BMW
MOTORRAD

RIDER'S MANUAL

R 1250 RS



MAKE LIFE A RIDE

Vehicle data

Model

Vehicle Identification Number

Colour code

Date of first registration

Registration number

Dealership details

Person to contact in Service department

Ms/Mr

Phone number

Dealership address/phone number (company stamp)

YOUR BMW.

We congratulate you on your choice of a vehicle from BMW Motorrad and welcome you to the community of BMW riders. Familiarise yourself with your new vehicle so that you can ride it safely and confidently in all traffic situations.

About this rider's manual

Read this rider's manual carefully before starting your new BMW. It contains important information on how to operate the controls and how to make the best possible use of all your BMW's technical features.

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

If the time comes to sell your BMW, please remember to hand over this rider's manual to the new owner. It is an important part of the vehicle.

We hope you will enjoy riding your BMW and that all your journeys will be pleasant and safe

BMW Motorrad.

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GENERAL INSTRUCTIONS

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4 GENERAL INSTRUCTIONS

QUICK & EASY REFERENCE

An important aspect of this rider's manual is that it can be used for quick and easy reference. Consulting the extensive index at the end of this rider's manual is the fastest way to find information on a particular topic or item. To first read an overview of your vehicle, please go to Chapter 2. All maintenance and servicing work on the vehicle is documented in the "Service" section. The record of the maintenance work you have had performed on your vehicle is a precondition for generous treatment of goodwill claims.

ABBREVIATIONS AND SYMBOLS

CAUTION Low-risk hazard. Non-avoidance can lead to slight or moderate injury.

WARNING Medium-risk hazard. Non-avoidance can lead to fatal or severe injury.

DANGER High-risk hazard. Non-avoidance leads to fatal or severe injury.

ATTENTION Special notes and precautionary measures. Non-compliance can lead to damage to the vehicle or accessory and, consequently, to voiding of the warranty.

Specific instructions on how to operate, control, adjust or look after items of equipment on the motorcycle.

- • Instruction.
- » Result of an activity.
- Reference to a page with more detailed information.
- ◁ Indicates the end of a passage relating to specific accessories or items of equipment.
- Tightening torque.
- Technical data.
- NV National-market version.

OE	Optional equipment. The vehicles are assembled complete with all the BMW Motorrad optional equipment originally ordered.
OA	Optional accessories. You can obtain BMW Motorrad optional accessories through your authorised BMW Motorrad dealer; optional accessories have to be retrofitted to the vehicle.
ABS	Anti-lock brake system.
D-ESA	Electronic Suspension Adjustment.
DTC	Dynamic Traction Control.
DWA	Anti-theft alarm.
EWS	Electronic immobiliser.
RDC	Tyre pressure monitoring.

EQUIPMENT

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

TECHNICAL DATA

All dimensions, weights and power ratings stated in the rider's manual are quoted to the standards and comply with the tolerance requirements of the Deutsches Institut für Normung e. V. (DIN).
Technical data and specifications in this rider's manual are guide values. The vehicle-specific data may deviate from these, for example as a result

of selected optional equipment, the national-market version or country-specific measuring procedures. Detailed values can be taken from the vehicle registration documents, or can be obtained from your authorised BMW Motorrad retailer or another qualified service partner or specialist workshop. The specifications in the vehicle documents always have priority over the information provided in this rider's manual.

CURRENCY

The high safety and quality standards of BMW motorcycles are maintained by constant development work on designs, equipment and accessories. Because of this, your vehicle may differ from the information supplied in the rider's manual. At the time of production of the motorcycle, the rider's manual is the most up-to-date source. Owing to updates subsequent to the date of publication, differences between the printed rider's manual and the online version are possible.
Up-to-date information is available at **bmw-motorrad.com/service**.

ADDITIONAL SOURCES OF INFORMATION

Authorised BMW Motorrad retailer

Your authorised BMW Motorrad retailer will be happy to answer any questions you may have.

Internet

The rider's manual for your vehicle, operating and installation instructions for accessories and general information about BMW Motorrad, in relation to technology, for example, are available for download from **bmw-motorrad.com/manuals**.

CERTIFICATES AND OPERATING LICENCES

The certificates for the vehicle and the official operating licences for accessories can be downloaded from **bmw-motorrad.com/certification**.

DATA MEMORY

General

Control units are installed in the vehicle. Control units process data that they receive, for example, from vehicle sensors, or that they generate themselves or exchange between

each other. Some control units are required for the vehicle to function safely or provide assistance during riding, for example assistance systems. In addition, control units enable comfort or infotainment functions.
Information on data that has been stored or exchanged can be obtained from the manufacturer of the vehicle, for example via a separate booklet.

Personal reference
Each vehicle is identified with a clear vehicle identification number. Depending on the country, the vehicle identification number, the number plate and the corresponding authorities can be referenced to ascertain the vehicle owner. There are also other ways to use data obtained from the vehicle to trace the rider or vehicle owner, for example using the ConnectedDrive user account.

Data protection rights
In accordance with applicable data protection laws, vehicle users have certain rights in relation to the manufacturer of the vehicle or in relation to companies which collect or process personal data.

Vehicle users have the right to obtain full information at no cost from persons or entities storing personal data of the vehicle user.
These entities may include:
–Manufacturer of the vehicle
–Qualified service partners
–Specialist workshops
–Service providers

Vehicle users have the right to request information on what personal data has been stored, for what purpose the data is used, and where the data comes from. To obtain this information, proof of ownership or use is required.
The right to information also includes information about data that has been shared with other companies or entities.
The website of the vehicle manufacturer contains the applicable data protection information. This data protection information includes information on the right to have data deleted or corrected.
The manufacturer of the vehicle also provides their contact details and those of the data protection officer on their website.
The vehicle owner can also request that a BMW Motorrad

retailer or another qualified service partner or specialist workshop read out the data that is stored in the vehicle for a charge.
The vehicle data is read out using the legally prescribed socket for on-board diagnosis (OBD) in the vehicle.

Legal requirements for the disclosure of data

As part of its legal responsibilities, the manufacturer of the vehicle is obligated to make its stored data available to the relevant authorities. This data is provided in the required scope in individual cases, for example to clarify a criminal offence.
In the context of applicable laws, public agencies are entitled in individual cases to read out data from the vehicle themselves.

Operating data in the vehicle

Control units process data to operate the vehicle.
This includes, for example:
– Status reports of the vehicle and its individual components, for example wheel speed, wheel circumferential velocity, deceleration
– Environmental conditions, for example temperature

The data is only processed in the vehicle itself and is generally non-permanent. The data is not stored beyond the operating period.
Electronic components, for example control units, contain components for storing technical information. Information can be temporarily or permanently stored on the vehicle condition, component loads, incidents or errors.
This information is generally used to document the condition of a component, a module, a system or the surrounding area, for example:
– Operating conditions of system components, for example filling levels, tyre pressure
– Malfunctions and faults in important system components, for example light and brakes
– Response of the vehicle in special riding situations, for example engagement of the driving dynamics systems
– Information on incidents resulting in damage to the vehicle

The data is necessary for the provision of control unit func-

tions. Furthermore, the data is used to detect and rectify malfunctions and to enable the vehicle manufacturer to optimise vehicle functions.
The vast majority of this data is non-permanent and is only processed in the vehicle itself. Only a small amount of the data is stored in incident or fault memories as required by events.
If services are accessed, for example repairs, service processes, warranty cases and quality assurance measures, this technical information can be read out of the vehicle together with the vehicle identification number.
The information can be read out by a BMW Motorrad retailer or another qualified service partner or specialist workshop. The legally stipulated socket for on-board diagnosis (OBD) in the vehicle is used to read out the data. The data is obtained, processed and used by the relevant parts of the retailer network. The data is used to document the technical conditions of the vehicle, to help with error localization, to comply with warranty obligations and to improve quality.
In addition, the manufacturer has various product monitoring obligations arising from product liability legislation. To meet these obligations, the vehicle manufacturer requires technical data from the vehicle. The data from the vehicle can also be used to check warranty claims from the customer.
Error and incident memories in the vehicle can be reset during servicing or repair work by a BMW Motorrad retailer or another qualified service partner or specialist workshop.

Data input and data transfer in the vehicle

General

Depending on the equipment, comfort and customised settings can be stored in the vehicle and can be changed or reset at any time.
If required, data can be entered in the entertainment and communication system of the vehicle, for example using a smartphone.
Depending on the individual equipment, this includes:

–Multimedia data, such as music for playback
–Contacts data for use in connection with a communication system or an integrated navigation system
–Entered destinations
–Data on the use of internet services. This data can be stored locally in the vehicle or is located on a device that is connected to the vehicle, for example smartphone, USB stick, MP3 player. If this data is stored in the vehicle, the data can be deleted at any time.

This data is transferred to third parties only if personally requested within the context of using online services. This depends on the selected settings when using the services.

Incorporation of mobile devices

Depending on the equipment, mobile devices connected to the vehicle, for example smartphones, can be controlled using the operating elements of the vehicle.
The image and sound of the mobile device can then be output via the multimedia system. At the same time, specific information is transferred to the mobile device. Depending on the type of integration, this includes, for example, position data and additional general vehicle information. This enables optimal use of the selected apps, for example navigation or music playback.
The type of additional data processing is determined by the provider of the respective app. The scope of the possible settings depends on the corresponding app and the operating system of the mobile device.

Services

General

If the vehicle has a wireless connection, this enables the exchange of data between the vehicle and other systems. The wireless connection is enabled by the vehicle's own transceiver unit or using personally integrated mobile devices, for example smartphones. Online functions can be accessed through this wireless connection. These include online services and apps that are provided by the vehicle manufacturer or by other providers.

Services of the vehicle manufacturer

For online services of the vehicle manufacturer, the individual functions are described at suitable points, for example rider's manual, website of the manufacturer. At the same time, information is also provided on the relevant data protection law. Personal data may be used to provide online services. Data is exchanged using a secure connection, for example with the IT systems provided by the vehicle manufacturer. Obtaining, processing and using personal data outside of the normal provision of services requires legal permission, contractual agreement or consent. It is also possible to have the entire data connection activated or deactivated. Statutory functions are excluded from this.

Services from other providers

When using online services from other providers, these services are subject to the responsibility and the data protection and operating conditions of the individual provider. The vehicle manufacturer has no influence on the content that is exchanged in this instance. Information on the type, scope and purpose of the data capture and use of personal data as part of the services of third parties can be ascertained from the individual provider.

BLUETOOTH®

Bluetooth is a short-range wireless technology. Bluetooth devices are short-range devices transmitting 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 licence being required.
Although Bluetooth is designed to establish and sustain robust connections over short distances, as with every other wireless technology disruptions are possible. Interference can affect connections or connections can sometimes fail. Particularly when multiple devices operate in a Bluetooth network, with wireless technology of this nature it is not possible to ensure fault-free communications in every situation.

Possible sources of interference:
– interference zones due to transmission masts and similar.
– devices with non-compliant Bluetooth implementations.
– proximity of other Bluetooth-compatible devices.
– shielding by metal objects or bodies.

CONNECTIVITY FUNCTIONS

Connectivity functions include media, telephony and navigation. Connectivity functions can be used when the instrument cluster is connected to a mobile device and a helmet (➠ 75). For more information on the Connectivity functions go to:
bmw-motorrad.com/connectivity

Depending on the mobile end device, the scope of Connectivity functions might be restricted.

BMW Motorrad Connected app
The BMW Motorrad Connected app enables the user to call up usage data and vehicle status information. For some functions such as navigation, for example, the app has to be installed on the mobile device and paired to the instrument cluster. The app is used to start route guidance and adjust the navigation.

On some mobile devices, e.g. those with the iOS operating system, the BMW Motorrad Connected app has to be opened prior to use.

INTELLIGENT EMERGENCY CALL SYSTEM

– with intelligent emergency call OE

Principle
The intelligent emergency call system enables manual or automatic emergency calls, for example in the event of an accident.
The emergency calls are received by an emergency call centre that is commissioned by the vehicle manufacturer.
For information on operating the intelligent emergency call system and its functions see (➠ 91).

Legal basis

Processing of personal data using the intelligent emergency call system is in line with the following regulations:

– Protection of personal data: Directive 95/46/EC of the European Parliament and of the Council.

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

The legal basis for the activation and function of the intelligent emergency call system is the concluded Connected-Ride contract for this function, as well as the corresponding laws, ordinances and directives of the European Parliament and of the European Council.
The relevant ordinances and directives regulate the protection of natural persons during the processing of personal data.
The processing of personal data by the intelligent emergency call system satisfies the European directives for the protection of personal data.
The intelligent emergency call system processes personal data only with the agreement of the vehicle owner.
The intelligent emergency call system and other services with additional benefits can process personal data only with the express permission of the person affected by the data processing, for example the vehicle owner.

SIM card

The intelligent emergency call system operates via the mobile phone network using the SIM card installed in the vehicle.
The SIM card is permanently logged into the mobile phone network to enable rapid connection setup. Data is sent to the vehicle manufacturer in the event of an emergency.

Improving quality

The data that is transferred in an emergency is also used by the manufacturer of the vehicle to improve product and service quality.

Location determination

The position of the vehicle can be determined exclusively by the mobile phone network provider based on the mobile phone site locations. It is not possible for the provider to

trace a connection between the vehicle's VIN and the phone number of the installed SIM card. Only the manufacturer of the vehicle can link a VIN and the phone number of the SIM card installed in a particular vehicle.

Log data of emergency calls

The log data of emergency calls is stored in a memory of the vehicle. The oldest log data is regularly deleted. The log data includes, for example, information on when and where an emergency call was made. In exceptional cases, the log data can be read out of the vehicle memory. As a rule, log data is only read out following a court order, and this is only possible if the corresponding devices are connected directly to the vehicle.

Automatic emergency call

The system is designed so that, following a sufficiently serious accident, which is detected by sensors in the vehicle, an emergency call is automatically activated.

Sent information

When making an emergency call using the intelligent emergency call system, the system forwards the same information to the designated emergency call centre as is forwarded to the public emergency operations centre by the statutory emergency call system eCall. In addition, the intelligent emergency call system sends the following additional information to an emergency call centre commissioned by the vehicle manufacturer and, if required, to the emergency services:

– Accident data, for example the direction of impact detected by the vehicle sensors, to assist the emergency services response.
– Contact details, for example the phone number of the installed SIM card and the phone number of the rider, if available, to enable rapid contact with those involved in the accident if required.

Data storage

The data for an activated emergency call is stored in the vehicle. The data contains information on the emergency

call, for example the location and time of the emergency call. The voice recordings of the emergency call are stored at the emergency call centre. The voice recordings of the customer are stored for 24 hours in case details of the emergency call need to be analysed. After this, the voice recordings are deleted. The voice recordings of the employee of the emergency call centre are stored for 24 hours for quality assurance purposes.

Information on personal data

The data that is processed as part of the intelligent emergency call is processed exclusively to carry out the emergency call. As part of its statutory obligation, the manufacturer of the vehicle provides information about the data that it has processed and any data that it still has stored.

Regional restriction

A precondition for the operability of the intelligent emergency call function is that the national-market version has to include support for the region where the vehicle is currently in use.

More information about regional restrictions:
support.bmw-motorrad.com

GENERAL VIEWS

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18 GENERAL VIEWS

GENERAL VIEW, LEFT SIDE



1 Clutch-fluid reservoir (➠ 187)
2 Fuel filler neck (➠ 149)
3 Seat lock (➠ 117)
4 Passenger grab handle
5 Rear footrest
6 Setting the rear damping (down at the spring strut) (➠ 132)
7 Rider footrest

GENERAL VIEW, RIGHT SIDE



1 Adjustment of spring preload for rear wheel (➠ 131)

2 Brake-fluid reservoir, front (➠ 185)

3 USB charging socket (➠ 213)

4 Vehicle identification number (VIN) (on steering head, right)
Type plate (on steering head, left)

5 Coolant-level indicator (➠ 187)
Coolant expansion tank (➠ 188)

6 Oil filler opening (➠ 181)

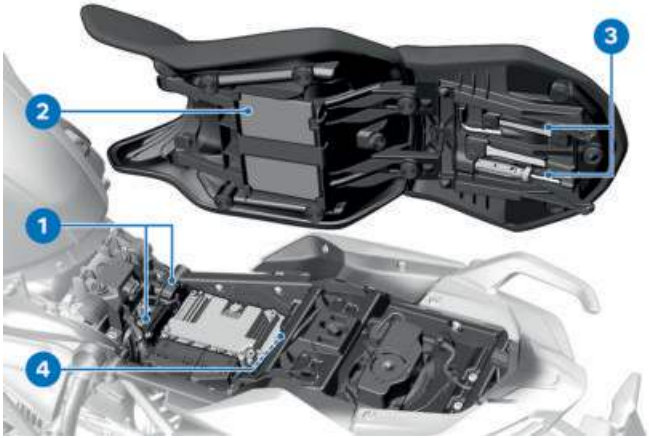
7 Engine oil level indicator (➠ 180)

8 Behind the battery cover:
Battery (➠ 202)
Remote positive terminal (➠ 200)
Diagnostic connector (➠ 208)

9 Brake-fluid reservoir, rear (➠ 186)

10 Power socket (➠ 212)

UNDERNEATH THE SEAT



1 Fuses (➠ 206)
2 Rider's manual
3 Standard toolkit (➠ 179)
4 Payload table
Tyre pressures table

MULTIFUNCTION SWITCH, LEFT



1 High-beam headlight and headlight flasher (➠ 94)
2 Cruise control (➠ 106)
3 Hazard warning lights (➠ 97)
4 DTC (➠ 98)
5 Dynamic ESA (➠ 100)
6 Auxiliary headlights (➠ 95)
7 Turn indicators (➠ 98)
8 Horn
9 MENU rocker button (➠ 71)
10 Multi-Controller
Multi-Controller (➠ 70)
11 Daytime riding light (➠ 96)

MULTIFUNCTION SWITCH, RIGHT

–with intelligent emergency call[OE]



1 Heating (➠ 115)
2 Riding mode (➠ 102)
3 Emergency-off switch (kill switch) (➠ 91)
4 Starter button
Start the engine.
(➠ 139)
5 SOS button
Intelligent emergency call
(➠ 91)

MULTIFUNCTION SWITCH, RIGHT

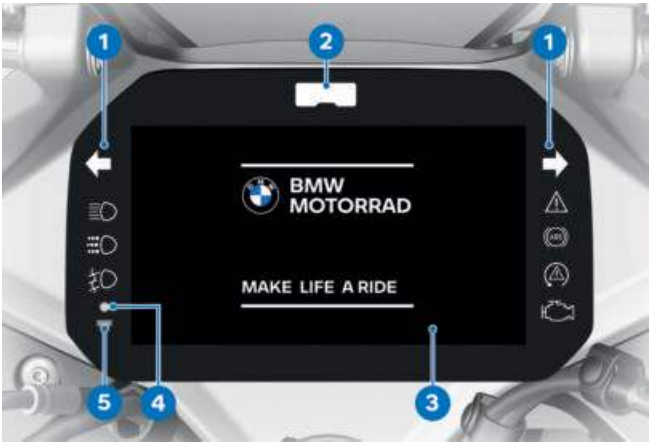
–without intelligent emergency call[OE]



1 Heating (➠ 115)
2 Riding mode (➠ 102)
3 Emergency-off switch (kill switch) (➠ 91)
4 Starter button
Start the engine.
(➠ 139)

24 GENERAL VIEWS

INSTRUMENT CLUSTER



1 Indicator and warning lights (➠ 28)
2 Shift light (➠ 144)
3 Display (➠ 30) (➠ 29)
4 Indicator light
Anti-theft alarm (DWA) (➠ 113)
Keyless Ride (➠ 87)
5 Photosensor (for adapting the brightness of the instrument lighting)

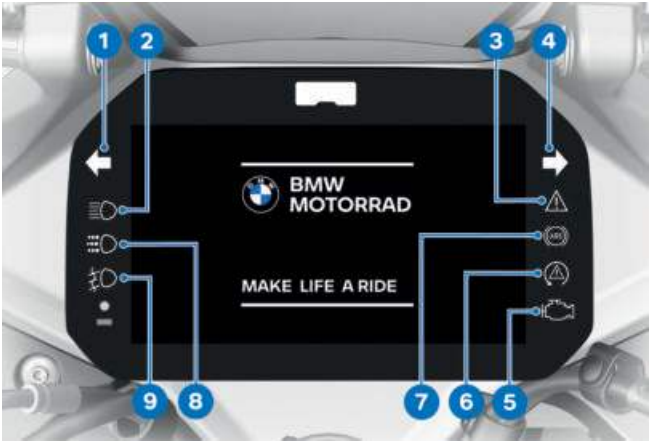
STATUS INDICATORS

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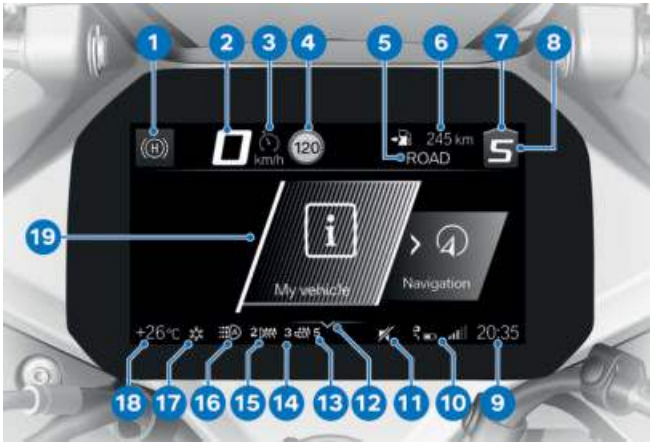
28 STATUS INDICATORS

INDICATOR AND WARNING LIGHTS



1 Turn indicators, left (➠ 98)
2 High-beam headlight (➠ 94)
3 General warning light (➠ 36)
4 Turn indicators, right (➠ 98)
5 Warning light, drive malfunction (➠ 51)
6 DTC (➠ 61)
7 ABS (➠ 60)
8 Daytime riding light (➠ 96)
9 Auxiliary headlights (➠ 95)

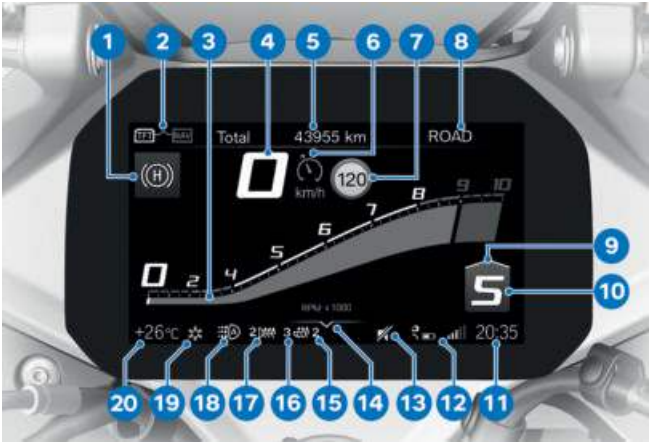
MENU VIEW



1 Hill Start Control (➠ 64)
2 Speedometer
3 Cruise control (➠ 106)
4 Speed Limit Info (➠ 79)
5 Riding mode (➠ 102)
6 Status line (➠ 73)
7 Recommendation to upshift (➠ 32)
8 Gear indicator
9 Clock
10 Connection status
11 Muting (➠ 74)
12 Operating help
13 Passenger seat heating (➠ 117)
14 Rider's seat heating (➠ 116)
15 Heating stages, handlebar grips (➠ 115)
16 Automatic daytime riding light (➠ 97)
17 Outside temperature warning (➠ 44)
18 Ambient temperature
19 Menu section

PURE RIDE VIEW

START SCREEN



1 Hill Start Control (➠ 64)
2 Change of operating focus (➠ 77)
3 Rev. counter (➠ 31)
4 Speedometer
5 Status line (➠ 73)
6 Cruise control (➠ 106)
7 Speed Limit Info (➠ 79)
8 Riding mode (➠ 102)
9 Recommendation to upshift (➠ 32)
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20 Ambient temperature

REV. COUNTER



1 Scale
2 Upper/red engine speed range
3 Needle
4 Secondary indicator

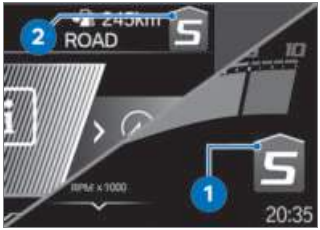
Range



The range readout **1** indicates how far you can ride with the fuel remaining in the tank. This distance is calculated on the basis of average consumption and the quantity of fuel on board.

– When the vehicle is propped on its side stand the slight angle of inclination means that the sensor cannot register the fuel level correctly. This is the reason why the range is recalculated only when the side stand is in the retracted position.
– The range is shown together with a warning once the fuel reserve has been reached.
– After a refuelling stop, range is recalculated if the amount of fuel in the tank is greater than the reserve quantity.
– The calculated range is only an approximate figure.

Recommendation to upshift



The recommendation to upshift in **1** view **2** or in status line indicates the best time to upshift to conserve fuel.

SPORT OVERVIEW

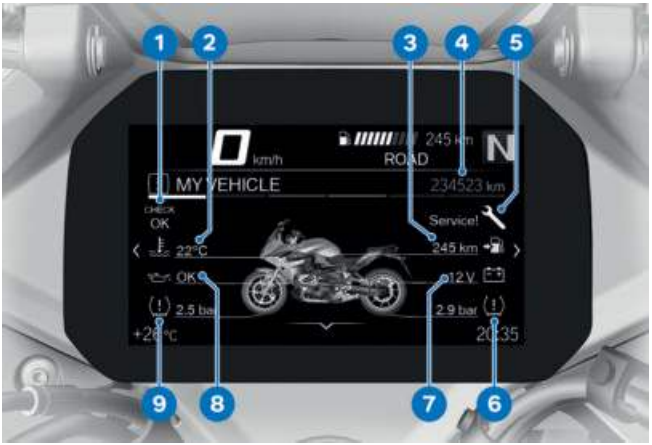


1 Maximum DTC torque reduction
2 Actual DTC torque reduction
3 Rev. counter
4 Maximum heel angle, left
5 Actual heel angle in corners for left and right
6 Maximum heel angle, right
7 Current retardation rate during braking
8 Maximum retardation rate

The maximum values for DTC torque reduction, lean angle and deceleration are automatically reset after the ignition has been switched off.

MY VEHICLE VIEW

START SCREEN



1 Check Control display
Mode of presentation
(➠ 36)

2 Coolant temperature
(➠ 50)

3 Range (➠ 32)

4 Odometer

5 Service display (➠ 65)

6 Tyre pressure, rear
(➠ 54)

7 On-board voltage
(➠ 203)

8 Engine oil level (➠ 50)

9 Tyre pressure, front
(➠ 54)

On-board computer and trip computer



The ON-BOARD COMPUTER and TRIP COMPUTER menu screens display vehicle and trip data, such as average values.

Service requirements



When the next service is due within less than a month or within 1000 km, a white Check Control message is displayed.

WARNING INDICATORS

Mode of presentation

Warnings are indicated by the corresponding warning lights. Warnings are indicated by the 'General' warning light showing in combination with a dialogue in the instrument cluster. The 'General' warning light shows yellow or red, depending on the urgency of the warning.

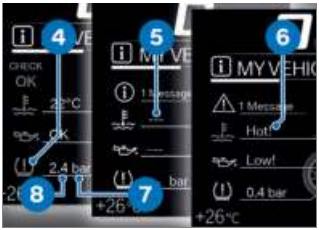
The status of the 'General' warning light matches the most urgent warning.
The possible warnings are listed on the next pages.



Check Control display

The messages differ in how they show on the display. Different colours and symbols are used depending on priority:

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



Values display

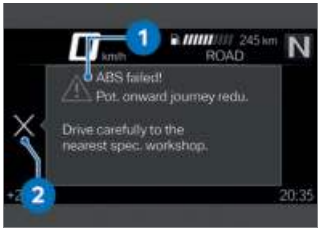
Symbols **4** differ in how they show on the display. The colours used differ and reflect the urgency of the message. Along with numerical values **8** with units **7**, texts **6** are displayed as well:

Colour of the symbol

–Green: (`OK`) Current value is ideal.
–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: (---) No valid value available. Dashes **5** are displayed instead of a numerical value.

To some extent, individual values can be processed only after the vehicle has covered a certain distance or has reached a certain speed. Dashes are displayed as placeholders for as long as a measured value cannot be displayed because the preconditions for measurement have still to be met. If there are no valid measured values, there will be no assessment in the form of a coloured symbol.



Check Control dialogue

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

– If there are two or more Check Control messages of equal priority, the messages keep changing in the order of their occurrence until they are acknowledged.
– If symbol **2** is actively displayed, it can be acknowledged by tilting the Multi-Controller to the left.
– Check Control messages are attached dynamically to the pages as additional tabs in the `My vehicle` menu. The message can be called up again as long as the fault persists.

Warnings, overview

Indicator and warning lights	Display text	Meaning
	 is displayed.	Outside temperature warning (➠ 44)
 lights up yellow.	 `Remote key not in range.`	Radio-operated key out of range (➠ 44)
 lights up yellow.	 `Keyless Ride failure`	Keyless Ride failed (➠ 45)
 lights up yellow.	 `Remote key battery weak.`	Replacing battery of radio-operated key (➠ 45)
	 is displayed in yellow.  `Vehicle voltage low.`	Voltage of the vehicle electrical system too low (➠ 45)
 lights up yellow.	 is displayed in yellow.  `Vehicle voltage critical!`	Voltage of the vehicle electrical system critical (➠ 46)
 flashes yellow.	 is displayed in yellow.  `Battery voltage critical!`	Charging voltage critical (➠ 46)
 lights up yellow.  flashes yellow.	 The faulty bulb is displayed.  The faulty bulb is displayed.	Bulb faulty (➠ 47)
 lights up yellow.	 `Light control failure!`	Light control failed (➠ 48)

Indicator and warning lights	Display text	Meaning
	Alarm system batt. capacity weak.	Anti-theft alarm battery weak (➠ 48)
	Alarm system battery empty.	Anti-theft alarm battery flat (➠ 49)
	Alarm system failure	DWA failed (➠ 49)
 lights up yellow.	Engine oil level Check engine oil level.	Engine-oil level too low (➠ 50)
 lights up yellow.	Engine temp. high!	Engine temperature high (➠ 50)
 lights up red.	Engine overheating!	Engine overheated (➠ 51)
 shows.	Engine!	Drive malfunction (➠ 51)
 flashes red.  flashes.	Serious fault in the engine control!	Serious drive malfunction (➠ 52)
 lights up yellow.  shows.	No communication with engine control.	Engine control failed (➠ 52)
 lights up yellow.	Fault in the engine control.	Engine in emergency-operation mode (➠ 52)

Indicator and warning lights	Display text	Meaning
 flashes red.	 Serious fault in the engine control!	Serious fault in engine control (➠ 53)
 lights up yellow.	 is displayed in yellow.  Tyre pressure does not match setpoint	Tyre pressure close to limit of permitted tolerance (➠ 55)
 flashes red.	 is displayed in red.  Tyre pressure does not match setpoint  Tyre press. control. Loss of pressure.	Tyre pressure outside permitted tolerance (➠ 55)
	 "---"	Transmission fault (➠ 56)
 lights up yellow.	 "---"	Sensor faulty or system fault (➠ 57)
 lights up yellow.	 Tyre pressure check failure!	Tyre pressure monitoring (RDC) failed (➠ 57)
 lights up yellow.	 RDC sensor battery weak.	Battery for tyre pressure sensor weak (➠ 57)
	 Drop sensor faulty.	Malfunction, drop sensor (➠ 58)

Indicator and warning lights	Display text	Meaning
	Cannot start engine.	Motorcycle dropped (➠ 58)
lights up yellow.	Emergency call system restricted.	Emergency call function restricted (➠ 58)
lights up yellow.	Emergency call system error.	Emergency call function failed (➠ 59)
lights up yellow.	Side stand monitoring faulty.	Malfunction, side stand monitor (➠ 59)
flashes regularly.		ABS self-diagnosis not completed (➠ 59)
lights up yellow. shows.	Limited ABS availability!	ABS fault (➠ 60)
lights up yellow. shows.	ABS failure!	ABS failed (➠ 60)
lights up yellow. shows.	ABS Pro failure!	ABS Pro failed (➠ 60)
flashes irregularly.		ABS control at front wheel only (➠ 61)

Indicator and warning lights	Display text	Meaning
 quick-flashes.		DTC intervention (➠ 61)
 slow-flashes.		DTC self-diagnosis not completed (➠ 61)
 shows.	 `Off!`  `Traction control deactivated.`	DTC switched off (➠ 62)
 lights up yellow.  shows.	 `Traction control limited!`	DTC restricted (➠ 62)
 lights up yellow.  shows.	 `Traction control failure!`	DTC fault (➠ 62)
 lights up yellow.	 `Spring strut adjustment faulty!`	D-ESA fault (➠ 63)
	 Fuel down to reserve. Go to a filling station soon	Fuel down to reserve (➠ 63)
	 shows green.	Hill Start Control active (➠ 64)
	 flashes yellow.	Hill Start Control automatically deactivated (➠ 64)

Indicator and warning lights	Display text	Meaning
	 is displayed. `HSC not available. Engine not running.`	Hill Start Control cannot be activated (➠ 64)
	 The gear indicator flashes.	Gear not taught (➠ 65)
 flashes green.  flashes green.		Hazard warning lights system is switched on (➠ 65)
	 is displayed in white. `Service due!`	Service due (➠ 65)
 lights up yellow.	 is displayed in yellow. `Service overdue!`	Service-due date has passed (➠ 66)

Ambient temperature

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

When the vehicle is at a standstill, the heat of the electrical machine can falsify the ambient-temperature reading. If the heat of the electrical machine is affecting it too much, dashes are temporarily shown in place of the value.

 There is a risk of black ice if the ambient temperature falls below the limit value of approx. 3 °C.

The first time the temperature drops below this value, the ambient-temperature reading and the ice crystal symbol flash in the status line of the instrument cluster.

Outside temperature warning

 is displayed.

Possible cause:

 The air temperature measured at the vehicle is lower than:
approx. 3 °C

⚠ WARNING

Risk of black ice forming even when temperature is above approx. 3 °C

Risk of accident

- Always take extra care when temperatures are low; remember that there is particular danger of black ice forming on bridges and where the road is in shade.
- Ride carefully and think well ahead.

Radio-operated key out of range

–with Keyless Ride OE

 lights up yellow.

 `Remote key not in range. Not possible to switch on ignition again.`

Possible cause:

Communication between radio-operated key and engine electronics is disrupted.

- Check the battery in the radio-operated key.

–with Keyless Ride OE

- Replace the battery of the radio-operated key. (➠ 89)
- Use the spare key to continue your journey.

–with Keyless Ride OE

- Battery of the radio-operated key is empty or loss of the radio-operated key. (➠ 89)
- Remain calm if the Check Control dialogue appears on the display while you are riding. You can continue your journey, the engine will not switch off.
- Have the faulty radio-operated key replaced by an authorised BMW Motorrad retailer.

Keyless Ride failed

–with Keyless Ride OE

 lights up yellow.

 `Keyless Ride failure Do not stop the engine. It may not be poss. to restart the engine.`

Possible cause:

The Keyless Ride control unit has diagnosed a communication fault.

- Do not switch off the motor. Proceed as directly as possible to an authorised workshop, preferably an authorised BMW Motorrad retailer.

» Motor start with Keyless Ride can no longer be initiated.

» DWA can no longer be activated.

Replacing battery of radio-operated key

–with Keyless Ride OE

 lights up yellow.

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

Possible cause:

- The integral battery in the radio-operated key has lost a significant proportion of its original capacity. There is no assurance of how long the radio-operated key can remain operational.
- Replace the battery of the radio-operated key. (➠ 89)

Voltage of the vehicle electrical system too low

 is displayed in yellow.

 `Vehicle voltage low. Switch off unnecessary consumers.`

The voltage of the vehicle electrical system is too low. If you continue to ride the motorcycle the on-board electronics will drain the battery.

Possible cause:
Consumers with high power consumption are in operation (such as heated body warmers), too many consumers are in operation at one time, or battery faulty.
- Switch off non-essential consumers or disconnect them from the vehicle's electrical system.
- If the fault persists or occurs without consumers connected, have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad retailer.

Voltage of the vehicle electrical system critical

 lights up yellow.

 is displayed in yellow.

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

WARNING

Failure of the vehicle systems
Risk of accident
- Do not continue your journey.

The voltage of the vehicle electrical system is critical. The onboard electronics will drain the battery.
Possible cause:
Consumers with high power consumption are in operation (such as heated body warmers), too many consumers are in operation at one time, or battery faulty.
- Switch off non-essential consumers or disconnect them from the vehicle's electrical system.
- If the fault persists or occurs without consumers connected, have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad retailer.

Charging voltage critical

 flashes yellow.

 is displayed in yellow.

 Battery voltage critical! Accident risk. Stop driving.

WARNING

Failure of the vehicle systems
Risk of accident
- Do not continue your journey.

Battery is not being charged. The on-board electronics will drain the battery.
Possible cause:

Alternator malfunction, battery faulty or fuse has blown.
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad retailer.

Bulb faulty

 lights up yellow.

 The faulty bulb is displayed:

 High beam faulty!

 Front left turn indicator faulty! or.

Front right turn indicator faulty!

 Low-beam headlight faulty!

 Front side light faulty!

 Daytime riding light faulty!

–with LED additional headlight[OA]

 Left additional headlight faulty! or. Right additional headlight faulty!◁

 Tail light faulty!

 Brake light faulty!

 Rear left turn indicator faulty! or. Rear right turn indicator faulty!

 Number plate light faulty!

–Have it checked by a specialist workshop.

 flashes yellow.

 The faulty bulb is displayed:

 Active headlight faulty.

WARNING

Vehicle overlooked in traffic due to failure of the lights on the vehicle

Safety risk

- Always replace a faulty bulb at the earliest possible opportunity. Consult a specialist workshop, preferably an authorised BMW Motorrad Retailer.

Possible cause:

One or more bulbs faulty.

- Identify faulty bulb or bulbs by visual check.
- Have LED light sources replaced as complete units; consult a specialist workshop, preferably an authorised BMW Motorrad retailer.

Light control failed

 lights up yellow.

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

WARNING

Vehicle overlooked in traffic on account of failure of the vehicle lighting

Safety risk

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

The vehicle lighting has partially or completely failed.

Possible cause:

Light control has diagnosed a communication fault.

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

Anti-theft alarm battery weak

–with anti-theft alarm (DWA) OE

 Alarm system batt. capacity weak. No restrictions. Make an appointment at a specialist workshop.

 This error message is displayed briefly only after the Pre-Ride-Check completes.

Possible cause:

The integral battery in the anti-theft alarm has lost a significant proportion of its original capacity. There is no assurance of how long the anti-theft alarm can remain operational if the vehicle's battery is disconnected.

- Consult a specialist workshop, preferably an authorised BMW Motorrad retailer.

Anti-theft alarm battery flat

–with anti-theft alarm (DWA) OE

`Alarm system battery empty. No independent alarm. Make an appointment at a specialist workshop.`

This error message is displayed briefly only after the Pre-Ride-Check completes.

Possible cause:

The integral battery in the anti-theft alarm (DWA) has lost its entire original capacity. The system cannot guarantee the DWA function if the vehicle battery is disconnected.

- Consult a specialist workshop, preferably an authorised BMW Motorrad retailer.

DWA failed

–with anti-theft alarm (DWA) OE

`Alarm system failure Have it checked by a specialist workshop.`

Possible cause:

The DWA control unit has diagnosed a communication fault.

- Consult a specialist workshop, preferably an authorised BMW Motorrad retailer.

» DWA can no longer be activated or deactivated.

» False alarm possible.

Electronic oil-level check

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

The following preconditions have to be satisfied for electronic oil-level checking, and several measurements might have to be taken:

–Rider is sitting on the vehicle and vehicle has just been ridden at a speed of at least min 10 km/h.

–Engine idling for at least 20 seconds.

–Engine is at operating temperature.

–Vehicle is standing upright on a smooth, level surface.

–Side stand is retracted and vehicle is not propped on its centre stand.
–The spring strut is appropriately set for the load status, or D-ESA is in Auto load mode.

If measurement is incomplete or if these conditions are not met, the oil level cannot be judged by the system. Dashes (– – –) appear on the display instead of a reading.

Engine-oil level too low

 lights up yellow.

 `Engine oil level Check engine oil level.`

Possible cause:

The electronic oil-level sensor has registered a low oil level. If the vehicle is not standing upright on a smooth, level surface, the message might appear even though the oil level is correct. The next time you stop for fuel:

- Check the engine oil level. (➠ 180)

If the oil level in the sight glass is too low:

- Topping up the engine oil. (➠ 181)

When the oil level in the sight glass is correct:

- Check whether the preconditions for the electronic oil-level check are met.

If the message appears repeatedly, even though the oil level is slightly below the **MAX** mark:

- Consult a specialist workshop, preferably an authorised BMW Motorrad retailer.

Engine temperature high

 lights up yellow.

 `Engine temp. high! Continue riding with restriction to allow cooling.`

ATTENTION

Riding with overheated engine

Engine damage

- Compliance with the information set out below is essential.

Possible cause:

The coolant level is too low.

- Check the coolant level. (➠ 187)

If the coolant level is too low:

- Allow the motor to cool down. Top up the coolant. Have the cooling system checked by a specialist

workshop, preferably an authorised BMW Motorrad retailer.

Possible cause:

The temperature sensor has detected a high temperature in the motor.

- If possible, ride in the part-load range to cool down the motor.
- If the motor temperature is frequently too high, have the fault rectified as soon as possible by a specialist workshop, preferably an authorised BMW Motorrad retailer.

Engine overheated

 lights up red.

 Engine overheating! Stop when it is safe to do so and switch off the engine.

ATTENTION

Riding with overheated engine

Engine damage

- Compliance with the information set out below is essential.

Possible cause:

The coolant level is too low.

- Check the coolant level. (➠ 187)

If the coolant level is too low:

- Allow the motor to cool down. Top up the coolant. Have the cooling system checked by a specialist workshop, preferably an authorised BMW Motorrad retailer.

Possible cause:

Engine is overheated.

- Carefully bring the vehicle to a stop, switch off the engine and wait until the engine has cooled down.
- If engine overheating is a frequent occurrence, have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad retailer.

Drive malfunction

 shows.

 Engine! Have it checked by a specialist workshop.

Possible cause:

The motor control unit has diagnosed a fault that affects pollutant emissions and/or reduces power.

- Have the fault rectified by a specialist workshop, preferably an authorised BMW Motorrad retailer.

» You can continue riding; pollutant emissions are higher than the threshold values.

Serious drive malfunction

 flashes red.

 flashes.

 `Serious fault in the engine control! Riding at mod. speed pos. Damage possible. Have checked by workshop.`

Possible cause:

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

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

» It is possible to continue to ride but not recommended.

Engine control failed

 lights up yellow.

 shows.

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

Possible cause:

Communication with the engine control unit has failed.

- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised 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 ride characteristics when engine running in emergency-operation mode
Risk of accident
- Avoid accelerating sharply and overtaking.

Possible cause:
The electronic control unit has diagnosed a fault. In exceptional cases, the engine stops and refuses to start. Otherwise, the engine runs in emergency operating mode.
- You can continue to ride, but bear in mind that the usual engine performance might not be available.
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad retailer.

Serious fault in engine control


flashes red.


Serious fault in the engine control! Riding at mod. speed pos. Damage possible. Have checked by workshop.

WARNING

Engine damage when running in emergency-operation mode
Risk of accident
- Ride slowly, avoid accelerating sharply and overtaking.
- If possible, have the vehicle picked up and have the fault rectified by a specialist workshop, preferably an authorised BMW Motorrad Retailer.

Possible cause:
The engine control unit has diagnosed a fault that can lead to serious consequential faults. The engine is in emergency-operation mode.
- It is possible to continue to ride but not recommended.
- Avoid high load and rpm ranges if possible.
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad retailer.

Tyre pressure
–with tyre pressure control (RDC) OE

In addition to the MY VEHICLE menu screen and the Check Control messages, there is also the TYRE PRESSURE screen for the display of the tyre pressures:



The values on the left are for the front wheel; those on the right are for the rear wheel. Actual and specified tyre pressures and the difference between them are displayed for each wheel.
Immediately after the ignition is switched on, only dashes are displayed. The sensors do not start transmitting tyre pressure signals until the first time the vehicle accelerates to more than the minimum speed stated below:

RDC sensor is not active
min 30 km/h (The RDC sensor does not transmit its signal to the vehicle until a certain minimum speed has been reached.)

The tyre-pressure readings in the instrument cluster are temperature-compensated and are always referenced to the following tyre-air temperature:
20 °C

If the tyre symbol appears as well, showing yellow or red, this is a warning. The pressure difference is highlighted with an exclamation point in the same colour.

If the value in question is close to the limit of the permissible tolerance range, the reading is accompanied by the 'General' warning light showing yellow.

The 'General' warning light flashes red if the tyre pressure registered by the sensor is outside the permissible tolerance range.

For further information about the BMW Motorrad RDC, see the section entitled "Engineering details" from page (➠ 169) onward.

Tyre pressure close to limit of permitted tolerance

 lights up yellow.

 is displayed in yellow.

 `Tyre pressure does not match setpoint Check tyre pressure.`

Possible cause:

Measured tyre pressure is close to the limit of permitted tolerance.

- Correct tyre pressure.
- Before adjusting tyre pressure, read the information on temperature compensation and adjusting pressure in the section entitled "Engineering details":

–with tyre pressure control (RDC) OE

» Temperature compensation (➠ 170)◁

–with tyre pressure control (RDC) OE

» Pressure adaptation (➠ 170) ◁

» Find the correct tyre pressures in the following places:

–Back cover of the rider's manual

–Instrument cluster in the `TYRE PRESSURE` view

–Tyre pressures table

Tyre pressure outside permitted tolerance

 flashes red.

 is displayed in red.

 `Tyre pressure does not match setpoint Stop immediately! Check tyre pressure.`

 `Tyre press. control. Loss of pressure. Stop immediately! Check tyre pressure.`

WARNING

Tyre pressure outside the permitted tolerance.

Risk of accident, degradation of the vehicle's driving characteristics.

- Adapt your style of riding accordingly.

Possible cause:

Measured tyre pressure is outside permitted tolerance.

- Check the tyre for damage and to ascertain whether the vehicle can be ridden with the tyre in its present condition.

If the vehicle can be ridden with the tyre in its present condition:

- Correct the tyre pressure at the earliest possible opportunity.
- Before adjusting tyre pressure, read the information on temperature compensation and adjusting pressure in the section entitled "Engineering details":

–with tyre pressure control (RDC) OE

» Temperature compensation (➠ 170)<

–with tyre pressure control (RDC) OE

» Pressure adaptation (➠ 170)<

» Find the correct tyre pressures in the following places:

–Back cover of the rider's manual

–Instrument cluster in the TYRE PRESSURE view

–Tyre pressures table

- Have the tyre checked for damage by a specialist workshop, preferably an authorised BMW Motorrad retailer.

If you are unsure whether the vehicle can be ridden with the tyre in its present condition:

- Do not continue your journey.
- Notify the breakdown service.

Transmission fault

 "– – –"

Possible cause:

The vehicle has not reached the minimum speed (➠ 169).

RDC sensor is not active	
min 30 km/h (The RDC sensor does not transmit its signal to the vehicle until a certain minimum speed has been reached.)	

- Increase speed above this threshold and observe the RDC readings. Assume that a permanent fault has not occurred unless the 'General' warning light comes on to accompany the symptoms. Under these circumstances:
- Have the fault rectified by a specialist workshop, preferably an authorised BMW Motorrad retailer.

Possible cause:

Wireless communication with the RDC sensors has been disrupted. Possible causes include radio-communication systems operating in the vicinity and interfering with the link between the RDC control unit and the sensors.

- Move to another location and observe the RDC readings. Assume that a permanent fault has not occurred unless the 'General' warning light comes on to accompany the symptoms. Under these circumstances:
- Have the fault rectified by a specialist workshop, preferably an authorised BMW Motorrad retailer.

Sensor faulty or system fault

 lights up yellow.

 "---"

Possible cause:

Vehicle is fitted with wheels not equipped with RDC sensors.

- Retrofit a set of wheels equipped with RDC sensors.

Possible cause:

One or both RDC sensors have failed or a system fault has occurred.

- Have the fault rectified by a specialist workshop, preferably an authorised BMW Motorrad retailer.

Tyre pressure monitoring (RDC) failed

 lights up yellow.

 Tyre pressure check failure! Function limited. Have it checked by a specialist workshop.

Possible cause:

The tyre pressure control (RDC) control unit has diagnosed a communication fault.

- Consult a specialist workshop, preferably an authorised BMW Motorrad retailer.

» Tyre pressure warnings not available.

Battery for tyre pressure sensor weak

 lights up yellow.

 RDC sensor battery weak. Function limited. Have it checked by a specialist workshop.

This error message is displayed briefly only after the Pre-Ride-Check completes.

Possible cause:

The integral battery in the tyre-pressure sensor has lost a significant proportion of its original capacity. There is no assurance of how long the tyre pressure monitoring system can remain operational.

- Consult a specialist workshop, preferably an authorised BMW Motorrad retailer.

Malfunction, drop sensor

Drop sensor faulty. Have it checked by a specialist workshop.

Possible cause:

The drop sensor is not available.

- Consult a specialist workshop, preferably an authorised BMW Motorrad retailer.

Motorcycle dropped

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

Possible cause:

The drop sensor has detected a drop and has cut out the engine.

- Hold the vehicle upright and check it for damage.
- Switch the ignition off and then on again or switch the kill switch on and then off again.

Emergency call function restricted

–with intelligent emergency call[OE]



lights up yellow.



Emergency call system restricted. If this occurs again, have the vehicle checked by a specialist workshop.

Possible cause:

The emergency call cannot be made automatically or cannot be made via BMW.

- Consult the information on operating the intelligent emergency call on page (➠ 91)ff.
- Consult a specialist workshop, preferably an authorised BMW Motorrad retailer.

Emergency call function failed
–with intelligent emergency call OE


lights up yellow.


Emergency call system error. Make an appointment at a specialist workshop.

Possible cause:

The control unit of the emergency call system has diagnosed a fault. The emergency call function has failed.

- Bear in mind that an emergency call cannot be made.
- Consult a specialist workshop, preferably an authorised BMW Motorrad retailer.

Malfunction, side stand monitor


lights up yellow.


Side stand monitoring faulty. Onward journey possible. Engine will stop if stationary! Have checked by workshop.

Possible cause:

Side-stand switch or wiring damaged
The engine will switch off when speed drops below the minimum threshold. You cannot resume your journey.
min 5 km/h

- Consult a specialist workshop, preferably an authorised BMW Motorrad retailer.

ABS self-diagnosis not completed


flashes.

Possible cause:

ABS self-diagnosis not completed
The ABS function is not available, because self-diagnosis did not complete. (The motorcycle has to reach a defined minimum speed for the wheel speed sensors to be checked: 5 km/h)

- Pull away slowly. Bear in mind that the ABS function is not available until self-diagnosis has completed.

ABS fault

 lights up yellow.

 shows.

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

Possible cause:

The ABS control unit has detected a fault. The ABS function is available, subject to restrictions.

- You can continue to ride. Bear in mind the more detailed information on certain situations that can lead to an ABS fault message (➠ 160).
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad retailer.

ABS failed

 lights up yellow.

 shows.

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

Possible cause:

The ABS control unit has detected a fault. The ABS function is not available.

- You can continue to ride. Bear in mind the more detailed information on certain situations that can lead to an ABS fault message (➠ 160).
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad retailer.

ABS Pro failed

 lights up yellow.

 shows.

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

Possible cause:

Monitoring of the ABS Pro function has detected a fault. The ABS Pro function is not available. The ABS function is still available. ABS provides support only for braking in straight-ahead driving.

- You can continue to ride. Bear in mind the more detailed information on certain situations that can lead to an ABS Pro fault message (➠ 160).
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad retailer.

ABS control at front wheel only

–with riding modes Pro[OE]


flashes irregularly.

Possible cause:

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

- Check the settings of the riding mode.
- For more information on setting up the riding modes, see the section entitled "Engineering details" (➠ 165).

DTC intervention


quick-flashes.

Possible cause:

The DTC has detected a degree of instability at the rear wheel and has intervened to reduce torque.

The indicator and warning light flashes longer than the duration of the DTC. This affords the rider visual feedback on control intervention even after the critical situation has been dealt with.

- You can continue to ride. Ride carefully and think well ahead.

DTC self-diagnosis not completed


slow-flashes.

Possible cause:

 DTC+ self-diagnosis not completed
The DTC+ function is not available, because self-diagnosis did not complete. (The motorcycle has to reach a defined minimum speed for the wheel sensors to be checked: min 5 km/h)

- Pull away slowly. Bear in mind that the DTC function is not available until self-diagnosis has completed.

DTC switched off


shows.


Off!


Traction control deactivated.

Possible cause:

The rider has switched off the DTC system.

- Switch on DTC. (➠ 99)

DTC restricted


lights up yellow.


shows.


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

Possible cause:

The engine control unit has detected a DTC fault.

ATTENTION

Damaged components

Damage to sensors, for example, which causes malfunctions

- Do not transport any objects underneath the driver or passenger seat.
- Secure the toolkit.

- Do not damage the angular rate sensor.
- Bear in mind that the DTC function and other dynamic control system functions are restricted.
- You can continue to ride. Bear in mind the more detailed information on situations that can lead to a DTC fault (➠ 162).
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad retailer.

DTC fault


lights up yellow.


shows.


Traction control failure! Onward journey possible.

Ride carefully to next specialist workshop.

Possible cause:

The engine control unit has detected a DTC fault.

ATTENTION

Damaged components

Damage to sensors, for example, which causes malfunctions

- Do not transport any objects underneath the driver or passenger seat.
- Secure the toolkit.

- Do not damage the angular rate sensor.
- Bear in mind that the DTC function and other dynamic control system functions are not available.
- You can continue to ride. Bear in mind the more detailed information on situations that can lead to a DTC fault (➠ 162).
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad retailer.

D-ESA fault

–with Dynamic ESA OE



lights up yellow.



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

Possible cause:

The Dynamic ESA control unit has detected a fault. Components of the electronic suspension adjustment system are faulty or communication with the control unit is disrupted. In this condition, the motorcycle has too much damping and is uncomfortable to drive, especially on roads in poor condition.

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

Fuel down to reserve



Fuel down to reserve. Go to a filling station soon.

WARNING

Irregular engine operation or engine shutdown due to lack of fuel
Risk of accident, damage to catalytic converter
• Do not run the fuel tank dry.

Possible cause:
The fuel tank contains no more than the reserve quantity of fuel.

 Fuel reserve
approx. 4 l

• Refuel. (➠ 149)

Hill Start Control active

 shows green.

Possible cause:
Hill Start Control (➠ 172) has been activated by the rider.
• Switch off Hill Start Control.
• Operate Hill Start Control. (➠ 109)

Hill Start Control automatically deactivated

 flashes yellow.

Possible cause:
Hill Start Control has been automatically deactivated.
• Side stand has been extended.
» Hill Start Control is deactivated when the side stand is extended.
• Engine has been switched off.
» Hill Start Control is deactivated when the engine is switched off.
• Operate Hill Start Control. (➠ 109)

Hill Start Control cannot be activated

 is displayed.

`HSC not available. Engine not running.`
Possible cause:
Hill Start Control cannot be activated.
• Retract the side stand.
» Hill Start Control is operational only with the side stand retracted.
• Start the engine.
» Hill Start Control is operational only while the engine is running.

Gear not taught

–with shift assistant Pro[OE]


The gear indicator flashes.

Possible cause:

The gearbox sensor is not fully trained.

- Start the engine. (➠ 139)
- Select neutral N.
- Extend and then retract the side stand, without touching the shift lever.
- Use clutch control to engage each gear in turn. In each gear repeatedly move the throttle twistgrip to the idle position and then re-open the throttle.

» The gear indicator stops flashing when the gearbox sensor has been trained successfully.

–When the gearbox sensor has been taught successfully, Gear Shift Assistant Pro works as described (➠ 171).

- If teaching is not successful, have the fault rectified by a specialist workshop, preferably an authorised BMW Motorrad retailer.

Hazard warning lights system is switched on


flashes green.


flashes green.

Possible cause:

The driver has switched on the hazard warning lights system.

- Operate the hazard warning flashers. (➠ 97)

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 showing yellow.

If the service is overdue, a yellow CC message is displayed. Exclamation marks also draw your attention to the displays for service, service appointment and countdown distance in the MY VEHICLE and SERVICE REQUIREMENTS menu screens.


If the service-due indicator appears more than a month before the service date, the current date has to be corrected. This situation can occur if the battery was disconnected.

Service due


is displayed in white.

`Service due! Have service performed by a specialist workshop.`
Possible cause:

Service is due because of the driving performance or the date.

- Have your motorcycle serviced regularly by a specialist workshop, preferably by an authorised BMW Motorrad Retailer.

» The operational and road safety of the motorcycle remain intact.
» The motorcycle's value is maintained as best as possible.

Service-due date has passed

 lights up yellow.

 is displayed in yellow.

`Service overdue! Have service performed by a specialist workshop.`
Possible cause:

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

- Have your motorcycle serviced regularly by a specialist workshop, preferably by an authorised BMW Motorrad Retailer.

» The operational and road safety of the motorcycle remain intact.
» The motorcycle's value is maintained as best as possible.

INSTRUMENT CLUSTER

04

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WARNINGS

WARNING

Operation of a smartphone while riding the vehicle

Risk of accident

- Always comply with the road traffic regulations in force where you are riding.
- Do not use a smartphone while riding. This applies with the exception of applications without operation, such as hands-free telephony.

WARNING

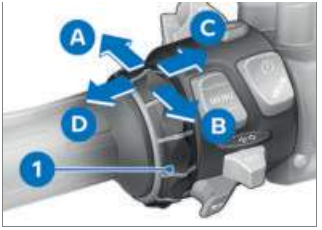
Distraction from the road and loss of control

Operating the integrated information system and communication devices while driving results in a risk of accident

- Operate those systems or devices only when the traffic situation allows for it.
- If necessary, stop and operate the systems or devices when stationary.

CONTROLS

Multi-Controller



1 Multi-Controller

A Move the cursor up in lists
Increase volume

B Move the cursor down in lists
Reducing volume

C Activate function in accordance with feedback
Confirm selection/setting
Scrolling through menu screens

D Activate function in accordance with feedback or go back
Return to Menu view after making settings
Change up one level in the hierarchy
Scrolling through menu screens

MENU rocker button



Short-press the top section of MENU rocker button 1:

–In Menu view: Change up one level.
–In Pure Ride view: Change the display for rider info. status line.

Long-press the top section of MENU rocker button 1:

–In Menu view: Open the Pure Ride view.
–In Pure Ride or Sport view: Switch the operating focus to the Navigator.

Short-press the bottom section of MENU rocker button 1:

–Change down a level.
–Confirm selection/setting.

Long-press the bottom section of MENU rocker button 1:

–Change back to the last menu after a previous menu change effected by long-pressing the top section of the rocker button.

Instructions given by the navigation system are displayed as a dialogue if the `Navigation` menu has not been called up. Operation of the MENU rocker button is temporarily restricted.

MY VEHICLE

On-board computer and trip computer

The `ON-BOARD COMPUTER` and `TRIP COMPUTER` menu screens display vehicle and trip data, such as average values.

Call up the on-board computer

- Call up the `My vehicle` menu.
- Scroll to the right until the `ON-BOARD COMPUTER` menu screen is displayed.

Reset the on-board computer

- Call up the on-board computer. (➠ 71)
- Press down the MENU rocker button.
- Select `Reset all values` or `Reset individual values` and confirm.

The following values can be reset:

Break

Journey

Current

Speed

Consump.

Call up the trip computer

- Call up the on-board computer. (➠ 71)
- Scroll to the right until the TRIP COMPUTER menu screen is displayed.

Reset the trip computer

- Call up the trip computer. (➠ 72)
- Press down the MENU rocker button.
- Select Autom. reset or Reset all values and confirm.

» If Autom. reset is selected, the trip computer is automatically reset when a minimum of 6 hours have passed and the date has changed since the ignition was switched off.

OPERATION

Calling up menu



- Display the Pure Ride view. (➠ 73)
- Short-press the bottom section of button **2**.

The following menus can be called up:

–My vehicle
–Navigation
–Media
–Telephone
–Settings

–with riding modes Pro OE additionally:

–Sport◁

- Repeatedly short-push Multi-Controller **1** to the right until the menu item you want is highlighted.
- Short-press the bottom section of button **2**.

The Settings menu can only be called up when the vehicle is stationary.

Display Pure Ride view

- Long-press the top section of the MENU rocker button.

System status displays

The system status is displayed in the lower area of the menu if a function is switched on or off.



Examples of what the system statuses mean:

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

Change the display for the status line

Requirement

The vehicle is at a standstill. The Pure Ride view is displayed.

- Switch on the ignition. (➠ 84)

» The instrument cluster shows all the information necessary for riding on public roads from the on-board computer (e.g. `TRIP` **1**) and the trip computer (e.g. `TRIP` **2**). The information can be displayed in the top status line.

–with tyre pressure control (RDC) OE

» Information from the tyre pressure monitoring can also be displayed.◁

- Select the content of the top status line. (➠ 74)



- Long-press button **1** to obtain the Pure Ride view.
- Repeatedly short-press button **1** to select the value in the top status line **2**.

The following values can be displayed:

`Total distance`

`Current distance 1`

`Current distance 2`

`Consumption 1` (Average)


Consumption 2 (Average)


Riding time 1


Riding time 2


Break 1


Break 2


Speed 1 (Average)


Speed 2 (Average)

–with tyre pressure control (RDC) OE


Tyre pressure◁


Range


Fuel tank level

Select the content of the top status line

- Navigate to Settings, Display, Status line content.
- Switch on the desired displays.

» You can switch between the selected displays in the top status line. If no displays are selected, only the range will be displayed.

SETTINGS

Adjusting volume

- Connect the rider's and passenger's helmets. (➠ 76)
- Increase volume: Turn the Multi-Controller up.
- Reduce volume: Turn the Multi-Controller down.
- Mute: Turn the Multi-Controller all the way down.

Changing system settings

- Switch on the ignition. (➠ 84)
- Navigate to Settings, System settings.

» You can change the following system settings here:

–Date and time
–Units
–Language

Adjusting brightness

- Navigate to Settings, Display, Brightness.
- Adjust display brightness.

» When ambient brightness drops below a defined threshold, the display is dimmed to the brightness set here.

Reset all settings

- Call up the Settings menu.

- Select Reset all and confirm.

The settings in the following menus are reset to their default factory settings:
–Vehicle settings
–System settings
–Connections
–Display
–Information

» Existing Bluetooth connections are not deleted.
» The pairing of the vehicle to the current BMW Motorrad ConnectedRide account is reset.

BLUETOOTH

Pairing

Two Bluetooth devices have to recognise 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 devices, e.g. those with the iOS operating system, the BMW Motorrad Connected app has to be opened prior to 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 the audio system can recognise another device are as follows:
–The device's Bluetooth function must be active
–The device must be "visible" to others
–Other Bluetooth-compatible devices must be OFF (e.g. mobile phones and navigation systems).

Please consult the operating instructions for your communication system.

Pairing

- Navigate to 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 devices is displayed.

Connect mobile device

- Perform pairing. (➠ 75)
- Activate the mobile device's Bluetooth function (see mobile device's operating instructions).
- Select `Mobile device` and confirm.
- Select `Pair new mobile device` and confirm.

Mobile devices are being searched for.


flashes in the bottom status line during pairing.

Mobile devices found are displayed.

- Select and confirm mobile device.


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

- Follow the instructions on the mobile device.
- Confirm that the code matches.

» The connection is established and the connection status updated.

» If the connection is not established, consult the troubleshooting chart in the section entitled "Technical data". (➠ 236)

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

» Telephone data (➠ 81)

» If the telephone book is not displayed, consult the troubleshooting chart in the section entitled "Technical data". (➠ 237)

» If the Bluetooth connection is not working as expected, consult the troubleshooting chart in the section entitled "Technical data". (➠ 237)

Connect rider's and passenger's helmet

- Perform pairing. (➠ 75)
- Select `Rider's helmet` or `Passenger helm.` and confirm.
- Make the helmet's communication system visible.
- Select `Pair new rider's helmet` or `Pair new passeng. helmet` and confirm.

Helmets are searched for.


flashes in the bottom status line during pairing.

Helmets found are displayed.

- Select and confirm helmet.

» The connection is established and the connection status updated.

» If the connection is not established, consult the troubleshooting chart in the section entitled "Technical data". (➠ 236)

» If the Bluetooth connection is not working as expected, consult the troubleshooting chart in the section entitled "Technical data". (➠ 237)

Delete connections

- Navigate to `Settings`, `Connections`.
- Select `Delete connections`.
- To delete an individual connection, select the connection and confirm.
- To delete all connections, select `Delete all connections` and confirm.

OPERATING FOCUS

Change of operating focus

–with preparation for navigation system OE

If the Navigator is connected, you can toggle between operation of the Navigator and operation of the instrument cluster.

Change the operating focus

–with preparation for navigation system OE

- Secure the navigation system. (➠ 219)
- Display the Pure Ride view. (➠ 73)
- Long-press the top section of the MENU rocker button.

» Operating focus switches to the Navigator or the instrument cluster, as applicable. The active device is highlighted on the left in the top status line. Operator actions affect the currently active device until the operating focus is changed again.

–with preparation for navigation system OE

» Operating navigation system (➠ 221)◁

NAVIGATION

Precondition

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

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

On some mobile devices, e.g. those with the iOS operating system, the BMW Motorrad Connected app has to be opened prior to use.

Enter the destination address

- Connect a mobile device. (➠ 76)
- Call up the BMW Motorrad Connected app and start the route guidance.
- In the instrument cluster, call up the Navigation menu.

» Active route guidance is displayed.

» If the active route guidance is not displayed, consult the troubleshooting chart in the section entitled "Technical data". (➠ 237)

Select destination from recent destinations

- Navigate to Navigation, Recent destinations.
- Select and confirm destination.
- Select Start route guidance.

Select destination from favourites

- The FAVOURITES menu shows all the destinations saved as favourites in the BMW Motorrad Connected app. You cannot use the instrument cluster to add favourites to the list.
- Navigate to Navigation, Favourites.
- Select and confirm destination.
- Select Start guidance.

Enter special destinations

- Special destinations, such as points of interest, can be displayed on the map.
- Navigate to Navigation, POIs.

The following locations can be selected:

–At current location
–At destination
–Along the route

- Select where the special destinations should be looked for.

For example, the following special destination can be selected:

–Filling station

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

Set route criteria

- Navigate to Navigation, Route criteria.

The following criteria can be selected:

–Route type
–Avoid

- Select desired Route type.

- Switch desired Avoid on or off.

The number of avoidances activated is displayed in brackets.

View the route information

- Navigate to Navigation, Settings and select Route info.

You can choose between the following options:

–Dest.
–Waypoint

- Select the desired option.

» Countdown distance and time are displayed.

Edit route guidance

- Navigate to Navigation, New destination.

You can choose from the following destinations:

–Recent destinations
–Favourites
–POIs

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

End route guidance

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

Switching spoken instructions on or off

- Connect the rider's and passenger's helmets. (➠ 76)
- Navigation instructions can be read out. For this purpose, Spoken instruction must be switched on.
- Navigate to Navigation, Active route guidance.
- Switch Spoken instruction on or off.

Repeat last spoken instruction

- Navigate to Navigation, Active route guidance.
- Select Current instruction and confirm.

Switch Speed Limit Info on or off

Requirement

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

- Speed Limit Info shows the maximum speed permitted at the time, if this information is made available by the

publisher of the map material in the navigation system.
- Navigate to `Settings`, `Display`.
- Switch `Speed Limit Info` on or off.

MEDIA

Precondition

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

Controlling music playback



- Call up the `Media` menu.

BMW Motorrad recommends setting the volume for media and phone calls on the mobile device to maximum before riding off.

- Adjust volume. (➠ 74)
- Next track: Short-tilt Multi-Controller **1** to the right.
- Preceding track or start of current track: Short-tilt Multi-Controller **1** to the left.
- Fast forward: Long-tilt Multi-Controller **1** to the right.
- Rewind: Long-tilt Multi-Controller **1** to the left.
- Call up context menu: Press bottom section of button **2**.

Depending on the mobile end device, the scope of Connectivity functions might be restricted.

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

The settings possible in the `Audio settings` submenu are as follows:
– Switch `Shuffle` on or off.
– Select `Repeat`: `Off`, `One` (current track) or `All`.

TELEPHONE

Precondition

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

Telephone calls



- Call up the `Telephone` menu.
- Accept call: Tilt Multi-Controller **1** to the right.
- Reject call: Tilt Multi-Controller **1** to the left.
- End call: Tilt Multi-Controller **1** to the left.

Muting

During active phone calls, the microphone in the helmet can be muted.

Phone calls with multiple participants

While a phone call is in progress, a second call can be accepted. The first phone call is put on hold. The number of active calls is shown in the `Telephone` menu. It is possible to switch between two phone calls.

Telephone data

Depending on the mobile device, when pairing (➠ 75) completes telephone data are automatically sent to the vehicle.

`Phone book`: List of contacts saved on the mobile device
`Call list`: List of calls with the mobile device
`Favourites`: List of favourites saved on the mobile device

SOFTWARE VERSION

- Navigate to `Settings`, `Information`, `Software version`.

LICENCE INFORMATION

- Navigate to `Settings`, `Information`, `Licences`.

OPERATION

05

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IGNITION SWITCH/STEERING LOCK

Keys

The motorcycle is supplied with one vehicle key and one spare key. If a key is lost or mislaid, consult the information on the electronic immobiliser (EWS) (➠ 85).
Ignition switch/steering lock, fuel filler cap lock and seat lock are all operated with the same ignition key.

If you wish you can arrange to have the cases and the topcase fitted with locks that can be opened with the ignition key as well. Consult a specialist workshop, preferably an authorised BMW Motorrad retailer.

Engaging steering lock

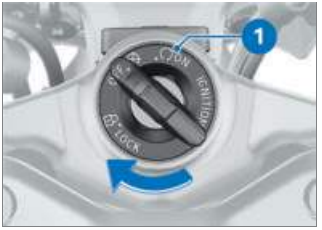
- Turn the handlebars all the way to the left.



- Turn the vehicle key to position **1**, while moving the handlebars slightly.

» Ignition, lights and all function circuits switched off.
» Handlebars are locked.
» Vehicle key can be removed.

Switching on ignition

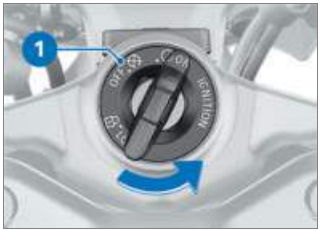


- Insert the vehicle key into the ignition switch and turn it to position **1**.

» Side lights and all function circuits are switched on.
» Daytime riding light is switched on.

–with LED additional headlight OA
» LED auxiliary headlights are switched on.◁
» Pre-Ride-Check is performed. (➠ 140)
» ABS self-diagnosis is in progress. (➠ 141)
» DTC self-diagnosis is performed. (➠ 141)

Switching off ignition



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

» When the ignition is switched off, the instrument cluster remains switched on for a short time and displays any existing fault messages.
» Handlebars not locked.
» Electrically powered accessories remain operational for a limited period of time.
» The battery can be recharged via the socket.
» Vehicle key can be removed.

- The daytime riding light goes out soon after the ignition is switched off.

–with LED additional headlight OA
- The LED auxiliary headlights go out soon after the ignition is switched off.◁

Electronic immobiliser (EWS)

The on-board electronics access the data saved in the ignition key via a ring aerial in the ignition lock. The ignition is not enabled for starting until the engine control unit has recognised this ignition key as "authorised" for your motorcycle.

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

If you lose an ignition key, you can have it barred by your authorised BMW Motorrad retailer.
If you wish to do this, you will need to bring all other keys for the motorcycle with you. The

engine cannot be started by a barred ignition key, but an ignition key that has been barred can subsequently be reactivated.
You can obtain extra keys only through an authorised BMW Motorrad retailer. The ignition keys are part of an integrated security system, so the retailer is under an obligation to check the legitimacy of all applications for replacement/extra keys.

IGNITION WITH KEYLESS RIDE

–with Keyless Ride OE

Keys

The telltale light for the radio-operated key flashes while the search for the radio-operated key is in progress.
The light goes out as soon as the radio-operated key or the emergency key is found.
The light goes out briefly if the search times out without the radio-operated key or the emergency key being found.

You receive one radio-operated key and one spare key. If a key is lost or mislaid, consult the notes on the electronic immobiliser (EWS) (➠ 85).

Ignition, fuel filler cap and anti-theft alarm system all work with the radio-operated key.
Seat lock, topcase and cases are locked and unlocked manually.

The vehicle cannot be started if the radio control key is not within range (e.g. key inside one of the cases or the topcase).
If the radio-operated key remains out of range the ignition is switched off after about 90 seconds to protect the battery.
It is advisable to keep the radio-operated key on your person (e.g. in a jacket pocket) and to have the emergency key with you as an alternative.

Range of the Keyless Ride radio-operated key
–with Keyless Ride OE
approx. 1 m◁

Locking the steering lock

Requirement

The handlebars are turned towards the left. Radio-operated key is within range.



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

» The steering lock engages with an audible click.
» Ignition, lights and all function circuits switched off.

- To unlock the steering lock, briefly press button **1**.

Switching on ignition

Requirement

Radio-operated key is within range.



- There are **two** ways of activating the ignition.

Version 1:

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

» The steering lock disengages.
» Side lights and all function circuits are switched on.
» Daytime riding light is switched on.

–with LED additional headlight OA

» LED auxiliary headlights are switched on.
» Pre-Ride-Check is performed. (➠ 140)
» ABS self-diagnosis is in progress. (➠ 141)
» DTC self-diagnosis is performed. (➠ 141)

Version 2:

- Short-press button **1**.

» Side lights and all function circuits are switched on.
» Daytime riding light is switched on.

–with LED additional headlight OA

» LED auxiliary headlights are switched on.
» Pre-Ride-Check is performed. (➠ 140)
» ABS self-diagnosis is in progress. (➠ 141)
» DTC self-diagnosis is performed. (➠ 141)

Switching off ignition
Requirement
Radio-operated key is within range.



- There are **two** ways of deactivating the ignition.

Version 1:
- Turn the handlebars all the way to the left.
- Press and hold down button **1**.

» Light is switched off.
» The steering lock engages.

Version 2:
- Short-press button **1**.

» Light is switched off.
» The steering lock does not engage.

- Lock the steering lock. (➠ 86)

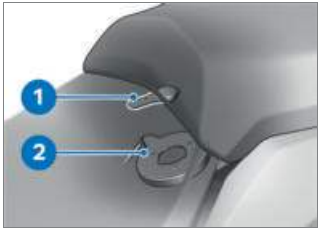
Electronic immobiliser (EWS)
The on-board electronics access the data saved in the radio-operated key via a ring aerial in the R/C ignition lock. The ignition is not enabled for starting until the engine control unit has recognised the radio-operated key as "authorised" for your motorcycle.

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

If you lose a radio-operated key, you can have it barred by your authorised BMW Motorrad retailer. If you wish to do this, you will need to bring all other keys for the motorcycle with you.
The engine cannot be started by a barred radio-operated key, but a radio-operated key that has been barred can subsequently be reactivated.
You can obtain extra keys only through an authorised BMW Motorrad retailer. The radio-operated keys are part of an integrated security system, so the retailer is under an obligation to check the legitimacy of all applications for replacement/extra keys.

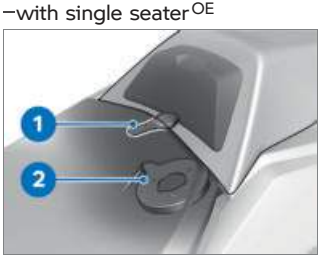
Battery of the radio-operated key is empty or loss of the radio-operated key

- If a key is lost or mislaid, consult the notes on the electronic immobiliser (**EWS**).
- If the radio-operated key is lost or mislaid while you are on a journey, you can start the vehicle with the spare key.



- If the battery of the radio-operated key is empty, the engine can be started by touching the radio-operated key against the passenger seat.

–with single seater OE



- If the battery of the radio-operated key is empty, the engine can be started by touching the radio-operated key against the tail-hump cover.◁
- Insert spare key **1** into the slot between the rider's seat and the tail-hump cover and the passenger seat, in such a way that the spare key is positioned above aerial **2**.

	Time during which the engine has to be started. The unlocking procedure has to be repeated if this time is allowed to expire.
30 s	

» Pre-Ride-Check is performed.
–Spare key has been recognised.
–Engine can be started.
–Spare key can be removed.
- Start the engine. (➠ 139)

Replacing battery of radio-operated key

If the radio-operated key does not react when you short-press or long-press a button:

- Battery of the radio-operated key is not at full capacity.

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

DANGER

Swallowing a battery
Risk of injury or death
- An ignition key contains a button cell as its battery. Batteries or button cells, if swallowed, can cause serious or fatal injury within two hours, for example resulting from internal burns or caustic action.
- Keep ignition keys and batteries out of reach of children.
- If there is any suspicion that a battery or button cell has been swallowed or is inside a part of the body, seek medical assistance immediately.

- Change the battery.



- Press button **1**.
» Key bit flips out.
- Push battery cover **2** up.
- Remove battery **3**.
- Dispose of the old battery in accordance with all applicable laws and regulations; do not attempt to dispose of batteries as domestic waste.

ATTENTION

Unsuitable or incorrectly inserted batteries
Component damage
- Use a battery compliant with the manufacturer's specifications.
- When inserting the battery, always make sure polarity is correct.

- Insert the new battery with the positive terminal up.

Battery type
For Keyless Ride radio-operated key
CR 2032

- Install battery cover **2**.
» Red LED in the instrument cluster flashes.
» The radio-operated key is again ready for use.

EMERGENCY-OFF SWITCH (KILL SWITCH)



1 Emergency-off switch (kill switch)

WARNING

Operation of the kill switch while riding
Risk of fall due to rear wheel locking
- Do not operate the kill switch when riding.

The emergency off switch is a kill switch for switching off the engine quickly and easily.



A Engine switched off
B Normal operating position (run)

INTELLIGENT EMERGENCY CALL

–with intelligent emergency call OE

Emergency call via BMW
Press the SOS button in an emergency only.
The emergency call is not able to be ensured because of technical reasons due to unfavourable conditions, e.g. in areas where there is no mobile phone reception.
During an emergency call, the location of the vehicle, the choice of language and, if applicable, accident-related data are transmitted to BMW (➠ 12). Under unfavourable conditions, data transfer can be restricted or delayed. This can

lead to delayed processing of the emergency call.
Even if an emergency call using BMW is not possible, the system may make an emergency call to a public emergency call number. This depends on the respective mobile phone network and the national regulations.

Language for emergency call

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

The language for the emergency call can be changed only by the authorised BMW Motorrad retailer.
The language assigned to the vehicle varies from the selectable language the rider can choose as the display language in the instrument cluster.

Manual emergency call
Requirement

An emergency has occurred.
The vehicle is at a standstill.
The ignition is switched on.



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



The time until transmission of the emergency call is displayed. During that time, it is possible to cancel the emergency call.

- To cancel an emergency call: Press SOS button **2** and hold it down for two seconds or switch the ignition off.
- Operate the emergency-off switch to stop the engine.
- Remove helmet.

» After expiry of the timer, a voice contact to the BMW Call Center is established.



The connection was established.



- Provide information to the emergency services using the microphone **3** and speaker **4**.

Automatic emergency call

The intelligent emergency call is active after the ignition is switched on and reacts if a fall or crash occurs.

Emergency call in the event of a light fall

- A minor fall or a crash is detected.

» An acoustic signal is sounded.



The time until transmission of the emergency call is displayed. During that time, it is possible to cancel the emergency call.

- To cancel an emergency call: Press the SOS button and hold it down for two seconds or switch the ignition off.
- If possible, remove helmet and stop engine.

» A voice contact connection to the BMW Call Center is established.



The connection was established.



- Open cover **1**.
- Provide information to the emergency services using the microphone **3** and speaker **4**.

Emergency call in the event of a severe fall

- A severe fall or a crash is detected.

» The emergency call is placed automatically without delay.

LIGHTING

Low-beam headlight and sidelights

The side lights switch on automatically when the ignition is switched on.

The side lights place a strain on the battery. Switch on the ignition for a limited time only.

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

In daytime the daytime riding light can be switched on as an alternative to the low-beam headlight.

High-beam headlight and headlight flasher

- Switch on the ignition. (➠ 84)



- Push switch **1** forward to switch on the high-beam headlight.
- Pull switch **1** back to operate the headlight flasher.

Headlight courtesy delay feature

- Switch off the ignition.



- Immediately after switching off the ignition, pull switch **1** back and hold it in that position until the headlight courtesy delay feature comes on.

» The vehicle's lights come on for one minute and then switch off automatically.

– This can be used to light up the path to the house door after the vehicle has been parked, for example.

Parking lights

- Switch off the ignition. (➠ 85)



- Immediately after switching off the ignition, push button **1** to the left and hold it in that position until the parking lights come on.
- Switch the ignition on and off again to switch off the parking lights.

Auxiliary headlights

– with LED additional headlight OA

Requirement

The auxiliary headlights are active only when the low-beam headlight is active.

The auxiliary headlights are approved as fog lights and can be used only in poor weather conditions. Always comply with the road traffic regulations in force in the country in which the vehicle is used.

- Start the engine. (➠ 139)



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

The indicator light for the auxiliary headlight illuminates.

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

Manual daytime riding light
Requirement

Automatic daytime riding light is switched off.

WARNING

Switching on the daytime riding light in the dark.
Risk of accident

- Do not use the daytime riding light in the dark.

By comparison with the low-beam headlight, the daytime running light makes the vehicle more visible to oncoming traffic. This improves daytime visibility.

- Start the engine. (➠ 139)
- Navigate to `Settings`, `Vehicle settings`, `Lights` and switch off the `Auto. daytime light` function.



- Press button **1** to switch on the daytime riding light.

The indicator light for the daytime riding light lights up.

» The low-beam headlight and the front side lights are switched off.

- In the dark or in tunnels: Press button **1** again to switch off the daytime riding light and switch on the low-beam headlight and the front side lights.

If the high-beam headlight is switched on while the daytime riding light is on, the daytime riding light is switched off after approx. two seconds and the high-beam headlight, low-beam headlight and front side light are switched on.
If the high beam headlight is switched off again, the daytime running light is not automatically reactivated, but must be switched on again if required.

Automatic daytime riding light

The changeover between daytime riding light and low-beam headlight including front side lights can be effected automatically.

WARNING

The automatic daytime riding light is not a substitute for the rider's personal judgement of the light conditions

Risk of accident

- Switch off the automatic daytime riding light in poor light conditions.

- Navigate to `Settings`, `Vehicle settings`, `Lights` and switch on the `Auto. daytime light` function.

The indicator light for the automatic daytime riding light lights up.

» If ambient brightness drops below a certain value, the low-beam headlight is automatically switched on (e.g. in a tunnel). When sufficient ambient brightness is detected, the daytime riding light is switched back on.

The indicator light for the daytime riding light shows if the daytime riding light is active.

Manual operation of the light when the automatic system is switched on

– If you press the button for the daytime riding light, the automatic daytime riding light is switched off and the low-beam headlight and front side lights are switched on (e.g. when you ride into a tunnel and the response of the automatic daytime riding light to the change in ambient brightness is delayed). The auxiliary headlight switches on again when the daytime riding light is switched off.

– Pressing the daytime riding light button again reactivates the automatic daytime riding light, in other words, the daytime riding light is switched on again when ambient brightness is adequate.

Operating hazard warning flashers

- Switch on the ignition. (➠ 84)

The hazard warning flashers place a strain on the battery. Do not use the haz-

ard warning flashers for longer than absolutely necessary.



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

» Ignition can be switched off.

- To switch off the hazard warning lights system, switch on the ignition if necessary and press button **1** again.

Operate the turn indicators

- Switch on the ignition. (➠ 84)
- Navigate to `Settings`, `Vehicle settings` and select `Lights`.
- Switch `Comfort turn indicator` on or off.



- Push button **1** to the left or right, as appropriate, to switch on the turn indicators.

» If the comfort turn indicators function is switched on, the turn indicators are cancelled automatically when the speed-dependent distance is covered.

- Alternatively: Press button **1** to cancel the turn indicators.

DYNAMIC TRACTION CONTROL (DTC)

Switching off DTC

- Switch on the ignition. (➠ 84)

You have the option of deactivating Dynamic Traction Control (DTC) while the motorcycle is on the move.



- Press and hold down button **1** until the DTC indicator light changes status.

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

shows.

Possible DTC system status OFF! is displayed.

- Release button **1** after the DTC system status changes.

The new DTC system status OFF! is displayed briefly.

remains lit.

» The DTC function is switched off.

Switch on DTC



- Press and hold down button **1** until the DTC indicator light changes status.

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

goes out; if self-diagnosis has not completed it starts flashing.

Possible DTC system status ON is displayed.

- Release button **1** once the status has changed.

remains off or continues to flash.

Possible DTC system status ON is displayed.

» The DTC function is switched on.

- For more information on Dynamic Traction Control (DTC) see the section entitled "Engineering details" (➠ 162).

ELECTRONIC SUSPENSION ADJUSTMENT (D-ESA)

–with Dynamic ESA[OE]

Possibilities for adjustment, Dynamic ESA

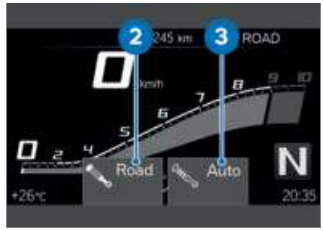
Dynamic ESA is an electronic system that enables your motorcycle's suspension to adjust automatically to suit the load the vehicle is carrying. When spring adjustment is set to `Auto`, the rider does not have to adjust the suspension to suit the load.
For more information on Dynamic ESA see the section headed "Engineering details" (➠ 164).

Viewing suspension settings

- Switch on the ignition. (➠ 84)



- Short-press button **1** to view the current setting.



Immediately after button **1** is pressed, the settings for damping **2** and spring adjustment **3** are displayed.

» The setting shows briefly, then disappears automatically.

Adjusting suspension damping

- Switch on the ignition. (➠ 84)



- Short-press button **1** to view the current setting.

To adjust damping:
- Repeatedly short-press button **1** until the setting you want to use is displayed.

You can adjust the damping characteristic while the motorcycle is on the move.



Selection arrow **4** is displayed.

» The selection arrow **4** disappears after the status is changed.

The following settings are available:
– `Road`: Damping for comfortable on-road riding
– `Dynamic`: Damping for dynamic on-road riding

- If the temperature is very low, take the weight off the motorcycle before increasing the spring setting; if applicable, have your passenger dismount.

» The chassis and suspension settings disappear once adjustment is complete.

» In `Auto` loading mode, the spring preload is adjusted only once the motorcycle is driven off.

Adjusting spring preload



To adjust spring preload:
- Start the engine. (➠ 139)
- Repeatedly long-press button **1** until the setting you want to use is displayed.

The spring setting cannot be changed while riding.

The following message is displayed if it is not possible to adjust a setting: `Load adjustment only avail. stopped.`



Selection arrow **4** is displayed.

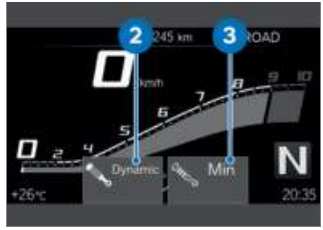
» The selection arrow **4** disappears after the status is changed.

The following settings are available:

–`Min`: Minimum spring setting (suitable for one-up riding only)

–`Auto`: Automatic spring adjustment (recommended setting)

» The settings for damping and spring preload shown on the display are automatically accepted if you allow a certain length of time to pass without pressing button **1**.



The new settings for damping **2** and spring adjustment **3** are briefly displayed.

- If the temperature is very low, take the weight off the motorcycle before increasing spring preload; if applicable, have your passenger dismount.

» The chassis and suspension settings disappear once adjustment is complete.

» In `Auto` loading mode, the spring preload is adjusted only once the motorcycle is driven off.

RIDING MODE

Using riding modes

BMW Motorrad has developed operational scenarios for your motorcycle from which you can select the scenario suitable for your situation:

Standard
–ECO: Range-optimised riding
–RAIN: Riding on rain-wet roads.
–ROAD: Riding on dry roads.

–with riding modes Pro OE
with riding modes Pro
–DYNAMIC: Dynamic riding on dry roads.
–DYNAMIC PRO: For dynamic riding on dry roadways while taking into account the settings made by the rider.

The optimum interplay of engine characteristic, ABS control and DTC control is provided for each of these scenarios.

–with Dynamic ESA OE
The chassis and suspension adjustment can also be adjusted in the scenario selected.
For more information on the riding modes, see the section entitled "Engineering details" (➠ 165).

Riding-mode preselection
You can preselect riding modes so that you can switch from one to the other while on the move. Between two and four riding modes can be preselected at any given time.
Factory setting:
ECO, RAIN and ROAD

–with riding modes Pro

additionally: DYNAMIC and DYNAMIC PRO

Preselect a riding mode
• Switch on the ignition. (➠ 84)
• Navigate to `Settings`, `Vehicle settings`, `Riding mode preselection`.
• Select riding modes.
The following riding modes can be selected:
–`ECO`: For range-optimised riding.
–`RAIN`: For riding on rain-wet roads.
–`ROAD`: For riding on dry roads.

–with riding modes Pro OE
The following riding mode can be selected:
–`DYNAMIC`: For dynamic riding on dry roads.
–`DYNAMIC PRO`: For dynamic riding on dry roads with provision for the rider's custom settings.◁

Select the riding mode
• Switch on the ignition. (➠ 84)
• Preselect a riding mode. (➠ 103)



• Press button **1**.



The riding mode currently active **2** is sent to the back and is displayed in the pop-up **3**. The guide **4** indicates how many riding modes are available.



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

–with riding modes Pro[OE]

The intervention of riding dynamics control systems can be restricted, depending on which riding mode is selected and how the selected mode is configured.
Possible restrictions are indicated by a pop-up message, for example `Warning! ABS setting.`.
The ABS indicator light flashes irregularly.
See the section entitled "Engineering details" for more information on riding dynamics control systems such as ABS.<

The following riding modes can be selected:
–`ECO`: For range-optimised riding.
–`RAIN`: For riding on rain-wet roads.
–`ROAD`: For riding on dry roads.

–with riding modes Pro[OE]
The following riding mode can be selected:
–`DYNAMIC`: For dynamic riding on dry roads.
–`DYNAMIC PRO`: For dynamic riding on dry roads with provision for the rider's custom settings.<

» With the vehicle at a standstill, the selected mode is ac-

tivated after approximately 2 seconds.
» The following conditions must be satisfied for activation of a new riding mode while riding:
– Throttle grip is in idle position.
– Brake is not applied.
– Adaptive cruise control is not active.
» The mode selected in this way is retained with the engine-characteristic, DTC and Dynamic ESA adaptation settings even after the ignition has been switched off.

RIDING MODE PRO

– with riding modes Pro OE

Adjustment option

The PRO riding modes can be set up individually only after being selected in riding mode preselection.

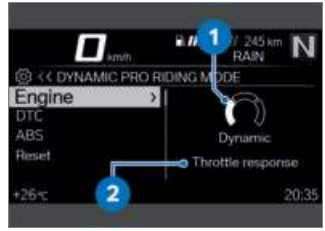
Selecting PRO riding mode

- Switch on the ignition. (➠ 84)
- Navigate to `Settings`, `Vehicle settings`, `Riding mode preselection`.
- Select `DYNAMIC PRO riding mode`.
- Call up `Configuration`.

Setting up Dynamic Pro

– with riding modes Pro OE

- Select PRO riding mode. (➠ 105)



The `Engine` system has been selected. The current setting is displayed as a diagram **1** with explanatory texts relating to the system **2**.

- Select system and confirm.



You can browse through the available settings **3** and the corresponding explanations **4**.

- Set up the system.

» The `Engine`, `DTC` and `ABS` systems can be set up in the same way. See the "Engineering details" section for more

information on all these systems:
» Selection (➠ 165)
- The settings can be reset to the factory settings:
- Reset the riding mode settings. (➠ 106)

Resetting riding mode settings
- Select PRO riding mode. (➠ 105)
- Select `Reset` and confirm.
» The following factory settings apply for `DYNAMIC PRO RIDING MODE`:
–`DTC: Road`
–`ENGINE: Dynamic`
–`ABS: Dynamic`

CRUISE CONTROL

–with cruise control[OE]

Display when adjusting settings (Speed Limit Info not active)



Symbol **1** for cruise control is displayed in the Pure Ride view and in the top status line.

Display when adjusting settings (Speed Limit Info active)



Symbol **1** for cruise control is displayed in the Pure Ride view and in the top status line.

Switching on cruise control



- Slide switch **2** to the right.
» Button **1** is enabled for operation.

Setting road speed



- Short-push button **1** forward.

Adjustment range for cruise control (gear-dependent)
20...210 km/h

is displayed.

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

Accelerating



- Short-push button **1** forward.

» Speed is increased by approx. 1 km/h each time you push the button.

- Push button **1** forward and hold it in this position.

» The vehicle accelerates smoothly.

» The current speed is maintained and saved if button **1** is not pushed again.

Decelerating



- Short-push button **1** back.

» Speed is reduced by approx. 1 km/h each time you push the button.

- Push button **1** back and hold it in this position.

» The vehicle decelerates smoothly.

» The current speed is maintained and saved if button **1** is not pushed again.

Deactivating cruise control

- Brake, pull the clutch lever or turn the throttle grip (close the throttle by turning the grip back past the idle position) to deactivate adaptive cruise control.

For safety reasons, cruise control is automatically deactivated when Gear Shift Assistant Pro downshifts. Cruise control remains active during upshifts.

For safety reasons, cruise control is automatically deactivated whenever ABS or DTC intervention occurs. If DTC is deactivated by the rider, cruise control is deactivated as well.

disappears.

Resuming former cruising speed



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

Opening the throttle does not deactivate cruise control. If you release the twistgrip the motorcycle will decelerate only to the cruising speed saved in memory, even though you might have intended slowing to a lower speed.

is displayed.

Switching off cruise control



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

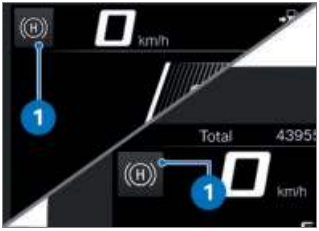
» The system is deactivated.

disappears.

» Button **1** is disabled.

HILL START CONTROL (HSC)

Display



Symbol **1** for Hill Start Control is displayed in the Pure Ride view and in the top status line.

Switch Hill Start Control on or off

- Switch on the ignition. (➠ 84)
- Navigate to `Settings`, `Vehicle settings`.
- Switch `Hill Start Control` on or off.

Operating Hill Start Control

Requirement

Vehicle stationary and upright, engine running.

ATTENTION

Non-availability of Hill Start Control

Risk of accident

- Apply the brakes manually to hold the vehicle.

Hill Start Control is purely a comfort system that facilitates hill starts and consequently, is not to be confused with a parking brake.



- Apply firm pressure to handbrake lever **1** or to the footbrake lever and then quickly release the lever.

shows green.

» Hill Start Control is activated.

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

disappears.

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

Hill Start Control is deactivated automatically when the motorcycle pulls away.

disappears.

» Hill Start Control is deactivated.

- For more information on Hill Start Control see the section entitled "Engineering details":

» Hill Start Control function (➠ 172)

Operating
Hill Start Control Pro
–with riding modes Pro[OE]

Requirement
Vehicle stationary and upright, engine running.

ATTENTION

Non-availability of Hill Start Control
Risk of accident
• Apply the brakes manually to hold the vehicle.

Hill Start Control Pro is purely a comfort system that facilitates hill starts and consequently, is not to be confused with a parking brake.

Hill Start Control Pro should not be used on gradients steeper than 40 %.



- Apply firm pressure to handbrake lever **1** or to the footbrake lever and then quickly release the lever.
- Alternatively, apply the brake for about one second beyond the vehicle reaching a standstill on an incline of at least 3%.

(H) shows green.

» Hill Start Control Pro is activated.

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

If Hill Start Control Pro has been deactivated by means of the handbrake lever, automatic Hill Start Control is deactivated for the next 4 m.

(H) disappears.

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

Pulling away from rest with the throttle grip turned to open the throttle automatically deactivates Hill Start Control Pro.

 disappears.

» Hill Start Control Pro is deactivated.
- For more information on Hill Start Control Pro see the section entitled "Engineering details":
» Hill Start Control function (➠ 172)

Adjust Hill Start Control Pro

–with riding modes Pro[OE]

- Switch on the ignition. (➠ 84)
- Navigate to `Settings`, `Vehicle settings`.
- Select `HSC Pro`.
- To switch off Hill Start Control Pro, select `Off`.
» Hill Start Control Pro is deactivated.
- To switch on manual Hill Start Control Pro, select `Manual`.
» Hill Start Control Pro can be activated by forcefully operating the handbrake or footbrake lever.
- To switch on automatic Hill Start Control Pro, select `Auto`.
» Hill Start Control Pro can be activated by forcefully operating the handbrake or footbrake lever.
» If the brake is actuated for approximately one second after the vehicle has come to a standstill and the motorcycle is on a gradient of at least 3%, Hill Start Control Pro is automatically activated.
» The selected setting remains stored even after the ignition is switched off.

SHIFT LIGHT

Switch the shift light on and off

- Navigate to `Settings`, `Vehicle settings`.
- Switch `Shift light` on or off.

Set the shift light

- Switch on the `Shift light` function.
- Navigate to `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 steady light.

» Changes to brightness and flashing frequency are demonstrated by the shift light lighting up or flashing.

ANTI-THEFT ALARM (DWA)

– with anti-theft alarm (DWA) OE

Activation

- Switch on the ignition. (➠ 84)
- Customise the anti-theft alarm settings. (➠ 114)
- Switch off the ignition.

» If the alarm system is activated, then the alarm system will be automatically activated when the ignition is switched off.

» Activation takes approximately 30 seconds to complete.

» Turn indicators flash twice.

» Confirmation tone sounds twice (if programmed).

» Anti-theft alarm is active.

– with Keyless Ride OE



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

» Activation takes approximately 30 seconds to complete.

» Turn indicators flash twice.

» Confirmation tone sounds twice (if programmed).

» Anti-theft alarm is active.



- To deactivate the motion sensor (for example if you are about to transport the motorcycle on a train and the swaying movement of the moving train could trip the alarm), press button **1** on the radio-

operated key again during the activation phase.
» Turn indicators flash three times.
» Confirmation tone sounds three times (if programmed).
» Motion sensor has been deactivated.◁

Alarm signal

A DWA alarm can be triggered by:
– Tilt sensor
– Switch-on attempt with an unauthorised vehicle key
– Disconnection of the DWA anti-theft alarm from the vehicle battery (DWA internal battery in the anti-theft alarm provides power – acoustic alarm only, the turn indicators do not flash).

When the radio-operated key is within range, an alarm triggered by the tilt alarm sensor is suppressed.

All functions are sustained even if the internal battery of the DWA anti-theft alarm system is flat; the only difference is that an alarm cannot be triggered if the system is disconnected from the vehicle's battery.

An alarm lasts for approximately 26 seconds. While an alarm is in progress an alarm tone sounds and the turn indicators flash. The type of acoustic alarm tone can be set by an authorised BMW Motorrad retailer.

– with Keyless Ride OE



You can cancel an alarm at any time by pressing button **1** on the radio-operated key; this does not deactivate the alarm system.

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

Light signals issued by the DWA LED:

–Flashes 1x: Tilt sensor 1
–Flashes 2x: Tilt sensor 2
–Flashes 3x: Ignition switched on with unauthorised key
–Flashes 4x: Disconnection of the anti-theft alarm from the vehicle's battery
–Flashes 5x: Tilt sensor 3

Deactivating anti-theft alarm system (DWA)

- Kill switch in operating position (run).
- Switch on the ignition. (➠ 84)

» Turn indicators flash once.
» Confirmation tone sounds once (if programmed).
» DWA has been switched off.

–with Keyless Ride[OE]



- Short-press button **1**.

If the alarm function is deactivated by the radio-operated key and the ignition is not subsequently switched on, the alarm function is automatically reactivated after approx. 30 seconds if `Arm automatically` is switched on.

» Turn indicators flash once.
» Confirmation tone sounds once (if programmed).
» DWA is switched off.◁

Customise the anti-theft alarm settings

- Switch on the ignition. (➠ 84)
- Navigate to `Settings`, `Vehicle settings`, `Alarm system`.

» The following settings are available:

–Adapting `Warning signal`
–Switch `Tilt sensor` on or off
–Switch `Arming tone` on or off
–Switch `Arm automatically` on or off

» Possibilities for adjustment (➠ 114)

Possibilities for adjustment

`Warning signal`: Set the rising and falling or intermittent alarm tone.
`Tilt sensor`: Activate tilt sensor to monitor the inclination of the vehicle. The anti-theft alarm is tripped if any attempt is made to steal a wheel or lift the vehicle for towing, for example.

When the vehicle is going to be transported, deactivate the tilt sensor to prevent the anti-theft alarm (DWA) from being triggered.

`Arming tone`: In addition to turn indicators flashing, alarm tone sounds as confirmation of activation/deactivation of the DWA.

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

TYRE PRESSURE MONITORING (RDC)

–with riding modes Pro OE
–with tyre pressure control (RDC) OE

Switch the target-pressure warning on or off

- The system can be set to issue a target-pressure warning if tyre pressure drops to the defined minimum.
- Navigate to `Settings`, `Vehicle settings`, `RDC`.
- Switch `Target pressure warn.` on or off.

HEATING

Operating heated handlebar grips

–with heated grips OE
–without seat heating OE

The heating in the heated handlebar grips can be activated only when the engine is running.

The increase in power consumption caused by having the heated handlebar grips switched on can drain the battery if you are riding at low engine speeds. If the charge level is low, the heated handlebar grips are switched off to ensure the battery's starting capability.

- Start the engine. (➠ 139)



- Repeatedly press button **1** until desired heating stage **2** appears in front of heated grip symbol **3**.

The handlebar grips have two-stage heating.



medium heating power



high heating power

» Stage 2 is for heating the grips quickly: it is advisable to switch back to stage 1 as soon as the grips are warm.
» The selected heating stage will be saved if you allow a certain length of time to pass without making further changes.
- To switch off the heated grips, repeatedly press button **1** until heated grip symbol **3** disappears.

Operate the heating

–with heated grips[OE]
–with seat heating[OE]

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

- Start the engine. (➠ 139)



- Press button **1**.
» HEATING menu opens.
- Select Grip heating or Seat heating.
- Select the desired heating stage and confirm your choice.
» The selected heating stage appears on the left beside heating symbol **2**.
- Press button **1** to close the HEATING menu.
- To switch the heating off, or on again with the heating stage selected beforehand, long-press button **1**.

The selected heating-stage settings are retained in memory when the ignition is switched off.

Operating passenger-seat heating

–with heated grips[OE]
–with seat heating[OE]

- Start the engine. (➠ 139)

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



- Set switch **1** to the desired heating stage.



The rear seat has two-stage heating. Stage two is for heating the seat quickly: it is advisable to switch back to stage one as soon as the seat is warm.

–**2** Switch centred: Heating off.
–**3** Switch pressed at one dot: low heating power.
–**4** Switch pressed at two dots: high heating power.

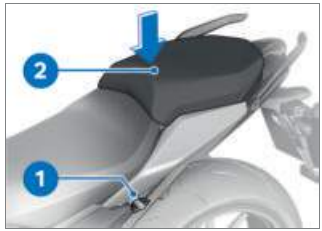


Selected heating stage **1** and seat-heating symbol **2** are displayed.

SEATS

Removing passenger seat

- Make sure the ground is level and firm and place the motorcycle on its stand.



- Press down on the front part of passenger seat **2** and at the same time turn seat lock **1** to the left with the

vehicle key and hold it in this position.
- Lift the rear seat at the front and release the key.

–with seat heating OE



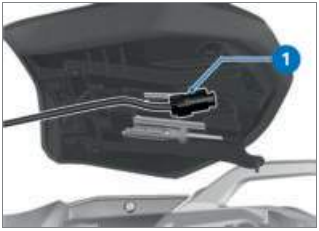
- Disconnect plug connection **1** of the seat heating.◁
- Remove passenger seat **2** and place it, upholstered side down, on a clean surface.

Installing passenger seat

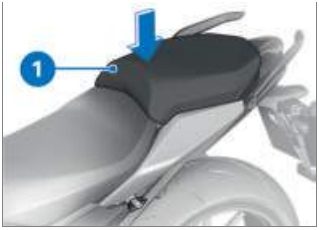
ATTENTION

Damaged components
Damage to sensors, for example, which causes malfunctions
- Do not transport any objects underneath the driver or passenger seat.
- Secure the toolkit.

–with seat heating OE



- Connect plug connection **1** of the seat heating.◁



- Begin by pushing the rear of passenger seat **1** into the mounts.
- Press down firmly on passenger seat **1** at the front.

» The passenger seat engages with an audible click.

Removing rider's seat
- Remove the rear seat. (➠ 117)

Front seat is unlocked.
- Lift the rear of the front seat.

–with seat heating OE



- Disconnect plug connection **1** for the seat heating.<

- Work the front seat to the rear to remove and place it, upholstered side down, on a clean surface.

Installing rider's seat

–with seat heating OE



- Connect plug connection **1** for the seat heating.<



- Push the rider's seat all the way into front mounts **1** and then lower it into position at the back.
- Install the passenger seat. (➠ 118)

Remove the tail-hump cover

–with single seater OE

- Make sure the ground is level and firm and place the motorcycle on its stand.



- Use vehicle key **1** to unlock lock for tail-hump cover **2**.
- Remove tail-hump cover **2**; to do so, unhook fixing **3**.

Install the tail-hump cover
–with single seater[OE]



- Position tail-hump cover **1**; hook in fixing **2** while doing so.
- Press tail-hump cover **1** downwards and lock.

ADJUSTMENT

06

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WINDSCREEN 125
HEADLIGHT 126
CLUTCH 126
GEARSHIFT LEVER 127
BRAKES 128
FOOTRESTS 130
SPRING PRELOAD 131
DAMPING 132

MIRRORS

Adjusting mirrors



- Turn the mirror head to the desired position.

Adjusting mirror arm

ATTENTION

Clash of mirror arm with other components.
Component damage
- Adjust mirror arm correctly. Note marking on the mirror arm.



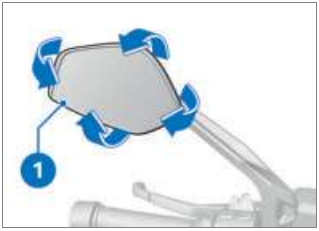
- Turn mirror arm.



- Align marks **1**.

Adjusting mirrors

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



- Turn the mirror **1** to the correct position.

Adjusting mirror arm

–with Option 719 Billet Pack Classic II OE

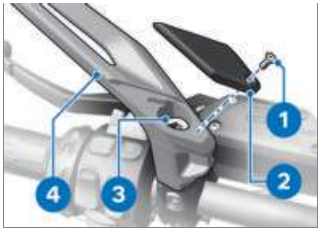
or

–with Option 719 Billet Pack Storm II OE

or

–with Option 719 Billet Pack Shadow II OE

A small and a large angle screwdriver is supplied with the vehicle for adjusting the mirror arm.



- Remove bolt **1** and cover **2**.
- Loosen adjusting screw **3** and turn the mirror arm **4** to the desired position.
- Tighten adjusting screw **3**, while holding the mirror arm.
- Attach cover **2** and fit bolt **1**.

Mirror on handlebars
M10 x 30
25 Nm

WINDSCREEN

Adjusting windscreen

Requirement

The motorcycle is at a standstill.



WARNING

Adjusting the windscreen while riding

Risk of falling

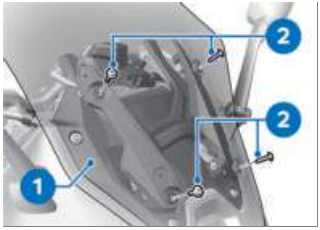
- Do not attempt to adjust the windscreen unless the motorcycle is at a standstill.

- Move the windscreen up or down.

» The windscreen is held at the top or bottom limit position by spring force.

Repositioning windscreen

- The windscreen can be secured to the vehicle at either of two different positions.



- To reposition windscreen **1**, remove all screws **2** and remove the windscreen.



- Position the windscreen at the appropriate hole **3**, noting bush **4** (inserted **from below**) and rubber grommet **5**.
- Install all four screws **6**.

Windscreen to holder	
M5 x 20	
2.4 Nm	

HEADLIGHT

Headlight beam throw and spring setting

The headlight beam throw generally remains constant by adjustment of the spring setting to the load status.
Adjustment of the spring setting may only be inadequate if the load is very high. In this case, the headlight beam throw must be adjusted to the weight.

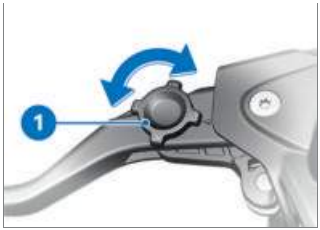
If there are doubts about the correct headlight beam throw, have the setting checked by a specialist workshop, preferably an authorised BMW Motorrad retailer.

CLUTCH

Adjusting clutch lever

WARNING

Adjusting the clutch lever while riding
Risk of accident
- Adjust the clutch lever only when the motorcycle is at a standstill.



- Turn adjuster knob **1** to the desired position.

The adjuster knob is easier to turn when the clutch lever is pushed slightly forward.

» Adjustment options:

–Position 1: Narrowest span between handlebar grip and clutch lever

–Position 4: Widest span between handlebar grip and clutch lever

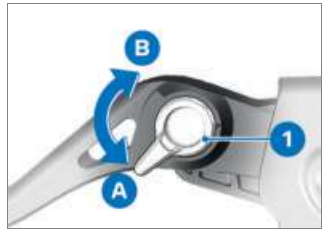
–with Option 719 Billet Pack Classic II[OE]

or

–with Option 719 Billet Pack Storm II[OE]

or

–with Option 719 Billet Pack Shadow II[OE]



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

» Adjustment options:

–From position **A**: Narrowest span between handlebar grip and clutch lever.

–In 5 steps toward position **B** to increase the span between handlebar grip and clutch lever.

GEARSHIFT LEVER

–with Option 719 Billet Pack Classic II[OE]

or

–with Option 719 Billet Pack Storm II[OE]

or

–with Option 719 Billet Pack Shadow II[OE]

Adjusting gearshift lever peg



- Foot clearance and height relative to peg **2** can be adjusted by turning to different positions.
- Remove screw **1**.



- Clean the threads.
- Turn peg **2** to the desired position.
- Install **new** screw **1**.

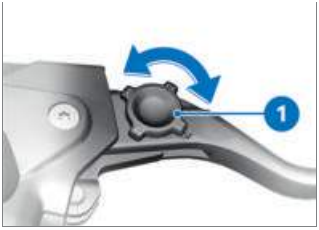
Peg to gearshift lever
M6 x 20
Thread-locking compound: micro-encapsulated
10 Nm

BRAKES

Adjusting handbrake lever

WARNING

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

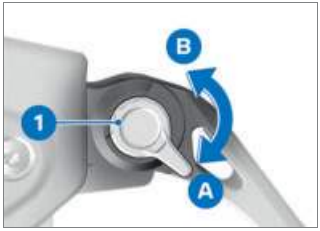


- Turn adjuster knob **1** to the desired position.

The adjuster knob is easier to turn when the handbrake lever is pushed slightly forward.

» Adjustment options:
–Position 1: Narrowest span between handlebar grip and handbrake lever
–Position 4: Widest span between handlebar grip and handbrake lever

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



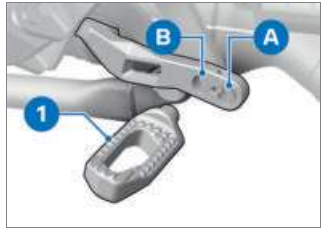
- Turn adjustment lever **1** to the desired position.

» Adjustment options:

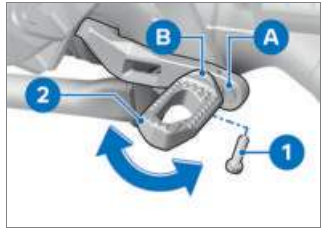
–From position **A**: Narrowest span between handlebar grip and handbrake lever.
–In 5 steps toward position **B** to increase the span between handlebar grip and handbrake lever.◁

Adjust the footbrake lever peg

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



- Foot distance and height to peg **1** can be adjusted by turning through 180° and installation in position **A** or **B**.



- Remove screw **1**.
- Clean the threads.
- Install peg **2** in desired position **A** or **B**.

- Turn peg **2** to the desired position.
- Install **new** screw **1**.

	Peg to footbrake lever
M6 x 20	
Thread-locking compound: micro-encapsulated	
10 Nm	

FOOTRESTS

–with Option 719 Billet Pack Classic II[OE]

or

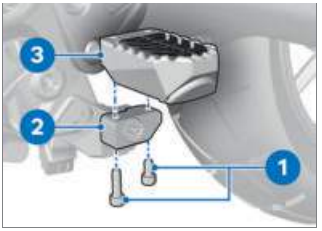
–with Option 719 Billet Pack Storm II[OE]

or

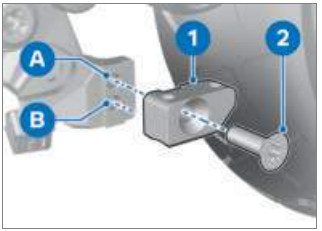
–with Option 719 Billet Pack Shadow II[OE]

Adjusting footrests

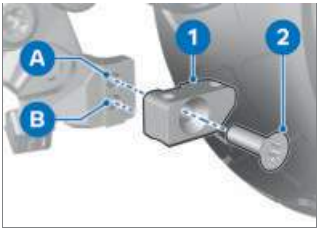
- The footrest is adjusted on the right and left in the same way.
- The position of the footrest must be set identically on the right and on the left.



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

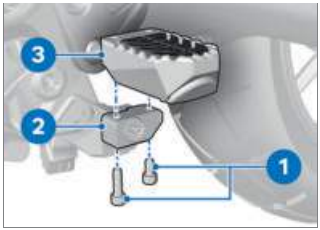


- Remove screw **2**.
- Remove clamping block **1** from position **A** or **B**.



- Install clamping block **1** in required position **A** or **B** and tighten bolt **2**.

Clamping block on footrest hinge
M8 x 25
20 Nm



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

Footrest on clamping block
M6 x 20 / M6 x 12
10 Nm

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

SPRING PRELOAD

–without Dynamic ESA[OE]

Adjustment

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

Adjusting spring preload for rear wheel

WARNING

Adjusting spring preload while riding.
Risk of accident
- Do not attempt to adjust spring preload unless the motorcycle is at a standstill.

- Make sure the ground is level and firm and place the motorcycle on its stand.



WARNING

Spring preload setting and spring-strut damping setting not matched.
Impaired handling.
- Adjust spring-strut damping to suit spring preload.

WARNING

Adjusting spring preload while riding.
Risk of accident
- Do not attempt to adjust spring preload unless the motorcycle is at a standstill.

- To reduce spring preload, turn adjuster knob **1** in the direction indicated by the **LOW** arrow.
- To increase spring preload, turn adjuster knob **1** in the direction indicated by the **HIGH** arrow.

Basic setting of spring preload, rear
Turn the adjuster knob as far as it will go in the **LOW** direction. (One-up riding without luggage)
Turn the adjuster knob as far as it will go in the **LOW** direction, then turn it 15 turns in the **HIGH** direction. (One-up with luggage)
Turn the adjuster knob as far as it will go in the **HIGH** direction. (Two-up with luggage)

DAMPING

–without Dynamic ESA OE

Adjustment

Damping must be adapted to suit the surface on which the motorcycle is ridden and to suit spring preload.
–An uneven surface requires softer damping than a smooth surface.
–An increase in spring preload requires firmer damping, a reduction in spring preload requires softer damping.

Adjusting damping for rear wheel

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Set the damping from the left-hand vehicle side.



- Turn adjuster knob **1** clockwise to increase damping.
- Turn adjuster knob **1** counterclockwise to reduce damping.

 Basic setting of rear-suspension damping characteristic
Turn the knob clockwise as far as it will go, then back it off 6 clicks in the counter-clockwise direction. (One-up riding without luggage)
Turn the knob clockwise as far as it will go, then back it off 4 clicks in the counter-clockwise direction. (One-up with luggage)
Turn the knob clockwise as far as it will go. (Two-up with luggage)

RIDING

07

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PARKING YOUR MOTORCYCLE 147
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SAFETY INFORMATION

Rider's equipment

Do not ride without the correct clothing! Always wear:
–Helmet
–Motorcycling jacket and trousers
–Gloves
–Boots

This applies even to short journeys, and to every season of the year. Your authorised BMW Motorrad dealer will be glad to advise you on the correct clothing for every purpose.

Load

WARNING

Handling adversely affected by overloading and imbalanced loads
Risk of falling
- Do not exceed the permissible gross weight and be sure to comply with the instructions on loading.

- Adapt spring setting and damping adjustment to the total weight.

–with case OA
- Ensure that the case volumes on the left and right are equal.
- Make sure that the weight is uniformly distributed between right and left.
- Pack heavy items at the bottom and toward the inboard side.
- Note the maximum permissible payload and maximum permissible speed (see also the section entitled "Accessories").◁

–with topcase OA
- Note the maximum permissible payload and maximum permissible speed (see also the section entitled "Accessories").◁

–with tank bag, small OA
- Note the maximum permissible payload and the speed limit for riding with the small tank rucksack fitted.

Payload of the tank rucksack, small
max 5 kg

Speed limit for riding with tank rucksack, small, fitted to the vehicle
max 180 km/h◁

–with tank bag OA
- Note the maximum permissible payload and maximum

speed for riding with the large tank bag.

 Payload of tank rucksack
max 5 kg
 Speed limit for riding with tankbag, large, fitted to the vehicle
max 130 km/h◁

Speed

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

– Settings of the spring-strut and shock-absorber system
– Imbalanced load
– Loose clothing
– Insufficient tyre pressure
– Poor tyre tread

Risk of poisoning

Exhaust fumes contain carbon monoxide, which is colourless and odourless but highly toxic.

WARNING

Exhaust gases adversely affecting health

Risk of asphyxiation

- Do not inhale exhaust fumes.
- Do not run the engine in an enclosed space.

WARNING

Inhalation of harmful vapours

Health hazard

- Do not inhale vapours from operating fluids and plastics.
- Use the vehicle only outdoors.

Risk of burning

CAUTION

Engine and exhaust system become very hot when the vehicle is in use

Risk of burn injury

- When you park the vehicle make sure that no-one and no objects can come into contact with the hot engine and exhaust system.

WARNING

Opening radiator cap
Risk of burning
- Do not open the radiator cap when the system is hot.
- Check and, if necessary, top up the coolant in the expansion tank only.

Catalytic converter

If misfiring causes unburned fuel to enter the catalytic converter, there is a danger of overheating and damage.
The following guidelines must be observed:
- Do not run the fuel tank dry.
- Do not attempt to start or run the engine with a spark-plug cap disconnected.
- Immediately stop the engine in case of misfires.
- Use only unleaded fuel.
- Comply with all specified maintenance intervals.

ATTENTION

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

Risk of overheating

ATTENTION

Engine running for prolonged period with vehicle at standstill
Overheating due to insufficient cooling; in extreme cases vehicle fire
- Do not allow the engine to idle unnecessarily.
- Ride away immediately after starting the engine.

Tampering

ATTENTION

Tampering with the motorcycle (e.g. engine management ECU, throttle valves, clutch)
Damage to the affected parts, failure of safety-relevant functions, voiding of warranty
- Do not tamper with the vehicle in any way that could result in tuned performance.

REGULAR CHECK

Comply with checklist
- At regular intervals, use the checklist below to check your motorcycle.

Always before riding off:
- Check operation of the brake system.
- Check operation of the lights and signalling equipment.
- Check operation of the clutch. (➠ 187)
- Check the tyre tread depth. (➠ 189)
- Check the tyre pressures. (➠ 188)

–without Dynamic ESA[OE]
- Adjust the spring preload for the rear wheel. (➠ 131)
- Adjust the damping for the rear wheel. (➠ 132)◁

–with Dynamic ESA[OE]
- Adjust the spring preload. (➠ 101)
- Adjust the damping. (➠ 100) ◁
- Check security of cases and luggage.

Every 3rd refuelling stop
- Check the engine oil level. (➠ 180)
- Check the brake pad thickness, front brakes. (➠ 182)
- Check the brake pad thickness, rear brakes. (➠ 183)
- Check the brake-fluid level, front brakes. (➠ 185)
- Check the brake-fluid level, rear brakes. (➠ 186)
- Check the coolant level. (➠ 187)

STARTING

Starting engine
- Switch on the ignition.

» Pre-Ride-Check is performed. (➠ 140)
» ABS self-diagnosis is in progress. (➠ 141)
» DTC self-diagnosis is performed. (➠ 141)

- Select neutral or, if a gear is engaged, pull the clutch lever.

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

- Cold starts and low temperatures: Pull the clutch lever.



- Press the starter button **1**.

The start attempt is automatically interrupted if battery voltage is too low. Recharge the battery before you start the engine, or use jump leads and a donor battery to start.
See the subsection on jump starting in "Maintenance" for more details.

» The engine starts.
» If the engine refuses to start, consult the troubleshooting chart in the section entitled "Technical data". (➠ 236)

Pre-Ride-Check

The instrument cluster runs a test of the instruments and the indicator and warning lights when the ignition is switched on. This test is known as the Pre-Ride-Check. The test is aborted if you start the engine before it completes.

Phase 1

All indicator and warning lights are switched on.
After a longer vehicle standstill period, an animation is displayed when the system starts up.

Phase 2

The 'General' warning light changes from red to yellow.

Phase 3

All the indicator and warning lights switched on in the initial phase are switched off in reverse sequence.

The malfunction indicator lamp only goes out after 15 seconds.

If one of the indicator and warning lights did not switch on:

WARNING

Faulty warning lights
No indication of malfunctions
• Check all the telltale and warning lights.

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

–with riding modes Pro OE

The intervention of riding dynamics control systems can be restricted, depending on which riding mode is selected and how the selected mode is configured.
Possible restrictions are indicated by a pop-up message, for

example `Warning! ABS setting.`.
The ABS indicator light flashes irregularly.
See the section entitled "Engineering details" for more information on riding dynamics control systems such as ABS.<

ABS self-diagnosis

BMW Motorrad Integral ABS performs self-diagnosis to ensure its operability. Self-diagnosis is performed automatically when you switch on the ignition

Phase 1

» Test of the diagnosable system components with the vehicle at a standstill.

 flashes.

Phase 2

» Test of the wheel-speed sensors as the vehicle pulls away from rest.

 flashes.

ABS self-diagnosis completed

» The ABS telltale and warning light goes out.

- Check all the indicator and warning lights.

 ABS self-diagnosis not completed
The ABS function is not available, because self-diagnosis did not complete. (The motorcycle has to reach a defined minimum speed for the wheel speed sensors to be checked: 5 km/h)

If an indicator showing an ABS fault appears when ABS self-diagnosis completes:

- You can continue to ride. Bear in mind that neither the ABS function nor the integral braking function is available.
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad dealer.

DTC self-diagnosis

BMW Motorrad DTC performs self-diagnosis to ensure its operability. Self-diagnosis is performed automatically when you switch on the ignition.

Phase 1

» Test of the diagnosable system components with the vehicle at a standstill.

 slow-flashes.

Phase 2

» Test of the diagnosis-compatible system components while the motorcycle is on the move.

 slow-flashes.

DTC self-diagnosis completed

» The DTC warning light goes out.

- Observe all the indicator and warning lights.

DTC+ self-diagnosis not completed
The DTC+ function is not available, because self-diagnosis did not complete. (The motorcycle has to reach a defined minimum speed for the wheel sensors to be checked: min 5 km/h)

If an indicator showing an DTC fault is displayed after DTC self-diagnosis completes:

- You can continue to ride. Bear in mind that the DTC function is not available.
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad retailer.

RUNNING IN

Engine

- Until the running-in check, vary the throttle opening and engine-speed range frequently; avoid riding at constant engine rpm for prolonged periods.
- Try to do most of your riding during this initial period on twisting, fairly hilly roads.
- Comply with the running-in speeds.

Running-in speeds
<5000 min^{-1} (Odometer reading 0...1000 km)
No full load (Odometer reading 0...1000 km)

- Note the mileage after which the running-in check should be carried out.

Mileage until the running-in check
500...1200 km

Brake pads

New brake pads have to bed down before they can achieve their optimum friction levels. You can compensate for this initial reduction in braking efficiency by exerting greater pressure on the levers.

WARNING

New brake pads
Longer stopping distance, risk of accident
- Apply the brakes in good time.

Tyres
New tyres have a smooth surface. This must be roughened by riding in a restrained manner at various heel angles until the tyres are run in. This running in procedure is essential if the tyres are to achieve maximum grip.

WARNING

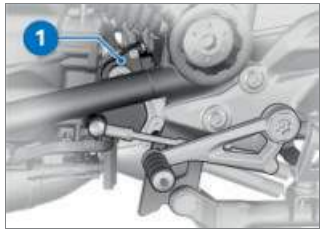
New tyres losing grip on wet roads and at extreme bank angles
Risk of accident
- Ride carefully and avoid extremely sharp inclines.

SHIFTING GEAR

Shift Assistant Pro
–with shift assistant Pro OE

For safety reasons, cruise control is automatically deactivated when Gear Shift Assistant Pro downshifts.

Cruise control remains active during upshifts.



- You select the gear in the usual way by means of the foot-operated shift lever.
» The shift assistant assists upshifts and downshifts without the rider having to pull the clutch or close the throttle.
–This is not an automatic-shift system.
–The rider is the most important part of the system and decides when to shift gears.
» The sensor **1** on the gearshift shaft registers the gearshift request and triggers shift assistance.
» When riding at a steady speed in a low gear at high engine rpm, an attempt to shift gear without pulling the clutch can cause a severe load-change reaction. BMW Motorrad recommends disengaging the clutch for shifts in these circumstances. It is advisable to avoid using

Shift Assistant Pro at engine speeds close to the limits at which the governor cuts in to limit engine rpm.

» Shift assistance is not available in the following situations:

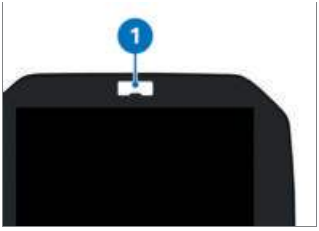
– With clutch lever pulled.
– Gearshift lever not in its initial position
– Upshifts with the throttle valve closed (engine overrun) and when slowing.
– Downshifts with throttle valve open and when accelerating.

• Once the gearshift has completed, the gearshift lever must be fully released before another gearshift with the Shift Assistant Pro can take place.

» For more information on Shift Assistant Pro see the section headed "Engineering details":

» Shift assistant Pro (➠ 171)

Shift light



Shift light **1** indicates that the engine speed at which the rider should upshift is approaching.

– Shift light flashes at preset frequency: Approaching upshift rpm
– Shift light goes out: Engine revving at upshift rpm

The engine-speed thresholds and the way in which the shift light indicates the various states can be customised by navigating to `Settings`, `Vehicle settings`, `Shift light`; also see the section on operation (➠ 111).

BRAKES

How can stopping distance be minimised?

Each time the brakes are applied, a load distribution shift takes place with the load shifting forward from the rear to the front wheel. The sharper the motorcycle decelerates,

the more load is shifted to the front wheel. The higher the wheel load, the more braking force can be transmitted without the wheel locking.
To optimise stopping distance, apply the front brakes rapidly and keep on increasing the force you apply to the brake lever. This makes the best possible use of the dynamic increase in load at the front wheel. Remember to pull the clutch at the same time. In the extreme sudden-stop braking situations that are trained so frequently, braking force is applied as rapidly as possible and with the rider's full force applied to the brake levers; under these circumstances the dynamic shift in load distribution cannot keep pace with the increase in deceleration and the tyres cannot transmit the full braking force to the surface of the road.
BMW Motorrad Integral ABS Pro prevents the front wheel from locking up.

Emergency braking

If you brake sharply from a speed in excess of >50 km/h, the brake light flashes rapidly as a warning for road users behind you.
If you brake until your speed is less than <15 km/h, the hazard warning lights start to flash as well. The hazard warning lights switch off automatically as soon as you start to accelerate and vehicle speed reaches 20 km/h.

Descending mountain passes

WARNING

Braking mostly with the rear brake on mountain descents
Brake fade, destruction of the brakes due to overheating
- Use both front and rear brakes, and make use of the engine's braking effect as well.

Wet and dirty brakes

WARNING

Wetness and dirt result in diminished braking efficiency
Risk of accident
- Apply the brakes lightly while riding to remove wetness and dirt, or dismount and clean the brakes.
- Think ahead and brake in good time until full braking efficiency is restored.

Wetness and dirt on the brake discs and the brake pads diminish braking efficiency.
Delayed braking action or poor braking efficiency must be reckoned with in the following situations:
– Riding in the rain or through puddles of water.
– After the vehicle has been washed.
– Riding on salted or gritted roads.
– After work has been carried on the brakes, due to traces of oil or grease.
– Riding on dirt-covered surfaces or off-road.

ABS Pro
Physical limits applicable to motorcycling

WARNING

Braking when cornering
Risk of crash despite ABS Pro
- Invariably, it remains the rider's responsibility to adapt riding style to riding conditions.
- Do not take risks that would negate the additional safety offered by this system.

ABS Pro and the assisting function of Dynamic Brake Control are available in all riding modes.

Possibility of a fall not precluded
Although ABS Pro and Dynamic Brake Control provide the rider with valuable assistance and constitute a huge advance in safety for braking with the motorcycle banked for cornering, they cannot under any circumstances be considered as redefining the physical limits that apply to motorcycling. It is still possible for these limits to be overshot due to misjudgement or rider

error. In extreme cases this can result in a crash.

Use on public roads

ABS Pro and Dynamic Brake Control help make the motorcycle even safer for riding on public roads. When the brakes are applied because of an unforeseen hazard when the motorcycle is banked for cornering, within the physical limits that apply to motorcycling the ABS Pro system prevents the wheels from locking and skidding away. In emergency braking, Dynamic Brake Control increases the braking effect and intervenes if the throttle grip is accidentally turned during braking.

ABS Pro was not developed to enhance individual braking performance with the motorcycle banked into corners.

PARKING YOUR MOTORCYCLE

Side stand

- Switch off the ignition. (➠ 85)

ATTENTION

Poor ground underneath the stand

Risk of damage to parts if vehicle topples

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

ATTENTION

Additional weight placing strain on the side stand

Risk of damage to parts if vehicle topples

- Do not sit or lean on the vehicle while it is propped on the side stand.

- Extend the side stand and prop the motorcycle on the stand.
- Turn the handlebars all the way to left.
- On a gradient, the motorcycle should always face uphill; select 1st gear.

Centre stand

–with centre stand[OE]

- Switch off the ignition. (➠ 85)

ATTENTION

Poor ground underneath the stand

Risk of damage to parts if vehicle topples

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

ATTENTION

Centre stand retracts due to severe movements

Risk of damage to parts if vehicle topples

- Do not lean or sit on the vehicle with the centre stand extended.

- Extend the centre stand and lift the motorcycle on to the stand.
- On a gradient, the motorcycle should always face uphill; select 1st gear.

REFUELLING

Fuel grade

Requirement

For optimum fuel consumption, fuel should be sulphur-free or as low-sulphur as possible.

ATTENTION

Engine operation with leaded fuel

Damage to catalytic converter

- Do not attempt to run the vehicle on leaded fuel or fuel with metallic additives (e.g. manganese or iron).

- Observe the maximum ethanol content of the fuel.

Fuel additives clean the fuel injection system and the combustion zone. It is advisable to use fuel additives when the engine is operated with low-grade fuel or if the vehicle is to be out of use for a lengthy period of time. More information is available from your authorised BMW Motorrad retailer.

	Recommended fuel grade
E5 E10	Super unleaded (max 15 % ethanol, E0/E5/E10/E15) 95 ROZ/RON 90 AKI

	Alternative fuel grade
E5 E10	Normal unleaded (power- and consumption-related restrictions.) (max 15 % ethanol, E0/E5/E10/E15) 91 ROZ/RON 87 AKI

» Pay attention to the following symbols in the fuel filler cap and on the fuel pump:

E5

E10

» After refuelling with fuels of poor-quality, sporadic knocking noises may be perceptible.

Refuelling

WARNING

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

ATTENTION

Component damage
Component damage caused by overfilled fuel tank
- Overfilling the fuel tank will cause excess fuel to penetrate the carbon canister and cause component damage.
- Fill the fuel tank up to the lower edge of the filler neck only.

ATTENTION

Wetting of plastic surfaces by fuel
Damage to the surfaces (surfaces become unsightly or dull)
- Clean plastic surfaces immediately after contact with fuel.

- Make sure the ground is level and firm and place the motorcycle on its side stand.

–with centre stand OE

- Make sure the ground is level and firm and place the motorcycle on its centre stand.◁



- Open the protective cap **2**.
- Unlock the cap of the fuel tank by turning vehicle key **1** clockwise in the lock and pop the cap open.



- Refuel with fuel of the grade stated above; do not fill the tank past the bottom edge of the filler neck.

When refuelling after running on reserve, make sure that you top up the tank to a level above reserve, so that the new level is detected and the fuel reserve indicator light is switched off.

The "usable fuel capacity" specified in the technical data is the quantity that the fuel tank could hold if refilled after it had been run dry and the engine had cut out due to a lack of fuel.

Fuel level
approx. 18 l

Fuel reserve
approx. 4 l

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

Refuelling
–with Keyless Ride OE

Requirement
The steering lock is disengaged.

WARNING

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

WARNING

Escape of fuel due to heat-induced expansion if fuel tank is overfilled
Risk of falling
• Do not overfill the fuel tank.

ATTENTION

Wetting of plastic surfaces by fuel
Damage to the surfaces (surfaces become unsightly or dull)
• Clean plastic surfaces immediately after contact with fuel.

- Make sure the ground is level and firm and place the motorcycle on its side stand.

–with centre stand OE

- Make sure the ground is level and firm and place the motorcycle on its centre stand.

- Switch off the ignition. (➠ 85)

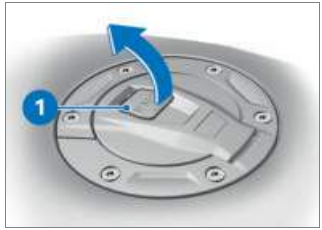
The fuel filler cap can be opened within the defined waiting time after the ignition has been switched off, without the radio-operated key being within range.

Waiting time for opening the fuel filler cap
2 min

» There are **two variant ways** of opening the fuel filler cap:
–Within the waiting time.
–After the waiting time has expired.

Variant 1
–with Keyless Ride OE

Requirement
Within the waiting time:



- Slowly pull tab **1** on the fuel filler cap up.

» Fuel filler cap unlocks.

- Fully open the fuel filler cap.

Variant 2
–with Keyless Ride OE

Requirement
After the waiting time has expired:

- Bring the radio-operated key into range.
- Slowly pull tab **1** up.

» The indicator light for the radio-operated key flashes while the search for the radio-operated key is in progress.
- Slowly pull tab **1** on the fuel filler cap up again.

» Fuel filler cap unlocks.
- Fully open the fuel filler cap.



- Refuel with fuel of the grade stated above; do not fill the tank past the bottom edge of the filler neck.

When refuelling after running on reserve, make sure that you top up the tank to a level above reserve, so that the new level is detected and the fuel reserve indicator light is switched off.

The "usable fuel capacity" specified in the technical data is the quantity that the fuel tank could hold if refilled after it had been run dry and the engine had cut out due to a lack of fuel.

Fuel level
approx. 18 l

Fuel reserve
approx. 4 l

- Press down firmly on the filler cap of the fuel tank.

» The fuel filler cap engages with an audible click.
» The fuel filler cap locks automatically when the waiting time expires.
» The engaged fuel filler cap locks immediately when you secure the steering lock or switch on the ignition.

Opening fuel filler cap emergency release

–with Keyless Ride OE

Fuel filler cap cannot be opened.
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad retailer.



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

» Fuel filler cap unlocks.

- Fully open the fuel filler cap.
- Refuel. (➠ 150)

Closing fuel filler cap emergency release
–with Keyless Ride[OE]

Requirement
Fuel filler cap is in closed position.



- Hold emergency release **2** in position.
- Install screws **1**.

Fuel filler cap to fuel tank
M5 x 28

Fuel filler cap to fuel tank
4 Nm

SECURING MOTORCYCLE FOR TRANSPORTATION

- Make sure that all components that might come into contact with straps used to secure the motorcycle are adequately protected against scratching. Use adhesive tape or soft cloths, for example, for this purpose.



ATTENTION

Vehicle topples to side when being lifted on to stand
Risk of damage to parts if vehicle topples
- Secure the vehicle to prevent it toppling, preferably with the assistance of a second person.

- Push the motorcycle on to the transportation flat and hold it in position: do not place it on the side stand or centre stand.
- Have a helper hold the motorcycle to make sure that it cannot topple.



ATTENTION

Trapping of components
Component damage
- Do not trap components such as brake lines or cable legs.

- Pass the straps on left and right through the fork bridge and strap the motorcycle down.



- At the rear, secure the straps to the holders for the passenger footrests on both sides and tighten the straps.

–with single seater OE



- Secure the straps behind on both sides on the frame and tighten.◁
- Tension all the straps uniformly to hold the vehicle securely.

ENGINEERING DETAILS

08

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GENERAL NOTES

To find out more about engineering, go to **bmw-motorrad.com/technik**.

ANTILOCK BRAKE SYSTEM (ABS)

Partially integral brakes

Your motorcycle is equipped with partially integral brakes. Both front and rear brakes are applied when you pull the handbrake lever. The foot-brake lever acts only on the rear brake.

When actively intervening in the braking process, the BMW Motorrad Integral ABS adapts braking-force distribution between front and rear brakes to suit the load on the motorcycle, and so ABS intervention helps achieve the shortest possible stopping distance.

ATTENTION

Attempted burn-out despite Integral braking function

Damage to rear brake and clutch

- Do not burn out tyres.

How does ABS work?

The amount of braking force that can be transferred to the road depends on factors that include the coefficient of friction of the road surface. Loose stones, ice and snow or a wet road all have much lower coefficients of friction than a clean and dry asphalt surface. The lower the coefficient of friction, the longer the braking distance. If the rider increases braking pressure to the extent that braking force exceeds the maximum transferable limit, the wheels start to lock and the vehicle loses its directional stability; a fall is imminent. Before this situation can occur, ABS intervenes and adapts braking pressure to the maximum transferable braking force. The wheels continue to turn and the driving stability is retained irrespective of the road condition.

What are the effects of surface irregularities?

Humps and surface irregularities can cause the wheels to lose contact temporarily with the road surface; if this happens the braking force that can be transmitted to the road can drop to zero. If the brakes are applied under these cir-

cumstances the ABS has to reduce braking force to ensure that directional stability is maintained when the wheels regain contact with the road surface. At this instant the ABS must assume an extremely low coefficient of friction, so that the wheels will continue to rotate under all imaginable circumstances, because this is the precondition for ensuring directional stability. As soon as is registers the actual circumstances, the system reacts instantly and adjusts braking force accordingly to achieve optimum braking.

What feedback does the rider receive from the BMW Motorrad Integral ABS Pro?

If ABS has to reduce braking force on account of the circumstances described above, vibration is perceptible through the handbrake lever.

When the handbrake lever is pulled, brake pressure is also built up at the rear wheel by the integral function. If the brake pedal is depressed after the handbrake lever is pulled, the brake pressure built up beforehand is perceptible as counter-pressure sooner than is the case when the brake pedal is depressed either before or at the same time as the brake lever is pulled.

Rear wheel lift

Under very severe and sudden deceleration, however, under certain circumstances it is possible that the ABS will be unable to prevent the rear wheel from lifting clear of the ground. If this happens the outcome can be a highsiding situation in which the motorcycle can flip over.

WARNING

Rear wheel lift due to severe braking

Risk of falling

- When you brake sharply, bear in mind that ABS control cannot always be relied on to prevent the rear wheel from lifting clear of the ground.

What is the design baseline for BMW Motorrad Integral ABS Pro?

Within the limits imposed by physics, BMW Motorrad Integral ABS Pro ensures directional stability on any surface. The system is not optimised for special requirements that apply under extreme competitive situations on the track. The driving behaviour should be adapted to actual driving skills and the road conditions.

Special situations

The speeds of the front and rear wheels are compared as one means of detecting a wheel's incipient tendency to lock. If the system registers implausible values for a lengthy period the ABS function is deactivated for safety reasons and an ABS fault message is issued. Self-diagnosis has to complete before fault messages can be issued.
In addition to problems with the BMW Motorrad ABS, exceptional riding conditions can also cause a fault message to be issued:

– Heating up with the motorcycle on the centre stand or an auxiliary stand, engine idling or with a gear engaged.
– Rear wheel locked by the engine brake for a lengthy period, for example while descending on a loose or slippery surface.

If a fault message is issued on account of exceptional riding conditions, you can reactivate the ABS function by switching the ignition off and on again.

What significance devolves on regular maintenance?

WARNING

Brake system not regularly serviced.
Risk of accident
- In order to ensure that the ABS is always maintained in optimum condition, it is essential for you to comply strictly with the specified inspection intervals.

Safety reserves

The potentially shorter braking distances which BMW Motorrad Integral ABS Pro permits must not be used as an excuse for careless riding. The system is

primarily a means of ensuring a safety margin in genuine emergencies.

WARNING

Braking when cornering
Risk of accident despite ABS
- Invariably, the rider bears responsibility for assessing road and traffic conditions and adopting his or her style of riding accordingly.
- Do not take risks that would negate the additional margin of safety offered by this system.

Evolution of ABS to ABS Pro

Until now, BMW Motorrad ABS has helped ensure a very high degree of safety for braking with the motorcycle upright and travelling in a straight line. Now ABS Pro offers enhanced safety for braking in corners as well. ABS Pro prevents the wheels from locking even under sharp braking. ABS Pro reduces abrupt changes in steering force, particularly in shock-braking situations, counteracting the vehicle's otherwise natural but undesirable tendency to straighten up.

ABS intervention

Technically speaking, depending on the riding situation ABS Pro adapts ABS intervention to the motorcycle's bank angle. Signals for rate of roll and rate of yaw and lateral acceleration are used to calculate bank angle.
As the motorcycle is heeled over more and more as it banks into a corner, an increasingly strict limit is imposed on the brake-pressure gradient for the start of brake application. This slows the build-up of brake pressure to a corresponding degree. Additionally,pressure modulation is more uniform across the range of ABS intervention.

Advantages for the rider

The advantages of ABS Pro for the rider are sensitive response and high braking and directional stability combined with best-case deceleration of the motorcycle, even when cornering.

DYNAMIC TRACTION CONTROL (DTC)

How does traction control work?

Traction control compares the front and rear wheel circumferential velocities. The differential is used to compute slip as a measure of the reserves of stability available at the rear wheel. If slip exceeds a certain limit, the electrical machine management system intervenes and adapts torque accordingly. Dynamic Traction Control (DTC) takes bank angle into consideration and on account of this additional bank-angle and acceleration data, its intervention is more precise and more comfortable for the rider.

BMW Motorrad DTC is designed as an assistant system for the rider and for use on public roads. The extent to which the rider affects DTC control can be considerable (weight shifts when cornering, items of luggage loose on the vehicle), especially when the style of riding takes rider and machine close to the limits imposed by physics.

The system is not optimised for special requirements that apply under extreme competitive conditions off-road or on the track. The BMW Motorrad DTC can be deactivated in these cases.

WARNING

Risky riding

Risk of accident despite DTC

- Invariably, the rider bears responsibility for assessing road and traffic conditions and adopting his or her style of riding accordingly.
- Do not take risks that would negate the additional safety offered by this system.

Special situations

In accordance with the laws of physics, the ability to accelerate is restricted more and more as the angle of heel increases. Consequently, there can be a perceptible reduction in acceleration out of very tight bends.

If the electronic processor receives values for the bank angle that it considers implausible over a lengthy period, a dummy value is used for the bank angle or the DTC function is switched off. Under these

circumstances the indicator for a DTC fault shows. Self-diagnosis has to complete before fault messages can be issued.
The BMW Motorrad Traction Control can shut down automatically under the exceptional riding conditions outlined below.

Exceptional riding conditions:
–Riding for a lengthy period with the front wheel lifted off the ground (wheelie).
–Rear wheel rotating with the vehicle held stationary by application of the front brake (burn-out).
–Heating up with the motorcycle on an auxiliary stand, in neutral or with a gear engaged.

 Minimum speed for activation of DTC
min 5 km/h

When riding on a slippery surface, never snap the throttle twistgrip fully closed without pulling the clutch at the same time. Engine braking torque can cause the rear wheel to skid, with a corresponding loss of stability. The BMW Motorrad DTC is unable to control a situation of this nature. With dynamic engine brake control, this loss of stability can be prevented.

DYNAMIC ENGINE BRAKE CONTROL (MSR)

–with riding modes Pro [OE]

How does dynamic engine brake control work?
The purpose of dynamic engine brake control is to prevent the unstable riding states that can be produced by excessive engine braking moment acting on the rear wheel. Depending on the road condition and riding dynamic, excessive braking torque can produce a sharp rise in rear-wheel slip and impair directional stability. Dynamic engine brake control limits this slip at the rear wheel to a safe mode-dependent and bank-angle-dependent regulated slip.
Causes for excessive slip at the rear wheel:
–Riding with engine overrun on a surface with a low coefficient of friction (e.g. wet leaves).
–Rear-wheel hop when rider downshifts.
–Sharp braking during sporty riding.

In the same way as DTC traction control, dynamic engine brake control compares the wheel circumferential velocities of the front and rear wheels. Additional information on the bank angle enables dynamic engine brake control to calculate slip and the reserve of stability at the rear wheel.
If slip overshoots the applicable limit, the throttle valves are opened very slightly to increase engine torque. Slip is reduced and the vehicle is stabilised.

Effect of dynamic engine brake control
–In ECO, RAIN and ROAD riding modes: Maximum stability.
–In DYNAMIC and DYNAMIC PRO riding modes: High stability.

DYNAMIC ESA

–with Dynamic ESA[OE]

Riding position equaliser
Dynamic ESA is an electronic system that enables your motorcycle's suspension to adjust automatically to suit the load the vehicle is carrying. When spring adjustment is set to Auto, the rider does not have to adjust the suspension to suit the load.

BMW Motorrad recommends the Auto chassis and suspension setting.

When driving off and when riding, the system monitors the suspension at the rear wheel and corrects the spring setting in order to set the correct riding position. The damping is also adjusted automatically to the load.
By interpreting ride height sensor signals, Dynamic ESA detects movements in the suspension and responds by adjusting the damper valves. This enables the suspension to adapt to the terrain.
Dynamic ESA calibrates itself at regular intervals to ensure the system functions correctly.

Possibilities for adjustment
Damping modes
–Road: Damping for comfortable on-road riding
–Dynamic: Damping for dynamic on-road riding

Load settings
–Auto: Active ride compensation with automatic adjustment of the spring setting

and damping (recommended suspension setting)
–Min: Minimum spring setting (suitable for one-up riding only)

RIDING MODE

Selection

To adjust the motorcycle to the road condition and the desired driving experience, the following riding modes can be selected:
–ECO
–RAIN
–ROAD (default mode)

–with riding modes Pro OE
–DYNAMIC
–DYNAMIC PRO

With the Riding modes Pro option installed, the ROAD, RAIN and ECO riding modes are activated by default. The other riding modes can be selected in the riding modes preselection. A maximum of four riding modes can be preselected at any given time.

For each of these riding modes, there is a matching setting for the ABS, DTC systems and for throttle response.

–with Dynamic ESA OE
The adjustment of the Dynamic ESA also depends on the riding mode selected.

DTC can be switched off in each riding mode. The explanations below always refer to the dynamic safety systems that are switched on.

Throttle response

–In ECO riding mode: Very restrained
–In RAIN riding mode: Restrained
–In ROAD riding mode: Optimum
–In DYNAMIC and DYNAMIC PRO riding modes: Direct
–In DYNAMIC PRO riding mode, throttle response can be set up differently using the configuration (➠ 102).

ABS

Adjustment

–In ROAD and DYNAMIC riding modes, the ABS setting corresponds to the selected riding mode.
–In ECO and RAIN riding modes, the ABS setting corresponds to the ROAD riding mode.
–In DYNAMIC PRO riding mode, the ABS setting

corresponds to the DYNAMIC riding mode.
– In DYNAMIC PRO riding mode, ABS can be set up differently using the configuration (➠ 105).

Tuning setup
– In ECO, RAIN, ROAD, DYNAMIC and DYNAMIC PRO riding modes, the ABS is set up for on-road riding.

Rear-wheel lift-off detection
– In ECO, RAIN and ROAD riding modes, the rider has maximum assistance from rear-wheel lift-off detection.
– In DYNAMIC and DYNAMIC PRO riding modes, rear-wheel lift-off detection offers reduced assistance and allows slight lift-off of the rear wheel.

ABS Pro
– In ECO, RAIN and ROAD riding modes, ABS Pro is fully available.
– In DYNAMIC and DYNAMIC PRO riding modes, ABS Pro assistance is reduced by comparison with ECO, RAIN and ROAD riding modes.
– In DYNAMIC PRO riding mode, ABS can be set up differently.
– In the ABS setting DYNAMIC PRO, ABS Pro is not available.

DTC
Tyres
– In the DTC settings RAIN, ROAD and DYNAMIC, DTC is set up for on-road riding with road tyres.

Riding stability
– In the DTC setting RAIN, DTC intervenes early enough to achieve maximum riding stability.
– In the DTC settings of ECO, ROAD and DYNAMIC PRO riding modes, DTC intervenes later than in RAIN riding mode. This prevents the rear wheel from spinning whenever possible.
– In the DTC settings of ECO, RAIN, ROAD and DYNAMIC PRO riding modes, the front wheel is prevented from lifting off the ground.
– In the DTC setting of DYNAMIC riding mode, DTC intervenes later than in the DTC setting of ECO, ROAD and DYNAMIC PRO riding modes, so slight drift can be induced when exiting corners and brief wheelies are also possible.

In RAIN, ROAD and DYNAMIC riding modes, the DTC setting corresponds to the riding mode.
In ECO and DYNAMIC PRO riding modes, the DTC setting corresponds to the ROAD riding mode.
In DYNAMIC PRO riding mode, DTC can be set up differently (➠ 105).

Mode changes

The riding mode can be changed while the vehicle is stationary with the ignition on. Under the following precondition, it is also possible to change modes while riding:
– No drive torque on the rear wheel.
– No brake pressure in the brake system.

The following steps must be taken to change the riding mode:
– Close the throttle twistgrip.
– Release the brake levers.
– Deactivate adaptive cruise control.

The desired riding mode is initially preselected. The mode change does not take place until the systems in question are all in the appropriate state.

The selection menu does not disappear from the display until the mode change has taken place.

ECO mode

ShiftCam technology is the bridge-builder between ultra-high dynamism and maximum efficiency. The full-load cams allow full valve lift for maximum combustion-chamber charge and high power, whereas the part-load cams considerably shorten the lift of the intake valves and open the valves to different extents. Charge-cycle losses are lessened by de-throttling, friction is reduced, the mixture is swirled more vigorously and combusted more effectively, fuel consumption goes down.
The ECO mode assists the rider with ECO indicator and engine characteristic (parametrisation of the electromotive throttle controller) to keep the engine in the operating range of the consumption-oriented part-load cam, so as to maximise the distance travelled with a given quantity of fuel.
The length of the green bar in the ECO indicator in the instrument cluster visualises whether

the drive is operating in the consumption-optimised range of the part-load cam and the margin from the switch-over threshold to full-load cam operation. The length of the bar represents the load reserve left before the switch-over point for full-load cam operation is reached. The colour changes to grey when load requirement increases and the engine switches to the full-load cam. The reading shown by the ECO indicator varies depending on the gear selected by the rider, the load requirement input via the throttle grip, and engine rpm. Even outside the operating range of the part-load cam, when the bar is grey, the ECO offers benefits for an economical style of riding by reducing maximum available torque and peak power.

Because of the reduced acceleration ability in ECO mode, changing to a different riding mode is recommended prior to critical overtaking manoeuvres with the motorcycle heavily loaded or when riding two-up.

Rider can further reduce consumption by riding with fuel economy in mind (➠ 174).

DYNAMIC BRAKE CONTROL

–with riding modes Pro OE

How Dynamic Brake Control works

The Dynamic Brake Control function is active in all riding modes. It can be deactivated in the DYNAMIC PRO riding mode only, by custom parametrisation of the ABS.

The Dynamic Brake Control function assists the rider in emergency braking situations.

Detection of emergency braking

–Sudden, sharp application of the front brake is interpreted as emergency braking.

Behaviour in emergency braking

–If emergency braking occurs at a speed in excess of min 10 km/h, the ABS function is further assisted by Dynamic Brake Control.
–When partially integral braking at a high brake pressure gradient is initiated, Dynamic Brake Control increases the integral brake pressure at the rear wheel.

The stopping distance shortens and controlled braking is possible.

Behaviour during accidental actuation of the throttle grip

–If the throttle is accidentally opened (throttle grip position > 5 %) during emergency braking, Dynamic Brake Control ensures the desired braking effect by ignoring actuation of the throttle grip. The effectiveness of emergency braking is ensured.
–If the throttle is closed (throttle grip position < 5 %) while Dynamic Brake Control is in action, the engine torque requested by the ABS brake system is restored.
–If emergency braking ceases and the rider still has not changed the position of the throttle grip, Dynamic Brake Control steadily ramps engine torque back to the rider's requested level.

TYRE PRESSURE CONTROL (RDC)

–with tyre pressure control (RDC) OE

Function

A sensor integrated into each tyre measures the air temperature and the air pressure inside the tyre and transmits this information to the control unit. Each sensor has a centrifugal-force tripswitch that does not enable transmission of the measured values until the motorcycle has exceeded a defined minimum speed for the first time.

 Minimum speed for transmission of the RDC measured values:
min 30 km/h

The display shows "––" for each tyre until the tyre-pressure signal is received for the first time. The sensors continue to transmit the measured-value signals for some time after the vehicle comes to a stop.

 Time for transmission of measured values after vehicle comes to a stop:
min 15 min

An error message is issued if wheels without sensors are fitted to a vehicle equipped with an RDC control unit.

Tyre pressure ranges

The RDC control unit differentiates between three tyre-pressure ranges, all of which are parameterised for the motorcycle:

– Tyre pressure within permitted tolerance.
– Tyre pressure close to limit of permitted tolerance.
– Tyre pressure outside permitted tolerance.

Temperature compensation

Tyre pressure is a temperature-sensitive variable: pressure increases as tyre-air temperature rises and decreases as tyre-air temperature drops. Tyre air temperature depends on ambient temperature as well as on the style of riding and the duration of the ride.

 The tyre-pressure readings in the instrument cluster are temperature-compensated and are always referenced to the following tyre-air temperature:
20 °C

The air lines available to the public in petrol stations and motorway service areas have gauges that do not compensate for temperature; the reading shown by a gauge of this nature is the temperature-dependent tyre-air pressure. In most instances, therefore, these gauge readings will not tally with the pressures shown by the instrument cluster.

Pressure adaptation

Compare the RDC value in the instrument cluster with the value in the table on the back cover of the rider's manual. Then use the air-line gauge at a service station to compensate for the difference between the RDC reading and the value in the table.

 Example
According to the operating instructions, the tyre pressure should be:
2.5 bar
The instrument cluster shows the following value:
2.3 bar
So pressure is low by:
0.2 bar

 Example
The gauge on the air line shows:
2.4 bar
You must now increase tyre pressure until the value is:
2.6 bar

GEAR SHIFT ASSISTANT

–with shift assistant Pro[OE]

Shift assistant Pro

Your vehicle is equipped with a Pro shift assistant, a system originally developed for racing and now adapted for touring. It permits upshifts and downshifts without declutching or closing the throttle in virtually all load and rpm ranges.

Advantages

–70-80 % of all gearshifts on a trip can be done without using the clutch.
–Less relative movement between rider and passenger because the shift pauses are shorter.
–It is not necessary to close the throttle valve when shifting under acceleration.
–When braking and downshifting (throttle valve closed), engine speed is adjusted by blipping the throttle.
–Shift time is shorter than a gearshift with clutch actuation.

In order for the system to identify a gearshift request, the rider has to move the gearshift lever from its idle position in the desired direction against the spring force through a certain "overtravel" at ordinary speed or rapidly and keep the gearshift lever in this position until the gearshift is completed. It is not necessary to increase the force applied to the shift lever while shifting is in progress. Once the gearshift has completed the shift lever has to be fully released before another gearshift with the Pro shift assistant can take place. When shifting gears with the Pro shift assistant, the rider has to keep load state (throttle grip position) constant before and during the gearshift. A change in the position of the throttle grip during a gearshift can cause the function to abort and/or lead to a missed shift. The Pro shift assistant provides no assistance for the gearshift if the rider declutches.

Downshifting

–Downshifting is assisted until maximum rpm for the target gear to be selected is reached. This prevents overrevving.

 Maximum engine speed
max 9000 min^{-1}

Upshifting

–Upshifting is only possible when the current speed is higher than the respective release threshold of the next higher gear.

–This prevents the engine from dropping below idle speed.

 Idle speed
1050 min^{-1} (Engine at regular operating temperature)

 Release thresholds
1st gear
min 1350 min^{-1}
2nd gear
min 1400 min^{-1}
3rd gear
min 1450 min^{-1}
4th gear

 Release thresholds
min 1500 min^{-1}
5th gear
min 1550 min^{-1}
6th gear
min 1600 min^{-1}

HILL START CONTROL

Hill Start Control function

Hill Start Control is a pullaway assistant that operates on the partially integral ABS system to prevent the vehicle from rolling back on a gradient, without the rider having to keep pressure applied to the brake lever. When Hill Start Control is activated, pressure is built up in the rear brake system to keep the machine at a standstill on a gradient.

The brake pressure in the brake system is dependent on the gradient.

Effect of an incline on brake pressure and drive-off behaviour

–If the motorcycle is stopped on a gentle incline, only low brake pressure is built up. In this case, the brakes are quickly released when driving off. The motorcycle can be moved off more gently. It

is not necessary to turn the throttle grip again.
– If the motorcycle is stopped on a steep incline, high brake pressure is built up. In this case, the brakes take longer to release when driving off. More torque is required for driving off which also requires the rider to turn the throttle grip again.

Behaviour when the motorcycle rolls or slips
– If the vehicle starts to roll while Hill Start Control is active, brake pressure is increased.
– If the rear wheel slips, the brake is released again after approx. approx. 1 m. This prevents the vehicle slipping with a locked rear wheel, for example.

– with riding modes Pro[OE]

Hill Start Control Pro

Hill Start Control Pro enables automatic activation of the holding function.

Brake release when engine is stopped or after time-out

Hill Start Control is deactivated if the rider stops the engine by hitting the emergency-off switch (kill switch) or when the side stand is extended, or after time-out (10 minutes).

In addition to the indicator and warning lights, the rider should be made aware that Hill Start Control has been deactivated by the following behaviour:

Brake warning jolt
– The brake is released briefly and reactivated immediately.
– This creates a jolt which the rider feels.
– The partial integral ABS brake system limits the speed of movement to approx. approx. 1…2 km/h.
– The rider must brake the motorcycle manually.
– After two minutes, or when the brake is actuated, Hill Start Control is completely deactivated.

The holding pressure is released immediately without a brake warning jolt as soon as the ignition is switched off.

SHIFTCAM

Functional principle of ShiftCam

The vehicle features BMW ShiftCam technology for varying valve timing and valve lift on the intake side. The heart of this technology is a one-piece shifting intake camshaft that has two lobes for each valve: a partial-load cam and a full-load cam. The partial-load cam is fine-tuned for consumption optimisation and engine smoothness. As well as adapting valve timing, the partial-load cam also reduces intake-valve lift. With the partial-load cams activated, moreover, the lobes for the cylinder's left and right intake valves produce staggered valve lift and offset angles of rotation. Consequently the two intake valves open at very slightly different times and the distance to which they open also differs. The advantage: The fuel/air mixture flowing into the combustion chamber is swirled more thoroughly and combusted effectively - so all in all the fuel is utilised more efficiently and engine operation is perceptibly smoother. The full-load cam is designed for optimised engine power and it maximises intake valve lift. The intake camshaft is shifted axially to vary valve timing and valve lift. The pins of an electromechanical actuator engage a shift gate on the intake camshaft. This permits load-dependent and speed-dependent actuation of the intake valves and, consequently, a no-compromises combination of performance and low fuel consumption.

MAINTENANCE

09

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GENERAL NOTES

The Maintenance chapter describes straightforward procedures for checking and replacing certain wear parts.
Special tightening torques are listed as applicable. The tightening torques for the threaded fasteners on your vehicle are listed in the section entitled "Technical data".

Some of the work calls for special tools and a thorough knowledge of the technology involved. If in doubt consult a specialist workshop, preferably an authorised BMW Motorrad retailer.

Microencapsulated screws

The microencapsulation is a chemical thread-locker. An adhesive compound creates a secure connection between bolt and nut or between screw and component. Consequently, microencapsulated screws are for once-only use and are not intended for re-installation after being slackened.
Regardless of whether the procedure involves removal or installation, the threaded bore always has to be cleaned. After removal of the screw, clean the internal thread to remove all traces of thread-locking compound. Always use new microencapsulated screws when re-assembling. Prior to disassembly make sure that you have suitable tools for cleaning the threads and a new replacement for each screw to be removed. If the job is not done correctly there is no guarantee that the screw will remain secure, which means that you would be putting yourself at risk!

Non-reusable cable ties

Non-reusable cable ties are used at some points to secure cables and lines. To prevent damage to cables and lines when these items are being removed, it is essential to use a suitable tool, for example diagonal cutting pliers, for their removal.
Cables and lines detached beforehand by the removal of non-reusable cable ties have to be re-secured with new non-reusable cable ties.
Use cable-tie clippers to clip off the excess length of the cable ties.

ON-BOARD TOOLKIT



1 Screwdriver handle
–Use with screwdriver insert
–Topping up the engine oil. (➠ 181)

2 Open-ended spanner
Width across flats 8/ 10 mm
–Removing battery (➠ 204).

3 Open-ended spanner
Width across flats 14 mm

4 Reversible screwdriver blade
Phillips PH1 and Torx T25
–Reposition the windscreen. (➠ 125)

FRONT-WHEEL STAND

Install the front-wheel stand

ATTENTION

Use of the BMW Motorrad front-wheel stand without accompanying use of centre stand or auxiliary stand
Risk of damage to parts if vehicle topples
- Place the motorcycle on its centre stand or another auxiliary stand before lifting the front wheel with the BMW Motorrad front-wheel stand.

- Make sure the motorcycle is standing firmly.
- Place the motorcycle on an auxiliary stand; BMW Motorrad recommends the BMW Motorrad rear-wheel stand.
- Install the rear-wheel stand. (➠ 180)



- See the instructions issued with the front-wheel stand for the details of the correct procedure for installation.
- BMW Motorrad offers an auxiliary stand suitable for every vehicle. Your BMW Motorrad retailer will be happy to help you with the selection of a suitable auxiliary stand.

REAR-WHEEL STAND

Install the rear-wheel stand



- The description of how to fit the rear-wheel stand correctly will be found in the instructions for the stand.
- BMW Motorrad offers an auxiliary stand suitable for every vehicle. Your BMW Motorrad retailer will be happy to help you with the selection of a suitable auxiliary stand.

ENGINE OIL

Checking engine oil level

- Make sure the ground is level and firm and hold the motorcycle upright.

–with centre stand OE

- Make sure the ground is level and firm and place the motorcycle on its centre stand.<

ATTENTION

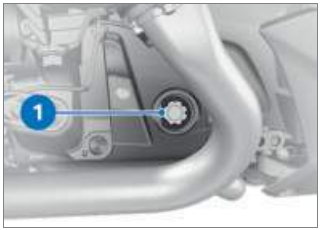
Misinterpretation of oil level reading, because oil level is temperature-dependent (the higher the temperature, the higher the oil level)

Engine damage due to incorrect oil filling

- Check the oil level only after a lengthy ride or when the engine is at operating temperature.

- Allow the engine to idle until the fan cuts in.
- Switch off the engine when it is at operating temperature.
- Wait five minutes for the oil to drain into the oil pan.

As a contribution to reducing environmental impact, BMW Motorrad recommends checking the engine oil on occasion after a trip of at least min 50 km.



ATTENTION

Vehicle toppling sideways
Risk of damage to parts if vehicle topples
- Secure the vehicle, preferably with the assistance of a second person, so that it cannot topple sideways.

- Check the oil level in the display **1**.

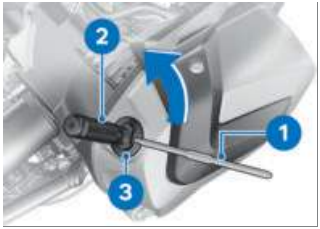


Engine oil, specified level
Between **MIN** and **MAX** marks

If the oil level is below the **MIN** mark:
- Topping up the engine oil. (➠ 181)

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

Topping up engine oil
- Make sure the ground is level and firm and place the motorcycle on its stand.



- Wipe the area around the oil filler opening clean.
- Insert Torx end of reversible screwdriver insert **1** into screwdriver handle **2** (toolkit) for additional leverage.
- Engage this tool in cap **3** of the oil filler opening and turn anti-clockwise to remove.
- Check the engine oil level. (➠ 180)

ATTENTION

Use of insufficient engine oil or too much engine oil
Engine damage due to incorrect oil filling
- Always make sure that the engine oil level is correct.

- Top up the engine oil to the specified level.

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

- Check the engine oil level. (➠ 180)
- Install cap **3** of the oil filler opening.

BRAKE SYSTEM

Check operation of the brakes
- Pull the handbrake lever.
» The pressure point must be clearly perceptible.
- Press the footbrake lever.
» The pressure point must be clearly perceptible.

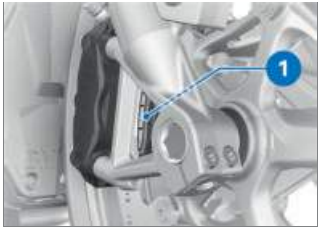
If the pressure point is not clearly perceptible:

ATTENTION

Work on brake system not in compliance with correct procedure
Risk to operational reliability of the brake system
- Have all work on the brake system undertaken by trained and qualified specialists.

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

Checking brake pad thickness, front brakes
- Make sure the ground is level and firm and place the motorcycle on its stand.



- Visually inspect the left and right brake pads to ascertain their thickness. Viewing direction: Between wheel and front suspension toward brake pads **1**.



Brake-pad wear limit, front
1.0 mm (Friction pad only, without backing plate. The wear indicators (grooves) must be clearly visible.)

If the wear indicating marks are no longer clearly visible:

WARNING

Brake-pad thickness less than permissible minimum
Diminished braking effect, damage to the brakes
- In order to ensure the dependability of the brake system, do not permit the brake pads to wear past the minimum permissible thickness.

- Have the brake pads replaced by a specialist workshop, preferably an authorised BMW Motorrad retailer.

Checking brake pad thickness, rear brakes

- Make sure the ground is level and firm and place the motorcycle on its stand.



- Visually inspect the brake pads to ascertain their thickness. Viewing direction: From the rear toward brake pads **1**.



Brake-pad wear limit, rear
1.0 mm (Friction pad only, without backing plate)

If the wear limit has been reached:

WARNING

Brake-pad thickness less than permissible minimum
Diminished braking effect, damage to the brakes
- In order to ensure the dependability of the brake system, do not permit the brake pads to wear past the minimum permissible thickness.

- Have the brake pads replaced by a specialist workshop, preferably an authorised BMW Motorrad retailer.

Checking brake-fluid level, front brakes

WARNING

Not enough brake fluid in brake fluid reservoir, or contaminants in brake fluid
Considerably reduced braking power due to presence of air, contaminants or water in the brake system
- Cease operation of the vehicle immediately and do not ride it until the fault has been rectified.
- Check the brake-fluid levels at regular intervals.
- Always make sure that the lid of the brake fluid reservoir and the area around the lid are cleaned before opening.
- Make sure that only fresh brake fluid from a sealed container is used.

- Make sure the ground is level and firm and hold the motorcycle upright.

–with centre stand OE

- Make sure the ground is level and firm and place the motorcycle on its centre stand. ◁

- Turn the handlebars to a position in which the brake fluid reservoir is horizontal.



- Check the brake fluid level in brake fluid reservoir for front wheel brake **1**.

Wear of the brake pads causes the brake fluid level in the reservoir to sink.



Brake fluid level, front
Brake fluid, DOT4
The brake fluid level may not drop below the **MIN** mark. (Brake-fluid reservoir horizontal, motorcycle upright)

If the brake fluid level drops below the permitted level:

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

Checking brake-fluid level, rear brakes

WARNING

Not enough brake fluid in brake fluid reservoir, or contaminants in brake fluid
Considerably reduced braking power due to presence of air, contaminants or water in the brake system

- Cease operation of the vehicle immediately and do not ride it until the fault has been rectified.
- Check the brake-fluid levels at regular intervals.
- Always make sure that the lid of the brake fluid reservoir and the area around the lid are cleaned before opening.
- Make sure that only fresh brake fluid from a sealed container is used.

- Make sure the ground is level and firm and hold the motorcycle upright.

–with centre stand OE

- Make sure the ground is level and firm and place the motorcycle on its centre stand.



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

Wear of the brake pads causes the brake fluid level in the reservoir to sink.



Brake fluid level, rear
Brake fluid, DOT4
The brake fluid level may not drop below the **MIN** mark. (Brake-fluid reservoir horizontal, motorcycle upright)

If the brake fluid level drops below the permitted level:

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

CLUTCH

Checking operation of the clutch

- Pull the clutch lever.

» The pressure point must be clearly perceptible.

If the pressure point is not clearly perceptible:

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

COOLANT

Check the coolant level

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Allow the motor to cool down.



- Check the coolant level in expansion tank **1**.



- Read the coolant level.

» The coolant level must be between the **MIN** and **MAX** marks.

If the coolant level drops below the **MIN** mark:

- Top up the coolant.

Topping up coolant

WARNING

Opening radiator cap
Risk of burning
- Do not open the radiator cap when the system is hot.
- Check and, if necessary, top up the coolant in the expansion tank only.



- Open cap **1** of the coolant expansion tank and top up the coolant to the specified level.

» The coolant level is between the MIN and MAX marks.

- Close cap **1**.

TYRES

Checking tyre pressures

WARNING

Incorrect tyre pressure
Impaired handling characteristics of the motorcycle, shorter useful tyre life
- Always check that the tyre pressures are correct.

WARNING

Tendency of valve inserts installed vertically to open by themselves at high riding speeds
Sudden loss of tyre pressure
- Install valve caps fitted with rubber sealing rings and tighten firmly.

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Check tyre pressures against the data below.

Tyre pressure, front
2.5 bar (with cold tyre; one-up and two-up riding)
2.5 bar (sport riding)

 Tyre pressure, rear
2.9 bar (with cold tyre; one-up and two-up riding)
2.9 bar (sport riding)

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

Check the tyre tread depth

WARNING

Riding with badly worn tyres
Risk of accident due to impaired handling
- If applicable, have the tyres changed in good time before they wear to the minimum tread depth permitted by law.

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Measure the tyre tread depth in the main tread grooves with wear marks.

Each tyre has wear indicators integrated into the main tread grooves. The tyre has reached its wear limit when the tread has worn down to the level of the wear indicators. The locations of the marks are indicated on the edge of the tyre, e.g. by the letters TI, TWI or by an arrow.

If the tyre tread is worn to minimum:
- Replace tyre or tyres, as applicable.

WHEEL RIMS

Checking rims
- Make sure the ground is level and firm and place the motorcycle on its stand.
- Visually inspect the rims for defects.
- Have damaged rims checked and, if necessary, replaced by a specialist workshop, preferably an authorised BMW Motorrad retailer.

WHEELS

Effect of wheel size on chassis and suspension control systems

Wheel size is very important as a parameter for the ABS running-gear control system. In particular, the diameter and the width of a vehicle's wheels are programmed into the control unit and are fundamental to all calculations. Any change in these influencing variables, caused for example by a switch to wheels other than those installed ex-works, can have seri-

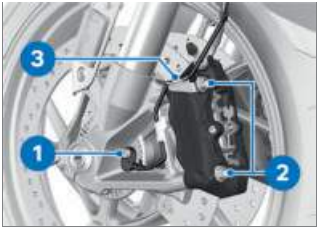
ous effects on the performance of the control systems.
The sensor rings are essential for correct road-speed calculation, and they too must match the motorcycle's control systems and consequently cannot be changed.
If you decide that you would like to fit non-standard wheels to your motorcycle, it is very important to consult a specialist workshop beforehand, preferably an authorised BMW Motorrad retailer. In some cases, the data programmed into the control units can be changed to suit the new wheel sizes.

Removing front wheel

- Place the motorcycle on an auxiliary stand. BMW Motorrad recommends the BMW Motorrad front-wheel stand.
- Install the front-wheel stand. (➠ 179)

–with centre stand OE

- Make sure the ground is level and firm and place the motorcycle on its centre stand.◁

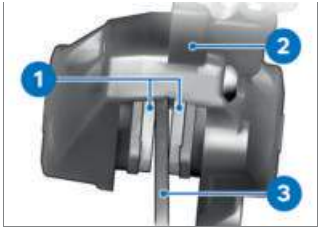


- Remove screw **1** and remove the wheel speed sensor from its bore.
- Mask off the parts of the wheel rim that could be scratched in the process of removing the brake calipers.

ATTENTION

Unwanted inward movement of the brake pads
Component damage on attempt to install the brake caliper or because brake pads have to be forced apart
- Do not operate the brakes with a brake caliper not correctly secured.

- Remove securing screws **2** of the left and right brake calipers and remove holding clip **3**.

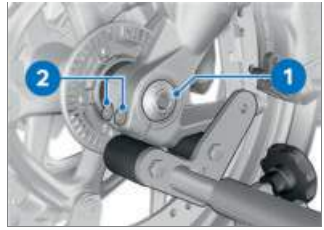


- Force brake pads **1** slightly apart by rocking brake caliper **2** back and forth against brake disc **3**.
- Carefully ease the brake calipers back and out until clear of the brake discs.

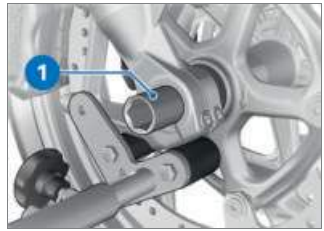
- Lift the front of the motorcycle until the front wheel is clear of the ground, preferably using a BMW Motorrad front-wheel stand.
- Install the front-wheel stand. (➠ 179)



- Slacken axle clamping screws **1**.



- Remove screw **1**.
- Slacken axle clamping screws **2**.
- Press quick-release axle slightly toward the inside, so as to be better able to grip it on the right-hand side.



- Withdraw quick-release axle **1**, support the front wheel when doing this.
- Set down front wheel and roll forwards out of the front suspension.



- Remove spacer bushing **1** from the wheel hub.

Installing front wheel

WARNING

Use of a non-standard wheel
Malfunctions in operation of ABS and DTC
- See the information on the effect of wheel size on the ABS and DTC systems at the start of this chapter.

ATTENTION

Tightening threaded fasteners to incorrect tightening torque
Damage, or threaded fasteners work loose
- Always have the security of the fasteners checked by a specialist workshop, preferably an authorised BMW Motorrad dealer.



- Lubricate the friction face of spacer bushing **1**.

Lubricant
Optimoly TA

- Insert spacer bushing **1** into the wheel hub on the left-hand side.

ATTENTION

Front wheel installed wrong way round
Risk of accident
- Note direction-of-rotation arrows on tyre or rim.

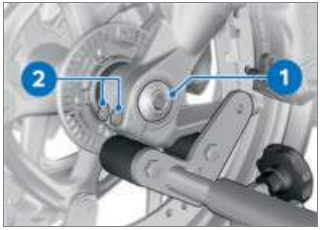
- Roll the front wheel into position between the forks of the front suspension.



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

Lubricant
Optimoly TA

- Lift the front wheel slightly and install quick-release axle **1**.
- Remove front-wheel stand and firmly compress front forks several times. Do not operate the handbrake lever in this process.
- Install the front-wheel stand. (➠ 179)



- Install screw **1** and tighten to specified torque. In this process, counter-hold the quick-release axle on the right side.

Quick-release axle in telescopic forks
M20 x 1.5
50 Nm

- Tighten axle clamping screws **2** to the specified torque.



Clamping screw for quick-release axle in telescopic fork
Tightening sequence: Tighten screws six times in alternate sequence
M8 x 50
19 Nm



- Tighten axle clamping screws **1** to the specified torque.



Clamping screw for quick-release axle in telescopic fork
Tightening sequence: Tighten screws six times in alternate sequence
M8 x 50
19 Nm

- Remove the front-wheel stand.
- Position left and right brake calipers on the brake discs.



- Install holding clip **3** on the left and securing screws **2** on left and right and tighten to the specified torque.

Brake caliper to telescopic fork
M10 x 65
38 Nm

- Remove the adhesive tape from the wheel rim.

WARNING

Brake pads not lying against the brake disc

Risk of accident due to delayed braking effect.

- Before driving, check that the brakes respond without delay.

- Operate the brake several times until the brake pads are bedded.

- Seat the cable for the wheel speed sensor in holding clip **3**.
- Insert the wheel speed sensor into the bore hole and new install screw **1**.

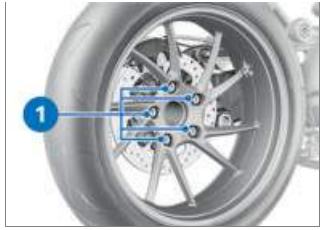
Wheel-speed sensor to fork leg
M6 x 16
Joining compound: Micro-encapsulated or medium-strength thread-locking compound
8 Nm

Removing rear wheel

CAUTION

Hot exhaust system
Risk of burn injury
- Do not touch a hot exhaust system.

- Allow rear silencer to cool down.
- Remove the silencer. (➠ 196)



- Engage first gear.
- Remove bolts **1** from the rear wheel, while supporting the wheel.
- Roll the rear wheel out toward the rear.

Installing rear wheel

WARNING

Use of a non-standard wheel
Malfunctions in operation of ABS and DTC
- See the information on the effect of wheel size on the ABS and DTC systems at the start of this chapter.

ATTENTION

Tightening threaded fasteners to incorrect tightening torque

Damage, or threaded fasteners work loose

- Always have the security of the fasteners checked by a specialist workshop, preferably an authorised BMW Motorrad dealer.



- Clean the wheel centring spigot and the contact surfaces of the wheel hub.
- Seat the rear wheel on the rear-wheel adapter.



- Install wheel bolts **1** and tighten to specified torque.

Rear wheel on wheel flange
Tightening sequence: Tighten in a crosswise pattern
M10 x 1.25 x 40
60 Nm

- Install the silencer. (➠ 198)

SILENCER

Removing silencer

CAUTION

Hot exhaust system

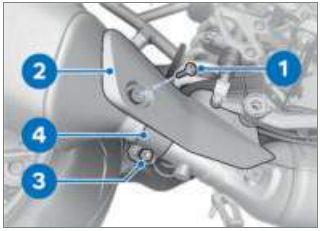
Risk of burn injury

- Do not touch a hot exhaust system.

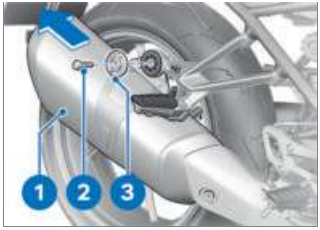
- Allow rear silencer to cool down.
- Make sure the ground is level and firm and place the motorcycle on a suitable auxiliary stand; BMW Motorrad recom-

mends the BMW Motorrad rear-wheel stand.
- Install the rear-wheel stand. (➠ 180)

–with centre stand OE
- Make sure the ground is level and firm and place the motorcycle on its centre stand.◁



- Remove screw **1** from cover **2**.
- Loosen nut **3** in clamp **4**.



- Remove screw **2** and washer **3**.
- Remove silencer **1**.

–with Sports silencer OE

CAUTION

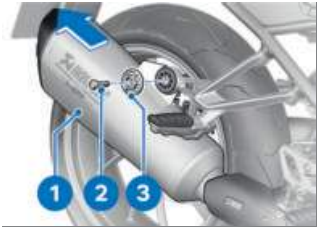
Hot exhaust system
Risk of burn injury
- Do not touch a hot exhaust system.

- Allow rear silencer to cool down.
- Make sure the ground is level and firm and place the motorcycle on a suitable auxiliary stand; BMW Motorrad recommends the BMW Motorrad rear-wheel stand.
- Install the rear-wheel stand. (➠ 180)

–with centre stand OE
- Make sure the ground is level and firm and place the motorcycle on its centre stand.◁

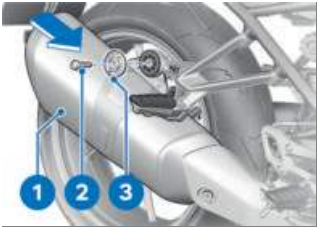


- Loosen nut **1** to slide clamp **2** back.



- Remove screw **2** and washer **3**.
- Remove silencer **1**.

Install the silencer



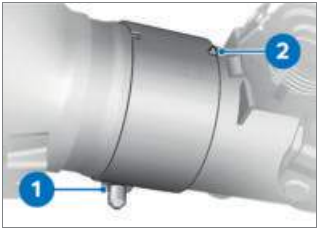
- Lightly lubricate the **inner face** of the clamp.

Lubricant
Optimoly TA

- Slip the clamp on to the silencer.
- Push silencer **1** to the limit position.
- Install screw **2** and washer **3**.

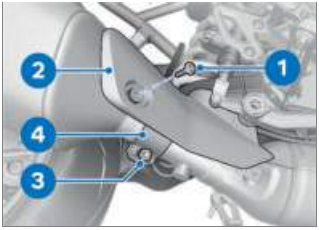
Silencer to rear frame
M8 x 35

Silencer to rear frame
19 Nm



- Slide the clamp with recess **1** as far forward as possible and align it with retaining lug **2**.

» Retaining lug engages recess in the clamp.



- Tighten nut **3** of clamp **4**.

Clamp to silencer and exhaust manifold
22 Nm
–with HP Sports silencer OE
19 Nm

- Install screw **2** of cover **1**.

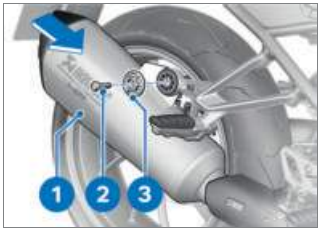
–with Sports silencer[OE]

ATTENTION

Tightening threaded fasteners to incorrect tightening torque

Damage, or threaded fasteners work loose

- Always have the security of the fasteners checked by a specialist workshop, preferably an authorised BMW Motorrad dealer.

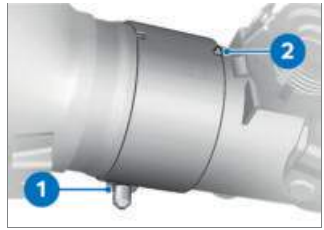


- Lightly lubricate the **inner face** of the clamp.

Lubricant
Optimoly TA

- Slip the clamp on to the silencer.
- Push silencer **1** to the limit position.
- Install screw **2** and washer **3**.

Silencer to rear frame
M8 x 35
19 Nm



- Slide the clamp with recess **1** as far forward as possible and align it with retaining lug **2**.

» Retaining lug engages recess in the clamp.



- Tighten nut **1** of clamp **2**.

Clamp to silencer and exhaust manifold
22 Nm
–with HP Sports silencer[OE]
19 Nm<<

LIGHTING

Replacing LED light sources

WARNING

Vehicle overlooked in traffic due to failure of the lights on the vehicle
Safety risk
- Always replace a faulty bulb at the earliest possible opportunity. Consult a specialist workshop, preferably an authorised BMW Motorrad Retailer.

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

JUMP-STARTING

CAUTION

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

ATTENTION

Excessive current flowing when the motorcycle is jump-started
Wiring smoulders/ignites or damage to the on-board electronics
- If the motorcycle has to be jump-started connect the leads to the battery terminals; never attempt to jump-start the engine by connecting leads to the on-board socket.

ATTENTION

Contact between crocodile clips of jump leads and vehicle

Risk of short-circuit

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

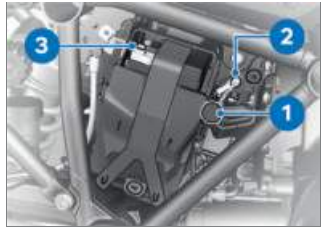
ATTENTION

Jump-starting with a voltage greater than 12 V

Damage to the on-board electronics

- Make sure that the battery of the donor vehicle has a voltage rating of 12 V.

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Remove the battery cover. (➠ 204)
- When jump-starting the engine, do not disconnect the battery from the on-board electrical system.



- Remove protective cap **1**.
- Use the red jump lead to connect remote positive terminal **2** of the discharged battery to the positive terminal of the donor battery.
- Connect one end of the black jump lead to the negative terminal of the donor battery, then connect the other end to negative terminal **3** of the discharged battery.
- Run the engine of the donor vehicle during jump-starting.
- Start the engine of the vehicle with the discharged battery in the usual way; if the engine does not start, wait a few minutes before repeating the attempt in order to protect the starter motor and the donor battery.
- Allow both engines to idle for a few minutes before disconnecting the jump leads.
- Disconnect the jump lead from the negative terminals first, then disconnect the

second lead from the positive terminals.

Do not use proprietary start-assist sprays or other products to start the engine.

- Install the protective cap.
- Install the battery cover. (➠ 206)

BATTERY

Maintenance instructions

Correct upkeep, recharging and storage will prolong the life of the battery and are essential if warranty claims are to be considered.

Compliance with the points below is important in order to maximise battery life:

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

Battery type
AGM battery (Absorbent Glass Mat), maintenance-free

ATTENTION

On-board electronics (e.g. clock) draining connected battery

Battery is deep-discharged; this voids the guarantee

- Connect a float charger to the battery if the motorcycle is to remain out of use for more than four weeks.

BMW Motorrad has developed a float charger specially designed for compatibility with the electronics of your motorcycle. Using this charger, the battery can be kept charged during long periods of disuse, without having to be disconnected from the vehicle's on-board systems. For more information, consult an authorised BMW Motorrad retailer.

Charging battery when connected

ATTENTION

Charging the battery that is connected to the vehicle via the battery terminals
Damage to the on-board electronics
- Disconnect the battery at the battery terminals before charging.

ATTENTION

Recharging a fully discharged battery via the power socket or extra socket
Damage to the vehicle electronics
- If a battery has discharged to the extent that it is completely flat (battery voltage less than 12 V, indicator lights and multifunction display remain off when the ignition is switched on) always charge the **disconnected** battery with the charger connected directly to the battery terminals.

ATTENTION

Unsuitable chargers connected to a socket
Damage to charger and vehicle electronics
- Use suitable BMW chargers. The suitable charger is available from your authorised BMW Motorrad dealer.

- With the battery connected to the vehicle's on-board electrical system, charge via the power socket.

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

- Comply with the operating instructions of the charger.

If you are unable to charge the battery through the on-board socket, you may be using a charger that is not compatible with your motorcycle's electronics. If this happens, charge the battery directly at the terminals of the battery that is disconnected from the vehicle.

Charging battery when disconnected

- Remove the battery. (➠ 204)
- Charge the battery using a suitable charger.
- Comply with the operating instructions of the charger.
- Once the battery is fully charged, disconnect the charger's terminal clips from the battery terminals.

The battery has to be recharged at regular intervals in the course of a lengthy period of disuse. See the instructions for caring for your battery. Always fully recharge the battery before restoring it to use.

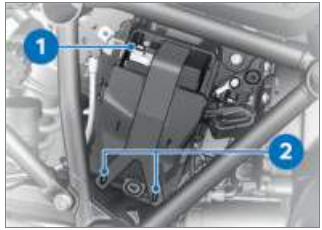
Removing battery



- Switch off the ignition.
- Remove screw **1**.
- Pull the battery cover slightly forward at the top at positions **2**.
- In order not to damage the battery cover or the mounting, work the battery cover up at position **3** to remove.

–with anti-theft alarm (DWA) OE

- If applicable, switch off the anti-theft alarm.◁



- Disconnect battery earth lead **1** and disengage rubber strap **2**.
- Wrap the end of negative battery cable **1** with insulating tape.



- Pull retaining panel in position **1** outwards and remove in an upward direction.
- Slightly lift the battery and ease it clear of the holder

until the battery positive terminal is accessible.



- Disconnect battery negative lead **1** and remove the battery.

Installing battery

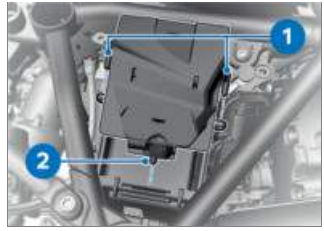
If the 12 V battery is not correctly installed or if the polarity of the terminals is reversed (e.g. in an attempt to jump-start the vehicle), this can cause the fuse for the alternator regulator to blow.



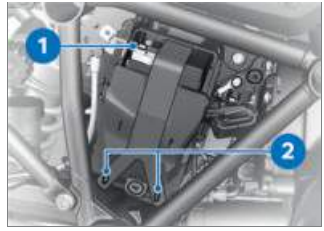
- Secure positive battery cable **1**.

	Wiring harness to battery
M6 x 13.5	
5 Nm	

- Push battery into the mounting.



- First insert retaining plate into the mountings **1** and then push under the battery in position **2**.



- Remove the insulating tape from negative battery cable **1**.
- Secure negative battery cable **1**.

Wiring harness to battery
M6 x 13.5
5 Nm

- Secure the battery with rubber strap **2**.



- If applicable, lubricate rubber grommets **1** and **2**.

» Rubber grommets are not pressed out in the process of installation.

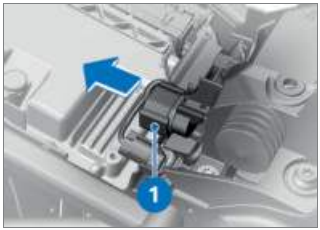
- Position battery cover in rubber grommets **1** and **2** and press it into place.



- Install screw **1**.
- Change the system settings. (➠ 74)

FUSES

Replacing fuses



- Switch off the ignition.
- Remove the front seat. (➠ 118)
- Disconnect connector **1**.

ATTENTION

Jumpering of blown fuses
Risk of short-circuit and fire
- Never attempt to jumper a blown fuse.
- Always replace a defective fuse with a new fuse of the same amperage.

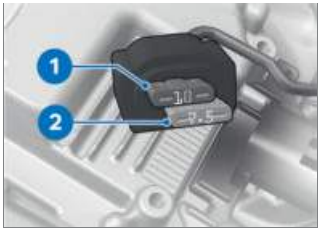
- Replace faulty fuse in accordance with the fuse allocation diagram.

If fuse defects recur frequently have the electric circuits checked by a specialist workshop, preferably an au-

thorised BMW Motorrad retailer.

- Install plug **1**.
- Install the rider's seat. (➠ 119)

Fuse assignment



1 10 A
Instrument cluster
Anti-theft alarm (DWA)
Ignition switch
Main relay
Diagnostic socket

2 7.5 A
Multifunction switch, left
Tyre pressure control (RDC)
Angular rate sensor

Fuse for the alternator regulator



1 50 A
Alternator regulator

Have the fuse replaced by a specialist workshop, preferably an authorised BMW Motorrad retailer.

DIAGNOSTIC CONNECTOR

Disengaging diagnostic socket

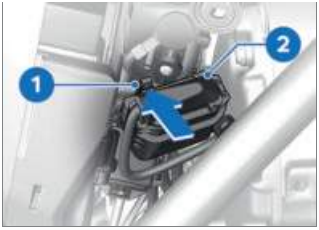
CAUTION

Incorrect disconnection of the diagnostic socket for on-board diagnosis

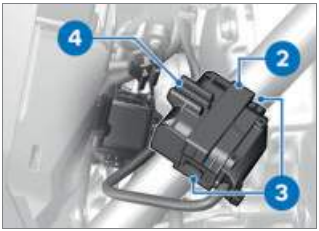
Malfunctions of the vehicle

- Do not disconnect the diagnostic socket or allow it to be disconnected except in the course of a BMW Motorrad service by a specialist workshop or by other authorised persons.
- Have the work carried out by appropriately trained personnel.
- Comply with the stipulations of the vehicle manufacturer.

- Remove the battery cover. (➠ 204)



- Press hook **1** and pull diagnostic socket **2** up to remove.

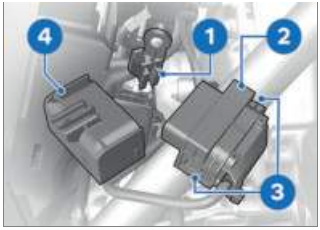


- Press locks **3** on both sides.
- Disengage diagnostic socket **2** from holder **4**.

» The interface to the diagnosis and information system can be connected to the diagnostic connector **2**.

Securing diagnostic socket

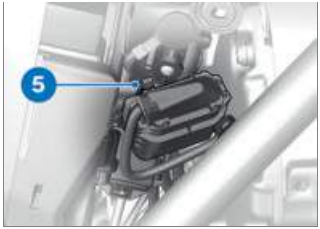
- Disconnect the interface for the diagnosis and information system.



- Insert diagnostic socket **2** into holder **4**.

» Locks **3** engage on both sides.

- Seat bracket **4** on mounting **1**.



- Make sure that hook **5** engages.
- Install the battery cover. (➠ 206)

ACCESSORIES

10

GENERAL NOTES 212
POWER SOCKETS 212
USB CHARGING SOCKET 213
CASES 214
TOPCASE 216
NAVIGATION SYSTEM 219

GENERAL NOTES

CAUTION

Use of other-make products
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 vehicles without constituting a safety hazard. Country-specific official authorisation does not suffice as assurance. Tests conducted by these instances cannot make provision for all operating conditions experienced by BMW vehicles and, consequently, they are not sufficient in some circumstances.
- Use only parts and accessories approved by BMW for your vehicle.

BMW has conducted extensive testing of the parts and accessory products to establish that they are safe, functional and suitable. Consequently, BMW accepts responsibility for the products. BMW accepts no liability whatsoever for parts and accessories that it has not approved.

All modifications must be in compliance with legal requirements. Make sure that the vehicle does not infringe the national road-vehicle construction and use regulations applicable in your country.
Your authorised BMW Motorrad retailer can offer expert advice on the choice of genuine BMW parts, accessories and other products.
To find out more about accessories go to: **bmw-motorrad.com/equipment**:

POWER SOCKETS

Connection of electrical devices
– You can start using electrical devices connected to the motorcycle's sockets only when the ignition is switched on.

Cable routing
– The cables from the power sockets to the auxiliary devices must be routed in such a way that they do not impede the rider.
– The cable routing should not restrict the steering angle or obstruct handling.
– The cables must not be trapped.

Automatic shutdown

–The sockets will be automatically switched off during the start procedure.
–The power supply to the sockets is switched off 60 seconds after the ignition is switched off, in order to prevent overloading of the on-board electrics. Low-wattage electrical accessories might not be recognised by the vehicle's electronics. In such cases, power sockets are switched off very shortly after the ignition is turned off.
–If the battery charge state is too low to maintain the motorcycle's start capability, the power sockets are switched off.
–The power sockets are also switched off when the maximum load capability as stated in the technical data is exceeded.

USB CHARGING SOCKET

Notes on use:

Charge current

This is a 5 V USB charging interface that provides a maximum charge current of 2.4 A.

Automatic shutdown

The USB charging sockets are shut down automatically under the following circumstances:
–If battery charge state is too low, to maintain the vehicle's start capability.
–If the maximum load capacity as stated in the technical data is exceeded.
–During the starting operation.

Connection of electrical devices

You can start using electrical devices connected to the USB charging sockets only when the ignition is switched on. The power supply to the sockets is switched off no more than 60 seconds after the ignition is switched off, in order to prevent overloading of the on-board electrics.
While riding in the rain, you should disconnect the device from the interface in order to protect against damage.
To prevent dirtying, keep the protective cover closed when no device is connected.

Cable routing

Note the following with regard to the routing of cables from USB charging sockets to items of electronic equipment:

–Make sure that cables do not impede the rider.
–Make sure that cables do not restrict the steering angle or obstruct handling.
–Make sure that cables cannot be trapped.

CASES

–with touring cases OA

Opening cases



- Turn key **1** counter-clockwise to the **OPEN** position.
- Pull grey release lever **2** **OPEN** up and at the same time open the case lid.

Closing cases



- Turn key **1** counter-clockwise to the **OPEN** position.
- Press catches **2** of the case lid into locks **3**. Check that nothing is trapped between the lid and the case.
- Pull grey release lever **4** **OPEN** up and at the same time close the case lid.

» The lid engages with an audible click.

- Turn key **1** in the case lock to the position in which it is parallel with the direction of travel and remove the key.

Removing cases



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



- Pull black release lever **1 RELEASE** up and at the same time pull the case out.
- Then lift the case out of the bottom mount.

Installing cases



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



- Position the case in case carrier **1**, then pivot it until it is seated at mount **2**.
- Pull black release lever **3 RELEASE** up and at the same time push the case into top mount **2**.
- Push black release lever **3 RELEASE** down until it engages.
- Turn the key in the case lock to the position in which it is parallel with the direction of travel and remove the key.

Maximum payload and maximum speed

Note the maximum payload and the maximum permissible speed.

The values for the combination described here are as follows:

Maximum permissible speed for riding with cases fitted to the motorcycle
max 180 km/h

Payload per case
max 10 kg

Secure attachment



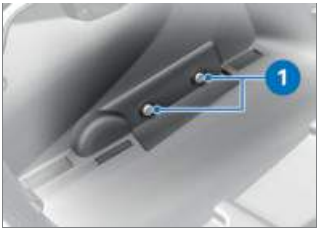
If a case wobbles or is difficult to install, it has to be adapted to the spacing between the top and bottom mounts.

WARNING

Case installation not in compliance with correct procedure.

Impairment of road safety.

- Cases may not wobble and must be secured free from play. Re-adjust the retainer if play develops over the course of time.



Screws **1** inside the case allow you to make this adjustment.

TOPCASE

–with topcase OA

Opening topcase



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



- Push lock barrel **1** forward.

» Release lever **2** pops up.

Closing topcase



- Pull release lever **1** all the way up.
- Close the lid of the topcase and hold it down. Check that nothing is trapped between the lid and the case.

The topcase can also be closed when the lock is in the **LOCK** position. Make sure that the ignition key is not left inside the topcase.



- Push release lever **1** down until it engages.
- Turn the key in the topcase lock to the **LOCK** position and remove the key from the lock.

Removing topcase



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

» The handle pops out.



- Pull carry handle **1** up as far as it will go.
- Lift the topcase at the rear and remove it from the luggage carrier.

Installing topcase

WARNING

Topcase not properly secured

Driving safety is impaired

- The topcase must not wobble and must be secured free from play.

- Pull the carry handle up as far as it will go.



- Hook the topcase into position on the luggage carrier. Make sure that hooks **1** are securely seated in corresponding keepers **2**.



- Push carry handle **1** down until it engages.



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

Maximum payload and maximum speed

Note the maximum payload and the maximum permissible speed.

The values for the combination described here are as follows:

Maximum speed for riding with a loaded topcase
max 180 km/h
Payload of topcase
max 5 kg

NAVIGATION SYSTEM

Securing navigation system

–with preparation for navigation system OE

Navigation preparation is suitable from BMW Motorrad Navigator IV onward.

The latching system of the Mount Cradle is not designed to protect against theft.

Always remove the navigation system and stow it away safely as soon as you finish your ride.



- Turn ignition key **1** counterclockwise.
- Pull the lock retainer **2** to the **left**.
- Press the lock **3** in.

» The Mount Cradle is unlocked and cover **4** can be pivoted forward and removed.



- Insert navigation system **1** at bottom and pivot it toward the rear.

» The navigation system engages with an audible click.

- Push the lock retainer **2** all the way to the **right**.

» Lock **3** is locked.

- Turn ignition key **4** clockwise.

» The navigation system is secured and the ignition key can be removed.

Removing navigation system and installing cover

–with preparation for navigation system OE

ATTENTION

Dust and dirt on the Mount Cradle contacts

Damaged contacts

- Always reinstall the cover as soon as you finish your ride.



- Turn ignition key **1** anti-clockwise.
- Pull the lock retainer **2** all the way to the **left**.

» Lock **3** is unlocked.

- Push lock **3** all the way to the **left**.

» Navigation system **4** is unlocked.

- Tilt navigation system **4** and work it down to remove.



- Insert cover **1** in the lower section and swing to the top with a rotational movement.

» The cover engages with an audible click.

- Push lock retainer **2** to the **right**.

• Turn ignition key **3** clockwise.
» The cover **1** is secured.

Operating navigation system
–with preparation for navigation system OE

The description below is based on the BMW Motorrad Navigator V and the BMW Motorrad Navigator VI. The BMW Motorrad Navigator IV does not support all the options described here.

Only the latest version of the BMW Motorrad communication system is supported. A software update of the BMW Motorrad communication system may be necessary. If this is the case, consult your authorised BMW Motorrad retailer.

If the BMW Motorrad Navigator and the operating focus is switched to the Navigator, some of its functions can be operated without the rider removing a hand from the handlebars.



The navigation system is operated using Multi-Controller **1** and MENU rocker button **2**.

Turning Multi-Controller 1 up and down
On the Compass and Mediaplayer pages: Increase or reduce volume of a Bluetooth-connected BMW Motorrad communication system.
In BMW special menu: Select menu items.

Short-tilting Multi-Controller 1 to the left and right
Switch between the main pages of the Navigator:
–Map view
–Compass
–Mediaplayer
–BMW special menu
–My Motorcycle page

Long-tilting Multi-Controller 1 to the left and right

Activate certain functions on the Navigator display. An arrow to the right or to the left above the corresponding button area on the display indicates a function that can be activated in this way.


Long-push to the right to activate this function.


Long-push to the left to activate this function.

Pressing bottom section of MENU rocker button 2

Switch operating focus to Pure Ride view.

In detail, the following functions can be controlled:

Map view

–Turn up: Zoom in.
–Turn down: Zoom out.

Compass page

–Turning increases or decreases the volume of a BMW Motorrad communication system connected via Bluetooth.

BMW special menu

–Speak: Repeat most recent navigation announcement.
–Waypoint: Save current location as a favourite.
–Home: Starts navigation to home address (greyed if no home address has been defined).
–Mute: Switch automatic navigation announcements off or on (off: a crossed-out lips symbol appears in the top line of the display). "Speak" will still activate navigation announcements. All other acoustic outputs remain switched on.
–Switch off display: Switch off the display.
–Dial home number: Dials the home phone number saved in the Navigator (not shown unless a communication system and a phone are connected).
–Diversion: Activates the diversion function (not shown unless a route is active).
–Skip: Skips the next waypoint (not shown unless the route has waypoints).

My Motorcycle

–Turn: Changes the number of data shown.

–Touch a data field on the display to open the menu for selecting data.
–The values available fr selection depend on the optional extras installed on the vehicle.

Mediaplayer
–Long-push to the left: Play preceding track.
–Long-push to the right: Play next track.
–Turning increases or decreases the volume of a BMW Motorrad communication system connected via Bluetooth.

The Mediaplayer function is only available when a Bluetooth device complying with the A2DP standard is used, for example a BMW Motorrad communication system.

Warnings and status messages
–with navigation system OA



Warning and status messages from the motorcycle are indicated by a symbol **1** appearing at the top left in the map view.

If a BMW Motorrad communication system is connected, warnings are accompanied by an acoustic signal.

If there are two or more active warnings the number appears below the warning triangle.
Touching the warning triangle when more than one warning is active opens a list of all the warnings.
Additional information appears as soon as a message is selected.

Detailed information cannot be displayed for all warnings.

Special functions
–with navigation system OA

Integration of the BMW Motorrad Navigator has produced a number of deviations from the descriptions in the operating instructions for the Navigator.

Reserve fuel level warning
The settings for the fuel gauge are not available, because the reserve fuel level warning is sent by the vehicle to the Navigator. Touch the message when it is active to view the locations of the nearest filling stations.

Security settings
The BMW Motorrad Navigator V can be secured against unauthorised use with a four-digit PIN (Garmin Lock). If this function is activated, while the Navigator is cradled on the vehicle and the ignition is switched on you are prompted to add the vehicle to the list of secured vehicles. If you answer "Yes" at the prompt, the Navigator saves the VIN of this vehicle in its internal memory. A maximum of five VINs can be saved in this way.

It is then no longer necessary to enter the PIN when the Navigator is switched on by ignition ON on any of these vehicles.
If the Navigator is removed from the vehicle while switched on, a security prompt is issued asking for the PIN to be entered.

Screen brightness
Screen brightness is adjusted by the motorcycle while the unit is cradled. Manual input is not necessary.
Automatic setting can be switched off in the display settings for the Navigator if desired.

CARE

11

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CARE PRODUCTS

ATTENTION

Use of unsuitable cleaning and care products
Damage to vehicle parts
- Do not use solvents such as cellulose thinners, cold cleaners, fuel or the like, and do not use cleaning products that contain alcohol.

ATTENTION

Use of strongly acidic or strongly alkaline cleaning agents
Damage to vehicle parts
- Dilute in accordance with the dilution ratio stated on the packaging of the cleaning agent.
- Do not use strongly acidic or strongly alkaline cleaning agents.

BMW Motorrad recommends that you use the cleaning and care products you can obtain from your authorised BMW Motorrad retailer. The substances in BMW Care Products have been tested in laboratories and in practice; they provide optimised care and protection for the materials used in your vehicle.

WASHING THE VEHICLE

WARNING

Wet brake discs and brake pads after vehicle wash, after riding through water and in rainy conditions
Diminished braking effect, risk of accident
- Apply the brakes in good time to allow the friction and heat to dry the brake discs and brake pads.

ATTENTION

Damage due to high water pressure from high pressure cleaners or steam cleaners
Corrosion or short circuit, damage to labels, seals, hydraulic brake system, electrical system and the motorcycle seat
- Exercise restraint when using a steam jet or high pressure cleaning equipment.

BMW Motorrad recommends that you use BMW insect remover to soften and wash off insects and stubborn dirt on

painted parts prior to washing the vehicle.
To prevent stains, do not wash the vehicle immediately after it has been exposed to strong sunlight and do not wash it in the sun.
Remove dirt from the fork legs at regular intervals.
Make sure that the vehicle is washed frequently, especially during the winter months or if it is ridden on salted roads.

ATTENTION

Effect of road salt intensified by warm water
Corrosion
- Use only cold water to remove road salt deposits.

To remove road salt deposits, clean the vehicle and mounted parts, as applicable, with cold water immediately after every trip.

After a ride in the rain, when humidity is high or after the vehicle has been washed, condensation might form inside the headlight. This can cause temporary fogging on the headlight lens. If moisture is constantly present inside the headlight consult a specialist workshop, preferably an authorised BMW Motorrad retailer.

CLEANING EASILY DAMAGED COMPONENTS

Plastics

ATTENTION

Use of unsuitable cleaning agents
Damage to plastic surfaces
- Do not use cleaning agents that contain alcohol, solvents or abrasives.
- Do not use insect-remover pads or cleaning pads with hard, scouring surfaces.

Clean the plastic parts with water and BMW plastic care product. This includes in particular:
–Windscreen and slipstream deflectors
–Headlight lens made of plastic
–Glass cover of the instrument cluster
–Black, unpainted parts

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

Instrument cluster

Clean the instrument cluster with warm water and washing-up liquid. Then dry it with a clean cloth, e.g. a paper towel.

Chrome

Carefully clean chrome parts with plenty of water and motorcycle cleaner from the BMW Care Products range. This is particularly important to counter the effects of salt. Use BMW Motorrad high-gloss 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

- Take care not to bend the radiator fins when cleaning.

Rubber

ATTENTION

Application of silicone sprays to rubber seals

Damage to the rubber seals

- Do not use silicone sprays or care products that contain silicon.

Treat rubber components with water or BMW rubber-care products.

CARE OF PAINTWORK

Washing the vehicle regularly will help counteract the long-term effects of substances that can damage the paint, especially if your vehicle is ridden in areas with high air pollution or natural sources of dirt, for example tree resin or pollen. Remove particularly aggressive substances immediately, however, as otherwise the paint can be affected or become discoloured. Substances of this nature include spilt fuel, oil, grease, brake fluid and bird droppings. For this, we recommend BMW Motorrad solvent cleaner followed by BMW Motorrad gloss polish for preservation.

Marks on the paintwork are particularly easy to see after the motorcycle has been washed. Remove stains of this kind at the earliest possible opportunity, using benzine or petroleum spirit on a clean cloth or ball of cotton wool. BMW Motorrad recommends using BMW tar remover for removing specks of tar. Then apply preserving agent to the areas treated in this way.

ATTENTION

Damage to paintwork due to metal polish
Risk of damage
- Do not treat painted surfaces and chrome-painted surfaces with metal polish.

PAINT PRESERVATION

If water no longer rolls off the paint, the paint must be preserved.
For paint preservation, BMW Motorrad recommends the use of BMW Motorrad gloss polish or agents containing carnauba wax or synthetic wax.

Do not use chrome polish to preserve chrome paints. Use only the agents recommended by BMW Motorrad.

LAYING UP THE MOTORCYCLE

- Clean the motorcycle.
- Fill the motorcycle's fuel tank.

Fuel additives clean the fuel injection system and the combustion zone. It is advisable to use fuel additives when the engine is operated with low-grade fuel or if the vehicle is to be out of use for a lengthy period of time. More information is available from your authorised BMW Motorrad retailer.

- Removing battery (➠ 204).
- Spray the brake and clutch lever pivots and the sidestand and centre-stand pivot mounts with a suitable lubricant.
- Coat bright metal and chrome-plated parts with an acid-free grease (e.g. Vaseline).
- Stand the motorcycle in a dry room in such a way that there is no load on either wheel (preferably using the front-wheel and rear-wheel stands from BMW Motorrad).

RESTORING MOTORCYCLE TO USE

- Remove the protective wax coating.
- Clean the motorcycle.
- Install the battery. (➠ 205)
- Comply with the checklist. (➠ 138)

TECHNICAL DATA

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TROUBLESHOOTING CHART

The engine doesn't start.

Possible cause	Rectification
Side stand extended and gear engaged	Fold in side stand.
Gear engaged and clutch not pressed	Select neutral or pull the clutch lever.
No fuel in tank	Refuel. (➠ 149)
Battery flat	Charge the battery when connected. (➠ 203)
Overheating protection for starter motor has been activated. Starter motor can only be operated for a limited period of time.	Allow the starter motor to cool down for approx. 1 minute before using it again.

The Bluetooth connection is not established.

Possible cause	Rectification
The steps required for pairing were not carried out.	Check the necessary steps for pairing in the operating instructions for the communication system.
The communication system was not connected automatically despite successful pairing.	Switch off the helmet's communication system and reconnect it after a minute or two.
Too many Bluetooth devices are saved on the helmet.	All pairing entries on the helmet are deleted (see the communication system operating instructions).
There are other vehicles with Bluetooth-capable devices in the vicinity.	Avoid simultaneously pairing with more vehicles.

Bluetooth connection is interrupted.

Possible cause	Rectification
The Bluetooth connection to the mobile end device is interrupted.	Switch off energy saving mode.
The Bluetooth connection to the helmet is interrupted.	Switch off the helmet's communication system and reconnect it after a minute or two.
The volume in the helmet cannot be adjusted.	Switch off the helmet's communication system and reconnect it after a minute or two.

Phonebook is not displayed in the instrument cluster.

Possible cause	Rectification
The phone book was not transmitted to the vehicle.	Confirm transmission of the phone data (➠ 81) when pairing the mobile device.

Active route guidance is not displayed in the instrument cluster.

Possible cause	Rectification
Navigation from the BMW Motorrad Connected App was not transmitted.	The BMW Motorrad Connected App is opened on the connected mobile end device prior to departure.
The route guidance cannot be started.	Secure the mobile device's data connection and check the map data on the mobile end device.

THREADED FASTENERS

Front wheel	Value	Valid
Brake caliper to telescopic fork		
M10 x 65	38 Nm	
Quick-release axle in telescopic forks		
M20 x 1.5	50 Nm	
Clamping screw for quick-release axle in telescopic fork		
M8 x 50	**Tightening sequence: Tighten screws six times in alternate sequence**	
	19 Nm	

Rear wheel	Value	Valid
Rear wheel on wheel flange		
M10 x 1.25 x 40	**Tightening sequence: Tighten in a crosswise pattern**	
	60 Nm	

Gearshift lever	Value	Valid
Peg to gearshift lever		
M6 x 20 micro-encapsulated	10 Nm	

Footbrake lever	Value	Valid
Peg to footbrake lever		
M6 x 20 micro-encapsulated	10 Nm	

Footrests	Value	Valid
Clamping block on footrest hinge		
M8 x 25	20 Nm	
Footrest on clamping block		
M6 x 20 / M6 x 12	10 Nm	

Handlebars	Value	Valid
Handlebar bridge to fork bridge		
M8 x 35	19 Nm	
M8 x 30	19 Nm	– with preparation for navigation system OE

FUEL

Recommended fuel grade	E5 E10 Super unleaded (max 15 % ethanol, E0/E5/E10/E15) 95 ROZ/RON 90 AKI
Alternative fuel grade	E5 E10 Normal unleaded (power- and consumption-related restrictions.) (max 15 % ethanol, E0/E5/E10/E15) 91 ROZ/RON 87 AKI
Fuel level	approx. 18 l
Fuel reserve	approx. 4 l
Fuel consumption	4.75 l/100 km, following world-wide harmonised motorcycle test cycle (WMTC)
–with power reduction OE	4.88 l/100 km, following world-wide harmonised motorcycle test cycle (WMTC)
CO2 emission	110 g/km, following world-wide harmonised motorcycle test cycle (WMTC)
–with power reduction OE	113 g/km, following world-wide harmonised motorcycle test cycle (WMTC)
Exhaust emissions standard	EU5

ENGINE OIL

Engine oil, capacity	max 4 l, with filter change
Specification	SAE 5W-40, API SL / JASO MA2, Additives (e.g. molybdenum-based) are not permissible because they can attack coated components of the engine, BMW Motorrad recommends BMW Motorrad ADVANTEC Ultimate oil.
Engine oil, quantity for topping up	max 0.8 l, Difference between **MIN** and **MAX**

BMW recommends ADVANTEC ORIGINAL BMW ENGINE OIL

ENGINE

Engine number location	Crankcase, bottom right, below starter motor
Engine type	A74B12M
Engine design	Air/liquid-cooled, two-cylinder four-stroke opposed-twin engine with two overlying, spur-gear-driven camshafts, a counterbalance shaft and BMW ShiftCam variable intake camshaft control
Displacement	1254 cm^3
Compression ratio	12.5:1
Nominal capacity	100 kW, at engine speed: 7750 min^{-1}
–with power reduction OE	79 kW, at engine speed: 7750 min^{-1}

Torque	143 Nm, at engine speed: 6250 min^{-1}
–with power reduction OE	140 Nm, at engine speed: 5000 min^{-1}
Maximum engine speed	max 9000 min^{-1}
Idle speed	1050 min^{-1}, Engine at regular operating temperature

CLUTCH

Clutch type	Multiplate oil-bath clutch, anti-hopping

TRANSMISSION

Type of transmission	Claw-shift 6-speed gearbox with helical gearing

FINAL DRIVE

Gear ratio of final drive	2.818 (31/11 teeth)
Rear axle differential oil	SAE 70W-80 / Hypoid Axle G3

FRAME

Type plate location	Frame, front left at steering head
Position of the vehicle identification number	Frame, front right, on steering head

CHASSIS AND SUSPENSION	
Front wheel	
Type of front suspension	Upside-down telescopic fork
Spring travel, front	140 mm, at front wheel
Rear wheel	
Type of rear suspension	Cast aluminium single swinging arm featuring BMW Motorrad Paralever
Spring travel at rear wheel	140 mm

BRAKES	
Front wheel	
Type of front brake	Hydraulically operated twin disc brake with 4-piston radial brake calipers and floating brake discs
Brake-pad material, front	Sintered metal
Brake disc thickness, front	4.5 mm, When new min 4 mm, Wear limit
Rear wheel	
Type of rear brake	Hydraulically actuated disc brake with 2-piston floating caliper and fixed disc
Brake-pad material, rear	Sintered metal
Brake disc thickness, rear	5 mm, When new min 4.5 mm, Wear limit

WHEELS AND TYRES	
Speed category, front/rear tyres	W, required at least: 270 km/h
Front wheel	
Front-wheel rim size	3.50" x 17"
Tyre designation, front	120/70 - ZR 17
Load index, front tyre	min. 58
Permissible front-wheel imbalance	max 5 g
Permissible wheel load, front	max 180 kg
Rear wheel	
Rear wheel rim size	5.50" x 17"
Tyre designation, rear	180/55 - ZR 17
Load index, rear tyre	min. 73
Permissible rear-wheel imbalance	max 5 g
Permissible wheel load, rear	max 325 kg
Tyre pressures	
Tyre pressure, front	2.5 bar, with cold tyre; one-up and two-up riding 2.5 bar, sport riding
Tyre pressure, rear	2.9 bar, with cold tyre; one-up and two-up riding 2.9 bar, sport riding

ELECTRICAL SYSTEM	
Electrical rating of on-board sockets	max 5 A, total for all sockets
Fuse carrier 1	10 A, Slot 1: instrument cluster, alarm system (DWA), ignition lock, main relay, diagnostic socket 7.5 A, Slot 2: multifunction switch left, tyre pressure control (RDC), angular rate sensor
Fuse holder	50 A, Fuse 1: Voltage regulator
Battery	
Battery type	AGM battery (Absorbent Glass Mat), maintenance-free
Battery rated voltage	12 V
Battery rated capacity	12 Ah
Battery type (For Keyless Ride radio-operated key)	CR 2032
Spark plugs	
Spark plugs, manufacturer and designation	NGK LMAR8AI-10
Lighting	
All light sources	LED

DIMENSIONS	
Length of motorcycle	2187 mm, at DIN vehicle kerb weight
Height of motorcycle	1255...1340 mm, over windscreen, at DIN vehicle kerb weight
Width of motorcycle	890 mm, with mirrors 794 mm, using the hand lever
Height of rider's seat	820 mm, without rider at DIN unladen weight
–with rider's seat, low OE	760 mm, without rider at DIN unladen weight
–with Sport seat OE	840 mm, without rider at DIN unladen weight
Rider's inside-leg arc, heel to heel	1840 mm, without rider at unladen weight
–with rider's seat, low OE	1720 mm, without rider at unladen weight
–with Sport seat OE	1875 mm, without rider at unladen weight

WEIGHTS	
Vehicle kerb weight	243 kg, DIN unladen weight, ready for road, 90 % load of fuel, without optional extras
Permissible gross vehicle weight	460 kg
Maximum payload	217 kg

PERFORMANCE FIGURES

Top speed	>200 km/h
–with power reduction OE	>200 km/h
–with case OA	180 km/h
–with topcase OA	180 km/h

SERVICE

13

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REPORTING SAFETY-RELEVANT DEFECTS

–with Canada export[NV]

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the NHTSA (National Highway Traffic Safety Administration) in addition to notifying the 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 it may order a recall and remedy campaign. However, the NHTSA cannot become involved in individual problems between you, your retailer, or BMW of North America, LLC.
You can contact the NHTSA by calling the Vehicle Safety Hotline on 1–888–327–4236 (teletypewriter TTY for the hearing impaired: 1–800–424–9153) toll-free, by visiting the website at http://www.safercar.gov or by writing to Administrator, NHTSA, 400 Seventh Street, SW., Washington, DC 20590.
Further information on vehicle safety is available at http://www.safercar.gov.
Canadian customers who wish to report a safety-related defect to Transport Canada, Defect Investigations and Recalls can call the toll-free hotline 1–800–333–0510. You can obtain further information about motor vehicle safety from http://www.tc.gc.ca/roadsafety.

RECYCLING

–with France export[NV]

Disposal of the rider's manual



Dispose of this rider's manual by depositing it in the container provided for the purpose.

BMW MOTORRAD SERVICE

BMW Motorrad has an extensive network of retailers in place to look after you and your motorcycle in more than 100 countries. Authorised BMW Motorrad retailers have the technical information and the technical know-how to carry out reliably all preventive maintenance and repair work on your BMW.
You can locate the nearest authorised BMW Motorrad retailer by visiting our website: **bmw-motorrad.com**

WARNING

Maintenance and repair work not in compliance with correct procedure
Risk of accident due to consequential damage
- BMW Motorrad recommends having work of this nature carried out on the vehicle by a specialist workshop, preferably an authorised BMW Motorrad dealer.

In order to help ensure that your BMW is always in optimum condition, BMW Motorrad recommends compliance with the maintenance intervals specified for your motorcycle.
Have all preventive maintenance and repair work carried out confirmed in the "Service" chapter in this manual.
Evidence of regular preventive maintenance is essential for generous treatment of claims submitted after the warranty period has expired.

Your authorised
BMW Motorrad retailer
can provide information on
BMW Motorrad services and
the work undertaken as part of
each service.

BMW MOTORRAD SERVICE HISTORY

Entries

Maintenance work that has
been carried out is entered in
the proof of maintenance. The
entries are like a Service Book-
let and provide proof of regular
maintenance.
When an entry is made in the
electronic service booklet of
the vehicle, service-relevant
data is saved in the central IT
systems accessible through
BMW.
If there is a change in vehicle
ownership, the data saved in
the electronic service booklet
can also be viewed by the new
vehicle owner. An authorised
BMW Motorrad retailer or a
specialist workshop can also
view data that is stored in the
electronic service booklet.

Objection

The vehicle owner can object
to entries being made by the
authorised BMW Motorrad
retailer or a specialist work-
shop in the electronic service
booklet along with the corres-
ponding storage of data in the
vehicle and transfer of data to
the vehicle manufacturer for
the period of time that they are
the vehicle owner. In this in-
stance, no entry is made in the
electronic service booklet of
the vehicle.

BMW MOTORRAD MOBILITY SERVICES

As owner of a new BMW
vehicle, in circumstances in
which assistance is required
you can benefit from the
protection afforded by the
various BMW Motorrad
mobility services (e.g. Mobile
Service, breakdown service,
vehicle recovery service).
Your authorised
BMW Motorrad dealer
will be happy provide informa-
tion about the mobility services
available to you.

MAINTENANCE WORK

BMW pre-delivery check

Your authorised BMW Motorrad dealer conducts the BMW pre-delivery check before handing over the vehicle to you.

BMW Running-in check

The BMW running-in check has to be performed when the vehicle has covered between 500 km and 1200 km.

BMW MOTORRAD SERVICE

The BMW Motorrad Service is carried out once a year; the extent of servicing can vary, depending on the age of the vehicle and the distance it has covered. Your authorised BMW Motorrad retailer confirms that the service work has been carried out and enters the date when the next service will be due.
Riders who cover long distances in a year might have to bring in their vehicles for service before the next scheduled date. It is to allow for these cases that a maximum odometer reading is entered as well in the confirmation of service. Servicing has to be brought forward if this odometer reading is reached before the next scheduled date for the service.

The service-due indicator in the display reminds you about one month or 1000 km in advance when the time for a service is approaching.

To find out more about service go to:
bmw-motorrad.com/service

The maintenance tasks necessary for your vehicle are set out in the maintenance schedule below. The tasks listed are due either when the vehicle has covered the stated distances, or periodically at the stated times.

MAINTENANCE SCHEDULE

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

1 BMW Motorrad running-in check (including oil change and oil filter change)
2 BMW Motorrad Service, standard scope
3 Engine-oil change, with filter
4 Oil change in bevel gears rear
5 Check valve clearances
6 Replace all spark plugs
7 Replace air-filter element
8 Recommended: Check Cardan shaft
9 Recommended: Lubricate Cardan shaft
10 Replace Cardan shaft
11 Change brake fluid, entire system

a annually or every 10000 km (whichever comes first)
b every two years or every 20000 km (whichever comes first)
d for the first time after one year, then every two years
e referenced to the distance over which the component was in use

BMW MOTORRAD RUNNING-IN CHECK

BMW Motorrad running-in check

The tasks included in the BMW Motorrad running-in check are listed below. The actual scope of work applicable for your vehicle may vary.

–Setting service-due date and countdown distance
–Performing vehicle test with BMW Motorrad diagnostic system
–Engine-oil change, with filter
–Changing oil in bevel gears
–Adjusting steering-head bearing
–Checking brake-fluid level, front brakes
–Checking brake-fluid level, rear brakes
–Checking coolant level
–Checking tyre tread depth and tyre pressure
–Check the lights and signalling equipment
–Function test, engine start suppression
–Final inspection and check of roadworthiness
–Performing vehicle test with BMW Motorrad diagnostic system
–Confirming the BMW service in the on-board literature

MAINTENANCE CONFIRMATIONS

BMW Motorrad Service standard scope

The tasks included in the BMW Motorrad Service standard scope are listed below. The actual scope of maintenance work applicable for your vehicle may vary.

–Performing vehicle test with BMW Motorrad diagnostic system
–Visual inspection of clutch system
–Visual inspection of the brake lines, brake hoses and connections
–Check the front brake pads and brake discs for wear
–Check the brake-fluid level, front wheel brake
–Check the rear brake pads and brake disc for wear
–Check the brake-fluid level, rear wheel brake
–Check the coolant level
–Check the side stand's ease of movement
–Check the ease of movement of the centre stand
–Check the tyre pressures and tread depth
–Check the tension of the spokes, adjust if necessary
–Checking lighting and signalling system
–Function test, engine start suppression
–Final inspection and check of roadworthiness
–Performing vehicle test with BMW Motorrad diagnostic system
–Setting service-due date and countdown distance with BMW Motorrad diagnostic system
–Checking battery state of charge
–Confirm the BMW Motorrad service in the on-board literature

BMW Motorrad pre-delivery check

carried out

on_____

Stamp, signature

BMW Motorrad running-in check

carried out

on_____

odometer reading_____

Next service

at the latest

on_____

or, when reached earlier

odometer reading_____

Stamp, signature

BMW Motorrad service
carried out

on_____
odometer reading_____

Next service
at the latest
on_____
or, when reached earlier
odometer reading_____

Work performed

	Yes	No
BMW Motorrad service	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear angular gearbox	☐	☐
Checking valve clearance	☐	☐
Renewing all spark plugs	☐	☐
Replacing the air filter element	☐	☐
Recommended: Checking Cardan shaft (during service)	☐	☐
Recommended: Lubricate Cardan shaft (during service)	☐	☐
Replacing Cardan shaft (during service)	☐	☐
Changing the brake fluid in the entire system	☐	☐

Notes

Stamp, signature

BMW Motorrad service
carried out

on_____
odometer reading_____

Next service
at the latest
on_____
or, when reached earlier
odometer reading_____

Work performed

	Yes	No
BMW Motorrad service	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear angular gearbox	☐	☐
Checking valve clearance	☐	☐
Renewing all spark plugs	☐	☐
Replacing the air filter element	☐	☐
Recommended: Checking Cardan shaft (during service)	☐	☐
Recommended: Lubricate Cardan shaft (during service)	☐	☐
Replacing Cardan shaft (during service)	☐	☐
Changing the brake fluid in the entire system	☐	☐

Notes

Stamp, signature

BMW Motorrad service
carried out

on_____
odometer reading_____

Next service
at the latest
on_____
or, when reached earlier
odometer reading_____

Work performed

	Yes	No
BMW Motorrad service	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear angular gearbox	☐	☐
Checking valve clearance	☐	☐
Renewing all spark plugs	☐	☐
Replacing the air filter element	☐	☐
Recommended: Checking Cardan shaft (during service)	☐	☐
Recommended: Lubricate Cardan shaft (during service)	☐	☐
Replacing Cardan shaft (during service)	☐	☐
Changing the brake fluid in the entire system	☐	☐

Notes

Stamp, signature

BMW Motorrad service
carried out

on_____
odometer reading_____

Next service
at the latest
on_____
or, when reached earlier
odometer reading_____

Work performed

	Yes	No
BMW Motorrad service	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear angular gearbox	☐	☐
Checking valve clearance	☐	☐
Renewing all spark plugs	☐	☐
Replacing the air filter element	☐	☐
Recommended: Checking Cardan shaft (during service)	☐	☐
Recommended: Lubricate Cardan shaft (during service)	☐	☐
Replacing Cardan shaft (during service)	☐	☐
Changing the brake fluid in the entire system	☐	☐

Notes

Stamp, signature

BMW Motorrad service
carried out

on_____
odometer reading_____

Next service
at the latest
on_____
or, when reached earlier
odometer reading_____

Work performed

	Yes	No
BMW Motorrad service	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear angular gearbox	☐	☐
Checking valve clearance	☐	☐
Renewing all spark plugs	☐	☐
Replacing the air filter element	☐	☐
Recommended: Checking Cardan shaft (during service)	☐	☐
Recommended: Lubricate Cardan shaft (during service)	☐	☐
Replacing Cardan shaft (during service)	☐	☐
Changing the brake fluid in the entire system	☐	☐

Notes

Stamp, signature

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carried out

on_____
odometer reading_____

Next service
at the latest
on_____
or, when reached earlier
odometer reading_____

Work performed

	Yes	No
BMW Motorrad service	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear angular gearbox	☐	☐
Checking valve clearance	☐	☐
Renewing all spark plugs	☐	☐
Replacing the air filter element	☐	☐
Recommended: Checking Cardan shaft (during service)	☐	☐
Recommended: Lubricate Cardan shaft (during service)	☐	☐
Replacing Cardan shaft (during service)	☐	☐
Changing the brake fluid in the entire system	☐	☐

Notes

Stamp, signature

BMW Motorrad service
carried out

on_____
odometer reading_____

Next service
at the latest
on_____
or, when reached earlier
odometer reading_____

Work performed

	Yes	No
BMW Motorrad service	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear angular gearbox	☐	☐
Checking valve clearance	☐	☐
Renewing all spark plugs	☐	☐
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Recommended: Checking Cardan shaft (during service)	☐	☐
Recommended: Lubricate Cardan shaft (during service)	☐	☐
Replacing Cardan shaft (during service)	☐	☐
Changing the brake fluid in the entire system	☐	☐

Notes

Stamp, signature

BMW Motorrad service
carried out

on_____
odometer reading_____

Next service
at the latest
on_____
or, when reached earlier
odometer reading_____

Work performed

	Yes	No
BMW Motorrad service	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear angular gearbox	☐	☐
Checking valve clearance	☐	☐
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Replacing the air filter element	☐	☐
Recommended: Checking Cardan shaft (during service)	☐	☐
Recommended: Lubricate Cardan shaft (during service)	☐	☐
Replacing Cardan shaft (during service)	☐	☐
Changing the brake fluid in the entire system	☐	☐

Notes

Stamp, signature

BMW Motorrad service
carried out

on_____
odometer reading_____

Next service
at the latest
on_____
or, when reached earlier
odometer reading_____

Work performed

	Yes	No
BMW Motorrad service	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear angular gearbox	☐	☐
Checking valve clearance	☐	☐
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Replacing the air filter element	☐	☐
Recommended: Checking Cardan shaft (during service)	☐	☐
Recommended: Lubricate Cardan shaft (during service)	☐	☐
Replacing Cardan shaft (during service)	☐	☐
Changing the brake fluid in the entire system	☐	☐

Notes

Stamp, signature

BMW Motorrad service
carried out

on_____
odometer reading_____

Next service
at the latest
on_____
or, when reached earlier
odometer reading_____

Work performed

	Yes	No
BMW Motorrad service	☐	☐
Engine oil change with filter	☐	☐
Oil change in rear angular gearbox	☐	☐
Checking valve clearance	☐	☐
Renewing all spark plugs	☐	☐
Replacing the air filter element	☐	☐
Recommended: Checking Cardan shaft (during service)	☐	☐
Recommended: Lubricate Cardan shaft (during service)	☐	☐
Replacing Cardan shaft (during service)	☐	☐
Changing the brake fluid in the entire system	☐	☐

Notes

Stamp, signature

SERVICE CONFIRMATIONS

The table is intended as a record of maintenance and repair work, the installation of optional accessories and, if appropriate, technical campaign work.

Work performed	odometer reading	Date

Work performed	odometer reading	Date

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KEYLESS RIDE ECU 279
CERTIFICATION TIRE PRESSURE CONTROL 281
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DECLARATION OF CONFORMITY

Manufacturer

Bayerische Motoren Werke Aktiengesellschaft
Petuelring 130, 80809 Munich, Germany

Simplified EU Declaration of Conformity according to EU RED (2014/53/EU).

CE

Simplified UK Declaration of Conformity according to Radio Equipment Regulations 2017 of the United Kingdom.

UK CA

Hereby, BMW AG declares that the radio equipment components listed below are in compliance with Directive 2014/53/EU and with Radio Equipment Regulations 2017 of the United Kingdom. The full text of the EU/UK declarations of conformity are available at the following internet address: **bmw-motorrad.com/certification**

Technical information

Radio equipment	**Component**	**Frequency band**	**Output/ Transmission Power**
EWS4	EWS	134 kHz	50 dBµV/m
HUF5794	Keyless Ride	433,92 MHz	10 mW
HUF8485	Keyless Ride	134,45 kHz	42 dBµV/m

Radio equipment	Component	Frequency band	Output/ Transmission Power
ZB001	Keyless Ride	134.5 kHz	allowed 66 dBµA/ m @ 10m
ZB002	Keyless Ride	433.92 MHz	max. 10 dBm e.r.p
TXBM-WMR	DWA	433.05 MHz - 434.79 MHz	18,8 dBm
RDC3	RDC	433.92 MHz	< 13 mW
Wus Moto gen 3	RDC	433,05 MHz - 434,79 MHz	< 10 mW e.r.p.
MC24-MA4	RDC		
WCA Motorrad-Ladestaufach	Charging compartment	110 kHz - 115 kHz	< 6 W
ICC6.5in	Instrument Cluster	Bluetooth: 2402 MHz - 2480 MHz WLAN: 2412 MHz – 2462 MHz	Bluetooth: < 4 dBm WLAN: < 20 dBm
ICC65V2	Instrument Cluster	Bluetooth: 2400 MHz - 2480 MHz WLAN: 2400 MHz – 2480 MHz	Bluetooth: < 10 mW WLAN: < 100 mW
ICC10in	Instrument Cluster	Bluetooth: 2402 MHz - 2480 MHz WLAN: 2402 MHz – 2472 MHz	Bluetooth: < 4 dBm WLAN: < 14 dBm

Radio equipment	Component	Frequency band	Output/ Transmission Power
MR-Re14FCR	ACC	76 - 77 GHz	Peak max. 32 dBm Nom max. 27 dBm
ARS513	Front radar	77 GHz	Peak max. 30 dBm
SRR521	Rear radar	77 GHz	Peak max. 30 dBm
TL1P22	Intelligent emergency call	832 MHz - 862 MHz 880 MHz - 915 MHz 1710 MHz - 1785 MHz 1920 MHz - 1980 MHz 2500 MHz - 2570 MHz 2570 MHz - 2620 MHz GNSS: 1559 MHz-1610 MHz	23 dBm 33 dBm 30 dBm 24 dBm 23 dBm 23 dBm
TL1M23NE	Intelligent emergency call	703 MHz - 748 MHz 832 MHz - 862 MHz 880 MHz - 915 MHz 1710 MHz - 1785 MHz 1920 MHz - 1980 MHz 2300 MHz - 2400 MHz 2500 MHz - 2570 MHz 2570 MHz - 2620 MHz GNSS: 1559 MHz-1610 MHz	23 dBm 23 dBm 33 dBm 30 dBm 24 dBm 23 dBm 23 dBm 23 dBm
MCR001	Audio system		
ZB005	Keyless Ride Main Unit	134,5 kHz 433,92 MHz	< 66 dBµA/m

Radio equipment	Component	Frequency band	Output/ Transmission Power
ZB006	Keyless Ride Active Key	134,5 kHz 433,92 MHz	< 10 mW e.r.p.

RADIO EQUIPMENT ELECTRONIC IMMOBILISER

For all countries without EU

Model name: EWS 4
Manufacturer
BECOM Electronics GmbH
Technikerstraße 1, A-7442
Hochstraß, Austria

Technical information

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

Country

Argentina



H-25246

Australia/New Zealand



R-NZ

Brunei



TA No: DTA-007061

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.

India

ETA-SD-20200905860

Israel

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

Malaysia

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

Indonesia

72790/SDPPI/2021
13349
Dilarang melakukan perubahan Spesifikasi yang dapat Menimbulkan gangguan fisik dan/atau elektromagnetik terhadap lingkungan sekitarnya

Paraguay

NR: 2020-11-I-0834

Philippines

Type Approved
No.: ESD-RCE-2023298

Serbia

P1620118300

Singapore

Complies with
IMDA Standards
N3504-20

South Africa

TA-2020/6131
APPROVED

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。

Vietnam



A1109091120AF04A3

KEYLESS RIDE KEY

For all Countries without EU

Model name: HUF5794
Manufacturer
Huf Hülsbeck & Fürst GmbH & Co. KG
Steeger Str. 17, 42551 Velbert, Germany

Technical information

Frequenzy band: 433,92 MHz
Output/Transmission Power: 10 mW

Country

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.

Indonesia
81598/SDPPI/2022
13349

Malaysia



HIDF17000037

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

Pakistan



TAC NO: 9.140/2022

Paraguay



2022-01-I-0051

Philippines



Type Approved
No. ESD-RCE-2228693

Serbia



И005 22

Singapore
Complies with
IMDA Standards
DA105282

South Africa



TA-2022/0252
APPROVED

Sultanate of Oman
OMAN - TRA
R/13021/22
D100428

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

Vietnam



THACO AUTO
C900248

KEYLESS RIDE ECU

For all Countries without EU

Model name: HUF8485
Manufacturer
Huf Hülsbeck & Fürst GmbH & Co. KG
Steeger Str. 17, 42551 Velbert, Germany

Technical information

Frequenzy band: 134,45 kHz
Output/Transmission Power: 42 dBµV/m

Country

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.

Indonesia
81597/SDPPI/2022
13349

Malaysia



HIDF17000037

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

Pakistan



TAC NO: 9.122/2022

Paraguay



2022-01-I-0052

Philippines



Type Approved
No. ESD-RCE-2228692

Singapore
Complies with
IMDA Standards
DA105282

South Africa



TA-2022/0251
APPROVES

Sultanate of Oman
OMAN - TRA
R/13020/22
D100428

Vietnam



THACO AUTO
C900248

CERTIFICATION TIRE PRESSURE CONTROL

with Canada export[NV]

TPC

Canada

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.

RADIO EQUIPMENT TFT INSTRUMENT CLUSTER

For all Countries without EU

Model name: ICC6.5in
Manufacturer
Robert Bosch GmbH
Robert Bosch Str. 200, 31139
Hildesheim, Germany

Technical information

Technical Information
BT operating frq. Range:
2402 - 2480 MHz
BT version: 4.2 (no BTLE)
BT output power: < 4 dBm

WLAN operating frq. Range:
2412 - 2462 MHz
WLAN standards:
IEEE 802.11 b/g/n
WLAN output power:
< 20 dBm

Country

Argentina

RAMATEL
C-24711

Canada

Thi s device complies with Industry Canada's licence-exempt RSSs and part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) this device may not cause interference, and
(2) this device must accept any interference, including interference that may cause undesired operation of the device.
Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
(1) l'appareil ne doit pas produire de brouillage, et
(2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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

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。

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Details described or illustrated in this booklet may differ from the vehicle's actual specification as purchased, the accessories fitted or the national-market specification. 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.
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Important data for refuelling:

Fuel	
Recommended fuel grade	E5 E10 Super unleaded (max 15 % ethanol, E0/E5/E10/E15) 95 ROZ/RON 90 AKI
Alternative fuel grade	E5 E10 Normal unleaded (power- and consumption-related restrictions.) (max 15 % ethanol, E0/E5/E10/E15) 91 ROZ/RON 87 AKI
Fuel level	approx. 18 l
Fuel reserve	approx. 4 l
Tyre pressures	
Tyre pressure, front	2.5 bar, with cold tyre; one-up and two-up riding 2.5 bar, sport riding
Tyre pressure, rear	2.9 bar, with cold tyre; one-up and two-up riding 2.9 bar, sport riding

For further information on all aspects of your vehicle, visit: **bmw-motorrad.com**

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