BMW
MOTORRAD

RIDER'S MANUAL (US MODEL)

M 1000 R



MAKE LIFE A RIDE

Vehicle data

Model

Vehicle identification number

Color number

First registration

License plate

Retailer data

Contact in Service

Ms./Mr.

Phone number

Retailer's address/Phone (company stamp)

YOUR BMW.

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

About these operating instructions

Read this rider's manual before starting your new BMW. It contains important notes about operating the vehicle that will enable you to make full use of the technical assets of your BMW.

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

If you should decide to sell your BMW one day, please remember to hand over this rider's manual as well. They are an important part of your vehicle.

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

BMW Motorrad.

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GENERAL INSTRUCTIONS

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4 GENERAL INSTRUCTIONS

QUICK & EASY REFERENCE

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

ABBREVIATIONS AND SYMBOLS

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

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

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

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

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

- • Instruction.
- » Result of a repair procedure.
- Reference to a page with more detailed information.
- ◁ Indicates the end of accessory or equipment-dependent information.
- Tightening torque.
- Technical data.
- NV National-market version.

OE	Optional equipment. BMW Motorrad optional equipment is already completely installed during motorcycle production.
OA	Optional accessories. BMW Motorrad optional accessories can be purchased and retrofitted at your authorized BMW Motorrad retailer.
ABS	Anti-Lock Brake System.
DDC	Dynamic Damping Control.
DTC	Dynamic Traction Control.
DWA	Anti-theft alarm.
EWS	Electronic immobilizer.
TPC	Tire Pressure Control (TPC).

EQUIPMENT

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

TECHNICAL DATA

All dimensions, weights and performance data contained in this rider's manual refer to the German Institute for Standardization i.e. DIN (Deutsches Institut für Normung e. V.) and comply with their tolerance specifications.
The technical data and specifications in this rider's manual serve as points of reference. The vehicle-specific data may vary, for instance due to the selected optional equipment, national-market version or country-specific measuring procedures. Detailed values can be obtained from the registration documents or requested from your BMW Motorrad retailer or other qualified service partner

or repair shop. The information on the vehicle documents always takes precedence over the information in this rider's manual.

CURRENTNESS OF THIS MANUAL

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

ADDITIONAL SOURCES OF INFORMATION

Authorized BMW Motorrad retailer

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

Internet

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

CERTIFICATES AND OPERATING PERMITS

The certificates for the vehicle and the 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 ob-

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

Personal references

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

Data privacy laws

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

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

These locations may be:

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

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

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

The vehicle manufacturer's website contains the appropriate privacy policy notices. The privacy policy notices contain information on the right to delete or correct data. The vehicle manufacturer also provides the manufacturer contact information and the contact information of the data security officer on the Internet.

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

8 GENERAL INSTRUCTIONS

The vehicle data is read out via the vehicle's legally mandated diagnostic socket.

Legal requirements for the disclosure of data

The vehicle manufacture is required by the law applicable in this context to provide authorities with the data stored by the manufacturer. The provision of this data within the scope required is on a case-by-case basis, for instance to clarify a criminal offense.

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

Operating data in the vehicle

Control units process data so that the vehicle can run.

Examples of this include:

- Status messages from the vehicle and its individual components, such as wheel RPM, wheel centrifugal velocity and deceleration
- Ambient conditions, such as temperature

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 dynamics systems
- Information about events causing damage to the vehicle

The data is necessary for providing control unit functions. In addition, it is used by the vehicle manufacturer to detect and eliminate malfunctions as well as to optimize vehicle functions.

The majority of this data is temporary and is processed only within the vehicle itself.

Only a small amount of event-driven data is stored in the event data recorder and fault memory.
When a vehicle is serviced, such as for repairs, servicing processes, warranty cases and quality assurance measures, this technical information can be read out from the vehicle together with the vehicle identification number.
The information can be read out by a BMW Motorrad retailer or other qualified service partner or specialist workshop. The vehicle's legally mandated diagnostic socket is used to read out the data.
The data is collected, processed and used by the respective service network locations. The data documents the vehicle's technical states and helps with fault finding, compliance with warranty obligations and quality improvements.
The manufacturer also has product monitoring obligations arising from product liability law. The vehicle manufacturer requires technical data from the vehicle in order to fulfill these obligations. The data from the vehicle can also be used to verify customer warranty and guarantee claims.
The fault memory and event data recorder in the vehicle can be reset by a BMW Motorrad retailer or other qualified service partner or specialist workshop as part of a repair or servicing.

Data input and data transfer in the vehicle

General information

Depending on the equipment, comfort settings and individualized settings in the vehicle can be saved and changed or reset at any time.
It is possible to introduce data into the vehicle entertainment and communication system via a smartphone, for instance. Depending on the individual equipment, this includes:

- Multimedia data, such as music for playback
- Address book data for use in combination with a communication system or integrated navigation system
- Entered destinations
- Data about the use of Internet services. This data can be stored locally in the vehicle or is on a device connected to the vehicle, such

as a smartphone, USB stick or MP3 player. If this data is saved in the vehicle, it can be deleted at any time.

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

Incorporating mobile end devices

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

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

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

Services

General information

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

Vehicle manufacturer services

In the case of the vehicle manufacturer's online services, the particular functions are described at the appropriate location, such as in the rider's manual or on the manufacturer's website. The relevant legal information on data privacy is also provided there. Personal

data may be used in order to provide online services. The data is exchanged over a secure connection, i.e. with the vehicle manufacturer's IT systems which are intended for this purpose.
Any collection, processing and use of personal data that goes beyond the provision of services take place only as permitted by law, on the basis of a contractual agreement or as a result of consent. It is also possible to have the entire data connection activated or deactivated. This is not the case for legally prescribed functions.

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

BLUETOOTH®

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

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

–Shielding by metals or bodies.

CONNECTIVITY FUNCTIONS

Connectivity functions include media, telephony and navigation. Connectivity functions can be used if the instrument cluster is connected to a mobile terminal and a helmet (➠ 66). You can find more information on the Connectivity functions at:
bmw-motorrad.com/connectivity

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

BMW Motorrad Connected App

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

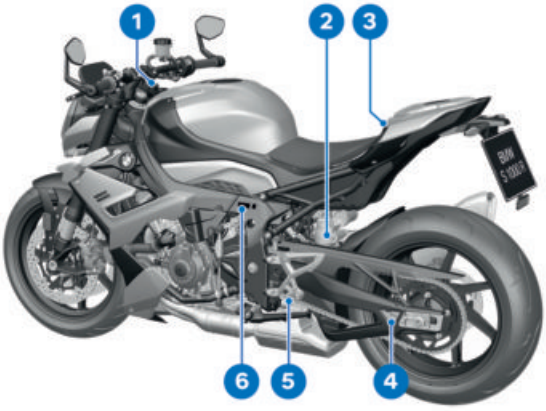
On some mobile terminals, e.g. with operating system iOS, you must go to the BMW Motorrad Connected App before use.

OVERVIEWS

02

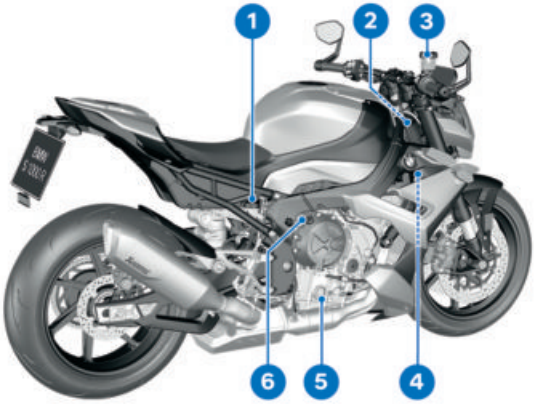
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OVERALL VIEW, LEFT SIDE



1 Spring preload on front wheel (➠ 105)
2 Adjust the spring preload at the rear wheel. (➠ 106)
3 Hump cover lock (➠ 95)
4 Tire pressure table
Chain adjustment values
5 Rider footrest
6 Noise emission sign

OVERALL VIEW, RIGHT SIDE



1 Brake fluid reservoir for rear wheel brake (➠ 179)

2 Vehicle identification number (frame, right front top)
Nameplate (right front frame on steering head)

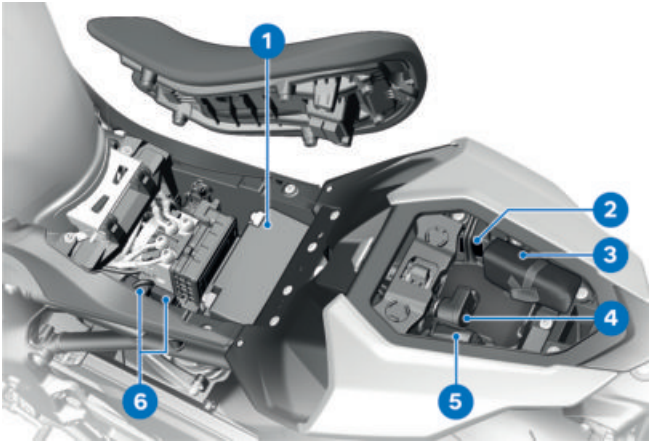
3 Brake fluid reservoir for front wheel brake (➠ 178)

4 Coolant expansion tank (➠ 182)

5 Engine oil indicator (➠ 174)

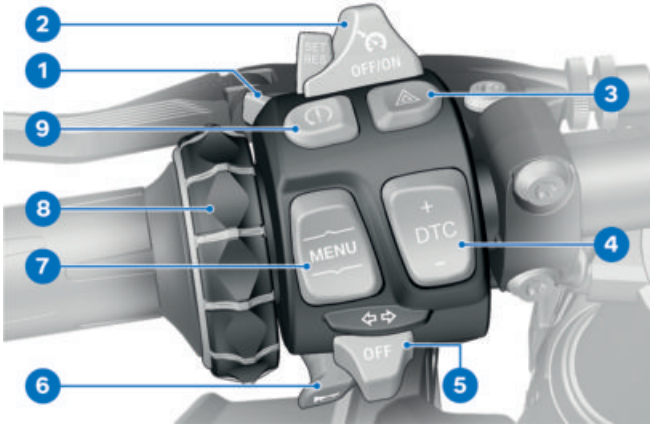
6 Oil filler opening (➠ 175)

UNDER THE RIDER'S SEAT



1 Battery (➠ 203)
2 Payload table
3 Onboard vehicle tool kit (➠ 173)
4 USB charging socket (➠ 214)
5 Diagnostic connector (➠ 207)
6 Fuses (➠ 206)

MULTIFUNCTION SWITCH, LEFT



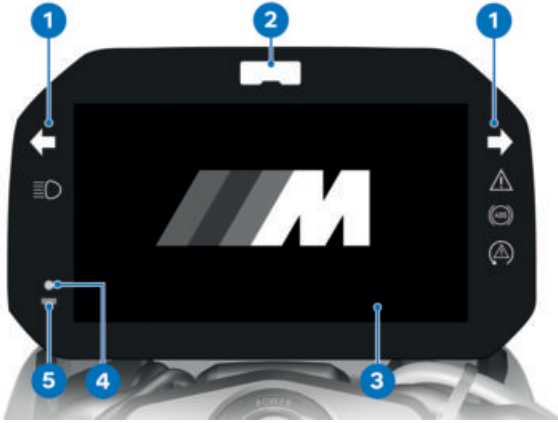
1 High beams and headlight flasher (➠ 81)
2 Cruise control (➠ 87)
3 Hazard warning system (➠ 82)
4 Adjusting the DTC (➠ 138)
5 Turn signals (➠ 82)
6 Horn
7 Rocker button MENU (➠ 63)
8 Multi-Controller (➠ 62)
9 DTC (➠ 82)

MULTIFUNCTION SWITCH, RIGHT



1 Heated grips (➠ 94)
2 Riding mode (➠ 84)
3 Emergency-off switch (➠ 80)
4 Starter button (➠ 116)

INSTRUMENT CLUSTER



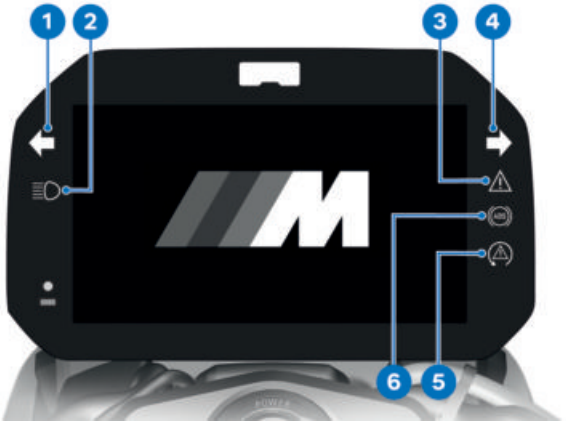
1 Indicator and warning lights (⇒ 24)
2 Shiftpoint light (⇒ 121)
3 Display (⇒ 26)
4 Indicator light
DWA (⇒ 92)
Keyless Ride (⇒ 76)
5 Photodiode (for adjusting brightness of instrument lighting)

DISPLAYS

03

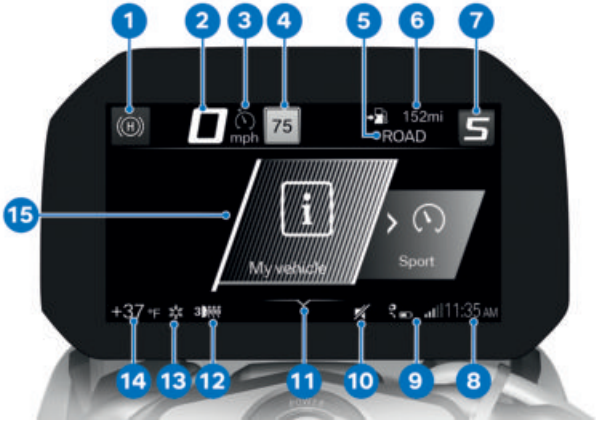
INDICATOR AND WARNING LIGHTS 24
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INDICATOR LIGHTS 32

INDICATOR AND WARNING LIGHTS



1 Turn signal, left (➠ 82)
2 High beams (➠ 81)
3 General warning light (➠ 32)
4 Turn signal, right (➠ 82)
5 DTC (➠ 53)
6 ABS

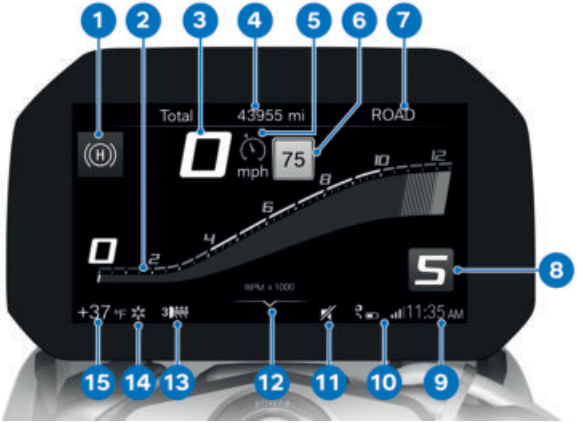
MENU VIEW



1 Hill Start Control (➠ 56)
2 Speedometer
3 Cruise control (➠ 87)
4 Speed Limit Info (➠ 71)
5 Riding mode (➠ 84)
6 Status bar, top (➠ 64)
7 Gear display
8 Clock
9 Connection status (➠ 67)
10 Muting (➠ 65)
11 Operating assistance
12 Heated grip settings (➠ 94)
13 External temperature warning (➠ 40)
14 Outside temperature
15 Menu area

PURE RIDE VIEW

START SCREEN



1 Hill Start Control (➠ 56)
2 Tachometer (➠ 27)
3 Speedometer
4 Status bar, top (➠ 64)
5 Cruise control (➠ 87)
6 Speed Limit Info (➠ 71)
7 Riding mode (➠ 84)
8 Gear display
9 Clock
10 Connection status (➠ 67)
11 Muting (➠ 65)
12 Operating assistance
13 Heated grip settings (➠ 94)
14 External temperature warning (➠ 40)
15 Outside temperature

TACHOMETER



1 Scale
2 High / red engine speed range
3 Needle
4 Drag pointer

The RPM range shaded in red changes depending on the coolant temperature:
The colder the engine, the lower the speed at which the range begins.
The warmer the engine, the higher the speed at which the range begins.
When the operating temperature has been reached, the range display will no longer change.

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

Range

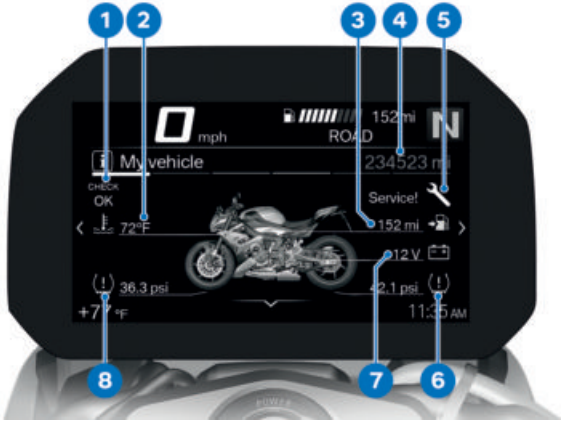


The **1** range can be displayed in the status line of the instrument cluster (➠ 64).
The range **1** indicates how far you can ride with the remaining fuel. This distance is calculated based on average consumption and the remaining fuel quantity.

- 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.

MY VEHICLE VIEW

START SCREEN



1 Check Control display (➠ 32)
2 Coolant temperature (➠ 45)
3 Range (➠ 28)
4 Odometer
5 Service display (➠ 57)
6 Rear tire pressure (➠ 30)
7 Voltage of the vehicle electrical system (➠ 203)
8 Front tire pressure (➠ 30)

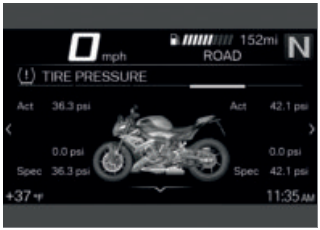
On-board computer and travel on-board computer



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

Tire pressure

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



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

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

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

The tire pressures are shown in the 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 in question is within the limit range of the permitted tolerance, the general warning light also lights up yellow.

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

For further information about the BMW Motorrad tire pressure control (TPM), see the Technology in detail (➠ 164) chapter.

Service requirement



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

INDICATOR LIGHTS

Layout

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

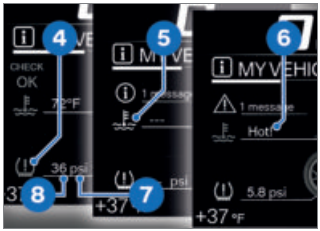
The general warning light lights up for whichever warning is most urgent at the current time.
You will find an overview of the potential warnings on the following pages.



Check Control display

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

- Green CHECK OK **1**: No message, optimal values.
- White circle with lowercase "i" **2**: Information.
- Yellow warning triangle **3**: Warning, value not optimal.
- Red warning triangle **3**: Warning, value critical



Value display

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

Color of the icon

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

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

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



Check Control dialog

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

– If 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 added to the screens in the `My vehicle` menu as additional tabs. You can go back to the message as long as the fault is present.

Overview of warning indicators

Indicator and warning lights	Display text	Meaning
	 is displayed.	External temperature warning (➠ 40)
 lights up yellow.	 `Remote key not in range.`	Radio-operated key outside reception range (➠ 40)
 lights up yellow.	 `Remote key battery low.`	Replacing the battery of the radio-operated key (➠ 41)
 lights up yellow.	 `Keyless Ride failure!`	Keyless Ride malfunction (➠ 41)
	 is displayed in yellow.	Voltage of the vehicle electrical system too low (➠ 41)
	 `Vehicle voltage low.`	
 lights up yellow.	 is displayed in yellow.	Voltage of the vehicle electrical system is critical (➠ 42)
	 `Vehicle voltage critical!`	
 blinks yellow.	 is displayed in yellow.	Charging voltage critical (➠ 42)
	 `Battery critically low!`	
 lights up yellow.	 The faulty light source is displayed.	Faulty light source (➠ 43)
 blinks yellow.	 The faulty light source is displayed.	
 lights up yellow.	 `Light control failure!`	Light control unit failed (➠ 44)

Indicator and warning lights	Display text	Meaning
	Anti-theft alarm batt. capacity low.	Anti-theft alarm system battery is weak (➠ 44)
	Anti-theft alarm battery discharged.	Anti-theft alarm system battery discharged (➠ 44)
	Anti-theft alarm system failure.	DWA malfunction (➠ 45)
 lights up yellow.	Engine too hot!	Engine temperature high (➠ 45)
 lights up red.	Engine overheating!	Engine overheated (➠ 46)
 blinks red.	Serious fault in the engine control.	Serious fault in the engine control (➠ 46)
 lights up yellow.	No communication with engine control.	Engine control malfunction (➠ 47)
 lights up.		
 lights up yellow.	Fault in the engine control.	Engine in emergency operation mode (➠ 47)
 lights up yellow.	 is displayed in yellow.	Tire pressure is the limit range of approved tolerance (➠ 48)
	Tire pressure not at set-point.	

Indicator and warning lights	Display text	Meaning
 blinks red.	 is displayed in red.	Tire pressure is outside the approved tolerance range (➠ 48)
	 `Tire pressure not at set-point.`	
	 `Tire Press. Monitor. Loss of pressure.`	
	 "---"	Transmission fault (➠ 49)
 lights up yellow.	 `TPM sensors battery low.`	Battery of the tire pressure sensor weak (➠ 50)
 lights up yellow.	 "---"	Sensor faulty or system fault (➠ 50)
 lights up yellow.	 `Tire Press. Monitor failure!`	Tire Pressure Monitor (TPM) malfunction (➠ 50)
	 `Fall sensor faulty.`	Fall sensor faulty (➠ 50)
	 `Cannot start engine.`	Motorcycle has fallen over (➠ 51)
 lights up yellow.	 `Side stand monitoring faulty.`	Side stand monitoring faulty (➠ 51)
 flashes regularly.		ABS self-diagnosis not completed (➠ 51)

Indicator and warning lights	Display text	Meaning
lights up.	Off!	ABS deactivated (➠ 52)
	ABS deactivated.	
lights up yellow.	Limited ABS availability!	ABS fault (➠ 52)
lights up.		
lights up yellow.	ABS failure!	ABS failure (➠ 52)
lights up.		
lights up yellow.	ABS Pro failure!	ABS Pro failure (➠ 53)
lights up.		
flashes irregularly.		ABS-control on front wheel only (➠ 53)
blinks rapidly.		DTC intervention (➠ 53)
blinks slowly.		DTC self-diagnosis not completed (➠ 53)
lights up.	Off!	DTC turned off (➠ 54)
	Traction control deactivated.	
lights up yellow.	Traction control failure!	DTC error (➠ 54)

Indicator and warning lights	Display text	Meaning
 lights up.		DTC error (➠ 54)
 lights up yellow.	 Traction control limited.	Limited DTC availability (➠ 55)
 lights up.		
 lights up yellow.	 Spring strut adjustment faulty!	DDC error (➠ 55)
	 Low fuel.	Fuel has reached reserve volume (➠ 56)
	 is displayed in green.	Hill Start Control active (➠ 56)
	 blinks yellow.	Hill Start Control automatically deactivated (➠ 56)
	 is displayed.	Hill Start Control cannot be activated (➠ 56)
	HSC not available. Engine not running.	
	 Gear indicator flashes.	Gear not taught in (➠ 57)
 flashes in green.		Hazard warning flasher switched on (➠ 57)
 flashes in green.		
Shiftpoint light lights up or blinks.	L-Con not available. Clutch too hot.	Launch Control not ready (➠ 57)

Indicator and warning lights	Display text	Meaning
	 is displayed in white.	Service due (➠ 58)
	Service due!	
 lights up yellow.	 is displayed in yellow.	Service appointment overdue (➠ 58)
	Service overdue!	

Outside temperature

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

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

 If the outside temperature falls below the 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 blink in the status line of the display.

External temperature warning

 is displayed.

Possible cause:

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

⚠ WARNING

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

Risk of accident

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

- Use caution when riding.

Radio-operated key outside reception range

 lights up yellow.

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

Possible cause:

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

- Check the battery in the radio-operated key.
- Replace the battery of the radio-operated key. (➠ 79)
- Use the spare key for further travel.
- Loss of radio-operated key. (➠ 78)
- If the Check Control dialog appears while riding, remain

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

Replacing the battery of the radio-operated key

 lights up yellow.

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

Possible cause:
- The battery for the radio-operated key is no longer charged to full capacity. Operation of the radio-operated key is only ensured for a limited time.
- Replace the battery of the radio-operated key. (➠ 79)

Keyless Ride malfunction

 lights up yellow.

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

Possible cause:

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

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

» DWA can no longer be activated.

Voltage of the vehicle electrical system 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 fault persists or occurs without any electrical loads connected, have the fault corrected as soon as possible at a repair shop, preferably an

authorized BMW Motorrad retailer.

Voltage of the vehicle electrical system is critical

 lights up yellow.

 is displayed in yellow.

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

WARNING

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

The vehicle voltage is critical. 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 fault persists or occurs without any electrical loads connected, have the fault corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad retailer.

Charging voltage critical

 blinks yellow.

 is displayed in yellow.

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

WARNING

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

The battery is not being charged. If you continue riding, the vehicle electronics will discharge the battery.
Possible cause:
Alternator or alternator drive is faulty, battery is faulty or fuse is blown.

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

Faulty light source

 lights up yellow.

 The faulty light source is displayed:

 `High beam faulty!`

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

 `Low beam faulty!`

 `Front parking lamp faulty!`

 `Tail light faulty!`

 `Brake light faulty!`

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

 `License plate light faulty!`

– `Have checked by a specialist workshop.`

 blinks yellow.

 The faulty light source is displayed:

 `Active headlamp faulty. 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.

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

Possible cause:

Plug connection disconnected.

- Identify the disconnected plug connection.
- Connect the disconnected plug connection.

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.

The vehicle lighting has failed partially or completely.

Possible cause:

The light control unit has diagnosed a communication fault.

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

Anti-theft alarm system battery is weak

–with anti-theft alarm system (DWA) OE

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

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

Possible cause:

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

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

Anti-theft alarm system 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 vehicle battery is disconnected.

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

DWA malfunction

–with anti-theft alarm system (DWA) OE

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

Possible cause:

The DWA control unit has diagnosed a communication fault.

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

» DWA can no longer be activated or deactivated.

» False alarm possible.

Engine temperature high

⚠ lights up yellow.

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

ATTENTION

Riding with overheated engine

Engine damage

- Be sure to observe the measures listed below.

Possible cause:

Coolant level is too low.

- Check the coolant level. (➠ 182)

If coolant level is too low:

- Allow the engine to cool down.
- Check the coolant level. (➠ 182)
- Have the cooling system checked at a repair shop, preferably by an authorized BMW Motorrad retailer.

Possible cause:

The coolant temperature is too high.

- Ride in the partial load range if possible to cool the engine.
- If the coolant temperature is more frequently too high, have the fault rectified as

quickly as possible by a repair shop, preferably an authorized BMW Motorrad retailer.

Engine overheated

 lights up red.

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

ATTENTION

Riding with overheated engine

Engine damage

- Be sure to observe the measures listed below.

Possible cause:

Coolant level is too low.

- Check the coolant level. (➠ 182)

If coolant level is too low:

- Allow the engine to cool down.
- Check the coolant level. (➠ 182)
- Have the cooling system checked at a repair shop, preferably by an authorized BMW Motorrad retailer.

Possible cause:

Engine is overheated.

- Carefully come to a stop and turn off the engine until it has cooled down.
- If the engine overheats more frequently, have the fault corrected as soon as possible by a specialist workshop, preferably an authorized BMW Motorrad retailer.

Serious fault in the engine control

 blinks red.

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

WARNING

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 consequential fault. The engine is in emergency operation.

- Continued riding 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 a repair shop, preferably an authorized BMW Motorrad retailer.

Engine control malfunction

 lights up yellow.

 lights up.

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

Possible cause:

Communication with the engine control unit has malfunctioned.

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

Engine in emergency operation mode

 lights up yellow.

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

WARNING

Unusual handling when the engine is in emergency operation

Accident hazard

- Avoid rapid acceleration and passing maneuvers.

Possible cause:

The engine control unit has diagnosed a fault. In exceptional cases, the engine stops and can no longer be started. Otherwise, the engine runs in emergency operation.

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

Tire pressure is the limit range of approved tolerance

 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 the tire pressure.
- Before adjusting the tire pressure, check the information on temperature compensation and tire pressure adjustment in the Technology in detail chapter:

» Temperature compensation (➠ 165)

» Tire pressure adjustment (➠ 165)

» 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 on the rear wheel swinging arm

Tire pressure is outside the approved tolerance range

 blinks 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 tire for damage and ridability.

If the tire is still ridable:

- Correct the tire pressure at the next opportunity.
- Before adjusting the tire pressure, check the information on temperature compensation

and tire pressure adjustment in the Technology in detail chapter:
» Temperature compensation (➠ 165)
» Tire pressure adjustment (➠ 165)
» 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 on the rear wheel swinging arm
• Have the tire checked by a specialist workshop for damage, preferably by an authorized BMW Motorrad retailer.

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

Transmission fault

⚠ "– – –"

Possible cause:

The vehicle has not reached the minimum speed (➠ 164).

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

• Observe the TPM display at higher speed.

⚠ This is a permanent fault only when the general warning light also lights up.
In this case:
• Have the fault corrected at a repair shop, preferably an authorized BMW Motorrad retailer.

Possible cause:

The radio link to the TPM sensors is disrupted. There are radio installation in the surrounding area that are causing interference to the connection between the TPM and the sensors.
• Observe the TPM display in different surroundings.

⚠ This is a permanent fault only when the general warning light also lights up.
In this case:
• Have the fault corrected at a repair shop, preferably an

authorized BMW Motorrad retailer.

Battery of the tire pressure sensor weak

 lights up yellow.

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

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

Possible cause:

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

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

Sensor faulty or system fault

 lights up yellow.

 "---"

Possible cause:

Wheels without TPM sensors are installed.

- Retrofit wheel set with TPM sensors.

Possible cause:

1 or 2 TPM sensors have malfunctioned or there is a system fault.

- Have the fault corrected at a repair shop, preferably an authorized BMW Motorrad retailer.

Tire Pressure Monitor (TPM) malfunction

 lights up yellow.

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

Possible cause:

The TPM control unit has diagnosed a communication fault.

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

» Tire pressure warnings not available.

Fall sensor faulty

 Fall sensor faulty. Have checked by a specialist workshop.

Possible cause:

The fall sensor is not functioning.

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

Motorcycle has fallen over



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

Possible cause:

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

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

Side stand monitoring faulty



lights up yellow.



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

Possible cause:

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

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

ABS self-diagnosis not completed



blinks.

Possible cause:

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

- Ride off slowly. Please note that the ABS function is only available after the self-diagnosis has completed.

ABS deactivated

 lights up.


Off!


ABS deactivated.

Possible cause:

The ABS system was turned off by the rider.

- Switch on ABS function. (➠ 148)

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 integral brake and the Dynamic Brake Control and Brake Slide Assist functions have malfunctioned. The ABS function is limited.

- You may continue riding. Take note of additional information on special situations that can lead to an ABS fault message (➠ 156).
- Have the malfunction corrected as soon as possible at a repair shop, 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.

- You may continue riding. Take note of additional information on special situations that can lead to an ABS fault message (➠ 156).
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad retailer.

ABS Pro failure

 lights up yellow.

 lights up.

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

Possible cause:

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

- You may continue riding. Observe additional information on special situations that can lead to a ABS Pro fault message (➠ 156).
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad retailer.

ABS-control on front wheel only

 flashes irregularly.

Possible cause:

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

- Check the settings of the riding mode.
- More detailed information on configuring the riding modes can be found in the "Technology in detail" chapter (➠ 161).

DTC intervention

 blinks rapidly.

Possible cause:

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

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

- You may continue riding. Use caution when riding.

DTC self-diagnosis not completed

 blinks slowly.

Possible cause:

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

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

DTC turned off

 lights up.

 `Off!`

 `Traction control deactivated.`

Possible cause:

The DTC system was turned off by the rider.

- Turn on the DTC. (➠ 83)

DTC error

 lights up yellow.

 lights up.

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

Possible cause:

The engine control unit has detected a DTC fault.

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 angular rate sensor.
- Note that the DTC function, the engine drag torque control and the Brake Slide Assist function are not available.
- You may continue riding. Observe additional information on situations that can lead to a DTC fault (➠ 158).
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad retailer.

Limited DTC availability

 lights up yellow.

 lights up.

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

Possible cause:

The engine control unit has detected a DTC fault.

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 angular rate sensor.
- Note that the DTC function and the engine drag torque control are only available to a limited extent.
- You may continue riding. Observe additional information on situations that can lead to a DTC fault (➠ 158).
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad retailer.

DDC error

 lights up yellow.

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

Possible cause:

The DDC control unit has detected an error.

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

» In this state, the motorcycle is probably heavily damped and is uncomfortable to drive, particularly on poor roads.

Possible cause:

A DDC sensor fault was detected.

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

» The semi-active functionality has been deactivated.

Fuel has reached reserve volume

Low fuel. Ride to the next filling station.

WARNING

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

Accident hazard, damage to catalytic converter

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

Possible cause:

At most, the fuel tank contains only the reserve volume.

Fuel reserve
Approx. 1.1 gal (Approx. 4 l)

- Refueling procedure. (➠ 124)

Hill Start Control active

is displayed in green.

Possible cause:

The Hill Start Control (➠ 167) was activated by the rider.

- Turn off the Hill Start Control.
- Operate Hill Start Control Pro. (➠ 90)

Hill Start Control automatically deactivated

blinks yellow.

Possible cause:

Hill Start Control was deactivated automatically.

- Side stand was folded out.
  » Hill Start Control is deactivated when the side stand is folded out.
- Engine was stopped.
  » Hill Start Control is deactivated when the engine is shut off.
- Operate Hill Start Control Pro. (➠ 90)

Hill Start Control cannot be activated

is displayed.

HSC not available. Engine not running.

Possible cause:

The Hill Start Control cannot be activated.

- Fold in side stand.

» Hill Start Control only functions when the side stand is folded away.

- Start engine.

» Hill Start Control only functions with the engine running.

Gear not taught in



Gear indicator flashes.

Possible cause:

The transmission sensor has not been completely taught in.

- Engage neutral N and run the engine for at least 10 seconds while parked to teach in the neutral position.
- Shift all gears with clutch control and ride for at least 10 seconds in each engaged gear.

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

– Once the transmission sensor has been fully taught in, the Gear Shift Assistant Pro functions as described (➠ 166).

- If the teach-in procedure is unsuccessful, have the fault corrected at a specialist workshop, preferably an authorized BMW Motorrad retailer.

Hazard warning flasher switched on


flashes in green.


flashes in green.

Possible cause:

The hazard warning flasher was switched on by the rider.

- Operate hazard warning flashers. (➠ 82)

Launch Control not ready

Shiftpoint light lights up or blinks.

`L-Con not available.`
`Clutch too hot.`

Possible cause:

The number of possible racing starts with Launch Control has been exceeded.

- Let the clutch cool down.
- Operate Launch Control. (➠ 136)

Service display


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

If service is overdue, a yellow Check Control message is displayed. The displays for

service, service appointment, and remaining distance are also highlighted with exclamation marks in the menu windows MY VEHICLE and SERVICE REQUIREMENTS.

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

Service due

 is displayed in white.

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

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

Service appointment overdue

 lights up yellow.

 is displayed in yellow.

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

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

INSTRUMENT CLUSTER

04

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WARNINGS

WARNING

Operation of a smartphone while riding

Risk of accident

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

WARNING

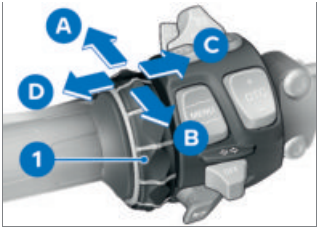
Distraction from traffic conditions and loss of control

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

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

OPERATING ELEMENTS

Multi-Controller



1 Multi-Controller

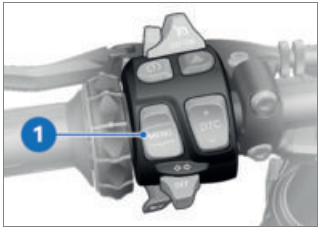
A Move the cursor up in lists
Increases the volume

B Move the cursor down in lists
Decrease volume

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

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

Rocker button MENU



Briefly press the top of the MENU 1:

–In Menu view: Change a hierarchy level up.

–In Pure Ride view: Changing the display for rider info. status line.

Press and hold the top of the MENU 1:

–In Menu view: Open Pure Ride view.

–In Pure Ride view: Change the operating focus to the navigator.

Press the bottom of the MENU 1:

–Change a hierarchy level down.

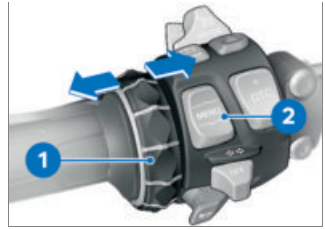
Press and hold the bottom of the MENU 1:

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

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

OPERATION

Go to the menu



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

The `Settings` menu can only be called up when stationary.

System status displays

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



Example:

–DTC function **1** is turned on.

Selecting display of upper status line

Requirement

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

- Turn on the ignition. (➠ 76)

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

» In addition, information from the Tire Pressure Monitor can be displayed.

» In addition, information from the Tire Pressure Monitor can be displayed.

- Select content of upper status line. (➠ 65)



- 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)

 Tire pressure

 Fuel tank level

 Range

Selecting content of upper status line

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

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

SETTINGS

Adjusting the volume

- Connect the rider's helmet and the passenger helmet. (➠ 68)
- Increase volume: Turn the Multi-Controller up.
- Decrease volume: Turn the Multi-Controller down.
- Mute: Turn the Multi-Controller all the way down.

Configuring system settings

- Turn on the ignition. (➠ 76)
- Call up menu Settings, System settings.

» The following system settings can be configured here:

– Date and time
– Units
– Language

Adjusting brightness

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

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

Resetting all settings

- All settings in the Settings menu can be reset to the factory settings.
- Go to the Settings menu.

- 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.

Resetting the on-board computer

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

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

Resetting the travel on-board computer

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

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

BLUETOOTH®

Pairing

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

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

During the pairing process, the instrument cluster searches for other Bluetooth-compatible devices within its reception range. The conditions that have to be

satisfied before a device can be detected are as follows:
– The Bluetooth® function of the device must be activated
– The device must be "visible" to others
– Other Bluetooth-capable devices must be OFF (e.g. mobile phones and navigation systems).

Please consult the operating instructions for your communication system.

Carrying out pairing

- Call up menu `Settings`, `Connections`.

» Bluetooth connections can be established, managed, and deleted in the `CONNECTIONS` menu. The following Bluetooth connections are displayed:

– `Mobile device`
– `Rider's helmet`
– `Passenger helm.`

The connection status for mobile end devices is displayed.

Connecting a mobile end device

- Carry out pairing. (➠ 67)
- Activate the Bluetooth function of the mobile end device (see operating instructions for the mobile end device).
- Select `Mobile device` and confirm.
- Select `Pair new mobile device` and confirm.

Mobile end devices are searched for.


blinks in the lower status line during pairing.

Visible mobile end devices are displayed.

- Select the mobile end device and confirm.


If the fuel tank is between the mobile terminal and the instrument cluster, the Bluetooth connection may be restricted. BMW Motorrad recommends storing the mobile terminal above the fuel tank (e.g. in the jacket pocket).

- 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. (➠ 224)

» Depending on the mobile end device, telephone data

is transferred to the vehicle automatically.
» Telephone data (➠ 73)
» If the phone book is not displayed, the troubleshooting chart in the Technical data chapter may provide assistance. (➠ 225)
» If the Bluetooth connection does not work as expected, the troubleshooting chart in the Technical data chapter may provide assistance. (➠ 225)

Connect the rider's helmet and the passenger helmet

- Carry out pairing. (➠ 67)
- Select `Rider's helmet` or `Passenger helm.` and confirm.
- Show the communication system of the helmet.
- Select `Pair new rider's helmet` or `Pair new passeng. helmet` and confirm.

Helmets are searched for.


blinks in the lower status line during pairing.

Visible helmets are displayed.
- Select helmet and confirm.

» The connection is established and the connection status is updated.
» If the connection cannot be established, the troubleshooting chart in the Technical data chapter may provide assistance. (➠ 224)
» If the Bluetooth connection does not work as expected, the troubleshooting chart in the Technical data chapter may provide assistance. (➠ 225)

Deleting connections

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

NAVIGATION

Warnings

WARNING

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

WARNING

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

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

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

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

Entering destination address
- Connect mobile terminal. (➠ 67)
- Go to the BMW Motorrad Connected app and start the guidance.
- Call up `Navigation` menu in the instrument cluster.

» Active destination guidance is displayed.

» If the active destination guidance is not displayed, the troubleshooting chart in the Technical data chapter may provide assistance. (➠ 225)

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

- Select Start route guidance.

Select destination from favorites

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

Entering special destinations

- 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 in which location you want to search for special destinations.

The following point of interest can be selected:

–Filling station

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

Specifying route criteria

- Call up menu Navigation, Route criteria.

The following criteria can be selected:

–Route type
–Avoid

- Select desired Route type.
- Turn desired Avoid on or off.

The number of enabled avoidances is displayed in brackets.

Display route info

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

You can select between the following options:

–Destination
–Waypoint

- Select desired option.

» The remaining distance and time are displayed.

Editing guidance

- Call up menu Navigation, New destination.

You can select between the following destinations:

–Recent destinations
–Favorites
–POIs

- Select destination from one of the three destination categories.
- Select Edit route guidance in the destination entry.
- Select Add stop to add the selected destination as a waypoint.
- Select Start guidance to overwrite the current destination.

Ending route guidance

- Call up menu Navigation, Active route guidance.
- Select and confirm End route guidance or tilt the Multi-Controller to the left.

Switching spoken instructions on or off

- Connect the rider's helmet and the passenger helmet. (➠ 68)
- 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.

Repeating the last spoken instruction

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

Turning Speed Limit Info on or off

Requirement

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

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

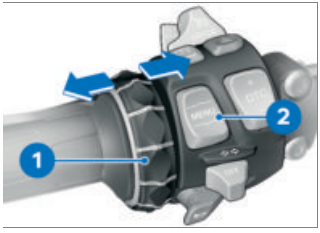
The Speed Limit Info is not available if a RACE PRO riding mode is activated.

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 terminals to the maximum before starting a journey.

- Adjust the volume. (➠ 65)
- Next title: Briefly tilt Multi-Controller **1** to the right.
- Last title or beginning of the current title: Briefly tilt Multi-Controller **1** to the left.
- Fast forward: Tilt Multi-Controller **1** to the right for an extended period.
- Fast rewind: Tilt Multi-Controller **1** to the left for an extended period.
- Go to context menu: Press button **2** downward.

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

» The following functions can be used in the context menu:
– Playback or Pause.
– For search and playback, select the category Now playing, All artists, All albums or All tracks.
– Select Playlists.

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

TELEPHONE

Prerequisite

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

Making a phone call



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

Muting

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

Conversations with multiple users

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

Telephone data

Depending on the mobile end device, telephone data is transferred to the vehicle automatically after pairing (➠ 66).
Phone book: List of contacts saved in the mobile terminal
Call list: List of calls with the mobile terminal
Favorites: List of favorites saved in the mobile terminal

DISPLAYING SOFTWARE VERSION

- Go to menu Settings, Information, Software version.

DISPLAYING LICENSE INFORMATION

- Go to menu Settings, Information, Licenses.

OPERATION

05

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IGNITION

Radio-operated 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) (➠ 77).
The ignition and anti-theft alarm system are activated with the radio-operated key. The locks of the hump cover and fuel cap are manually operated.

If the range of the radio-operated key is exceeded, the vehicle cannot be started.
If the radio-operated key continues to be missing, the ignition will be turned off after approx. 90 seconds to protect the battery.
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
Approx. 3.3 ft (Approx. 1 m)

Locking the steering lock

Requirement

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

Radio-operated key is within reception area.



- The steering lock can be unlocked by switching on the ignition.

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. (➠ 117)
» ABS self-diagnosis is performed. (➠ 117)
» DTC self-diagnosis is performed. (➠ 118)

Steering lock is unlocked:

- Briefly press button **1**.

» Parking lights and all function circuits are turned on.
» Pre-Ride-Check is carried out. (➠ 117)
» ABS self-diagnosis is performed. (➠ 117)
» DTC self-diagnosis is performed. (➠ 118)

Turning off the ignition

Requirement

Radio-operated key is within reception area.



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

Switch off the ignition and lock the steering lock:

- Turn handlebars to left.
- Press and hold button **1**.

» Light is turned off.
» Steering lock is locked.

Switch off the ignition and do not lock the steering lock:

- Briefly press button **1**.

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

- Lock steering lock. (➠ 76)

EWS electronic immobilizer

The motorcycle's electronics monitor the data stored in the ignition key by means of a ring antenna. The engine control unit does not enable engine start until this radio-operated

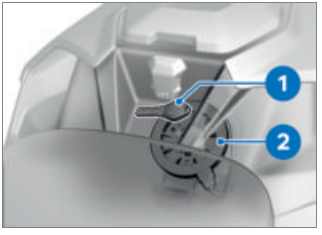
key has been recognized as "authorized" for your motorcycle.

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

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

If radio-operated key is lost

Should you lose your keys, refer to the notices regarding the electronic immobilizer (EWS).
Should you lose the radio-operated key during a trip, the vehicle can be started using the spare key.



- Hold spare key **1** against the trim to the rear of the rider's seat so that the spare key is positioned above the antenna **2**.

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

» Pre-Ride-Check is carried out.
– Spare key has been detected.
– Engine can be started.
– Spare key can be removed.
- Start engine. (➠ 116)

Replacing the battery of the radio-operated key

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

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

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

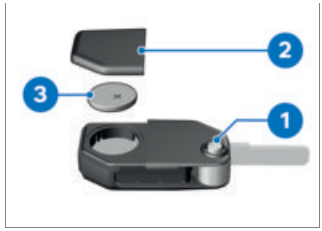
DANGER

Swallowing a battery

Risk of injury or death

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

- Change battery.



- Press button **1**.

» Key bit folds open.

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

ATTENTION

Unsuitable or improperly inserted batteries

Component damage

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

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

Battery type
For Keyless Ride radio-operated key
CR 2032

- Install battery cover **2**.

» 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

LIGHTING

Low beams

- Turn on the ignition. (➠ 76)



- Alternative: Pull the **1** switch if the ignition is turned on.

Parking lights

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

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

High beams and headlight flasher

- Turn on the ignition. (➠ 76)



- 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.



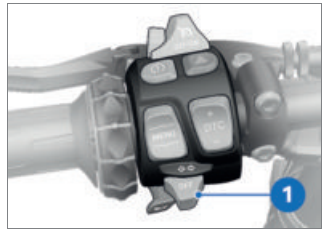
- Immediately after turning off the ignition, pull switch **1** back and hold until the headlight courtesy delay feature turns on.

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

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

Roadside parking lights

- Turn off the ignition. (➠ 77)



- Immediately after turning off the ignition, push button **1** to the left and hold it until the

roadside parking lights turn on.
- Turn ignition on and then off again to turn off the roadside parking lights.

Hazard warning system
- Turn on the ignition. (➠ 76)

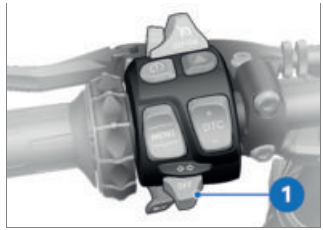
The hazard warning system places a load on the battery. Only switch the hazard warning lights system on briefly.



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

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

Turn signals
- Turn on the ignition. (➠ 76)
- Go to the `Settings`, `Vehicle settings` menu, then select the `Lights` menu item.
- Turn `Comfort turn indicator` on or off.



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

» If the comfort turn signal is turned on, the turn signal automatically switches off once the speed-dependent distance has been covered.
- Alternative: Press button **1** to turn off the turn signals.

DYNAMIC TRACTION CONTROL (DTC)

Turning off the DTC
- Turn on the ignition. (➠ 76)

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



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

Immediately after the button **1** is pressed, 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.

continues to light up.

» The DTC function is switched off.

Turn on the DTC



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

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

extinguishes, and if self-diagnosis has not been completed, it begins to blink.

Possible DTC system status ON is displayed.

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

remains off or continues to blink.

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

» The DTC function is switched on.

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

If the DTC indicator light lights up after turning the ignition off and on and then continuing to ride at the following minimum speed, a DTC fault has occurred.

min 3 mph (min 5 km/h)

- More detailed information on the Dynamic Traction Control can be found in the "Technology in detail" chapter (➠ 158).

DYNAMIC DAMPING CONTROL (DDC)

Possible settings

The Dynamic Damping Control (DDC) automatically adjusts the running gear to the conditions of the ground surface.
More information about the DDC can be found in the chapter "Technology in detail" (➠ 160).

Adjusting damping

- Turn on the ignition. (➠ 76)
- Go to the `Settings`, `Assist` menu, then select the `DDC` menu item.
- Select the desired damping setting.

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

RIDING MODE

Use of the riding modes

BMW Motorrad has developed riding scenarios for your vehicle from which you can select the one matching your situation:
–RAIN: Riding on wet roads.
–ROAD: Riding on dry roads.
–DYNAMIC: Brisk riding on dry roads.
–RACE: Riding on racetracks with sport tires or slicks.
–RACE PRO 1/2/3: Riding on racetracks, taking into account individual settings made by the rider.

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

The chassis and suspension adjustment is also adapted to the selected scenario.

Riding mode preselection

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

RAIN, ROAD, DYNAMIC and RACE

Configuring the riding mode preselection

- Turn on the ignition. (➠ 76)
- Go to menu `Settings`, `Vehicle settings`, `Riding mode preselection`.
- Activate or deactivate riding modes for the riding mode preselection.

» The activated riding modes are available for selection.

» If fewer than two riding modes are activated, the following message appears: `Action not possible. Min. number reached.`

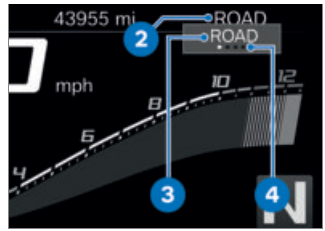
» The compilation of the riding modes in the riding mode preselection is retained, even after the ignition is switched off.

Select riding mode

- Turn on the ignition. (➠ 76)



- Press button **1**.



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



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

Depending on the riding mode or its configuration, the intervention of electronic stability control systems can be restricted.
Possible restrictions are displayed as a pop-up message, e.g. `Caution! ABS & DTC setting..`
The ABS indicator light flashes irregularly.
You can find more detailed information regarding road handling control systems such as ABS and DTC in the "Technology in detail" chapter.

» The availability of the riding modes depends on the individual configuration of the riding mode preselection.
» When the vehicle is at a standstill, the selected riding mode is activated after approx. 2 seconds.
» The new riding mode is activated while the vehicle is in motion under the following conditions:
– The throttle grip is in idle position.
– Brake is not engaged.
– Cruise control is deactivated.

CRUISE CONTROL

Displayed value while adjusting (Speed Limit Info not active)



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

Displayed value while adjusting (Speed Limit Info active)



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

Turning on cruise control



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

» Button **2** is unlocked.

Saving the speed



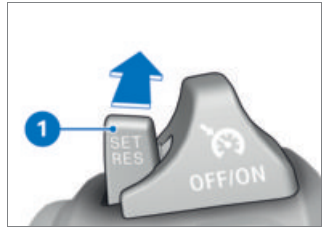
- Briefly press button **1** forward.

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

lights up.

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

Accelerating



- Briefly press button **1** forward.

» The speed is increased by 1 mph (1.6 km/h) each time the button is pressed.
- Press button **1** forward and hold.
» The speed 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 cruise control
- Actuate the brakes, coupling or throttle grip (ease the throttle beyond the default setting) to deactivate the adaptive cruise control.

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

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

is hidden.

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 intended slowing to a lower speed.

lights up.

Turning off cruise control



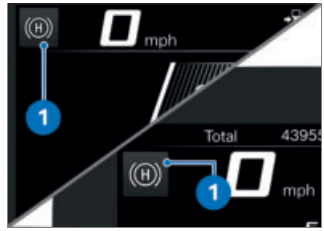
- Push switch **1** to the left.

» 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.

Adjusting Hill Start Control Pro

- Turn on the ignition. (➠ 76)
- Go to menu `Settings`, `Vehicle settings`, `HSC Pro`.
- To turn off Hill Start Control Pro, select `Off`.

» Hill Start Control Pro is deactivated.

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

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

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

» Hill Start Control Pro can be activated by firmly applying

the handbrake or footbrake lever.

» During brake actuation for approximately one second after the vehicle has come to a standstill and on a slope with at least a 3% gradient, Hill Start Control Pro is activated automatically.

» The selected setting is retained even after the ignition is turned off.

Operating Hill Start Control Pro

Requirement

Vehicle is at a standstill with the engine running.

ATTENTION

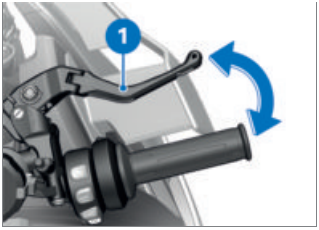
Failure of the drive-off assistant

Risk of accident

- Secure the vehicle through manual braking.

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

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



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

(H) is displayed in green.

» Hill Start Control Pro has been activated.

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

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

(H) is hidden.

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

If the throttle grip is depressed as you are driving off, Hill Start Control Pro is deactivated automatically.

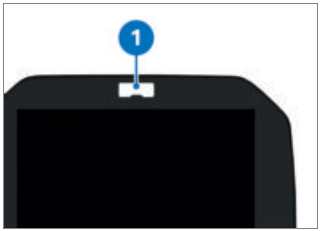
(H) disappears after the brake has been released completely.

» Hill Start Control Pro is deactivated.

- More information about the Hill Start Control Pro can be found in the chapter "Technology in detail" (➠ 167).

SHIFTPOINT LIGHT

Turning the shiftpoint light on and off



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

When the shiftpoint light flashes, the drag pointer flashes, too, except in the solid red RPM range.

Setting shifting flash

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

» The following settings are available:

– `Start RPM`
– `End RPM`
– `Brightness`
– `Frequency`. A flashing frequency of 0 Hz corresponds to continuous lighting.

» Changes to the brightness and the flashing frequency are signaled by the shiftpoint light briefly lighting up or flashing.

ANTI-THEFT ALARM SYSTEM (DWA)

– with anti-theft alarm system (DWA) OE

Activation

- Turn on the ignition. (➠ 76)
- Adjust the anti-theft alarm system. (➠ 93)
- Turn off the ignition.

» If the anti-theft alarm is activated, the 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).
» DWA is armed.



- 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).
» DWA is armed.



- To deactivate the tilt sensor (for example, if the motorcycle is being transported on a train and the train's strong 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).
» Tilt sensor is deactivated.

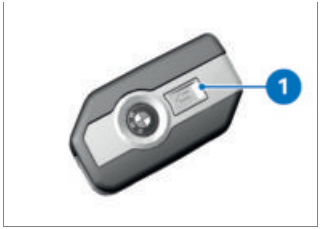
Alarm signal

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

If the 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, an alarm tone sounds and the turn signals blink. The type of alarm tone can be set by an authorized BMW Motorrad retailer.



A triggered alarm signal can be canceled 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 tone 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 indicator light:

- 1x flash: Tilt sensor 1
- 2x flash: Tilt sensor 2
- 3x flash: Ignition is turned on using an unauthorized ignition key
- 4x flash: DWA disconnected from vehicle battery
- 5x flash: Tilt sensor 3

Deactivating the DWA

- Turn on the ignition.

» Turn signals flash once.

» Confirmation tone sounds once (if programmed).

» DWA is turned off.

Adjusting the anti-theft alarm system

- Turn on the ignition. (➠ 76)
- Go to menu `Settings`, `Vehicle settings`, `Alarm system`.

» The following adjustments are available:

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

Possible settings

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

`Tilt sensor`: Activate the tilt sensor to monitor the inclination of the vehicle. The anti-theft alarm system responds, for example, in the event of attempted wheel theft or towing away.

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

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

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

TIRE PRESSURE MONITOR (TPM)

Switching setpoint pressure warning on or off

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

HEATED GRIPS

Operating heated grips

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

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

- Start engine. (➠ 116)



- 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 three different levels.

Low heater output

Medium heater output

High heater output

» High heater output is used for fast heating of the grips; the switch should then be switched back to a lower heater output.
» If no further changes are made, the selected heating level is set.

- To turn off the heated grips, press the button **1** repeatedly until the heated grip icon **3** disappears.

RIDER'S SEAT AND PASSENGER SEAT

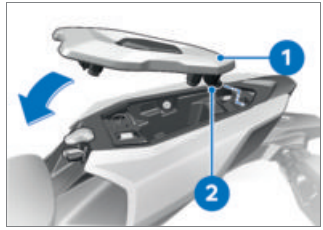
Removing the hump cover

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



- Fold up the lock cap **1** and unlock the lock for the hump cover **2** using the ignition key.
- Remove the hump cover **3** by unhooking the fixing mechanism **4**.

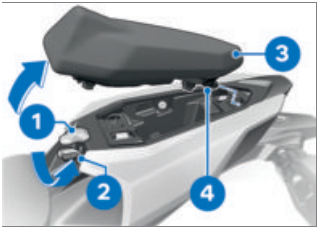
Installing the hump cover



- Position the hump cover **1**; hook in the fixing mechanism **2** when doing so.
- Press the hump cover **1** down and lock it in place.

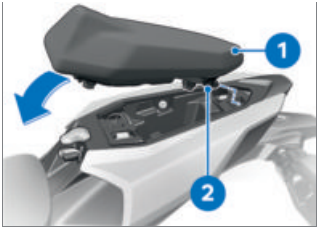
Removing the passenger seat
–with passenger package OE

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



- Fold up the lock cap **1** and unlock the lock for the passenger seat **2** using the ignition key.
- Remove the passenger seat **3** by unhooking the fixing mechanism **4**.
- Remove the ignition key and set the passenger seat on a clean surface with the upholstered side facing down.

Installing the passenger seat
–with passenger package OE



- Position the passenger seat **1**; hook in the fixing mechanism **2** when doing so.
- Press the passenger seat **1** down and lock it in place.

Removing the rider's seat



- Press the cover of the rider's seat **1** slightly forward on the seat surface and expose the lug **2**.
- Remove screw **3** with tool from onboard vehicle tool kit.
- Lift the rider's seat **1** at the rear and unhook the fixing mechanism **4**.
- Lay the rider's seat on a clean surface with the upholstered side down.

Installing the rider's seat



- Insert and position the rider's seat **1** at the front in the fixing mechanism **4**.
- Press the cover of the rider's seat **1** slightly forward on the seat surface and expose the lug **2**.
- Position and install the screw **3**.

SETTING

06

MIRRORS 100
HEADLIGHTS 100
BRAKES 100
CLUTCH 101
FOOTREST SYSTEM 101
STEERING 104
SPRING PRELOAD 104
DAMPING 107
DDC CALIBRATION 107

MIRRORS

Adjusting the mirrors



DANGER

Function impaired by incorrect installation position

Risk of a fall or accident

- Do not change the installation position of the mirror.

- Move mirror body to the desired position by turning it.

HEADLIGHTS

Headlight adjustment, right-hand/left-hand traffic

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

Headlight range and spring preload

The headlight range generally remains constant due to the adjustment of the spring preload to the load status. The headlight beam throw is correctly adjusted at the factory.

If there are doubts as to the correct headlight range, have the setting checked by a repair shop, preferably by an authorized BMW Motorrad retailer.

BRAKES

Setting the brake lever

WARNING

Modified position of the brake fluid reservoir

Air in the brake system

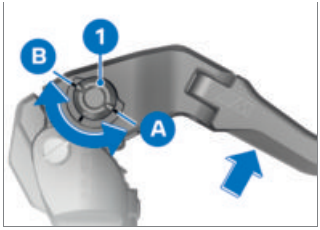
- Do not twist the handlebar fitting or the handlebars.

WARNING

Adjusting the brake lever while driving

Risk of accident

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



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

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

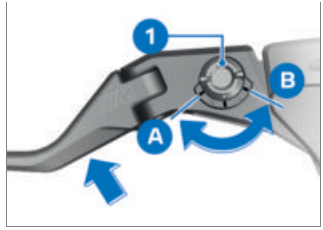
» Adjustment options:
– From position **A**: Minimum distance between handlebar grip and brake lever.
– Five steps toward position **B** to increase the distance between the handlebar grip and the brake lever.

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 lever **1** to the desired position.

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

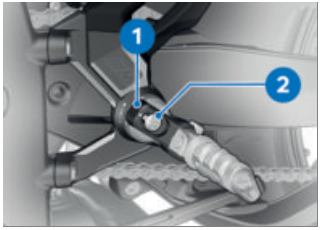
» Adjustment options:
– From position **B**: Minimum distance between handlebar grip and clutch lever.
– Four steps toward position **A** to increase the distance between the handlebar grip and the clutch lever.

FOOTREST SYSTEM

– with Billet pack OE

Adjusting the rotor

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



- The foot distance and the foot position can be adjusted by means of the rotor **1**.
- Loosen screw **2**.
» The angle of the rotor **1** can be adjusted to 3 positions along the rotary axis.
» The rotor **1** can be shifted to 3 positions along the rotary axis.
- Align the rotor **1** to the desired position and tighten the screw **2**.

Rotor on base plate
M8 x 35
21 lb/ft (28 Nm)

WARNING

Incorrectly adjusted footrest due to the rotor being moved.

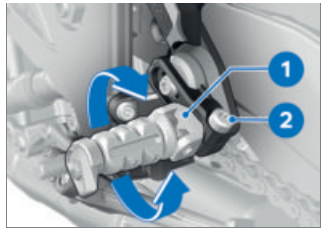
Accident hazard

- If the rotor is moved, the footrest adjustment must be adapted accordingly.

- The footrest can only fold upward and slightly backward.

Adjusting the footrest joint

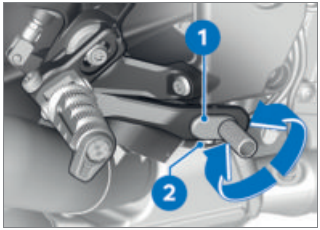
- The footrest joint is adjusted the same way on the left and right.



- Loosen screw **2**.
» The footrest joint **1** can be rotated.
- Orient the footrest joint **1** so that the footrest can fold upwards and slightly backwards.
- Tighten screw **2**.

Footrest joint on rotor
M8 x 30
21 lb/ft (28 Nm)

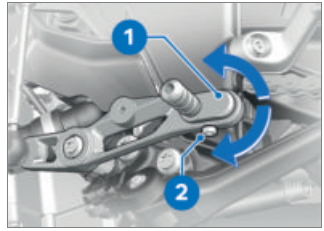
Adjusting the footbrake lever foot plate



- The horizontal and vertical distance of the foot relative to the foot plate **1** can be adjusted by turning it to different positions.
- Loosen screw **2**.
- Turn the foot plate **1** into the desired position.
- Tighten screw **2**.

Foot plate on footbrake lever
M6 x 25
7 lb/ft (9 Nm)

Adjusting the gearshift lever foot plate

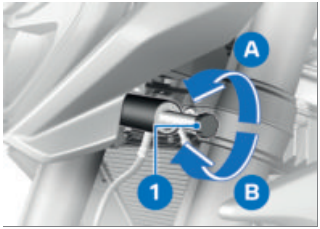


- The horizontal and vertical distance of the foot relative to the foot plate **1** can be adjusted by turning it to different positions.
- Loosen screw **2**.
- Turn the foot plate **1** to the desired position.
- Tighten screw **2**.

Foot piece to gearshift lever
M6 x 25
7 lb/ft (9 Nm)

STEERING

Adjusting the steering damper



WARNING

Adjusting the steering damper while riding.
Accident hazard
- Never adjust the steering damper except while the motorcycle is stationary.

- For reducing the damping: Turn the adjustment screw **1** in **A** direction.
- For increasing the damping: Turn the adjustment screw **1** in **B** direction.

Steering damper basic setting
Turn the adjustment screw in direction **B** to the stop, then 4 clicks in direction **A**. (Highway operation)

Steering damper basic setting
Turn the adjustment screw in direction **B** to the stop, then 1 clicks in direction **A**. (Racing mode)

SPRING PRELOAD

Setting

WARNING

Incorrect settings for spring preload and spring strut damping.
Impaired handling.
- Adjust the spring preload and spring strut damping to the payload of the motorcycle.

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

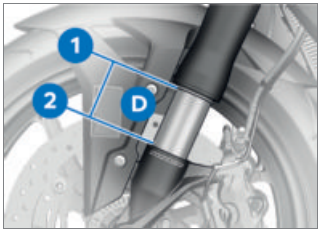
Lifting the motorcycle

An engine jack is required to set the spring preload recommended by BMW Motorrad. Details on how to use the jack are not specified further.
As an alternative, the spring preload can also be determined

by means of a test ride. If you are not sure whether this work is within your skill range, please contact a repair shop, preferably an authorized BMW Motorrad retailer.

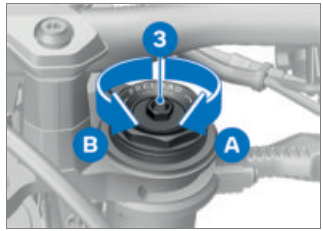
Adjusting the spring preload on the front wheel

- Park the motorcycle, making sure the ground is level and firm.
- Lift the motorcycle using the engine jack until the front wheel has been fully relieved.



- Measure the distance **D** between the points **1** and **2**.
- Remove the engine jack.
- Park the motorcycle, making sure the ground is level and firm.
- Load motorcycle with rider.
- With the assistance of a helper, measure the distance **D** between points **1** and **2** again and calculate the difference (compression) between the measured values.

Adjustment of spring preload dependent on loading
Compressing front wheel
2 in (50 mm) (With rider 187 lbs (85 kg))



WARNING

Uncoordinated settings of spring preload and spring strut damping.

Poorer handling.

- Adjust damping characteristic to changed spring preload.

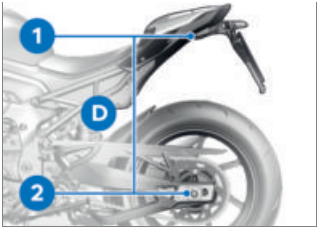
- To reduce the compression (increase the spring preload), turn the adjustment screw **3** in direction **A** using a tool from the onboard tool kit. A suitable adapter to protect the screw against scratches is included in the onboard tool kit.

- To increase the spring compression (reduce the spring preload), turn the adjustment screw **3** in direction **B** using a tool from the onboard tool kit. A suitable adapter to protect the screw against scratches is included in the onboard tool kit.

Adjusting the spring preload at the rear wheel

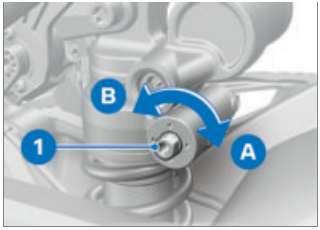
- Park the motorcycle, making sure the ground is level and firm.
- Lift the motorcycle using the engine jack until the rear wheel has been fully relieved.
- Turn on the ignition.
- Start engine to ensure that the battery does not discharge.

Settings on the DDC system can only be made when the ignition is switched on, as this is the only way the electric valves are active.



- Measure the distance **D** between the license-plate carrier **1** and the axle **2**.
- Remove the engine jack.
- Park the motorcycle, making sure the ground is level and firm.
- Load motorcycle with rider and possibly with luggage.
- With the assistance of a 2nd person, measure the distance **D** between points **1** and **2** again and calculate the difference (compression) between the measured values.

Adjustment of spring preload dependent on loading
Spring deflection of rear wheel
1.6 in (40 mm) (With rider 187 lbs (85 kg))



WARNING

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

- To reduce the spring compression (increase the spring preload), turn screw **1** in direction **A** using a tool from the onboard tool kit.
- To increase the compression (reduce the spring preload), turn the screw **1** in direction **B** using a tool from the onboard tool kit.

DAMPING

Correct damping setting

WARNING

Incorrect settings for spring preload and spring strut damping.
Impaired handling.
- Adjust the spring preload and spring strut damping to the payload of the motorcycle.

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

For information on setting the damping, see the chapter (➠ 84) "Operation"

DDC CALIBRATION

Calibrating the DDC

- Place the motorcycle on the side stand or a suitable auxiliary stand. Do not sit on the motorcycle during the calibration. Remove any pieces of luggage.



- Go to menu `Settings`, `Vehicle settings`, `DDC calibration`.
- Select `Start` **1** and confirm with `OK` **2**.

» The calibration is carried out.

» If the calibration was successful, `Calibration was successful.` is displayed. If `Calibration failed! Park the fully unloaded vehicle on its side stand.` is displayed, the calibration must be repeated.

- Select `Repeat`.

» If the calibration is still unsuccessful after several attempts, please contact a repair shop, preferably an BMW Motorrad Partner.

RIDING

07

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PARKING THE MOTORCYCLE 123
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PORTATION 126

SAFETY INSTRUCTIONS

Rider's equipment

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

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

WARNING

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

Vehicle load

WARNING

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

ATTENTION

Improperly fastened luggage
Component damage
- Do not use openings in the tail cowling for lashing down luggage.

- Adjust the setting of the spring preload and damping for the current gross vehicle weight.

Speed

If you ride at high speed, always bear in mind that various boundary conditions can negatively affect the vehicle handling of your motorcycle. These include, but are not limited to, the following:

–Settings of spring struts
–Unevenly distributed load
–Loose clothing
–Insufficient tire pressure
–Tire tread in poor condition

Removed parts

ATTENTION

Riding on public roads without vehicle parts that were removed for operation on the racetrack
Risk of accident, expiration of operating permit for public roads
- Attach all vehicle parts mandated for operation on public roads.

Carbon wheels

–with M carbon wheels OE

The material properties of carbon are significantly different from those of metallic materials, e.g. with regard to rigidity and weight.
Structural damage to carbon wheels is not always visible to the naked eye. If damage is suspected, e.g. after a fall or a significant impact on the carbon structure (e.g. riding across a pothole), the carbon wheel must be evaluated by a repair shop with corresponding expertise, ideally an authorized BMW Motorrad retailer.

WARNING

Unnoticed structural damage
Risk of accident
- Have the carbon wheels checked by a specialist workshop, preferably an authorized BMW Motorrad retailer, after a fall or a significant impact (e.g. riding through a pothole).

Risk of poisoning

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

WARNING

Harmful exhaust gas
Danger of suffocation
- Do not inhale exhaust fumes.
- Do not run the engine in closed rooms.

WARNING

Inhalation of vapors that are harmful to health
Damage to health
- Do not inhale vapors from operating fluids and plastics.
- Only use the vehicle outdoors.

Risk of burning

CAUTION

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

WARNING

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

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

ATTENTION

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

Danger of overheating

ATTENTION

Engine idling for a lengthy period while at a standstill
Overheating due to insufficient cooling; in extreme cases vehicle fire
- Do not allow the engine to idle unnecessarily.
- After starting, ride off immediately.

Modifications

ATTENTION

Modifications to the motorcycle (e.g. engine control unit, throttle valves, clutch)
Damage to the affected parts, failure of safety-relevant functions, expiration of warranty
- Do not make any modifications.

REGULAR CHECK

Observe checklist

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

In the event of a change to the load status:
- Adjust the spring preload on the front wheel (➠ 105).
- Adjusting the spring preload at the rear wheel (➠ 106).
- Adjust damping (➠ 84).

Always before riding off
- Check operation of the brake system (➠ 176).
- Check operation of the lighting and signal system.
- Check clutch function (➠ 181).
- Check tire tread depth (➠ 184).
- Check tire pressure (➠ 184).

ATTENTION

Improperly fastened luggage
Component damage
- Do not use openings in the tail cowling for lashing down luggage.

- Check that luggage is securely held in place.

At every 3rd refueling stop
- Check engine oil level (➠ 174).
- Check front brake pad thickness (➠ 176).
- Check rear brake pad thickness (➠ 177).

–Check front brake fluid level (➠ 178).
–Check rear brake fluid level (➠ 179).
–Check the coolant level (➠ 182).
–Check chain sag (➠ 194).
–Check chain for wear (➠ 196).
–Lubricate chain as needed (➠ 195).

STARTING

Starting the engine

- Turn on the ignition.

» Pre-Ride-Check is carried out. (➠ 117)
» ABS self-diagnosis is performed. (➠ 117)
» DTC self-diagnosis is performed. (➠ 118)

- 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.

To ensure rapid operational readiness of the catalytic converter, the idle speed is briefly increased after the engine starts.

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



- Press starter button **1**.

The starting attempt is automatically interrupted if battery voltage is too low. Recharge the battery before you attempt to start the engine again, or use jumper cables and a donor battery to start.
More detailed information can be found in the Maintenance chapter under Jump-starting.

» Engine starts.
» Consult the troubleshooting chart if the engine refuses to start. (➠ 224)

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 turned 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 have been 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 repair shop, preferably an authorized BMW Motorrad retailer.

Depending on the riding mode or its configuration, the intervention of electronic stability control systems can be restricted.
Possible restrictions are displayed as a pop-up message, e.g. `Caution! ABS setting.`.
The ABS indicator light flashes irregularly.
You can find more detailed information regarding road handling control systems such as ABS in the chapter "Technology in detail".

ABS self-diagnosis

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

Phase 1

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



blinks.

Phase 2

» Check the wheel speed sensors while riding off.



blinks.

ABS self-diagnosis completed

» The ABS indicator and warning light goes out.

ABS self-diagnosis not completed
The ABS function is not available, as the self-diagnosis function has not been completed. (To check wheel speed sensors, the motorcycle must reach a minimum speed with engine running: min 3 mph (min 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 repair shop, preferably an authorized BMW Motorrad retailer.

DTC self-diagnosis

The operational readiness of the BMW Motorrad DTC is checked through self-diagnosis. The self-diagnosis runs automatically when you turn on the ignition.

Phase 1

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

 blinks slowly.

Phase 2

» Checking system components capable of diagnosis when riding off.

 blinks slowly.

DTC self-diagnosis completed

» The DTC icon is no longer displayed.

- Check the display of all indicator and warning lights.

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

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

- You may continue riding. Please note that the DTC

function is limited or is not available at all.
- Have the malfunction corrected as soon as possible at a repair shop, preferably an authorized BMW Motorrad retailer.

BREAKING IN

Engine

- In the period preceding the break-in service, ride in frequently changing engine load and engine speed ranges, avoiding extended periods at constant rpm.
- Choose curvy, slightly hilly routes if possible.
- Observe the engine run-in speeds.

 Engine run-in speed
<7000 min^{-1} (Odometer reading 0…186 miles (0…300 km))
No full throttle (Odometer reading 0…621 miles (0…1000 km))

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

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

Brake pads

New brake pads must be run in before they achieve their optimum friction force. This reduction in braking effect can be compensated for by exerting greater pressure on the brake levers.

WARNING

New brake pads
Extension of the braking distance, accident hazard
- Brake early.

Tires

New tires have a smooth surface. They must be roughened by riding in a restrained manner at varying lean angles until the tires are run in. This breaking-in procedure is essential if the tire tread is to achieve maximum grip.

WARNING

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

SHIFTING

Gear Shift Assistant Pro

More detailed information on Pro Gear Shift Assistant can be found in the "Technology in detail" chapter.

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



- The gears are shifted into as usual with foot force on the gearshift lever.

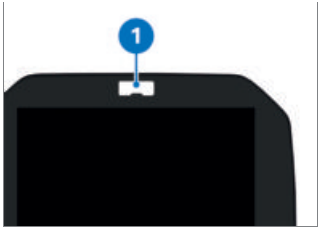
» The sensor **1** on the gearshift rod detects the gearshift request and triggers the shift assistance.

» If you are riding at a constant speed and in coasting overrun in a low gear at high RPMs, shifting gears without clutch control can cause strong power-off reactions. BMW Motorrad recommends only shifting gears with clutch control in these riding situations. Riders should avoid using the Gear Shift Assistant in the range of the RPM limiter.

» Shift assistance is not available in the following situations:
– With clutch actuated.
– Gearshift lever not in its initial position

- To enable another gear change with the Gear Shift Assistant, the gearshift lever must be fully released after the first shifting process.

Shiftpoint light



The shiftpoint light **1** signals to the rider that the engine speed is approaching the RPM at which the rider needs to shift to the next highest gear.

– Shiftpoint light blinks at the set frequency: The shifting speed will soon be reached
– Shiftpoint light goes off: Shifting speed has been reached

The speed thresholds and the behavior of the shiftpoint light can be adjusted in the `Settings`, `Vehicle settings` menu, see also the Operation (➠ 91) chapter.

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 load 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 optimize the stopping distance, apply the front wheel brake rapidly and continue to increase the 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.

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

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. Due to the missing wheel load, the ABS must prevent a tendency of the front wheel to lock up with even minimal braking effect. This results in a reduced braking effect.

Descending mountain passes

WARNING

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

Wet, soiled brakes

Moisture and dirt on the brake discs and the brake pads result in a decrease in the braking effect.
Delayed or poorer braking effect must be expected in the following situations:
- When riding in the rain and through puddles.
- After washing the vehicle.
- When riding on roads spread with salt.
- After working on the brakes due to oil or grease residues.
- When riding 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 is activated in all riding modes. In the RACE PRO riding mode, ABS Pro can be set individually.

Falling cannot be excluded

Although ABS Pro and Dynamic Brake Control represent valuable support and an enormous safety advantage for the rider when braking in an inclined position, they by no means redefine the physical riding limits. It is still possible to exceed those limits through misjudgments or riding errors. In extreme cases this my result in a fall.

Use on public roads

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

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

PARKING THE MOTORCYCLE

Side stand

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

ATTENTION

Poor ground conditions in area of stand

Component damage cause by tipping over

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

- Fold out side stand and park motorcycle.

ATTENTION

Loading of the side stand with additional weight

Component damage cause by tipping over

- Do not sit on the motorcycle when it is parked on the side stands.

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

REFUELING

Fuel quality

Requirement

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

ATTENTION

Refueling with leaded fuel

Damage to catalytic converter

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

ATTENTION

Use of Ethanol E85 as fuel

Damage to the engine and fuel supply

- Do not refuel with E85, i.e. fuel with an ethanol content of 85 %, or with Flex Fuel.

- Observe the maximum ethanol content of the fuel.

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

Recommended fuel quality
Premium unleaded (93) (max. 5 % ethanol, E5) 91 AKI (98 ROZ/RON) 93 AKI

Alternative fuel quality
Premium unleaded (91; restrictions with regard to power and fuel consumption) (max. 10 % ethanol, E10) 89 AKI (95 ROZ/RON) 90 AKI

Refueling procedure

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.

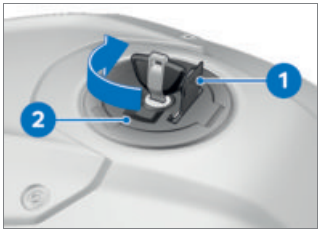
ATTENTION

Contact of fuel and plastic surfaces

Damage to surfaces (become unattractive or cloudy)

- Immediately clean plastic surfaces after contact with fuel.

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



- Open the protective flap **1**.
- Unlock the cap **2** of the fuel tank with the ignition key clockwise and open.



- Refuel with a fuel meeting the specifications above, continuing until fuel is no higher than lower edge of the recess in the fuel filler neck.

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. 4.4 gal (Approx. 16.5 l)

Fuel reserve
Approx. 1.1 gal (Approx. 4 l)

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

FASTENING MOTORCYCLE IN PLACE FOR TRANSPORTATION

- Protect all components, along which tensioning straps are routed, against being scratched, for example by using adhesive strips or soft cloths.



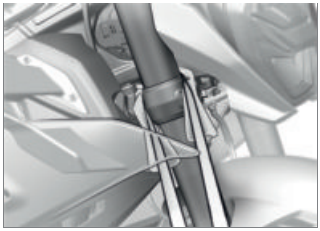
ATTENTION

Motorcycle tips to the side when raising

Component damage cause by tipping over

- Secure the motorcycle against tipping to the side, preferably with the assistance of a second person.

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



ATTENTION

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

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



- Fasten the rear tensioning belts on both sides on the rear frame and tighten them.
- Tighten all tensioning belts evenly; the vehicle should be pulled down with the springs compressed as much as possible.

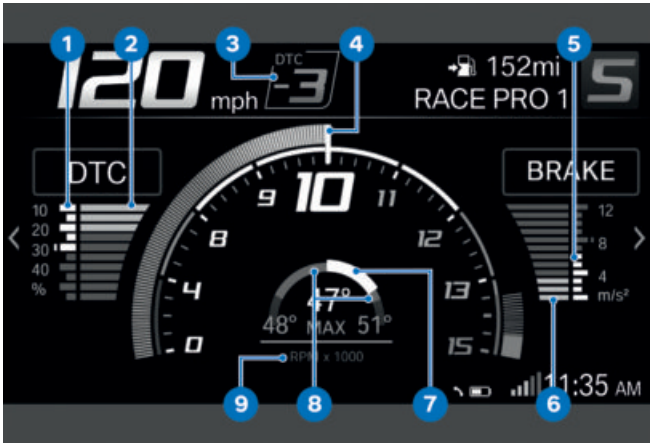
ON THE RACE-TRACK

08

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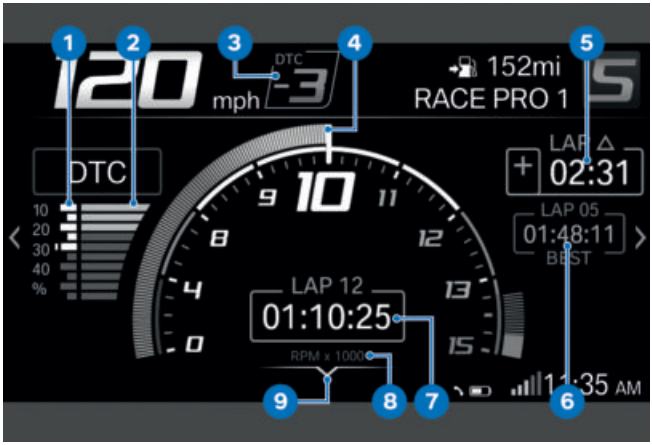
DISPLAYS FOR RACING MODE

SPORT 1 DISPLAY



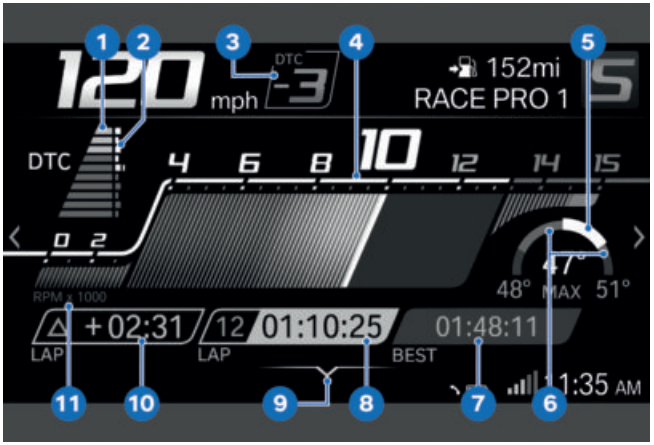
1 Maximum DTC torque reduction
2 Current DTC torque reduction
3 DTC control value
4 Tachometer
5 Maximum braking deceleration
6 Current braking deceleration
7 Current angle of inclination
8 Maximum angle of inclination
9 Unit for tachometer: 1000 RPM

SPORT 2 DISPLAY



1 Maximum DTC torque reduction
2 Current DTC torque reduction
3 DTC control value
4 Tachometer
5 Difference between the last lap time and the reference time, or difference between the current lap time and the reference time
6 Reference time: the fastest lap of the laps currently saved, or the fastest lap ever saved (➠ 133)
7 Current lap time
8 Unit for tachometer: 1000 RPM
9 Operating assistance

SPORT 3 DISPLAY

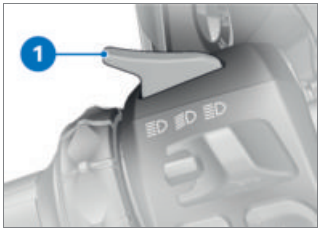


1 Current DTC torque reduction
2 Maximum DTC torque reduction
3 DTC control value
4 Tachometer
5 Current angle of inclination
6 Maximum angle of inclination
7 Reference time: the fastest lap of the laps currently saved, or the fastest lap ever saved (➠ 133)
8 Current lap time
9 Operating assistance
10 Difference between the last lap time and the reference time, or difference between the current lap time and the reference time
11 Unit for tachometer: 1000 RPM

LAPTIMER

Starting time recording

- Go to Sport menu and change to the Sport 2 or Sport 3 display.
- Start engine. (➠ 116)



- Press button **1**.

» The time recording is running.

- Each time when riding over the Start/Finish line, press button **1** again to start the recording for the next racing lap.

» The data of the preceding race lap will be saved.

» The time for the current lap restarts at 00:00:00.

» The stopped time of a racing lap is displayed for a configurable Disp. duration before the system switches to the current time for the current racing lap.

» If the display mode is exited during a recording, then the recording continues to run.

Ending time recording and managing times

Requirement

The Sport 2 or Sport 3 display is shown.

- Press MENU rocker button down.

» The LAPTIMER menu is displayed.

– Stop recording can be used to end a recording that is currently in progress.

– Laps can be used to go to the current lap times and riding data. 99 laps can be saved. If you do not delete any laps after reaching the maximum, any further laps will overwrite the first laps.

– Delete all laps can be used to delete all laps.

– Reset Best Ever can be used to reset the best ever racing lap (Best Ever).

Setting the Laptimer

- Go to menu Settings, Vehicle settings, Laptimer. The following settings are available:

» Debounce time: If the headlight flasher was operated, the headlight flasher can be operated again within this time without affecting the lap time measurement.

–with M GPS-Laptrigger OE

» Trigger: Changeover of operation. Manual: Triggering by means of headlight flasher. External: Triggering by means of M GPS-Laptrigger. For automatic signaling of new laps and for the evaluation of recorded riding data, the optionally available M Datalogger optional accessories including GPS-Laptrigger are necessary.◁

» Disp. duration: Within this time, the stopped time of a lap is displayed before the current lap time is shown.

» Reference: Selection of which best time is shown as the reference. Best: Best time of the current recording or Best Ever: Best ever time measured.

» Best lap in progress: When this function is activated, the display does not show the difference between the last lap time and the reference time, but rather the difference between the current lap time and the reference time.

Best ever racing lap

The best ever racing lap (Best Ever) is the fastest of all recorded racing laps and is updated as soon as a faster lap has been recorded.

The best ever racing lap remains stored even if the recorded racing laps are deleted. As a result, a new race can be recorded at other times and compared with the best lap from previous races.

The best ever racing lap can be deleted in the LAPTIMER menu.

If the best ever racing lap is from a stored recording, the corresponding lap number is also displayed. If the best ever racing lap does not have a lap number, it is from a recording that has already been deleted.

RACE PRO RIDING MODES

Configuration for the racetrack

The RACE PRO riding modes enable the rider to professionally adjust the finer details of the chassis, braking and engine control systems. Individual rider requests, route characteristics, and weather conditions can be taken into account in this way.

The following parameters can be set:
–Engine
–Engine Brake
–Traction (DTC)
–Wheelie (DTC)
–ABS
–DDC

For more detailed information on the parameters, see (➠ 161).

Three RACE PRO riding modes can be configured.

A RACE PRO riding mode can also be selected via the MODE button (➠ 84).

Configuring the RACE PRO riding modes

- Call up the Settings, Vehicle settings menu and select Riding mode preselection.
- Activate at least one RACE PRO riding mode.
- Select Configuration.

» The current configurations are shown in the overview.



- Select a configuration.



- Select parameters.

» The current setting is displayed graphically and numerically. Explanatory texts for the respective setting are also displayed.

–If a setting is also saved in a standard riding mode, this riding mode is specified.

- Change setting as desired.

Resetting to factory setting

- Select a configuration.
- In the parameter list, scroll down and select the last entry Reset.

LAUNCH CONTROL

Racing start with Launch Control

Launch Control supports the rider in maintaining the ideal RPM for a racing start.

Engine speed after the activation of Launch Control at full throttle
9000 min^{-1}

When the Launch Control is active, the engine torque is reduced so that, for example, the maximum drive power on level ground is set with the front wheel slightly lifting off. If the front wheel is detected as lifting off, the torque is temporarily slightly reduced.

Launch Control is turned off under the following conditions:
– Third gear is engaged.
– Angle becomes greater than 30°.
– Engine or ignition is switched off.

The number of consecutive starts with Launch Control is limited for clutch protection. The number of starts still possible is shown in the display, e.g. `L-Con: 3 starts still available.`.

Operating Launch Control

CAUTION

Launch Control allows maximum acceleration, which could cause unfamiliar riding situations.
Risk of injury due to increased acceleration.
- Only use Launch Control on race tracks.

- Bring vehicle into start position.

» Vehicle is standing, engine is running.



- Hold down the starter button **1** until the display shows the number of starts with Launch Control that are still possible.

» If no more starts are possible, `L-Con not available. Clutch too hot.` is displayed.

- Let the clutch cool down.

Clutch cool-down time
Approx. 3 min (with the engine running)
Approx. 20 min (with the engine stopped)

- When starting, proceed as usual; turn the throttle grip at least far enough to reach the RPM limiter.
- After the clutch engages, turn the throttle grip all the way.

» Shiftpoint light lights up or blinks.

» The Launch Control controls the ideal torque on the rear wheel.

- Leave throttle grip completely open.

» Due to the full-throttle position of the throttle grip, the engine speed increases as soon as the RPM limiter is turned off.

» The throttle grip responds again as usual.

» If third gear is engaged or the angle of inclination is greater than 30°, the shiftpoint light extinguishes.

» The racing start with Launch Control is completed.

PIT LANE LIMITER

Restricting the speed with the Pit Lane Limiter

The Pit Lane Limiter is a support function designed to comply with a speed restriction, e.g. when riding in the pit lane. For this purpose, a maximum engine RPM is defined for riding in 1st gear.

The speed resulting from the maximum RPM depends on the gear ratio and the tire size.

Reading display range

–3500 to 8000 RPM in increments of 100

Adjusting Pit Lane Limiter

- Go to the `Settings`, `Vehicle settings` menu, then activate `Pit Lane Limiter`.
- Select `Configuration`.
- Adjust `RPM`.

Operating Pit Lane Limiter



- Ride in 1st gear.

- Hold down the starter button **1**.
- Open the throttle grip until the set maximum RPM has been reached.

» The engine speed is limited to the set speed.

WARNING

When the starter button is released, the engine accelerates according to the position of the throttle grip.
Risk of accident by violent jerk with throttle grip in full load position.
- Do not open the throttle grip completely, but instead only until the limit speed is reached.

- Release the starter button **1**.

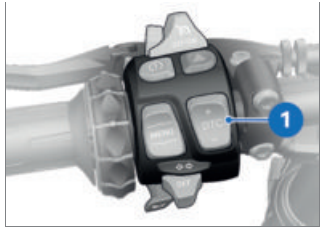
» The vehicle accelerates with maximum acceleration.

DTC

DTC setting

The permissible slip on the rear wheel is controlled by the DTC according to the selected riding mode.

The control can be adjusted in detail as part of the configuration of the RACE PRO riding modes.
Configuring the RACE PRO riding modes (➠ 135)



While riding, the DTC rocker button **1** on the left-hand handlebar control unit can be used to change the DTC setting.

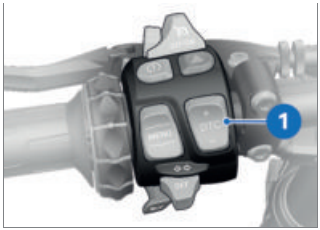
Adjusting the DTC

- Configure the RACE PRO riding modes. (➠ 135)
- Select the desired RACE PRO riding mode.

DTC can also be adjusting while riding.



If `RACE PRO riding mode` is activated, then `Speed Limit Info` **1** is hidden and the DTC control value **2** is displayed instead.



- Briefly press the rocker button **1** up to increase the DTC control.

WARNING

Loss of stability with spinning rear wheel caused by reduction of DTC control.
Accident hazard
- Reduce DTC control on race tracks only.
- Change the DTC control by only one stage at a time and carefully test the impact on the handling.

- Briefly press the DTC rocker button **1** down to reduce the DTC control.

» The set value is shown on the display and lies between `-7` and `7`:

» `1 ... 7`: Reduction of the slip on the rear wheel by a maximum of seven levels. The value `7` corresponds to the earliest DTC intervention.

» `-1 ... -7`: Increase of the slip on the rear wheel by a maximum of seven levels. The value `-7` corresponds to the latest DTC intervention.

» `0`: Factory setting

» `DTC` display hidden: DTC turned off.

Turning off the DTC

On very loose surfaces (e.g. a gravel bed at a racetrack), the control interventions of the DTC can reduce the driving power at the rear wheel so much that forward motion is no longer possible. In this case, BMW Motorrad recommends turning off the DTC temporarily.

Note that the rear wheel will spin in the loose substrate, and close the throttle in a timely manner before reaching a solid substrate.

Turning off the DTC also turns off the traction control and wheelie suppression.

Then turn the DTC back on.

Turn on the DTC. (➠ 83)

LICENSE-PLATE CARRIER

Removing the license-plate carrier

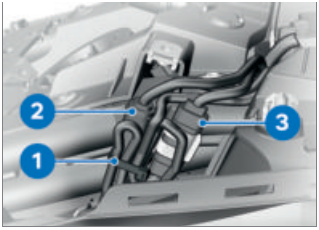
ATTENTION

Removing the number plate carrier

Expiry of operating license for public roads

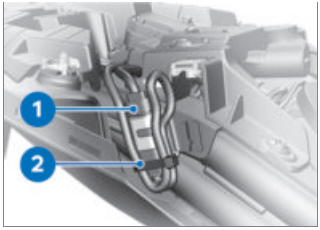
- Do not ride on public roads without a number plate carrier.

- Park the motorcycle, making sure the ground is level and firm.
- Remove the hump trim panel. (➠ 200)

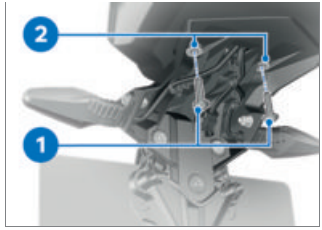


- Remove the cable tie **1**.
- Disconnect the connector for the license plate light **2** and left-hand turn signal **3**.

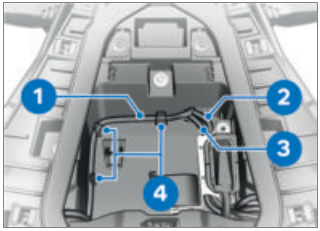
If the turn signals are removed or the license-plate carriers are detached for racetrack operation, the vehicle electronics will interpret this as a defective light and the corresponding warning message will appear on the display. If `Light warnings` is deactivated, the warning is suppressed.



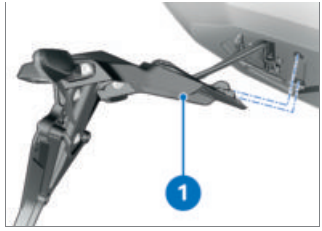
- Remove the cable tie **2**.
- Disconnect the connector for the right-hand turn signal **1**.



- Remove the screws **1**, paying attention to the collar bushings **2**.



- Detach the cable for the right-hand turn signal **1** and pull it out of the holders **4**.
- Feed out the cable for the left turn signal **2** and license plate light **3**.



- Unhook the license-plate carrier **1** and remove it in a downward motion.
- Carefully thread out the cable.

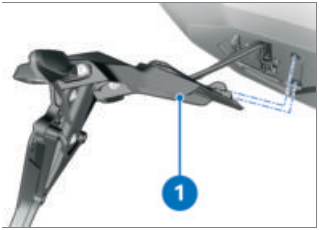
The M Cover Kit contains dummy plugs for open plug connections to prevent moisture from getting into the vehicle electrical system.

- Protect exposed plug connections from the penetration of moisture, ideally using the dummy connectors in-

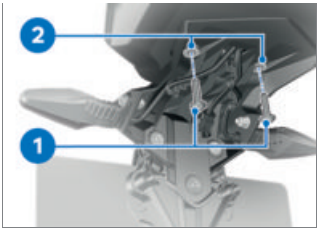
cluded in the BMW Motorrad M Cover Kit.
- Install the hump trim panel. (➠ 201)

Installing the license-plate carrier

–with M Cover Kit OA
- Remove the M Cover Kit. (➠ 146)◁
- Park the motorcycle, making sure the ground is level and firm.
- Remove the hump trim panel. (➠ 200)

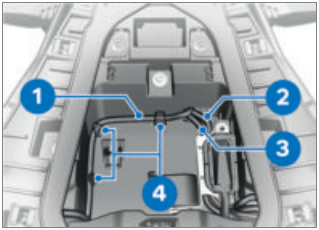


- Position the license-plate carrier **1** and carefully feed in the cable.
- Hook in the license-plate carrier **1**.

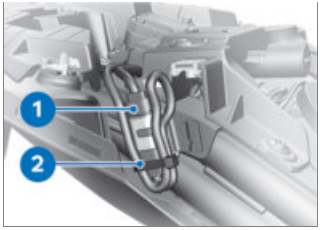


- Install the screws **1** through the collar bushings **2**.

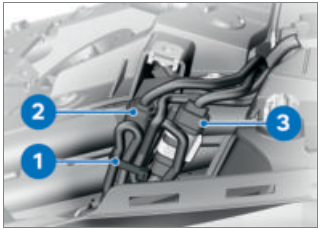
License-plate carrier on rear frame
M5 x 17
1 lb/ft (2 Nm)



- Feed in cable for the right turn signal **1** and fasten it in the holder **4**.
- Feed out the cables for the left turn signal **2** and license plate light **3**.



- Connect the connector for the right-hand turn signal **1**.
- Install the cable tie **2**.



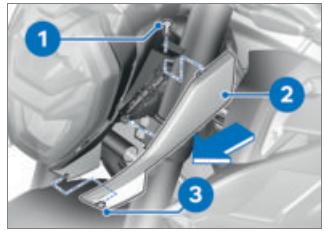
- Connect the connectors for the license plate light **2** and left-hand turn signal **3**.
- Install the cable tie **1**.
- Check function of the lighting and turn signals.
- Install the hump trim panel. (➠ 201)

FRONT TURN SIGNAL

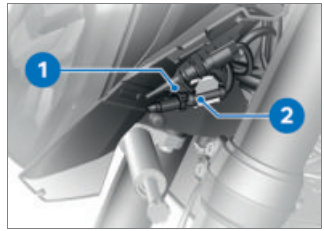
Removing front turn signals

ATTENTION

Removal of the turn signals
Expiration of operating license for public roads
- Do not ride on public roads without the turn signals.

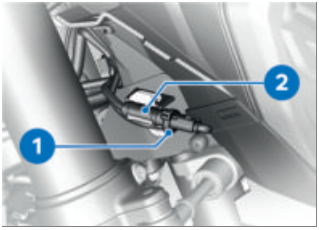


- Remove screw **1** on the left and right.
- Detach cover **2** on the left and right in arrow direction; when doing so, pay attention to lug **3**.



- Remove the cable tie **1**.

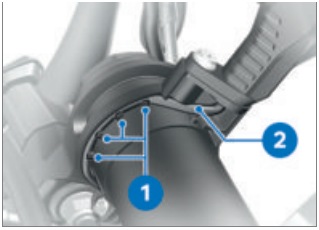
- Disconnect the connector for the left-hand turn signal **2**.



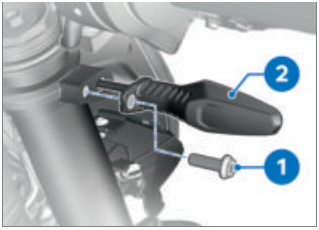
- Remove the cable tie **1**.
- Disconnect the connector for the right-hand turn signal **2**.

The M Cover Kit contains dummy plugs for open plug connections to prevent moisture from getting into the vehicle electrical system.

- Protect exposed plug connections from the penetration of moisture, ideally using the dummy connectors included in the BMW Motorrad M Cover Kit.

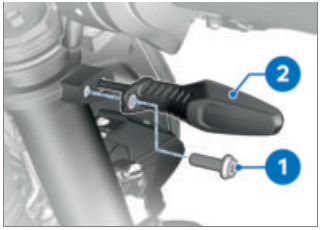


- Feed out the cables for turn signals **2** on the left and right from the cable bracket **1**.



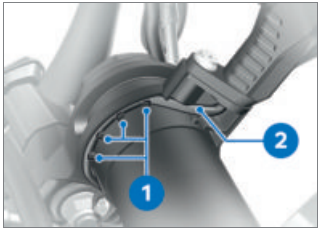
- Remove screw **1** on the left and right.
- Remove the turn signals **2** on the left and right and carefully feed out the cables.

Installing front turn signals

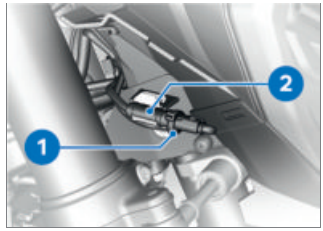


- Feed in cables and position turn signals **2** on the left and right.
- Install screw **1** on the left and right.

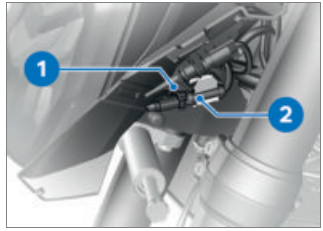
	Turn signal on turn signal holder
M6 x 20	
2 lb/ft (3 Nm)	



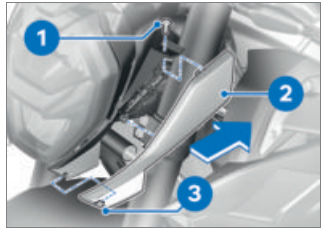
- Fasten the cables for turn signals **2** on the left and right in the cable bracket **1**.



- Connect the connector for the right-hand turn signal **2**.
- Install the cable tie **1**.



- Connect the connector for the left-hand turn signal **2**.
- Install the cable tie **1**.



- Position cover **2** on the left and right in arrow direction;

when doing so, pay attention to lug **3**.

- Install screw **1** on the left and right.

M COVER KIT

–with M Cover Kit [OA]

Covering openings in the body

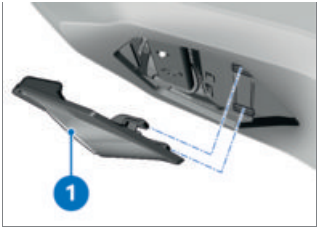
Requirement

The M Cover Kit is used for covering the body opening professionally after the license-plate carrier has been removed.

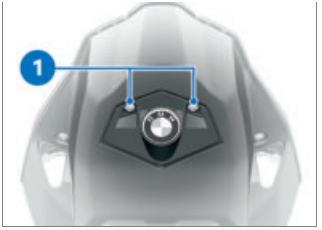
- Remove license-plate carrier. (➠ 140)
- Install the M Cover Kit. (➠ 146)
- After removing the M Cover Kit, the license-plate carrier must be reinstalled.
- Install the license-plate carrier. (➠ 142)

Installing the M Cover Kit

Observe installation instructions of special or racing accessories.

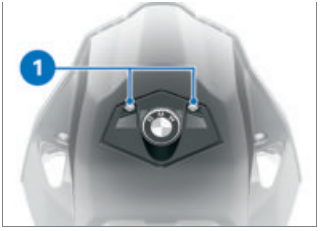


- Hook in and position the cover for the license-plate carrier **1**.

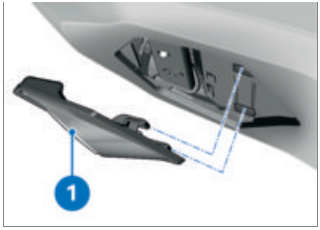


- Install screws **1**.

Removing the M Cover Kit



- Remove screws **1**.



- Unhook the cover for the license-plate carrier **1** and remove it in a downward motion.
- Install the license-plate carrier. (➠ 142)

SWITCHING OFF ABS WHEN RIDING ON THE RACETRACK

Turning off the ABS function

Requirement

License-plate carrier is removed.

- Turn on the ignition. (➠ 76)

The ABS function can also be turned off while riding.



- Press and hold the button **1** for at least three seconds.

(ABS) lights up.

» The ABS function is switched off.
» The integral function is turned off.
» The function of the Hill Start Control remains active.
» The Dynamic Brake Control function is also turned off when the ABS function is turned off.
» In the RACE PRO riding modes, the ABS function remains turned off even after the ignition is turned off and back on again.

- More detailed information about brake systems with BMW Motorrad Integral ABS can be found in the chapter "Technology in detail":

» Partially integral brake (➠ 154)

» Hill Start Control function (➠ 167)
» Dynamic Brake Control function (➠ 163)

Turning on ABS function



- Press and hold the button **1** for at least 3 seconds.

ABS extinguishes, and if self-diagnosis has not been completed, it begins to blink.

» The ABS function is turned on.

- If no RACE PRO riding mode is activated in the Riding mode preselection menu, then the ABS is also activated when the ignition is turned off and back on.

If the ABS indicator and warning light lights up after turning the ignition off and on and then continuing to ride above the minimum speed, a ABS fault has occurred.

min 6 mph (min 10 km/h)

SHIFT PATTERN REVERSAL

Shift pattern for racing mode

For the racing mode, the shift pattern can be reversed by modifying the gearshift rod. Shift pattern reversal means that the gearshift lever must be actuated upward for 1st gear and downward for all other gears. This is the opposite of operation on public roads.

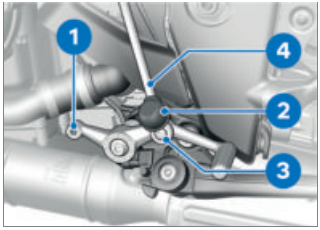
Reversing shift pattern

ATTENTION

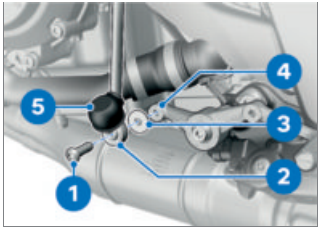
Riding with shift pattern reversal on public roads

Expiry of operating license for public roads

- Do not use shift pattern reversal on public roads.



- Clean the thread **1**.
- Detach the protective cap **2** and slide it on the gearshift rod **4**.
- Remove the screw **3** with washer.
- Transfer the gearshift rod **4** to the thread for the shift pattern reversal **1**.



- Insert the screw **1** through the ball joint **2** and washer **3**.
- Install the screw **1** in the thread for the shift pattern reversal **4**.

Gearshift rod on gearshift lever
M6 x 20

Gearshift rod on gearshift lever
Thread-locking compound: micro-encapsulated
6 lb/ft (8 Nm)

- Slide on the protective cap **5**.

» The shift pattern reversal for racing mode is set up.

MIRRORS

Removing mirrors

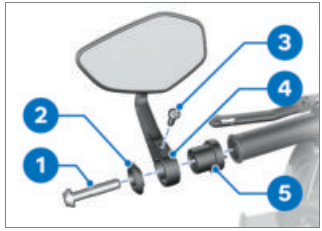
ATTENTION

Removal of the mirrors

Expiration of operating license for public roads

- Do not ride on public roads without the mirrors.

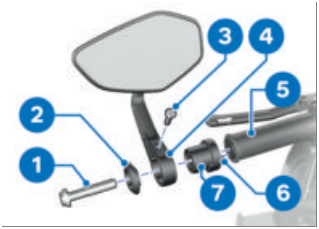
The work steps described here for the left mirror also logically apply to the right mirror.



- Remove the screw **1** and the cover cap **2**.

- Loosen the screw **3**, and remove the left mirror **4**.
- Remove the **5** decoupling element.

Installing mirrors



- Attach the decoupling element **7** to the handlebars **5**; when doing so pay attention to the retaining lug **6**.
- Push on the left mirror **4** and tighten the screw **3**.

Mirror on decoupling element
M5 × 20
Thread-locking compound: micro-encapsulated
2 lb/ft (2.5 Nm)

- Attach the cover cap **2**, and install the screw **1**.

Mirror on handlebars
M10 × 60
28 lb/ft (38 Nm)

- Adjust the mirrors. (➠ 100)

DATA RECORDING AND 2D SOFTWARE

–with M GPS-Laptrigger OE

Data recording and 2D software

You will find all the necessary information and support for dealing with the 2D software as well as for reading out and evaluating the recorded riding data at:
2d-datarecording.com/en/m-gps-laptrigger.

TECHNOLOGY IN DETAIL

09

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DYNAMIC DAMPING CONTROL (DDC) 160
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TIRE PRESSURE MONITOR (RDC) 164
GEAR SHIFT ASSISTANT 166
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ADAPTIVE HEADLIGHT 168

GENERAL NOTES

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

ANTILOCK 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.

ATTENTION

Attempt at a Burn-out despite integral function

Damage to rear wheel brake and clutch

- A Burn-out may occur only when the vehicle starts from a standstill. A Burn-out is not within the scope of the vehicle's intended use and can therefore result in fault memory entries.

How does ABS work?

The maximum braking force that can be transferred to the road is partially dependent on the coefficient of friction of the road surface. Gravel, ice, snow and wet roads offer a considerably lower coefficient of friction than a dry, clean asphalt surface. The poorer the coefficient of friction of the road is, the longer the braking distance will be.

If the maximum transferable braking force is exceeded when the rider increases the brake pressure, the wheels begin to lock and riding stability is lost, and a fall can result. Before this situation occurs, ABS is activated and the brake pressure is adjusted to the maximum transferable braking force. This enables the wheels to continue to turn and maintains riding stability regardless of the road condition.

What happens when rough roads are encountered?

Bumpy or rough roads can briefly lead to a loss of contact between the tires and the road surface, until the transferable braking force is reduced to zero. If braking is carried

out in this situation, ABS must reduce the brake pressure to ensure riding stability when restoring contact with the road. At this point in time, the ABS must assume extremely low coefficients of friction (gravel, ice, snow) so that the running wheels turn in every imaginable case and the driving stability is ensured. After detecting the actual conditions, the system adjusts the optimum brake pressure.

In what ways is the BMW Motorrad ABS Pro noticeable to the rider?

If the ABS system must reduce the braking force due to the conditions described above, then vibrations can be felt through the brake lever. If the brake lever is pulled, then braking pressure is also built up at the rear wheel with the integral function. If the footbrake lever is first actuated after this, the brake pressure built up previously can be felt earlier as a counter pressure 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 ABS cannot prevent the rear wheel from lifting off the ground. In these cases, the motorcycle can also flip end over end.

WARNING

Lifting off of the rear wheel due to heavy braking

Accident hazard

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

What are the design features of the ABS?

The ABS ensures riding stability on any surface within the limits of riding physics. The system is not optimized for special requirements resulting under extreme weather conditions on the racetrack. Handling should be adapted to riding skills and road conditions.

Special situations

To detect the tendency of the wheels to lock up, the speeds of the front and rear wheel are compared. If the system registers implausible values for an extended period of time, it will switch off the ABS as safety precaution and a display will alert you to an ABS error. A self-diagnosis must be completed before the fault message can be displayed.

In addition to problems at the BMW Motorrad ABS Pro, unusual riding conditions can also result in a fault message. Should a fault memory entry occur due to an unusual riding condition, the ABS function can be reactivated by turning the ignition off and then on again.

Unusual riding conditions:

– Warming up the engine on an auxiliary stand in neutral or with gear engaged.
– Rear wheel locked-up for a longer period of time by engine brake, e.g. when riding down steep hills.

How important is regular preventive maintenance?

WARNING

Failure to have maintenance performed on the brake system regularly.

Accident hazard

- To ensure that the ABS is in a properly maintained condition, it is vital that the specified service intervals be observed.

Reserves for safety

The potentially shorter braking distances which ABS permits must not be used as an excuse for a careless driving 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.

ABS Pro

ABS Pro increases safety, particularly for braking processes 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 occurrence of inadvertent lift-off of the vehicle.

ABS control

From a technical standpoint, ABS Pro adjusts the ABS control to the angle of inclination of the motorcycle based on the respective riding situation. Signals for the roll and yaw rate and the lateral acceleration are used to determine the inclination of the vehicle. The signals come from the angular rate sensor, which is already used for Dynamic Traction Control (DTC).

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

Advantages for the rider

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

ABS Pro is activated in all riding modes. In the RACE PRO riding mode, ABS Pro can be set individually.

Brake Slide Assist

Brake Slide Assist is an extension of the BMW Motorrad ABS Pro and is conceived of as a rider assistance system for operation with slick tires on racetracks.

During sharp deceleration due to the front and rear wheel brakes, Brake Slide Assist calculates the current drift angle, taking into account the wheel centrifugal velocities, steering angle and lean angle.

If the drift angle exceeds a limit calculated by Brake Slide Assist, the slip is reduced and the motorcycle is stabilized through the limitation of the brake pressure on the rear wheel and intervention of the engine drag torque control.

In the stability limit of the riding physics, both the rider and

external factors such as road conditions and chassis and suspension adjustments have a significant impact on the control options of the Brake Slide Assist.

DYNAMIC TRACTION CONTROL (DTC)

How does traction control work?

The traction control compares the wheel centrifugal velocities of the front and rear wheels. The slip, and with it the stability reserves at the rear wheel, are determined from the speed difference. The engine control adapts the engine torque when the slip limit is exceeded.
DTC takes the angle of inclination of the vehicle into account, conveniently adjusts and is suitable for improving the lap times on the racetrack.
The DTC can only provide support within the physical limits. The physical limits depend heavily on the road surface, road temperatures, tire selection and tire temperature. If unsuitable tires are used, there is a risk of overheating on racetracks.

WARNING

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

Special situations

As the angle of inclination increases, the capacity to accelerate is more and more limited in accordance with the laws of physics. This can result in reduced acceleration when coming out of very tight curves.

To detect spinning or slipping away of the rear wheel, the DTC compares the speeds of the front and rear wheel and takes the angle of inclination and other factors into account.

If the values for the angle of inclination are detected to be implausible for a long period, a substitute value is used for the angle of inclination/the DTC is turned off. In these cases, a DTC fault is displayed. A self-diagnosis must be completed

before the fault message can be displayed.
Under the following unusual riding conditions, 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.

ENGINE DRAG TORQUE CONTROL

How does engine drag torque control work?

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

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

Like the DTC traction control, the dynamic engine brake control compares the wheel circumferential velocities of the front and rear wheel. With the aid of more information on the angle, the dynamic engine brake control can determine the slip or the stability reserve at the rear wheel.
If the slip exceeds the respective limit value, the engine torque is increased by slightly opening the throttle valves. The slip is reduced, and the vehicle is stabilized.

DYNAMIC DAMPING CONTROL (DDC)

How does DDC work?

Dynamic Damping Control (DDC) is a semi-active running gear system that automatically responds to riding maneuvers and to the road condition. Using a ride height sensor, DDC detects movements of the running gear and responds to them by adjusting the damper valves. As a result, the suspension is adjusted to the conditions of the ground surface.

Possible settings

Depending on the selected riding mode, DDC is preset to a suitable setting. The following settings are available for adapting the running gear to the desired driving experience:

Damping modes

–Road: Damping for comfortable road travel (default setting in the RAIN and ROAD riding modes)
–Dynamic: Damping for dynamic road travel (default setting in the DYNAMIC riding mode)
–Race: Damping for racetrack riding (default setting in the RACE riding mode)

The damping values for the front wheel and rear wheel can additionally be adjusted in 14 stages in the RACE PRO CONFIGURATION menu (stage 1: "softest" setting; stage 14: "hardest" setting). On the rear wheel, compression stage and rebound stage can be separately adjusted.
In order to separately adjust the damping values on the front wheel according to rebound and compression stage, a spring travel sensor (racing accessory) must be installed on the front forks.

Load settings

In the damping modes Road and Dynamic, the running gear can also be adjusted to the vehicle load. The following settings are available:
–One-up
–Two-up mode (with luggage)

RIDING MODE

Selection

To adjust the motorcycle to the road condition and the desired riding experience, you can select from the following riding modes:
–RAIN
–ROAD
–DYNAMIC
–RACE
–RACE PRO 1
–RACE PRO 2
–RACE PRO 3

The riding mode preselection can be used to select a maximum of four riding modes.

For each riding mode, a coordinated setting is available for the following systems: Engine, Engine Brake, DTC, Wheelie (DTC), ABS, and DDC.

In the RACE PRO riding modes, the settings for the Engine, Engine Brake, Traction (DTC), Wheelie (DTC), ABS and DDC systems can be adjusted individually.

Torque and throttle response
–In RAIN riding mode: soft throttle response, reduced torque in low gears.
–In the ROAD and DYNAMIC riding modes: optimum throttle response, reduced torque in low gears.
–In RACE riding mode: optimum throttle response, maximum torque.
–In the RACE PRO riding modes, additionally: soft or direct throttle response, maximum torque.

Braking effect of the engine and engine drag torque control
–In the RAIN and ROAD riding modes: maximum braking effect of the engine. Maximum stability.
–In the DYNAMIC and RACE riding modes: reduced braking effect of the engine. High stability.
–In the RACE PRO riding modes, additionally: minimum braking effect of the engine. Reduced stability.

Traction control (DTC)

–In RAIN riding mode: Maximum stability on wet roads. Acceleration may be reduced on dry roads.
–In ROAD riding mode: High stability on dry roads. Acceleration may be slightly reduced on dry roads.
–In DYNAMIC riding mode: High performance on dry roads. In poor road conditions, optimum stability cannot be guaranteed.
–In RACE riding mode: Maximum performance. Stability may be impaired on poorly surfaced roads or if unsuitable tires, such as touring tires, are used.

For optimum performance, the traction control can be finely adjusted while the vehicle is in the RACE PRO riding modes using the DTC rocker button.

Wheelie (DTC) – front wheel lifts off the road

–In RAIN riding mode: Maximum stability. Wheelie suppression is attempted.
–In the ROAD, DYNAMIC and RACE riding modes: flat Wheelie is possible, optimum drive power.
–In the RACE PRO riding modes with setting 1: high Wheelie is possible. The rider has to brake the rear wheel manually to prevent the Wheelie. The system intervenes late.
–In the RACE PRO riding modes with setting 0: The system is deactivated.

ABS

–In the RAIN, ROAD, and DYNAMIC riding modes, the rear-wheel lift-off detection is active.
–In the RAIN, ROAD and DYNAMIC riding modes, the ABS is set for road use.
–In the RACE riding mode, the ABS is tailored to racetrack operation with slick tires. The rear-wheel lift-off detection allows high stoppies.
–In the RACE PRO riding modes: The click-in point of the ABS can be individually adjusted.

Brake Slide Assist

–In RAIN, ROAD and DYNAMIC riding modes: Brake Slide Assist is deactivated. Maximum stability when braking into a curve.
–In the RACE and RACE PRO riding modes with setting 2:

maximum performance. Drifts when braking into a curve are possible.
– In the RACE PRO riding modes with setting 1: Brake Slide Assist is inactive. The rear wheel can lock up during hard braking processes.

Dynamic Damping Control (DDC)
– In the RAIN and ROAD riding modes: Damper characteristics are set for comfortable riding.
– In DYNAMIC riding mode: Damper characteristics are set for sporty riding.
– In RACE riding mode: Damper characteristics are set for riding on a racetrack.
– In the RACE PRO riding modes: The damper characteristics can be set individually.

Switchover

Riding modes can be changed when the vehicle is at a standstill with the ignition turned 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.

DYNAMIC BRAKE CONTROL

Dynamic Brake Control function

The Dynamic Brake Control function is active in all riding modes. It can only be deactivated in the RACE PRO riding modes by individually adjusting the ABS.

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

Detection of emergency braking

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

Behavior during emergency braking

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

–In the event of partial braking with high brake pressure gradients, Dynamic Brake Control will increase the integral brake pressure on the rear wheel. This shortens the braking distance, enabling controlled braking.

Behavior in the event of accidental activation of the throttle grip

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

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

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

When the ABS is turned off, the Dynamic Brake Control function is turned off at the same time.

TIRE PRESSURE MONITOR (RDC)

Function

A sensor located in each tire monitors the air temperature and the tire pressure and transmits this information to the control unit.

The sensors are equipped with a centrifugal controller, which does not enable the transmission of the measured values until the minimum speed is exceeded for the first time.

 Minimum speed for the transmission of the TPC measured values:
min 19 mph (min 30 km/h)

Before initial reception of the tire pressure, -- is shown in the display for each tire. The sensors continue to transmit the measured values for some time after the vehicle comes to a stop.

 Transmission time of the measured values after vehicle standstill:
min 15 min

If an RDC 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 pressure is temperature-dependent: it increases or decreases together with the tire air temperature. The tire temperature is dependent on the outside temperature, the riding style and the length of the journey.

The tire pressures are shown in the multifunction display with temperature compensation and are always based on a tire air temperature of 68 °F (20 °C). Tire pressure gauges at filling stations do not compensate for temperature; the tire pressure that is measured depends on the tire air temperature. As a result, in most cases the values displayed there do not match the values shown in the instrument cluster.

Tire pressure adjustment

Compare the RDC value in the instrument cluster with the value on the back cover of the rider's manual. The difference between the two values must be compensated with the tire pressure gauge at the filling station.

Example
According to the rider's manual, the tire pressure should have the following value:
36.3 psi (2.5 bar)
The following value is indicated in the display:
33.4 psi (2.3 bar)
The shortfall is thus:
2.9 psi (0.2 bar)
The tester at the filling station shows:
34.8 psi (2.4 bar)
To produce the correct tire pressure, this must be increased to the following value:
37.7 psi (2.6 bar)

GEAR SHIFT ASSISTANT

Gear Shift Assistant Pro

Your motorcycle is equipped with the Gear Shift Assistant originally developed for racing but now specially adapted for use in public highway traffic. 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 shifts can be performed without using the clutch.
- Less movement between rider and passenger due to shorter gear-change intervals.
- Throttle valve does not have to be closed when changing gear under acceleration.
- During deceleration and downshifts (throttle plate closed) the system blips the throttle valve to obtain the correct engine speed.
- Shifting times are faster than when the clutch is used to shift gears.

For the system to detect the rider's intention to change gear, the gear 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 gearshift lever must be fully released before the

Pro Gear Shift Assistant can execute a new gear change. When shifting gears using the Gear Shift Assistant Pro, the load condition (throttle grip position) must remain constant both prior to and during the gear shift. Changing the accelerator twist-grip position during the gear-shift sequence may cause the function to abort and/or the gear change to fail. The Gear Shift Assistant Pro does not provide support when gear shifts are made with clutch control.

Downshifts

– Downshifts are assisted up to the speed at which the engine reaches maximum rpm in the gear to be engaged. Over-revving is thus prevented.

 Maximum engine speed
max 14600 min^{-1}

Upshifts

– Upshifting is supported until the idling speed is reached in the required gear.
– The engine speed is thus prevented from dropping below idle speed.

 Idle speed
$1270^{\pm 50}$ min^{-1} (Engine at operating temperature)

HILL START CONTROL

Hill Start Control function

The Hill Start Control drive-off assistant function prevents uncontrolled rolling back on slopes by means of targeted intervention in the partial integral ABS brake system, without the rider having to operate the brake lever continuously. When Hill Start Control is activated, pressure builds in the rear brake system so that the motorcycle remains stationary on a sloping surface. The brake pressure in the brake system depends on the gradient.

Influence of gradient on brake pressure and starting behavior

– Stopping on a slight incline builds up only a small amount of brake pressure. The brake is released quickly when riding off, making it possible to ride off more smoothly. Additional turning of the throttle grip is hardly required.
– Stopping on a steeper slope increases the amount of brake

pressure built up. The brake is a bit slower to release when riding off. More torque is required to ride off, making additional turning of the throttle grip necessary.

Behavior when the vehicle is rolling back or slipping

- The brake pressure increases when the vehicle is rolling back with the Hill Start Control activated.
- If the rear wheel slips, the brake is released again after approx. 3.3 ft (approx. 1 m). This prevents the vehicle from slipping with a locked rear wheel, for example.

Hill Start Control Pro

It is possible to automatically activate the holding function using Hill Start Control Pro.

Releasing the brake when switching off the engine or during timeout

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

In addition to indicator and warning lights, the following vehicle behavior should make the rider aware that the Hill Start Control is deactivated:

Brake warning jerk

- The brake is released briefly and is immediately reactivated.
- This causes a jerking behavior that the rider can feel.
- The partial integral ABS brake system sets a speed of approx. 1 mph (approx. 1...2 km/h).
- The rider must brake the vehicle manually.
- After two minutes, or when the brake is applied, the cruise control is deactivated completely.

When the ignition is switched off, the holding pressure is built up immediately and without brake warning jerk.

ADAPTIVE HEADLIGHT

Function

In addition to the low beams, high beams and daytime running lights or parking lights, the headlight is equipped with separate LED elements with their own reflectors. Depending on the angle, the LED elements are also switched on for the low beams in order to improve

the illumination of the interior range of the curve. The adaptive headlights are optimized for slight to moderate lean angles.

The adaptive headlights are activated under the following conditions:

– Riding at slight to moderate lean angle.
– The speed is min 6 mph (min 10 km/h).
– The low beams are switched on.

MAINTENANCE

10

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GENERAL NOTES

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

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

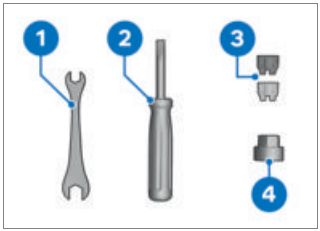
Microencapsulated screws

The microencapsulation is a chemical threadlocker. An adhesive is used to create a solid connection between screw and nut or component. Microencapsulated screws, therefore, are suitable for single use only. Regardless of the removal or installation, the hole must always be cleaned. After removal, the internal thread must be cleaned to remove adhesive. During installation, a new microencapsulated screw must be used. 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!

Disposable cable ties

Occasionally cables and wires are secured with disposable cable ties. To prevent cables and wires from getting damaged during removal, a suitable tool must be used, e.g. diagonal cutting pliers.
For reinstallation, cables and wires that were cut free must be secured with new disposable cable ties.
Protrusions should be cut off with cable tie pliers.

ONBOARD VEHICLE TOOL KIT



1 Open-ended wrench
Key range: 10/13 mm
–Removing the battery (➠ 205).
–Adjust the spring preload on the front wheel. (➠ 105)
–Adjust the spring preload at the rear wheel. (➠ 106)
–Adjust chain sag. (➠ 194)

2 Reversible screwdriver insert
Slotted blade and T25 torx
–Remove the rider`s seat. (➠ 96)

3 Spare fuses
Miniature fuses, 7.5 A and 15 A

4 Plastic top part
–Adjust the spring preload on the front wheel. (➠ 105)

FRONT WHEEL STAND

Installing 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.

- Ensure that the motorcycle is standing securely.
- Put the motorcycle on an auxiliary stand; BMW Motorrad recommends the BMW Motorrad rear-wheel stand.
- Mount the rear-wheel stand. (➠ 174)



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

REAR-WHEEL STAND

Installing rear-wheel stand



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

ENGINE OIL

Checking the engine oil level

ATTENTION

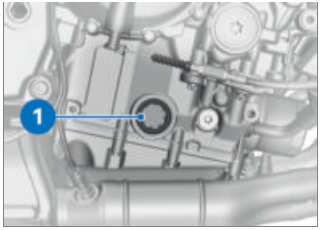
Misinterpretation of the oil filling quantity, as the oil level is temperature-dependent (the higher the temperature, the higher the oil level)

Engine damage

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

- Run the engine in Neutral for one minute.
- Turn off the ignition.
- Wait five minutes to allow oil to drain into the oil pan.

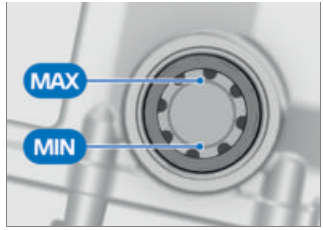
BMW Motorrad recommends occasionally checking the engine oil after a journey of min 31 miles (min 50 km) in order to reduce the environmental impact.



ATTENTION

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

- Hold the motorcycle upright, making sure that the ground is firm and level.
- Read oil level on the display **1**.



Specified level of engine oil	
Between the **MIN** and **MAX** marks	

If the oil level is below the **MIN** mark:
- Top up engine oil. (➠ 175)

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

Topping up the engine oil
- Park the motorcycle, making sure the ground is level and firm.
- Clean the area around the oil filler opening.



- Remove cap **1** of oil filler opening.

ATTENTION

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

- Top up the engine oil to the specified level.

Engine oil, top-up quantity
max 1.4 quarts (max 1.3 l) (Difference between **MIN** and **MAX**)

- Check engine oil level. (➠ 174)
- Install cap of oil filler opening **1**.

BRAKE SYSTEM

Checking brake function

- Actuate brake lever.
» The pressure point must be clearly perceptible.
- Press the footbrake lever.
» The pressure point must be clearly perceptible.

If resistance points are not clearly perceptible:

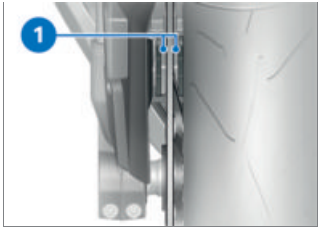
ATTENTION

Improper working on the brake system
Endangering of the operating safety of the brake system
- Have all work on the brake system carried out by experts.

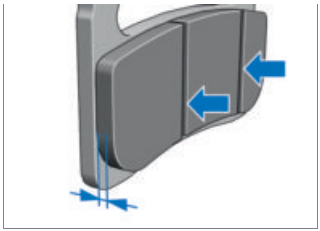
- Have the brakes checked by a specialist workshop, preferably an authorized BMW Motorrad retailer.

Checking the front brake pad thickness

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



- Visually inspect the left and right brake pads to ascertain their thickness. Direction of view: from front, looking at brake pads **1**.



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

If brake pads are worn:

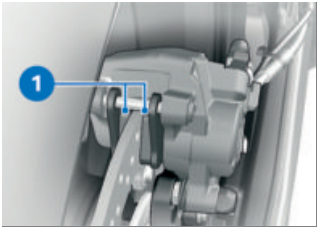
WARNING

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

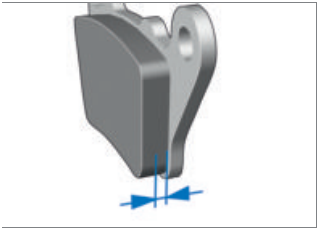
- Have brake pads renewed at a repair shop, preferably an authorized BMW Motorrad retailer.

Checking the rear brake pad thickness

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



- Conduct a visual inspection of the brake pad thickness. Direction of view: from rear, looking at brake pads **1**.



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

If brake pads are worn:

WARNING

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

- Have brake pads renewed at a repair shop, preferably an authorized BMW Motorrad retailer.

Checking the front brake fluid level

- Hold the motorcycle upright, making sure that the ground is firm and level.
- Align the handlebars so that the brake fluid reservoir is positioned horizontally.



- 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)

If the brake fluid level falls below the approved level:

WARNING

Insufficient or contaminated brake fluid in the brake fluid reservoir

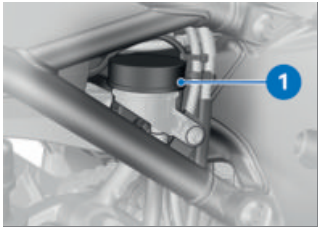
Considerably reduced braking power caused by air, dirt or water in the brake system

- 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.

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

Checking the rear brake fluid level

- Hold the motorcycle upright, making sure that the ground is firm and level.



ATTENTION

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

- Check the brake fluid level at the brake fluid reservoir for rear wheel brake **1**.

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



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

If the brake fluid level falls below the approved 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.

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

CLUTCH

Checking the clutch function

- Pull the clutch lever.

» A rising force must be perceptible upon increasing operation.

If no rising force can be felt upon increasing operation:

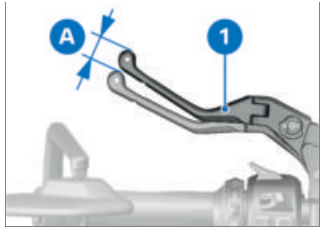
- Have the clutch checked by a specialist workshop, preferably an authorized BMW Motorrad retailer.

Checking clutch lever play

Requirement

The engine is cold.

- Park the motorcycle, making sure the ground is level and firm.
- Move the handlebars to the straight-ahead position.



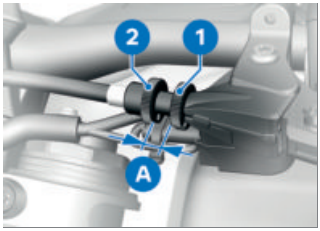
- Actuate clutch lever **1** several times until it touches the handle.
- Actuate clutch lever **1** slightly until you can feel resistance while observing the free play of the clutch pedal **A**.

Clutch lever play
0.12...0.2 in (3...5 mm) (measured along the outside of the clutch lever, handlebars in the straight-ahead position, when the engine is cold)

If the clutch pedal free play is outside of tolerance:

- Adjust clutch pedal free play. (➠ 182)

Adjusting clutch pedal free play



- Loosen lock nut **1**.
- To increase clutch pedal free play: Turn the adjustment screw **2** into the handlebar fitting.

» Distance **A** is reduced.

- To reduce clutch pedal free play: Turn the adjustment screw **2** out of the handlebar fitting.

» Distance **A** is increased.

- Observe distance **A** between the adjustment screw and handlebar fitting.

If the clutch pedal free play cannot be set within the specified clearances, contact a repair shop, preferably an authorized BMW Motorrad retailer.

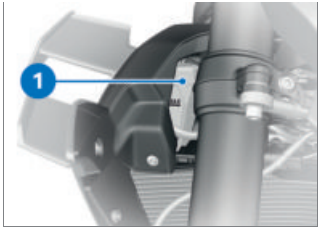
Distance between adjustment screw and handlebar fitting (adjustment of the clutch cable)
$0.31^{\pm 0.06}$ in ($8^{\pm 1.5}$ mm)

- Check clutch lever play. (➠ 181)
- Tighten lock nut **1**; hold down adjustment screw **2** while doing so.

COOLANT

Checking the coolant level

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



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



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

If the coolant level drops below the permitted level:

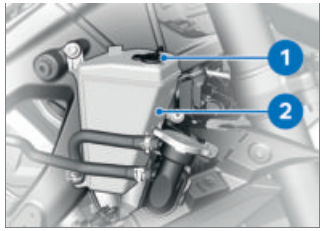
- Top up coolant.

Topping up coolant

WARNING

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

- Remove fairing side panel. (➠ 197)



- Open cap **1** of expansion tank **2**.
- Top up coolant to specified level.

Coolant top-up quantity
0.2 quarts (0.15 l) (Difference between **MIN** and **MAX**)
2.5 quarts (2.4 l) (Entire coolant circuit)
FROSTOX HT-12 (Coolant)

- Check the coolant level. (➠ 182)
- Close cap **1** of expansion tank **2**.
- Install fairing side panel. (➠ 198)

TIRES

Checking tire pressure

WARNING

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

WARNING

Valve inserts open of their own accord at high speeds
Sudden loss of tire inflation pressure
- Use valve caps with rubber sealing ring and screw on firmly.

- Park the motorcycle, making sure the ground is level and firm.
- Check tire pressure against data below.

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

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

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

Checking tire tread depth

WARNING

Riding with heavily worn tyres
Risk of accident due to poorer rideability
- If necessary, replace the tyres before the legally specified minimum tread depth is reached.

- Park the motorcycle, making sure the ground is level and firm.
- Measure tire tread depth in main tread grooves with wear marks.

Wear marks are integrated into the main grooves on every tire. If the tire tread has worn down to the

level of the marks, the tire is completely worn. The locations of the marks are indicated on the edge of the tire, e.g. by the letters TI, TWI or by an arrow.

When the minimum tread depth is reached:

- Replace the worn tire.

RIMS

Checking rims

- Park the motorcycle, making sure the ground is level and firm.
- Visually inspect rims for defects.

WARNING

Unnoticed structural damage

Risk of accident

- Have the carbon wheels checked by a specialist workshop, preferably an authorized BMW Motorrad retailer, after a fall or a significant impact (e.g. riding through a pothole).

- Have damaged rims checked and, if necessary, renewed by a repair shop, preferably an authorized BMW Motorrad retailer.

WHEELS

Effect of wheel sizes on suspension control systems

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

The sensor rings required for wheel speed detection must also match the installed control systems and must not be replaced.

If you want to convert your motorcycle to different wheels, please contact a specialist workshop, preferably a BMW Motorrad retailer. In some cases the data stored in the control units must be adapted to the new wheel sizes.

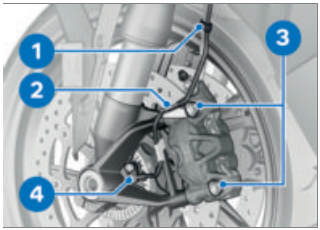
Removing the front wheel

- Put the motorcycle on an auxiliary stand; BMW Motorrad recommends the BMW Motorrad rear-wheel stand.
- Mount the rear-wheel stand. (➠ 174)

ATTENTION

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

- Mask off areas of the wheel rim that could get scratched in the process of removing the brake calipers.

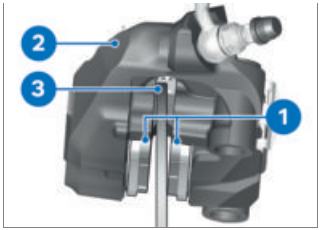


- Detach wheel speed sensor cable from holding clips **1** and **2**.
- Remove the screw **4** and remove the wheel speed sensor from the drilled hole.

ATTENTION

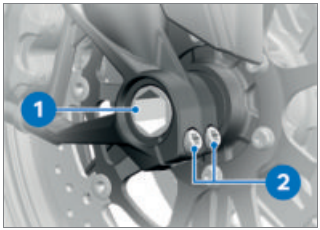
Unintentional pressing together of brake pads
Component damage when mounting the brake caliper or when pressing the brake pads apart
- Do not actuate the brakes with the brake caliper removed.

- Remove the mounting bolts **3** of the left and right brake calipers.



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

- Raise the front of motorcycle, preferably using a BMW Motorrad front wheel stand, until the front wheel rotates freely.
- Mount the front wheel stand. (➠ 173)



ATTENTION

Incorrect spacing between the sensor ring and wheel speed sensor caused by poorly aligned threaded bushing in the front suspension

Damage to the wheel speed sensor. ABS malfunction

- The left clamp fixes the threaded bushing in position and must not be loosened or removed.

- Loosen clamping bolts **2**.
- Remove the quick-release axle **1** while supporting the wheel.
- Roll the front wheel forward to remove it.

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

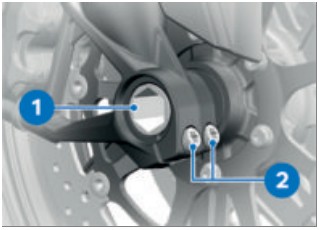
Damage or loosening of screwed connections

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

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.



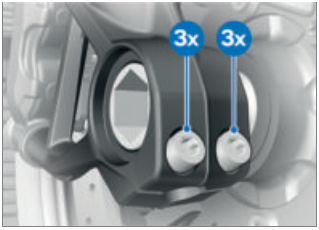
- Lubricate the quick-release axle **1**.

Lubricant
Optimoly TA

- Lift the front wheel and install the quick-release axle **1** using an appropriate torque.

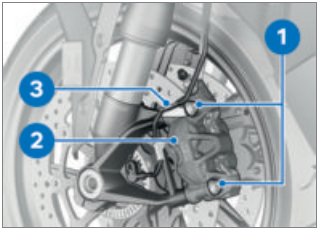
Quick-release axle in threaded bush
M24 x 1.5
37 lb/ft (50 Nm)

- Tighten the clamping bolts **2** to the specified torque.



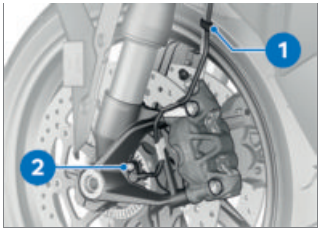
Clamping bolts in subframe
Tightening sequence: Tighten the screws 6 times, alternating between one and the other each time
M8 x 35
14 lb/ft (19 Nm)

- Set the brake calipers onto the brake discs.



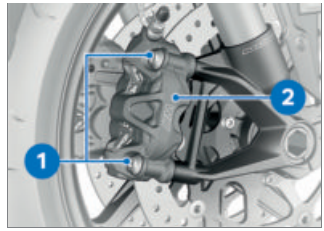
- Position the brake caliper **2** on the left and position the cable routing **3**.
- Install the screws **1** with the appropriate torque.

Radial brake calipers on the axle adapter
M10 x 65
28 lb/ft (38 Nm)



- Fasten the cable for the wheel speed sensor in the holder **1**.
- Insert the wheel speed sensor into the bore and fasten with the new screw **2**.

Wheel speed sensor at the front of forkleg
M6 x 16
Thread-locking compound: micro-encapsulated
6 lb/ft (8 Nm)



- Position the brake caliper **2** on the right and install the screws **1** with the appropriate torque.

Radial brake calipers on the axle adapter
M10 x 65
28 lb/ft (38 Nm)

- Remove adhesive tape from wheel rim.

WARNING

Brake pads do not contact the brake disc

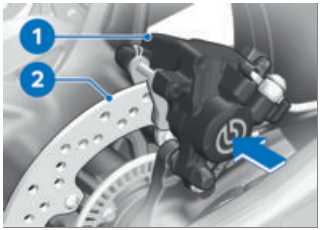
Risk of accident due to delayed braking effect.

- Before driving off, check that the braking effect kicks in without any delay.

- Operate the brake lever firmly several times until the resistance point is felt.
- Remove front wheel stand and auxiliary stand.

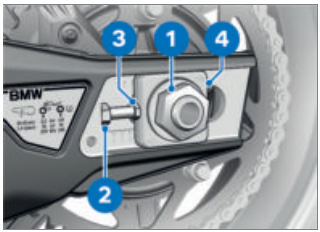
Removing the rear wheel

- Raise motorcycle, preferably using a BMW Motorrad rear-wheel stand.
- Mount the rear-wheel stand. (➠ 174)
- Support the rear wheel, e.g. with a wooden block, so that it cannot fall down after the quick-release axle is removed.

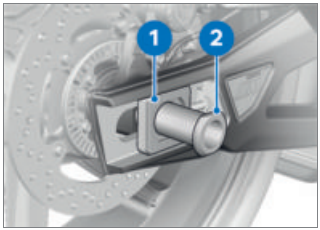


- Press the brake caliper **1** against the brake disk **2**.

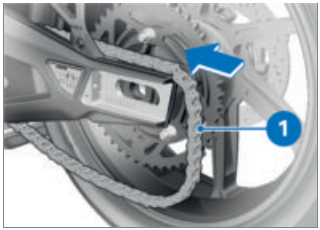
» Brake pistons are pressed back.



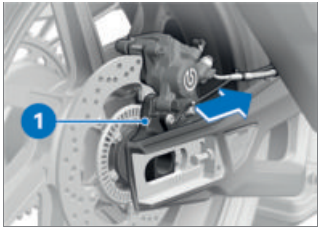
- Remove the axle nut **1** with washer.
- Loosen the lock nuts **2** on the left and right.
- Loosen the adjustment screws **3** on the left and right.
- To slacken the drive chain, remove the adjustment plate **4** and slide axle as far forward as possible.



- Remove the quick-release axle **2** and take out the adjustment plate **1**.



- Roll the rear wheel as far forward as possible and remove the drive chain **1** from the camshaft sprocket.



- Pull out the brake-caliper support **1** to the front and set it to the side.
- Roll the rear wheel toward rear and out of the rocker.

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

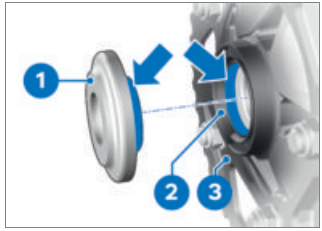
Installing the rear wheel

ATTENTION

Altering the tire size
Influence on the control systems
- Have new parameters encoded by a specialist workshop, preferably by an authorized BMW Motorrad retailer.

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.



- Clean dirt and old lubricant off the spacer bushing **1** and radial shaft seal **2** on the chain sprocket carrier **3**.
- Lubricate the spacer bushing **1** and radial shaft seal **2** on the surfaces marked with **arrows**.

Lubricant
Unirex N3



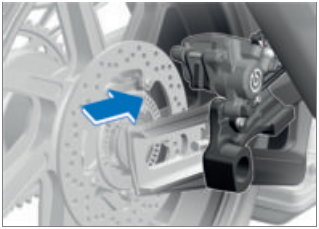
- Check judder damper elements **2** for damage, deformation and wear, replace as appropriate.

After the judder damper elements are renewed, the adaptation values must be reset with the BMW Motorrad diagnostic system. Please contact a repair shop, preferably an authorized BMW Motorrad retailer.

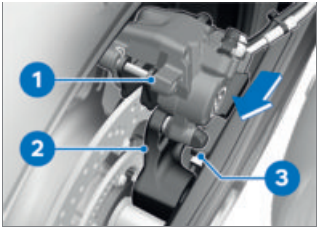
- Lubricate judder damper elements **2** and install them.

Installation aid
Silicone spray

- Install chain sprocket carrier **1**.

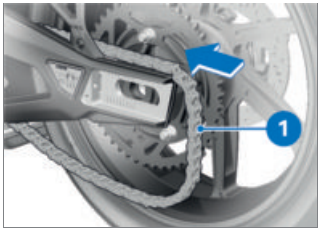


- Roll the rear wheel on the support into the swinging arm.

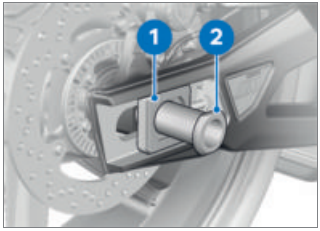


- Insert the brake caliper **1** with brake-caliper support **2** into the guide **3** of the swinging arm.

Ensure that the brake line and ABS sensor cable are correctly positioned. The brake line and the ABS sensor cable must fit in their guides in order to prevent contact with the rear wheel or exhaust system.



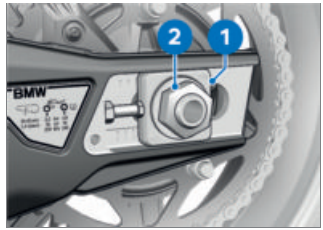
- Roll the rear wheel as far forward as possible and lay the drive chain **1** on the camshaft sprocket.



- Insert the right-hand adjustment plate **1** into the swinging arm.
- Lubricate the quick-release axle **2**.

Lubricant
Optimoly TA

- Raise the rear wheel and install the quick-release axle **2** through the adjustment plate and into the brake caliper mounting bracket and rear wheel.
- Make sure that the quick-release axle meets the recess for mounting flats.



- Insert the left-hand adjustment plate **1**.
- Install the axle nut **2** with washer, but do not tighten it yet.
- Remove the rear-wheel stand.

WARNING

Brake pads do not contact the brake disc

Risk of accident due to delayed braking effect.

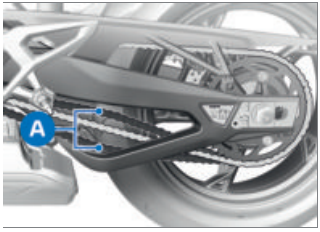
- Before driving off, check that the braking effect kicks in without any delay.

- Engage the brakes repeatedly until the brake pads make contact with the discs.
- Adjust chain sag. (➠ 194)

DRIVE CHAIN

Checking chain sag

- Push the motorcycle until the position with the lowest chain sag is reached.
- Park the motorcycle, making sure the ground is level and firm.



- With the help of a screwdriver, push the chain up and down in the center between the pinion and chain sprocket and measure the chain sag **A**.

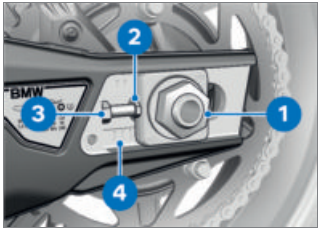
Chain sag
1.4...1.8 in (35...45 mm) (Motorcycle unloaded on side stand)

If the chain sag is outside the approved tolerance:

- Adjust chain sag. (➠ 194)

Adjusting chain sag

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



- Loosen quick-release axle nut **1**.
- Loosen the lock nuts **3** on the left and right.
- Adjust chain sag using adjustment screws **2** on left and right.

ATTENTION

The rear wheel is crooked due to uneven adjustment of the screws

Increased wear on the rear wheel and chain drive

- Make sure the toe setting is adjusted correctly (same scale value on both sides of the rear wheel swinging arm).

- Make sure that the same scale value **4** is set on the left and right.
- Check chain sag. (➠ 194)
- Tighten the lock nuts **3** on the left and right to the specified torque.

 Lock nut of the drive chain tensioning screw
M8
14 lb/ft (19 Nm)

- Tighten quick-release axle nut **1** to the specified torque.

 Rear-wheel quick-release axle in swinging arm
M24 x 1.5
Thread-locking compound: mechanical
92 lb/ft (125 Nm)

- Check chain sag. (➠ 194)

Caring for and lubricating the low-maintenance drive chain

ATTENTION

Insufficient cleaning and lubrication of the drive chain
Increased wear
- Clean and lubricate the drive chain regularly.

The low-maintenance drive chain is cleaned and lubricated in the course of the annual service interval. In the interest of an optimum service life, the low-maintenance chain can be additionally relubricated using a chain lubricant suitable for low-maintenance chains. Perform lubrication at shorter intervals if there is an above-average load from riding in salty, dusty or dirty conditions.

- Switch off ignition and engage Neutral.
- If necessary, place the motorcycle on an auxiliary stand; BMW Motorrad recommends the BMW Motorrad rear-wheel stand.
- Clean drive chain with suitable cleaning agent, dry and apply chain lubricant. To extend and maximize the chain's service life BMW Motorrad recommends using BMW Motorrad chain lubricant or:

 Lubricant
Chain spray, O-ring compatible

- Wipe off excess lubricant.

Checking drive chain for wear
Requirement

Chain sag is correctly adjusted.

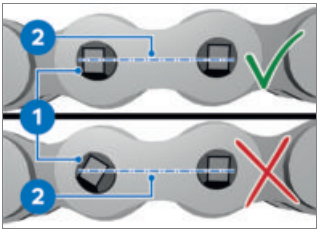
- Park the motorcycle, making sure the ground is level and firm.
- Engage 1st gear.
- Rotate the rear wheel in the riding direction until the drive chain is tensioned.
- Determine drive chain length below the rear wheel swinging arm above the center of 10 rivets at 3 different locations.



Permissible chain length
max 5.7 in (max 144 mm) (Measured over the **center** of 10 rivets, drive chain under tension)

If the drive chain has reached the maximum approved length:

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



- Check to see whether a rivet head **1** has rotated.

Rivet heads should be parallel to the centerline of the drive chain **2**.

- Riveting is OK.

If one or more rivet heads has rotated:

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

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.

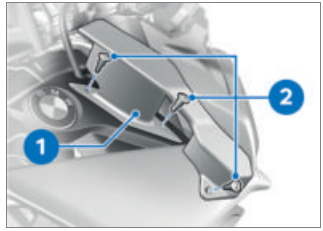
All light sources on the vehicle are LED light sources. The service life of the LED light sources is longer than the assumed service life of the vehicle. If an LED light source is faulty, please contact a repair shop, preferably an authorized BMW Motorrad retailer.

TRIM PANEL COMPONENTS

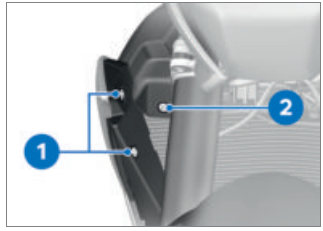
Removing fairing side panel

The work steps described here for the right side trim panel also logically apply to the left side.

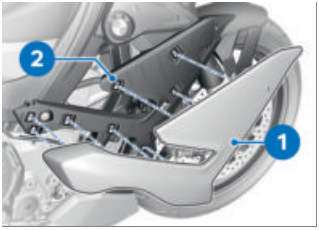
- Park the motorcycle, making sure the ground is level and firm.



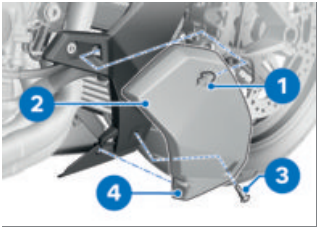
- Remove screws **2**.
- Remove the winglet **1**.



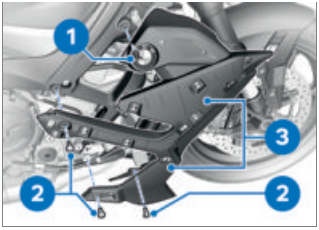
- Remove screws **1** (3 mm with collar).
- Remove screw **2** (25 mm without collar).



- Detach fairing panel **1** from fastening clips **2** and remove it.

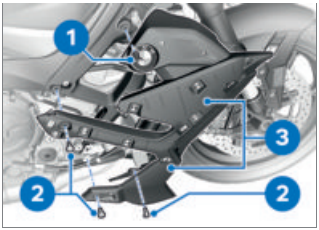


- Remove screw **3**.
- Remove engine spoiler **2** from fastening clip **4**.
- Take engine spoiler **2** off toward rear while paying attention to the hook **1**.

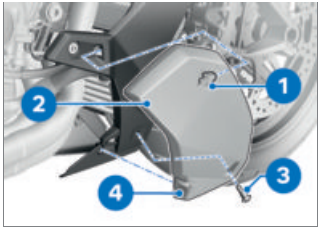


- Remove screws **2** (9 mm with collar).
- Loosen the fairing side panel **3** from the grommet **1** and remove it.

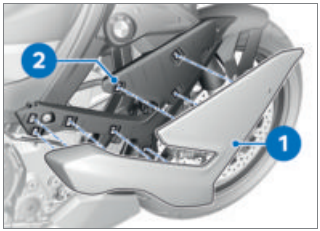
Installing fairing side panel



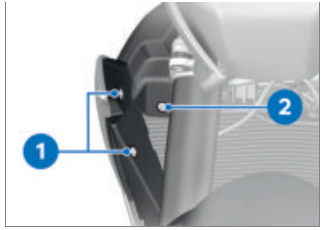
- Position the fairing side panel **3** and insert it into the grommet **1**.
- Install screws **2** (9 mm with collar).



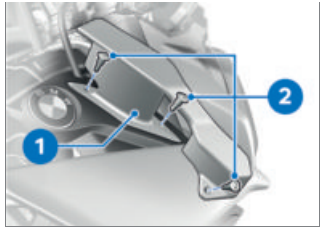
- Attach the engine spoiler **2**, paying attention to the hook **1**.
- Install the engine spoiler **2** in the fastening clip **4**.
- Install screw **3**.



- Position the fairing panel **1** and install it in the fastening clips **2**.



- Install screws **1** (3 mm with collar).
- Install screw **2** (25 mm without collar).



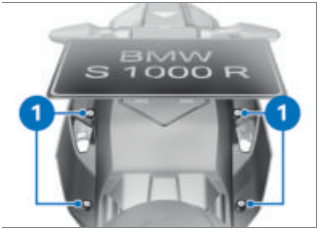
- Attach the winglet **1**.
- Install screws **2**.

	Winglet on trim
M5 × 20	
1 lb/ft (2 Nm)	

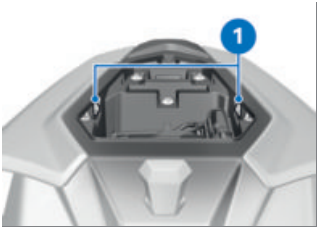
Removing the hump trim panel

–with passenger package OE

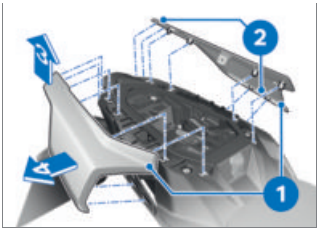
- Remove the rear seat. (➠ 96)
- Remove the hump cover. (➠ 95)
- Remove the rider`s seat. (➠ 96)



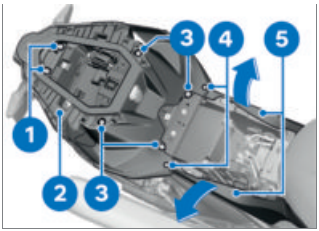
- Remove screws **1**.



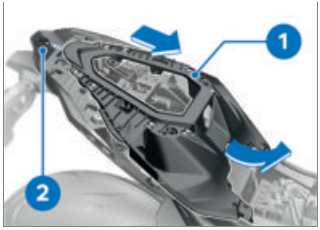
- Remove screws **1**.



- First unclip tail cowling **1** on the left and right vertically **3**; use caution. Then carefully detach the lugs **2** from the holder **4**.

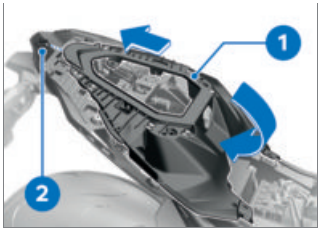


- Remove screws **3** (3 mm with collar).
- Remove screws **1** (6 mm with collar).
- Remove screws **4**.
- Carefully unclip the trim **5** in the **arrow direction** from the hump trim panel **2**.

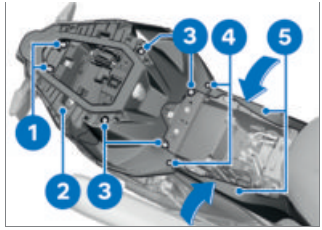


- Lift the hump trim panel **1** in the **arrow direction** and remove it from the retaining tab **2**.

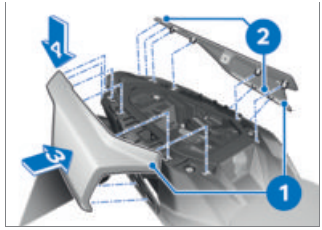
Installing the hump trim panel



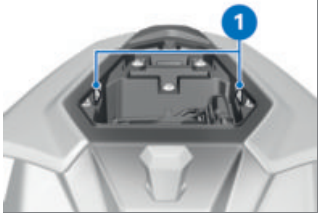
- Position the hump trim panel **1** on the retaining tab **2**.



- Carefully clip in the panels **5** in the **arrow direction** into the hump trim panel **2**.
- Install screws **4**.
- Install screws **3** (3 mm with collar).
- Install screws **1** (6 mm with collar).



- First position tail cowling **1** on the left and right vertically and clip in **4**. Then insert the lugs **2** into the holder **3**.



- Install screws **1**.



- Install screws **1**.

–with passenger package OE

- Install the passenger seat. (➠ 96)◁
- Install the hump cover. (➠ 95)
- Install the rider's seat. (➠ 97)

JUMP-STARTING

CAUTION

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

ATTENTION

Contact between crocodile clips of jump leads and motorcycle
Danger of short circuit
- Use jump leads fitted with fully insulated crocodile clips at both ends.

ATTENTION

Jump-starting with a voltage higher than 12 V
Damage to the motorcycle's electronics
- The battery of the donor vehicle must not exceed a voltage of 12 V.

- Do not disconnect battery from onboard electrical system for jump-starting procedure.

- Remove the rider`s seat. (➠ 96)
- Run the engine of the donor vehicle during the jump-starting procedure.
- Begin by clamping one end of the red jumper cable to the positive terminal of the drained battery and clamping the other end to the positive terminal of the donor battery.
- Clamp the black jumper cable first to the donor battery's negative terminal and then to the drained battery's negative terminal.
- Start the engine of the vehicle with the empty battery in the usual way; if the engine does not start, wait a few minutes before repeating the attempt to start the engine to protect the starter motor and the donor battery.

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

- Allow both engines to idle for a few minutes before disconnecting jumper cables.
- Disconnect the jumper cable from the negative terminal first, then from the positive terminal.
- Install the rider's seat. (➠ 97)

BATTERY

Maintenance instructions

Correct upkeep, recharging and storage will prolong the service life of the battery and are essential for recognition of warranty claims.
Compliance with the points below is important in order to maximize battery service life:

- Keep the surface of the battery clean and dry.
- Do not open the battery.
- 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 device, 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.

Disconnecting battery from vehicle

- Park the motorcycle, making sure the ground is level and firm.
- Remove the rider`s seat. (➠ 96)

–with anti-theft alarm system (DWA) OE

- Turn off the DWA if it is turned on.◁



ATTENTION

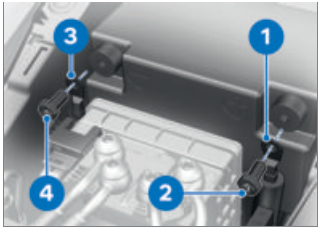
Incorrect battery disconnection

Danger of short circuit

- Follow the disconnection sequence.

- Remove the screw **1** and take off the wiring harness negative terminal **2** and press to the front.
- Remove the screw **3** and take off the wiring harness positive terminal **4**.

Connecting battery to vehicle



ATTENTION

Incorrect battery connection
Danger of short circuit
- Follow the installation sequence.

- Position the wiring harness positive terminal **1** and install the screw **2**.
- Position the wiring harness negative terminal **3** and install the screw **4**.
- Install the rider's seat. (➠ 97)

–with anti-theft alarm system (DWA) OE
- Turn on the DWA if necessary. ◁

Charging the battery
- Disconnecting battery from motorcycle. (➠ 204)
- 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.

- Connecting battery to vehicle (➠ 205)

Removing the battery
- Remove the rider`s seat. (➠ 96)
- Disconnecting battery from motorcycle. (➠ 204)
- Lift the battery up and out; use tilting movements in the event of stiff movement.

Installing the battery

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

- Place the battery in the battery compartment, with the positive terminal on the left in the driving direction.

- Connecting battery to vehicle (➠ 205)
- Configure system settings. (➠ 65)

FUSES

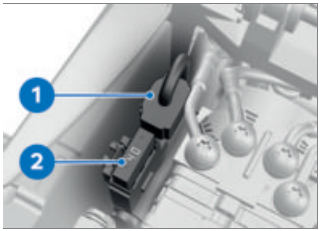
Replacing fuses

- Turn off the ignition.
- Remove the rider`s seat. (➠ 96)

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.



- Pull the faulty fuse **2** up and out of the slot.
- To replace the two fuses of the fuse box **1**, pull the fuse box up and out of its holder. For this purpose, press in the snap-in lugs on the fuse box on the left and right.

If the fuses are faulty frequently, have the electrical system checked by a repair shop, preferably a BMW Motorrad retailer.

- Install the fuse box **1** in the holder.
- Install the rider's seat. (➠ 97)

Fuse layout



Fuse 1
15 A (Instrument cluster, anti-theft alarm system, ignition switch, diagnostic socket, ignition coil for cut-off relay)

Fuse 2
7.5 A (Multifunction switch on left, control unit RDC, sensor box)

Main fuse
40 A (Alternator regulator, cut-off relay, BCL, BMS-O, ABS, SAF, fuse box (slot 1 directly and slot 2 via cut-off relay))

DIAGNOSTIC CONNECTOR

Detaching the diagnostic connector

CAUTION

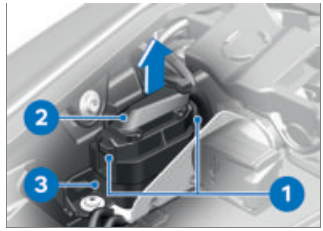
Incorrect procedure when disconnecting the diagnostic socket for onboard diagnosis

Vehicle experiences malfunctions

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

–with passenger package OE

- Remove the rear seat. (➠ 96)
- Remove the hump cover. (➠ 95)

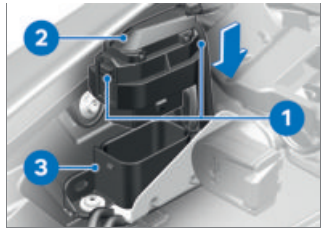


- Press locking mechanisms **1**.
- Detach the diagnostic socket **2** from the holder **3**.

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

Fastening the diagnostic connector

- Disconnect the interface for the diagnostics and information system.



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

» The locks **1** snap in.

–with passenger package OE
- Install the passenger seat. (➠ 96)
- Install the hump cover. (➠ 95)

ACCESSORIES

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CONNECTOR FOR OPTIONAL ACCESSORIES 212
USB CHARGING SOCKET 214

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 original BMW parts, accessories and other products.
More information on the topic of accessories is available at: **bmw-motorrad.com/equipment**

CONNECTOR FOR OPTIONAL ACCESSORIES

Equipment

The vehicle is equipped with the following connectors for special and racing accessories:
–Spring travel sensor
–M data logger
–Optional accessories

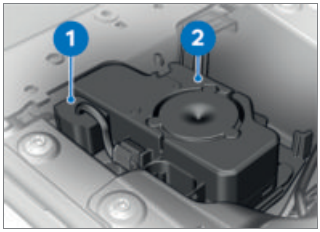
Under left-hand fairing side panel



1 Plug for special and racing accessories:
Power supply and LIN
Spring travel sensor for front forks (racing accessory)

Under the hump trim panel

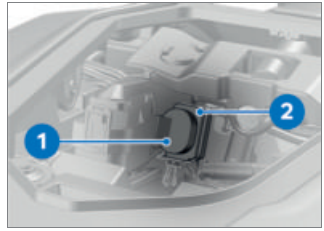
– with anti-theft alarm system (DWA) OE



1 Connector for DWA and M data logger
2 DWA

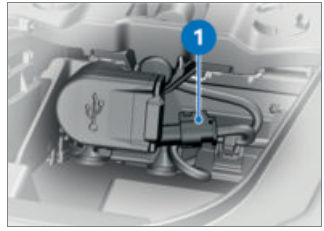
Under the hump cover

– without anti-theft alarm system (DWA) OE



1 Terminating resistor
2 Connector for DWA and M data logger

Under the hump cover



1 Connector for optional accessories at the rear

Mounting special and racing accessories

Requirement

To access connectors, remove respective fairing side panel, passenger seat and/or hump cover.

- Remove fairing side panel. (➠ 197)

–with passenger package OE

- Remove the rear seat. (➠ 96)
- Remove the hump cover. (➠ 95)
- Remove the hump trim panel. (➠ 200)
- Unlock cover cap or terminating resistor and pull off connector.
- Mount special or racing accessories.

Observe installation instructions of special or racing accessories.

So that the wiring harness can be correctly positioned and the wiring harnesses with the connectors are not routed under tension, the cable times must not be tightened until the end.

ATTENTION

Penetration of dirt and moisture in the open connector

Malfunctions

- Remount cover cap or terminating resistor after removing connector.
- After removal of accessories: Refit the cover cap or terminating resistor.
- Install fairing side panel. (➠ 198)

–with passenger package OE

- Install the passenger seat. (➠ 96)
- Install the hump cover. (➠ 95)
- Install the hump trim panel. (➠ 201)

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 shutoff

The USB charging socket is automatically switched off under the following conditions:

–If the battery voltage is too low to retain the starting capability of the vehicle.

–If the maximum load capacity specified in the technical data is exceeded.

–During the starting procedure.

Connecting electrical devices

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

To protect against water and vibrations, BMW Motorrad recommends the use of the BMW Motorrad smartphone protective sleeve.

When no device is connected, the cover of the USB charging socket should be closed to prevent contamination.

Cable layout

When routing the cables, ensure that the cables cannot get jammed.

CARE

12

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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, lab-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 motorcycle.

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

Regularly clean the fork tubes of contamination.

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

ATTENTION

Increased effect of salt caused by warm water

Corrosion

- Only use cold water to remove salt deposits.

To remove salt deposits, clean the vehicle and any add-on parts with cold water immediately after completion of every trip.

After rides in the rain, in high humidity and after the vehicle is washed, condensation can form inside the headlight. During this pro-

cess, the headlight can become foggy for a while. If moisture accumulates in the headlight on an ongoing basis, contact a repair shop, preferably an authorized BMW Motorrad 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

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

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

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

CLEANING SENSITIVE VEHICLE PARTS

Plastics

ATTENTION

Use of unsuitable cleaning agents

Damage to plastic surfaces

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

Clean plastic components with water and BMW plastic care emulsion. This includes in particular:

–Windshields and wind deflectors
–Headlight diffusers made of plastic
–Glass cover of the instrument cluster
–Black, unpainted parts

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

Carbon parts
Clean the carbon parts with water and a microfiber cloth.

Instrument cluster
Clean the instrument cluster with warm water and dish soap. Then dry with a clean cloth, e.g. a paper towel.

Chrome
Carefully clean chrome parts with plenty of water and motorcycle cleaner of the BMW Care Products series. This is particularly important in case of exposure to salt.
Use BMW Motorrad metal polish for additional treatment.

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

ATTENTION

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

Rubber
Treat rubber parts with water or BMW rubber care product.

ATTENTION

Use of silicone sprays for care of rubber seals
Damage to rubber seals
- Do not use silicone sprays or care products that contain silicone.

CARE OF PAINTWORK

Washing the 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 dirt immediately with cleaning benzene or ethyl alcohol on a clean cloth or cotton ball. BMW Motorrad recommends removing tar stains with BMW tar remover. Then add a protective wax coating to the paint at these locations.

ATTENTION

Paint damage from metal polish
Risk of damage
- Do not treat paints and chrome lacquers with metal polish.

PAINT PRESERVATION

Apply a preservative when water fails to bead up on the painted surface.
BMW Motorrad recommends BMW Motorrad high gloss polish or agents that contain carnauba or synthetic wax for paint preservation.

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

STORING THE MOTORCYCLE

- Completely fill the motorcycle's fuel tank.

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

- Clean the motorcycle.
- Remove battery. (➠ 205)
- Spray the brake lever and clutch lever as well as side stand pivots with a suitable lubricant.
- Coat bare metal and chrome-plated parts with an acid-free grease (petroleum jelly).
- Park motorcycle in a dry room, raising it to relieve both wheels.

PUTTING THE MOTORCYCLE INTO OPERATION

- Remove the protective wax coating.
- Clean the motorcycle.
- Install the battery. (➠ 205)
- Observe checklist (➠ 115).

TECHNICAL DATA

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TROUBLESHOOTING CHART

Engine does not start at all or is very difficult to start.

Possible cause	Remedy
Side stand extended and gear engaged	Fold in side stand.
Gear engaged and clutch not disengaged	Shift transmission to neutral or disengage clutch.
No fuel in tank	Refueling procedure. (➠ 124)
Battery drained	Charge battery. (➠ 205)
Overheating protection for starter motor has triggered. Starter motor can only be actuated for a limited period.	Leave the starter motor to cool down for around 1 minute until it becomes available again.

Bluetooth connection is not established.

Possible cause	Remedy
Necessary pairing steps were not performed.	Refer to the operating instructions of the communication system for the necessary steps for pairing.
The communication system is not connected automatically despite successful pairing.	Turn off the communication system of the helmet and connect again after one to two minutes.
Too many Bluetooth® devices are stored in the helmet.	Delete all pairing entries in the helmet (see the operating instructions of the communication system).
There are additional vehicles with Bluetooth-capable devices nearby.	Avoid simultaneous pairing with multiple vehicles.

Bluetooth® connection is faulty.

Possible cause	Remedy
Bluetooth® connection to the mobile end device is interrupted.	Turn off energy saving mode.
Bluetooth connection to the helmet is interrupted.	Turn off the communication system of the helmet and connect again after one to two minutes.
Volume in the helmet cannot be adjusted.	Turn off the communication system of the helmet and connect again after one to two minutes.

The phone book is not displayed in the instrument cluster.

Possible cause	Remedy
Phone book was has not yet been transferred to the vehicle.	When pairing to the mobile end device, confirm the transfer of the telephone data (➠ 73).

Active destination guidance is not displayed in the instrument cluster.

Possible cause	Remedy
Navigation from the BMW Motorrad Connected App was not transferred.	Go to the BMW Motorrad Connected App on the connected mobile terminal before riding.
Route guidance cannot be started.	Ensure that there is a data connection to the mobile end device and check the map data on the mobile end device.

THREADED CONNECTIONS

Front wheel	Value	Valid
Quick-release axle in threaded bush		
M24 x 1.5	37 lb/ft (50 Nm)	
Clamping bolts in subframe		
M8 x 35	**Tightening sequence: Tighten the screws 6 times, alternating between one and the other each time**	
	14 lb/ft (19 Nm)	
Radial brake calipers on the axle adapter		
M10 x 65	28 lb/ft (38 Nm)	

Rear wheel	Value	Valid
Lock nut of the drive chain tensioning screw		
M8	14 lb/ft (19 Nm)	
Nut on swing axle		
M18 x 1.5, Renew nut mechanical	74 lb/ft (100 Nm)	
Rear-wheel quick-release axle in swinging arm		
M24 x 1.5 mechanical	92 lb/ft (125 Nm)	

Rear wheel	Value	Valid
Swinging-arm adapter on rear wheel swinging arm		
M8 x 30	15 lb/ft (20 Nm)	
Spring strut on the relay lever		
M12 x 1.5 x 75- 10.9 micro-encapsulated	74 lb/ft (100 Nm)	

Mirrors	Value	Valid
Mirror with lock nut on adapter		
M10 x 1.25	Left-hand thread, 16 lb/ft (22 Nm)	
Adapter to clamping block		
M10 x 14 - 4.8	18 lb/ft (25 Nm)	

Turn signals	Value	Valid
Turn signal on turn signal holder		
M6 x 20	2 lb/ft (3 Nm)	

Footrest system	Value	Valid
Rotor on base plate		
M8 x 35	21 lb/ft (28 Nm)	–with Billet pack OE
Footrest joint on rotor		
M8 x 30	21 lb/ft (28 Nm)	–with Billet pack OE

Footrest system	Value	Valid
Foot plate on foot-brake lever		
M6 x 25	7 lb/ft (9 Nm)	–with Billet pack[OE]
Foot piece to gearshift lever		
M6 x 25	7 lb/ft (9 Nm)	–with Billet pack[OE]

FUEL	
Recommended fuel quality	Premium unleaded (93) (max. 5 % ethanol, E5) 91 AKI (98 ROZ/RON) 93 AKI
Alternative fuel quality	Premium unleaded (91; restrictions with regard to power and fuel consumption) (max. 10 % ethanol, E10) 89 AKI (95 ROZ/RON) 90 AKI
Usable fuel quantity	Approx. 4.4 gal (Approx. 16.5 l)
Fuel reserve	Approx. 1.1 gal (Approx. 4 l)
Fuel consumption	37 mpg (6.4 l/100 km), in accordance with WMTC
CO2 emissions	149 g/km, In accordance with WMTC
Emission standard	TIER 2, measured in accordance with FTP75

ENGINE OIL	
Engine oil, filling capacity	Approx. 1.1 gal (Approx. 4.0 l), with filter replacement
Specification	SAE 5W-40, API SJ/ JASO MA2, Additives (for instance, molybdenum-based substances) are prohibited, because they would attack the coatings on engine components, BMW Motorrad recommends BMW Motorrad ADVANTEC Ultimate oil.
Engine oil, top-up quantity	max 1.4 quarts (max 1.3 l), Difference between **MIN** and **MAX**

BMW recommends ADVANTEC ORIGINAL BMW ENGINE OIL

COOLANT	
Coolant top-up quantity	0.2 quarts (0.15 l), Difference between **MIN** and **MAX** 2.5 quarts (2.4 l), Entire coolant circuit FROSTOX HT-12, Coolant

ENGINE	
Engine number location	Lower part of crankcase, right
Engine type	A10A10C
Engine design	Oil-cooled and water-cooled 4-cylinder 4-stroke in-line engine, four valves per cylinder
Displacement	999 cc (999 cm^3)
Cylinder bore	3.1 in (80 mm)

Piston stroke	2 in (49.7 mm)
Compression ratio	13.3:1
Nominal capacity	202 hp (151 kW), at engine speed: 13000 min^{-1}
–with Torque optimized calibration OE	177 hp (132 kW), at engine speed: 11500 min^{-1}
Torque	83 lb/ft (113 Nm), at engine speed: 11000 min^{-1}
Maximum engine speed	max 14600 min^{-1}
Idle speed	$1270^{\pm 50}$ min^{-1}, engine at operating temperature

CLUTCH

Clutch design	Multiple-disc oil bath (anti-hopping) with self-reinforcement

TRANSMISSION

Transmission design	Claw-shifted 6-speed manual transmission integrated in engine housing
Transmission gear ratios	1.652 (76:46 teeth), Primary gear ratio 2.647 (45:17 teeth), 1st gear 2.091 (46:22 teeth), 2nd gear 1.727 (38:22 teeth), 3rd gear 1.500 (33:22 teeth), 4th gear 1.360 (34:25 teeth), 5th gear 1.261 (29:23 teeth), 6th gear

REAR-WHEEL DRIVE	
Type of final drive	Chain drive
Chain sag	1.4...1.8 in (35...45 mm), motorcycle unloaded on side stand
Permissible chain length	max 5.7 in (max 144 mm), measured over the **center** of 10 rivets, drive chain under tension
Number of teeth of rear-wheel drive (Pinion/sprocket)	17/47
Secondary gear ratio	2,765

FRAME	
Frame design	Aluminum composite bridge frame, load-bearing engine
Location of type plate	Frame at front right on steering head
Location of the vehicle identification number	Frame, right front top

RUNNING GEAR	
Front wheel	
Type of front suspension	Upside-down telescopic forks, diameter of 45 millimeters, DDC electronically adjusted, spring preload adjustable, damper range electronically customizable
Spring travel, front	4.7 in (120 mm), on front wheel

Rear wheel	
Type of rear-wheel guide	Two-arm aluminum swinging arm
Design of rear-wheel suspension	Central spring strut with coil spring, manually adjustable spring preload, electrically adjustable rebound-stage and compression damping
Spring travel, rear	4.6 in (117 mm), on rear wheel

BRAKES	
Front wheel	
Type of front wheel brake	Two-rotor disk brake, diameter 320 mm, 4-piston fixed caliper
Front brake pad material	Sintered metal
Front brake disc thickness	0.2 in (5 mm), new condition min 0.18 in (min 4.5 mm), wear limit
Free travel of brake actuation (Front wheel brake)	0.02...0.06 in (0.6...1.4 mm), at piston
Rear wheel	
Type of rear wheel brake	Single-disc brake, diameter 220 mm, 1-piston floating caliper
Rear brake pad material	Organic
Rear brake disc thickness	0.2 in (5 mm), new condition min 0.18 in (min 4.5 mm), wear limit

WHEELS AND TIRES	
Recommended tire combinations	An overview of the current tire approvals is available from your authorized BMW Motorrad retailer.
Speed category of front/rear tires	W, minimum requirement: 168 mph (270 km/h)
Front wheel	
Front wheel design	Aluminum forged wheel
–with M carbon wheels[OE]	Carbon wheel
Front-wheel rim size	3.50" x 17"
Front tire designation	120/70 ZR 17
Load index for front tire	At least 58
Permissible front-wheel imbalance	max 0.2 oz (max 5 g)
Rear wheel	
Rear wheel design	Aluminum forged wheel
–with M carbon wheels[OE]	Carbon wheel
Rear-wheel rim size	6.0" x 17"
Rear tire designation	200/55 ZR 17
Load index for rear tire	At least 75
Permissible rear-wheel imbalance	max 0.2 oz (max 5 g)
Tire pressure	
Front tire pressure	36.3 psi (2.5 bar), with tire cold
Rear tire pressure	42.1 psi (2.9 bar), with tire cold

ELECTRICAL SYSTEM

Fuses	
Main fuse	40 A, Alternator regulator, cut-off relay, BCL, BMS-O, ABS, SAF
Fuse 1	15 A, Instrument cluster, anti-theft alarm system, ignition switch, diagnostic socket, ignition coil for cut-off relay
Fuse 2	7.5 A, Multifunction switch on left, control unit RDC, sensor box
Battery	
Battery design	Lithium-ion, maintenance-free
Battery voltage	12 V
Battery capacity	5 Ah
Spark plugs	
Spark plugs, manufacturer and designation	NGK LMAR9FI-10G
Light sources	
All light sources	LED

ANTI-THEFT ALARM SYSTEM

Activation time	Approx. 30 s
Alarm duration	Approx. 26 s
Battery type (For Keyless Ride radio-operated key)	CR 2032

DIMENSIONS	
Motorcycle length	82.1 in (2085 mm), over rear wheel
Motorcycle height	46.3 in (1176 mm), over mirrors, at DIN unloaded vehicle weight 43.8 in (1112 mm), without mirror, with DIN unladen weight
Motorcycle width	39.2 in (996 mm), with mirrors 33.4 in (849 mm), over handlebar weights
Front-seat height	32.7 in (830 mm), without rider, at DIN unloaded vehicle weight
–with M sport seat, low[OE]	31.9 in (810 mm), without rider, at DIN unloaded vehicle weight
–with M sport seat, high[OE]	33.5 in (850 mm), without rider, at DIN unloaded vehicle weight
Rider's inside-leg arc, heel to heel	72.2 in (1835 mm), without rider, at DIN unloaded vehicle weight
–with M sport seat, low[OE]	71.5 in (1815 mm), without rider, at DIN unloaded vehicle weight
–with M sport seat, high[OE]	73.1 in (1858 mm), without rider, at DIN unloaded vehicle weight

WEIGHTS	
Unloaded vehicle weight	439 lbs (199 kg), DIN unloaded vehicle weight, ready for road, fuel tank 90% full, without OE
Front wheel load at unloaded vehicle weight	231 lbs (105 kg)
Permissible front wheel load	max 353 lbs (max 160 kg)
Rear wheel load at unloaded vehicle weight	207 lbs (94 kg)
Permissible rear wheel load	max 582 lbs (max 264 kg)
Gross vehicle weight	897 lbs (407 kg)
Maximum payload	463 lbs (210 kg)

PERFORMANCE DATA	
Maximum speed	>124 mph (>200 km/h)
–with Torque optimized calibration OE	>124 mph (>200 km/h)

SERVICE

14

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REPORTING SAFETY DEFECTS

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

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

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

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

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 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 service history, service-related data is stored on the central IT systems of BMW AG, Munich.

When there is a change in vehicle owner, the data entered in the electronic Service History can also be viewed by the new vehicle owner. An authorized BMW Motorrad retailer or repair shop can view the data entered in the service history.

Objection

At an authorized BMW Motorrad retailer or repair shop, the vehicle owner can object to the entry of data in the service history with the related storage of data in the vehicle and the transfer of data to the vehicle manufacturer during his time as the vehicle owner. In this case, no entry is made in the vehicle's electronic Service History.

BMW MOTORRAD MOBILITY SERVICES

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

Contact your authorized BMW Motorrad retailer for additional information on available mobility services.

MAINTENANCE WORK

BMW pre-delivery check

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

BMW running-in check

The BMW running-in check must be carried out between 300 mi (500 km) and 750 mi (1200 km).

BMW Motorrad Service

BMW Motorrad service is carried out once a year. The scope of the services performed may be dependent on the age of the vehicle and the distance covered. Your 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 multifunction 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. The listed repair procedures are due at the respective specified mileage levels or the specified time intervals.

MAINTENANCE SCHEDULE

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

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

[a] Annually or every 6000 mi (10000 km) (whichever comes first)
[b] At first after one year, then every two years

BMW MOTORRAD BREAK-IN SERVICE

BMW Motorrad break-in service

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

- Set the service date and remaining distance using the BMW Motorrad diagnostic system
- Deleting the break-in RPM limitation with the BMW Motorrad diagnostic system
- Performing the vehicle test using the BMW Motorrad diagnostic system
- Engine oil change with filter
- Check the clutch cable and clutch lever play
- Checking the front wheel brake fluid level
- Checking the rear wheel brake fluid level
- Checking the coolant level
- Checking chain sag
- Checking the tire pressure and tread depth
- Checking the lighting and signal system
- Functional check for engine starting suppression
- Final inspection and road safety check
- Performing the vehicle test using the BMW Motorrad diagnostic system
- Confirming the BMW service in the vehicle literature

MAINTENANCE CONFIRMATIONS

BMW Motorrad Service standard scope

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

- Performing the vehicle test using the BMW Motorrad diagnostic system
- Visual inspection of the 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 the coolant level
- Check the clutch cable and clutch lever play
- Checking and lubricating the chain drive
- Checking the tire pressure and tread depth
- Checking carbon wheels
- Checking side stand for ease of movement
- 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 Motorrad pre-delivery check

performed

on_____

Stamp, signature

BMW Motorrad break-in service

performed

on_____

at km_____

Next service

latest

on_____

or, if reached earlier

at km_____

Stamp, signature

BMW Motorrad Service
performed

on_____
at km_____

Next service
latest
on_____
or, if reached earlier
at km_____

Work performed

	Yes	No
BMW Motorrad Service	☐	☐
Oil change in engine with filter	☐	☐
Checking valve clearance	☐	☐
Checking timing (cylinder head cover removed)	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Oil change in 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	☐	☐
Oil change in engine with filter	☐	☐
Checking valve clearance	☐	☐
Checking timing (cylinder head cover removed)	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Oil change in telescopic fork	☐	☐
Changing brake fluid in entire system	☐	☐

Notes

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performed

on_____
at km_____

Next service
latest
on_____
or, if reached earlier
at km_____

Work performed

	Yes	No
BMW Motorrad Service	☐	☐
Oil change in engine with filter	☐	☐
Checking valve clearance	☐	☐
Checking timing (cylinder head cover removed)	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Oil change in telescopic fork	☐	☐
Changing brake fluid in entire system	☐	☐

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Next service
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BMW Motorrad Service	☐	☐
Oil change in engine with filter	☐	☐
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Checking timing (cylinder head cover removed)	☐	☐
Replacing all spark plugs	☐	☐
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Next service
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at km_____

Next service
latest
on_____
or, if reached earlier
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at km_____

Next service
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on_____
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at km_____

Next service
latest
on_____
or, if reached earlier
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BMW Motorrad Service
performed

on_____
at km_____

Next service
latest
on_____
or, if reached earlier
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BMW Motorrad Service	☐	☐
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at km_____

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latest
on_____
or, if reached earlier
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BMW Motorrad Service	☐	☐
Oil change in engine with filter	☐	☐
Checking valve clearance	☐	☐
Checking timing (cylinder head cover removed)	☐	☐
Replacing all spark plugs	☐	☐
Replacing air filter insert	☐	☐
Oil change in 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

CERTIFICATE FOR ELECTRONIC IMMOBILIZER 261
CERTIFICATE FOR KEYLESS RIDE HUF5750 264
CERTIFICATE FOR KEYLESS RIDE HUF5794 266
CERTIFICATE FOR KEYLESS RIDE HUF8465 268
CERTIFICATE FOR KEYLESS RIDE HUF8485 270
CERTIFICATE FOR TIRE PRESSURE MONITOR 272
CERTIFICATE FOR INSTRUMENT CLUSTER 273

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

Declaration of Conformity

Keyless Ride Key

For all Countries without EU

Model name: HUF5750

Technical information
Frequenzy band: 434,42 MHz
Output/Transmission Power: 10 mW

Manufacturer and Address
Huf Hülsbeck &
Fürst GmbH & Co. KG
Steeger Str. 17,
42551 Velbert, Germany

Argentina

CNC COMISIÓN NACIONAL DE COMUNICACIONES
H-17115

Morocco

AGREE PAR L'ANRT MAROC
Numéro d'agrément: MR 8851 ANRT 2014
Date d'agrément: 17/01/2014

Nigeria

Connection and use of this communications equipment is permitted by the Nigerian Communications Commission

United Arabic Emirates

TRA

TRA – United Arab Emirates
Dealer ID: DA36976/14
TA RTTE: ER57698/17
Model: HUF5750
Type: RF transceiver for BMW Motorcycles

Malaysia

MCMC
HIDF17000037

Paraguay

CONATEL
2020-05-I-0277

Philippines

NTC
Type Approved
No. ESD-1408693C

Belarus

TP BY

South Africa

TA-2013/1674
ICASA
APPROVED

Vietnam

THACO AUTO
C900248
ICT

Singapore

Complies with IMDA Standards DA101586

Indonesia

81556/SDPPI/2022
13349

Serbia

И005 19

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

(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) L'appareil ne doit pas produire de brouillage;
(2) L'utilisateur de l'appareil doit acceptor tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

United States (USA)
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

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

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

Taiwan
取得審驗證明之低功率射頻器材，非經核准，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。低功率射頻器材之使用
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。前述合法通信，指依電信管理法規定作業之
無線電通信。低功率射頻器材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



Declaration of Conformity

Keyless Ride Key

For all Countries without EU

Model name: HUF5794

Technical information
Frequenzy band: 433,92 MHz
Output/Transmission Power: 10 mW

Manufacturer and Address
Huf Hülsbeck &
Fürst GmbH & Co. KG
Steeger Str. 17,
42551 Velbert, Germany

Oman

OMAN - TRA
R/13021/22
D100428

Morocco

AGREE PAR L'ANRT MAROC
Numéro d'agrément: MR00031289ANRT2022
Date d'agrément: 06/01/2022

Nigeria

Connection and use of this communications equipment is permitted by the Nigerian Communications Commission

United Arabic Emirates

TRA

TRA – United Arab Emirates
Dealer ID: DA36976/14
TA RTTE: ER04909/22
Model: HUF5794
Type: BMW

Malaysia

MCMC
HIDF17000037

Paraguay

CONATEL
2022-01-I-0051

Philippines

NTC
Type Approved
No. ESD-RCE-2228693

Pakistan

Approved by PTA
TAC NO: 9.140/2022
PTA
Pakistan Telecom Authority

South Africa

TA-2022/0252
ICASA
APPROVED

Belarus

TPBY

Vietnam

THACO AUTO
C900248
ICT

Serbia

И005 22

Indonesia

81598/SDPPI/2022
13349

Singapore

Complies with IMDA Standards DA105282

Canada

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

(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) L'appareil ne doit pas produire de brouillage;
(2) L'utilisateur de l'appareil doit acceptor tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

United States (USA)

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

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

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

Taiwan

取得審驗證明之低功率射頻器材，非經核准，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。低功率射頻器材之使用
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。前述合法通信，指依電信管理法規定作業之
無線電通信。低功率射頻器材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

กสทช.

เครื่องวิทยุคมนาคมนี้ ได้รับยกเว้น ไม่ต้องได้รับใบอนุญาตให้มี ใช้ซึ่งเครื่องวิทยุคมนาคม หรือตั้งสถานีวิทยุคมนาคมตามประกาศ กสทช. เรื่อง เครื่องวิทยุคมนาคม และสถานีวิทยุคมนาคมที่ได้รับยกเว้นไม่ต้องได้รับใบอนุญาต วิทยุคมนาคมตามพระราชบัญญัติวิทยุคมนาคม พ.ศ. 2498

กสทช. | โทรคมนาคม
กำกับดูแลเพื่อประชาชน
Call Center 1200 (โทรฟรี)

Declaration of Conformity

Keyless Ride ECU

For all Countries without EU

Model name: HUF8465

Technical information
Frequenzy band: 134,45 kHz
Output/Transmission Power:
42 dBµV/m

Manufacturer and Address
Huf Hülsbeck &
Fürst GmbH & Co. KG
Steeger Str. 17,
42551 Velbert, Germany

Argentina

RAMATEL
H-27885

Morocco

AGREE PAR L'ANRT MAROC
Numéro d'agrément: MR 9389 ANRT 2014
Date d'agrément: 24/06/2014

Nigeria

Connection and use of this communications equipment is permitted by the Nigerian Communications Commission

United Arabic Emirates

TRA

TRA – United Arab Emirates
Dealer ID: DA36976/14
TA RTTE: ER59309/17
Model: HUF8465
Type: ELV incl. ECU

Malaysia

MCMC
HIDF17000037

Philippines

NTC
Type Approved
No. ESD-1409281C

South Africa

TA-2014/886
ICASA
APPROVED

Vietnam

THACO AUTO
C900248
ICT

Indonesia

81555/SDPPI/2022
13349

Paraguay

CONATEL
2020-05-I-0278

Singapore

Complies with
IMDA Standards
DA101586

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

(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) L'appareil ne doit pas produire de brouillage;
(2) L'utilisateur de l'appareil doit acceptor tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

United States (USA)
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

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

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

Taiwan
取得審驗證明之低功率射頻器材，非經核准，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。低功率射頻器材之使用
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。前述合法通信，指依電信管理法規定作業之
無線電通信。低功率射頻器材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



Declaration of Conformity

Keyless Ride ECU

For all Countries without EU

Model name: HUF8485

Technical information
Frequenzy band: 134,45 kHz
Output/Transmission Power: 42 dBµV/m

Manufacturer and Address
Huf Hülsbeck &
Fürst GmbH & Co. KG
Steeger Str. 17,
42551 Velbert, Germany

Argentina

RAMATEL
H-27411

Morocco

AGREE PAR L'ANRT MAROC
Numéro d'agrément: MR00031290ANRT2022
Date d'agrément: 06/01/2022

Nigeria

Connection and use of this communications equipment is permitted by the Nigerian Communications Commission

United Arabic Emirates

TRA

TRA – United Arab Emirates
Dealer ID: DA36976/14
TA RTTE: ER04912/22
Model: HUF8485
Type: BMW

Malaysia

MCMC
HIDF17000037

Paraguay

CONATEL
2022-01-I-0052

Philippines

NTC
Type Approved
No. ESD-RCE-2228692

Pakistan

Approved by PTA
TAC NO: 9.122/2022
PTA
Pakistan Telecom Authority

South Africa

TA-2022/0251
ICASA
APPROVED

Oman

OMAN - TRA
R/13020/22
D100428

Vietnam

THACO AUTO
C900248
ICT

Singapore

Complies with IMDA Standards DA105282

Indonesia

81597/SDPPI/2022
13349

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

(1) This device may not cause interference.
(2) This device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) L'appareil ne doit pas produire de brouillage;
(2) L'utilisateur de l'appareil doit acceptor tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

United States (USA)
This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

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

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

Taiwan
取得審驗證明之低功率射頻器材，非經核准，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。低功率射頻器材之使用
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。前述合法通信，指依電信管理法規定作業之
無線電通信。低功率射頻器材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



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 GmbH
Address: Robert Bosch Str. 200,
31139 Hildesheim, Germany

Turkey
Robert Bosch 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 GmbH모델명 : ICC6.5in
기자재명칭 : 특정소출력 무선기기(무선데이터통신시스템용 무선기기)
제조자 및 제조국가 : Robert Bosch GmbH / 포르투갈
제조년월 : 제조년월로 표기
이 기기는 업무용 환경에서 사용할 목적으로적합성평가를 받은 기기로서 가정용 환경에
서 사용하는 경우 전파간섭의 우려가 있습니
다.

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.

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The descriptions and illustrations in this manual may vary from your own motorcycle's actual equipment, depending upon its equipment level and accessories as well as your specific national 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.

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WARNING

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

Important data for refueling stop:

Fuel	
Recommended fuel quality	Premium unleaded (93) (max. 5 % ethanol, E5) 91 AKI (98 ROZ/RON) 93 AKI
Alternative fuel quality	Premium unleaded (91; restrictions with regard to power and fuel consumption) (max. 10 % ethanol, E10) 89 AKI (95 ROZ/RON) 90 AKI
Usable fuel quantity	Approx. 4.4 gal (Approx. 16.5 l)
Fuel reserve	Approx. 1.1 gal (Approx. 4 l)
Tire pressure	
Front tire pressure	36.3 psi (2.5 bar), with tire cold
Rear tire pressure	42.1 psi (2.9 bar), with tire cold

You can find further information on all aspects of your vehicle at:
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