BMW
MOTORRAD

RIDER'S MANUAL (US MODEL)

R 1250 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 these operating instructions before starting your new BMW. It contains important notes about operating the vehicle that will enable you to make full use of the technical assets of your BMW.

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

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

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

BMW Motorrad.

GENERAL INSTRUCTIONS

01

4 GENERAL INSTRUCTIONS

QUICK & EASY REFERENCE

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 motorcycle, this information has been provided in chapter 2. All preventive maintenance and repair procedures carried out on your motorcycle will be documented in the Service chapter. Documentation of the maintenance work performed is a prerequisite for generous treatment of claims.

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 an activity.
- 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 retailer.
ABS	Anti-Lock Brake System.
D-ESA	Electronic chassis and suspension adjustment.
DTC	Dynamic Traction Control.
DWA	Anti-theft alarm.
EWS	Electronic immobilizer.
MSR	Engine drag torque control.
TPC	Tire Pressure Control (TPC).

EQUIPMENT

When you ordered your BMW Motorrad motorcycle, you chose various items of custom equipment. These operating instructions describe optional equipment (OE) offered by BMW and selected optional accessories (OA). This explains why the manual may also contain descriptions of equipment which you have not ordered. Please note, too, that your motorcycle might not be exactly as illustrated in this manual on account of country-specific differences.
If your motorcycle features equipment that is not described here, you can find these features described in a separate manual.

TECHNICAL DATA

All dimensions, weights and performance data contained in these operating instructions 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 these operating instructions serve as points of reference. The vehicle-specific

data may vary, for instance due to the selected optional equipment, national-market version or country-specific measuring procedures. Detailed values can be obtained from the registration documents or requested from your BMW Motorrad retailer or other qualified service partner or specialist workshop. The information on the vehicle documents always takes precedence over the information in these operating instructions.

TIMELINESS OF THE STATUS OF THIS MANUAL

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

ADDITIONAL SOURCES OF INFORMATION

Authorized BMW Motorrad retailer

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

Internet

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

CERTIFICATES AND OPERATING PERMITS

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

DATA MEMORY

General information

Control units are installed in the vehicle. Control units process data received from vehicle sensors, self-generated data or data exchanged between control units, for example. Some control units are required for

safe vehicle operation or provide riding assistance, such as rider assistance systems. Control units also make comfort and infotainment functions possible.
Information about the stored or exchanged data can be obtained from the vehicle manufacturer, such as in the form of a separate booklet.

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

Data privacy laws
In accordance with applicable data privacy laws, vehicle users have certain rights over the vehicle manufacturer or company that collects or processes personal data.
Vehicle users have the right to obtain comprehensive information without charge from the locations that store the vehicle user's personal data.
These locations may be:
–The vehicle manufacturer
–Qualified service partners
–Specialist workshops
–Service providers

Vehicle users may request information about the type of personal data that is stored, the purpose for which the data will be used and the source of the data. This information can only be obtained by a registered owner or a person with written proof authorizing use of the vehicle.
The right to information also includes information related to data transmitted to other companies or locations.
The vehicle manufacturer's website contains the appropriate privacy policy notices.
The privacy policy notices contain information on the right to delete or correct data. The vehicle manufacturer also provides the manufacturer contact information and the contact information of the data security officer in the Internet.
The vehicle owner can have a BMW Motorrad retailer or other qualified service partner

or specialist workshop read out the data stored in the vehicle for a fee if required.
The vehicle data is read out via the vehicle's legally mandated socket for onboard diagnosis (OBD).

Legal requirements for the disclosure of data
The vehicle manufacture is required by the law applicable in this context to provide authorities with the data stored by the manufacturer. The provision of this data within the scope required is on a case-by-case basis, for instance to clarify a criminal offense.
Government agencies are authorized by the law applicable in this context to read out the data from the vehicle themselves in individual cases.

Operating data in the vehicle
Control units process data so that the vehicle can run.
Examples of this include:
– Status messages from the vehicle and its individual components, such as wheel RPM, wheel centrifugal velocity and deceleration
– Ambient conditions, such as temperature

The data is processed only in the vehicle itself and is usually temporary. The data is not stored beyond the period in which the vehicle is operating.
Electronic components such as control units contain components for storing technical information. This may be information about the vehicle's condition, component load, events or faults stored temporarily or permanently.
This information generally documents the condition of a component, module, system or the surrounding area; for example:
– Operating conditions of system components, such as fill levels and tire pressure
– Malfunctions and faults in key system components, such as lights and brakes
– Vehicle responses in specific riding situations, such as the activation of riding stability control 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 a BMW Motorrad retailer or other qualified service partner or specialist workshop. The vehicle's legally mandated socket for onboard diagnosis (OBD) is used to read out the data.
The data is collected, processed and used by the respective retailer network locations. The data documents the vehicle's technical states and helps with fault finding, compliance with warranty obligations and quality improvements.
The manufacturer also has product monitoring obligations arising from product liability law. The vehicle manufacturer requires technical data from the vehicle in order to fulfill these obligations. The data from the vehicle can also be used to verify customer warranty and guarantee claims.
The fault memory and event data recorder in the vehicle can be reset by a BMW Motorrad retailer or other qualified service partner or specialist workshop as part of a repair or servicing.

Data input and data transfer in the vehicle

General information

Depending on the equipment, comfort settings and individualized settings in the vehicle can be saved and changed or reset at any time.
Examples of this include:
– Windshield position settings
– Chassis and suspension adjustment settings

It is possible to introduce data into the vehicle entertainment and communication system via a smartphone, for instance. Depending on the individual equipment, this includes:

–Multimedia data, such as music for playback
–Address book data for use in combination with a communication system or integrated navigation system
–Entered destinations
–Data about the use of Internet services. This data can be stored locally in the vehicle or is on a device connected to the vehicle, such as a smartphone, USB stick or MP3 player. If this data is saved in the vehicle, it can be deleted at any time.

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

Incorporating mobile end devices

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

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

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

Services

General information

If the vehicle has a mobile phone connection, this connection makes it possible to exchange data between the vehicle and other systems. The mobile phone connection is made possible through the vehicle's transmitter and receiver or via personally integrated mobile end devices such as smartphones. Online functions, as they are called, are used over this mobile phone connection. These include online services and apps provided by the vehicle manufacturer or other providers.

Vehicle manufacturer services
In the case of the vehicle manufacturer's online services, the particular functions are described at the appropriate location, such as in the rider's manual or on manufacturer's website. The relevant legal information on data privacy is also provided there. Personal data may be used in order to provide online services. The data is exchanged over a secure connection, i.e. with the vehicle manufacturer's IT systems which are intended for this purpose.
Any collection, processing and use of personal data that goes beyond the provision of services take place only as permitted by law, on the basis of a contractual agreement or as a result of consent. It is also possible to have the entire data connection activated or deactivated. This is not the case for legally prescribed functions.
Services of other providers
When using the online services of other providers, these services are subject to the responsibility and the term of data protection and use of the respective provider. The vehicle manufacturer has no control over the content exchanged via these services. Information about the type, scope and purpose of collecting and using personal data as part of third-party services can be obtained from the particular service provider.

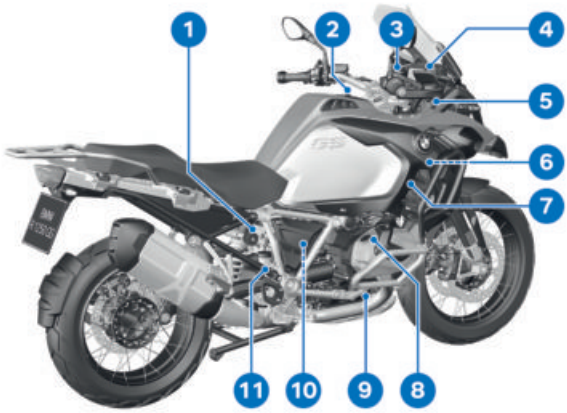
OVERVIEWS

02

OVERALL VIEW, LEFT SIDE

1 Fuel filler opening (➠ 137)
2 12 V socket
3 Seat lock (➠ 116)
4 Adjuster for rear damping (at the bottom on the spring strut) (➠ 120)
5 Tire pressure table (behind the side trim panel)

OVERALL VIEW, RIGHT



1 Adjuster for spring preload, rear (➠ 119)

2 Air filter (under center fairing panel) (➠ 185)

3 Brake fluid reservoir for front wheel brake (➠ 173)

4 Height adjustment of the windshield (➠ 110)

5 USB charging interface (➠ 199)

6 Vehicle identification number (on the steering-head bearing)
Nameplate (on the steering-head bearing)

7 Coolant level indicator (➠ 175)
Coolant tank (➠ 176)

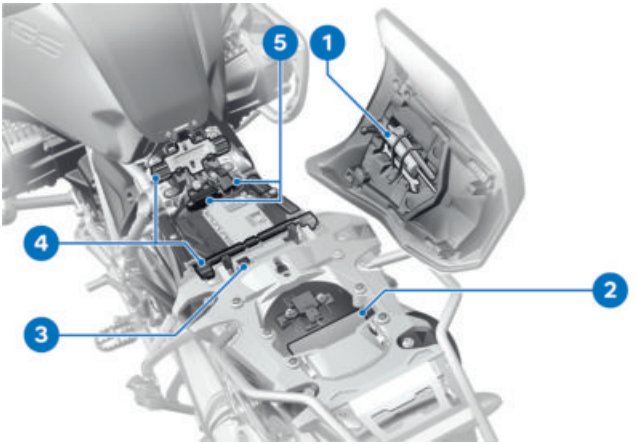
8 Oil filler opening (➠ 170)

9 Engine oil indicator (➠ 169)

10 Behind the side trim panel:
Battery (➠ 188)
Remote positive terminal (➠ 187)
Diagnostic socket (➠ 194)

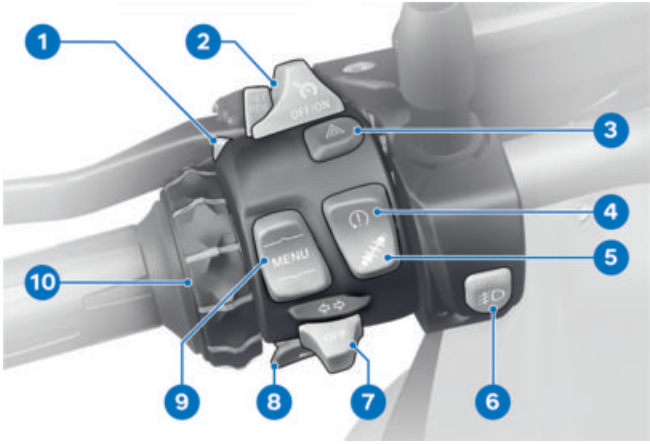
11 Brake fluid reservoir for rear wheel brake (➠ 174)

UNDERNEATH THE SEAT



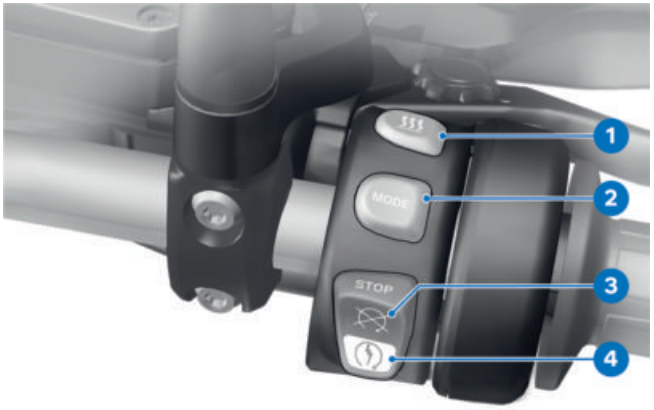
1 Onboard vehicle tool kit (➠ 167)
2 Rider's manual
3 Payload table
4 Adjustment in setting of rider's seat height (➠ 118)
5 Fuses (➠ 193)

MULTIFUNCTION SWITCH, LEFT



1 High beams and headlight flasher (➠ 61)
2 –with cruise control[OE] Cruise control (➠ 72).
3 Hazard warning lights (➠ 62)
4 DTC (➠ 64)
5 –with Dynamic ESA[OE] Dynamic ESA adjustment options (➠ 65)
6 –with additional headlight[OE] Auxiliary headlights (➠ 62).
7 Turn signals (➠ 63)
8 Horn
9 Rocker button MENU (➠ 87)
10 Multi-Controller Operating elements (➠ 87)

MULTIFUNCTION SWITCH, RIGHT



1 Heating (➠ 80)
2 Riding mode (➠ 68)
3 Emergency-off switch (➠ 60)
4 Starter button
Starting the engine (➠ 127).

INSTRUMENT CLUSTER

1 Indicator and warning lights (➠ 22)

2 TFT display (➠ 23) (➠ 24)

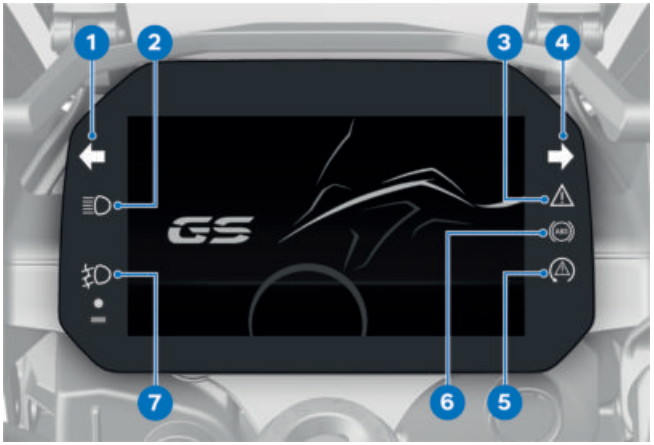
3 Anti-theft alarm system LED
–with anti-theft alarm system (DWA) OE
Alarm signal (➠ 78)
–with Keyless Ride OE
Indicator light for radio-operated key
Ignition with Keyless Ride (➠ 57).

4 Photodiode (for adjusting brightness of instrument lighting)

DISPLAYS

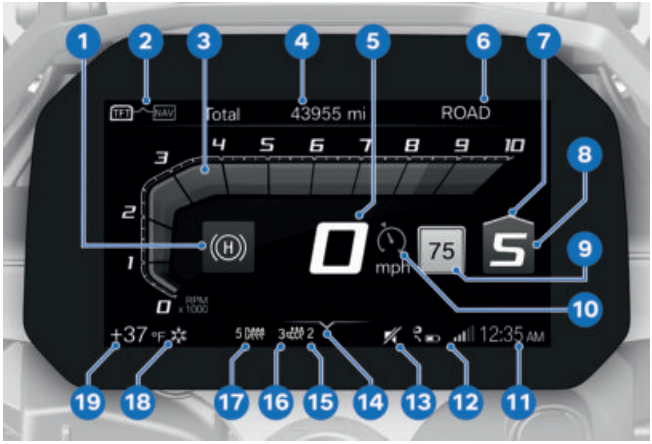
03

INDICATOR AND WARNING LIGHTS



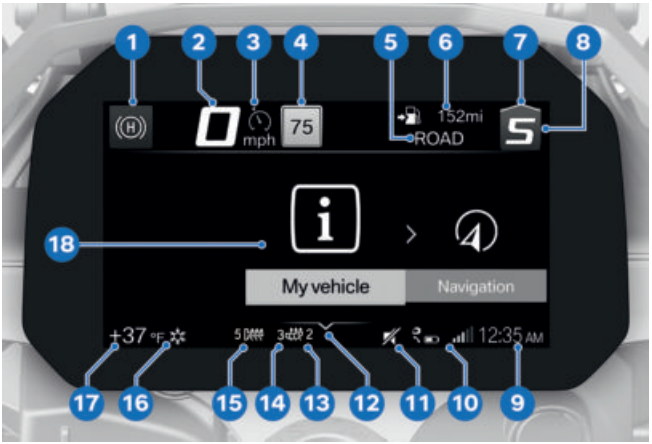
1 Turn signal, left
Operating turn signals (➠ 63).
2 High beams (➠ 61)
3 General warning light (➠ 25)
4 Turn signal, right
5 DTC (➠ 46)
6 ABS (➠ 45)
7 –with additional headlight[OE]
Auxiliary headlights (➠ 62).

TFT DISPLAY IN PURE RIDE VIEW



1 Hill Start Control (➠ 49)
2 Changing operating focus (➠ 91)
3 Tachometer (➠ 93)
4 Rider info. status line (➠ 91)
5 Speedometer
6 Riding mode (➠ 68)
7 Upshift recommendation (➠ 94)
8 Gear display, "N" (Neutral) is displayed in the neutral position.
9 Speed Limit Info (➠ 93)
10 –with cruise control[OE] Cruise control (➠ 72).
11 Clock (➠ 95)
12 Connection status (➠ 97)
13 Muting (➠ 94)
14 Operating assistance
15 Passenger seat heater (➠ 81)
16 Rider's seat heater (➠ 81)
17 Heated grips (➠ 80)
18 Outside temperature warning (➠ 32)
19 Outside temperature

TFT DISPLAY IN THE VIEW MENU



1 Hill Start Control (➠ 49)
2 Speedometer
3 –with cruise control[OE] Cruise control (➠ 72).
4 Speed Limit Info (➠ 93)
5 Riding mode (➠ 68)
6 Rider info. status line (➠ 91)
7 Upshift recommendation (➠ 94)
8 Gear display, "N" (Neutral) is displayed in the neutral position.
9 Clock
10 Connection status
11 Muting (➠ 94)
12 Operating assistance
13 Passenger seat heater (➠ 81)
14 Rider's seat heater (➠ 81)
15 Heated grips (➠ 80)
16 Outside temperature warning (➠ 32)
17 Outside temperature
18 Menu area

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 TFT display. 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, values optimal.
–White circle with small "i" **2**: information.
–Yellow warning triangle **3**: warning message, value not optimal.
–Red warning triangle **3**: warning message, 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 too 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 several Check Control messages of the same priority are present, the messages change in the order in which they occur, until they are acknowledged.

–If the icon **2** is active, you can acknowledge this by tilting the Multi-Controller to the left.

–Check Control messages are dynamically attached to the pages in the `My vehicle` menu as additional tabs (➠ 89). The message can be called up again as long as the error persists.

Overview of warning indicators

Indicator and warning lights	Display text	Meaning
	 is displayed.	Outside temperature warning (➠ 32)
 lights up yellow.	 Remote key not in range.	Radio-operated key outside reception range (➠ 32)
 lights up yellow.	 Keyless Ride failure!	Keyless Ride failure (➠ 33)
 lights up yellow.	 Remote key battery at 50%.	Replacing the battery of the radio-operated key (➠ 33)
	 Remote key battery low.	
	 is displayed in yellow.	Vehicle voltage too low (➠ 33)
	 Vehicle voltage low.	
 lights up yellow.	 is displayed in red.	Vehicle voltage critical (➠ 34)
	 Vehicle voltage critical!	
 flashes yellow.	 is displayed in red.	Charging voltage critical (➠ 34)
	 Vehicle voltage critical!	
 lights up yellow.	 The faulty light source is displayed.	Light source defect (➠ 35)
 lights up yellow.	 Light control failure!	Light control unit failed (➠ 36)

Indicator and warning lights	Display text	Meaning
	Anti-theft alarm batt. capacity low.	Anti-theft alarm battery low charge (➠ 36)
	Anti-theft alarm battery discharged.	Anti-theft alarm battery discharged (➠ 36)
	Anti-theft alarm system failure.	DWA failure (➠ 37)
	Engine oil level Check engine oil level.	Electronic oil-level check: check engine oil level (➠ 37)
lights up red.	Coolant temperature too high!	Coolant temperature too high (➠ 38)
	Engine!	Drive malfunction (➠ 38)
lights up yellow.	No communication with engine control.	Engine control failure (➠ 39)
lights up yellow.	Fault in the engine control.	Engine in emergency-operation mode (➠ 39)
flashes red.	Serious fault in the engine control.	Serious fault in the engine control (➠ 39)
lights up yellow.	is displayed in yellow.	Tire pressure at the limits of the permissible tolerance. (➠ 41)
	Tire pressure not at set-point.	

Indicator and warning lights	Display text	Meaning
 flashes red.	 is displayed in red.	Tire pressure is outside the approved tolerance range (➠ 42)
	 `Tire pressure not at set-point.`	
	 `Tire Press. Monitor. Loss of pressure.`	
	 `"---"`	Transmission fault (➠ 43)
 lights up yellow.	 `"---"`	Sensor faulty or system fault (➠ 43)
 lights up yellow.	 `Tire Press. Monitor failure!`	Tire pressure control (TPC) failed (➠ 44)
 lights up yellow.	 `TPM sensors battery low.`	Battery of the tire pressure sensor weak (➠ 44)
	 `Fall sensor faulty.`	Fall sensor defective (➠ 44)
	 `Side stand monitoring faulty`	Side stand monitoring faulty (➠ 44)
 flashes.		ABS self-diagnosis not completed (➠ 45)
 lights up yellow.	 `Limited ABS availability!`	ABS fault (➠ 45)
 lights up.		

Indicator and warning lights	Display text	Meaning
 lights up yellow.	 ABS failure!	ABS failure (➠ 45)
 lights up.		
 lights up.	 ABS Pro failure!	ABS Pro failure (➠ 46)
 flashes rapidly.		DTC intervention (➠ 46)
 flashes slowly.		DTC self-diagnosis not completed (➠ 46)
 lights up.	Off!	DTC switched off (➠ 47)
	 Traction control deactivated.	
lights up.	 Traction control limited.	Limited DTC availability (➠ 47)
 lights up.	 Traction control failure!	DTC error (➠ 47)
lights up yellow.	Spring strut adjustment faulty!	D-ESA fault (➠ 48)
	 Fuel reserve is being used up. Drive to the nearest filling station.	Fuel down to reserve volume (➠ 48)
	 is displayed in green.	Hill Start Control active (➠ 49)

Indicator and warning lights	Display text	Meaning
	 blinks yellow.	Hill Start Control is automatically deactivated (➠ 49)
	 is displayed.	Hill Start Control cannot be activated (➠ 49)
	 Gear indicator flashes.	Gear not trained (➠ 49)
 flashes in green.		Hazard warning lights system switched on (➠ 50)
 flashes in green.		
	 is displayed in white.	Service due (➠ 50)
	Service due!	
 lights up yellow.	 is displayed in yellow.	Service date missed (➠ 51)
	Service overdue!	

Outside temperature
The outside temperature is displayed in the status line of the TFT display.
Engine heat can lead to spurious readings the outside temperature when the motorcycle is stationary. If the effect of the engine heat becomes excessive, dashes are temporarily displayed instead of the value.


If the outside temperature falls below the following limit value, there is a risk of black ice formation.

 Limit value for outside temperature
Approx. 37 °F (Approx. 3 °C)

The first time the temperature drops below this value, the outside temperature display and ice crystal symbol will flash in the status line of the TFT display.

Outside temperature warning

is displayed.

Possible cause:

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

⚠ WARNING

Risk of black ice, even above 37 °F (3 °C)
Accident hazard
- At a low outside temperature, icy conditions must expected on bridges and in shady road areas.

- Think well ahead when driving.

Radio-operated key outside reception range
–with Keyless Ride[OE]


lights up yellow.


`Remote key not in range. It is not possible to turn on the ignition again.`
Possible cause:
Communication between the key fob transmitter and the engine electronics is disrupted.
- Check the battery in the key fob transmitter.

–with Keyless Ride[OE]
- Replacing the battery of the radio-operated key (➠ 59).
- Use reserve key for further driving.

–with Keyless Ride OE

- Battery of radio-operated key is dead or radio-operated key is lost (➠ 58).
- Should the Check Control dialog appear while riding, keep calm. You can continue driving; the engine will not turn off.
- Have the defective key fob transmitter replaced by an authorized BMW Motorrad retailer.

Keyless Ride failure

 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 specialist workshop immediately if possible, ideally an authorized BMW Motorrad retailer.

» Engine start using Keyless Ride is no longer possible.

» DWA can no longer be activated.

Replacing the battery of the radio-operated key

–with Keyless Ride OE

 lights up yellow.

 `Remote key battery at 50%. No functional limitation.`

 `Remote key battery low. Limited central locking function. Change battery.`

Possible cause:

- The battery for the key fob transmitter is no longer charged to full capacity. Operation of the key fob transmitter is only ensured for a limited time.
- Replacing the battery of the radio-operated key (➠ 59).

Vehicle voltage too low

 is displayed in yellow.

 `Vehicle voltage low. Switch off unneeded consumers.`

The vehicle voltage is too low. If you continue riding, the vehicle electronics will discharge the battery.

Possible cause:
Consumers with high electrical consumption, e.g. heating vests, are in operation, too many consumers are in operation at the same time or the battery is defective.
- Switch off consumers that are not needed or disconnect them from the electrical system.
- If the malfunction persists or occurs without any consumers connected, have the malfunction corrected as soon as possible at a specialist workshop, preferably an authorized BMW Motorrad retailer.

Vehicle voltage critical

 lights up yellow.

 is displayed in red.

 `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. If you continue riding, the vehicle electronics will discharge the battery.
Possible cause:
Consumers with high electrical consumption, e.g. heating vests, are in operation, too many consumers are in operation at the same time or the battery is defective.
- Switch off consumers that are not needed or disconnect them from the electrical system.
- If the malfunction persists or occurs without any consumers connected, have the malfunction corrected as soon as possible at a specialist workshop, preferably an authorized BMW Motorrad retailer.

Charging voltage critical

 flashes yellow.

 is displayed in red.

 `Vehicle voltage critical! Battery is not charged. Check battery condition.`

WARNING

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

The battery is not being charged. If you continue riding, the vehicle electronics will discharge the battery.
Possible cause:
Defect in alternator or the alternator drive assembly, or the voltage regulator fuse has been triggered.
- Have the malfunction corrected as soon as possible at an authorized service facility, preferably an authorized BMW Motorrad retailer.

Light source defect


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!`

–with additional headlight OE


`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.`

WARNING

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

Possible cause:
One or more light sources are faulty.
- Locate defective bulb with visual check.
- Have the LED light source replaced in full; for details please contact a specialist workshop, preferably an au-

thorized BMW Motorrad retailer.

Light control unit failed

 lights up yellow.

 `Light control failure! Have checked by a specialist workshop.`

WARNING

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

Safety risk

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

Possible cause:
The light control unit has diagnosed a communication error.

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

Anti-theft alarm battery low charge

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

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

Anti-theft alarm battery discharged

–with anti-theft alarm system (DWA) OE

`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 anti-theft alarm system battery is completely discharged. Operation of the anti-theft alarm system is no longer ensured when the motorcycle's battery is disconnected.
- Contact an authorized service facility, preferably an authorized BMW Motorrad retailer.

DWA failure

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

Possible cause:
The DWA control unit has diagnosed a communication fault.
- Contact a specialist workshop, preferably an authorized BMW Motorrad retailer.

» 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:

– The rider is sitting on the motorcycle and the motorcycle has been ridden at a speed of at least 6 mph (10 km/h) beforehand.
– Engine idling for at least 20 seconds.
– Engine is at operating temperature.
– Motorcycle stands vertically on a level surface.
– Side stand is retracted and motorcycle is not resting on a center stand.
– The spring strut is set according to the load status, or D-ESA is in the Auto loading mode.

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

Electronic oil-level check: check engine oil level

⚠ `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:
- Checking the engine oil level (➠ 169).

If the oil level is too low in the inspection glass:
- Topping up the engine oil (➠ 170).

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

If the note appears multiple times even though the oil level is slightly below the **MAX** mark:
- Contact a specialist workshop, preferably an authorized BMW Motorrad retailer.

Coolant temperature too high

 lights up red.

 `Coolant temperature too high! Check coolant level. Carry on at moderate pace to cool.`

ATTENTION

Riding with overheated engine

Engine damage
- Be sure to observe the measures listed below.

Possible cause:
Coolant level is too low.
- Checking the coolant level (➠ 175).

If coolant level is too low:
- Allow the engine to cool down.
- Topping up coolant (➠ 176).
- Have the cooling system checked at a specialist workshop, preferably by an authorized BMW Motorrad retailer.

Possible cause:
The coolant temperature is too high.
- If possible, continue riding in the partial load range to cool down the engine.

If the coolant temperature is frequently too high:
- Have the fault corrected as soon as possible by a specialist workshop, preferably an authorized BMW Motorrad retailer.

Drive malfunction

 `Engine! Have checked by a specialist workshop.`

Possible cause:
The engine control unit has diagnosed a fault which affects the pollutant emissions.
- Have fault eliminated at a specialist service facility, preferably an authorized BMW Motorrad retailer.

» You may continue to drive if the pollutant emission is above the setpoint values.

Engine control failure

 lights up yellow.


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

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 which impairs the engine performance or throttle response. The engine is running in the emergency-operation mode. In exceptional cases, the engine stops and can no longer be started.
- Have the malfunction corrected as soon as possible at an authorized service facility, preferably an authorized BMW Motorrad Retailer.

» It is possible to continue riding, however the engine performance and engine speed range may be impaired and not function as normal.

Serious fault in the engine control

 flashes red.


Serious fault in the engine control. Onward journey possible.

Damage possible. Have checked by a workshop.

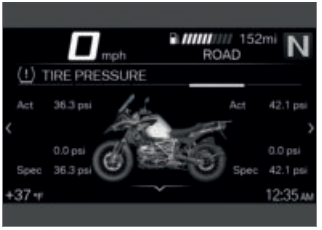
WARNING

Damage to engine during emergency operation
Accident hazard
- Drive slowly and avoid rapid acceleration and passing maneuvers.
- If possible, have the vehicle picked up and the fault eliminated at a specialist workshop, preferably an authorized BMW Motorrad retailer.

Possible cause:
The engine control unit has diagnosed a fault, which can lead to a severe secondary fault. The engine is in the emergency-operation mode.
- Continued driving is possible, however it is not recommended.
- Avoid high load and engine speed ranges if possible.
- Have the malfunction corrected as soon as possible at an authorized service facility, preferably an authorized BMW Motorrad Retailer.

Tire pressure
–with tire pressure monitor (TPM) OE

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 turning on the ignition, only dashes are displayed. The transfer 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 does not transmit a signal to the motorcycle until this minimum speed has been exceeded.)
 The tire pressures are shown in the TFT display 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 concerned is borderline in terms of the permissible 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 more information about the BMW Motorrad tire pressure control, see the "Technology in detail" chapter starting on page (➠ 158).

Tire pressure at the limits of the permissible tolerance.

–with tire pressure monitor (TPM) OE

 lights up yellow.

 is displayed in 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 tire pressure.
- Before adjusting the tire pressure, check the information on temperature compensation and tire pressure adjustment in the "Technology in detail" section:

» Temperature compensation (➠ 159)

» Tire pressure adjustment (➠ 159)

» 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
–Sign underneath the seat

Tire pressure is outside the approved tolerance range
–with tire pressure monitor (TPM) OE

 flashes red.

 is displayed in 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 the tires for damage and driveability.
Can the tire still be driven on:
• 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" section:
» Temperature compensation (➠ 159)
» Tire pressure adjustment (➠ 159)
» 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
–Sign underneath the seat
• Have the tires checked by a specialist workshop for damage, preferably an authorized BMW Motorrad retailer.

The RDC warning message can be deactivated in the off-road mode.

In the event of uncertainty about the driveability of the tire:
- Do not continue riding.
- Inform roadside assistance.

Transmission fault
–with tire pressure monitor (TPM) OE


"–––"

Possible cause:
The motorcycle has not reached the minimum speed (➠ 158).

 RDC sensor is not active
min 19 mph (min 30 km/h) (The RDC sensor does not transmit a signal to the motorcycle until this minimum speed has been exceeded.)

- Watch the TCP/RDC display at a higher rate of speed. A continuous error is only present if the general warning lamp also lights up. In this case:
- Have fault eliminated at a specialist service facility, preferably an authorized BMW Motorrad retailer.

Possible cause:
There is a fault in the radio connection to the TPC/RDC sensors. Possible causes are radio systems in the surrounding area, which interfere with the connection between the TPC/RDC control unit and the sensors.
- Watch the TPC/RDC display in another environment. A continuous error is only present if the general warning lamp also lights up. In this case:
- Have fault eliminated at a specialist service facility, preferably an authorized BMW Motorrad dealer.

Sensor faulty or system fault
–with tire pressure monitor (TPM) OE


lights up yellow.


"–––"

Possible cause:
Wheels without TPM sensors are fitted.
- Retrofit wheel set with TPM sensors.

Possible cause:
1 or 2 TCP/RDC sensors have failed or a system error has occurred.
- Have fault eliminated at a specialist service facility, preferably an authorized BMW Motorrad retailer.

Tire pressure control (TPC) failed

–with tire pressure monitor (TPM) OE


lights up yellow.


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

Possible cause:
The TPC control unit has diagnosed a communication fault.
- Contact a specialist workshop, preferably an authorized BMW Motorrad retailer.

» Tire pressure warnings not available.

Battery of the tire pressure sensor weak

–with tire pressure monitor (TPM) OE


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 of the tire inflation pressure sensor no longer has its full capacity. The operation of the tire inflation pressure control is only ensured for a limited time.
- Contact an authorized workshop, preferably an authorized BMW Motorrad retailer.

Fall sensor defective


Fall sensor faulty. Have checked by a specialist workshop.

Possible cause:
The fall sensor is not functioning.
- Contact an authorized service facility, preferably an authorized BMW Motorrad retailer.

Side stand monitoring faulty


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

Possible cause:
The side-stand switch or its wiring is damaged. The engine is switched off when the speed falls below 3 mph (5 km/h), and the ride cannot be resumed.

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

ABS self-diagnosis not completed


flashes.

Possible cause:

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

- Ride off slowly. Please note that the ABS function is only available after the self-diagnosis has 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 partial integral brake and the Dynamic Brake Control function have failed. The ABS function is limited.

- It remains possible to continue riding. Observe additional information on special situations which can lead to ABS fault messages (➠ 148).
- Have the malfunction corrected as soon as possible at an authorized specialist workshop, preferably an authorized BMW Motorrad retailer.

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.
- It remains possible to continue riding. Observe additional information on special situations which can lead to ABS fault messages (➠ 148).
- Have the malfunction corrected as soon as possible at an authorized service facility, preferably an authorized BMW Motorrad Retailer.

ABS Pro failure


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 an ABS Pro fault memory entry (➠ 148).
- Have the malfunction corrected as soon as possible at a specialist workshop, preferably an authorized BMW Motorrad retailer.

DTC intervention


flashes rapidly.

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 situation has passed.

DTC self-diagnosis not completed


flashes 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, motorcycle must reach a minimum speed with engine running: min 3 mph (min 5 km/h))

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

DTC switched off

 lights up.

 Off!

 Traction control deactivated.

Possible cause:
The DTC system was deactivated by the rider.
- Turning on DTC (➠ 64).

Limited DTC availability

 lights up.

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

Possible cause:
The DTC control unit has detected an error.

ATTENTION

Damage to components
Damage to sensors, for example, with the resultant malfunctions
- Do not carry along any objects under the rider's or passenger's seat.
- Secure vehicle tools.

- Do not damage the rotational speed sensor.
- It must be noted that only limited DTC function is available.
- You may continue riding. Observe additional information on situations that can lead to a DTC fault (➠ 150).
- Have the malfunction corrected as soon as possible at a specialist workshop, preferably an authorized BMW Motorrad retailer.

DTC error

 lights up.

 Traction control failure! Onward journey possible. Ride carefully to the next specialist workshop.

Possible cause:
The DTC control unit has detected an error.

ATTENTION

Damage to components
Damage to sensors, for example, with the resultant malfunctions
- Do not carry along any objects under the rider's or passenger's seat.
- Secure vehicle tools.

- Do not damage the rotational speed sensor.
- It must be noted that the DTC function is not available at all or is restricted.
- You may continue riding. Observe additional information on situations that can lead to a DTC fault (➠ 150).
- Have the malfunction corrected as soon as possible at a specialist workshop, preferably an authorized BMW Motorrad retailer.

D-ESA fault


lights up yellow.


`Spring strut adjustment faulty! Onward journey possible. Ride carefully to next specialist workshop.`

Possible cause:
The D-ESA control unit has detected a fault. Damping action and/or the spring adjustment may be the cause. In the Auto loading mode, the cause may be a fault in the function of the riding position compensation. In this state, the motorcycle is probably heavily damped and is uncomfortable to drive, particularly on poor roadways. Alternatively, the spring preload may be set incorrectly.
- Have the malfunction corrected as soon as possible at an authorized service facility, preferably an authorized BMW Motorrad Retailer.

Fuel down to reserve volume


Fuel reserve is being used up. Drive to the nearest 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 the most, the fuel tank still contains the reserve fuel quantity.

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

- Refueling procedure (➠ 137).

Hill Start Control active

 is displayed in green.

Possible cause:
The Hill Start Control (➠ 161) was activated by the rider.
- Switch off Hill Start Control.
- Operating the Hill Start Control (➠ 74).

Hill Start Control is 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 stopped.
- Operating the Hill Start Control (➠ 74).

Hill Start Control cannot be activated

 is displayed.

Possible cause:
The Hill Start Control can not be activated.
- Fold in side stand.
» Hill Start Control only functions when the side stand is folded in.
- Start engine.
» Hill Start Control only functions with the engine running.

Gear not trained

–with Gearshift Assistant Pro OE

 Gear indicator flashes.

Possible cause:
–with Gearshift Assistant Pro OE
The transmission sensor has not been completely taught in.
- Engage idle position N and allow the engine to run for at least 10 seconds while parked to train the idle position.
- Shift all gears with clutch control and ride for at least 10 seconds in each engaged gear.
» The gear display stops flashing when the transmission sensor has been successfully taught in.

– If the transmission sensor is completely trained, the Gear Shift assistant Pro functions as described (➠ 159).
- If the transmission sensor has been programmed completely, the gearshift assistant will operate as described If the teach-in procedure is unsuccessful, have the fault corrected at a specialist workshop, preferably an authorized BMW Motorrad retailer.

Hazard warning lights system switched on

 flashes in green.

 flashes in green.

Possible cause:
The hazard warning lights system was switched on by the rider.
- Operating the hazard warning lights (➠ 62).

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 MY VEHICLE and SERVICE REQUIREMENTS menu screens.

 If the service display appears more than a month before the service date, the current day's date must be reset in the instrument cluster. 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 driving performance or the date.
- Have service performed regularly by a specialist workshop, preferably an authorized BMW Motorrad retailer.

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

Service date missed

 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 specialist workshop, preferably an authorized BMW Motorrad retailer.

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

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

OPERATION

04

IGNITION SWITCH/STEERING LOCK

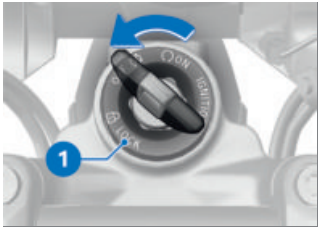
Ignition key

You are provided with 2 ignition keys.
If you lose your keys, refer to the notes regarding the electronic immobilizer (EWS) (➠ 55).
A single ignition key fits the ignition switch/steering lock, the fuel filler cap and the seat lock.

The cases and the topcase can also be ordered with locks for the same key on request. Please contact a specialist workshop for this purpose, preferably a BMW Motorrad retailer.

Locking the steering lock

- Turn handlebars to left.

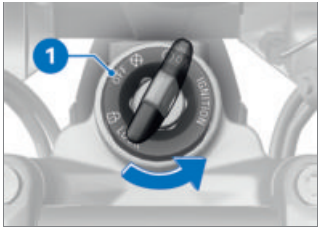


- Turn the ignition key to position **1** while moving the handlebars somewhat.
» Ignition, lights and all electrical circuits turned off.
» Steering lock is locked.
» The ignition key can be removed.

Turning on the ignition

- Insert the ignition key into the ignition switch/steering lock and turn it to position **1**.
» Parking lights and all function circuits are turned on.
» Pre-Ride-Check is carried out. (➠ 128)
» ABS self-diagnosis is performed. (➠ 129)
» DTC self-diagnosis is performed. (➠ 129)

Turning off the ignition



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

» After the ignition has been turned off, the instrument cluster remains turned on for a little while and indicates any existing fault memory entries.
» Steering lock is not locked.
» Electrically powered accessories remain operational for a limited period of time.
» Battery can be recharged using the onboard power socket.
» The ignition key can be removed.

–with additional headlight OE

- The auxiliary headlights go off shortly after the ignition is switched off.◁

EWS electronic immobilizer

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

An additional ignition key attached to the same ring as the ignition key used to start the engine could "irritate" the electronics, in which case the enabling signal for the engine start is not issued.
Always keep the ignition keys separate from each other.

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

safety system, so the retailer is under an obligation to check the legitimacy of all applications for replacement/ extra ignition keys.

IGNITION WITH KEYLESS RIDE

–with Keyless Ride[OE]

Ignition key

The indicator light for the radio-operated key flashes as long as the radio-operated key is being searched for.
If the radio-operated key or the spare key is detected, it goes out.
If the radio-operated key or the spare key is not detected, it lights up briefly.

You are provided with one radio-operated key and one spare key. If you lose your keys, refer to the notes regarding the electronic immobilizer (EWS) (➠ 55).
The ignition, fuel filler cap and anti-theft alarm system are activated with the radio-operated key. The seat lock, topcase and case can be operated manually.

When the range of the radio-operated key is exceeded (e.g. in case or Topcase), the vehicle cannot be started.
If the radio-operated key continues to be missing, the ignition is switched off after approx. 1.5 minutes to protect the battery charge.
It is advisable to carry the radio-operated key directly on your person (e.g. in a jacket pocket) and to also carry the spare key as an alternative.

Range of Keyless Ride radio-operated key
–with Keyless Ride[OE]
Approx. 3.3 ft (Approx. 1 m)◁

Locking the steering lock

Requirement

Handlebars are turned to the left. The radio-operated key is within the reception area.

- 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
The radio-operated key is within the reception area.

• There are **two** ways to activate the ignition.

Version 1:
• Briefly press button **1**.
» Parking lights and all function circuits are turned on.
–with additional headlight OE
» Auxiliary headlights are switched on.◁
» Pre-Ride-Check is carried out. (➠ 128)
» ABS self-diagnosis is performed. (➠ 129)

Version 2:
• Steering lock is locked, press and hold button **1**.
» Steering lock is unlocked.
» Parking lights and all function circuits are turned on.
» Pre-Ride-Check is carried out. (➠ 128)
» ABS self-diagnosis is performed. (➠ 129)

Turning off the ignition
Requirement
The radio-operated key is within the reception area.

• The ignition can be deactivated in **two** ways.

Version 1:
• Briefly press button **1**.
» Light is switched off.
» Steering lock is not locked.

Version 2:
• Turn handlebars to left.
• Press and hold button **1**.
» Light is switched off.
» Steering lock is locked.

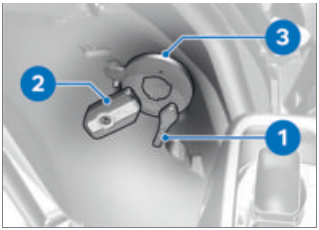
EWS Electronic immobilizer
The motorcycle's electronics monitor the data stored in the radio-operated key through a ring antenna in the radio-operated lock. The engine control unit does not enable an engine

start until the radio-operated key has been recognized as "authorized" for your motorcycle.

An additional radio-operated key attached to the same ring as the radio-operated key used to start the engine could "irritate" the electronics, in which case the enabling signal for the engine start is not issued.
Always keep the radio-operated keys separate from each other.

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

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**).
- Should you loose the radio-operated key while riding, the motorcycle can be started by using the spare key.
- If the battery of the radio-operated key is dead, you can start the vehicle by touching the rear wheel cover with the radio-operated key.
- Hold the spare key **1** or the empty key remote **2** against the rear wheel cover at the height of the antenna **3**.

The spare key or dead radio-operated key must be **touching** the rear wheel cover.

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

» Pre-Ride-Check is carried out.
– Key fob transmitter was detected.
– Engine can be started.
• Starting the engine (➠ 127).

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 is not charged to full capacity.

⚠ `Remote key battery low. Limited central locking function. Change battery.`

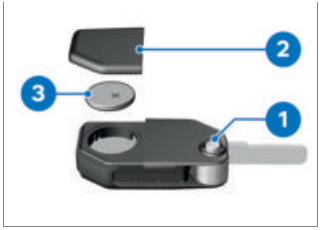
DANGER

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.

• Replace 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 reg-

ulations. 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**.

» Red LED in instrument cluster blinks.

» The radio-operated key is working again.

EMERGENCY-OFF SWITCH

1 Emergency-off switch

WARNING

Operation of the emergency ON/OFF switch when riding
Danger of falling due to blocking of rear wheel
- Do not operate the emergency ON/OFF switch when riding.

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

A Engine turned off
B Operating position

LIGHTS

Low-beam headlight and parking lights

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

The parking lights are a strain on the battery. Do not leave the ignition switched on longer than absolutely necessary.

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

High beams and headlight flasher

- Turning on the ignition (➠ 54).

- 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.

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

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

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

front door after the vehicle is parked.

Parking lights

- Turning off the ignition (➠ 55).

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

Auxiliary headlights

–with additional headlight OE

Requirement

The auxiliary headlights are only active if the low beams are active.

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

- Starting the engine (➠ 127).

- Press button **1** to turn on the auxiliary headlights.

The indicator light for the additional headlight lights up.

- Press button **1** again to turn off the auxiliary headlights.

HAZARD WARNING LIGHTS

Operating the hazard warning lights

- Turning on the ignition (➠ 54).

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

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

» Ignition can be turned off.

- To turn off the hazard warning lights, turn on the ignition, as required, and press button **1** once again.

TURN SIGNALS

Operating turn signals

- Turning on the ignition (➠ 54).

- Press button **1** to the left to turn on the left-side turn signals.
- Press button **1** to the right to turn on the right-side turn signals.
- Move button **1** to the center position to turn off the turn signals.

Comfort turn signals

If button **1** has been pushed to the right or left, the turn signals will automatically turn off under the following conditions:

– Speed is under 18 mph (30 km/h): after a distance covered of 165 ft (50 m).
– Speed is between 18 mph and 60 mph (30 km/h and 100 km/h): after a speed-dependent distance is covered or during acceleration.
– Speed is above 60 mph (100 km/h): after turn signals blink five times.

When button **1** is pushed to the right or left and held slightly longer, the turn signals will only turn off automatically after the speed-dependent distance is covered.

TRACTION CONTROL (DTC)

Turning off DTC

- Turning on the ignition (⇒ 54).

The Dynamic Traction Control (DTC) can also be deactivated while riding.

- Press and hold button **1** until the DTC indicator light changes its behavior.

Immediately after pressing button **1**, the DTC system status ON is displayed.

lights up.

Possible DTC system status OFF! is displayed.

- Release button **1** after changeover of the status.

The new DTC system status OFF! is displayed for a short time.

continues to light up.

» The DTC function is switched off.

Turning on DTC

- Press and hold button **1** until the DTC indicator light changes its behavior.

Immediately after pressing button **1**, the DTC system status OFF! is displayed.

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

Possible DTC system status ON is displayed.

- Release button **1** after changeover of the status.

remains off or continues to flash.

The new DTC system status ON is displayed for a short time.

» The DTC function is switched on.

- Alternatively, turn the ignition off and on again.

- More information about traction control (DTC) can be found in the "Technology in detail" chapter:

» How does traction control work? (➠ 149)

ELECTRONIC CHASSIS AND SUSPENSION ADJUSTMENT (D-ESA)

Dynamic ESA adjustment options

–with Dynamic ESA OE

The Dynamic ESA electronic chassis and suspension adjustment can automatically adapt your motorcycle to the load. If the spring preload is set to Auto, the driver does not have to worry about adjusting the load.
More information about Dynamic ESA can be found in the "Technology in detail" chapter (➠ 152).

Available damping modes

–For road use: Road and Dynamic
–For off-road use: Enduro

Available load settings

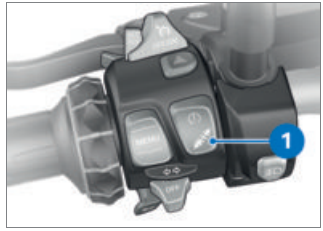
–Fixed minimum spring preload: Min
–Active riding position compensation with automatic adjustment of spring preload: Auto
–Fixed maximum spring preload: Max

BMW Motorrad recommends the Auto chassis and suspension adjustment.

Displaying chassis and suspension adjustment

–with Dynamic ESA OE

- Turning on the ignition (➠ 54).



- Press button **1** briefly to display current setting.

Immediately after the button **1** is pressed, the chassis and

suspension adjustment options for damping **2** and spring preload **3** are displayed.

» The display automatically disappears again after a short time.

Adjusting damping
–with Dynamic ESA[OE]

- Turning on the ignition (➠ 54).

- Press button **1** briefly to display current setting.

To adjust the damping rate:

- Repeatedly press button **1** briefly until the desired setting is displayed.

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

The selection arrow **4** is displayed.

» The selection arrow **4** goes away after the changeover of the status.

The following settings are available:

–`Road`: damping for comfortable road travel
–`Dynamic`: damping for dynamic road travel
–`Enduro`: damping for off-road riding. Only available in the `ENDURO` and `ENDURO PRO` riding modes and cannot be further adjusted in these riding modes.

The following message is displayed if no adjustments are possible in the selected riding mode: `In ENDURO riding mode damp. not adjustable.`

Adjusting spring preload

To adjust the spring preload:
- Starting the engine (➠ 127).
- Repeatedly press and hold button **1** until the desired setting is displayed.

BMW Motorrad recommends the `Auto` setting. `Min` can be used for easier dismounting and `Max`, for example, for off-road use.

The settings Min, Auto and Max can only be selected while stationary.

The following message is output if no adjustments to the setting are possible: `Load adjust. only avail. when halted.`

The selection arrow **4** is displayed.

» The selection arrow **4** goes away after the changeover of the status.

The following settings are available:
– `Min`: minimum spring preload
– `Auto`: automatic spring preload setting
– `Max`: maximum spring preload

» If the button **1** is not pressed for an extended period, the damping action and the spring preload will be adjusted to the displayed settings.

The new chassis and suspension adjustment options for damping **2** and spring preload **3** are displayed briefly.

- At very low temperatures, relieve the motorcycle of its load before increasing the spring preload; if applicable, have the passenger dismount.

» After the setting is completed, the chassis and suspension adjustments disappear.

» In the Auto loading mode, the spring preload is only adjusted after riding off.

RIDING MODE

Use of the riding modes

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

Standard

–ECO: range-optimized riding.

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

–ROAD: riding on dry roads.

–with riding modes Pro OE

With Pro riding modes

–ENDURO: for off-road riding with road tires.

–DYNAMIC: dynamic riding on dry roads.

–ENDURO PRO: off-road riding with cleated off-road tires, taking account of the settings by the rider.

–DYNAMIC PRO: dynamic riding on dry roads, taking account of the settings made by the rider.

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

–with Dynamic ESA OE

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 (➠ 153).

Riding mode preselection
The available riding modes can be preselected. Between two and four riding modes can be selected at a time.
Factory setting:
ECO, RAIN and ROAD
–With Pro riding modes

In addition:ENDURO

Preselecting the riding mode
- Turning on the ignition (➠ 54).
- Go to menu `Settings`, `Vehicle settings`, `Riding mode preselection`.
- Select riding modes.

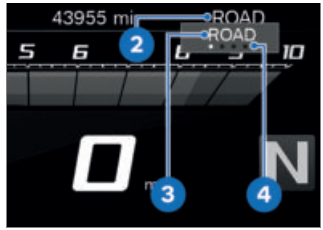
From the following riding modes you can select:
–`ECO`: For range-optimized riding.
–`RAIN`: for riding on rain-slicked roads.
–`ROAD`: for riding on dry roads.

–with riding modes Pro[OE]
The following riding modes are additionally available for selection:
–`DYNAMIC`: for dynamic riding on dry roads.
–`ENDURO`: for off-road riding with road tires.◁

–`DYNAMIC PRO`: for dynamic riding on dry roads, taking account of the settings made by the rider.
–`ENDURO PRO`: for off-road riding with knobby off-road tires, taking account of the settings made by the rider.

Select riding mode
- Turning on the ignition (➠ 54).
- Preselecting the riding mode (➠ 69).

- Press button **1**.



The active riding mode **2** fades into the background, and the first selectable riding mode **3** is displayed. 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.

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

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

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

» The new riding mode is activated while the motorcycle is in motion under the following conditions:
– The throttle grip is in Neutral.
– Brake is not engaged.
– Cruise control is not active.
» The selected riding mode and its corresponding adjustments to the engine characteristics DTC, ABS and MSR are retained even after the ignition has been turned off.

PRO RIDING MODE

– with riding modes Pro[OE]

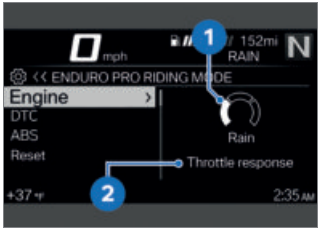
Adjustment options
The PRO riding modes can be adjusted individually only if they have been selected in the riding mode preselection.

Select PRO riding mode
- Turning on the ignition (➠ 54).
- Go to menu Settings, Vehicle settings, Riding mode preselection.
- Select ENDURO PRO riding mode or DYNAMIC PRO riding mode.
- Go to menu Configuration.

Adjusting Enduro Pro

–with riding modes Pro OE

- Select PRO riding mode (➠ 70).



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

- Select and confirm the system.

You can browse 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.

- The settings can be reset to factory settings:
- Riding mode settings reset (➠ 71).

Adjusting Dynamic Pro

- Select PRO riding mode (➠ 70).
- Set systems as for `ENDURO PRO riding mode`.

Riding mode settings reset

- Select PRO riding mode (➠ 70).
- 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: Dyna Pro`
–`ABS: Dynamic`

CRUISE CONTROL

–with cruise control OE

Display 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.

Display 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 the cruise control
Requirement
Cruise control is only available after switching from the ENDURO or ENDURO PRO riding modes.

- Slide switch **1** to the right.

» Button **2** can be operated.

Saving the speed

- Briefly push button **1** forward.

Adjustment range of the cruise control
19...130 mph (30...210 km/h)

The indicator light for cruise control is lit.

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

Accelerating

- Briefly push button **1** forward.
» Speed is increased by 1 mph (1.6 km/h) each time the button is pressed.
- Press button **1** forward and hold.
» The speed increases continuously.
» If button **1** is no longer pressed, the speed reached is maintained and saved.

Decelerating

- Briefly press button **1** backward.
» The speed is decreased by 1 mph (1.6 km/h) each time the button is pressed.
- Press button **1** back and hold.
» The speed is reduced continuously.
» If button **1** is no longer pressed, the speed reached is maintained and saved.

Deactivating the cruise control

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

Due to safety reasons, the cruise control is automatically disabled when downshifting with the Gear Shift Assistant Pro.

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

» The indicator light for cruise control goes out.

Resuming previous cruising speed

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

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

The indicator light for cruise control is lit.

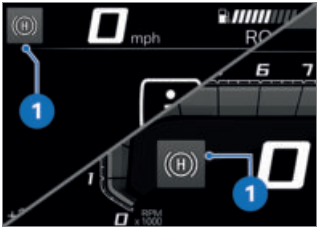
Turning off cruise control

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

» The system is turned off.
» Button **2** is locked.

HILL START CONTROL

Display



The icon **1** for the Hill Start Control is displayed in the Pure Ride view and in the upper status line.

Operating the Hill Start Control

Requirement

Vehicle is at a standstill with the engine running.

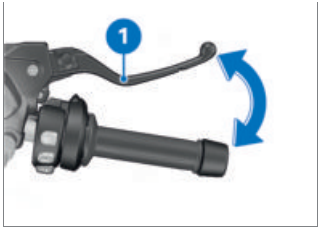
ATTENTION

Failure of the drive-off assistant

Risk of accident

- Secure the vehicle through manual braking.

Hill Start Control is only a convenience system for easier hill-starting and should, therefore, not be confused with a parking brake.



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

(H) is displayed in green.

» Hill Start Control is activated.

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

(H) 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.

The stop icon disappears after the brake has been released completely.

» Hill Start Control is deactivated.

- More information about Hill Start Control can be found in the "Technology in detail" chapter:

» Hill Start Control function (➠ 161)

Switch Hill Start Control on and off

- Turning on the ignition (➠ 54).
- Call up menu `Settings`, `Vehicle settings`.
- Turn `Hill Start Control` on or off.

Operating the Hill Start Control Pro
–with riding modes Pro OE

Requirement
Vehicle is at a standstill with the engine running.

ATTENTION

Failure of the drive-off assistant
Risk of accident
- Secure the vehicle through manual braking.

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

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

- Apply handbrake 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%.

(H) is displayed in green.

» Hill Start Control Pro is activated.

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

If Hill Start Control Pro was deactivated using the brake lever, automatic Hill Start Control is deactivated for the next 4 m.

(H) 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.

The stop icon (H) disappears after the brake has been released completely.

» Hill Start Control Pro is deactivated.

- More information about Hill Start Control Pro can be found in the "Technology in detail" chapter:

» Hill Start Control function (➠ 161)

Adjust Hill Start Control Pro

–with riding modes Pro[OE]

- Turning on the ignition (➠ 54).
- Go to 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 the automatic Hill Start Control Pro, select `Auto`.

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

ANTI-THEFT ALARM SYSTEM (DWA)

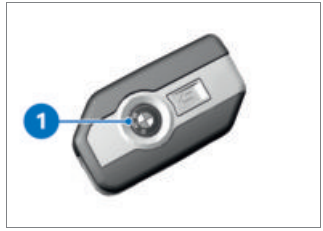
Activation

–with anti-theft alarm system (DWA) OE

- Turning on the ignition (➠ 54).
- Adjust DWA (➠ 79).
- Turn off the ignition.

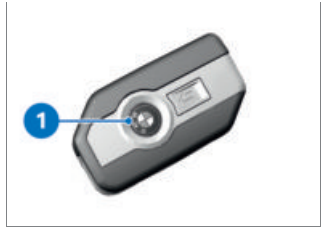
» If DWA is activated, DWA is automatically activated after the ignition is switched off.
» Activation takes approximately 30 seconds to complete.
» Turn signals flash twice.
» Confirmation tone sounds twice (if programmed).
» The anti-theft alarm system is active.

–with Keyless Ride OE



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

» Activation takes approximately 30 seconds to complete.
» Turn signals flash twice.
» Confirmation tone sounds twice (if programmed).
» The anti-theft alarm system is active.



- To deactivate the motion sensor (for example, if the motorcycle is being transported on a train and the train's movements could trigger the alarm signal), press the button **1** on

the radio-operated key again during the activation phase.
» Turn signals flash three times.
» Confirmation tone sounds three times (if programmed).
» Motion sensor is deactivated.◁

Alarm signal

–with anti-theft alarm system (DWA) OE

The DWA alarm signal can be triggered by:
–Motion 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)

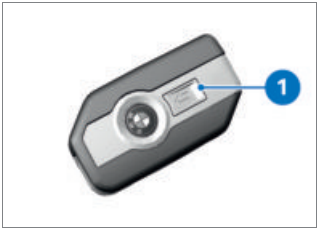
–with Keyless Ride OE

If the radio-operated key is within the reception area, any alarm signal triggered by the tilt alarm sensor is suppressed.◁

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 duration of the alarm signal is approx. 26 seconds. During the alarm signal, an alarm signal sounds, and the turn signals blink. The type of alarm tone can be set by an authorized BMW Motorrad retailer.

–with Keyless Ride OE



You can cancel a triggered alarm signal at any time by pressing the button **1** 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 signal sounding once when the ignition is turned on. Then the DWA LED indicates the reason for the alarm signal for one minute.

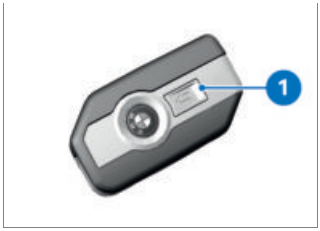
Light signals on DWA LED:
– 1 blink: motion sensor 1
– 2 blinks: motion sensor 2
– 3 blinks: ignition turned on with unauthorized ignition key
– 4 blinks: anti-theft alarm system disconnected from vehicle battery
– 5 blinks: motion sensor 3

Deactivation
– with anti-theft alarm system (DWA) OE

- Emergency-off switch in operating position.
- Turn on the ignition.

» Turn signals flash once.
» Confirmation tone sounds once (if programmed).
» The anti-theft alarm system is turned off.

– with Keyless Ride OE



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

If the alarm function is deactivated using the radio-operated key and the ignition is not then switched on, it will reactivate automatically after approximately 30 seconds if "activation after ignition off" is programmed.

» Turn signals flash once.
» Confirmation tone sounds once (if programmed).
» The anti-theft alarm system is turned off.◁

Adjust DWA
- Turning on the ignition (➠ 54).
- Call up menu `Settings`, `Vehicle settings`, `Alarm system`.

» The following settings are available:
– Adjust `Warning signal`
– Turn `Tilt sensor` on and off
– Turn `Arming tone` on and off
– Turn `Arm automatically` on and off
– with anti-theft alarm system (DWA) OE

» Adjustment options (➠ 79)◁

Adjustment options
– with anti-theft alarm system (DWA) OE

`Warning signal`: Set rising and falling or intermittent alarm tone.
`Tilt sensor`: Activate the inclination sensor to monitor the inclination of the vehicle.

The anti-theft alarm system responds if, for example, if the wheel is stolen or the motorcycle is towed.

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 indicators.
`Arm automatically`: Automatic activation of the alarm function when turning off the ignition.

TIRE PRESSURE CONTROL (TPC)

–with riding modes Pro OE
–with tire pressure monitor (TPM) OE

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`.
- Switch `Target pressure warn.` on or off.

HEATING

Operating heated grips

–with heated grips OE
–without seat heating OE

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

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

- Starting the engine (➠ 127).

- Press the button **1** repeatedly until the desired heating level **2** is shown in front of the heated grip icon **3**.

The handlebar grips can be heated at two different levels.

1 Low heater output

High heater output

» The high heating level is used for fast heat-up of the grips; then the switch should be switched back to the 1st level.
» If no further changes are made, the selected heating level is set.
- To turn off the heated grips, press the button **1** repeatedly until the heated grip icon **3** disappears.

Operating the heating
–with heated grips OE
–with seat heating OE

The heated grips and seat heating can be activated only when the engine is running.

- Starting the engine (➠ 127).

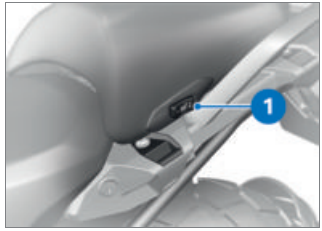
- Press button **1**.
» The HEATING menu opens.
- Select Heated handlebar grips or Seat heating.
- Select the desired heating level and confirm.
» The selected heating level is shown in the display to the left of the heating symbols **2**.
- Press the **1** button to close the HEATING menu.
- To switch the heater off or on again using the previously selected heating levels, press and hold the **1** button.

The heat level settings are retained even after the ignition is turned off.

Operating the passenger seat heater
–with heated grips OE
–with seat heating OE

- Start engine.

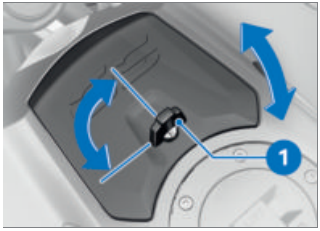
Seat heating can be activated only when the engine is running.



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

STORAGE COMPARTMENT

Opening and locking the storage compartment



- To open the storage compartment **1**, turn the handle through 90° in a counterclockwise direction and pull it up.
- To lock the storage compartment **1**, close the storage compartment, turn the handle clockwise 90°, and fold it onto the storage compartment in the driving direction.

TFT DISPLAY

05

GENERAL NOTES

Warnings

WARNING

Operation of a smartphone while the vehicle is in motion or when the engine is running
Risk of accident
- Observe the relevant road traffic regulations.
- Do not use while riding (except for applications without operation such as telephony via the 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.

Connectivity functions
Connectivity functions include media, telephony and navigation. Connectivity functions can be used if the TFT display is connected to a mobile end device and a helmet (➠ 96). You can find more information about the Connectivity functions at:
bmw-motorrad.com/connectivity

If the fuel tank is between the mobile end device and the TFT display, the Bluetooth connection may be restricted. BMW Motorrad recommends storing the mobile end device above the fuel tank (e.g. in the jacket pocket).

Depending on the mobile end device, 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 features such as navigation, the app must be installed on the mobile end device and be connected to the TFT display. The

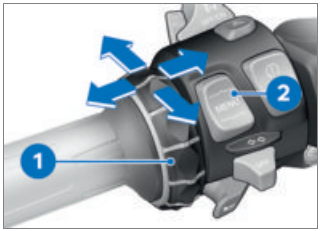
app starts the route guidance and adapts the navigation.

On some mobile devices, e.g. with operating system iOS, the BMW Motorrad Connected App must be called up before using.

Currentness of this manual
After the editorial deadline, there may be updates to the TFT display. For this reason, some aspects of your motorcycle may vary from the descriptions in this rider's manual. Updated information at:
bmw-motorrad.com/service

PRINCIPLE

Operating elements



All contents of the display are controlled by the Multi-Controller **1** and the rocker button MENU **2**.
The following functions are possible depending on the context.

Functions of the Multi-Controller

Turn the Multi-Controller up:
–Move the cursor up in lists.
–Make settings.
–Increase volume.

Turn the Multi-Controller down:
–Move the cursor down in lists.
–Make settings.
–Reduce volume.

Tilt Multi-Controller to the left:
–Activate the function according to the operating feedback.
–Activate function to the left or back.
–After settings, return to menu view.
–In the menu view: move up one hierarchy level.
–In the My Vehicle menu: leaf to the next menu sheet.

Tilt Multi-Controller to the right:
–Activate the function according to the operating feedback.
–Confirm selection.
–Confirm settings.
–Browse to the next menu step.
–Scroll to right in lists.
–In the My Vehicle menu: leaf to the next menu sheet.

Rocker button MENU functions

Navigation instructions are displayed as a dialog if the `Navigation` menu has not been called up. Operation of the MENU rocker button is temporarily restricted.

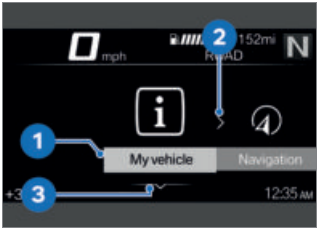
Briefly press the MENU up:
- In the menu view: move up one hierarchy level.
- In the Pure Ride view: Change display for rider info. status line.

MENU long press up:
- In the Menu view: Open Pure Ride view.
- In the Pure Ride view: change the operating focus to the navigator.

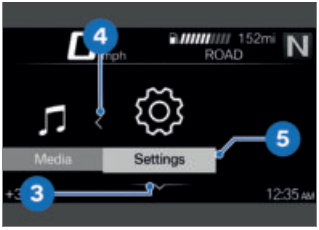
MENU short press down:
- Change a hierarchy level down.
- No function when lowest hierarchy level is reached.

MENU long press down:
- Return to the last menu, after a menu change has been previously carried out by long press of the rocker button MENU at the top.

Operating instructions in the main menu



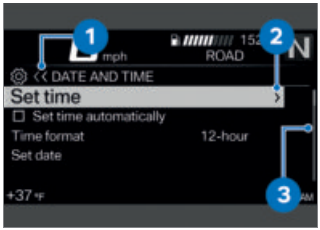
The operating instructions indicate whether and which interactions are possible.



Meaning of the operating instructions:
- Operating instructions **1**: The left end has been reached.
- Operating instructions **2**: You can scroll to the right.
- Operating instructions **3**: You can scroll down.
- Operating instructions **4**: You can scroll to the left.
- Operating instructions **5**: The right end has been reached.

Operating instructions in submenus

In addition to the operating instructions in the main menu, there are additional operating instructions in submenus.



Meaning of the operating instructions:

–Operating instructions **1**: The current display is in a hierarchical menu. One icon indicates one submenu level. Two icons indicate two or more submenu levels. The color of the icon changes depending on whether there is an option to return to the top.

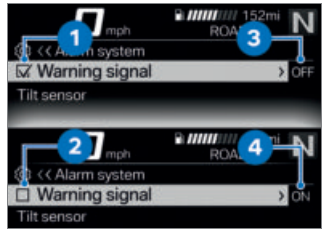
–Operating instructions **2**: You can go to another submenu level.

–Operating instructions **3**: There are more entries than can be displayed.

Show Pure Ride view

- Press and hold the top MENU rocker button.

Switching functions on and off



Some items are preceded by a box. The box indicates whether the function is turned on or switched off. Action icons after the menu items illustrate what is switched by briefly tilting the Multi-Controller to the right.

Examples for switching on and off:

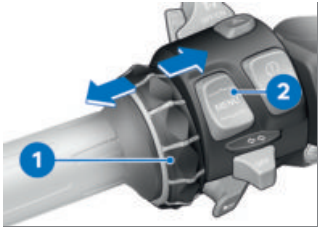
–Icon **1** indicates that the function is turned on.

–Icon **2** indicates that the function is turned off.

–Icon **3** indicates that the function can be turned off.

–Icon **4** indicates that the function can be turned on.

Going to a menu



- Show Pure Ride view (➠ 89).
- Briefly press button **2** downward.

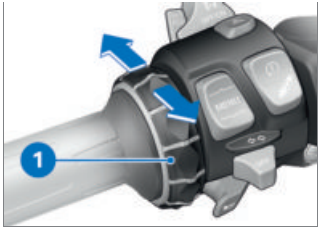
The following menus can be called up:

–My vehicle
–Navigation
–Media
–Telephone
–Settings

- Press Multi-Controller **1** repeatedly briefly to the right until the desired menu item is marked.
- Briefly press button **2** downward.

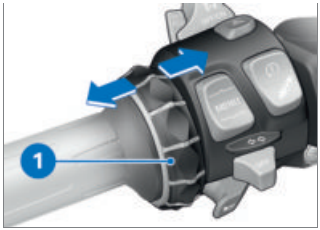
The Settings menu can only be called up when stationary.

Moving the cursor in lists



- Going to a menu (➠ 90).
- To move the cursor down in lists, turn the Multi-Controller **1** down until the desired entry is marked.
- To move the cursor up in lists, turn the Multi-Controller **1** up until the desired entry is marked.

Confirming the selection



- Select desired entry.
- Multi-Controller **1** short press to right.

Calling up the last menu used

- In the Pure Ride view: press and hold the bottom of the MENU rocker button.

» The last used menu is called up. The last marked entry is selected.

Operating focus change

–with preparation for navigation system OE

When the Navigator is connected, you can switch between the operation of the Navigator and the TFT display.

Changing the operating focus

–with preparation for navigation system OE

- Securely fastening navigation device (➠ 204).
- Show Pure Ride view (➠ 89).
- Press and hold the top MENU rocker button.

» Operating focus changes to the Navigator or the TFT display. The active device is marked in the upper left status line. Operating actions affect the active device until the operating focus is changed again.

» Operating the navigation system (➠ 205)

System status displays

The system status is displayed in the lower menu area when a function has been turned on or switched off.

Example of the meaning of the system statuses:

–System status **1**: DTC function is turned on.

Changing the display for rider info. status line

Requirement

The vehicle is stationary. The Pure Ride view is displayed.

- Turning on the ignition (➠ 54).

» All of the information necessary for operating the vehicle on public roads is made available from the on-board computer (e.g. TRIP **1**) and the travel on-board computer (e.g. TRIP **2**) in the TFT display. The information can be displayed in the upper status line.

–with tire pressure monitor (TPM) OE

» In addition, information from the tire pressure control can be displayed.◁

- Select content of driver info. status line (➠ 92).

- Press and hold button **1** to display the 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)

–with tire pressure monitor (TPM) OE

Tire pressure◁

Range

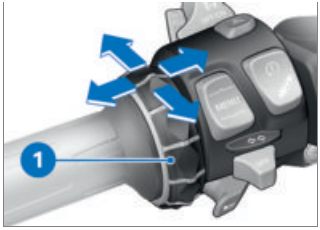
Fuel tank level

Select content of driver info. status line

- Call up menu Settings, Display, Status line content.
- Turn on desired displays.

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

Making settings



- Select desired settings menu and confirm.
- Turn Multi-Controller **1** down until the desired setting is marked.
- If operating instructions are present, tilt the Multi-Controller **1** to the right.
- If no operating instructions are present, tilt the Multi-Controller **1** to the left.

» The setting is saved.

Switching Speed Limit Info on or off

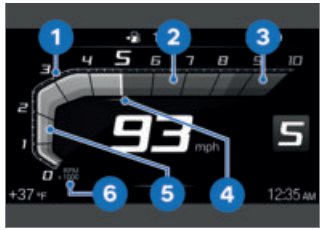
Requirement

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.
- Go to menu `Settings Display`.
- Switch `Speed Limit Info` on or off.

PURE RIDE VIEW

Tachometer



1 Scale
2 Low engine speed range
3 High / red engine speed range
4 Needle
5 Trailing indicator
6 Unit for tachometer: 1000 revolutions per minute

The red engine speed range changes depending on the coolant temperature: The colder the engine, the lower the speed at which the red engine speed range begins. The warmer the engine, the higher the speed at which the red engine speed range begins. When the operating temperature has been reached, the red

engine speed range display will no longer change.

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 Pure Ride **2** view or in the status line **1** indicates the best time for an upshift from an economical perspective.

GENERAL SETTINGS

Adjusting the volume

- Connect the rider's helmet and the passenger helmet (➠ 98).
- Increase volume: turn Multi-Controller up.
- Reduce volume: turn Multi-Controller down.
- Mute: turn Multi-Controller all the way down.

Setting the date

- Turning on the ignition (➠ 54).
- Call up menu `Settings`, `System settings`, `Date and time`, `Set date`.
- Set `Day`, `Month`, and `Year`.
- Confirm setting.

Adjusting the date format

- Call up menu Settings, System settings, Date and time, Date format.
- Select desired setting.
- Confirm setting.

Setting the clock

- Turning on the ignition (➠ 54).
- Call up menu Settings, System settings, Date and time, Set time.
- Set Hour and Minute.

Setting the time format

- Call up menu Settings, System settings, Date and time, Time format.
- Select desired setting.
- Confirm setting.

Setting the units of measurement

- Call up menu Settings, System settings, Units.

The following units of measurement can be set:

–with tire pressure monitor (TPM) OE
–Pressure◁
–Temperature
–Consumption

Adjust language

- Call up menu Settings, System settings, Language.

The following languages can be set:

–Chinese
–German
–English
–Spanish
–French
–Italian
–Dutch
–Portuguese
–Russian
–Ukrainian
–Polish
–Turkish
–Korean
–Thai
–Japanese

Adjusting brightness

- Call up 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

- All settings in the Settings menu can be reset to the factory settings.
- Call up menu Settings.
- Select Reset all and confirm.

The settings of the following menus are reset:

–Vehicle settings
–System settings
–Connections

–Display
–Information

» Existing Bluetooth connections are not deleted.

BLUETOOTH

Short-range radio technology
The Bluetooth function may not be offered depending on the country of use.

Bluetooth is a short-range radio technology. Bluetooth devices are short-range devices (transmitting with a limited range) on the license-free ISM band (Industrial, Scientific, Medical) between 2.402 GHz and 2.480 GHz. They can be operated anywhere in the world without requiring a license. Although Bluetooth is designed to establish robust links over a short distance, disturbances are possible, as they are with any wireless technology. Links may be disturbed, interrupted briefly 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 standard.
–By nearby Bluetooth-capable devices.

Pairing
Before two Bluetooth devices can be linked to one another, they must recognize each other. 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 devices, e.g. with operating system iOS, the BMW Motorrad Connected App must be called up before using.

During the pairing process, the TFT display searches for other Bluetooth-compatible devices within its reception range. The conditions that have to be satisfied before the audio system can recognize another device are as follows:

–The Bluetooth function of the device must be activated
–The device must be "visible" to others
–The device must support the A2DP profile
–Other Bluetooth-capable devices must be OFF (e.g. mobile phones and navigation systems).

Please consult the operating instructions for your communication system.

Perform 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.

Connect mobile end device

- Perform pairing (➠ 97).
- 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.


During the pairing, the Bluetooth symbol flashes in the lower status line.

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. (➠ 219)

» Depending on the mobile end device, telephone data is transferred to the vehicle automatically.

» Telephone data (➠ 105)

» If the phone book is not displayed, the troubleshooting chart in the "Technical data" chapter may provide assistance. (➠ 220)

» If the Bluetooth connection does not work as expected, the troubleshooting chart in the "Technical data" chap-

ter may provide assistance. (➠ 219)

Connect the rider's helmet and the passenger helmet

- Perform pairing (➠ 97).
- 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.


During the pairing, the Bluetooth symbol flashes in the lower status line.

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. (➠ 219)

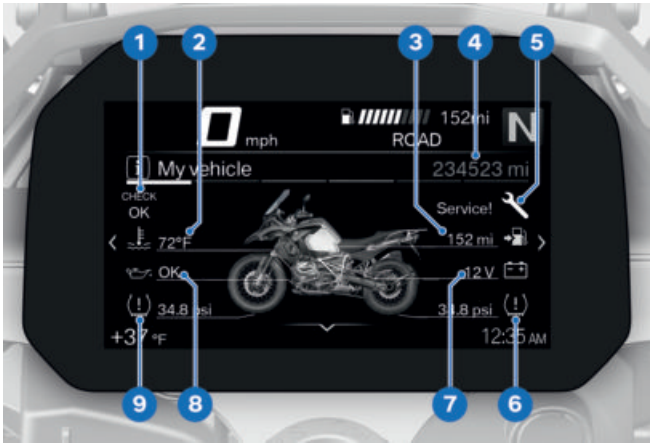
» If the Bluetooth connection does not work as expected, the troubleshooting chart in the "Technical data" chapter may provide assistance. (➠ 219)

Delete 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.

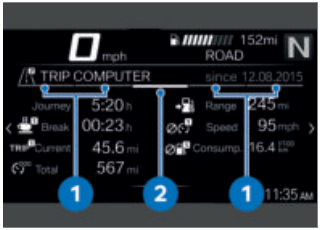
MY VEHICLE

Start screen



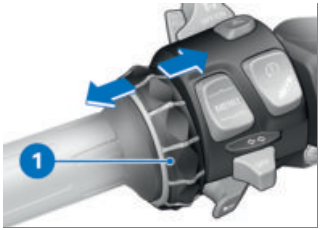
1 Check Control display Layout (➠ 25)
2 Coolant temperature (➠ 38)
3 Range (➠ 94)
4 Odometer
5 Service display (➠ 50)
6 Rear tire pressure (➠ 40)
7 Voltage of the vehicle electrical system (➠ 189)
8 Engine oil level (➠ 37)
9 Front tire pressure (➠ 40)

Operating instructions



–Operating instructions **1**: tabs that show how far to the left or right you can scroll.
–Operating instructions **2**: tab that shows the position of the current menu screen.

Browsing through menu screens



- Go to the My vehicle menu.
- To scroll to the right, briefly push the Multi-Controller **1** to the right.
- To scroll to the left, briefly push the Multi-Controller **1** to the left.

The "My vehicle" menu contains the following windows:

–MY VEHICLE
–CC messages (if available)
–ONBOARD COMPUTER
–TRIP COMPUTER
–with tire pressure monitor (TPM) OE
–TIRE PRESSURE◁
–SERVICE REQUIREMENTS

- More information about tire pressure and Check Control messages can be found in the "Displays" chapter.

Check-Control messages are dynamically added to the menu screens in the My vehicle menu as additional tabs.

On-board computer and travel on-board computer

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

Call up on-board computer

- Call up menu My vehicle.
- Scroll to the right until the ONBOARD COMPUTER menu window is displayed.

Reset on-board computer

- Call up on-board computer (➠ 100).
- Press MENU rocker button down.

- Select Reset all values or Reset individual values and confirm.

The following values can be reset individually:
–Break
–Journey
–Current (TRIP 1)
–Speed
–Consump.

Call up travel on-board computer

- Call up on-board computer (➠ 100).
- Scroll to the right until the TRIP COMPUTER menu window is displayed.

Reset travel on-board computer

- Call up travel on-board computer (➠ 101).
- Press MENU rocker button down.
- Select Automatic reset or Reset all values and confirm.

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

Service display

If the time remaining until the next service is less than a month, or if the next service is due within 700 mi (1127 km), a white Check Control message is displayed.

NAVIGATION

Warnings

WARNING

Operation of a smartphone while the vehicle is in motion or when the engine is running
Risk of accident
- Observe the relevant road traffic regulations.
- Do not use while riding (except for applications without operation such as telephony via the 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.

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

The BMW Motorrad Connected App is installed on the mobile end device.

On some mobile devices, e.g. with operating system iOS, the BMW Motorrad Connected App must be called up before using.

Enter destination address
- Connect mobile end device (➠ 97).
- Call up the BMW Motorrad Connected app and start the route guidance.
- Call up menu `Navigation` in the TFT display.

» Active route guidance is displayed.

» If the active route guidance is not displayed, the troubleshooting chart in the "Technical data" chapter may provide assistance. (➠ 220)

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 on the TFT display.
- Call up menu Navigation, Favorites.
- Select destination and confirm.
- Select Start guidance.

Enter special destination

- Special destinations, e.g. landmarks, can be displayed on the map.
- Call up menu Navigation, POIs.

The following locations can be selected:

–At current location
–At destination
–Along the route

- Select the area to look for special destinations.

E.g. the following special destination can be selected:

–Filling station

- Select special destination and confirm.
- Select Start route guidance and confirm.

Define 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.

End route guidance

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

Switch spoken directions on or off

- Connect the rider's helmet and the passenger helmet (➠ 98).
- The navigation can be read out by a computer voice. To do this, the Spoken instructions must be turned on.
- Call up menu Navigation, Active route guidance.
- Turn Spoken instructions on or off.

Repeat last spoken directions

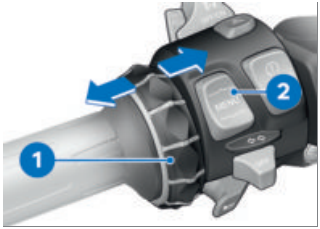
- Call up menu Navigation, Active route guidance.
- Select Current instruction and confirm.

MEDIA

Prerequisite

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

Controlling audio playback



- Go to the Media menu.

BMW Motorrad recommends setting the volume for media and conversations via mobile end devices to the maximum before starting a journey.

- Adjusting the volume (➠ 94).
- Next title: Tilt the Multi-Controller **1** briefly to the right.
- Last title or start of current title: Tilt the Multi-Controller **1** briefly 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** down.

Depending on the mobile end device, 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.

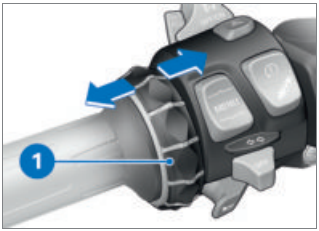
In the Audio settings submenu you can adjust the following settings:
– Turn Shuffle on or off.
– Repeat: Select Off, One (current track), or All.

PHONE

Prerequisite

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

Making a phone call



- Go to the Telephone menu.

- Accept call: Tilt the Multi-Controller **1** to the right.
- Reject call: Tilt the Multi-Controller **1** to the left.
- End 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 telephone 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 will be automatically transferred to the vehicle after the pairing (➠ 96).
`Phone book`: List of contacts saved in the mobile end device
`Call list`: List of telephone calls with the mobile end device
`Favorites`: List of favorites saved in the mobile end device

DISPLAY SOFTWARE VERSION

- Call up menu `Settings`, `Information`, `Software version`.

DISPLAYING LICENSE INFORMATION

- Call up menu `Settings`, `Information`, `Licenses`.

SETTING

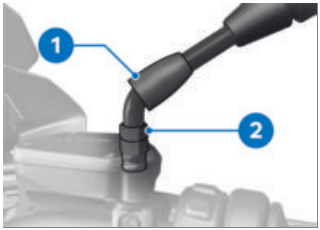
06

MIRRORS

Adjusting the mirrors

- Move mirror into desired position by twisting.

Adjusting the mirror arm



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

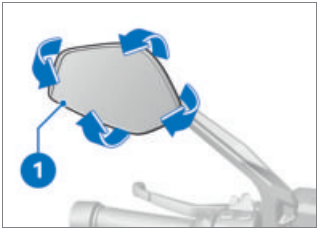
Mirror (locknut) on adapter
M10 x 1.25

Mirror (locknut) on adapter
16 lb/ft (22 Nm) (Left-hand thread)

- Slide the protective cap **1** over the bolted connection.

Adjusting the mirrors

–with Option 719 Billet pack Classic II[OE]
or
–with Option 719 Billet pack Storm II[OE]
or
–with Option 719 Billet pack Shadow II[OE]

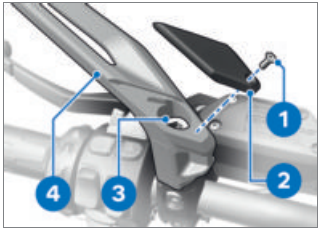


- Move mirror **1** into desired position by turning it.

Adjusting the mirror arm

–with Option 719 Billet pack Classic II[OE]
or
–with Option 719 Billet pack Storm II[OE]
or
–with Option 719 Billet pack Shadow II[OE]

To adjust the mirror arm, a small and a large angle screwdriver are included with the vehicle.



- Remove screw **1** and remove cover **2**.
- Loosen adjusting screw **3** and turn mirror arm **4** into the desired position.
- Tighten adjusting screw **3**, holding the mirror arm while doing so.
- Affix cover **2** and install screw **1**.

	Mirror on handlebars
M10 x 50	
18 lb/ft (25 Nm)	

HEADLIGHT

Headlamp range and spring preload

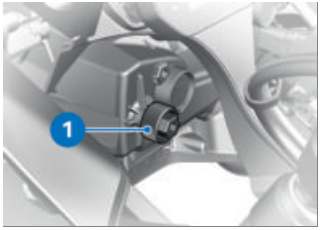
The headlamp range generally remains constant due to the adjustment of the spring preload to the loading state. Spring preload adjustment may only be insufficient when the motorcycle is very heavily loaded. In this case, the headlamp range must be adjusted to the weight.

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

Adjusting the headlight range

Requirement

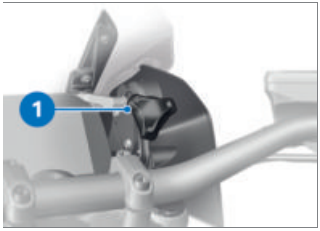
When the spring preload adjustment is no longer able to maintain the correct beam height to avoid dazzling oncoming traffic owing to high vehicle payloads.



- Adjust the headlight beam throw at adjustment screw **1**.

WINDSHIELD

Adjusting the windshield



WARNING

Adjusting the windshield while driving
Accident hazard
- Only adjust the windshield when the motorcycle is stationary.

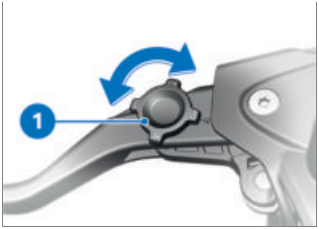
- Turn the adjustment wheel **1** clockwise to lower the windshield.
- Turn the adjustment wheel **1** counterclockwise to raise the windshield.

CLUTCH

Adjusting the clutch lever

WARNING

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

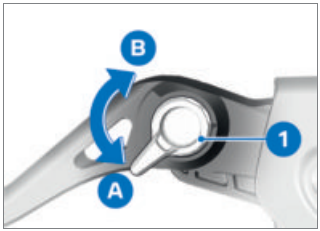


- Turn the adjustment wheel **1** into the desired position.

The adjustment wheel can be turned more easily if you press the clutch lever forward when doing so.

» Adjustment options:
– Position 1: smallest distance between handlebar grip and clutch lever
– Position 4: largest distance between handlebar grip and clutch lever

–with Option 719 Billet pack Classic II OE
or
–with Option 719 Billet pack Storm II OE
or
–with Option 719 Billet pack Shadow II OE



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

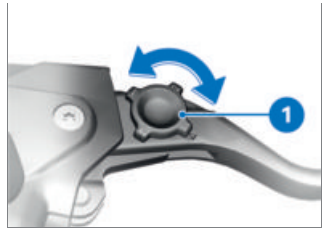
» Adjustment options:
–From position **A**: Smallest distance between handlebar grip and clutch lever.
–Five steps toward position **B** to increase the distance between the handlebar grip and the clutch lever.◁

BRAKE

Adjusting the brake lever

WARNING

Adjusting the brake lever while driving
Risk of accident
- Do not attempt to adjust the brake lever unless the motorcycle is at a standstill.

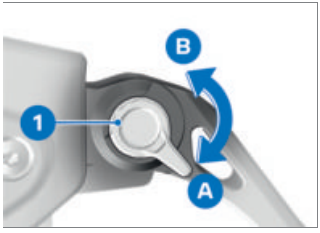


- Turn the adjustment wheel **1** into the desired position.

The adjustment wheel can be turned more easily if you press the handbrake lever forward when doing so.

» Adjustment options:
–Position 1: smallest distance between handlebar grip and brake lever
–Position 4: greatest distance between handlebar grip and brake lever

–with Option 719 Billet pack Classic II[OE]
or
–with Option 719 Billet pack Storm II[OE]
or
–with Option 719 Billet pack Shadow II[OE]



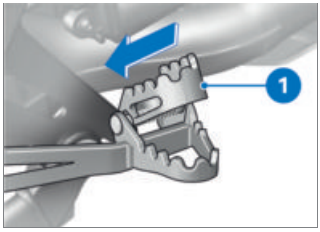
- Turn the adjustment lever **1** to the desired position.

» Adjustment options:

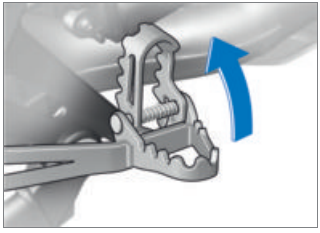
–From position **A**: smallest distance between handlebar grip and brake lever.
–Five steps toward position **B** to increase the distance between the handlebar grip and the handbrake lever.◁

Adjusting the footbrake lever

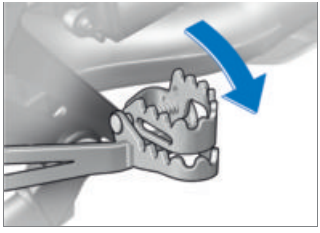
- Park the motorcycle, making sure the ground is level and firm.



- Slide the footboard **1** of the footrest to the left to unlock it.



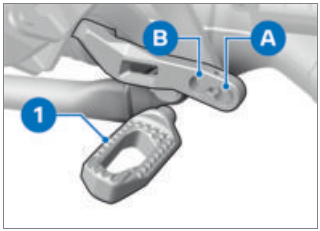
- Fold the footboard up to the latch mechanism if riding in a seated position.



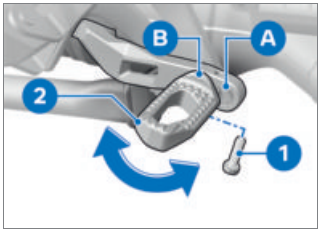
- Fold the footboard down to the latch mechanism if riding in a standing position.

Adjusting the footbrake lever foot plate

–with Option 719 Billet pack Classic II[OE]
or
–with Option 719 Billet pack Storm II[OE]
or
–with Option 719 Billet pack Shadow II[OE]



- You can adjust the horizontal and vertical distance of the foot relative to the foot plate **1** by turning the lever 180° and installing it in position **A** or **B**.
- Remove the screw **1**.

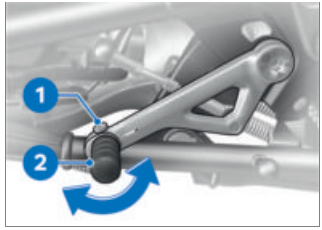


- Clean the thread.
- Install the foot plate **2** in position **A** or **B** as desired.
- Turn the foot plate **2** into the desired position.
- Install the **new** screw **1**.

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

SHIFTING

Adjusting the gearshift lever



- Loosen screw **1**.
- Turn the foot plate **2** to the desired position.

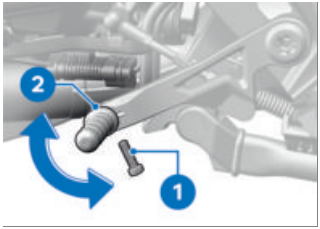
If the toe piece is set too high or too low, this can cause problems when shifting gears. In the event of shifting problems, check the toe piece setting.

- Tighten screw **1** to tightening torque.

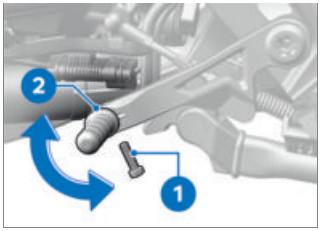
Treadplate (fixing) on gear lever
M6 x 16
6 lb/ft (8 Nm)

Adjusting the gearshift lever foot plate

–with Option 719 Billet pack Classic II[OE]
or
–with Option 719 Billet pack Storm II[OE]
or
–with Option 719 Billet pack Shadow II[OE]



- You can adjust the horizontal and vertical distance of the foot relative to the foot plate **2** by turning the foot plate in different positions.
- Remove the screw **1**.



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

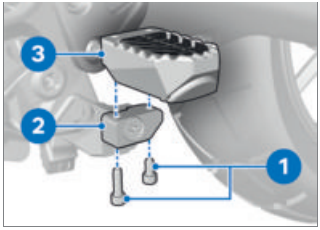
Foot piece to gearshift lever
M6 x 20
Thread-locking compound: micro-encapsulated
7 lb/ft (10 Nm)

FOOTRESTS

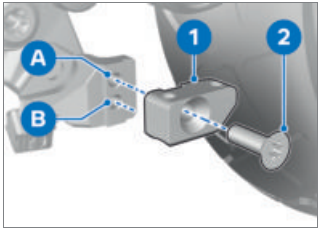
–with Option 719 Billet pack Classic II[OE]
or
–with Option 719 Billet pack Storm II[OE]
or
–with Option 719 Billet pack Shadow II[OE]

Adjusting the footrests

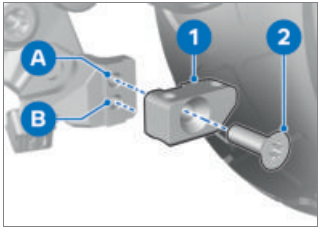
- The footrest is set the same way on the right and left.
- The position of the footrest must be set equally on the right and left.



- Remove screws **1**.
- Remove the footrest **3** from the clamping block **2**.

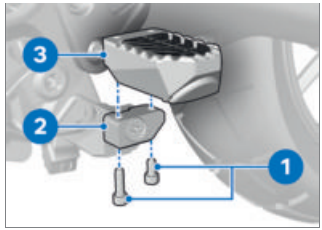


- Remove the screw **2**.
- Remove clamping block **1**.



- Install clamping block **1** in the desired position **A** or **B** and tighten screw **2**.

Clamping block on footrest hinge
M8 x 25
15 lb/ft (20 Nm)



- Position footrest **3** on clamping block **2**.
- Install screws **1**.

Footrest on clamping block
M6 x 20 / M6 x 12
7 lb/ft (10 Nm)

- Remove and install the footrest on the other side in the same way.

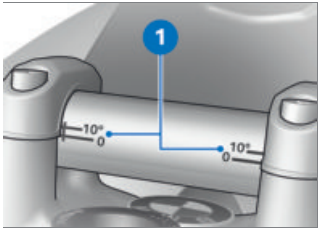
HANDLEBARS

Adjustable handlebars

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

–with handlebar risers OE

The handlebar risers can restrict the free movement of cables and wires. BMW Motorrad recommends setting the handlebars to the upper position (**10°** mark) if the handlebar risers are installed.◁

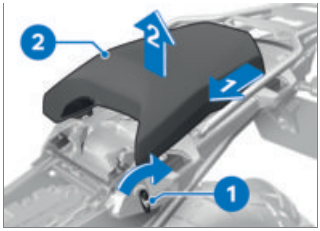


The inclination of the handlebars is adjustable in the areas with the mark **1**.
Have the handlebars adjusted by a specialist workshop, preferably an authorized BMW Motorrad retailer.

SEATS

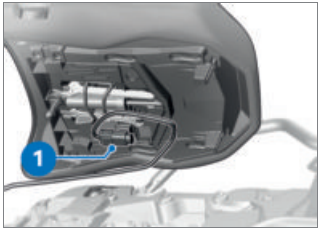
Removing the passenger seat

- Removing the rider's seat (➠ 117).



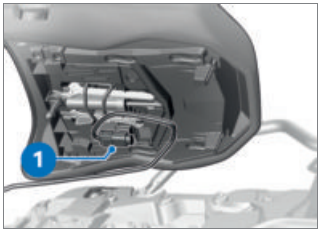
- Turn the ignition key **1** clockwise.
- Slide passenger seat **2** forwards and lift up to remove

–with seat heating OE

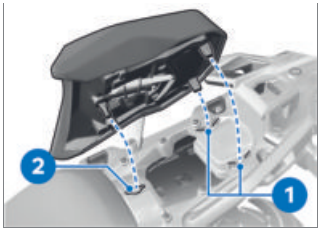


- Disconnect the plug connection **1** of the seat heater.◁
- Lay the passenger seat on a clean, dry surface with the upholstered side down.

Installing the passenger seat –with seat heating OE



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



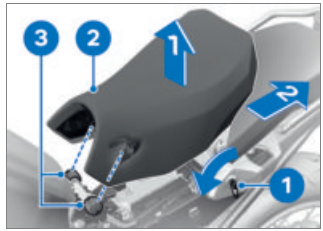
- Fit passenger seat centered in rear mounts **1** and in front mount **2**.
- Slide the passenger seat to the rear (in the direction opposite of the driving direction).
- Check passenger seat for proper fit.

- Firmly press passenger seat **1** downwards.

» Passenger seat audibly engages.

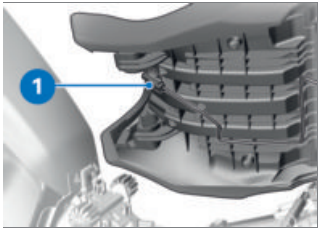
- Installing the rider's seat (➠ 119).

Removing the rider's seat



- Turn ignition key **1** counterclockwise and hold while lifting rider's seat **2** in rear area.
- Remove rider's seat **2** from seat bracket **3** toward rear.

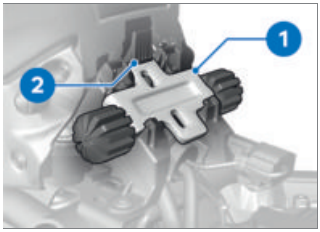
–with seat heating OE



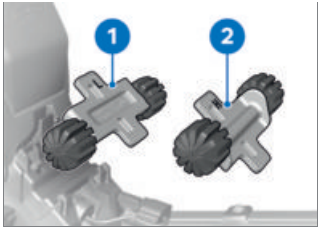
- Disconnect the plug connection **1** of the seat heater.◁
- Lay the rider's seat on a clean, dry surface with the upholstered side down.

Adjusting the seat height and seat angle

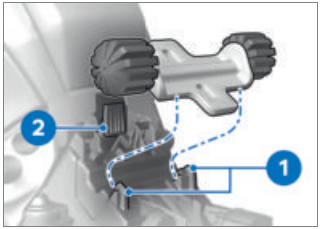
- Removing the rider's seat (➠ 117).



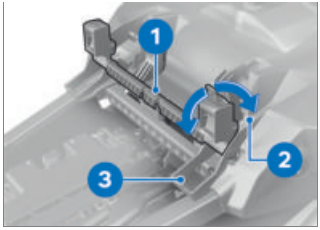
- To remove the front height adjustment **1** push the lock **2** forwards and remove the height adjustment in an upwards direction.



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



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



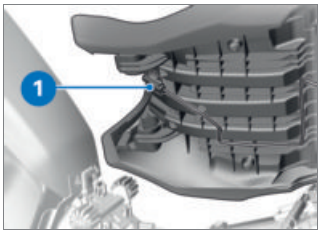
- In order to adjust the low seat position, swivel the rear height adjustment **1** into position **3** (**L** mark).
- In order to adjust the high seat position, swivel the rear height adjustment **1** into position **2** (**H** mark).

If seat tilt should be changed:

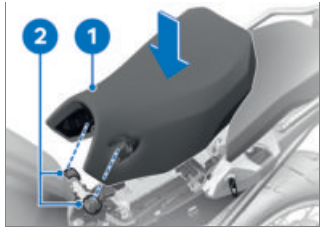
- Position the front and rear height adjustment differently.
- Installing the rider's seat (➠ 119).

Installing the rider's seat

–with seat heating OE



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



- Insert the rider's seat **1** into the seat mount **2** on the left and right and place it loosely on the motorcycle.
- Press the rider's seat forward slightly in the rear area and then press down firmly until the locking mechanism engages.

SPRING PRELOAD

–without Dynamic ESA OE

Setting

It is essential to set the spring preload to suit the load carried by the motorcycle. Increase spring preload when the vehicle is heavily loaded and reduce spring preload accordingly when the vehicle is lightly loaded.

Adjusting the spring preload at the rear wheel

WARNING

Adjusting the spring preload while riding.
Accident hazard
- Adjust the spring preload only when the motorcycle is stationary.

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

WARNING

Uncoordinated settings of spring preload and spring strut damping.
Poorer handling.
- Adjust damping characteristic to changed spring preload.

- To increase spring preload, turn the adjustment wheel **1** in the arrow direction **HIGH**.
- To decrease spring preload, turn the adjustment wheel **1** in the arrow direction **LOW**.

Basic setting of spring preload, rear
Turn adjustment wheel as far as possible into LOW direction. (One-up without load)
Turn adjuster wheel as far as possible in LOW direction, then rotate 15 turns in HIGH direction. (One-up with load)
Turn adjuster wheel as far as possible in LOW direction, then rotate 30 turns in HIGH direction. (Two-up and load)

DAMPING

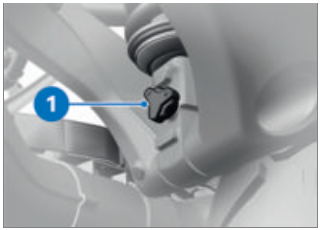
–without Dynamic ESA OE

Setting

The damping must be adjusted to the road conditions and the spring preload.
–A rough road surface requires softer damping than a smooth road surface.
–An increase in spring preload requires firmer damping, a reduction in spring preload requires softer damping.

Adjusting damping at the rear wheel

- Park the motorcycle, making sure the ground is level and firm.
- Adjust damping from the left side of the vehicle.



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

Basic setting of rear wheel damping
Turn adjustment wheel as far as possible clockwise, then 8 clicks counterclockwise. (One-up without load)
Turn adjustment wheel as far as possible clockwise, then 4 clicks counterclockwise. (One-up with load)
Turn adjustment wheel as far as possible clockwise, then 4 clicks counterclockwise. (Two-up with load)

RIDING

07

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.

Reduced clearance in inclined position

Motorcycles with lowered running gear have less ground clearance in all positions than motorcycles with standard running gear.

WARNING

When cornering with lowered motorcycles, motorcycle parts can contact the road surface sooner than normal.
Accident hazard
- Carefully test the clearance of the motorcycle in an inclined position and adjust your riding style accordingly.

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

The motorcycle's lowered suspension shortens the spring travel (see the "Technical data" chapter). This may result in reduction of the usual riding comfort. Especially in two-up mode, the spring preload should be adjusted accordingly.

Load

WARNING

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

- Adjust the setting of the spring preload and damping for the current gross vehicle weight.
- 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 as indicated on the sign in the case (➠ 202).
- Observe the maximum payload and maximum speed as indicated on the sign in the topcase (➠ 203).

–with tank bag OA

- Observe the maximum payload of the tank bag.

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

Speed

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

–Settings of spring-strut and shock absorber system
–Unevenly distributed load
–Loose clothing
–Insufficient tire inflation pressure
–Tire tread in poor condition
–Etc.

Maximum speed with studded or winter tires

DANGER

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

With studded or winter tires, the maximum speed permitted 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.

Burn hazard

CAUTION

Intense heating up of engine and exhaust system while riding
Burn hazard
- After parking the motorcycle, make sure that no persons or objects come into contact with the engine and exhaust system.

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
If misfire causes unburned fuel to enter the catalytic converter, there is a danger of overheating and damage.
The following must be observed:
– Do not run the fuel tank dry.
– Do not run the engine with the spark-plug cap removed.
– Stop the engine immediately if it misfires.
– Use unleaded fuel only.
– Comply with all specified maintenance intervals.

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.

OBSERVE CHECKLIST

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

BEFORE EVERY JOURNEY

- Check operation of the brake system.
- Check operation of the lighting and signal system.
- Check clutch function (➠ 175).
- Checking tire tread depth (➠ 178).
- Checking tire pressure (➠ 177).
- Check secure hold of cases and luggage.

AT EVERY THIRD REFUELING STOP

- Checking the engine oil level (➠ 169).
- Checking the front brake pad thickness (➠ 171).
- Checking the rear brake pad thickness (➠ 172).
- Checking the front brake fluid level (➠ 173).
- Checking the rear brake fluid level (➠ 174).
- Checking the coolant level (➠ 175).

STARTING

Starting the engine

- Turn on the ignition.

» Pre-Ride-Check is carried out. (➠ 128)
» ABS self-diagnosis is performed. (➠ 129)
» DTC self-diagnosis is performed. (➠ 129)

- 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.

- In the case of cold start or under cold temperatures: Pull back clutch lever.

–with M Lightweight battery[OE]

» 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.◁

- Press starter button **1**.

» Engine starts.

» If the engine fails to start, the troubleshooting table in the chapter "Technical Data" may provide assistance. (➠ 218)

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

- Charging connected battery (➠ 189).
- Jump-starting (➠ 187).

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

Pre-Ride-Check

After the ignition is turned on, the instrument cluster performs a test of the indicator and warning lights – what we call the "Pre-Ride-Check". Starting the engine before the test is completed will cancel the remainder of the test.

Phase 1

All indicator and warning lights are switched on.
After a longer standstill of the vehicle, an animation is displayed during the system start.

Phase 2

The general warning light changes from red to yellow.

Phase 3

All of the indicator and warning lights that were turned on are turned off in reverse order.

If one of the indicator and warning lights was not turned on:

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

ABS self-diagnosis

The self-diagnosis routine checks whether the BMW Motorrad Integral ABS Pro is ready for operation. The self-diagnosis starts automatically when you start the ignition.

Phase 1

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

 flashes.

Phase 2

» Check wheel speed sensors while riding off.

 flashes.

ABS self-diagnosis completed

» The ABS indicator and warning light goes out.

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

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

- You may continue riding. Bear in mind that neither the ABS function nor the integral function is available.
- Have the malfunction corrected as soon as possible at a specialist workshop, preferably an authorized BMW Motorrad retailer.

DTC self-diagnosis

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

Phase 1

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

 flashes slowly.

Phase 2

» Checking system components capable of diagnosis while riding off.

 flashes slowly.

DTC self-diagnosis completed

» The DTC icon is no longer displayed.

- Watch all indicator lights on the display.

 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, motorcycle must reach a minimum speed with engine running: min 3 mph (min 5 km/h))

If a DTC fault is displayed after the DTC self-diagnosis is completed:

- You may continue riding. Please note that the DTC function is restricted or is not available at all.
- Have the malfunction corrected as soon as possible at a specialist workshop, preferably an authorized BMW Motorrad retailer.

BREAKING IN

Engine

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

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

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

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

Brake pads

New brake pads must be run in before they achieve their optimum friction force. This initial reduction in braking efficiency can be compensated for by ex-

erting 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. This must be roughened by riding in a restrained manner at various heel angles until the tires are run in. This running in procedure is essential if the tires are to achieve maximum grip.

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

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

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.

Spring preload and damping

WARNING

Modified values for spring preload and spring strut damping when riding offroad
Poorer handling characteristics on paved roads
- Set correct spring preload and correct spring strut damping before leaving offroad terrain.

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

Air cleaner insert

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.

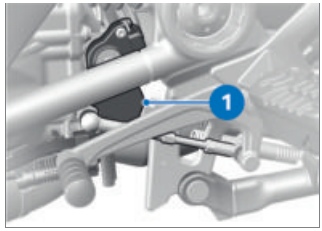
Use under very dusty conditions (deserts, savannas, etc.) requires the use air cleaner inserts specially developed for these kinds of applications.

SHIFTING GEARS

–with Gearshift Assistant Pro[OE]

Pro Gear Shift Assistant

When downshifting using the Pro Gear Shift Assistant, the cruise control is automatically deactivated for safety reasons.



- 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 a constant speed in a low gear at high

RPMs and attempt to shift gears without clutch control, it can cause a strong load-change response.
– BMW Motorrad recommends clutch control for shifting gears in these riding situations.
– Use of the Pro Gear Shift Assistant should be avoided at RPMs within the speed limiter range.
» Shift assistance is not available in the following situations:
– With clutch actuated.
– Gearshift lever not in its initial position
– When upshifting with the throttle valve closed (coasting overrun) or when decelerating.
– When downshifting with the throttle valve open or when accelerating.
• After shifting gears, you must fully release the gearshift lever before another gearshift with the Pro Gear Shift Assistant can take place.
» More details on the Pro Gear Shift Assistant can be found in the "Technology in detail" chapter:
– with riding modes Pro OE
» Shift assistant Pro (➠ 159)◁

BRAKES

How do you achieve the shortest braking distance?

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

Descending mountain passes

WARNING

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

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

WARNING

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

ABS Pro
Physical riding limits

WARNING

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

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
ABS Pro and Dynamic Brake Control help make riding your motorcycle on public roads even safer. When braking due to unexpected hazards in curves, locking-up and slipping of the wheels is prevented 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 YOUR MOTORCYCLE

Side stand

- Switch off engine.

ATTENTION

Poor ground conditions in area of stand
Component damage cause by tipping over
- Always check that the ground under the stand is level and firm.

ATTENTION

Loading of the side stand with additional weight
Component damage cause by tipping over
- Do not sit on the motorcycle when it is parked on the side stands.

- Fold out side stand and park motorcycle.
- Turn handlebars to the left.
- On slopes point the motorcycle uphill and engage 1st gear.

Center stand

- Switch off engine.

ATTENTION

Poor ground conditions in area of stand
Component damage cause by tipping over
- Always check that the ground under the stand is level and firm.

ATTENTION

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.

- Fold out center stand and jack up motorcycle.
- On a grade, the motorcycle should always face uphill; select 1st gear.

REFUELING

Fuel grade

Requirement

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

ATTENTION

Refueling with leaded fuel
Damage to catalytic converter
- Do not refuel with leaded gasoline or gasoline with metallic additives, e.g. manganese or iron.

ATTENTION

Use of Ethanol E85 as fuel
Damage to the engine and fuel supply
- Do not refuel with E85, i.e. fuel with an ethanol content of 85 %, or with Flex Fuel.

- Observe the maximum ethanol content of the fuel.

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

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

WARNING

Fuel is highly flammable
Fire and explosion hazard
- Do not smoke. Never bring a naked flame near the fuel tank.

ATTENTION

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

ATTENTION

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

- Put the motorcycle up on its center stand, making sure the ground is level and firm.

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

- Refuel up to the lower edge of the fuel filler neck, but no higher. 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 the fuel tank cap down firmly to close it.
- Remove the ignition key and close the protective flap.

Refueling procedure
–with Keyless Ride OE

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.

• Place motorcycle on center stand, ensuring that it is resting on a firm and level support surface.
–with Keyless Ride OE
• Turning off the ignition (➠ 57).

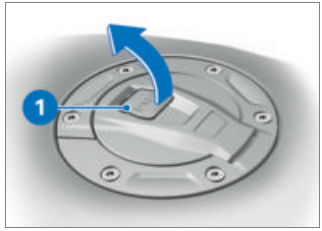
After the ignition is switched off, the fuel filler cap can be opened within the specified run-on time even without the radio-operated key being within the reception area.

After-running period for opening the fuel filler cap
2 min

» There are **2 ways** to open the fuel filler cap:
–Within the run-on time.
–After the run-on time expires.

Version 1
–with Keyless Ride OE

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
–with Keyless Ride OE

Requirement
After the end of the after-run period

• Bring radio-operated key into reception range.
• Slowly pull up tab **1**.
» The indicator light for the radio-operated key flashes 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 audibly engages.

» The fuel cap automatically locks after the end of the after-run period.

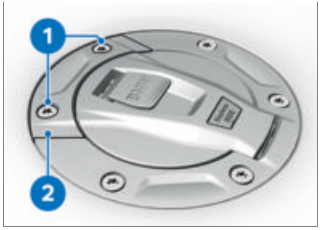
» The engaged fuel cap locks immediately when the steering lock is locked or the ignition is turned on.

Open fuel filler cap emergency release

–with Keyless Ride OE

The fuel filler cap cannot be opened.

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



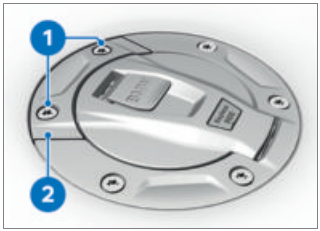
- Remove screws **1**.
- Remove emergency release **2**.

» Fuel filler cap unlocked.

- Open fuel filler cap completely.
- Refueling (➠ 138).
- Close fuel filler cap emergency release (➠ 141).

Close fuel filler cap emergency release
–with Keyless Ride OE

Requirement
Fuel filler cap is closed.



- Position the emergency release **2**.
- Install screws **1**.

FASTENING MOTORCYCLE IN PLACE FOR TRANSPORTATION

- Provide scratch protection for all components along which luggage straps are routed. For example, use adhesive tape or soft cloths.

ATTENTION

Motorcycle tips to the side when raising
Component damage cause by tipping over
- Secure the motorcycle against tipping to the side, preferably with the assistance of a second person.

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

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 luggage straps 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

GENERAL NOTES

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

ANTI-LOCK BRAKING SYSTEM (ABS)

Partially integral brake
Your motorcycle is equipped with a partially integral brake configuration. In this brake system, both front and rear wheel brakes are applied simultaneously when you pull the brake lever. The footbrake lever acts only on the rear wheel brake.
BMW Motorrad Integral ABS Pro adapts the braking force distribution between the front and rear wheel brakes during braking with ABS control to suit the load carried by the motorcycle.

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 surface is partially dependent on the friction coefficient of the road surface. Gravel, ice, snow and wet roads offer a considerably lower friction coefficient than a dry, clean asphalt surface. The poorer the friction coefficient of the road surface is, the longer the braking distance will be.
If the maximum transferable braking force is exceeded when the rider increases the brake pressure, the wheels begin to lock and driving 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 driving stability regardless of the road surface condition.

What happens when rough roads are encountered?
Bumpy or rough roads can briefly lead to a loss of contact between the tires and the road surface, until the transferable braking force is reduced to zero. If the brakes are ap-

plied in this situation, the ABS must reduce the brake pressure to ensure riding stability when contact to the road is restored. At this point in time, the BMW Motorrad Integral ABS Pro must assume extremely low friction coefficients (gravel, ice, snow) so that the running wheels turn in every imaginable case and 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 must reduce the braking forces due to the conditions described above, then vibrations can be felt at the handbrake lever.

If the brake lever is pulled, then brake pressure is built up at the rear wheel with the integral function. If the footbrake lever is not actuated until after this, the brake pressure already built up can be felt as counterpressure earlier than when the footbrake lever is actuated before or together with 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.

What are the design features of the BMW Motorrad Integral ABS Pro?

The BMW Motorrad Integral ABS Pro ensures stability on all surfaces, within the limits set by riding dynamics. The system is not optimized for the special conditions encountered under the extreme conditions of competitive off-road and racetrack use. Handling should be adopted 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 deactivated for safety reasons and an ABS error is indicated. A self-diagnosis routine must be completed before the error will be displayed.
Apart from problems with the BMW Motorrad ABS, unusual riding conditions can also cause a fault message to be generated:
– Warm-up on the center or auxiliary stand at idle 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 code occur due to an unusual driving condition, the ABS function can be reactivated by switching the ignition off and then on again.

How important is regular maintenance?

WARNING

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 braking in 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 motorcycle lifting off the ground inadvertently.

ABS control

From a technical standpoint, ABS Pro adjusts the ABS control to the angle of inclination of the motorcycle in dependence on the respective riding situation. Signals for the roll and yaw rate and the lateral acceleration are used to determine the inclination of the motorcycle.

With an increasing inclination, the brake pressure gradient is increasingly limited at the start of braking. This results in a slower pressure buildup. In addition, the pressure modulation in the range of the ABS control is more uniform.

Advantages for the rider

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

TRACTION CONTROL (DTC)

How does traction control work?

The traction control compares the wheel circumferential 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.

BMW Motorrad DTC is designed as an assistance system for the rider and for riding on public roads. 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

control intervention by the DTC is performed slightly later in this mode, enabling controlled drifting.
The system is not optimized for the special conditions encountered under the extreme conditions of competitive off-road and racetrack use. 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 lean angles increase, acceleration capability is also progressively restricted by the laws of physics. This can result in reduced acceleration when coming out of very tight curves.

To detect spinning or slipping away of the rear wheel, the rotational speeds of the front and rear wheel are compared and the angle is considered, for example.

If the values for the lean angle are detected to be implausible for a long period, a replacement value is used for the angle, or the DTC function is switched off. In these cases, a DTC error is displayed. A self-diagnosis must be completed before the fault memory entry will be displayed.
Under the following unusual riding conditions, BMW Motorrad Traction Control may be deactivated automatically.
Unusual riding conditions:
– Riding on the rear wheel (wheelie) for a longer 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 during extreme acceleration, the DTC reduces the engine torque in the RAIN and ROAD riding modes until the front wheel makes contact with the ground again. In the DTC settings DYNAMIC and ENDURO, the front wheel

lift-off detection permits brief wheelies.
In the DTC settings DYNAMIC PRO and ENDURO PRO, the front wheel lift-off detection is switched off.
The riding modes ENDURO and ENDURO PRO are designed for off-road riding and are not suitable for road operation.
In the ECO riding mode, the DTC setting corresponds to the ROAD riding mode.
In the RAIN, ROAD, DYNAMIC, DYNAMIC PRO, ENDURO and ENDURO PRO riding modes, the DTC setting corresponds to the riding mode.
In the DYNAMIC PRO and ENDURO PRO riding modes, the DTC can be set differently (➠ 70).
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.

On a slippery surface, the throttle grip should never be suddenly throttled back completely unless the clutch is disengaged at the same time. The engine braking torque can cause the rear wheel to slip, resulting in an unstable riding state. This case cannot be controlled by BMW Motorrad DTC. Dynamic engine brake control prevents this unstable riding state.

DYNAMIC ENGINE BRAKE CONTROL (MSR)

–with riding modes Pro[OE]

How does dynamic engine brake control work?
The purpose of the dynamic engine brake control is to safely prevent unstable riding conditions that are related to excess drag torque at the rear wheel. Depending on the road condition and riding dynamics, excess drag torque can make the drive 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 con-

trol 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, the engine torque is increased by slightly opening the throttle valves. The slip is reduced, and the vehicle is stabilized.

Effect of the dynamic engine brake control
– In the ECO RAIN and ROAD riding modes: maximum stability.
– In the DYNAMIC and DYNAMIC PRO riding modes: high stability.
– In the ENDURO riding mode: minimum stability.
– In ENDURO PRO riding mode, dynamic engine brake control is disabled.

DYNAMIC ESA

– with Dynamic ESA[OE]

Riding position compensation
The Dynamic ESA electronic chassis and suspension adjustment can automatically adapt your motorcycle to the load.
If the spring preload is set to `Auto`, the driver does not have to worry about adjusting the load.
When the motorcycle is started and while it is being driven, the system monitors the compression of the rear wheel and corrects the spring preload to ensure that the correct driving position is set. The damping is also automatically adjusted to the load.
Using ride height sensors, Dynamic ESA detects the movements of the chassis and suspension and responds to them by adjusting the EDC valves. As a result, the chassis and suspension is adjusted to the conditions of the surface.
Dynamic ESA calibrates itself at regular intervals to ensure that the system is operating correctly.

Adjustment options
Damping modes
–Road: Damping for comfortable road travel
–Dynamic: Damping for dynamic road travel
–Enduro: Damping for off-road riding

Load settings
–Auto: Active riding position compensation with automatic adjustment of spring preload and damping
–Min: Minimum spring preload
–Max: Maximum spring preload (for off-road use)
–The Min and Max spring preloads may be selected by the driver, but they cannot be changed. The riding position compensation function is deactivated in the Min and Max settings.

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)

–with riding modes Pro OE
–ENDURO
–DYNAMIC
–ENDURO PRO
–DYNAMIC PRO

With OE Pro riding modes, the riding modes ROAD, RAIN, ECO and ENDURO are enabled. The other riding modes can be selected in the riding mode preselection. Only up to a maximum of four riding modes can be selected at a time.

For each of these riding modes, a setting designed to complement the systems DTC, ABS and MSR as well as for the engine characteristics is available.

–with Dynamic ESA OE
Coordination of the Dynamic ESA 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
–In riding mode ECO: particularly restrained
–In the RAIN and ENDURO riding modes: restrained
–In the ROAD and ENDURO PRO riding modes: optimal
–In the DYNAMIC and DYNAMIC PRO riding modes: direct
–In the DYNAMIC PRO and ENDURO PRO riding modes, the throttle response can be set differently via the SETUP (➠ 68).

ABS
Setting
–In the ROAD, DYNAMIC, ENDURO and ENDURO PRO riding modes, the ABS setting corresponds to the riding mode.
–In the ECO and RAIN settings, the ABS setting corresponds to the ROAD riding mode.
–In the DYNAMIC PRO riding mode, the ABS setting corresponds to the DYNAMIC riding mode.
–In the DYNAMIC PRO and ENDURO PRO riding modes, the ABS can be set up differently using the SETUP (➠ 70).

Coordination
–In the ECO, RAIN, ROAD, DYNAMIC and DYNAMIC PRO riding modes, ABS is adjusted to road use.
–In the ENDURO riding mode, ABS is adjusted to off-road use with road tires.
–In the ENDURO PRO riding mode, the ABS control is not applied to 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
–In the ECO, RAIN, ROAD and ENDURO riding modes, the rider is given maximum support by the rear wheel lift-off detection.
–In the DYNAMIC and DYNAMIC PRO riding modes, the rear wheel lift-off detection offers reduced support and permits gentle lift-off of the rear wheel.
–The rear wheel lift-off detection is disabled in ENDURO PRO riding mode.

ABS Pro
–In the ECO, RAIN and ROAD riding modes, ABS Pro is available to the full extent.
–In the DYNAMIC, DYNAMIC PRO and ENDURO riding

modes, the support of ABS Pro is reduced compared to ECO, RAIN and ROAD.
– In the ABS setting DYNAMIC PRO, ABS Pro is not available.
– In the ENDURO PRO riding mode, ABS Pro is not available. It can be switched on by switching to the ABS setting ENDURO.

DTC

Tires

– In the DTC settings RAIN, ROAD and DYNAMIC, DTC is adjusted to road use with road tires.
– In the DTC setting ENDURO, the DTC is set for off-road use with road tires.
– In the DTC setting ENDURO PRO, DTC is adjusted to off-road use with cleated tires.

Riding stability

– In the DTC setting RAIN, DTC intervenes early enough to ensure that maximum riding stability is achieved.
– In the DTC settings of the ECO and ROAD riding modes, the intervention of the DTC takes place later than in the RAIN riding mode. Rear wheel spinning without traction is avoided wherever possible.
– In the DTC settings ECO, RAIN and ROAD, the front wheel is prevented from lifting off.
– In the DTC setting DYNAMIC, the DTC intervenes later than in the DTC setting ROAD, which enables minor drifts at the end of curves and brief wheelies.
– In the DTC setting ENDURO, the DTC intervenes even later and is set to off-road use so that longer drifts and brief wheelies are possible at the end of curves.
– In the DTC setting ENDURO PRO, the DTC control assumes that cleated tires are used for off-road riding. The front wheel lift-off detection is turned off, which enables wheelies of any duration and height. In extreme cases, the vehicle can roll over backward!

In the RAIN, ROAD, DYNAMIC, and ENDURO riding modes, the DTC setting corresponds to the riding mode.
In the ENDURO PRO and DYNAMIC PRO riding modes, the DTC can be set differently (➠ 70).

Switchover
Riding modes can be changed when the vehicle is at a standstill with the ignition switched on. A changeover while riding is possible under the following conditions:
–No drive torque at rear wheel.
–No brake pressure in the braking system.

For a changeover while riding, the following steps must be carried out:
–Turn back throttle grip.
–Do not actuate brake lever.
–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 with ShiftCam technology
The ShiftCam technology bridges the gap between maximum dynamics and maximum efficiency. While the full load cams make the full valve stroke available for maximum combustion chamber filling and high power output, the partial load cams open the intake valves significantly less and at different widths. The gas exchange losses are reduced by de-throttling, friction is reduced, the mixture is agitated more thoroughly and burned more effectively, and the fuel consumption drops.
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 TFT display 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 switch to the full load cam has taken

place. The ECO display varies depending on the selected gear, the load requirement and rotational speed. Even outside the operating range of the partial load cam, when the bar is gray, the ECO mode provides advantages with regard to an efficient riding style by reducing the maximum available torque and peak power output.

Due to of the reduced acceleration capability in the ECO mode, it is recommended that the riding mode be changed before attempting critical passing maneuvers with a heavy vehicle load or in two-up operation.

Applying a defensive riding style can further reduce fuel consumption (▶ 162).

DYNAMIC BRAKE CONTROL

–with riding modes Pro[OE]

Dynamic Brake Control function

The Dynamic Brake Control function is active in all riding modes. It can only be deactivated in the DYNAMIC PRO and ENDURO PRO riding modes by individual adjustment of 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 emergency braking is applied at a speed of more than 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 the Dynamic Brake Control, the engine torque required by the ABS brake system will be restored.
– If the emergency braking is stopped and the throttle grip is still under actuation, the Dynamic Brake Control reduces the engine torque as required by the rider in a controlled manner.

TIRE PRESSURE CONTROL (RDC)

– with tire pressure monitor (TPM) OE

Operation

A sensor located in each tire monitors the air temperature and the inflation pressure inside the tire 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 RDC 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 readings 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 control unit is installed but the wheels have no sensors, a fault message is generated.

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 inflation 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 TFT display with temperature compensation and are always based on the following tire air temperature:
68 °F (20 °C)

Tire pressure gages at gas stations do not make any adjustment for the air temperature, the tire pressure indicated depends on the temperature of the air in the tire. As a result, in most cases the values displayed there do not match the values shown in the TFT display.

Tire pressure adjustment
Compare the RDC value in the TFT display with the value on the back cover of the operating instructions. The difference between the two values must be compensated with the tire inflation pressure tester 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 TFT display:
33.4 psi (2.3 bar)
Missing 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 riding modes Pro[OE]

Shift assistant Pro
Your motorcycle is equipped with a Pro gearshift assistant 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.

Benefits

–70-80 % of all gear changes can be performed without using the clutch.
–Less movement between pilot and pillion due to shorter gear-change intervals.
–Throttle does not have to be closed when changing gear under acceleration.
–During deceleration and downshifts (throttle plate closed) the system blips the throttle to obtain the correct engine speed.
–Shifting times are faster than when the clutch is used to change gears.

For the system to detect the rider's intention to change gear, the gearshift lever previously not operated must be moved against the force of the spring by a certain amount of "overtravel" in the desired direction with a normal to brisk action and held in that position until the gear change is completed. A further increase of the force applied to the gearshift lever during the gear-shift operation is not necessary. After the gear change is completed, the gear lever must be fully released before the Pro gearshift assistant can execute a new gear change. The load factor (throttle grip position) should remain constant both prior to and during execution of shifts using the Pro gearshift assistant. Changing the accelerator twist-grip position during the gear-shift operation may cause the function to abort and/or the gear change to fail. The Pro gearshift assistant does not provide support when gear changes are made using the clutch.

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 only possible if the current RPM is higher than the release threshold for the next higher gear.
–This prevents the idling speed from being dropped below.

 Idle speed
1050 min^{-1} (Engine at operating temperature)
 Release thresholds
1st gear
min 1350 min^{-1}
2nd gear
min 1400 min^{-1}
3rd gear
min 1450 min^{-1}
4th gear
min 1500 min^{-1}
5th gear
min 1550 min^{-1}
6th gear
min 1600 min^{-1}

HILL START CONTROL

Hill Start Control function

The Hill Start Control prevents an uncontrolled rolling back on slopes by means of targeted intervention in the partial integral ABS brake system, without the rider having to continuously operate the brake lever. 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 driving off, making it possible to drive off more smoothly. Additional turning of the throttle grip is hardly necessary.
– Stopping on a steeper slope increases the amount of brake pressure built up. The brake is a bit slower to release when driving off. More torque is required to drive off, making additional turning of the throttle grip necessary.

Behavior when the vehicle is rolling or slipping

– The brake pressure increases when the vehicle is rolling with Hill Start Control active.
– If the rear wheel slips, the brake is released again after approx. 1 m. This prevents the vehicle from rolling with the rear wheel blocked.

Releasing the brake when switching off the engine or during timeout

Hill Start Control is deactivated when the engine is switched off using the emergency-off switch, when the side stand is folded out, or after it times out (10 minutes).

In addition to the indicator and warning lights, the rider is to be made aware about the deactivation of the Hill Start Control by the following behavior:

Brake warning jerk

- The brake is released briefly and is immediately reactivated.
- This causes a jerking behavior that the driver can feel.
- The partial integral ABS brake system sets a speed of approx. 0.6-1.2 mph (1-2 km/h).
- The driver 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

Principle of ShiftCam function

The motorcycle is equipped with the BMW ShiftCam technology - a technique for varying the valve timing and the valve stroke on the intake side. The centerpiece of this technology is a one-piece 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, which have 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 perfor-

mance 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 HEADLIGHTS

–with Adaptive Lights[OE]

How do the adaptive headlights work?

The standard installed dimming unit in the headlight consists of two reflectors that generate low beams using LED. Ride height sensors at the front and rear wheel suspension provide data for ongoing headlight distance control. Thanks to the pitching compensation, the light always illuminates the optimal, preset area when riding on straight stretches of road, regardless of the riding conditions and load status. Using Adaptive Headlights, the dimming unit additionally rotates around an axis, depending on the angle, and compensates for the angle of roll of the vehicle. The angle of rotation is 70° (±35°).

In addition to the pitching compensation, the low-beam headlight learns to compensate for the angle at which riding takes place. Both movements are overlaid so that a highlight in the curve results. This results in significantly improved illumination of the road when riding around curves and thus an enormous increase in active riding safety.

MAINTENANCE

09

GENERAL NOTES

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

Microencapsulated screws
The microencapsulation is a chemical threadlocker. An adhesive is used to create a solid connection between screw and nut or component. Microencapsulated screws, therefore, are suitable for single use only.

After removal, the internal thread must be cleaned to remove adhesive. During installation, a new microencapsulated screw must be used. Therefore, before removal, ensure that you have suitable tools for cleaning the thread and have a replacement screw. If you carry out the work improperly, the locking function of the screw might no longer be guaranteed, which puts you in danger!

Additional information
If special tightening torques are to be taken into account for installation, these are listed. An overview of all required tightening torques is contained in the chapter "Technical data". Information on additional preventive maintenance and repair procedures is provided in the repair manual for your motorcycle on DVD, which you can obtain from your authorized BMW Motorrad retailer.

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

ONBOARD TOOL SET

1 Screwdriver handle
–Use with screwdriver insert
–Topping up the engine oil (➠ 170).

2 Reversible screwdriver insert
Phillips PH1 and Torx T25
–Removing the battery cover (➠ 190).
–Topping up coolant (➠ 176).

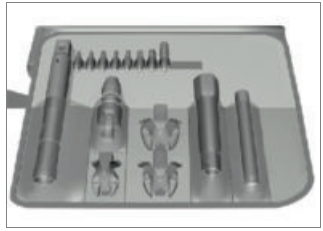
3 Open-ended wrench
Key range: 8/10 mm
–Removing battery (➠ 190).

4 Open-ended wrench
Key range: 14 mm
–Adjusting the mirror arm (➠ 108).

5 Torx wrench T30
–Adjusting the gearshift lever from below

SERVICE TOOL SET

–with service tool set OA



For more extensive servicing (e.g. removing and installing wheels), BMW Motorrad has set up a service tool kit designed for your motorcycle. You can purchase this tool kit from your authorized BMW Motorrad retailer.

FRONT-WHEEL STAND

Attaching front-wheel stand

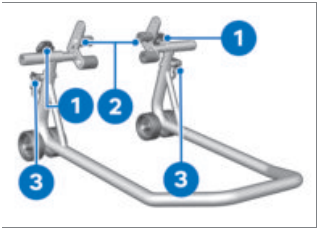
ATTENTION

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

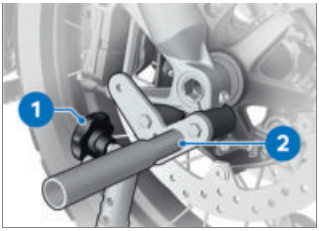
Component damage cause by tipping over

- Place the motorcycle on the center stand or an auxiliary stand before lifting it with the BMW Motorrad front wheel stand.

- Put the motorcycle up on the center stand, ensuring that it is resting on a firm and level support surface.
- Use basic stand with front wheel mount. The basic stand and its accessories are available through your authorized BMW Motorrad retailer.



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



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

ATTENTION

Lifting off the center stand if the motorcycle is raised too high

Component damage cause by tipping over

- When raising the motorcycle, make sure that the center stand remains in touch with the ground.

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

ENGINE OIL

Checking the engine oil level

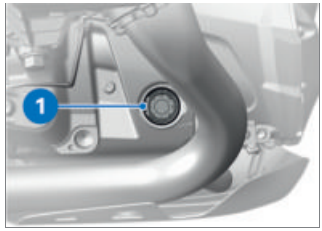
- When the motorcycle is at operating temperature, put it up on its center stand, making sure the ground is level and firm.

ATTENTION

Misinterpretation of the oil filling quantity, as the oil level is temperature-dependent (the higher the temperature, the higher the oil level)
Engine damage
- Only check the oil level after a longer journey or when the engine is warm.

- Run the engine in neutral until the fan starts.
- Turn off engine at operating temperature.
- Wait five minutes to allow oil to drain into the oil pan.

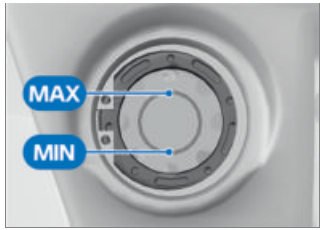
BMW Motorrad recommends occasionally checking the motor oil after a journey of at least 31 mi in order to reduce the environmental impact.



ATTENTION

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

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



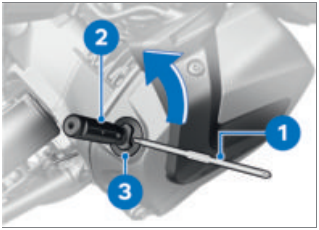
	Specified level of engine oil
Between **MIN** and **MAX** mark	

If the oil level is below the **MIN** mark:
- Topping up the engine oil (➠ 170).

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

Topping up the engine oil
- Park the motorcycle, making sure the ground is level and firm.
- Checking the engine oil level (➠ 169).

It is possible to misinterpret the oil capacity as the oil level depends on the temperature.



- Clean the area around the oil filler opening.
- To be able to apply force more easily, insert the interchangeable screwdriver insert **1** Torx-end first, into the screwdriver handle **2** (from on-board tool kit).
- Position the specified tool from the on-board tool kit on the cap **3** of the oil filler opening and turn counterclockwise to remove it.
- Checking the engine oil level (➠ 169).

ATTENTION

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

- Top up the engine oil to the specified level.

Engine oil, quantity for topping up
max 0.8 quarts (max 0.8 l) (Difference between **MIN** and **MAX**)

- Checking the engine oil level (➠ 169).
- Install the cap **3** of the oil filler opening.

BRAKE SYSTEM

Checking brake operation
- Actuate the handbrake lever.
» Pressure point must be clearly perceptible.
- Actuate the footbrake lever.

» Pressure point must be clearly perceptible.

If no clear pressure points are perceptible:

ATTENTION

Improper working on the brake system

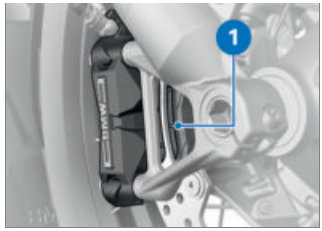
Endangering of the operating safety of the brake system

- Have all work on the brake system carried out by experts.

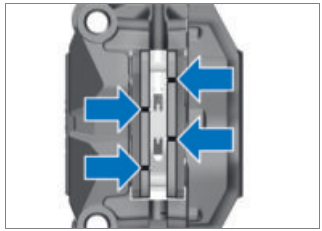
- Have the brakes checked at an authorized workshop, preferably an authorized BMW Motorrad retailer.

Checking the front brake pad thickness

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



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



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

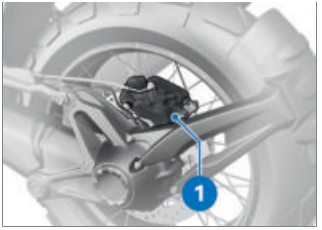
If the wear marks are no longer clearly visible:

WARNING

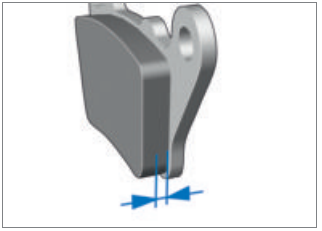
Dropping below the minimum pad thickness
Reduced braking action, damage to the brake
- In order to ensure the operating reliability of the brake system, make sure that the brake pads are not worn beyond their minimum thickness.

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

Checking the rear brake pad thickness
- Park the motorcycle, making sure the ground is level and firm.



- Visually inspect the brake pad thickness. Viewing direction: between splash guard and rear wheel toward brake pads **1**.



Rear brake-pad wear limit
0.04 in (1.0 mm) (Only friction material without carrier plate.)

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 specialist workshop, preferably an authorized BMW Motorrad retailer.

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.

- Put the motorcycle up on its center stand, making sure the ground is level and firm.
- 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 defect rectified as quickly as possible by a specialist workshop, preferably an authorized BMW Motorrad retailer.

Checking the rear brake fluid level

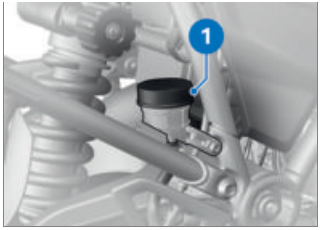
WARNING

Insufficient or contaminated brake fluid in the brake fluid reservoir

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

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

- Put the motorcycle up on its center stand, making sure the ground is level and firm.



- Check brake fluid level at 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 defect rectified as quickly as possible by a specialist workshop, preferably an authorized BMW Motorrad retailer.

CLUTCH

Check clutch function

- Pull back the clutch lever.

» Pressure point must be clearly perceptible.

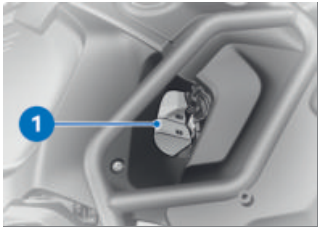
If no clear pressure point can be felt:

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

COOLANT

Checking the coolant level

- Park the motorcycle, making sure the ground is level and firm.
- Allow the engine to cool down.



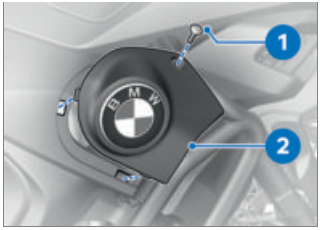
- Check coolant level at expansion tank **1**.

	Required coolant level
Between **MIN** and **MAX** marks on the expansion tank (Engine cold)	

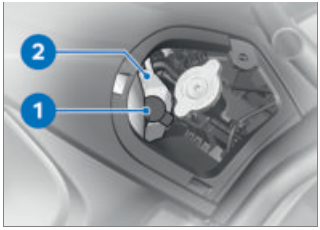
If the coolant level drops below the permitted level:

- Topping up coolant (➠ 176).

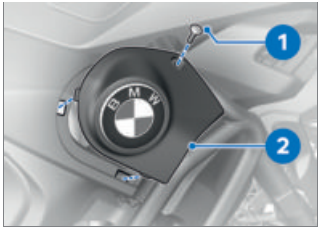
Topping up coolant



- Remove screw **1** and remove lid **2**.



- Open the cap **1** of the coolant expansion tank **2** and top up coolant to the specified level.
- Checking the coolant level (➠ 175).
- Close the cap of the coolant expansion tank.



- Position the lid **2**.
- Install the screw **1**.

TIRES

Checking tire pressure

WARNING

Incorrect tire inflation pressure
Poorer handling characteristic of motorcycle, reduction of tire service life
- Ensure proper tire inflation pressure.

WARNING

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

Front tire pressure
36.3 psi (2.5 bar) (with cold tires, one-up and two-up mode)

Rear tire pressure
42.1 psi (2.9 bar) (with cold tires, one-up and two-up mode)

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

Tire pressures can be determined with tire pressure control (RDC). These values are always displayed with compensation for temperature and always refer to a tire air temperature of 68 °F (20 °C). Tire pressure gauges at gas stations do not compensate for temperature. Therefore, the values measured there usually do not match the values shown in the TFT display.

WHEEL RIMS AND TIRES

Check wheel rims

- Make sure ground is level and firm and park motorcycle.
- Subject wheel rims to visual inspection for defects.
- Have damaged rims checked and, if necessary, replaced by a specialist service facility, preferably an authorized BMW Motorrad retailer.

Checking tire tread depth

WARNING

Riding with heavily worn tyres

Risk of accident due to poorer rideability

- If necessary, replace the tyres before the legally specified minimum tread depth is reached.

- Make sure ground is level and firm and park motorcycle.
- Measure tire tread depth in main tread grooves with wear indicators.

Tread wear marks are integrated into the main grooves on every tire. If the tire tread has worn down to the level of the marks, the tire is completely worn. The locations of the marks are indicated on the edge of the tire, e.g. by the letters TI, TWI or by an arrow.

When the minimum tread depth is reached:

- Replace the worn tires.

Checking spokes

- Make sure ground is level and firm and park motorcycle.
- Sweep across spokes with a screwdriver handle or similar item, paying attention to the sound that they emit as you proceed.

If the tone does not remain consistent:

- Have spokes checked by an authorized service facility, preferably an authorized BMW Motorrad retailer.

WHEELS

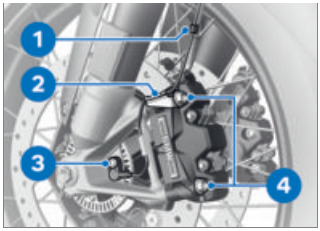
Effect of wheel sizes on suspension control systems

The wheel sizes play an important role in the suspension control system ABS. The diameter and width of the wheels stored in the control unit have particular significance as the basis for all necessary calculations. A change in these sizes resulting from conversion to wheels not installed as standard equipment can seriously affect the control efficiency of these systems.

The sensor rings required for wheel speed detection must also match the installed control systems and may not be replaced.
If you want to convert your motorcycle to different wheels, please contact a specialist workshop, preferably a BMW Motorrad retailer. In some cases, the data stored in the control units can be adapted for the new wheel sizes.

Removing front wheel

- Put the motorcycle up on its center stand, making sure the ground is level and firm.



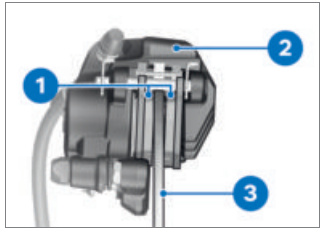
- Detach the wheel speed sensor cable from the holding clips **1** and **2**.
- Remove the screw **3** and remove the wheel speed sensor from the bore.
- Mask off areas of the wheel rim that could get scratched in the process of removing the brake calipers.

ATTENTION

Unintentional pressing together of brake pads
Component damage when mounting the brake caliper or when pressing the brake pads apart

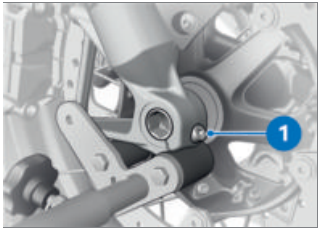
- Do not actuate the brakes with the brake caliper removed.

- Remove the mounting bolts **4** of the left and right brake calipers.

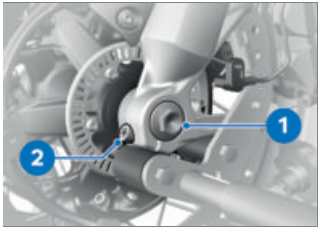


- Push brake pads **1** apart slightly by turning the brake caliper **2** back and forth against brake disc **3**.
- Carefully pull the brake calipers back and outward to remove them from the brake discs.

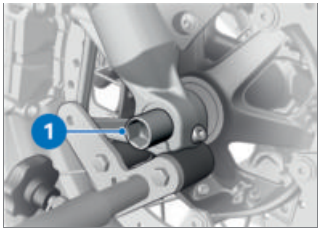
- Raise the front of motorcycle, preferably using a BMW Motorrad front wheel stand, until the front wheel rotates freely.
- Attaching front-wheel stand (➠ 167).



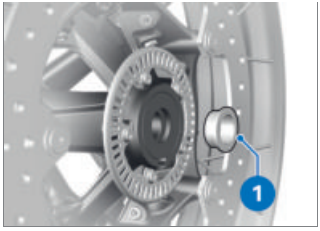
- Loosen the right axle clamping screw **1**.



- Remove the screw **1**.
- Loosen the left axle clamping screw **2**.
- 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.

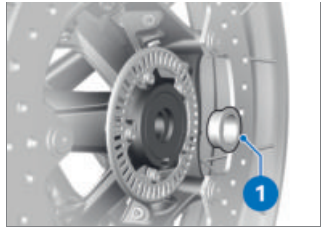
Installing the front wheel

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 of screwed connections with incorrect tightening torque
Damage or loosening of screwed connections
- Always have the tightening torques checked by a specialized workshop, preferably an authorized BMW Motorrad retailer.



- Lubricate the contact surface on the spacer bushing **1**.

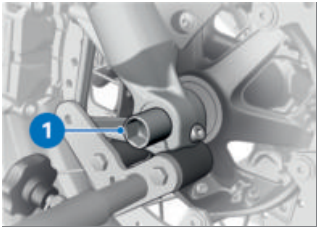
Lubricant
Optimoly TA

- 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.

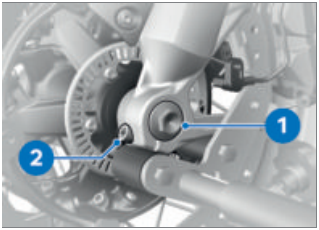
- Roll the front wheel into the front suspension.



- Lubricate the quick-release axle **1**.

Lubricant
Optimoly TA

- Lift the front wheel and install the quick-release axle **1**.
- Remove front wheel stand and firmly compress front forks. Do not actuate hand-brake lever at the same time.
- Attaching front-wheel stand (➠ 167).

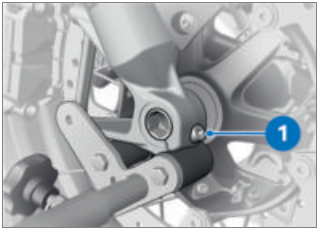


- Install the screw **1** to the specified torque. Brace quick-release axle on the right side at the same time.

Quick-release axle in telescopic fork
M12 x 20
22 lb/ft (30 Nm)

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

Clamping screw for quick-release axle in telescopic fork
M8 x 35
14 lb/ft (19 Nm)

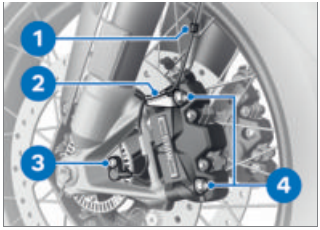


- Tighten the right axle clamping screw **1** to the specified torque.

Clamping screw for quick-release axle in telescopic fork
M8 x 35
14 lb/ft (19 Nm)

- Remove the front wheel stand.

- Put the brake calipers on the left and right onto the brake discs.



- Install mounting bolts **4** on left and right to the specified torque.

Brake caliper on telescopic forks
M10 x 65
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 bore and install screw **3**.

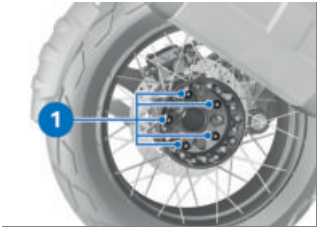
Wheel speed sensor on fork
M6 x 16
Joint compound: Microencapsulated or medium-strength screw lock
6 lb/ft (8 Nm)

Removing rear wheel
- Make sure ground is level and firm and place motorcycle on its center stand.
- Shift into first gear.

CAUTION

Hot exhaust system
Burn hazard
- Do not touch hot exhaust system.

- Let the end muffler cool down.



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

Installing the rear wheel

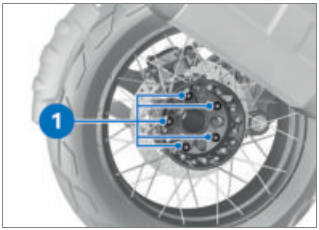
WARNING

Use of a wheel which does not comply with series specifications
Malfunctions during control interventions by ABS and 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 of screwed connections with incorrect tightening torque
Damage or loosening of screwed connections
- Always have the tightening torques checked by a specialized workshop, preferably an authorized BMW Motorrad retailer.

- Place rear wheel on rear wheel support.



WARNING

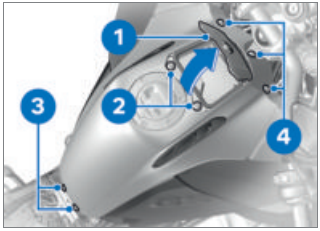
Mixed installation of wheel bolts for spoked wheels and cast wheels
Accident hazard
- Use only wheel bolts with the same permitted length code numbers.
- Do not lubricate the lug bolts.

- Install the lug bolts **1** with the specified torque.

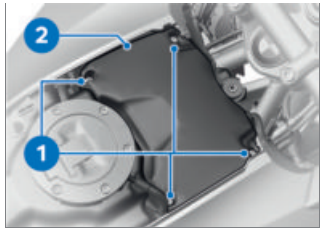
	Tighten rear wheel on wheel flange
Tightening sequence: Tighten crosswise	
M10 x 1.25 x 40	
44 lb/ft (60 Nm)	

AIR FILTER

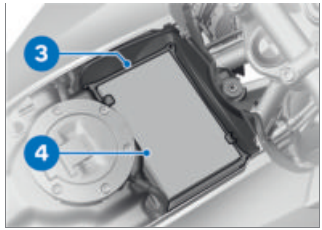
Replacing the air filter insert



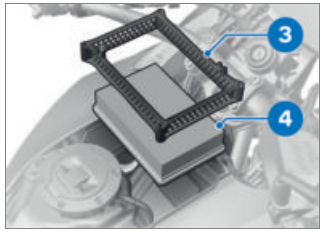
- Removing the rider's seat (➠ 117).
- Open lid **1** of storage compartment.
- Remove screws **2**, **3** and **4**.
- Take off the tank cover.



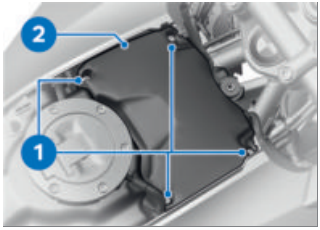
- Remove the screws **1**.
- Remove air filter cover **2**.



- Remove the frame **3**.
- Remove the air filter element **4**.

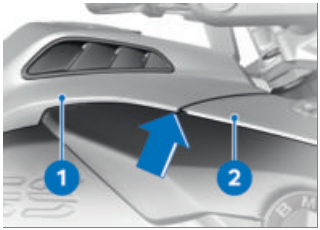


- Clean air filter element **4** or replace, if necessary.
- Insert air filter element **4** and frame **3**.

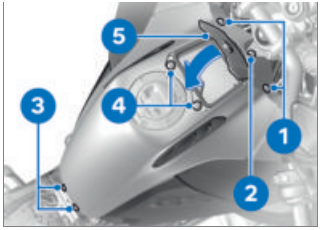


- Put the air filter cover **2** in place.
- Install the screws **1**.

Air filter cover on intake silencer
Tightening sequence: Tighten crosswise
M5 x 50
2 lb/ft (3 Nm)



- Place tank cover **1** in position from above, taking care during installation that the guide (**arrow**) is underneath the upper front wheel cover **2**.



- Install screws (short collar) **3** and **4**.
- Close lid **5** of storage compartment.
- Install screws (short collar) **1**.
- Install the screw **2**.

Body screw connection
M6 x 25
6 lb/ft (8 Nm)

- Installing the rider's seat (➠ 119).

LIGHT SOURCES

Replacing the LED light source

WARNING

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

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

JUMP-STARTING

CAUTION

Touching live parts of the ignition system when the engine is running
Electrocution
- Do not touch parts of the ignition system when the engine is running.

ATTENTION

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.

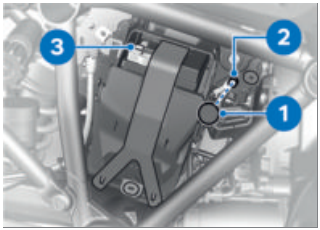
ATTENTION

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.
- Removing the battery cover (➠ 190).
- Do not disconnect the battery from the electrical system for an external start.



- Remove protective cap **1**.
- Begin by connecting the red jumper cable to the remote positive terminal **2** on the empty 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 **3** while connecting the other end to the empty battery's negative terminal.
- Let the engine of the donor vehicle run during the jump-starting procedure.
- Start the engine of the vehicle with the empty battery in the usual way; if the engine does not start, wait a few minutes before repeating the attempt to protect the starter motor and the donor battery.

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

- Allow both engines to idle for a few minutes before disconnecting jumper cables.
- Disconnect the jumper cable from the negative terminal first, then from the positive terminal.
- Install the protective cap.
- Installing the battery cover (➠ 192).

BATTERY

Maintenance instructions

Correct battery maintenance combined with proper charging and storage procedures extends the battery's service life, and is also required for warranty claims.

Compliance with the points below is important in order to maximize battery life:
–Keep the surface of the battery clean and dry.
–Do not open the battery.
–Do not top up with water.
–Be sure to read and comply with the instructions for charging the battery on the following pages.
–Do not turn the battery upside down.

ATTENTION

Discharging of the connected battery by the vehicle electronics (e.g. clock)
Total discharge of battery leading to a rejection of warranty claims
• During riding breaks of more than 4 weeks, connect a trickle-charger to the battery.

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

Charging connected battery

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

Unsuitable chargers connected to the power socket
Damage to charger and vehicle electronics
- Use suitable BMW chargers. The correct charger is available through your authorized BMW Motorrad retailer.

- Charge disconnected battery via onboard socket.

The motorcycle's onboard electronics know when the battery is fully charged. The onboard socket is switched off when this happens.

- Comply with operating instructions of charger.

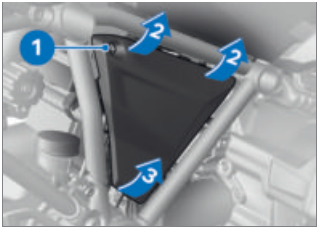
If you are unable to charge the battery via the onboard socket, you may be using a charger that is not compatible with your motorcycle's electronics. In this case, charge the battery directly from the terminals of the battery disconnected from the vehicle.

Charging disconnected battery

- Charge battery using a suitable charger.
- Comply with operating instructions of charger.
- Once battery is fully charged, disconnect charger's terminal clips from battery terminals.

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

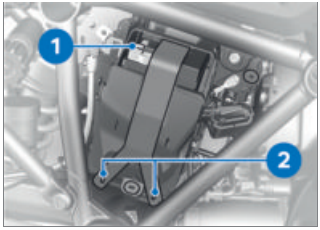
Removing battery



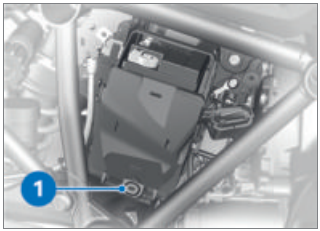
- Turn off the ignition.
- Remove screw **1**.
- Pull battery cover at top slightly forward at positions **2**.
- Remove the battery cover upward at position **3** in order not to damage the battery cover and the mount.

–with anti-theft alarm system (DWA) OE

- Turn off the anti-theft alarm system if necessary.◁



- Disconnect the negative battery cable **1** and rubber strap **2**.
- Insulate the negative battery cable **1** with adhesive strip.



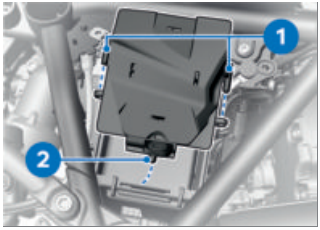
- Pull the retaining plate at position **1** outward and remove it upward.
- Lift battery slightly out of holder sufficiently for positive terminal to be accessible.

- Disconnect the positive battery cable **1** and pull out the battery.

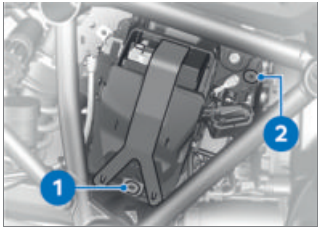
Installing a battery

If the 12-V battery is inserted incorrectly or the terminals reversed (e.g. when jump starting), it can blow the fuse for the alternator regulator.

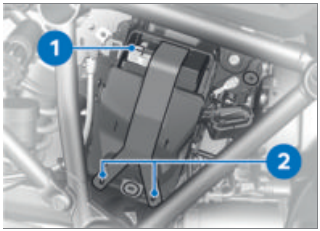
- Fasten the positive battery cable **1**.
- Slide battery into holder.



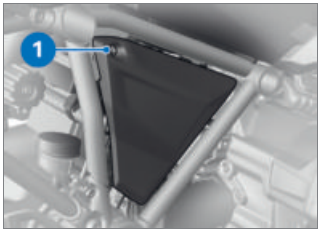
- First press retaining plate into the mounts **1** and then press under the battery at point **2**.



- Insert battery cover into mount **1** and press it into the mount **2**.



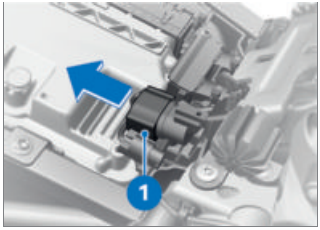
- Remove the adhesive strip from the negative battery cable **1**.
- Fasten the negative battery cable **1**.
- Fasten battery with rubber strap **2**.



- Install the screw **1**.
- Setting the clock (➠ 95).
- Setting the date (➠ 94).

FUSES

Replacing fuses



- Turn off the ignition.
- Removing the rider's seat (➠ 117).
- Detach connector **1**.

ATTENTION

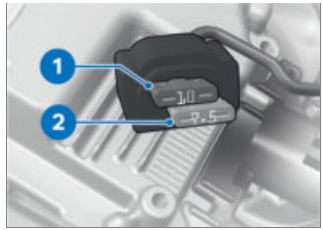
Bypassing defective fuses
Risk of short circuit and fire
- Do not bypass defective fuses.
- Replace defective fuses with new fuses.

- Consult the fuse assignment diagram and replace the defective fuse.

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

- Insert connector **1**.
- Installing the rider's seat (➠ 119).

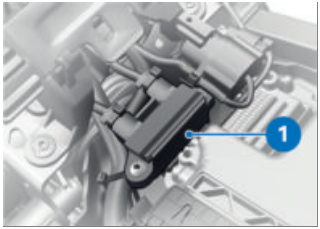
Fuse assignments



1 10 A
Instrument cluster
Anti-theft alarm system (DWA)
Ignition switch
Diagnostic socket
Cut-off relay for ignition coil

2 7.5 A
Multifunction switch, left
Tire pressure control (TPC)
Sensor box
Seat heating

Fuse for the alternator regulator



1 50 A
Alternator regulator

Have the fuse exchanged by a specialist workshop, preferably an authorized BMW Motorrad dealer.

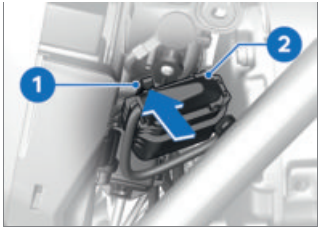
DIAGNOSTIC SOCKET

Detaching the diagnostic socket

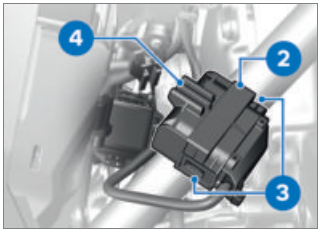
CAUTION

Incorrect procedure when disconnecting the diagnostic socket for onboard diagnosis
Vehicle experiences malfunctions
- Do not have the diagnostic socket disconnected except during BMW Motorrad service by a specialist workshop or other authorized persons.
- Have work carried out by appropriately trained personnel.
- Observe the specifications of the vehicle manufacturer.

- Removing the battery cover (➠ 190).



- Press the hook **1** and remove the diagnostic socket **2** by pulling it upwards.

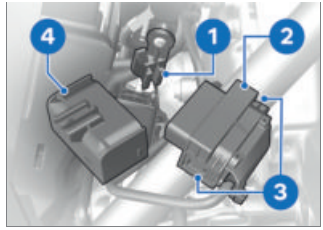


- Press the locks **3** on both sides.
- Detach the diagnostic socket **2** from the bracket **4**.

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

Fastening the diagnostic socket

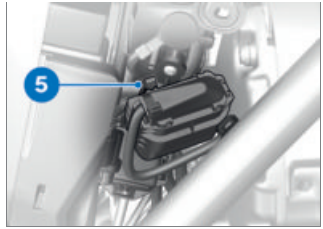
- Disconnect the interface for the diagnostic and information system.



- Plug the diagnostic socket **2** into the bracket **4**.

» The locking mechanisms **3** engage on both sides.

- Connect the bracket **4** to the mount **1**.



- Make sure that the hook **5** engages.
- Installing the battery cover (➠ 192).

ACCESSORIES

10

GENERAL NOTES

CAUTION

Use of products from other manufacturers
Safety risk
- BMW Motorrad cannot examine or test each product of outside origin to ensure that it can be used on or in connection with BMW motorcycles without constituting a safety hazard. Nor is this guarantee provided when the official approval of a specific country has been granted. Tests conducted by these instances cannot make provision for all operating conditions experienced by BMW motorcycles and, consequently, they are not sufficient in some circumstances.
- Use only parts and accessories approved by BMW for your motorcycle.

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

ONBOARD POWER SOCKETS

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

Cable routing
– The cables from the onboard sockets to the auxiliary devices must be routed in such a way that they do not impede the rider.
– Cable routing must not restrict the steering angle and the handling characteristics.
– Cables must not be trapped.

Automatic deactivation

– The onboard sockets are automatically switched off during starting.
– These sockets are switched off approx. 15 minutes after switching off the ignition to reduce the strain on the onboard electrical system. Additional devices with low power consumption are possibly not detected by the vehicle electronics. In these cases, onboard sockets are already switched off shortly after the ignition is switched off.
– In case of insufficient battery voltage, the onboard sockets are switched off to maintain the ability to start the motorcycle.
– If the maximum loadability specified in the technical data is exceeded, the onboard sockets are switched off.

USB CHARGING SOCKET

Notes about use:

Charge current

This is a 5 V USB charging socket providing a maximum charge current of 2.4 A.

Automatic shut-off

The USB charging sockets are automatically switched off under the following conditions:
– To retain the starting capability if the battery voltage is too low.
– If the maximum load capacity specified in the technical data is exceeded.
– During the starting procedure.

Connection of electrical devices

The ignition must be switched on before electrical devices connected to USB charging sockets can be operated. To reduce loads on the electrical system, these are switched off no more than 15 minutes after the ignition is switched 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 routing

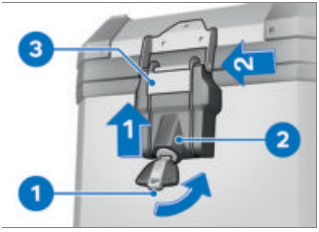
Observe the following when routing cables from USB charging sockets to additional devices:

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

CASES

–with aluminum case[OA]

Opening a case

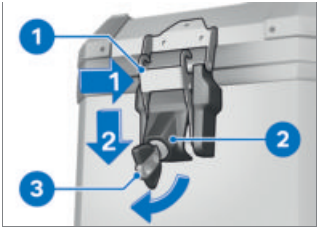


- Turn key **1** counterclockwise.

The case cover can be opened with both the left and the right latch.

- Push the lock housing **2** up to unlock the locking claw **3**.
- Pull locking claw **3** to side and open cover lid.

Closing a case



- Close the case lid.
- Put the locking claw **1** on the lid.
- Push down lock housing **2**, in doing so ensure that the claw catches in the lid.
- To lock the lock, turn the key **3** clockwise and remove it.

Removing the case lid

- Opening a case (➠ 200).

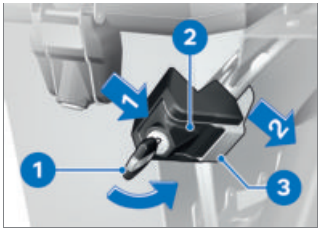
- Detach the lid-retaining cable **1**.
- Close the case lid.
- Open the second closure of the case lid.
- Remove case lid.

Installing the case lid

- Put the case lid on the case.
- Close one closure of the case lid.
- Open the case lid toward the closed side.

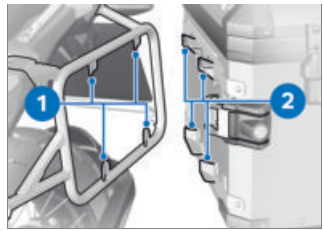
- Attach the lid-retaining cable **1**.
- Close the case lid.
- Close the second closure of the case lid.

Removing a case

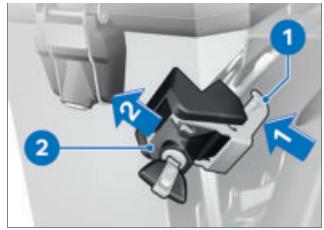


- Turn key **1** counterclockwise.
- Push the lock housing **2** to the side to unlock the locking claw **3**.
- Pull locking claw **3** to the side while holding the case in position.
- Pull the case forward up to the stop and remove it sideways.

Attaching a case



- Place case on case carrier and slide backwards so that mounts on case carrier **1** and case **2** interlock.



- Put the locking claw **1** on the case carrier while holding the case in position.
- Push lock housing **2** to one side, in doing so make sure that the claw grips around the holder.

- Turn the key clockwise and remove it.

Maximum payload and top speed

Note the maximum permissible payload and the speed limit for riding with cases fitted, as stated on the label inside the case.

If you cannot find your combination of vehicle and case on the sign, contact your BMW Motorrad partner.

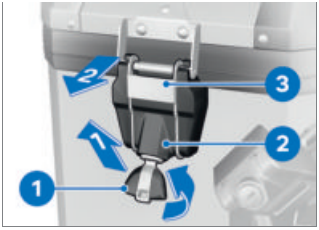
The following values apply for the combination described here:

Maximum speed for riding with aluminum case
max 112 mph (max 180 km/h)
Payload per aluminum case
max 22 lbs (max 10 kg)

TOPCASE

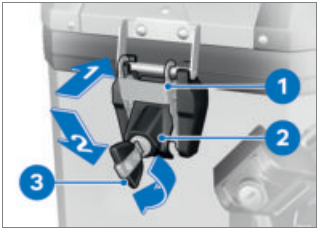
–with aluminum topcase[OA]

Opening a topcase



- Turn key **1** counterclockwise.
- Push the lock housing **2** upward to unlock the locking claw **3**.
- Pull the locking claw **3** backward and open the lid.

Closing a topcase

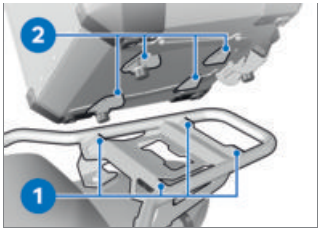


- Close the topcase lid.
- Put the locking claw **1** on the lid.
- Push down lock housing **2**, in doing so ensure that the claw catches in the lid.
- To lock the lock, turn the key **3** clockwise and remove it.

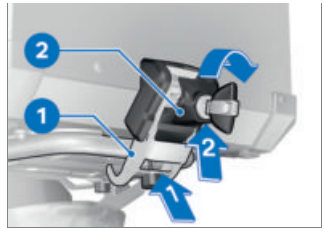
Removing a topcase

- Turn key **1** counterclockwise.
- Press the lock housing **2** down to unlock locking claw **3**.
- Pull the locking claw **3** backward.
- First pull the topcase backward and then remove it upward.

Installing a topcase



- Place topcase on topcase carrier and slide forwards so that mounts on topcase carrier **1** and topcase **2** interlock.



- Put the locking claw **1** on the topcase carrier.
- Push up lock housing **2**, in doing so make sure that the claw grips around the support.
- To lock the lock, turn the key clockwise and remove it.

Maximum payload and top speed

Note the maximum permissible payload and the speed limit for riding with topcase fitted, as stated on the label inside the topcase.

If you cannot find your combination of motorcycle and topcase on the sign, contact your authorized BMW Motorrad retailer.

The following values apply for the combination described here:

Maximum speed for riding with aluminum topcase
max 112 mph (max 180 km/h)
Payload of aluminum topcase
max 11 lbs (max 5 kg)

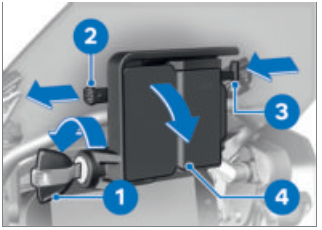
NAVIGATION SYSTEM

–with preparation for navigation system OE

Securely fastening navigation device

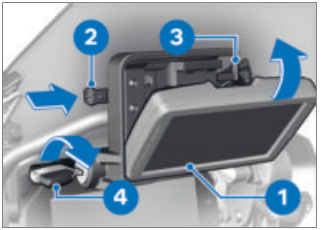
The navigation preparation is suitable as from the BMW Motorrad Navigator IV.

The locking system of the Mount Cradle offers no protection against theft. Remove the navigation system and store in a safe place after every drive.



- Turn the ignition key **1** counterclockwise.
- Pull the shut-off lock **2** to the **left**.
- Press in the locking mechanism **3**.

» The Mount Cradle is unlocked and the cover **4** can be removed with a rotational movement toward the front.



- Mount the navigation device **1** in the lower area and swing backward with a rotational movement.

» Navigation device audibly engages.

- Slide the shut-off lock **2** completely to the **right**.

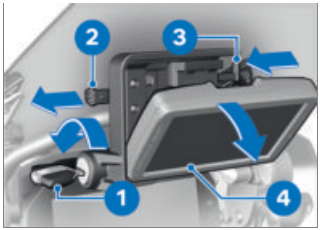
» The locking mechanism **3** is locked.
- Turn the ignition key **4** clockwise.

» Navigation device is locked and ignition key can be removed.

Removing the navigation device and installing the cover

ATTENTION

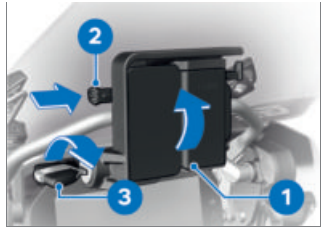
Dust and dirt on the contacts of the Mount Cradle
Damage to the contacts
- Reinstall the cover after end of each drive.



- Turn the ignition key **1** counterclockwise.
- Pull the shut-off lock **2** completely to the **left**.

» The locking mechanism **3** is unlocked.
- Slide the locking mechanism **3** completely to the **left**.

» Navigation device **4** is unlocked.
- Remove navigation device **4** downward with a tilting movement.



- Mount the cover **1** in the lower area and swing upward with a rotational movement.

» Cover audibly engages.
- Slide the shut-off lock **2** to the **right**.
- Turn the ignition key **3** clockwise.

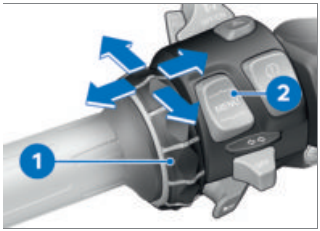
» The cover **1** is secured.

Operating the navigation system

The following description refers to the BMW Motorrad Navigator V and the BMW Motorrad Navigator VI. The BMW Motorrad Navigator IV does not offer all options described.

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 retailer.

If BMW Motorrad Navigator is installed and the operating focus is changed to Navigator (➠ 91), some of its functions can be operated directly from the handlebars.



The navigation system is operated using the Multi-Controller **1** and the rocker button MENU **2**.

Turning the Multi-Controller 1 up and down
On the compass and Mediaplayer screen: Increase or decrease the volume of a BMW Motorrad communication system connected via Bluetooth.
On the BMW special menu: Select menu items.

Briefly tilt the Multi-Controller 1 to the left and right
Change between the main screens of the Navigator:
–Map view
–Compass
–Mediaplayer
–BMW special menu
–My motorcycle page

Tilt and hold the Multi-Controller 1 to the left and right
Activate specific functions on the Navigator display. These functions are indicated by a right arrow or left arrow above the corresponding touch field.

The function is triggered by long actuation to the right.

The function is triggered by long actuation to the left.

Press the bottom of the MENU 2 rocker button
Change the operating focus to the Pure Ride view.

In detail, the following functions can be operated:

Map view

–Turning upward: zooms in on map section (Zoom in).
–Turning downward: zooms out of map section (Zoom out).

Compass page

–Turning increases or decreases the volume of a BMW Motorrad communication system connected via Bluetooth.

BMW special menu

–Speak: Repeat last navigation announcement.
–Waypoint: Save current location as a favorite.
–Navigate home: Starts navigation to the home address (is grayed-out if no home address is set).
–Mute: Turn automatic navigation announcements off or on (off: The top line in the display shows a crossed-out lip icon). Navigation announcements can still be output via "Speak". All other sound outputs remain switched on.
–Switching off display: Switch off display.
–Call home: Calls the home phone number stored in the navigator (only displayed when a communication system and a phone are connected).
–Detour: Activates the detour function (only displayed if a route is active).
–Skip: Skips the next waypoint (only displayed if route is provided with waypoints).

My Motorcycle

–Turn: changes the number of data sets displayed.
–Touching a data field on the display opens a menu for selecting the data.
–The values available for selection depend on the optional equipment that is installed.

Mediaplayer

–Long press to the left: Play previous title.
–Long press to the right: Play next title.
–Turning increases or decreases the volume of a BMW Motorrad communication system connected via Bluetooth.

The Mediaplayer function is only available when using a Bluetooth device as per A2DP standard, e.g., a BMW Motorrad communication system.

Warning and status messages

Warning and status messages of the motorcycle are indicated with a corresponding icon **1** at the upper left on the map view.

If a BMW Motorrad communication system is connected, an acoustic signal is also sounds in case of a warning.

If several warning messages are active, the number of messages is indicated below the warning triangle.
A list of all warning messages is opened by pressing on the warning triangle with more than one message.
Additional information is display when a message is selected.

Detailed information cannot be displayed for all warnings.

Special functions

Due to integration of the BMW Motorrad Navigator, there are differences from the descriptions in the operating instructions for the Navigator.

Reserve fuel level warning

The settings for the fuel gauge are not available because the low-fuel warning light is transmitted from the vehicle to the Navigator. If the message is active, the nearest gas stations are shown when you press on the message.

Security settings

The BMW Motorrad Navigator V and the BMW Motorrad Navigator VI can be secured against unauthorized use with a four-digit PIN (Garmin Lock). If this function is activated while the Navigator is installed in the vehicle and the ignition is turned on, you will be asked if you want to add this vehicle to the list of secure vehicles.
If you confirm this question by answering "Yes", then the Navigator will save the vehicle identification number of this vehicle.
A maximum of five VINs can be saved in this way.

Afterwards, if the Navigator is turned on when the ignition is turned on in one of these vehicles, then a PIN no longer needs to be entered.
If the Navigator is removed from the vehicle while it is turned on, then for security reasons a PIN prompt is started.

Screen brightness
Screen brightness is adjusted by the motorcycle while the unit is installed. There is no need for manual input.
If desired, automatic setting can be switched off in the Navigator via the display settings.

CARE

11

CARE PRODUCTS

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

ATTENTION

Use of unsuitable cleaning and care agents

Damage to motorcycle parts

- Do not use any solvents such as nitro thinners, cold cleaners, fuel or similar, and do not use cleaning agents that contain alcohol.

ATTENTION

Use of highly acidic or alkaline cleaning agents

Damage to motorcycle parts

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

WASHING THE VEHICLE

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

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 soiling.

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

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

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

WARNING

Damp brake disks and brake pads after washing the motorcycle, after riding through water or in the rain
Poorer braking action, accident hazard
- Brake early until the brake rotors and brake pads are dry.

ATTENTION

Increased effect of salt caused by warm water
Corrosion
- Only use cold water to remove road salt.

ATTENTION

Damage caused by high water pressure from high-pressure cleaners or steam-jet devices
Corrosion or short circuit, damage to labels, to seals, to hydraulic brake system, to the electrical system and the seat
- Exercise caution when using high-pressure or steam-jet devices.

Cases and topcases made of aluminum have no surface coating. The best possible appearance is preserved with the following care:
Remove road salt and corrosive deposits immediately with cold water after completing the trip.

CLEANING SENSITIVE MOTORCYCLE PARTS

Plastics

ATTENTION

Use of unsuitable cleaning agents
Damage to plastic surfaces
- Do not use abrasive cleaners or cleaners containing alcohol or solvents.
- Do not use insect sponges or sponges with a hard surface.

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

Windshields and lenses are manufactured in plastic
Clean off dirt and insects with a soft sponge and plenty of water.

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


Clean with water and sponge only.


Do not use chemical cleansers.

TFT display
Clean the TFT display with warm water and detergent. Then dry with a clean cloth, e.g. a paper towel.

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

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

ATTENTION

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

Rubber
Treat rubber components with water or BMW rubber care product.

ATTENTION

Use of silicone sprays for care of rubber seals
Damage to rubber seals
- Do not use silicone sprays or care products that contain silicone.

CARE OF PAINTWORK

Washing the motorcycle regularly will help counteract the long-term effects of substances that damage the paint, especially if your motorcycle is ridden in areas with high air pollution or natural sources of dirt, such as tree resin or pollen. However, remove particularly aggressive 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 didrt 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.

STORE MOTORCYCLE

- Clean motorcycle.
- Completely fill the motorcycle's fuel tank.

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

- Removing battery (➠ 190).
- Spray the brake and clutch lever, and the center and side stand pivots with a suitable lubricant.
- Protect metal and chrome-plated parts with an acid-free grease (Vaseline).
- Park the motorcycle in a dry space in such a way that both wheels are under no load (preferably by using the front and rear-wheel stands available from BMW Motorrad).

PUTTING THE MOTORCYCLE INTO OPERATION

- Remove the protective wax coating.
- Clean the motorcycle.
- Installing a battery (➠ 191).
- Checklist (➠ 127).

TECHNICAL DATA

12

TROUBLESHOOTING CHART

Engine does not start.

Possible cause	Remedy
Emergency on/off switch (kill switch)	Adjust emergency on/off switch (kill switch) to normal operating position.
Side stand extended and gear engaged	Retract side stand.
Gear engaged and clutch not disengaged	Place transmission in neutral or disengage clutch.
No fuel in tank	Refueling procedure (➠ 137).
Battery drained	Charging connected battery (➠ 189).
Overheating protection for starter motor has activated. 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.	Switch 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.

Bluetooth connection is disrupted.

Possible cause	Remedy
Bluetooth connection to the mobile end device is interrupted.	Switch off energy saving mode.
Bluetooth connection to the helmet is interrupted.	Switch off the communication system of the helmet and connect again after one to two minutes.
Volume in the helmet cannot be adjusted.	Switch off the communication system of the helmet and connect again after one to two minutes.

Phone book is not displayed in the TFT display.

Possible cause	Remedy
Phone book was has not yet been transferred to the vehicle.	During pairing to the mobile end device, confirm the transfer of the telephone data (105).

Active route guidance is not displayed in the TFT display.

Possible cause	Remedy
Navigation from the BMW Motorrad Connected App was not transferred.	Call up the BMW Motorrad Connected App on the connected mobile end device 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.

SCREW CONNECTIONS

Front wheel	Value	Valid
Quick-release axle in telescopic fork		
M12 x 20	22 lb/ft (30 Nm)	
Fork bridge, bottom at slider tube		
M8 x 35	**Tightening sequence: Tighten the screws 6 times, alternating between one and the other each time**	
	14 lb/ft (19 Nm)	
Brake caliper on telescopic forks		
M10 x 65	28 lb/ft (38 Nm)	
Wheel speed sensor on fork		
M6 x 16 Micro-encapsulated or medium-strength screw lock	6 lb/ft (8 Nm)	

Rear wheel	Value	Valid
Tighten rear wheel on wheel flange		
M10 x 1.25 x 40	**Tightening sequence: Tighten crosswise**	
	44 lb/ft (60 Nm)	

Mirrors	Value	Valid
Mirror (locknut) on adapter		
M10 x 1.25	Left-hand thread, 16 lb/ft (22 Nm)	
Adapter to clamping block		
M10 x 14	18 lb/ft (25 Nm)	

Gearshift lever	Value	Valid
Foot piece to gearshift lever		
M6 x 20 micro-encapsulated	7 lb/ft (10 Nm)	

Footbrake lever	Value	Valid
Foot piece on foot-brake lever		
M6 x 20 micro-encapsulated	7 lb/ft (10 Nm)	

Footrests	Value	Valid
Clamping block on footrest hinge		
M8 x 25	15 lb/ft (20 Nm)	
Footrest on clamping block		
M6 x 20 / M6 x 12	7 lb/ft (10 Nm)	

Handlebars	Value	Valid
Clamping block (handlebar clamp) on fork bridge		
M8 x 35	**Tightening sequence: tighten to block at front in direction of travel**	
	14 lb/ft (19 Nm)	
M8 x 65	**Tightening sequence: tighten to block at front in direction of travel**	–with handlebar risers[OE]
	14 lb/ft (19 Nm)	

FUEL	
Recommended fuel quality	Super unleaded (max. 15 % ethanol, E15) 89 AKI (95 ROZ/RON) 90 AKI
Alternative fuel quality	Normal unleaded (with performance penalty) (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	49 mpg (4.8 l/100 km), in accordance with WMTC
CO2 emissions	110 g/km, according to WMTC
Emission standard	TIER 2, measured in accordance with FTP75

ENGINE OIL	
Engine oil, capacity	max 1.1 gal (max 4 l), with filter replacement
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.

BMW recommends ADVANTEC ORIGINAL BMW ENGINE OIL

Engine oil, quantity for topping up	max 0.8 quarts (max 0.8 l), Difference between **MIN** and **MAX**

BMW recommends ADVANTEC ORIGINAL BMW ENGINE OIL

ENGINE

Engine number location	Lower right of engine block beneath the starter
Engine type	A74B12M
Engine design	Air-cooled/liquid-cooled two-cylinder four-stroke opposed-twin engine with two overhead, spur-gear-driven camshafts, a counterbalance shaft, and variable intake camshaft control BMW Shift-Cam
Displacement	1254 cc (1254 cm^3)
Cylinder bore	4 in (102.5 mm)
Piston stroke	3 in (76 mm)
Compression ratio	12.5:1
Nominal capacity	134 hp (100 kW), at engine speed: 7750 min^{-1}
Torque	105 lb/ft (143 Nm), at engine speed: 6250 min^{-1}
Maximum engine speed	max 9000 min^{-1}
Idle speed	1050 min^{-1}, Engine at operating temperature

CLUTCH	
Clutch design	Multi-disk oil-bath clutch, slipper clutch

TRANSMISSION	
Transmission design	6-speed transmission with helical cut dog ring gears
Transmission gear ratios	1.000 (60:60 teeth), Primary gear ratio 1.650 (33:20 teeth), Transmission input ratio 2.438 (39:16 teeth), 1st gear 1.714 (36:21 teeth), 2nd gear 1.296 (35:27 teeth), 3rd gear 1.059 (36:34 teeth), 4th gear 0.943 (33:35 teeth), 5th gear 0.848 (28:33 teeth), 6th gear 1.061 (35:33 teeth), Transmission output ratio

REAR-WHEEL DRIVE	
Type of final drive	Shaft drive with bevel gears
Gear ratio of rear-wheel drive	2.91 (32:11 teeth)
Rear axle differential oil	SAE 70W-80, above 41 °F (5 °C) and below 41 °F (5 °C)

FRAME	
Frame design	Steel-tube frame with partially self-supporting drive unit, steel-tube rear frame
Location of type plate	Frame at front left on steering head
Location of the vehicle identification number	Frame at front right below steering head

CHASSIS

Front wheel	
Type of front suspension	BMW Telelever, upper fork bridge tilt decoupled, leading link mounted in engine and on telescopic fork, centrally positioned spring strut supported on leading link and frame
Design of the front-wheel suspension	Central spring strut with coil spring
–with Dynamic ESA OE	Central spring strut with coil spring and expansion tank, electrically adjustable rebound-stage and compression damping
Spring travel, front	8.3 in (210 mm), on wheel
–with lowered OE	6.2 in (158 mm), on wheel
Rear wheel	
Type of rear-wheel guide	Cast-aluminum single swing arm with BMW Motorrad Paralever
Design of rear-wheel suspension	Central spring strut with coil spring, adjustable rebound-stage damping and spring preload
–with Dynamic ESA OE	Central spring strut with coil spring and expansion tank, electrically adjustable rebound-stage and compression damping, electrically adjustable spring preload
Spring travel on the rear wheel	8.7 in (220 mm), on wheel
–with lowered OE	6.7 in (170 mm), on wheel

BRAKES	
Front wheel	
Type of front wheel brake	Hydraulically operated twin disk brake with 4-piston radial calipers and floating brake disks
Front brake pad material	Sintered metal
Front brake disc thickness	0.18 in (4.5 mm), New min 0.16 in (min 4.0 mm), Wear limit
Free travel of brake actuation (Front wheel brake)	0.06...0.08 in (1.6...2.1 mm), at the piston
Rear wheel	
Type of rear wheel brake	Hydraulically operated disc brake with 2-piston floating caliper and fixed brake disc
Rear brake pad material	Sintered metal
Rear brake disc thickness	0.2 in (5.0 mm), New min 0.18 in (min 4.5 mm), Wear limit
Blow-by clearance of footbrake lever	0.04...0.06 in (1...1.5 mm), Between frame and footbrake lever

WHEELS AND TIRES	
Recommended tire combinations	An overview of the current tire approvals is available from your authorized BMW Motorrad retailer or on the Internet at **bmw-motorrad.com**.
Speed category of front/rear tires	V, minimum requirement: 149 mph (240 km/h)

Front wheel	
Front wheel design	Cross spoke wheel
Front-wheel rim size	3.0"x19"
Front tire designation	120/70 - R19
Load index for front tire	At least 60
Permissible front wheel load	max 419 lbs (max 190 kg)
Permissible front-wheel imbalance	max 0.2 oz (max 5 g)
Rear wheel	
Rear wheel design	Cross spoke wheel
Rear-wheel rim size	4.50"x17"
Rear tire designation	170/60 - R17
Load index for rear tire	At least 72
Permissible rear wheel load	max 705 lbs (max 320 kg)
Permissible rear-wheel imbalance	max 1.6 oz (max 45 g)
Tire inflation pressures	
Front tire pressure	36.3 psi (2.5 bar), with cold tires, one-up and two-up mode
Rear tire pressure	42.1 psi (2.9 bar), with cold tires, one-up and two-up mode

ELECTRICAL SYSTEM	
Electrical rating of onboard sockets	max 5 A, all onboard sockets together

Fuse carrier 1	10 A, Slot 1: instrument cluster, anti-theft alarm system (DWA), ignition switch, diagnostic socket, ignition coil for cut-off relay 7.5 A, Slot 2: left multifunction switch, tire pressure control (RDC), sensor box, seat heating
Fuse carrier	50 A, Fuse 1: Voltage regulator
Battery	
Battery design	AGM (Absorbent Glass Mat) battery, maintenance-free
–with M Lightweight battery[OE]	Lithium ion battery
Battery voltage	12 V
–with M Lightweight battery[OE]	12 V
Battery capacity	14 Ah
–with M Lightweight battery[OE]	10 Ah
Spark plugs	
Spark plugs, manufacturer and designation	NGK LMAR8AI-10
Light sources	
Bulb for high-beam headlight	LED
Bulbs for low-beam headlight	LED
Bulb for parking light	LED
Bulb for taillight/brake light	LED
Bulbs for flashing turn indicators	LED

ANTI-THEFT ALARM SYSTEM	
Activation time	Approx. 30 s
Alarm duration	Approx. 26 s
Battery type	CR 123 A

DIMENSIONS	
Motorcycle length	89.4 in (2270 mm), over splash guard
Motorcycle height	57.5...59.8 in (1460...1520 mm), over windshield, at DIN unloaded vehicle weight
–with Style Rallye OE –with lowered OE	55.5...57.9 in (1410...1470 mm), over windshield, at DIN unloaded vehicle weight
–with lowered OE	55.9...58.3 in (1420...1480 mm), over windshield, at DIN unloaded vehicle weight
–with Style Rallye OE or –with edition OE	57.1...59.4 in (1450...1510 mm), over windshield, at DIN unloaded vehicle weight
Motorcycle width	37.5 in (952 mm), with mirrors 38.6 in (980 mm), with hand guard
Front-seat height	35...35.8 in (890...910 mm), without rider, at DIN unloaded vehicle weight
–with lowered OE –with seat heating OE	31.7...32.5 in (805...825 mm), without rider, at DIN unloaded vehicle weight
–with lowered OE –with passenger package, low OE	32.3...33.1 in (820...840 mm), without rider, at DIN unloaded vehicle weight

–with lowered[OE] –with passenger package, low[OE] –with seat heating[OE]	32.7…33.5 in (830…850 mm), without rider, at DIN unloaded vehicle weight
–with lowered[OE]	33.1…33.9 in (840…860 mm), without rider, at DIN unloaded vehicle weight
–with lowered[OE] –with Rallye seat, low[OE]	33.1 in (840 mm), without rider, at DIN unloaded vehicle weight
–with Rallye seat, low[OE]	34.6 in (880 mm), without rider, at DIN unloaded vehicle weight
Rider's inside-leg arc, heel to heel	76.8…78.3 in (1950…1990 mm), without rider, at DIN unloaded vehicle weight
–with lowered[OE] –with passenger package, low[OE]	71.3…72.8 in (1810…1850 mm), without rider, at DIN unloaded vehicle weight
–with lowered[OE] –with passenger package, low[OE] –with seat heating[OE]	72…73.6 in (1830…1870 mm), without rider, at DIN unloaded vehicle weight
–with lowered[OE] –with seat heating[OE]	72.4…73.2 in (1840…1860 mm), without rider, at DIN unloaded vehicle weight
–with lowered[OE]	72.8…74.4 in (1850…1890 mm), without rider, at DIN unloaded vehicle weight
–with lowered[OE] –with Rallye seat, low[OE]	74 in (1880 mm), without rider, at DIN unloaded vehicle weight
–with Rallye seat, low[OE]	75.6 in (1920 mm), without rider, at DIN unloaded vehicle weight

WEIGHTS	
Unloaded vehicle weight	591 lbs (268 kg), DIN unladen weight, ready for road, fuel tank 90 % full, without OE
Gross vehicle weight	1069 lbs (485 kg)
Maximum payload	478 lbs (217 kg)

PERFORMANCE DATA	
Maximum speed	>124 mph (>200 km/h)
–with aluminum case OA	112 mph (180 km/h)
–with aluminum topcase OA	112 mph (180 km/h)

SERVICE

13

REPORTING SAFETY DEFECTS

If you think that your motorcycle has a fault which may cause an accident, injury or death, you must inform the NHTSA (National Highway Traffic Safety Administration) immediately and BMW of North America, LLC.
If the NHTSA receives other similar complaints, it may open an investigation. If it finds that a safety defect exists in a group of vehicles, the NHTSA may order the manufacturer to perform a recall and remedy campaign. However, the NHTSA cannot become involved in individual problems between you, your authorized BMW Motorrad retailer, or BMW of North America, LLC.
You can contact the NHTSA by calling the Vehicle Safety Hotline on 1–888–327–4236 (Teletypewriter TTY for the hearing impaired: 1–800–424–9153) for free, by visiting the website at http:// www.safercar.gov or by writing to Administrator, NHTSA, 400 Seventh Street, SW., Washington, DC 20590. Further information on vehicle safety is available at http:// www.safercar.gov.
Canadian customers who wish to report a safetyrelated defect to Transport Canada, Defect Investigations and Recalls, may call the toll-free hotline 1–800–333–0510. You can also obtain other information about motor vehicle safety from http:// www.tc.gc.ca/roadsafety.

BMW MOTORRAD SERVICE

With its worldwide retailer network, BMW Motorrad can attend to you and your motorcycle in over 100 countries around the globe. Authorized BMW Motorrad retailers have the technical information and expertise needed to reliably conduct all preventive maintenance and repair procedures on your BMW.
You will find the nearest authorized BMW Motorrad retailer at our website: **bmw-motorrad.com**.

WARNING

Improperly performed maintenance and repair work
Accident hazard caused by subsequent damage
- BMW Motorrad recommends having corresponding work on the motorcycle carried out by a specialized workshop, preferably by an authorized BMW Motorrad retailer.

To ensure that your BMW is always in optimum condition, BMW Motorrad recommends that you comply with the maintenance intervals specified for your motorcycle.
Have all preventive maintenance and repair procedures that have been carried out confirmed in the "Service" chapter in this manual. Documented proof of scheduled preventive maintenance is essential for generous treatment of claims submitted after the warranty period has expired (goodwill).

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

BMW MOTORRAD SERVICE HISTORY

Entries

Maintenance work that has been performed is recorded in the diagnostics and information system. Like a Service Booklet, these entries provide proof of regular maintenance.
If an entry is made in the vehicle's electronic Service History (eSH), service-related data is stored on the central IT systems of BMW AG in Munich, Germany.
When there is a change in vehicle owner, the data entered in the electronic Service History can also be viewed

by the new vehicle owner. A BMW Motorrad retailer or specialist workshop can view the data entered in the electronic Service History.

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

BMW MOTORRAD MOBILITY SERVICES

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

MAINTENANCE PROCEDURES

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

BMW Running-in Check
The BMW running-in check must be carried out between 300 mls (500 km) and 750 mls (1200 km).

BMW 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 mileage ridden. Your BMW Motorrad retailer confirms that the service has been performed and enters the date for the next service. For riders with a high annual distance traveled, it may be necessary to come in for service before the entered date. In these cases, a corresponding maximum distance covered will also be entered in the confirmation of service. If this distance covered is reached before the next service

appointment, service must be performed sooner.
The service display in the display reminds you of the next 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:

MAINTENANCE SCHEDULE

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

1 BMW break-in service (including oil 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 element
8 Check or replace the air filter element
9 Change brake fluid in the entire system

[a] Annually or every 6000 mi (10000 km) (whichever comes first)
[b] Annually or every 12000 mi (20000 km) (whichever comes first)
[c] When used off-road, annually or every 6000 mi (10000 km) (whichever comes first)
[d] At first after one year, then every two years

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 steering-head bearing
- Checking coolant level
- Check 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
- Set the service date and remaining distance using the BMW Motorrad diagnostic system
- Checking charging state of battery
- Confirming the BMW Motorrad service in the vehicle literature

BMW pre-delivery check
performed

on_____

Stamp, signature

BMW running-in check
performed

on_____
at km_____

Next service
latest
on_____
or, if reached earlier
at km_____

Stamp, signature

BMW Motorrad Service
performed

on_____
at km_____

Next service
latest
on_____
or, if reached earlier
at km_____

Work performed

	Yes	No
BMW Motorrad Service	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear bevel gears	☐	☐
Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Checking or replacing air cleaner element (maintenance)	☐	☐
Oil change - telescopic fork	☐	☐
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	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear bevel gears	☐	☐
Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Checking or replacing air cleaner element (maintenance)	☐	☐
Oil change - telescopic fork	☐	☐
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	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear bevel gears	☐	☐
Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Checking or replacing air cleaner element (maintenance)	☐	☐
Oil change - telescopic fork	☐	☐
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	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear bevel gears	☐	☐
Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Checking or replacing air cleaner element (maintenance)	☐	☐
Oil change - telescopic fork	☐	☐
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	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear bevel gears	☐	☐
Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Checking or replacing air cleaner element (maintenance)	☐	☐
Oil change - telescopic fork	☐	☐
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	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear bevel gears	☐	☐
Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Checking or replacing air cleaner element (maintenance)	☐	☐
Oil change - telescopic fork	☐	☐
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	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear bevel gears	☐	☐
Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Checking or replacing air cleaner element (maintenance)	☐	☐
Oil change - telescopic fork	☐	☐
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	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear bevel gears	☐	☐
Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Checking or replacing air cleaner element (maintenance)	☐	☐
Oil change - telescopic fork	☐	☐
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	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear bevel gears	☐	☐
Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Checking or replacing air cleaner element (maintenance)	☐	☐
Oil change - telescopic fork	☐	☐
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	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear bevel gears	☐	☐
Checking valve clearance	☐	☐
Replacing all spark plugs	☐	☐
Checking or replacing air cleaner element (maintenance)	☐	☐
Oil change - telescopic fork	☐	☐
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

Declaration of Conformity

Radio equipment electronic immobiliser (EWS4)

For all countries without EU

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

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

Argentina

RAMATEL
H-25246

Australia/New Zealand

R-NZ

Brunei

AITI
TA No: DTA-007061

United Arab Emirates

TRA
REGISTERED No:
ER89926/20

DEALER No:
DA96133I20

Philippiens

NTC
Type Approved
No.: ESD-RCE-2023298

South Africa

TA-2020/6131
ICASA
APPROVED

India

ETA-SD-20200905860

Belarus

TP BY

Indonesia

72790/SDPPI/2021
13349

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

Paraquay

CONATEL

NR: 2020-11-I-0834

Singapore

Complies with
IMDA Standards
N3504-20

Taiwan

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

Malaysia

MCMC

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

Israel

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

United States (USA)

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

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

FCC § 15.21 Information to user

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

RF Exposure Requirements

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

Serbia

P1620118300

Canada

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

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

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

Vietnam

A1109091120AF04A3

Certifications

BMW Keyless Ride ID Device

USA, Canada:

Product name: BMW Keyless Ride ID
Device FCC ID: YGOHUF5750
IC: 4008C-HUF5750

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

Canada:
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.

USA:
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.

Argentina:

CNC COMISIÓN NACIONAL DE COMUNICACIONES

H-17115

Declaration Of Conformity

We declare under our responsibility that the product

BMW Keyless Ride ID Device (Model: HUF5750)

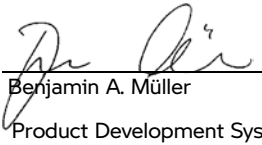
camplies with the appropriate essential requirements of the article 3 of the R&TIE and the other relevant provisions, when used for its intended purpose. Applied Standards:

1. Health and safety requirements contained in article 3 (1) a)
    - EN 60950-1:2006+A11:2009+A1:2010+A12:2011; Information technology equipment-Safety
2. Protection requirements with respect to electromagnetic compatibility article 3 (1) b)
    - EN 301 489-1 (V1 .9.2, 09/2011), Electromagnetic compatibility and radio spectrum matters (ERM); Electromagnetic compatibility (EMC) standard for radio equipment and services;
      Part 1: Common technical requirements
    - EN 301 489-3 (V1.4.1, 08/2002) Electromagnetic compatibility and radio spectrum matters (ERM); Electromagnetic compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for short range devices (SRD) operating on frequencies between 9 kHz and 40 GHz
3. Means of the efficient use of the radio frequency spectrum article 3 (2)
    - EN 300 220-1 & -2 (V2.4.1, 05/2012), electromagnetic compatibility and radio spectrum matters (ERM); Short range devices (SRD); Radio equipment tobe used in the 25 MHz to 1000 MHz frequency range with power leveis ranging up to 500 mW;
      Part 1: Technical characteristics and test methods.
      Part 2: Harmonized EN covering essential requirements under article 3.2 ofthe R&TIE directive

The product is labeted with the CE marking:

CE

Velbert, October 15th, 2013



Benjamin A. Müller

Product Development Systems
Car Access and Immobilization -
Electronics Huf Hülsbeck & Fürst
GmbH & Co. KG
Steeger Straße 17, D-42551
Velbert

Certification Tire Pressure Control (TPC)

FCC ID: MRXBC54MA4
IC: 2546A-BC54MA4

This device complies with Part 15 of the FCC Rules and 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 any interference received, including interference that may cause undesired operation.

WARNING: Changes or modifications not expressively approved by the party responsible for compliance could void the user's authority to operate the equipment. The term “IC:” before the radio certification number only signifies that Industry Canada technical specifications were met.

FCC ID: MRXBC5A4
IC: 2546A-BC5A4

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

(1) l'appareil ne doit pas produire de brouillage, et
(2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

WARNING: Changes or modifications not expressively approved by the party responsible for compliance could void the user's authority to operate the equipment. The term “IC:” before the radio certification number only signifies that Industry Canada technical specifications were met.

Declaration of Conformity

Radio equipment TFT instrument cluster

For all Countries without EU

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

Manufacturer and Address
Manufacturer:
Robert Bosch Car Multimedia GmbH
Address: Robert Bosch Str. 200, 31139 Hildesheim, Germany

Turkey
Robert Bosch Car Multimedia GmbH, ICC6.5in tipi telsiz sisteminin 2014/53/EU nolu yönetmeliğe uygun olduğunu beyan eder. AB Uygunluk Beyanı'nın tam metni, aşağıdaki internet adresinden görülebilir: http://cert.bosch-carmultimedia.net

Argentina

RAMATEL

C-24711

Brazil
Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário.

Canada
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.

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.

Korea

적합성평가에 관한 고시
R-CMM-RBR-ICC65IN
상호 : Robert Bosch Car Multimedia GmbH모델명 : ICC6.5in
기자재명칭 : 특정소출력 무선기기
(무선데이터통신시스템용 무선기기)
제조자 및 제조국가 : Robert Bosch Car Multimedia GmbH / 포르투갈
제조년월 : 제조년월로 표기
이 기기는 업무용 환경에서 사용할 목적으로적합성평가를 받은 기기로서 가정용 환경에서 사용하는 경우 전파간섭의 우려가 있습니다.

Mexico

La operación de este equipo está sujeta a las siguientes dos condiciones:
(1) es posible que este equipo o dispositivo no cause interferencia perjudicial y
(2) este equipo o dispositivo debe aceptar cualquier interferencia, incluyendo la que pueda causar su operación no deseada.

Taiwan, Republic of

根據 NCC 低功率電波輻射性電機管理辦法 規定: 第十二條
經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。
第十四條
低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。
前項合法通信，
指依電信法規定作業之無線電通信。
低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

Thailand

เครื่องโทรคมนาคมและอุปกรณ์ นี้
มีความสอดคล้องตามข้อกำหนดของ กทช.
(This telecommunication equipments is in compliance with NTC requirements)

United States (USA)

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.

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.

The descriptions and illustrations in this manual may vary from your own motorcycle's actual equipment, depending upon its equipment level and accessories as well as your specific national version. No claims will be entertained as a result of such discrepancies.
Dimensions, weights, fuel consumption and performance data are quoted to the customary tolerances.
The right to modify designs, equipment and accessories is reserved.
Errors and omissions excepted.

Original Rider's Manual, printed in Germany.

WARNING

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

Important data for refueling:

Fuel	
Recommended fuel quality	Super unleaded (max. 15 % ethanol, E15) 89 AKI (95 ROZ/RON) 90 AKI
Alternative fuel quality	Normal unleaded (with performance penalty) (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 inflation pressures	
Front tire pressure	36.3 psi (2.5 bar), with cold tires, one-up and two-up mode
Rear tire pressure	42.1 psi (2.9 bar), with cold tires, one-up and two-up mode

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

Order No.: 01 40 7 106 637
03-2021, 2nd edition, 07