠ 158)
- Turn on the auxiliary headlights (➠ 104).
- Adjust the headlight range at the adjustment screw **1** using the onboard toolkit.

If the motorcycle is ridden again with lower payload:
- Restore basic setting of headlight.

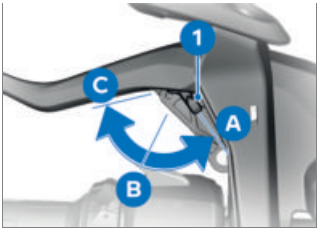
CLUTCH

–without Automated shift assistant OE

Adjusting the clutch lever

WARNING

Adjusting the clutch lever while driving
Accident hazard
- Adjust the clutch lever when the motorcycle is stationary.



- Push the adjustment lever **1** into the desired position.

The adjustment lever is easier to shift when the clutch lever is pressed forward slightly.

» Adjustment options:
–Position **A**: Minimum distance between handlebar grip and clutch lever
–Position **B**: Medium distance between handlebar grip and clutch lever
–Position **C**: Maximum distance between handlebar grip and clutch lever
- Check the hand guard. (➠ 150)

GEARSHIFT LEVER

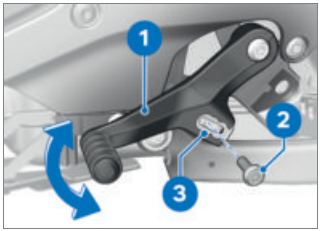
Adjusting the gearshift lever foot plate

ATTENTION

Unintentional actuation of the gearshift lever

Damage to the transmission

- Check for the correct setting of the gearshift lever.
- Ensure that the gearshift lever bears no load when not in the process of gear shifting.

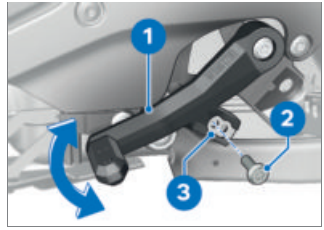


- Loosen screw **2**.
- Push the gearshift lever **1** into the desired position.
- Insert the screw **2** into one of the three counterbore depths **3**.
- Tighten screw **2**.

Screw on gearshift lever and gearshift lever adjuster
M6 x 20

Screw on gearshift lever and gearshift lever adjuster
6 lb/ft (8 Nm)

–with Option 719 Billet pack Shadow OE



- Loosen screw **2**.
- Push the gearshift lever **1** into the desired position.
- Insert the screw **2** into one of the two counterbore depths **3**.
- Tighten screw **2**.

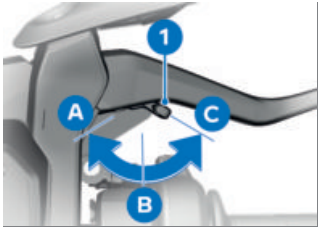
Screw on gearshift lever and gearshift lever adjuster
M6 x 20
6 lb/ft (8 Nm)◁

BRAKES

Setting the brake lever

WARNING

Adjusting the brake lever while driving
Risk of accident
- Only adjust the brake lever when the vehicle is stationary.



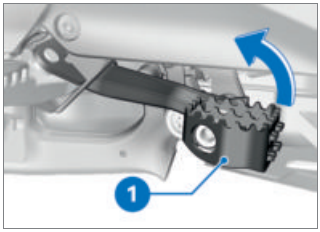
- Push the adjustment lever **1** into the desired position.

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

» Adjustment options:
– Position **A**: Minimum distance between handlebar grip and brake lever
– Position **B**: Medium distance between handlebar grip and brake lever
– Position **C**: Maximum distance between handlebar grip and brake lever

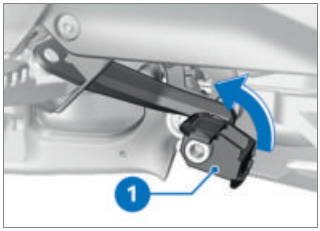
- Check the hand guard. (➠ 150)

Adjusting the footbrake lever foot plate



- The horizontal and vertical distances of the foot relative to the foot plate **1** can be adjusted by a 90° turn.
- Pull the foot plate **1** outward and turn it into the desired position.

– with Option 719 Billet pack Shadow OE



- The horizontal and vertical distances of the foot relative to the foot plate **1** can be adjusted by a 90° turn.

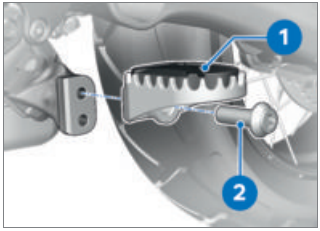
- Pull the foot plate **1** outward and turn it into the desired position.◁

FOOTRESTS

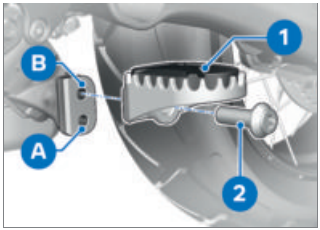
–with OE enduro package Pro

Adjusting the footrests

- The footrest is set the same way on the right and left.
- The position of the footrest must be set equally on the right and left.



- Remove screw **2**.
- Remove the rider foot peg **1**.



- Install the rider foot peg **1** in the desired position **A** or **B** and tighten the screw **2**.

	Rider foot peg on footrest joint
M10 x 30	
41 lb/ft (56 Nm)	

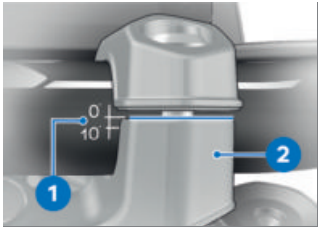
- After adjusting the foot pegs, adjust the foot plate at the brake lever and gearshift lever, if necessary.
- Adjust the gearshift lever foot plate. (➠ 147)
- Adjust the footbrake lever foot plate. (➠ 148)

HANDLEBARS

Adjustable handlebars

Have the handlebars adjusted by a repair shop, preferably an authorized BMW Motorrad dealer.

When adjusting the handlebars, check whether the mirror and windshield will collide.
Where appropriate, adjust the mirror arm accordingly.



The inclination of the handlebars is adjustable in the areas with the mark **1**. Align the marking **1** with the upper edge of the handlebar bridge **2**.

Additional components are needed to replace the handlebars. Have the handlebars replaced by a repair shop, preferably an authorized BMW Motorrad dealer.

Checking the hand guard

If the hand guard is twisted, not enough distance between the hand guard and handlebar lever can lead to continuous actuation of the handlebar lever. Interference with the clutch and/or brake function is possible.

- Check the position of the hand guard and free movement of the handlebar levers, particularly after the following events:

–Change in ergonomic settings
–Accident or fall
–Incorrect transport
–Loose screw connections



- Check the free movement between the hand guard **1** and handlebar levers **2** on the left and right.

If the handlebar lever touches the hand guard or the handlebar lever does not easily move forward out of the rest position:

- Have the hand guard aligned by a repair shop, preferably an authorized BMW Motorrad dealer.

The turn signals are integrated into the hand guard. If a hand guard is twisted out of position, the turn signal might not be correctly aligned in a way that is compliant with the German road traffic regulations.

RIDING

07

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FASTENING MOTORCYCLE IN PLACE FOR TRANSPORTATION 174

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 dealer 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.

Vehicle load

WARNING

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

–with aluminum case OA
- Ensure that case volumes on left and right are equal.
- Make sure that weight is uniformly distributed between right and left.
- Pack heavy pieces of luggage and cargo as low and as close to the center of the motorcycle as possible.
- Observe the maximum payload and maximum speed; also see the Accessories chapter (➠ 247).◁

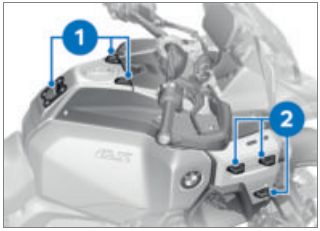
–with aluminum topcase OA
- Observe the maximum payload and maximum speed; also see the Accessories chapter (➠ 252).◁

–with tank bag OA
- Note the maximum payload and top speed of the tank bag.

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

Maximum speed when riding with loaded tank bag
max. 81 mph (max. 130 km/h)◁

Additional mounting elements



Additional mounting elements on the tank **1** and radiator cowls **2** provide the option of attaching BMW Motorrad accessories such as a tank bag and radiator cowl bags.

WARNING

Improper use of mounting elements

Impairment of driving stability and steering angle

- Use fasteners on the radiator cowl and tank only for BMW Motorrad accessories.

Maximum speed when riding with loaded tank bag
–with tank bag[OA]
max. 81 mph (max. 130 km/h)◁

Payload of tank bag
–with tank bag[OA]
max. 11 lbs (max. 5 kg)◁

Maximum speed for journeys with loaded radiator cowl bags
max. 81 mph (max. 130 km/h)

Payload of radiator cowl bags
max. 4 lbs (max. 2 kg)

More information on the topic of accessories is available at: **bmw-motorrad.com/equipment**.

Speed

Drive cold tires warm with care to extend the service life of your tires and ensure optimum road adhesion. Avoid powerful acceleration on cold tires. Slowly increase lean angles while driving the tires warm.

To prevent the tires from overheating and to extend the service life of your tires, avoid driving at maximum speed for long periods.

If you ride at high speed, always bear in mind that various boundary conditions can negatively affect the vehicle handling of your motorcycle. These include, but are not limited to, the following:
–Adjustment of the chassis
–Unevenly distributed load
–Loose clothing
–Insufficient tire pressure
–Tire tread in poor condition

Maximum speed with studded or winter tires

DANGER

Maximum speed of the motorcycle is higher than the permissible maximum speed of the tires
Risk of accident due to tire damage at high speed
- Observe the maximum speed applicable to the tires.

With studded or winter tires, the maximum permissible speed for the tires must be observed.

Attach a sticker specifying the maximum speed permitted within the field of view of the instrument cluster.

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.

Risk of burning

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.

WARNING

Opening the radiator cap
Risk of burning
- Do not open the radiator cap when it is hot.
- Check the coolant level exclusively at the expansion tank and top up if necessary.

Catalytic converter

There is a danger of overheating and damage if misfiring causes unburned fuel to enter the catalytic converter.
The following must be observed:
– Do not run the fuel tank dry.
– Do not run the engine with the spark plug connector 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 (➠ 208).
–Check operation of the lighting and signal system.
–without Automated shift assistant OE
–Check clutch function (➠ 213).
–Check tire tread depth (➠ 215).
–Check tire pressure (➠ 214).
–Check that the case and luggage are firmly secured.

At every third refueling stop

–Check engine oil level (➠ 206).
–Check front brake pad thickness (➠ 208).
–Check rear brake pad thickness (➠ 209).
–Check front brake fluid level (➠ 211).
–Check rear brake fluid level (➠ 212).
–Check the coolant level (➠ 213).

STARTING

Starting the engine

- Turn on the ignition. (➠ 95)

» Pre-Ride-Check and self-diagnoses are performed. (➠ 159)

- 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.

–with Automated shift assistant OE

If the motorcycle is started while idling, it is prevented from engaging the

gear when the side stand is folded out.
If a gear is engaged while the engine is running, the immobilizer P is automatically triggered when the side stand is folded out and the engine is switched off.◁

–with Automated shift assistant OE

When the starter button is pressed, Neutral N is automatically engaged. There may be a delay before the engine starts. The immobilizer is deactivated.◁

–with Automated shift assistant OE

- Apply the brake.◁

–without Automated shift assistant OE

- For cold start and at low temperatures: Pull clutch.◁



- Press and hold the starter button **1** until the engine starts.

The starting response may be affected by low temperatures. Repeated brief load on the battery increases the battery temperature and thus the available services for the engine start.

» If the engine fails to start, the troubleshooting chart in the chapter "Technical Data" may provide assistance (➠ 266)

Recharge the battery before you attempt to start the engine again, or get a jump start:

- Charge the connected battery. (➠ 230)
- Jump-starting. (➠ 227)

The starting attempt is automatically interrupted if battery voltage is too low.

Pre-Ride-Check and self-diagnosis

After the ignition is turned on, the instrument cluster performs a test of the display elements and of the indicator and warning lights. During the Pre-Ride-Check, all indicator and warning lights light up temporarily.

» If the instrument cluster remains dark after the ignition is turned on, the troubleshooting chart in the Technical

Data chapter may provide assistance. (➠ 268)

» The self-diagnosis checks the operational readiness of the BMW Motorrad ABS, and of the BMW Motorrad DTC.

 blinks.

 blinks slowly.

» The indicator and warning lights go dark once a riding speed of 3 mph (5 km/h) is reached.

» The self-diagnosis is completed.

If a fault message is displayed after self-diagnosis has been completed:

- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

BREAKING IN

Engine

- Up to the first break-in inspection, vary the throttle opening and engine-speed range frequently; avoid riding for long periods at a constant speed.
- Choose curvy, slightly hilly routes if possible.
- Observe the engine run-in speeds.

 Engine break-in speeds
<5000 min^{-1} (Odometer reading 0…621 miles (0…1000 km))
No full throttle (Odometer reading 0…621 miles (0…1000 km))

- Observe mileage, after which the break-in inspection should be performed.

 Mileage until 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 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. This breaking-in procedure is essential if the tire tread is to achieve maximum grip.
Read the tire manufacturer's information on how to break-in new tires correctly.

WARNING

Loss of adhesion of new tires on wet roads and at extreme angles
Accident hazard
- Always think well ahead and avoid extreme angles.

OFF-ROAD USE

During offroading
Tire pressure

WARNING

When driving off-road, lower tire pressure than riding on paved roads
Risk of accident due to poorer handling characteristics.
- Ensure proper tire inflation pressure.

Brakes

WARNING

Riding on unpaved or dirty roads
Delayed braking effect due to dirty brake discs and brake pads
- Brake early until the brakes are clean again.

ATTENTION

Riding on unpaved or dirty roads
Increased brake pad wear
- Check the brake pad thickness more often and replace the brake pads sooner.

Rims

ATTENTION

More intense off-road use than riding on dirt paths
Damage to the standard cast aluminum rims
- For more intense off-road use, use the cross-spoke wheels or forged enduro wheels available as optional equipment.

BMW Motorrad recommends checking the rims for possible damage after riding off-road.

–with off-road tires[OE]

Splash guard

ATTENTION

More intense off-road use and extended rides on dirt paths

Damage to the spray guard

- For more intense off-road use with cleated tires, remove the spray guard from the rear wheel.

Remove the spray guard (➠ 221).

Install the spray guard (➠ 224).

Air cleaner element

ATTENTION

Dirty air filter element

Engine damage

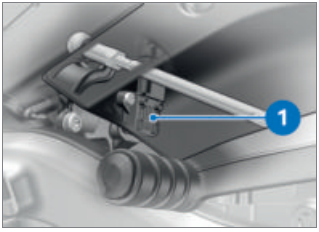
- When driving in dusty terrain, check air filter insert for soiling at short intervals and clean or replace if necessary.

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

GEAR SHIFT ASSISTANT PRO

–with Gearshift Assistant Pro[OE]

Function of the Gearshift Assistant Pro



- Engage the gears as usual with the foot-operated gearshift lever.

» The Gear Shift Assistant provides assistance for upshifts and downshifts, without the rider having to actuate the clutch or throttle grip.

–This is not an automatic gearshift system.

–The rider is an essential part of the system and decides when to shift gears.

–The sensor **1** on the gearshift shaft detects the intent to shift gears and triggers the shift assistance.

» If you are riding at constant speed and in coasting overrun in a low gear at high rotational speeds, shifting gears without clutch control can cause strong power-off re-

actions. BMW Motorrad recommends shifting gears with clutch control in these driving situations.
» Shift assistance is not available in the following situations:
– With clutch actuated.
– Gearshift lever is not in its initial position
- After a gearshift, you must fully release the gearshift lever before another gear shift with the Gear Shift Assistant Pro can take place.
- Further information on the Gear Shift Assistant Pro can be found in the chapter "Technology in detail" (➠ 196).

AUTOMATED SHIFT ASSISTANT (ASA)

– with Automated shift assistant OE

Establishing ride readiness

If drive-ready state is established while the motorcycle is on the center stand and the brake or throttle grip is not actuated, the neutral position is automatically engaged after a short time. This prevents accidental driving off when lowering from the center stand.
If the drive-ready state is already present, this is canceled when propping up and Neutral N is automatically engaged.

- Turn on the ignition. (➠ 95)
- Start engine. (➠ 158)
- Fold in side stand.
- Apply the brake.
- Engage the 1st gear using the gearshift lever.

» The motorcycle is ready to ride.
» The manual mode M is active.

Manual mode

Requirement

Ride readiness has been established.

- Open the throttle grip with caution to ride off.
- Upshifting and downshifting as usual by means of the gearshift lever.

» The gear shift is performed insofar as the rotational speed in the required gear is between the maximum and minimum RPM.

- After a gear shift, you must fully release the gearshift lever.
- To stop, close the throttle grip completely and decelerate to a standstill.

If the rotational speed falls below a gear-dependent minimum RPM, an automatic downshift will take place even

in manual mode. This prevents the engine from stalling.

- Select the neutral position N. (➠ 164)

Automatic mode
Requirement

Ride readiness has been established.

- Select automatic mode D (➠ 112).
- Open the throttle grip with caution to ride off.

» All gear shifts are performed automatically.

If the gearshift lever is used to shift up or down, automatic gear selection is temporarily suspended. Automated gear selection is resumed as soon as a harmonious transition becomes possible.

- To stop, close the throttle grip completely and decelerate to a standstill.
- Select the neutral position N. (➠ 164)

Selecting the neutral position
Requirement

The vehicle is at a standstill with the 1st gear engaged.

- Apply the brake.
- Press the gearshift lever down and hold for some time.



- Alternative: Press and hold button **1**.

N is displayed.

» The transmission is in the neutral position.

Immobilizer
Requirement

Vehicle stationary, engine running and 1st gear is engaged.

- Actuate the emergency-off switch.
- Alternatively, with the engine switched off and the transmission in neutral position N: Press the gearshift lever down.

P is displayed.

» The motorcycle is secured against rolling away.

–In rare cases, the position of the gearwheels in the

transmission may prevent the immobilizer from being engaged.

P blinks.

» Engaging the immobilizer has failed.

- Move the motorcycle forwards or backwards briefly.

P is displayed.

» The motorcycle is secured against rolling away.

- Turn off the ignition. (➠ 95)
- To release the immobilizer, select the neutral position N (➠ 164) or start the engine (➠ 158).

BRAKES

How do you achieve the shortest braking distance?

The dynamic load distribution between the front and rear wheel changes during braking. The greater the deceleration, the more load is transferred to the front wheel. Increases in the load on an individual wheel are accompanied by a rise in the effective brake 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 utilization of the dynamic load increase to the front wheel.

– without Automated shift assistant OE

The clutch should also be engaged at the same time.

With the frequently instructed "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 Integral ABS Pro.

Rear-end impact warning

If BMW Motorrad Rear End Collision Warning (RECW) detects a speed-dependent probability of collision, the hazard warning lights are activated briefly with an increased flashing frequency.

For more information on the Rear End Collision Warning

(RECW), see the chapter Technology in detail (➠ 187).

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.

–with Automated shift assistant OE

To make the best possible use of the engine brake when descending mountain passes, select the manual mode M (➠ 112).

Wet, soiled brakes

WARNING

Decreased braking effect due to moisture and dirt
Risk of accident
- Dry brakes or clean them through braking; if necessary, clean them manually.
- Brake early until the tires have reached their full braking effect again.

Moisture and dirt on the brake discs and the brake pads result in a decrease in the braking effect.
Delayed or decreased braking effect must be expected in the following situations:
–When riding in the rain and through puddles.
–After washing the vehicle.
–When riding on salted roads.
–After working on the brakes due to oil or grease residues.
–When riding on soiled roads or offroad.

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.

ABS Pro and the supporting function of the Dynamic Brake Control are available in all riding modes except Enduro PRO.

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
- Turn off the ignition. (➠ 95)

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.
- Turn handlebars to left.
- On slopes point the motorcycle uphill and engage 1st gear.

–with Automated shift assistant OE

- Select the immobilizer P. (➠ 164)

Center stand

–with center stand OE

–with OE adaptive vehicle height control

or

–with Adaptive vehicle height control Comfort OE

- Turn on the ignition. (➠ 95)◁

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

Folding in the center stand in case of strong movements

Component damage cause by tipping over

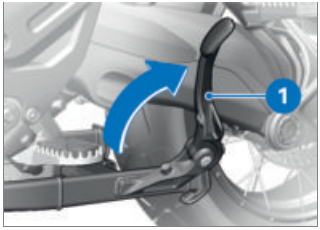
- Do not sit on the vehicle while it is resting on the center stand.

- Shift to neutral.

–with Automated shift assistant OE

- Shift to neutral N.◁

- On sloping roads, park the motorcycle in the "uphill" direction.



- Fold out the foot plate on the center stand **1**.
- Push the center stand down using the foot plate **1** and prop up the motorcycle.

–with OE adaptive vehicle height control

or

–with Adaptive vehicle height control Comfort OE

» The chassis is automatically set to the maximum height.

–After the motorcycle is propped up, the chassis is automatically set to the lowest height to increase the stability.◁

- Engage 1st gear.

–with Automated shift assistant OE

- Select the immobilizer P. (➠ 164)◁

WARNING

Incompletely folded away center stands touch the ground

Risk of accident

- Fold away the center stands completely before riding off.
- Fold away the foot plate completely before riding off.

- After the motorcycle is propped up, first fold away the center stand and then the foot plate on the center stand **1**.

–with OE adaptive vehicle height control

or

–with Adaptive vehicle height control Comfort OE

» After driving off, the last selected ride height is set automatically.◁

Function of the prop-up assistant

–with OE adaptive vehicle height control

or

–with Adaptive vehicle height control Comfort OE

The prop-up assistant provides support for propping up the vehicle on the center stand. Automatically increasing the chassis height results in beneficial leverage ratios for the center stand. The effort needed to prop up the motorcycle is decreased.

When the center stand is folded out, a sensor detects the intent to prop up the motorcycle and simultaneously aligns the chassis accordingly.

Actuating the prop-up assistant multiple times can drain the battery. There is a limit to repeated use of the prop-up assistant. For further attempts, the ignition must be turned off and then on again.

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 stationary periods. Your authorized BMW Motorrad dealer can provide you with more detailed information.

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

 Alternative fuel quality
Regular unleaded (restrictions with regard to power and fuel consumption.) (Max. 15 % ethanol, E15) 87 AKI (91 ROZ/RON) 87 AKI

» After refueling with lower quality fuels, there may occasionally be a knocking noise.

Refueling procedure
Requirement

Steering lock is unlocked.

WARNING

Fuel is highly flammable
Fire and explosion hazard
- Do not smoke. Never bring a naked flame near the fuel tank.

WARNING

Escaping of fuel due to expansion under exposure to heat with overfilled fuel tank
Accident hazard
- Do not overfill the fuel tank.

ATTENTION

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

–without center stand OE
- Put the motorcycle up on the side stand, ensuring that it is resting on a firm and level support surface.◁

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

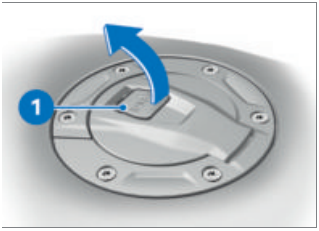
- Turn off the ignition. (➠ 95)

After the ignition is switched off, the fuel filler cap can be opened within the specified run-on time even without the radio-operated key being within the reception area.

After-running period for opening the fuel filler cap
2 min

» There are **2 ways** to open the fuel filler cap:
– Within the after-run period.
– After the after-run period is over.

Version 1
Requirement
Within the after-run period



- Slowly pull up the fuel cap tab **1**.

» Fuel filler cap unlocked.

- Open fuel filler cap completely.

Version 2
Requirement
After the after-run period is over

- Bring radio-operated key into reception range.
- Slowly pull up tab **1**.

» The indicator light for the radio-operated key blinks as long as the radio-operated key is being searched for.

- Slowly pull up the fuel cap tab **1** again.

» Fuel filler cap unlocked.

- Open fuel filler cap completely.



- Refuel with a fuel quality as specified above, but no higher than the lower edge of the fuel filler neck. 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.

Usable fuel quantity
approx. 7.9 gal (approx. 30 l)
Reserve fuel quantity
approx. 1.1 gal (approx. 4 l)

- Press fuel filler cap of fuel tank down firmly.

» Fuel filler cap snaps in audibly.

» The fuel cap automatically locks after the after-run period is over.

» The engaged fuel cap snaps in immediately when the steering lock is locked or the ignition is turned on.

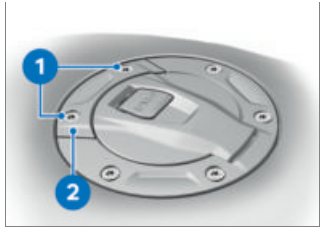
Open fuel filler cap emergency release

The fuel filler cap cannot be opened.

- Press firmly on the fuel filler cap.
- Turn the ignition off and on again.

» If the fuel filler cap still does not open:

- Have the fault rectified as soon as possible by a repair shop, preferably an authorized BMW Motorrad dealer.



- Remove screws **1**.
- Remove emergency release **2**.

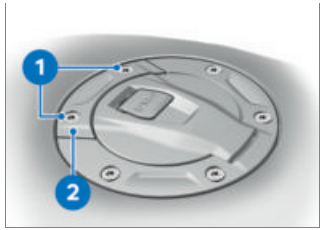
» Fuel filler cap unlocked.

- Open fuel filler cap completely.
- Refueling procedure. (➠ 171)
- Clean the area under the emergency release **2** .
- Close fuel filler cap emergency release. (➠ 173)

Close fuel filler cap emergency unlocking

Requirement

Fuel filler cap is closed.



- Position the emergency unlocking **2**.
- Install screws **1**.

FASTENING MOTORCYCLE IN PLACE FOR TRANSPORTATION

ATTENTION

Improper lashing down
Component damage
- Absolutely avoid lashing down on add-ons such as engine protection bars.
- Only fasten tensioning belts on described components.

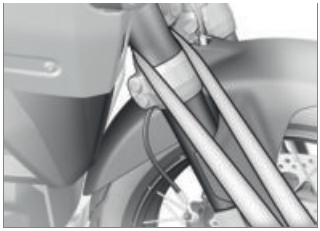
- Protect all components from being scratched where tensioning belts are routed, for example, by using adhesive tape or soft cloths.



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 transportation flat and hold it in position; do not place it on the side stand or center stand.
- Secure the motorcycle from tipping with support from a second person.



ATTENTION

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

- Pass the luggage straps on the left and right through the fork bridge and strap the motorcycle down.



- Fasten and tighten the tensioning belts at the rear on the brackets for the passenger footrests on both sides.
- Tension all luggage straps evenly so that the vehicle is securely fastened.

TECHNOLOGY IN DETAIL

08

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GENERAL NOTES

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

ANTILOCK BRAKING SYSTEM (ABS)

Fully integral brake

Your motorcycle is equipped with a fully integral brake. With this brake system, both the front and rear wheel brakes are actuated upon actuation of a brake lever (hand or footbrake lever).

When braking with active ABS control, BMW Motorrad full integral ABS adapts the brake force distribution between the front and rear wheel brakes to suit the vehicle load. The brake force distribution depends on the riding mode and can be individually adjusted.

ATTENTION

Attempt at a burn-out despite integral function

Damage to rear-wheel brake and clutch

- Do not perform burn-out.

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 surface. Gravel, ice, snow and wet roads offer a considerably lower coefficient of friction than a dry, clean asphalt surface. The lower the coefficient of friction of the road is, the longer the braking distance will be.

If the maximum transferable braking force is exceeded when the rider increases the brake pressure, the wheels begin to lock and riding stability is lost, and a fall can result. 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 riding stability regardless of the road condition.

In the factory setting, the ABS control for the rear wheel is deactivated when the ENDURO PRO riding mode is active.

What happens when rough roads are encountered?

Bumpy or rough roads can briefly lead to a loss of contact between the tires and the road surface, until the transferable braking force is reduced to zero. If the brakes are applied in this situation, the antilock braking system must reduce the brake pressure to ensure riding stability when road contact is restored. At this time, the BMW Motorrad Integral ABS Pro has to assume extremely low coefficients of friction (gravel, ice, snow) so that the running wheels rotate in every conceivable case and, as a result, the riding stability is ensured. After detecting the actual conditions, the system adjusts the optimum brake pressure.

In what ways is the BMW Motorrad Integral ABS Pro noticeable to the rider?

If the ABS system has to reduce the braking force due to the conditions described above, then a pulsation can be felt through the brake lever.
If the brake lever is pulled, then brake pressure is built up at the rear wheel with the integral function. The built-up brake pressure can be felt earlier as counter pressure if the footbrake lever is actuated before the brake lever.

Lifting off rear wheel

However, during extremely heavy and rapid decelerations it is possible that the BMW Motorrad Integral ABS Pro 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.

How is the BMW Motorrad Integral ABS Pro designed?

The BMW Motorrad Integral ABS Pro ensures riding stability on any surface within the limits of riding physics. The system is not optimized for the special requirements encountered under the extreme conditions

of competitive off-road and racetrack use. Handling should be adapted to riding skills and road conditions.

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 fault is displayed. A self-diagnosis must be completed before the fault message can be displayed.
In addition to problems at the BMW Motorrad ABS, unusual riding conditions can also result in a fault message:

– Warm-up on the center or auxiliary stand in neutral or with gear engaged.
– Rear wheel locked-up for a longer period of time by engine brake, e.g. when riding downhill on slippery surfaces.

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

How important is regular preventive maintenance?

WARNING

Failure to have maintenance performed on the brake system regularly.
Accident hazard

- To ensure that the ABS is in a properly maintained condition, it is vital that the specified service intervals be observed.

Reserves for safety

The potentially shorter stopping distances which BMW Motorrad Integral ABS Pro permits must not be used as an excuse for a careless riding style. 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.

Further development of ABS to ABS Pro

In the past, the BMW Motorrad ABS system provided for a very high level of safety while braking during straight-ahead riding. Now ABS Pro also offers increased safety even when performing the braking process around curves. ABS Pro prevents the wheels from locking up, even in the event that the brakes are applied quickly. ABS Pro reduces abrupt changes in steering forces, especially during shock braking, and therefore decreases the risk of the occurrence of inadvertent lift-off of the vehicle.

ABS control

From a technical standpoint, ABS Pro adjusts the ABS control to the angle of inclination of the motorcycle based on the respective riding situation. Signals for the roll and yaw rate and the lateral acceleration are used to determine the inclination of the vehicle.

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 around curves.

DYNAMIC TRACTION CONTROL (DTC)

How does traction control work?

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. DTC factors in the lean angle and uses lean angle and acceleration information to regulate traction more precisely and smoothly.

BMW Motorrad DTC is designed as a rider assistance system for riding on public streets. The extent to which the rider affects 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.
The ENDURO riding mode should be activated for off-road riding. In this mode, the adjusting intervention by the 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 DTC can be switched off in such instances.

WARNING

Risky riding style
Risk of accident despite 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 the angle of inclination increases, the capacity to accelerate is more and more limited in accordance with the laws of physics. This can result in reduced acceleration when coming out of very tight curves.

If the values for the lean angle are detected to be implausible for a long period, a substitute value is used for the angle, or the DTC function is turned off. In these cases, a DTC fault is displayed. A self-diagnosis must be completed before the fault message can be displayed.
Under the following unusual riding conditions, the traction control may be turned off automatically.

Unusual riding conditions:
– Riding on the rear wheel (wheelie) for an extended period.
– Rear wheel spinning in place with front wheel brake engaged (burn out).
– Warming up the engine on an auxiliary stand in neutral or with gear engaged.

If the front wheel loses contact with the ground under extreme acceleration, the DTC reduces the engine torque depending on the riding mode or the DTC setting, until the front wheel is touching the ground again. BMW Motorrad recommends that you respond to the front wheel lifting off by letting off on the throttle grip somewhat to return to a stable riding state as quickly as possible.

DYNAMIC ENGINE BRAKE CONTROL (MSR)

How does engine drag torque control work?

The purpose of the engine drag torque 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 dynamic engine brake control limits slip at the rear wheel to a safe, setpoint slip that is dependent on the mode and angle.

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 DTC traction control, the dynamic engine brake control compares the wheel circumferential velocities of the front and rear wheel. With the aid of more information on the angle, the dynamic engine brake control can determine the slip or the stability reserve at the rear wheel.
If the slip exceeds the respective limit value, engine torque is increased by slightly opening the throttle valves. The slip is reduced, and the vehicle is stabilized.

BATTERY GUARD

What is the Battery Guard?

The Battery Guard monitors the battery state of charge or battery voltage. The Battery Guard prevents deep discharge of the battery and helps you to keep the battery properly charged.

How does the Battery Guard work?

When the vehicle is shut off, once a day the state of charge or voltage of the battery is checked. If the detected values are too low, a warning message appears after the ignition is turned on.

Depending on the availability of the BMW Motorrad Teleservices, warning messages can also be issued through electronic notifications. More information on the BMW Motorrad Teleservices is available from your authorized BMW Motorrad dealer.

The Battery Guard responds in multiple levels:

– **Low state of charge**: 12 V socket is activated. A connected battery charger can recharge the battery.

In combination with BMW Motorrad Teleservices:

– **Low state of charge**: Every three days, a warning message is issued with a prompt to charge the battery.
– **Critical state of charge**: Every day, a warning message is issued with a prompt to charge the battery.

DEACTIVATION CONCEPT

What is the deactivation concept?

When the ignition is turned on, the electrical system voltage and the state of charge of the battery are monitored. If there are too many electrical loads, such that the alternator no longer covers the current demand, the deactivation concept takes effect. As a result, comfort functions are degraded or deactivated according to demand to ensure that driving can continue. In the event of a shutoff, a warning message appears in the instrument cluster.

The deactivation concept achieves the following:

– Stabilizes the electrical system voltage
– Ensures a positive charge-discharge balance
– Provides relief for the 12 V vehicle battery
– Provides relief for components and the wiring harness

DISTANCE CONTROL (ACC)

–with Riding Assistant[OE]

What is ACC?

BMW Motorrad ACC is cruise control with distance control. The function enables the rider to specify a desired speed and desired distance from the vehicle in front. Cruising speed is automatically maintained as long as the distance to the road user directly ahead does not undershoot the distance selected by the rider. If it is undershot, the speed is reduced until the desired distance is reached again.

The rider is still in charge and can intervene at any time and overrule ACC.

The ACC function has two characteristics: `Comfortable` and `Dynamic`. These influence the acceleration and deceleration behavior during the control process.

How does ACC work?

Objects in front are detected by the front radar sensor. At the same time, the radar sensor uses the yaw rate and driving speed to determine the predicted travel path, i.e. the corridor in which the motorcycle will move in the next approx. 328.1 ft (approx. 100 m). If one of the detected objects is located in the driving path, a response is triggered and the speed is adjusted to ensure that the desired distance to the object is achieved.

Control functions of ACC

ACC control is divided into the three following control functions:

–**Cruise control**: The speed stored by the rider is adjusted.

–**Distance control**: The speed stored by the rider is adjusted while the distance to the vehicles in front is taken into account.

–**Curve control**: When cornering, the speed may be reduced and the system will attempt to achieve a comfortable lean angle (e.g. 20°). In addition, the braking and acceleration dynamics are limited as the angle increases so that the rider is not surprised by sudden braking or acceleration maneuvers. For example, curve control prevents unexpected acceleration when an object is lost and the selected speed is too high. An object can be lost if the vehicle in front is only detected by

the radar to a limited extent when it is traveling around the curve.

Speed range of ACC

The ACC function can be activated in the following speed ranges:

–19...99 mph (30...160 km/h)

–If ACC is activated in the speed range higher than 99 mph (160 km/h), the maximum speed of 99 mph (160 km/h) is selected.

Influence on the ACC performance

The rider can support the performance of ACC through the following behavior:

–Steady riding style.

–Drive as close to the center of the lane as possible behind the vehicle in front.

–Clearly change lanes during passing maneuvers to support the deselection of the vehicle in front.

–Return to the lane behind vehicles in front as soon as possible to provide time for object selection.

FORWARD COLLISION MITIGATION (FCW)

–with Riding Assistant OE

What is FCW?

BMW Motorrad FCW is a forward collision warning system, which warns the rider of critical situations in parallel traffic and provides support for identifying and handling them. The function provides collision warnings and brake assistance. Collision warnings are triggered visually by the instrument cluster and haptically by warning pulses. There are two levels of collision warnings: the prewarning and the acute warning. At minimum, the prewarning is visually displayed in the instrument cluster. If enabled in the menu, a haptic warning is simultaneously output as a warning pulse (➠ 123). The warning pulse draws the rider's attention to the hazardous situation.

If the situation becomes even more critical, then the second step, the acute warning, follows. At minimum, the acute warning is visually displayed in the instrument cluster. If enabled in the menu, the brake assist bridges the response

time of the rider by braking lightly (➠ 123).

Time-based warning threshold

To determine when the rider should be warned, the system calculates how long the rider can continue riding under the current dynamics until the rider can prevent the collision only with a controlled braking maneuver.

The warning thresholds can be postponed slightly, depending on the rider's attentiveness. An attention estimator evaluates both the current riding dynamics and potential interactions of the rider with the motorcycle to determine how attentively the rider is watching the traffic ahead.

The time of the warning threshold can be set to `Early`, `Medium` and `Late`.

Speed range of FCW

The FCW function can monitor the traffic ahead and intervene in the following speed ranges:
–19...99 mph (30...160 km/h)

Cross effect on ACC

The FCW is implemented in such a way that no Forward Collision Mitigation is triggered during an approaching maneuver when ACC is active. The ACC responds primarily to objects in its own lane. Therefore, the FCW may consider a vehicle cutting suddenly into the lane to be a critical object before the ACC identifies it as a vehicle ahead. In this case, Forward Collision Mitigation can also be triggered when ACC following mode is active. Unlike ACC, the FCW does not have to be reactivated for every ride.

REAR-END IMPACT WARNING (RECW)

–With rear-end impact warning OE

What is RECW?

The BMW Motorrad Rear End Collision Warning (RECW) is a rear-end impact warning system to prevent accidents. The function is there to prevent impacts by issuing impact warnings. Detected vehicles with a speed-dependent impact probability within the same lane are warned by

an increased frequency of the directional signals.

Influence on the RECW performance

The following conditions support the effectiveness of RECW:
–Steady riding style
–Straight road alignment
–No offset riding within a lane
–Inclined positions, max. 25 degrees

LANE CHANGE WARNING (SWW)

–with Riding Assistant OE

What is the lane change warning?

The BMW Motorrad lane change warning monitors the traffic in back and signals critical driving situations to the rider before a lane change.

How does the lane change warning work?

The rider is warned if the rear radar sensor detects other road users approaching in an adjacent lane or in the blind spot to the side behind the vehicle. A distinction is made here between an information warning and an acute warning. For this purpose, the system detects the initiation of a lane change when the turn signal is actuated and warns the rider of imminent danger in good time. The warning zone increases in size as the speed differential increases, so that the system can also issue warnings about vehicles that are approaching quickly.

Lane change warning condition

The lane change warning is subject to the system conditions described in the following:
–**Rear radar range**: The radar sensor has a maximum field of vision of approx. 262.5 ft (approx. 80 m). A timely collision warning is possible up to a speed difference of 50 mph (80 km/h) with the approaching vehicle.
–**Speed ranges**: Warning messages are output at speeds above 11 mph (18 km/h) and remain as the speed decreases until 9 mph (15 km/h). During passing procedures, warning messages are output as long as the speed difference with the passed vehicle is less than 9 mph (15 km/h).

– **Rear radar detection on curves**: The full extent of radar detection is available for lean angles up to 25 degrees.

CHASSIS AND SUSPENSION ADJUSTMENT (DSA)

How does the dynamic chassis and suspension adjustment DSA work?

Dynamic Suspension Adjustment (DSA) is a semi-active chassis and suspension system that automatically responds to riding maneuvers and to the road condition. Using a ride height sensor, DSA detects movements of the running gear and responds to them by adjusting the damper valves. In addition, the chassis and suspension characteristics can also be adjusted to suit the desired riding experience. Depending on the riding mode, the spring rate is also automatically adjusted for this purpose in addition to the damping.

Vehicle load compensation

The dynamic chassis and suspension adjustment DSA automatically adapts the motorcycle to the vehicle load. The rider does not have to take care of the vehicle load setting. When the motorcycle is started and while it is being ridden, the system monitors the spring compression and corrects the spring setting to ensure that the correct riding position is set. The damping is also automatically adjusted to the vehicle load.

If the vehicle load is changed while at a standstill, this will affect the distance between the rider's feet and the ground until the load compensation feature adjusts the ride height to the new vehicle load.

– with OE adaptive vehicle height control

or

– with Adaptive vehicle height control Comfort OE

Ride height control

The adaptive vehicle height control automatically adapts the ride height depending on riding speed. After you ride off, the chassis changes to the high ride height. When you stop, the chassis automatically returns to the low ride height and thereby makes it easier for you to reach the ground.

Depending on the riding mode, the ride height can also be adjusted manually.

Ranges of adjustment for ride height
–Auto: Automatic ride height setting
–High: Continuously high ride height

In the ENDURO and ENDURO PRO riding modes:
–Low: Continuously low ride height
–High: Continuously high ride height

Range of adjustment for damping
–Road: Damping for comfortable road travel
–Dynamic: Damping for dynamic road travel

In the ENDURO and ENDURO PRO riding modes:
–Enduro: Damping for off-road riding

For more customization, you can adjust the damping properties in five levels.

RIDING MODE

Selection

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

–ECO
–RAIN
–ROAD (standard mode)
–ENDURO

–with riding modes Pro[OE]
–DYNAMIC
–DYNAMIC PRO
–ENDURO PRO

The riding mode preselection can be used to select a maximum of four riding modes.

For each of these riding modes, there is a coordinated setting for the systems DTC, ABS, MSR as well as for the engine characteristics and automatic shifting.

Coordination of the DSA also depends on the selected riding mode.

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
–ECO: Restrained
–RAIN and ENDURO: Soft
–ROAD and ENDURO PRO: Optimum
–DYNAMIC and DYNAMIC PRO: Direct
–DYNAMIC PRO and ENDURO PRO: The throttle response

can be set individually (➠ 110).

–with Automated shift assistant OE

Automatic shifting

–ECO: Automated shifting for high efficiency.
–RAIN, ROAD, ENDURO and ENDURO PRO: Optimum automatic shifting.
–DYNAMIC and DYNAMIC PRO: Automatic shifting for maximum drive power.
–DYNAMIC PRO and ENDURO PRO: Automatic shifting can be set individually (➠ 110).

ABS

In the factory setting, the ABS control for the rear wheel is deactivated when the ENDURO PRO riding mode is active.

Setting

–ROAD, DYNAMIC, ENDURO and ENDURO PRO: The ABS setting corresponds to the respective riding mode.
–ECO and RAIN: The ABS setting corresponds to the riding mode ROAD.
–DYNAMIC PRO: The ABS setting corresponds to the riding mode DYNAMIC.
–DYNAMIC PRO and ENDURO PRO: The ABS can be set individually (➠ 110).

Coordination

–ECO, RAIN, ROAD, DYNAMIC and DYNAMIC PRO: The ABS is set for road use.
–ENDURO: The ABS is adjusted to off-road use with road tires.
–ENDURO PRO: There is no ABS-control at the rear wheel if the footbrake lever is actuated. The ABS is adjusted to off-road use with cleated tires.

Rear wheel lift-off detection

–ECO, RAIN and ROAD: The driver is supported as much as possible by the rear wheel lift-off detection.
–DYNAMIC, DYNAMIC PRO and ENDURO: The rear wheel lift-off detection offers reduced support and permits gentle lift-off of the rear wheel.
–ENDURO PRO: The rear wheel lift-off detection is inactive.

ABS Pro

–ECO, RAIN and ROAD: ABS Pro is fully available.
–DYNAMIC, DYNAMIC PRO and ENDURO: The support from ABS Pro is reduced

compared to ECO, RAIN and ROAD.
– ENDURO PRO: In the standard setting, ABS Pro is not available.

Brake force distribution
Actuating the front wheel brake
– ECO, RAIN and ROAD: The brake power is maximally distributed to the rear wheel.
– DYNAMIC and DYNAMIC PRO: The distribution of brake power to the rear wheel is reduced compared to ECO, RAIN and ROAD.
– ENDURO: The distribution of the brake power to the rear wheel is reduced and set for off-road use.
– ENDURO PRO: The brake power is distributed to the rear wheel as much as possible and is adapted to off-road operation.

Actuating the rear wheel brake
– ECO, RAIN and ROAD: The brake power is distributed to the front wheel as much as possible.
– DYNAMIC and DYNAMIC PRO: The distribution of brake power to the front wheel is reduced compared to ECO, RAIN and ROAD.
– ENDURO: The distribution of the brake power to the front wheel is reduced and set for off-road use.
– ENDURO PRO: The brake force distribution is inactive.

DTC
Tires
– ECO, RAIN, ROAD, DYNAMIC and DYNAMIC PRO: DTC is adjusted to road use with road tires.
– ENDURO: DTC is adjusted to off-road use with road tires.
– ENDURO PRO: DTC is adjusted to off-road use with lugged tires.

Riding stability
– RAIN: Intervention of the DTC occurs at such an early stage that maximum ride stability is achieved.
– ECO, ROAD and DYNAMIC PRO: The intervention of the DTC occurs later than in the RAIN riding mode. Rear wheel spinning without traction is avoided wherever possible.
– ECO, RAIN, ROAD and DYNAMIC PRO: The front wheel is prevented from lifting off. Front wheel lift-off detection is deactivated in the

ENDURO PRO riding mode, so wheelies of any duration and height are possible. In extreme cases, the vehicle can roll over backward!
– DYNAMIC: The DTC intervenes later than in riding modes ECO, ROAD and DYNAMIC PRO, so that minor drifts and brief wheelies are possible at the end of curves.
– ENDURO: The DTC intervenes and is set for off-road use. Brief wheelies are possible at the end of curves.
– ENDURO PRO: The control of the DTC assumes that lugged tires are used in off-road operation. The intervention of the DTC occurs later than in the ENDURO riding mode.

ENDURO PRO and DYNAMIC PRO: DTC can be set individually (➠ 110).

Effect of the engine drag torque control
– ECO, RAIN and ROAD: Maximum stability.
– DYNAMIC and DYNAMIC PRO: High stability.
– ENDURO: Reduced stability.
– ENDURO PRO: The engine drag torque control is inactive.

Switchover
Riding modes can be changed when the vehicle is at a standstill with the ignition turned on. Riding mode changeover while driving is possible in 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.
– Deactivate the 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.

ECO mode
The ECO mode supports the rider by means of the ECO indicator and engine characteristics (E-gas adjustment) in the targeted operation of the combustion engine within the operating range of the partial load cam, which is the optimum

for consumption, and thus to achieve a maximum range. The fill level of the green bar of the ECO indicator in the instrument cluster visualizes whether the drive is operating in the consumption-optimized range of the partial load cam and, if so, at which distance to the switching threshold. The length of the bar here represents the remaining load reserve to the point of the switch to the full load cam. The color turns gray if the load requirement increases and a change to the full load cam has taken place. The ECO display varies depending on the selected gear, the load requirement and rotational speed.
Applying a defensive riding style can further reduce fuel consumption (➠ 200).

DYNAMIC BRAKE CONTROL

Dynamic Brake Control function

The Dynamic Brake Control function is inactive in riding mode ENDURO PRO. It can also be deactivated in riding mode DYNAMIC PRO by individually setting the ABS.

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 min. 6 mph (min. 10 km/h), in addition to the ABS function, the Dynamic Brake Control function will also be activated.
– In the event of partial braking with high brake pressure gradients, Dynamic Brake Control will increase the integral brake pressure on the rear wheel. This shortens the braking distance, enabling controlled braking.

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 Dynamic Brake Control, the engine torque required by the ABS brake system will be restored.
–If hazard braking has ended but the throttle grip is still being actuated, Dynamic Brake Control returns the engine torque to that required by the rider in a controlled manner.

TIRE PRESSURE MONITOR (RDC)

Function

A sensor located in each tire monitors the air temperature and the tire pressure and transmits this information to the control unit.
The sensors are equipped with a centrifugal controller, which does not enable the transmission of the measured values until the minimum speed is exceeded for the first time.

 Minimum speed for the transmission of the TPC measured values:
min. 19 mph (min. 30 km/h)

Before initial reception of the tire pressure, -- is shown in the display for each tire. The sensors continue to transmit the measured values for some time after the vehicle comes to a stop.

 Transmission time of the measured values after vehicle standstill:
min. 15 min

If an RDC (TPM) control unit is installed on wheels without sensors, a fault message is issued.

Tire inflation pressure ranges

The RDC control unit distinguishes between three inflation pressure ranges matched to the motorcycle:
–Tire pressure within the permissible tolerance
–Tire pressure within the limit range of the permissible tolerance
–Tire pressure outside of the permissible tolerance

Temperature compensation

The tire pressure is temperature dependent, i.e. it increases or decreases together with the tire air temperature. The tire temperature is dependent on the outside temperature, the

riding style and the length of the journey.
The tire pressures are shown in the multifunction display with temperature compensation and are always based on a tire air temperature of 68 °F (20 °C). Tire pressure gauges at filling stations do not compensate for temperature; the tire pressure that is measured depends on the tire air temperature. As a result, in most cases the values displayed there do not match the values shown in the display.

Tire pressure adjustment

Compare the RDC value in the instrument cluster with the value on the back cover of the rider's manual. The difference between the two values must be compensated with the tire pressure gauge at the filling station.

 Example
According to the rider's manual, the tire pressure should have the following value:
36.3 psi (2.5 bar)
The following value is displayed in the instrument cluster:
33.4 psi (2.3 bar)

 Example
The shortfall is thus:
2.9 psi (0.2 bar)
The tester at the filling station shows:
34.8 psi (2.4 bar)
To produce the correct tire pressure, this must be increased to the following value:
37.7 psi (2.6 bar)

GEAR SHIFT ASSISTANT

–with Gearshift Assistant Pro OE

Gear Shift Assistant Pro

Your motorcycle is equipped with the Gear Shift Assistant Pro originally developed for racing but now specially adapted for touring use.
It allows you upshift and downshift under almost any load conditions and in virtually all engine-speed ranges without operating the clutch or accelerator.
The engine control supports the gear change depending on:
–Desired target gear
–Engine speed
–The position of the throttle grip

The decision about using the Gearshift Assistant lies with the rider, who must take into account the driving situation as well as aspects of safety and comfort.

Benefits

–Most of the gear shifts can be done without the clutch.
–Less movement between rider and passenger due to shorter gear-change intervals.
–The throttle grip does not have to be closed during acceleration.
–During downshifting (throttle grip closed), double-clutching is used to change the RPM.
–Shifting times are faster than when the clutch is used to shift gears.

For a gearshift request to be detected, the rider has to move the previously unused gearshift lever at a medium to fast speed in the desired direction and up to the mechanical stop of the shift control. After the gear change is completed, the gearshift lever must be fully released before the Gear Shift Assistant Pro can execute a new gear change. To achieve optimum shift quality with the Gearshift Assistant Pro, the respective load condition (throttle position) must be kept constant before and during the gear shift. In the case of gear shifting with clutch control, there is no support from the Gearshift Assistant Pro.

Downshifts

–Downshifts are assisted up to the speed at which the engine reaches maximum rpm in the gear to be engaged. Overrevving is thus prevented.

 Maximum engine speed
max. 9000 min^{-1}

Upshifts

–Upshifting is possible until engine speed undershoots idle speed in the required gear. This prevents the idle speed from being undershot.
–A certain loss of comfort and perceptibly sharper power-off reactions may be felt if the rider upshifts in overrun mode, particularly in low gears.

AUTOMATED SHIFT ASSISTANT (ASA)

–with Automated shift assistant[OE]

Functional principle of the automated shift assistant (ASA)

The automated shift assistant is the logical and technical further development of the already proven shift assistant Pro. Electronically controlled actuators actuate both the clutch and the gearshift forks and thus enable automated gear shifts without input from the rider.

In manual mode M, the rider can actuate the gearshift lever in the desired direction as usual to detect a gearshift request. If the rotational speed in the target gear is within the maximum or minimum speed, the shift operation is directly implemented. If the rotational speed falls below a gear-dependent minimum RPM, an automatic downshift will take place even in manual mode. This prevents the engine from stalling.

In automated mode D, gear shifts are implemented depending on the following parameters:
–Riding mode
–RPM
–Throttle grip actuation
–Brake actuation
–Inclined position

The gear shifts are initiated according to the driving situation and dynamic requirements.

Benefits

–Dynamic and comfortable gear shifts.
–Complete omission of clutch control by the rider.
–Selection between automated and manual gear shifts.
–Automatic adaptation of the shift behavior to the rider's dynamic request in automated mode D.
–Any stalling of the engine due to unfavorable gear shifts is prevented.

HILL START CONTROL (HSC)

Hill Start Control function

The Hill Start Control prevents uncontrolled rolling back on slopes by means of targeted intervention in the integral ABS brake system, without the rider having to operate the brake lever continuously. When Hill

Start Control is activated, pressure builds in the rear brake system so that the motorcycle remains stationary on a sloping surface.
The brake pressure in the brake system depends on the gradient.

Influence of gradient on brake pressure and starting behavior

–Stopping on a slight incline builds up only a small amount of brake pressure. The brake is released quickly when riding off.
–Stopping on a steeper slope increases the amount of brake pressure built up. The brake is a bit slower to release when riding off. More torque is required to ride off, making additional turning of the throttle grip necessary.

Behavior when the vehicle is rolling back or slipping

–The brake pressure increases when the vehicle is rolling back with the Hill Start Control activated.
–If the rear wheel slips, the brake is released again after approx. 3.3 ft (approx. 1 m). This prevents the vehicle from slipping with a locked rear wheel, for example.

–with riding modes Pro[OE]

Hill Start Control Pro

It is possible to automatically activate the holding function using Hill Start Control Pro.

Releasing the brake when switching off the engine or during timeout

Hill Start Control is deactivated when the engine is stopped using the emergency-off switch, when the side stand is folded out or after timeout (10 minutes).
In addition to indicator and warning lights, the following vehicle behavior should make the rider aware that the Hill Start Control is deactivated:

Brake warning jerk

–The brake is released briefly and is immediately reactivated.
–This causes a jerking behavior that the rider can feel.
–The integral ABS brake system sets a speed of approx. 1…1 mph (approx. 1…2 km/h).
–The rider must brake the vehicle manually.
–After two minutes, or when the brake is applied, Hill Start

Control is deactivated completely.

When the ignition is switched off, the holding pressure is built up immediately and without brake warning jerk.

SHIFTCAM

ShiftCam functional principle

The vehicle is equipped with BMW ShiftCam technology—a technique for varying the valve timing and the valve stroke on the intake side. The centerpiece of this technology is an intake trip camshaft that has two cams per valve to be actuated: one for partial load and one for full load. The partial load cam has been developed with regard to fuel economy optimization and smooth running. The partial load cam reduces both the valve timings adapted for this purpose and the intake valve stroke. Furthermore, the intake cams for the left and right intake valve differ in stroke and angle position when the partial load cam is activated. This causes a staggered opening of the two intake valves at different widths. The advantage is that the fuel-air mixture flowing into the combustion chamber is more strongly swirled and more effectively burned. Overall, this results in optimal fuel efficiency and noticeably improves the smoothness of running. The full load cam is optimized for performance and releases the maximum intake valve stroke. In order to vary the valve timing and the valve stroke, the intake camshaft is shifted axially. For this purpose, the pins of an electromechanical actuator mesh with a shift gate on the intake camshaft. This allows for the actuation of the intake valves depending on load and motor speed and, as a result, an uncompromising symbiosis of performance and low fuel consumption.

ADAPTIVE HEADLIGHT

–with Headlight Pro OE

How does the adaptive headlight work?

In addition to the low-beam headlight, high-beam headlight and, where appropriate, daytime driving lights or parking lights, the main headlight is equipped with separate LED segments for the adaptive headlight. Depending on the lean angle, the LED segments

are also turned on for the low-beam headlight to improve illumination of the inner area of the curve.

–with adaptive light modes[OE]

How do the adaptive headlights work?

The adaptive headlight enables LED segments to be turned on individually even for the high-beam headlight and additionally depending on the speed. As a result, the adaptive headlight achieves an optimum beam of light, which follows the curve radius, and thereby improves the riding experience and riding safety.

MAINTENANCE

09

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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 "Technical data" chapter.

Special tools and thorough specialized knowledge are required to carry out some of the work described here. If in doubt, contact a repair shop, preferably an authorized BMW Motorrad dealer.

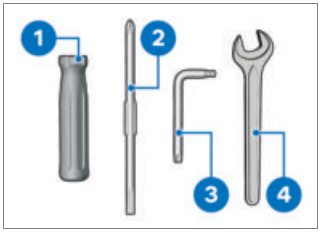
Microencapsulated screws

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. Regardless of the removal or installation, the hole must always be cleaned. After removal, the internal thread must be cleaned to remove adhesive. During installation, a new microencapsulated screw must be used. Before removal, make sure that you have suitable tools for cleaning the thread and a new 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!

Disposable cable ties

Occasionally cables and wires are secured with disposable cable ties. To prevent cables and wires from getting damaged during removal, a suitable tool must be used, e.g. diagonal cutting pliers.
For reinstallation, cables and wires that were cut free must be secured with new disposable cable ties.
Protrusions should be cut off with cable tie pliers.

ONBOARD VEHICLE TOOL KIT



1 Screwdriver handle
–Use with screwdriver insert

2 Reversible screwdriver insert
with Phillips and slotted blade
–Disconnecting battery from motorcycle. (➠ 231)

3 Torx wrench, T25/T30
T25 on short end, T30 on long end
–Remove the right tank cover. (➠ 226)
–Adjust the gearshift lever foot plate. (➠ 147)
–Readjust the headlight range. (➠ 145)

4 Open-ended wrench
Key range: 14 mm
–Adjust the mirror arm. (➠ 144)

FRONT WHEEL STAND

Installing front wheel stand

ATTENTION

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

- Ensure that the motorcycle is standing securely.
- Put the motorcycle on an auxiliary stand; BMW Motorrad recommends the BMW Motorrad rear-wheel stand.
- Attach the rear-wheel stand. (➠ 206)

–with center stand[OE]
- Make sure the ground is level and firm and put the motorcycle on its center stand.◁



- 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 vehicle. Your authorized BMW Motorrad dealer 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 vehicle. Your authorized BMW Motorrad dealer will be very happy to assist you in choosing the suitable auxiliary stand.

ENGINE OIL

Checking the engine oil level

To prevent unnecessary pollution of the environment, BMW Motorrad recommends checking the engine oil after riding min. 31 miles (min. 50 km).

ATTENTION

Misinterpretation of the oil capacity because the oil level is temperature-dependent (the higher the temperature, the higher the oil level)

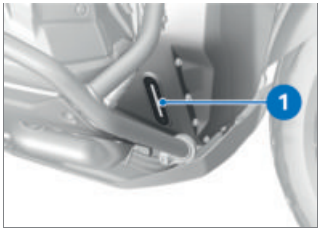
Engine damage from incorrect filling

- Only check the oil level after an extended ride or when the engine is warm.
- Run the engine in Neutral until the fan starts.
- Keep the motorcycle vertical with the engine idling for at

least 20 seconds, then turn off the engine.

For the engine oil level to be determined correctly, the vehicle must be in the riding position (vertical). Do not park the motorcycle on the center stand or auxiliary stand.

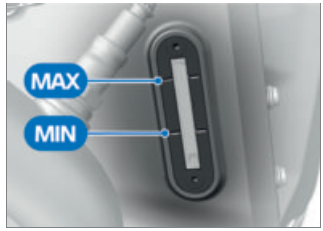
- Wait a minute so that the oil can collect in the oil reservoir.
- Continue to hold the motorcycle vertical.



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**.

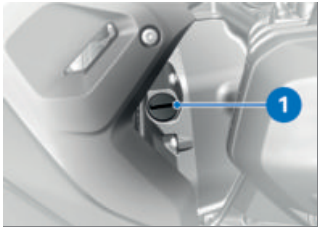


Specified level of engine oil
Between the **MIN** and **MAX** marks

If the oil level is below the **MIN** mark:
- Top up engine oil. (➠ 207)

When the oil level is at the top edge of the indicator **1**:
- Have the oil level corrected at a repair shop, preferably an authorized BMW Motorrad dealer.

Topping up the engine oil
- Park the motorcycle, making sure the ground is level and firm.
- Clean the area around the oil filler opening.



- Remove cap **1** of oil filler opening.

ATTENTION

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

- If the oil level is below the **MIN** mark, top up with max. 0.5 quarts (max. 0.5 l) engine oil.
- Install cap **1** of oil filler opening.
- Check engine oil level. (➠ 206)

BRAKE SYSTEM

Checking brake function
- Actuate the brake lever.

» The resistance point must be clearly perceptible.
- Press the footbrake lever.

» The resistance point must be clearly perceptible.

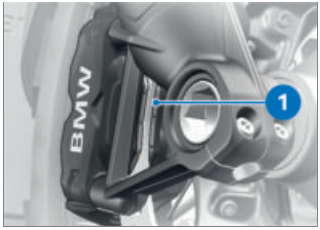
If resistance points are not clearly perceptible:

ATTENTION

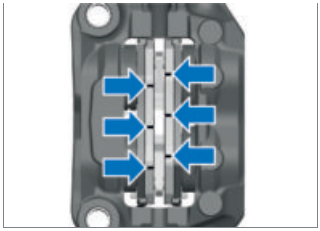
Improper working on the brake system
Endangering of the operating safety of the brake system
- Have all work on the brake system carried out by experts.

- Have the brakes checked by a repair shop, 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 left and right brake pads to ascertain their thickness. Viewing direction: between wheel and front suspension toward brake pads **1**.



Front brake-pad wear limit
0.03 in (0.8 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.

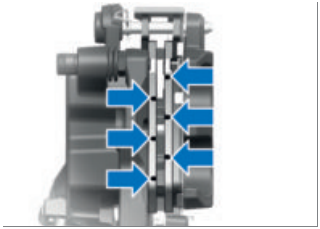
- Have brake pads renewed at a repair shop, preferably an authorized BMW Motorrad dealer.

Checking the rear brake pad thickness

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



- Conduct a visual inspection of the brake pad thickness. Viewing direction: between splash guard and rear wheel toward brake pads **1**.
- Alternatively: from the vehicle's right side through the rear wheel from below to the brake pads **1**.



Rear brake-pad wear limit
0.03 in (0.8 mm) (Only friction material without carrier plate. The wear marks (grooves) must be clearly visible.)

If wear limit is reached:

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 repair shop, preferably an authorized BMW Motorrad dealer.

Checking the front brake fluid level

WARNING

Insufficient or contaminated brake fluid in the brake fluid reservoir

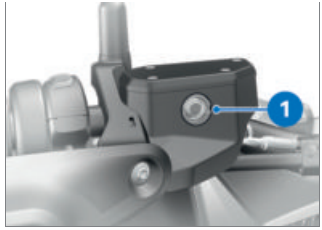
Considerably reduced braking power caused by air, dirt or water in the brake system

- 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.

- Position the motorcycle vertically, making sure that the ground is firm and level.

–with center stand OE

- Make sure the ground is level and firm and put the motorcycle on its center stand.◁
- Move the handlebars to the straight-ahead position.



- Check brake fluid level at brake fluid reservoir for front wheel brake **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 fault rectified as soon as possible by a repair shop, preferably an authorized BMW Motorrad dealer.

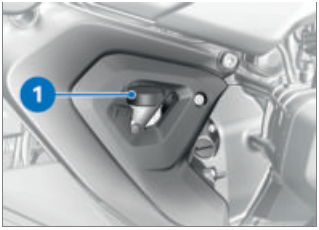
Checking the rear brake fluid level

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.

- Position the motorcycle vertically, making sure that the ground is firm and level.

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



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.

- Check the brake fluid level at the brake fluid reservoir for rear wheel brake **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, vehicle standing upright)

If the brake fluid level falls below the approved level:

- Have the fault rectified as soon as possible by a repair shop, preferably an authorized BMW Motorrad dealer.

CLUTCH

–without Automated shift assistant OE

Checking the clutch function

- Pull the clutch lever.

» The resistance point must be clearly perceptible.

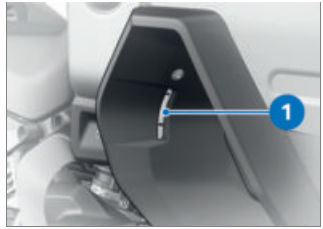
If no clear resistance point can be felt:

- Have the clutch checked by a repair shop, preferably an authorized BMW Motorrad dealer.

COOLANT

Checking the coolant level

- Park the motorcycle, making sure the ground is level and firm.
- Allow the engine to cool down.



- Check coolant level at expansion tank **1**.



Required coolant level
Between the **MIN** and **MAX** marks on the expansion tank (Engine cold)

If the coolant level drops below the permitted level:

- Top up coolant.

Topping up coolant

WARNING

Opening the radiator cap
Risk of burning

- Do not open the radiator cap when it is hot.
- Check the coolant level exclusively at the expansion tank and top up if necessary.

- Remove the right tank cover. (➠ 226)



- Open the expansion tank cap **1**.
- Top up coolant to the specified level using a suitable funnel.
- Check the coolant level. (➠ 213)
- Close the expansion tank cap **1**.
- Install the right tank cover. (➠ 226)

TIRES

Checking tire pressure

WARNING

Incorrect tire pressure
Worse handling characteristics of the motorcycle, reduction in the service life of the tires

- Ensure correct tire pressure.

WARNING

Automatic opening of vertically installed valve inserts at high speeds
Sudden loss of tire inflation pressure
- Use valve caps with rubber sealing ring and screw on firmly.

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

Tire pressures can be determined with tire pressure control (RDC). These values are always shown with temperature compensation and are consistently based on a tire air temperature of 68 °F (20 °C). There is no temperature compensation in the pressure gauges at the filling stations. Therefore, the values measured there usually do not match the values shown in the instrument cluster.

Checking tire tread depth

WARNING

Riding with heavily worn tires
Risk of accident due to poorer rideability
- If necessary, replace the tires before the legally specified minimum tread depth is reached.

- Park the motorcycle, making sure the ground is level and firm.
- Check tire tread depth in main tread grooves with wear indicators.

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 rims
- Park the motorcycle, making sure the ground is level and firm.
- Visually inspect rims for defects.
- Have damaged rims checked and, if necessary, renewed by a repair shop, preferably an authorized BMW Motorrad dealer.

Checking spokes
- Park the motorcycle, making sure the ground is level and firm.
- 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 repair shop, preferably by an authorized BMW Motorrad dealer.

WHEELS

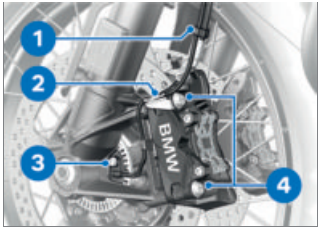
Effect of wheel sizes on suspension control systems
The wheel sizes play a major role in the ABS suspension control system. The diameter and width of the wheels stored in the control unit have particular significance as the basis for all necessary calculations. A change in these sizes resulting from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

Removing the front wheel
- Put the motorcycle on an auxiliary stand; BMW Motorrad recommends the BMW Motorrad rear-wheel stand.

- Attach the rear-wheel stand. (➠ 206)

–with center stand OE

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



- Detach wheel speed sensor cable from holding clips **1** and **2**.
- Remove the screw **3** and remove the wheel speed sensor from the drilled hole.
- Mask off areas of the wheel rim that could get scratched in the process of removing the brake calipers.

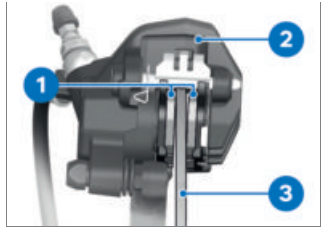
ATTENTION

Unintentional pressing together of brake pads

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

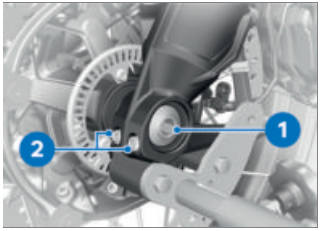
- Do not actuate the brakes with the brake caliper removed.

- Remove the mounting bolts **4** of the left and right brake calipers.



- Push brake pads **1** apart slightly by turning the brake caliper **2** back and forth against brake disk **3**.
- Carefully pull the brake calipers back and outward to remove them from the brake disks.

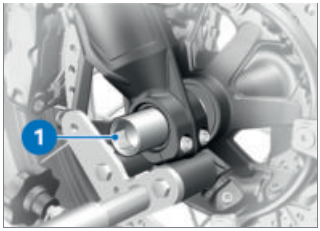
- Raise the front of motorcycle, preferably using a BMW Motorrad front wheel stand, until the front wheel rotates freely.
- Mount the front wheel stand. (➠ 205)



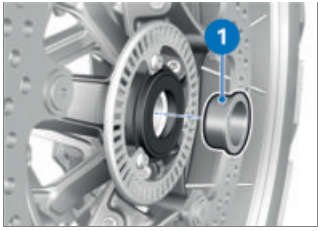
- Loosen axle clamping screws **2** on the left.
- Remove screw **1**.



- Loosen the right-side axle clamping screws **1**.
- Slightly press the quick-release axle inward for a better grip on the right side.



- Pull out the quick-release axle **1** while supporting the front wheel.
- Place front wheel down and roll it forward out of the front suspension.



- Remove the spacer bushing **1** from the wheel hub.

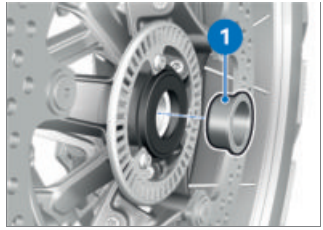
Installing the front wheel

WARNING

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

ATTENTION

Tightening screw connections with incorrect tightening torque
Damage to or loosening of screw connections
- Have the tightening torques checked by a repair shop, preferably by an authorized BMW Motorrad dealer.



- Lubricate the contact surface on the spacer bushing **1**.

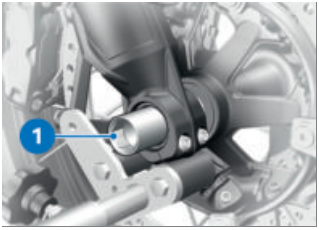
Lubricant
Unirex N3 wheel bearing grease

- Insert the spacer bushing **1** into the wheel hub on the left side.

ATTENTION

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

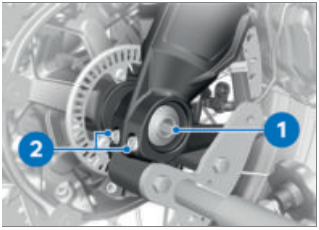
- Roll the front wheel into the front suspension.



- Lubricate the quick-release axle **1**.

Lubricant
Unirex N3 wheel bearing grease

- Lift the front wheel and install the quick-release axle **1**.
- Remove front wheel stand and firmly compress front forks. Do not actuate the brake at the same time.
- Mount the front wheel stand. (➠ 205)

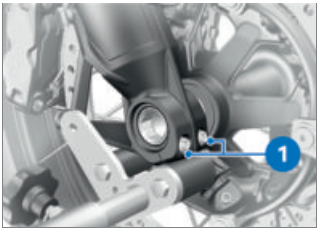


- Install the screw **1** to the specified torque. Brace quick-release axle on the right side at the same time.

Screw in quick-release axle
M20 x 1.5
37 lb/ft (50 Nm)

- Tighten left axle clamping screws **2** to appropriate torque.

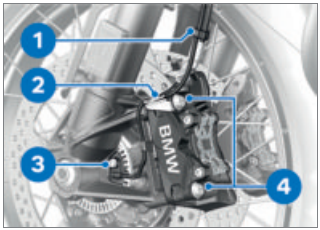
Clamping bolts for quick-release axle
Tightening sequence: Tighten the screws 6 times, alternating between one and the other each time
M6 x 30 - 10.9
9 lb/ft (12 Nm)



- Tighten the right-side axle clamping screws **1** to the specified torque.

Clamping bolts for quick-release axle
Tightening sequence: Tighten the screws 6 times, alternating between one and the other each time
M6 x 30 - 10.9
9 lb/ft (12 Nm)

- Remove the front wheel stand.
- Put the brake calipers on the left and right onto the brake disks.



- Install mounting bolts **4** on left and right to the specified torque.

Radial brake calipers on telescopic forks
M10 x 60
28 lb/ft (38 Nm)

- Remove adhesive tape from wheel rim.

WARNING

Brake pads do not contact the brake disc

Risk of accident due to delayed braking effect.

- Before driving off, check that the braking effect kicks in without any delay.

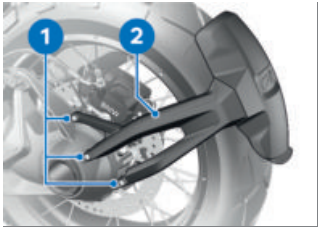
- Engage the brakes repeatedly until the brake pads make contact with the discs.
- Insert the wheel speed sensor cable into the holding clips **1** and **2**.
- Insert the wheel speed sensor into the drilled hole and install screw **3**.

Wheel speed sensor on fork
M6 x 16
Joint compound: micro-encapsulated
6 lb/ft (8 Nm)

Removing the rear wheel

–with off-road tires OE

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



- Remove screws **1**.
- Remove the spray guard **2**.◁
- Put the motorcycle on an auxiliary stand; BMW Motorrad recommends the BMW Motorrad rear-wheel stand.
- Attach the rear-wheel stand. (➠ 206)

–with center stand OE

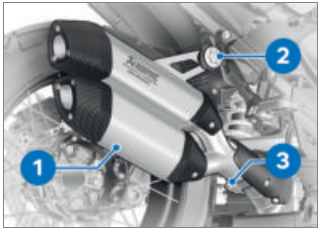
- Make sure the ground is level and firm and put the motorcycle on its center stand.◁

CAUTION

Hot exhaust system
Burn hazard
- Do not touch hot exhaust system.

- Let the end muffler cool down.

–with OE double silencer



- Loosen the clamp **3**.
- Remove the screw with form shim **2**.
- Remove the muffler **1** and clamp **3**.

The clamp is suitable only for one-time use and must be renewed before installation of the muffler.◁



- Remove the screws **1** of the rear wheel while supporting the wheel.
- Tilt the rear wheel out to the side.

Installing the rear wheel

WARNING

Use of a wheel which does not comply with series specifications

Malfunctions during control interventions by ABS and DTC

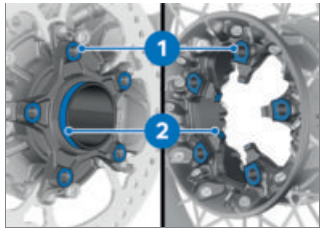
- Please see the information on the effect of wheel sizes on the ABS and DTC chassis control systems at the beginning of this chapter.

ATTENTION

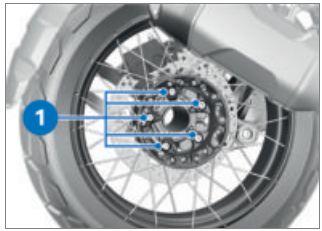
Tightening screw connections with incorrect tightening torque

Damage to or loosening of screw connections

- Have the tightening torques checked by a repair shop, preferably by an authorized BMW Motorrad dealer.



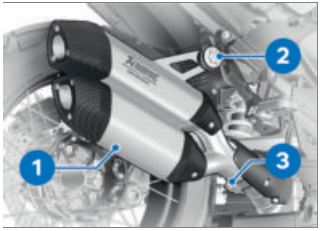
- Clean contact surfaces of the wheel hub **1** and wheel centering device **2**.
- Place rear wheel on rear wheel support.



- Install the lug bolts **1** to the specified torque.

Tighten rear wheel on wheel flange
Tightening sequence: Tighten crosswise
M10 x 1.25
44 lb/ft (60 Nm)

–with OE double silencer



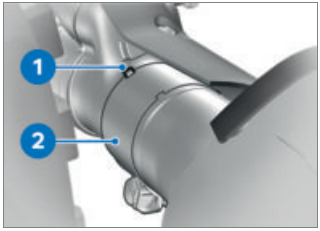
- Lightly lubricate the inside of the new clamp **3**.

Lubricant
Optimoly TA

- Slide the new clamp **3** onto the muffler **1**.
- Push muffler **1** up to the stop.
- Install the screw with form shim **2**.

Silencer on bracket
M8 x 35
14 lb/ft (19 Nm)◁

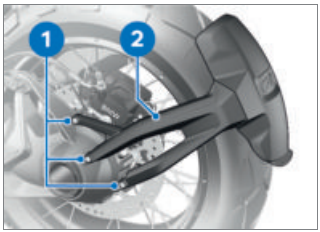
–with OE double silencer



- Position the clamp with recess **2** in the retaining lug **1**.
» The retaining lug **1** engages in the recess of the clamp.
- Tighten the clamp with recess **2**.

Clamp on silencer and exhaust manifold
Joint compound: Lubricating the inner clamp, Optimoly TA
16 lb/ft (22 Nm)◁

–with off-road tires OE



- Clean the thread for screws **1**.
- Position the spray guard **2**.
- Install screws **1**.

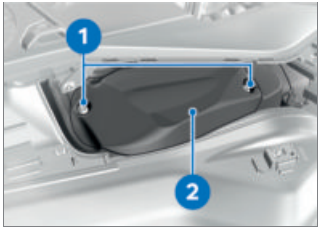
	Spray guard on angular gearbox
M6 x 25	
Thread-locking compound: micro-encapsulated	
7 lb/ft (10 Nm)◁	

AIR FILTER

Removing air filter insert

The work steps described here for the air filter on the right side logically apply also to the air filter on the left side.

- Remove the right tank cover. (➠ 226)



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



- Remove the frame **1** with air filter insert **2**.

Checking air filter insert

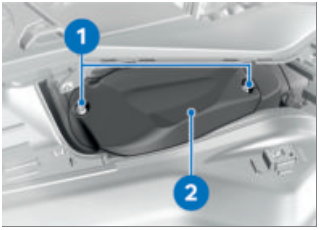
- Check air filter insert and clean if necessary.

» Replace heavily soiled air filter insert.

Installing air filter insert



- Insert the frame **1** with air filter insert **2**.



- Put air filter cover **2** in place.
- Install screws **1**.

	Air filter cover on intake silencer
2 lb/ft (3 Nm)	

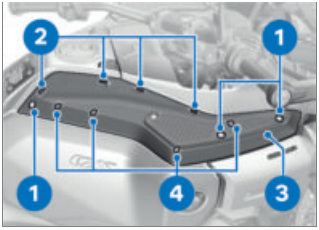
- Install the right tank cover. (➠ 226)

TANK COVER

Removing the right tank cover

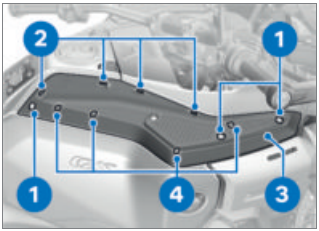
The steps described here for the right tank cover also apply analogously to the left side.

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



- Remove screws **1**.
- Carefully release the tank cover **3** from the mounting clips **4** and the retaining lugs **2**.
- Remove the tank cover **3**.

Installing the right tank cover



- Fit the tank cover **3**.
- Carefully insert the tank cover **3** into the retaining lugs **2** and mounting clips **4**.
- Install screws **1**.

LIGHT SOURCES

Replacing the LED light source

WARNING

Overlooking the vehicle in road traffic due to failure of the lighting on the vehicle
Safety risk
- Replace defective lighting as soon as possible. Please contact a repair shop for this purpose, preferably an authorized BMW Motorrad dealer.

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 repair shop, preferably an authorized BMW Motorrad dealer.

JUMP-STARTING

CAUTION

Touching live parts of the ignition system when the engine is running
Electrocution
- Do not touch parts of the ignition system when the engine is running.

ATTENTION

Current too high when jump-starting the motorcycle
Cable fire or damage to the motorcycle electronics
- Do not jump-start the motorcycle using the power socket, only via the battery terminal.

ATTENTION

Contact between crocodile clips of jump leads and motorcycle
Danger of short circuit
- Use jump leads fitted with fully insulated crocodile clips at both ends.

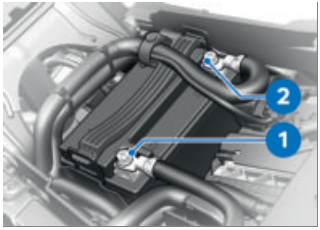
ATTENTION

Jump-starting with a voltage higher than 12 V

Damage to the motorcycle's electronics

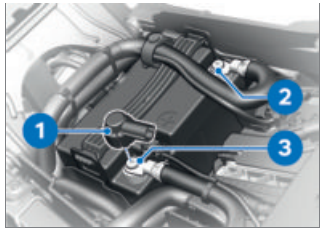
- The battery of the donor motorcycle must have a voltage of 12 V.

- Park the motorcycle, making sure the ground is level and firm.
- Remove the rider's seat. (➠ 138)
- Do not disconnect the battery from the electrical system for an external start.



- Begin by connecting one end of the red jumper cable to the positive terminal **1** of the discharged battery and the other end to the positive terminal of the donor battery.
- Then clamp one end of the black jumper cable to the donor battery's negative terminal **2** while connecting the other end to the empty battery's negative terminal.

–with M Lightweight battery[OE]



- Remove protective cap **1**.
- Begin by connecting one end of the red jumper cable to the positive terminal **3** of the discharged battery and the other end to the positive terminal of the donor battery.
- Then clamp one end of the black jumper cable to the donor battery's negative terminal **2** while connecting the other end to the empty battery's negative terminal.◁

- Run the engine of the donor vehicle at a slightly increased rotational speed during the jump start process.
- 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 pro-

tect 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 jumper cables.
- Disconnect the jumper cable from the negative terminal first, then from the positive terminal.

–with M Lightweight battery[OE]

- Install the protective cap **1**.◁
- Install the rider's seat. (➠ 139)

BATTERY

Maintenance instructions

Proper care, charging and storage extend the battery's service life and are required for any warranty claims.

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

–Keep the surface of the battery clean and dry.

–Do not open the battery.

–Be sure to read and comply with the instructions for charging the battery on the following pages.

–Do not turn the battery upside down.

Battery design
AGM (Absorbent Glass Mat) battery, maintenance-free
–with M Lightweight battery[OE]
Lithium-ion battery, maintenance-free◁

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 the motorcycle. The float charger allows quick and convenient charging via the 12 V power socket. In order to maintain the battery charge over a prolonged state of charge, BMW Motorrad recommends connecting the float charger to the

disconnected battery or the jump start support points.
For more information, consult an authorized BMW Motorrad dealer.

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.

ATTENTION

A fully discharged battery must be charged via a power socket or extra socket.
Damage to vehicle electronics
- A fully discharged battery (battery voltage less than 12 V, indicator lights and multifunction display remain off when ignition is switched on) must always be charged directly at the poles of the **disconnected** battery.

ATTENTION

Improper battery chargers connected to a socket
Damage to battery charger and vehicle electronics
- Use suitable BMW battery chargers. You can obtain the right charger from your authorized BMW Motorrad dealer.

- Charge connected battery via onboard power socket.

The vehicle electronics detect when the battery is fully charged. The onboard socket is switched off when this happens.

- Comply with operating instructions of charger.

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

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.

Disconnecting battery from vehicle

ATTENTION

Incorrect battery disconnection

Danger of short circuit

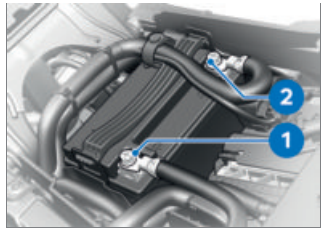
- Follow the disconnection sequence.

–with Automated shift assistant OE

After disconnecting the battery from the vehicle, the immobilizer cannot be released. The motorcycle cannot be maneuvered with the immobilizer engaged. To maneuver the vehicle without a battery, park the vehicle in the neutral position N.◁

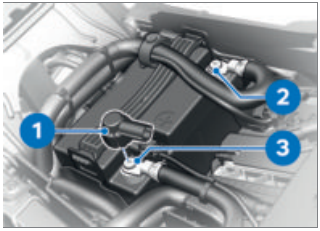
The battery monitor's connector must only be connected/disconnected when the vehicle is de-energized.
When connecting the terminals: Disconnect the connector beforehand.
When disconnecting the terminals: Disconnect the connector afterwards.

- Park the motorcycle, making sure the ground is level and firm.
- Remove the rider's seat. (➠ 138)



- First remove the negative battery cable **2**.
- Then remove positive battery cable **1**.

–with M Lightweight battery[OE]

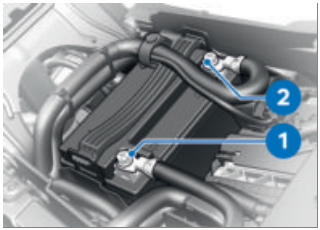


- Remove protective cap **1**.
- First remove the negative battery cable **2**.
- Then remove positive battery cable **3**.◁

Connecting the battery to the motorcycle

ATTENTION

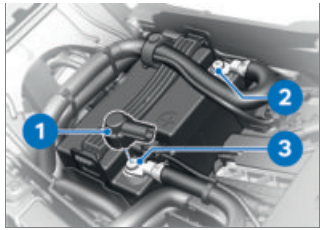
Incorrect battery connection
Danger of short circuit
- Follow the installation sequence.



- First install the positive battery cable **1**.
- Then install the negative battery cable **2**.

Wiring harness on battery
M6 x 12
3 lb/ft (3.5 Nm)
–with M Lightweight battery[OE]
M6 x 8
3 lb/ft (4.5 Nm)◁

–with M Lightweight battery[OE]



- First install the positive battery cable **3**.
- Then install the negative battery cable **2**.

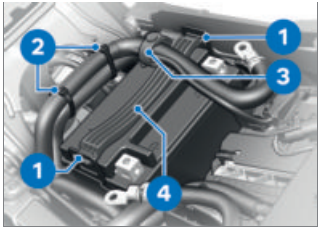
Wiring harness on battery
M6 x 12
3 lb/ft (3.5 Nm)
M6 x 8
3 lb/ft (4.5 Nm)

- Install the protective cap **1**.◁
- Install the rider's seat. (➠ 139)

Removing the battery

–with anti-theft alarm system (DWA) OE

- Turn off the anti-theft alarm system if necessary.◁
- Turn off the ignition. (➠ 95)
- Disconnecting battery from motorcycle. (➠ 231)

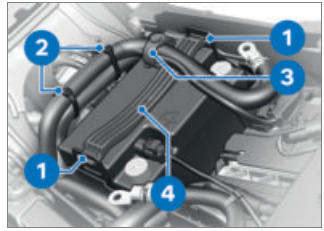


- Remove the cable tie **2** and lug **3**.
- Unclip the battery carrier **4** out of the holder **1**.

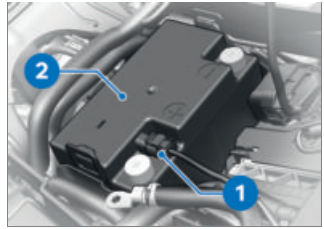


- Detach the diagnostic connector. (➠ 237)
- Lift the battery **1** up and out; use tilting movements in the event of stiff movement.

–with M Lightweight battery OE



- Remove the cable tie **2** and lug **3**.
- Unclip the battery carrier **4** out of the holder **1**.



- Disconnect the plug connection **1** from the battery **2**.
- Detach the diagnostic connector. (➠ 237)
- Lift the battery **2** up and out; use tilting movements in the event of stiff movement.◁

Installing the battery

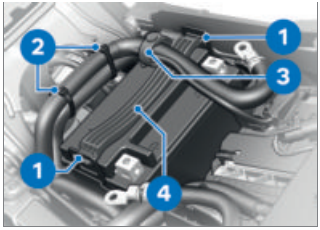
If the vehicle has been disconnected from the battery for a long time, the current date must be reset to

make sure the service display is working properly.

After the battery type is changed, the `Fault in the on-board battery. Limited onward journey possible. Drive carefully to nearest specialist workshop.` message is displayed once.
If you want to convert your motorcycle to a different battery type, please contact a repair shop beforehand, preferably an authorized BMW Motorrad dealer.

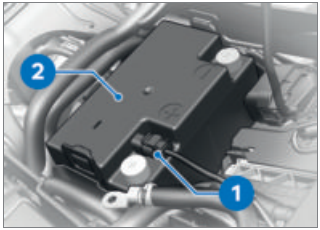


- Insert the battery **1** into the battery compartment with the positive terminal on the left side in the direction of travel.
- Fasten the diagnostic connector. (➠ 237)



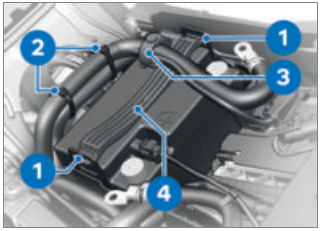
- Clip the battery holder **4** into the holder **1**.
- Install the cable tie **2** and lug **3**.

–with M Lightweight battery[OE]



- Insert the battery **2** into the battery compartment with the positive terminal on the left side in the direction of travel.
- Connect the plug connection **1** to the battery **2**.
- Fasten the diagnostic connector. (➠ 237)◁

–with M Lightweight battery OE



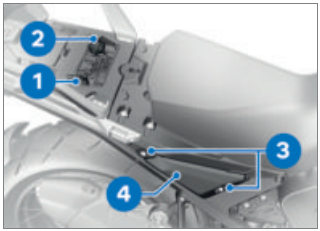
- Clip the battery holder **4** into the holder **1**.
- Install the cable tie **2** and lug **3**.◁
- Connect the battery to the motorcycle. (➠ 232)

–with anti-theft alarm system (DWA) OE

- Turn on the anti-theft alarm system if necessary.◁
- Configure system settings. (➠ 84)

FUSES

Replacing fuses



- Turn off the ignition.
- Remove the rear seat. (➠ 137)
- Unplug plug **1** or plug **2**.
- Remove screws **3**.
- Remove the cover **4**.

ATTENTION

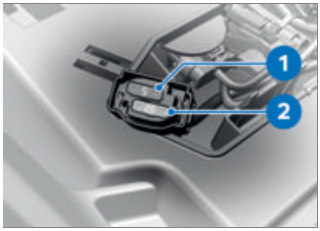
Bypassing defective fuses
Risk of short circuit and fire
- Do not bypass defective fuses.
- Replace defective fuses with new fuses.

- Consult the fuse assignment diagram and replace the defective fuse.

If the fuses are faulty frequently, have the electrical system checked by a repair shop, preferably a BMW Motorrad dealer.

- Plug in plug **1** or plug **2**.
- Position cover **4**.
- Install screws **3**.
- Install the passenger seat. (➠ 138)

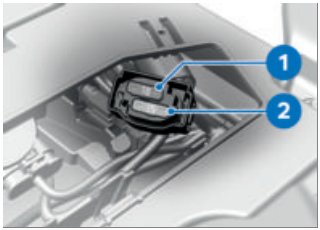
Fuse layout I



1 5 A
Multifunction switch, left
Auxiliary headlights
CCP

2 20 A
USB port
Voltage supply for cases and topcase

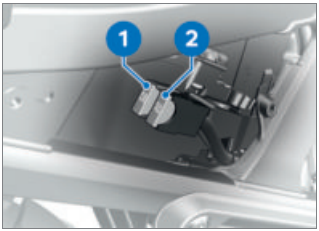
Fuse layout II



1 10 A
Instrument cluster
Anti-theft alarm system
Diagnostic socket
Seat heating
Central locking system for cases and topcase

2 15 A
Keyless Ride
Cut-off relay for ignition coil
Headlight

Fuse layout III



1 50 A
Main fuse

2 20 A
Rear radar
Front radar
Sensor box
Windshield motor
CCP

DIAGNOSTIC CONNECTOR

Detaching the diagnostic connector

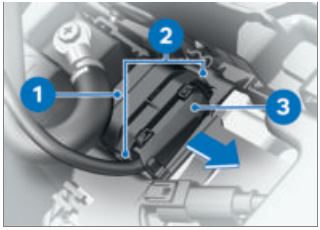
CAUTION

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 repair shop or other authorized persons.
- Have work carried out by appropriately trained personnel.
- Observe the specifications of the vehicle manufacturer.

- Remove the rider's seat. (➠ 138)

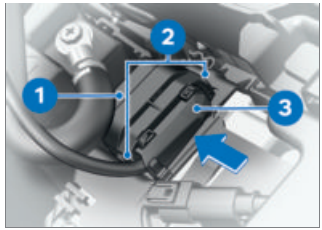


- Press locking mechanisms **2**.
- Detach the diagnostic socket **3** from the holder **1**.

» The interface for the diagnostics and information system can be connected to the diagnostic connector **3**.

Fastening the diagnostic connector

- Disconnect the interface for the diagnostics and information system.



- Insert the diagnostic socket **3** into the holder **1**.

» The locking mechanisms **2** engage on both sides.

- Install the rider's seat. (➠ 139)

ACCESSORIES

10

GENERAL NOTES 240
SOCKETS 240
USB CHARGING PORTS 241
CASE 243
TOPCASE 247
NAVIGATION SYSTEM 252

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 dealer
offers you qualified advice for choosing original BMW parts, accessories and other products.
More information on the topic of accessories is available at: **bmw-motorrad.com/equipment**.

SOCKETS

Connecting electrical devices
– The ignition must be turned on before electrical devices connected to the onboard power sockets can be put into operation.

Cable layout
– The cables from the on-board sockets to the auxiliary devices must be routed in such a way that they do not impede the rider.
– Cable layout must not restrict the steering angle and the handling characteristics.
– Cables must not be trapped.

Automatic shutoff

–The onboard sockets are automatically switched off during the starting procedure.
–For relief of the electrical system, the sockets are switched off 60 seconds after the ignition has been turned off. Accessories with low electrical consumption might not be detected by the vehicle electronics. In these cases, onboard sockets are already turned off shortly after the ignition is turned off.
–In case of insufficient battery voltage, the onboard sockets are switched off to maintain the starting capability of the vehicle.
–If the maximum loadability specified in the technical data is exceeded, the onboard sockets are switched off.

USB CHARGING PORTS

Notes about use

ATTENTION

Vibrations during riding

Damage to stored mobile phones

- Make sure that the stored mobile phone is suitable for use on the vehicle. To do so, ask the manufacturer about limits of use and observe them.

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 stress on the electrical system, the onboard power sockets are switched off no more than 60 seconds after the ignition is 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.
- Make sure that cables are not or do not become trapped.

Storage compartment

The USB charging socket is located below the storage compartment flap (➠ 136).

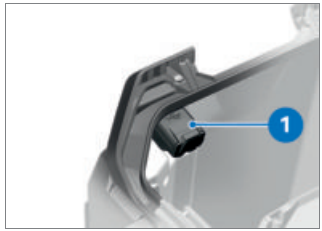


It is a 5 V USB charging socket **1** charging socket providing a maximum charge current of 2.1 A (maximum charging power of 10.5 W).

Case

- with aluminum case [OA]

The USB charging port is located in the left case (➠ 243).



It is a 5 V USB charging socket **1** charging socket providing a maximum charge current of 3 A (maximum charging power of 15 W).

Topcase

–with aluminum topcase[OA]

The USB charging port is located in the topcase (➠ 247).

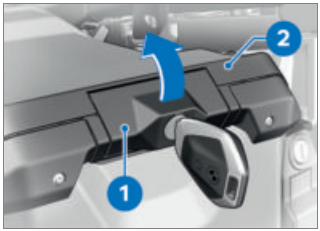


It is a 5 V USB charging socket **1** charging socket providing a maximum charge current of 3 A (maximum charging power of 15 W).

CASE

–with aluminum case[OA]

Opening a case

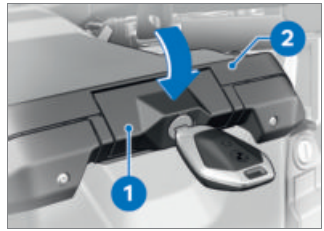


- Turn the key to the **OPEN** position.

» Case is unlocked.

- Fully open the locking mechanism **1**.
- Open the case lid **2**.

Closing a case

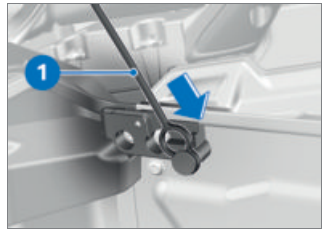


- Close the case lid **2**.
- Fully close the locking flap **1**.
- Turn the key to the **LOCK** position.

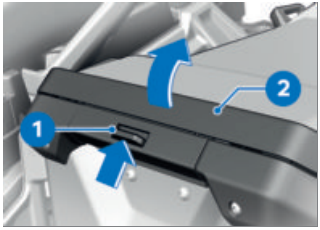
» Case is correctly engaged on its holders.

Removing the case lid

- Open case. (➠ 243)



- Detach the retaining strap **1**.

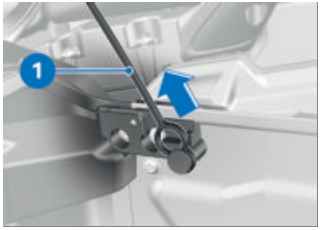


- Press the locking device **1** upwards and detach the case lid **2** in **arrow direction**.

Attaching the case lid

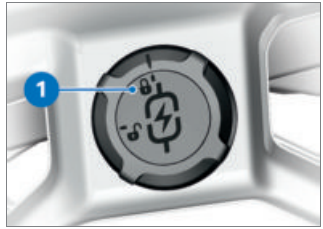


- Press the locking device **1** upwards and hook the case lid **2** in **arrow direction**.



- Hook the retaining strap **1**.
- Close case. (➠ 243)

Locking the protective cap



- Turn the protective cap into position **1**.

» The protective cap noticeably snaps in.

Unlocking the protective cap

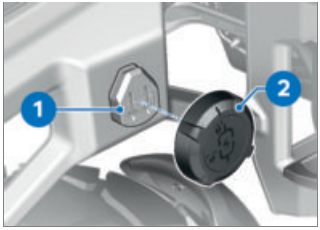


- Turn the protective cap into position **1**.

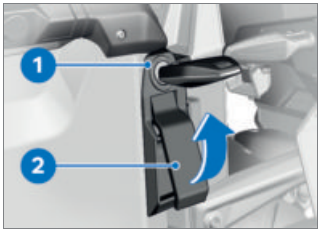
» The protective cap noticeably snaps in.

Attaching a case

- Unlock the protective cap. (➠ 244)



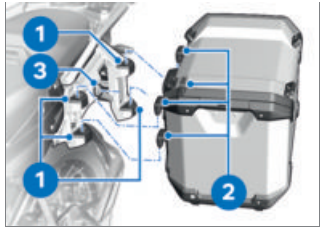
- Remove the protective cap **2** from the magnetic plug connection **1**.



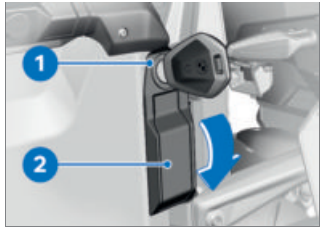
- Turn the key in the case lock **1** to the **RELEASE** position.

» The locking mechanism **2** pops open.

- Fully open the locking mechanism **2**.



- Check the magnetic plug connection **3** of the case and case carrier for dirt and damage.
- Securely insert the hooks **2** into the receptacles **1**.



- Fully close the locking flap **2**.

» Locking mechanism audibly engages.

» The key automatically jumps into the **1 LOCK** position.

- Remove the key **1**.
- Ensure that the case is correctly seated in the holder.

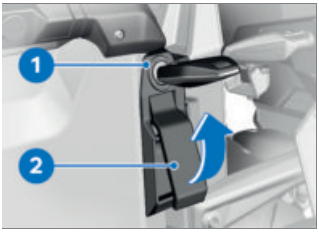


- Open case. (➠ 243)
- Attach the protective cap **1** to the holder **2** in the case lid.

–with aluminum case [OA]

- Lock the protective cap. (➠ 244)

Removing a case



- Turn the key in the case lock **1** to the **RELEASE** position.

» The locking mechanism **2** pops open.

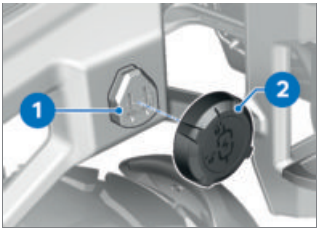
- Fully open the locking mechanism **2**.
- Remove the case from the case carrier.
- Protect the magnetic plug connection of the case from damage, dirt and corrosion.
- Store the case in a clean and dry location.



- Open case. (➠ 243)
- Remove the protective cap **1** from the holder **2** in the case lid.

–with aluminum case [OA]

- Unlock the protective cap. (➠ 244)



- Check the protective cap **2** and magnetic plug connection **1** for dirt and damage.
- Attach the protective cap **2** to the magnetic plug connection **1**.

• Lock the protective cap. (➠ 244)

Maximum payload and maximum speed

When lashing down lightweight luggage, make sure that the eyes are not overloaded (max. 7 lbs (max. 3 kg)). Accordingly, straps or ropes must be lashed by hand and without mechanical support (e.g. ratchet).

Observe maximum payload and maximum speed.
Load the cases in a way that ensures the roll stability of the motorcycle.
The following values apply to the combination described here:

Maximum speed for riding with aluminum case
max. 112 mph (max. 180 km/h)

Weight per aluminum case
15 lbs (6.6 kg)

Weight of volume expansion per aluminum case
3 lbs (1.4 kg)

Total weight with payload per aluminum case incl. add-ons/extensions
max. 37 lbs (max. 16.6 kg)

TOPCASE

–with topcase carrier OE
–with aluminum topcase OA

Opening topcase

–with topcase carrier OE
–with aluminum topcase OA
• Unlock. (➠ 135)

The central locking system has malfunctioned or the topcase has been closed and removed:
• Emergency release. (➠ 135)



• Press the release button **1** and open the topcase lid.

Closing topcase

• Close topcase lid forcefully.
» Make sure that the topcase lid audibly snaps in on both sides.

–with topcase carrier OE
–with aluminum topcase OA
• Lock. (➠ 135)

Locking the protective cap



• Turn the protective cap into position **1**.
» The protective cap noticeably snaps in.

Unlocking the protective cap



• Turn the protective cap into position **1**.
» The protective cap noticeably snaps in.

Installing the topcase

WARNING

Luggage improperly fastened on topcase
Riding stability is impaired
• Do not lash the luggage fastened on the topcase down onto the topcase carrier or other moving parts.
• Before riding off, check whether the topcase carrier has free lateral movement.

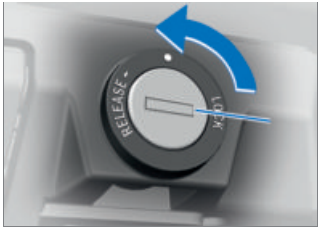
WARNING

Topcase not properly secured
Driving safety is impaired
• Topcase must not shake and must be fastened clearance-free.



–with topcase carrier OE
–with aluminum topcase OA
• Unlock the protective cap. (➠ 248)

- Remove the protective cap **1** from the magnetic plug connection **2**.

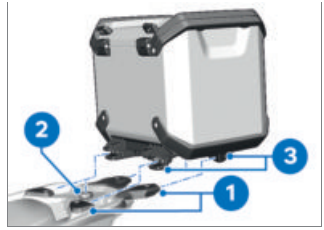


- Turn the key to the **RELEASE** position.

» The locking mechanism pops open.



- Fully open the locking mechanism **1**.



- Check the magnetic plug connection **2** of the topcase and topcase carrier for dirt and damage.
- Securely insert the hooks **3** into the receptacles **1**.

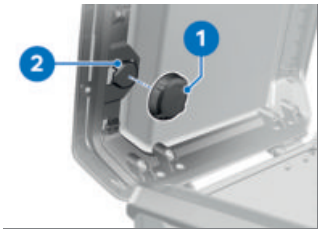


- Fully close the locking flap **1**.

» Locking mechanism audibly engages.



- The key automatically jumps into position **1**.
- Make sure that the topcase is correctly seated on the luggage rack.
- Open topcase. (➠ 247)



- Fit the protective cap **1** in the holder **2** in the topcase and lock (➠ 248).
- Close topcase. (➠ 247)



- Turn the key to position **1** and remove the key.

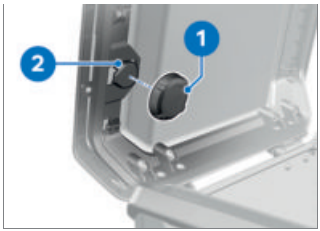
» The topcase locks and unlocks with a central locking system.

- Alternatively, turn the key to the **LOCK** position and remove the key.

» The Topcase remains locked even when the central locking system is unlocked.

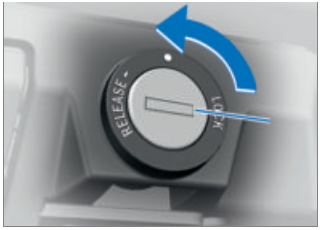
Removing the topcase

- Open topcase. (➠ 247)



- Unlock the protective cap. (➠ 248)
- Remove the protective cap **1** from the holder **2** in the topcase.

- Close topcase. (➠ 247)



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

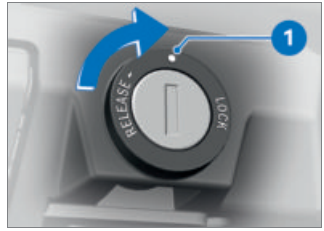
» The locking mechanism pops open.



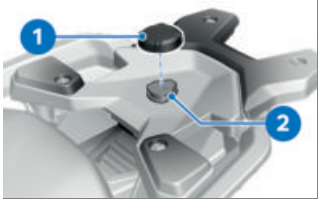
- Fully open the locking mechanism **2**.
- Remove the topcase **1** from the topcase carrier.



- Fully close the locking flap **1**.



- The key automatically jumps into position **1**.
- Turn the key to position **1** and remove the key.
- Alternatively, turn the key to the **LOCK** position and remove the key.
- Protect the magnetic plug connection of the topcase from damage, dirt and corrosion.
- Store the topcase in a clean and dry location.



- Check the protective cap **1** and magnetic plug connection **2** for dirt and damage.
- Attach the protective cap **1** to the magnetic plug connection **2**.

–with topcase carrier OE
–with aluminum topcase OA

- Lock the protective cap. (➠ 248)

Maximum payload and maximum speed

WARNING

Luggage improperly fastened on topcase
Riding stability is impaired
- Do not lash the luggage fastened on the topcase down onto the topcase carrier or other moving parts.
- Before riding off, check whether the topcase carrier has free lateral movement.

When lashing down lightweight luggage, make sure that the eyes are not overloaded (max. 4 lbs (max. 2 kg)). Straps or ropes must be lashed by hand and without mechanical support (e.g. ratchet).

Observe maximum payload and maximum speed.
The following values apply to the combination described here:

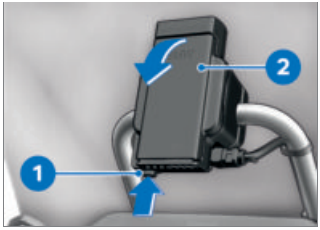
Maximum speed for riding with aluminum topcase
max. 112 mph (max. 180 km/h)

Payload of aluminum topcase
max. 18 lbs (max. 8 kg)

NAVIGATION SYSTEM

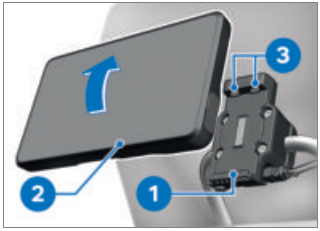
–with preparation for navigation system OE

Securely fastening navigation device
- Turn on the ignition. (➠ 95)



- Press and hold button **1**.

» The ConnectedRide Mount is unlocked and the cover **2** can be removed with a rotational movement toward the front.



- Insert the navigation device **2** in the bottom mount **1** and swivel to the rear in a rotational movement.

» The navigation system engages in the lock **3** with an audible click.

- Check that the navigation system **2** fits firmly in the ConnectedRide Mount.
- Turn off the ignition. (➠ 95)

Removing the navigation device and installing the cover

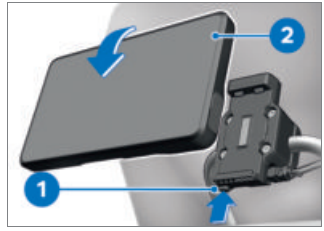
ATTENTION

Dust and dirt on contacts of ConnectedRide Mount

Damage to the contacts

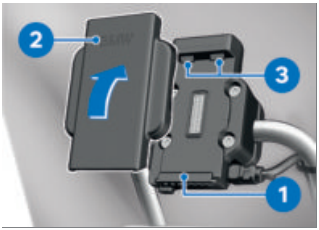
- Reinstall the cover after the end of every ride.

- Turn on the ignition. (➠ 95)



- Press and hold button **1**.

» ConnectedRide Mount is unlocked and navigation system **2** can be removed toward the front using a rotational movement.



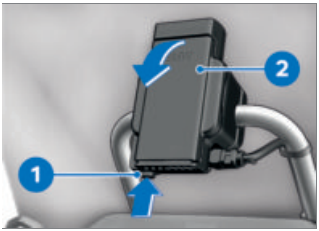
- Insert the cover **2** in the bottom mount **1** and swivel to the rear in a rotational movement.

» The cover engages in the lock **3** with an audible click.

- Turn off the ignition. (➠ 95)

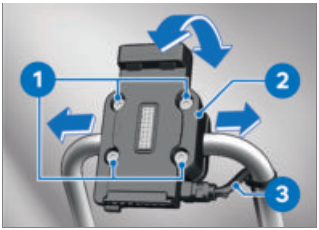
Adjusting ConnectedRide Mount settings

- Turn on the ignition. (➠ 95)



- Press and hold button **1**.

» The ConnectedRide Mount is unlocked and the cover **2** can be removed with a rotational movement toward the front.



- Slacken screws **1**.
- Align the position and angle of ConnectedRide Mount **2** taking care with cable **3**.
- Tighten screws **1**.

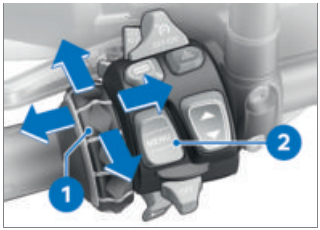
Operating the navigation system

The following description refers to the BMW Motorrad ConnectedRide Navigator.

Only the latest version of the BMW Motorrad communication system is supported. A software update may be required for the BMW Motorrad communication system. In this case, please contact your authorized BMW Motorrad dealer.

If the BMW Motorrad ConnectedRide Navigator is installed and the operating focus is changed to the Navigator (➠ 86), some of

its functions can be operated directly from the handlebars. If the BMW Motorrad ConnectedRide Navigator is connected, all connections on the vehicle are automatically disconnected. Devices that have already been paired with the Navigator are automatically connected. Now the `Navigation`, `Media` and `Telephone` functions are controlled through the Navigator.



The navigation system is operated using the Multi-Controller **1** and the rocker button MENU **2**.

Turn the Multi-Controller 1 up/down
–Select menu
–Change volume
–Zoom in when using maps

Briefly tilt the Multi-Controller 1 to the left/right
–Confirm or cancel

Press the rocker button MENU 2 at the bottom
Change the operating focus to the instrument cluster.

Special functions
The ConnectedRide Navigator is equipped with an automatic operating focus changer. For more information, see the operating instructions of the ConnectedRide Navigator.

Security settings
The safety instructions in the operating instructions of the BMW Motorrad ConnectedRide Navigator must be observed.

CARE

11

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CLEANING SENSITIVE VEHICLE PARTS 259
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STORING THE MOTORCYCLE 261
PUTTING THE MOTORCYCLE INTO OPERATION 262

CARE PRODUCTS

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.

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

WASHING THE VEHICLE

WARNING

Wet brake disks and brake pads after washing the vehicle, after water passages or in rain

Decreased braking effect, risk of accident

- Brake early until the brake disks and brake pads have dried off on their own or through braking.

ATTENTION

High water pressure generated by high-pressure cleaners or steam-jet cleaners can cause damage

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

- Do not clean the dashboard or switches with high-pressure or steam-jet equipment.
- Use high-pressure or steam-jet equipment with care.

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.
Regularly clean the fork tubes of contamination.
Make sure that the vehicle is washed more frequently, especially during the winter months and when riding on salted roads.

ATTENTION

Increased effect of salt caused by warm water
Corrosion
- Only use cold water to remove salt deposits.

To remove salt deposits, clean the vehicle and any add-on parts with cold water immediately after completion of 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 repair shop, preferably an authorized BMW Motorrad dealer.

CLEANING SENSITIVE VEHICLE 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.

Clean plastic components with water and BMW plastic care emulsion. This includes in particular:
–Windshields and wind deflectors
–Headlight diffusers made of plastic
–Glass cover of the instrument cluster
–Black, unpainted parts

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

Instrument cluster

Clean the instrument cluster with warm water and dish soap. Then dry with a clean cloth, e.g. a paper towel.

Chrome

Carefully clean chrome parts with plenty of water and motorcycle cleaner of the BMW Care Products series. This is particularly important in case of exposure to salt.

For additional treatment, use BMW Motorrad high-gloss polish.

Radiator

Clean the cooler regularly to prevent the engine overheating due to inadequate cooling.

To do this, 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

ATTENTION

Use of silicone sprays for care of rubber seals

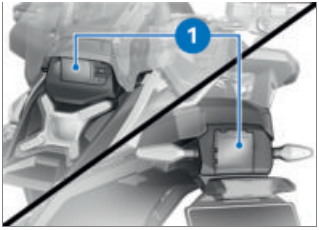
Damage to rubber seals

- Do not use silicone sprays or care products that contain silicone.

Treat rubber parts with water or BMW rubber care product.

Radar sensors

–with Riding Assistant OE



Clean the covers **1** of the radar sensors with a cloth dampened with glass cleaner.

CARE OF PAINTWORK

ATTENTION

Paint damage from metal polish
Risk of damage
- Do not treat paints and chrome lacquers with metal polish.

Washing the vehicle regularly will help counteract the long-term effects of substances that damage the paint, especially if your vehicle is ridden in areas with high air pollution or natural sources of dirt, such as tree resin or pollen.
However, remove particularly aggressive substances immediately; otherwise changes in the paint or discoloration may occur. These include spilled fuel, oil, grease and brake fluid as well as bird droppings.
It is recommended to use BMW Motorrad solvent cleaner and then apply BMW Motorrad high-gloss polish to preserve the paint.
Contaminants on the paint surface are particularly easy to see after washing the vehicle. Remove this type of dirt immediately with cleaning benzene or ethyl alcohol 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 stationary periods. Your authorized BMW Motorrad dealer can pro-

vide you with more detailed information.

- Clean the motorcycle.

–with Automated shift assistant OE

After disconnecting the battery from the vehicle, the immobilizer cannot be released. The motorcycle cannot be maneuvered with the immobilizer engaged. To maneuver the vehicle without a battery, park the vehicle in the neutral position N.◁

- Remove battery. (➠ 233)

–with center stand OE

- Spray the folding foot plate on the center stand and the center stand bearing with a suitable lubricant.◁

–without Automated shift assistant OE

- Spray the brake and clutch lever bearing and the side stand bearing with a suitable lubricant.◁

–with Automated shift assistant OE

- Spray the brake lever bearings and the side stand bearings with a suitable lubricant.◁
- Preserve bare metal and chrome-plated parts with an acid-free grease (Vaseline).
- Park motorcycle in a dry room, raising it to relieve both wheels.

PUTTING THE MOTORCYCLE INTO OPERATION

- Remove the protective wax coating.
- Clean the motorcycle.
- Install the battery.
- Observe checklist (➠ 158).

TECHNICAL DATA

12

TROUBLESHOOTING CHART 266
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TROUBLESHOOTING CHART

Ignition cannot be turned on.

Possible cause	Remedy
Battery drained	Charge the connected battery. (➠ 230)
Radio-operated key not within range or battery of the radio-operated key flat	Replace the battery of the radio-operated key. (➠ 97)

Engine does not start.

Possible cause	Remedy
Side stand extended and gear engaged	Fold in side stand.
Gear engaged and clutch not disengaged	Shift transmission to neutral or disengage clutch.
No fuel in tank	Refueling procedure. (➠ 171)
Battery drained	Charge the connected battery. (➠ 230)
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.

Bluetooth connection is not established.

Possible cause	Remedy
Necessary pairing steps were not performed.	Refer to the operating instructions of the communication system for the necessary steps for pairing.
The communication system is not connected automatically despite successful pairing.	Turn off the communication system of the helmet and connect again after one to two minutes.
Too many Bluetooth® devices are stored in the helmet.	Delete all pairing entries in the helmet (see the operating instructions of the communication system).
There are additional vehicles with Bluetooth-capable devices nearby.	Avoid simultaneous pairing with multiple vehicles.

Active destination guidance is not displayed in the instrument cluster.

Possible cause	Remedy
Navigation from the BMW Motorrad Connected App was not transferred.	Go to the BMW Motorrad Connected App on the connected mobile terminal before riding.
Route guidance cannot be started.	Ensure that there is a data connection to the mobile end device and check the map data on the mobile end device.

The instrument cluster remains dark after the ignition is turned on.

Possible cause	Remedy
There is a software error that causes a malfunction of the instrument cluster.	Turn the ignition off and on again.
The instrument cluster is damaged.	Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad dealer.

THREADED CONNECTIONS

Front wheel	Value	Valid
Screw in quick-release axle		
M20 x 1.5	37 lb/ft (50 Nm)	
Clamping bolts for quick-release axle		
M6 x 30 - 10.9	**Tightening sequence: Tighten the screws 6 times, alternating between one and the other each time**	
	9 lb/ft (12 Nm)	
Radial brake calipers on telescopic forks		
M10 x 60	28 lb/ft (38 Nm)	
Wheel speed sensor on fork		
M6 x 16 micro-encapsulated	6 lb/ft (8 Nm)	

Rear wheel	Value	Valid
Tighten rear wheel on wheel flange		
M10 x 1.25	**Tightening sequence: Tighten crosswise**	
	44 lb/ft (60 Nm)	
Spray guard on angular gearbox		
M6 x 25, Renewing the screw micro-encapsulated	7 lb/ft (10 Nm)	

Mirrors	Value	Valid
Mirror (lock nut) on adapter		
M10 x 1.25	Left-hand thread, 16 lb/ft (22 Nm)	
Mirror (lower lock nut) on adapter		
M10 x 1.5	16 lb/ft (22 Nm)	–with Riding Assistant[OE]

Gearshift lever	Value	Valid
Screw on gearshift lever and gearshift lever adjuster		
M6 x 20	6 lb/ft (8 Nm)	

Footrests	Value	Valid
Rider foot peg on footrest joint		
M10 x 30	41 lb/ft (56 Nm)	

Handlebars	Value	Valid
Clamping block (handlebar clamp) on fork bridge		
M8 x 30	**Tightening sequence: tighten to block at front in direction of travel**	
	14 lb/ft (19 Nm)	
One handlebar riser (15 mm), M8 x 45	**Tightening sequence: tighten to block at front in direction of travel**	– with handlebar risers OE
	14 lb/ft (19 Nm)	
Two handlebar risers (30 mm), M8 x 60	**Tightening sequence: tighten to block at front in direction of travel**	
	14 lb/ft (19 Nm)	

Battery	Value	Valid
Wiring harness on battery		
M6 x 12	3 lb/ft (3.5 Nm)	
M6 x 8	3 lb/ft (4.5 Nm)	– with M Lightweight battery OE

Silencer	Value	Valid
Clamp on silencer and exhaust manifold		
Renew clamp Lubricating the inner clamp, Optimoly TA	16 lb/ft (22 Nm)	
Silencer on bracket		
M8 x 35	14 lb/ft (19 Nm)	

Air filter	Value	Valid
Air filter cover on intake silencer		
	2 lb/ft (3 Nm)	

FUEL	
Recommended fuel quality	Premium unleaded (Max. 15 % ethanol, E15) 89 AKI (95 ROZ/RON) 90 AKI
Alternative fuel quality	Regular unleaded (restrictions with regard to power and fuel consumption.) (Max. 15 % ethanol, E15) 87 AKI (91 ROZ/RON) 87 AKI
Usable fuel quantity	approx. 7.9 gal (approx. 30 l)
Reserve fuel quantity	approx. 1.1 gal (approx. 4 l)
Fuel consumption	48 mpg (4.9 l/100 km), in accordance with WMTC
–with Automated shift assistant[OE]	47 mpg (5.0 l/100 km), in accordance with WMTC
CO2 emissions	113 g/km, In accordance with WMTC
–with Automated shift assistant[OE]	115 g/km, In accordance with WMTC
Emission standard	TIER 2, measured in accordance with FTP75

ENGINE OIL	
Engine oil, filling capacity	max. 1.3 gal (max. 5.0 l), with filter exchange
Specification	SAE 5W-40, API SL/ 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 Ultimate oil.
Engine oil, top-up quantity	max. 0.8 quarts (max. 0.75 l), Difference between **MIN** and **MAX**

BMW recommends ADVANTEC ORIGINAL BMW ENGINE OIL

ENGINE	
Engine number location	Lower left part of crankcase
Engine type	A75B13A
Engine design	Air-cooled/liquid-cooled two-cylinder four-stroke opposed-twin engine with two overhead camshafts, two compensation gears, and variable intake camshaft control BMW Shift-Cam
Displacement	1300 cc (1300 cm^3)
Compression ratio	13.3 g/cm^3
Nominal capacity	143 hp (107 kW), at RPM: 7750 min^{-1}

Torque	110 lb/ft (149 Nm), at RPM: 6500 min^{-1}
Maximum engine speed	max. 9000 min^{-1}
Idle speed	$1050^{\pm 50}$ min^{-1}, Engine at operating temperature

CLUTCH

Clutch design	Multi-disk wet clutch

TRANSMISSION

Transmission design	Claw-shifted 6-speed manual transmission integrated in engine housing

REAR-WHEEL DRIVE

Gear ratio of rear-wheel drive	2.909 (32/11 teeth)
Rear axle differential oil	SAE 70W-80

FRAME

Frame design	Frame in sheet-metal shell structure with load-bearing drive unit, rear frame made of die-cast aluminum
Location of type plate	Front right frame next to steering head
Location of the vehicle identification number	Front right frame next to steering head

RUNNING GEAR	
Front wheel	
Type of front suspension	BMW telelever
Spring travel, front	8.3 in (210 mm), on front wheel
–with Adaptive vehicle height control Comfort OE	7.5 in (190 mm), on front wheel
Rear wheel	
Type of rear-wheel guide	Cast aluminum single-sided swinging arm with BMW Motorrad Paralever
Spring travel on the rear wheel	8.7 in (220 mm), on rear wheel
–with Adaptive vehicle height control Comfort OE	7.9 in (200 mm), on rear wheel

BRAKES	
Front wheel	
Type of front wheel brake	Two-rotor disk brake, floating brake disks, diameter 12.2 in (310 mm), 4-piston radial brake caliper
Front brake pad material	Sintered metal
Front brake disc thickness	0.17 in (4.4 mm), New condition min. 0.16 in (min. 4.0 mm), Wear limit
–with forged enduro wheel OE	0.18 in (4.5 mm), New condition min. 0.16 in (min. 4.0 mm), Wear limit

Rear wheel	
Type of rear wheel brake	Single-disc brake, diameter 11.2 in (285 mm), 2-piston floating caliper
Rear brake pad material	Sintered metal
Rear brake disc thickness	0.18 in (4.5 mm), New condition min. 0.16 in (min. 4.0 mm), Wear limit

WHEELS AND TIRES	
Speed category of front/rear tires	V, minimum requirement: 149 mph (240 km/h)
Front wheel	
Front wheel design	Cross spoke wheel
–with forged enduro wheel OE	Aluminum forged wheel
Front-wheel rim size	3.00" x 19"
Front tire designation	120/70 R 19
Load index for front tire	60 g/cm^3
Permitted front wheel imbalance	max. 0.2 oz (max. 5 g)
Rear wheel	
Rear wheel design	Cross spoke wheel
–with forged enduro wheel OE	Aluminum forged wheel
Rear-wheel rim size	4.50" x 17"
Rear tire designation	170/60 R 17
Load index for rear tire	72 g/cm^3
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	
Electrical rating of onboard sockets	max. 12 A, all on-board power sockets in total
Main fuse	50 A, Main fuse
Fuse 1	10 A, Instrument cluster, anti-theft alarm system (DWA), on-board diagnostics onboard power socket, seat heating, central locking system for cases and topcase
Fuse 2	15 A, Cut-off relay, Key-less Ride, headlight
Fuse 3	20 A, Rear radar, front radar, CCP, windshield motor, sensor box
Fuse 4	20 A, USB port, voltage supply for cases and topcase
Fuse 5	5 A, CCP 30G, auxiliary head-light, left multifunction switch

Battery	
Battery design	AGM (Absorbent Glass Mat) battery, maintenance-free
–with M Lightweight battery OE	Lithium-ion battery, maintenance-free
Battery voltage	12 V
Battery capacity	14 Ah
–with M Lightweight battery OE	10 Ah
Battery type (For Keyless Ride radio-operated key)	CR 2032
Spark plugs	
Spark plugs, manufacturer and designation	NGK LMAR8AI-10
Light sources	
All light sources	LED

DIMENSIONS	
Motorcycle length	86.9 in (2208 mm), over splash guard
–with topcase carrier OE	89.8 in (2280 mm), above luggage rack
Motorcycle height	58.8...62.5 in (1494...1588 mm), without mirrors, above windshield, at DIN empty weight
Motorcycle width	39.4 in (1000 mm), with hand guard

Front-seat height	34.6...35.4 in (880...900 mm), without rider, at DIN unloaded vehicle weight
–with Adaptive vehicle height control Comfort OE	32.9...33.7 in (835...855 mm), without rider, at DIN unloaded vehicle weight
–with OE adaptive vehicle height control	33.7...34.4 in (855...875 mm), without rider, at DIN unloaded vehicle weight
Rider's inside-leg arc, heel to heel	77.2...78.7 in (1960...2000 mm), without rider, at DIN unloaded vehicle weight
–with Adaptive vehicle height control Comfort OE	73.6...75.2 in (1870...1910 mm), without rider, at DIN unloaded vehicle weight
–with OE adaptive vehicle height control	75.2...76.8 in (1910...1950 mm), without rider, at DIN unloaded vehicle weight

WEIGHTS

Unloaded vehicle weight	593 lbs (269 kg), DIN unloaded vehicle weight, ready for road, 90% full tank of gas, without OE
Gross vehicle weight	1069 lbs (485 kg)
Maximum payload	476 lbs (216 kg)
Weight per aluminum case	15 lbs (6.6 kg)
Weight of volume expansion per aluminum case	3 lbs (1.4 kg)
Total weight with payload per aluminum case incl. add-ons/ extensions	max. 37 lbs (max. 16.6 kg)
Payload of aluminum topcase	max. 18 lbs (max. 8 kg)

PERFORMANCE DATA	
Pullaway performance on uphill grades (with a permissible total weight)	32 %
Maximum speed	137 mph (220 km/h)
–with aluminum case OA or –with aluminum topcase OA or –with tank bag OA	112 mph (180 km/h)

SERVICE

13

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REPORTING SAFETY DEFECTS

If you think that your vehicle 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 dealer or BMW of North America, LLC.

You can contact the NHTSA by calling 1–888–327–4236 to reach the Vehicle Safety Hotline (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, 1200 New Jersey Ave, SE., Washington, DC 20590. Further information on vehicle safety is available at the following website: http://www.safercar.gov.

Canadian customers who wish to report a safety-related 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 vehicle safety from http://www.tc.gc.ca/roadsafety.

RECYCLING

Disposal of a vehicle

When the vehicle has reached the end of its life cycle, BMW Motorrad recommends giving it to a collection point designated by the manufacturer.

The respective national legal requirements apply to this collection and recycling in general. Information about recycling and sustainability can be retrieved at the country-specific websites of the manufacturer. More information can be requested from your authorized BMW Motorrad dealer or another qualified service partner or a repair shop.

BMW MOTORRAD SERVICE

With its worldwide dealer network, BMW Motorrad can attend to you and your motorcycle in over 100 countries around the globe. Authorized BMW Motorrad dealers 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 dealer at our website: **bmw-motorrad.com**.

WARNING

Improperly performed maintenance work and repair procedures

Risk of accident due to subsequent damage

- BMW Motorrad recommends having corresponding work performed on the motorcycle by a repair shop, preferably by an authorized BMW Motorrad dealer.

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 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 authorized BMW Motorrad dealer.

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 preventive maintenance. If an entry is made in the vehicle's service history, service-related data is stored on the central IT systems that can be accessed via BMW.
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. An authorized BMW Motorrad dealer or repair shop can view the data entered in the service history.

Objection

At an authorized BMW Motorrad dealer or repair shop, the vehicle owner can object to the entry of data in the 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

BMW Motorrad Mobility Services furnish you and your new BMW motorcycle with extra security by offering a wide array of assistance services in the event of a breakdown (mobile service, breakdown assistance, vehicle recovery and retrieval, etc.).
Your authorized BMW Motorrad dealer will be happy to provide information about the available range of mobility services and contract durations.

MAINTENANCE WORK

BMW pre-delivery check

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

BMW running-in check
The BMW running-in check must be carried out between 300 mi (500 km) and 750 mi (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 authorized BMW Motorrad dealer 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. Servicing has to be brought forward if this distance covered is reached before the next scheduled service appointment.

The service display in the display reminds you of the approaching service appointment approx. one month or 620 mi (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. The listed repair procedures are due at the respective specified mileage levels or the specified time intervals.

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	x	x	x	x	x	x	x	x	x	x[a]	
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		
6			x		x		x		x		x		
7			x		x		x		x		x		
8			x		x		x		x		x		
9									x[d]				
10												x[c]	x[c]

1 BMW 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 Replace all spark plugs

7 Replace the air filter insert

8 Visually inspect and lubricate the universal shaft

9 Replace the universal shaft

10 Change brake fluid in the entire system

a annually or every 6000 mi (10000 km) (whichever comes first)

b every two years or every 12000 mi (20000 km) (whichever comes first)

c at first after one year, then every two years

d relative to the service life of the component

BMW MOTORRAD BREAK-IN SERVICE

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
–Performing the vehicle test using the BMW Motorrad diagnostic system
–Engine oil change with filter
–Change oil in the angular gearbox
–Checking the front wheel brake fluid level
–Checking the rear wheel brake fluid level
–Checking the coolant level
–Check the tire tread depth and tire pressure
–Checking the lighting and signal system
–Check the tension of the spokes and tighten as needed
–Functional check for engine starting suppression
–Final inspection and road safety check
–Performing the vehicle test using the BMW Motorrad diagnostic system
–Confirming 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
–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 coolant level
–Checking the expandable plate on the handlebar bridge
–Checking side stand for ease of movement
–Checking center stand for ease of movement
–Checking the tire pressure and tread depth
–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
–Performing the vehicle test using the BMW Motorrad diagnostic system
–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 Motorrad pre-delivery check

performed

on_____

Stamp, signature

BMW Motorrad break-in service

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 rear angular gearbox	☐	☐
Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Visual inspection and lubricate universal shaft (during preventive maintenance)	☐	☐
Removing/installing or replacing universal shaft	☐	☐
Changing brake fluid in entire system	☐	☐

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 rear angular gearbox	☐	☐
Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Visual inspection and lubricate universal shaft (during preventive maintenance)	☐	☐
Removing/installing or replacing universal shaft	☐	☐
Changing brake fluid in entire system	☐	☐

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 rear angular gearbox	☐	☐
Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Visual inspection and lubricate universal shaft (during preventive maintenance)	☐	☐
Removing/installing or replacing universal shaft	☐	☐
Changing brake fluid in entire system	☐	☐

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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 rear angular gearbox	☐	☐
Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Visual inspection and lubricate universal shaft (during preventive maintenance)	☐	☐
Removing/installing or replacing universal shaft	☐	☐
Changing brake fluid in entire system	☐	☐

Notes

Stamp, signature

BMW Motorrad Service
performed

on_____
at km_____

Next service
latest
on_____
or, if reached earlier
at km_____

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	Yes	No
BMW Motorrad Service	☐	☐
Oil change in engine with filter	☐	☐
Oil change in rear angular gearbox	☐	☐
Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Visual inspection and lubricate universal shaft (during preventive maintenance)	☐	☐
Removing/installing or replacing universal shaft	☐	☐
Changing brake fluid in entire system	☐	☐

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Stamp, signature

BMW Motorrad Service
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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 rear angular gearbox	☐	☐
Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Visual inspection and lubricate universal shaft (during preventive maintenance)	☐	☐
Removing/installing or replacing universal shaft	☐	☐
Changing brake fluid in entire system	☐	☐

Notes

Stamp, signature

BMW Motorrad Service
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or, if reached earlier
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BMW Motorrad Service	☐	☐
Oil change in engine with filter	☐	☐
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Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Visual inspection and lubricate universal shaft (during preventive maintenance)	☐	☐
Removing/installing or replacing universal shaft	☐	☐
Changing brake fluid in entire system	☐	☐

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 rear angular gearbox	☐	☐
Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Visual inspection and lubricate universal shaft (during preventive maintenance)	☐	☐
Removing/installing or replacing universal shaft	☐	☐
Changing brake fluid in entire system	☐	☐

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 rear angular gearbox	☐	☐
Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Visual inspection and lubricate universal shaft (during preventive maintenance)	☐	☐
Removing/installing or replacing universal shaft	☐	☐
Changing brake fluid in entire system	☐	☐

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 rear angular gearbox	☐	☐
Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Visual inspection and lubricate universal shaft (during preventive maintenance)	☐	☐
Removing/installing or replacing universal shaft	☐	☐
Changing brake fluid in entire system	☐	☐

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

RADIO EQUIPMENT TFT INSTRUMENT CLUSTER 305
KEYLESS RIDE SYSTEM MAIN UNIT 307
KEYLESS RIDE SYSTEM ACTIVE KEY 309
MID RANGE RADAR 310
SHORT RANGE RADAR 312
RADIO EQUIPMENT TYRE PRESSURE CONTROL (RDC) 314
RADIO EQUIPMENT TYRE PRESSURE CONTROL (RDC) 314
RADIO EQUIPMENT INTELLIGENT EMERGENCY CALL 315

RADIO EQUIPMENT TFT INSTRUMENT CLUSTER

For all countries without EU

Model name: ICC65V2
Manufacturer

Robert Bosch GmbH
Robert-Bosch-Platz 1, 70839 Gerlingen, Germany

Technical Information

BT operating frq. Range: 2402 - 2480 MHz
BT version: 4.2 (no BTLE)
BT output power: < 4 dBm
WLAN operating frq. Range: 2412 - 2462 MHz
WLAN standards:
IEEE 802.11 b/g/n
WLAN output power: < 20 dBm

Country

Canada

Thi s device complies with Industry Canada's licence-exempt RSSs and part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause interference, and
(2) this device must accept any interference, including interference that may cause undesired operation of the device.
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
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'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.
Radio Frequency (RF) Exposure Information
The radiated output power of the Wireless Device is below the Industry Canada (IC) radio frequency exposure limits. The Wireless Device should be used in such a manner such that the potential for human contact during normal operation is minimized. This device has also been evaluated and shown compliant with the IC RF Exposure limits under mobile exposure conditions.
Informations concernant l'exposition aux fréquences radio (RF)
La puissance de sortie émise par l'appareil de sans fil est inférieure à la limite d'exposition

aux fréquences radio d'Industry Canada (IC). Utilisez l'appareil de sans fil de façon à minimiser les contacts humains lors du fonctionnement normal. Ce périphérique a également été évalué et démontré conforme aux limites d'exposition aux RF d'IC dans des conditions d'exposition à des appareils mobiles (antennes sont supérieures à 20 cm à partir du corps d'une personne).

United States (USA)

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

CAUTION:

Any changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

This device complies with Industry Canada's licence-exempt RSSs and part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause interference, and
(2) this device must accept any interference, including interference that may cause undesired operation of the device.

RF exposure warning

This equipment must be installed and operated in accor-

dance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provide with antenna installation instructions and transmitter operating conditions for satisfying RF exposure compliance.

KEYLESS RIDE SYSTEM MAIN UNIT

For all countries without EU

Model name: ZB005
Manufacturer
ZADI S.p.A.
Via Carlo Marx 138, 41012 Carpi (MO), Italy

Technical Information
Nominal voltage:
13,5 V
Operating voltage:
6,7 - 16 V
Operating temperature:
-20 °C - +60 °C
Operating frequency LF:
134,5 kHz
Operating frequency HF:
433,92 MHz
RF power:
< 66 dBµA/m
IP grade:
IP5K6K

Country

Canada
IC: 22239-KLRMZB005
This device complies with Industry Canada 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, including interference that may cause undesired operation of the device.
This Class B digital device complies with Canadian ICES-003.
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'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Cet appareil numerique classe B est conforme à la norme Canadien NMB-003.

United States (USA)

FCC ID: VFZKLRMZB005
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.
Changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.
RF Radiation Exposure
This product complies with FCC and ISED radiation exposure limits set forth for an uncontrolled environment. The antenna should be installed and operated with minimum distance of 20 cm between the radiator and your body.

KEYLESS RIDE SYSTEM ACTIVE KEY

For all countries without EU

Model name: ZB006
Manufacturer

ZADI S.p.A.
Via Carlo Marx 138, 41012 Carpi (MO), Italy

Technical Information

Battery type
CR2032
Nominal voltage:
3 V
Operating voltage:
2,5 - 3,16 V
Operating temperature:
-20 °C - +60 °C
Operating frequency LF:
134,5 kHz
Operating frequency HF:
433,92 MHz
RF power:
< 10 mW e.r.p.
IP grade:
IP5K7

Country

Canada

IC: 22239-KLRKZB006

This device complies with Industry Canada 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, including interference that may cause undesired operation of the device.
This Class B digital device complies with Canadian ICES-003.
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'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.
Cet appareil numerique classe B est conforme à la norme Canadien NMB-003.

United States (USA)

FCC ID: VFZKLRKZB006
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

Changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

RF Radiation Exposure

This product complies with FCC and ISED radiation exposure limits set forth for an uncontrolled environment. The antenna should be installed and operated with minimum distance of 20 cm between the radiator and your body.

MID RANGE RADAR

For all countries without EU

Model name: ARS513/ARS5-B

Manufacturer

ADC Automotive Distance Control Systems GmbH

Peter-Dornier-Straße 10, 88131 Lindau, Germany

Technical information

Frequency band: 76 - 77 GHz
Output/Transmission power:
2,0 W (33 dBm RMS EIPR)

Country

Canada

Advanced Radar Sensor
ARS5-B
IC: 4135A-ARS5B
This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.
L'emetteur/recepteur exempt de licence contenu dans le present appareil est conforme aux CNR d'Innovation, Sciences et Développement économique 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.
Radiofrequency radiation exposure Information:
This equipment complies with radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and the body of any persons, user or bystander.
Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé.
Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps.

United Kingdome

UK
CA

Hereby, ADC Automotive Distance Control Systems GmbH declares that the radio equipment type ARS5-B is in

compliance with the UK Radio Equipment Regulations 2017 (as amended by UK SI 2019/ 969). The full text of the UK declaration of conformity is available at the following internet address:
http://continental.automotive-approvals.com/
Frequency band(s) in which the radio equipment operates: 76 – 77 GHz
Maximum radio-frequency power transmitted in the frequency band(s) in which the radio equipment operates: 2.0 W (33 dBm RMS EIRP)

United States (USA)

Advanced Radar Sensor
ARS5-B
FCC ID: OAYARS5B
Radiofrequency radiation exposure Information:
This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
FCC Notice
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

SHORT RANGE RADAR

For all countries without EU

Model name: SRR521/SRR5-B

Manufacturer

ADC Automotive Distance Control Systems GmbH
Peter-Dornier-Straße 10, 88131 Lindau, Germany

Technical information

Frequency band: 76 - 77 GHz
Output/Transmission power: 1,58 W (32 dBm RMS EIPR)

Country

Canada

Model: SRR5-B
IC: 4135A-SRR5B
This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:
(1) this device may not cause interference.
(2) this device must accept any interference, including interference that may cause undesired operation of the device.

Radiofrequency radiation exposure Information: This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body. This transmitter must not be colocated or operating in conjunction with any other antenna or transmitter.

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;

(2) l'utilisateur de l'appareil doit acceptor tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Informations sur l'exposition aux radiofréquences: Cet équipement est conforme aux limites d'exposition aux rayonnements IC établies pour un environnement non contrôlé. Cet équipement doit être installé et utilisé avec un minimum de 20 cm de distance entre la source de rayonnement et votre corps. Ce transmetteur ne doit pas etre place au meme endroit ou utilise simultanement avec un autre transmetteur ou antenne.

United Kingdom

UK CA

Hereby, ADC Automotive Distance Control Systems GmbH declares that the radio equipment type SRR5-B is in compliance with Radio Equipment Regulations of the United Kingdom. The full text of the UK declaration of conformity is available at the following internet address: http://continental.automotive-approvals.com/

Frequency band(s) in which the radio equipment operates: 76 – 77 GHz

Maximum radio-frequency power transmitted in the frequency band(s) in which the radio equipment operates: 1.58 W (32 dBm RMS EIRP)

United States (USA)

Model: SRR5-B

FCC ID: OAYSRR5B

Radiofrequency radiation exposure Information:

This equipment complies with FCC radiation exposure limits set

forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 cm between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.
FCC Notice
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

RADIO EQUIPMENT TYRE PRESSURE CONTROL (RDC)

For all countries without EU

Model name:
Wus moto gen 3
Manufacturer

LDL Technology S.A.S.
Parc Technologique du Canal,
3 rue Giotto, 31520 Ramonville,
France

Technical information

Frequency band: 433,92 MHz
Maximum effective radiated power: 16,75 dBm

Country

United States (USA)

This device complies with Part 15 of the FCC Rules and Industry Canada 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.
Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

RADIO EQUIPMENT TYRE PRESSURE CONTROL (RDC)

For all countries without EU

Model name:
Wus moto gen 3 4x4
Manufacturer

LID Technologies S.A.S.
Parc Technologique du Canal,
3 rue Giotto, 31520 Ramonville,
France

Technical information

Frequency band: 433,92 MHz
Maximum effective radiated power: - 16,75 dBm

Country

Canada

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions:
(1) this device may not cause harmful interference, and (2) this device must accept interference received, including interference that may cause undesired operation of the device.
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 d'accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

United States (USA)

This device complies with Part 15 of the FCC rules and Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.
Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

RADIO EQUIPMENT INTELLIGENT EMERGENCY CALL

For all countries without EU

Model name: TL1M23NE
Manufacturer

LG ELECTRONICS INC.
10, Magokjungang 10-ro, Gangseo-gu Seoul, Republic of Korea

Country

Canada

IC: US0186.2022.000413
This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 3.5 cm between the radiator & your body. Oper-

ation is subject to the following two conditions:
(1) this device may not cause interference, and
(2) this device must accept any interference, including interference that may cause undesired operation of the device.
The manufacturer is not responsible for any radio or tv interference caused by unauthorized modifications to this equipment. Such modifications could void the user's authority to operate the equipment.
Avis d'Industrie Canada sur l'exposition aux rayonnements
Cet appareil est conforme aux limites d'exposition aux rayonnements d'Industrie Canada pour un environment non contrôlé.
Il doit être installé de façon à garder une distance minimale de 3.5 centimétres entre la source de rayonnements et votre corps.
L'exploitation est autorisée aux deux conditions suivantes :
(1) l'appareil ne doit pas produire de brouillage, et
(2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Le fabricant n'est pas responsable des interférences radioélectriques causées par des modifications non autorisées apportées à cet appareil. de telles modifications pourrait annuler l'autorisation accordée à l'utilisateur de faire fonctionner l'appareil.

United States (USA)
FCC ID: BEJTM04ANNABM2
This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/ TV technician for help.

Changes or modifications not expressly approved by the grantee of this device could void the user's authority to operate the equipment.

This device complies with Industry Canada's licence-exempt RSSs and part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause interference, and

(2) this device must accept any interference, including interference that may cause undesired operation of the device.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. This device should be installed and operated with minimum distance 3.5 cm between the radiating element of this device and the user.

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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-market version. No claims shall be entertained as a result of such discrepancies.
Dimensions, weights, fuel consumption and performance data are quoted to the customary tolerances.
The right to modify designs, equipment and accessories is reserved.
Errors and omissions excepted.

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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	Premium unleaded (Max. 15 % ethanol, E15) 89 AKI (95 ROZ/RON) 90 AKI
Alternative fuel quality	Regular unleaded (restrictions with regard to power and fuel consumption.) (Max. 15 % ethanol, E15) 87 AKI (91 ROZ/RON) 87 AKI
Usable fuel quantity	approx. 7.9 gal (approx. 30 l)
Reserve fuel quantity	approx. 1.1 gal (approx. 4 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

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