



**BMW
MOTORRAD**

RIDER'S MANUAL C 400 GT



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

OVERVIEW

Chapter 2 of this rider's manual will provide you with an initial overview of your Scooter. All maintenance and repair work on the vehicle is documented in Chapter 13. The record of the maintenance work you have had performed on your vehicle is a precondition for generous treatment of goodwill claims. When the time comes to sell your Scooter, please remember to hand over this rider's manual to the new owner. It is an important part of the vehicle.

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 ac-

cessory 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.
EWS	Electronic immobiliser.
DWA	Anti-theft alarm.
ABS	Anti-lock brake system.
DTC	Dynamic Traction Control.
CVT	Continuously Variable Transmission. Transmission with continuously variable ratio

EQUIPMENT

When you ordered your Scooter, you chose various items of custom equipment. This Rider's Manual describes optional extras (OE) offered by BMW and selected optional accessories (OA). 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 vehicle might not be exactly as illustrated. If your Scooter was supplied with equipment not described in this Rider's Manual, you will find these features described in separate operating instructions.

TECHNICAL DATA

All dimensions, weights and power ratings stated in the rider's manual are quoted to the standards and comply with the tolerance requirements of the Deutsches Institut für Normung e. V. (DIN). Technical data and specifications in this rider's manual are guide values. The vehicle-specific data may deviate from these, for example, as a result of selected optional equipment, the national-market version or country-specific measuring procedures. Detailed values can be taken from the vehicle registration documents, or can be obtained from your authorised BMW Motorrad retailer or another qualified service partner or specialist workshop. The specifications in the vehicle documents always have priority over the information provided in this rider's manual.

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CURRENCY

The high safety and quality standards of BMW Scooters 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. Nor can BMW Motorrad entirely rule out errors and omissions. We hope you will appreciate that no claims can be entertained on the basis of the data, illustrations or descriptions in these operating instructions.

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.

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.

8 GENERAL INSTRUCTIONS

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 functions. 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:

- 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

10 GENERAL INSTRUCTIONS

data can be deleted at any time.

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

Incorporation of mobile devices

Depending on the equipment, mobile devices connected to the vehicle, for example smartphones, can be controlled using the operating elements of the vehicle.

The image and sound of the mobile device can then be output via the multimedia system. At the same time, specific information is transferred to the mobile device. Depending on the type of integration, this includes, for example, position data and additional general vehicle information. This enables optimal use of the selected apps, for example navigation or music playback.

The type of additional data processing is determined by the provider of the respective app. The scope of the possible settings depends on the corres-

ponding 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 content that is exchanged in this instance. Information on the type, scope and purpose of the data capture and use of personal data as part of the services of third parties can be ascertained from the individual provider.

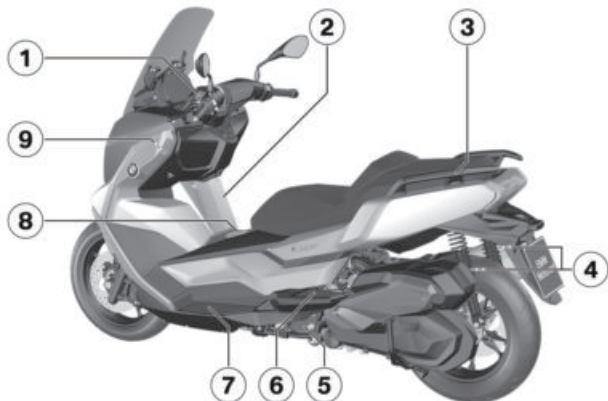
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GENERAL VIEW, LEFT SIDE



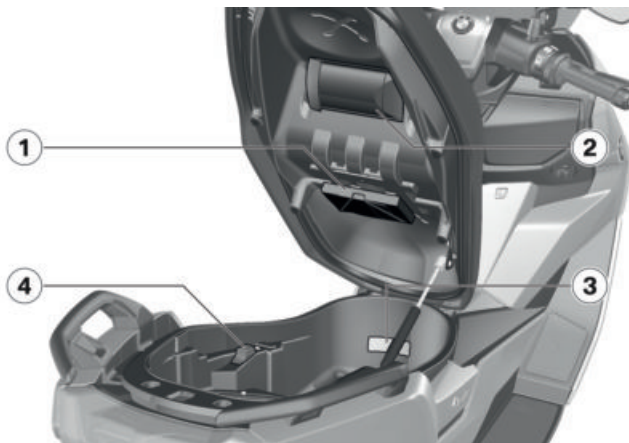
- | | |
|---|---|
| 1 Brake-fluid reservoir for the rear-wheel brake (▮▮▮ 132) | 8 Fuel filler neck (▮▮▮ 109) |
| 2 Under the battery cover:
Battery (▮▮▮ 151)
Fuses (▮▮▮ 147)
Diagnostic connector (▮▮▮ 159) | 9 Coolant expansion tank (under left fairing side panel) (▮▮▮ 134) |
| 3 Passenger grab handle | |
| 4 Adjustment of spring pre-load (▮▮▮ 95) | |
| 5 Vehicle identification number (frame, left, on swinging arm bearing) | |
| 6 Passenger footboard | |
| 7 Rider's footboards | |

GENERAL VIEW, RIGHT SIDE

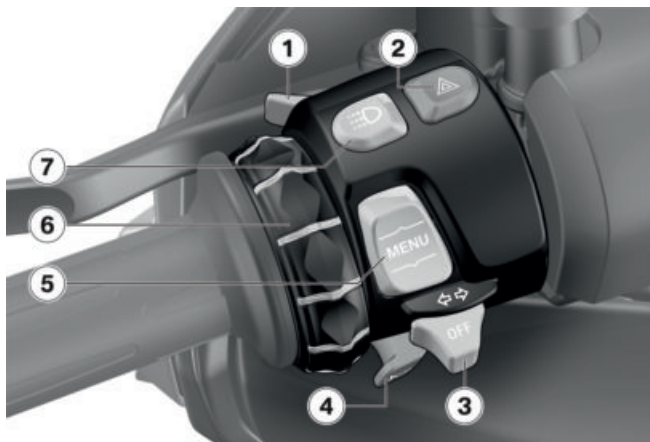
- | | |
|--|--|
| 1 Brake-fluid reservoir for the front-wheel brake (► 132) | 7 Emergency release for seat
Open/close the seat. (► 87) |
| 2 Coolant-level indicator (► 133) | 8 Passenger grab handle |
| 3 Type plate (on the right frame tube)
Vehicle identification number (on right frame tube) | |
| 4 Rider's footboards | |
| 5 Passenger footboard | |
| 6 Oil filler opening and oil dipstick (► 128) | |

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UNDERNEATH THE SEAT



- 1 Rider's manual
- 2 Toolkit (➡ 127)
- 3 Payload table
Tyre pressures table
Note on use of accessory products
- 4 Unlocking rear storage compartment (BMW flex-case) (➡ 90)

MULTIFUNCTION SWITCH, LEFT

- 1** High-beam headlight and headlight flasher (➡ 80)
- 2** Hazard warning lights (➡ 81)
- 3** Turn indicators (➡ 82)
- 4** Horn
- 5** MENU rocker button (➡ 61)
- 6** Multi-Controller (➡ 60)
- 7** Daytime riding light (➡ 80)

18 GENERAL VIEWS

MULTIFUNCTION SWITCH, RIGHT



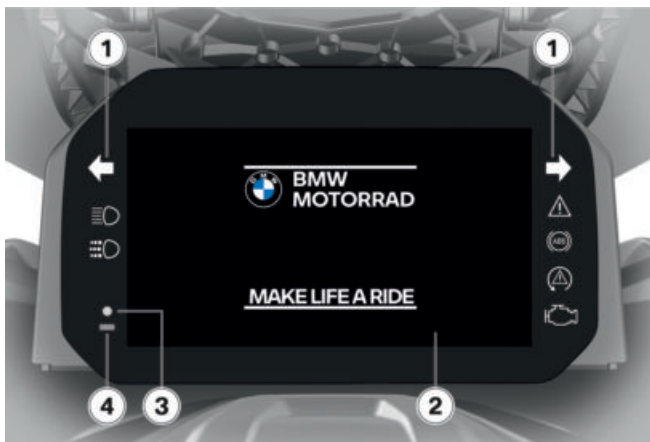
- 1 Heated grips (➡ 86)
- 2 Seat heating (➡ 86)
- 3 Emergency-off switch (kill switch) (➡ 79)
- 4 Starter button (➡ 103)

COCKPIT

- 1** Control module for Key-less Ride (► 74)
- 2** Unlocking storage compartment, right (► 88)
- 3** Storage compartment, right (► 88)
Socket (in storage compartment) (► 164)
USB charging socket (in storage compartment) (► 165)
- 4** Unlocking seat (► 87)
- 5** Storage compartment, left (► 88)
- 6** Unlocking storage compartment, left (► 88)

20 GENERAL VIEWS

INSTRUMENT CLUSTER



- 1** Indicator and warning lights (➡ 24)
- 2** Instrument cluster (➡ 28)
- 3** Indicator light
—with anti-theft alarm (DWA)^{OE}
Alarm signal (➡ 84)
Keyless Ride
Switch on the ignition. (➡ 75)
- 4** Photosensor (for automatic measurement of ambient brightness)

INSTRUMENT CLUSTER

—with Connectivity Pro^{OE}



- 1** Indicator and warning lights (►► 24)
- 2** Instrument cluster (►► 29)
- 3** Indicator light
—with anti-theft alarm (DWA)^{OE}
Alarm signal (►► 84)
Keyless Ride
Switch on the ignition. (►► 75)
- 4** Photosensor (for automatic measurement of ambient brightness)

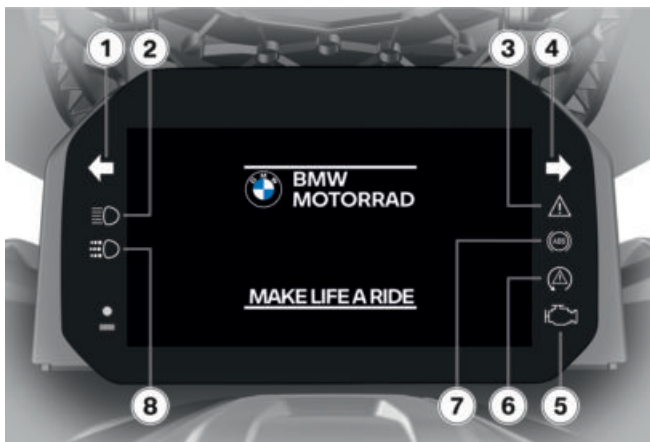
STATUS INDICATORS

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24 STATUS INDICATORS

INDICATOR AND WARNING LIGHTS



- 1 Turn indicators, left
(➡ 82)
- 2 High-beam headlight
(➡ 80)
- 3 General warning light
(➡ 35)
- 4 Turn indicators, right
(➡ 82)
- 5 Warning light, drive malfunction
Drive malfunction (➡ 48)
- 6 DTC (➡ 55)
- 7 ABS (➡ 54)
- 8 Daytime riding light
(➡ 80)

INDICATOR AND WARNING LIGHTS

—with Connectivity Pro^{OE}

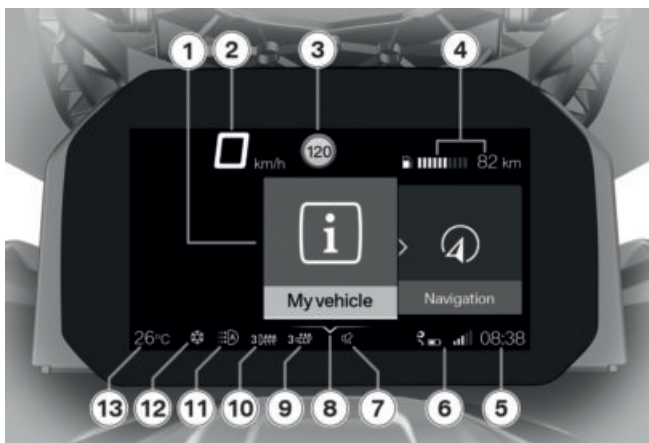


- 1** Turn indicators, left
(➡ 82)
- 2** High-beam headlight
(➡ 80)
- 3** General warning light
(➡ 35)
- 4** Turn indicators, right
(➡ 82)
- 5** Warning light, drive malfunction
Drive malfunction (➡ 48)
- 6** DTC (➡ 55)
- 7** ABS (➡ 54)
- 8** Daytime riding light
(➡ 80)

26 STATUS INDICATORS

MENU VIEW

START SCREEN



- | | |
|---|--|
| 1 Menu section | 11 Automatic daytime riding light (81) |
| 2 Speedometer | 12 Outside temperature warning (42) |
| 3 Speed Limit Info (69) | 13 Ambient temperature |
| 4 Rider info. status line (63) | |
| 5 Clock (64) | |
| 6 Connection status
Perform Bluetooth pairing.
(65) | |
| 7 Muting (64) | |
| 8 Operating help | |
| 9 Rider's seat heating
(86) | |
| 10 Heated grips (86) | |

START SCREEN

—with Connectivity Pro^{OE}

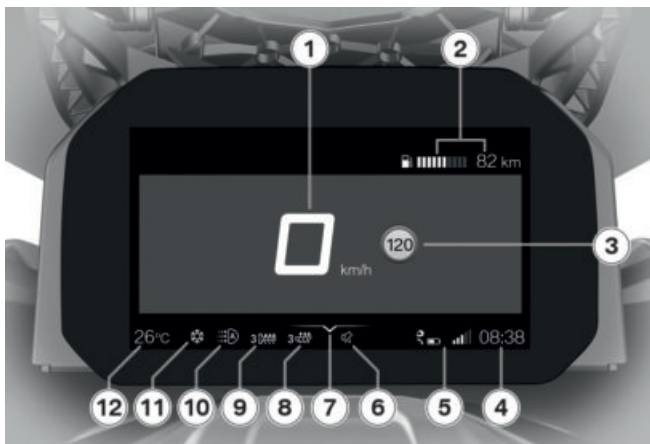


- | | |
|---|---|
| 1 Menu section | 11 Automatic daytime riding light (►►► 81) |
| 2 Speed Limit Info (►►► 69) | 12 Outside temperature warning (►►► 42) |
| 3 Speedometer | 13 Ambient temperature |
| 4 Rider info. status line (►►► 63) | |
| 5 Clock (►►► 64) | |
| 6 Connection status
Perform Bluetooth pairing. (►►► 65) | |
| 7 Operating help | |
| 8 Muting (►►► 64) | |
| 9 Rider's seat heating (►►► 86) | |
| 10 Heated grips (►►► 86) | |

28 STATUS INDICATORS

PURE RIDE VIEW

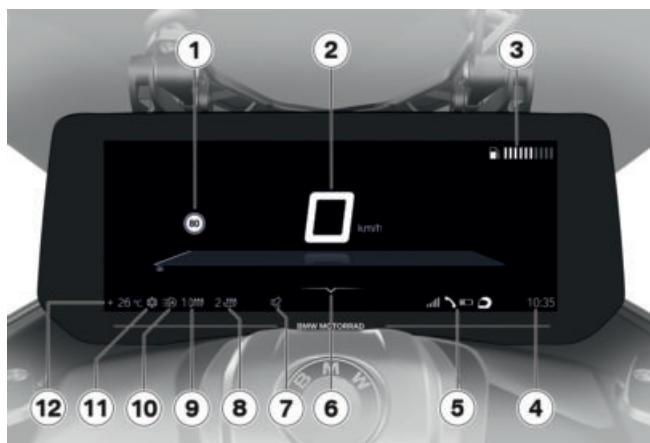
START SCREEN



- | | |
|---|--|
| 1 Speedometer | 11 Automatic daytime riding light (81) |
| 2 Rider info. status line (63) | 12 Ambient temperature |
| 3 Speed Limit Info (69) | |
| 4 Clock (64) | |
| 5 Connection status (65) | |
| 6 Muting (64) | |
| 7 Operating help | |
| 8 Rider's seat heating (86) | |
| 9 Heated grips (86) | |
| 10 Outside temperature warning (42) | |

START SCREEN

—with Connectivity Pro^{OE}



- | | |
|---|--|
| 1 Speed Limit Info (➡ 69) | 11 Outside temperature warning (➡ 42) |
| 2 Speedometer | 12 Ambient temperature |
| 3 Rider info. status line (➡ 63) | |
| 4 Clock (➡ 64) | |
| 5 Connection status (➡ 65) | |
| 6 Operating help | |
| 7 Muting (➡ 64) | |
| 8 Rider's seat heating (➡ 86) | |
| 9 Heated grips (➡ 86) | |
| 10 Automatic daytime riding light (➡ 81) | |

30 STATUS INDICATORS

Range

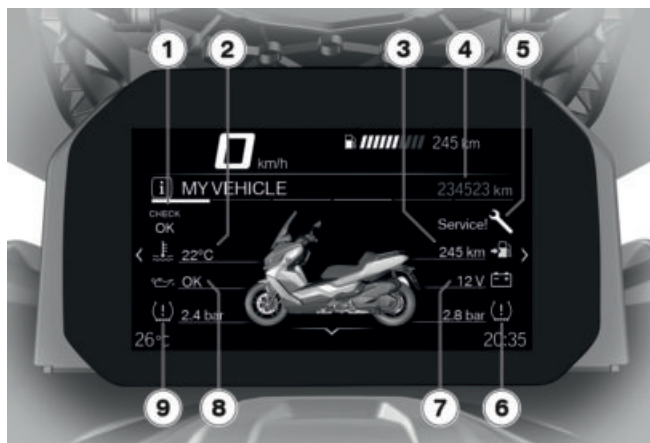


Range readout **1** indicates how far you can ride with the fuel remaining in the tank. This distance is calculated on the basis of average consumption and the quantity of fuel on board.

- 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.

MY VEHICLE VIEW

START SCREEN

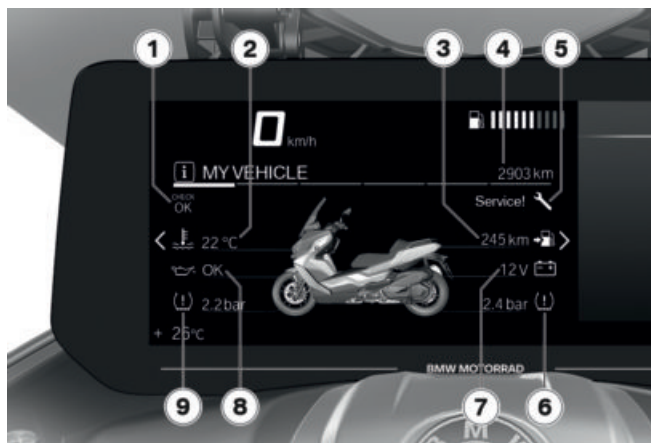


- 1 Check Control display
Mode of presentation
(➡ 35)
- 2 Coolant temperature
(➡ 47)
- 3 Range (➡ 30)
- 4 Odometer
- 5 Service display (➡ 57)
- 6 Tyre pressure, rear
(➡ 33)
- 7 On-board voltage
(➡ 153)
- 8 Engine oil level (➡ 47)
- 9 Tyre pressure, front
(➡ 33)

32 STATUS INDICATORS

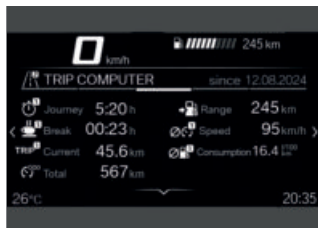
START SCREEN

—with Connectivity Pro^{OE}



- 1 Check Control display
Mode of presentation
(➡ 35)
- 2 Coolant temperature
(➡ 47)
- 3 Range (➡ 30)
- 4 Odometer
- 5 Service display (➡ 57)
- 6 Tyre pressure, rear
(➡ 33)
- 7 On-board voltage
(➡ 153)
- 8 Engine oil level (➡ 47)
- 9 Tyre pressure, front
(➡ 33)

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)^{OA}

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.)

34 STATUS INDICATORS



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

20 °C



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



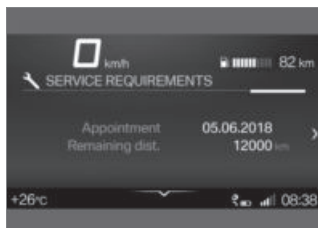
If the value in question is close to the limit of the permissible tolerance range, the reading is accompanied by the 'General' warning light showing yellow.



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

For further information about the BMW Motorrad RDC, see the section entitled "Engineering details" from page (➡ 122) onward.

Service requirements



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

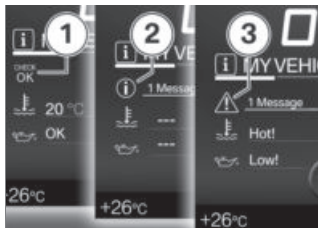
WARNING INDICATORS

Mode of presentation

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



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



Check Control display

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

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



Values display

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

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–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.

Warnings, overview

Indicator and warning lights	Display text	Meaning
	 is displayed.	Outside temperature warning (▮▮▮ 42)
 shows yellow.	 Remote key not in range.	Radio-operated key out of range (▮▮▮ 42)
 shows yellow.	 Keyless Ride failure	Keyless Ride failed (▮▮▮ 43)
 shows yellow.	 Remote key battery at 50%.  Remote key battery weak.	Replacing battery of radio-operated key (▮▮▮ 43)
	 is displayed in yellow.	Voltage of the vehicle electrical system too low (▮▮▮ 43)
	 Vehicle voltage low.	
 shows red.	 is displayed in red.	Voltage of the vehicle electrical system critical (▮▮▮ 44)
	 Vehicle voltage critical!	
 flashes yellow.	 is displayed in red.	Charging voltage critical (▮▮▮ 44)
	 Battery voltage critical!	
 shows yellow.	 The faulty bulb is displayed.	Bulb faulty (▮▮▮ 45)
	 Alarm system batt. capacity weak.	Anti-theft alarm battery weak (▮▮▮ 46)

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Indicator and warning lights	Display text	Meaning
	Alarm system battery empty.	Anti-theft alarm battery flat (▣▣▣▣▶ 46)
	Alarm system failure	DWA failed (▣▣▣▣▶ 46)
	Engine oil level. Check engine oil level.	Engine-oil level too low (▣▣▣▣▶ 47)
 shows red.	 Coolant temperature too high!	Coolant temperature too high (▣▣▣▣▶ 47)
 shows.	 Engine!	Drive malfunction (▣▣▣▣▶ 48)
 flashes red.	 Serious fault in the engine control!	Serious drive malfunction (▣▣▣▣▶ 48)
 flashes.		
 shows yellow.	 No communication with engine control.	Engine control failed (▣▣▣▣▶ 48)
 shows yellow.	 Fault in the engine control.	Engine in emergency-operation mode (▣▣▣▣▶ 49)
 flashes yellow.	 Serious fault in the engine control!	Serious fault in engine control (▣▣▣▣▶ 49)

Indicator and warning lights	Display text	Meaning
 shows yellow.	 is displayed in yellow.  Tyre pressure does not match setpoint	Tyre pressure close to limit of permitted tolerance (▮▮▮ 50)
 flashes red.	 is displayed in red.  Tyre pressure does not match setpoint  Tyre press. control. Loss of pressure.	Tyre pressure outside permitted tolerance (▮▮▮ 50)
	 "---"	Transmission fault (▮▮▮ 51)
 shows yellow.	 "---"	Sensor faulty or system fault (▮▮▮ 52)
 shows yellow.	 RDC sensor battery weak.	Battery for tyre pressure sensor weak (▮▮▮ 52)
 shows yellow.	 Tyre pressure check failure!	Tyre pressure monitoring (RDC) failed (▮▮▮ 53)
	 Side stand monitoring faulty.	Side stand monitoring is faulty (▮▮▮ 53)
 flashes.		ABS self-diagnosis not completed (▮▮▮ 53)

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Indicator and warning lights	Display text	Meaning
 shows yellow.  shows.	 Limited ABS availability!	ABS fault (→ 53)
 shows yellow.  shows.	 ABS failure!	ABS failed (→ 54)
 shows yellow.  shows.	 ABS Pro failure!	ABS Pro failed (→ 54)
 shows yellow.	 ABS indicator light faulty!	ABS indicator and warning light failed (→ 55)
 quick-flashes.		DTC intervention (→ 55)
 slow-flashes.		DTC self-diagnosis not completed (→ 55)
 shows yellow.  shows.	 Traction control failure!	DTC fault (→ 55)
	 Engine start not poss. BMW flex-case open. Close BMW flexcase.	BMW flexcase opened (→ 56)

Indicator and warning lights	Display text	Meaning
	Tank reserve level reached. Ride to the next filling station.	Fuel down to reserve (▬▬▬➔ 56)
	flashes green.	Hazard warning lights system is switched on (▬▬▬➔ 56)
	flashes green.	
	is displayed in white. Service due!	Service due (▬▬▬➔ 57)
	shows yellow.	
	is displayed in yellow. Service overdue!	Service-due date has passed (▬▬▬➔ 57)

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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



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.
- Replace the battery of the radio-operated key. (► 77)
- Use the spare key to continue your journey.

- Battery of the radio-operated key is empty or loss of the radio-operated key. (▣➡ 77)
- 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



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.
- » Engine start with Keyless Ride no longer possible.
- » DWA can no longer be activated.

Replacing battery of radio-operated key



shows yellow.



Remote key battery at 50%. No functional impairment.



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. (▣➡ 77)

Voltage of the vehicle electrical system too low



is displayed in yellow.



Vehicle voltage low. Switch off unnecessary consumers.

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

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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 red.



is displayed in red.



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



WARNING

Failure of the vehicle systems

Risk of accident

- Do not continue your journey.

Battery is not being charged. If you continue to ride the motorcycle the on-board electronics will drain the battery.



If the 12 V battery is not correctly installed or if the polarity of the terminals is reversed (e.g. in an attempt to jump-start the vehicle), this can cause the fuse for the alternator regulator to blow.

Possible cause:

Alternator or alternator drive faulty.

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

Charging voltage critical



flashes yellow.



is displayed in red.

 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. If you continue to ride the motorcycle the on-board electronics will drain the battery.
Possible cause:

Alternator or alternator drive faulty.

- 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!

 Number plate light faulty!

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

—Have it checked by a specialist workshop.

WARNING

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

Safety risk

- Replace defective bulbs as soon as possible; always carry a complete set of spare bulbs if possible.

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Possible cause:

Several lights front and rear faulty.

- Please read the fault descriptions listed earlier.

Anti-theft alarm battery weak —with anti-theft alarm (DWA)^{OE}

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

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

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

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

Anti-theft alarm battery flat —with anti-theft alarm (DWA)^{OE}

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

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

Possible cause:

The integral battery in the anti-theft alarm has lost its entire original capacity. There is no assurance that the anti-theft alarm will be operational if the vehicle's battery is disconnected.

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

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

 Alarm system failure
Have it checked by a specialist workshop.

Possible cause:

The DWA control unit has diagnosed a communication fault.

- Consult a specialist workshop, preferably an authorised BMW Motorrad retailer.
- » DWA can no longer be activated or deactivated.
» False alarm possible.

Electronic oil-level check

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

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

- Rider is sitting on the vehicle and vehicle has just been ridden at a speed of at least min. 10 km/h.
- Engine idling for at least 20 seconds.
- Engine is at operating temperature.
- Vehicle is standing upright on a smooth, level surface.
- Side stand is retracted and vehicle is not propped on its centre stand.
- The suspension strut is appropriately set for the load status, or D-ESA is in Auto load mode.

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

Engine-oil level too low



Engine oil level.
Check engine oil level.

Possible cause:

The electronic oil-level sensor has registered an excessively low oil level. Check the engine oil level using the oil dipstick at the next refuelling stop:

- Checking engine oil level (11111 128).

If the oil level is too low:

- Topping up the engine oil.

Coolant temperature too high



shows red.



Coolant temperature too high! Check coolant level. Continue driving in part. load to cool down.



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. (11111 133)

If the coolant level is too low:

- Have the cooling system checked by a specialist workshop, preferably an

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authorised BMW Motorrad Retailer.

Possible cause:

The coolant or engine oil temperature is too high.

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

Drive malfunction



shows.



Engine! Have it checked by a specialist workshop.

Possible cause:

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

- Have the fault rectified by a specialist workshop, preferably an authorised BMW Motorrad retailer.
- » You can continue riding; pollutant emissions are higher than the threshold values.

Serious drive malfunction



flashes red.



flashes.



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

Possible cause:

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

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

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

Engine control failed



shows yellow.



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

Possible cause:

Communication with the engine control unit has failed.

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

Engine in emergency-operation mode



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 yellow.



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.

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Possible cause:

The engine control unit has diagnosed a fault that can lead to serious consequential faults.

The engine is in emergency-operation mode.

- 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.

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

Tyre pressure close to limit of permitted tolerance

—with tyre pressure control (RDC)^{OA}



shows yellow.



is displayed in yellow.



Tyre pressure does not match setpoint
Check tyre pressure.

Possible cause:

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

- Correct tyre pressure.
- Before adjusting tyre pressure, read the information on temperature compensation and adjusting pressure in the

section entitled "Engineering details":

- » Temperature compensation (111 123)
- » Pressure adaptation (111 123)
- » Find the correct tyre pressures in the following places:
 - Back cover of the rider's manual
 - Instrument cluster in the TYRE PRESSURE view
 - Tyre pressures table

Tyre pressure outside permitted tolerance

—with tyre pressure control (RDC)^{OA}



flashes red.



is displayed in red.



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



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

**WARNING****Tyre pressure outside the permitted tolerance.**

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

- Adapt your style of riding accordingly.

Possible cause:

Measured tyre pressure is outside permitted tolerance.

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

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

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

- » Temperature compensation (123)
 - » Pressure adaptation (123)
 - » 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)^{OA}



"---"

Possible cause:

The vehicle has not reached the minimum speed (122).



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 ac-

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company 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)^{OA}



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.

Battery for tyre pressure sensor weak

—with tyre pressure control (RDC)^{OA}



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

—with tyre pressure control (RDC)^{OA}



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.

Side stand monitoring is faulty



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

Possible cause:

The side-stand switch or its wiring are damaged. The engine is shut down when speed drops below 5 km/h. You cannot resume your journey.

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

ABS self-diagnosis not completed



flashes.

Possible cause:

Self-diagnosis did not complete, so the ABS function is not available. The Scooter must be ridden at a speed of at least 5 km/h in order for ABS self-diagnosis to complete.

- 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.

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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 (117).

- 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 (117).

- 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 (117).
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad retailer.

ABS indicator and warning light failed

—with Connectivity Pro^{OE}



shows yellow.



ABS indicator light faulty! Onward journey possible. Check by specialist workshop required.

Possible cause:

The ABS indicator and warning light 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.

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 sensors to be checked: min. 5 km/h)

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

DTC fault



shows yellow.



shows.



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

56 STATUS INDICATORS

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 (120).
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad retailer.

BMW flexcase opened



Engine start not poss. BMW flexcase open. Close BMW flexcase.

Possible cause:

The BMW flexcase is opened.

- Close the BMW flexcase.
- Close the rear storage compartment (BMW flexcase). (109)

Fuel down to reserve



Tank reserve level reached. Ride to the next filling station.



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 volume

approx. 3 l

- Refuel. (109)

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. (▮▮▮ 81)

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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60 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

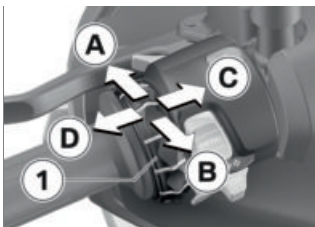
Distraction from the road and loss of control

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.

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: 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.

Display Pure view

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

Urban view

- without Connectivity Pro^{OE}



The Urban view also displays the engine speed with a numerical display **1** and a bar display **2**.

This can be called up via the main menu.

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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** 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:

- Break
- Journey
- Current (TRIP 1)
- Speed
- Consump.

Call up the trip computer

- Call up the on-board computer. (➡ 62)
- 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 rider info. 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 rider info. status line. (➡ 63)



- 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

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Riding time 2



Break 1



Break 2



Speed 1 (Average)



Speed 2 (Average)



Range



Fuel tank level

Adjusting volume

- Connect the rider's and passenger's helmets. (►► 66)
- 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

- without Connectivity Pro^{OE}
- with preparation for navigation system^{OE}

Requirement

The ConnectedRide 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

Bluetooth coupling

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 coupled they remember each other, so the Bluetooth coupling 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 Bluetooth 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
- The device must support the A2DP profile
- Other Bluetooth-compatible devices must be OFF (e.g. mobile phones and navigation systems).

Please consult the operating instructions for your communication system.

Perform Bluetooth 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 Bluetooth pairing. (▶▶▶ 65)
- Activate the mobile device's Bluetooth function (see mobile device's operating instructions).

66 INSTRUMENT CLUSTER

- Select **Mobile device** and confirm.

- Select **PAIR NEW MOBILE DEVICE** and confirm.

Mobile devices are being searched for.



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

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". (183)

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

» Telephone data (71)

» If the telephone book is not displayed, consult the troubleshooting chart in the

section entitled "Technical data". (184)

» If the Bluetooth connection is not working as expected, consult the troubleshooting chart in the section entitled "Technical data". (183)

Connect rider's and passenger's helmet

- Perform Bluetooth pairing. (65)

- 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 Bluetooth coupling.

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". (183)

» If the Bluetooth connection is not working as expected, consult the troubleshooting chart in the section entitled "Technical data". (11111111 183)

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.

- Install navigation device. (11111111 171)
- 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 (11111111 171)
- 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.

68 INSTRUMENT CLUSTER



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.
(▶▶▶ 65)
- Call up the BMW Motorrad Connected app and start the route guidance.
- Call up the Navigation menu.
 - » Active route guidance is displayed.
 - » If the active route guidance is not displayed, consult the troubleshooting chart in the section entitled "Technical data". (▶▶▶ 184)

Select destination from recent destinations

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

Select destination from favourites

- The FAVOURITES menu shows all the destinations saved as favourites in the BMW Motorrad Connected app. You cannot use the

instrument cluster to add favourites to the list.

- Navigate to Navigation, Favourites.
- Select and confirm destination.
- Select Start guidance.

Enter special destinations

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

The following locations can be selected:

- At current location
- At destination
- Along the route
- Select where the special destinations should be looked for. For example, the following special destination can be selected:
 - Filling station
- Select and confirm the special destination.
- Select Start route guidance and confirm.

Set route criteria

- Navigate to Navigation, Route criteria.

The following criteria can be selected:

- Route type
- Avoid
- Select desired Route type.

- Switch desired **Avoid** on or off.

The number of avoidances activated is displayed in brackets.

View the route information

- Navigate to **Navigation, Settings** and select **Route info**.

You can choose between the following options:

- **Dest.**
- **Waypoint**
- Select the desired option.
- » **Countdown distance and time** are displayed.

Edit route guidance

- Navigate to **Navigation, New destination**.

You can choose from the following destinations:

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

End route guidance

- Navigate to **Navigation, Active route guidance**.
- Select **End route guidance** and confirm.

Switching spoken instructions on or off

- Connect the rider's and passenger's helmets. (66)
- The navigation can be read out by a computer voice. 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 the Navigator or a compatible mobile device. The BMW Motorrad Connected app is installed on the mobile device.

- **Speed Limit Info** displays the maximum speed currently permitted.

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 end device, telephone data may be transmitted to the vehicle automatically once the Bluetooth connection has been established (➔ 65).

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

DISPLAY SOFTWARE VERSION

- Navigate to Settings, Information, Software version.

DISPLAY LICENCE INFORMATION

- Navigate to Settings, Information, Licences.

OPERATION

05

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74 OPERATION

IGNITION

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) (76).

Ignition, fuel filler cap and anti-theft alarm system all work with the radio-operated key. The seat lock and topcase can be locked and unlocked manually.

 If the range of the radio-operated key is exceeded (e.g. in the topcase) the vehicle cannot be started.

If the radio-operated key is still missing, the ignition is switched off after approx. 1.5 minutes in order to save the battery.

Do not store the radio-operated key in the luggage compartment.

In some circumstances, the signal of the radio-operated key cannot be received by the aerial, and the seat can no longer be opened.

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



Range of the Keyless
Ride radio-operated key

approx. 1 m

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. (103)
- » If the instrument cluster remains dark after the ignition is switched on, the troubleshooting chart in the Technical Data section can help. (182)

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. (103)
- » If the instrument cluster remains dark after the ignition is switched on, the troubleshooting chart in the Technical Data section can help. (182)

Switching off ignition Requirement

Radio-operated key is within range.



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

76 OPERATION

Version 1:

- Short-press button 1.
 - » Light is switched off, side light and lighting of the rear storage compartment continue to light up for a short time.
 - » 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, side light and lighting of the rear storage compartment continue to light up for a short time.
 - » The steering lock engages.

Electronic immobiliser (EWS)

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



A spare key attached to the same ring as the radio-operated key used to start the engine could impair the electronics function, in

which case the enabling signal for starting is not issued. The warning with the key symbol appears in the multifunction display.

Always keep the spare key separate from the radio-operated key.

If you lose a radio-operated key, you can have it barred by your authorised BMW Motorrad retailer. If you wish to do this, you will need to bring all other keys for the Scooter with you to the dealership.

The engine cannot be started by a barred radio-operated key, but a radio-operated key that has been barred can subsequently be reactivated.

You can obtain extra keys only through an authorised BMW Motorrad retailer. The radio-operated keys are part of an integrated security system, so the retailer is under an obligation to check the legitimacy of all applications for replacement/extra keys.

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



- If a key is lost or mislaid, consult the notes on the electronic immobiliser (**EWS**).
- If 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 engine can be started by touching the radio-operated key against the battery cover.
- Hold spare key **1** or radio-operated key with empty battery **2** against the battery cover at the location of aerial **3**.

 The spare key or the flat radio-operated key must **be placed next to** the rear-wheel cover.



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.
- Radio-operated key has been recognised.
- Engine can be started.
- Start the engine. (103)

Replacing battery of radio-operated key

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

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



Remote key battery weak. Function limited. Change battery.

78 OPERATION

DANGER

Swallowing a battery

Risk of injury or death

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

- Change the battery.



- Press button **1**.
 - » Key bit flips out.
- Push battery cover **2** up.
- Remove battery **3**.

- Dispose of the old battery in accordance with all applicable laws and regulations; do not attempt to dispose of batteries as domestic waste.

ATTENTION

Unsuitable or incorrectly inserted batteries

Component damage

- Use a battery compliant with the manufacturer's specifications.
 - When inserting the battery, always make sure polarity is correct.
- Insert the new battery with the positive terminal up.
- | | |
|---|--------------|
|  | Battery type |
| For Keyless Ride radio-operated key | |
| CR 2032 | |
- Install battery cover **2**.
 - » Red LED in the instrument cluster flashes.
 - » The radio-operated key is again ready for use.

EMERGENCY-OFF SWITCH (KILL SWITCH)



- 1** Emergency-off switch (kill switch)



WARNING

Operation of the kill switch while riding

Risk of fall due to rear wheel locking

- Do not operate the kill switch when riding.

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



- a** Engine switched off
b Normal operating position (run)

LIGHTING

Low-beam headlight and sidelights

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



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

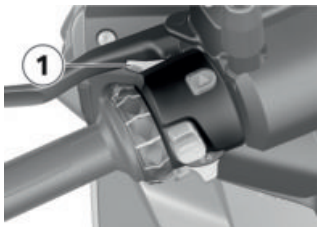
The low-beam headlight switches on automatically when the engine is started.

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

80 OPERATION

High-beam headlight and headlight flasher

- Switch on the ignition.
( 75)



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

Parking lights

- Switch off the ignition.



- 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.

Using daytime riding light

- Switch on the ignition.
( 75)



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



The daytime riding lights symbol is displayed.

- » The low-beam headlight and the backlighting of the instrument cluster are switched off.
- In the dark or in tunnels: Press button **1** again to switch off the daytime riding light and switch on the low-beam headlight.



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

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.



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.

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

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

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.



If you press a turn-indicator button while the hazard warning lights are switched

82 OPERATION

on, the turn-indicator function is activated instead of the hazard warning flashers and remains active until you release the button. The hazard warning flashers recommence flashing as soon as the button is released.



- Press button **1** to switch on the hazard warning lights system.
- » Ignition can be switched off.
- Switch on the ignition and press button **1** again to switch off the hazard warning flashers.

Operate the turn indicators

- Switch on the ignition.
( 75)
- Navigate to Settings, Vehicle settings, 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 DTC function off and on

- Switch on the ignition.
( 75)
- Navigate to Settings, Assist and select DTC.
- Deactivate DTC to switch off Dynamic Traction Control (DTC) temporarily until the next time the ignition is switched on.



shows.

- Activate DTC to switch on Dynamic Traction Control (DTC). Alternatively: Switch ignition off and on again.
-  goes out, if self-diagnosis has not completed the DTC indicator and warning light starts flashing.
- For more information on Dynamic Traction Control (DTC) see the section entitled "Engineering details" (▮▮▮ 119).

ANTI-THEFT ALARM (DWA)

—with anti-theft alarm (DWA)^{OE}

Activation

- Switch on the ignition. (▮▮▮ 75)
- Adjust the DWA. (▮▮▮ 85)
- 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.



- 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-operated key again during the activation phase.

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- » Turn indicators flash three times.
- » Confirmation tone sounds three times (if programmed).
- » Tilt sensor is deactivated.

Alarm signal

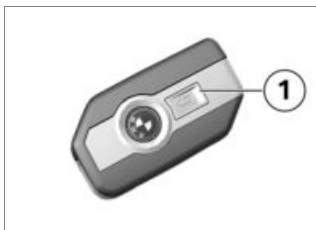
A DWA alarm can be triggered by:

- Motion sensor
- An attempt to use an unauthorised vehicle key to switch on the ignition
- 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.



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

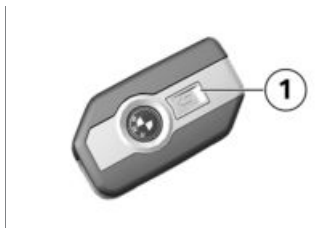
If an alarm was triggered while the motorcycle was unattended, the rider is notified accordingly by an alarm tone sounding once when the ignition is switched on. The DWA LED then indicates the reason for the alarm for one minute.

Light signals issued by the indicator light:

- Flashes 1x: Motion sensor 1
- Flashes 2x: Motion 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: Motion sensor 3

Deactivating anti-theft alarm system (DWA)

- Switch on the ignition.
( 75)
- » Turn indicators flash once.
- » Confirmation tone sounds once (if programmed).
- » DWA is switched off.



- Press button **1** 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.

Adjusting DWA Requirement

The Scooter is stationary.

- Switch on the ignition.
( 75)
- 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
( 85)

Possibilities for adjustment

Warning signal: Set the rising and falling or intermittent alarm tone.

Tilt sensor: Deactivate the tilt sensor to activate the transport mode. The inclination of the vehicle is no longer monitored in transport mode.

86 OPERATION

 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.

HEATING

Operating heated handlebar grips

—with heated grips^{OE}

- Start the engine.

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



- Repeatedly press button **1** until the heating stage you want to use is displayed. The grips can be heated to three levels. Stage three is for heating the grips quickly: it is advisable to switch back to stage one or two as soon as the grips are warm. The following can be displayed:



high heating power



medium heating power



low heating power

Operate the rider's seat heating

—with seat heating^{OE}

- Start the engine.

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



- Repeatedly press button **1** until the heating stage you want to use is displayed.

The rider's seat can be heated in three stages. Stage three is intended to quickly heat up the seat, subsequently switch to the second or first stage. The following can be displayed:



high heating power



medium heating power



low heating power

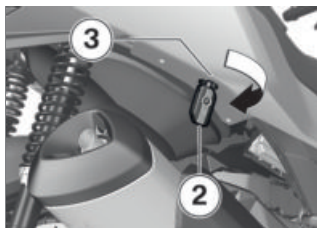
SEAT

Operate the seat

- Switch on the ignition.



- Press button **1**.
» Seat is unlocked.



- The seat can also be unlocked without the ignition being switched on. To do so, insert extended radio-operated key **2** into lock **3** at the right-hand side trim panel and turn the key clockwise.
» Seat is unlocked.

88 OPERATION



- Lift seat **4** at the rear and swing it up.



- To close, push the motorcycle seat **4** into the lock at the rear.

STORAGE COMPARTMENTS

Using the front storage compartments

- Switch on the ignition.



- To open a storage compartment, press the corresponding button **1**.
- To close a storage compartment, push the corresponding flap into the lock.
- After the ignition has been switched off and a waiting period has expired, both storage compartments are locked.



After-running period
for opening the storage
compartments

60 s

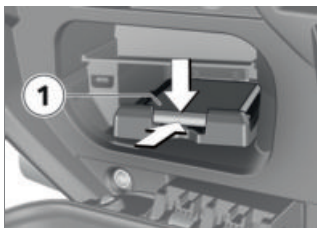
- Observe notes on USB charging sockets: (165)

Charging smartphone

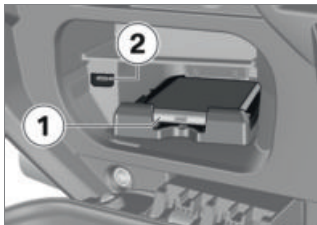
—with Connectivity Pro^{OE}

Requirement

Ignition on.



- Position the smartphone **1** with the display still at the top of the charging cradle.
 - Press the smartphone **1** against the clamping slider in direction of arrow and clamp it in the charging cradle.
- » The smartphone is secured.



- Connect one end of the charging cable to smartphone **1** and USB-C port **2**.

 BMW Motorrad recommends using the BMW Motorrad USB cable for charging smartphones in the storage compartment. Commercially available charging cables may not have

enough space in the storage compartment and may be damaged.

Notes on use

—with Connectivity Pro^{OE}

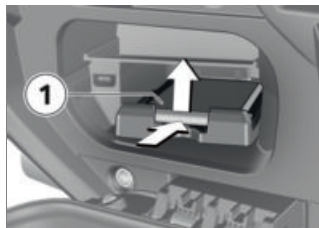
The storage compartment is suitable for smartphones up to max. 158 mm x 78 mm x 10 mm in size. For small mobile phones that might not be held securely by the holder, BMW Motorrad recommends using the BMW Motorrad smartphone pouch.

Charge current

This is a 5 V USB-C charging interface that provides a maximum charge current of 1.5 A (maximum charging power 7.5 W).

Removing smartphone

—with Connectivity Pro^{OE}



- Press smartphone **1** against the clamping slider in direction of arrow and remove.

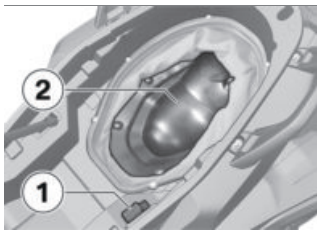
90 OPERATION

Operating rear storage compartment (BMW flexcase)

- Open/close the seat. (▶ 87)

 The storage compartment lighting is switched on when the ignition is switched on.

After switching off the ignition the storage compartment light remains illuminated briefly.

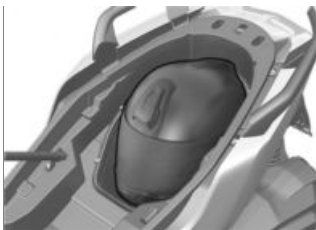


- Pull release lever **1** forward to increase the size of the storage compartment, for example to accommodate a helmet.

» Base **2** moves lower.

» It is not possible to start the vehicle with the base lowered.

 When the ignition is switched on, Engine start not poss. BMW flexcase open. Close BMW flexcase. appears on the display.



- The BMW flexcase can accommodate one integral helmet.



Payload of the flexcase

max. 5 kg



- A jet helmet can be stowed as shown in the front part of the storage compartment.



Payload of the front storage compartment

max. 3 kg

- Close the seat.



- To resume your journey, open the seat.
- Empty the storage compartment.
- Pull base **2** up by lever **3** until it latches.

i When the ignition is switched on, Engine start not poss. BMW flexcase open. Close BMW flexcase. disappears from the display.

- Close the seat.
- » The journey can now be continued.

ADJUSTMENT

06

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HEADLIGHT	94
WINDSCREEN	95
SPRING PRELOAD	95

94 ADJUSTMENT

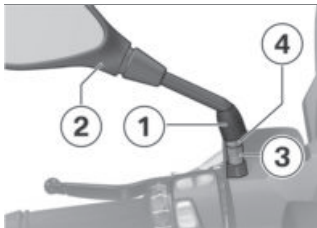
MIRRORS

Adjusting mirrors



- Pivot the mirror to the correct position by pressing gently at the edge.

Adjusting mirror arm



- Push rubber cap **1** up.
- If necessary, loosen lock nut **4** (left-hand thread), align mirror **2** and secure with lock nut **4** while bracing at adapter **3**.



Left mirror (lock nut) to adapter

M10

22 Nm (Left-hand thread)

- Push rubber cap **1** down.

HEADLIGHT

Headlight adjustment for right-hand or left-hand traffic

This vehicle has a symmetric-beam low-beam headlight. When riding in countries which drive on the other side of the road to that of the Scooter's country of registration, no further measures are required.

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.

WINDSCREEN

Adjusting windscreen Requirement

The motorcycle is at a standstill.



WARNING

Adjusting the windscreen while riding

Risk of falling

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

- Pull lever **2** down to raise windscreen **1**.
- Push lever **2** up to lower windscreen **1**.

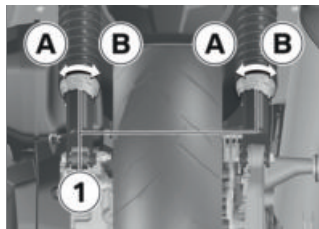
SPRING PRELOAD

Adjustment

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

Adjusting spring preload for rear wheel

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



- To increase the spring reload, rotate the adjustment rings **1** using the toolkit in the direction of arrow **A**.
- To reduce the spring preload, rotate the adjustment rings **1** using the toolkit in the direction of arrow **B**.

96 ADJUSTMENT



Basic setting of the rear spring preload

Stage 1 (with full load of fuel, with rider weighing 85 kg)

Stage 1 (One-up without luggage)

Stage 3 (One-up with luggage)

Stage 5 (Two-up with luggage)

- Make sure that the same values are set on both suspension struts.

RIDING

07

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SAFETY INFORMATION

Rider's equipment

Do not ride without the correct clothing:

- 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.

Load



WARNING

Handling adversely affected by overloading and imbalanced loads

Risk of falling

- Do not exceed the permissible gross weight and be sure to comply with the instructions on loading.
- Adjust the setting of the spring preload to the total weight.
- Note the maximum permissible payload of the luggage carrier.



Payload of luggage carrier

max. 16,5 kg

- Note the maximum permissible payload of the topcase.



Payload of topcase

max. 10 kg

Speed

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

- Setting the spring 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 operate the engine over a longer period of time with the speed limiter activated.

102 RIDING

- 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 Scooter (e.g. engine control unit, throttle valves, clutch)

Damage to the affected parts, failure of safety-relevant functions. Damage due to tampering is not covered by the warranty.

- Do not tamper with the vehicle in any way that could result in tuned performance.

COMPLY WITH CHECKLIST

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

Requirement

Always before riding off:

- Check operation of the brake system.
- Check operation of the lights and signalling equipment.
- Check the tyre tread depth.
(135)
- Check the tyre pressures.
(134)
- Check that topcase and luggage are securely fastened.

Requirement**Every 3rd refuelling stop:**

- Adjust the spring preload for the rear wheel. (▮▮▮ 95)
- Check the engine oil level. (▮▮▮ 128)
- Check the brake pad thickness, front brakes. (▮▮▮ 130)
- Check the brake pad thickness, rear brakes. (▮▮▮ 131)
- Check the brake-fluid level, front and rear wheel brakes. (▮▮▮ 132)
- Check the coolant level. (▮▮▮ 133)

STARTING**Starting engine**

- Switch on the ignition.
 - » Pre-Ride-Check and self-diagnoses are performed. (▮▮▮ 103)
- Apply the brake.

 The vehicle cannot be started while the side stand is extended. Extending the side stand while the engine is running kills the engine.



- Press starter button **1**.
 - » The engine starts.
 - » Consult the troubleshooting chart below if the engine refuses to start. (▮▮▮ 182)

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. (▮▮▮ 182)
- » Self-diagnosis checks the functional readiness of the BMW Motorrad ABS and the BMW Motorrad 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.

RIDING

At engine speeds below approx. 1500 rpm, the centrifugal clutch remains open; the Scooter is in idle. If the engine speed is increased, the clutch closes and the Scooter drives off.

In the approx. 50...approx. 120 km/h speed range, with the throttle valve fully open engine rpm increases slightly to accelerate the vehicle in the maximum engine-torque band. The change in speed is achieved by the CVT. Consequently, engine noise

changes only slightly within this speed range.

Speeds higher than approx.

120 km/h are achieved by an increase in engine rpm.

RUNNING IN

Engine

- Up to the running-in check, ride in frequently changing load ranges.
- 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

max. 7000 min⁻¹ (for the first 1000 km)

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



Mileage until the running-in check

500...1200 km

Brake pads

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



WARNING

New brake pads

Longer stopping distance, risk of accident

- Apply the brakes in good time.

Tyres

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



WARNING

New tyres losing grip on wet roads and at extreme bank angles

Risk of accident

- Ride carefully and avoid extremely sharp inclines.

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. 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

106 RIDING

circumstances, the front wheel would lock up.

BMW Motorrad ABS prevents the front wheel from locking up.

Emergency braking

If you brake sharply from a speed in excess of 50 km/h, the brake light flashes rapidly as a warning for road users behind you.

If you brake until your speed is less than 15 km/h, the hazard warning lights start to flash as well. The hazard warning lights switch off automatically as soon as you start to accelerate and vehicle speed reaches 20 km/h.

Descending mountain passes



WARNING

Braking mostly with the rear brake on mountain descents

Brake fade, destruction of the brakes due to overheating

- Use both front and rear brakes, and make use of the engine's braking effect as well.

Wet and dirty brakes



WARNING

Wetness and dirt result in diminished braking efficiency

Risk of accident

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

Wetness and dirt on the brake discs and the brake pads diminish braking efficiency. Delayed braking action or poor braking efficiency must be reckoned with in the following situations:

- Riding in the rain or through puddles of water.
- After the vehicle has been washed.
- Riding on salted or gritted roads.
- After work has been carried on the brakes, due to traces of oil or grease.
- Riding on dirt-covered surfaces or off-road.

ABS Pro

Physical limits applicable to motorcycling



WARNING

Braking when cornering

Risk of crash despite ABS Pro

- Invariably, it remains the rider's responsibility to adapt riding style to riding conditions.
- Do not take risks that would negate the additional safety offered by this system.

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

Possibility of a fall not precluded

Although ABS Pro and Dynamic Brake Control provide the rider with valuable assistance and constitute a huge advance in safety for braking with the motorcycle banked for cornering, they cannot under any circumstances be considered as 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 and Dynamic Brake Control help make the motorcycle even safer for riding on public roads. When the brakes are applied because of an unforeseen hazard when the motorcycle is banked for cornering, within the physical limits that apply to motorcycling the ABS Pro system prevents the wheels from locking and skidding away. In emergency braking, Dynamic Brake Control increases the braking effect and intervenes if the throttle grip is accidentally turned during braking.



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

PARKING YOUR SCOOTER

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.

- Extend the side stand and prop the Scooter on the stand.



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.

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

Centre 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

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 Scooter 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

—with regular-grade fuel, unleaded^{OE}



Recommended fuel grade

Regular unleaded (max. 15% ethanol, E15)
91 ROZ/RON
87 AKI◁

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



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

Refuelling 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 Scooter on its centre stand.
- Switch off the ignition.
( 75)



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

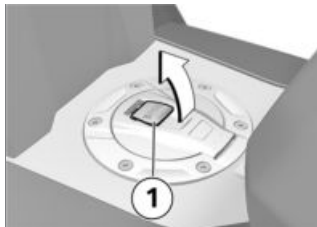
- » There are **two variant ways** of opening the fuel filler cap:

- Within the waiting time.
- After the waiting time has expired.

Variant 1

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.

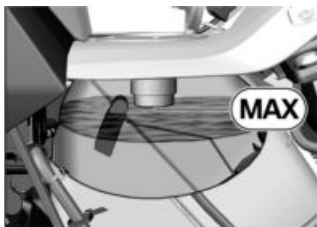
Variant 2

Requirement

After the waiting time has expired

- Bring the radio-operated key into range.
- Slowly pull the tab **1** upwards and then release again.
- » 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.



Usable fuel capacity

approx. 12.8 l



Reserve volume

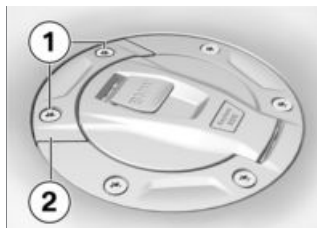
approx. 3 l

- Pull tab on the fuel filler cap up.
- Push fuel filler cap down firmly.
- » 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

Fuel filler cap cannot be opened.

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



- Remove screws 1.

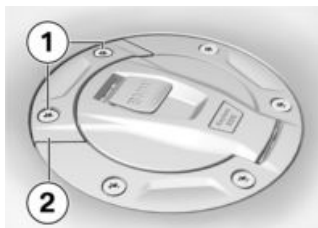
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- Remove emergency release **2**.
» Fuel filler cap unlocks.
- Fully open the fuel filler cap.
- Refuel. (➡ 109)
- Close the fuel filler cap emergency release. (➡ 112)

Closing fuel filler cap emergency release

Requirement

Fuel filler cap is in closed position.



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

SECURE THE VEHICLE FOR TRANSPORTATION

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



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.
- Push the vehicle on to the transportation flat and hold it in position: do not place it on the side stand or centre stand.

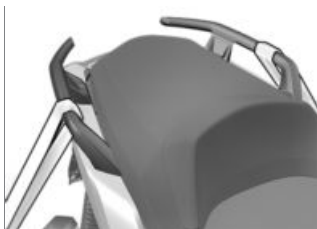


ATTENTION

Trapping of components

Component damage

- Do not trap components such as brake lines or cable legs.
- At the front, loop a strap round the fork bridge on each side, cross the straps and tighten them down.
- Make sure that no pressure is applied to the brake lines.
- Protect the front-wheel cover with soft cloths.



handles and tighten them down.

- Tighten all the straps uniformly; the vehicle's suspension should be compressed as tightly as possible front and rear.

- At the rear, loop tensioning straps round the rear grab

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 brake pressure to the extent that brake force exceeds the maximum transferable limit, the wheels start to lock and the Scooter loses its riding stability. A fall is imminent. Before this situation can occur, ABS intervenes and adapts brake pressure to the maximum transferable brake force, so the wheels continue to turn and riding 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 reduces braking force to ensure that riding stability is maintained when the wheels regain road contact. At this instant the BMW Motorrad ABS assumes 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 riding 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

Where there is a high level of adhesion between the tyres and road, the front wheel is only blocked very late or not at all even when the brakes are applied forcefully. Accordingly, the ABS control must be applied very late or not at all. In

this case, the rear wheel can lift off the ground, which can cause the Scooter to roll 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. 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.

Exceptional riding conditions

- Rear wheel rotating with the vehicle held stationary by applying the front brake (burn-out).
- Sustained slipping of the rear wheel on a slippery surface, e.g. when slowing down with the braking effect of the engine.

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.

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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 motorcycle'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.

DYNAMIC TRACTION CONTROL (DTC)

How does traction control work?

Traction control compares the front and rear wheel circumferential velocities. The differential is used to compute slip as a measure of the reserves of stability available at the rear wheel. If slip exceeds a certain limit, the electrical machine management system intervenes and adapts torque accordingly. Dynamic Traction Control (DTC) takes bank angle into consideration and on account of this additional bank-angle and acceleration data, its intervention is more precise and more comfortable for the rider.

BMW Motorrad DTC is designed as an assistant system for the rider and for use on public roads. The extent to which the rider affects DTC control can be considerable (weight shifts when cornering, items of luggage loose on the vehicle), especially when the style of riding takes rider and machine close to the limits imposed by physics.

The system is not optimised for special requirements that apply under extreme competitive conditions off-road or on the track. The BMW Motorrad DTC can be deactivated in these cases.



WARNING

Risky riding

Risk of accident despite DTC

- Invariably, the rider bears responsibility for assessing road and traffic conditions and adopting his or her style of riding accordingly.
- Do not take risks that would negate the additional safety offered by this system.

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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 (MSR)

How does dynamic engine brake control work?

The purpose of dynamic engine brake control is to prevent the unstable riding states that can be produced by excessive engine braking moment acting on the rear wheel. Depending on the road condition and riding dynamic, excessive braking torque can produce a sharp rise in rear-wheel slip and impair directional stability. Dynamic engine brake control limits this slip at the rear wheel to a safe mode-dependent and

bank-angle-dependent regulated slip.

Causes for excessive slip at the rear wheel:

- Riding with engine overrun on a surface with a low coefficient of friction (e.g. wet leaves).
- Sharp braking during sporty riding.

In the same way as DTC traction control, dynamic engine brake control compares the wheel circumferential velocities of the front and rear wheels. Additional information on the bank angle enables dynamic engine brake control to calculate slip and the reserve of stability at the rear wheel.

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

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 min. 10 km/h, the ABS function is further assisted by Dynamic Brake Control.
- When partially integral braking at a high brake pressure gradient is initiated, Dynamic Brake Control increases the integral brake pressure at the rear wheel. The stopping distance shortens and controlled braking is possible.

Behaviour during accidental actuation of the throttle grip

- If the throttle is accidentally opened (throttle grip position > 5 %) during emergency braking, Dynamic Brake Control ensures the desired braking effect by ignoring actu-

122 ENGINEERING DETAILS

ation 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.

TYRE PRESSURE CONTROL (RDC)

- with tyre pressure control (RDC)^{OA}

Function

A sensor integrated into each tyre measures the air temperature and the air pressure inside the tyre and transmits this information to the control unit. Each sensor has a centrifugal-force tripswitch that does not enable transmission of the measured values until the motorcycle has 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:

- Filling pressure within the permissible tolerance
- Filling pressure in the limit range of the permissible tolerance
- Filling pressure outside permitted tolerance

Temperature compensation

Tyre pressure is a temperature-sensitive variable: pressure increases as tyre-air temperature rises and decreases as tyre-air temperature drops. Tyre air temperature depends on ambient temperature as well as on the style of riding and the duration of the ride.

The tyre-pressure readings in the instrument cluster are temperature-compensated and are always referenced to a tyre-air temperature of 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 in the instrument cluster with the value in the table on the back cover of the rider's manual. Then use the air-line gauge at a service station to compensate for the difference between the

RDC reading and the value in the table.

 Example
According to the operating instructions, the tyre pressure should be:
2.5 bar
The instrument cluster shows the following value:
2.3 bar
So pressure is low by:
0.2 bar
The gauge on the air line shows:
2.4 bar
You must now increase tyre pressure until the value is:
2.6 bar

MAINTENANCE

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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!

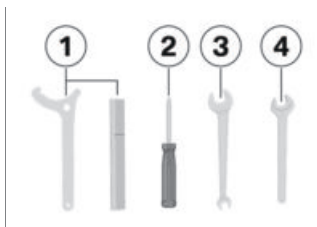
Non-reusable cable ties

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.

STANDARD TOOL KIT

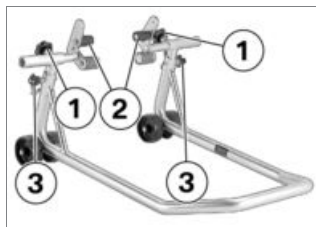


- 1** Hook wrench
 - Adjust the spring pre-load for the rear wheel. (➡ 95)
- 2** Reversible screwdriver blade
Phillips PH1 and Torx T25
 - Removing body panels.
 - Remove the battery cover. (➡ 157)
- 3** Open-ended spanner
Width across flats 10/16 mm
 - Removing battery (➡ 156).
- 4** Open-ended spanner
Width across flats 14 mm
 - Adjust the mirror arm. (➡ 94)

FRONT-WHEEL STAND

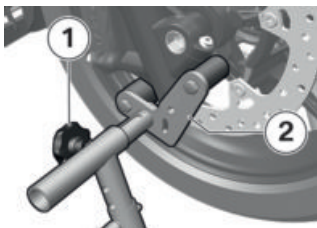
Installing front-wheel stand

- Make sure the ground is level and firm and place the Scooter on its centre stand.
- Use basic stand with front-wheel adapter. The basic stand and its accessory components are available from your authorised BMW Motorrad Retailer.

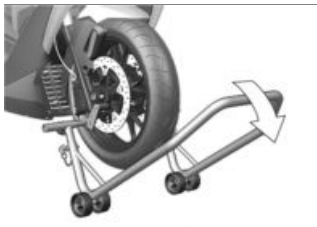


- Slacken screws **1**.
- Push the two adapters **2** apart until the front suspension fits between them.
- Use locating pins **3** to set the front-wheel stand to the desired height.
- Centre the front-wheel stand relative to the front wheel and push it into position at the front axle.

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- Align the mountings **2** on the left and right so that the front suspension is securely seated.
- Tighten securing screws **1** on left and right.



ATTENTION

Centre stand lifts clear if the vehicle is lifted too high

Risk of damage to parts if vehicle topples

- When lifting, make sure that the centre stand remains in contact with the ground.
- If necessary, adjust the height of the front-wheel stand.

- Apply uniform pressure to push the front-wheel stand down and raise the Scooter.
- Make sure the Scooter is standing firmly.

ENGINE OIL

Checking engine oil level



To determine the oil level correctly, the vehicle must be standing on the centre stand.

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



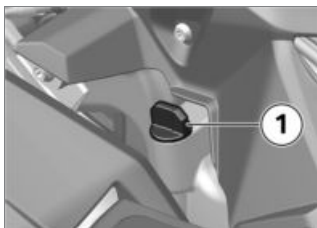
ATTENTION

Misinterpretation of oil level reading, because oil level is temperature-dependent (the higher the temperature, the higher the oil level)

Engine damage due to incorrect oil filling

- Check the oil level only after a lengthy ride or when the engine is at operating temperature.
- Allow the engine to idle until the fan starts up, then allow it to idle **two minutes longer**.
- Switch off engine and wait approximately **two minutes** to allow the oil to drain down.

- Wipe the area around the oil filler opening clean.



ATTENTION

Vehicle toppling sideways

Risk of damage to parts if vehicle topples

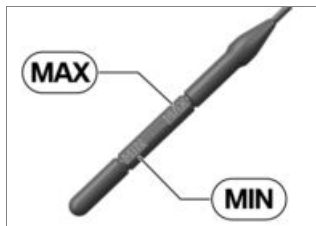
- Secure the vehicle, preferably with the assistance of a second person, so that it cannot topple sideways.

- Remove the oil dipstick **1**.



- Clean measuring range **2** of oil dipstick with a dry cloth.

- Seat the oil dipstick on the oil filler opening, but do not engage the threads.
- Remove the oil dipstick and check the oil level.



Engine oil, specified level

Between **MIN** and **MAX** marks (Engine at operating temperature, only place the oil dipstick in position, **do not screw in place.**)

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

- Top up the engine oil to the specified level.



Engine oil, quantity for topping up

max. 0.4 l (Difference between **MIN** and **MAX**)

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

- Have the oil level corrected by a specialist workshop, preferably an authorised BMW Motorrad retailer.
- Insert the oil dipstick and tighten it by hand.

BRAKE SYSTEM

Check operation of the brakes

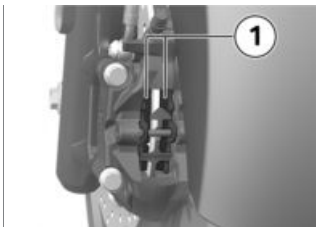
- Operate right brake lever.
 - » The pressure point must be clearly perceptible.
- Operate left brake lever.
 - » The pressure point must be clearly perceptible.

If pressure points are not clearly perceptible:

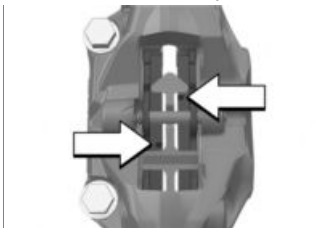
- Have the brakes checked by a specialist workshop, preferably an authorised BMW Motorrad retailer.

Checking brake pad thickness, front brakes

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



- Visually inspect the brake pads to ascertain their thickness. Turn the handlebars to the right.
- Viewing direction: from the rear toward brake pads **1**.
- Turn the handlebars to the left and check the brake pad thickness on the right-hand side in the same way.



Brake-pad wear limit, front

≥ 1 mm (Friction pad only, without backing plate. Wear marks (grooves) must be clearly visible.)

If the wear indicating marks are no longer clearly visible:



WARNING

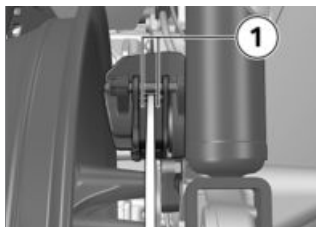
Brake-pad thickness less than permissible minimum

Diminished braking effect, damage to the brakes

- In order to ensure the dependability of the brake system, do not permit the brake pads to wear past the minimum permissible thickness.
- Have the brake pads replaced by a specialist workshop, preferably an authorised BMW Motorrad retailer.
- BMW Motorrad recommends installing only genuine brake pads from BMW Motorrad.

Checking brake pad thickness, rear brakes

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



- Visually inspect the brake pads to ascertain their thickness. Viewing direction: from the rear toward brake pads **1**.



Brake-pad wear limit, rear

min. 1 mm (Friction pad only, without backing plate. The wear indicators (grooves) must be clearly visible.)

If the wear marks have been reached:



WARNING

Brake-pad thickness less than permissible minimum

Diminished braking effect, damage to the brakes

- In order to ensure the dependability of the brake system, do not permit the brake pads to wear past the minimum permissible thickness.
- Have the brake pads replaced by a specialist workshop, preferably an authorised BMW Motorrad retailer.
- BMW Motorrad recommends installing only genuine brake pads from BMW Motorrad.

Brake fluid level

The brake fluid level can be checked in the sight glasses of the brake fluid reservoirs. The brake fluid reservoir for the front wheel brake is on the right, the brake fluid reservoir for the rear wheel brake is on the left.

Checking brake-fluid level, front and rear wheel 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 place the Scooter on its centre stand.
- Turn the handlebars to a position in which the brake fluid reservoir is horizontal.



- Check the brake fluid level in sight glass **1** of the left or, as applicable, right brake fluid reservoir.



Wear of the brake pads causes the brake fluid level in the reservoir to sink.



Brake fluid level

Brake fluid, DOT4

It is not permissible for the brake fluid level to be below the **MIN** mark. (Brake-fluid reservoir horizontal)

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.

COOLANT

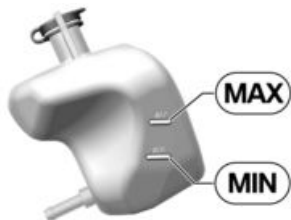
Check the coolant level

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



- Viewing direction: from the front under the front trim panel. Check the coolant level in the coolant expansion tank **1**.

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Specified coolant level in expansion tank

Between **MIN** and **MAX** marks (engine cold)

If the coolant drops below the permitted level:

- Top up the coolant.

Topping up coolant

- Remove the fairing side panel. (111111 158)



- Open lock **1** of the coolant expansion tank and top up the coolant to the specified level.
- Check the coolant level. (111111 133)
- Close lock **1** of the coolant expansion tank.

- Install the fairing side panel. (111111 159)

TYRES

Checking tyre pressures



WARNING

Incorrect tyre pressure.

Impairment of the vehicle's handling characteristics.
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 Scooter on its stand.
- Check tyre pressures against the data below.



Tyre pressure, front

2.2 bar (One-up, tyre cold)

2.4 bar (Two-up mode with load; with cold tyres)

 Tyre pressure, rear
2.4 bar (One-up, tyre cold)
2.6 bar (Two-up mode with load; with cold tyres)

If tyre pressure is too low:

- Correct tyre pressure.

RIMS AND TYRES

Checking rims

- Make sure the ground is level and firm and place the Scooter 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.

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 Scooter 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.

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.

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Effect of wheel size on chassis and suspension control systems

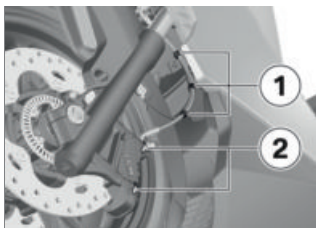
Wheel size is very important as a parameter for the ABS running-gear control system. In particular, the diameter and the width of a vehicle's wheels are programmed into the control unit and are fundamental to all calculations. Any change in these influencing variables, caused for example by a switch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



- Mask off the parts of the wheel rim that could be scratched in the process of removing the brake calipers.
- Disengage the brake line from holders **1**.



ATTENTION

Unwanted inward movement of the brake pads

Component damage on attempt to install the brake caliper or because brake pads have to be forced apart

- Do not operate the brakes with a brake caliper not correctly secured.
- Remove screws **2** of the brake calipers on left and right.

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Installing front wheel

WARNING

Use of a non-standard wheel
Malfunctions in operation of ABS and DTC

- See the information on the effect of wheel size on the ABS and DTC systems at the start of this chapter.

ATTENTION

Tightening threaded fasteners to incorrect tightening torque

Damage, or threaded fasteners work loose

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



- Clean spacer bushing **5** if necessary and lubricate.



Lubricant

Optimoly TA

- Insert spacer bushing **5** into the wheel hub on the left-hand side.

ATTENTION

Front wheel installed wrong way round

Risk of accident

- Note direction-of-rotation arrows on tyre or rim.

ATTENTION

Installation of front wheel not in compliance with correct procedure

Damage to wheel speed sensor

- Note the wheel-speed sensor when rolling in the front wheel.
- Roll the front wheel into position between the forks of the front suspension.



- Clean and lubricate quick-release axle **4**.



Lubricant

Optimoly TA

- Lift the front wheel slightly and install quick-release axle **4**.



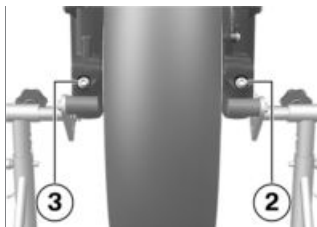
- Install screw **1** and tighten to specified torque. In this process, counter-hold the quick-release axle on the right side.



Bolt in quick-release axle at front

M12 x 20

32 Nm



- Tighten clamping bolts **3** and **2** to the specified torque.

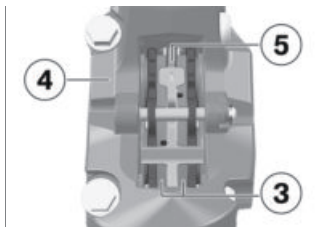


Clamping bolts (quick-release axle) in telescopic forks

M8 x 30

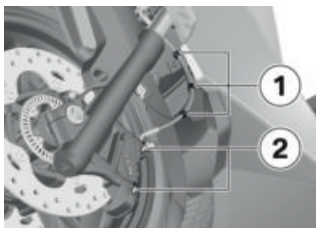
19 Nm

- Remove the front-wheel stand.



- Position brake caliper **4** on the brake disc, making sure that the brake disc **5** is fitted between the brake pads **3**.
- Install the brake caliper on the other side in the same way.

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- Install screws **2** on left and right until the screw heads are seated, but **do not tighten**.
- Operate the brake several times until the brake pads are bedded, **fix brake lever with rubber band**.
- Tighten screws **2** on left and right to the specified torque.



Brake caliper on fork leg

M8 x 50 - 10.9

32 Nm

- Secure the brake line in holders **1**.
- Release the brake lever.
- Retighten screws **2** on the left and right to the specified torque.



Brake caliper on fork leg

M8 x 50 - 10.9

32 Nm

- Remove the adhesive tape from the wheel rim.

Removing rear wheel



CAUTION

Hot engine and/or hot exhaust system

Risk of burn injury

- Allow engine and exhaust system to cool before starting work.

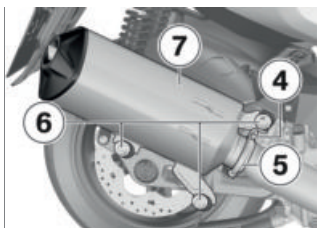
- Make sure the ground is level and firm and place the Scooter on its centre stand.
- Apply masking tape to the parts of the rim that could be scratched.



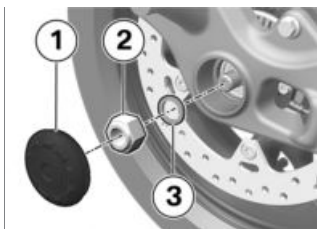
- Remove screw **1**.
- Raise the trim for the silencer **2** slightly and remove insulating disc.



- Push trim for silencer **2** to the rear and remove.



- Slacken screw **4** of clamp **5**.
- Remove screws **6** with the washers.
- Pull silencer **7** off the exhaust manifold and remove.

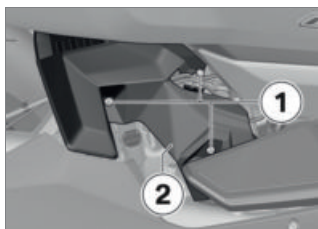


- Pull the handlebar lever to apply the rear wheel brake and

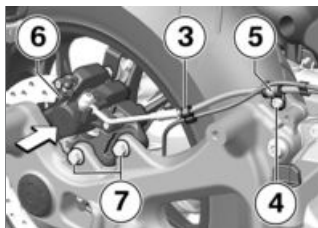
secure the handlebar lever in this position with a rubber strap.

» Rear wheel cannot turn.

- Carefully pry off cap **1** and remove.
- Remove nut **2** and washer **3**.
- Remove the rubber strap securing the lever of the rear wheel brake.



- Remove screws **1**.
- Lift rear-wheel cover **2**.

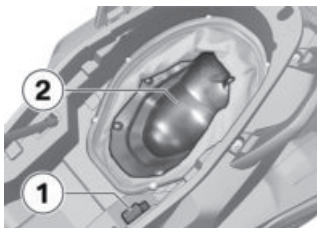


- Release brake line from holder **3**.
- Remove bolt **4** and release holder for brake line **5**.
- Press brake caliper **6** against the brake disc.

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» The brake piston is forced back.

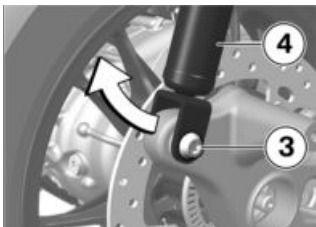
- Remove screws **7**.
- Lift brake caliper **6** up and clear of the brake disc and allow it to dangle to one side.



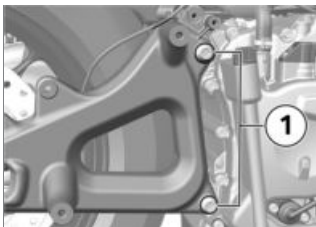
- Open the seat.
- Pull release lever **1** forward and open luggage-compartment lid **2**.



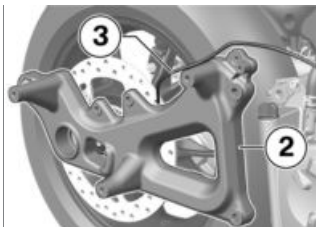
- Slacken nut **1** of the top suspension strut mount while counter-holding bolt **2** with a cranked wrench.



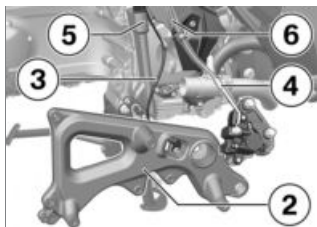
- Remove screw **3**.
- Pivot suspension strut **4** to the rear.



- Remove screws **1**.



- Disengage rear wheel swinging arm **2**, taking care not to damage cable **3** for the wheel speed sensor.



- Guide cable **3** for wheel speed sensor and brake hose **4** between oil filler neck **5** and rear-wheel cover **6**.
- » There is no strain on cable **3**.
- Lay down rear wheel swinging arm **2**.



- Remove the spacer bush **1**.
- Pull the rear wheel **2** off the output shaft and remove.

Installing rear wheel



ATTENTION

Tightening threaded fasteners to incorrect tightening torque

Damage, or threaded fasteners work loose

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



- Clean the output shaft.
- Lubricate the gearing of the output shaft.

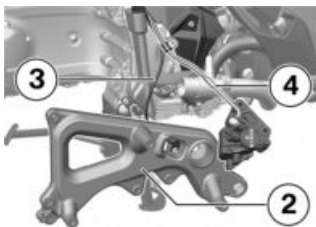


Lubricant

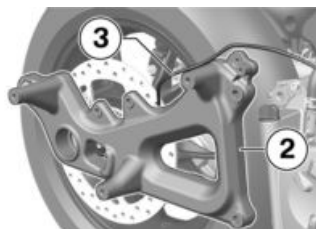
MP 3 paste

- » Do not apply lubricant to the thread of the output shaft.
- Push rear wheel **2** onto the output shaft and rotate until it engages with the gearing.
- Install spacer bush **1**.

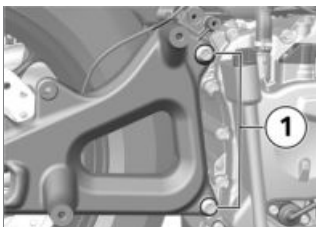
144 MAINTENANCE



- Thread back rear wheel swinging arm **2** with cable **3** for wheel speed sensor and brake hose **4**.



- Hold rear wheel swinging arm **2** in position, making sure that cable **3** for the wheel speed sensor is correctly routed.



- Install bolts **1** and tighten to the specified torque.



Right swinging arm on drivetrain swinging arm

M10 x 50

38 Nm



- Pivot suspension strut **4** forward and hold it in position.
- Install bolt **3** and tighten to the specified torque.



Suspension strut on swinging arm

M10 x 50

38 Nm



- Renew nut **1**.
- Hold bolt **2** in place with an offset screwdriver and tighten nut **1** to specified torque.



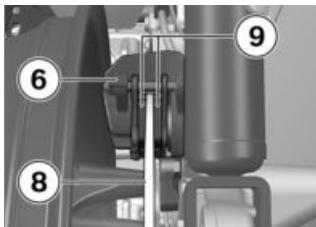
Suspension strut to frame

M10 x 50

Thread-locking compound:
mechanical

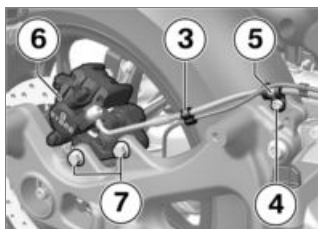
38 Nm

- Close the luggage compartment lid.
- Close the seat.



- Clean the threads.
- Position brake caliper **6** on the brake disc, making sure

that the brake disc **8** is fitted between the brake pads **9**.



- Position brake caliper **6**, fit **new** screws **7** and tighten to the specified torque.



Rear brake caliper on rear wheel swinging arm

M8 x 30 - 10.9

Thread-locking compound:
micro-encapsulated

32 Nm

- Fit the holder for the brake line **5**, install bolt **4** and tighten to the specified torque.



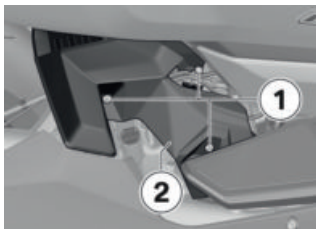
Brake hose bracket on swinging arm

M6 x 12

8 Nm

- Secure brake line in holder **3**.

146 MAINTENANCE

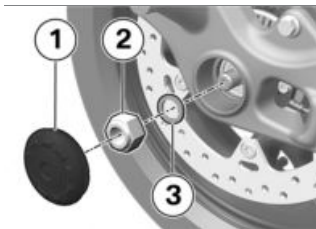


- Position rear-wheel cover **2**.
- Install screws **1**.

 Rear-wheel cover to drivetrain swinging arm

M6 x 16

8 Nm



- Operate the rear wheel brake several times to seat the brake pads.
- Pull the handlebar lever to apply the rear wheel brake and secure the handlebar lever in this position with a rubber strap.
- » Rear wheel cannot turn.
- Install washer **3**.

- Install **new** nut **2** and tighten to the specified torque.

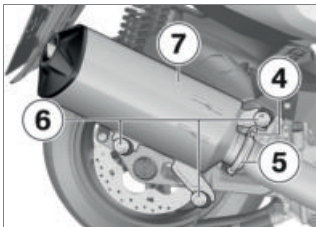
 Rear wheel on output shaft

M16

Thread-locking compound: mechanical

115 Nm

- Install cap **1**.
- Remove the rubber strap securing the lever of the rear wheel brake.



- Check seal in silencer **7**; renew if necessary.
- Seat silencer **7** on the exhaust manifold and hold it in position.
- Install bolts **4** with washers and tighten to the specified torque.

 Silencer on swinging arm

M8 x 50

21 Nm

- Renew clamp **5**.

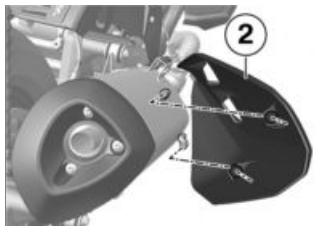
- Tighten screw **4** of clamp **5** to the specified torque.



Rear silencer on exhaust manifold

M8 x 40

25 Nm



- Hook trim for silencer **2** on to the holders.



- Raise the trim for the silencer **2** slightly and insert insulating disc.
- Install screw **1**.
- Remove the adhesive tape from the wheel rim.

FUSES

Removing a fuse Requirement

The fuses are located under the battery compartment cover on the legshield.



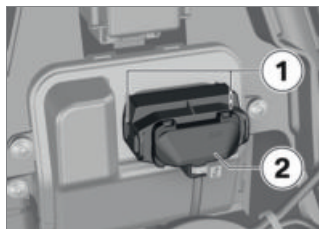
ATTENTION

Jumpering of blown fuses

Risk of short-circuit and fire

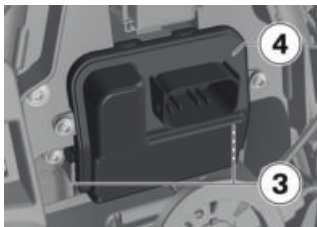
- Never attempt to jumper a blown fuse.
- Always replace a defective fuse with a new fuse of the same amperage.

- Switch off the ignition.
- Remove the battery cover.
( 157)



- Push in locks **1** and release the diagnostic connector **2**.

148 MAINTENANCE

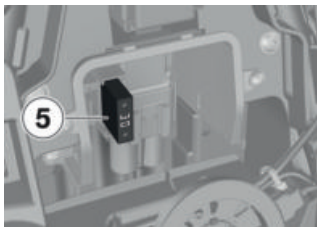


- Release locks **3**.
- Swivel cover **4** upwards.

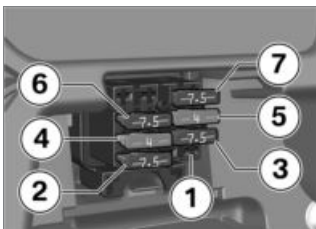


- Pull the affected fuse out of the fuse box.

Install fuse

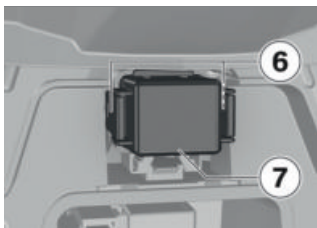


- To remove the main fuse, pull the fuse **5** out of the fuse carrier.



- Replace faulty fuses in the fuse box with a fuse with the required current level.

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



- To remove the fuses from slots 2 to 7, press locks **6** and remove lid **7** from the fuse box.

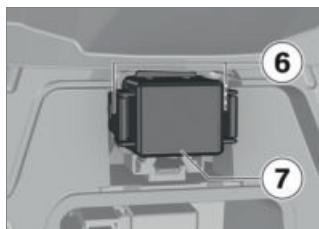


Main fuse

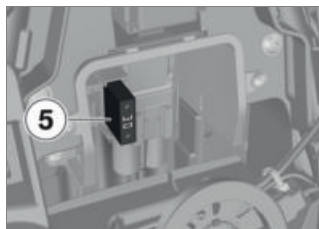
30 A (Voltage regulator)

 Fuse 1
Not used
 Fuse 2
7.5 A (Diagnostic socket, ignition lock, Keyless Ride, anti-theft alarm)
 Fuse 3
7.5 A (Multifunction switch, left, tail light, helmet compartment lighting, storage compartment lock)
 Fuse 4
4 A (Brake light switch)
 Fuse 5
4 A (Fuel pump relay)
 Fuse 6
7.5 A (Fan relay)
 Fuse 7
7.5 A (Ignition coil, fuel injector, tank vent valve)

 Fuse 8
Not used

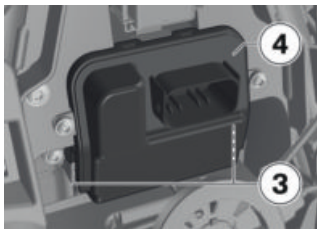


- Install cap **7**.
- » Locks **6** engage audibly.

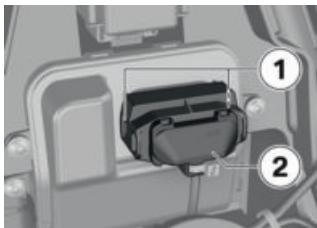


- Replace faulty main fuse **5** with a fuse with the required current strength.

 Main fuse
30 A (Voltage regulator)



- Install cover **4**.
» Locks **3** engage audibly.



- Install the diagnostic connector **2**.
» Locks **1** engage audibly.
- Install the battery cover.
(►► 158)

LIGHTING

LED light source



WARNING

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

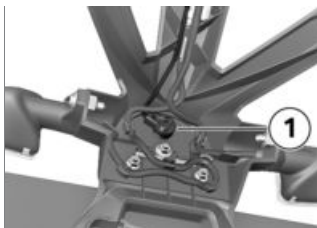
Safety risk

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

The vehicle has all-LED lights, with the exception of the number plate light. 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.

Replacing the light source for the number plate light

- Make sure the ground is level and firm and place the Scooter on its stand.
- Switch off the ignition.



- Remove socket **1** from the light housing.



- Remove the bulb from the bulb socket.
- Replace the faulty bulb.



Light source for the
number plate light

W5W / 12 V / 5 W

- Use a clean, dry cloth to hold the new bulb in order to keep the glass free of foreign matter.



- Insert the bulb into the socket.



- Insert socket **1** into the light housing.

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:

152 MAINTENANCE

- Keep the surface of the battery clean and dry.
- Be sure to read and comply with the instructions for charging the battery on the following pages.
- Do not turn the battery upside down.



Battery type

AGM, 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.

Jump-starting



ATTENTION

Excessive current when jump-starting the Scooter

Cable fire or damage to the vehicle electronics

- Do not jump-start the Scooter using the socket; only use the battery terminals.



ATTENTION

Contact between crocodile clips of jump leads and vehicle

Risk of short-circuit

- Use jump leads fitted with fully insulated crocodile clips at both ends.



ATTENTION

Jump-starting with a voltage greater than 12 V

Damage to the on-board electronics

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

- Make sure the ground is level and firm and place the Scooter on its stand.
- Remove the battery cover. (11111 157)
- Remove the battery holder. (11111 155)
- When jump-starting the engine, do not disconnect the battery from the on-board electrical system.
- Use the red jump lead to connect the remote positive terminal of the discharged battery to the positive terminal of the donor battery.
- Connect one end of the black jump lead to the negative terminal of the donor battery, then connect the other end to the negative terminal of the discharged battery.
- Run the engine of the donor vehicle during jump-starting.



Do not use proprietary start-assist sprays or other products to start the engine.

- 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 run for a few minutes before disconnecting the jump leads.
- Disconnect the jump lead from the negative terminal first, then from the positive terminal.
- Install the battery holder. (11111 157)
- Install the battery cover. (11111 158)

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.
- Use only the socket in the right-hand storage compartment to charge the connected battery.



ATTENTION

Commercially available battery chargers connected to the on-board power socket

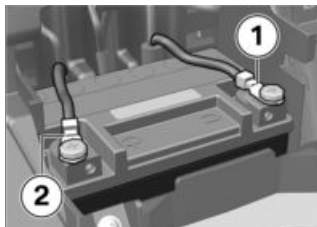
Damage to charger and to frame and suspension electronics

- Use only chargers approved by BMW Motorrad.

- Comply with the operating instructions of the charger.

Recharging disconnected battery

- Remove the battery cover. (1111111111 157)
- Remove the battery holder. (1111111111 155)



ATTENTION

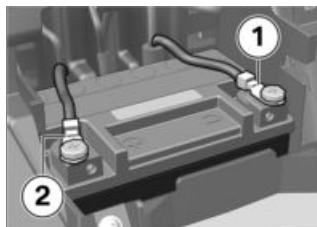
Battery not disconnected in accordance with correct procedure

Risk of short-circuit

- Always proceed in compliance with the specified disconnection sequence.
- First disconnect negative battery cable **1**.
- Then disconnect positive battery cable **2**.
- 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.



ATTENTION

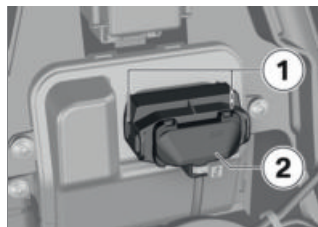
Battery not connected in accordance with correct procedure

Risk of short-circuit

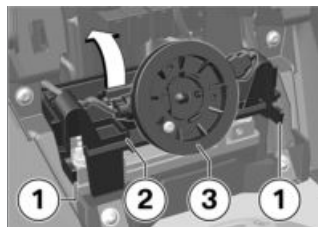
- Always proceed in compliance with specified installation sequence.
- First connect positive battery cable **2**.
- Then connect negative battery cable **1**.

- Install the battery holder. ( 157)
- Install the battery cover. ( 158)

Removing the battery holder



- Push in locks **1**.
- Release diagnostic connector **2** and hang it to one side.

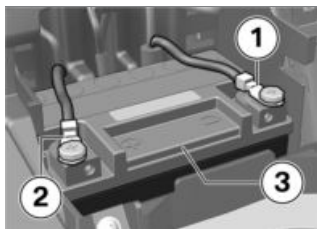


- Press locks **1** on left and right and fold battery holder **2** up.
- Unhook battery holder **1** from the rear of the battery compartment, pull out with audio frequency aerial **3** and lay to the side.

156 MAINTENANCE

Removing battery

- Switch off the ignition.
- If applicable, switch off the anti-theft alarm.
- Remove the battery cover.
(▮▮▮ 157)
- Remove the battery holder.
(▮▮▮ 155)



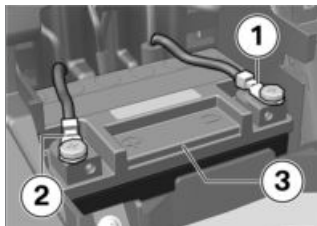
ATTENTION

Battery not disconnected in accordance with correct procedure

Risk of short-circuit

- Always proceed in compliance with the specified disconnection sequence.
- First disconnect negative battery cable **1**.
- Then disconnect positive battery cable **2**.
- Remove the battery **3** from the battery compartment.

Installing battery



- Place the battery **3** in the battery compartment, positive terminal on the left side.



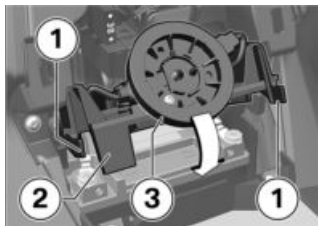
ATTENTION

Battery not connected in accordance with correct procedure

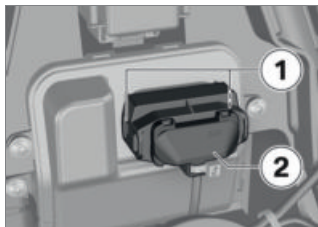
Risk of short-circuit

- Always proceed in compliance with specified installation sequence.
- First connect positive battery cable **2**.
- Then connect negative battery cable **1**.
- Install the battery holder.
(▮▮▮ 157)
- Install the battery cover.
(▮▮▮ 158)
- Change the system settings.
(▮▮▮ 64)

Installing the battery holder



- Place the battery holder **2** with the audio frequency aerial **3** in position and hook in place at the rear of the battery compartment.
- Fold down the battery holder **2** while pressing locks **1** until it engages.



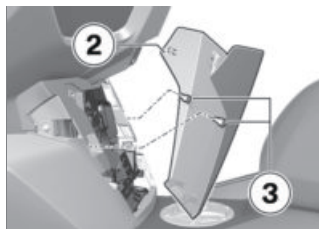
- Install the diagnostic connector **2**.
- » The locks **1** engage.

TRIM PANEL COMPONENTS

Removing battery cover



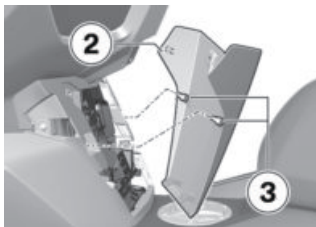
- Remove screws **1**.



- Slightly raise battery cover **2** at the edges.
- Pull mounting clips **3** of battery cover **2** out of the fixtures.

158 MAINTENANCE

Installing battery cover



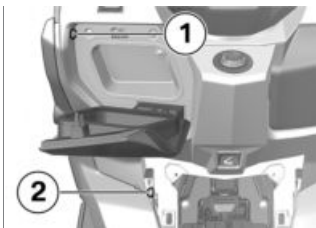
- Check that all mounting clips **3** are in place on battery cover **2**.
- Hook battery cover **2** in at the bottom and uniformly press mounting clips **3** into the fixtures.



- Install screws **1**.

Remove the fairing side panel

- Remove the battery cover.
( 157)
- Switch on the ignition.
- Open the left storage compartment.
- Switch off the ignition.

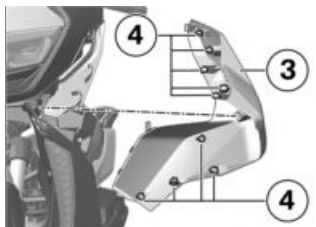


- Remove screws **1** and **2** for fairing side panel.

 The steps described here for the left fairing side panel also apply for the right-hand side.

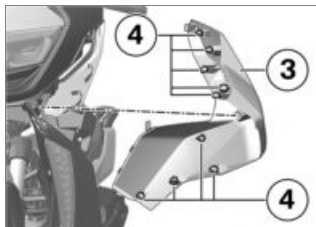


- Remove screw **3**.



- Raise fairing side panel **3** slightly at the edges.
- Ease mounting clips **4** of fairing side panel **2** as uniformly as possible out of their mounts.

Installing side panel

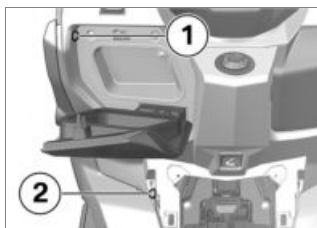


- Check that all mounting clips **4** are in place in fairing side panel **3**.
- Hold fairing side panel **3** in position and uniformly press mounting clips **4** into the fixtures.

 The steps described here for the left fairing side panel also apply for the right-hand side.



- Install screw **3**.



- Install screws **1** and **2** for the fairing side panel.
- Close left storage compartment.
- Install the battery cover. (→ 158)

DIAGNOSTIC CONNECTOR

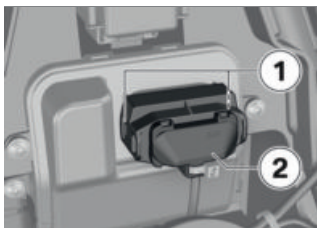
Disengaging diagnostic socket

Requirement

The diagnostic connector is located under the battery compartment cover on the leg-shield.

160 MAINTENANCE

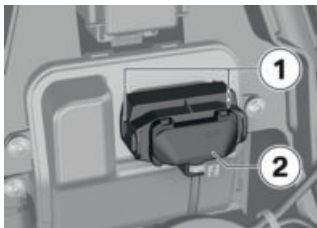
- Remove the battery cover.
( 157)
- Install the battery cover.
( 158)



- Push in locks **1**.
- Disengage the diagnostic socket **2**.
» The interface to the diagnosis and information system can be connected to the diagnostic connector **2**.

Installing the diagnostic connector

- Disconnect the interface for the diagnosis and information system.



- Install the diagnostic connector **2**.
» The locks **1** engage.

ACCESSORIES

10

GENERAL NOTES	164
POWER SOCKET	164
USB CHARGING SOCKET	165
TOPCASE	166
NAVIGATION SYSTEM	171

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.

Parts and accessory products from BMW have undergone extensive testing 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 SOCKET

Information on using the socket:

Connection of electrical devices

- Electrical devices connected to the motorcycle's socket can only be used when the ignition is switched on.
- The sockets continue to receive power for only 60 seconds after the ignition is switched 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.

Automatic shutdown

- The power supply to the socket is interrupted automatically during the start procedure.
- The power supply to the sockets is switched off no later than 15 minutes after the ignition is switched off, in order to prevent overloading of the on-board electrics. Low-wattage electrical accessories might not be recognised by the vehicle's electronics. In such cases, power sockets are switched off very shortly after the ignition is turned off.
- If the battery charge state is likely to drop too low to maintain the motorcycle's start capability, the power supply to the socket is switched off.

- The power supply to the socket is switched off if maximum load capability as stated in the technical data is exceeded.

USB CHARGING SOCKET

Notes on use:

Charge current

This is a 5 V USB charging interface that provides a maximum charge current of 2.4 A.

Automatic shutdown

The USB charging sockets are shut down automatically under the following circumstances:

- If battery charge state is too low, to maintain the vehicle's start capability.
- If the maximum load capacity as stated in the technical data is exceeded.
- During the starting operation.

Connection of electrical devices

You can start using electrical devices connected to the USB charging sockets only when the ignition is switched on. The power supply to the sockets is switched off no more than 15 minutes after the ignition is switched off, in order to pre-

166 ACCESSORIES

vent overloading of the on-board electrics.

While riding in the rain, you should disconnect the device from the interface in order to protect against damage.

To prevent dirtying, keep the protective cover closed when no device is connected.

Cable routing

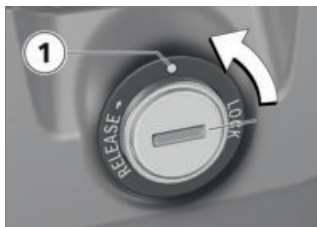
Note the following with regard to the routing of cables from USB charging sockets to items of electronic equipment:

- Make sure that cables do not impede the rider.
- Make sure that cables do not restrict the steering angle or obstruct handling.
- Make sure that cables cannot be trapped.

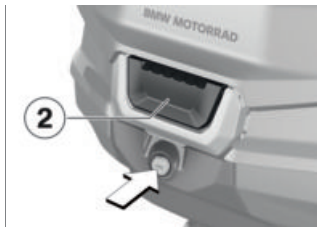
TOPCASE

- with topcase^{OA}

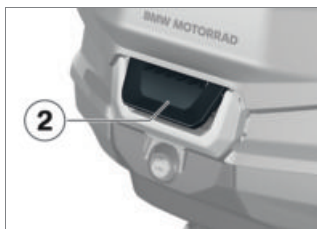
Opening topcase



- Turn the key in the topcase lock to position 1.



- Push topcase lock forwards.
» Release flap 2 pops open.



- Pull release flap 2 backwards.
» The lid of the topcase opens.
- Open the topcase lid.

Closing topcase Requirement

The release flap is folded out.



- Close the topcase lid and push into the lock. Check that nothing is trapped between the lid and the case.
 - » The topcase lid engages with an audible click.
- Close the release flap **2**.
 - » The release flap **2** engages with an audible click.



- If necessary, turn the key in the topcase lock to the **Lock** position and remove the key from the lock.

Locking protective cap



- Turn the protective cap to position **1**.
 - » The protective cap engages with a perceptible snap.

Unlocking protective cap



- Turn the protective cap to position **1**.
 - » The protective cap engages with a perceptible snap.

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Installing topcase

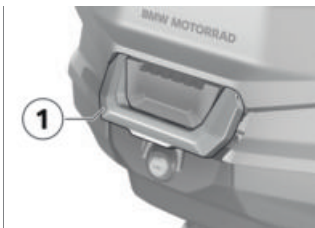


—with topcase^{OA}

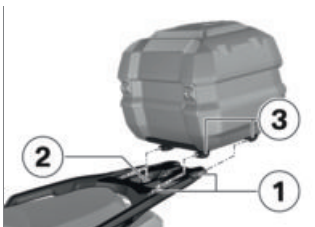
- Unlock the protective cap. (► 167)
- Remove protective cap **1** from magnetic plug connection **2**.



- Turn the key in the topcase lock to position **RELEASE**.
» The locking handle pops open.



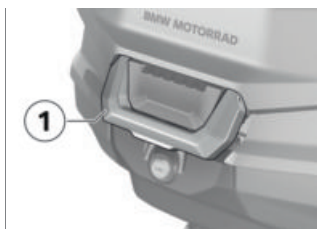
- Fully open the locking handle **1**.



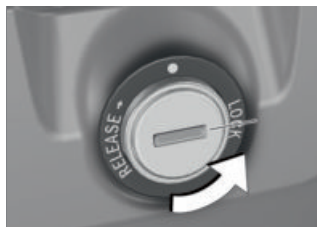
- Check magnetic plug connection **2** of topcase and topcase holder for dirt and damage.
- Engage hooks **3** securely in mounts **1**.



- with topcase^{OA}
- Open the topcase. (166)
- Attach the protective cap **1** to the holder in the topcase lid **2**.
- with topcase^{OA}
- Lock the protective cap. (167)
- with topcase^{OA}
- Close the topcase. (167)



- Fully close the locking handle **1**.
- » The locking handle **1** engages with an audible click.



- If necessary, turn the key in the topcase lock to the **Lock** position and remove the key from the lock.

Removing topcase

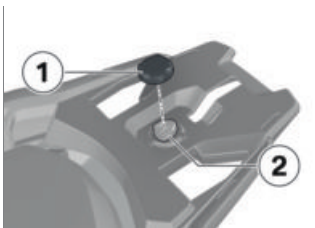


- with topcase^{OA}
- Open the topcase. (166)
- with topcase^{OA}
- Unlock the protective cap. (167)
- Remove protective cap **1** from holder on topcase lid **2**.
- with topcase^{OA}
- Close the topcase. (167)

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- Turn the key in the topcase lock to position **RELEASE**.
» The locking handle pops open.



- Check protective cap **1** and magnetic plug connection **2** for dirt and damage.
- Install protective cap **1** on magnetic plug connection **2**.
—with topcase^{OA}
- Lock the protective cap.
(167)



- Fully open the locking handle **1**.
- Take the topcase on the locking handle **1** out of the topcase carrier.
- Protect the magnetic plug connection of the topcase against damage, dirt and corrosion.

Maximum payload and maximum speed

Note the maximum payload and the maximum permissible speed.

The values for the combination described here are as follows:



Maximum speed for riding with a loaded topcase

max. 130 km/h



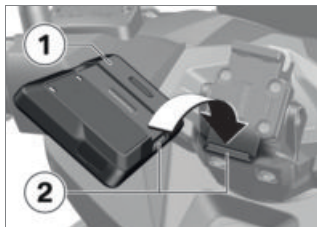
Payload of topcase

max. 10 kg

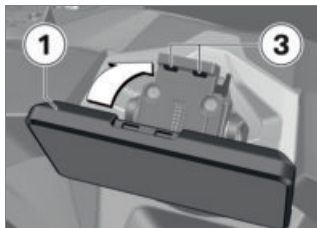
NAVIGATION SYSTEM

—with preparation for navigation system^{OE}

Installing navigation device

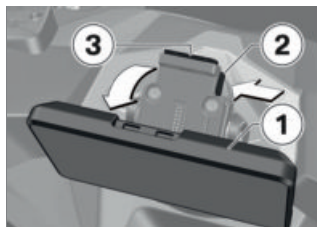


- Set navigation device **1** into cradle **2**.



- Pivot navigation device **1** forward and at the top edge, press it into latching mechanism **3**.
 - » Navigation device engages.
- Check that the navigation device is secure in the cradle.
 - » The red marking for unlocking is not visible.

Removing navigation device



- Press release **2**.
 - » Red mark **3** indicates that latch is released.
- Remove navigation device **1**.

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 ( 67), some of its functions can be operated

172 ACCESSORIES

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.

Security settings

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



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

Special functions

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

CARE

11

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CARE PRODUCTS



ATTENTION

Use of unsuitable cleaning and care products

Damage to vehicle parts

- Do not use solvents such as cellulose thinners, cold cleaners, fuel or the like, and do not use cleaning products that contain alcohol.



ATTENTION

Use of strongly acidic or strongly alkaline cleaning agents

Damage to vehicle parts

- Dilute in accordance with the dilution ratio stated on the packaging of the cleaning agent.
- Do not use strongly acidic or strongly alkaline cleaning agents.

BMW Motorrad recommends that you use the cleaning and care products you can obtain from your authorised BMW Motorrad retailer.

The substances in BMW Care Products have been tested in laboratories and

in practice; they provide optimised care and protection for the materials used in your vehicle.

WASHING THE VEHICLE



WARNING

Wet brake discs and brake pads after vehicle wash, after riding through water and in rainy conditions

Diminished braking effect, risk of accident

- Apply the brakes in good time to allow the friction and heat to dry the brake discs and brake pads.



ATTENTION

Damage due to high water pressure from high pressure cleaners or steam cleaners

Corrosion or short circuit, damage to labels, seals, hydraulic brake system, electrical system and the motorcycle seat

- Exercise restraint when using a steam jet or high pressure cleaning equipment.

BMW Motorrad recommends that you use BMW insect remover to soften and wash off

insects and stubborn dirt on painted parts prior to washing the vehicle.

To prevent stains, do not wash the vehicle immediately after it has been exposed to strong sunlight and do not wash it in the sun.

Remove dirt from the fork legs at regular intervals.

Make sure that the vehicle is washed frequently, especially during the winter months or if it is ridden on salted roads.



ATTENTION

Effect of road salt intensified by warm water

Corrosion

- Use only cold water to remove road salt deposits.

To remove road salt deposits, clean the vehicle and mounted parts, as applicable, with cold water immediately after every trip.



After a ride in the rain, when humidity is high or after the vehicle has been washed, condensation might form inside the headlight. This can cause temporary fogging on the headlight lens. If moisture is constantly present inside the headlight consult a spe-

cialist 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.

Trim panel components

Clean trim panel components with water and BMW Motorrad solvent cleaner.

Plastic windscreens and headlight lenses

Remove dirt and insects with a soft sponge and plenty of water.



Soften stubborn dirt and insects by covering the affected areas with a wet cloth.



Clean with water and sponge only.

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Do not use any chemical cleaning agents.

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 Motorrad Care Products range. This is particularly important to counter the effects of road salt.

Use BMW Motorrad metal polish for additional treatment.

Radiator

Clean the radiator regularly to prevent overheating of the engine due to inadequate cooling. For example, use a garden hose with low water pressure.



ATTENTION

Bending of radiator fins

Damage to radiator fins

- Take care not to bend the radiator fins when cleaning.

Rubber

Treat rubber components with water or BMW rubber-care products.



ATTENTION

Application of silicone sprays to rubber seals

Damage to the rubber seals

- Do not use silicone sprays or care products that contain silicon.

CARE OF PAINTWORK

Washing the vehicle regularly will help counteract the long-term effects of substances that can damage the paint, especially if your vehicle is ridden in areas with high air pollution or natural sources of dirt, for example tree resin or pollen. Remove particularly aggressive substances immediately, however, as otherwise the paint can be affected or become discoloured. Substances of this nature include spilt fuel, oil, grease, brake fluid and bird droppings. For this, we recommend BMW Motorrad solvent cleaner followed by BMW Motorrad gloss polish for preservation.

Marks on the paintwork are particularly easy to see after the 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.

LAYING UP THE SCOOTER

- Clean the Scooter.
- Fill the Scooter's fuel tank and, if necessary, pour fuel additive into the tank. BMW Motorrad recommends the use of ADVANTEC Protect Original BMW Fuel Additive to prevent fuel ageing effects.

- Removing battery (➡ 156).
- Spray the brake-lever and 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 Scooter in a dry room in such a way that there is no load on either wheel.

RESTORE YOUR SCOOTER TO USE

- Remove the protective wax coating.
- Clean the Scooter.
- Install the battery. (➡ 156)
- Checklist. (➡ 102)

TECHNICAL DATA

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182 TECHNICAL DATA

TROUBLESHOOTING CHART

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.

Engine does not start or is difficult to start.

Possible cause	Rectification
Side stand extended	Retract the side stand.
Starting without operating the brakes	Operate a brake lever when starting.
BMW flexcase open	Close the BMW flexcase.
No fuel in tank	Refuel. (109)
Battery flat	Recharge the battery. (154)

The Bluetooth connection is not established.

Possible cause	Rectification
Necessary steps for Bluetooth coupling have not been carried out.	Check the necessary steps for Bluetooth coupling in the operating instructions for the communication system.
Communication system is not automatically connected, even though Bluetooth coupling has taken place.	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 Bluetooth coupling entries on the helmet are deleted (see the communication system operating instructions).
There are other vehicles with Bluetooth-capable devices in the vicinity.	Avoid simultaneous Bluetooth coupling with several 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.

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Phonebook is not displayed in the instrument cluster.

Possible cause	Rectification
The phonebook was not transmitted to the vehicle.	Confirm transmission of the phone data (📶 71) when Bluetooth coupling with the mobile end device.

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.

THREADED FASTENERS

Brakes	Value	Valid
Brake caliper on fork leg		
M8 x 50 - 10.9	32 Nm	
Rear brake caliper on rear wheel swinging arm		
M8 x 30 - 10.9, Replace screw micro-encapsulated	32 Nm	
Brake hose bracket on swinging arm		
M6 x 12	8 Nm	

Front wheel	Value	Valid
Bolt in quick-release axle at front		
M12 x 20	32 Nm	
Clamping bolts (quick-release axle) in telescopic forks		
M8 x 30	19 Nm	

Rear wheel	Value	Valid
Rear wheel on output shaft		
M16, Replace nut mechanical	115 Nm	

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Rear wheel	Value	Valid
Right swinging arm on drivetrain swinging arm		
M10 x 50	38 Nm	
Suspension strut on swinging arm		
M10 x 50	38 Nm	
Suspension strut to frame		
M10 x 50, Renew the nut; the bolt can be re-used mechanical	38 Nm	

Exhaust system	Value	Valid
Silencer on swinging arm		
M8 x 50	21 Nm	
Rear silencer on exhaust manifold		
Clamp, M8 x 40	25 Nm	

FUEL

Recommended fuel grade	 Premium unleaded (max. 15% ethanol, E10/E15)  95 ROZ/RON 90 AKI
—with regular-grade fuel, unleaded ^{OE}	Regular unleaded (max. 15% ethanol, E15) 91 ROZ/RON 87 AKI
Usable fuel capacity	approx. 12.8 l
Reserve volume	approx. 3 l
Fuel consumption	3.5 l/100 km, in accordance with WMTC
CO ₂ emission	81 g/km, in accordance with WMTC
Exhaust emissions standard	EU5, measured according to WMTC

ENGINE OIL

Engine oil, capacity	approx. 1.8 l, with filter change
Specification	SAE 5W-40, API SJ / 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
Engine oil, quantity for topping up	max. 0.4 l, Difference between MIN and MAX

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ENGINE

Engine number location	Crankcase, left next to the oil filter
Engine type	A81A03B
Engine design	Drivetrain swinging arm with single-cylinder four-stroke engine, four valves with rocker arms
Displacement	350 cm ³
Compression ratio	11.5: 1
Nominal capacity	25 kW, at rpm: 7500 min ⁻¹
Torque	35 Nm, at rpm: 5750 min ⁻¹
Maximum engine speed	max. 9400 min ⁻¹
Idle speed	1450 $\pm$ 50 min ⁻¹ , Engine at regular operating temperature

CLUTCH

Clutch type	Centrifugal clutch
-------------	--------------------

TRANSMISSION

Type of transmission	CVT (Continuously Variable Transmission)
----------------------	--

FINAL DRIVE

Gear ratio of the final drive	8.71
-------------------------------	------

FRAME

Position of the vehicle identification number	Frame, front right on steering head
Type plate location	Frame right, centre, top

CHASSIS AND SUSPENSION

Type of front suspension	Telescopic forks
Spring travel, front	110 mm, at front wheel
Type of rear suspension	Drivetrain swinging arm with screwed on auxiliary swinging arm
Spring travel at rear wheel	112 mm, at rear wheel

BRAKES**Front wheel**

Type of front brake	Twin disc brake, rigid, diameter 265 mm, 4-piston fixed caliper
Brake-pad material, front	Organic material
Brake disc thickness, front	5.0 mm, When new 4.5 mm, Wear limit

Rear wheel

Type of rear brake	Single-disc brake, diameter 265 mm, 1-piston floating caliper
Brake-pad material, rear	Organic material
Brake disc thickness, rear	5.0 mm, When new 4.5 mm, Wear limit

190 TECHNICAL DATA

WHEELS AND TYRES

Speed category, front/rear tyres	S, required at least: 180 km/h
----------------------------------	--------------------------------

Front wheel

Front-wheel rim size	3.50" x 15"
Tyre designation, front	120/70-15
Load index, front tyre	56
Permissible front-wheel imbalance	max. 5 g

Rear wheel

Rear wheel rim size	4.25" x 14"
Tyre designation, rear	150/70-14
Load index, rear tyre	66
Permissible rear-wheel imbalance	max. 5 g

Tyre pressure

Tyre pressure, front	2.2 bar, One-up, tyre cold 2.4 bar, Two-up mode with load; with cold tyres
Tyre pressure, rear	2.4 bar, One-up, tyre cold 2.6 bar, Two-up mode with load; with cold tyres

ELECTRICAL SYSTEM

Electrical rating of on-board sockets	max. 10 A, Total for all sockets
---------------------------------------	----------------------------------

Fuses

Main fuse	30 A, Voltage regulator
Fuse 1	Not used
Fuse 2	7.5 A, Diagnostic socket, ignition lock, Keyless Ride, anti-theft alarm
Fuse 3	7.5 A, Multifunction switch, left, tail light, helmet compartment lighting, storage compartment lock
Fuse 4	4 A, Brake light switch
Fuse 5	4 A, Fuel pump relay
Fuse 6	7.5 A, Fan relay
Fuse 7	7.5 A, Ignition coil, fuel injector, tank vent valve
Fuse 8	Not used

Battery

Battery type	AGM, maintenance-free
Battery rated voltage	12 V
Battery rated capacity	9 Ah

Spark plugs

Spark plugs, manufacturer and designation	NGK LMAR8J-9E
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192 TECHNICAL DATA

Lighting

Bulbs for the low-beam headlight	LED
Bulb for high-beam headlight	LED
Bulb for parking light	LED
Bulbs for turn indicators	LED
Bulb for tail light/brake light	LED
Light source for the number plate light	W5W / 12 V / 5 W

ANTI-THEFT ALARM

—with anti-theft alarm (DWA)^{OE}

Battery type (For Keyless Ride radio-operated key)	CR 2032
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DIMENSIONS

Length of motorcycle	2200 mm, over number-plate carrier
Height of motorcycle	1500 mm, over windscreen, at DIN unladen weight
Width of motorcycle	813 mm, without mounted parts
	845 mm, with hand protectors
Height of rider's seat	765 mm, without rider, at DIN unladen weight
Rider's inside-leg arc, heel to heel	1742 mm, without rider, at DIN unladen weight

WEIGHTS

Vehicle kerb weight	216 kg, DIN unladen weight, ready for road, 90 % load of fuel, without optional extras (OE)
Permissible gross vehicle weight	422 kg
Maximum payload	206 kg

PERFORMANCE FIGURES

Top speed	129 km/h
—with Canada export ^{NV}	139 km/h
—with topcase ^{OA}	130 km/h

SERVICE

13

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REPORTING SAFETY-RELEVANT DEFECTS

—with Canada export^{NV}

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the NHTSA (National Highway Traffic Safety Administration) in addition to notifying the BMW of North America, LLC.

If the NHTSA receives other, similar complaints, it may open an investigation. If it finds that a safety defect exists in a group of vehicles, the NHTSA it may order a recall and remedy campaign. However, the NHTSA cannot become involved in individual problems between you, your retailer, or BMW of North America, LLC. You can contact the NHTSA by calling the Vehicle Safety Hotline on 1-888-327-4236 (teletypewriter TTY for the hearing impaired: 1-800-424-9153) toll-free, by visiting the website at <http://www.safercar.gov> or by writing to Administrator, NHTSA, 400 Seventh Street, SW., Washington, DC 20590. Further information on vehicle safety is available at <http://www.safercar.gov>.

Canadian customers who wish to report a safety-related defect to Transport Canada, Defect Investigations and Recalls can call the toll-free hotline 1-800-333-0510. You can obtain further information about motor vehicle safety from <http://www.tc.gc.ca/roadsafety>.

RECYCLING

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 retailer network in place to look after you and your Scooter 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 Scooter.

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 subsequent damage

- BMW Motorrad recommends you have all the associated work on your Scooter carried out by a specialist workshop, preferably an authorised BMW Motorrad Retailer.

In order to help ensure that your BMW Scooter is always in optimum condition, BMW Motorrad recommends compliance with the maintenance intervals specified for your Scooter.

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 of BMW AG, Munich, Germany.

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

Your authorised BMW Motorrad retailer conducts the BMW pre-delivery check before handing over the vehicle to you.

BMW Running-in Check

The BMW running-in check has to be performed when the vehicle has covered between 500 km and 1200 km.

BMW Motorrad Service

The BMW Motorrad Service is carried out once a year; the extent of servicing can vary, depending on the age of the vehicle and the distance it has covered. Your authorised BMW Motorrad retailer confirms that the service work has been carried out and enters the date when the next service will be due.

Riders who cover long distances in a year might have to bring in their vehicles for service before the next scheduled date. It is to allow for these cases that a maximum odometer reading is entered as well in the confirmation of service. Servicing has to be brought forward if this odometer reading is reached before the next scheduled date for the service.

200 SERVICE

The maintenance tasks necessary for your vehicle are set out in the maintenance schedule below:

MAINTENANCE SCHEDULE

	500-1 200 km 300-750 mls	10 000 km 6 000 mls	20 000 km 12 000 mls	30 000 km 18 000 mls	40 000 km 24 000 mls	50 000 km 30 000 mls	60 000 km 36 000 mls	70 000 km 42 000 mls	80 000 km 48 000 mls	90 000 km 54 000 mls	100 000 km 60 000 mls	12 months	24 months
①	X												
②		X	X	X	X	X	X	X	X	X	X	X ^a	
③		X	X	X	X	X	X	X	X	X	X	X ^a	
④		X	X	X	X	X	X	X	X	X	X		
⑤		X	X	X	X	X	X	X	X	X	X		
⑥		X	X	X	X	X	X	X	X	X	X		
⑦			X		X		X		X		X		
⑧			X		X		X		X		X		
⑨			X		X		X		X		X		
⑩				X			X			X			
⑪			X		X		X		X		X		
⑫					X				X				
⑬												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 Clean/check filter for CVT
 - 5 Replace air-filter element
 - 6 Checking steering-head bearing
 - 7 Replace CVT belt and roller weights with slider shoes
 - 8 Replace all spark plugs
 - 9 Check valve clearances
 - 10 Replace mounting for rubber mounts
 - 11 Oil change in the telescopic forks
 - 12 Check clutch (clutch removed)
 - 13 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
- Setting service-due date and countdown distance
- Checking brake-fluid level, front/rear brakes
- Check the coolant level
- Check the tyre pressures and tread depth
- 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
- 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.

- Checking battery state of charge
- Performing vehicle test with BMW Motorrad diagnostic system
- Visual inspection of the brake lines, brake hoses and connections
- Check the brake fluid level, front and rear
- Check the front brake pads and brake discs for wear
- Check the rear brake pads and brake disc for wear
- Check the coolant level
- Checking left and right rubber mounts
- Check the tyre pressures and tread depth
- Checking lighting and signalling system
- Function test, engine start suppression
- Final inspection and check of roadworthiness
- Setting service-due date and countdown distance
- Confirm the BMW Motorrad service in the on-board literature

204 SERVICE

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	☐	☐
Cleaning CVT dust filter, front	☐	☐
Replacing the air filter element	☐	☐
Checking steering-head bearing	☐	☐
Replacing the CVT belt	☐	☐
Renewing all spark plugs	☐	☐
Checking valve clearance	☐	☐
Replacing fixture for rubber mount	☐	☐
Changing the oil in the telescopic fork	☐	☐
Checking clutch	☐	☐
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	☐	☐
Cleaning CVT dust filter, front	☐	☐
Replacing the air filter element	☐	☐
Checking steering-head bearing	☐	☐
Replacing the CVT belt	☐	☐
Renewing all spark plugs	☐	☐
Checking valve clearance	☐	☐
Replacing fixture for rubber mount	☐	☐
Changing the oil in the telescopic fork	☐	☐
Checking clutch	☐	☐
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	☐	☐
Cleaning CVT dust filter, front	☐	☐
Replacing the air filter element	☐	☐
Checking steering-head bearing	☐	☐
Replacing the CVT belt	☐	☐
Renewing all spark plugs	☐	☐
Checking valve clearance	☐	☐
Replacing fixture for rubber mount	☐	☐
Changing the oil in the telescopic fork	☐	☐
Checking clutch	☐	☐
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	☐	☐
Cleaning CVT dust filter, front	☐	☐
Replacing the air filter element	☐	☐
Checking steering-head bearing	☐	☐
Replacing the CVT belt	☐	☐
Renewing all spark plugs	☐	☐
Checking valve clearance	☐	☐
Replacing fixture for rubber mount	☐	☐
Changing the oil in the telescopic fork	☐	☐
Checking clutch	☐	☐
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	☐	☐
Cleaning CVT dust filter, front	☐	☐
Replacing the air filter element	☐	☐
Checking steering-head bearing	☐	☐
Replacing the CVT belt	☐	☐
Renewing all spark plugs	☐	☐
Checking valve clearance	☐	☐
Replacing fixture for rubber mount	☐	☐
Changing the oil in the telescopic fork	☐	☐
Checking clutch	☐	☐
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	☐	☐
Cleaning CVT dust filter, front	☐	☐
Replacing the air filter element	☐	☐
Checking steering-head bearing	☐	☐
Replacing the CVT belt	☐	☐
Renewing all spark plugs	☐	☐
Checking valve clearance	☐	☐
Replacing fixture for rubber mount	☐	☐
Changing the oil in the telescopic fork	☐	☐
Checking clutch	☐	☐
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	☐	☐
Cleaning CVT dust filter, front	☐	☐
Replacing the air filter element	☐	☐
Checking steering-head bearing	☐	☐
Replacing the CVT belt	☐	☐
Renewing all spark plugs	☐	☐
Checking valve clearance	☐	☐
Replacing fixture for rubber mount	☐	☐
Changing the oil in the telescopic fork	☐	☐
Checking clutch	☐	☐
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	☐	☐
Cleaning CVT dust filter, front	☐	☐
Replacing the air filter element	☐	☐
Checking steering-head bearing	☐	☐
Replacing the CVT belt	☐	☐
Renewing all spark plugs	☐	☐
Checking valve clearance	☐	☐
Replacing fixture for rubber mount	☐	☐
Changing the oil in the telescopic fork	☐	☐
Checking clutch	☐	☐
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	☐	☐
Cleaning CVT dust filter, front	☐	☐
Replacing the air filter element	☐	☐
Checking steering-head bearing	☐	☐
Replacing the CVT belt	☐	☐
Renewing all spark plugs	☐	☐
Checking valve clearance	☐	☐
Replacing fixture for rubber mount	☐	☐
Changing the oil in the telescopic fork	☐	☐
Checking clutch	☐	☐
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	☐	☐
Cleaning CVT dust filter, front	☐	☐
Replacing the air filter element	☐	☐
Checking steering-head bearing	☐	☐
Replacing the CVT belt	☐	☐
Renewing all spark plugs	☐	☐
Checking valve clearance	☐	☐
Replacing fixture for rubber mount	☐	☐
Changing the oil in the telescopic fork	☐	☐
Checking clutch	☐	☐
Changing the brake fluid in the entire system	☐	☐

Notes

Stamp, signature

216 SERVICE

[illegible]

DECLARATION OF CONFORMITY	219
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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

222 APPENDIX

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

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 TFT INSTRUMENT CLUSTER

For all Countries without EU

Model name: ICC10in Manufacturer

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

Technical information

The ICC10in can operate in one of two operating modes:

1. Normal mode, with Bluetooth and WLAN on, and

2. Radio off mode (only available during vehicle manufacturing).

BT operating frq. Range:

2402 - 2480 MHz

BT version: 4.2 (no BTLE)

BT output power:

< +4 dBm (internal antenna)

WLAN operating frq. Range:

2402 - 2472 MHz

WLAN standards:

IEEE 802.11 b/g/n

WLAN output power:

< +14 dBm (internal antenna)

Country

Argentina



C-25636

Canada

This device contains licence-exempt transmitter(s)/ receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

- (1) This device may not cause interference.
- (2) This device must accept any interference, including interference

that may cause undesired operation of the device.

Radiofrequency radiation exposure Information: This equipment complies with Canada radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance of 20 centimeters between the radiator and your body. This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes :

- (1) L'appareil ne doit pas produire de brouillage;
- (2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

Informations sur l'exposition aux radiofréquences: Cet équipement est conforme aux limites d'exposition aux radiations fixées par le Canada pour un environ-

228 APPENDIX

nement non contrôlé. Cet équipement doit être installé et utilisé avec une distance minimale de 20 centimètres entre le radiateur et votre corps. Cet émetteur ne doit pas être colocalisée ou opérant en conjonction avec autre antenne ou émetteur.

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.



IFETEL

Serbia



U011 20

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。

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、科學及醫療用電波輻射性電機設備之干擾。

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KEYLESS RIDE ECU

For all Countries without EU

Model name: HUF8485

Manufacturer

Huf Hülsbeck & Furst GmbH &
Co. KG
Steege 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 interfe-
rence that may cause undesired
operation of the device.

Le présent appareil est conforme
aux CNR d'Industrie Canada ap-
plicables aux appareils radio ex-
empts de licence. L'exploitation
est autorisée aux deux condi-
ons suivantes :

- (1) L'appareil ne doit pas pro-
duire de brouillage;
- (2) L'utilisateur de l'appareil
doit acceptor tout brouillage
radioélectrique subi, même si le
brouillage est susceptible d'en
compromettre le fonctionne-
ment.

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 com-
munications equipment is per-
mitted by the Nigerian Commu-
nications 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

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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

A1109091120AF04A3



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



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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.

Errors and omissions excepted.

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Original rider's manual, printed in Germany.

Important data for refuelling:

Fuel

Recommended fuel grade	 Premium unleaded (max. 15% ethanol, E10/E15)  95 ROZ/RON 90 AKI
—with regular-grade fuel, unleaded ^{OE}	Regular unleaded (max. 15% ethanol, E15) 91 ROZ/RON 87 AKI
Usable fuel capacity	approx. 12.8 l
Reserve volume	approx. 3 l
Tyre pressure	
Tyre pressure, front	2.2 bar, One-up, tyre cold 2.4 bar, Two-up mode with load; with cold tyres
Tyre pressure, rear	2.4 bar, One-up, tyre cold 2.6 bar, Two-up mode with load; with cold tyres

For further information on all aspects of your vehicle, visit: bmw-motorrad.com

