

Rider's Manual (US Model)

K 1300 R



BMW Motorrad



The Ultimate
Riding Machine

Motorcycle/Retailer Data

Motorcycle data

Model

Vehicle Identification Number

Color number

First registration

Registration number

Retailer Data

Contact in Service

Ms./Mr.

Phone number

Retailer's address/phone number (company stamp)

Welcome to BMW

We congratulate you on your choice of a motorcycle from BMW and welcome you to the community of BMW riders.

Familiarize yourself with your new motorcycle so that you can ride it safely and confidently in all traffic situations.

Please read this Rider's Manual carefully before starting to use your new BMW motorcycle. It contains important information on how to operate the controls and how to make the best possible use of all your BMW's technical features.

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

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

BMW Motorrad.

01 41 8 524 677



Table of Contents

You can also consult the index at the end of this Rider's Manual if you want to find a particular topic or item of information.

1 General instructions 5

Overview 6

Abbreviations and symbols 6

Equipment 7

Technical data 7

Currentness of this manual 7

2 Overviews 9

General view, left side 11

General view, right side 13

Multifunction switch, left 14

Multifunction switch, right 15

Underneath seat 16

Instrument cluster 17

3 Status indicators 19

Multifunction display 20

Meanings of displays 21

Warning and indicator

lamps 21

Service display 22

Range 23

Ambient temperature 23

Tire inflation pressures 24

Oil level indicator 24

Warning indicators 25

4 Operation 39

Steering and ignition

lock 40

EWS Electronic immobilizer 41

Clock 42

Display 43

Lights 45

Turn indicators 46

Hazard warning flashers 46

Emergency ON/OFF switch 47

Heated handlebar grips 47

BMW Motorrad Integral

ABS 48

ASC Automatic Stability

Control 49

Clutch 50

Brakes 51

Mirrors 52

Spring preload 52

Damping 53

ESA Electronic Suspension

Adjustment 54

Tires 56

Headlight 56

Seat 57

Luggage loops 57

5 Riding 59

Safety instructions 60

Checklist 62

Starting 62

Breaking in 65

Shifting gears 65

Brakes 66

Parking your motorcycle 67

Refueling 68

Securing motorcycle for transport	69	Rear wheel stand.....	104	Brakes	128
6 Technology in detail	71	Lamps.....	105	Wheels and tires	128
Brake system with BMW Motorrad Integral ABS	72	Jump-starting	110	Electrical system	129
Engine management with BMW Motorrad ASC	74	Battery	111	Frame	131
TPC Tire Pressure Control	75	9 Care	115	Dimensions	131
ESA II Electronic Suspension Adjustment.....	77	Care products.....	116	Weights	132
7 Accessories	79	Washing your motorcycle.....	116	Riding specifications	132
General instructions	80	Cleaning sensitive motorcycle parts.....	116	11 Service	133
Onboard sockets.....	80	Paint care	117	Reporting safety defects	134
Case	81	Protective wax coating	118	BMW Motorrad Service ...	135
8 Maintenance	85	Storing motorcycle	118	BMW Motorrad Mobility Services	135
General instructions	86	Returning motorcycle to use	118	Maintenance work.....	135
Onboard tool kit.....	86	10 Technical data	119	Confirmation of maintenance work.....	137
Engine oil	86	Troubleshooting chart.....	120	Confirmation of service....	142
Brake system	89	Threaded fasteners	121	12 Index	144
Clutch.....	93	Engine	123		
Rims and Tires	94	Fuel	124		
Wheels	94	Engine oil	124		
Front wheel stand.....	103	Clutch.....	125		
		Transmission.....	126		
		Rear-wheel drive	126		
		Running gear.....	127		

General instructions

Overview	6
Abbreviations and symbols	6
Equipment	7
Technical data	7
Currentness of this manual	7

Overview

Chapter 2 of this Rider's Manual will provide you with an initial overview of your motorcycle. All maintenance and repair work carried out on your motorcycle will be documented in Chapter 11. Proof of the maintenance work performed is a prerequisite for generous treatment of claims. When the time comes to sell your BMW, please remember to hand over this Rider's Manual; it is an important part of the motorcycle.

Abbreviations and symbols



Indicates warnings that you must comply with for reasons of your safety and the safety of others, and to protect your motorcycle 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 equipment The motorcycles are assembled complete with all the BMW optional extras originally ordered.
OA	Optional accessory BMW 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/ RDC	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). This explains why the manual may also contain descriptions of equipment which you have not ordered. Please note, too, that your motorcycle might not be exactly as illustrated in this manual on account of country-specific differences.

If your BMW is equipped with options or accessories not described in this Rider's Manual, then this equipment is described in separate operating instructions.

Technical data

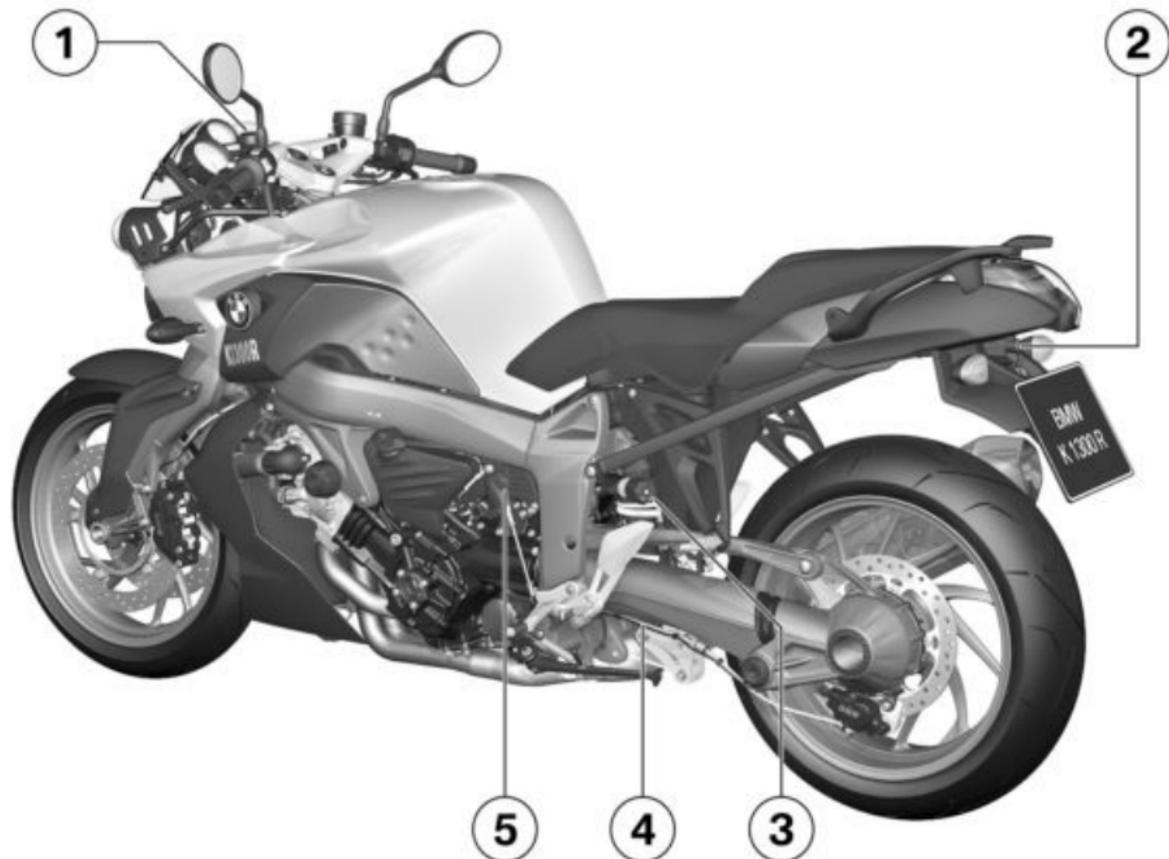
All dimensions, weights and outputs in the Rider's Manual refer to the Deutsches Institut für Normung e. V. (DIN) and comply with its tolerance regulations. Versions for individual countries may differ.

Currentness of this manual

The high safety and quality standards of BMW motorcycles are maintained by constant development work on designs, equipment and accessories. Because of this, your motorcycle may differ from the information supplied in the Rider's Manual. In addition, BMW Motorrad cannot guarantee the total absence of errors. We hope you will appreciate that no claims can be entertained on the basis of the data, illustrations or descriptions in this manual.

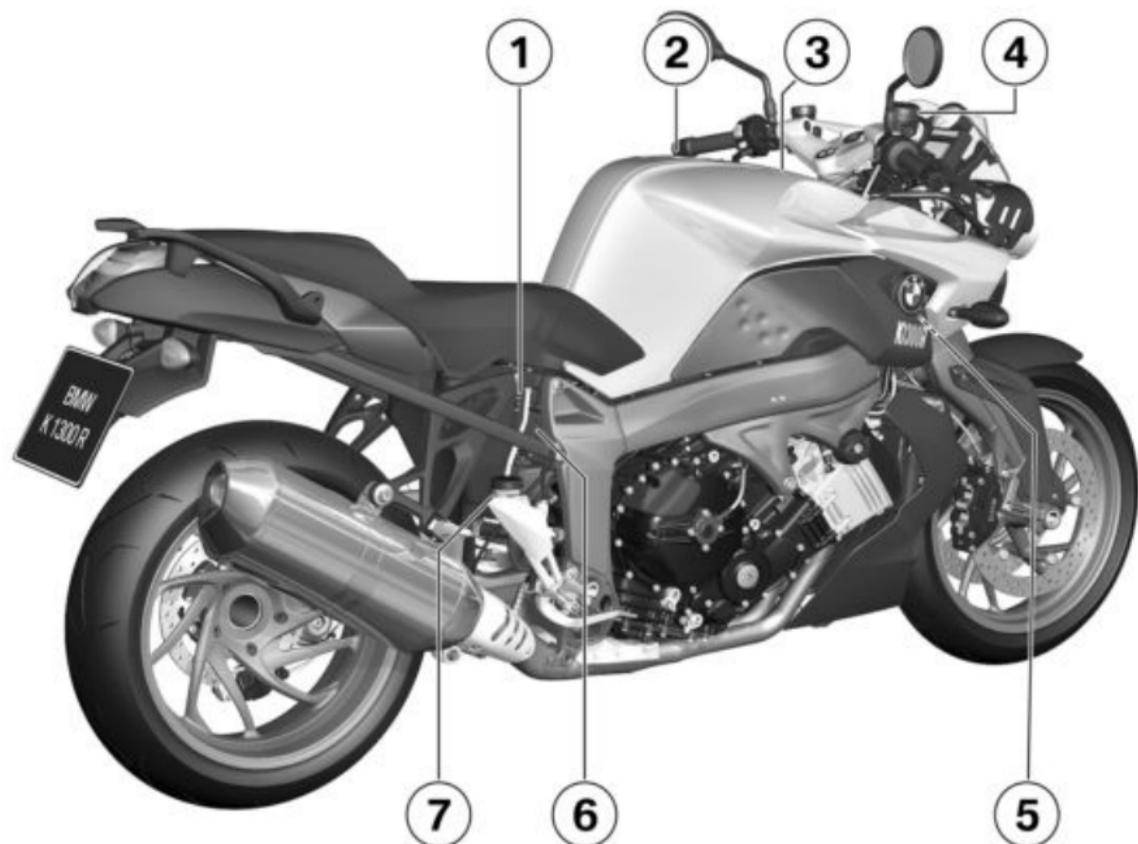
Overviews

General view, left side.....	11
General view, right side	13
Multifunction switch, left	14
Multifunction switch, right.....	15
Underneath seat	16
Instrument cluster	17



General view, left side

- 1 Clutch fluid reservoir
( 93)
- 2 Seat lock (below tail light)
( 57)
- 3 Adjuster for spring preload,
rear ( 52)
- 4 Adjustment of rear damp-
ing rate ( 53)
- 5 Onboard socket ( 80)



General view, right side

- 1 Engine oil level indicator
( 86)
- 2 Fuel filler opening ( 68)
- 3 Battery compartment
( 112)
- 4 Brake-fluid reservoir, front
( 89)
- 5 Vehicle identification number (on front right side panel)
- 6 Type plate (on rear cross tube)
- 7 Brake-fluid reservoir, rear
( 92)

Multifunction switch, left

- 1 Headlight high beam and flasher (►► 45)
- 2 Selecting display readings (►► 43).
– with onboard computer^{OE}
Resetting average data (►► 44).
- 3 Hazard warning flashers (►► 46)
- 4 Turn signals (►► 46)
- 5 Horn
- 6 – with Electronic Suspension Adjustment (ESA II)^{OE}
ESA control (►► 54)
- 7 – with BMW Motorrad Integral ABS Generation II^{OE}
ABS operation (►► 48)
– with automatic Stability Control^{OE}
ASC control (►► 49)



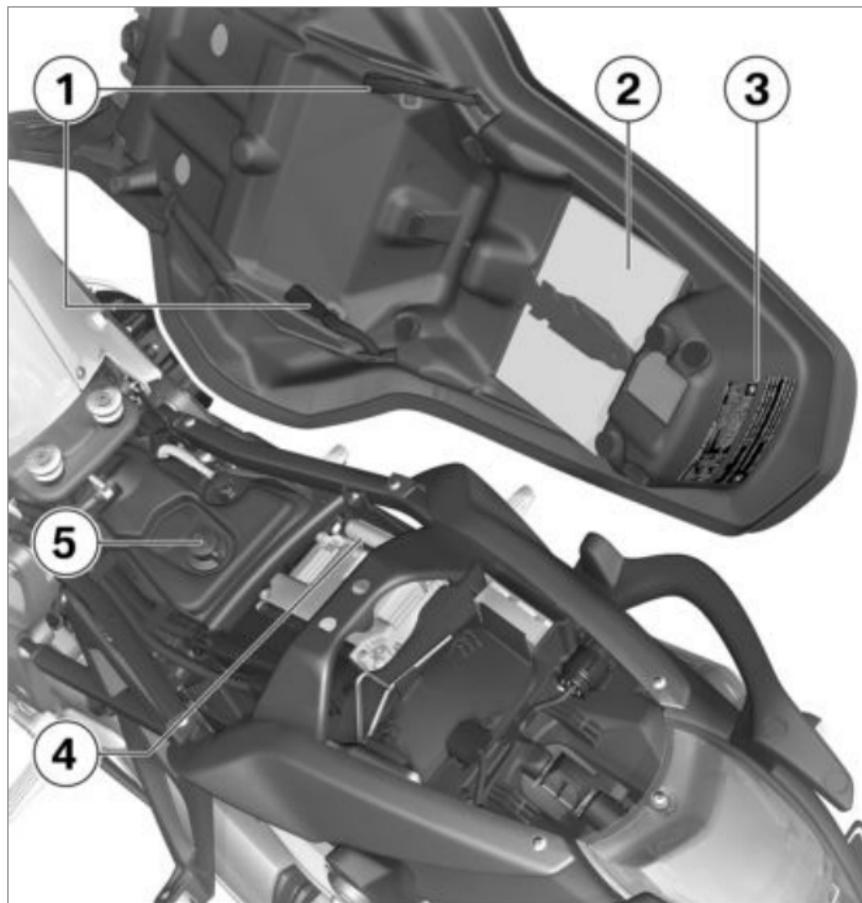


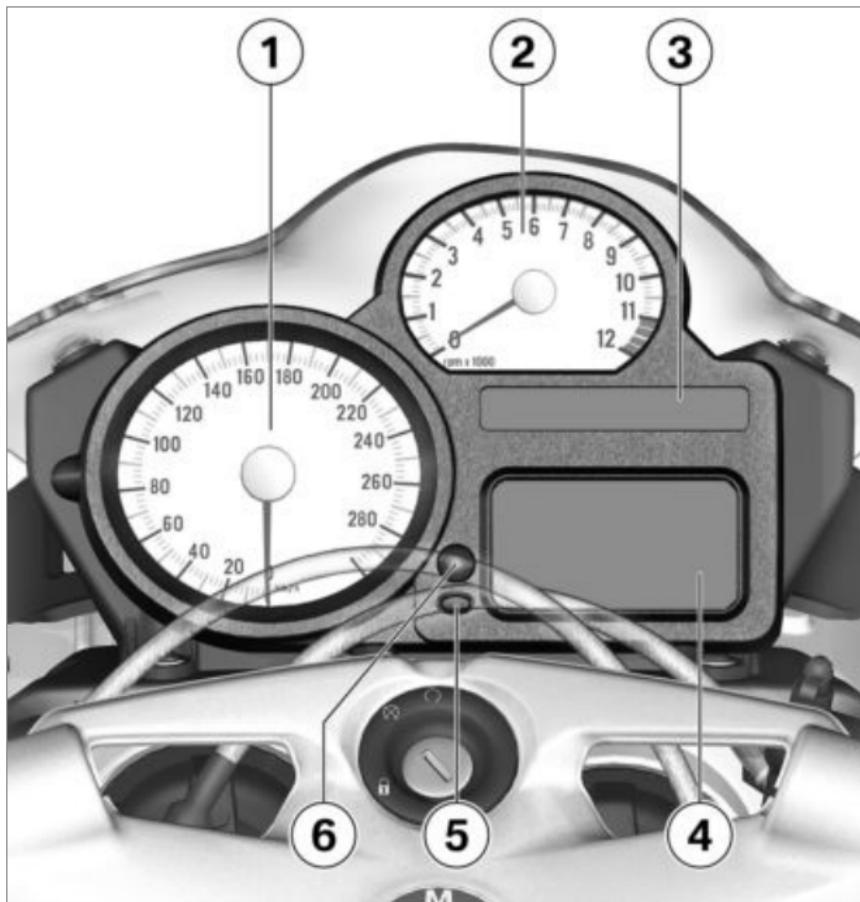
Multifunction switch, right

- 1 – with heated handlebar grips^{OE}
Heated handlebar grips (➡ 47)
- 2 Starter button (➡ 62)
- 3 Emergency ON/OFF switch (➡ 47)

Underneath seat

- 1 Luggage loops
- 2 Rider's Manual (US Model)
- 3 Tire inflation pressure table and payload table
- 4 Standard tool kit (► 86)
- 5 Engine oil fill location (► 88)





Instrument cluster

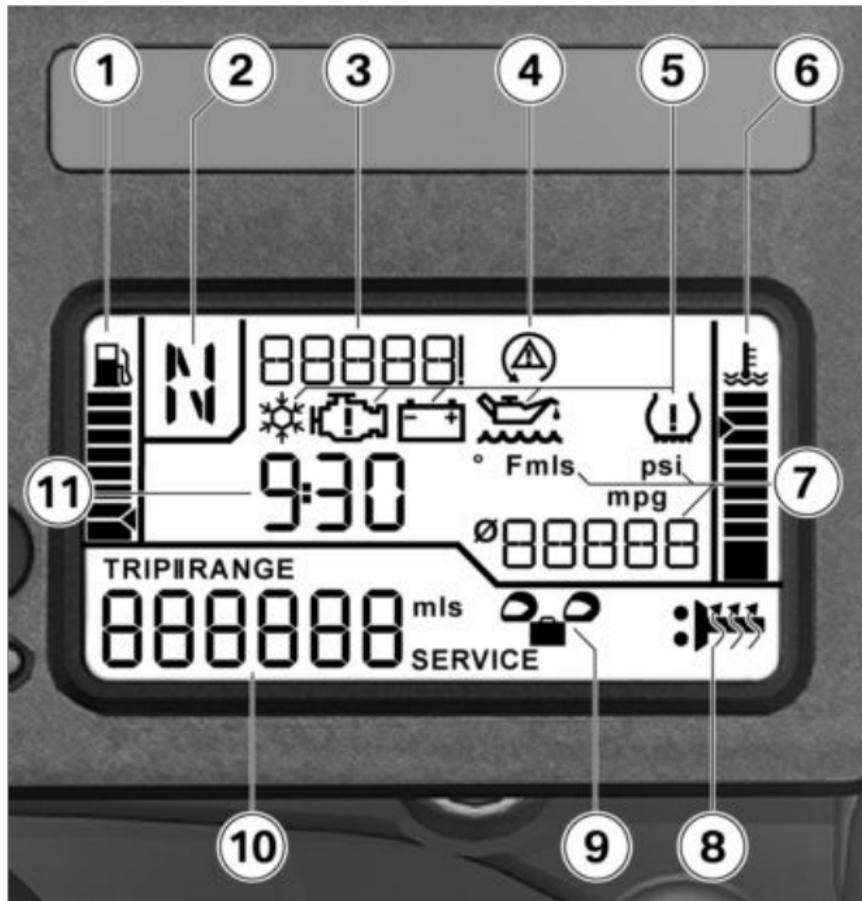
- 1 Tachometer
- 2 Speedometer
- 3 Warning and indicator lamps (►► 21)
- 4 Multifunction display (►► 20)
- 5 Ambient light sensor (for brightness adjustment of instrument lighting)
– with anti-theft alarm^{OE}
Anti-theft alarm indicator light (see anti-theft alarm operating instructions)
- 6 Operating odometer (►► 43)
Operating clock (►► 42)

Status indicators

Multifunction display	20
Meanings of displays	21
Warning and indicator lamps	21
Service display	22
Range	23
Ambient temperature	23
Tire inflation pressures	24
Oil level indicator	24
Warning indicators	25

Multifunction display

- 1 The horizontal bars indicate the remaining fuel level.
- 2 Gear indicator display, "N" indicates "neutral."
- 3 Sector for warning displays (►► 25)
- 4 – with automatic Stability Control^{OE}
ASC warning and indicator display (►► 34)
- 5 Warning indicators (►► 25)
- 6 The horizontal bars indicate the level of the engine temperature.
- 7 – with onboard computer^{OE}
Onboard computer displays (►► 21)
- 8 – with heated handlebar grips^{OE}
Grip heating level (►► 47)



- 9** – with Electronic Suspension Adjustment (ESA) || ^{OE}
 ESA setting ( 54)
- 10** Odometer ( 43)
- 11** Clock ( 42)
 – with onboard computer ^{OE}
 Onboard computer data sector ( 43)

Meanings of displays

– with onboard computer ^{OE}

CLOCK: Time display

TEMP: Ambient temperature
 ( 23)

Ø SPEED: Average speed since last reset

Ø FUEL: Average fuel mileage since last reset

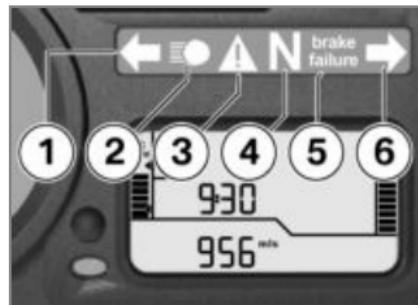
RANGE: Travel range with remaining fuel ( 23)

OIL: Oil level indicator ( 24)

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

RDC P: Tire inflation pressures
 ( 24) <

Warning and indicator lamps



- 1** Indicator lamp for left turn signal
- 2** Headlight high beam indicator lamp
- 3** General warning lamp, appears together with warnings in display panel ( 25)
- 4** Neutral indicator lamp
- 5** – with BMW Motorrad Integral ABS Generation || ^{OE}
 ABS warning lamp ( 33)

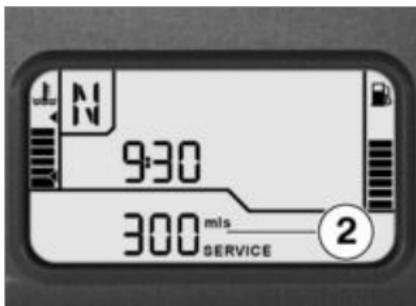
- 6** Indicator lamp for right turn signal

 The ABS symbol can be shown differently depending on the country. ◀

Service display



If the time remaining until the next service will elapse within one month, the service date **1** appears briefly following the pre-ride check. In this example the display means "March, 2012."



If the motorcycle covers high annual mileages then shorter service intervals may be required. When the odometer reading for the recalculated early service falls to within 621 miles (1000 km), the remaining miles (kilometers) **2** are counted down in 62-mile (100 km) increments and briefly displayed following the pre-ride check.



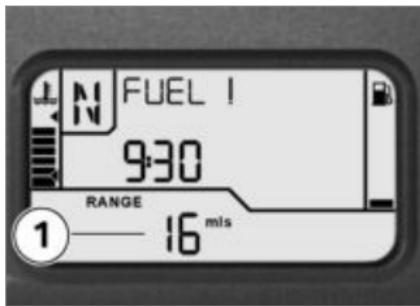
When a service date elapses without service, the universal warning lamp lights up in yellow, appearing together with the date and milage (kilometer)

display. The "Service" message is displayed continuously.

 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 has been disconnected for a longer time.

Consult a certified workshop, preferably an authorized BMW Motorrad retailer, for setting of the date. ◀

Range



The range **1** indicates what distance can still be driven with the remaining fuel. This distance is calculated based on fuel level and average consumption.

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. 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.◀

– without onboard computer^{OE}

The travel-range display does not appear until the remaining fuel falls to the reserve level.◀

– with onboard computer^{OE}

The average consumption employed to calculate the remaining travel range does not appear in the display and may vary from the indicated average consumption.◀

Ambient temperature

– with onboard computer^{OE}

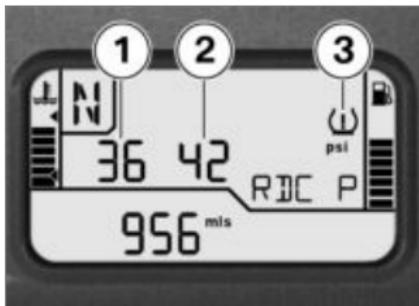
Engine heat can lead to spurious readings of ambient temperature when the motorcycle is stationary. When the effects of engine heat on the monitored temperature become excessive the display responds by temporarily reverting to -- as the display reading.



When ambient temperatures drop below 37°F (3°C) the temperature display responds by flashing a warning indicating possible ice formation on the road surface. The display automatically switches from any other mode to the temperature reading when the temperature drops below this threshold for the first time.

Tire inflation pressures

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



The displayed tire inflation pressures are based on a tire temperature of 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. When you switch on the ignition, -- -- appears in the display. This is because active transmission of tire-inflation data does not start until the

motorcycle exceeds a speed of 19 mph (30 km/h) at least once.



If the **3** symbol appears at the same time the display is a warning. The critical tire-inflation pressure flashes. If the critical value is at the limit of the permissible tolerance, the general warning light also lights up in yellow. If the determined tire inflation pressure is outside the permissible tolerance, the general warning light flashes in red.

Additional information on the BMW Motorrad Tire Pressure Monitor is provided starting on page (→ 75).

Oil level indicator

- with onboard computer^{OE}



The oil level indicator **1** provides information on the oil level in the engine. It can only be displayed when the motorcycle is stopped.

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).



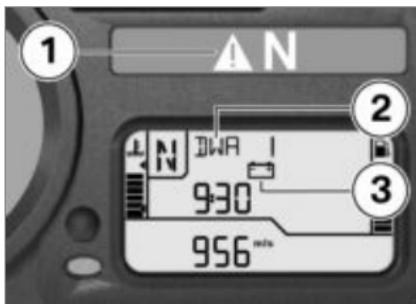
If other information of the onboard computer is displayed, this symbol continues to be shown until the oil level is detected as correct again.

The most recently measured status appears in the display for five seconds the next time you switch on the ignition.

Warning indicators

Display

Warnings are displayed with the corresponding warning light.



Warnings for which no separate warning lamp is provided are signaled by the universal warning lamp **1** and are accompanied by a warning notice such as **2** or a warning symbol such as **3** in the multifunction display. The universal warning lamp lights up in either red or yellow depending on the urgency of the warning.

If several warnings are active, all corresponding warning lights and warning symbol are displayed; warnings are shown alternately. The following page contains a list of potential warnings.

Overview of warning indicators

Warning light	Displays	Meaning
 Lights up yellow	EWS ! Is indicated	Electronic immobilizer is active (►► 30)
 Lights up yellow	FUEL ! Is indicated	Fuel down to reserve (►► 30)
 Lights up red	Temperature display flashes	Coolant temperature too high (►► 30)
 Lights up yellow	 appears on the display	Engine in emergency-operation mode (►► 30)
 Flashes red	 Is indicated	Engine oil pressure low (►► 31)
 Lights up red	 Is indicated	Battery charge current insufficient (►► 31)
 Lights up yellow	LAMP R ! Is indicated	Tail light defective (►► 32)
	LAMP F ! Is indicated	Headlight bulb or turn signal defective (►► 32)

Warning light

Displays

Meaning



Lights up yellow

LAMPS ! Is indicated

Bulbs defective (▣▣▣▣ 32)



Is indicated

Engine oil level too low (▣▣▣▣ 33)

Check Oil Is indicated



appears on the display

Ice warning (▣▣▣▣ 33)



Flashes

ABS self-diagnosis not completed (▣▣▣▣ 33)



Lights up

ABS deactivated (▣▣▣▣ 33)



Lights up

ABS error (▣▣▣▣ 34)



Flashes rapidly in yellow



appears on the display

ASC intervention (▣▣▣▣ 34)



Flashes slowly

ASC self-diagnosis not completed (▣▣▣▣ 34)

Warning light	Displays	Meaning
	 appears on the display	ASC deactivated (→ 34)
 Lights up yellow	 appears on the display	ASC error (→ 35)
 Lights up yellow	 appears on the display	Tire inflation pressure is at limit of approved range (→ 35)
	The critical tire inflation pressure flashes	
 Flashes red	 appears on the display	Tire inflation pressure outside permissible tolerance (→ 35)
	The critical tire inflation pressure flashes	
	"---" or "--- --" is indicated	Transmission error (→ 36)
 Lights up yellow	 appears on the display	Sensor defective or system fault (→ 37)

Warning light

Displays

Meaning

Warning light	Displays	Meaning
 Lights up yellow	"--" or "-- --" is indicated	Sensor defective or system fault (➡ 37)
 Lights up yellow	RDC ! is indicated	Battery of tire-inflation pressure sensor weak (➡ 37)
	DWALO ! Is indicated	Anti-theft alarm battery weak (➡ 37)
 Lights up yellow	DWA ! Is indicated	Anti-theft alarm battery discharged (➡ 38)

Electronic immobilizer is active



General warning light shows yellow.

EWS ! is indicated.

Possible cause:

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

- Remove other ignition keys located on the ignition key.
- Use the reserve key.
- Have the defective key replaced, preferably by an authorized BMW Motorrad retailer.

Fuel down to reserve



General warning light shows yellow.

FUEL ! is indicated.



A fuel shortage can lead to misfiring and to the engine dying unexpectedly. Misfiring can

damage the catalytic converter, and the engine dying unexpected can lead to accidents.

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 (➡ 68).

Coolant temperature too high



General warning light shows red.

Temperature display flashes.



Continued 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.
- In traffic jams, switch off the engine, but keep the ignition switched on so that the radiator fan continues to operate.
- Should the coolant temperature frequently be too high, have the fault rectified as quickly as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Engine in emergency-operation mode



General warning light shows yellow.



Engine symbol appears on the display.



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. ◀

Possible cause:

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

- Continued driving is possible, however the accustomed engine performance may not be available.
- Have the malfunction corrected as soon as possible at a specialist service facility, preferably an authorized BMW Motorrad retailer.

Engine oil pressure low



General warning light flashes red.



Oil-can symbol appears on the display.

The oil pressure in the lubricating oil circuit is too low. If the warning light lights up, stop immediately and switch off the engine.



The warning on insufficient engine oil pressure is no substitute for the function of an oil-level indicator. The correct engine oil level can only be checked on the oil level indicator. ◀

Possible cause:

The engine oil level is too low.

- Checking engine oil level (▶▶▶ 86).
- If oil level is too low:
 - Topping up engine oil (▶▶▶ 88).

Possible cause:

The engine oil pressure is insufficient.



Driving with insufficient engine oil pressure can result in engine damage.

Do not continue driving. ◀

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

Battery charge current insufficient



General warning light shows red.



Battery symbol appears on the display.



A discharged battery leads to the failure of various motorcycle systems, e.g. lighting, engine or ABS. This can result in dangerous driving situations.

If possible, do not continue driving.◀

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

Possible cause:

Alternator or alternator drive defective

- Have the malfunction corrected as soon as possible at a specialist service facility, preferably an authorized BMW Motorrad retailer.

Tail light defective



General warning light shows yellow.

LAMP R ! is indicated.



A defective bulb places your safety at risk because it is easier for other users to not see the motorcycle.

Replace defective bulbs as soon as possible; always carry a

complete set of spare bulbs if possible.◀

Possible cause:

Taillight or brake light defective.

- The diode tail light must be replaced. Please contact a specialized workshop, preferably an authorized BMW Motorrad retailer.

Headlight bulb or turn signal defective

LAMP F ! is indicated.



A defective bulb places your safety at risk because it is easier for other users to not see the motorcycle.

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

Possible cause:

Low-beam, high-beam, parking or turn indicator bulb defective.

- Replacing low-beam and high-beam bulbs (➡ 105).
- Replacing parking light bulb (➡ 107).
- Replacing front and rear turn indicator bulbs (➡ 108).

Bulbs defective



General warning light shows yellow.

LAMP S ! is indicated.



A defective bulb places your safety at risk because it is easier for other users to not see the motorcycle.

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

Possible cause:

A combination of several bulb defects is present.

- See the fault descriptions above.

Engine oil level too low

– with onboard computer^{OE}



Oil level symbol appears on the display.

Check Oil is indicated.

Possible cause:

The electronic oil level sensor has detected a low engine oil level. Check the engine oil level on the oil level indicator the next time you stop for refueling:

- Checking engine oil level (▶▶▶▶ 86).

If oil level is too low:

- Topping up engine oil (▶▶▶▶ 88).

Ice warning

– with onboard computer^{OE}



Ice crystal symbol appears on the display.

Possible cause:

The ambient temperature measured at the motorcycle is lower than 37 °F (3 °C).



The ice warning does not mean that there is no risk of black ice forming at measured temperatures above 37 °F (3 °C). At low outside temperatures, black ice must especially be expected on bridges and in shady road areas.◀

- Think well ahead when driving.

ABS self-diagnosis not completed

– with BMW Motorrad Integral ABS Generation II^{OE}



ABS warning light flashes.

Possible cause:

The self-diagnosis routine was not completed; the ABS function is not available. The motorcycle must reach a speed of at least 3.1 mph (5 km/h) before the ABS self-diagnosis routine can be completed.

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

ABS deactivated

– with BMW Motorrad Integral ABS Generation II^{OE}



ABS warning light lights up.

Possible cause:

The ABS system has been deactivated by the driver.

- Switch on ABS function.

ABS error

– with BMW Motorrad Integral ABS Generation II^{OE}



ABS warning light lights up.

Possible cause:

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

- Continued driving is possible while taking the failed ABS function into account. Observe additional information on situations which can lead to an ABS error (► 73).
- Have the malfunction corrected as soon as possible by a specialized workshop, preferably

an authorized BMW Motorrad retailer.

ASC intervention

– with automatic Stability Control^{OE}



General warning light flashes rapidly in yellow.



ASC symbol is displayed.

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

ASC self-diagnosis not completed

– with automatic Stability Control^{OE}



ASC symbol flashes.

Possible cause:

The self-diagnosis was not completed; the ASC function is not available. So that the ASC self-diagnosis can be completed, the engine must be running and the motorcycle must be moved at a speed of at least 3.1 mph (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 deactivated

– with automatic Stability Control^{OE}



ASC symbol is displayed.

Possible cause:

The ASC system has been deactivated by the driver.

- Activating the ASC function

ASC error

– with automatic Stability Control^{OE}



General warning light shows yellow.



ASC symbol is displayed.

Possible cause:

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

- Continue driving is possible. It must be noted that the ASC function is not available. Observe additional information on

situations which can lead to an ASC error (▶ 75).

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

Tire inflation pressure is at limit of approved range

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



General warning light shows yellow.



Tire symbol appears on the display.

The critical tire-inflation pressure flashes.

Possible cause:

The measured tire inflation pressure is in the limit area of the permissible tolerance.

- Correct tire inflation pressure in accordance with instructions on

back of cover of Rider's Manual.



Before adjusting the tire inflation pressure, observe the information on temperature compensation and on inflation pressure adjustment in the chapter "Technology in detail". ◀

Tire inflation pressure outside permissible tolerance

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



General warning light flashes red.



Tire symbol appears on the display.

The critical tire-inflation pressure flashes.

Possible cause:

The measured tire inflation pressure is outside the permissible tolerance.

- Check tire for damage and drivability.

Is it still possible to drive with tire:



Incorrect tire inflation pressure result in poorer handling of the motorcycle.

Always adapt your driving style to the incorrect tire inflation pressure. ◀

- Correct tire inflation pressure at next opportunity.



Before adjusting the tire inflation pressure, observe the information on temperature compensation and on inflation pressure adjustment in the chapter "Technology in detail". ◀

- Have the tire checked for damage by a specialized workshop,

preferably an authorized BMW Motorrad retailer.

If you are unsure about the drivability of the tire:

- Do not continue driving.
- Inform roadside service.

Transmission error

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

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

Possible cause:

The motorcycle's speed has not exceeded the threshold of approx. 19 mph (30 km/h). The TPC/RDC sensors do not send their signal until after this speed has been exceeded for the first time (▣→ 75).

- Watch TPC/RDC display at higher speed. A permanent fault has not occurred until the general warning light also lights up. In this case:

- Have fault eliminated by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Possible cause:

There is a fault in the radio connection to the RDC sensors.

Possible causes are radio systems in the surrounding area, which interfere with the connection between the RDC control unit and the sensors.

- Watch the RDC display in another environment. A permanent fault has not occurred until the general warning light also lights up. In this case:
- Have fault eliminated by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Sensor defective or system fault

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



General warning light shows yellow.



Tire symbol appears on the display.

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

Possible cause:

Wheels without installed RDC sensors are mounted.

- Retrofit wheel set with RDC sensors.

Possible cause:

One or two RDC sensors have failed.

- Have fault eliminated by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Possible cause:

A system fault has occurred.

- Have fault eliminated by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Battery of tire-inflation pressure sensor weak

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



General warning light shows yellow.

RDC ! is indicated.



This error message is only displayed for a short time following the pre-ride check.◀

Possible cause:

The battery of the tire inflation pressure sensor no longer has its full capacity. The operation of the tire inflation pressure control is only ensured for a limited time.

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

Anti-theft alarm battery weak

– with anti-theft alarm^{OE}

DWALO ! is indicated.



This error message is only displayed for a short time following the pre-ride check.◀

Possible cause:

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

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

Anti-theft alarm battery discharged

– with anti-theft alarm^{OE}



General warning light shows yellow.

DWA ! is indicated.



This error message is only displayed for a short time following the pre-ride check.◀

Possible cause:

The anti-theft alarm battery has no capacity. The operation of the anti-theft alarm is no longer ensured with the motorcycle battery disconnected.

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

Operation

Steering and ignition lock	40	Damping	53
EWS Electronic immobilizer	41	ESA Electronic Suspension Adjust- ment	54
Clock	42	Tires	56
Display	43	Headlight	56
Lights	45	Seat	57
Turn indicators	46	Luggage loops	57
Hazard warning flashers	46		
Emergency ON/OFF switch	47		
Heated handlebar grips	47		
BMW Motorrad Integral ABS	48		
ASC Automatic Stability Control	49		
Clutch	50		
Brakes	51		
Mirrors	52		
Spring preload	52		

Steering and ignition

lock

Keys

Two main keys and one emergency key are provided with the vehicle. The emergency key features a light, compact design, allowing it to be carried in a wallet, etc. This key is intended for use when no main key is immediately available, and is not suitable for continuous use.

Should you lose your keys please refer to the information regarding the electronic immobilizer (EWS) (▣▣▣ 41).

The ignition lock, tank lock and seat lock are operated with the same key.

– with case^{OA}

Cases with locks for the same key can be ordered on request. Please contact a specialist service facility for this purpose,

preferably an authorized BMW Motorrad retailer.◀

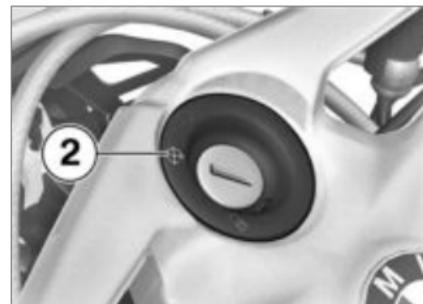
Switching on ignition



- Turn key to position **1**.
 - » Parking lights and all function circuits switched on.
 - » Engine can be started.
 - » Pre-ride check is performed. (▣▣▣ 63)
- with BMW Motorrad Integral ABS Generation II^{OE}
 - » ABS self-diagnosis in progress. (▣▣▣ 63)

- with automatic Stability Control^{OE}
 - » ABS self-diagnosis in progress. (▣▣▣ 64)

Switching off ignition



- Turn key to position **2**.
 - » Light switched off.
 - » Handlebars not locked.
 - » Key can be removed.
 - » Electrically powered accessories remain operational for a limited period of time.
 - » Battery can be recharged via onboard socket.

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 **3** while moving handlebars slightly.
 - » Ignition, lights and all electrical circuits switched off.
 - » Handlebars locked.
 - » Key can now be removed.

EWS Electronic immobilizer

The motorcycle's electronic circuitry monitors the data stored in the key through a ring antenna incorporated in the ignition lock. The engine management system does not enable engine starting until the key has been recog-

nized as "authorized" for your motorcycle.

 A spare 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 the spare key separately from the ignition key. ◀

If you lose a key, you can have it disabled by your BMW Motorrad partner. 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.

Replacement and spare keys are only available through an authorized BMW Motorrad retailer.

The keys are part of an integrated security system, so the retailer is under an obligation to check the legitimacy of all applications for replacement/extra keys.

Clock

Setting clock



Attempting to set the clock while riding the motorcycle can lead to accidents.

Adjust the clock only when the motorcycle is stationary. ◀

- Switch on ignition.

- without onboard computer^{OE}
- without Tire Pressure Control (TPC/RDC)^{OE}

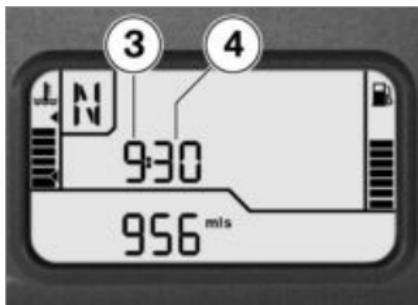


- Press button **1** or button **2** repeatedly until total mileage is shown. ◀

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



- Press button **2** repeatedly until clock is shown. ◀

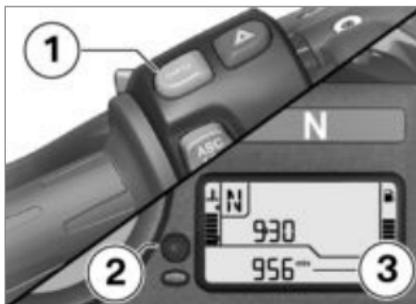


- Press and hold button until hours **3** flash.
- Press button repeatedly until desired hours are shown.
- Press and hold button until minutes **4** flash.
- Press button repeatedly until desired minutes are shown.
- Press and hold button until minutes no longer flash.
- » Setting is completed.

Display

Selecting display readings

- Switch on ignition.
 - without onboard computer^{OE}
 - without Tire Pressure Control (TPC/RDC)^{OE}



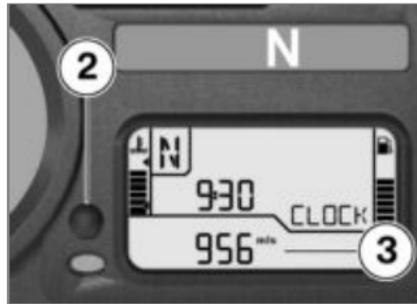
- Press the button **1** or the button **2** to select an odometer in the sector **3**.

The following data can be displayed:

- Total distance covered
- Trip odometer 1 (Trip I)
- Trip odometer 2 (Trip II)

– Operating range (after reaching reserve level)◀

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



- Press the button **2** to select an odometer in the sector **3**. The following data can be displayed:

- Total distance covered
- Trip odometer 1 (Trip I)
- Trip odometer 2 (Trip II)



- Press the button **1** to select a display in the sector **4**.

– with onboard computer^{OE}

The following data can be displayed:

- Clock (CLOCK)
- Ambient temperature (TEMP)
- Average speed (ØSPEED)
- Average consumption (ØFUEL)
- Range (RANGE)
- Oil level indicator (OIL)

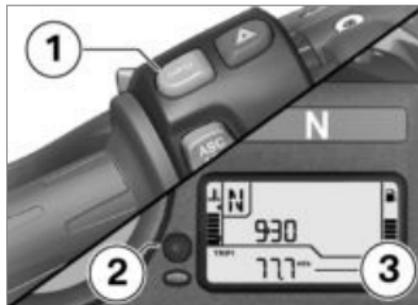
– with Tire Pressure Control (TPC/RDC)^{OE}

The following data can be displayed:

- Tire inflation pressure (RDC P)◀

Resetting trip odometer

- Switch on ignition.
- Select desired trip odometer.
 - without onboard computer^{OE}
 - without Tire Pressure Control (TPC/RDC)^{OE}



- Press button **1** or button **2** and continue to hold it down until

the trip odometer in the sector **3** resets.◀

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



- Press the button **2** and continue to hold it until the trip odometer in the sector **3** resets.◀

Resetting average data

- with onboard computer^{OE}
- Switch on ignition.

- Select average fuel consumption or average speed.



- Press the button **1** and continue to hold it until the displayed figure in the sector **4** resets.

Lights

Parking lights

The parking lights 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. ◀

Headlight low beam

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

 With the engine switched off, you can switch on the lights by switching on the high-beam headlight with the ignition switched on or by operating the headlight flasher. ◀

Headlight high beam and flasher



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

Parking light

- Switch off ignition.



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

Turn indicators

Operating turn signal

- Switch on ignition.

▶ After driving for approx. ten seconds or after covering a distance of approx. 980 ft

(300 m), the turn indicators are automatically switched off. ◀



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

Hazard warning flashers

Operating hazard warning flashers

- Switch on ignition.

▶ 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. ◀



Emergency ON/OFF switch



- Press button **1** to switch on hazard warning flashers.
» Ignition can be switched off.
- Press button **1** again to switch off hazard warning flashers.

- 1** Emergency ON/OFF 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

Heated handlebar grips

– with heated handlebar grips^{OE}

Operating heated handlebar grips

- Start engine.

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

 The increase in power consumption caused by the heated hand grips can drain the

battery if you are riding at low engine speeds. If the battery is inadequately charged, the heated hand grips are switched off to ensure starting capability.◀



- Press button **1** repeatedly until desired heating level is shown.



The handlebar grips can be heated at two different levels. The second level **2** is used for fast heat-up of the grips; then the switch should be switched back to the first level.



50 % heating output



100 % heating output

» If no further changes are made, the selected heating level is set.

BMW Motorrad Integral ABS

– with BMW Motorrad Integral ABS Generation II ^{OE}

Switching off ABS function

- Stop motorcycle or switch on ignition with motorcycle stationary.



- Press and hold button **1** until ABS warning light changes its display behavior.

brake failure ABS warning light lights up.

- with automatic Stability Control^{OE}
- » First the ASC symbol changes its display behavior. Press and hold button **1** until ABS warning light reacts. In this case, the ASC setting does not change.
- Release button **1** within two seconds.

brake failure ABS warning light continues to light up.

- » ABS function is deactivated, integral function continues to be active.

Switching on ABS function



- Press and hold button **1** until ABS warning light changes its display behavior.

brake failure ABS warning light goes out; if self-diagnosis has not been completed, it begins to flash.

- Release button **1** within two seconds.

brake failure ABS warning light remains off or continues to flash.

- » ABS function is switched on.

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

▶ If the ABS light continues to light up after switching the ignition off and then on again, an ABS fault has occurred.◀

ASC Automatic Stability Control

– with automatic Stability Control^{OE}

Deactivating ASC function

- Switch on ignition.

▶ The ASC function can also be deactivated while driving.◀



- Press and hold button **1** until ASC symbol changes its display behavior.



ASC symbol is displayed.

- Release button **1** within two seconds.



ASC symbol continues to be displayed.

- » ASC function is deactivated.

Activating ASC function



- Press and hold button **1** until ASC symbol changes its display behavior.



ASC symbol is no longer displayed; if self-diagnosis is not completed, it begins to flash.

- Release button **1** within two seconds.



ASC symbol is still not displayed or continues to flash.

- » ASC function is activated.
- As an alternative, the ignition can also be switched off and then on again.



If the ASC warning light lights up after switching the ignition off and on and then continued driving over 3 mph (5 km/h), an ASC error has occurred.◀

Clutch

Adjusting clutch lever



Changing the position of the clutch-fluid reservoir can allow air to penetrate the clutch system.

Do not turn the handlebar fitting on the handlebar.◀



Adjusting the clutch lever while driving can lead to accidents.

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

Brakes

Adjusting handbrake lever

 Changing the position of the brake-fluid reservoir can allow air to penetrate the brake system.

Do not turn the handlebar fitting on the handlebar.◀

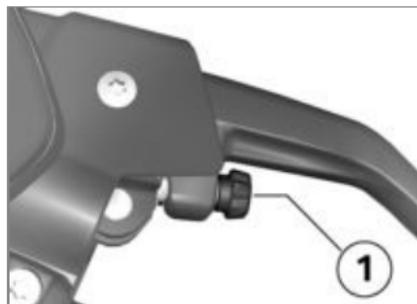
 Adjusting the handbrake lever while driving can lead to accidents.

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



- Turn adjusting screw **1** clockwise to increase distance between clutch lever and handlebar grip.
- Turn adjusting screw **1** counterclockwise to decrease distance between clutch lever and handlebar grip.

 The adjusting screw can be turned more easily if you press the clutch lever forward when doing so.◀



- Turn adjusting screw **1** clockwise to increase distance between brake lever and handlebar grip.
- Turn adjusting screw **1** counterclockwise to decrease distance between brake lever and handlebar grip.

 The adjusting screw can be turned more easily if you press the handbrake lever forward when doing so.◀

Mirrors

Adjusting mirrors



- Move mirror into desired position by twisting.

Adjusting mirror arm



- Slide protective cap **1** up over screw connection on mirror arm.
- Loosen nut **2** (left-hand thread).
- Turn mirror arm into desired position.
- Tighten nut to specified torque while holding mirror arm in place.



Mirror on left/right adapter

– 16 lb/ft (22 Nm)

- Slide protective cap over threaded fastener.

Spring preload Setting

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

Adjusting spring preload for rear wheel

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



- To decrease spring preload, turn handwheel **1** in direction of arrow LOW.

 Basic setting of spring preload, rear

– without Electronic Suspension Adjustment (ESA II)^{OE}

– Turn upper adjustment wheel as far as possible in direction of arrow LOW, then turn 13 clicks in direction of arrow HIGH (Full tank of gas, with rider 187 lbs (85 kg))<

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

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

- To increase spring preload, turn handwheel **1** in direction of arrow HIGH.

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 re-

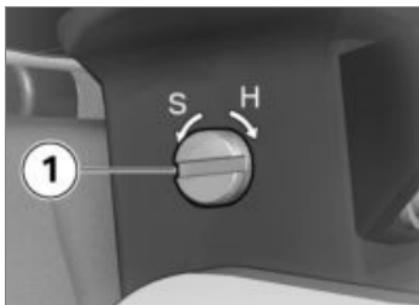
duction in spring preload requires softer damping.

Adjusting damping on rear wheel

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



- Adjust damping with the toolkit using the adjusting screw **1**.



- To increase damping, turn adjusting screw **1** in arrow direction H.
- To decrease damping, turn adjusting screw **1** in arrow direction S.


 Basic setting of rear wheel rear-wheel damping

– without Electronic Suspension Adjustment (ESA II)^{OE}


 Basic setting of rear wheel rear-wheel damping

– Turn adjusting screw as far as possible in direction of arrow H, then turn one and one-half turn in direction of arrow S (Full tank of gas, with rider 187 lbs (85 kg))<

ESA Electronic Suspension Adjustment

– with Electronic Suspension Adjustment (ESA II)^{OE}

Settings

You can use the ESA Electronic Suspension Adjustment feature to adapt your motorcycle to its current load as well as the road surface.

You can select from among three load types, for each of which

three suspension damping rates are available.

Additional information on the electronic suspension adjustment ESA II is provided on page (77).

Calling up settings

- Switch on ignition.



- Press button **1** to display current adjustment.



The selected suspension damping rate appears in the multifunction display area **1**, while the load type is shown in the **2** sector. The displays provide the following information:

- COMF: Comfortable damping
- NORM: Normal damping
- SPORT: Sport, performance-oriented damping



One-up



One-up with luggage



Two-up (with luggage)

» The display is automatically hidden again after a short time.

Adjusting the suspension

- Start engine.



- Press the button **1** to view the current adjustment setting in the display.
- To reset the suspension's compliance rate, press the **1** button briefly, then continue to press it repeatedly until the

desired suspension setting appears in the display.



The damping can be adjusted while the motorcycle is being ridden. ◀

- To set the weight, apply extended pressure on the **1** button, pressing it repeatedly until the desired setting appears in the display.



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

- » If the **1** button is not pressed for an extended period of time, the current display settings for suspension's damping rate and the load weight will be adopted. The ESA display then goes out automatically.

Tires

Checking 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.

In order to avoid a sudden loss of tire inflation pressure, fit a valve cap with rubber sealing ring to the rear tire and make sure that the cap is screwed on firmly. ◀

- 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.

Headlight

Adjusting headlight for RHD/LHD traffic

If the motorcycle is ridden in a country where the opposite rule of the road applies, its asymmetric low-beam headlight will tend to dazzle oncoming traffic.

Have the headlight adjusted to the relevant conditions by a specialized workshop, preferably an authorized BMW Motorrad retailer.



Ordinary adhesive tape damages the plastic lens.

To prevent damage to the plastic lens, consult a specialized workshop, preferably an authorized BMW Motorrad retailer. ◀

Headlight range and spring preload

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

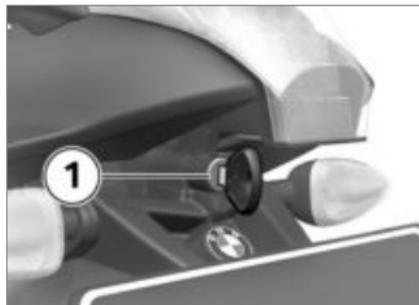


If you are unsure whether the headlight range is correct, consult a specialized workshop, preferably an authorized BMW Motorrad retailer. ◀

Seat

Removing seat

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



- Turn seat lock **1** to left with ignition key while pressing seat downward at rear to support movement.



- Raise seat at rear and release key.
- Take off seat and place on a clean surface with upholstered side facing downward.

Installing seat

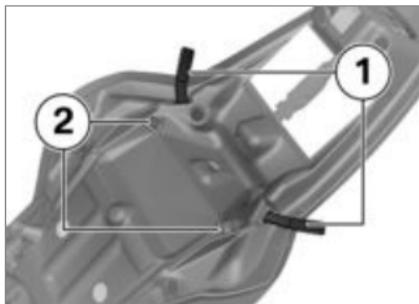


- Insert seat in brackets **1**.
- Firmly press down on the seat at the rear.
 - » The seat can be heard to lock into place.

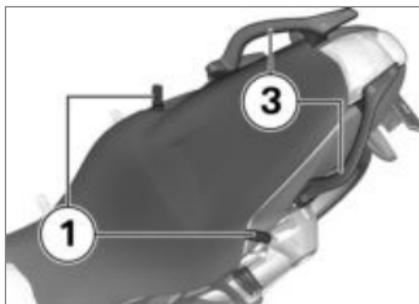
Luggage loops

Locking luggage on motorcycle

- Removing seat (➡ 57).
- Turn over seat.



- Take loops **1** out of holders **2** and lay outwards.
- Installing seat (▶▶▶ 57).



- Use loops **1** and grab handles **3** in conjunction with lug-

gage belts to lash luggage down to the passenger seat.

Riding

Safety instructions	60
Checklist.....	62
Starting	62
Breaking in.....	65
Shifting gears	65
Brakes	66
Parking your motorcycle	67
Refueling	68
Securing motorcycle for transport	69

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, suspension damping rate settings and

tire inflation pressures for the current gross vehicle weight.

- with case^{OA}
- Ensure that case volumes on left and right are equal.
- Make sure that weight is uniformly distributed between right and left.
- Pack heavy 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. ◀
- with luggage carrier^{OE}
- Comply with maximum payload of luggage rack.



Payload of luggage carrier

- with luggage carrier^{OA}
- or
- with luggage carrier^{OE}



Payload of luggage carrier

- max 11 lbs (max 5 kg) ◀◀

- 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 limit for driving with tank rucksack

- max 81 mph (max 130 km/h) ◀

- with tank bag^{OA}
- Observe maximum payload of tank bag and corresponding top speed.



Payload of tank bag

– ≤11 lbs (≤5 kg)



Speed limit for driving
with tank bag

– ≤81 mph (≤130 km/h)◀

Speed

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

- 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 motorcycle is in use. There is a risk of burn injuries by contact with hot surfaces, particularly at the silencer.

When you park the motorcycle make sure that no-one 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 stand-

still: 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:

- Brakes
- Front and rear brake fluid levels
- Clutch
- Clutch fluid level
- Shock absorber setting and spring preload
- Tread depth and tire inflation pressure
- Firm seating of cases and luggage

At regular intervals:

- Engine oil level (every time you refuel)
- Brake pad wear (during every third stop for refueling)

Starting

Starting the engine

- Switch on ignition.
- » Pre-ride check is performed. (▣▶ 63)

- with BMW Motorrad Integral ABS Generation II^{OE}
- » ABS self-diagnosis in progress. (▣▶ 63)
- with automatic Stability Control^{OE}
- » ABS self-diagnosis in progress. (▣▶ 64)
- 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 start attempt is automatically interrupted if battery voltage is too low. Recharge the battery before you start the engine, or use jump leads and a donor battery to start. ◀

- » Engine starts.
- » Consult the troubleshooting chart if the engine refuses to start. (▮▮▮▶ 120)

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". The test is aborted if the engine is started before it is completed.

To initialize, the exhaust flap is completely opened once then closed again.

Phase 1

 General warning light shows red.

– CHECK ! is indicated.

Phase 2

 General warning light shows yellow.

– CHECK ! is indicated.

If the 'General' warning light 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 by a specialized workshop, preferably an authorized BMW Motorrad retailer.

ABS self-diagnosis

– with BMW Motorrad Integral ABS Generation II ^{OE}

The self-diagnosis routine is determining 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.



ABS warning light flashes.

Phase 2

- » Checking wheel sensors while starting off. The motorcycle must reach a speed of at least 3 mph (5 km/h) before the ABS self-diagnosis routine can be completed.



ABS warning light flashes.

ABS self-diagnosis completed

- » The ABS warning lamp goes out.

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

- It remains possible to continue riding. Please be aware that neither the ABS nor the integral function is available.
- Have the malfunction corrected as soon as possible at a specialist service facility, preferably an authorized BMW Motorrad retailer.

ASC self-diagnosis

– with automatic Stability Control^{OE}

The self-diagnosis routine is determining whether the BMW Motorrad Integral ASC 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.



ASC symbol flashes.

Phase 2

- » Checking system components capable of diagnosis while starting off. So that the ASC self-diagnosis can be completed, the engine must be running and the motorcycle must drive at a speed of at least 3 mph (5 km/h).



ASC symbol flashes.

ASC self-diagnosis completed

- » The ASC symbol is no longer displayed.

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

- It remains possible to continue riding. Please be aware that

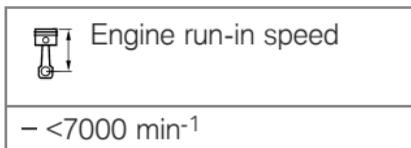
ASC functionality is no longer available.

- Have the malfunction corrected as soon as possible at a specialist service facility, preferably an authorized BMW Motorrad retailer.

Breaking in

The first 600 mls (1000 km)

- 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 highways if possible.
- Observe the engine run-in speeds.



- Have the first inspection carried out after 300 - 750 mls (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 heel angles until the tires are run in. This running in procedure is essential if the tires are to achieve maximum grip.

 New tires have not achieved their full adhesion yet. There is a danger of accidents when driving at extreme angles. Avoid extreme angles.◀

Shifting gears

– with gearshift assistant^{OE}

Gearshift assistant

Your motorcycle is equipped with a shifting assistant developed based on racing requirements. It enables upshifting without actuating the clutch or throttle valve in virtually all load and engine

speed ranges. During acceleration the throttle valve can remain open, and the shifting time is reduced to a minimum. The gears are shifted into as usual with foot force on the shift lever.



The sensor **1** in the shift linkage detects the shift request and initiates shifting support.

When driving at constant speed in low gears at high engine speeds, upshifting without clutch operation can result in major load change reactions. BMW Motorrad recommends only

upshifting with clutch operation in these driving situations. The shifting assistant should not be used in the area of the rev-limiter.

No shifting support is provided in the following situations:

- during shifting with engaged clutch
- during shifting with the throttle valve closed (overrun)
- during downshifts

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 "forced braking" often practiced in which the brake pressure is generated as quickly as possible and with great force, the dynamic load distribution cannot follow the increased deceleration and the braking force cannot be completely transferred to the road surface. The front wheel can lock up.

- with BMW Motorrad Integral ABS Generation II^{OE}

Locking up of the front wheel is prevented by the 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.◀

- with BMW Motorrad Integral ABS Generation II^{OE}



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.

The BMW integrated braking function ensures that the rear wheel brake is also applied when the handbrake lever is actuated, thus providing protection against overheating. Simply apply the front wheel brake and use the engine brake.◀◀

Wet, soiled brakes

Moisture and dirt on the brake disks 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 motorcycle.
- 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.◀

- Fold out side stand and park motorcycle.

! 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.◀

- If the slope of the road permits, turn the handlebars to the left.
- On a grade, the motorcycle should always face uphill; select 1st gear.

Center stand

– with center stand Generation II OA

- 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 would 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.

Refueling

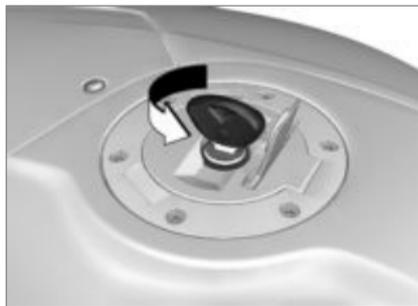
! Fuel is highly flammable. Fire at the fuel tank can result in fire and explosion. Do not smoke. Never bring a naked flame near the fuel tank.◀

! Fuel attacks plastic surfaces, making them cloudy or unattractive.

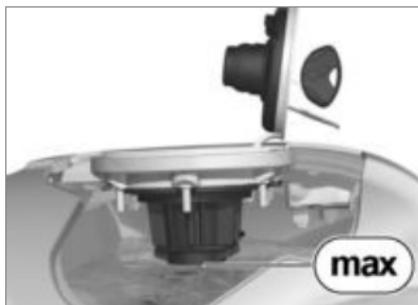
Wipe off any fuel that gets onto plastic parts immediately.◀

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

- Fold up tank lock cover.



- Open fuel tank cap with ignition key by turning it counter-clockwise.



! 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.◀

! Leaded fuel will destroy the catalytic converter. Use only unleaded fuel.◀

- Refuel with quality listed below at most until lower edge of filler neck is reached.

▶ When refueling after running on reserve, make sure that you top up the tank to a level above reserve, as other-

wise the sensor will not be able to register the new level. Otherwise neither the fill level nor the range display can be updated.◀



Recommended fuel quality

- Super Plus unleaded
- 91 AKI (98 ROZ/RON)
- 91 AKI



Usable fuel quantity

- Approx. 5 gal (Approx. 19 l)



Reserve fuel quantity

- Approx. 1.1 gal (Approx. 4 l)

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

Securing 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 the motorcycle against tipping away to the side.◀

- 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. ◀

- Place front strap over the frame and route downward.
- Guide the strap through the wheel carrier toward the front and tension downward.



- Fasten straps at rear on both sides on passenger footrests and tighten them.
- Tension all straps evenly; the motorcycle should be pulled down against its springs with the suspension compressed as much as possible.

Technology in detail

Brake system with BMW Motorrad Integral ABS	72
Engine management with BMW Motorrad ASC	74
TPC Tire Pressure Control.....	75
ESA II Electronic Suspension Adjust- ment.....	77

Brake system with 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.

The BMW Motorrad Integral ABS adapts the braking force distribution between the front and rear wheel brake to the loading of the motorcycle during braking.

 Spinning of the rear wheel with the front brake pulled (burn out) is made considerably more difficult by the integral function. The result may be damage to the rear wheel brake and the clutch.

Avoid burn-outs.◀

How does 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 poorer 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 transferrable braking force is exceeded when the driver increases the brake pressure, the wheels begin to lock and driving stability is lost, and a fall can result. Before this situation occurs, ABS intervenes and adjusts the brake pressure to the maximum transferrable 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 transferrable braking force is reduced to zero. If braking is carried out in this situation, ABS must reduce the brake pressure to ensure driving 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.

How is the BMW Motorrad Integral ABS noticeable to the rider?

If the ABS system must reduce the braking forces due to the conditions described above, then vibrations can be felt at the handbrake lever.

If the handbrake lever is pulled, then braking pressure is built up at the rear wheel with the integral function. If the footbrake pedal is first actuated after this, the brake pressure already built up can be felt earlier than the counter-pressure, than when the footbrake pedal is actuated before or together with the handbrake lever.

Lifting off rear wheel

Even during severe braking, a high level of tire grip can mean that the front wheel does not lock up until very late, if at all. Consequently, ABS does not intervene until very late, if at all.

Under these circumstances the rear wheel can lift off the ground, and the outcome can be a high-siding situation in which the motorcycle can flip over.



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

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

What are the design characteristics of the BMW Motorrad 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 offroad or on the race-track.

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 a longer period of time, the ABS function is deactivated for safety reasons and an ABS fault is indicated. The condition for a fault message is the completed self-diagnosis. In addition to problems on the BMW Motorrad Integral ABS, unusual driving conditions can also lead to a fault message.

Unusual driving conditions:

- Heating up on the main or auxiliary stand at idle or with gear engaged.
- Rear wheel locked by the engine brake for a lengthy period, for example while descending on a loose surface.

Should a fault message result due to one of the driving conditions described above, 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 an optimally maintained condition, it is vital that the specified inspection intervals be complied with. ◀

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.

Take care when cornering. When you apply the brakes on a corner, the motorcycle's weight and momentum take over and even BMW Motorrad Integral ABS is unable to counteract their effects.

Engine management with BMW Motorrad ASC

– with automatic Stability Control^{OE}

How does ASC work?

The BMW Motorrad ASC compares the wheel speeds of the front and rear wheel. 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 characteristics of the BMW Motorrad ASC?

The BMW Motorrad ASC is an assistance system for the driver and is designed for driving on public roads. Especially in at the limits of driving physics, the driver has a considerable influence on the control options of the ASC (shifting weight in curves, loose loads).

The system is not optimized for special requirements resulting under extreme weather conditions offroad or on the racetrack. The BMW Motorrad ASC can be deactivated for these cases.



Even with ASC, physical laws cannot be overridden. The driver is always responsible for adapting his/her driving style. Do not reduce the additional safety provided with risky driving. ◀

Special situations

At an increasing angle, the acceleration performance is increasingly limited in accordance with physical laws. 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 fault is indicated. The condition for a fault message is the completed self-diagnosis.

In the following unusual driving states, the BMW Motorrad ASC can be automatically deactivated.

Unusual driving conditions:

- Driving on the rear wheel (wheely) for a longer period with ASC deactivated.

- Rear wheel spinning in place with front brake pulled (burn out).
- Heating up on the main or auxiliary stand at idle or with gear engaged.

The ASC is reactivated by switching the ignition on and off and then driving at a speed above 3 mph (5 km/h).

If the front wheel loses contact to the ground during extreme acceleration, the ASC reduces the engine torque until the front wheel touches the ground again. In this case, BMW Motorrad recommends turning back the throttle twist 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 pull the clutch at the same time. The engine braking torque can cause the rear wheel to block, resulting in an unstable driving state. This case cannot be controlled by the BMW Motorrad ASC.

TPC Tire Pressure Control

- 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 controller, which does not enable the transmission of the measured values un-

til a speed of approx. 18 mph (30 km/h) is reached. Before initial reception of the tire inflation pressure, -- is shown in the display for each tire. The sensors continue to transmit the measured values for approx. 15 minutes after the motorcycle comes to a stop.

The control unit can manage four sensors, and as a result two sets of wheels with TPC/RDC sensors can be driven. If a TPC/RDC control unit is installed, however the wheels have no sensors, then an error message is output.

Tire inflation pressure ranges

The TPC/RDC control unit distinguishes between three tire 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 temperature. The tire temperature is dependent on the ambient temperature and on the driving style and duration.

The tire inflation pressures are shown temperature-compensated in the multifunction display; they refer to a tire temperature of 68 °F (20 °C). No temperature compensation takes place in the inflation pressure testers at filling stations, i.e. the measured tire inflation pressure is dependent on

the tire temperature. As a result, the values displayed there do not match the values shown in the multifunction display in most cases.

Adjusting inflation pressure

Compare the TPC/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 inflation pressure is to be 36 psi (2.5 bar), however 33 psi (2.3 bar) is shown in the multifunction display. The tester at the filling station indicates 34.8 psi (2.4 bar). This value must be increased by 3 psi (0.2 bar) to 37.8 psi (2.6 bar) in order to

produce the correct tire inflation pressure.

ESA II Electronic Suspension Adjustment

- with Electronic Suspension Adjustment (ESA II)^{OE}

Chassis adjustments

The proper type of loading must first be selected when the motorcycle is stationary according to the motorcycle's load. Depending on the damping selected for this purpose, the damping levels are set on both spring struts and the spring base and spring rate are set on the rear spring strut. If the selected damping is changed, the spring rate on the rear spring strut is also adjusted in addition to the damping of both spring struts. This enables very precise adjustment of

the chassis to all riding conditions, including while riding.

- The combination of spring base, damping and spring rate ensures the chassis geometry is always appropriate.
- The static normal position is virtually maintained while riding.
- The different riding and loading conditions are offset so that the handling of the motorcycle remains constant.

It is possible to electrically change the spring rate through the combination of a conventional coil spring with a plastic element (Elastogran), the lateral expansion of which can be electrohydraulically limited using a displaceable sleeve. The more the sleeve surrounds the plastic element, the more its expansion is limited and the spring rate increases. The highest spring rate is achieved when the sleeve

completely encloses the plastic element and sits on the steel spring. Accordingly, the spring rate is lower, the less the sleeve limits the expansion of the plastic element.

Accessories

General instructions.....	80
Onboard sockets	80
Case	81

General instructions

BMW Motorrad recommends the use of parts and accessories for your motorcycle that are approved by BMW for this purpose. Your authorized BMW Motorrad retailer is the right place to go for genuine BMW parts and accessories, other BMW approved products, and expert advice on their installation and use.

These parts and products have been tested by BMW for safety, function and suitability. BMW accepts product liability for these products.

Conversely, BMW is unable to accept any liability whatsoever for parts and accessories which it has not approved.

Observe the information on the importance of tire sizes for chassis control systems (►► 94).



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. ◀

Whenever you are planning modifications, comply with all the legal requirements. The motorcycle must not infringe on national road-vehicle construction and use regulations of your country.

Onboard sockets

Information on using onboard sockets:

automatic switch-off

Onboard sockets are switched off automatically under the following conditions:

- In case of insufficient battery voltage to maintain the ability to start the motorcycle
- If the maximum loadability specified in the technical data is exceeded
- During starting

Operating electrical accessories

You can start using electrical accessories only when the ignition is switched on. The accessory remains operational if the ignition is subsequently switched off. Onboard sockets are switched off approx. 15 minutes after switching off the ignition to reduce the

strain on the onboard electrical system.

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
- Do not restrict the steering angle and the driving characteristics
- Cannot be trapped

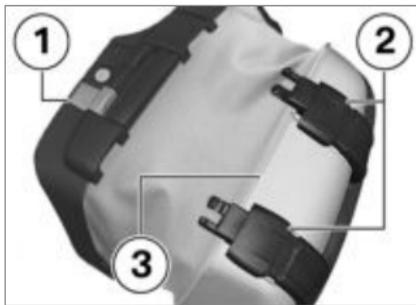
Case

- with case^{OA}

Opening case



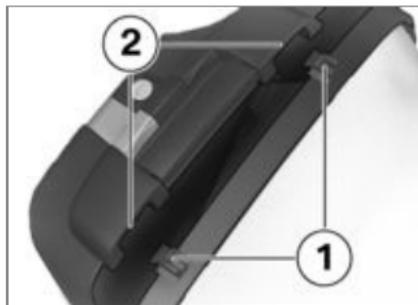
- Turn lock barrel into OPEN position.



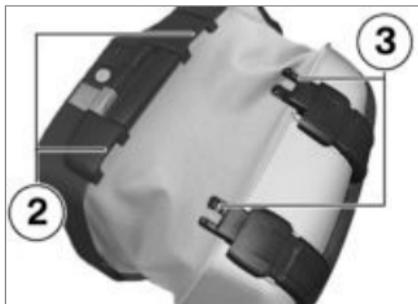
- Pull gray release lever **1** (OPEN) upward.
» Lock straps **2** open.

- Pull gray release lever (OPEN) upwards again while simultaneously pulling case lid **3** out of retainer.

Close case



- Press locks **1** of case lid into locking devices **2** until they engage.



- Also press locks **3** of lock straps into locking devices **2** until they engage.

Adjusting case volume

- Only close case lid.



- Press lock straps **1** outward and pull upward.
» The maximum volume has been set.



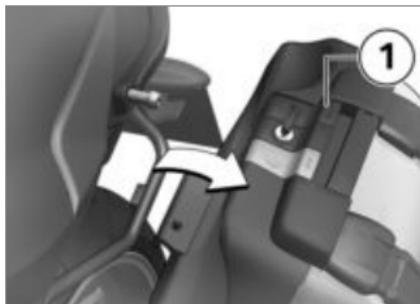
- Close lock straps.

- Press case lid against case body.
» The case volume is adapted to the contents.

Removing case

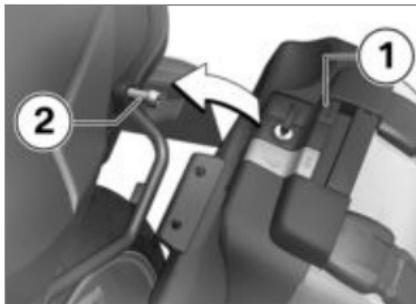


- Turn lock barrel in direction **RELEASE**.



- Pull black release lever **1** (RELEASE) upwards while simultaneously pulling the case outward.
- Then lift case out of lower mounting.

Mounting case

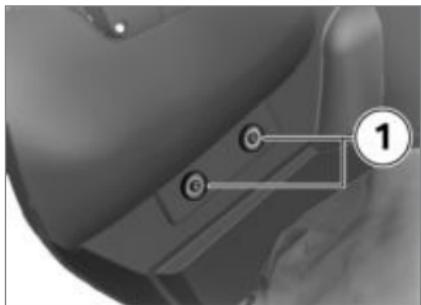


- Hook case into lower mounting.
- Pull black release lever **1** (RELEASE) upwards while simultaneously pushing the case into upper mounting **2**.
- Press black release lever (RELEASE) downward.
- Check case for secure hold.

Secure hold



If a case wobbles or is difficult to fit, it must be adapted to the gap between the upper and lower mounting.



Use the screws **1** inside the case for this purpose.

Maintenance

General instructions.....	86
Onboard tool kit	86
Engine oil	86
Brake system	89
Clutch	93
Rims and Tires	94
Wheels	94
Front wheel stand	103
Rear wheel stand	104
Lamps	105
Jump-starting.....	110
Battery.....	111

General instructions

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

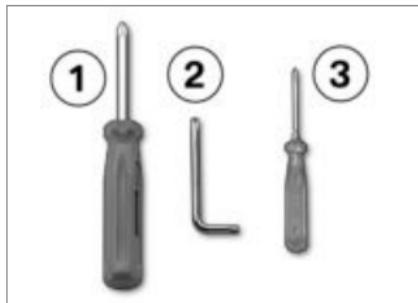
If special tightening torques are to be taken into account for assembly, these are listed. An overview of all required tightening torques is contained in the chapter "Technical Data".

Information on additional maintenance and repair work is provided in the Repair Manual for your motorcycle on DVD, which you can obtain from your authorized BMW Motorrad retailer.

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

Onboard tool kit

Standard tool kit



- 1** Reversible screwdriver with Phillips and straight blade
– Removing battery
(112).
- 2** TORX wrench, T25
– Removing battery compartment cover (113).
- 3** Small screwdriver with Phillips blade
– Replacing front and rear turn indicator bulbs
(108).

Service tool kit



For expanded service work (e.g., removing and installing wheels), 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

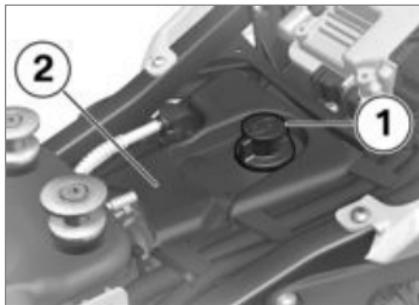
Checking engine oil level



After longer motorcycle immobilization periods, engine oil can collect in the oil pan; this must be pumped into the oil tank before the reading is taken.

Topping up engine oil

- Make sure ground is level and firm and park motorcycle.
- Removing seat (▶▶ 57).
- Clean the area adjacent to the oil filler opening.



- Remove cap **1** of engine oil fill location.

 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 0.5 quarts (max 0.5 l)
(Difference between MIN and MAX)

- During an oil change: Observe the dependence of the oil filling quantity on the marking at position **2**.



Engine oil, capacity

- 3.7 quarts (3.5 l) (with filter change (**unmarked** container))
- 1.1 gal (4 l) (with filter change (larger **marked** container))
- 0.5 quarts (0.5 l) (Difference between Min and Max)

- Checking engine oil level (▶▶ 86).
- Reinstall engine oil fill location cap.

- Installing seat (➔ 57).

Brake system

Checking brake operation

- Squeeze the brake lever.
 - » Pressure point must be clearly perceptible.
- Press 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 a specialist service facility, preferably an authorized BMW Motorrad retailer.

Checking 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. Direction of view: between wheel and front wheel control to brake calipers **1**.



 Front brake-pad wear limit

- min 0.04 in (min 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 by a specialist service facility, preferably an authorized BMW Motorrad retailer.

Checking rear brake pad thickness

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



- Check the brake pad thickness with visual inspection. Direction of view: from right to brake caliper **1**.



Rear brake-pad wear limit

– min 0.04 in (min 1.0 mm)
(Only friction material without carrier plate. Brake disk must not be visible through bore hole of inner brake pad.)

If the brake rotor is 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 by a specialist service facility, preferably an authorized BMW Motorrad retailer.

Checking 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 hold motorcycle vertically.

- with center stand Generation II^{OA}
- Make sure ground is level and firm and place motorcycle on its center stand.◀
- Move handlebars into straight-ahead position.



- Read off brake fluid level at 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 and handlebars straight ahead)

If brake fluid level falls below the approved level:

- Have the defect corrected as soon as possible by a specialist service facility, preferably an

authorized BMW Motorrad retailer.

Replacing screen insert

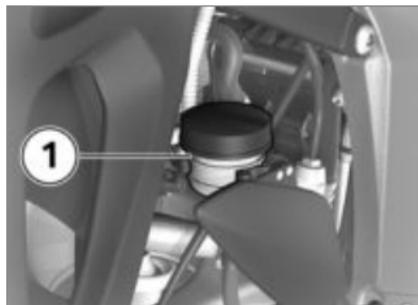


Possible loss of stopping power at front brake.

Screen insert in the front brake-fluid reservoir always has to be replaced on completion of work that affects the level of fluid in the front braking circuit (for example replacing brake pads or changing brake fluid). Please contact a specialized workshop for this purpose, preferably an authorized BMW Motorrad retailer. ◀

Checking rear brake fluid level

- Make sure ground is level and firm and hold motorcycle vertically.
- with center stand Generation II OA
- Make sure ground is level and firm and place motorcycle on its center stand. ◀



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. ◀

- 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)



Rear brake fluid level

- 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 a specialist service facility, preferably an authorized BMW Motorrad retailer.

Clutch

Checking clutch operation

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

If no clear pressure point can be felt:

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

Checking clutch fluid level

- Make sure ground is level and firm and hold motorcycle vertically.
- with center stand Generation II^{OA}
- Make sure ground is level and firm and place motorcycle on its center stand.◀
- Move handlebars into straight-ahead position.



- Read off clutch fluid level at reservoir 1.

▶ The fluid level in the clutch fluid reservoir rises due to clutch wear.◀



Clutch fluid level (visual check)

- Clutch fluid level must not drop.

If clutch fluid level drops:



Unsuitable hydraulic fluids could cause damage to the clutch system.

No fluids may be poured in.◀

- Have the defect corrected as soon as possible by a specialist service facility, preferably an authorized BMW Motorrad retailer.

Rims and Tires

Checking rims

- Make sure ground is level and firm and park motorcycle.
- Visually inspect rims 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 be-

fore the minimum tread depth is reached. ◀

- Make sure ground is level and firm and park motorcycle.
- Measure tire tread depth in main tread grooves with wear indicators.



Tires have wear indicators integrated into the main tread grooves. 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. Extensive information is available at your authorized BMW Motorrad retailer or on the Internet at www.bmw-motorrad.com.

Affect of wheel sizes on chassis control systems

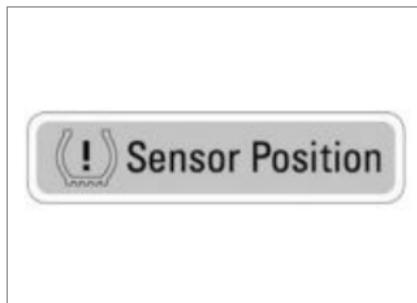
The wheel sizes play a major role in the chassis control systems ABS and ASC. Especially the diameter and width of the wheels are stored in the control unit as

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.

The sensor wheels required for wheel speed detection must also match the control systems installed and may not be replaced. If you want to equip your motorcycle with different wheels, please speak to a specialized workshop, and preferably a BMW Motorrad retailer. In some cases the data stored in the control units can be adapted to the new wheel sizes.

TPC/RDC sticker

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



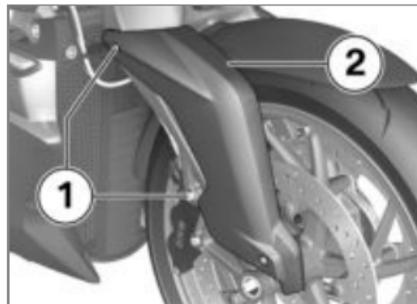
 The TPC/RDC sensors can be damaged in case of improper tire mounting. Inform the authorized BMW Motorrad retailer or the specialized workshop on the fact that the wheel is equipped with a TPC/RDC sensor. ◀

On motorcycles equipped with TPC/RDC, a corresponding sticker is located on the wheel rim at the position of the TPC/RDC sensor. During a tire change it must be ensured that the TPC/RDC sensor is not damaged. Inform the

BMW Motorrad retailer or the specialized workshop of the TPC/RDC sensor.

Removing front wheel

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



- Remove screws **1** on left and right.
- Remove cover panels **2** on left and right.

– with BMW Motorrad Integral ABS Generation II ^{OE}



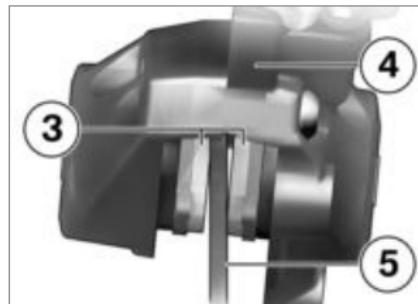
- Unclip two retaining clips **1** of sensor cable on brake line.◀
- Mask off area of wheel rim that could be scratched in process of removing brake calipers.



! 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 disk on reassembly.

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

- Remove securing screws **2** of left and right brake calipers.



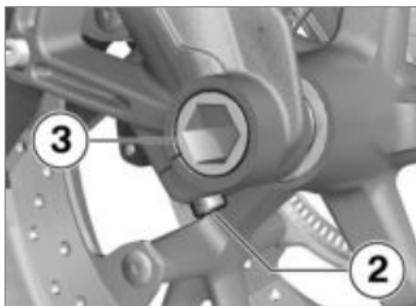
- Push brake pads **3** apart slightly by turning the brake caliper **4** back and forth against the brake rotor **5**.
- Carefully pull brake calipers back to remove them from the brake rotors.

- with BMW Motorrad Integral ABS Generation II^{OE}



- Remove screw **1** and take ABS sensor out of hole.<
- Place motorcycle on an auxiliary stand; BMW Motorrad recommends BMW Motorrad rear wheel stand.
- Installing rear-wheel stand (➡ 104).
- with center stand Generation II^{OA}
- Make sure ground is level and firm and place motorcycle on its center stand.<

- Raise front of motorcycle until the front wheel can turn freely. BMW Motorrad recommends the BMW Motorrad front-wheel stand for lifting the motorcycle.
- Mounting front wheel stand (➡ 103).



- ⚠ The left axle clamping screw fixes the threaded bush in place in the front suspension. A poorly aligned threaded bush results in incorrect spacing between the ABS sensor ring and the ABS sensor, and therefore to ABS malfunctions or destruction of the ABS sensor.

To ensure the proper alignment of the threaded bush, do not loosen or remove the left axle clamping screw.<

- Remove right-hand axle clamping screw **2**.
- Remove quick-release axle **3** while supporting wheel.
- Roll front wheel forward to remove.

Installing front wheel

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

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

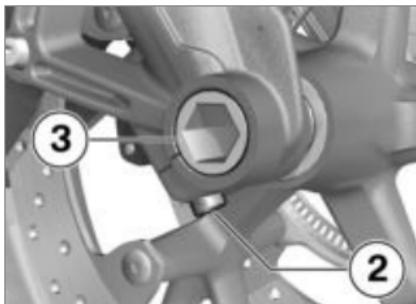
⚠ Threaded fasteners not tightened to the specified

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. ◀



The front wheel must be installed right way round to rotate in the correct direction. Observe the direction of rotation arrows on the tires or on the rim. ◀

- Roll front wheel into front wheel guide.



- Lift front wheel and install quick-release axle **3** with torque.



Quick-release axle in threaded bush

– 37 lb/ft (50 Nm)

- Tighten the right-hand axle clamping screw **2** with the specified torque.

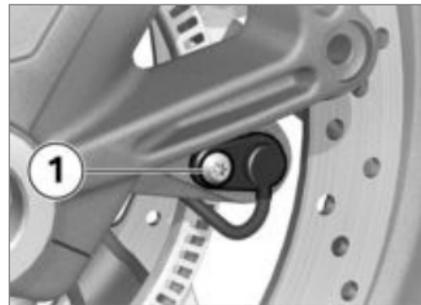


Clamping bolt in wheel carrier

– 14 lb/ft (19 Nm)

- Remove front wheel stand.

- without center stand Generation II^{OA}
- Remove rear wheel stand. ◀
- with BMW Motorrad Integral ABS Generation II^{OE}



- Insert ABS sensor into hole and install screw **1**. ◀
- Slide the brake calipers onto the rotors.



- Install securing screws **2** on left and right with specified torque.



Front brake caliper on wheel carrier

– 22 lb/ft (30 Nm)

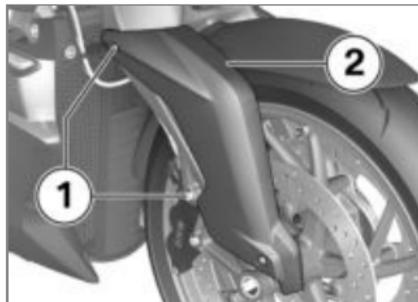
– with BMW Motorrad Integral ABS Generation II^{OE}



 The cable of the wheel speed sensor could chafe through if it comes into contact with the brake disk. Make sure that sensor cable is routed correctly.◀

- Snap the two retaining clips **1** for the sensor wire onto the brake line.<
- Remove adhesive tape from wheel rim.

- Press handbrake lever firmly a number of times until resistance point is noticeable.

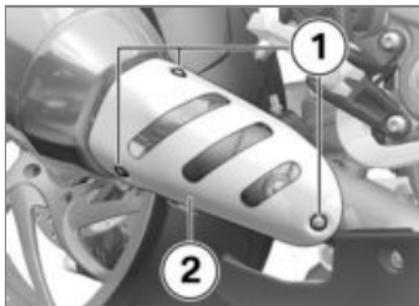


- Position cover panels **2** on left and right.
- Install screws **1** on left and right.

Removing rear wheel

- Place motorcycle on an auxiliary stand; BMW Motorrad recommends BMW Motorrad rear wheel stand.
- Installing rear-wheel stand (▶▶▶ 104).

- with center stand Generation II/OA
- Make sure ground is level and firm and place motorcycle on its center stand.◀



! Danger of burns from the hot exhaust system. Do not touch the exhaust system. If necessary, do not continue work until the exhaust system has cooled down.◀

- Remove three screws **1** on the muffler cover **2**.
- Take off cover.



- Loosen screw **3** on clamp far enough that the clip can be twisted.
- Do not remove sealing grease from clamp.



- Remove screw **4** on the rear footrest while supporting the end muffler.



- First turn the end muffler downward slightly and then outward.

- Engage first gear.



- Remove five screws **1** on rear wheel, holding wheel as you do so.
- When using the BMW Motorrad rear wheel stand: remove the lock washer.
- Lower rear wheel to the ground and roll out toward rear.
- When using the BMW Motorrad rear wheel stand: remount the lock washer.

Installing rear wheel

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

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

- When using the BMW Motorrad rear wheel stand: remove the lock washer.
- Roll and mount rear wheel onto rear wheel support.

- When using the BMW Motorrad rear wheel stand: remount the lock washer.



- Fit five screws **1** and tighten diagonally with specified torque.

 Tighten rear wheel on wheel flange

– Tightening sequence: diagonally

– 44 lb/ft (60 Nm)

- Turn the end muffler to its initial position.



- Tighten screw **4** on the rear footrest with the appropriate torque.



Muffler on passenger footrest

– 16 lb/ft (22 Nm)

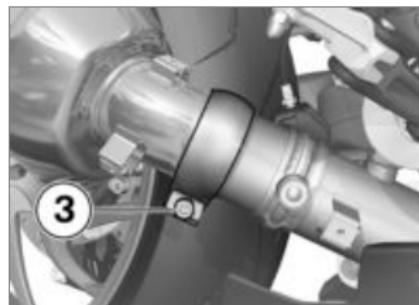


- Align end muffler so that specified distance is complied with.



Distance from muffler to tire

– min 0.8 in (min 20 mm)

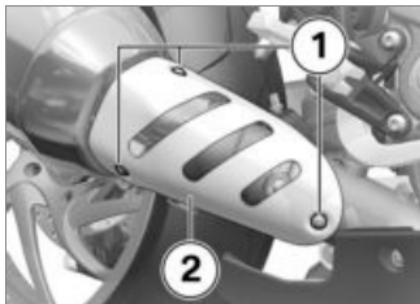


- Align clip as shown.
- Tighten screw **3** on the ball pipe clip with the appropriate torque.



Muffler with ball-joint clamp on manifold

– 26 lb/ft (35 Nm)



- Position muffer cover **2** and fit three screws **1**.
- without center stand Generation II^{OA}
- Remove rear wheel stand.<

Front wheel stand

Mounting front wheel stand

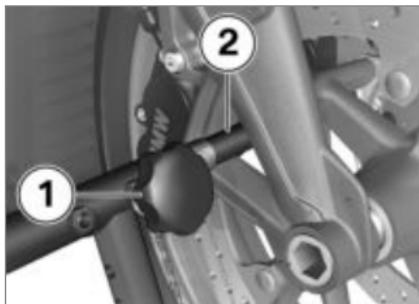
 The BMW Motorrad front wheel stand is not designed for holding motorcycles without a center or other auxiliary stands. A motorcycle standing on the front

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.<

- Use basic stand with part number (83 30 0 402 241) in combination with front-wheel adapter (83 30 0 402 243).
- Place motorcycle on an auxiliary stand; BMW Motorrad recommends BMW Motorrad rear wheel stand.
- Installing rear-wheel stand (➡ 104).
- with center stand Generation II^{OA}
- Make sure ground is level and firm and place motorcycle on its center stand.<



- Loosen adjusting screws **1**.
- Push two mounting pins **2** far enough apart that 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.



! The sensor ring of the BMW Motorrad Integral ABS can be damaged. Only push the left mounting pin so far inward that it does not touch the sensor ring.◀

- Push two mounting pins **2** through triangles of brake caliper support toward inside so that front wheel can still be rolled through.
- Tighten adjusting screws **1**.



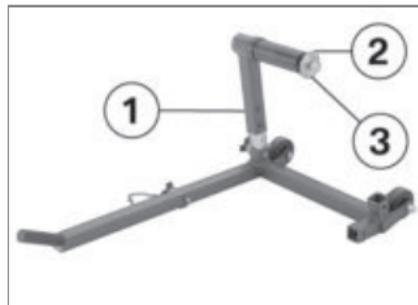
! If the motorcycle is resting on the center stand: The motorcycle is raised too far at the front, the center stand lifts off the ground and the motorcycle can tip over to the side. When raising the motorcycle, make sure that the center stand remains on the ground.◀

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

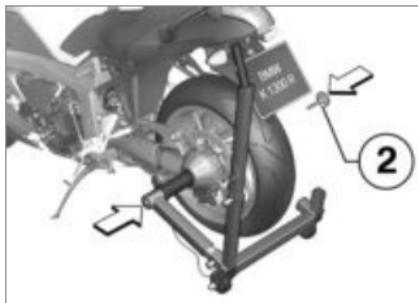
Rear wheel stand

Installing rear-wheel stand

- Use basic stand with part number (83 30 0 402 245) with rear axle adapter (83 30 0 402 250).



- Set desired height of rear wheel stand using bolts **1**.
- Remove the lock washer **2**; to do so, press the unlock button **3**.
- Make sure ground is level and firm and place the motorcycle on its side stand.



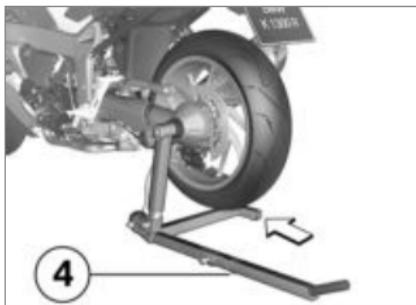
- Push rear wheel stand from left into rear axle.
- Mount lock washer **2** from right by pressing release button.



- Position motorcycle upright while simultaneously pressing

grip of stand back so that both stand rollers rest on ground.

- Then press the grip down to the ground.



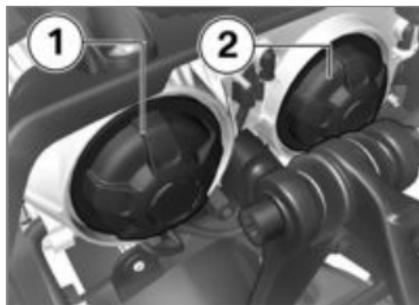
- To ensure a secure position, install lever **4** on the short side of the stand.

Lamps

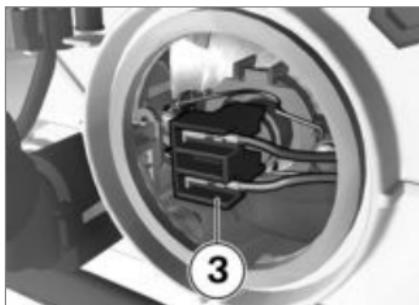
Replacing low-beam and high-beam bulbs

 The alignment of the connector may differ from the illustration depending on the bulb to be replaced. ◀

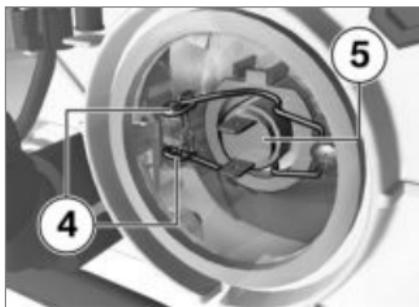
- Make sure the ground is level and firm and park the motorcycle.
- Switch off the ignition.



- Remove the covers **1** on the high-beam bulbs and/or the cover **2** on the low-beam bulbs by turning counterclockwise.



- Disconnect plug **3**.



- Remove spring strap **4** from detents and fold up.
- Remove bulb **5**.

- Replace defective bulb.

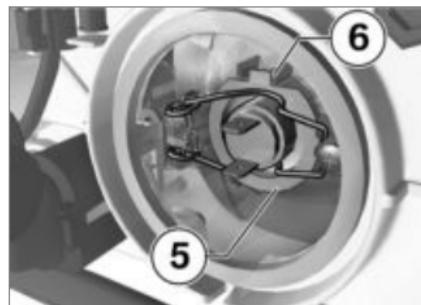
	Bulbs for low-beam headlight
---	------------------------------

– H7 / 12 V / 55 W

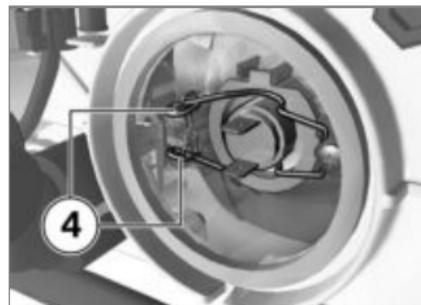
	Bulb for high-beam headlight
---	------------------------------

– H7 / 12 V / 55 W

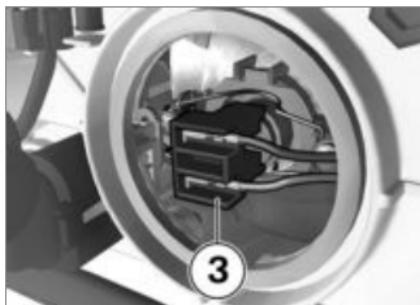
- To avoid contamination on the bulb's glass surface, never touch or hold the bulb anywhere other than on its metal socket base.



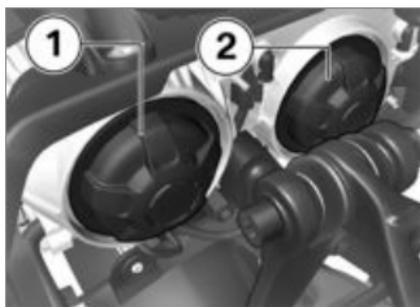
- Insert bulb **5** while ensuring that the lug **6** is in the correct position.



- Install spring straps **4** in locks.



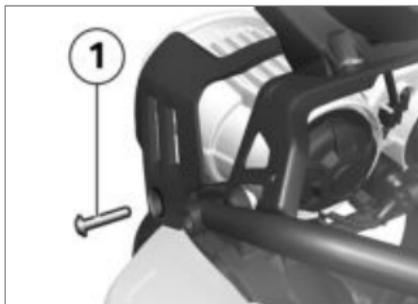
- Attach the plug **3**.



- Install covers **1** for high-beam bulbs and/or cover **2** for low-beam bulbs by turning clockwise.

Replacing parking light bulb

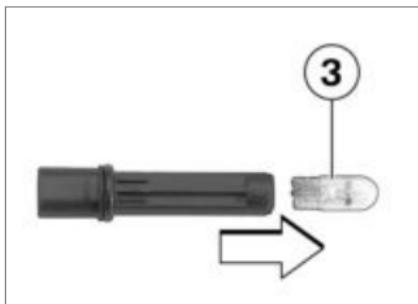
- Make sure ground is level and firm and park motorcycle.
- Switch off ignition.



- Remove mounting screws **1** on both sides of lamp housing.



- Pull out lamp housing toward front and fold down slightly.
- Remove bulb holder **2** from headlight housing by turning it counterclockwise.



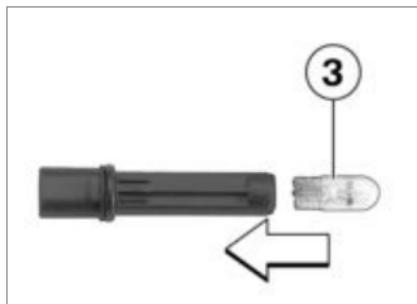
- Remove bulb **3** from bulb holder.
- Replace defective bulb.



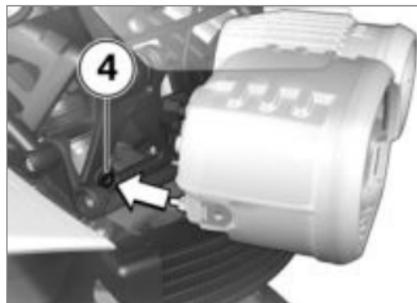
Bulb for parking light

– W5W / 12 V / 5 W

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



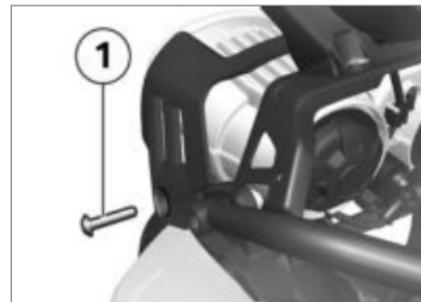
- Insert bulb **3** into bulb socket.
- Install bulb socket in headlight housing by turning clockwise.



Incorrectly routed headlight cables can become entangled in the steering.

Secure electrical cables with the corresponding retaining clips on the rear wall of the headlight. ◀

- Press lamp housing into mounts **4** on frame.



- Install mounting screws **1** on both sides of lamp housing.

Replacing front and rear turn indicator bulbs

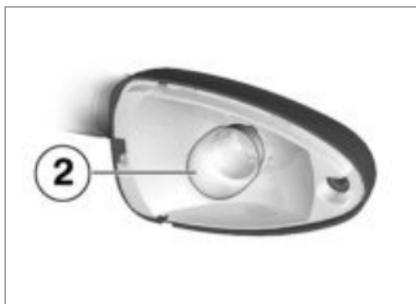
- Make sure the ground is level and firm and park the motorcycle.
- Switch off the ignition.



- Remove screw **1**.



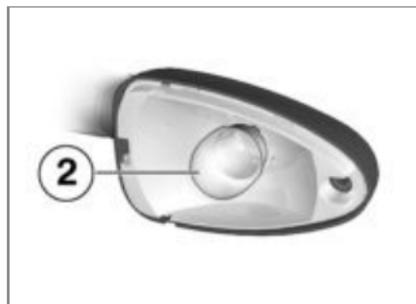
- Pull lamp housing on screw connection side out of turn indicator housing.



- Press bulb **2** into socket and turn counterclockwise to remove.
- Replace defective bulb.

	Bulbs for flashing turn indicators, rear
– RY10W / 12 V / 10 W	

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



- Press bulb **2** into socket and install by turning clockwise.



- Insert lamp glass in turn indicator housing.



- Install screw **1**.

Diode rear light

If more LEDs have burned out in the tail light than are indicated in the Technical Data below, the tail light bulb must be replaced. In this case:

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



Maximum number of defective LEDs in taillight

– 1 (Brake light/taillight (red))

– 1 (License plate light (white))

Jump-starting

⚠ 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 motorcycle electronics.

Do not use the onboard 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.
- Removing battery compartment cover (▶▶▶ 113).
- When jump-starting the engine, do not disconnect the battery from the onboard electrical system.
- Allow the engine on the support vehicle to run while jump-starting.
- Begin by clamping one end of the red jumper cable to the positive terminal of the discharged battery and clamping the other end to the positive terminal of the donor battery.
- Then clamp one end of the black jumper cable to the donor battery's negative terminal while connecting the other end to discharged battery's negative terminal.
- Start engine of the vehicle with discharged battery in usual way; if engine does not start,

board socket can cause damage to the motorcycle's electronics.

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 BMW chargers with the part numbers 71 60 7 688 864 (220 V) or, as applicable, 71 60 7 688 865 (110 V). If in doubt, charge the disconnected battery directly at the terminals.◀

- 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, please 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 the battery is fully charged, disconnect the charger's terminal clips from the battery terminals.

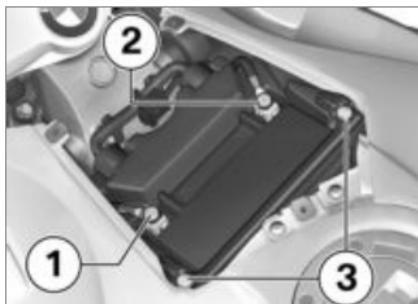


In the case of longer periods when the motorcycle is not being used, the battery must

be recharged regularly. See the instructions for caring for your battery. Always fully recharge the battery before returning it to use.◀

Removing battery

- Removing battery compartment cover (►► 113).
 - with anti-theft alarm^{OE}
- Switch off anti-theft alarm if necessary.◀
- Switch off ignition.



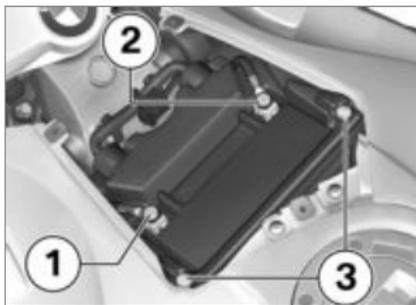
⚠ An incorrect disconnection sequence increase the risk of short-circuiting.

Always observe the proper sequence.◀

- Remove negative cable **1** first.
- Then remove positive cable **2**.
- Unscrew screws **3** and pull retaining bracket toward rear.
- Lift battery upwards; if it is difficult to move, moving it back and forth will help.

Installing battery

- Place battery in battery compartment, positive terminal on right in direction of travel.



- Push retaining strap over battery and install screws **3**.

⚠ An incorrect installation sequence increases the risk of short-circuiting.

Always observe the proper sequence.◀

- First install positive battery cable **2**.
- Then install negative battery cable **1**.

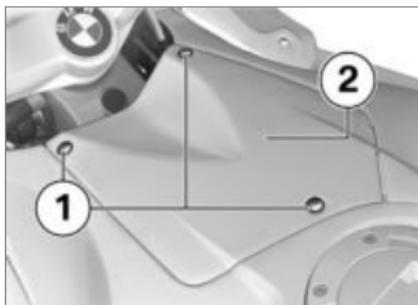
▶ If the motorcycle was disconnected from the battery for a longer time, the current date must be entered in the instrument cluster to ensure the proper operation of the service display.

Consult a certified workshop, preferably an authorized BMW Motorrad retailer, for setting of the date.◀

- Installing battery compartment cover (▣ 114).
- Setting clock (▣ 42).

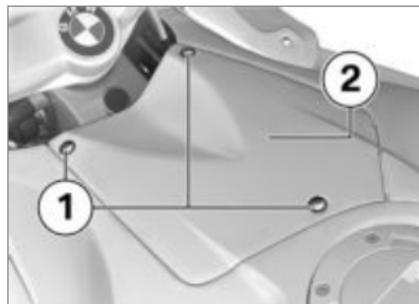
Removing battery compartment cover

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



- Remove screws **1**.
- Remove battery compartment cover **2** forward and upward.

Installing battery compartment cover



- Install battery compartment cover **2**.
- Install screws **1**.

Care

Care products	116
Washing your motorcycle	116
Cleaning sensitive motorcycle parts	116
Paint care	117
Protective wax coating	118
Storing motorcycle.....	118
Returning motorcycle to use	118

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 motorcycle.



The use of unsuitable cleaning and care products 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 every trip.



After washing the motorcycle, after driving through water or in the rain, braking can be delayed due to damp brake disks and brake pads.

Brake early until the brake disks and pads are dry.◀



Warm water intensifies the effect of salt.

Only use cold water to remove road salt.◀



The high water pressure of high-pressure cleaners (steam cleaners) can damage seals, the hydraulic brake system, the electrical system and the seat.

Do not use a steam jet or high-pressure cleaning equipment.◀

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. 'Fly sponges' or sponges with hard surfaces can also lead to scratches.◀

Fairings

Clean body panels with water and BMW plastic care emulsion.

Windscreens and headlight lenses made 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.◀

Chrome

Especially in the case of road salt, carefully clean chrome parts with plenty of water and BMW auto shampoo. 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

Treat rubber components with water or BMW rubber protection coating agent.



Using silicone sprays for the care of rubber seals can cause damage.

Do not use silicon sprays or other care products that contain silicon.◀

Paint care

Washing the motorcycle regularly will help counteract the long-term effects of substances that damage the paint, especially if your motorcycle is ridden in areas with high air pollution or natural sources of dirt, e.g. tree resin or pollen.

However, remove particularly aggressive materials immediately; otherwise changes in the paint or discoloration can occur. These include spilled fuel, oil, grease, brake fluid as well as bird droppings. BMW Car Polish or BMW Paint Cleaner are recommended for this.

Contamination of the paint finish is particularly easy to see after the motorcycle has been washed. Remove this type of soiling with cleaning naphtha or spirit on a clean cloth or cotton ball. BMW Motorrad recommends removing tar spots with BMW Tar Re-

mover. Then add a protective wax coating to the paint at these locations.

Protective wax coating

To preserve the finish of your motorcycle, BMW Motorrad recommends using BMW Car Wax or agents that contain carnauba or synthetic waxes.

A sure sign that the paint must be protected, is the fact that water no longer pearls up on it.

Storing motorcycle

- Clean the motorcycle.
- Removing battery (▶▶▶ 112).
- Spray the brake and clutch lever, and the main 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.

Returning motorcycle to use

- Remove the protective wax coating.
- Clean the motorcycle.
- Install a charged battery.
- Before starting: Observe checklist.

Technical data

Troubleshooting chart	120
Threaded fasteners	121
Engine	123
Fuel.....	124
Engine oil	124
Clutch	125
Transmission	126
Rear-wheel drive.....	126
Running gear	127
Brakes	128
Wheels and tires	128
Electrical system.....	129
Frame	131
Dimensions	131
Weights.....	132

Riding specifications	132
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Troubleshooting chart

Engine does not start at all or is very difficult to start

Possible cause	Remedy
Side stand is extended	Retract side stand.
Gear engaged and clutch not disengaged	Place transmission in neutral or disengage clutch.
No fuel in tank	Refueling (▶▶ 68).
Battery drained	Charge battery.

Threaded fasteners

Front wheel	Value	Valid
Front brake caliper on wheel carrier		
M8 x 32 - 10.9	22 lb/ft (30 Nm)	
Clamping bolt in wheel carrier		
M8 x 30	14 lb/ft (19 Nm)	
Quick-release axle in threaded bush		
M24 x 1.5	37 lb/ft (50 Nm)	
Rear wheel	Value	Valid
Muffler on passenger footrest		
M8 x 30	16 lb/ft (22 Nm)	
Muffler with ball-joint clamp on manifold		
M8 x 60	26 lb/ft (35 Nm)	
Cover on muffler		
M5 x 8	2 lb/ft (3 Nm)	

Rear wheel	Value	Valid
Tighten rear wheel on wheel flange		
M10 x 1.25 x 40	diagonally	
	44 lb/ft (60 Nm)	
Mirrors	Value	Valid
Mirror on left/right adapter		
Left-hand thread, M10 x 1.25	16 lb/ft (22 Nm)	

Engine

Engine design	Transverse-mounted four-cylinder, four-stroke in-line engine, angled 55° toward front. With four valves per cylinder, actuated by two overhead camshafts and trailing valve levers; liquid cooled, electronic fuel injection, integrated six-speed cassette transmission, dry-sump lubrication
Displacement	1293 cc (1293 cm ³)
Cylinder bore	3.1 in (80 mm)
Piston stroke	2.5 in (64.3 mm)
Compression ratio	13:1
Rated output	173 hp (127 kW), - at engine speed: 9250 min ⁻¹
- with power reduction 79 kW ^{OE}	107 hp (79 kW), - at engine speed: 9000 min ⁻¹
Torque	103 lb/ft (140 Nm), - at engine speed: 8250 min ⁻¹
- with power reduction 79 kW ^{OE}	87 lb/ft (118 Nm), At: 3750 min ⁻¹
Maximum engine speed	max 11000 min ⁻¹
Idle speed	1050±50 min ⁻¹

Fuel

Recommended fuel quality	Super Plus unleaded 91 AKI (98 ROZ/RON) 91 AKI
Usable fuel quantity	Approx. 5 gal (Approx. 19 l)
Reserve fuel quantity	Approx. 1.1 gal (Approx. 4 l)

BMW recommends the use of BP fuel



Engine oil

Engine oil, capacity	3.7 quarts (3.5 l), with filter change (unmarked container) 1.1 gal (4 l), with filter change (larger marked container) 0.5 quarts (0.5 l), Difference between Min and Max
products recommended by BMW Motorrad and generally permissible viscosity classes	
Castrol Power 1 Racing SAE 5W-40	Engine oil, API SL / JASO MA2 ≥-4 °F (≥-20 °C)

BMW recommends 

SAE 5W-40	Engine oil for motorcycles with wet clutch, API SJ / JASO MA2 ≥ -4 °F (≥ -20 °C)
SAE 10W-50	Engine oil for motorcycles with wet clutch, API SJ / JASO MA2 ≥ -4 °F (≥ -20 °C)

BMW recommends 

Clutch

Clutch design	Multi-disk oil-bath clutch
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Transmission

Transmission design	Claw-shifted 6-speed transmission integrated in engine housing
Transmission gear ratios	1.559 (92:59 teeth), Primary gear ratio 2.294 (39:17 teeth), 1st gear 1.789 (34:19 teeth), 2nd gear 1.458 (35:24 teeth), 3rd gear 1.240 (31:25 teeth), 4th gear 1.094 (35:32 teeth), 5th gear 0.971 (33:34 teeth), 6th gear 1.045 (23:22 teeth), Angle drive

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
Number of teeth in bevel gears (gear ratio)	2.91 (32:11)

Running gear

Front wheel	
Type of front suspension	Double leading link
Design of front suspension strut	Central spring strut with coil pressure spring and single-tube gas-pressure shock absorber.
– with Electronic Suspension Adjustment (ESA II) ^{OE}	Central spring strut with single-tube gas-pressure shock absorber and electric adjustable rebound-stage damping.
Spring travel, front	4.9 in (125 mm), On wheel
Rear wheel	
Type of rear suspension	Cast-aluminum single swing arm with BMW Motorrad paralever
Type of rear suspension	Central strut with coil spring and single-tube gas-filled shock absorber controlled by linkage system. Infinitely-variable adjustment of spring preload and rebound rate
– with Electronic Suspension Adjustment (ESA II) ^{OE}	Central strut with coil and elastomer spring assembly with single-tube, gas-filled shock absorber. Electrically adjustable control of suspension damping and spring preload/spring rate
Spring travel, rear	5.3 in (135 mm), On wheel

Brakes

Type of front brake	hydraulically operated twin disk brake with 4-piston fixed calipers and floating brake disks
Brake-pad material, front	Sintered metal
Type of rear brake	Hydraulic disk brake with 2-piston floating caliper and fixed brake disk
Brake-pad material, rear	Organic

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	Cast aluminum, MT H2
Front-wheel rim size	3.50" x 17"
Front tire designation	120 / 70 ZR 17

Rear wheel

Rear wheel design	Cast aluminum, MT H2
Rear-wheel rim size	5.5" x 17"
– with sports wheel ^{OE}	6.0" x 17"
Rear tire designation	180 / 55 ZR 17
– with sports wheel ^{OE}	190 / 55 ZR 17

Tire inflation pressure

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 5 A
Fuses	All circuits are electronically protected, so plug-in fuses are no longer necessary. If an electronic fuse trips and de-energizes a circuit, the circuit is active as soon as the ignition is switched on after the fault has been rectified.

Battery

Battery design	AGM (Absorptive Glass Mat) battery.
Battery voltage	12 V
Battery capacity	12 Ah

Spark plugs

Spark plugs, manufacturer and designation	NGK KR9CI
Electrode gap of spark plug	0.03 in (0.8 mm), New

Bulbs

Bulb for high-beam headlight	H7 / 12 V / 55 W
Bulbs for low-beam headlight	H7 / 12 V / 55 W
Bulb for parking light	W5W / 12 V / 5 W
Bulb for taillight/brake light	LED / 12 V
Bulb of license plate light	W5W / 12 V / 5 W
Maximum number of defective LEDs in taillight	1, Brake light/taillight (red) 1, License plate light (white)
Bulbs for flashing turn indicators, front	RY10W / 12 V / 10 W
Bulbs for flashing turn indicators, rear	RY10W / 12 V / 10 W

Frame

Frame design	Cast light alloy - welded design with screwed-on tubular steel rear frame
Location of type plate	On right wheel carrier
Location of vehicle identification number	Front right side frame section

Dimensions

Motorcycle length	87.9 in (2233 mm)
Motorcycle height	48.4 in (1230 mm), Across mirrors at DIN unladen weight
Motorcycle width	33.7 in (856 mm), Across mirrors
Driver's seat height	32.3 in (820 mm), Without driver
– with low double seat ^{OE}	31.1 in (790 mm), Without driver
Rider's inside-leg arc, heel to heel	71.3 in (1810 mm), Without driver
– with low double seat ^{OE}	68.9 in (1750 mm), Without driver

Weights

Unladen weight	536 lbs (243 kg), DIN unladen weight, ready for road, 90 % full tank of gas, without OE
Permissible gross weight	1014 lbs (460 kg)
Maximum payload	478 lbs (217 kg)

Riding specifications

Top speed	>124 mph (>200 km/h)
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Service

Reporting safety defects	134
BMW Motorrad Service	135
BMW Motorrad Mobility Services	135
Maintenance work	135
Confirmation of maintenance work	137
Confirmation of service	142

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 dealer, 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 service network, BMW Motorrad can attend to you and your motorcycle in over 100 countries around the globe. 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 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 (Mobile Service, breakdown assistance, vehicle recovery and retrieval, etc.).

Contact your authorized BMW Motorrad retailer for additional information on available mobility-maintenance services.

Maintenance work

BMW Pre-Delivery Check

The BMW pre-delivery check is carried out by your authorized BMW Motorrad retailer before it turns over the motorcycle to you.

BMW Running-in Check

The BMW running-in check must be carried out between 300 mls (500 km) and 750 mls (1200 km).

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 drivers 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.

The service display in the multi-function display reminds you of the next service date approx. one month or 621 miles (1000 km) before the entered values.

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 _____

or, if reached sooner,

Odometer reading _____

Stamp, Signature**BMW Service**

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 _____

or, if reached sooner,

Odometer reading _____

Stamp, Signature

BMW Service

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 _____

or, if reached sooner,

Odometer reading _____

Stamp, Signature**BMW Service**

Conducted

on _____

Odometer reading _____

Next service
at the latest

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or, if reached sooner,

Odometer reading _____

Stamp, Signature

BMW Service

Conducted

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Odometer reading _____

Next service
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or, if reached sooner,

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Stamp, Signature**BMW Service**

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Stamp, Signature

BMW Service

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or, if reached sooner,

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Stamp, Signature**BMW Service**

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at the latest

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or, if reached sooner,

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

A

Abbreviations and symbols, 6

ABS

Control, 14

Operating, 48

Self-diagnosis, 63

Technology in detail, 72

Warning indicators, 33

Accessories

General instructions, 80

Ambient temperature

Display, 23

Ice warning, 33

Anti-theft alarm

Indicator lamp, 17

Warning indicator, 38

ASC

Control, 14

Operating, 49

Self-diagnosis, 64

Technology in detail, 74

Warning indicator, 34

Average values

Resetting, 44

B**Battery**

Charging connected
battery, 111

Charging disconnected
battery, 112

Closing battery
compartment, 114

Installing, 113

Location, 13

Maintenance instructions, 111

Opening battery
compartment, 113

Removing, 112

Technical data, 130

Warning for battery charge
current, 31

Brake fluid

Checking fluid level at rear, 92

Checking front fluid level, 91

Front reservoir, 13

Rear reservoir, 13

Brake pads

Check front, 89

Check rear, 90

Running in, 65

Brakes

Adjusting handlebar lever, 51

Checking operation, 89

Safety instructions, 66

Technical data, 128

C**Case**

Operating, 81

Checklist, 62**Clock**

Adjusting, 42

Clutch

Adjusting handlebar lever, 50

Checking fluid level, 93

Checking operation, 93

Fluid reservoir, 11

Technical data, 125

Confirmation of maintenance
work, 137

Coolant
Overtemperature warning indicator, 30
Currentness of this manual, 7

D

Damping
Adjusting, 53
Rear adjuster, 11
Dimensions
Technical data, 131

E

Electrical system
Technical data, 129
Emergency ON/OFF switch, 15
Operating, 47
Engine
Starting, 62
Technical data, 123
Warning for engine electronics, 30
Engine oil
Checking level, 86
Fill level indicator, 13
Fill location, 16

Oil level indicator, 24
Technical data, 124
Topping up, 88
Warning for engine oil level, 33
Warning for engine oil pressure, 31
Equipment, 7
ESA
Control, 14
Operating, 54
Technology in detail, 77

F

Frame
Technical data, 131
Front wheel stand
Mounting, 103
Fuel
Fill location, 13
Refueling, 68
Technical data, 124
Fuel reserve
Range, 23
Warning indicator, 30
Fuses
Technical data, 129

H

Hazard warning flashers
Control, 14
Operating, 46
Headlight
Adjusting for RHD/LHD traffic, 56
Headlight range, 56
Heated handlebar grips
Control, 15
Operating, 47
Horn, 14

I

Ignition
Switching off, 40
Switching on, 40
Immobilizer
Spare key, 41
Warning indicator, 30
Indicator lights, 17
Overview, 21
Instrument cluster
Ambient light sensor, 17
Overview, 17

J

Jump-starting, 110

K

Keys, 40

L

Lamps

Replacing front turn indicator bulbs, 108

Replacing high-beam bulb, 105

Replacing low-beam bulb, 105

Replacing parking light bulb, 107

Replacing rear light, 110

Replacing rear turn indicator bulbs, 108

Technical data, 130

Warning for bulb failure, 32

Lights

Control, 14

Headlight low beam, 45

Operating headlight flasher, 45

Operating headlight high beams, 45

Operating parking light, 45

Parking lights, 45

Luggage

Loading information, 60

Luggage loops

Position on motorcycle, 16

Use, 57

M

Maintenance

General instructions, 86

Maintenance intervals, 135

Mirrors

Adjusting, 52

Mobility Services, 135

Motorcycle

Care, 115

Cleaning, 115

Parking, 67

Returning to use, 118

Securing with straps, 69

Storage, 118

Multifunction display, 17

Control, 14

Meaning of symbols, 21

Overview, 20

Selecting display readings, 43

Multifunction switch

General view, left, 14

General view, right, 15

O

Odometer and tripmeters

Resetting, 44

Onboard socket, 11

Information on use, 80

Onboard toolkit

Contents, 86

Position on motorcycle, 16

Overview of warning

indicators, 26

Overviews

Instrument cluster, 17

Left side of motorcycle, 11

Multifunction display, 20

Multifunction switch, left, 14

Multifunction switch, right, 15

Right side of motorcycle, 13
Underneath seat, 16
Warning and indicator lamps, 21

P

Pre-ride check, 63

R

Rear-wheel drive
 Technical data, 126
Rear-wheel stand
 Mounting, 104
Refueling, 68
Rider's Manual (US Model)
 Position on motorcycle, 16
Running gear
 Technical data, 127
Running in, 65

S

Safety instructions
 On braking, 66
 On riding, 60

Seat
 Installing, 57
 Locking mechanism, 11
 Removing, 57
Service, 135
 Reporting safety defects, 134
Service display, 22
Shifting gear
 Gearshift assistant, 65
Spark plugs
 Technical data, 130
Speedometer, 17
Spring preload
 Adjusting, 52
 Rear adjuster, 11
Starting, 62
 Control, 15
Steering lock
 Locking, 41
Switching off, 67
Symbols
 Meaning, 21

T

Tachometer, 17

Technical data
 Battery, 130
 Brakes, 128
 Bulbs, 130
 Clutch, 125
 Dimensions, 131
 Electrical system, 129
 Engine, 123
 Engine oil, 124
 Frame, 131
 Fuel, 124
 Rear-wheel drive, 126
 Running gear, 127
 Spark plugs, 130
 Standards, 7
 Transmission, 126
 Weights, 132
 Wheels and tires, 128
Tire Pressure Control TPC/RDC
 Display, 24
 Rim sticker, 95
 Technology in detail, 75
 Warning indicators, 35

Tires

- Checking tire inflation pressure, 56
 - Checking tire tread depth, 94
 - Inflation pressure table, 16
 - Inflation pressures, 129
 - Recommendation, 94
 - Running in, 65
 - Technical data, 128
- Torques, 121
- Transmission
- Technical data, 126
- Troubleshooting chart, 120
- Turn indicators
- Control, 14
 - Operating, 46
- Type plate, 13

V

- Vehicle Identification Number, 13

W**Warning indicators**

- ABS, 33
- Anti-theft alarm, 38
- ASC, 34

Battery charge current, 31

Bulb defective, 32

Coolant temperature, 30

Display, 25

Engine electronics, 30

Engine oil level, 33

Engine oil pressure, 31

Fuel reserve, 30

Ice warning, 33

Immobilizer, 30

Tire Pressure Monitor, 35

Warning lamps, 17

Overview, 21

Weights

Payload table, 16

Technical data, 132

Wheels

Checking rims, 94

Installing front wheel, 97

Installing rear wheel, 101

Removing front wheel, 95

Removing rear wheel, 99

Size change, 94

Technical data, 128

Details described or illustrated in this booklet may differ from the motorcycle's actual specification as purchased, the accessories fitted or the national-market specification. No claims will be entertained as a result of such discrepancies.

Dimensions, weights, fuel consumption and performance data are quoted to the customary tolerances.

The right to modify designs, equipment and accessories is reserved.

Errors and omissions excepted.

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The most important data for a filling station stop can be found in the following chart.

Fuel	
Recommended fuel quality	Super Plus unleaded 91 AKI (98 ROZ/RON) 91 AKI
Usable fuel quantity	Approx. 5 gal (Approx. 19 l)
Reserve fuel quantity	Approx. 1.1 gal (Approx. 4 l)
Tire inflation pressure	
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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