



**BMW
MOTORRAD**

RIDER'S MANUAL

F 900 R



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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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

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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 General Operating Permits 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 registered keeper. There are also other ways to use data obtained from the vehicle to trace the rider or vehicle owner, for example using the Connected-Drive 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
- Authorised BMW Motorrad Retailers
- 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.

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The registered keeper can also request an authorised BMW Motorrad Retailer or a specialist workshop to read out the data that is stored in the vehicle for a charge.

The vehicle data is read out using the legally prescribed 12 V 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 factors, 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 an authorised BMW Motorrad Retailer or a specialist workshop. The legally stipulated 12 V 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.

Fault and event memories in the vehicle can be reset during servicing or repair work by an authorised BMW Motorrad Retailer or a 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:

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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 in-

formation 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, manufacturer's website. 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 con-

tent 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.

INTELLIGENT EMERGENCY CALL

with intelligent emergency call^{OE}

Principle

The intelligent emergency call 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 operation of the intelligent emergency call and its functions, see the section entitled Operation (86).

Legal basis

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

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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 is the concluded ConnectedRide 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 satisfies the European directives for the protection of personal data. The intelligent emergency call processes personal data only with the agreement of the registered keeper.

The intelligent emergency call and other services with additional benefits can process personal data only with the ex-

press permission of the person affected by the data processing, for example, the registered keeper.

SIM card

The intelligent emergency call operates via mobile communications 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 service provider to link the vehicle identification number 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, the system forwards the same information to the designated emergency call centre as is forwarded to the public emergency call centre by the legal emergency call eCall.

In addition, the intelligent emergency call 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

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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

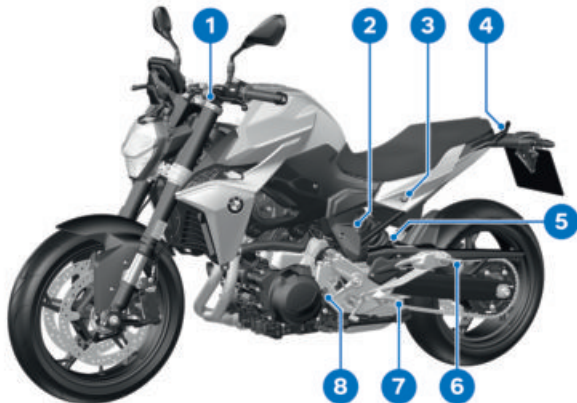
GENERAL VIEWS

02

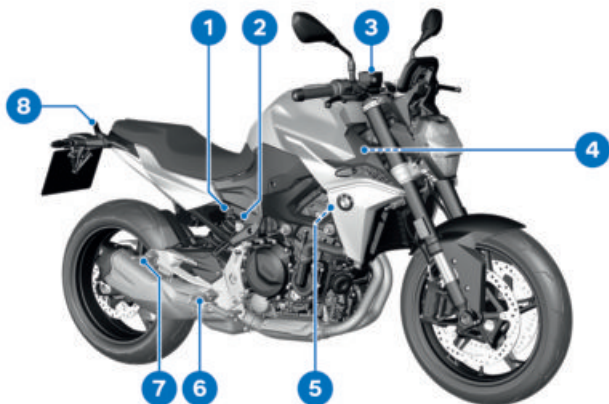
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18 GENERAL VIEWS

GENERAL VIEW, LEFT SIDE



- 1** Adjustment of spring pre-load (115)
- 2** Power socket (198)
- 3** Seat lock (107)
- 4** Passenger grab handle
- 5** Adjustment of damping (116)
- 6** Rear footrest
- 7** Rider footrest
- 8** Oil filler opening and oil dipstick (160)

GENERAL VIEW, RIGHT SIDE

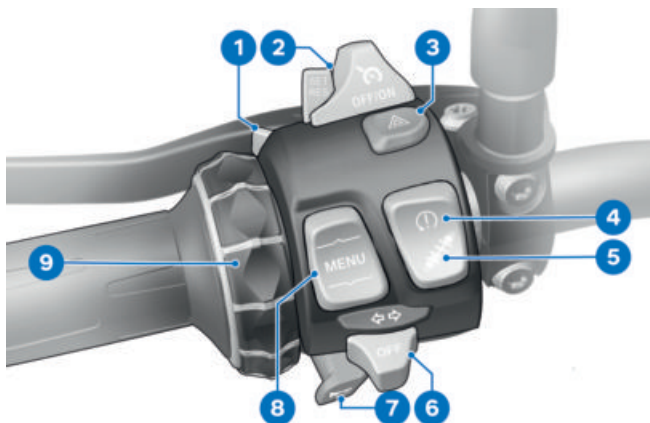
- 1** Adjustment of spring pre-load (114)
- 2** Brake-fluid reservoir, rear (166)
- 3** Brake-fluid reservoir, front (165)
- 4** Vehicle identification number, type plate (on steering head)
- 5** Coolant level indicator (behind the side trim panel) (168)
- 6** Rider footrest
- 7** Rear footrest
- 8** Passenger grab handle

20 GENERAL VIEWS

UNDERNEATH THE SEAT



- 1 Toolkit (159)
- 2 Battery (186)
- 3 Main fuse (191)
- 4 Diagnostic connector
(193)
- 5 Fuses (192)

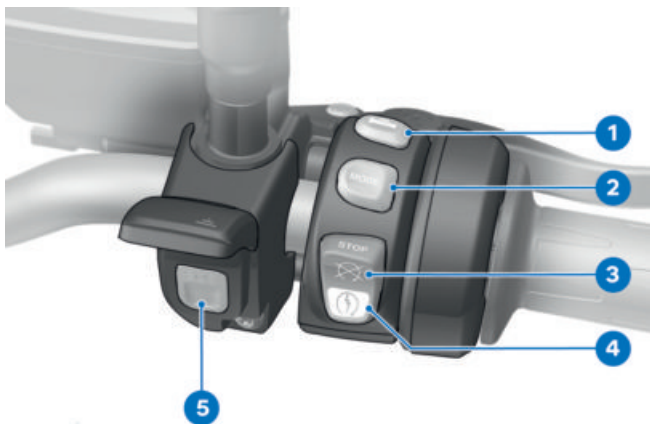
MULTIFUNCTION SWITCH, LEFT

- 1** High-beam headlight and headlight flasher (89)
- 2** Cruise control (99)
- 3** Hazard warning lights (91)
- 4** DTC (91)
- 5** Dynamic ESA (93)
- 6** Turn indicators (91)
- 7** Horn
- 8** MENU rocker button (67)
- 9** Multi-Controller (66)

22 GENERAL VIEWS

MULTIFUNCTION SWITCH, RIGHT

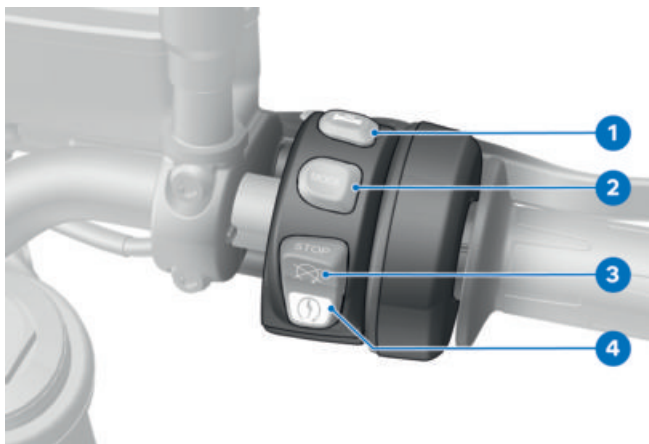
with intelligent emergency call^{OE}



- 1** Operating heated handle-bar grips (106)
- 2** Select the riding mode (96)
- 3** Emergency-off switch (kill switch) (86)
- 4** Starter button (126)
- 5** SOS button
Intelligent emergency call (86)

MULTIFUNCTION SWITCH, RIGHT

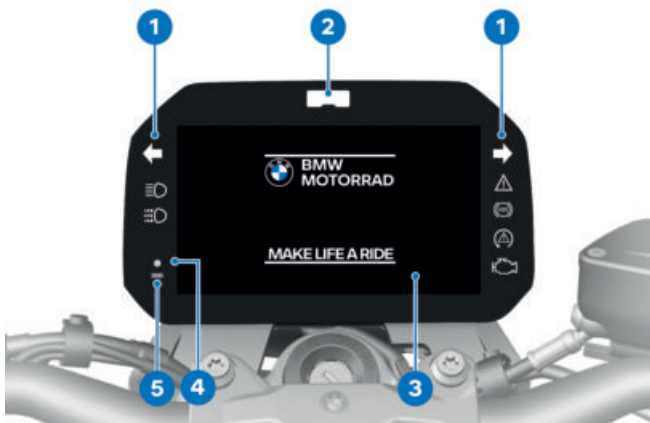
without intelligent emergency call^{OE}



- 1** Operating heated handle-bar grips (106)
- 2** Select the riding mode (96)
- 3** Emergency-off switch (kill switch) (86)
- 4** Starter button (126)

24 GENERAL VIEWS

INSTRUMENT CLUSTER



- 1** Indicator and warning lights (28)
- 2** Shift light
- 3** Instrument cluster (30) (29)
- 4** DWA light-emitting diode (104)
with Keyless Ride^{OE}
Indicator light for the radio-operated key (82)
- 5** Photosensor (for adapting the brightness of the instrument lighting)

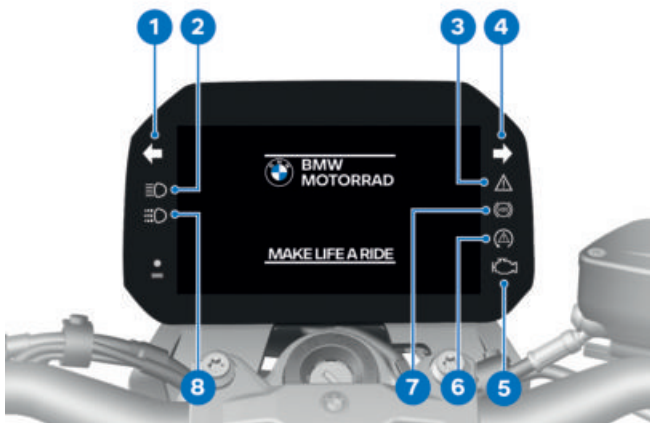
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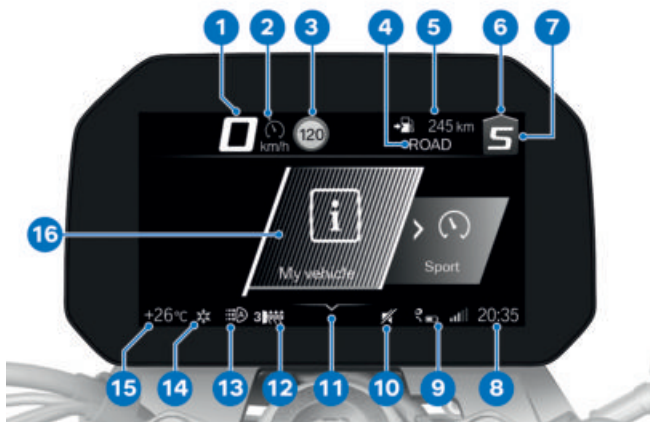
28 STATUS INDICATORS

INDICATOR AND WARNING LIGHTS



- 1 Turn indicators, left
(91)
- 2 High-beam headlight
(89)
- 3 General warning light
(38)
- 4 Turn indicators, right
(91)
- 5 Warning light, drive mal-
function (51)
- 6 DTC (59)
- 7 ABS (58)
- 8 Automatic daytime riding
light (90)

MENU VIEW

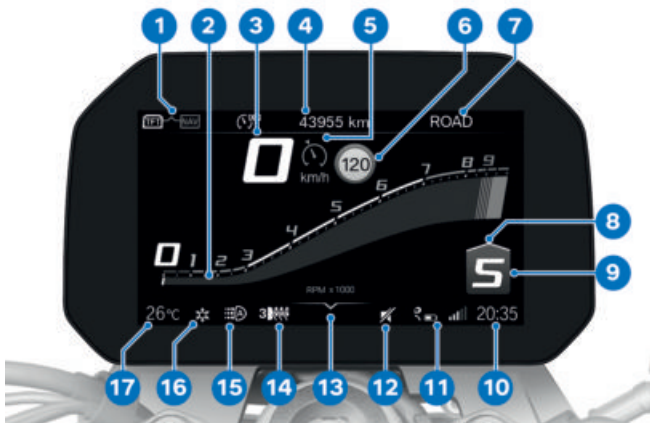


- | | |
|--|--|
| 1 Speedometer | 13 Automatic daytime riding light (90) |
| 2 Cruise control (99) | 14 Outside temperature warning (45) |
| 3 Speed Limit Info (75) | 15 Ambient temperature |
| 4 Riding mode (95) | 16 Menu section |
| 5 Status line (69) | |
| 6 Recommendation to up-shift (32) | |
| 7 Gear indicator | |
| 8 Clock (70) | |
| 9 Connection status (71) | |
| 10 Muting (70) | |
| 11 Operating help | |
| 12 Heating stages, handlebar grips (106) | |

30 STATUS INDICATORS

PURE RIDE VIEW

START SCREEN



- | | |
|---|--|
| 1 Change of operating focus (73) | 13 Operating help |
| 2 Rev. counter (31) | 14 Heating stages, handlebar grips (106) |
| 3 Speedometer | 15 Automatic daytime riding light (90) |
| 4 Status line (69) | 16 Outside temperature warning (45) |
| 5 Cruise control (99) | 17 Ambient temperature |
| 6 Speed Limit Info (75) | |
| 7 Riding mode (95) | |
| 8 Recommendation to up-shift (32) | |
| 9 Gear indicator | |
| 10 Clock (70) | |
| 11 Connection status (71) | |
| 12 Muting (70) | |

REV. COUNTER



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

 When the shift light flashes, the rotational-speed sensor also flashes.

 The red engine speed range changes depending on the coolant temperature: The colder the engine, the lower the engine speed at which the red engine speed range starts. The warmer the engine, the higher the speed at which the red engine speed range starts.

32 STATUS INDICATORS

Range



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.

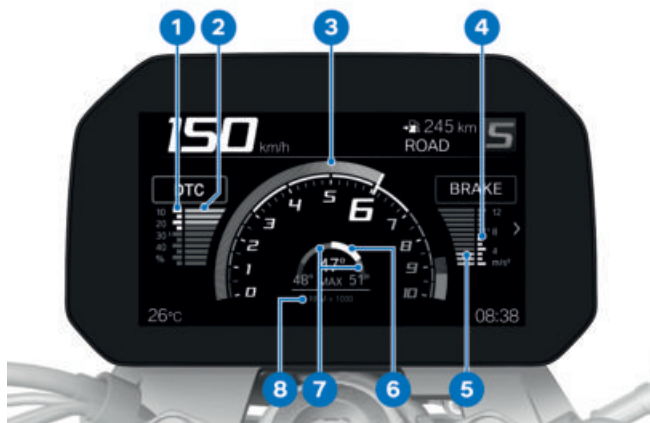
Recommendation to upshift



The recommendation to upshift in Pure Ride view **1** or in status line **2** indicates the best time to upshift economically.

OVERVIEW SPORT 1

with riding modes Pro^{OE}



- 1 Maximum DTC torque reduction
- 2 Current DTC torque reduction
- 3 Rev. counter
- 4 Maximum braking deceleration
- 5 Current braking deceleration
- 6 Current lean angle
- 7 Maximum lean angle
- 8 Unit for engine speed display: 1000 revolutions per minute

34 STATUS INDICATORS

OVERVIEW SPORT 2

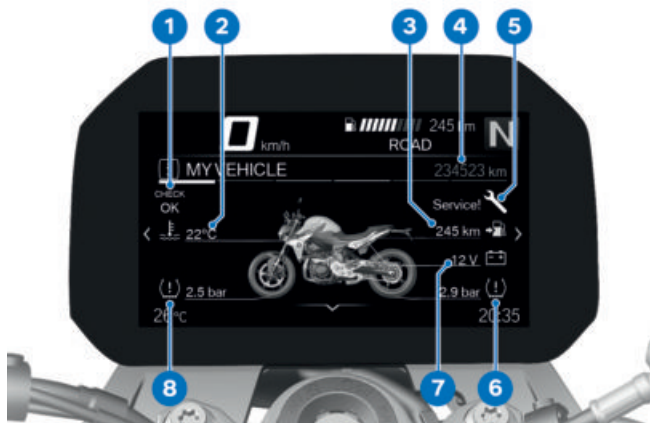
with riding modes Pro^{OE}



- | | |
|--|---|
| 1 Maximum DTC torque reduction | 7 Unit for engine speed display: 1000 revolutions per minute |
| 2 Current DTC torque reduction | 8 Operating help |
| 3 Rev. counter | |
| 4 Difference between the last lap time and reference time or difference between current lap time and reference time | |
| 5 Reference time: Fastest of the currently saved laps or all-time fastest saved lap | |
| 6 Current lap time (100) | |

MY VEHICLE VIEW

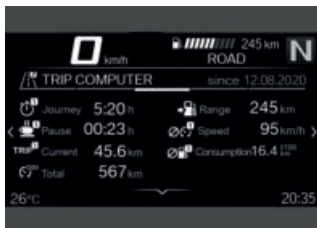
START SCREEN



- 1 Check Control display
Mode of presentation
(38)
- 2 Coolant temperature
(50)
- 3 Range (32)
- 4 Odometer
- 5 Service display (62)
- 6 Tyre pressure, rear
(36)
- 7 On-board voltage
(187)
- 8 Tyre pressure, front
(36)

36 STATUS INDICATORS

On-board computer and trip computer

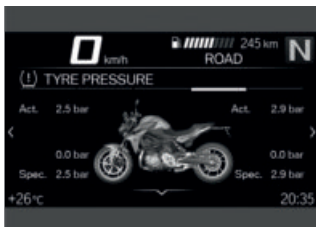


The ON-BOARD COMPUTER and TRIP COMPUTER menu screens display vehicle and trip data, such as average values.

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 showing 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.

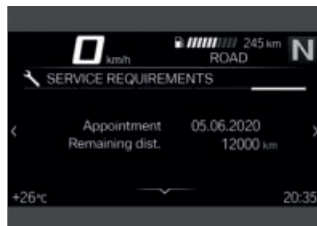
 The tolerance ranges of the tyre inflation pressures refer to one-up.

 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 BMW Motorrad RDC, see the section entitled "Engineering details" (151).

Service requirements



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

38 STATUS INDICATORS

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.

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 too low.

Yellow: (Low!/High!) Current value is too low or too high.

Red: (Hot!/High!) Current temperature or value is too high.



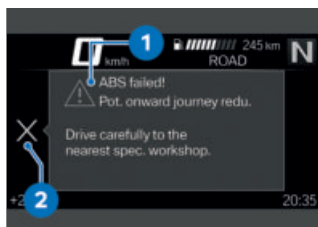
Check Control display

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

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 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.



Check Control dialogue

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

If symbol **2** is actively displayed, it can be acknowledged by tilting the Multi-Controller to the left.

40 STATUS INDICATORS

Warnings, overview

Indicator and warning lights	Display text	Meaning
	 is displayed.	Outside temperature warning (45)
 shows yellow.	 Remote key not in range.	Radio-operated key out of range (45)
 shows yellow.	 Keyless Ride failure	Keyless Ride failed (46)
 shows yellow.	 Remote key battery weak.	Replacing battery of radio-operated key (46)
	 Vehicle voltage low.	Voltage of the vehicle electrical system too low (46)
 shows yellow.	 Vehicle voltage critical!	Voltage of the vehicle electrical system critical (47)
 flashes yellow.	 Battery voltage critical!	Charging voltage critical (47)
 shows yellow.	 The faulty bulb is displayed.	Bulb faulty (48)
 flashes yellow.	 The faulty bulb is displayed.	
 shows yellow.	 Light control failure!	Light control failed (49)

Indicator and warning lights	Display text	Meaning
	 Alarm system batt. capacity weak.	Anti-theft alarm battery weak (49)
 shows yellow.	 Alarm system battery empty.	Anti-theft alarm battery flat (49)
 shows yellow.	 Alarm system failure	DWA failed (50)
 shows yellow.	 Engine temp. high!	Engine temperature high (50)
 shows red.	 Engine overheating!	Engine overheated (51)
 Lights up or flashes.	 Drive!	Drive malfunction (51)
 flashes red.	 Serious fault in the engine control!	Serious drive malfunction (51)
 flashes.		
 shows yellow.	 No communication with engine control.	Engine control failed (52)
 shows.		
 shows yellow.	 Fault in the engine control.	Engine in emergency-operation mode (52)
 flashes red.	 Serious fault in the engine control!	Serious fault in engine control (53)

42 STATUS INDICATORS

Indicator and warning lights	Display text	Meaning
 shows yellow.	 Tyre pressure does not match setpoint	Tyre pressure close to limit of permitted tolerance (53)
 flashes red.	 Tyre pressure does not match setpoint  Tyre press. control. Loss of pressure.	Tyre pressure outside permitted tolerance (54)
	 "---"	Transmission fault (54)
 shows yellow.	 "---"	Sensor faulty or system fault (55)
 shows yellow.	 RDC sensor battery weak.	Battery for tyre pressure sensor weak (56)
 shows yellow.	 Tyre pressure check failure!	Tyre pressure monitoring (RDC) failed (56)
	 Fall sensor faulty.	Malfunction, drop sensor (56)
	 Cannot start engine.	Motorcycle dropped (56)
 shows yellow.	 Emergency call system restricted.	Emergency call function restricted (57)

Indicator and warning lights	Display text	Meaning
 shows yellow.	 Emergency call system error.	Emergency call function failed (57)
 shows yellow.	 Side stand monitoring faulty.	Malfunction, side stand monitor (57)
 flashes.		ABS self-diagnosis not completed (58)
 shows yellow.  shows.	 Limited ABS availability!	ABS fault (58)
 shows yellow.  shows.	 ABS failure!	ABS failed (58)
 shows yellow.  shows.	 ABS Pro failure!	ABS Pro failed (59)
 quick-flashes.		DTC intervention (59)
 slow-flashes.		DTC self-diagnosis not completed (59)
 shows.	 Off!  Traction control deactivated.	DTC switched off (60)

44 STATUS INDICATORS

Indicator and warning lights	Display text	Meaning
 shows yellow.	 Traction control limited!	DTC restricted (60)
 shows.		
 shows yellow.	 Traction control failure!	DTC fault (60)
 shows.		
 shows yellow.	 Spring strut adjustment faulty!	D-ESA fault (61)
 shows yellow.	 Fuel reserve reached. Go to a filling station soon	Fuel down to reserve (61)
	 flashes.	Gear not taught (62)
 flashes green.		Hazard warning lights system is switched on (62)
 flashes green.		
	 is displayed in white.	Service due (63)
	Service due!	
 shows yellow.	 is displayed in yellow.	Service-due date has passed (63)
	Service overdue!	

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 ice crystal symbol flashes 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}



shows yellow.



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

Possible cause:

Communication between radio-operated key and propulsion-unit electronics is disrupted.

Check the battery in the radio-operated key.
with Keyless Ride^{OE}

Replace the battery of the radio-operated key. (84)

Use the spare key to continue your journey.

46 STATUS INDICATORS

with Keyless Ride^{OE}

Battery of the radio-operated key is empty or loss of the radio-operated key. (83)
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}



shows yellow.



Keyless Ride failure
Do not stop the engine. It may not be possible 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}



shows 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. (84)

Voltage of the vehicle electrical system too low



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



shows 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 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.

Charging voltage critical



flashes 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.

48 STATUS INDICATORS

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

 shows 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!

 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. Have it checked by a specialist workshop.

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:

Bulb faulty.

Visually inspect to ascertain which bulb is faulty.

Have LED light sources replaced as complete units; consult a specialist workshop, preferably an authorised BMW Motorrad retailer.

Light control failed

shows 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}

shows yellow.



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.

50 STATUS INDICATORS

Possible cause:

The DWA battery is discharged. It is not possible to trigger an alarm after disconnecting the vehicle battery. All other functions of the DWA are functional.

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

DWA failed

with anti-theft alarm (DWA)^{OE}



shows yellow.



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.

Engine temperature high



shows 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.

(168)

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

shows 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.

(168)

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

Lights up or flashes.



Drive! 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.

52 STATUS INDICATORS

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



shows 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.

You can continue to ride.

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

Engine in emergency-operation mode



shows 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 close to limit of permitted tolerance

with tyre pressure control (RDC)^{OE}



shows 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":

Temperature compensation (152)

Pressure adaptation (152)

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

54 STATUS INDICATORS

Tyre pressure outside permitted tolerance

with tyre pressure control (RDC)^{OE}



flashes 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":

Temperature compensation (152)

Pressure adaptation (152)

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

with tyre pressure control (RDC)^{OE}



"---"

Possible cause:

The vehicle has not reached the minimum speed (151).

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 with tyre pressure control (RDC) ^{OE}



shows 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.

56 STATUS INDICATORS

Battery for tyre pressure sensor weak

with tyre pressure control (RDC)^{OE}



shows 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.

Tyre pressure monitoring (RDC) failed



shows 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.

Malfunction, drop sensor



Fall 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 fall sensor has detected a fall and has cut out the motor.

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}



shows 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.

Observe the information on operating the intelligent emergency call from page (86) onwards.

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

Emergency call function failed

with intelligent emergency call^{OE}



shows 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



shows 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 motor 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.

58 STATUS INDICATORS

ABS self-diagnosis not completed



flashes.

Possible cause:

The ABS function is not available, because self-diagnosis did not complete. The motorcycle has to move forward a few metres for the wheel sensors to be tested.

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

ABS fault



shows 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 (143).

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

ABS failed



shows 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 (143).

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

ABS Pro failed

shows 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 (143).

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

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 with the engine running for the wheel-speed 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.

60 STATUS INDICATORS

DTC switched off



shows.



Off!



Traction control deactivated.

Possible cause:

The rider has switched off the DTC system.

Switch on DTC. (92)

DTC restricted



shows 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 (146).

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

DTC fault



shows 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 (146).

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}



shows 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



shows yellow.



Fuel reserve reached. Go to a filling station soon.

62 STATUS INDICATORS



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.

Reserve fuel
approx. 4 l
Refuel. (134)

Gear not taught

with shift assistant Pro^{OE}

N The gear indicator flashes.
The shift assistant Pro is not available.

Possible cause:

The gearbox sensor is not fully trained.

Start the engine. (126)

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 (152).

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. (91)

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 Check Control 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 either distance covered or time expired.

Have your vehicle serviced regularly by a specialist workshop, preferably an authorised BMW Motorrad retailer. The vehicle remains operationally reliable and road-worthy.
The vehicle retains its value.

Service-due date has passed



shows 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 vehicle serviced regularly by a specialist workshop, preferably an authorised BMW Motorrad retailer. The vehicle remains operationally reliable and road-worthy.
The vehicle retains its value.

INSTRUMENT CLUSTER

04

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66 INSTRUMENT CLUSTER

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

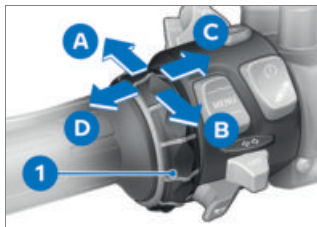
Operating the integrated information system and communication devices while driving results in a risk of accident

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

Some functions can be used only when the vehicle is 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 view: reset on-board computer value.
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

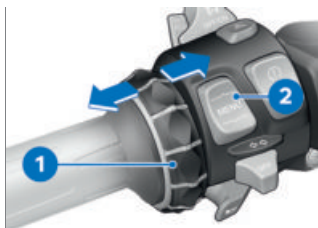
effected by long-pressing the top section of the rocker button.

 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.

MENUS

Requirement

Pure Ride view is displayed.



Long-press the top section of MENU rocker button **2** to open the Pure Ride view.
Short-press the bottom section of MENU rocker button **2**.
Repeatedly short-push Multi-Controller **1** to the right until the menu item you want is highlighted.
Short-press the bottom section of MENU rocker button **2**

68 INSTRUMENT CLUSTER

to open the corresponding menu.

MY VEHICLE

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 *My vehicle* menu.

Call up the **ON-BOARD COMPUTER** menu screen.

Press the bottom section of the **MENU** rocker button.

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

Alternatively: Change to *Pure Ride* view.

Repeatedly short-press the top section of rocker button **MENU** to select the value in the top status line.

Long-press the top section of rocker button **MENU** to reset the selected value.

The following values can be reset:



Journey



Break



Current



Consump.



Speed

Call up the trip computer

Call up the on-board computer. (68)

Scroll to the right until the **TRIP COMPUTER** menu screen is displayed.

Reset the trip computer

Call up the *My vehicle* menu.

Call up the **TRIP COMPUTER** menu screen.

Press the bottom section of 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.

SETTINGS

Select the content of the top status line

Change to Pure Ride view.
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. 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.

Changing display in top status line

Select the content of the top status line. (69)



Change to 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

70 INSTRUMENT CLUSTER



Speed 1 (Average)



Speed 2 (Average)

with tyre pressure control (RDC)^{OE}



Tyre pressure



Fuel tank level



Range

Adjusting volume

Connect the rider's and passenger's helmets. (72)

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

Navigate to Settings, System settings.

You can change the following system settings here:

Date and time

Units

Language

Switch GPS synchronisation on or off

with preparation for navigation system^{OE}

Requirement

TheConnectedRide Navigator or a mobile end device is connected to the vehicle via the navigation preparation.

Navigate to Settings, System settings, Date and time.

Switch GPS synchronisation on or off.

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

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:

Vehicle settings
System settings
Connections

Display Information

The pairing of the vehicle to the current BMW Motorrad Connected-Ride account is reset.

BLUETOOTH PAIRING

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. (71)
Activate the mobile device's Bluetooth function (see mobile device's operating instructions).
Select **Mobile device** and confirm.

72 INSTRUMENT CLUSTER

Select `Pair new mobile device` and confirm.

Mobile devices are being searched for.

 The Bluetooth symbol flashes in the bottom status line during pairing.

Mobile devices found are displayed.

Select and confirm mobile device.

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". (218)

Connect rider's and passenger's helmet

Perform pairing. (71)

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 passenger. helmet` and confirm.

Helmets are searched for.

 The Bluetooth symbol 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". (218)

If the Bluetooth connection does not work as expected, consult the troubleshooting chart in the section entitled "Technical data". (219)

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

with preparation for navigation system^{OE}

Change of operating focus

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

Change the operating focus

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

Secure the navigation device.
(203)

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

Dialog menu and progress indicator are shown.

The following selection is possible:

Navigator operation
Show Pure Ride

In Pure Ride view:

Navigator operation
Reset OBC values

Press and hold down the top section of rocker button MENU until the progress indicator reaches maximum, or confirm Navigator operation.

Operating focus changes to the Navigator.

Operating navigation system
(205)

To change the operating focus to the instrument cluster, short-press the bottom section of rocker button MENU.

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.
(71)

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 active route guidance is not displayed, consult the troubleshooting chart in the

74 INSTRUMENT CLUSTER

section entitled "Technical data". (219)

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

In menu **Navigation**, tilt the Multi-Controller to the left.
Alternatively, in menu **Active route guidance**, select and confirm **Option End route guidance**.

Switching spoken instructions on or off

Connect the rider's and passenger's helmets. (72)
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.

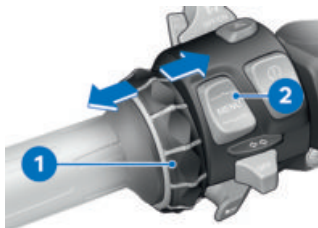
Speed Limit Info shows the maximum speed permitted at the time, if this information is made available by the publisher of the map material in the navigation system.
Navigate to **Settings**,
Display.
Switch **Speed Limit Info** on or off.

MEDIA**Precondition**

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

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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. (70)

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.

You can make the following adjustments in the Audio settings submenu:

Switch Shuffle on or off.

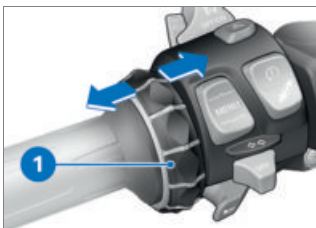
Select Repeat: Off, One (current track) or All.

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 (71) 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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80 OPERATION

IGNITION SWITCH/STEERING LOCK

Keys

You receive two vehicle keys. Please consult the information on the electronic immobiliser (EWS) if a key is lost or mislaid (85).

Ignition switch, fuel filler cap lock and seat lock are all operated with the same key.

with soft cases^{OA}

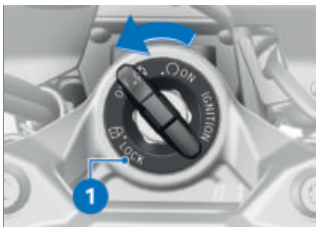
or

with topcase^{OA}

If you wish you can arrange to have the cases and the topcase fitted with locks that can be opened with this 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.



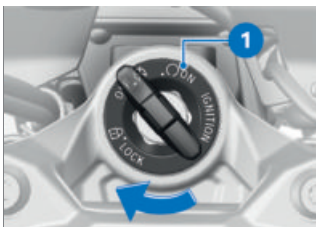
Turn the key to position **1** while moving the handlebars slightly.

Ignition, lights and all function circuits switched off.

Steering lock engaged.

Key can be removed.

Switching on ignition



Turn the key to position **1**.

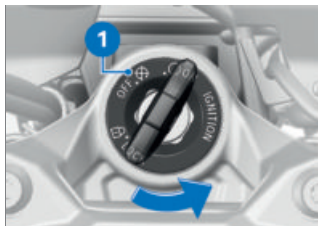
Side lights and all function circuits switched on.

Engine can be started.

Pre-Ride-Check and self-diagnoses are performed.

(127)

Switching off ignition



Turn the key to position **1**.
 Lights switched off.
 Handlebars not locked.
 Key can be removed.
 Electrically powered accessories remain operational for a limited period of time.
 The battery can be recharged via the vehicle socket.

IGNITION WITH KEYLESS RIDE

with Keyless Ride^{OE}

Keys

 The indicator 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 can be 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.

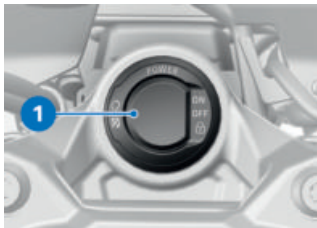
It is advisable to keep the radio-operated key on your person (e.g. in a jacket pocket) and to have the emergency key with you as an alternative.

Range of the Keyless Ride radio-operated key
with Keyless Ride ^{OE}
approx. 1 m

82 OPERATION

Engaging steering lock Requirement

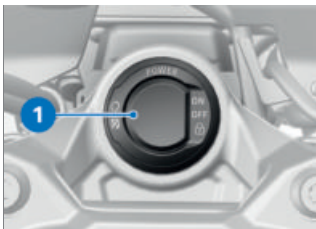
The handlebars are turned towards the left. Radio-operated key is within range.



Press and hold down button **1**.
The steering lock engages with an audible click.
Ignition, lights and all function circuits switched off.
Short-press button **1** to disengage the steering lock.

Switching on ignition Requirement

Radio-operated key is within range.



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

Version 1:

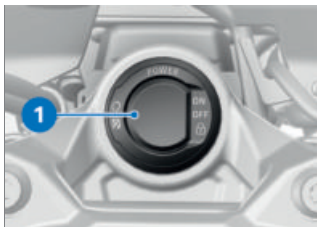
Short-press button **1**.
Side lights and all function circuits are switched on.
Pre-Ride-Check and self-diagnoses are performed.
(127)

Version 2:

Steering lock is engaged; press and hold down button **1**.
The steering lock disengages.
Side lights and all function circuits switched on.
Pre-Ride-Check and self-diagnoses are performed.
(127)

Switching off ignition Requirement

Radio-operated key is within range.



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

Version 1:

Short-press button **1**.
Light is switched off.
Handlebars (steering lock) are not locked.

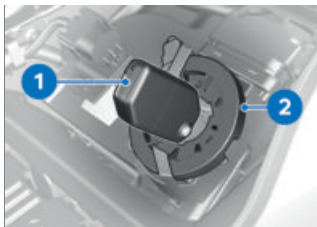
Version 2:

Turn the handlebars all the way to the left.
Press and hold down button **1**.
Light is switched off.
The steering lock engages.

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 you happen to lose or mislay the radio-operated key while on a journey, you can start the vehicle with the spare key.
If the battery of the radio-operated key is empty, the

vehicle can be started by simply inserting the folded radio-operated key into the ring aerial under the seat.



Remove the seat. (107)
Insert the spare key or folded-in radio-operated key with the empty battery **1** into ring aerial **2**.

 The spare key or the closed radio-operated key with the empty battery **must be inserted into** the opening in the ring aerial.

Time during which the motor 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.
Key has been recognised.
Engine can be started.
Start the engine. (126)

84 OPERATION

Replacing battery of radio-operated key

Requirement

The radio-operated key does not react because the battery is weak.



Remote key battery weak. Function limited. Change battery.



DANGER

Swallowing a battery

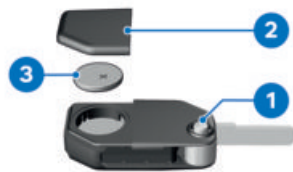
Risk of injury or death

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

Battery type
CR 2032

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

ELECTRONIC IMMOBILISER (EWS)

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



A second vehicle key attached to the same ring as the vehicle key/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 spare key separate from the ignition key/radio-operated key.

If you mislay a vehicle key, you can have the key in question barred by your authorised BMW Motorrad retailer. In order to have a key barred you must bring along all the other keys belonging to the motorcycle.

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.

86 OPERATION

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 (11). 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.

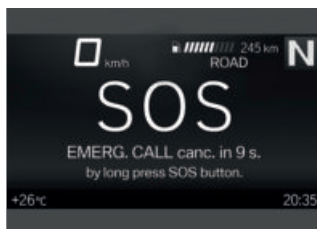
 The language for the emergency call can be changed only by the authorised BMW Motorrad retailer. The language assigned to the vehicle varies from the selectable language the driver can choose as the display language in the multifunction display.

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**.



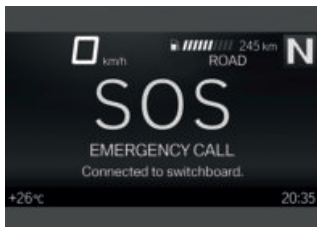
The time until transmission of the emergency call is displayed. During that time, it is possible to cancel the emergency call.

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.

88 OPERATION



The connection was established.



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

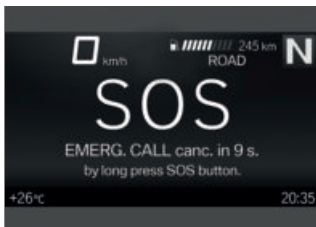
Automatic emergency call

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.

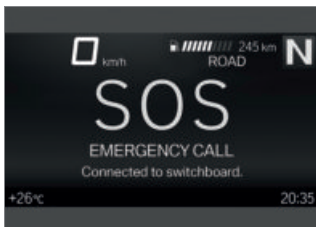
An acoustic signal is sounded.



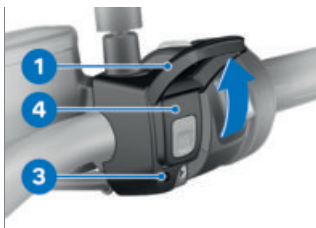
The time until transmission of the emergency call is displayed. During that time, it is possible to cancel the emergency call.

To cancel an emergency call: Press the SOS button and hold it down for two seconds. 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.

High-beam headlight and headlight flasher

Switch on the ignition.
(80)



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**

90 OPERATION

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.
(81)



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.

Automatic daytime riding light



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.



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

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



The indicator light for the automatic daytime riding light shows.

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.

Operating hazard warning flashers

Switch on the ignition.



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



Press button **1** to 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.

(80)

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.



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

92 OPERATION



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

Immediately after button **1** is pressed, DTC system status **ON** and current ABS system status are displayed.



shows.

Possible DTC system status **OFF!** is displayed.

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



remains lit.

The new DTC system status **OFF!** is displayed briefly. The ABS system status remains unchanged.

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!** and current ABS system status are 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.

The new DTC system status **ON** is displayed briefly. The ABS system status remains unchanged.

The DTC function is switched on.

You also have the option of switching the ignition off and then on again.

A DTC fault has occurred if the DTC warning light shows when the motorcycle accelerates to a speed in excess of the minimum stated below after the ignition was switched off and then on again.

min. 5 km/h

For more information on Dynamic Traction Control, see the section entitled "Engineering details" (145).

ELECTRONIC SUSPENSION ADJUSTMENT (D-ESA)

with Dynamic ESA^{OE}

Possibilities for adjustment

You can calibrate rear-wheel damping to suit the terrain with ease using electronic chassis and suspension adjustment Dynamic ESA. Two damping settings and three spring preload levels are available.

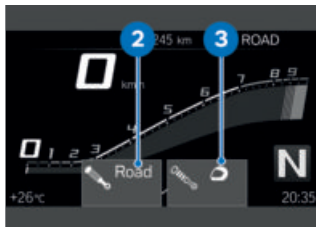
Viewing suspension settings



Switch on the ignition.

(80)

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



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

The setting shows briefly, then disappears automatically.

Adjusting suspension damping

Switch on the ignition.

(80)

94 OPERATION

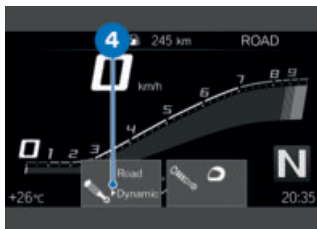


Short-press button **1** to view the current setting.

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

Adjusting spring preload



To adjust spring preload:

Start the engine. (126)

Repeatedly long-press button **1** until the setting you want to use is displayed.

 You cannot adjust spring preload while the motorcycle is on the move.

The following settings are available:



One-up riding

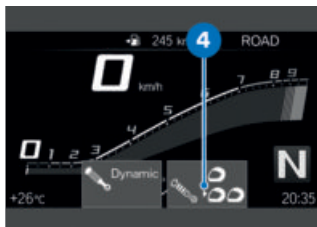


One-up with luggage



Two-up (with luggage)

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.

Wait for the mechanism to complete all adjustments before you ride off.

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**.

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

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.

For each of these riding modes there is a matching setting for the ABS, DTC systems, for engine drag torque control and for throttle response.

 See the section entitled "Engineering details" for more information on the selectable riding modes.

with Dynamic ESA^{OE}

The chassis and suspension settings can also be adapted in the selected scenario.

Riding-mode preselection

with riding modes Pro^{OE}

Riding mode preselection is a function for shortlisting the rider's subset of preferred riding modes.

Between two and a maximum of four riding modes can be added to the riding modes preselection shortlist.

Factory setting:

RAIN, ROAD, DYNAMIC and DYNAMIC PRO

96 OPERATION

Configure riding-mode preselection

with riding modes Pro^{OE}

Switch on the ignition.

(80)

Navigate to Settings, Vehicle settings, Riding mode preselection. Activate or deactivate riding modes for riding mode preselection.

The activated riding modes are available for subsequent selection.

If fewer than two riding modes are preselected, this message is displayed: Action not possible.

Min. number reached.

The list of preselected riding modes is retained in memory, even after the ignition is switched off.

Select the riding mode

Switch on the ignition.

(80)



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 in the pop-up. 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.

with riding modes Pro^{OE}

The availability of the riding modes depends on the custom configuration of the riding modes preselection function.

With the vehicle at a standstill, the selected mode is activated 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.

Cruise control is deactivated.

The selected riding mode is retained with the engine-characteristic, ABS, 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 individually.

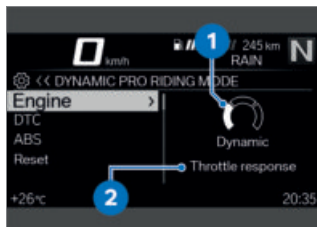
Configuring DYNAMIC PRO riding mode

Switch on the ignition.

(80)

Navigate to Settings, Vehicle settings, Riding mode preselection. Select DYNAMIC PRO riding mode and activate.

Select Configuration and confirm.



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.

98 OPERATION



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.

The settings can be reset to the factory settings:
Reset the riding mode settings. (98)

Resetting riding mode settings

Configure DYNAMIC PRO riding mode. (97)
Select Reset and confirm.
The following factory settings apply for DYNAMIC PRO riding mode:
DTC: ROAD
ABS: DYNAMIC
Engine: 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)



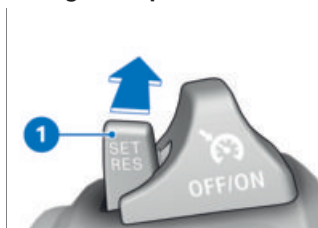
Symbol **1** for cruise control is displayed in the Pure Ride view and in the top status line.

Switching on cruise control



Slide switch **2** to the right.
Button **1** is operational.

Setting road speed



Short-push button **1** forward.

Adjustment range for
cruise control (gear-de-
pendent)

15...210 km/h



shows.

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 main-
tained 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.

100 OPERATION

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

The vehicle decelerates smoothly.

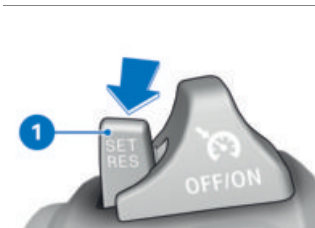
The current speed is maintained and saved if button **1** is not pushed again.

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.

Indicator light for adaptive cruise control goes out.

Resuming former cruising speed



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

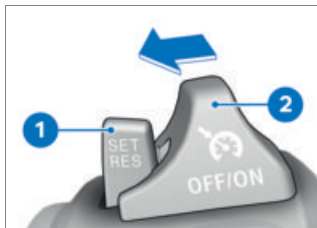
 Opening the throttle overrides cruise control briefly, without deactivating it. When the throttle twistgrip is released, speed drops back to the setting saved beforehand.

If you want to reduce speed further you have to deactivate cruise control, for example by applying the brakes.



shows.

Switching off cruise control



Slide switch **2** to the left. The system is deactivated. Button **1** is disabled.

LAPTIMER

with riding modes Pro^{OE}

Start the timing

Call up the *Sport* and switch to the *Sport 2* display. Start the engine. (126)



Press button **1**.

Time recording is running. Every time you cross the start/finish line, press button **1** again to start recording for the next lap.

The data of the preceding lap are written into memory.

The time for the current lap starts again from 00:00:00.

The stopped time for a lap is displayed for an adjustable Disp. duration time before the display switches to elapsed time for the current lap.

Recording continues even if you exit the display mode during recording.

Ending time recording and managing times

Requirement

Sport 2 is displayed.

Press down the MENU rocker button.

The LAPTIMER menu is displayed.

Timing in progress can be ended with Stop recording.

You can go to the current lap times and riding data by using Laps. 99 laps can be saved.

If the laps have not been deleted in the meantime, additional laps overwrite the first laps.

All laps can be deleted with Delete all laps.

You can use Reset Best Ever to reset the all-time best lap (Best Ever).

Set up the laptimer

Navigate to Settings, Vehicle settings, Laptimer.

The following settings are available:

Debounce time: If the headlight flasher has been actuated, the headlight flasher can be actuated again within this time without affecting lap time measurement.

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

Reference: Selection of which best time is displayed as a reference. **Best:** Best time of the current recording

102 OPERATION

session or **Best Ever**: Best-ever measured time.

Best lap in progress:

When this function is activated, the difference between the current lap time and the reference time is displayed instead of the difference between the last lap time and the reference time.

Best-ever lap

The best-ever lap (**Best Ever**) is the fastest of all recorded laps and is updated once a faster lap has been recorded.

The best-ever lap remains stored in memory even if the recorded laps are deleted. This means that other races can subsequently be timed and the lap times of those races compared with the best-ever lap from earlier races.

The best-ever lap can be deleted in the **LAPTIMER** menu. If the best-ever lap is from a saved recording, it is accompanied on the display by the relevant lap number. If the best-ever lap shows without a lap number, this means that it comes from a recording that has been deleted.

SHIFT LIGHT

Shift light



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

 When the shift light flashes, the rotational-speed sensor also flashes.

Shift light flashes at preset frequency: Engine revving at upshift rpm

Switch the shift light on and off

with riding modes Pro^{OE}

Navigate to **Settings**,
Vehicle settings.

Switch **Shift light** on or off.

Set the shift light

with riding modes Pro^{OE}

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 the flashing frequency are demonstrated by the shift light with it briefly lighting up or flashing.

ANTI-THEFT ALARM (DWA)

with anti-theft alarm (DWA)^{OE}

Activation

Switch on the ignition.

(80)

Customise the anti-theft alarm settings. (105)

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 tilt 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-oper-

104 OPERATION

ated key again during the activation phase.

Turn indicators flash three times.

Confirmation tone sounds three times (if programmed).

Tilt sensor is 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's 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 **2** on the radio-operated key; this does not deactivate the alarm system.

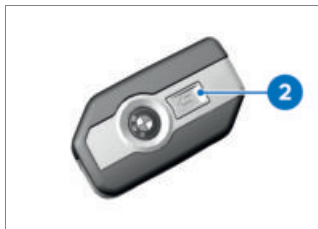
If an alarm was triggered while the motorcycle was unattended, the rider is notified accordingly by an alarm tone sounding once when the ignition is switched on. The DWA LED then indicates the reason for the alarm for one minute.

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

Deactivation

- Switch on the ignition.
- (80)
- Turn indicators flash once.
- Confirmation tone sounds once (if programmed).
- DWA has been switched off.
- with Keyless Ride^{OE}



Press button **2** on the radio-operated key once.

 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 has been switched off.

Customise the anti-theft alarm settings

- Switch on the ignition.
- (80)
- 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
- (105)

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.

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i 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.

Default settings

The anti-theft alarm ships with the following default settings:

Confirmation alarm tone after activation/deactivation of the DWA: No.

Alarm tone: intermittent.

TYRE PRESSURE MONITORING (RDC)

with tyre pressure control (RDC)^{OE}

Switch the target-pressure warning on or off

The system can be set to issue a specified-pressure warning when tyre pressure drops to the defined minimum.

Navigate to **Settings**, **Vehicle settings**, **RDC**.

Switch Target pressure warn. on or off.

HEATED GRIPS

with heated grips^{OE}

Operating heated handlebar grips

Start the engine. (126)

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

i 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.



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

The handlebar grips can be heated to three levels. High heating power is for heating the grips quickly: it is advisable to switch back to a lower heating power as soon as the grips are warm.

 high heating power

 medium heating power

 low heating power

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.

SEAT

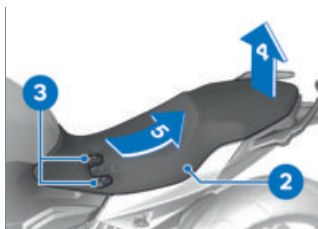
Removing seat Requirement

Place the motorcycle on its stand on firm, even ground.



Turn seat lock **1** counter-clockwise with the vehicle key.

Seat bench is unlocked.

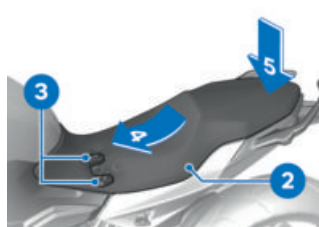


Slightly lift seat **2** in direction of arrow **4**.

Pull seat **2** in direction of arrow **5** and out of holders **3**. Place seat **2** on a clean surface.

108 OPERATION

Installing seat



Push seat **2** in direction of arrow **4** on to holders **3**.
Press seat firmly in direction of arrow **5**.
The seat bench audibly engages.

ADJUSTMENT

06

MIRRORS	112
HEADLIGHT	113
CLUTCH	113
BRAKES	114
SPRING PRELOAD	114
DAMPING	116

112 ADJUSTMENT

MIRRORS

Adjusting mirrors



Turn the mirror to the appropriate position.

with handlebar end mirrors^{OE}



DANGER

Functional impairment due to incorrect installation position

Risk of crash and accident

Do not change the installation position of the mirror.

Turn the mirror head to the desired position.

Adjusting mirror arm



Push protective cap **1** over the threaded fastener of the mirror arm up to expose the threaded fastener.

Slacken nut **2**.

Turn the mirror arm to the appropriate position.

Tighten the nut to the specified torque, while holding the mirror arm to ensure that it does not move out of position.

Mirror (locknut) to clamping piece
M10 x 1.25
22 Nm (Left-hand thread)

Push the protective cap over the threaded fastener.

HEADLIGHT

Headlight beam throw and spring preload

Headlight beam throw is generally kept constant when spring preload is adjusted to suit load.

Spring preload adjustment might not suffice only if the motorcycle is very heavily loaded. Under these circumstances, headlight beam throw has to be adjusted to suit the weight carried by the motorcycle.

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

Adjusting headlight beam throw



Slacken nut **1**.

Adjust beam throw by tilting headlight **2** slightly about its horizontal axis.
Tighten nut **1**.

Headlight on fork bridge (setting)
M8
Thread-locking compound: mechanical
19 Nm

CLUTCH

Adjusting clutch lever

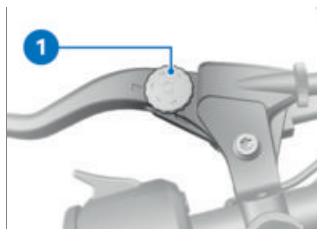


WARNING

Adjusting the clutch lever while riding

Risk of accident

Adjust the clutch lever only when the motorcycle is at a standstill.



Turn adjusting screw **1** clockwise to increase the span between the clutch lever and the handlebar grip.

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Turn adjusting screw **1** counter-clockwise to reduce the span between the clutch lever and the handlebar grip.

 The adjusting screw can be turned more easily if the clutch lever is pushed forward.



BRAKES

Adjusting brake lever

WARNING

Relocated brake fluid tank

Air in the brake system

Do not turn the handlebars or the handlebar fitting on the handlebar.

WARNING

Adjusting the handbrake lever while riding

Risk of accident

Do not attempt to adjust the handbrake lever unless the vehicle is at a standstill.

Turn adjusting screw **1** counter-clockwise to increase the span between the brake lever and the handlebar grip. Turn adjusting screw **1** clockwise to reduce the span between the brake lever and the handlebar grip.

 The adjusting screw is easier to turn when the handbrake lever is pushed forward.

SPRING PRELOAD

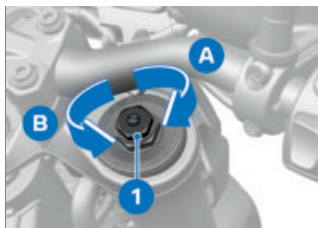
Adjustment

Front spring preload has to be adjusted to suit the rider's weight. Increase spring preload for heavy loads, decrease spring preload for light loads. 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 front wheel

without low-slung^{OE}



WARNING

Unmatched spring-preload and front-fork damping settings.

Impaired handling.

Adjust the front-fork damping characteristic to suit spring preload.

To reduce compression (increase spring preload), use the tool from the on-board toolkit to turn adjusting screw **1** in direction **A**.
To increase compression (reduce spring preload), use the tool from the on-board toolkit to turn adjusting screw **1** in direction **B**.



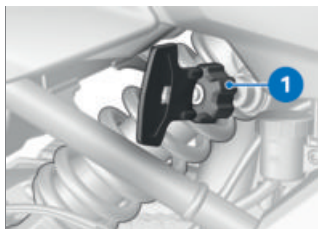
Set spring preload to the same value at both fork legs.

Adjusting spring preload for rear wheel

without Dynamic ESA^{OE}

Remove the seat. (107)

Removing the toolkit.



WARNING

Spring preload setting and spring-strut damping setting not matched.

Impaired handling.

Adjust spring-strut damping to suit spring preload.

To increase spring preload, use the tool from the on-board toolkit to turn adjuster knob **1** clockwise.
To reduce spring preload, use the tool from the on-board toolkit to turn adjuster knob **1** counter-clockwise.

116 ADJUSTMENT

Basic setting of spring preload, rear

One-up without luggage (Turn the adjuster knob as far as it will go counter-clockwise.)

One-up with luggage (Turn the adjuster as far as it will go counter-clockwise, then back it off 10 turns in the clockwise direction.)

Two-up with luggage (Turn the knob clockwise as far as it will go.)

Stow the on-board toolkit in its correct position.
Install the seat. (108)

DAMPING

Effects of damping on handling.

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

Increased compression-stage damping

Direct handling/drivability.
Increased response to road conditions.
Loss of comfort on bumpy or uneven road surfaces.

Reduced compression-stage damping

Comfortable handling/drivability.
Reduced response to road conditions.
Increased vibration tendency.

Increased rebound-stage damping

Direct handling/drivability.
Increased response to road conditions.
Reduced vibration tendency.
Loss of comfort when driving over series of bumps.

Reduced rebound-stage damping

Comfortable handling/drivability.
Reduced response to road conditions.
Increased vibration tendency.

Adjusting compression-stage damping for front wheel

without low-slung^{OE}



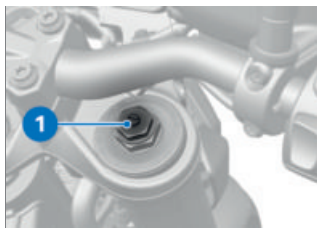
Adjust compression-stage damping by turning adjusting screw **1** on the left fork leg.

To increase damping: Turn adjusting screw **1** clockwise.
To reduce damping: Turn adjusting screw **1** counter-clockwise.

Compression stage, basic setting, front

Turn the adjusting screw as far as it will go clockwise, then back it off 10 clicks

Adjusting rebound-stage damping for front wheel
without low-slung^{OE}



Adjust rebound-stage damping by turning adjusting screw **1** on the right fork leg.

To increase damping: Turn adjusting screw **1** clockwise.
To reduce damping: Turn adjusting screw **1** counter-clockwise.

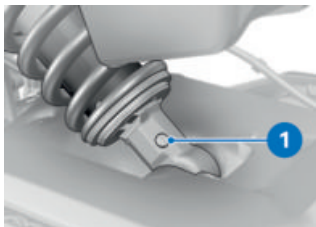
Rebound stage, basic setting, front

Turn the adjusting screw as far as it will go clockwise, then back it off 10 clicks

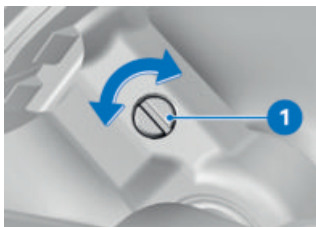
Adjust the rebound-stage damping for rear wheel
without Dynamic ESA^{OE}

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

118 ADJUSTMENT



Adjust the damping action by turning adjusting screw **1**.



Turn the adjusting screw **1** clockwise to harden the damping action.

Turn the adjusting screw **1** anticlockwise to soften the damping action.

Basic setting of rear-suspension damping characteristic

Turn the adjusting screw clockwise to the limit position, and then 0.5 turns anticlockwise. (One-up with luggage)

Turn the adjusting screw as far as it will go clockwise, then back it off 0.25 of a turn. (Two-up with luggage)

Basic setting of rear-suspension damping characteristic

Turn the adjusting screw as far as it will go clockwise, then back it off 1.5 turns. (One-up without luggage)

RIDING

07

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SAFETY INFORMATION

Rider's equipment

Do not ride without the correct clothing! Always wear

- Helmet
- Suit
- Gloves
- Boots

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



WARNING

Loose textiles, items of luggage or straps snagged by open rotating parts of the vehicle (wheels, drive shaft)

Risk of accident

Make sure that loosely worn or carried textiles cannot be snagged by openly rotating parts of the vehicle. Keep all items of luggage and straps well clear of openly rotating parts of the vehicle.

Restricted angle of heel
with low-slung^{OE}

A motorcycle with lowered suspension has less ground clearance and cannot corner at angles of heel as extreme as those achievable by a counter-part motorcycle with standard-height suspension.



WARNING

When a motorcycle with lowered suspension is cornering, certain components can come into contact with the surface at a bank angle less than that to which the rider is accustomed.

Risk of falling

Carefully try out the limits of the motorcycle's bank angle and adapt your style of riding accordingly.

Test your motorcycle's angle of heel in situations that do not involve risk. When riding over kerbs and similar obstacles, bear in mind that your motorcycle's ground clearance is limited.

Lowering the motorcycle's suspension shortens spring travel. Ride comfort might be restricted as a result. Be sure to adjust spring preload accordingly, particularly for riding two-up.

Loading correctly



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.

Adjust spring preload setting and damping to the total weight.
with soft cases^{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 of the cases and toward the inboard side.

Note the maximum permissible payload and maximum permissible speed, see

also the section entitled "Accessories" (201).

Payload per soft case
max. 5 kg
Maximum speed when riding with soft case installed
max. 180 km/h

with topcase^{OA}

Note the maximum permissible payload and maximum permissible speed, see also the section entitled "Accessories" (203).

Payload of topcase
max. 5 kg
Maximum speed for riding with a loaded topcase
max. 180 km/h

Speed



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



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

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
- Stop the engine immediately if it 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 motor-cycle (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.

126 RIDING

When load status changes:

without Dynamic ESA^{OE}
Adjust the spring preload for the rear wheel. (115)

with Dynamic ESA^{OE}
Adjust the spring preload.
(94)

without Dynamic ESA^{OE}
Adjust rebound-stage damping for rear wheel. (117)

with Dynamic ESA^{OE}
Adjust the damping. (93)

Always before riding off:

Check operation of the brake system.
Check operation of the lights and signalling equipment.
Check operation of the clutch.
(167)
Check the tyre tread depth.
(170)
Check the tyre pressures.
(169)
Check security of cases and luggage.

Every 3rd refuelling stop:

Check the engine oil level.
(160)
Check the brake pad thickness, front brakes. (163)
Check the brake pad thickness, rear brakes. (164)
Check the brake-fluid level, front brakes. (165)

Check the brake-fluid level, rear brakes. (166)
Check the coolant level.
(168)
Lubricate the chain. (181)
Check the chain tension.
(182)

STARTING

Starting engine



ATTENTION

Sufficient gearbox lubrication only with the engine is running.

Gearbox damage

Do not allow the motorcycle to roll for a lengthy period of time or push it a long distance with the engine switched off.

Switch on the ignition.
(80)

Pre-Ride-Check and self-diagnoses are performed.
(127)

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 en-

gage a gear before retracting the side stand.



Press 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". (218)

Pre-Ride-Check and self-diagnosis

The instrument cluster runs a test of the instruments and the indicator and warning lights when the ignition is switched on. During the Pre-Ride-Check, all indicator and warning lights show temporarily.

If the instrument cluster remains dark after the ignition is switched on, the troubleshooting chart in the Technical Data section can help. (220)

Self-diagnosis checks the functional readiness of the BMW Motorrad ABS and the BMW Motorrad ASC/DTC.



flashes.



slow-flashes.

The indicator and warning lights go out when a speed of 5 km/h is reached.

Self-diagnosis has completed.

If an error message appears when self-diagnosis completes: 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, avoiding high-speed main roads and highways if possible.

Comply with the running-in speeds.

Running-in speed

<6500 min ⁻¹ (Odometer reading 0...1200 km)
--

No full load (Odometer reading 0...1200 km)

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

Mileage until the first running-in check
--

500...1200 km

Brake pads

New brake pads have to be run in before they can achieve their optimum frictional force. 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.

Read the tyre manufacturer's information on how to run in new tyres correctly.

**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

with shift assistant Pro^{OE}

Gear Shift Assistant Pro

Select the gears in the usual way by using the foot-operated gearshift 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 you are riding at constant speed or in overrun in a low gear with the engine revving high, shifting gear without disengaging the clutch can cause a severe reaction to the load change. BMW Motorrad recommends disengaging the clutch for shifts in these circumstances. Shift assistance is not available in the following situations:

With clutch lever pulled.

Gearshift lever is not in its initial position

Once the gearshift has completed, the gearshift lever has to be fully released before another gearshift with the Pro can take place.

For more information on Gear Shift Assistant Pro see the section headed "Engineering details" (152).

SHIFT LIGHT

Shift light



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

 When the shift light flashes, the rotational-speed sensor also flashes.

Shift light flashes at preset frequency: Engine revving at upshift rpm

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 vehicle 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 "emergency 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. Under these circumstances the front wheel can lock up. BMW Motorrad ABS prevents the front wheel from locking up.

Emergency braking

If the motorcycle is braked sharply at a sufficient speed, the brake light flashes rapidly to warn following road users. 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 is available in all riding modes except Dynamic PRO.

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Possibility of a fall not precluded

Although ABS Pro provides the rider with valuable assistance and constitutes a huge advance in safety for braking with the motorcycle banked for cornering, it cannot under any circumstances be considered as re-defining the physical limits that apply to motorcycling. It is still possible for these limits to be overshoot due to misjudgement or rider error. In extreme cases this can result in a crash.

Use on public roads

ABS Pro helps 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 system prevents the wheels from locking and skidding away.



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

PARKING YOUR MOTORCYCLE

Side stand

Switch off the engine.



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.

If the camber of the roadway permits, turn the handlebars all the way to the left.

On a gradient, always park the motorcycle facing uphill; select 1st gear.

Centre stand

with centre stand^{OE}

Switch off the engine.

**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.

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



Premium unleaded (max. 15% ethanol, E10/E15)



95 ROZ/RON
90 AKI

Alternative fuel grade

- E5** Regular unleaded
(power- and consumption-related restrictions.)
E10 (max. 15% ethanol,
E10/E15)
91 ROZ/RON
87 AKI

Look for these symbols on the fuel filler cap and on the fuel pump:



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.



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.



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



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 tank capacity
approx. 13 l
Reserve fuel
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.

with Keyless Ride^{OE}

Switch off the ignition.

(82)



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 tank capacity
approx. 13 l
Reserve fuel
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.

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Remove screws **1**.
Remove emergency release **2**.
Fuel filler cap unlocks.
Fully open the fuel filler cap.
Refuel. (135)
Close the fuel filler cap emergency release. (138)

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**.

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.



ATTENTION

Trapping of components

Component damage

Do not trap components
such as brake lines or cable
legs.

At the front, secure the straps
to the bottom fork bridge on
both sides and tighten the
straps.



At the rear, secure the straps
to the footrest plates on both
sides and tighten the straps.
Uniformly tighten all the
straps.

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)

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, dry asphalt surface. The lower the coefficient of friction, the longer the stopping 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, so the wheels continue to turn and directional stability is maintained irrespective of the condition of the road surface.

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 circumstances 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 BMW Motorrad ABS must assume an extremely low coefficient of friction (gravel, ice, snow), so that the wheels will continue to rotate under all imaginable circumstances, because this is the precondition for ensuring directional stability. As soon as it registers the actual circumstances, the system reacts instantly and adjusts braking force accordingly to achieve optimum braking.

Rear wheel lift

Under very severe and sudden deceleration, however, under certain circumstances it is possible that the BMW Motorrad 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 ABS?

Within the limits imposed by physics, the BMW Motorrad ABS ensures directional stability on any surface.

At speeds above 4 km/h, within the limits imposed by physics the BMW Motorrad ABS can ensure directional stability on any surface. Limitations inherent to the design principle mean that at lower speeds the BMW Motorrad ABS cannot provide optimum assistance on all surfaces.

The system is not optimised for special requirements that apply under extreme competitive conditions off-road or on the track.

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 lead to a fault message being issued:

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 motor-cycle on the centre stand or an auxiliary stand, engine idling or with a gear engaged. Rear wheel locked by the electrical machine's braking moment 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 servicing?



WARNING

Brake system not regularly serviced

Risk of accident

In order to ensure that the BMW Motorrad 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 ABS 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.

Take care when cornering!

When you apply the brakes on a corner, the vehicle's weight and momentum take over and even BMW Motorrad ABS is unable to counteract their effects.

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. Addi-

tionally, 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.

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 the lean angle into consideration and uses this additional lean angle and acceleration data to regulate traction more precisely and comfortably.

BMW Motorrad DTC is designed as an assistant system for the rider and for use on

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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.

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.

If the front wheel lifts clear of the ground under severe acceleration, DTC either as a function of the riding mode or the DTC setting reduces engine torque until the front wheel regains contact with the ground. BMW Motorrad recommends turning the throttle grip back slightly when lifting the front wheel in order to reach a stable driving condition again as soon as possible.

DYNAMIC ENGINE BRAKE CONTROL

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 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 dynamic traction control BMW Motorrad DTC, engine drag torque control compares the wheel circumferential velocities of the front and rear wheels calculated from the wheel speeds and the tyre radius. Dynamic engine brake control uses this differential to compute slip as a measure of the reserve of stability available at the rear wheel.

If slip overshoots the applicable limit value, the throttle valves are opened very slightly to increase engine torque. Slip is reduced and the vehicle is stabilised.

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Effect of dynamic engine brake control

In RAIN and ROAD riding modes: Maximum stability.

with riding modes Pro^{OE}

In DYNAMIC and DYNAMIC PRO riding modes: Compared to RAIN and ROAD riding modes, reduced intervention.

DYNAMIC ESA

with Dynamic ESA^{OE}

How Dynamic ESA works

Dynamic ESA uses a ride height sensor to detect movements in the suspension and responds by adjusting the damper valve. 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

One-up riding

One-up with luggage

Two-up (with luggage)

RIDING MODE

Selection

To adjust the motorcycle to the road condition and the desired driving experience, the following riding modes can be selected:

Standard

RAIN

ROAD (default mode)

with riding modes Pro^{OE}

with riding modes Pro

DYNAMIC

DYNAMIC PRO

For each of these riding modes there is a matching setting for the ABS, DTC systems, for engine drag torque control and for throttle response.

with Dynamic ESA^{OE}

Dynamic ESA can be parametrised independently of the selected riding mode.

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 RAIN riding mode: the engine's throttle response is soft.

In ROAD riding mode: the engine's throttle is optimum.

In DYNAMIC riding mode: The engine's throttle response is direct.

In DYNAMIC PRO riding mode: the engine's throttle response can be parametrised to suit the rider's individual needs and preferences.

ABS

Rear wheel lift-off detection is active in all riding modes except in the factory default settings of the DYNAMIC PRO riding mode.

In DYNAMIC riding mode, rear wheel lift-off detection is reduced to enhance the braking effect.

In DYNAMIC PRO riding mode, ABS can be set up differently.

ABS Pro

In RAIN and ROAD riding modes, ABS Pro is fully available. The tendency of the motorcycle to straighten up when the brakes are applied with the machine banked for cor-

nering is reduced to a minimum.

In DYNAMIC riding mode, ABS Pro is available only when the tyre-to-surface coefficient of friction is high. Assistance is less than in RAIN and ROAD riding modes and instead, the system is set up for maximised braking effect. In DYNAMIC PRO riding mode, ABS Pro is switched off by default.

DTC

Tyres

DTC is set up for on-road riding with road tyres in all riding modes.

Riding stability

In the DTC setting RAIN, DTC intervenes early enough to achieve maximum riding stability.

In the DTC setting ROAD, DTC intervenes later than in RAIN riding mode. This prevents the rear wheel from spinning whenever possible. In the DTC settings RAIN and ROAD, the front wheel is prevented from lifting.

In the DTC setting DYNAMIC, DTC intervenes later than in ROAD riding mode, so slight drift can be induced when ex-

150 **ENGINEERING DETAILS**

iting corners and brief wheelies are also possible.

In the DTC settings RAIN, ROAD and DYNAMIC, the DTC setting corresponds to the riding mode.

In the DTC setting DYNAMIC PRO, the DTC can be set up differently.

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 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.

DYNAMIC BRAKE CONTROL

How Dynamic Brake Control works

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 10 km/h, the ABS function is further assisted by Dynamic Brake Control.

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 hazard 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.



When ABS is switched off, the Dynamic Brake Control function is switched off as well.

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 trippswitch that does not enable transmission of the measured values until the motorcycle has accelerated to 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 distinguishes between three tyre pressure ranges matched to the vehicle:

Tyre pressure within permitted tolerance.

Tyre pressure close to limit of permitted tolerance.

Tyre pressure outside permitted tolerance.

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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 pressures are shown in the display as temperature compensated and always refer 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. As a result, the values displayed there usually do not correspond to the values displayed in the display.

Pressure adaptation

Compare the RDC value on the display 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 dif-

ference 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 following value is shown in the display:
2.3 bar
So pressure is low by:
0.2 bar
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}

Gear Shift Assistant Pro

Your vehicle is equipped with Gear Shift Assistant Pro, a system originally developed for racing and now adapted for the touring sector. 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 request for a gearshift, the rider has to move the shift lever from its idle position in the desired direction against the force of the spring through a certain "overtravel" at ordinary speed or rapidly and keep the shift lever in this position until the gearshift is completed. It is not necessary to increase the force applied to the gearshift 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 Gear Shift Assistant Pro, the rider has to keep load state (throttle twistgrip position) constant before and during the gearshift. A change in the position of the throttle twistgrip during a gearshift can cause the function to abort and/or lead to a missed shift. Gear Shift Assistant Pro 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 over-revving.

Maximum engine speed
max. 9250 min ⁻¹

Upshifting

Upshifting is assisted until idle rpm for the target gear to be selected is reached.

This prevents the engine from dropping below idle speed.

Idle speed
1250 $\pm$ 50 min ⁻¹ (Engine at regular operating temperature)

ADAPTIVE HEADLIGHT

with Headlight Pro^{OE}

Function

In addition to the bulbs for low beam, high beam and daytime riding light, or side light, the headlight has two separate LED elements complete with their own reflectors. The LED elements are activated as a function of bank angle in addition to the low-beam headlight, enabling the headlight to illuminate the inside of the bend as the motorcycle banks for cornering. The adaptive cornering headlight is optimised for slight to moderate bank angles.

The adaptive cornering headlight is activated under the following conditions:

Cornering at a slight to moderate bank angle.

Speed is higher than 10 km/h.

The low-beam headlight is switched on.

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

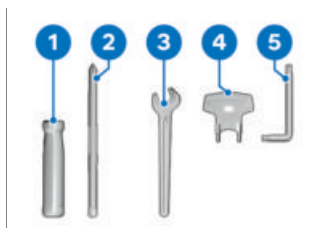
internal thread to remove all traces of thread-locking compound. Always use new microencapsulated screws when re-assembling. Prior to disassembly make sure that you have suitable tools for cleaning the threads and a new replacement for each screw to be removed. If the job is not done correctly there 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.

TOOLKIT


- 1** Screwdriver handle
- 2** Reversible screwdriver blade
With star-head and plain-tip ends
Remove the battery.
(190)
without Dynamic ESA^{OE}
Adjust rebound-stage damping for rear wheel.
(117)
- 3** Open-ended spanner
Width across flats 14 mm
Adjust the mirror arm.
(112)
- 4** Keys
without Dynamic ESA^{OE}
Adjust the spring pre-load for the rear wheel.
(115)
- 5** Torx wrench, T25/T30
T25 on short end, T30 on long end

ADDITIONAL TOOLKIT


- 6** Open-ended spanner
Width across flats 19 mm without low-slung^{OE}
Adjust the spring pre-load for front wheel.
(115)

FRONT-WHEEL STAND
Installing front-wheel stand

ATTENTION

Use of the BMW Motorrad front-wheel stand without also using the auxiliary stand

Risk of damage to parts if vehicle topples
Place the motorcycle on an auxiliary stand before lifting the front wheel with the BMW Motorrad front-wheel stand.

Make sure the motorcycle is standing firmly.

160 MAINTENANCE

Place the motorcycle on an auxiliary stand; BMW Motorrad recommends the BMW Motorrad auxiliary stand. Install the rear-wheel stand. (160)



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

 To avoid unnecessary environmental impact, BMW Motorrad recommends checking the engine oil after riding min. 50 km.

**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.

Wipe the area around the oil filler opening clean.
Allow the engine to idle until the fan starts up, then allow it to idle one minute longer.
Switch off the engine.

**ATTENTION**

Vehicle toppling sideways

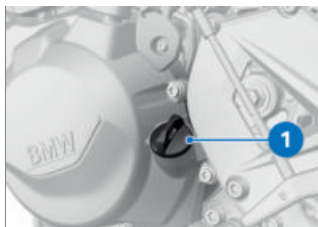
Risk of damage to parts if vehicle topples

Secure the vehicle, preferably with the assistance of a second person, so that it cannot topple sideways.

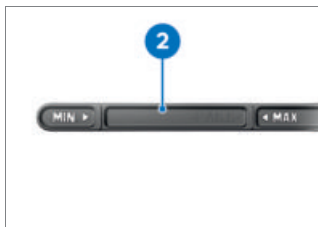
Make sure the engine is at operating temperature and hold the motorcycle upright. BMW Motorrad recommends using a suitable auxiliary stand.

with centre stand^{OE}

Make sure the ground is level and firm and with the engine at operating temperature, place the motorcycle on its centre stand.



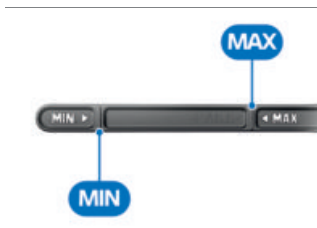
Wait five minutes for the oil to drain into the oil pan. Remove oil dipstick **1**.



Use a dry cloth to wipe gauge length **2** clean
Seat the oil dipstick on the oil filler neck, but do not engage the threads. Turn the dipstick one full turn backward to make the oil level easier to read.

162 MAINTENANCE

Remove the oil dipstick and check the oil level.



Engine oil, specified level

Between **MIN** and **MAX** marks

Engine oil, quantity for topping up

max. 0.5 l (Difference between **MIN** and **MAX**)

If the oil level is below the **MIN** mark:

Topping up the engine oil.
(162)

If the oil level is above the **MAX** mark:

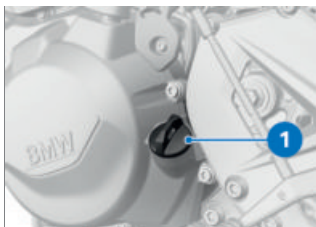
Have the oil level corrected by a specialist workshop, preferably an authorised BMW Motorrad retailer.

Install the oil dipstick.

Topping up engine oil

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

Wipe the area around the filler neck clean.



Remove oil dipstick **1**.



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.

Check the engine oil level.

(160)

Install the oil dipstick.

BRAKE SYSTEM

Check operation of the brakes

Operate the brake lever.
The pressure point must be clearly perceptible.
Press the footbrake lever.
The pressure point must be clearly perceptible.

If pressure points are 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.

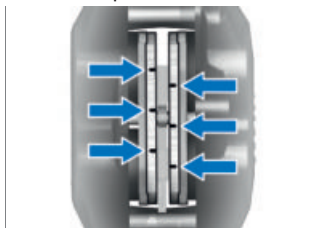
Have the brakes checked by a specialist workshop, preferably an authorised BMW Motorrad retailer.

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 calipers **1**.



Brake-pad wear limit, front

min. 1.0 mm (Friction pad only, without backing plate. The wear indicators, i.e. the grooves, must be clearly visible.)

164 MAINTENANCE

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 thick-

ness. Viewing direction: from the rear toward brake caliper **1**.



Brake-pad wear limit, rear

min. 1.0 mm (Friction pad only, without backing plate.)

If the brake pads are worn:



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.

with centre stand^{OE}

Make sure the ground is level and firm and place the motorcycle on its centre stand. Move the handlebars to the straight-ahead position.

Make sure the ground is level and firm and hold the motorcycle upright.

Move the handlebars to the straight-ahead position.



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

You should never allow the brake fluid level to drop below the **MIN** mark. (Brake-fluid reservoir horizontal, motorcycle upright)

166 MAINTENANCE

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.

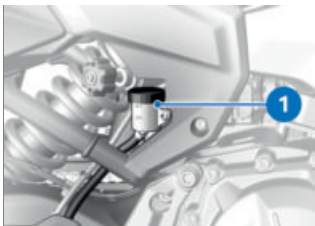
Always make sure that the lid of the brake fluid reservoir and the area around the lid are cleaned before opening.

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.

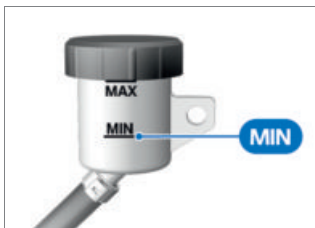
with centre stand^{OE}

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
(visual inspection)

Brake fluid, DOT4

You should never allow the brake fluid level to drop below the **MIN** mark.

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

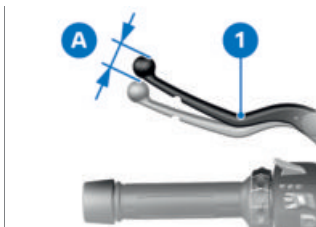
Pull the clutch lever.

An increase in force with increasing actuation must be perceptible.

If no increase in force with increasing actuation is perceptible:

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

Checking the clutch play



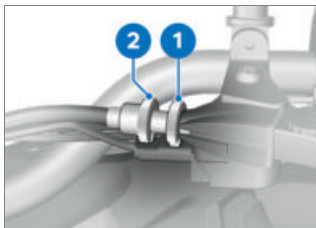
Repeatedly pull clutch lever **1** tight against the grip.
Pull clutch lever **1** gently until resistance is perceptible, observing the clutch play **A**.

Clutch cable play

3...5 mm (at the outer end of the handlebar lever, handlebars in straight-ahead position, engine cold)

Clutch play is out of tolerance:
Adjust the clutch play.
(167)

Adjust the clutch play



Loosen lock nut **1**.

168 MAINTENANCE

To increase clutch play:

Tighten adjusting screw **2** into the handlebar fitting.

To reduce clutch play: Back off adjusting screw **2** in the handlebar fitting.

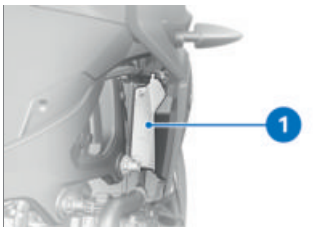
 The distance between locknut and adjusting nut (measured at the inside) must be no more than 8 ± 1.5 mm. Consult a specialist workshop, preferably an authorised BMW Motorrad retailer, if the distance has to be exceeded in order to obtain the correct clutch play.

Check the clutch play.

(167)

Tighten locknut **1** while counter-holding adjusting screw **2**.

Make sure the ground is level and firm and position the motorcycle upright.



Check the coolant level in expansion tank **1**. Viewing direction: from behind through opening in right-hand side trim panel.



Specified coolant level

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

COOLANT

Check the coolant level



WARNING

Opening radiator cap

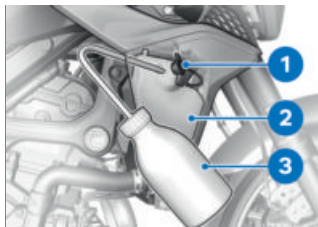
Risk of burning

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

If the coolant drops below the permitted level:

Top up the coolant.

Topping up coolant



Open cap **1** of expansion tank **2**.

Using a suitable container such as a graduated laboratory flask **3**, top up the coolant to the specified level.

Check the coolant level.

(168)

Close cap **1** of expansion tank **2**.

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 (tyre cold)

Tyre pressure, rear

2.9 bar (tyre cold)

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

Tyre recommendation

For each size of tyre, BMW Motorrad tests and classifies as roadworthy certain makes. BMW Motorrad cannot assess the suitability or provide any guarantee of road safety for other tyres.

BMW Motorrad recommends using only tyres tested by BMW Motorrad.

More detailed information is available from your authorised BMW Motorrad retailer.

Effect of wheel size on chassis and suspension control systems

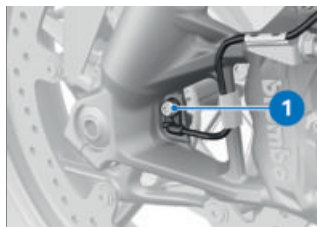
Wheel size is very important as a parameter for the suspension control systems. In particular, the diameter and the width of a vehicle's wheels are programmed into the control unit and are fundamental to all calculations. Any change in these influencing variables, caused for example by a switch to wheels other than those installed ex-works, can have serious 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.

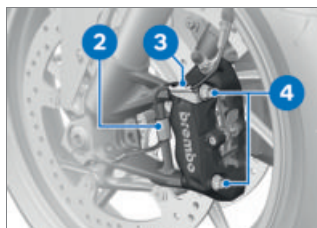
If you decide that you would like to fit non-standard wheels to your motorcycle, it is very important to consult a specialist workshop beforehand, preferably an authorised BMW Motorrad retailer. In some cases, the data programmed into the control units can be changed to suit the new wheel sizes.

Removing front wheel

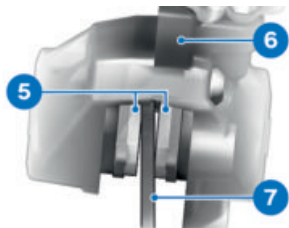
Make sure the ground is level and firm and place the motorcycle on its stand.



Remove screw **1** and remove the wheel speed sensor from its bore.



Disengage the cable for the wheel speed sensor from holding clips **2** and **3**. Remove securing screws **4** from the left and right brake calipers.



Force brake pads **5** slightly apart by rocking brake caliper **6** back and forth against brake disc **7**.



ATTENTION

Use of hard or sharp-edged objects in proximity to component

Component damage

Take care not to scratch components; cover or mask as necessary.

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.

Carefully pull the brake calipers back and out until clear of the brake discs.

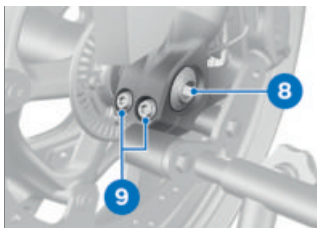
Place the motorcycle on a suitable auxiliary stand. Install the rear-wheel stand.

(160)
with centre stand^{OE}

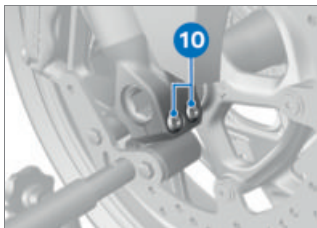
Make sure the ground is level and firm and place the motorcycle on its centre stand.

Raise front of motorcycle until the front wheel can turn freely. Use a suitable front-wheel stand to lift the front of the motorcycle.

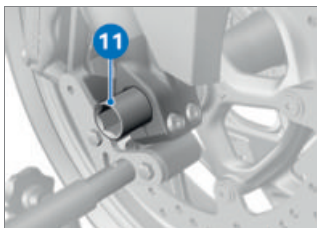
Install the front-wheel stand.
(159)



Remove axle screw **8**.
Slacken left axle clamping screws **9**.

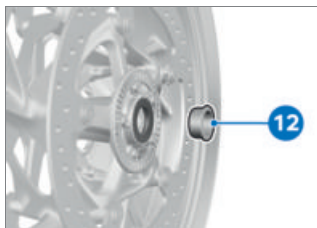


Slacken right axle clamping screws **10**.



Remove axle **11**, while supporting the wheel.
Do not remove the grease from the axle.

Roll the front wheel forward to remove.



Remove spacing bushing **12** from the left-hand side of 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.

174 MAINTENANCE

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 running surface of spacer bush **12**.

Lubricant

Unirex N3

Slip spacer bushing **12**, turned with the collar facing out, on to the wheel hub on the left-hand side.

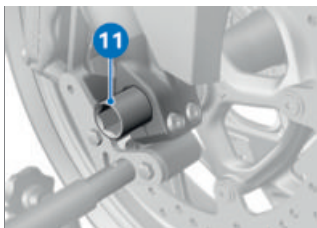
ATTENTION

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 the quick-release axle **11**.

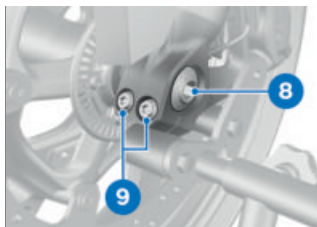
Lubricant

Unirex N3

**WARNING****Improper installation of the quick-release axle**

Loosening of the front wheel
After securing the brake calipers and relieving the front forks, tighten the quick-release axle and the axle clamping to the specified tightening torque.

Raise the front wheel and insert quick-release axle **11** until seated.



Install axle screw **8** and tighten to the specified torque. In this process, counter-hold the quick-release axle on the right side.

Axle screw in front
quick-release axle

M20 x 1.5

50 Nm

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. (159)
Tighten left axle clamping screws **9** to the specified torque.



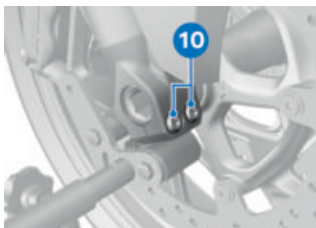
Clamp of quick-release
axle

Tightening sequence: Tighten screws six times in alternate sequence

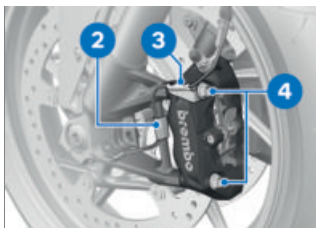
M8 x 35

19 Nm

176 MAINTENANCE



Tighten right axle clamping screws **10** to the specified tightening torque.



Tighten securing screws **4** of the left and right brake calipers to the specified torque.



Clamp of quick-release axle

Tightening sequence: Tighten screws six times in alternate sequence

M8 x 35

19 Nm

Position left and right brake calipers on the brake discs.

Brake caliper to telescopic fork

M10 x 65

38 Nm

Remove the adhesive tape from the wheel rim.



WARNING

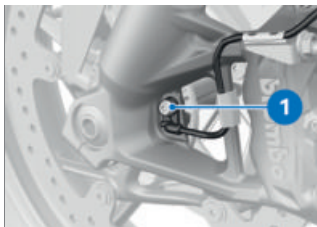
Brake pads not lying against the brake disc

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 clips **2** and **3**.



Insert the wheel speed sensor into the bore and tighten **new** screw **1** to the specified torque.

Wheel-speed sensor, front, to fork leg
M6 x 16
Thread-locking compound: micro-encapsulated
8 Nm

Remove the front-wheel stand.

without centre stand^{OE}
Remove the auxiliary stand.
Place the motorcycle on its side stand.

Removing rear wheel



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.

Make sure the ground is level and firm and place the motorcycle on a suitable auxiliary stand.

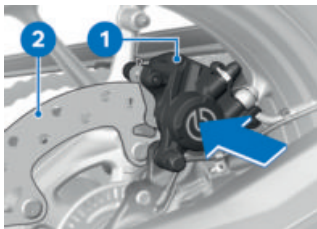
Install the rear-wheel stand.
(160)

with centre stand^{OE}

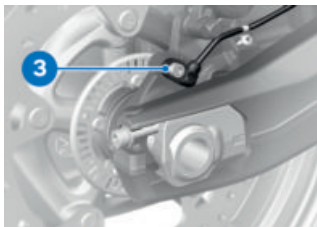
Make sure the ground is level and firm and place the motorcycle on its centre stand.

Slip wooden chocks or similar under the rear wheel to prevent it from dropping out after the quick-release axle has been removed.

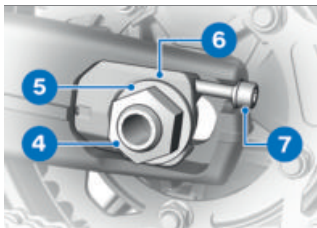
178 MAINTENANCE



Press the brake caliper **1** against the brake disc **2**. Brake pistons are pushed back.

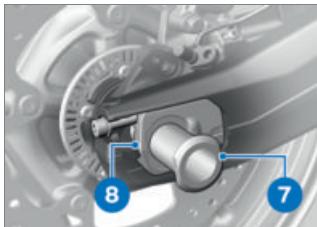


Remove screw **3** and remove the wheel speed sensor from its bore.



Remove axle nut **4** and washer **5**.

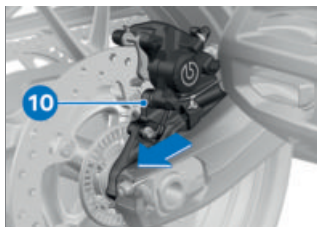
Back off adjusting screws **7** on both sides.
Remove chain tensioner **6** and push the axle forward as far as it will go.



Remove quick-release axle **7** and remove chain tensioner **8**.



Roll the rear wheel as far forward as possible and disengage chain **9** from the sprocket.



Roll the rear wheel to the rear and clear of the swinging arm and at the same time pull brake-caliper carrier **10** back far enough to allow the rear wheel to clear it.

 The chain sprocket and the spacer bushes on left and right are loose fits in the wheel. Make sure that these parts are not damaged or get lost on removal.

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

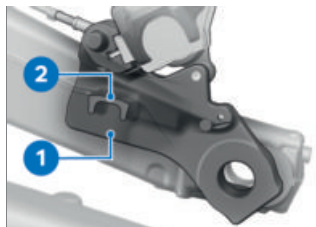
Tightening threaded fasteners to incorrect tightening torque

Damage, or threaded fasteners work loose

Always have the security of the fasteners checked by a specialist workshop, preferably an authorised BMW Motorrad dealer.

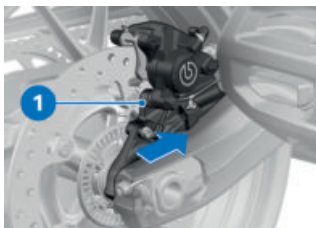
 The chain sprocket and the spacer bushes on left and right are loose fits in the wheel. When installing, make sure that no parts are not damaged or mislaid.

Roll the rear wheel on the support into the swinging arm as far as necessary to permit the brake-caliper to be inserted.

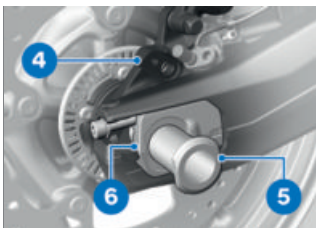


Insert brake-caliper mounting bracket **1** into guide **2**.

180 MAINTENANCE



Roll the rear wheel farther into the swinging arm, while pushing brake-caliper carrier **1** forward at the same time.



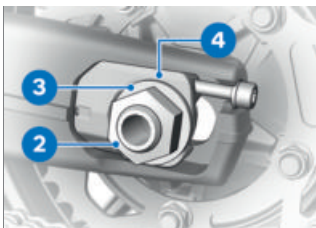
Insert right chain tensioner **6** into the swinging arm. Lubricate quick-release axle **5** and install it in brake caliper mounting bracket **4** and rear wheel.

Lubricant
Unirex N3

Make sure that the axle fits into the recess of the chain tensioner.

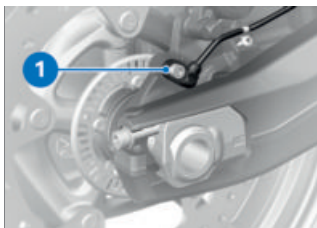


Roll the rear wheel as far forward as possible and loop chain **7** over the chain sprocket.



Insert left chain tensioner **4**. Install washer **3** and axle nut **2**, but do not tighten yet.

without centre stand^{OE}
Remove the auxiliary stand.



Insert the wheel speed sensor into the bore and tighten **new** screw **1** to the specified torque.

Wheel-speed sensor, rear, to brake caliper carrier
--

M6 x 16

Thread-locking compound: micro-encapsulated
--

8 Nm

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.

After completing work, operate the brake several times until the brake pads are bedded.

Adjust the chain tension.
(183)

Check the chain tension.
(182)

CHAIN

Lubricate the chain



ATTENTION

Inadequate cleaning and lubrication of the drive chain

Accelerated wear

Clean and lubricate the drive chain at regular intervals.

Lubricate the drive chain every third fuel stop.

Lubricate the chain more frequently if the motorcycle is ridden in wet, dusty or dirty conditions.

Switch the ignition off and select neutral.

Clean the drive chain with a suitable cleaning product, dry it and apply chain lubricant.

To prolong chain life, BMW Motorrad recommends using BMW Motorrad chain lubricant, or:

Lubricant

Chain spray, O-ring compatible

Wipe off excess lubricant.

182 MAINTENANCE

Lubricating and caring for low-maintenance chain with M Endurance chain^{OE}



ATTENTION

Inadequate cleaning and lubrication of the drive chain

Accelerated wear

Clean and lubricate the drive chain at regular intervals.



The low-maintenance drive chain is cleaned and lubricated as part of the annual service. For optimum durability, the low-maintenance chain can also be lubricated at intervals by application of a chain lubricant suitable for low-maintenance chains. If riding involves above-average wear and tear due to exposure to salt or dust and dirt, carry out lubrication at correspondingly more frequent intervals.

Switch the ignition off and select neutral.

Clean the drive chain with a suitable cleaning product, dry it and apply chain lubricant. To prolong chain life, BMW Motorrad recommends the use of BMW Motorrad chain lubricant or:

Lubricant

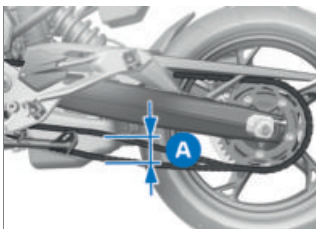
Chain spray, O-ring compatible

Wipe off excess lubricant.

Check the chain tension

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

Turn the rear wheel until it reaches the position of least chain sag.



Use a screwdriver to push the chain up and down at a point midway between the pinion and chain sprocket and measure difference **A**.

Chain deflection

35...45 mm (Motorcycle with no weight applied, supported on its side stand)

with low-slung^{OE}

Chain deflection

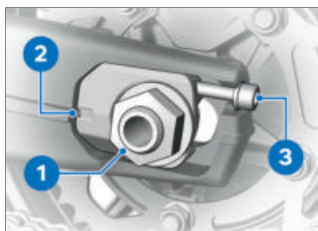
30...40 mm (Motorcycle with no weight applied, supported on its side stand)

If measured value is outside permitted tolerance:

Adjust the chain tension.
(183)

Adjust the chain tension

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



Slacken axle nut **1**.
Use adjusting screws **3** on left and right to adjust chain tension.

Check the chain tension.
(182)

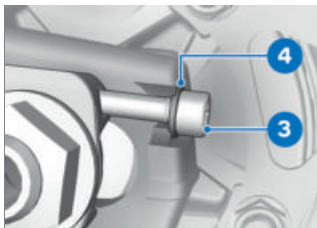
Make sure that scale readings **2** are the same on left and right.

Tighten quick-release axle nut **1** to the specified torque.

Rear quick-release axle in swinging arm

M24 x 1.5

125 Nm

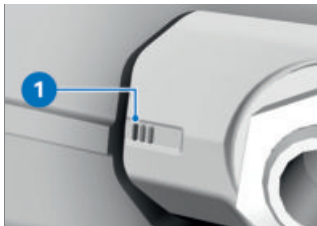


Check that washer **4** is seated all round against screw head **3**, correct if necessary.

Check the chain wear Requirement

Chain tension is correct.

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



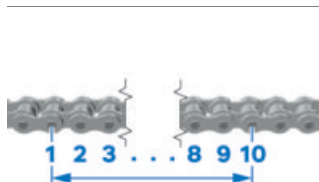
Check whether third marker line **1** is fully visible.

184 MAINTENANCE

If third marker line **1** is fully visible, check chain length:
Engage 1st gear.

Turn the rear wheel in the normal direction of travel until the chain is tensioned.

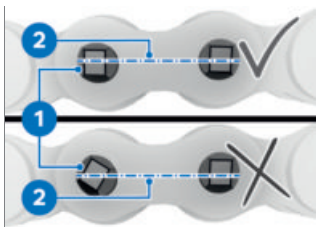
Measure the length of the chain, rivet centre to rivet centre, over 10 rivets below the rear wheel swinging arm. Turn the rear wheel in the forward direction of travel and measure chain length at 3 different points.



Permissible chain length

max. 144 mm (measured from the **centre** of 10 rivets, chain pulled taut)

If the chain has stretched to the maximum permissible length:
Consult a specialist workshop, preferably an authorised BMW Motorrad retailer.



Check whether a rivet head **1** has twisted out of line.

Rivet heads are parallel to the chain centreline **2**.

Chain riveting is OK.

If one or more rivet heads have twisted out of line:

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

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

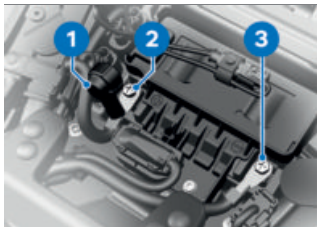
Jump-starting with a voltage greater than 12 V

Damage to the on-board electronics

Make sure that the battery of the donor vehicle has a voltage rating of 12 V.

186 MAINTENANCE

Remove the seat. (107)
When jump-starting the engine, do not disconnect the battery from the on-board electrical system.



Flip open positive terminal cover **1**.

Begin by connecting one end of the red jump lead to positive terminal **2** of the discharged battery and the other end 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.

 The spring-strut screw can be used as an alternative to the battery's negative terminal.

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 seat. (108)

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 char-

ging 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.

Recharging connected battery



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.

Recharging disconnected battery

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.

Disconnecting battery from motorcycle**ATTENTION****Battery not disconnected in accordance with correct procedure**

Risk of short-circuit

Always proceed in compliance with the specified disconnection sequence.

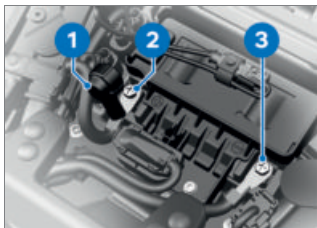
Make sure the ground is level and firm and place the motorcycle on its stand.

Remove the seat. (107)

Remove the toolkit.

with anti-theft alarm (DWA)^{OE}
If applicable, switch off the anti-theft alarm.

Switch off the ignition.



ATTENTION

Battery not disconnected in accordance with correct procedure

Risk of short-circuit

Always proceed in compliance with the specified disconnection sequence.

Disconnect negative battery cable **3**.
Flip open positive terminal cover **1**.
Disconnect positive battery cable **2**.

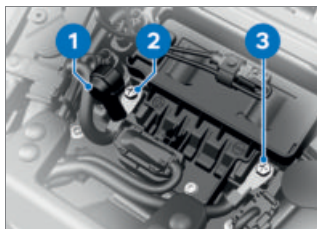
Connecting battery to motorcycle

ATTENTION

Battery not connected in accordance with correct procedure

Risk of short-circuit

Always proceed in compliance with specified installation sequence.



ATTENTION

Battery not connected in accordance with correct procedure

Risk of short-circuit

Always proceed in compliance with specified installation sequence.

Connect positive battery cable **2**.

190 MAINTENANCE

Wiring harness to battery

M6 x 13.5

5 Nm

Place positive terminal cover **1** in position.
Install negative battery cable **3**.

Wiring harness to battery

M6 x 13.5

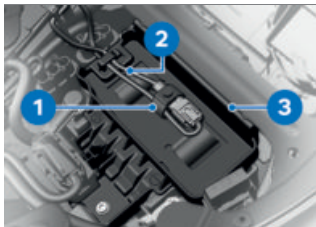
5 Nm

Install the onboard toolkit.
Install the seat. (108)

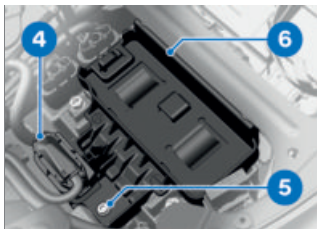
with anti-theft alarm (DWA)^{OE}
If applicable, switch on the anti-theft alarm.

Removing battery

Disconnect the battery from the motorcycle. (188)



Remove tensioning strap **1** and loosen wiring harness for number plate light **2** to release it from battery cover **3**.



Disengage diagnostic socket **4** from the holder.
Remove screw **5** and work battery cover **6** forward to remove.

Lift the battery up and out; work it slightly back and forth if it is difficult to remove.

Installing battery

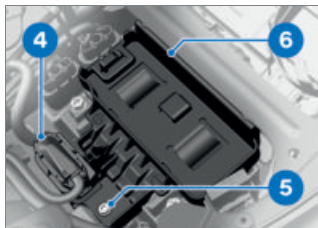
 If the vehicle has been disconnected from the battery for a significant time, the current date will have to be reset to guarantee correct operation of the service display.

 After a change of battery type, the Fault in the on-board battery. Limited onward journey possible. Drive carefully to nearest specialist workshop. message is displayed once.

If you decide that you would like to change to a different battery type for your motorcycle, it is very important to

consult a specialist workshop beforehand, preferably an authorised BMW Motorrad retailer.

Place the battery in the battery compartment with the positive terminal on the right in the direction of travel.



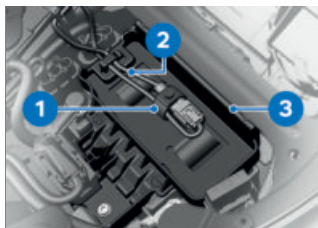
Install battery cover **6**.
Install screw **5**.

Battery holder to rear-wheel cover

M5 x 12

2 Nm

Secure diagnostic socket **4** in the holder.



Fit wiring harness for number plate light **2** in battery cover **3**.

Install tensioning strap **1**.
Connect the battery to motorcycle. (189)
Change the system settings. (70)

FUSES

Replace the main fuse



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.

Switch off the ignition.
Make sure the ground is level and firm and place the motorcycle on its stand.
Remove the seat. (107)

192 MAINTENANCE



Replace blown fuse **1**.

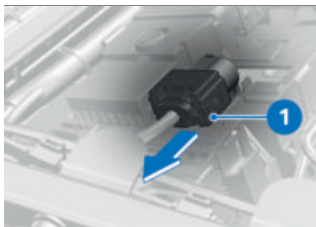
 If fuse defects recur frequently have the electric circuits checked by a specialist workshop, preferably an authorised BMW Motorrad retailer.

Main fuse

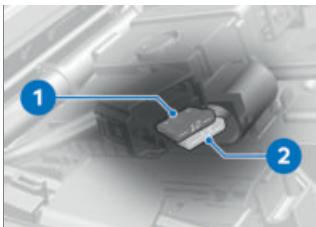
40 A (Voltage regulator)

Install the seat. (108)

Replacing fuses



Switch off the ignition.
Remove the seat. (107)
Remove fuse box **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.

Consult the fuse assignment diagram and replace blown fuse **1** or **2**.



If fuse defects recur frequently have the electric circuits checked by a specialist workshop, preferably an authorised BMW Motorrad retailer.

Fuse box

10 A (Slot 1: Instrument cluster, alarm system (DWA), ignition lock, diagnostic socket, ignition coil main relay)

Fuse box
7.5 A (Slot 2: Multifunction switch left, tyre pressure control (RDC))
Fuses
All electrical circuits are protected electronically. If a circuit has been switched off by the electronic fuse, the circuit is once again active after having switched on the ignition and as soon as the activating fault has been eliminated. Insert the fuse box. Install the seat. (108)

DIAGNOSTIC CONNECTOR

Disengaging diagnostic socket



CAUTION

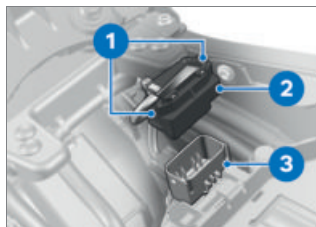
Incorrect disconnection of the diagnostic socket for on-board diagnosis

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 seat. (107)



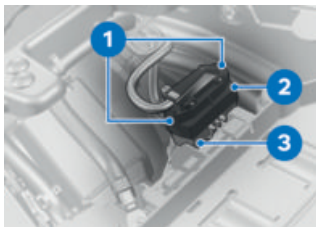
Press locks **1** on both sides.
Disengage diagnostic socket **2** from holder **3**.

194 MAINTENANCE

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 **3**.

The locks **1** engage.

Install the seat. (108)

ACCESSORIES

10

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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

Notes on use of power sockets:

Automatic shutdown

Power 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. The sockets continue to receive power for only 60 seconds after the ignition is switched off.

Operating electrical accessories

You can start using electrical accessories connected to the sockets only when the ignition is switched on.

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.

Cable routing

Note the following with regard to the routing of cables from sockets to items of electrical 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.

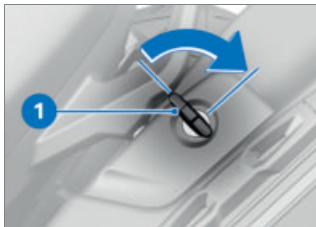
SOFT CASES

Install the soft cases

with case holder^{OA}
with soft cases^{OA}



Lower soft case **1** with retaining lugs **3** from above into holders **4** and against latch **2**.



Turn key **1** opposite to direction of travel and press the soft case into the latch. Soft case snaps into engagement with the latch.

Remove the soft cases

with case holder^{OA}
with soft cases^{OA}

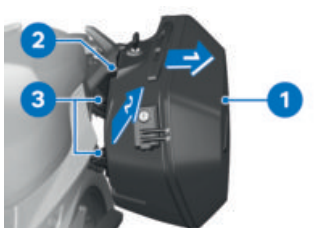
200 ACCESSORIES



Turn key **1** opposite to the direction of travel.



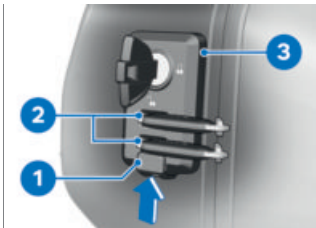
Turn key **1** clockwise.
The case lid lock is unlocked.



Pull soft case **1** in direction of arrow **1** to loosen and disengage it from stop **2**. Then lift soft case **1** in direction of arrow **2** out of retaining lugs **3**.

Unlocking the case lid

with case holder^{OA}
with soft cases^{OA}



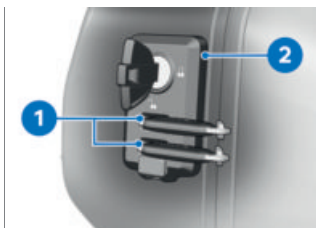
Press stop **1** and loosen and release zip fastener slide **2** from the lock **3**.

Locking the case lid

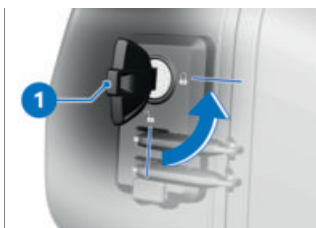
with case holder^{OA}
with soft cases^{OA}

Requirement

The case lid lock is unlocked.



Engage zip fastener slide **1** in the lock **2**.



Turn vehicle key **1** anticlockwise and remove.
The case lid lock is locked.

Maximum payload and maximum speed

with soft cases^{OA}

Note the maximum payload and the maximum permissible speed.

Maximum speed when riding with soft case installed

max. 180 km/h

Payload per soft case

max. 5 kg

TOPCASE

Opening topcase

with topcase^{OA}

with luggage carrier^{OA}



Turn key **1** counter-clockwise in the topcase lock to the **OPEN** position.



Push lock barrel **1** forward. Release lever **2** pops up. Pull release lever **2** all the way up and open the lid of the topcase.

202 ACCESSORIES

Closing topcase

with topcase^{OA}

with luggage carrier^{OA}



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 vehicle key is not left inside the topcase.



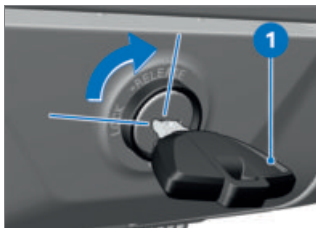
Push release lever **1** down until it engages.

Turn the key in the topcase lock to the **LOCK** position and remove the key from the lock.

Removing topcase

with topcase^{OA}

with luggage carrier^{OA}



Turn key **1** clockwise to the **RELEASE** position. 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 topcasewith topcase^{OA}with luggage carrier^{OA}

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 the **LOCK** position and remove the key from the lock.

Maximum payload and maximum speedwith topcase^{OA}with luggage carrier^{OA}

Note the maximum payload and the maximum permissible speed.

Maximum speed for riding with a loaded topcase
--

max. 180 km/h

Payload of topcase

max. 5 kg

NAVIGATION SYSTEM

with preparation for navigation system^{OE}

Secure the navigation device

 Navigation preparation is suitable from BMW Motorrad Navigator IV onward.

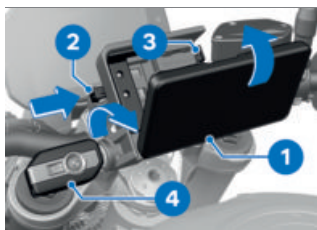
 The latching system of the Mount Cradle is not designed to protect against theft.

Always remove the navigation system and stow it away safely as soon as you finish your ride.

204 ACCESSORIES



Turn ignition key **1** counter-clockwise.
Pull 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 device **1** at bottom and pivot it toward the rear.
The navigation device engages with an audible click.
Push lock retainer **2** all the way to the **right**.
Lock **3** is locked.
Turn ignition key **4** clockwise.

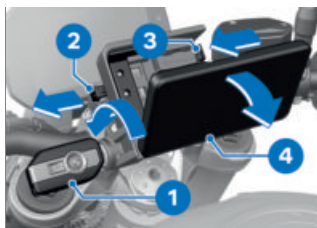
The navigation device is secured and the ignition key can be removed.

Remove the navigation device and install cover

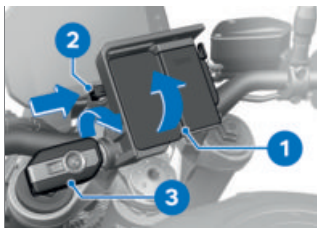
ATTENTION

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** counter-clockwise.
Pull lock retainer **2** all the way to the **left**.
Lock **3** is unlocked.
Push lock **3** all the way to the **left**.
The navigation device **4** is unlocked.
Tilt the navigation device **4** down and 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.

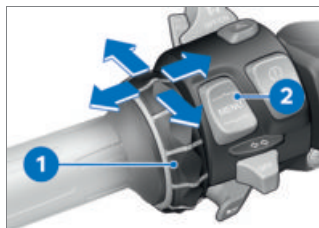
Operating navigation system

 The description below is based on the BMW Motorrad ConnectedRide Navigator.

 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 ConnectedRide Navigator is installed and the operating focus is switched to the

Navigator (73), some of its functions can be operated without the rider removing a hand from the handlebars. If the BMW Motorrad ConnectedRide Navigator is connected, all the connections on the vehicle are automatically disconnected and re-established via the Navigator. The Navigation, Media and Telephone functions are now connected via the Navigator.



The navigation system is operated using Multi-Controller **1** and MENU rocker button **2**.

Turning Multi-Controller 1 up/down

Select menu
Change volume
Zoom map

206 ACCESSORIES

Short-tilting Multi-Controller 1 to left/right

Confirm or cancel

Pressing bottom section of MENU rocker button 2

Switch operating focus to instrument cluster.

Special functions

The ConnectedRide Navigator has a n automatic operating focus changeover. For more details see the operating instructions of the ConnectedRide Navigator.

Security settings

Always follow the safety instructions in the operating instructions of the BMW Motorrad ConnectedRide Navigator.

CARE

1

1

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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.

212 CARE

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



ATTENTION

Damage to paintwork due to metal polish

Risk of damage
Do not treat painted surfaces and chrome-painted surfaces with metal polish.

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 vehicle 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.

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 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.

Clean the motorcycle.

Remove the battery.

Spray the brake and clutch lever pivots and the side 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.

214 CARE

Install the battery.

Comply with the checklist.

(125)

TECHNICAL DATA

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TROUBLESHOOTING CHART

The engine does not start:

Possible cause	Rectification
Side stand extended and gear engaged	Select neutral or retract the side stand.
Gear engaged and clutch not disengaged	Select neutral or pull the clutch lever.
No fuel in tank	Refuel.
Battery flat	Charge the battery when connected.
Starter motor overheating protection has tripped. The starter motor can be operated for a limited time only.	Allow the starter motor to cool down for approximately 1 minute before trying 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 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.

Active route guidance is not displayed in the instrument cluster.

Possible cause	Rectification
Navigation from the BMW Motorrad Connected app was not transmitted.	Call up the BMW Motorrad Connected app on the paired mobile device prior to departure.
The route guidance cannot be started.	Make sure that the mobile device has a data connection and check the map data on the mobile device.

220 TECHNICAL DATA

The instrument cluster remains dark after the ignition is switched on.

Possible cause	Rectification
There is a software error which leads to a function failure of the instrument cluster.	Switch ignition off and on again.
The instrument cluster is damaged.	Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad retailer.

THREADED FASTENERS

Front wheel	Value	Valid
Wheel-speed sensor, front, to fork leg		
M6 x 16, Replace screw micro-encapsulated	8 Nm	
Front-wheel cover to telescopic fork		
M5 x 14, Replace screw micro-encapsulated	2 Nm	
Brake caliper to telescopic fork		
M10 x 65	38 Nm	
Clamp of quick-release axle		
M8 x 35	Tightening sequence: Tighten screws six times in alternate sequence	
	19 Nm	
Axle screw in front quick-release axle		
M20 x 1.5	50 Nm	

222 TECHNICAL DATA

Rear wheel	Value	Valid
Wheel-speed sensor, rear, to brake caliper carrier		
M6 x 16, Replace screw micro-encapsulated	8 Nm	
Rear quick-release axle in swinging arm		
M24 x 1.5	125 Nm	

Mirror arm	Value	Valid
Mirror (locknut) to clamping piece		
M10 x 1.25	Left-hand thread, 22 Nm	
Adapter to clamping block		
M10 x 14 - 4.8	25 Nm	

FUEL

Recommended fuel grade	 Premium unleaded (max. 15% ethanol, E10/E15)  95 ROZ/RON 90 AKI
Alternative fuel grade	 Regular unleaded (power- and consumption-related restrictions.) (max. 15% ethanol, E10/E15)  91 ROZ/RON 87 AKI
Fuel tank capacity	approx. 13 l
Reserve fuel	approx. 4 l
Fuel consumption	4.2 l/100 km, in accordance with WMTC
CO2 emission	99 g/km, in accordance with WMTC
Exhaust emissions standard	EU 5
with Canada export ^{NV}	TIER 2, measured in accordance with FTP75

224 TECHNICAL DATA

ENGINE OIL

Engine oil, capacity	approx. 3.0 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. 0.5 l, Difference between MIN and MAX

BMW recommends

COOLANT

Coolant topping up quantity	0.2 l, Difference between MIN and MAX marks 1.8 l, Coolant circuit, total
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ENGINE, F 900 R (0K81)

Engine number location	Crankcase top section, near oil/coolant heat exchanger
Engine type	A24A09B
Engine design	Water-cooled, 2-cylinder 4-stroke engine with four valves per cylinder operated via rocker arms, two overhead camshafts and dry-sump lubrication
Displacement	895 cm ³
Compression ratio	13.1 : 1

Nominal capacity	77 kW, at rpm: 8500 min ⁻¹
Torque	93 Nm, at rpm: 6750 min ⁻¹
Maximum engine speed	max. 9250 min ⁻¹
Idle speed	1250 $\pm$ 50 min ⁻¹ , Engine at regular operating temperature

ENGINE, F 900 R A2 (0K91)

Engine number location	Crankcase top section, near oil/coolant heat exchanger
Engine type	A24A09B
Engine design	Water-cooled, 2-cylinder 4-stroke engine with four valves per cylinder operated via rocker arms, two overhead camshafts and dry-sump lubrication
Displacement	895 cm ³
Compression ratio	13.1 : 1
Nominal capacity	70 kW, at rpm: 7500 min ⁻¹
with power reduction to 35 kW ^{OE}	35 kW, at rpm: 5500 min ⁻¹
Torque	93 Nm, at rpm: 6750 min ⁻¹
with power reduction to 35 kW ^{OE}	70 Nm, at rpm: 4500 min ⁻¹
Maximum engine speed	max. 9250 min ⁻¹
Idle speed	1250 $\pm$ 50 min ⁻¹ , Engine at regular operating temperature

226 TECHNICAL DATA

CLUTCH

Clutch type	Multi-plate oil-bath (anti-hop-ping)
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TRANSMISSION

Type of transmission	Constant mesh six-speed transmission, integrated into engine block
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FINAL DRIVE

Gear ratio of the final drive	2.588 (44/17 teeth)
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FRAME

Type plate location	Frame, front left at steering head
Position of the vehicle identification number	Frame, front right

CHASSIS AND SUSPENSION

Front wheel

Type of front suspension	Upside-down telescopic fork
Spring travel, front	135 mm, at front wheel
with low-slung ^{OE}	115 mm, at front wheel

Rear wheel

Type of rear suspension	Cast aluminium double swinging arm
Spring travel at rear wheel	142 mm, at rear wheel
with low-slung ^{OE}	120 mm, at rear wheel

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. 4.0 mm, Wear limit

Rear wheel

Type of rear brake	Hydraulically actuated disc brake with 1-piston floating caliper and fixed disc
Brake-pad material, rear	Organic material
Brake disc thickness, rear	5.0 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	58

Rear wheel

Rear wheel rim size	5.50" x 17"
Tyre designation, rear	180/55 ZR 17
Load index, rear tyre	73

228 TECHNICAL DATA

Tyre pressure

Tyre pressure, front	2.5 bar, tyre cold
Tyre pressure, rear	2.9 bar, tyre cold

ELECTRICAL SYSTEM

Electrical rating of on-board sockets	max. 5 A, Total for all sockets
Main fuse	40 A, Voltage regulator
Fuse box	10 A, Slot 1: Instrument cluster, alarm system (DWA), ignition lock, diagnostic socket, ignition coil main relay 7.5 A, Slot 2: Multifunction switch left, tyre pressure control (RDC)

Battery

Battery type	AGM battery (Absorbent Glass Mat), maintenance-free
Battery rated voltage	12 V
Battery rated capacity	9 Ah
Battery type (For Keyless Ride radio-operated key)	
with Keyless Ride ^{OE}	CR 2032

Spark plugs

Spark plugs, manufacturer and designation	NGK LMAR8J-9E
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Lighting

All light sources	LED
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DIMENSIONS

Length of motorcycle	2140 mm, over rear wheel
Height of motorcycle	1130 mm, Over instrument cluster at DIN unladen weight
with low-slung ^{OE}	1104 mm, Over instrument cluster at DIN unladen weight
Width of motorcycle	870 mm, with mirrors
with handlebar end mirrors ^{OE}	998 mm, with mirrors
Height of rider's seat	815 mm, without rider, at DIN unladen weight
with Sport seat ^{OE}	835 mm, without rider, at DIN unladen weight
with low-slung ^{OE} with seat, low ^{OE}	760 mm, without rider, at DIN unladen weight
with seat, low ^{OE}	790 mm, without rider, at DIN unladen weight
Rider's inside-leg arc, heel to heel	1820 mm, at DIN unladen weight, without rider
with Sport seat ^{OE}	1860 mm, at DIN unladen weight, without rider
with low-slung ^{OE} with seat, low ^{OE}	1735 mm, at DIN unladen weight, without rider
with seat, low ^{OE}	1780 mm, at DIN unladen weight, without rider

230 TECHNICAL DATA

WEIGHTS

Vehicle kerb weight	208 kg, DIN unladen weight, ready for road, 90 % load of fuel, without optional extras (OE)
Permissible gross vehicle weight	430 kg
Maximum payload	222 kg
Payload per soft case	max. 5 kg
Payload of topcase	max. 5 kg

PERFORMANCE FIGURES

Top speed	>200 km/h
with power reduction to 35 kW ^{OE}	162 km/h
with soft cases ^{OA}	180 km/h
with topcase ^{OA}	180 km/h

SERVICE

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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

Disposal of an EOL vehicle

BMW Motorrad recommends disposing of a vehicle that has reached the end of its useful life by taking it to a manufacturer-designated receiving centre for EOL vehicles.

In general, the laws of the country in question apply for receiving and recycling of EOL vehicles. Information about recycling and sustainability can be viewed on the country-specific websites of the manufacturer. Additional information can be obtained on request from your authorised BMW Motorrad retailer or another qualified service partner, or from a specialist workshop.

Disposal of the rider's manual with France export^{NV}



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 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.

You can inquire about the content of BMW Motorrad services at your authorised BMW Motorrad retailer.

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 Booklet 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 workshop in the electronic service

booklet along with the corresponding 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 instance, 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 retailer will be happy to provide information about the mobility services available to you.

MAINTENANCE WORK

BMW pre-delivery check

The BMW pre-delivery check is performed by your authorised BMW Motorrad retailer before the vehicle is handed over 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.

238 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		
5			X		X		X		X		X		
6			X		X		X		X		X		
7				X			X			X			
8												X ^b	X ^b

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 Check valve clearances

5 Replace all spark plugs

6 Replace air-filter element

7 Oil change in the telescopic forks

8 Change brake fluid, entire system

^a annually or every 10000 km (whichever comes first)

^b for the first time after one year, then every two years

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.

- Performing vehicle test with BMW Motorrad diagnostic system
- Oil change in engine with filter conversion (long oil filter)
- Check the coolant level
- Checking brake-fluid level, front brakes
- Checking brake-fluid level, rear brakes
- Check/adjust the clutch play
- Checking chain tension and lubricating chain
- Checking tyre pressures
- Adjusting steering-head bearing
- Securing top fork bridge
- 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 diagnosis system
- Confirm 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

Check the coolant level

Check/adjust the clutch play

Check the front brake pads and brake discs for wear

Check the rear brake pads and brake disc for wear

Check the brake fluid level, front and rear

Visual inspection of the brake lines, brake hoses and connections

Check the tyre pressures and tread depth

Checking and lubricating the chain drive

Check the side stand's ease of movement

Check the ease of movement of the centre stand

Checking steering-head bearing

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

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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

Checking valve clearance

Renewing all spark plugs

Replacing the air filter element

Changing the oil in the telescopic fork

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

Checking valve clearance

Renewing all spark plugs

Replacing the air filter element

Changing the oil in the telescopic fork

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

Checking valve clearance

Renewing all spark plugs

Replacing the air filter element

Changing the oil in the telescopic fork

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

Checking valve clearance

Renewing all spark plugs

Replacing the air filter element

Changing the oil in the telescopic fork

Changing the brake fluid in the entire sys-

tem

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

Checking valve clearance

Renewing all spark plugs

Replacing the air filter element

Changing the oil in the telescopic fork

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

Checking valve clearance

Renewing all spark plugs

Replacing the air filter element

Changing the oil in the telescopic fork

Changing the brake fluid in the entire sys-

tem

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

Checking valve clearance

Renewing all spark plugs

Replacing the air filter element

Changing the oil in the telescopic fork

Changing the brake fluid in the entire system

Notes

Stamp, signature

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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

Checking valve clearance

Renewing all spark plugs

Replacing the air filter element

Changing the oil in the telescopic fork

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

Checking valve clearance

Renewing all spark plugs

Replacing the air filter element

Changing the oil in the telescopic fork

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

Checking valve clearance

Renewing all spark plugs

Replacing the air filter element

Changing the oil in the telescopic fork

Changing the brake fluid in the entire system

Notes

Stamp, signature

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[illegible]

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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).



Simplified UK Declaration of Conformity according to Radio Equipment Regulations 2017 of the United Kingdom.



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 dB μ V/m
HUF5794	Keyless Ride	433.92 MHz	10 mW
HUF8485	Keyless Ride	134.45 kHz	42 dB μ V/m
ZB001	Keyless Ride	134.5 kHz	allowed 66 dB μ A/ m @ 10m

Radio equipment	Component	Frequency band	Output/Transmission Power
ZB002	Keyless Ride	433.92 MHz	max. 10 dBm e.r.p
TXBM-WMR	DWA 8	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 Motor- rad-Lade- staufach	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
MR-Re14FCR	ACC	76 - 77 GHz	Peak max. 32 dBm Nom max. 27 dBm

Radio equipment	Component	Frequency band	Output/Transmission Power
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
TL1M-23NE	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
ZB006	Keyless Ride Active Key	134.5 kHz 433.92 MHz	< 10 mW e.r.p.
LIN2BTLE Gateway	Instrument Cluster	2400 MHz - 2483.5 MHz	< 3 dBm

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BATTERY DIRECTIVE

Batteries are generally subject to the battery directive 2023/1542/EU. Consumer information on the batteries can be found in the relevant sections of this manual.

Batteries are integrated in the following components:

Technical information

Component	Type	Contact
RDC sensor	17109	LID TECHNOLOGIES, 3 rue Giotto, 31520 Ramonville, Saint Agne, France E-mail: contact@lid.tech www.lid.tech
KLR Key	HUF5794	Huf Hülsbeck & Fürst GmbH & Co. KG, Steeger Str.17, 42551 Velbert, Germany E-mail: info@huf-group.com www.huf-group.com
KLR Key	ZB002	ZADI S.p.A., Via Carlo Marx 138, 41012 Carpi (MO), Italy E-mail: info@zadi.com www.zadi.com
KLR Key	ZB006	ZADI S.p.A., Via Carlo Marx, 138 41012 Carpi (MO), Italy E-mail: info@zadi.com www.zadi.com
DWA8 ECU	DWA8	Meta System S.p.A, Via Tancredi Galimberti 5, 42124 Reggio Emilia, Italy www.metasystemcorporation.com
DWA8 RC	TXBMWMR	Meta System S.p.A, Via Tancredi Galimberti 5, 42124 Reggio Emilia, Italy www.metasystemcorporation.com

Component	Type	Contact
DWA9	DWA9	Bury Sp. z o.o., ul. Wojska Polskiego 4, 39-300 Mielec, Poland E-mail: info@bury.com www.bury.com

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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

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



C-24711

Canada

This device complies with Industry Canada's licence-exempt RSSs and part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause interference, and

(2) this device must accept any interference, including interference that may cause undesired operation of the device.

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

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) l'appareil ne doit pas produire de brouillage, et

(2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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。

RADIO EQUIPMENT TWT INSTRUMENT CLUSTER

For all countries without EU

Model name: ICC65V2

Manufacturer

Robert Bosch GmbH
Robert-Bosch-Platz 1, 70839
Gerlingen, Germany

Technical Information

BT operating frq. Range: 2402 - 2480 MHz

BT version: 4.2 (no BTLE)

BT output power: < 4 dBm

WLAN operating frq. Range:
2412 - 2462 MHz

WLAN standards:

IEEE 802.11 b/g/n

WLAN output power: < 20 dBm

Country

Canada

This device complies with Industry Canada's licence-exempt RSSs and part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause interference, and

(2) this device must accept any interference, including interference that may cause undesired operation of the device.

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

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

(1) l'appareil ne doit pas produire de brouillage, et

(2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

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Radio Frequency (RF) Exposure Information

The radiated output power of the Wireless Device is below the Industry Canada (IC) radio frequency exposure limits. The Wireless Device should be used in such a manner such that the potential for human contact during normal operation is minimized. This device has also been evaluated and shown compliant with the IC RF Exposure limits under mobile exposure conditions.

Informations concernant l'exposition aux fréquences radio (RF)

La puissance de sortie émise par l'appareil de sans fil est inférieure à la limite d'exposition aux fréquences radio d'Industry Canada (IC). Utilisez l'appareil de sans fil de façon à minimiser les contacts humains lors du fonctionnement normal. Ce périphérique a également été évalué et démontré conforme aux limites d'exposition aux RF d'IC dans des conditions d'exposition à des appareils mobiles (antennes sont supérieures à 20 cm à partir du corps d'une personne).

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.

Paraguay



NR.: 2023-03-I-0156

RADIO EQUIPMENT TYRE PRESSURE CONTROL (RDC)

For all countries without EU

Model name:

Wus moto gen 3

Manufacturer

LDL Technology S.A.S.

Parc Technologique du Canal,
3 rue Giotto, 31520 Ramonville,
France

Technical information

Frequency band: 433,92 MHz

Maximum effective radiated power: 16,75 dBm

Country

Argentina



H-23422

Australia**Malaysia**

RBEF/29A/0919/S(19-3776)

Mexico

IFETEL: IFT/223/UCS/DG-AUSE/
2418/2019

Morocco

AGREE PAR L'ANRT MAROC

Numéro d'agrément :

MR 20577 ANRT 2019

Date d'agrément :

26/07/2019

Singapore

Complies with

IMDA Standards

N3305-19

South Africa

TA-2019/1178

APPROVED

Taiwan

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

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醫療 用電波輻射性電機設備之干擾。

KEYLESS RIDE ECU

For all Countries without EU

Model name: HUF8485

Manufacturer

Huf Hüsbeck & 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 accepter 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

KEYLESS RIDE KEY

For all Countries without EU

Model name: HUF5794**Manufacturer**Huf Hülsbeck & Fürst GmbH &
Co. KGSteege Str. 17, 42551 Velbert,
Germany

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Technical information

Frequency 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 accepter 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

I005 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

270 APPENDIX

THACO AUTO
C900248

RADIO EQUIPMENT ELEC- TRONIC 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 dB μ V/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

78578/SDPPI/2023

2651

Dilarang melakukan perubahan
Spesifikasi yang dapat Menim-
bulkan gangguan fisik dan/atau
elektromagnetik terhadap ling-
kungan sekitarnya

Paraguay

NR: 2020-11-I-0834

Philippines

Type Approved

No.: ESD-RCE-2023298

Serbia

P1620118300

Singapore

Complies with

IMDA Standards

N3504-20

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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

RADIO EQUIPMENT INTELLIGENT EMERGENCY CALL

For all countries without EU

Model name: TL1P22

Manufacturer

LG ELECTRONICS INC.
10, Magokjungang 10-ro,
Gangseo-gu Seoul, Republic of
Korea

Country

Canada

IC: 2703H-TM04ANNABM1

This equipment complies with IC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 3.5 cm between the radiator & your body. 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.

The manufacturer is not responsible for any radio or tv interference caused by unauthorized modifications to this equipment. Such modifications could void

the user's authority to operate the equipment.

Avis d'Industrie Canada sur l'exposition aux rayonnements

Cet appareil est conforme aux limites d'exposition aux rayonnements d'Industrie Canada pour un environnement non contrôlé. Il doit être installé de façon à garder une distance minimale de 3.5 centimètres entre la source de rayonnements et votre corps. L'exploitation est autorisée aux deux conditions suivantes :

(1) l'appareil ne doit pas produire de brouillage, et

(2) l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Le fabricant n'est pas responsable des interférences radioélectriques causées par des modifications non autorisées apportées à cet appareil. de telles modifications pourrait annuler l'autorisation accordée à l'utilisateur de faire fonctionner l'appareil.

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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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80788 Munich, Germany

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Original rider's manual, printed in Germany.

Important data for refuelling:

Fuel

Alternative fuel grade	 Regular unleaded (power- and consumption-related restrictions.) (max. 15% ethanol, E10/E15)  91 ROZ/RON 87 AKI
Recommended fuel grade	 Premium unleaded (max. 15% ethanol, E10/E15)  95 ROZ/RON 90 AKI
Fuel tank capacity	approx. 13 l
Reserve fuel	approx. 4 l
Tyre pressure	
Tyre pressure, front	2.5 bar, tyre cold
Tyre pressure, rear	2.9 bar, tyre cold

For further information on all aspects of your vehicle, visit: [bmw-motorrad.com](https://www.bmw-motorrad.com)

