



BMW Motorrad



The Ultimate
Riding Machine

Rider's Manual (US Model)
R 1200 RT

Motorcycle/Dealer Data

Motorcycle data

Model

Vehicle identification number

Color number

Initial registration

License plate

Dealer Data

Contact in Service

Ms./Mr.

Phone number

Dealer's address/phone number (company stamp)

Welcome to BMW

Congratulations on choosing a motorcycle from BMW Motorrad and welcome to the community of BMW motorcycle owners and riders. Familiarize yourself with your new motorcycle so that you can ride it safely and confidently in all highway traffic situations.

About this Rider's Manual

Please read this Rider's Manual carefully before starting to use your new BMW. It contains important information on how to operate the controls and how to get the most benefit from your BMW's advanced 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.

Suggestions and complaints

If you have any questions concerning your motorcycle, your authorized BMW Motorrad retailer is always happy to provide advice and assistance.

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

BMW Motorrad.

01 41 8 557 807



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General instructions

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Overview

This Rider's Manual has been designed to provide quick and efficient orientation. The quickest way for you to find information on specific topics is to consult the comprehensive index at the back of the manual. You can find a first overview of your motorcycle in Chapter 2. All maintenance and repair work carried out on your motorcycle will be documented in Chapter 11. Documentation confirming performance of scheduled maintenance is a precondition for generous handling of out-of-warranty claims and goodwill warranty treatment.

When the time comes to sell your BMW, remember to hand over this Rider's Manual; it is an important part of the motorcycle.

Abbreviations and symbols



Indicates warnings that are imperative to observe for your own safety and the safety of others, and to protect your product against damage.



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



Indicates the end of an item of information.



Instruction.



Result of an activity.



Reference to a page with more detailed information.



Indicates the end of accessory or equipment-dependent information.



Tightening torque.



Technical data.

OE

Optional extra. BMW Motorrad optional extras are already completely installed during motorcycle production.

OA

Optional accessory. BMW Motorrad optional accessories can be purchased and installed at your authorized BMW Motorrad retailer.

EWS

Electronic immobilizer.

DWA

Anti-theft alarm.

ABS Anti-Lock Brake System.

ASC Automatic Stability Control.

ESA Electronic Suspension Adjustment.

TPC Tire Pressure Control (TPC).

Equipment

When you ordered your BMW motorcycle, you chose various items of custom equipment. This Rider's Manual describes optional equipment (OE) offered by BMW and selected optional accessories (OA). It may also describe equipment options that you have not chosen. Please note, too, that your motorcycle might not be exactly as illustrated in this manual on account of country-specific differences.

If your motorcycle comes with equipment not described here, you can find the descriptions in a separate manual.

Technical data

All dimensions, weights and outputs in the Rider's Manual relate to the German DIN standards and comply with their tolerance specifications. Versions for individual countries may differ.

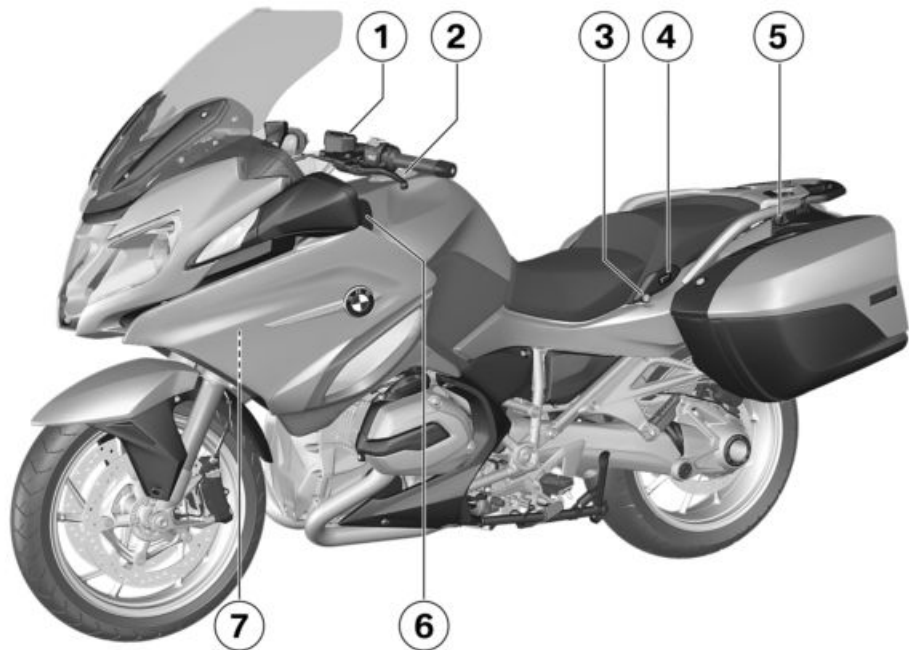
Notice concerning current status

The high safety and quality standards of BMW motorcycles are maintained by constant development work on design, equipment and accessories. For this reason, aspects of your motorcycle may vary from the descriptions in this Rider's Manual. In addition, BMW Motorrad cannot guarantee the total absence of errors.






Thus, no claims may be based on the information, illustrations or descriptions.

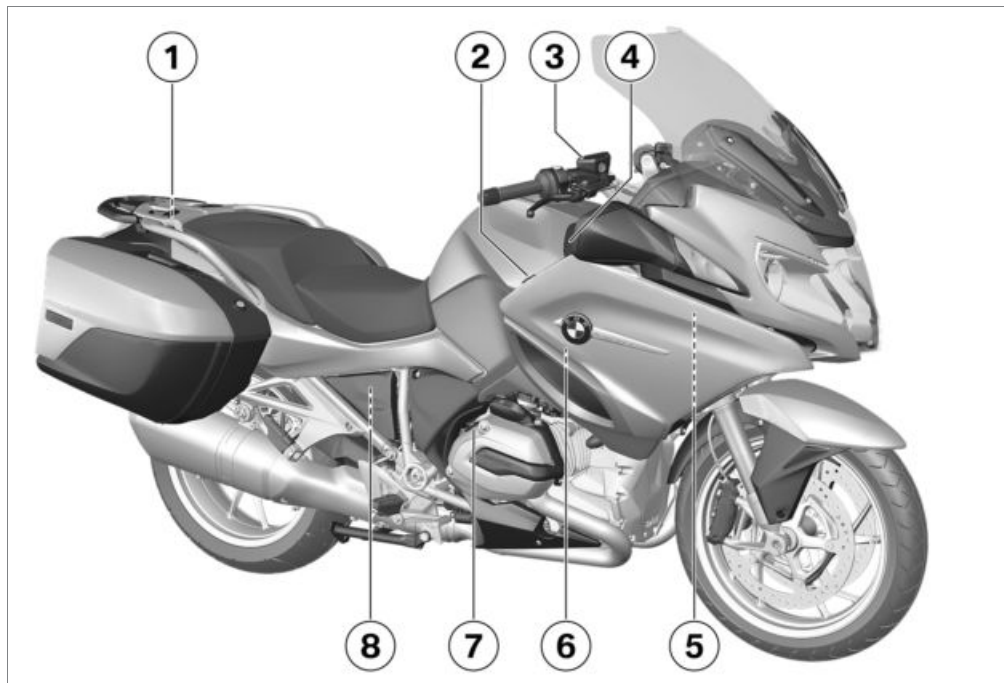
Overviews

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General view, right side	13
Underneath seat	14
Multifunction switch, left	15
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General view, left side

- 1 Clutch fluid reservoir
( 116)
- 2 Fuel filler opening ( 94)
- 3 Seat lock ( 81)
- 4 Passenger seat heater
( 71)
- 5 2nd power socket
- 6 Left-hand stow compartment ( 74)
- 7 Payload table
Tire inflation pressure table

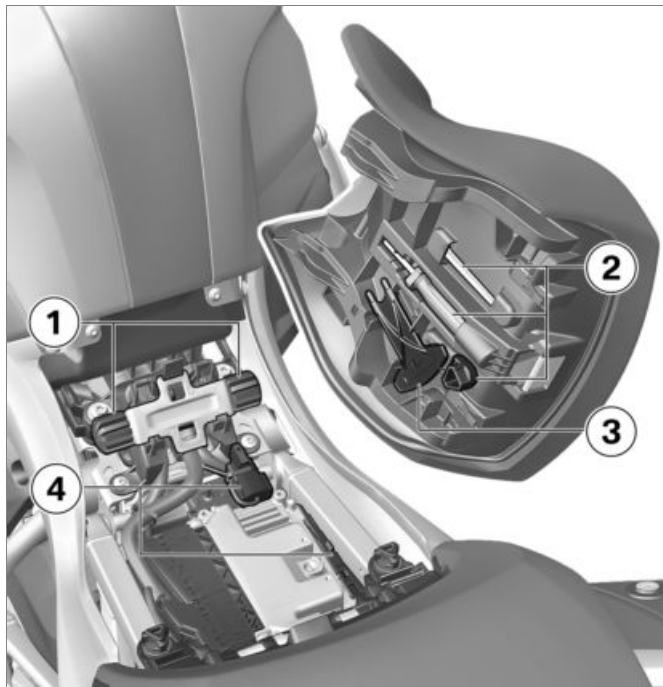


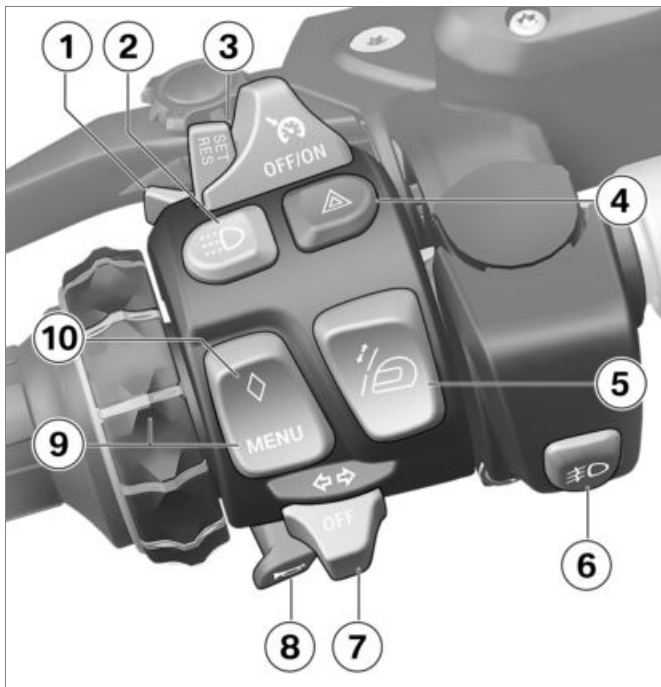
General view, right side

- 1 Rider's Manual (US Model)
- 2 Onboard power socket
( 138)
- 3 Brake-fluid reservoir, front
( 112)
- 4 – with audio system^{OE}
Right-hand stow compartment ( 74)
- 5 Vehicle identification number (on steering head bearing)
Type plate (on steering-head bearing)
- 6 Coolant level indicator (behind side panel) ( 114)
- 7 Engine oil filler ( 109)
- 8 Rear brake fluid reservoir (behind side panel)
( 113)

Underneath seat

- 1 Adjuster for the rider's seat height (➡ 82)
- 2 Standard tool kit (➡ 108)
- 3 Tool for adjusting spring load (➡ 65)
- 4 Fuses (➡ 135)





Multifunction switch, left

- 1 High-beam headlight and headlight flasher (► 57)
- 2 – with daytime driving light^{OE}
- 3 – with cruise control^{OE}
- 4 Hazard warning flashers (► 60)
- 5 Windshield adjustment (► 73)
- 6 – with additional LED headlight^{OA}
- 7 Turn indicators (► 60)
- 8 Horn

- 9** Multi-Controller and MENU button
 - Multifunction display (▶▶▶▶▶ 49)
 - ASC (▶▶▶▶▶ 61)
 - with dynamic ESA^{OE}
 - D-ESA (▶▶▶▶▶ 67)
 - with audio system^{OE}
 - Audio system (see audio system manual)
- 10** Menu Favorite (▶▶▶▶▶ 52)



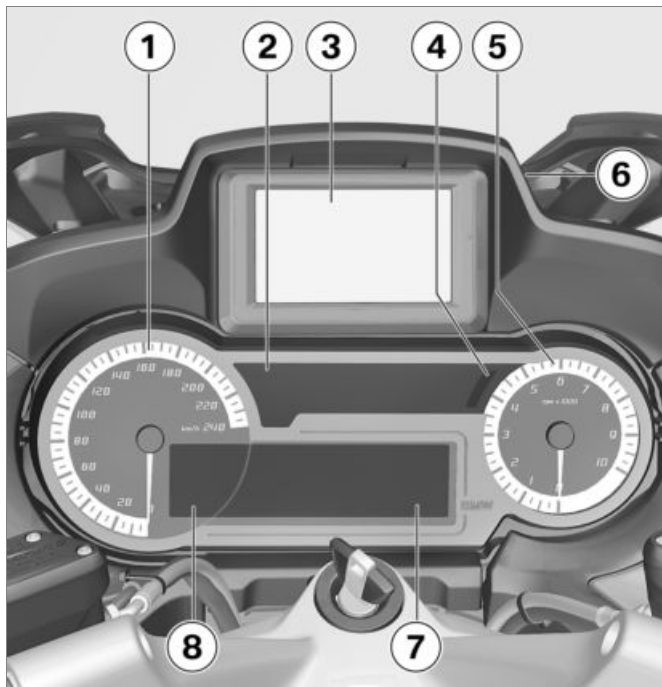
Multifunction switch, right

- 1 – with central locking^{OE}
Central locking (➡ 75)
- 2 Riding mode (➡ 61)
- 3 Emergency on/off switch
(kill switch) (➡ 56)
- 4 Starting the engine
(➡ 88)

Instrument cluster

- 1 Speedometer
- 2 Warning and indicator lamps (►► 22)
- 3 – with navigation system^{OA}
– with preparation for navigation system^{OE}
- Navigation system (►► 139)
- 4 Ambient light sensor (for brightness adjustment of instrument lighting)
- 5 Tachometer
- 6 – with navigation system^{OA}
– with preparation for navigation system^{OE}
- Release for navigation slot (►► 139)
- 7 Multifunction display (►► 24)
- 8 Trip odometer (►► 55)

► The brightness of the warning lights and telltale lights, the display and the instrument needle and gauge lighting is



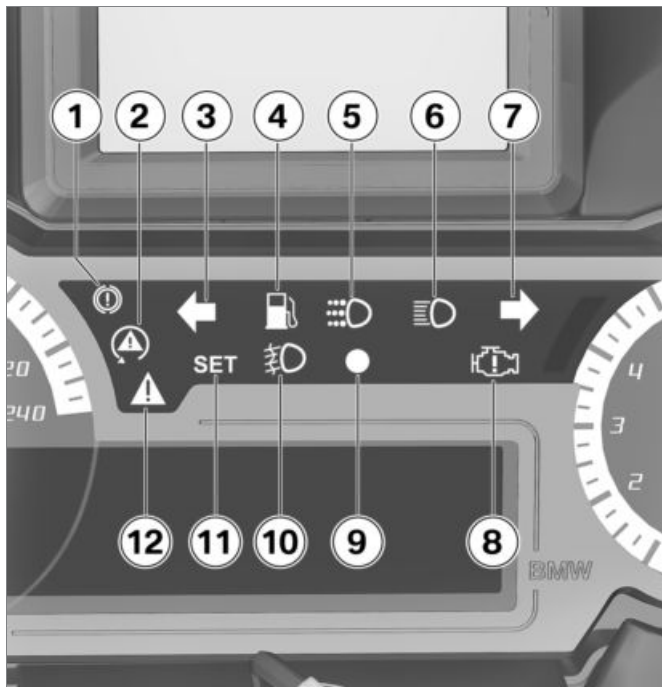
adapted automatically to suit ambient brightness.◀

Displays

Warning and indicator lamps	22
Multifunction display	24
Meaning of symbols	25
Warning lamps	26
Ambient temperature	40
Cruising range	40
Oil level indicator	41
Service display	41
Tire inflation pressures	42

Warning and indicator lamps

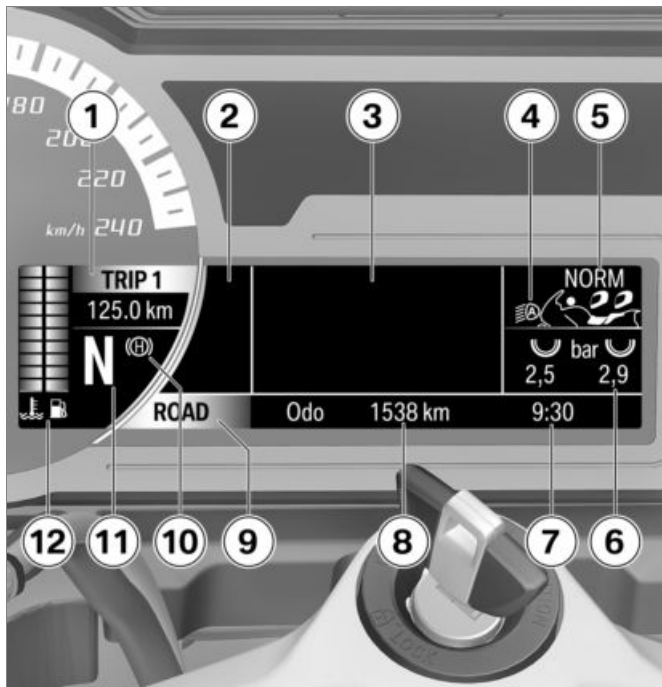
- 1 ABS (►► 36)
- 2 ASC (►► 37)
- 3 Turn indicator, left
- 4 Fuel reserve (►► 40)
- 5 – with daytime driving light^{OE}
Daytime driving light (►► 58)
- 6 High-beam headlight
- 7 Turn indicator, right
- 8 Electronic engine management
- 9 – with anti-theft alarm system (DWA)^{OE}
DWA (►► 79)
- 10 – with additional LED headlight^{OA}
Auxiliary headlight (►► 57)
- 11 – with cruise control^{OE}
Cruise control (►► 63)



- 12** General warning lamp, appears together with warning symbols in display panel (▣▶ 26)

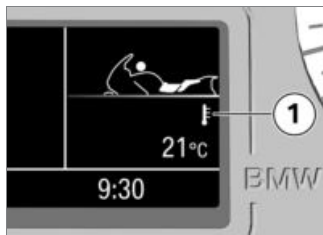
Multifunction display

- 1 Trip odometer (➡ 55)
- 2 Warning symbols (➡ 26)
- 3 Menu area (➡ 49)
Audio system
- 4 – with daytime driving light^{OE}
Automatic daytime light function (➡ 59)
- 5 – with seat heating^{OE}
Seat heating (➡ 71)
Heated handlebar grips (➡ 70)
– with dynamic ESA^{OE}
D-ESA settings
- 6 Onboard computer (➡ 53)
– with Tire Pressure Control (TPC/RDC)^{OE}
Tire inflation pressure
- 7 Clock (➡ 53)
- 8 Odometer
- 9 Riding mode (➡ 61)
- 10 – with Hill Start Control^{OE}
Hill Start Control (➡ 69)







- 11 Gear indicator, "N" is shown for Neutral
- 12 Coolant temperature
Fuel level


Meaning of symbols




Meanings of the symbols at position **1**:

-  Average fuel consumption since last reset (►►► 54)
-  Current fuel consumption
-  Range with fuel now on board (►►► 40)


 Average speed since last reset (►►► 54)

 Ambient temperature (►►► 40)

– with Tire Pressure Control (TPC/RDC)^{OE}

 Tire inflation pressures (►►► 42)

 Stopwatch (►►► 54)

 Travel times (►►► 54)

 Date (display mode depends on the time format selected) (►►► 53)



Oil level (→ 41)



Electrical system voltage



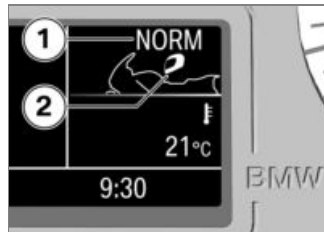
1 Heated handlebar grips switched on

– with seat heating^{OE}

2 Rider`s-seat heating ON

3 Rear-seat heating ON

– with dynamic ESA^{OE}



1 Damping

2 Vehicle load

Warning lamps













Display

Warnings are displayed with the corresponding warning lamps.














Warnings for which there is no dedicated warning light are indicated by the general warning light **1** in conjunction with a warning symbol such as **2** shown on the multifunction display. The universal warning lamp lights up in either yellow or red depending on the urgency of the warning. Up to four warning symbols can be displayed at any given time. The universal warning lamp lights up for the most urgent warning.

A list of the possible warnings can be found on the pages that follow.

Warning and indicator lamps	Warning symbols in the display panel	Meaning
 lights up yellow	 appears on the display	Light failure (→ 34)
	 appears on the display	DWA battery charge level low (→ 34)
 lights up yellow	 appears on the display	DWA battery drained (→ 34)
	 appears on the display	Onboard system voltage low (→ 35)
 lights up yellow	 appears on the display	Onboard system voltage critical (→ 35)
 lights up red	 appears on the display	Battery charging voltage insufficient (→ 35)
 flashes		ABS self-diagnosis not completed (→ 36)
 lights up		ABS error (→ 36)

Warning and indicator lamps







Warning symbols in the display panel

Warning and indicator lamps		Warning symbols in the display panel	Meaning
	flashes rapidly		ASC intervention (→ 36)
	flashes slowly		ASC self-diagnosis not completed (→ 37)
	lights up		ASC switched off (→ 37)
	lights up		ASC error (→ 37)
	lights up yellow		appears on the display ESA error (→ 37)
	flashes red		+ tire pressure in red Tire inflation pressure is outside approved range (→ 37)
			+ "--" or "-- --" is indicated Transmission error (→ 38)
	lights up yellow		+ "--" or "-- --" is indicated Sensor defective or system error (→ 39)

Warning and indicator lamps

Warning symbols in the display panel

Meaning

	lights up yellow		appears on the display	Battery of tire-inflation pressure sensor weak (▬▬▬➔ 39)
			appears on the display	Central locking locked (▬▬▬➔ 39)
	briefly shows yellow		appears on the display	Service overdue (▬▬▬➔ 39)
	lights up		Fuel-level reading turns yellow	Fuel down to reserve (▬▬▬➔ 40)

Outside temperature warning



appears on the display.

Possible cause:



The outside temperature measured on the motorcycle is less than:

Approx. 37 °F (Approx. 3 °C)



The outside temperature warning does not mean that there is no risk of icy conditions at temperatures above the borderline range.

At low outside temperatures, icy conditions must especially be expected on bridges and in shady road areas. ◀

- Think well ahead when driving.

EWS active



shows yellow.



appears on the display.

Possible cause:

The key being used is not authorized for starting, or communication between the key and engine electronics is disrupted.

- Remove other motorcycle keys from the ignition key ring.
- Have the defective key replaced, preferably by an authorized BMW Motorrad retailer.

Coolant temperature too high



shows red.

The temperature reading turns red.



Driving with an overheated engine can result in engine damage.

Be sure to observe the measures listed below. ◀

Possible cause:

The coolant temperature is too high.

- If possible, continue driving in the part-load range to cool down the engine.
- Should the coolant temperature frequently be too high, have the fault rectified as quickly as possible by an authorized workshop, preferably an authorized BMW Motorrad retailer.

Engine-oil level too low



appears on the display.

Possible cause:

The electronic oil level sensor has detected a low engine oil level. During the next refueling stop:

- Check engine oil level (🔧➡ 109).

If oil level is too low:

- Top up engine oil (🔧➡ 110).

Engine fault



lights up.

Possible cause:

The engine control unit has diagnosed a fault.



The engine is in the emergency operating mode. Unusual engine response is a possibility.

Adapt your style of riding accordingly. Avoid accelerating sharply and overtaking.◀

- If you continue to ride be prepared for unusual engine be-

havior (low power, poor response, abrupt stalling, etc.).

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

Severe engine fault



flashes.

Possible cause:

The engine control unit has diagnosed a severe fault.



The engine is in the emergency operating mode. A risk of damaging the engine cannot be excluded.

Adapting style of riding: Ride slowly, avoid accelerating and overtaking.

If possible, have motorcycle picked up and have fault eliminated by a specialized workshop, preferably an

authorized BMW Motorrad retailer.◀

- If you continue to ride be prepared for unusual engine behavior (low power, poor response, abrupt stalling, etc.).
- Have the malfunction corrected as soon as possible at an authorized workshop, preferably an authorized BMW Motorrad retailer.

Front light failure



shows yellow.



appears on the display.

Possible cause:

Low-beam headlight, high-beam headlight, parking light or front flashing turn indicator defective. The low-beam headlight for one of the LED turn indicators must be replaced.

- Please contact a specialized workshop, preferably an authorized BMW Motorrad retailer.
- Replacing bulb for high-beam headlight (➡ 125).

Rear light failure



shows yellow.



appears on the display.

Possible cause:

Rear light, brake light or rear flashing turn indicator defective. The LED tail light must be replaced.

- Please contact a specialized workshop, preferably an authorized BMW Motorrad retailer.

Light failure



shows yellow.



Bulb symbol with two arrows appears on the display.

Possible cause:

A combination of light failures has occurred.

- Please contact a specialized workshop, preferably an authorized BMW Motorrad retailer.

DWA battery charge level low

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



appears on the display.

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

Possible cause:

The DWA battery no longer has its full charging capacity. The operation of the DWA with the vehicle battery disconnected is only guaranteed for a limited time.

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

DWA battery drained

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



shows yellow.



appears on the display.

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

Possible cause:

The DWA battery no longer has any charging capacity. Operation of the DWA is no longer guaranteed when the vehicle battery is disconnected.

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

Onboard system voltage low



appears on the display. Generator power is only just sufficient to supply all consumers and charge the battery.

Possible cause:

Too many consumers switched on. On-board system voltage tends to drop particularly at low engine rpm and when the engine is idling.

- When riding at low engine revs, switch off all electrical equipment that is not necessary

for road safety (e.g. heated body warmer or supplementary headlight).

Onboard system voltage critical



shows yellow.



appears on the display.

Generator power is no longer sufficient to supply all consumers and charge the battery. In order to ensure that the engine can be started and the motorcycle ridden, the onboard electronics switch off the electricity supply to the onboard sockets and the auxiliary headlights. In extreme cases the seat heating and the grip heating might also be shut down.

Possible cause:

Too many consumers switched on. On-board system voltage tends to drop particularly at low engine rpm and when the engine is idling.

- When riding at low engine revs, switch off all electrical equipment that is not necessary for road safety (e.g. heated body warmer or supplementary headlight).

Battery charging voltage insufficient



shows red.



appears on the display.



A discharged battery will lead to the failure of various motorcycle systems such as lighting, engine or ABS. This can result in dangerous driving situations.

Do not continue riding.◀

The battery is not being charged. If you continue driving, the motorcycle electronics will discharge the battery.

Possible cause:

Alternator or alternator drive defective or fuse for alternator regulator has blown.

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

ABS self-diagnosis not completed



flashes.

Possible cause:



ABS self-diagnosis not completed

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

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

ABS error



lights up.

Possible cause:

The ABS control unit has detected an error. The ABS function is not available.

- It is possible to continue riding the motorcycle if you make

allowance for the ABS failure. You should also take account of the additional information on situations that can lead to an ABS fault (▶ 102).

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

ASC intervention



flashes rapidly.

The ASC has detected instability at the rear wheel and has reduced the torque. The warning lamp flashes longer than the ASC intervention lasts. This feature continues to furnish the rider with visual feedback confirming that the system has initiated active closed-loop intervention even after the critical situation has passed.

ASC self-diagnosis not completed

 flashes slowly.


Possible cause:

 ASC self-diagnosis not completed

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

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

ASC switched off


 ASC warning lamp lights up.

Possible cause:

The ASC system has been deactivated by the rider.

- Switch ASC on.

ASC error


 ASC warning lamp lights up.


Possible cause:

The ASC control unit has detected an error. The ASC function is not available.

- It remains possible to continue riding. It must be noted that the ASC function is not available. You should also take account of the additional information on situations that can lead to an ASC fault (103).
- Have the malfunction corrected as soon as possible at an authorized workshop, preferably an authorized BMW Motorrad retailer.

ESA error

 shows yellow.

 appears on the display.

Possible cause:

The ESA control unit has detected an error. Motorcycle damping is in this condition very firm and riding is rather uncomfortable - in particular on rough roads.

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

Tire inflation pressure is outside approved range

– with Tire Pressure Control (TPC/RDC)^{OE}

an authorized BMW Motorrad retailer.

an authorized BMW Motorrad retailer.

Sensor defective or system error

– with Tire Pressure Control (TPC/RDC)^{OE}



shows yellow.



+ "--" or "-- --" is indicated.

Possible cause:

Wheels without RDC sensors are mounted.

- Retrofit wheel set with RDC sensors.

Possible cause:

1 or 2 RDC sensors have failed or a system fault has occurred.

- Have fault eliminated at a specialist service facility, preferably

Possible cause:

A system fault has occurred.

- Have fault eliminated at a specialist service facility, preferably an authorized BMW Motorrad retailer.

Battery of tire-inflation pressure sensor weak

– with Tire Pressure Control (TPC/RDC)^{OE}



shows yellow.



appears on the display.



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

Possible cause:

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

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

Central locking locked

– with central locking^{OE}



The locked symbol appears on the display.

All locks in the central locking system are locked.

Service overdue



appears on the display.



General warning light briefly shows yellow after the Pre-Ride-Check.

Possible cause:

A necessary service has not been carried out.

- Have servicing carried out as quickly as possible by a specialist workshop, preferably an authorized BMW Motorrad retailer.

Fuel down to reserve



lights up.

Fuel-level reading turns yellow.



A fuel shortage can cause irregular engine operation or engine shut-off (accident hazard) and the catalytic converter can be damaged.

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

Possible cause:

At the most, the fuel tank still contains the reserve fuel quantity.



Reserve fuel quantity

Approx. 1.1 gal (Approx. 4 l)

- Refueling procedure (▶▶▶ 94).

Ambient temperature



Engine heat can lead to spurious readings of ambient temperature when the motorcycle is stationary. When the effects of engine heat on the monitored temperature become excessive the display responds by temporarily reverting to "--" as the display reading.



If the ambient temperature drops below the borderline range, this warning of possible black-ice formation appears. The display automatically switches

from any other mode to the temperature reading when the temperature drops below this threshold for the first time.



Borderline range for ambient temperature

Approx. 37 °F (Approx. 3 °C)

Cruising range



The range indicates the travel distance available with the remaining fuel. The average consumption employed to calculate the remaining travel range does not appear in the display and may vary from the indicated average consumption. You must put at least five liters of fuel into the fuel tank for the new level to be registered correctly. If the sensor cannot register the new level the range display cannot be updated.

If the motorcycle is standing on its side stand, the motorcycle's inclined position will prevent the fuel level from being registered accurately. For this reason travel range is only calculated with the side stand retracted.



The determined range is an approximate reading.

BMW Motorrad therefore recommends that you do not try to use the full range before refueling. ◀

Oil level indicator



The oil-level indicator gives you an indication of the engine oil level.

The conditions for the oil level indicator are as follows:

- Engine at operating temperature.
- Engine idling for at least ten seconds.
- Side stand retracted.

– Motorcycle is vertical.

The readings mean:

OK: Oil level correct.

CHECK !: Check oil level during next refueling stop.

– – -: No measurement possible (above-mentioned conditions not met).

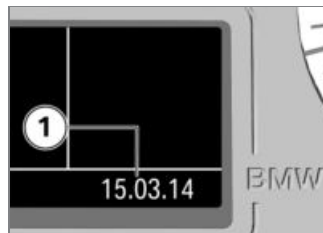
Service display



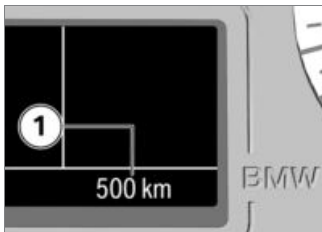
If a service is due, the service symbol and the service due date in place of the odometer are shown for a short time after the Pre-Ride-Check.



If the service is overdue the general warning light briefly shows yellow and the service symbol lights up continuously.



If the countdown to the next service is less than one month, service-due date **1** appears on the display.



If the vehicle covers high annual mileages then shorter service intervals may be required. If the mileage for the brought-forward service is within the display range, the remaining mileage **1** is indicated.



Indication of remaining mileage until next service:

621 miles (1000 km)

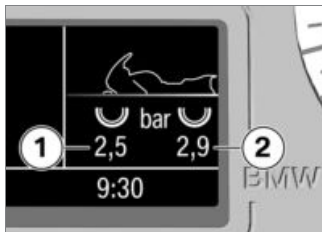


If the service display appears more than a month before the service date, the stored date must be adjusted

in the instrument cluster. This situation can occur if the battery was disconnected. ◀

Tire inflation pressures

– with Tire Pressure Control (TPC/RDC)^{OE}



The tire pressures are shown adjusted for temperature on the multifunction display and are always relative to the following tire air temperature:

68 °F (20 °C)

The figure on the left side **1** indicates the front tire's inflation pressure, while the figure on the right **2** shows the inflation pressure in the rear tire. Immediately after switching on the ignition, "-- --" is indicated.



TCP/RDC sensor is not active

min 19 mph (min 30 km/h)
(The RDC sensor does not send its signal to the motorcycle until after the minimum speed has been exceeded.)

If the pressure in a tire drops to a critical level the corresponding status indicator shows red.



The tire warning symbol also appears on the display.



The general warning lamp flashes red.

Further information on BMW Motorrad RDC can be found starting from page (▮▮▮▮▶ 104).

Operation

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Steering and ignition lock

Keys

You are provided with 2 ignition keys.

Should you lose your keys, refer to the information regarding the electronic immobilizer (EWS) (▶▶ 48).


Single-key locking

- Steering and ignition lock
- Pannier lock
- Stow compartment lock
- Fuel filler cap
- Seat lock
- Storage compartment

- with topcase^{OA}
- Topcase

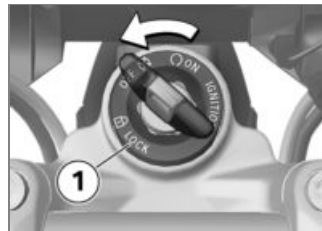
- with audio system^{OE}
- Audio stow compartment

Locking handlebars

 If the motorcycle is on the side stand, the surface of the ground will determine whether it is better to turn the handlebars to the left or right. However, the motorcycle is more stable on a level surface with the handlebars turned to the left than with the handlebars turned to the right.

On level ground, always turn the handlebars to the left to set the steering lock. ◀

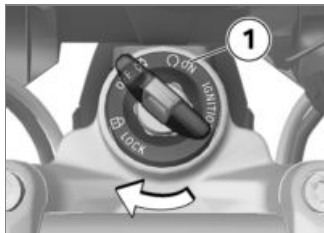
- Turn handlebars to full left or right lock position.



- Turn key to position **1** while moving handlebars slightly.
 - » Ignition, lights and all electrical circuits switched off.
 - » Handlebars are locked.
 - » Key can now be removed.

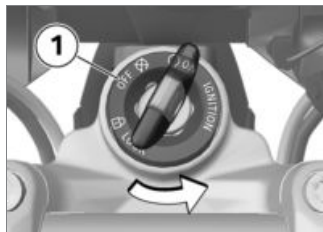
Ignition

Switch on ignition



- Insert key into the steering and ignition lock. Turn key to position **1**.
 - » Parking lights and all function circuits are switched on.
 - » Pre-Ride-Check in progress (►► 88)
 - » ABS self-diagnosis is performed (►► 89)
 - » ASC self-diagnosis in progress (►► 90)

Switch off ignition



- Turn key to position **1**.
 - » After the ignition is switched off, the instrument cluster remains switched on for a short period of time and indicates possibly present fault codes.
 - » Handlebars not locked.
 - » Electrically powered accessories remain operational for a limited period of time.
 - » Battery can be recharged via onboard socket.
 - » Key can now be removed.

- with daytime driving light^{OE}
- The daytime light switches off shortly after the ignition is switched off.<

- with additional LED headlight^{OA}
- The supplementary LED headlights switch off shortly after the ignition is switched off.<

Electronic immobilizer EWS

The motorcycle's electronic circuitry monitors the data stored in the ignition key through a ring antenna incorporated in the steering and ignition lock. The engine management system does not enable engine starting until this key has been recognized as "authorized" for your motorcycle.

▶ A further key attached to the same ring as the ignition key used to start the engine could "irritate" the electronics, in which case the enabling signal for starting is not issued. The EWS warning is shown in the multifunction display.

Always store further vehicle keys separately from the ignition key. ◀

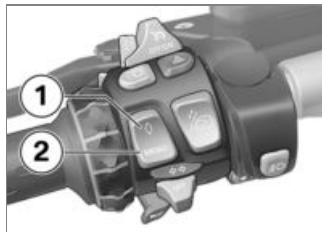
If you lose your vehicle key, you can have it disabled by your authorized BMW Motorrad retailer. When having a key disabled you should also bring all of the motorcycle's remaining keys with you. The engine can no longer be started using a disabled key; however, a disabled key can be enabled again.

Ignition key is only available through an authorized BMW Motorrad retailer. The keys are part of an integrated security system, obligating the retailer

to check the legitimacy of all applications for replacement/extra keys.

Multifunction display

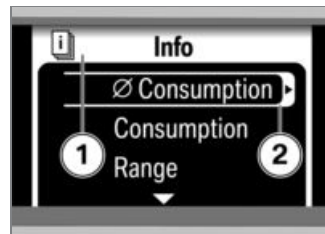
Selecting menu



Press button **2** to step through the sequence of menus, starting with the Dynamic ESA menu. Each successive press of button **2** opens the next menu; the total number of menus depends on the equipment options fitted on the motorcycle.

You can also use button **1** to directly access your predefined favorite menu.

With the exception of the Audio area, the Settings menu can only be called with the motorcycle at a standstill.



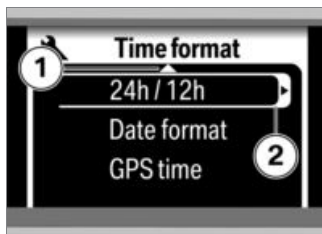
The selected menu is displayed in position **1**. The selected sub-menu **2** is marked by a border.

▶ A list of all the menus can be found in the separate Quick Reference Guide. ◀

Selecting menu item

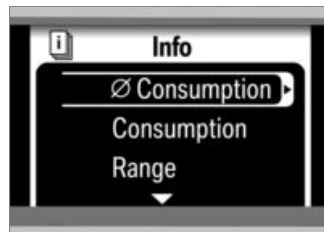


Move the cursor within the menu using the Multi-Controller **1**.



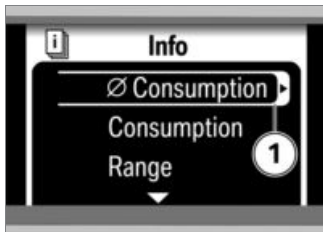
An arrow **1** on the upper or lower edge of the display indicates that by turning the Multi-Controller in the corresponding direction, you can access additional menu items. If the arrow **2** is shown on the cursor, then you can call up a submenu by pressing the Multi-Controller to the right (different meaning for average values and list selection, see (→ 50)).

Setting parameters



Direct selection

If you move the cursor to a menu item that requires no other settings, your selection goes active right away.



Resetting settings

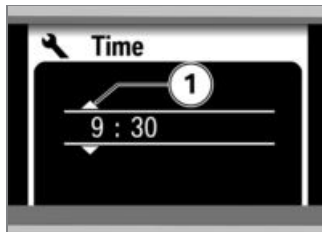
You can reset average values marked with an arrow **1** by long-pressing the Multi-Controller to the right.



Selecting from a list

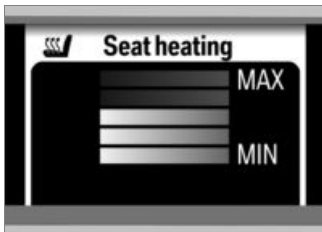
A circle **1** beside each selectable item means that the items are part of a selection list. A circle with a dot indicates the item that is currently selected.

If you want to change the selection, move the cursor to another item in the list and press the Multi-Controller to the right to either activate or deactivate the parameter you selected.



Setting numerical values

If there are one or more numerical values between the arrows **1**, you can increase the values by turning the Multi-Controller up or reduce the values by turning it down. By pressing the Multi-Controller to the right or left, you can change between the values.



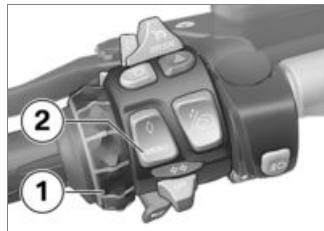
Setting relative values

A bar indicator enables you to set a value in a range between two limits. Turning the Multi-Controller up increases or turning it down decreases the value to be set.

Exiting menu



Arrow **1** appears when you are in a submenu.



Pressing the Multi-Controller **1** to the left returns you to the next higher menu; pressing the MENU button **2** returns you to the main menu.


To hide the menus, press the Multi-Controller **1** to the left in a main menu.

Selecting favorite menu

- Select the main menu of your choice.



- Hold down button **1**.

 The rhomboid symbol is shown on the right next to the selected menu.

- » The menu you have selected will subsequently be called up whenever you press button **1**.

Adapting mode of presentation

- Switch on ignition.
- Call up the **Settings** menu and select **User**.

The settings you can choose are as follows:

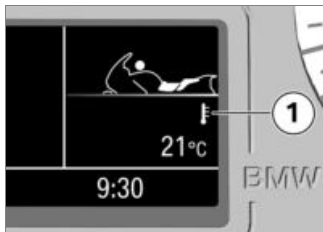
- **Language:** Display language (German, English, Spanish, Italian, French, Dutch, Portuguese)
- **Time format - 12 h / 24 h:** Clock in 12-hour format (12 h) or in 24-hour format (24 h)
- **Time format - Date format:** Date in day . month . year format (dd . mm . yy) or in month / day / year format (mm / dd / yy)
- **Time format - GPS time:** Accept GPS time and GPS date from the built-in navigation system (On), (Off)
- **Brightness:** Brightness of the display and the instruments
- **Start logo:** Show start logo after the ignition is switched on (On), (Off)
- **Fact. settings:** Restore factory defaults (when **Reset!** appears on the display, press the Multi-Controller to the right and hold it in this position)
- **Background:** Indication on the display when the radio is switched off: **Empty:** No indication, **Logo:** Logo (RT), **Speedo:** Digital speedometer.

- Using the Multi-Controller, make the desired adjustments.

Onboard computer

Selecting display readings

- Call up the **Info** menu and select the item of information of your choice.



The following items of information can be displayed in panel **1**:

- ØConsump.: Average fuel consumption
- Consump.: Current fuel consumption
- Range: Range with fuel remaining in fuel tank
- ØSpeed: Average speed
- Temperature: Ambient temperature
- Tire pressure: Tire pressures
- Stopwatch: Stopwatch
- Travel times: Travel times

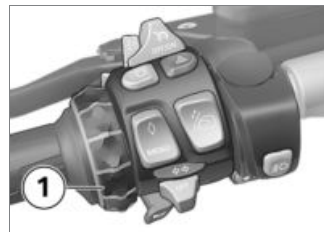
- Date: Current date
- Oil level: Engine-oil level
- Elec. voltage: Electrical system voltage
- Off: No reading

Reset average data

- Call up the Info menu and select the average value you want to reset.
- Push the Multi-Controller to the right and hold it in this position until the average value is reset.

Operating stopwatch

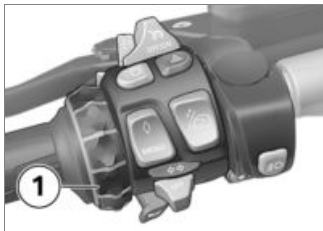
- Call up the Info menu and select Stopwatch.




- With the stopwatch stopped, push the Multi-Controller **1** to the right to start the stopwatch.
 - » The stopwatch continues timing even if you select some other reading or switch off the ignition.
- When the stopwatch is running, press the Multi-Controller **1** to the right to stop it.
- Press and hold the Multi-Controller **1** to the right to reset the stopwatch.


Measuring travel times

- Call up the Info menu and select Travel times.



- Push the Multi-Controller **1** to the right and hold it in this position to reset the travel time.
- » Timing continues even if you select some other reading or switch off the ignition.

 Time during which the motorcycle was on the move since the last reset.

 Time during which the motorcycle was at a standstill since the last reset.

Trip odometer

Selecting tripmeter

- Switch on ignition.



- Open Trip menu by pressing button **1** and then select the desired odometer **2**.

The following counters can be displayed:

- Tripmeter 1 (Trip 1)
- Tripmeter 2 (Trip 2)
- Automatic trip meter (Trip Auto., resets automatically eight hours after ignition OFF).

Reset tripmeter

- Switch on ignition.
- Select desired trip odometer.



- Press and hold button **1** until the odometer reading **2** is reset.

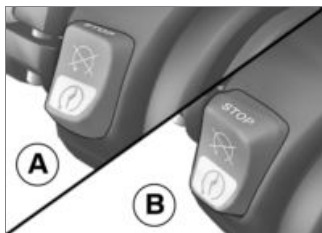
Emergency on/off switch (kill switch)



- 1 Emergency on/off switch (kill switch)

! Operating the emergency ON/OFF switch when riding can cause the rear wheel to lock and thus cause a fall. Do not operate the emergency ON/OFF switch when riding. ◀

The engine can be switched off easily and quickly using the emergency on/off switch.



- A Engine switched off
B Operating position

Headlight

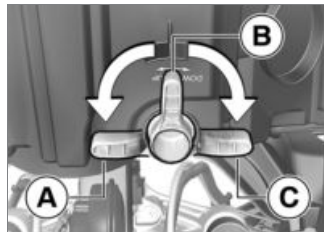
Headlamp range and spring preload

The headlamp range generally remains constant due to the adjustment of the spring preload to the loading state.

Spring preload adjustment may only be insufficient when the motorcycle is very heavily loaded. In this case, the headlamp range must be adjusted to the weight.

▶ If there are questions whether the headlight range is correct, consult a specialized workshop, preferably an authorized BMW Motorrad retailer. ◀

Headlight range adjustment



- A swiveling lever is used for the headlight range adjustment.
 - **A** Setting for light payload (single rider)
 - **B** Single rider and luggage
 - **C** Position for heavy payload (with pillion rider)

Lights

Parking lamps

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

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

Lowbeam headlamp

The headlights automatically come on in their low-beam mode as soon as you start the engine.

High-beam headlight and headlight flasher

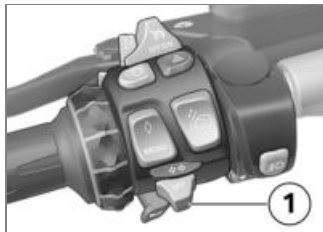


- Press switch **1** toward front to switch on high beams.
- Pull switch **1** rearward to activate headlight flasher.

▶ The high-beam headlight can also be switched on when the engine is not running.◀

Parking light

- Switch off ignition.




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

Operate additional LED headlight

- with additional LED headlight^{OA}

supplementary headlight is switched on again at the same time.

 If the main-beam headlight is switched on when the daytime light is on, the daytime light is switched off after approx. 2 seconds and the main-beam headlight, dipped headlight, front side lights and, if applicable, the supplementary headlight are switched on.

If the main-beam headlight is switched off again, the daytime light is not automatically reactivated and should thus be switched on manually if required. ◀

Automatic daytime light function


– with daytime driving light^{OE}



The automatic headlights function cannot replace the rider's personal assessment of

the light conditions. The sensor cannot detect fog or drizzle, for example.

In such situations you should switch on the dipped headlight manually as otherwise there is a safety risk. ◀

 The changeover between daytime light and dipped headlight plus front side lights can be performed automatically. ◀

- Open the **Settings** menu and then select **Vehicle**.
- Select menu option **Day run lights** and set **Auto**.
DRL to **On**.



The symbol for automatic daytime light function lights up on the display.

» If the ambient light level drops below a certain level (e.g. in a tunnel), the dipped headlight is automatically switched on. As soon as an adequate ambient light level is detected, the day-

time light is switched on again. When the daytime light is on, the daytime light symbol shows on the multifunction display.

Manual operation of the light when automatic function is active

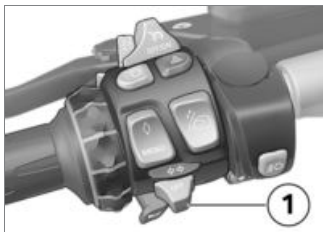
- with daytime driving light^{OE}
- If the daytime light button is operated, the daytime light is switched off and the dipped headlight and front side lights are switched on (e.g. when entering a tunnel if the automatic daytime light function is slow to react due to the ambient light level). When the daytime light is switched off, the supplementary headlight is switched on again.
- If the daytime light button is pressed again, the automatic daytime light function is reactivated, i.e. the daytime light is switched on again when the

ambient light reaches the required level.

Turn indicator

Operate turn indicator

- Switch on ignition.



- Press button **1** toward left to switch on left-hand turn indicator.
- Press button **1** toward right to switch on right-hand turn indicator.
- Press button **1** into center position to switch off turn indicators.



Turn indicator cancellation

The turn indicators automatically switch off after the defined time and distance.

min 10 s

min 984.3 ft (min 300 m)

Hazard warning flashers

Operating hazard warning flashers

- Switch on ignition (☰➔ 48).

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

▶ If a turn indicator button is pressed with the ignition switched on, the flashing function replaces the emergency flashing function as long as the button is

pressed. If the turn indicator button is released, the emergency flasher function becomes active again.◀



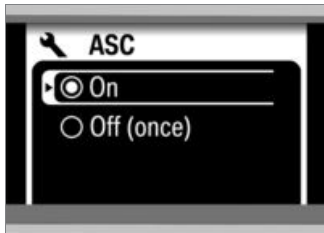
- Press button **1** to switch on hazard warning flashers.
- » Ignition can be switched off.
- To switch off the hazard warning lights, switch on the ignition and press the button **1** again.

ASC

Switching ASC function off and on

- Switch on ignition.
- Call up the **Settings** menu and select **ASC**.

▶ This menu cannot be called up while the motorcycle is on the move.◀



- Select **Off (once)** to switch ASC off until the next time the ignition is switched on.



If the ASC is switched off, the ASC warning lamp comes on.

- Select **On** to switch ASC on. Alternatively: Switch the ignition off and then on.



ASC warning lamp goes out; if self-diagnosis has not been completed, the ASC warning lamp begins to flash.

Riding mode

Use of the riding modes

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

- Riding on wet roads
- Riding on dry roads

- with Pro driving modes^{OE}
- Brisk riding on dry roads

For each of those scenarios, the optimum balance between engine torque, throttle response, ABS control and ASC control for the situation concerned is provided.

- with dynamic ESA^{OE}

The suspension settings also adjust to the selected scenario.

Setting riding mode

- Switch on ignition (▶ 48).



- Press button **1**.

▶ Details on the selectable driving modes are provided in the chapter "Technology in Detail".◀



The selection arrow **2** and the active riding mode **1** are shown.



- Press button **1** repeatedly, until the selection arrow is shown next to the desired riding mode.

The following riding modes can be selected:

- RAIN: When riding on wet roads.
- ROAD: When riding on dry roads.
- with Pro driving modes^{OE}
- » The following driving mode can also be selected:
- DYNA: For brisk riding on dry roads.◀

- » When the vehicle is stationary, the selected riding mode is activated after approx. 2 seconds.
- » While the motorcycle is moving, the new riding mode will only be activated if the accelerator twist-grip is in the zero position.
- » After the new riding mode is activated, the symbols for coolant temperature and fuel level are displayed again.
- » The riding mode selected and its associated engine-characteristic, ABS ASC and Dynamic ESA settings are retained even after the ignition has been switched off.

Cruise control

- with cruise control^{OE}

Switching on cruise control




- Push switch **1** to right.
- » Button **2** is unlocked.

Setting road speed



- Briefly press button **1** forward.

 Adjustment range for cruise control (gear-dependent)

6...130 mph (10...210 km/h)

SET Indicator lamp for cruise-control system lights up.

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

Acceleration



- Briefly press button **1** forward.

» Speed is increased by 1.2 mph (2 km/h) each time button is pressed.

- Press button **1** forward and hold.
- » The motorcycle accelerates steplessly.
- » If the button **1** is no longer pressed, the speed achieved is maintained and saved.

Decreasing speed



- Briefly press button **1** backward.



Decreasing the speed

Speed is decreased each time button is pressed.

1 mph (2 km/h)

- Press button **1** back and hold.
- » The motorcycle decelerates steplessly.
- » If the button **1** is no longer pressed, the speed achieved is maintained and saved.


Deactivate cruise control

- Actuate brakes or clutch or throttle grip (take back throttle beyond back position) to deactivate cruise-control system.
- » Cruise control indicator lamp goes out.

Resuming former cruising speed



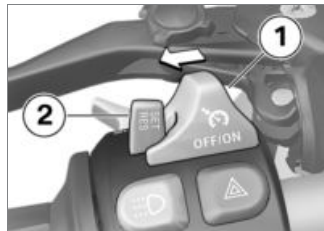
- Briefly push button **1** back to return to the speed saved beforehand.

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



Indicator lamp for cruise-control system lights up.

Switching off cruise control




- Push switch **1** to left.
- » The system is deactivated.
- » Button **2** is locked.

Spring preload Setting

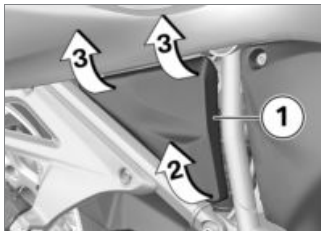
It is essential to set the spring preload to suit the load carried by the motorcycle. Increase spring preload when the vehicle is heavily loaded and reduce spring

preload accordingly when the vehicle is lightly loaded.

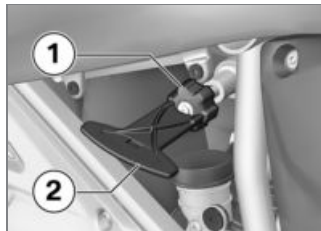
Adjust spring preload at rear wheel


 Adjusting the spring preload while the motorcycle is being ridden can lead to accidents. Adjust the spring preload only when the motorcycle is stationary. ◀

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



- Pull cover **1** slightly outwards at point **2**.
- So as not to damage the cover or the mounts, lift off cover at points **3**.



 Your motorcycle's handling will suffer if you do not match the spring-preload and damping-characteristic settings. Adjust damping characteristic to changed spring preload. ◀

- To reduce the spring load, turn the adjuster wheel **1** counter-clockwise using the tool **2**.
- To increase the spring load, turn the adjuster wheel **1** clockwise using the tool **2**.



Basic setting of spring preload, rear

– without dynamic ESA^{OE}



Basic setting of spring preload, rear

Turn adjuster wheel counterclockwise as far as possible. (One-up without load)

Turn adjuster wheel as far as possible counterclockwise, then 10 turns clockwise. (One-up with load)

Turn adjuster wheel clockwise as far as possible. (Two-up and load)◀



- Locate cover in mount **2** and press it into mounts **1**.

Damping Setting

The damping must be adjusted to the road conditions and the spring preload.

- A rough road surface requires softer damping than a smooth road surface.
- An increase in spring preload requires firmer damping, a reduction in spring preload requires softer damping.

Adjusting damping on rear wheel

- Make sure ground is level and firm and park motorcycle.
- Adjust damping from the left side of the vehicle.



- Turn adjusting screw **1** clockwise to increase damping.
- Turn adjusting screw **1** counterclockwise to decrease damping.



Basic setting of rear wheel rear-wheel damping

– without dynamic ESA^{OE}

Turn adjuster wheel as far as possible clockwise, then 6 clicks counterclockwise (One-up without load)



Basic setting of rear wheel rear-wheel damping

Turn adjuster wheel as far as possible clockwise, then 4 clicks counterclockwise (One-up with load)

Turn adjuster wheel as far as possible clockwise, then 2 clicks counterclockwise (Two-up with load)◀

Electronic suspension adjustment

– with dynamic ESA^{OE}

Adjustment options

Using the Dynamic ESA electronic suspension adjustment system you can easily adjust your motorcycle to the load being carried.

Using leveling sensors, Dynamic ESA detects movements of the

running gear and responds to them by adjusting the damper valves. As a result, the running gear is adjusted to the conditions of the ground.

In addition, the damping characteristic can be made harder (HARD) or softer (SOFT) relative to the normal setting (NORMAL).

– with Pro driving modes^{OE}

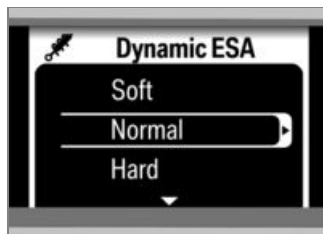
The suspension setting depends on the riding mode selected. Damping set by the riding mode can be changed by the rider.

Adjust chassis

- Start engine.

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

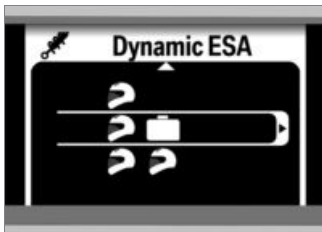
- Call up the ESA menu.



The possible settings for the damping characteristic appear on the display.

- **Soft**: Comfortable damping
- **Normal**: Normal damping
- **Hard**: Sporty, performance-oriented damping
- Select the damping characteristic you want or move the cursor down to set the vehicle load.

▶ The load setting cannot be adjusted while the motorcycle is underway.◀



The possible settings for vehicle load appear on the display.



One-up



One-up with luggage



Two-up (with luggage)

- Select the vehicle load variant you want.
- » The suspension adjusts to suit the new setting and the Dynamic ESA display changes accordingly. The symbols for vehicle load and damping char-

acteristic are grayed while adjustment is in progress.

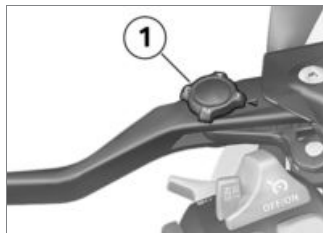
Clutch

Adjusting clutch lever



Adjusting the clutch lever while driving can lead to accidents.

Only adjust the clutch lever when the motorcycle is stationary.◀



- Turn adjusting wheel **1** into desired position.



The adjustment wheel can be turned more easily if you

press the clutch lever forward when doing so.◀

- » Four settings are available:
 - Position 1: smallest distance between handlebar grip and clutch lever.
 - Position 4: largest distance between handlebar grip and clutch lever.

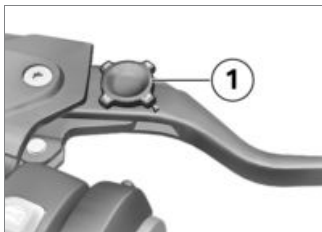
Brakes

Adjusting handbrake lever



Adjusting the handbrake lever while driving can lead to accidents.

Only adjust the handbrake lever when the motorcycle is stationary.◀



- Turn adjusting wheel **1** into desired position.

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

- » Four settings are available:
 - Position 1: smallest distance between handlebar grip and brake lever.
 - Position 4: largest distance between handlebar grip and brake lever.

Hill Start Control

– with Hill Start Control^{OE}

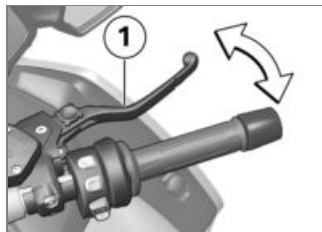
Hill Start Control Operating

⚠ Start-off assistance brake failure on switching off engine/ignition, folding down side stand, expiry of time limit (approx. 20 minutes) or in the event of a fault.

It is imperative to secure the motorcycle by manual braking.◀

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

▶ More detailed information on Hill Start Control can be found in the section "Technology in detail".◀



- Apply brake lever **1** firmly and then release.

(H) Hill Start Control indicator lamp appears on the display.

» Hill Start Control is now activated.

- To switch off Hill Start Control, pull brake lever **1** again.

▶ Hill Start Control is automatically deactivated after pulling away.◀


- The general warning light and the indicator lamp on the display light up briefly and then

the Hill Start Control indicator lamp goes out when the brake is fully released.


» Hill Start Control is now switched off.

Tires

Check tire pressure

 Incorrect tire inflation pressure results in poorer handling characteristics of the motorcycle and reduces the life of the tires.

Ensure proper tire inflation pressure. ◀

 At high road speeds, tire valves installed perpendicular to the wheel rim have a tendency to open as a result of centrifugal force.

Use valve caps with rubber seals and screw them on firmly to prevent sudden tire deflation. ◀

- Make sure ground is level and firm and park motorcycle.
- Check tire pressures against data below.



Tire pressure, front

36.3 psi (2.5 bar) (with tire cold)



Tire pressure, rear

42.1 psi (2.9 bar) (with tire cold)

If tire pressure is too low:

- Correct tire pressure.

Heating

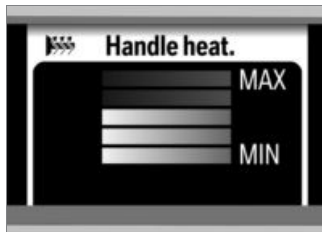
Operating heated grips

- Start engine.



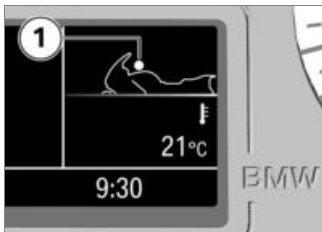
The heated grips option can only be activated when the engine is running. ◀

- Call up the Handle heat. menu.




The grips have five-stage heating. Stage five is for heating the grips quickly: it is advisable to switch back to a lower stage as soon as the grips are warm.

- Select the heating stage you want.




Symbol **1** appears on the display, indicating that the handlebar grip heating is ON.

 If this warning symbol appears it tells you that the onboard system voltage is low. If applicable, the handlebar grip heating might have been temporarily switched off.

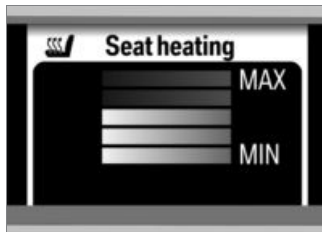
Rider's seat heater

– with seat heating^{OE}

- Start engine.

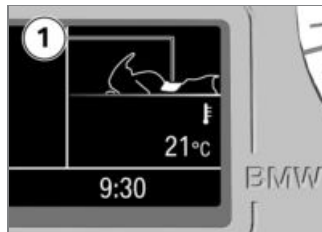
 Seat heating can be activated only when the engine is running.◀

- Call up the Seat heating menu.




The rider's seat has five-stage heating. Stage five is for heating the seat quickly: it is advisable to switch back to a lower stage as soon as the seat is warm.

- Select the heating stage you want.




Symbol **1** appears on the display, indicating that the seat heating is ON.

 If this warning symbol appears it tells you that the onboard system voltage is low. If applicable, the seat heating might have been temporarily switched off.

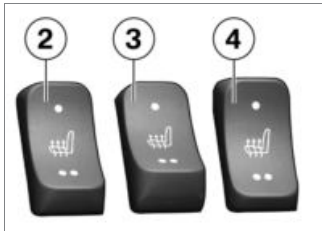
Passenger seat heater

- Start engine.

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



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



The passenger seat can be heated at two levels. The second level is used for fast heat-up of the seat; then the switch should

be switched back to the first level.

- **2** Switch in middle position: Heating off.
- **3** Switch in one-dot position: 50 % heating output.
- **4** Switch in two-dot position: 100 % heating output.



Symbol **1** appears on the display, indicating that the rear seat heating is ON.



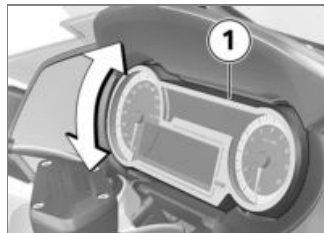
If this warning symbol appears it tells you that the onboard system voltage is low. If applicable, the seat heating might

have been temporarily switched off.

Adjusting the instrument cluster

Adjusting the instrument cluster

▶ The instrument cluster may only be adjusted when the motorcycle is stationary. ◀



- Move instrument cluster **1** to desired position by pressing firmly on the top or bottom edge. When doing so, make sure to press in the center so

as to ensure the adjustment is even.

Mirrors

Adjust mirrors



- Move mirror into the desired position by pressing lightly on the edge of the glass.

Windshield

Adjust windshield

- Switch on ignition.
 - » When you pull away the windscreen automatically returns to

the position it was in before the ignition was switched off.



- Press button **1** at top to raise windshield.
- Press button **1** at bottom to lower windshield.
- Switch off ignition.
 - » The windscreen automatically moves to the bottom limit position.
 - » If the windscreen encounters resistance before it reaches its limit position the pressure-sensitive finger guard system goes active. The windscreen is stopped and raised slightly.

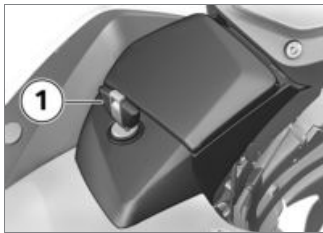
After a delay of a few seconds the windscreen again attempts to move to the bottom limit position.

There is no guarantee that the pressure-sensitive finger guard system will function correctly if a windscreen that does not have BMW Motorrad approval is installed.

- Under these circumstances: Before switching off the ignition always check that there is nothing to obstruct movement of the windscreen.

Storage compartment

Using left-hand stow compartment



- Use the ignition key to open or close lock **1** of the stowage compartment.
- Push unlocked lock barrel downward to open lid.

⚠ Temperatures inside the stow compartments can become high, particularly in summer, and could potentially cause damage to items stowed in the compartments. This applies in particular to electronic devices

such as mobile phones and MP3 players.

Refer to the operating instructions of your electronic devices for possible usage restrictions. ◀

- In summer, do not place heat-sensitive objects in the stowage compartments.

Using right-hand stow compartment

– with audio system^{OE}



- Use the ignition key to open or close lock **1** of the stowage compartment.

- Push unlocked lock barrel downward to open lid.

⚠ Temperatures inside the stow compartments can become high, particularly in summer, and could potentially cause damage to items stowed in the compartments. This applies in particular to electronic devices such as mobile phones and MP3 players.

Refer to the operating instructions of your electronic devices for possible usage restrictions. ◀

- In summer, do not place heat-sensitive objects in the stowage compartments.

Central locking

– with central locking^{OE}

Lock



- Switch on the ignition and press button **3**.
- Alternatively: Press button **1** on the remote control.
 - » The stow compartment in the left-hand side trim panel and the panniers are locked.
- with audio system^{OE}
 - » The stow compartment in the right-hand side trim panel is locked.<
- with topcase^{OA}
 - » The topcase is locked.<
 - » These locks cannot subsequently be unlocked manually.



The locked symbol appears on the display.

- with anti-theft alarm system (DWA)^{OE}
 - » The functions of the remote control for the anti-theft alarm are described in the corresponding section.<

Unlocking



- Switch on the ignition and press button **3**.
- Alternatively: Press button **2** on the remote control.

- » The stowage compartment in the left side panel and the cases are unlocked.
- » The stowage compartment in the right side panel is unlocked.
- with topcase^{OA}
 - » The topcase is unlocked.<
 - » Once a lock has been locked manually it subsequently has to be unlocked manually as well.
- with anti-theft alarm system (DWA)^{OE}
 - » The functions of the remote control for the anti-theft alarm are described in the corresponding section.<

Emergency unlocking

If the central locking system refuses to unlock, you can open the cases, topcase and stowage compartments manually. The procedure is as follows:

- Remove case (➡ 143).

- Open case (▮▮▮ 142).

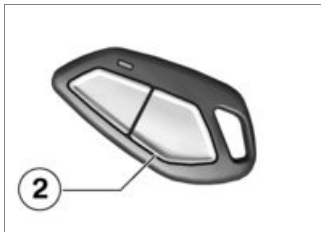


- First turn the key in the top-case lock 45° past the LOCK position, then turn it to the dot position and press in the lock barrel.
- » The release lever pops open.

Logon of remote controls

If a remote control has been mislaid and a replacement acquired or if you are going to use an additional remote control, you must invariably log on all the remote controls in the set.

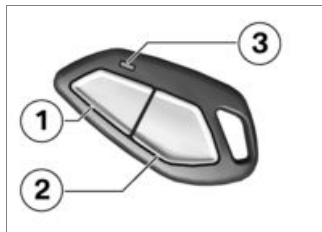
- Enable logon of the remote controls as follows:
- Switch on ignition.



- Press button **2** on the remote control three times.
- » One acoustic signal sounds.
- Within ten seconds, switch off the ignition.

You can now proceed to log on all the remote controls.

- Step through the following procedure with each remote control in turn:



- Press and hold down buttons **1** and **2** until LED **3** stops flashing.
- » LED **3** flashes for about ten seconds.
- Release buttons **1** and **2**.
- » LED **3** lights up.
- Press button **1** or button **2**.
- » One audible signal sounds, LED **3** goes out.

To complete logon:

- Switch off ignition.
- » Three acoustic signals sound.
- » The logon is also ended in the following situations:

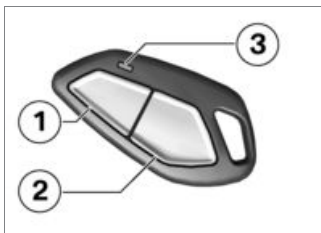
- 4 remote controls have been logged on.
- After logon of the first remote control, no button was pressed for approx. 30 seconds.

Synchronize the remote controls

If the central locking system stops responding to the signals from a remote control, the unit in question has to be synchronized. This can happen, for example, if the buttons on the remote control were pressed too frequently while the remote control was out of range of the anti-theft alarm.

- Synchronize the remote controls as follows:

- Switch on ignition.

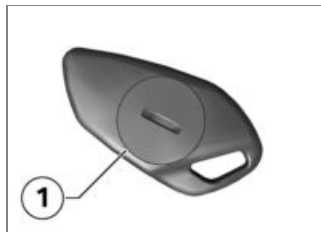


- Press and hold down buttons **1** and **2** until LED **3** stops flashing.
 - » LED **3** flashes for about ten seconds.
- Release buttons **1** and **2**.
 - » LED **3** lights up.
- Press button **1** or button **2**.
 - » LED **3** goes out.

Replacing battery of remote control

If you press a button on the remote control and the LED does not show or lights up only briefly:

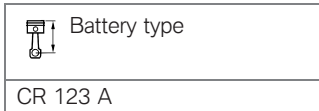
- Replace the battery of remote control.



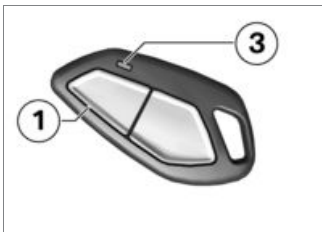
- Open lid of battery compartment **1**.
- Dispose of the old battery in accordance with legal regulations. Do not dispose of the battery in the household waste.

⚠ Incorrect batteries or polarity can destroy the device. Use a battery compliant with the manufacturer's specifications. When inserting the battery, make sure that the polarity is correct. ◀

- Insert the new battery with the positive terminal up.



- » The LED on the remote control lights up; the remote control needs to be synchronized.



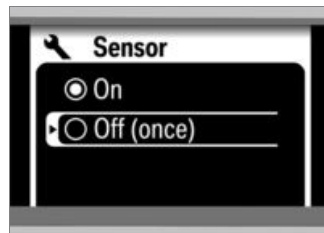
- Press button **1** twice.
 - » LED **3** flashes for a few seconds.
 - » The remote control is ready to operate again.

DWA

Deactivation without remote control

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

- Emergency on/off switch (kill switch) in normal operating position.
 - » Switch on ignition.
 - » Turn indicators light up once.
 - » Confirmation tone sounds once (if programmed).
 - » DWA is now switched off.
- To deactivate the motion sensor (for example if you are about to transport the motorcycle on a train and the swaying movement of the moving train could trip the alarm), call up the **Settings** menu before switching off the ignition.
 - Select **Vehicle - Alarm syst. - Sensor**.



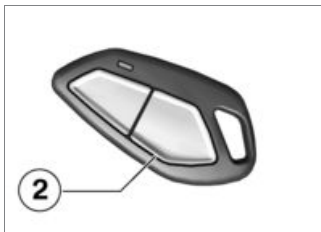
- Select **Off (once)** to switch off the motion sensor this once.
 - Switch off ignition.
 - » Activation takes 30 seconds to complete.
 - » Turn indicators are illuminated three times.
 - » Confirmation tone sounds three times (if programmed).
 - » DWA is armed, the motion sensor is deactivated.

Activation without remote control

- with anti-theft alarm system (DWA)^{OE}
- If necessary, activate automatic arming of DWA after ignition is switched off.
- DWA Adapting (▶▶▶ 81).
- Switch off ignition.
 - » Activation takes 30 seconds to complete.
 - » Turn indicators are illuminated twice.
 - » Confirmation tone sounds twice (if programmed).
 - » DWA is switched on.

Deactivation with remote control

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



- Press button **2** on the remote control once.

▶ See also the other functions of the remote control for the central locking system.◀

▶ If the alarm function is deactivated by means of the remote control and the ignition then not switched on, the alarm function is automatically reactivated after 30 seconds if "Activation after ignition off" has been programmed.◀

- » Turn indicators light up once.
- » Confirmation tone sounds once (if programmed).

» DWA is now switched off.

Activation with remote control

- with anti-theft alarm system (DWA)^{OE}
- with central locking^{OE}
- Switch off ignition.



- Press button **1** on the remote control twice.

▶ See also the other functions of the remote control for the central locking system.◀

- » Activation takes 30 seconds to complete.
- » Turn indicators are illuminated twice.
- » Confirmation tone sounds twice (if programmed).
- » DWA is armed.



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

- » Turn indicators are illuminated three times.
- » Confirmation tone sounds three times (if programmed).
- » Motion sensor is deactivated.

Alarm

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

The alarm can be triggered by

- the motion sensor
- an attempt to use an unauthorized key to switch on the ignition
- disconnecting the DWA from the motorcycle battery (DWA battery takes over the power supply – alarm sound only, hazard warning lights do not flash)

If the DWA battery is discharged all functions remain operational; the only difference is that the alarm cannot be set off if the

system is disconnected from the motorcycle battery.

An alarm lasts for approximately 26 seconds. During the alarm, an alarm tone sounds and the turn indicators flash. The type of alarm sound can be set by an authorized BMW Motorrad retailer.

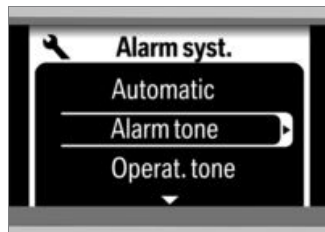
If an alarm was triggered while the motorcycle was unattended, the rider is notified accordingly by an alarm tone sounding once when the ignition is switched on. The anti-theft alarm system indicator lamp then signals the reason for the alarm for one minute. The meanings of the flash codes are as follows:

- 1 flash: motion sensor 1
- 2 flashes: motion sensor 2
- 3 flashes: ignition switched on with unauthorized key

- 4 flashes: DWA disconnected from motorcycle battery
- 5 flashes: motion sensor 3

DWA Adapting

- with anti-theft alarm system (DWA)^{OE}
- Call up the Settings menu and select **Vehicle - Alarm syst..**



The following settings are available:

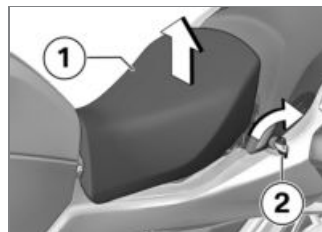
- **Automatic - On:** Anti-theft alarm system is activated

automatically when the ignition is switched off.

- **Automatic - Off:** Anti-theft alarm system has to be activated with the remote control when the ignition is switched off.
- **Alarm tone:** Type of alarm tone.
- **Operat. tone - On:** Turn indicators flash and one tone sounds as confirmation when the alarm is switched on or off.
- **Operat. tone - Off:** Turn indicators flash as only confirmation when anti-theft alarm is switched on or off.
- Make the desired adjustment using the Multi-Controller.

Rider's seat

Removing rider's seat



- Turn ignition key **2** clockwise.
- Lift up front seat **1** slightly at the rear.



- Remove front seat **1** from seat bracket **3** in rearward direction.

– with seat heating^{OE}

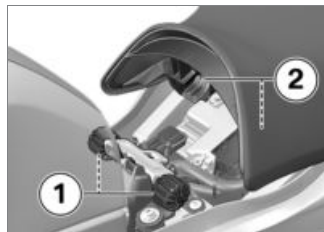
- Unplug electrical connector **2** for seat heater.<
- Remove front seat and place on a clean and dry surface with fabric side facing down.

Installing driver's seat

– with seat heating^{OE}



- Connect plug **1** of the seat heating.<



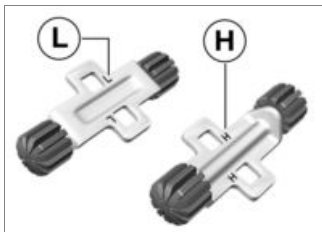
- Locate front seat lugs **2** in the rubber buffers **1** on the left and right.
- Lower the rear of the rider's seat and engage the seat in the latching mechanism.

Adjusting front-seat height

- Removing rider's seat (➡ 81).

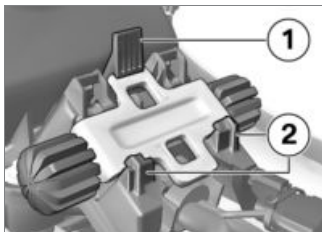


- Pull latch **1** to the front and remove adjusting plate **2**.



- Turn the adjuster plate to position **L** to obtain the lower seat height.

- Turn the adjuster plate to position **H** to obtain the higher seat height.



- Insert the adjuster plate into mounts **2** in the desired position and then press it into the catch **1**.
- Installing driver's seat (☛ 82).

Passenger seat

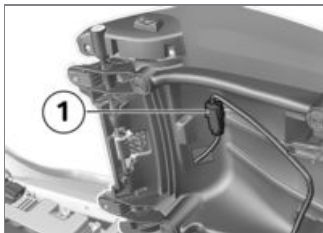
Remove passenger seat

- Switch off ignition.
- Removing rider's seat (☛ 81).



- Remove screws **1**.
- Pull the rear seat slightly forward and lift the seat slightly.

– with seat heating^{OE}



- Disconnect plug **1** of the seat heating and remove the rear seat.<
- Lay the seat on the cover side on a clean surface.

Install the passenger seat

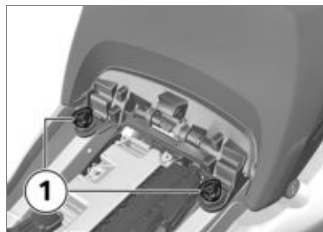
– with seat heating^{OE}



- Connect plug **1** of the seat heating.<



- Position pillion seat on the mounts **1**.



- Install screws **1**.

Riding

Safety instructions	86
Checklist.....	87
Starting	88
Breaking in.....	90
Shifting gears	91
Brakes	92
Parking your motorcycle	93
Refueling	93
Fastening motorcycle for transport	95

Safety instructions

Rider's Equipment

Do not ride without the correct clothing. Always wear:

- Helmet
- Rider's suit
- Gloves
- Boots

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

Loading



Overloading and imbalanced loads can adversely affect the motorcycle's handling. Do not exceed the gross weight limit and observe the loading information. ◀

- Adjust spring preload and damping rate for the current gross vehicle weight.
- Ensure that case volumes on left and right are equal.
- Make sure that weight is uniformly distributed between right and left.
- Pack heavy pieces of luggage and cargo as low and as close to the center of the motorcycle as possible.
- Observe maximum payload and top speed as indicated on label in case.
- Observe maximum payload and top speed as indicated on label in topcase.
- with tank rucksack^{OA}
- Observe maximum payload of tank rucksack and corresponding top speed.



Payload of tank rucksack

max 11 lbs (max 5 kg)◀


Speed

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

- Settings of spring-strut and shock absorber system
- Imbalanced load
- Loose clothing
- Insufficient tire inflation pressure
- Poor tire tread
- Etc.


Risk of poisoning

Exhaust fumes contain carbon monoxide, which is colorless and odorless but highly toxic.

 Inhaling exhaust fumes therefore represents a health hazard and can even cause loss of consciousness with fatal consequences.

Do not inhale exhaust fumes. Do not run the engine in closed rooms.◀

Burn hazard

 Engine and exhaust system become very hot when the vehicle is in use. There is a risk of burn injuries by contact with hot surfaces.


After parking the motorcycle, make sure that nobody comes into contact with the engine and exhaust system.◀

Catalytic converter

If misfiring causes unburned fuel to enter the catalytic converter, there is a danger of overheating and damage.


For this reason, observe the following points:

- Do not run the fuel tank dry
- Do not run the engine with the spark-plug cap removed
- Stop the engine immediately if it misfires
- Use unleaded fuel only
- Comply with all specified maintenance intervals.

 Unburned fuel will destroy the catalytic converter.

Note the points listed for protection of the catalytic converter.◀


Danger of overheating

 Cooling would be inadequate if the engine were allowed to idle for a lengthy period with the motorcycle at a standstill: overheating would result. In extreme cases, the motorcycle could catch fire.

Do not allow the engine to idle

unnecessarily. After starting, ride off immediately.◀

Modifications

 Modifications of the motorcycle (e.g. engine management system, throttle valves, clutch) can cause damage to the affected components and failure of safety-related functions. Damage caused in this way is not covered by the warranty. Do not make any modifications.◀

Checklist

Use the following checklist to check important functions, settings and wear limits before you ride off:

Before every journey

- Brakes
- Front and rear brake fluid levels
- Coolant level
- Clutch function

- Damping setting and spring preload
- Tread depth and tire inflation pressure
- Secure attachment of the case and the luggage.

At regular intervals

- Engine oil level (every time you refuel)
- Brake pad wear (at every 3rd refueling stop).

Starting

Starting the engine

- Switch on ignition.
- » Pre-Ride-Check in progress (▶▶▶▶ 88)
- » ABS self-diagnosis is performed (▶▶▶▶ 89)
- » ASC self-diagnosis in progress (▶▶▶▶ 90)
- Engage neutral, or pull back clutch lever if a gear is engaged.

▶ You cannot start the motorcycle with the side stand extended and a gear engaged. The engine will switch itself off if it is started with the transmission in neutral and then a gear is engaged before retracting the side stand.◀

- For cold starts and at low ambient temperatures: pull the lever to disengage the clutch and twist the throttle grip slightly.



- Press starter button 1.

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

- » Engine starts.
- » If the engine fails to start, the troubleshooting table in the chapter "Technical Data" may provide assistance. (▶▶▶▶ 152)

Pre-Ride-Check

The instrument cluster runs a test of the 'General' warning light when the ignition is switched on: this is the "Pre-Ride-Check".

Phase 1



shows yellow.

» The instrument pointers move once from the beginning to the end of the scale.

Phase 2



shows red.

Phase 3

» General warning light goes out and display changes to operating data.

If the 'General' warning lamp does not show:



Some malfunctions cannot be indicated if the 'General' warning light cannot be displayed.

Check that the 'General' warning light comes on, and that it shows red and yellow. ◀

- Have the malfunction corrected as soon as possible at an authorized workshop, preferably

an authorized BMW Motorrad retailer.

ABS self-diagnosis

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

Phase 1

» Check on system components monitored by diagnostic system while vehicle is parked.



flashes.

Phase 2

» Checking wheel sensors while starting off.



flashes.

ABS self-diagnosis completed

» ABS warning lamp goes out.



ABS self-diagnosis not completed

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

If an ABS error is indicated following completion of the ABS self-diagnosis routine:

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

ASC self-diagnosis

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

Phase 1

» Check on system components monitored by the diagnostic system while vehicle is parked.



flashes slowly.

Phase 2

» Checking the diagnosable system components while the motorcycle is moving.



flashes slowly.

ASC self-diagnosis completed

» ASC warning lamp goes out.

- Watch all warning and indicator lamps on the display.



ASC self-diagnosis not completed

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

If an ASC error is indicated following completion of the ASC self-diagnosis routine:

- It remains possible to continue riding. It must be noted that the ASC function is not available.
- Have the malfunction corrected as soon as possible at an authorized workshop, preferably an authorized BMW Motorrad retailer.

Breaking in Engine

- While running in the motorcycle, vary the throttle opening and engine-speed range frequently; avoid driving for long periods at a constant speed.
- 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.
- Observe the engine run-in speeds.



Engine break-in speeds

<5000 min⁻¹




Carrying out the first running-in check

311...746 miles
(500...1200 km)


Brake pads

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

 New brake pads can extend stopping distance by a significant margin. Brake early.◀

Tires

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

 New tires do not provide full tire traction. Accident hazards exist in particular on wet roads and at extreme angles.


Always think well ahead and avoid extreme angles.◀


Shifting gears

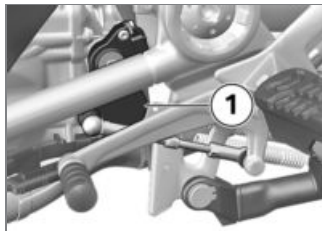
– with gearshift assistance Pro^{OE}

Gearshift assistant Pro

The gearshift assistant provides help with upward and downward gear shifts without the clutch or the accelerator having to be operated. This is not an automatic transmission. The rider is an essential part of the system and makes the decision as to when to change gear.

 More detailed information on Pro Gear-shift Assistance can be found in the section "Technology in detail".◀

 When changing gear using the Pro Gear-shift Assistance function, the cruise control is automatically deactivated for safety reasons.◀



- The gears are shifted into as usual with foot force on the shift lever.
- » The sensor **1** on the gear-lever shaft detects the intention to change gear and initiates gear-shift assistance.
- » When driving at constant speed in low gears at high revs, changing gear without using the clutch can result in major load change reactions. BMW Motorrad recommends only changing gear using the clutch in such situations. The shifting assistant should not

be used in the area of the rev-limiter.

- » No shifting support is provided in the following situations:
 - If the clutch is operated
 - If the gear lever is not in the zero position
 - When changing up with the throttle closed (overrunning mode) or when decelerating.
- To be able to make another gear shift using gear-shift assistance, the gear lever must be fully released after the first gear change.

Brakes

How do you achieve the shortest stopping distances?

The dynamic load distribution between the front and rear wheel changes during braking. The heavier you brake, the greater the weight transfer to the front

wheel. Increases in the load at an individual wheel are accompanied by a rise in the effective braking force that the wheel can provide.

To achieve the shortest possible braking distance, the front brake must be applied quickly and with increasing force. This procedure provides ideal exploitation of the extra weight transfer to the front wheel. The clutch should also be disengaged at the same time. With the extreme emergency braking technique that motorcyclists are often trained to use, whereby maximum braking force is applied as rapidly and as powerfully as possible, the dynamic weight transfer cannot keep up with the increase in the deceleration rate so that the full braking force cannot be transferred to the road surface.

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

Descending mountain passes




There is a danger of the brakes fading if you use only the rear brakes when descending mountain passes. Under extreme conditions, the brakes could overheat and suffer severe damage. Use both front and rear brakes, and make use of the engine's braking effect as well. ◀

Wet, soiled brakes

Moisture and dirt on the brake rotors and the brake pads result in a decrease in the braking action.

Delayed or poorer braking action must be expected in the following situations:

- When driving in the rain and through puddles.
- After washing the vehicle.
- When driving on roads spread with salt.
- After working on the brakes due to oil or grease residues.
- When driving on soiled roads or offroad.


 Poor braking action due to moisture and dirt.

Brake until brakes are dry or clean; clean if necessary. Brake early until the full braking action is available again.◀


Parking your motorcycle

Side stand

- Switch off engine.

 If the ground is soft or uneven, there is no guarantee that the motorcycle will rest firmly on the stand.

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


 The side stand is designed to support only the weight of the motorcycle.

Do not lean or sit on the motorcycle with the side stand extended.◀


- Fold out side stand and park motorcycle.
- If the slope of the road permits, turn the handlebars to the left.
- On slopes point the motorcycle uphill and engage 1st gear.

Center stand

- Switch off engine.

 If the ground is soft or uneven, there is no guarantee that the motorcycle will rest firmly on the stand.

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

 Excessive movements could result in the center stand retracting, and the motorcycle could topple as a result.


Do not sit on the motorcycle while it is resting on the center stand.◀

- Fold out center stand and jack up motorcycle.
- On slopes point the motorcycle uphill and engage 1st gear.

Refueling

Fuel specifications

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

 Leaded fuel will destroy the catalytic converter.

Do not refuel with leaded gasoline or gasoline with metallic additives, e. g. manganese or Iron.◀

! Ethanol E85 might damage the engine and fuel supply system.

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

- Fuels with a maximum ethanol content of 10 %, meaning "E10," may be used for refueling. Ethanol should satisfy the quality standards for the US (ASTM 4806-xx) and Canada (CGSB-3.511-xx). "xx" - comply with the current standard in each case.



Recommended fuel quality

Super unleaded (max. 10 % ethanol, E10)
89 AKI (95 ROZ/RON)
89 AKI

Refueling procedure

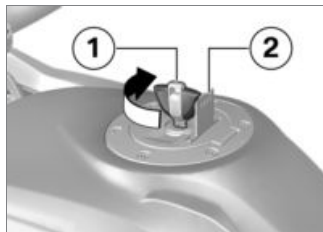
! Fuel is highly flammable. Fire at the fuel tank can result in fire and explosion. Do not smoke. Never bring a naked flame near the fuel tank. ◀

! Fuel expands when exposed to heat. When the tank is overfilled, fuel can escape and get onto the road. This results in a danger of falling. Do not overfill the fuel tank. ◀

! Fuel attacks plastic surfaces, making them cloudy or unattractive. Immediately wipe off plastic parts after contact with fuel. ◀

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

▷ The available fuel tank volume can only be optimally used with the vehicle standing on the side stand. ◀



- Open protective cap **2**.
- Unlock cap of fuel tank **1** with ignition key by turning it clockwise, and fold it up.



- Refuel with a fuel meeting the specifications above, continu-

ing until fuel is no higher than lower edge of filler neck.

▶ When refueling after running on reserve, make sure that you top up the tank to a level above reserve, as otherwise the sensor will not be able to register the new level and the fuel warning lamp will not be switched off.◀

▶ The "usable fuel quantity" indicated in the Technical data is the fuel quantity, which can be refueled, if the fuel tank was completely emptied, i.e., if the engine dies off due to lack of fuel.◀



Usable fuel quantity

Approx. 6.6 gal (Approx. 25 l)



Reserve fuel quantity

Approx. 1.1 gal (Approx. 4 l)

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

Fastening motorcycle for transport

- Protect all component surfaces against which straps are routed against scratching. For example, use adhesive tape or soft cloths.



The motorcycle can tip away to the side and fall over.

Secure motorcycle against tipping away to the side, preferably with the help of a second person.◀

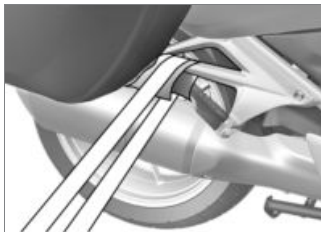
- Push motorcycle onto transport surface, and do not place on side stand or center stand.



Components can be damaged.

Do not pinch components, e.g. brake lines or wiring harnesses. ◀

- Pass the straps over the fork bridge on the left and right and tighten down.



- Fasten rear straps on both sides to the passenger foot-pegs and then tighten them.
- Tighten all straps evenly so that the motorcycle is fixed securely.

Technology in detail

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Riding mode

Riding mode selection

Three riding modes enable the motorcycle's characteristics to adapt to the prevailing weather conditions, the road and traffic, and the rider's style of riding:

- RAIN
- ROAD

- with Pro driving modes^{OE}
- DYNAMIC

Each riding mode affects the behavior of the motorcycle in a different way. The ASC can be switched off in each mode; the explanations below always refer to what happens when the system is switched on. The last selected riding mode is reactivated automatically after the ignition is switched off and on again.

The following rule always applies: the more dynamic the selected

mode, the less assistance there is from the ASC.

Therefore, consider the following when selecting the riding mode: the more dynamic the setting, the greater are the demands on the skill of the rider!

Throttle response:

- In RAIN modes: restrained
- In ROAD modes: direct

- with Pro driving modes^{OE}
- In DYNAMIC mode: dynamic

RAIN mode

The ASC system intervenes early enough to prevent the rear wheel from spinning. On road surfaces with high to medium grip (dry and wet asphalt to dry cobblestones) the motorcycle remains very stable; movements of the tail are clearly perceptible only on slippery road surfaces (wet bitumen or wet cobblestones).

ROAD mode

The point at which the ASC system intervenes is later than in RAIN mode. On road surfaces with high to medium grip (dry and wet asphalt to dry cobblestones) the motorcycle remains stable. Slight rear-wheel drift is perceptible. Movements of the tail are clearly perceptible on slippery road surfaces (wet bitumen or wet cobblestones).

- with Pro driving modes^{OE}

DYNAMIC mode

DYNAMIC mode is the most sports-performance mode. The point at which the ASC system intervenes is even later, which means that even on dry asphalt drifting is possible under sharp acceleration when cornering.

- with dynamic ESA^{OE}

Dynamic ESA

- In the RAIN, ROAD and DYNAMIC modes, damping variants HARD, NORMAL and SOFT can be selected.

Default setting for:

- RAIN: SOFT
- ROAD: NORMAL
- with Pro driving modes^{OE}
- DYNAMIC: HARD

Changing between riding modes

Changing engine management and ASC functions is only possible when no drive torque is being transmitted to the rear wheel.

To obtain this state,

- the motorcycle must be stopped with the ignition switched on,

or

- the throttle twist-grip must be turned back.

Gearshift assistant Pro

- with gearshift assistance Pro^{OE}

Your motorcycle is equipped with the gear-shift assistance function originally developed for racing but now specially adapted for touring use. It allows you to change up or down in almost any load conditions and rev bands without operating the clutch or accelerator.

Benefits

- 70-80 % of all gear changes can be performed without using the clutch.
- Less movement between pilot and pillion due to shorter gear-change intervals.

- Throttle does not have to be closed when changing gear under acceleration.
- When decelerating and changing down (throttle closed) the engine speed is adjusted by intermediate accelerator operation.
- The gear-shift time is shorter than when using the clutch to change gear.

For the system to detect the rider's intention to change gear, the previously unoperated gear lever has to be moved against the force of the spring by a certain amount of "overtravel" in the desired direction with a normal to brisk action and held in that position until the gear change is completed. A further increase of the force applied to the gear lever during the gear-shift operation is not necessary. After the gear change is completed, the

gear lever must be fully released in order to be able to make another gear shift using the Pro Gear-shift Assistance function. When changing gear using the gear-shift assistance function, the throttle setting (twist-grip position) must be kept constant before and during the gear-change sequence. Changing the accelerator twist-grip position during the gear-shift sequence may cause the function to abort and/or the gear change to fail. No assistance is provided by the gear-shift assistance function during gear changes made using the clutch.

Changing down

- Downshifts are assisted up to the maximum revs in the gear into which you are changing. Overrevving is thus prevented.



Maximum engine speed

max 9000 min⁻¹

Changing up

- If the engine speed is below idling speed during an upshift operation, no assistance is provided by the gear-shift assistance function.



Idle speed

1150 min⁻¹ (Engine at operating temperature)

Hill Start Control

- with Hill Start Control^{OE}

Hill Start Control prevents the motorcycle rolling backwards in an uncontrolled manner when starting off on an uphill incline

by controlled intervention in the semi-integrated ABS system without the rider having to constantly operate the brake lever. Thus, when Hill Start Control is activated, the pressure in the rear brake system is built up so that the motorcycle remains stationary on a sloping surface. The holding pressure in the braking system depends on the gradient of the slope.

BMW Motorrad Integral ABS

Partially integral brake

Your motorcycle is equipped with a partially integral brake configuration. Both front and rear brakes are applied simultaneously when you pull the handbrake lever. The footbrake lever acts only on the rear brake. BMW Motorrad Integral ABS adapts the brake force distribu-

tion between the front and rear brakes during braking by means of ABS modulation to suit the load carried by the motorcycle.



Spinning of the rear wheel with the front brake applied (Burn Out) is prevented by the integral function. The result may be damage to the rear wheel brake and the clutch.

Do not attempt Burn Outs. ◀

How does the Integral ABS work?

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

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

What happens when rough roads are encountered?

Bumpy or rough roads can briefly lead to a loss of contact between the tires and the road surface, until the transferable braking force is reduced to zero. If braking is carried out in this situation, ABS must reduce the brake pressure to ensure driv-

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

In what ways is the Integral ABS noticeable to the rider?

If the ABS system has to reduce the braking force due to the conditions described above, then vibrations can be felt through the handlebar brake lever.

If the handbrake lever is pulled, then braking pressure is built up at the rear wheel with the integral function. If the footbrake lever is first actuated after this, the brake pressure already built up can be

felt earlier than the counter-pressure, than when the footbrake lever is actuated before or together with the handbrake lever.

Lifting off rear wheel

However, during extremely heavy and rapid decelerations it is possible that the BMW Motorrad Integral ABS cannot prevent the rear wheel from lifting off the ground. In these cases, the motorcycle can also flip end over end.



Heavy braking can lead to the rear wheel lifting off the ground.

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

What are the design characteristics of the Integral ABS?

The BMW Motorrad Integral ABS ensures driving stability on any surface within the limits of driving physics. The system is not optimized for special requirements resulting under extreme weather conditions off-road or on the racetrack. Handling should be adopted to driving skills and road conditions.

Special situations

To detect the tendency of the wheels to lock up, the speeds of the front and rear wheel are compared. If implausible values are detected over an extended period of time, the ABS function is deactivated for safety reasons and an ABS fault is indicated. The condition for a fault code is the completed self-diagnosis.

Apart from problems on the BMW Motorrad Integral ABS, unusual riding conditions can also cause a fault message to be generated.

- Heating up on the main or auxiliary stand at idle or with gear engaged.
- Rear wheel locked-up for a longer period of time by engine brake, e.g. when riding downhill on slippery surfaces.

Should a fault code occur due to an unusual driving condition, the ABS function can be reactivated by switching the ignition off and then on again.

How important is regular maintenance?



Any technical system is always only as good as its maintenance condition.

To ensure that the BMW Motorrad Integral ABS is in

a properly maintained condition, it is vital that the specified service intervals are kept to. ◀

Reserves for safety

But remember: the potentially shorter braking distances which BMW Motorrad Integral ABS permits must not be used as an excuse for careless riding. ABS is primarily a means of ensuring a safety margin in genuine emergencies.



Be careful in curves. When you apply the brakes in a curve, the motorcycle's weight and momentum take over and even BMW Motorrad ABS is unable to counteract their effects. The rider is always responsible for adapting his/her driving style. Do not reduce the additional safety provided with risky driving. ◀

BMW Motorrad ASC

How does ASC work?

BMW Motorrad ASC compares the wheel speeds of the front and rear wheels. From the speed difference the slip, and with it the stability reserves on the rear wheel are determined. When a slip limit is exceeded, the engine torque is adapted by the engine management system.

What are the design features of ASC?

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

The system is not optimized for special requirements resulting under extreme weather conditions off-road or on the racetrack. In such situations BMW Motorrad ASC can be switched off.



Even with ASC, the laws of physics cannot be overridden. The rider is always responsible for adapting his/her driving style.

Do not reduce the additional safety provided with risky driving. ◀

Special situations

As lean angles increase, acceleration potential is also progressively restricted by the laws of physics. This can result in delayed acceleration when coming out of very tight curves.

To detect spinning or slipping away of the rear wheel, the speeds of the front and rear wheel are compared. If implausible values are detected over a longer period of time, the ASC function is deactivated for safety reasons and an ASC error is indicated. The condition for a fault code is the completed self-diagnosis.

The following unusual driving conditions may lead to automatic deactivation of BMW Motorrad ASC:

- Riding on the rear wheel (performing Wheelies) for an extended period with the ASC deactivated.
- Spinning the rear wheel on the spot with the front brake applied (Burn Out).
- Heating up on the main or auxiliary stand at idle or with gear engaged.

Switching the ignition off and on again and then riding the motorcycle at more than a certain minimum speed reactivates the ASC.



Minimum speed for ASC activation

min 6 mph (min 10 km/h)

With extremely knobby tires, it is possible that due to the greater degree of slip the ASC will intervene before the optimum traction is obtained. In such cases the BMW Motorrad ASC should be switched off.

If the front wheel loses contact with the ground under extreme acceleration, the ASC reduces the engine torque until the front wheel makes contact with the ground again. In this case, BMW Motorrad recommends turning back the throt-

tle grip somewhat to achieve a stable driving state again as quickly as possible.

On a slippery surface, the throttle grip should never be suddenly turned back completely without pulling the clutch at the same time. The engine braking torque can cause the rear wheel to block, resulting in an unstable driving state. This situation cannot be controlled by the BMW Motorrad ASC.

TPC/RDC

- with Tire Pressure Control (TPC/RDC)^{OE}

Function

A sensor is located in each tire, which measures the air temperature and the inflation pressure inside the tire and sends these values to the control unit.

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



Minimum speed for transmission of RDC measured data:

min 6 mph (min 10 km/h)

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



Duration of measured data transmission after motorcycle is stationary:

min 15 min

If an RDC control unit is fitted but the wheels have no sensors, a fault message is generated.

Tire inflation pressure ranges

The RDC control unit distinguishes between three inflation pressure ranges matched to the motorcycle:

- Inflation pressure within the permissible tolerance.
- Inflation pressure at the limits of the permissible tolerance.
- Inflation pressure outside the permissible tolerance.

Temperature compensation

The tire inflation pressure is temperature dependent, i.e. it increases or decreases together with the tire air temperature. The tire temperature is dependent on the outside temperature, the riding style and the length of the journey.



The tire pressures are shown adjusted for temperature on the multifunction display and are always relative to the following tire air temperature:

68 °F (20 °C)

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

Adjusting inflation pressure

Compare the RDC value in the multifunction display with the value on the back cover of the Rider's Manual. The difference between the two values must be

compensated with the air pressure tester at the filling station.



Example

According to the Rider's Manual, the tire pressure should be as follows:

36.3 psi (2.5 bar)

The multifunction display shows the following figure:

33.4 psi (2.3 bar)

The shortfall is thus:

2.9 psi (0.2 bar)

The tester at the filling station shows:

34.8 psi (2.4 bar)

To obtain the correct tire pressure, that has to be increased to the following figure:

37.7 psi (2.6 bar)

ESA

– with dynamic ESA^{OE}

Adjustment options

Using the Dynamic ESA electronic suspension adjustment system you can easily adjust your motorcycle to the load being carried.

Using leveling sensors, Dynamic ESA detects movements of the running gear and responds to them by adjusting the damper valves. As a result, the running gear is adjusted to the conditions of the ground.

In addition, the damping characteristic can be made harder (HARD) or softer (SOFT) relative to the normal setting (NORMAL).

– with Pro driving modes^{OE}

The suspension setting depends on the riding mode selected. Damping set by the riding mode can be changed by the rider.

Maintenance

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General instructions

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

If special tightening torques are to be taken into account for assembly, these are listed. An overview of all required tightening torques is contained in the chapter "Technical Data".

Further information about maintenance and repair work can be obtained on DVD through your authorized BMW Motorrad retailer.

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

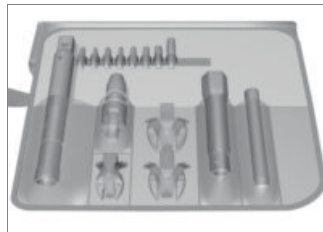
Onboard tool kit Standard tool kit



- 1 Screwdriver handle
- 2 Reversible screwdriver insert
Phillips PH1 and Torx T25
 - Removing rider's seat (➡ 81).
 - Removing and installing body panels.

- 3 Tool for oil cap
 - Top up engine oil (➡ 110).
 - Remove passenger seat (➡ 83).
 - Install the passenger seat (➡ 84).
- 4 Open-ended wrench
Wrench size: 8/10 mm

Service tool kit



For more extensive service operations (such as wheel removal and installation), BMW Motorrad has put together a service tool kit matched to your motorcycle. You

can purchase this tool kit from your authorized BMW Motorrad retailer.

Engine oil

Check engine oil level



The oil level varies with the temperature of the oil. The higher the temperature, the higher the level of oil in the sump. Checking the oil level with the engine cold or after a short trip leads to misinterpretations of the oil fill quantity.

To ensure that the display of the engine oil level is correct, only check the oil level with the engine at operating temperature. ◀


- Switch off engine at operating temperature.
- Make sure ground is level and firm and place motorcycle on center stand.

- Wait five minutes to allow oil to drain to the oil pan.



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



 Specified level of engine oil

Between MIN and MAX marking

If the oil level is below MIN mark:

- Top up engine oil (➔ 110).

If oil level is above MAX mark:


- Have the oil level corrected at an authorized service facility, preferably an authorized BMW Motorrad retailer.

Top up engine oil

- Make sure ground is level and firm and park motorcycle.



- Clean area adjacent to oil fill location.
- Remove oil filler plug **2** using oil filler tool **1**.
- Locate the oil filler tool **1** on the engine oil filler plug **2** and turn counterclockwise to remove.
- Check engine oil level (▶▶▶ 109).

 Both too little and too much engine oil can lead to engine damage.

Always make sure that the oil level is correct.◀

- Add engine oil up to specified level.



Engine oil, quantity for topping up

max 1 quarts (max 0.95 l) (Difference between MIN and MAX)

- Check engine oil level (▶▶▶ 109).
- Install sealing plug **2** of engine oil fill location.

Brake system

Checking brake operation

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

If no clear pressure points are perceptible:



Incorrect working practices endanger the reliability of the brakes.

Have all work on the brake system carried out by specialists.◀

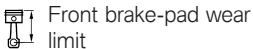
- Have the brakes checked at an authorized workshop, preferably an authorized BMW Motorrad retailer.

Check front brake pad thickness

- Make sure ground is level and firm and park motorcycle.



- Visually inspect left and right brake pads to determine their thickness. Viewing direction: between wheel and front suspension toward brake pads **1**.



0.04 in (1.0 mm) (Only friction material without carrier plate. Wear markings (grooves) must be clearly visible.)

If the wear indicators are no longer clearly visible:



⚠ Dropping below the minimum pad thickness leads to reduced braking performance and may result in damage to the brakes.

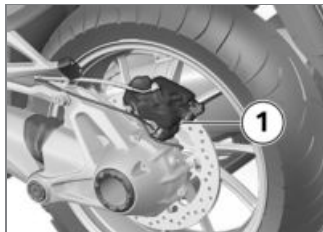
In order to ensure the operating reliability of the brake system,

make sure that the brake pads are not worn beyond their minimum thickness. ◀

- Have the brake pads replaced at an authorized service facility, preferably an authorized BMW Motorrad retailer.

Checking rear brake pad thickness

- Make sure ground is level and firm and park motorcycle.



- Conduct a visual inspection of the brake pad thickness. Viewing direction: between splash

guard and rear wheel toward brake pads **1**.



Rear brake-pad wear limit

0.04 in (1.0 mm) (Only friction material without carrier plate.)

If wear limit is reached:



Dropping below the minimum pad thickness leads to reduced braking performance and may result in damage to the brakes.

In order to ensure the operating reliability of the brake system,

make sure that the brake pads are not worn beyond their minimum thickness. ◀

- Have the brake pads replaced at an authorized service facility, preferably an authorized BMW Motorrad retailer.

Check front brake fluid level



A low fluid level in the brake reservoir can allow air to penetrate the brake system. This significantly reduces braking efficiency.

Check brake fluid level regularly. ◀

- Make sure ground is level and firm and place motorcycle on its center stand.
- Move handlebars into straight-ahead position.




- Check brake fluid level in front brake-fluid reservoir **1**.



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



 Front brake fluid level


Brake fluid, DOT4

The brake fluid level must not fall below the MIN mark. (Brake-fluid reservoir horizontal, motorcycle standing upright)

If brake fluid level falls below the approved level:

- Have the defect corrected as soon as possible by an authorized workshop, preferably an authorized BMW Motorrad retailer.


Checking rear brake fluid level

 A low fluid level in the brake reservoir can allow air to penetrate the brake system. This significantly reduces braking efficiency. Check brake fluid level regularly.◀

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



- Check level of brake fluid in rear brake-fluid reservoir **1**.

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



Rear brake fluid level

Brake fluid, DOT4

The brake fluid level must not fall below the MIN mark. (Brake-fluid reservoir horizontal, motorcycle standing upright)

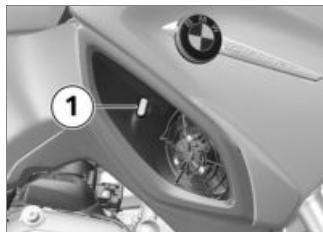
If brake fluid level falls below the approved level:

- Have the defect corrected as soon as possible by an authorized workshop, preferably an authorized BMW Motorrad retailer.

Coolant

Check coolant level

- Make sure ground is level and firm and park motorcycle.
- Allow the engine to cool down.



- Read off coolant level on expansion tank **1**.



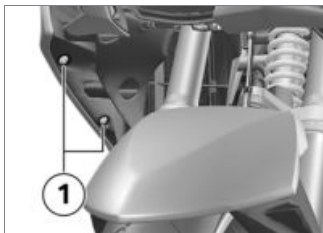
Coolant, specified level

Between MIN and MAX marks on the expansion tank (with cold engine)

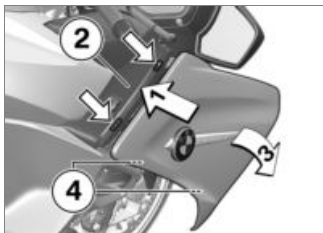
If coolant level drops below approved level:

- Have the defect corrected as soon as possible by an authorized workshop, preferably an authorized BMW Motorrad retailer.

Topping up coolant



- Remove screws **1**.

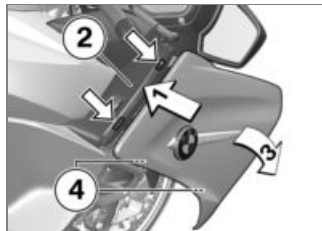


- Pull side trim panel **3** outwards at the front.
» Lugs **4** are pulled out of grommets.

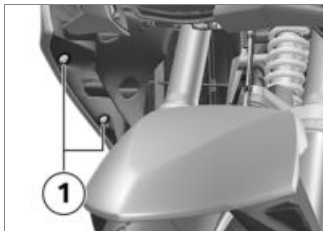
- Pull side trim panel **1** upwards out of side panel **2**, paying attention to lugs **arrowed** when doing so.



- Open cap **1** of coolant expansion tank and add coolant up to specified level.
- Check coolant level (▮▮▮ 114).
- Close cap of coolant expansion tank.



- Locate side trim panel **1** on side panel **2**, paying attention to position of lugs.
- Rotate side trim panel **3** inwards.
» Lugs **4** are pressed into grommets.



- Install screws **1**.

Clutch

Check clutch function

- Pull back the clutch lever.
» Pressure point must be clearly perceptible.

If no clear pressure point can be felt:

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

Wheel rims and tires

Check wheel rims

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

Checking tire tread depth



The handling of your motorcycle can already change for the worse before the legally prescribed minimum tread depth is reached.

Have tires replaced even before the minimum tread depth is reached.◀

- Make sure ground is level and firm and park motorcycle.

- Check tire tread depth in main tread grooves with wear indicators.

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

When the minimum tread depth is reached:

- Replace the worn tires.

Wheels

Tire recommendation

For every size of tire, BMW Motorrad has tested and approved certain makes as roadworthy. BMW Motorrad cannot evaluate the suitability of other tires, and can therefore

take no responsibility for their driving safety.

BMW Motorrad recommends only using the tires tested and approved by BMW Motorrad. Detailed information can be obtained from your authorized BMW Motorrad retailer or online at **www.bmw-motorrad.com**.

Effect of wheel sizes on handling control systems

The wheel sizes play a major role in the ABS and ASC handling control systems. Especially the diameter and width of the wheels are stored in the control unit as the basis for all necessary calculations. A change in these sizes due to conversion to others than the wheels installed as standard equipment can seriously affect the control comfort of these systems.

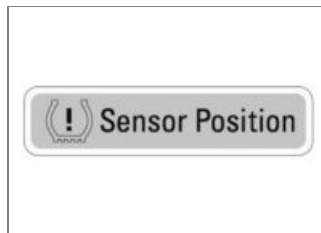
Even the sensor reluctors used for detecting the wheel speeds


have to match the control systems installed and are not interchangeable.

If you want to equip your motorcycle with different wheels, please speak to a specialist service facility, and preferably a BMW Motorrad retailer. In some cases the data stored in the control units can be adapted to the new wheel sizes.

RDC sticker

– with Tire Pressure Control (TPC/RDC)^{OE}



 If tires are inexpertly removed, the RDC sensors may be damaged.

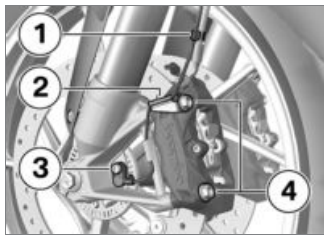
Inform the authorized BMW Motorrad retailer or the specialist service facility on the fact that the wheel is equipped with a RDC sensor. ◀

On motorcycles equipped with RDC, there is a sticker on the wheel near to the position of the RDC sensor. When changing the tire, it is important to take care not to damage the RDC sensor. Draw the attention of the


BMW Motorrad retailer or tire fitter to the RDC sensor.

Remove front wheel

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

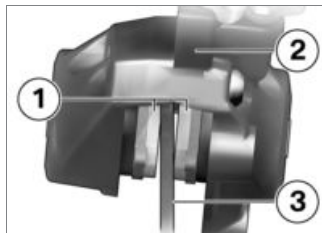


- Remove ABS sensor cable from retaining clips **1** and **2**.
- Remove screw **3** and extract the ABS sensor from its socket.
- Mask off areas of wheel rim that could be scratched in the process of removing the brake calipers.

 Once the calipers have been removed, there is a risk of the brake pads being pressed together to the extent that they cannot be slipped back over the brake rotor on reassembly.

Do not operate the handbrake lever when the brake calipers have been removed. ◀

- Remove securing screws **4** of left and right brake calipers.



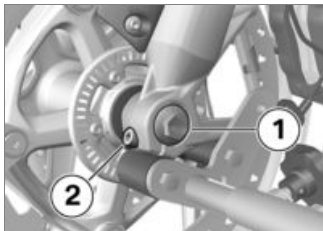
- Push brake pads **1** slightly apart by turning the brake

caliper **2** back and forth against the brake rotor **3**.

- Carefully pull brake calipers back and outward to remove them from the brake rotors.
- Raise front of motorcycle, preferably using a BMW Motorrad front wheel stand, continuing until the wheel rotates freely.
- Mounting front wheel stand (▶▶ 122).



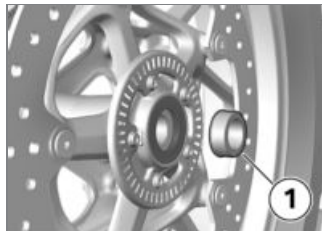
- Remove right-hand axle clamping screw **1**.



- Remove screw **1**.
- Remove left axle clamping screw **2**.
- Slightly press the quick-release axle inward for a better grip on the right side.




- Pull quick-release axle **1** out while supporting the front wheel.
- Place front wheel down and roll it forward out of the front suspension.



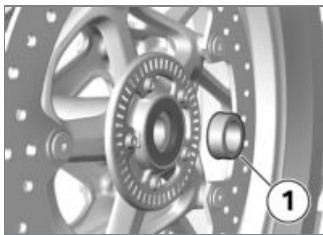
- Remove spacer bushing **1** from the wheel hub.

Install front wheel

 Malfunctions may occur during control interventions by ABS or ASC if a wheel other than the standard wheel is installed.

Please see the information on the effect of wheel sizes on the ABS and ASC chassis control systems at the beginning of this chapter. ◀

! Threaded fasteners not tightened to the specified torque can work loose or their threads can suffer damage. Always have the tightening torques checked by a specialized workshop, preferably an authorized BMW Motorrad retailer. ◀



- Mount spacing bushing **1** on left side in wheel hub.

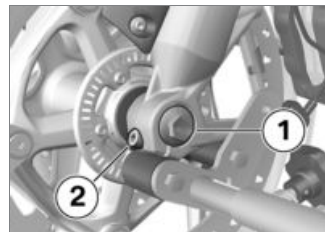
! The front wheel must be installed right way round to rotate in the correct direction. Observe the direction of rota-

tion arrows on the tires or on the rim. ◀

- Roll front wheel into front suspension.



- Lift front wheel and install quick-release axle **1**.
- Remove front wheel stand and firmly compress front forks. Do not actuate handbrake lever at the same time.
- Mounting front wheel stand (▶▶ 122).



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



Quick-release axle in telescopic fork

22 lb/ft (30 Nm)

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




Clamping screw for quick-release axle in telescopic fork

14 lb/ft (19 Nm)

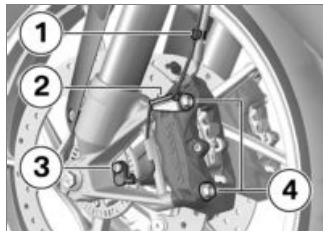


- Tighten the right-hand axle clamping screw **1** with the specified torque.

 Clamping screw for quick-release axle in telescopic fork

14 lb/ft (19 Nm)

- Remove front wheel stand.
- Slide the brake calipers on the left-hand and right-hand side onto the brake rotors.




- Install securing screws **4** on left and right with specified torque.

 Brake caliper on telescopic forks

28 lb/ft (38 Nm)

- Remove adhesive tape from wheel rim.


 Braking efficiency is impaired if the brake pads are not correctly bedded against the disks.

Before driving off, check that the braking effect kicks in without any delay. ◀

- Engage the brakes repeatedly, continuing until the brake pads seat against the rotors.
- Fix ABS sensor lead in retaining clips **1** and **2**.
- Insert ABS sensor into socket and fit screw **3**.

Remove rear wheel

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

 Risk of skin burns from hot exhaust system.

Do not touch hot parts of the exhaust system. ◀

- Let rear muffler cool down.



- Remove bolts **1** of rear wheel, holding wheel as you do so.
- Roll rear wheel out toward rear.

Installing rear wheel

! Malfunctions may occur during control interventions by ABS or ASC if a wheel other than the standard wheel is installed.

Please see the information on the effect of wheel sizes on the ABS and ASC chassis control systems at the beginning of this chapter. ◀

! Threaded fasteners not tightened to the specified torque can work loose or their threads can suffer damage. Always have the tightening torques checked by a specialized workshop, preferably an authorized BMW Motorrad retailer. ◀

- Place rear wheel on rear wheel support.



! The lengths of the lug bolts used with cast wheels and wire wheels vary. Mixing up sets of lug bolts or using the wrong lug bolts would mean that the

rear wheel would not be correctly secured and this, in turn, could result in an accident.

Use only wheel studs with the same permitted length code numbers. Do not lubricate the lug bolts. ◀

- Install wheel studs **1** with specified torque.



Tighten rear wheel on wheel flange

Tightening sequence: diagonally

44 lb/ft (60 Nm)

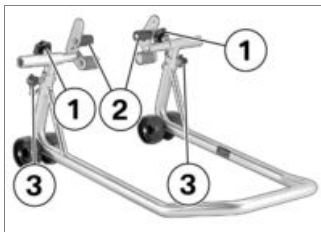
Front wheel stand Mounting front wheel stand

! The BMW Motorrad front wheel stand is not designed for holding motorcycles without a center or other auxiliary stands. A motorcycle standing on the front

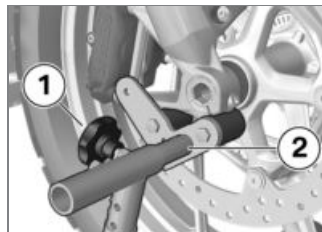
wheel stand and the rear wheel alone can fall over.

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

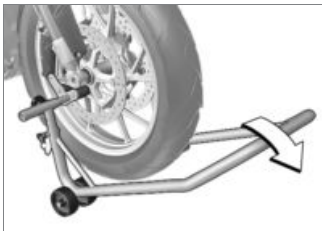
- Make sure ground is level and firm and place motorcycle on center stand.
- Use basic stand with front wheel mount. The basic stand and its accessories are available through your authorized BMW Motorrad retailer.



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



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



! If the motorcycle is resting on the center stand: The motorcycle is raised too far at the front, the center stand lifts off the ground and the motorcycle can tip over to the side.

When raising the vehicle, make sure that the center stand remains on the ground.◀

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

Bulbs

Replacing bulbs for low-beam headlight

▶ The alignment of connector, spring wire strap and bulb may differ from that shown in the following illustrations.◀

- Make sure ground is level and firm and park motorcycle.
- Switch off ignition.



- Remove cover **1** by turning it counterclockwise to replace low-beam headlight bulb.




- Disconnect plug **1**.



- Remove wire spring **1** from catch and fold to one side.
- Remove bulb **2**.

- Replace defective bulb.


	Bulbs for low-beam headlight
--	------------------------------

H7 / 12 V / 55 W

- To protect the glass against soiling, only grasp the bulb by the base.



- Insert bulb **2**, ensuring that the lug is in the correct position.

 The alignment of the bulb may differ from the illustration. ◀

- Locate wire spring **1** in the catch.




- Insert plug **1**.



- Place cap **1** in position and fix by turning it clockwise.

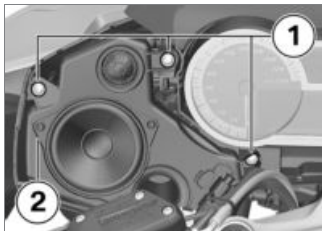
Replacing bulb for high-beam headlight

 The description below steps you through the procedure for replacing the left bulb. Replacement is carried out in the same way on the right side. ◀

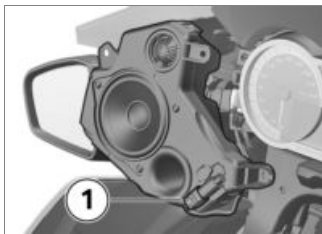
- Make sure ground is level and firm and park motorcycle.
- Switch off ignition.



- Remove screws **2**.
- Remove speaker cover **1** side-ways to the left.



- Remove screws **1**.
- Carefully remove speaker unit **2**, paying attention to the electrical connector.



- Disconnect plug connection **1**.





- Remove cover **1** by pulling on lever.



- Disconnect plug **1**.



- Release wire spring **1** from catch on left and right and fold down.
- Remove bulb **2**.
- Replace defective bulb.

 Bulb for high-beam
 headlight

H1 / 12 V / 55 W

- To protect the glass against soiling, only grasp the bulb by the base.



- Fit bulb **2**, ensuring that the lug is in the correct position.

▶ The alignment of the bulb may differ from the illustration.◀

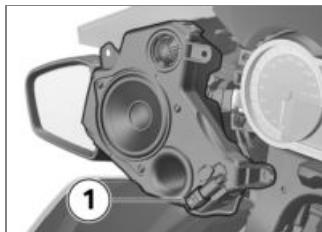
- Fit wire spring **1**.



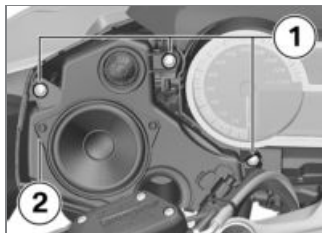
- Attach plug **1**.



- Install cover panel **1**.



- Connect electrical connector **1**.



- Locate speaker unit **2** in mount.
- Install screws **1**.

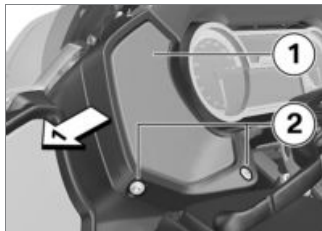


- Place speaker cover **1** in position and fit screws **2**.

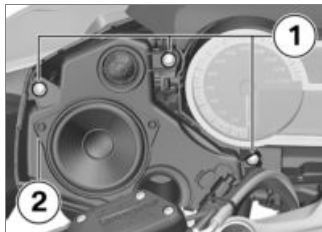
Replacing bulb for parking light

▶ The description below steps you through the procedure for replacing the left bulb. Replacement is carried out in the same way on the right side.◀

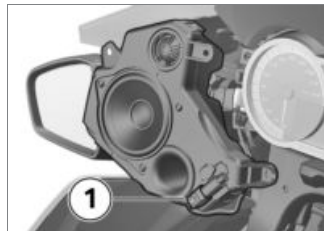
- Make sure ground is level and firm and park motorcycle.
- Switch off ignition.



- Remove screws **2**.
- Remove speaker cover **1** side-ways to the left.



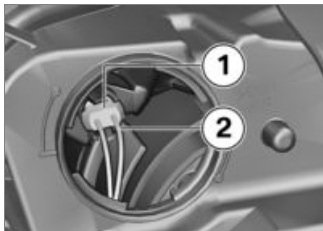
- Remove screws **1**.
- Carefully remove speaker unit **2**, paying attention to the electrical connector.



- Disconnect plug connection **1**.
- Make sure ground is level and firm and park motorcycle.
- Switch off ignition.



- Remove cover panel **1** by turning counterclockwise.



- Pull carefully on lead **2** to remove the bulb socket **1** from the light unit housing.



- Remove bulb **1** from the socket.

- Replace defective bulb.



Bulb for parking light

W5W / 12 V / 5 W

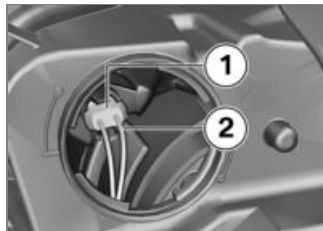
- with daytime driving light^{OE} or
- with headlight Pro^{OE}

Lighting rings, integrated into headlight<

- To prevent contaminants from being deposited on the glass surface, always use a clean, dry cloth to hold the bulb.



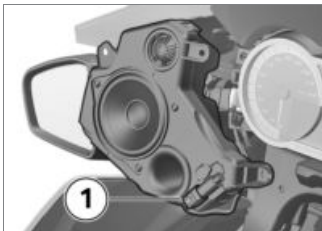
- Insert bulb **1** in bulb socket.



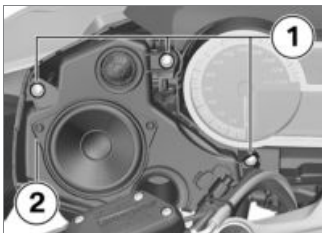
- Insert bulb socket **1** in the light unit housing, using the lead **2** to assist you.



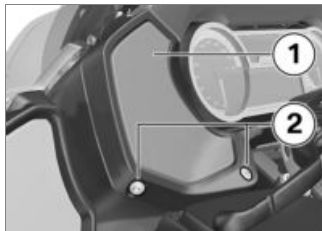
- Install cover **1** by turning clockwise.



- Connect electrical connector **1**.



- Locate speaker unit **2** in mount.
- Install screws **1**.



- Place speaker cover **1** in position and fit screws **2**.

Replacing LED tail light

The LED tail light can only be completely replaced.

- Please contact a specialist service facility for this purpose, preferably an authorized BMW Motorrad retailer.

Replacing LED turn indicator

- LED turn indicators can only be replaced as a complete unit. Please contact a specialist service facility for this pur-

pose, preferably an authorized BMW Motorrad retailer.

Replacing fiber-optic halo lights

- with daytime driving light^{OE}
- with headlight Pro^{OE}
- The fiber-optic halo lights are integrated in the headlight unit and can only be replaced as part of the complete headlight unit. Please contact a specialist service facility for this purpose, preferably an authorized BMW Motorrad retailer.


Replacing LED supplementary headlight

- with additional LED headlight^{OA}


The LED supplementary headlights can only be replaced as a complete unit; it is not possible to replace individual LEDs.

Please contact a specialized workshop, preferably an authorized BMW Motorrad retailer.


Jump-start

 The wires leading to the power socket do not have a load-capacity rating adequate for jump-starting the engine. Excessively high current can lead to a cable fire or damage to the vehicle electronics.

Do not use the socket to jump-start the engine of the motorcycle. ◀

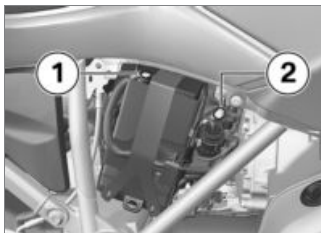
 A short-circuit can result if the crocodile clips of the jump leads are accidentally brought into contact with the motorcycle.

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

 Jump-starting with a donor-battery voltage higher than 12 V can damage the motorcycle electronics.

The battery of the donor vehicle must have a voltage of 12 V. ◀


- Make sure ground is level and firm and park motorcycle.
- Remove battery cover (▶▶▶ 133).
- When jump-starting the engine, do not disconnect the battery from the onboard electrical system.



- Begin by connecting one end of the red jump lead to the positive terminal **2** of the dis-

charged battery and the other end to the positive terminal of the donor battery.

- Connect the black jump lead to the negative terminal of the donor battery and then to the negative terminal **1** of the discharged battery.
- Run engine of donor vehicle during jump-starting procedure.
- Start engine of the vehicle with discharged battery in usual way; if engine does not start, wait a few minutes before repeating attempt in order to protect starter motor and donor battery.
- Allow both engines to idle for a few minutes before disconnecting jumper cables.
- Disconnect jump lead from negative terminals first, then disconnect second lead from positive terminals.

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


- Installing driver's seat (▶▶▶ 82).

Battery


Maintenance instructions

Correct battery maintenance combined with proper charging and storage procedures extends the battery's service life, and is also required for warranty claims. Compliance with the points below is important in order to maximize battery life:


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

 If the battery is not disconnected, the onboard electronics (clock etc.) will drain the battery. This can cause the battery to run flat. If this happens, warranty claims will not be accepted.


During driving breaks of more than 4 weeks, a trickle-charger should be connected to the battery. ◀


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

Charge connected battery

 Charging the connected battery directly at the battery terminals can damage the motorcycle electronics.

To charge the battery via the battery terminals, disconnect the battery first. ◀

 If the multifunction display and indicator lamps fail to light up when you switch on the ignition, the battery is completely discharged (battery voltage below 9 V). Attempts to recharge a completely discharged battery through the onboard power socket can damage the motorcycle's electronic systems. Always charge a completely drained battery directly at the terminals of the disconnected battery. ◀

 Charging the battery via the onboard socket is only possible with suitable chargers.

Unsuitable chargers can result in damage to the motorcycle electronics.

Use suitable BMW chargers. The correct charger is available through your authorized BMW Motorrad retailer.◀

- Charge disconnected battery via onboard socket.

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

- Comply with operating instructions of charger.

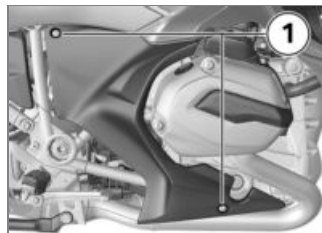
▷ If you are unable to charge the battery via the onboard socket, you may be using a charger that is not compatible with your motorcycle's electronics. In this case, charge the battery directly at the terminals of the disconnected battery.◀

Charging disconnected battery

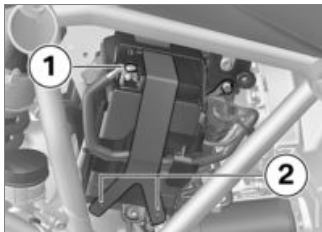
- Charge battery using a suitable charger.
- Comply with operating instructions of charger.
- Once battery is fully charged, disconnect charger's terminal clips from battery terminals.

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

Removing and installing battery



- Switch off ignition.
 - Remove screws **1**.
 - Remove battery cover.
- with anti-theft alarm system (DWA)^{OE}
- Switch off DWA if necessary.◀



- Remove negative battery cable **1** and rubber strap **2**.



- Pull mounting plate on position **1** outward and remove it upward.

- Lift battery slightly out of holder sufficiently for positive terminal to be accessible.



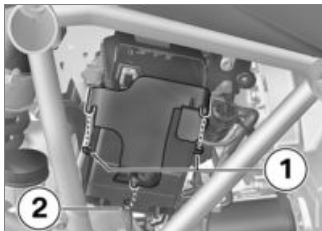
- Remove positive battery cable **1** and pull out battery.
» The battery has been removed.



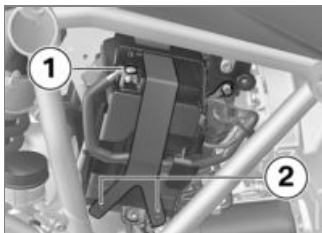
- Fasten positive battery cable **1**.

▶ If the 12 V battery is installed incorrectly, or if the terminals are exchanged (e.g. when jump-starting), this can result in the fuse for the alternator regulator blowing.◀

- Slide battery into holder.

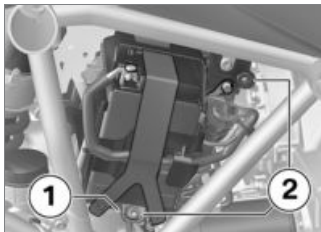


- First press retaining plate under the battery at point **2** and then locate it in the mounts **1**.

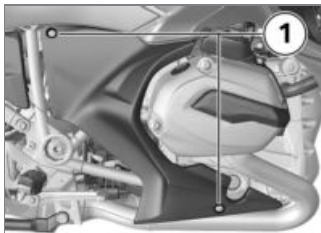


- Fasten negative battery cable **1**.

- Fasten battery with rubber strap **2**.



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

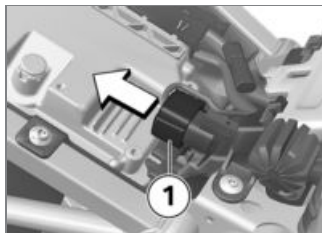


- Install screws **1**.

- Switch on ignition.
- Set the time in **Settings - Time** and set the date in **Settings - Date**.

Fuses

Replace fuses



- Switch off ignition.
- Removing rider's seat (→ 81).
- Disconnect plug **1**.

⚠ If defective fuses are bridged, this results in a danger of short-circuit and thus a danger of fire.

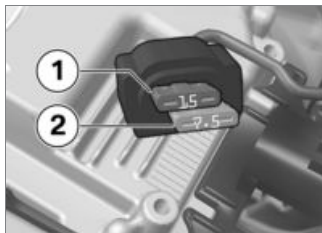
Replace defective fuses with new fuses. ◀

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

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

- Installing driver's seat (▶▶▶ 82).

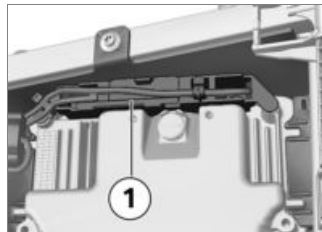
Fuse assignment



Fuse box

15 A (Slot 1: instrument cluster, anti-theft alarm system (DWA), ignition lock, diagnostic socket, topcase light)

7.5 A (Slot 2: left multifunction switch, Tire Pressure Control (RDC), audio system)



Fuse carrier

50 A (Fuse 1: alternator regulator)

Accessories

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General instructions



BMW Motorrad cannot examine or test each product of outside origin to ensure that it can be used on or in connection with BMW motorcycles without constituting a safety hazard. Nor is this guarantee provided when the official approval of a specific country has been granted. Tests conducted by these instances cannot make provision for all operating conditions experienced by BMW motorcycles and, consequently, they are not sufficient in some circumstances.

Use only parts and accessories approved by BMW for your motorcycle. ◀

The safety, function and suitability of the parts and accessory products have been checked extensively by BMW. Therefore, BMW assumes responsibility for these products. BMW shall not

be liable for unapproved parts and accessory products of any kind.

Whenever you are planning modifications, comply with all the legal requirements. The vehicle must not infringe on national road-vehicle construction and use regulations of your country. Your authorized BMW Motorrad retailer offers you qualified advice when choosing genuine BMW parts, accessories and other products.

You will find all BMW Motorrad optional accessories on our website: "www.bmw-motorrad.com".

Onboard power sockets

Connection of electrical devices

- The ignition must be switched on before electrical devices

connected to the power sockets can be operated.


Cable routing

- The cables from the onboard sockets to the auxiliary devices must be routed in such a way that they do not impede the rider.
- Cable routing must not restrict the steering angle and the handling characteristics.
- Cables must not be trapped.

Automatic deactivation

- The onboard sockets are automatically switched off during starting.
- To reduce the load on the electrical system, the power sockets are switched off a certain amount of time after the ignition is switched off. Additional devices with low power consumption are possibly not detected by the vehi-

cle electronics. In these cases, onboard sockets are already switched off shortly after the ignition is switched off.

	Automatic power socket cut-out after ignition is switched off
--	---

max 15 min

- In case of insufficient battery voltage, the onboard sockets are switched off to maintain the ability to start the motorcycle.
- If the maximum loadability specified in the technical data is exceeded, the onboard sockets are switched off.

Navigation system

Securely fasten navigation device

- with navigation system^{OA}
- with preparation for navigation system^{OE}



Dust and dirt can damage the contacts of the Mount Cradle.

Reinstall the cover after end of each drive.◀



The locking system of the Mount Cradle offers no protection against theft.

Remove the navigation system and store in a safe place after every drive.◀



- Press catch release **1** and remove cover **2**.



- First locate navigation device **1** in the cradle and then swing it backwards **2**.

- Press on the navigation device at the upper edge until it engages.



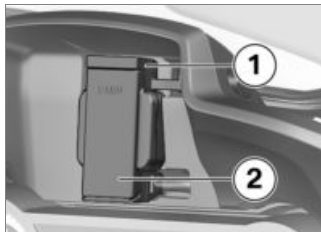
- Check that the navigation device is secure in the cradle. The catch **1** must be fully engaged. At that point, the catch mechanism should be pressed flat and no longer visible.

Removing navigation device

- with navigation system^{OA}
- with preparation for navigation system^{OE}



- Press catch release **1** and remove navigation device **2**.

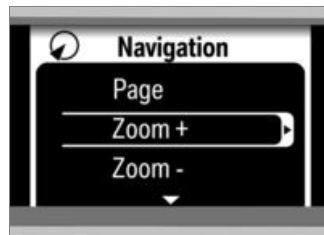


- Install cover **2**.
- Check that the cover is secure in the cradle. The top retain-

ing catch **1** should be fully engaged.

Operating the navigation system

- with preparation for navigation system^{OE}
- Switch on ignition if necessary.
- Call up the Navigation menu.



The options for using the navigation system appear on the display.

- Page: You can page from view to view; the choices are

- main menu, map and onboard computer.
- **Zoom +**: Performs functions marked with a minus sign + in the navigation system. In the map view, for instance, the view zooms in on the map detail.
- **Zoom –**: Performs functions marked with a minus sign - in the navigation system. In the map view, for instance, the view zooms out from the map detail.
- **Speak**: The last navigation announcement is spoken again. The announcement is spoken again even if automatic spoken announcements have been switched off in the settings of the navigation system.
- **Mute**: Automatic spoken announcements are toggled off and on.

- **Display Off**: The display of the navigation device is toggled off and on.
 - Select the function you want and implement the function by pushing the Multi-Controller to the right.

Special functions

- with preparation for navigation system^{OE}

Due to integration of the BMW Motorrad Navigator V, there may be differences from the descriptions in the instruction manual for the Navigator.

Reserve fuel level warning

The settings for the fuel gauge enable you to define a distance that is covered per tankful of fuel. The motorcycle sends the figure for residual range possible with the fuel remaining in the fuel tank to the Navigator, so it is no

longer necessary to enter this value.

Time and date

The Navigator sends time and date to the motorcycle. Transfer of this data into the instrument cluster must be activated in the **SETUP** menu of the instrument cluster.

Security settings

The BMW Motorrad Navigator V can be secured against unauthorized use with a four-digit PIN (Garmin Lock). If this function is activated, while the Navigator is cradled on the motorcycle and the ignition is switched on you are prompted to add the motorcycle to the list of secured vehicles. If you answer "Yes" to this question, the Navigator saves the VIN of the present motorcycle in its internal memory.

A maximum of five VINs can be saved in this way.

Subsequently, the PIN does not have to be entered when the Navigator is switched by switching ON the ignition while cradled in any of these motorcycles.

If the Navigator is removed from the motorcycle while switched on, a security prompt asking for the PIN to be entered is issued.

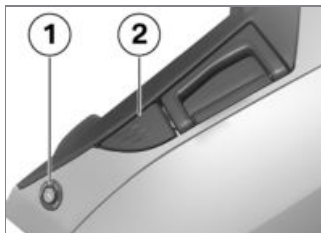
Case

Open case

- with central locking^{OE}
- If applicable, open the central locking.<



- Turn the key to the in the case lock to the position indicated by the dot.



- Press lock barrel **1** downward.
- » Release lever **2** pops up.

- Pull the release lever all the way up and open the lid of the case.

Close case



- Pull release lever **2** all the way up.
- Close case lid and press down. Ensure that no luggage is trapped between lid and case.

▶ The case can also be locked if the lock is in the LOCK position. Under such circumstances, ensure that the ignition key is not in the case.<

- Push release lever **2** down, continuing until it engages.
- Turn key to LOCK position in pannier lock and remove.

Remove case



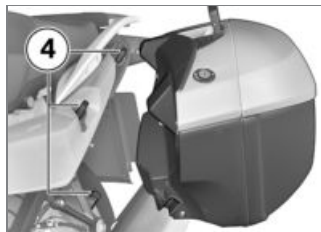
- Turn key to RELEASE position in pannier lock.
- » Handle pops out.



- Pull carry handle **3** up as far as it will go.
- » Case is released and can be removed.

Mount case

- Fold up handle as far as possible.



- Insert case in brackets **4**.



- Press handle **3** down until it engages.
- Turn key to LOCK position in pannier lock and remove.

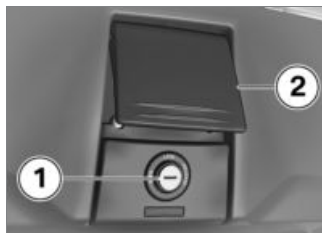
Topcase

Opening topcase

- with topcase^{OA}
- with central locking^{OE}
- If applicable, open the central locking.<



- Turn the key to the in the topcase lock to the position indicated by the dot.



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

Close topcase

- with topcase^{OA}



- Pull release lever **2** all the way up.
- Close topcase lid and hold it down. Ensure that no luggage is trapped between lid and case.

▶ The topcase can also be locked if the lock is in the LOCK position. Under such circumstances, ensure that the ignition key is not in the topcase.<

- Push release lever **2** down, continuing until it engages.
- Turn key in topcase lock to the LOCK position and remove.

Remove topcase

- Removing rider`s seat (▮▮▮ 81).
- Remove passenger seat (▮▮▮ 83).
- with topcase^{OA}



- Disconnect plug connection **1**.
- Thread out the connector from the topcase to the rear.
- Open topcase.
- If applicable, empty the topcase and lift out the bottom mat.



- Push slide latch **2** toward the outside and hold it in this position.
- Turn rotary fastener **3** in the direction indicated by the RELEASE arrow.
- » Release warning **4** is visible.
- Close topcase.



- Raise the rear of the topcase and pull it off luggage rack.<
- Install the passenger seat (▮▮▮ 84).
- Installing driver's seat (▮▮▮ 82).

Mounting topcase

- Removing rider`s seat (▮▮▮ 81).
- Remove passenger seat (▮▮▮ 83).
- with topcase^{OA}
- If applicable, empty the topcase and lift out the bottom mat.



- Set the topcase on the luggage carrier.
- Opening topcase (▣▣▣ 144).

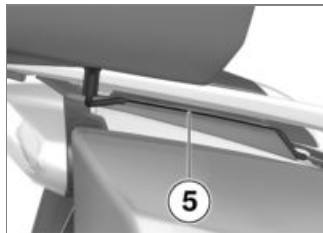


- Turn rotary fastener **3** as far as it will go in the direction indicated by the LOCK arrow

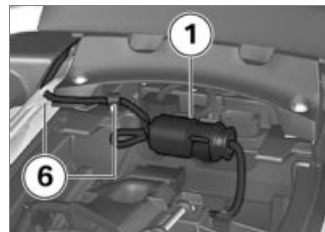
while pressing down on the back edge of the topcase.
 » Release warning **4** is no longer visible.

If the release warning is still visible the topcase is not correctly secured.

- Make sure that the topcase is correctly located on the pannier rack.



- Route the connecting cable forward in cable guide **5**.




- Work the cable into position at positions **6**.
- Close plug connection **1**.
- Install the passenger seat (▣▣▣ 84).
- Installing driver's seat (▣▣▣ 82).

Care

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Care products

BMW Motorrad recommends that you use cleaning and care products available at your authorized BMW Motorrad retailer. BMW CareProducts have been materials tested, laboratory tested, and field tested and provide optimum care and protection for the materials used in your vehicle.

 The use of unsuitable products for cleaning and care can damage motorcycle components.

For cleaning, do not use any solvents such as nitro-thinners, cold cleaning agents, fuel or similar, and do not use cleaning agents that contain alcohol.◀


Washing your motorcycle

BMW Motorrad recommends that you use BMW Insect Remover to soften and wash off insects and stubborn dirt from painted parts before washing the motorcycle.


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

Make sure that the motorcycle is washed frequently, especially during the winter months.


To remove road salt, clean the motorcycle with cold water immediately after completion of every trip.

 After washing the motorcycle, after driving through water or in the rain, braking can be delayed owing to damp brake rotors and brake pads.


Brake early until the brake rotors and brake pads are dry.◀

 Warm water intensifies the effect of salt.

Only use cold water to remove road salt.◀

 The high water pressure from high-pressure cleaners (steam blasters) can result in damage to seals, the hydraulic brake system, the electrics and the seat.


Do not use a steam jet or high-pressure cleaning equipment.◀

 Cases and topcases made of aluminum have no surface coating. The best possible appearance is preserved with the following care:

Remove road salt and corrosive deposits immediately with cold water after completing the trip.◀

Cleaning sensitive motorcycle parts

Plastics

 If plastic parts are cleaned using unsuitable cleaning agents, the surfaces can be damaged.

Do not use cleaning agents that contain alcohol, solvents or abrasives to clean plastic parts.

'Insect sponges' or sponges with hard surfaces can also lead to scratches.◀

Fairings and Panels

Clean fairings and panels with water and BMW plastic cleaner.

Windshields and lenses are manufactured of plastic

Clean off dirt and insects with a soft sponge and plenty of water.



Soften stubborn dirt and dead insects by covering

the affected areas with a wet cloth.◀



Clean with water and sponge only.



Do not use chemical cleaning agents.

Chrome

Carefully clean chrome parts with plenty of water and BMW car shampoo, especially if the motorcycle has been exposed to gritting salt. Use chrome 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.



Cooling fins can be bent easily.

When cleaning the radiator, ensure that the fins are not bent.◀

Rubber parts

Treat rubber parts with water or BMW rubber protection coating agent.



Using silicone sprays for the care of rubber seals can cause damage.

Do not use silicone sprays or care products that contain silicone.◀

Paint care

Washing the vehicle on a regular basis will help prevent long-term damage from harmful substances, and is especially important when your vehicle is used in areas with high levels of air pollution or where natural con-

taminants such as tree resin and pollen are present.

However, remove particularly aggressive substances (spilled fuel, oil grease, brake fluid as well as bird droppings) immediately; otherwise changes in the paint or discolorations may occur. BMW Motorrad recommends BMW car polish or BMW paint cleaner for the purpose.

Contamination on the paint finish is particularly easy to see after the motorcycle has been washed. Remove such marks as soon as possible using white spirit or methylated spirits on a clean cloth or cotton pad. BMW Motorrad recommends using BMW tar remover for removing tar spots. Then add a protective wax coating to the paint at these locations.

Storing motorcycle

- Clean the motorcycle.

- Remove battery (🔌➔ 133).
- Spray the brake and clutch lever, and the center and side stand pivots with a suitable lubricant.
- Coat bare metal and chrome-plated parts with an acid-free grease (e.g., Vaseline).
- Park motorcycle in a dry room, raising it to remove weight from both wheels (preferably using the front wheel and rear-wheel stand offered by BMW).

Protective wax coating

Paint must be protected, if water no longer pearls up on it.

To preserve the finish of your vehicle, BMW Motorrad recommends BMW Car Wax or agents that contain carnauba or synthetic waxes.

Returning motorcycle to use

- Remove the protective wax coating.
- Clean the motorcycle.
- Install a charged battery.
- Observe checklist before starting.

Technical data

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Threaded fasteners

Front wheel	Value	Valid
Brake caliper on telescopic forks		
M10 x 65	28 lb/ft (38 Nm)	
Clamping screw for quick-release axle in telescopic fork		
M8 x 35	14 lb/ft (19 Nm)	
Rear wheel	Value	Valid
Tighten rear wheel on wheel flange		
M10 x 1.25 x 40	Diagonally	
	44 lb/ft (60 Nm)	
Mirror arm	Value	Valid
Mirror on bracket		
M6 x 50	6 lb/ft (8 Nm)	

Engine

Engine number location	On crankcase at lower right
Engine type	122EN
Engine design	Air/liquid-cooled two-cylinder, four-stroke opposed-twin engine with two spur gear-driven overhead camshafts and one counterbalance shaft.
Displacement	1170 cc (1170 cm ³)
Cylinder bore	4 in (101 mm)
Piston stroke	2.9 in (73 mm)
Compression ratio	12.5:1
Rated output	125 hp (92 kW), at engine speed: 7750 min ⁻¹
Torque	92 lb/ft (125 Nm), at engine speed: 6500 min ⁻¹
Maximum engine speed	max 9000 min ⁻¹
Idle speed	1150 min ⁻¹ , engine at operating temperature

Fuel

Recommended fuel quality	Super unleaded (max. 10 % ethanol, E10) 89 AKI (95 ROZ/RON) 89 AKI
Usable fuel quantity	Approx. 6.6 gal (Approx. 25 l)
Reserve fuel quantity	Approx. 1.1 gal (Approx. 4 l)
Emission standard	EU 3

BMW recommends BP fuel



Engine oil

Engine oil, capacity	max 1.1 gal (max 4 l), with filter replacement
Specification	SAE 5W-40, API SL / JASO MA2, additives (e.g. on a molybdenum basis) are not permitted, as they will attack coated engine components, BMW Motorrad recommends Castrol Power 1 Racing 4T SAE 5W-40, API SL/JASO MA2
Engine oil, quantity for topping up	max 1 quarts (max 0.95 l), difference between MIN and MAX

BMW recommends 

Clutch

Clutch design	Multi-disk wet clutch
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Transmission

Transmission design	Helical-gear 6-speed transmission integrated in crankcase
Transmission gear ratios	1.000 (60:60 teeth), Primary gear ratio 1.650 (32:20 teeth), Transmission input ratio 2.438 (39:16 teeth), 1st gear 1.714 (36:21 teeth), 2nd gear 1.296 (35:27 teeth), 3rd gear 1.059 (36:34 teeth), 4th gear 0.943 (33:35 teeth), 5th gear 0.848 (28:33 teeth), 6th gear 1.061 (35:33 teeth), Transmission output ratio

Rear-wheel drive

Type of final drive	Shaft drive with bevel gears
Type of rear suspension	Cast-aluminum single swing arm with BMW Motorrad paralever
Gear ratio of final drive	2.75 (33:12 teeth)

Suspension

Front wheel

Type of front suspension	BMW Telelever, upper fork bridge tilt decoupled, leading link mounted in engine and on telescopic fork, centrally positioned spring strut supported on leading link and frame
Design of the front-wheel suspension	Central spring strut with coil spring
– with dynamic ESA ^{OE}	Central spring strut with coil spring and expansion tank, electrically adjustable rebound-stage and compression damping
Spring travel, front	4.7 in (120 mm), on wheel

Rear wheel

Type of rear suspension	Cast-aluminum single swing arm with BMW Motorrad paralever
Type of rear suspension	Central spring strut with coil spring, adjustable rebound-stage damping and spring preload
– with dynamic ESA ^{OE}	Central spring strut with coil spring and expansion tank, electrically adjustable rebound-stage and compression damping, electrically adjustable spring preload
Spring travel at rear wheel	5.3 in (135 mm)

Brakes

Type of front brake	Hydraulically operated double disc brakes with 4-piston radial monobloc calipers and floating brake discs
Brake-pad material, front	Sintered metal
Front brake-disk thickness	min 0.16 in (min 4 mm), wear limit
Free travel of brake actuation (Front wheel brake)	Approx. 0.07 in (Approx. 1.85 mm), on piston
Type of rear brake	Hydraulically operated disk brake with 2-piston floating caliper and fixed brake disk
Brake-pad material, rear	Organic

Rear brake-disk thickness	min 0.18 in (min 4.5 mm), wear limit
Free travel of brake actuation (Rear wheel brake)	Approx. 0.04 in (Approx. 1 mm), on piston

Wheels and tires

Recommended tire combinations	You can obtain an overview of the current tire approvals from your authorized BMW Motorrad retailer or on the Internet at www.bmw-motorrad.com .
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Front wheel

Front wheel design	Aluminum cast wheel
Front-wheel rim size	3.5"x17"
Front tire designation	120/70 - 17
Front wheel load at unladen weight	306 lbs (139 kg)
Permissible front wheel load	max 390 lbs (max 177 kg)
Permissible front-wheel imbalance	max 0.2 oz (max 5 g)

Rear wheel

Rear wheel design	Aluminum cast wheel
Rear-wheel rim size	5.5"x17"
Rear tire designation	180/55 - 17
Rear wheel load at unladen weight	298 lbs (135 kg)

Permissible rear wheel load	max 701 lbs (max 318 kg)
Tire inflation pressures	
Tire pressure, front	36.3 psi (2.5 bar), with tire cold
Tire pressure, rear	42.1 psi (2.9 bar), with tire cold

Electrical system

Electrical rating of onboard sockets	max 10 A, all onboard sockets together
Fuse box	15 A, Slot 1: instrument cluster, anti-theft alarm system (DWA), ignition lock, diagnostic socket, topcase light 7.5 A, Slot 2: left multifunction switch, Tire Pressure Control (RDC), audio system
Fuse carrier	50 A, Fuse 1: alternator regulator

Battery

Battery design	AGM (Absorptive Glass Mat) battery
Battery voltage	12 V
Battery capacity	16 Ah

Spark plugs

Spark plugs, manufacturer and designation	NGK LMAR8D-J
Electrode gap of spark plug	0.03 \pm 0.01 in (0.8 \pm 0.1 mm)

Bulbs

Bulb for high-beam headlight	H1 / 12 V / 55 W
Bulbs for low-beam headlight	H7 / 12 V / 55 W
Bulb for parking light	W5W / 12 V / 5 W
– with daytime driving light ^{OE} or – with headlight Pro ^{OE}	Lighting rings, integrated into headlight
Bulb for taillight/brake light	LED
Bulbs for flashing turn indicators, front	LED
Bulbs for flashing turn indicators, rear	LED

Frame

Frame design	Steel-tube frame with partially self-supporting drive unit, aluminum rear frame
Location of type plate	Frame at front right (next to spring strut)
Location of the vehicle identification number	Frame at front right on steering head

Anti-theft alarm system

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

Activation time	Approx. 30 s
Alarm duration	Approx. 26 s
Battery type	CR 123 A

Dimensions

Motorcycle length	86 in (2185 mm)
Motorcycle height	55.3 in (1405 mm), at DIN unladen weight
Motorcycle width	38.6 in (980 mm), across mirrors
Rider's seat height	31.7...32.5 in (805...825 mm), without rider at unladen weight
– with low rider's seat ^{OE}	29.9...30.7 in (760...780 mm), without rider at unladen weight
– with high rider's seat ^{OE}	32.7...33.5 in (830...850 mm), without rider at unladen weight

Rider's inside-leg arc, heel to heel	71.3...72.8 in (1810...1850 mm), without rider at unladen weight
– with low rider's seat ^{OE}	68.5...70.1 in (1740...1780 mm), without rider at unladen weight
– with high rider's seat ^{OE}	73.8...75.4 in (1875...1915 mm), without rider at unladen weight

Weights

Unladen weight	604 lbs (274 kg), DIN unladen weight, ready for use, fuel tank 90 % full, inc. panniers
Permissible gross weight	1091 lbs (495 kg)
Maximum payload	487 lbs (221 kg)

Performance data

Start-off capacity on uphill grades (with permissible total weight)	20 %
Top speed	>124 mph (>200 km/h)

Service

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Reporting safety defects

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 National Highway Traffic Safety Administration (NHTSA) in addition to notifying BMW of North America, LLC.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your retailer, or BMW of North America, LLC.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to <http://www.safercar.gov>; or write to: Administrator, NHTSA, 400 Seventh Street, SW., Washington, DC 20590. You can also obtain other information about motor vehicle safety from <http://www.safercar.gov>.

BMW Motorrad Service

With its worldwide dealer network, BMW Motorrad can attend to you and your motorcycle in over 100 countries around the globe. Authorized BMW Motorrad retailers have the technical information and expertise needed to conduct reliable service and repairs covering every aspect of your BMW.

You can find the nearest authorized BMW Motorrad retailer by visiting our Internet site at "www.bmw-motorrad.com".



If this maintenance and repair work is performed inexpertly, there is a danger of damage and associated safety risks. BMW Motorrad recommends having corresponding work on your motorcycle carried out by a specialized workshop, preferably

by an authorized BMW Motorrad retailer. ◀

To ensure that your BMW consistently remains in optimal condition BMW Motorrad urges you to observe the recommended service intervals.

Have all maintenance and repair work confirmed in the "Service" chapter in this manual. For generous treatment of claims submitted after the warranty period has expired (goodwill), evidence of regular maintenance is essential.

You can obtain information on the contents of the BMW Services from your BMW Motorrad retailer.

BMW Motorrad Mobility Services

The BMW Motorrad Mobility Services furnish you and your new BMW motorcycle with extra security by offering a wide array of assistance services in the event of a breakdown (BMW Roadside Assistance, breakdown assistance, vehicle recovery and retrieval, etc.).

Contact your authorized BMW Motorrad retailer for additional information on available mobility-maintenance services.

Maintenance procedures

BMW Pre-Delivery Check

The BMW pre-delivery check is carried out by your authorized BMW Motorrad retailer before it turns over the vehicle to you.

BMW Running-in Check

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

The service display in the multi-function display reminds you of the next service date approx. one month or 1000 km before the entered values.

BMW Service

BMW Service is carried out once a year. The scope of the services performed may be dependent on the vehicle owner and the mileage driven. Your BMW Motorrad retailer confirms that the service has been performed and enters the date for the next service.

For riders who drive long distances annually, it may be necessary to come in for service before the entered date. In this case a corresponding maximum odometer reading will also be entered in the confirmation of service. If this odometer reading is reached before the next service date, service must be performed sooner.

Confirmation of maintenance work

BMW Pre-Delivery Check

Conducted

on _____

Stamp, Signature

BMW Running-in Check

Conducted

on _____

Odometer reading _____

Next service
at the latest

on _____

or, if reached sooner,

Odometer reading _____

Stamp, Signature

BMW Service

Conducted

on _____

Odometer reading _____

Next service
at the latest

on _____

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Stamp, Signature**BMW Service**

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Odometer reading _____

Stamp, Signature**BMW Service**

Conducted

on _____

Odometer reading _____

Next service
at the latest

on _____

or, if reached sooner,

Odometer reading _____

Stamp, Signature

Confirmation of service

The table is intended as proof of maintenance and repair work, the installed optional accessories and any special campaign (recall) work carried out.

Work carried out	Odometer reading	Date

Work carried out	Odometer reading	Date

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Certifications

Remote Control for central locking system



Česky

Meta System S.p.A. tímto prohlašuje, že tento PF240009 je ve shodě se základními požadavky a dalšími příslušnými ustanoveními směrnice 1999/5/ES.

Dansk

Undertegnede Meta System S.p.A. erklærer herved, at følgende udstyr PF240009 overholder de væsentlige krav og øvrige relevante krav i direktiv 1999/5/EF.

Deutsch

Hiermit erklärt Meta System S.p.A., dass sich das Gerät PF240009 in Übereinstimmung mit den grundlegenden Anforderungen und den übrigen einschlägigen Bestimmungen der Richtlinie 1999/5/EG befindet.

Eesti

Käesolevaga kinnitab Meta System S.p.A. seadme PF240009 vastavust direktiivi 1999/5/EÜ põhinõuetele ja nimetatud direktiivist tulenevatele teistele asjakohastele sätetele.

English

Hereby, Meta System S.p.A., declares that this PF240009 is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

Español

Por medio de la presente Meta System S.p.A. declara que el PF240009 cumple con los requisitos esenciales y cualesquiera otras disposiciones aplicables o exigibles de la Directiva 1999/5/CE.

Certifications

Ελληνική

ΜΕ ΤΗΝ ΠΑΡΟΥΣΑ Meta System S.p.A. ΔΗΛΩΝΕΙ ΟΤΙ PF240009 ΣΥΜΜΟΡΦΩΝΕΤΑΙ ΠΡΟΣ ΤΙΣ ΟΥΣΙΩΔΕΙΣ ΑΠΑΙΤΗΣΕΙΣ ΚΑΙ ΤΙΣ ΛΟΙΠΕΣ ΣΧΕΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ ΤΗΣ ΟΔΗΓΙΑΣ 1999/5/ΕΚ.

Français

Par la présente Meta System S.p.A. déclare que l'appareil PF240009 est conforme aux exigences essentielles et aux autres dispositions pertinentes de la directive 1999/5/CE.

Italiano

Con la presente Meta System S.p.A. dichiara che questo PF240009 è conforme ai requisiti essenziali ed alle altre disposizioni pertinenti stabilite dalla direttiva 1999/5/CE.

Latviski

Ar šo Meta System S.p.A. deklarē, ka PF240009 atbilst Direktīvas 1999/5/ΕΚ būtiskajām prasībām un citiem ar to saistītajiem noteikumiem.

Lietuvių

Šiuo Meta System S.p.A. deklaruoja, kad šis PF240009 atitinka esminius reikalavimus ir kitas 1999/5/EB Direktyvos nuostatas.

Nederlands

Hierbij verklaart Meta System S.p.A. dat het toestel PF240009 in overeenstemming is met de essentiële eisen en de andere relevante bepalingen van richtlijn 1999/5/EG.

Malti

Hawnhekk, Meta System S.p.A., jiddikjara li dan PF240009 jikkonforma mal-ħtiġijiet essenzjali u ma provvedimenti oħrajn rilevanti li hemm fid-Dirrettiva 1999/5/EC.

Magyar

Alulírott, Meta System S.p.A. nyilatkozom, hogy a PF240009 megfelel a vonatkozó alapvető követelményeknek és az 1999/5/EC irányelv egyéb előírásainak.

Polski

Niniejszym Meta System S.p.A. oświadcza, że PF240009 jest zgodny z zasadniczymi wymogami oraz pozostałymi stosownymi postanowieniami Dyrektywy 1999/5/EC.

Português

Meta System S.p.A. declara que este PF240009 está conforme com os requisitos essenciais e outras disposições da Directiva 1999/5/CE.

Certifications

Slovensko

Meta System S.p.A. izjavlja, da je ta PF240009 v skladu z bistvenimi zahtevami in ostalimi relevantnimi določili direktive 1999/5/ES.

Slovensky

Meta System S.p.A. týmto vyhlasuje, že PF240009 spĺňa základné požiadavky a všetky príslušné ustanovenia Smernice 1999/5/ES.

Suomi

Meta System S.p.A. vakuuttaa täten että PF240009 tyyppinen laite on direktiivin 1999/5/EY oleellisten vaatimusten ja sitä koskevien direktiivin muiden ehtojen mukainen.

Svenska

Härmed intygar Meta System S.p.A. att denna PF240009 står i överensstämmelse med de väsentliga egenskapskrav och övriga relevanta bestämmelser som framgår av direktiv 1999/5/EG.

Íslenska

Hér með lýsir Meta System S.p.A. yfir því að PF240009 er í samræmi við grunnkröfur og aðrar kröfur, sem gerðar eru í tilskipun 1999/5/EC.

Norsk

Meta System S.p.A. erklærer herved at utstyret PF240009 er i samsvar med de grunnleggende krav og øvrige relevante krav i direktiv 1999/5/EF.

USA, Canada

Product name: TX BMW MR FCC ID: P3O98400 IC:4429A - TXBMWMR

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.



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

Declaration Of Conformity

R&TTE Declaration Of Conformity (DoC)

CE0470

We:

Meta System S.p.A.

with the address:

Via Majakovskij 10 b/c/d/e
42124 Reggio Emilia -Italy

Declare

Under own responsibility that the product:

TX BMW MR

To which this declaration relates is in conformity with the essential requirements and other relevant requirements of the R&TTE Directive (1999/5/EC).

This product is in conformity with the following standards:

Health & Safety (art.3.1)

EN 60950-1

EMC (art.3.2)

ETSI EN 301 489-1/-3

Spectrum

ETSI EN 300 220 - 2

Human exposure

EN 62311

According to Directive 1999/5/CE

Reggio Emilia , 14/07/2010

Technical Director
Lasagni Cesare



Certification Tire Pressure Control (TPC)

FCC ID: MRXBC54MA4
IC: 2546A-BC54MA4

FCC ID: MRXBC5A4
IC: 2546A-BC5A4

This device complies with Part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s).

Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

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

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

WARNING: Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. The term "IC:" before the radio certification number only signifies that Industry Canada technical specifications were met.

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The descriptions and illustrations in this manual may vary from your own motorcycle's actual equipment, depending upon its equipment level and accessories as well as your specific national version. No claims stemming from these differences can be recognized.

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 refueling:

Fuel

Recommended fuel quality	Super unleaded (max. 10 % ethanol, E10) 89 AKI (95 ROZ/RON) 89 AKI
--------------------------	--

Usable fuel quantity	Approx. 6.6 gal (Approx. 25 l)
----------------------	--------------------------------

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

Tire inflation pressures

Tire pressure, front	36.3 psi (2.5 bar), with tire cold
----------------------	------------------------------------

Tire pressure, rear	42.1 psi (2.9 bar), with tire cold
---------------------	------------------------------------

BMW recommends 

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