BMW Motorrad

Rider's Manual

R 1200 GS

Vehicle data/dealership details

Vehicle data

Model

Vehicle Identification Number

Colour code

Date of first registration

Registration number

Dealership details

Person to contact in Service department

Ms/Mr

Phone number

Dealership address/phone number (company stamp)

Welcome to BMW

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

About this Rider's Manual

Please read this Rider's Manual carefully before starting to use your new BMW. It contains important information on how to operate the controls and how to make the best possible use of all your BMW's technical features. In addition, it contains information on maintenance and care to help you maintain your vehicle's reliability and safety, as well as its value.

This record of the maintenance work you have had performed on your vehicle is a precondition for generous treatment of goodwill claims.

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

Suggestions and criticism

If you have questions concerning your vehicle, your authorised BMW Motorrad dealer will gladly provide advice and assistance.

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

BMW Motorrad.

01 40 8 406 471

Table of Contents

1 General instructions 5
Overview 6
Abbreviations and symbols 6
Equipment 7
Technical data 7
Actuality 7

2 General views 9
General view, left side 11
General view, right side 13
Underneath the seat 14
Multifunction switch, left 15
Multifunction switch, right 17
Instrument panel 18

3 Status indicators 19
Indicator and warning lights 20
Multifunction display 22
Warning symbols in the display 24
Warnings 25

4 Operation 49
Ignition switch/steering lock 50
Ignition with Key-less Ride 52
Emergency off switch (kill switch) 56
Lights 57
Daytime riding light 58
Hazard warning lights system 60
Turn indicators 61
Multifunction display 61
Anti-lock brake system (ABS) 68
Automatic Stability Control (ASC) 69
Dynamic Traction Control (DTC) 70
Electronic Suspension Adjustment (D-ESA) 71
Riding mode 74
PRO riding mode 76
Cruise-control system 81
Hill Start Control 83
Anti-theft alarm (DWA) 84
Heated handlebar grips 87
Front and rear seats 88

5 Adjustment 93
Mirrors 94
Headlight 94
Windscreen 95
Clutch 96
Brakes 96
Handlebars 97
Spring preload 97
Damping 98

6 Riding 101
Safety instructions 102
Comply with checklist 105
Always before riding off ... 105
Every 3rd refuelling stop 105
Starting 105
Running in 109
Off-roading 109
Shifting gear 111

Brakes 112
Parking your motorcycle 114
Refuelling 114
Securing motorcycle for transportation 118

7 Engineering details 121
General instructions 122
Anti-lock brake system (ABS)..... 122
Automatic Stability Control (ASC) 125
Dynamic Traction Control (DTC) 126
Dynamic ESA 127
Riding mode 128
Tyre pressure monitoring (RDC) 131
Shift assistant 132
Hill Start Control 133

8 Maintenance 135
General instructions 136
Toolkit..... 136
Service toolkit 136
Front-wheel stand..... 137
Engine oil 138
Brake system 139
Clutch..... 144
Coolant..... 144
Tyres..... 146
Wheel rims and tyres..... 146
Wheels..... 147
Air filter..... 153
Light source..... 155
Jump-starting 160
Battery 161
Fuses 165
Diagnostic connector..... 167

9 Accessories 169
General instructions 170
Power sockets 170
Cases 171
Topcase..... 174
Navigation system..... 180

10 Care 187
Care products..... 188
Washing the vehicle..... 188
Cleaning easily damaged components..... 189
Paint care 190
Protective wax coating 190
Laying up the motorcycle 190
Restoring motorcycle to use..... 191

11 Technical data 193
Troubleshooting chart..... 194
Threaded fasteners 195
Fuel 197
Engine oil 198
Engine 198
Clutch..... 199
Transmission..... 199
Final drive 200
Frame 201
Chassis and suspension..... 201
Brakes 203
Wheels and tyres..... 204
Electrical system 205
Anti-theft alarm..... 207
Dimensions 207
Weights 210
Riding specifications 210

12 Service 211
BMW Motorrad Service ... 212
BMW Motorrad Mobility services 212
Maintenance work..... 212
BMW Service 213
Maintenance schedule 215
Maintenance confirmations..... 216
Service confirmations 230
13 Appendix..... 233
Certificate for Electronic Immobiliser..... 234
Certificate for Keyless Ride 236
Certificate for Tyre Pressure Control (RDC)..... 238
14 Index 239

General instructions

Overview 6
Abbreviations and symbols 6
Equipment 7
Technical data 7
Actuality 7

Overview

An important aspect of this Rider's Manual is that it can be used for quick and easy reference. Consulting the extensive index at the end of this Rider's Manual is the fastest way to find information on a particular topic or item. To first read an overview of your motorcycle, please go to Chapter 2. All maintenance and repair work on the motorcycle is documented in Chapter 12. This record of the maintenance work you have had performed on your vehicle is a precondition for generous treatment of goodwill claims. When the time comes to sell your BMW, please remember to hand over this Rider's Manual; it is an important part of the motorcycle.

Abbreviations and symbols

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

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

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

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

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

◄ 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 a passage relating to specific accessories or items of equipment.

Tightening torque.

Technical data.

NV National-market version.

OE Optional extras. The vehicles are assembled complete with all the BMW Motorrad optional extras originally ordered.

OA Optional accessories. You can obtain BMW Motorrad optional accessories through your authorised BMW Motorrad dealer; optional accessories have to be retrofitted to the vehicle.

ABS Anti-lock brake system.

ASC Automatic Stability Control.

D-ESA Electronic chassis and suspension adjustment.

DTC Dynamic Traction Control (optional extra only in combination with Pro riding modes).

DWA Anti-theft alarm (Diebstahlwarnanlage).

EWS Electronic immobiliser.

RDC Tyre pressure monitoring.

Equipment

When you purchased your BMW motorcycle, you chose a model with individual equipment. This Rider's Manual describes the optional extras (OE) offered by BMW and selected optional accessories (OA). This explains why the manual may also contain equipment specifications 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 motorcycle contains equipment that has not been described, its description can be found in a separate manual.

Technical data

All dimensions, weights and power ratings stated in the Rider's Manual are quoted to the standards and comply with the tolerance requirements of the Deutsches Institut für Normung e.V. (DIN). Versions for individual countries may differ.

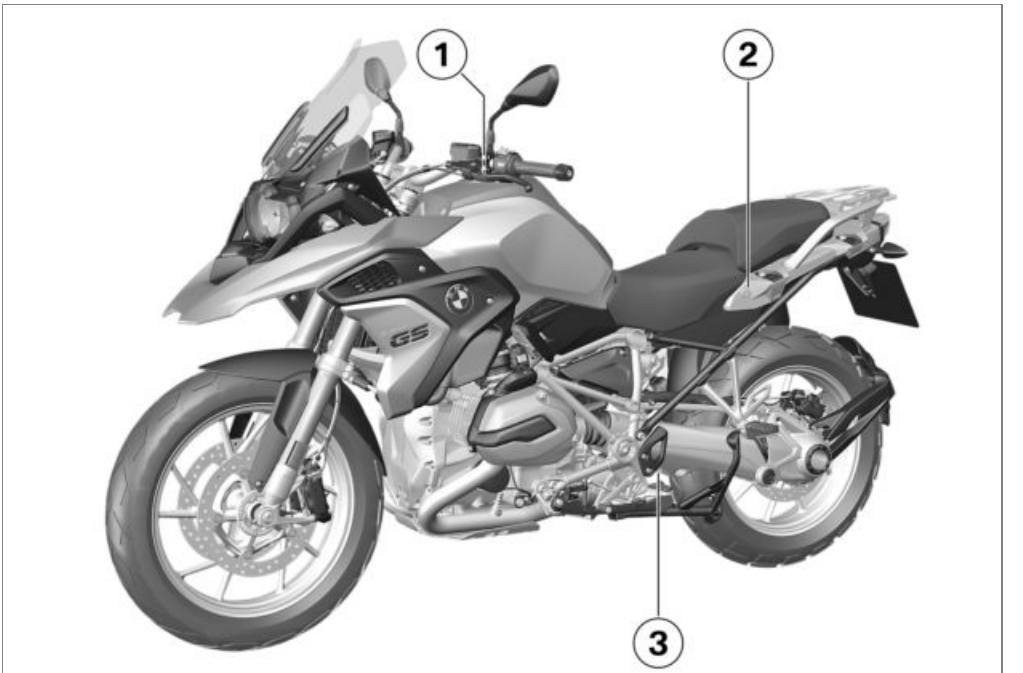
Actuality

The high safety and quality level of BMW motorcycles is ensured by continuous development work on design, equipment and accessories. Because of this, your motorcycle may differ from the information supplied in the Rider's Manual. Nor

can BMW Motorrad entirely rule out errors and omissions. Consequently no claims can be derived from the information, graphics or descriptions.

General views

General view, left side 11
General view, right side 13
Underneath the seat 14
Multifunction switch, left 15
Multifunction switch, right 17
Instrument panel 18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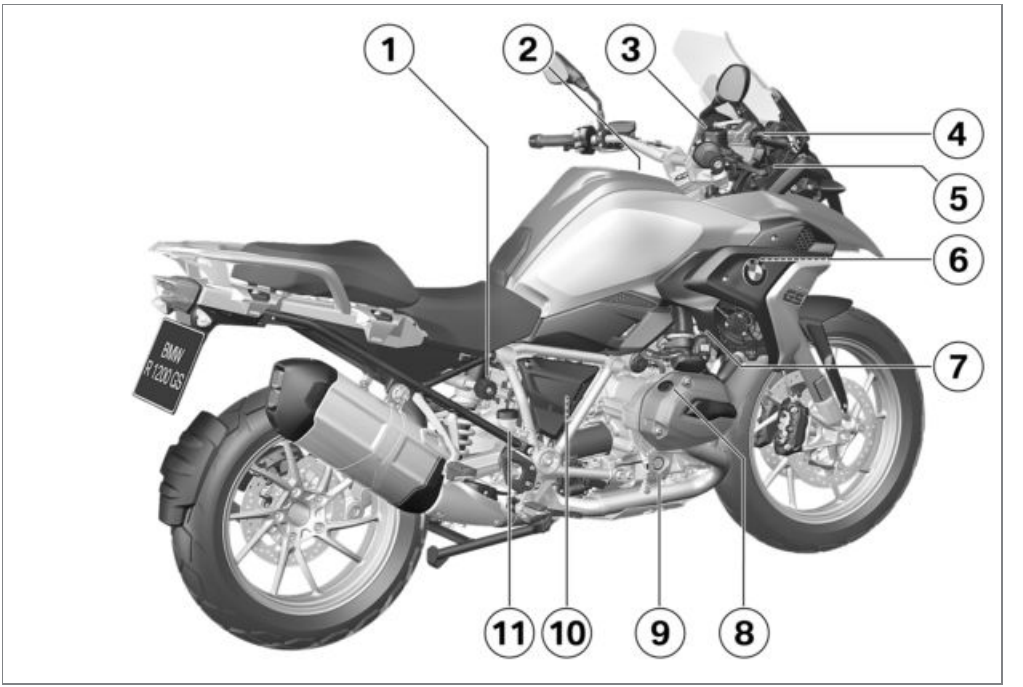
2
3

General view, left side

1 Fuel filler neck (➠ 115)
2 Seat lock (➠ 88)
3 Setting the rear damping (down at the spring strut) (➠ 98)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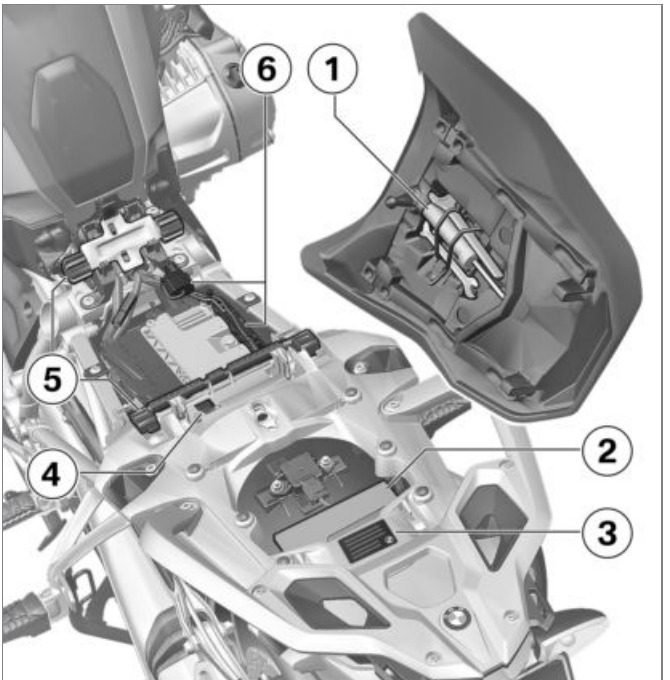
8
9
10
11
BMW
R 1200 GS

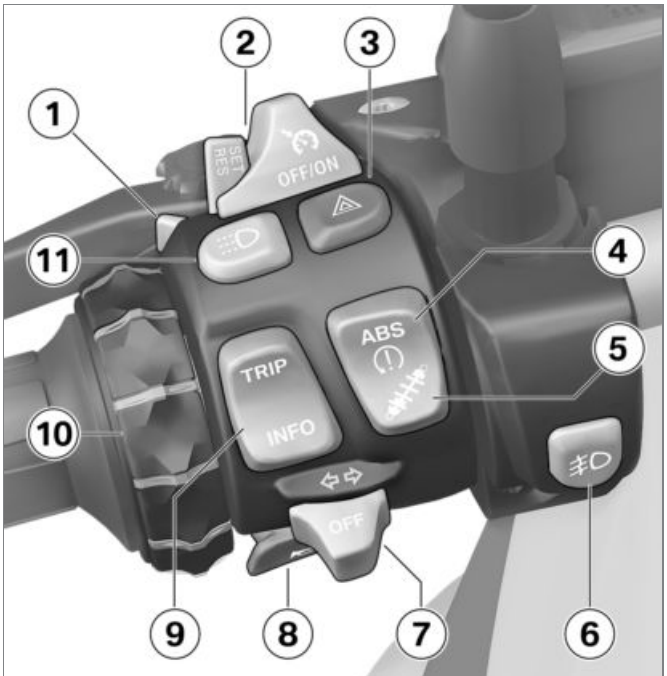
General view, right side

1 – without Dynamic ESA OE
Adjuster for spring preload, rear (➠ 97).
2 Air filter (underneath the centre trim panel) (➠ 153)
3 Brake-fluid tank, front (➠ 142)
4 Height adjustment of the windscreen (➠ 95)
5 Power socket (➠ 170)
6 Vehicle identification number (on steering head)
Type plate (on the frame, front right)
7 Coolant-level indicator (➠ 144)
Coolant reservoir (➠ 145)
8 Oil filler neck (➠ 139)
9 Engine oil level indicator (➠ 138)
10 Behind the side trim panel:
Battery (➠ 161)
Positive battery connection point (➠ 160)
Diagnostic connector (➠ 167)
11 Brake-fluid reservoir, rear (➠ 143)

Underneath the seat

1 Standard toolkit (➠ 136)
2 Rider's Manual
3 Tyre pressure table
4 Payload table
5 Adjusting the front seat height (➠ 89)
6 Fuses (➠ 165)





Multifunction switch, left

1 High-beam headlight and headlight flasher (➠ 57)

2 – with cruise control[OE]
Cruise-control system (➠ 81).

3 Hazard warning lights system (➠ 60)

4 ABS (➠ 68)
ASC (➠ 69)
– with riding modes Pro[OE]
DTC (➠ 70)

5 – with Dynamic ESA[OE]
Dynamic ESA possible settings (➠ 72)

6 – with LED auxiliary headlights[OA]
LED auxiliary headlights (➠ 58).

7 Turn indicators (➠ 61)

8 Horn

9 Multifunction display (➠ 61)

10 – with preparation for navigation system[OE]
Operating navigation system (➠ 182)
Multi-Controller

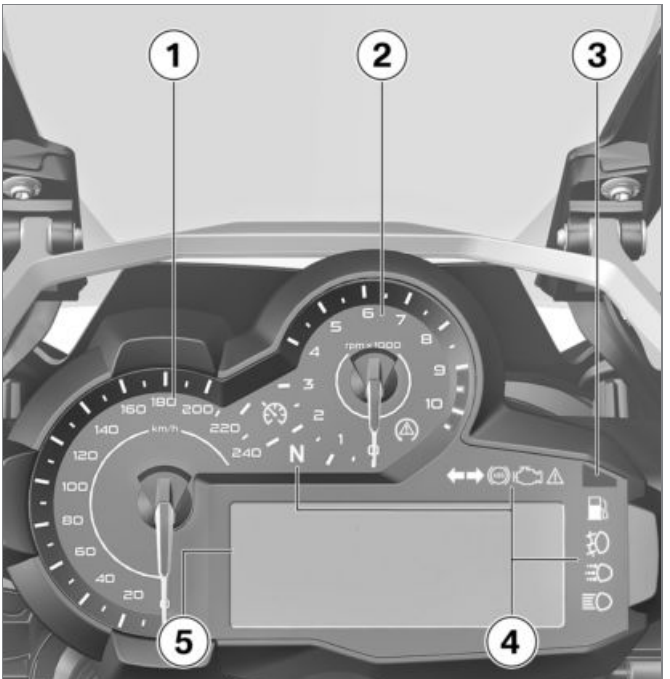
11 – with LED headlight[OE]
Daytime riding light (➠ 58).

Multifunction switch, right

1 – with heated grips[OE]
Heated handlebar grips (➠ 87).
2 Riding mode (➠ 74)
3 Emergency off switch (kill switch) (➠ 56)
4 Starter button
Start engine (➠ 105).

Instrument panel

1 Speedometer
2 Engine speed display
3 Photosensor (for adapting the brightness of the instrument lighting)
– with alarm system (DWA) OE
Alarm system LED
Alarm signal (➠ 85)
– with Keyless Ride OE
Telltale light for the radio-operated key
Ignition with Keyless Ride (➠ 53).
4 Indicator and warning lights (➠ 20)
5 Multifunction display (➠ 22)



Status indicators

Indicator and warning lights 20
Multifunction display 22
Warning symbols in the display 24
Warnings 25

Indicator and warning lights

1 – with cruise control[OE] Cruise-control system (➠ 81).
2 Neutral
3 ASC (➠ 42)
– with riding modes Pro[OE] DTC (➠ 42)
4 Turn indicators
5 ABS (➠ 41)
6 Malfunction indicator lamp Emissions warning (➠ 35)
7 General warning light (in combination with warning symbols in the display) (➠ 25)

8 – with alarm system (DWA)[OE]
Alarm signal (➠ 85)
– with Keyless Ride[OE]
Telltale light for the radio-operated key
Ignition with Keyless Ride (➠ 53).

9 High-beam headlight (➠ 57)

10 – with LED headlight[OE]
Daytime riding light (➠ 58).

11 – with LED auxiliary headlights[OA]
LED auxiliary headlights (➠ 58).

12 Fuel reserve (➠ 45)

Multifunction display

1 Fuel level

2 Recommendation to upshift (➠ 46)

3 Gear indicator; "N" indicates neutral (idle) position.

4 – with LED headlight OE
Automatic daytime riding light (➠ 59).

5 – with Hill Start Control OE
Operate Hill Start Control (➠ 83).

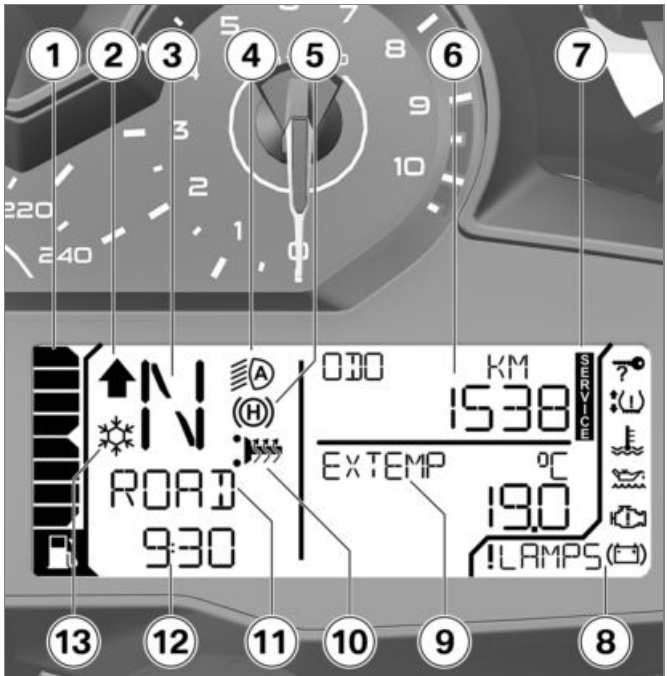
6 Odometer and tripmeters (➠ 61)

7 Service-due indicator (maintenance interval) (➠ 212)

8 Warning symbols (➠ 25)

9 On-board computer
– with Dynamic ESA OE
Dynamic ESA possible settings (➠ 72)

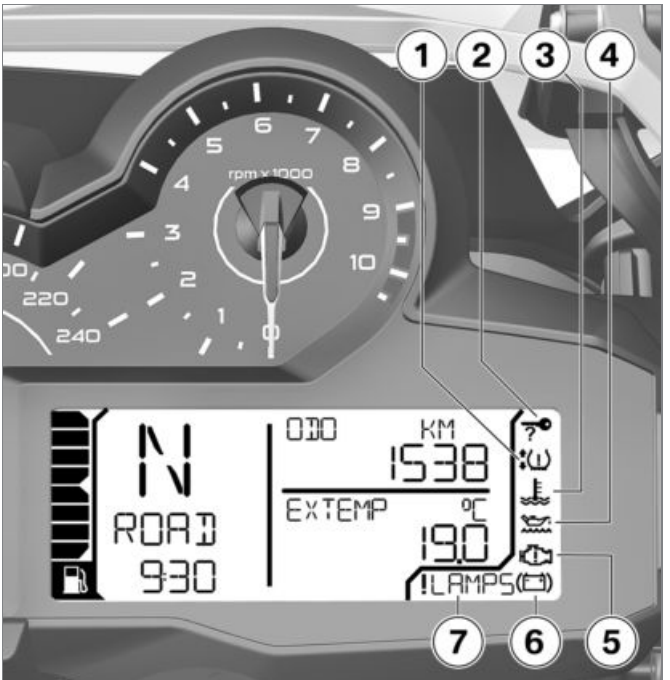
10 – with heated grips OE
Heated handlebar grips (➠ 87).



11 Riding mode (➠ 74)
12 Clock (➠ 64)
13 Outside temperature warning (➠ 32)

Warning symbols in the display

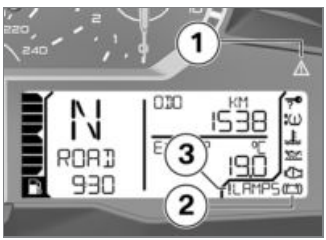
1 – with tyre pressure control (RDC) OE
Tyre pressure (➠ 38)
2 EWS (➠ 32)
3 Coolant temperature (➠ 35)
4 Engine oil level (➠ 35)
5 Engine electronics (➠ 36)
6 On-board voltage (➠ 33)
7 Warnings (➠ 25)



Warnings

Mode of presentation

Warnings are indicated by the corresponding warning lights.



Warnings that do not have warning lights of their own are indicated by 'General' warning light **1** showing in combination with a warning symbol at **2** or a text warning at **3**. The 'general' warning light shows yellow or red, depending on the urgency of the warning.

The status of the 'General' warning light matches the most urgent warning.

The possible warnings are listed on the next pages.

Warnings, overview

Indicator and warning lights	Display text	Meaning
	 Ice crystal symbol is displayed.	Outside temperature warning (➠ 32)
 General warning light shows yellow.	 EWS warning symbol is displayed.	Electronic immobiliser active (➠ 32)
 General warning light shows yellow.	 Radio-operated key warning symbol is displayed.	Radio-operated key out of range (➠ 33)
 General warning light shows yellow.	!KEYLO is displayed.	Replace the battery of the radio-operated key (➠ 33)
 General warning light shows red.	 Symbol for vehicle voltage is displayed.	Vehicle voltage too low (➠ 33)
	 The oil can symbol is displayed.	Engine-oil level too low (➠ 35)
	OILLVL CHECK is displayed.	

Indicator and warning lights	Display text	Meaning
 General warning light shows red.	 Temperature symbol appears on the display.	Coolant temperature too high (➠ 35)
 The malfunction indicator lamp lights up.		Emissions warning (➠ 35)
 General warning light shows yellow.	 Engine symbol appears on the display.	Engine in emergency-operation mode (➠ 36)
 General warning light flashes yellow.	 The engine symbol flashes.	Severe fault in the engine control unit (➠ 36)
 General warning light shows yellow.	! LAMPF, ! LAMPR or ! LAMPS is displayed.	Bulb faulty (➠ 37)
	! DWALO is displayed.	Anti-theft alarm battery weak (➠ 37)
 General warning light shows yellow.	! DWA is displayed.	Anti-theft alarm battery flat (➠ 38)

Indicator and warning lights	Display text	Meaning
 General warning light shows yellow.	 The tyre symbol is displayed with one or two arrows. The critical tyre pressure flashes.	Tyre pressure close to limit of permitted tolerance (➠ 39)
 General warning light flashes red.	 The tyre symbol is displayed with one or two arrows. The critical tyre pressure flashes.	Tyre pressure outside permitted tolerance (➠ 39)
 General warning light shows yellow.	 The tyre symbol with one or two arrows appears in the display.	Sensor is faulty or there is a system fault (➠ 40)
	"– –" or "– – – –" is displayed.	Signal transmission disrupted (➠ 40)
 General warning light shows yellow.	! RDC is displayed.	Battery of tyre-pressure sensor weak (➠ 41)
 ABS telltale and warning light flashes.		ABS self-diagnosis not completed (➠ 41)

Indicator and warning lights	Display text	Meaning
 ABS telltale and warning light shows.		ABS fault (➠ 41)
 ABS telltale and warning light shows.		ABS deactivated (➠ 42)
 ASC telltale and warning light quick-flashes.		ASC intervention (➠ 42)
 DTC indicator and warning light flashes quickly.		DTC intervention (➠ 42)
 ASC telltale and warning light slow-flashes.		ASC self-diagnosis not completed (➠ 43)
 DTC indicator and warning light flashes slowly.		DTC self-diagnosis not completed (➠ 43)
 ASC telltale and warning light shows.		ASC switched off (➠ 43)

Indicator and warning lights	Display text	Meaning
 DTC indicator and warning light shows.		DTC switched off (➠ 43)
 ASC telltale and warning light shows.		ASC fault (➠ 44)
 DTC indicator and warning light shows.		DTC fault (➠ 44)
 General warning light shows yellow.	! D–ESA is displayed.	D-ESA fault (➠ 44)
 Fuel reserve indicator light lights up.		Fuel down to reserve (➠ 45)
	 The holding symbol is displayed.	Hill Start Control is activated (➠ 45)
 General warning light flashes yellow.	 The holding symbol flashes briefly.	Hill Start Control is deactivated automatically (➠ 45)
 General warning light flashes yellow.	 The holding symbol flashes briefly.	Hill Start Control cannot be activated (➠ 46)

Indicator and warning lights	Display text	Meaning
	 The arrow pointing upwards is displayed.	Recommendation to upshift (➠ 46)
	 The gear indicator flashes.	Gear not trained (➠ 47)
 General warning light flashes red.		Hazard warning lights system is switched on (➠ 47)
 Turn signal indicator light flashes green.		
 General warning light shows yellow.	SERVICE is displayed permanently.	Service-due date has passed (➠ 48)

Ambient temperature

When the motorcycle is at a standstill, the heat of the engine can falsify the ambient-temperature reading. If the effect of the engine's heat becomes excessive, "– –" temporarily appears on the display.

At ambient temperatures below 3 °C, there is a risk of ice forming. When this temperature threshold is undershot for the first time, there will be an automatic switchover to the ambient temperature display **1**, irrespective of the actual display setting; the displayed value flashes.

In addition, the ice crystal symbol **2** is shown.

⚠ WARNING

Risk of black ice also applicable at over 3 °C

Risk of accident

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

Outside temperature warning

Ice crystal symbol is displayed.

Possible cause:

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

⚠ WARNING

Risk of black ice also applicable at over 3 °C

Risk of accident

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

Electronic immobiliser active

General warning light shows yellow.


EWS warning symbol is displayed.

Possible cause:

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

- Remove all other vehicle keys from the same ring as the ignition key.
- Use the emergency key.
- Have the defective key replaced, preferably by an authorised BMW Motorrad dealer.

Radio-operated key out of range

– with Keyless Ride OE


General warning light shows yellow.


Radio-operated key warning symbol is displayed.

Possible cause:

Communication between R/C key and engine electronics is disrupted.

- Check the battery in the radio-operated key.

– with Keyless Ride OE

- Replace the battery of the radio-operated key (➠ 55).
- Use the reserve key to continue your journey.

– with Keyless Ride OE

- Battery of the radio-operated key is flat or the key has been lost (➠ 55).
- Remain calm if the warning symbol appears while you are riding. You can continue your journey, the engine will not switch off.
- Have the defective radio-operated key replaced by an authorised BMW Motorrad dealer.

Replace the battery of the radio-operated key


General warning light shows yellow.

! KEYLO is displayed.

Possible cause:

– with Keyless Ride OE

The integral battery in the radio-operated key has lost a significant proportion of its original capacity. There is no assurance of how long the R/C key can remain operational.

- Replace the battery of the radio-operated key (➠ 55).

Vehicle voltage too low


General warning light shows red.


Symbol for vehicle voltage is displayed.

WARNING

Discharged battery causes various motorcycle systems to fail, such as lighting, engine or ABS

Risk of accident

• Do not continue your journey.◀

The battery will not be charged. By continuing to drive on, the vehicle electronics discharge the battery.

NOTICE

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

Possible cause:

The alternator or alternator drive is faulty, battery is faulty or the fuse for the alternator regulator has blown.

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

Oil level

The oil-level indicator **1** gives you an indication of the engine oil level. You can call up this reading only when the vehicle is at a standstill.

The preconditions for the oil level check are as follows:

– Engine at operating temperature.
– Engine idling for at least ten seconds.
– Side stand retracted.
– Motorcycle standing upright on a smooth, level surface.

The readings mean:

OK: Oil level is correct.

CHECK: Check the oil level the next time you stop for fuel.

– – –: Oil level cannot be measured (conditions as stated above not satisfied).

If the oil level needs to be checked, the symbol **2** is displayed until the oil level is detected as being correct again.

Engine-oil level too low


The oil can symbol is displayed.

OILLVL CHECK is displayed.
Possible cause:

The electronic oil-level sensor has registered an excessively low oil level. The next time you stop for fuel:

- Checking engine oil level (➠ 138).

If the oil level is too low:

- Topping up the engine oil (➠ 139).

If the oil level is correct:

- Seek the advice of a specialist workshop, preferably an authorised BMW Motorrad dealer.

Coolant temperature too high


General warning light shows red.


Temperature symbol appears on the display.

ATTENTION

Riding with overheated engine

Engine damage

- Compliance with the information set out below is essential.◀

Possible cause:

The coolant level is too low.

- Check coolant level (➠ 144).

If the coolant level is too low:

- Leave the engine to cool down.
- Topping up coolant (➠ 145).
- Have the cooling system checked by a specialist workshop, preferably by a BMW Motorrad partner.

Possible cause:

The coolant temperature is too high.

- If possible, ride in the part-load range to cool down the engine.

If the coolant temperature is frequently too high:

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

Emissions warning


The malfunction indicator lamp lights up.

Possible cause:

The engine control unit has diagnosed a fault which affects the pollutant emissions.

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

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

Engine in emergency-operation mode

General warning light shows yellow.

Engine symbol appears on the display.

WARNING

Unusual ride characteristics when engine running in emergency-operation mode

Risk of accident

- Adapt your style of riding accordingly: avoid accelerating sharply and overtaking.◀

Possible cause:

The engine control unit has diagnosed a fault which impairs the engine performance or throttle response. The engine is in emergency-operation mode. In exceptional cases, the engine stops and refuses to start.

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

» It is possible to continue riding, however the engine performance and engine speed range may be impaired and not function as normal.

Severe fault in the engine control unit

General warning light flashes yellow.

The engine symbol flashes.

WARNING

Engine damage when running in emergency-operation mode

Risk of accident

- Adapt your style of riding accordingly: ride slowly, avoid sharp accelerating and overtaking.
- If possible, have the vehicle brought in and the fault rectified by a specialist workshop, preferably an authorised BMW Motorrad dealer.◀

Possible cause:

The engine control unit has diagnosed a fault which may cause severe secondary faults. The engine is in emergency-operation mode.

- It is possible to continue to ride but not recommended.
- Avoid high load and rpm ranges if possible.
- Have the fault rectified as quickly as possible by a specialist workshop, preferably

an authorised BMW Motorrad dealer.

Bulb faulty


General warning light shows yellow.

! LAMP... is displayed:
– ! LAMPF: Low-beam headlight, high-beam headlight, parking light or front turn indicator defective.
– with LED headlight OE
– ! LAMPF: Additionally: daytime riding light faulty.◁
– ! LAMPR: Brake light, rear light, indicator light rear or license plate light faulty.
– ! LAMPS: Several bulbs defective.

WARNING

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

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

Possible cause:

One or more bulbs defective.
- Identify defective bulb or bulbs by visual check.
- Replacing bulbs for low-beam and high-beam headlight (➠ 155).
- Replacing bulb for parking light (➠ 157).

– with LED headlight OE
- Replace LED headlights (➠ 160).

- Replacing bulbs for front and rear turn indicators (➠ 158).
- Replace the LED rear light (➠ 159).

– with LED flashing turn indicators OE
- Replace LED flashing turn indicators (➠ 159).

Anti-theft alarm battery weak

– with alarm system (DWA) OE

! DWALO is displayed.

NOTICE

This error message shows briefly only after the Pre-Ride-Check completes.◀

Possible cause:

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

- Seek the advice of a specialist workshop, preferably an authorised BMW Motorrad dealer.

Anti-theft alarm battery flat

– with alarm system (DWA)[OE]

General warning light shows yellow.

! DWA is displayed.

NOTICE

This error message shows briefly only after the Pre-Ride-Check completes.◀

Possible cause:

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

- Seek the advice of a specialist workshop, preferably an authorised BMW Motorrad dealer.

Tyre pressure

– with tyre pressure control (RDC)[OE]

The front tyre pressure is on the left **1**; the reading on the right **2** is the rear tyre pressure. "-- --" appears directly after the ignition is switched on. The sensors do not transmit tyre pressures until the first time the vehicle accelerates to more than 30 km/h. Tyre-pressure readings are based on a tyre air temperature of 20 °C.

If the symbol **3** also shows, this is a warning. The critical tyre pressure flashes.

If the value in question is close to the limit of the permissible tolerance range, the reading is accompanied by the 'General' warning light showing yellow. If the tyre pressure registered by the sensor is outside the permissible tolerance range, the 'General' warning light flashes red.

For further information on BMW Motorrad tyre pressure control, see page (➠ 131).

Tyre pressure close to limit of permitted tolerance

– with tyre pressure control (RDC)[OE]


General warning light shows yellow.


The tyre symbol is displayed with one or two arrows. The critical tyre pressure flashes.

The up arrow indicates a front-tyre pressure problem, the down arrow indicates a rear-tyre pressure problem.
Possible cause:

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

- Correct the tyre pressure as stated on the inside cover of the Rider's Manual.

NOTICE

Before adjusting the tyre pressure, observe the information on temperature compensation and pressure adaptation in the chapter "Engineering details":◀

» Temperature compensation (➠ 131)

Tyre pressure outside permitted tolerance

– with tyre pressure control (RDC)[OE]


General warning light flashes red.


The tyre symbol is displayed with one or two arrows. The critical tyre pressure flashes.

WARNING

Tyre pressure outside permitted tolerance.
Impairment of the vehicle's handling characteristics.

- Adapt your style of riding accordingly.◀

The up arrow indicates a front-tyre pressure problem, the down arrow indicates a rear-tyre pressure problem.
Possible cause:

Measured tyre pressure is outside permitted tolerance.

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

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

- Correct the tyre pressure at the earliest possible opportunity.

NOTICE

You can deactivate RDC warnings for riding in off-road mode.◀

NOTICE

Before adjusting the tyre pressure, observe the information on temperature compensation and pressure adaptation in the chapter "Engineering details":◀

» Temperature compensation (➠ 131)

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

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

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

Sensor is faulty or there is a system fault

– with tyre pressure control (RDC) OE

General warning light shows yellow.

The tyre symbol with one or two arrows appears in the display.

Possible cause:

Vehicle is fitted with wheels not equipped with RDC sensors.

- Fit wheels and tyres equipped with RDC sensors.

Possible cause:

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

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

Signal transmission disrupted

– with tyre pressure control (RDC) OE

"––" or "–– ––" is displayed.

Possible cause:

The vehicle has not reached the minimum speed (➠ 131).

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

- Observe the RDC display at higher speeds.

A permanent fault is present only when the general warning light also lights up.

Under these circumstances:

• Have the fault rectified by a specialist workshop, preferably an authorised BMW Motorrad dealer.

Possible cause:

The radio link to the RDC sensors is faulty. Radio systems are located in the surrounding area which are interfering with the transmission between the RDC control unit and the sensors.

• Observe the RDC displays in other surrounding areas.


A permanent fault is present only when the general warning light also lights up.

Under these circumstances:

• Have the fault rectified by a specialist workshop, preferably an authorised BMW Motorrad dealer.

Battery of tyre-pressure sensor weak

– with tyre pressure control (RDC)[OE]


General warning light shows yellow.

! RDC is displayed.

NOTICE

This error message shows briefly only after the Pre-Ride-Check completes.◀

Possible cause:

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

• Seek the advice of a specialist workshop, preferably an authorised BMW Motorrad dealer.

ABS self-diagnosis not completed


ABS telltale and warning light flashes.

Possible cause:

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

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

ABS fault


ABS telltale and warning light shows.

Possible cause:

– with riding modes Pro OE

The angular rate sensor has been damaged. The ABS Pro function is not available.

ATTENTION

Damaged components

Damage to sensors, for example, which causes malfunctions

- Do not transport any objects underneath the driver or passenger seat.
- Secure the toolkit.◀
- Do not damage the angular rate sensor.

Possible cause:

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

- You can continue to ride. Bear in mind the more detailed information on situations that can lead to an ABS fault message (➠ 123).
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad dealer.

ABS deactivated

ABS telltale and warning light shows.

Possible cause:

The rider has switched off the ABS system.

- Activating the ABS function (➠ 69).

ASC intervention

– without riding modes Pro OE

ASC telltale and warning light quick-flashes.

The ASC has detected a degree of instability at the rear wheel and has intervened to reduce torque. The indicator and warning light flashes longer than the ASC intervention lasts. This affords the rider visual feedback on control intervention even after the critical situation has been dealt with.

DTC intervention

– with riding modes Pro OE

DTC indicator and warning light flashes quickly.

The DTC has detected a degree of instability at the rear wheel and has intervened to reduce torque. The indicator and warning light flashes longer than the DTC intervention lasts. This affords the rider visual feedback on control intervention even after the critical situation has been dealt with.

ASC self-diagnosis not completed

– without riding modes Pro OE


ASC telltale and warning light slow-flashes.

Possible cause:

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

- Pull away slowly. The ASC indicator and warning light goes out after a few minutes.

The ASC indicator and warning light continues to flash:

- Seek the advice of a specialist workshop, preferably an authorised BMW Motorrad dealer.

DTC self-diagnosis not completed

– with riding modes Pro OE


DTC indicator and warning light flashes slowly.

Possible cause:

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

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

ASC switched off

– without riding modes Pro OE


ASC telltale and warning light shows.

Possible cause:

The rider has switched off the ASC system.

– without riding modes Pro OE

- Activating the ASC function (➠ 70).

DTC switched off

– with riding modes Pro OE


DTC indicator and warning light shows.

Possible cause:

The rider has switched off the DTC system.

- DTC Switching on (➠ 71).

ASC fault

– without riding modes Pro[OE]


ASC telltale and warning light shows.

Possible cause:

The DSC control unit has detected a fault. The ASC function is no longer available.

- You can continue to ride. Bear in mind that the ASC function is not available. Bear in mind the more detailed information on situations can lead to an ASC fault (➠ 126).
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad dealer.

DTC fault

– with riding modes Pro[OE]


DTC indicator and warning light shows.

Possible cause:

The DTC control unit has detected a fault.

ATTENTION

Damaged components

Damage to sensors, for example, which causes malfunctions

- Do not transport any objects underneath the driver or passenger seat.
- Secure the toolkit.◀
- Do not damage the angular rate sensor.
- Bear in mind that the DTC function is not available or the functionality is subject to certain restrictions.
- You can continue to ride. Bear in mind the more detailed information on situations that can lead to a DTC fault (➠ 126).
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad dealer.

D-ESA fault


General warning light shows yellow.

! D–ESA is displayed.

Possible cause:

The D-ESA control unit has detected a fault. The damping and/or spring adjuster may be the cause. In AUTO loading mode, a fault in the riding position equaliser may also cause the fault. In this condition, the motorcycle has too much damping and is uncomfortable to drive, especially on roads in poor condition. Alternatively, the spring preload may be incorrectly adjusted.

- Have the fault rectified as quickly as possible by a specialist workshop, preferably

an authorised BMW Motorrad dealer.

Fuel down to reserve


Fuel reserve indicator light lights up.

WARNING

Irregular engine operation or engine shutdown due to lack of fuel

Risk of accident, damage to catalytic converter

• Do not run the fuel tank dry.◀

Possible cause:

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

Reserve fuel
approx. 4 l

• Refuelling (➠ 115).

Fuel reserve

The fuel quantity remaining in the fuel tank once the fuel reserve indicator light switches on depends on the riding dynamics. The more the fuel moves around in the fuel tank (caused by frequent changes in lean angle, frequent braking and accelerating), the harder it is to determine the fuel reserve. For this reason, it is not possible to accurately state the fuel reserve.

The range is shown automatically once the fuel reserve indicator light is switched on.

The range remaining with the available fuel reserve depends on the riding style (on consumption) and the fuel quantity available when the indicator light switched on.

After a refuelling stop, the distance counter for reserve fuel is reset if the amount of fuel in the tank is greater than the reserve quantity.

Hill Start Control is activated

– with Hill Start Control OE

The holding symbol is displayed.

Possible cause:

The driver has activated Hill Start Control (➠ 133).

• Switch off Hill Start Control.

• Operate Hill Start Control (➠ 83).

Hill Start Control is deactivated automatically

– with Hill Start Control OE

General warning light flashes yellow.

The holding symbol flashes briefly.

Possible cause:

Hill Start Control has been switched off automatically.

- The side stands have been folded out.
» Hill Start Control is deactivated when the side stands are folded out.
- The engine has been stopped.
» Hill Start Control is deactivated when the engine is stopped.
- The motorcycle has been drive off with Hill Start Control activated.
- Operate Hill Start Control (➠ 83).

Hill Start Control cannot be activated

– with Hill Start Control OE

General warning light flashes yellow.

The holding symbol flashes briefly.

Possible cause:

Hill Start Control cannot be activated.

- Retract the side stand.
» Hill Start Control functions only when the side stands are folded in.
- Start the engine.
» Hill Start Control functions only when the engine is running.

Recommendation to upshift

The upshift recommendation must be activated in the display settings (➠ 63).

The upshift recommendation **1** signals the economically best point in time for upshift.

Recommendation to upshift

The arrow pointing upwards is displayed.

Possible cause:

The right speed for changing into the next gear has been reached.

- Shift up a gear.
» The arrow disappears.

Gear not trained

– with shift assistant Pro OE

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

Possible cause:

– with shift assistant Pro OE

The gearbox sensor is not fully trained.

- Engage neutral gear N and, with the vehicle at a standstill, let the engine run for at least 10 seconds to train the idle gear.
- Engage all gears with clutch actuation and ride at least 10 seconds with the engaged gear.

» The gear indicator starts to flash when the gearbox sensor has been trained successfully.

– When the gearbox sensor is fully trained, the Pro shift assistant functions as described (➠ 132).

- If the training process was not successful, have the fault rectified by a specialist workshop, preferably an authorised BMW Motorrad dealer.

Hazard warning lights system is switched on

General warning light flashes red.

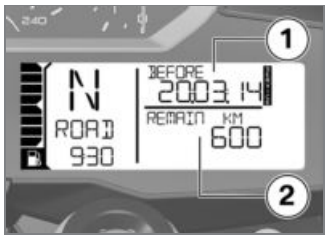
Turn signal indicator light flashes green.

Possible cause:

The driver has switched on the hazard warning lights system.

- Switch off the hazard warning lights system (➠ 60).

Service-due indicator



If the time remaining to the next service is less than a month or if the next service falls due within 1000 km, the service due date **1** and countdown distance **2** are displayed briefly after the Pre-Ride-Check has been completed.

If service is overdue, the due date or the odometer reading at which service was due is accompanied by the 'General' warning light showing yellow. The word Service remains permanently visible.

NOTICE

If the service-due indicator appears more than a month before the service date, the date saved in the instrument cluster must be adjusted. This situation can occur if the battery was disconnected for a prolonged period of time.

If you want to have the date set consult a specialist workshop, preferably an authorised BMW Motorrad dealer.◀

Service-due date has passed

General warning light shows yellow.

SERVICE is displayed permanently.

Possible cause:

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

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

» The operational and road safety of the motorcycle remain intact.

» The motorcycle's value is maintained as best as possible.

Operation

Ignition switch/steering lock 50
Ignition with Keyless Ride 52
Emergency off switch (kill switch) 56
Lights 57
Daytime riding light 58
Hazard warning lights system 60
Turn indicators 61
Multifunction display 61
Anti-lock brake system (ABS) 68
Automatic Stability Control (ASC) 69
Dynamic Traction Control (DTC) 70
Electronic Suspension Adjustment (D-ESA) 71
Riding mode 74
PRO riding mode 76
Cruise-control system 81
Hill Start Control 83
Anti-theft alarm (DWA) 84
Heated handlebar grips 87
Front and rear seats 88

Ignition switch/steering lock

Keys

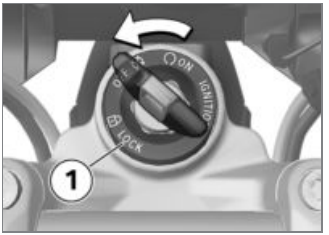
You receive 2 ignition keys. Please consult the information on the electronic immobiliser (EWS) if a key is lost or mislaid (➠ 51). Ignition switch/steering lock, fuel filler cap lock and seat lock are all operated with the same key.

– with cases OA
– with topcase OA

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

Lock the handlebars

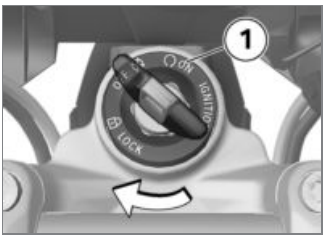
- Turn the handlebars all the way to left.



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

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

Switching on ignition



- Insert the key in the ignition switch and turn to position **1**.

» Side lights and all function circuits are switched on.
» Pre-Ride-Check is performed. (➠ 106)
» ABS self-diagnosis is in progress. (➠ 106)
– without riding modes Pro OE
» ASC self-diagnosis is performed. (➠ 107)◁
– with riding modes Pro OE
» DTC self-diagnosis is in progress. (➠ 108)◁

Welcome lights

- Switch on the ignition.

» The side lights briefly light up.

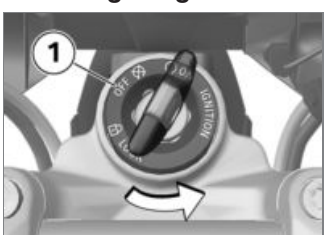
– with LED headlight OE

» The daytime riding lights briefly light up.◁

– with LED auxiliary headlights OA

» The LED auxiliary headlights briefly light up.◁

Switching off ignition



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

» When the ignition is switched off, the instrument cluster remains switched on for a short time and displays any existing fault messages.

» Handlebars not locked.

» Electrically powered accessories remain operational for a limited period of time.

» The battery can be recharged via the socket.

» Key can be removed.

– with LED headlight OE

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

– with LED auxiliary headlights OA

- The LED auxiliary headlights go out soon after the ignition is switched off.◁

Electronic immobiliser EWS

The electronic design of the motorcycle allows it to access data stored in the ignition key by means of a ring antenna located in the ignition switch/steering lock. The engine control unit will not permit the engine to be started unless the key is identified as “authorised”.

NOTICE

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 warning with the key symbol appears in the multifunction display.
Always keep the spare key separately from the ignition key.◀

If you lose your key, you can have it barred by your authorised BMW Motorrad dealer.
If you wish to do this, you will need to bring all other keys for the motorcycle with you. The engine cannot be started by a

barred key, but a key that has been barred can subsequently be reactivated.
You can obtain emergency/extra keys only through an authorised BMW Motorrad dealer. The keys are part of an integrated security system, so the dealer is under an obligation to check the legitimacy of all applications for replacement/extra keys.

Ignition with Keyless Ride

– with Keyless Ride OE

Keys

NOTICE

The telltale light for the radio-operated key flashes while the search for the radio-operated key is in progress.

The telltale light goes out as soon as the radio-operated key or the emergency key is found. The telltale light goes out briefly if the search times out without the radio-operated key or the emergency key being found.◀

You receive one radio-operated key and one emergency key. Please consult the information on the electronic immobiliser (EWS) if a key is lost or mislaid (➠ 51).
Ignition, fuel filler cap and anti-theft alarm system all work with the radio-operated key. Seat lock, topcase and cases can be locked and unlocked manually.

NOTICE

The vehicle cannot be started or the central locking system locked or unlocked if the radio-operated key is not within range (e.g. key inside one of the cases or the topcase).

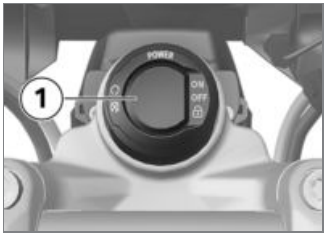
If the key is taken out of range the ignition is switched off after approximately 1.5 minutes, but the central locking system is **not** locked.
It is advisable to keep the radio-operated key on your person (e.g. in a jacket pocket) and to have the emergency key with you as an alternative.◀

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

Lock the handlebars

Requirement

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



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

» The steering lock engages with an audible click.

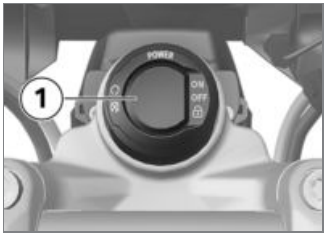
» Ignition, lights and all function circuits switched off.

- Short-press button **1** to disengage the steering lock.

Switching on ignition

Requirement

Radio-operated key is within range.



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

Version 1:

- Short-press button **1**.

» Side lights and all function circuits are switched on.

– with LED headlight OE

» Daytime riding light is switched on.◁

– with LED auxiliary headlights OA

» LED auxiliary headlights are switched on.◁

» Pre-Ride-Check is performed. (➠ 106)

» ABS self-diagnosis is in progress. (➠ 106)

– without riding modes Pro OE

» ASC self-diagnosis is performed. (➠ 107)◁

Version 2:

- Steering lock is engaged; press and hold down button **1**.

» The steering lock disengages.

» Parking lights and all function circuits switched on.

» Pre-Ride-Check is performed. (➠ 106)

» ABS self-diagnosis is in progress. (➠ 106)

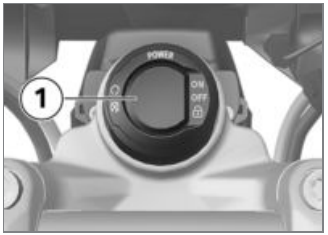
– without riding modes Pro OE

» ASC self-diagnosis is performed. (➠ 107)◁

Switching off ignition

Requirement

Radio-operated key is within range.



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

Version 1:

- Short-press button **1**.

» Light is switched off.

» Handlebars (steering lock) are not locked.

Version 2:

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

» Light is switched off.

» The steering lock engages.

Electronic immobiliser EWS

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

NOTICE

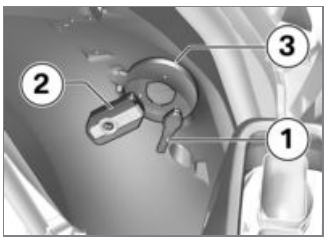
A spare vehicle key attached to the same ring as the radio-operated key used to start the engine could "irritate" the electronics, in which case the enabling signal for starting is not issued. The warning with the key symbol appears in the multifunction display. Always keep the spare key separately from the radio-operated key.◀

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

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

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

Battery of the radio-operated key is flat or the key has been lost



- Please consult the information on the electronic immobiliser (**EWS**) if a key is lost or mislaid.
- If you happen to lose or mislay the radio-operated key while on a journey, you can start the vehicle with the emergency key.
- If the battery of the radio-operated key is flat, the motorcycle can be started by touching the rear-wheel cover with the radio-operated key.
- Hold the emergency key **1** or the flat radio-operated key **2** against the rear-wheel cover at the same height as the antenna **3**.

NOTICE

The emergency key or the radio-operated key with the empty battery must be **in contact with** the rear-wheel cover.◀

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

» Pre-Ride-Check is performed.
– Key has been recognised.
– Engine can be started.
- Start engine (➠ 105).

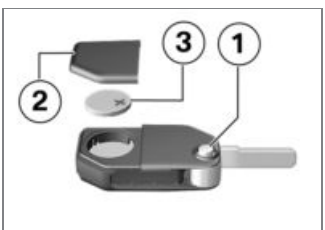
Replace the battery of the radio-operated key

Requirement

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

! KEYLO is displayed.

- Change the battery.



- Press button **1**.
» Key bit flips out.
- Push up battery cover **2**.
- Remove battery **3**.
- Dispose of the old battery in accordance with all applicable

laws and regulations; do not attempt to dispose of batteries as domestic waste.

ATTENTION

Unsuitable or incorrectly inserted batteries

Component damage

- Use a battery compliant with the manufacturer's specifications.
- When inserting the battery, always make sure polarity is correct.◀
- Insert the new battery with the positive terminal up.

Battery type
for Keyless Ride-radio-operated key
CR 2032

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

Emergency off switch (kill switch)

1 Emergency off switch (kill switch)

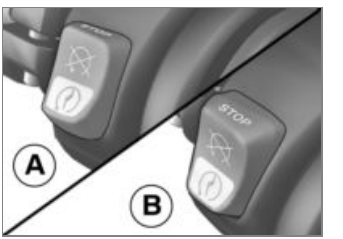
WARNING

Operation of the kill switch while riding

Risk of fall due to rear wheel locking

- Do not operate the kill switch when riding.◀

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



A Engine switched off
B Normal operating position (run)

Lights

Low-beam headlight and sidelights

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

NOTICE

The side lights place a strain on the battery. Do not switch the ignition on for longer than absolutely necessary.◀

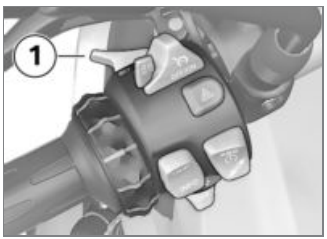
The low-beam headlight switches on automatically when the engine is started.

– with LED headlight OE

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

High-beam headlight and headlight flasher

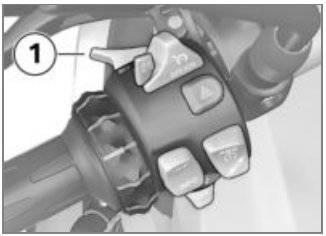
• Switching on ignition (➠ 50).



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

Headlight courtesy delay feature

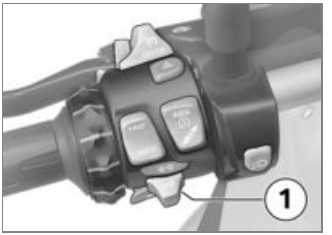
• Switch off the ignition.



• Immediately after switching off the ignition, push button **1** to the back and hold it in this position until the headlight courtesy delay feature comes on.
» The vehicle lighting lights for one minute and is automatically switched back off.
– This can be used after parking the vehicle, for example, to light the way to the house door.

Parking lights

• Switching off ignition (➠ 51).



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

LED auxiliary headlights

– with LED auxiliary headlights OA

Requirement

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

NOTICE

The auxiliary headlights have approval as fog lights and their use is permissible in bad weather conditions only. Always comply with the road traffic regulations in force in the country in which the vehicle is used.◀

- Start engine (➠ 105).

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

The indicator light for the LED additional headlight lights up.

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

Daytime riding light

– with LED headlight OE

Manual daytime riding light

Requirement

Automatic daytime riding light is switched off.

WARNING

Activation of daytime riding light in the dark.

Poorer vision and oncoming traffic dazzled.

- Do not use the daytime running light when it is dark.◀

NOTICE

By comparison with the low-beam headlight, the daytime running light makes the vehicle

more visible to oncoming traffic. This improves daytime visibility.◀

- Start engine (➠ 105).
- In the display's SETUP menu, go to the DLIGHT menu item and set the automatic daytime riding light to OFF.

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

The indicator light for the daytime riding light lights up.

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

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

NOTICE

If the high-beam headlight is switched on while the daytime riding light is on, the daytime riding light is switched off after approx. 2 seconds and the high-beam headlight, low-beam headlight and front side light are switched on.
If the high beam headlight is switched off again, the daytime running light is not automatically reactivated, but must be switched on again if required.◀

Automatic daytime riding light

NOTICE

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

WARNING

The automatic riding light control system cannot replace your personal assessment of lighting conditions, particularly in foggy or misty weather.
Safety risk

- Manually switch on the low-beam headlight in poor lighting conditions.◀
- In the display's SETUP menu, go to the DLIGHT menu item and set the automatic daytime riding light to ON.

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

» If the ambient brightness decreases below a certain value, the low beam headlight is automatically switched on (e. B. in a tunnel). When sufficient ambient brightness is detected, the daytime riding light is switched back on. When the daytime riding light is active, the daytime riding light symbol is displayed in the multifunction display.

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

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

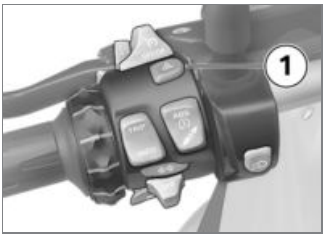
Hazard warning lights system

Operating hazard warning flashers

• Switching on ignition (➠ 50).

NOTICE

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



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

General warning light flashes red.

Turn signal indicator light flashes green.

» Ignition can be switched off.
• To switch off the hazard warning lights system, switch on the ignition and press button **1** again.

» The general warning light and the turn signal indicator light go out.

Turn indicators

Operating the turn indicators

• Switching on ignition (➠ 50).

• Push button **1** to the left to switch on the left turn indicators.

Turn signal indicator light flashes green.

• Push button **1** to the right to switch on the right turn indicators.

Turn signal indicator light flashes green.

• Operate centre button **1** to cancel the turn indicators.

Turn indicator cancellation
The turn indicators are cancelled automatically after the defined riding time and distance.

» The turn signal indicator light goes out.

Multifunction display

Selecting the display at the top

• Switching on ignition (➠ 50).

• Briefly press button **1** in order to select the display in the top display line **2**.

In the standard equipment the following values can be displayed and selected at the press of a button:

– Total distance travelled (ODO)
– Tripmeter 1 (TRIP 1)
– Tripmeter 2 (TRIP 2)
– Range (RANGE)
– SETUP menu (SETUP ENTER), only when stationary

– with on-board computer Pro[OE]

The following information is additionally displayed by means of the on-board computer Pro:

– Automatic tripmeter (TRIP A)
– Current consumption (CONS C)
– Current speed (SPEED)◁

Selecting display at the bottom

• Briefly press button **1** in order to select the display in the bottom display line **2**.

In the standard equipment the following values can be displayed and selected at the press of a button:

– Ambient temperature (EXTEMP)
– Engine temperature (ENGTMP)
– Average consumption 1 (CONS 1)
– Average consumption 2 (CONS 2)
– Average speed (Ø SPEED)

– with tyre pressure control (RDC)[OE]
– Tyre pressures (RDC)◁

– Date (DATE)
– Oil-level reminder (OILLVL)

– with on-board computer Pro[OE]
– Vehicle circuit voltage (VOLTGE)◁
– with on-board computer Pro[OE]
– Stopwatch total time (ALTIME)◁
– with on-board computer Pro[OE]
– Stop watch driving time (RDTIME)◁

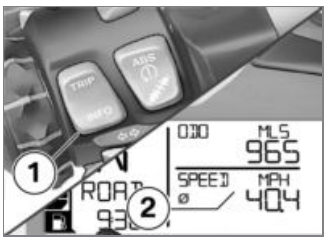
Resetting trip distance recorder

• Switching on ignition (➠ 50).

• Repeatedly press button **1** briefly until the tripmeter to be reset is indicated in the top display line **2**.
• Press and hold down button **1** until the value shown is reset.

Resetting the average values

- Switching on ignition (➠ 50).



- Repeatedly press button **1** briefly until the average value to be reset is indicated in the bottom display line **2**.
- Press and hold down button **1** until the value shown is reset.

Configuring functions

- Switching on ignition (➠ 50).

- Keep pressing the button **1** briefly until **2** SETUP ENTER is shown in the top display lines.
- Press and hold button **1** to start the SETUP menu.

» The following indication in the display depends on the equipment selected.

- Press button **1** briefly in order to go to the next menu item.

» The top display line **2** shows the menu item.

» The bottom display line **3** shows the preset value.

- Press button **4** briefly in order to change the set value.

The following menu items can be selected:

– with alarm system (DWA)[OE]

– DWA: Switch alarm system ON or OFF◁

– with preparation for navigation system OE
– GPS TM: Navigation system installed: Accept GPS time and GPS date (ON) or do not accept (OFF)◁
– CLOCK: Setting the clock
– DATE: Setting the date
– ECOSFT: Show upshift recommendation on the display (ON) or not (OFF)
– BRIGHT: Set display brightness, from normal (0) to bright (5)
– with LED headlight OE
– DLIGHT: Switch daytime riding light ON or OFF◁
– EXIT: Exit SETUP menu

– with on-board computer Pro OE
– BC CUSTOM: Start individualisation of the display.◁

- In order to exit the SETUP menu, at the menu item SETUP EXIT press and hold button **1**.
- In order to cancel the SETUP menu at any point, press button **1** and hold.

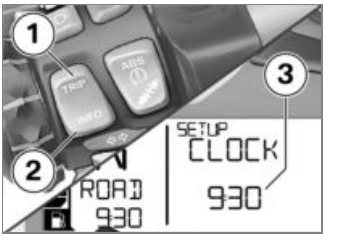
Setting the clock

- Switching on ignition (➠ 50).

⚠ WARNING

Adjusting the clock while riding
Risk of accident

- Set the clock only when the motorcycle is stationary.◀
- In the SETUP menu, select the menu item SETUP CLOCK.



- Keep button **2** pressed until the hours in the bottom display line **3** start to flash.

NOTICE

If "−− **:** −−" is displayed instead of the time, the voltage supply of the instrument cluster has been interrupted (e.g. by disconnecting the battery).◀

- Press button **1** to increase the flashing value or button **2** to reduce the same.
- Keep button **2** pressed until the minutes in the bottom display line **3** start to flash.
- Press button **1** to increase the flashing value or button **2** to reduce the same.
- Keep button **2** pressed until the minutes no longer flash.

» Setting is complete.

- In order to cancel the setting at any point, keep button **1** pressed until the initial value is shown again.

NOTICE

If you drive off before the setting has been completed, the setting will be cancelled.◀

Setting the date

- Switching on ignition (➠ 50).
- In the SETUP menu, select the menu item SETUP DATE.

- Keep button **2** pressed until the day in the bottom display line **3** starts to flash.

NOTICE

If "−− . −− . −−" is displayed instead of the date, the voltage supply of the instrument cluster has been interrupted (e.g. by disconnecting the battery).◀

- Press button **1** to increase the flashing value or button **2** to reduce the same.
- Keep button **2** pressed until the month in the bottom display line **3** starts to flash.
- Press button **1** to increase the flashing value or button **2** to reduce the same.
- Keep button **2** pressed until the year in the bottom display line **3** starts to flash.
- Press button **1** to increase the flashing value or button **2** to reduce the same.
- Keep button **2** pressed until the year no longer flashes.

» Setting is complete.

- In order to cancel the setting at any point, keep button **1** pressed until the initial value is shown again.

NOTICE

If you drive off before the setting has been completed, the setting will be cancelled.◀

Customising the display

– with on-board computer Pro[OE]

• Switching on ignition (➠ 50).

In the customisation menu, it is possible to set which information is to be displayed in which display line.

• In the SETUP menu, select the menu item SETUP BC BASIC.

• Briefly press button **1** to start the customisation menu.

» SETUP BC CUSTOM appears on the display.

• Briefly press button **1** again to exit the customisation menu.

NOTICE

If SETUP BC BASIC is selected, then the factory setting will be active again. The customisation CUSTOM remains stored.◀

• Press button **1** for a long period in order to display the first menu item.

» SETUP BC ODO appears on the display.

- Press button **2** briefly in order to go to the next menu item.

» The top display line **3** shows the menu item.

» The bottom display line **4** shows the preset value. The following values can be set.

– TOP: The value is displayed in the top display line.
– BELOW: The value is displayed in the bottom display line.
– BOTH: The value is displayed in both display lines.
– OFF: The value is not displayed.

- Press button **1** briefly in order to change the set value.

The following menu items can be selected, the works setting is shown in brackets. Some menu items will only be selected if the relevant special equipment (OE) is actually present.

– ODO: Total mileage counter (TOP, the setting OFF is not possible)
– TRIP 1: Tripmeter 1 (TOP)
– TRIP 2: Tripmeter 2 (TOP)
– TRIP A: Automatic trip distance recorder (TOP)
– EXTEMP: Ambient temperature (BELOW)
– ENGTMP: Engine temperature (BELOW)
– RANGE: Range (TOP)
– CONS R: Average consumption for range calculation (OFF)
– CONS 1: Average consumption 1 (BELOW)
– CONS 2: Average consumption 2 (BELOW)
– CONS C: Current consumption (TOP)
– ØSPEED: Average speed (BELOW)
– SPEED: Current speed (TOP)
– RDC: Tyre pressures (BELOW)
– VOLTGE: Vehicle circuit voltage (BELOW)
– ALTIME: Stopwatch total time (BELOW)
– RDTIME: Stopwatch driving time (BELOW)
– DATE: Date (BELOW)
– SERV T: Date of the next service (OFF)
– SERV D: Countdown distance to next service (OFF)
– OILLVL: Oil level note (BELOW)
– EXIT: Exit individualisation menu

- When the menu item SETUP EXIT is displayed, press and hold button **1** to exit the customisation menu.
- In order to exit the customisation menu at any point, press and hold button **2**.

» All settings made until then will be saved.

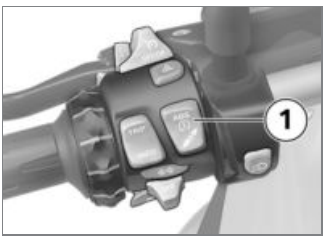
Anti-lock brake system (ABS)

Deactivating the ABS function

- Switching on ignition (➠ 50).

NOTICE

You have the option of deactivating the ABS function while the motorcycle is on the move.◀



- Press and hold down button **1** until the ABS telltale and warning light changes status.

» Initially, the ASC symbol changes status. Press and hold down button **1** until the ABS telltale and warning light responds. Under these circumstances, there is no change in the ASC setting.

ABS telltale and warning light shows.

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

ABS telltale and warning light remains on.

» The ABS function is deactivated, but the integral function remains active.

– with Hill Start Control OE

» Hill Start Control is still activated.◁

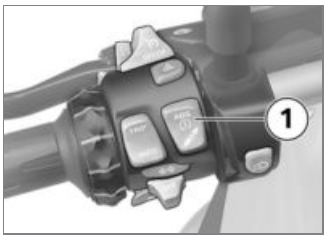
- See the section entitled "Engineering details" for more information on brake systems with BMW Motorrad Integral ABS.

» Partially integral brakes (➠ 122)

– with Hill Start Control OE

» Hill Start Control function (➠ 133)◁

Activating the ABS function



- Press and hold down button **1** until the ABS telltale and warning light changes status.

ABS telltale and warning light goes out; if self-diagnosis has not completed it starts flashing.

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

ABS telltale and warning light remains off or continues to flash.

» The ABS function is activated.

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

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

min 10 km/h

– with riding modes Pro OE

- If the encoding plug is not inserted, you have the alternative of switching the ignition off and back on again.◁

Automatic Stability Control (ASC)

– without riding modes Pro OE

Deactivating the ASC function

- Switching on ignition (➠ 50).

NOTICE

You have the option of deactivating the ASC function while the motorcycle is on the move.◀

- Press and hold down button **1** until the ASC telltale and warning light changes status.

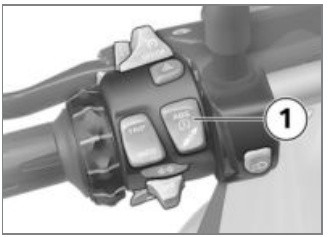
ASC telltale and warning light shows.

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

ASC telltale and warning light remains on.

» The ASC function is deactivated.

Activating the ASC function



- Press and hold down button **1** until the ASC telltale and warning light changes status.

ASC indicator and warning light no longer lights up and starts flashing if the self-diagnosis is incomplete.

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

ASC indicator and warning light remains off or continues flashing.

» The ASC function is activated.

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

An ASC fault has occurred if the ASC indicator and warning light shows when the motorcycle accelerates to a speed in excess of the minimum stated below after the ignition was switched off and then on again.
min 10 km/h

- See the section "Engineering details" for more information on BMW Motorrad Automatic Stability Control (ASC):

» How does ASC work? (➠ 125)

Dynamic Traction Control (DTC)

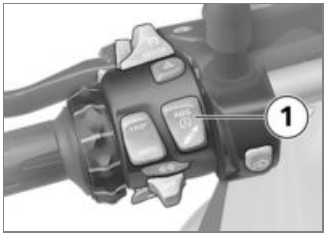
DTC Switching off

– with riding modes Pro OE

- Switching on ignition (➠ 50).

NOTICE

You have the option of deactivating the DTC function while the motorcycle is on the move.◀



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

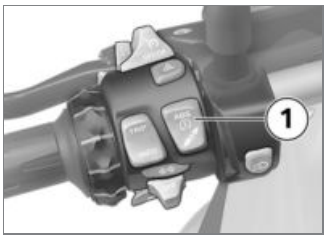
DTC indicator and warning light shows.

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

DTC indicator and warning light remains on.

» DTC is switched off.

DTC Switching on



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

DTC indicator and warning light goes out; if self-diagnosis has not completed, it starts flashing.

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

DTC indicator and warning light remains off or continues to flash.

» DTC is switched on.

- If the encoding plug is not inserted, you have the alternative of switching the ignition off and back on again.

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

min 10 km/h

- See the section "Engineering details" for more information on BMW Motorrad Dynamic Traction Control (DTC):

» How does traction control work? (➠ 126)

Electronic Suspension Adjustment (D-ESA)

– with Dynamic ESA OE

Dynamic ESA possible settings

The electronic chassis and suspension adjustment Dynamic ESA is able to adjust your motorcycle automatically to the load. If the spring preload is set to AUTO, the rider does not have to change the load settings. See the section "Engineering details" for more information on Dynamic ESA (➠ 128).

Available damping modes

- For on-road mode: ROAD and DYNA
- For off-road mode: ENDURO

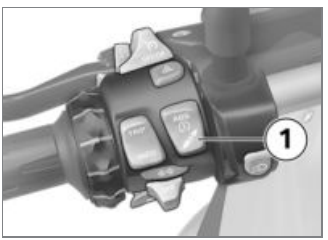
Available load settings

- Fixed set minimum spring preload: MIN
- Activated riding position equaliser with automatic adjustment of the spring preload: AUTO
- Fixed set maximum spring preload: MAX

NOTICE

The MAX setting must only be used for riding off-road.◀

Viewing suspension settings



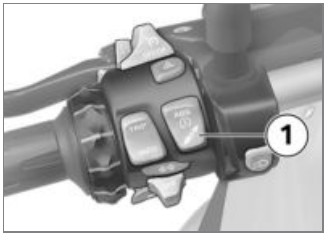
- Switching on ignition (➠ 50).
- Press button **1** briefly to view the current setting.

In the multifunction display, the damping is shown in area **1**, the spring preload in area **2**.

» The setting shows briefly, then disappears automatically.

Adjusting the chassis and suspension

- Switching on ignition (➠ 50).



- Press button **1** briefly to view the current setting.

To adjust damping:

- Repeatedly press button **1** briefly until the setting you want to use appears on the display.

NOTICE

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

The following settings are available:

– ROAD: Damping for comfortable on-road mode.
– DYNA: Damping for dynamic on-road mode
– ENDURO: Damping for off-road mode. Only available in ENDURO or ENDURO PRO riding modes and can also not be changed further in these riding modes.

To adjust spring preload:

- Start engine (➠ 105).
- Press button **1** briefly to view the current chassis and suspension setting.
- Repeatedly press and hold button **1** until the setting you want to use appears on the display.

NOTICE

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

NOTICE

The MAX setting must only be used for riding off-road.◀

The following settings are available:

– MIN: Minimum spring preload
– AUTO: Automatic setting of spring preload
– MAX: Maximum spring preload

» The settings for damping and spring preload shown on the display are automatically accepted if you allow a certain length of time to pass without pressing button **1**.
» The D-ESA display flashes when set to MIN or MAX.
» Once adjustment completes, the D-ESA display disappears.
» In AUTO loading mode, the spring preload is adjusted only once the motorcycle is driven off.

Riding mode

Using the riding modes

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

Series

– Riding on a rain-wet roadway.
– Riding on a dry roadway.

– with riding modes Pro OE

with Pro riding modes

– Dynamic riding on a dry road surface.
– Riding off-road with road tyres.

with Pro riding modes and installed encoding plug

– For dynamic riding on dry roadways while taking into account the settings made by the rider.
– For riding off road with off-road tyres with large tread blocks while taking into account the settings made by the rider.

The interplay of throttle response, ABS control and ASC/DTC control is optimised for each of the scenarios.

– with Dynamic ESA OE

The chassis and suspension adjustment can also be adjusted in the scenario selected.

See the section "Engineering details" for more information on the riding modes (➠ 128).

Select riding mode

• Switching on ignition (➠ 50).

• Press button **1**.

The selection arrow **1** and the first selectable riding mode **2** are displayed.

ATTENTION

Activation of the off-road mode (Enduro and Enduro Pro) when riding on-road.

Risk of crash due to lack of stability when the vehicle brakes or accelerates in the control range of ABS or ASC/DTC

- Activate off-road mode (Enduro and Enduro Pro) only for off-road riding.◀
- Press button **1** repeatedly until the required riding mode is indicated next to the selection arrow.

NOTICE

When selecting the Enduro PRO riding mode: note the deactivated ABS control for the rear wheel.◀

The following ride modes can be selected:

– RAIN: For riding on a rain-wet road surface.
– ROAD: For riding on a dry road surface.

– with riding modes Pro OE
» The following riding modes are additionally available for selection:◁
– DYNA: For dynamic riding on a dry road surface.
– Enduro: When riding off-road with road tyres:

– with riding modes Pro OE
» When an encoding plug is installed, the DYNA PRO and Enduro PRO riding modes replace DYNA and Enduro:◁
– DYNA PRO: For dynamic riding on dry roadways while taking into account the settings made by the rider.
– Enduro PRO: For riding off road with off-road tyres with large tread blocks while taking into account the settings made by the rider.

» With the motorcycle at a standstill, the selected mode is activated after approximately two seconds.
» The newly selected riding mode is activated as you ride only when the following preconditions are satisfied:
– Throttle twistgrip is in idle position.
– Brake is not applied.

» Following activation of the new riding mode the clock is displayed again.
» The values set in SETUP MODE are not shown permanently but in sequence for a limited time after the following events:
– After each Pre-Ride-Check when PRO riding mode is activated.
– After switching to the Enduro PRO riding mode.
– After switching to the DYNA PRO riding mode.
» The set riding mode with the relevant adjustments in engine characteristics, ABS, ASC/DTC and Dynamic ESA also remains once the ignition has been switched off.

PRO riding mode

– with riding modes Pro[OE]

Launching SETUP MODE

- Installing encoding plug (➠ 80).
- Switching on ignition (➠ 50).

- Repeatedly press button **1** briefly until the top display line shows **2** SETUP ENTER.
- Press and hold button **1** to start the SETUP menu.

SETUP MODE ENDURO PRO ENTER is displayed.

- Press the button **4** briefly to switch between the riding modes PRO **3**.

» The following PRO riding modes can be adjusted:
– ENDURO PRO
– DYNA PRO
• Press and hold button **4** to launch the SETUP MODE.
» SETUP DTC is displayed.

Adjusting Enduro PRO

– with riding modes Pro[OE]
• Launch SETUP MODE (➠ 76).
» SETUP DTC is displayed.

• Press button **4** briefly to set DTC to ENDURO or ENDURO PRO **3**.
• Press button **1** briefly.
» SETUP ABS is displayed.
• Press button **4** briefly to set ABS to ENDURO or ENDURO PRO **3**.
• Press button **1** briefly.
» SETUP ENGINE is displayed.
• Press button **4** briefly to set ENGINE to RAIN, ROAD or DYNA.
• Press button **1** briefly.
» SETUP MODE RESET is displayed.

• Press button **1** briefly to keep the settings.
» SETUP MODE EXIT is displayed.
• Press and hold the alternative button **4** to reset all parameters.
» The factory setting is adopted for the Enduro PRO riding mode:
– DTC: ENDURO PRO
– ABS: ENDURO PRO
– ENGINE: ROAD
» RESET flashes 3 times.
» SETUP MODE EXIT is displayed.

• Press button **1** briefly to return to the settings menu page.

» SETUP DTC is displayed.
- Press and hold the button **4** to permit SETUP MODE.

SETUP MODE ENDURO PRO ENTER is displayed.

- Press the button **1** repeatedly until SETUP EXIT is shown.
- Press and hold button **1**.

» The on-board computer readings appear on the display.

Adjusting DYNA PRO

– with riding modes Pro[OE]

- Launch SETUP MODE (➠ 76).

» SETUP DTC is displayed.

- Press button **4** briefly to set DTC to RAIN, ROAD or DYNA **3**.
- Press button **1** briefly.

» SETUP ENGINE is displayed.
- Press button **4** briefly to set ENGINE to RAIN, ROAD or DYNA.
- Press button **1** briefly.

NOTICE

ABS can only be set in the Enduro PRO riding mode.◀

» SETUP MODE RESET is displayed.

- Press button **1** briefly to keep the settings.

» SETUP MODE EXIT is displayed.

- Press and hold the alternative button **4** to reset all parameters.

» Factory setting adopted for DYNA PRO riding mode:

– DTC: DYNA
– ENGINE: DYNA

» RESET flashes 3 times.

» SETUP MODE EXIT is displayed.

- Press button **1** briefly to return to the settings menu page.

» SETUP DTC is displayed.

- Press and hold the button **4** to permit SETUP MODE.

SETUP MODE DYNA PRO ENTER is displayed.

- Press the button **1** repeatedly until SETUP EXIT is shown.
- Press and hold button **1**.

» The on-board computer readings appear on the display.

Deactivate the RDC for off-roading

Requirement

The motorcycle should be driven with reduced tyre pressure when off road.

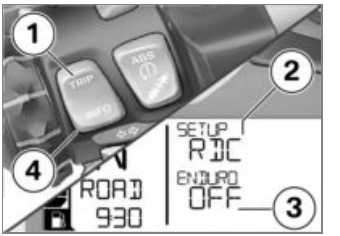
Requirement

Either the ENDURO or ENDURO PRO riding mode has been set

in order to be able to switch the RPA off.

- Switching on ignition (➠ 50).

- Repeatedly press button **1** briefly until the top display line **2** shows SETUP ENTER.
- Press and hold button **1** to start the SETUP menu.



- Press button **1** briefly to go to the next menu item RDC.

» In the top display line **2**, RDC is displayed.

» The bottom display line **3** shows the preset value.

- Press button **4** briefly in order to change the set value.

» The following settings are possible RDC Enduro:

ON: The RDC warning symbol in the display does not show. Only a tyre pressure that is outside the permitted tolerance is displayed.

OFF: The RDC warning symbol is shown in the display and the tyre pressure outside of the permitted tolerance is shown.

Installing encoding plug

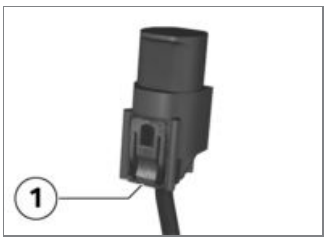
- Switching off ignition (➠ 51).
- Removing front seat (➠ 89).

ATTENTION

Dirt and damp penetrating inside open connectors

Malfunctions

- Reinstall the protective cap after removing the coding plug.◀
- Remove cap of plug **1**.



- Press in the lock **1** and pull of the protective cap.
- Install the encoding plug.
- Switch on the ignition.

NOTICE

If the encoding plug is in place, the disabled driving safety systems remain disabled even after switching the ignition off and back on.◀

The symbol for the encoding plug **1** is shown on the display. The riding modes **2** Enduro PRO and DYNA PRO can be selected and replace the Enduro and DYNA riding modes.

- Installing front seat (➠ 90).

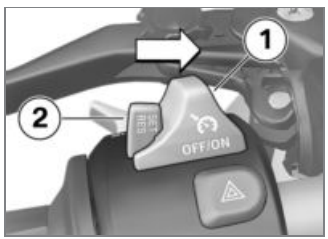
Cruise-control system

– with cruise control[OE]

Switching on cruise control

Requirement

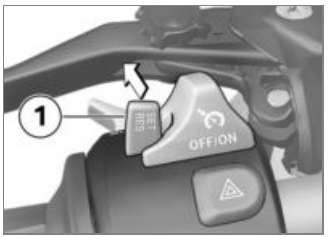
Cruise control is not available until the Enduro or Enduro Pro riding mode has been deactivated.



- Slide switch **1** to the right.

» Button **2** is operational.

Saving road speed



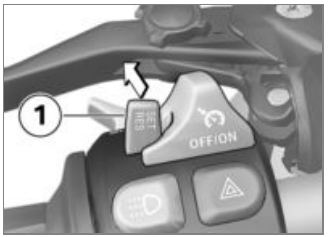
- Briefly push button **1** forward.

Adjustment range for cruise control (depending on gear)
20...210 km/h

Telltale light for cruise control shows.

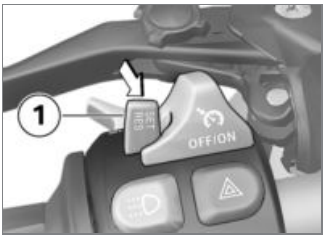
» The motorcycle maintains your current cruising speed and the setting is saved.

Accelerating



- Briefly push button **1** forward.
» The speed is increased by 2 km/h each time the button is pushed.
- Push button **1** forward and hold it in this position.
» The motorcycle accelerates steplessly.
» The current speed is maintained and saved if button **1** is not pushed again.

Decelerating



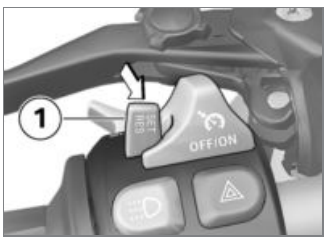
- Briefly push button **1** back.
» The speed is reduced by 2 km/h each time you push the button.
- Push button **1** back and hold it in this position.
» The motorcycle decelerates steplessly.
» The current speed is maintained and saved if button **1** is not pushed again.

Deactivate cruise control

- Brake, pull the clutch lever or turn the throttle twistgrip (close the throttle by turning

the twistgrip back past the idle position) to deactivate the cruise-control system.
» Telltale light for cruise control goes out.

Resuming former cruising speed



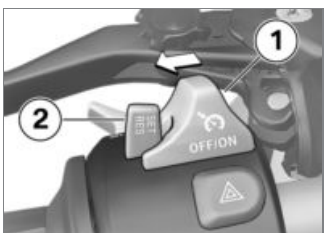
- Briefly push button **1** back to return to the speed saved beforehand.

NOTICE

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

Telltale light for cruise control shows.

Switching off cruise control



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

Hill Start Control

– with Hill Start Control[OE]

Operate Hill Start Control

Requirement

The vehicle is at a standstill.

ATTENTION

Switching off the engine or ignition, extending the side stand, timeout (approx. 20 minutes) or in the event of a fault

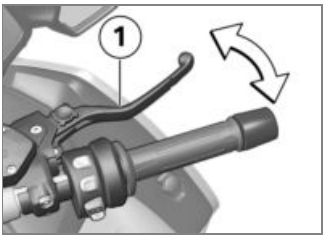
Hill Start Control brake failure

- It is essential to apply the brakes manually to hold the vehicle.◀

NOTICE

Hill Start Control is purely a comfort system to facilitate holding the machine and pulling way on uphill gradients and should

not be confused with a parking brake.◀



- Operate the parking brake lever **1** with force and once again release it.

The holding symbol is displayed.

» Hill Start Control has been activated.

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

The holding symbol disappears.

- Or drive off in first or second gear.

NOTICE

Hill Start Control is deactivated automatically when driving off.◀

General warning light flashes yellow.

The holding symbol flashes briefly.

Once the brake has been fully released, the holding symbol disappears.

» Hill Start Control has been switched off.

- See the section "Engineering details" for more information on Hill Start Control.

» Hill Start Control function (➠ 133)

Anti-theft alarm (DWA)

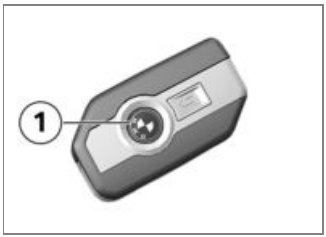
– with alarm system (DWA)[OE]

Activation

- Switching on ignition (➠ 50).
- Customising anti-theft alarm settings (➠ 87).
- Switch off the ignition.

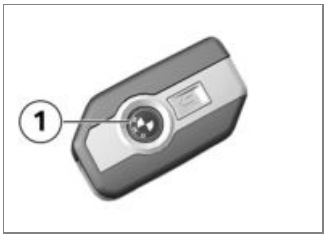
» If the alarm system is activated, then the alarm system will be automatically activated when the ignition is switched off.
» Activation takes approximately 30 seconds to complete.
» Turn indicators flash twice.
» Confirmation tone sounds twice (if programmed).
» Anti-theft alarm is active.

– with Keyless Ride[OE]



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

» Activation takes approximately 30 seconds to complete.
» Turn indicators flash twice.
» Confirmation tone sounds twice (if programmed).
» Anti-theft alarm is active.



- Press button **1** again on the radio-operated key during the activation phase to deactivate the motion sensor (e.g. to transport the motorcycle by train when the severe movements may activate the alarm).

» Turn indicators flash three times.
» Confirmation tone sounds three times (if programmed).
» Motion sensor has been deactivated.

Alarm signal

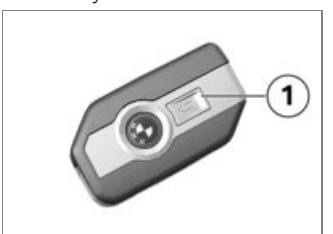
A DWA alarm can be triggered by:

– motion sensor
– an attempt to use an unauthorised vehicle key to switch on the ignition
– disconnection of the DWA anti-theft alarm from the motorcycle's battery (DWA internal battery in the anti-theft alarm provides power - alarm tone only, the turn indicators do not flash)

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

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

– with Keyless Ride OE



The activated alarm can be aborted at any time by pressing the **1** button on the radio-operated key, without deactivating the anti-theft alarm.

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

Light signals issued by the DWA LED:

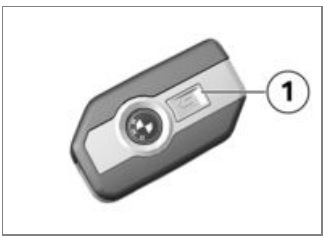
– Flashes 1x: Motion sensor 1
– Flashes 2x: Motion sensor 2
– Flashes 3x: Ignition switched on with unauthorised vehicle key
– Flashes 4x: Disconnection of the anti-theft alarm from the motorcycle's battery
– Flashes 5x: Motion sensor 3

Deactivation

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

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

– with Keyless Ride OE



- Press button **1** on the radio-operated key once.

NOTICE

If the alarm function is deactivated by the remote control and the ignition is not subsequently switched on, the alarm function automatically goes active again after 30 seconds if "Activation after ignition OFF" is programmed.◀

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

Customising anti-theft alarm settings

• Switching on ignition (➠ 50).

• Repeatedly press button **1** briefly until the top display line shows **2** SETUP ENTER.
• Press and hold button **1** to start the SETUP menu.

• Press button **1** briefly to go to the next menu item DWA.
» In the top display line **2**, DWA is indicated.
» The bottom display line **3** shows the preset value.
• Press button **4** briefly in order to change the set value.

The following settings are available:

– ON: alarm system is activated or is automatically activated after having switched off the ignition.
– OFF: alarm is deactivated.

Heated handlebar grips

– with heated grips OE

Operating the heated handlebar grips

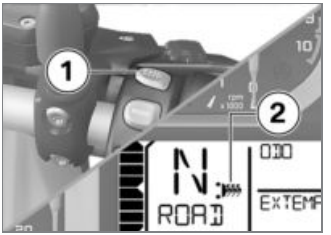
NOTICE

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

• Start engine (➠ 105).

NOTICE

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



- Repeatedly press button **1** until desired heating stage **2** appears on the display.

The handlebar grips have two-stage heating.

50% heating power

100% heating power

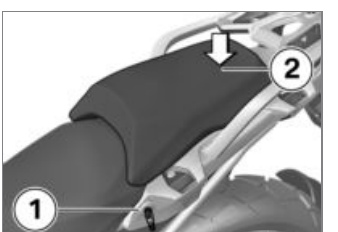
» Stage 2 is for heating the grips quickly: it is advisable to switch back to stage 1 as soon as the grips are warm.
» The selected heating stage will be saved if you allow a certain length of time to pass without making further changes.

- In order to switch off the heated handlebar grips, repeatedly press button **1** until the heated handlebar grip symbol **2** is no longer shown on the display.

Front and rear seats

Removing rear seat

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



- Turn the key clockwise in seat lock **1** and hold it in this position while pressing down the rear part of rear seat **2**.
- Lift the rear seat at the front and release the key.
- Remove the rear seat and place it, upholstered side down, on a clean surface.

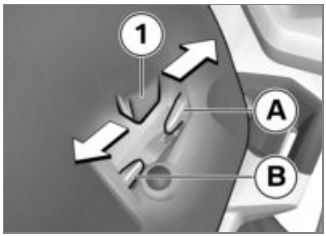
Install the rear seat

ATTENTION

Damaged components

Damage to sensors, for example, which causes malfunctions

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



- Bear in mind the position of the rider`s seat with regard to the direction for adjustment of the passenger seat.

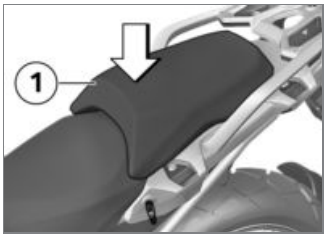
– The rear seat can be set to either of 2 different positions.

- Centre both lugs **1** on the rear seat in the mounts.

– Rear seat position: Push passenger seat toward the rear **A**.

– Front seat position: Push passenger seat forward **B**.

» Lugs **1** of the rear seat are correctly located.

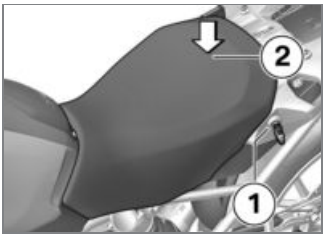


- Press down firmly on passenger seat **1** at the front.

» The passenger seat engages with an audible click.

Removing front seat

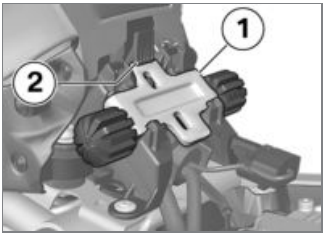
- Removing rear seat (➠ 88).



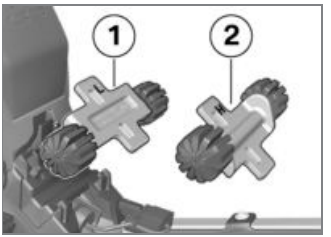
- Turn and hold the seat lock **1** to the left with the ignition key while pushing down the driver's seat at the rear **2**.
- Lift the driver's seat at the rear and release the key.
- Remove the driver's seat and place it on a clean surface with the upholstery facing down.

Setting the driver's seat height and inclination

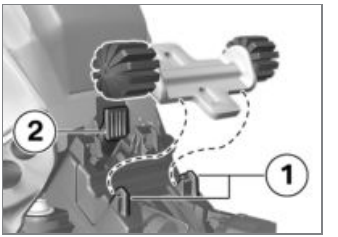
- Removing front seat (➠ 89).



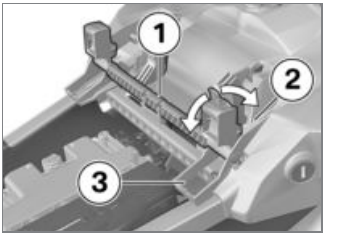
- To remove the front height adjustment **1**, push the locking mechanism forwards **2** and remove the height adjustment in an upwards direction.



- To set the low seat position, install the height adjustment and align it with **1** (identification L).
- To set the high seat position, install the height adjustment and align it with **2** (identification H).



- First push the front height adjustment under the mounts**1** then push it into the locking mechanism **2** until it engages.



- To set the low seat position, swing the rear height adjustment **1** into position **3** (identification L).
- To set the high seat position, swing the rear height adjustment into position **1 2** (identification H).

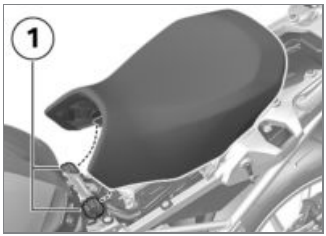
If the seat angle needs to be adjusted:

- Position the front and rear height adjustment differently.

Installing front seat

- Removing rear seat (➠ 88).

- Set the driver's seat height and inclination (➠ 89).



- Insert the rider's seat into the fixtures **1** on the left and right and lean carefully on the motorcycle.
- Push the rider's seat forwards slightly by applying pressure at the rear and then push it down with force until the locking mechanism engages.

Adjustment

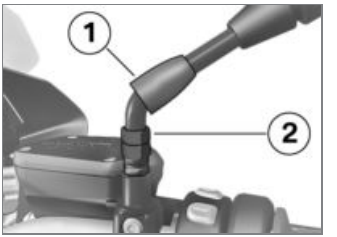
Mirrors 94
Headlight 94
Windscreen 95
Clutch 96
Brakes 96
Handlebars 97
Spring preload 97
Damping 98

Mirrors

Adjusting mirrors

- Turn the mirror to the correct position.

Adjusting mirror arm



- Push protective cap **1** up over the threaded fastener on the mirror arm.
- Slacken nut **2**.
- Turn the mirror arm to the appropriate position.
- Tighten the nut to the specified tightening torque, while holding the mirror arm in place.

Mirror (locknut) to adapter
22 Nm (Left-hand thread)

- Push protective cap **1** over the threaded fastener.

Headlight

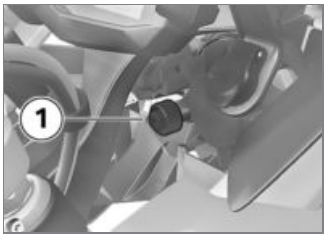
Headlight beam throw and spring preload

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

NOTICE

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

Adjusting headlight beam throw



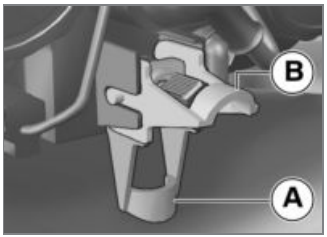
If, for a high load, the adjustment of the spring pre-load is no longer sufficient not to dazzle oncoming traffic:

- Turn adjuster knob **1** counter-clockwise in order to lower the headlight beam again.

When the motorcycle is again ridden with a lower load:

- Have the basic settings of the headlight restored by a specialist workshop, best of all by a BMW Motorrad dealer.

– with LED headlight[OE]



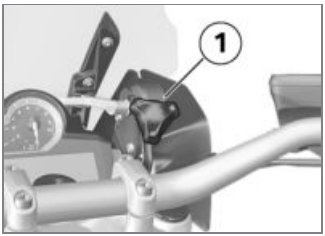
- The headlight beam-throw is adjusted via an engage pivot lever.

– **A** Neutral position

– **B** Position for heavy load◁

Windscreen

Adjusting windscreen



WARNING

Adjusting the windscreen while riding

Risk of falling

- Do not attempt to adjust the windscreen unless the motorcycle is at a standstill.◀
- Turn knob **1** clockwise to lower the windscreen.
- Turn knob **1** counter-clockwise to raise the windscreen.

Clutch

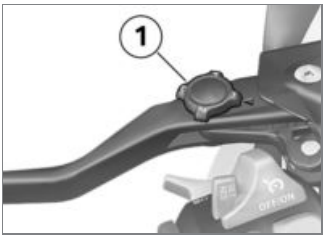
Adjusting the clutch lever

WARNING

Adjusting the clutch lever while riding

Risk of accident

- Do not attempt to adjust the clutch lever unless the motorcycle is at a standstill.◀



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

NOTICE

The adjuster is easier to turn if you push the clutch lever forward.◀

» Four settings are possible:

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

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

Brakes

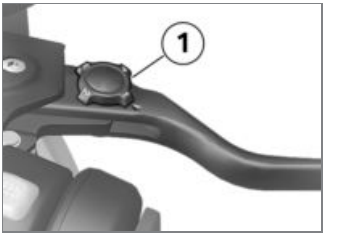
Adjusting the front brake lever

WARNING

Adjusting the brake lever while riding

Risk of accident

- Do not attempt to adjust the brake lever unless the motorcycle is at a standstill.◀



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

NOTICE

The adjuster is easier to turn if you push the brake lever forward.◀

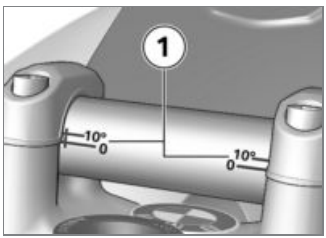
» Four settings are possible:

– Position 1: smallest span between handlebar grip and brake lever

– Position 4: largest span between handlebar grip and brake lever

Handlebars

Adjustable handlebars



The angle of the handlebars can be adjusted within the marked areas **1**.
Allow a specialist workshop, preferably an authorised BMW Motorrad dealer to adjust the handlebars.

Spring preload

– without Dynamic ESA OE

Adjustment

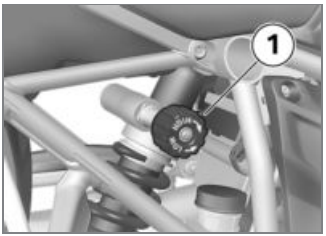
It is essential to set the spring preload of the rear suspension to suit the load carried by the motorcycle. Increase the spring preload when the vehicle is heavily loaded and reduce the spring preload accordingly when the vehicle is lightly loaded.

Adjusting spring preload for rear wheel

WARNING

Adjusting spring preload while riding.
Risk of accident

- Do not attempt to adjust spring preload unless the motorcycle is at a standstill.◀
- Place the motorcycle on its stand on firm, even ground.



WARNING

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

- Adjust spring-strut damping to suit spring preload.◀
- To increase the spring preload, turn the adjuster knob **1** in the direction indicated by the HIGH arrow.
- To reduce the spring preload, turn the adjuster knob **1** in the direction indicated by the LOW arrow.

Basic setting of spring preload, rear
Turn the knob as far as it will go in the LOW direction. (One-up without luggage)
Turn the adjuster knob as far as it will go in the LOW direction, then 15 turns in the HIGH direction. (One-up with luggage)
Turn the adjuster knob as far as it will go in the LOW direction, then 30 turns in the HIGH direction. (Two-up with luggage)

Damping

– without Dynamic ESA OE

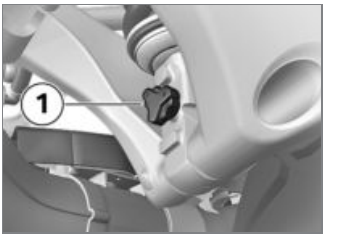
Setting

Damping must be adapted to suit the surface on which the motorcycle is ridden and to suit spring preload.

– An uneven surface requires softer damping than a smooth surface.
– An increase in spring preload requires firmer damping, a reduction in spring preload requires softer damping.

Adjusting the damping characteristic for rear wheel

- Place the motorcycle on its stand on firm, even ground.
- Set the damping from the left-hand vehicle side.



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

Basic setting of rear-suspension damping characteristic
Turn the adjuster knob as far as it will go in the clockwise direction, then back it off 8 clicks in the counter-clockwise direction. (One-up without luggage)

Basic setting of rear-suspension damping characteristic
Turn the adjuster knob as far as it will go in the clockwise direction, then back it off 2 clicks in the counter-clockwise direction. (One-up with luggage)
Turn the adjuster knob as far as it will go in the clockwise direction, then back it off 2 clicks in the counter-clockwise direction. (Two-up with luggage)

Riding

Safety instructions 102
Comply with checklist..... 105
Always before riding off 105
Every 3rd refuelling stop 105
Starting 105
Running in 109
Off-roading 109
Shifting gear 111
Brakes 112
Parking your motorcycle 114
Refuelling 114
Securing motorcycle for transportation 118

Safety instructions

Rider's equipment

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

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

Restricted angle of heel

– with lowered suspension OE

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

WARNING

When a motorcycle with lowered suspension is cornering, certain components can come into contact with the surface at a bank angle less than that to which the rider is accustomed.
Risk of falling
- Carefully try out the limits of the motorcycle's bank angle and adapt your style of riding accordingly.◀

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

Lowering the motorcycle's suspension shortens suspension travel (see the section entitled "Technical Data"). Ride comfort might be restricted as a result. Be sure to adjust spring preload accordingly, particularly for riding two-up.

Loading

WARNING

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

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

– with topcase OA
- Note the maximum permissible payload and the speed limit for riding with topcase fitted, as stated on the label inside the case (see also the section entitled "Accessories").◁

– with tank bag OA
- Note the maximum permissible payload of the tank rucksack.

 Payload of tank rucksack
max 5 kg◁

Speed

If you ride at high speed, always bear in mind that various boundary conditions can adversely affect the handling of your motorcycle:
– Settings of the spring-strut and shock-absorber system
– Imbalanced load
– Loose clothing
– Insufficient tyre pressure
– Poor tyre tread
– Etc.

Maximum speed with knobbly tyres or winter tyres

DANGER

Maximum speed of the motorcycle is higher than the permissible maximum rated speed of the tyres

Risk of accident due to tyre damage at high speed
- Comply with the tyre-specific speed restrictions.◀

Always bear the maximum permissible speed of the tyres in mind when riding a motorcycle fitted with knobbly tyres or winter tyres.

Affix a label stating the maximum permissible speed to the instrument panel in the rider's field of vision.

Risk of poisoning

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

⚠ WARNING

Exhaust gases adversely affecting health

Risk of asphyxiation

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

Risk of burn injury

⚠ CAUTION

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

Risk of burn injury

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

Catalytic converter

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

The following guidelines must be observed:

– Do not run the fuel tank dry.
– Do not attempt to start or run the engine with a spark-plug cap disconnected.
– Stop the engine immediately if it misfires.
– Use only unleaded fuel.
– Comply with all specified maintenance intervals.

ATTENTION

Unburned fuel in catalytic converter

Damage to catalytic converter

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

Risk of overheating

ATTENTION

Engine running for prolonged period with vehicle at standstill

Overheating due to insufficient cooling; in extreme cases vehicle fire

- Do not allow the engine to idle unnecessarily.
- Ride away immediately after starting the engine.◀

Tampering

ATTENTION

Tampering with the motorcycle (e.g. engine management ECU, throttle valves, clutch)

Damage to the affected parts, failure of safety-relevant functions, voiding of warranty

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

Comply with checklist

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

Always before riding off

- Check operation of the brake system.
- Check operation of the lights and signalling equipment.
- Checking clutch function (➠ 144).
- Checking tyre tread depth (➠ 146).
- Checking tyre pressure (➠ 146).
- Check that cases and luggage are securely held in place.

Every 3rd refuelling stop

– without Dynamic ESA OE

- Adjuster for spring preload, rear (➠ 97).

- Adjusting the damping characteristic for rear wheel (➠ 98).◁

– with Dynamic ESA OE

- Adjusting the chassis and suspension (➠ 72).◁

- Checking engine oil level (➠ 138).
- Checking front brake pad thickness (➠ 140).
- Check rear brake pad thickness (➠ 141).
- Checking brake-fluid level, front brakes (➠ 142).
- Checking the brake-fluid level, rear brakes (➠ 143).
- Check coolant level (➠ 144).

Starting

Start engine

- Switch on the ignition.

» Pre-Ride-Check is performed. (➠ 106)

» ABS self-diagnosis is in progress. (➠ 106)

– without riding modes Pro OE

» ASC self-diagnosis is performed. (➠ 107)◁

– with riding modes Pro OE

» DTC self-diagnosis is in progress. (➠ 108)◁

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

NOTICE

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

- For a cold engine start and low temperatures: pull clutch.

- Press starter button **1**.

» The engine starts.

» If the engine refuses to start, consult the troubleshooting chart in the section entitled "Technical data". (➠ 194)

Recharge the battery before you start the engine, or use jump leads and a donor battery to start.

- Charge battery when connected (➠ 162).
- Jump-starting (➠ 160).

NOTICE

The start attempt is automatically interrupted if battery voltage is too low.◀

Pre-Ride-Check

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

Phase 1

All telltale and warning lights are switched on.

Phase 2

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

Phase 3

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

The malfunction indicator lamp only goes out after 15 seconds.

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

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

ABS self-diagnosis

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

Phase 1

» Test of the diagnosis-compatible system components with the vehicle at a standstill.

ABS telltale and warning light flashes.

Phase 2

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

ABS telltale and warning light flashes.

ABS self-diagnosis completed

» The ABS indicator and warning light goes out.

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

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

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

ASC self-diagnosis

– without riding modes Pro OE

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

Phase 1

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

ASC telltale and warning light slow-flashes.

Phase 2

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

ASC telltale and warning light slow-flashes.

ASC self-diagnosis completed

» The ASC telltale and warning light goes out.

- Check all the indicator and warning lights.

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

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

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

DTC self-diagnosis

– with riding modes Pro OE

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

Phase 1

» Test of the diagnosis-compatible system components with the vehicle at a standstill.

DTC indicator and warning light flashes slowly.

Phase 2

» Pullaway test of the system components with diagnostic capability.

DTC indicator and warning light flashes slowly.

DTC self-diagnosis completed

» The DTC symbol no longer shows.

- Check all the indicator and warning lights.

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

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

- You can continue to ride. Bear in mind that the DTC function is not available or the functionality might be subject to certain restrictions.

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

Running in

Engine

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

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

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

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

Brake pads

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

WARNING

New brake pads

Longer stopping distance, risk of accident

- Apply the brakes in good time.◀

Tyres

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

WARNING

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

Risk of accident

- Ride carefully and avoid extremely sharp inclines.◀

Off-roading

For off-roading

Rims

ATTENTION

Off-roading more severe than riding on unsurfaced tracks

Damage to standard cast-aluminium rims
- Use the cross-spoked wheels available as optional extras for severe off-roading.◀

After off-roading

BMW Motorrad recommends checking the following after riding the motorcycle off-road:

Tyre pressure

WARNING

Lower tyre pressure for off-roading in operation on smooth roads
Risk of accident due to impaired driving characteristics.
- Always check that the tyre pressures are correct.◀

Brakes

WARNING

Driving on unpaved or dirt roads
Delayed braking efficiency due to soiled brake disks and brake pads.
- Brake early until the brakes are clean.◀

ATTENTION

Riding on unsurfaced or dirty roads
Increased brake pad wear
- Check the thickness of the brake pads more frequently and replace the brake pads in good time.◀

Spring preload and shock-absorber settings

WARNING

Changed values for spring preload and spring strut damping for off-roading
Impaired driving characteristics on paved roads
- Before leaving the off-road terrain, set the correct spring preload and shock absorption.◀

Rims

BMW Motorrad recommends checking the rims for damage after off-roading.

Air filter element

ATTENTION

Dirty air filter element
Engine damage
- If you ride in dusty terrain check the air filter element for

clogging at shorter intervals; clean or replace as necessary.◀

Operation in very dusty conditions (desert, steppes, or the like) necessitates the use of air filter elements specially designed for conditions of this nature.

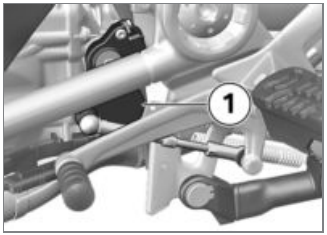
Shifting gear

– with shift assistant Pro OE

Shift assistant Pro

NOTICE

Whenever the Pro shift assistant shifts gears, cruise control is automatically disengaged for safety reasons.◀



- Select the gears in the usual way by using the foot-operated gearshift lever.

» The shift assistant assists upshifts and downshifts without the rider having to pull the clutch or close the throttle.

– This is not an automatic-shift system.
– The rider is the most important part of the system and decides when to shift gears.
– Sensor **1** on the selector shaft registers the shift request and triggers shift assistance.

» When riding at a steady speed in a low gear at high engine rpm, an attempt to shift gear without pulling the clutch can cause a severe load-change reaction.

– BMW Motorrad recommends disengaging the clutch for shifts in these circumstances.
– It is advisable to avoid using the Pro shift assistant at engine speeds close to the limits at which the governor cuts in to limit engine rpm.

» Shift assistance is not available in the following situations:

– With clutch lever pulled.
– Shift lever not in its initial position.
– Upshifts with the throttle valve closed (coasting) and when slowing.

- After a gearshift, you must fully release the gearshift lever before another gearshift with the Pro shift assistant can take place.

» See the section "Engineering details" for more information on the Pro shift assistant.
» Shift assistant Pro (➠ 132)

Brakes

How can stopping distance be minimised?

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

Hazard braking

– with riding modes Pro[OE]

If you brake sharply from a speed in excess of 50 km/h, the brake light flashes rapidly as an additional warning for road users behind you.
The hazard warning lights system switches on if you brake to below 15 km/h in this process.
The hazard warning lights system automatically switches off again from a speed of 20 km/h.

Descending mountain passes

WARNING

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

Wet and dirty brakes

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

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

WARNING

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

ABS Pro

– with riding modes Pro OE

Physical limits applicable to motorcycling

WARNING

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

ABS Pro is available in all riding modes except Enduro PRO.

Possibility of a fall not precluded

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

Use on public roads

ABS Pro helps make the motorcycle even safer for riding on public roads. When the brakes are applied because of an unforeseen hazard when the motorcycle is banked for cornering, within the physical limits that apply to motorcycling the system prevents the wheels from locking and skidding away.

NOTICE

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

ations approaching the limits of performance.◀

Parking your motorcycle

Side stand

- Switch off the engine.

ATTENTION

Poor ground underneath the stand

Risk of damage to parts if vehicle topples

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

ATTENTION

Additional weight placing strain on the side stand

Risk of damage to parts if vehicle topples

- Do not sit or lean on the vehicle while it is propped on the side stand.◀
- Extend the side stand and prop the motorcycle on the stand.
- Turn the handlebars all the way to left.
- On a gradient, the motorcycle should always face uphill; select 1st gear.

Centre stand

- Switch off the engine.

ATTENTION

Poor ground underneath the stand

Risk of damage to parts if vehicle topples

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

ATTENTION

Centre stand folds in due to sharp movements

Risk of damage to parts if vehicle topples

- Do not lean or sit on the vehicle with the centre stand extended.◀
- Extend the centre stand and lift the motorcycle onto the stand.
- On a gradient, the motorcycle should always face uphill; select 1st gear.

Refuelling

Fuel grade

Requirement

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

ATTENTION

Engine operation with leaded fuel

Damage to catalytic converter

- Do not attempt to run the vehicle on leaded fuel or fuel with metallic additives (e.g. manganese or iron).◀
- You can run the engine on fuel with a maximum ethanol content of 10 %, i.e. E10.

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

 Alternative fuel grade
Regular unleaded (power and consumption-related restrictions.) (max. 10 % ethanol, E10) 91 ROZ/RON 87 AKI

» A conversion is required if the quality is not sufficient. Have the motorcycle programmed beforehand at an authorised BMW Motorrad retailer.

Refuelling

WARNING

Fuel is highly flammable

Risk of fire and explosion

- Do not smoke. Never bring a naked flame near the fuel tank.◀

ATTENTION

Component damage

Component damage caused by overfilled fuel tank

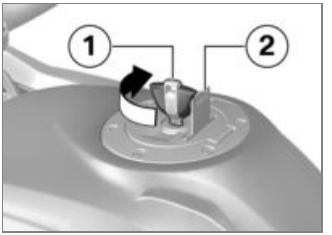
- Overfilling the fuel tank will cause excess fuel to penetrate the carbon canister and cause component damage.
- Fill the fuel tank up to the lower edge of the filler neck only.◀

ATTENTION

Wetting of plastic surfaces by fuel

Damage to the surfaces (surfaces become unsightly or dull)

- Clean plastic surfaces immediately after contact with fuel.◀
- Make sure the ground is level and firm and place the motorcycle on its centre stand.



- Open the protective cap **2**.
- Use ignition key **1** to unlock fuel filler cap by turning it clockwise, and flip the cap open.

- Refill with fuel up to the lower edge of the fuel filler neck.

NOTICE

When refuelling after running on reserve, make sure that you top up the tank to a level above reserve, as otherwise the new level will not be registered and the fuel warning light indicating that the level is down to reserve will not be switched off.◀

NOTICE

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

Usable fuel capacity
approx. 20 l

Reserve fuel
approx. 4 l

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

Refuelling

– with Keyless Ride[OE]

Requirement

The steering lock is disengaged.

WARNING

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

WARNING

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

ATTENTION

Wetting of plastic surfaces by fuel
Damage to the surfaces (surfaces become unsightly or dull)
- Clean plastic surfaces immediately after contact with fuel.◀
- Make sure the ground is level and firm and place the motorcycle on its centre stand.

– with Keyless Ride[OE]
- Switching off ignition (➠ 53).

NOTICE

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

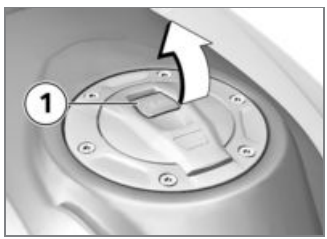
Waiting time for opening fuel filler cap
2 min

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

Version 1

– with Keyless Ride[OE]

Requirement
Within the waiting time



- Pull up tab **1** of the fuel filler cap slowly.

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

Version 2

– with Keyless Ride[OE]

Requirement
After the waiting time has expired

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

» The telltale light for the radio-operated key flashes while the search for the radio-operated key is in progress.

- Again slowly pull up tab **1** of the fuel filler cap.

» Fuel filler cap unlocks.

- Fully open the fuel filler cap.

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

NOTICE

When refuelling after running on reserve, make sure that you top up the tank to a level above reserve, as otherwise the new level will not be registered and the fuel warning light indicating that the level is down to reserve will not be switched off.◀

NOTICE

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

Usable fuel capacity
approx. 20 l

Reserve fuel
approx. 4 l

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

» The fuel filler cap engages with an audible click.

» The fuel filler cap locks automatically when the waiting time expires.

» The engaged fuel filler cap locks immediately when you secure the steering lock or switch on the ignition.

Securing motorcycle for transportation

- Make sure that all components that might come into contact with straps used to secure the motorcycle are adequately protected against scratching. Use

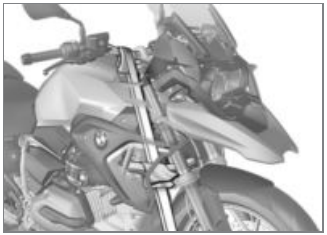
adhesive tape or soft cloths, for example, for this purpose.

ATTENTION

Vehicle topples to side when being lifted on to stand

Risk of damage to parts if vehicle topples

- Secure the vehicle to prevent it toppling, preferably with the assistance of a second person.◀
- Push the motorcycle onto the transportation flat and hold it in position: do not place it on the side stand or centre stand.



ATTENTION

Trapping of components

Component damage

- Do not trap components such as brake lines or cable legs.◀
- At the front, secure the straps to the handlebars on both sides.
- Pass the straps through the leading link and tighten the straps.

- Secure the tensioning straps at the rear on both sides to the frame for the rear footrest and tighten the straps.
- Tighten all the straps uniformly; the vehicle's suspension should be compressed as tightly as possible front and rear.

Engineering details

General instructions 122
Anti-lock brake system (ABS) 122
Automatic Stability Control (ASC) 125
Dynamic Traction Control (DTC) 126
Dynamic ESA 127
Riding mode 128
Tyre pressure monitoring (RDC) 131
Shift assistant 132
Hill Start Control 133

General instructions

To find out more about engineering, go to:
bmw-motorrad.com/technology

Anti-lock brake system (ABS)

Partially integral brakes

Your motorcycle is equipped with partially integral brakes. Both front and rear brakes are applied when you pull the handbrake lever. The footbrake lever acts only on the rear brake.
While the brakes are slowing the motorcycle with ABS actively intervening, the BMW Motorrad Integral ABS adapts braking-force distribution between front and rear brakes to suit the load on the motorcycle.

ATTENTION

Attempted burn-out despite Integral braking function
Damage to rear brake and clutch
• Do not burn out tyres.◀

How does ABS work?

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

What are the effects of surface irregularities?

Humps and surface irregularities can cause the wheels to lose contact temporarily with the road surface; if this happens the braking force that can be transmitted to the road can drop to zero. If the rider brakes in this situation, the ABS has to reduce the brake pressure in order to ensure driving stability when resuming contact with the road. Up to this point, BMW Motorrad Integral ABS assumes an extremely low coefficient of friction (gravel, ice, snow) so that the road wheels turn in every conceivable situ-

ation and so ensure driving stability. As soon as is registers the actual circumstances, the system reacts instantly and adjusts braking force accordingly to achieve optimum braking.

What feedback does the rider receive from the BMW Motorrad Integral ABS?

If the ABS system has to reduce braking force on account of the circumstances described above, vibration is perceptible through the handbrake lever.
When the handbrake lever is pulled, brake pressure is also built up at the rear wheel by the integral function. If the brake pedal is depressed after the handbrake lever is pulled, the brake pressure built up beforehand is perceptible as counter-pressure sooner than is the case when the brake pedal is depressed either before or at the same time as the brake lever is pulled.

Rear wheel lift

Under very severe and sudden deceleration, however, under certain circumstances it is possible that the BMW Motorrad Integral ABS will be unable to prevent the rear wheel from lifting clear of the ground. If this happens the outcome can be a highsiding situation in which the motorcycle can flip over.

⚠ WARNING

Rear wheel lift due to severe braking

Risk of falling

- When you brake sharply, bear in mind that ABS control cannot always be relied on to prevent the rear wheel from lifting clear of the ground.◀

What is the design baseline for BMW Motorrad Integral ABS?

Within the limits imposed by physics, the BMW Motorrad Integral ABS ensures directional stability on any surface. The system is not optimised for special requirements that apply under extreme competitive situations off-road or on the track. The driving behaviour should be adapted to actual driving skills and the road conditions.

Special situations

The speeds of the front and rear wheels are compared as one means of detecting a wheel's incipient tendency to lock. If the system registers implausible values for a lengthy period the ABS function is deactivated for safety reasons and an ABS fault message is issued. Self-dia-

gnosis has to complete before fault messages can be issued. In addition to problems with the BMW Motorrad ABS, exceptional riding conditions can also cause a fault message to be issued:

– Heating up with the motorcycle on the centre stand or an auxiliary stand, engine idling or with a gear engaged.
– Rear wheel locked by the engine brake for a lengthy period, for example while descending on a loose or slippery surface.

If a fault message is issued on account of exceptional riding conditions, you can reactivate the ABS function by switching the ignition off and on again.

What significance devolves on regular maintenance?

WARNING

Brake system not regularly serviced.

Risk of accident

- In order to ensure that the ABS is always maintained in optimum condition, it is essential for you to comply strictly with the specified inspection intervals.◀

Reserves for safety

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.

WARNING

Braking when cornering

Risk of accident despite ABS

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

Evolution of ABS to ABS Pro

– with riding modes Pro[OE]

Until now, the BMW Motorrad ABS helped ensure a very high degree of safety for braking with the motorcycle upright and travelling in a straight line. Now ABS Pro offers enhanced safety for braking in corners as well. ABS Pro prevents the wheels from locking even under

sharp braking. ABS Pro reduces abrupt changes in steering force, particularly in panic-braking situations, counteracting the vehicle's otherwise natural but undesirable tendency to straighten up.

ABS intervention

Technically speaking, depending on the riding situation ABS Pro adapts ABS intervention to the motorcycle's bank angle. Signals for rate of roll and rate of yaw and lateral acceleration are used to calculate bank angle.
As the motorcycle is heeled over more and more as it banks into a corner, an increasingly strict limit is imposed on the brake-pressure gradient for the start of brake application. This slows the build-up of brake pressure to a corresponding degree. Additionally, pressure modulation is more uniform across the range of ABS intervention.

Advantages for the rider

The advantages of ABS Pro for the rider are sensitive response and high braking and directional stability combined with best-case deceleration of the motorcycle, even when cornering.

Automatic Stability Control (ASC)

– without riding modes Pro OE

How does ASC work?

BMW Motorrad ASC compares the speed of rotation of the front wheel and the rear wheel. The differential is used to compute slip as a measure of the reserves of stability available at the rear wheel. If slip exceeds a certain limit, the engine control intervenes and adapts the engine torque accordingly.

What is the design baseline for BMW Motorrad ASC?

BMW Motorrad ASC is designed as an assistant system for the rider and for use on public roads. The extent to which the rider affects ASC control can be considerable (weight shifts when cornering, items of luggage loose on the motorcycle), especially when the style of riding takes rider and machine close to the limits imposed by physics.
Activate the Enduro mode for off-roading. This mode delays ASC intervention slightly in order to permit controlled drifting.
The system is not optimised for special requirements that apply under extreme competitive situations off-road or on the track. The BMW Motorrad ASC can be deactivated in these cases.

⚠ WARNING

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

Dynamic Traction Control (DTC)

– with riding modes Pro OE

How does traction control work?

Traction control is available in two versions
– **without** provision for the bank angle: Automatic Stability Control ASC
– ASC is a rudimentary function intended to prevent falls.
– **with** provision for bank angle: Dynamic Traction Control DTC
– DTC regulation is more delicate and more comfortable thanks to the additional bank angle and acceleration information.

The traction control system compares the speed of rotation at the circumferences of the front wheel and the rear wheel. The differential is used to compute slip as a measure of the reserves of stability available at the rear wheel. If slip exceeds a certain limit, the engine management system intervenes and adapts engine torque accordingly.

⚠ WARNING

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

Special situations

In accordance with the laws of physics, the ability to accelerate is restricted more and more as the angle of heel increases. Consequently, there can be a perceptible reduction in acceleration out of very tight bends.

The speeds of the front and rear wheels are compared and DTC, unlike ASC, also takes the bank angle into account in processing data to detect the rear wheel's incipient tendency to spin or slip sideways.

– with riding modes Pro OE

If the electronic processor receives values for the bank angle that it considers implausible over a lengthy period, a dummy value is used for the bank angle or the DTC function is switched off. Under these circumstances the indicator for a DTC fault shows. Self-diagnosis has to complete before fault messages can be issued.

The BMW Motorrad Traction Control can shut down automatically under the exceptional riding conditions outlined below.

Exceptional riding conditions:

– Riding for a lengthy period with the front wheel lifted off the ground (wheelie).
– Rear wheel rotating with the vehicle held stationary by applying the front brake (burnout).
– Heating up with the motorcycle on an auxiliary stand, in neutral or with a gear engaged.

If the encoding plug is not inserted, the DTC is reactivated after a fault has occurred by switching the ignition off and on and then by continuing to drive at minimum speed.

 Minimum speed for activation of DTC
min 10 km/h

If the front wheel lifts clear of the ground under severe acceleration, the ASC or DTC reduces engine torque in the RAIN and ROAD riding modes until the front wheel regains contact with the ground.

In DYNA, DYNA PRO and Enduro riding modes, the front wheel lift-oft detection allows for short wheelies.

In Enduro PRO riding mode, the front wheel lift-off detection is switched off.

BMW Motorrad recommends turning the throttle grip back slightly when lifting the front wheel in order to reach a stable driving condition again as soon as possible.

When riding on a slippery surface, never snap the throttle grip fully closed without pulling the clutch at the same time. Engine braking torque can cause the rear wheel to skid, with a corresponding loss of stability. The BMW Motorrad DTC is unable to control a situation of this nature.

Dynamic ESA

– with Dynamic ESA OE

Riding position equaliser

The electronic chassis and suspension adjustment Dynamic ESA is able to adjust your motorcycle automatically to the load. If the spring preload is set to AUTO, the rider does not have to change the load settings. When driving off and when riding, the system monitors the suspension on the rear wheel and corrects the spring preload in order to set the riding position correctly. The damping is also adjusted automatically to the load.

Via ride height sensors, Dynamic ESA detects the movements in the chassis and suspension and responds by adjusting the EDC valves. The chassis and suspension will thus be adapted to the characteristics of the terrain.

Dynamic ESA calibrates itself at regular intervals to ensure the system functions correctly.

Possible settings

Damping modes

- ROAD: Damping for comfortable on-road mode
- DYNA: Damping for dynamic on-road mode
- ENDURO: Damping for off-road mode

Load settings

- AUTO: Active riding position equaliser with automatic adjustment of the spring preload and damping
- MIN: Minimum spring preload
- MAX: Maximum spring preload (for off-road use)
- The MIN and MAX spring preloads can be selected by the rider but not changed. The riding position equaliser is inactive when set to MIN and MAX.

Riding mode

Selection

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

- RAIN
- ROAD (Standard mode)

- with riding modes Pro[OE]
- DYNA
- Enduro

When an encoding plug is installed, the DYNA PRO and Enduro PRO riding modes replace DYNA and Enduro:

- Enduro PRO
- DYNA PRO

For each of these riding modes there is a calibrated setting for the ABS, ASC and DTC systems as well as for the throttle response.

– with Dynamic ESA OE

The adjustment of the Dynamic ESA also depends on the riding mode selected.

ABS and/or ASC or DTC can be switched off in every riding mode. The following explanations always refer to the driving safety systems that are switched on.

Throttle response

– In RAIN and Enduro riding modes: restrained
– In ROAD and Enduro PRO riding modes: direct
– In DYNA and DYNA PRO riding modes: dynamic

ABS

– The rear wheel lift-off detection is activated in all riding modes.
– In RAIN, ROAD, DYNA and DYNA PRO riding modes, the ABS is set to on-road mode.
– In Enduro riding mode ABS is set to off-road mode with road tyres.
– In Enduro PRO riding mode, there is no ABS control at the rear wheel when the footbrake lever is operated. The ABS has been adjusted to off-road operation using studded tyres.

– with riding modes Pro OE

– In RAIN, ROAD, DYNA and DYNA PRO riding mode, ABS Pro is fully available. The tendency of the motorcycle to straighten up when the brakes are applied with the machine banked for cornering is reduced to a minimum.
– In Enduro riding mode ABS Pro is available in conditions with a good coefficient of friction only. Support is reduced compared with ROAD riding mode and instead, it is configured to generate a maximum braking effect.
– ABS Pro is not available in Enduro PRO riding mode.

– without riding modes Pro OE

ASC

– The front wheel lift-off detection is activated in all riding modes.
– ASC has been calibrated for on-road operation.
– ASC provides high driving stability in ROAD riding mode and maximum driving stability in RAIN riding mode.

– with riding modes Pro OE

DTC

Tyres

– In RAIN, ROAD, DYNA and DYNA PRO riding modes, DTC is calibrated to on-road operation with road tyres.

– In Enduro riding mode, DTC is calibrated to off-road operation with road tyres.
– In Enduro PRO riding mode, DTC is calibrated to off-road operation with studded tyres.

Driving stability

– In RAIN riding mode, DTC intervenes early enough to achieve maximum driving stability.
– In ROAD riding mode, DTC intervenes later than in RAIN riding mode. This prevents the rear wheel from spinning whenever possible.
– In RAIN and ROAD riding modes, the front wheel is prevented from lifting.
– In DYNA and DYNA PRO riding modes, DTC intervenes later than in ROAD riding mode meaning that the motorcycle may drift slightly when coming out of the corner or do short wheelies.
– In DYNA PRO riding mode, DTC can be set differently via SETUP MODE (➠ 74).
– In the ENDURO riding mode, DTC intervenes again later and calibrated to off-road operation so that longer drifts and short wheelies are possible when coming out of the curve.
– In Enduro PRO riding mode, DTC control assumes that studded tyres are used when off road. Longer wheelies and wheelies in slight lean angles are permitted. The front wheel lift-off detection is switched off which may cause rollover to the rear in extreme cases!
– In Enduro PRO riding mode, DTC can be set differently via SETUP MODE (➠ 74).

Mode changes

When riding, you can change riding modes only when the following preconditions are satisfied:
– No drive torque on the rear wheel.
– No brake pressure in the brake system.

This is the status of the motorcycle when it is at a standstill with the ignition switched on. Under other circumstances, you must proceed as follows:
– Close the throttle twistgrip.
– Release the brake levers.

The desired riding mode is initially preselected. The mode change does not take place until the systems in question are all in the appropriate state.
The selection menu does not disappear from the display until the mode change has taken place.

Tyre pressure monitoring (RDC)

– with tyre pressure control (RDC)[OE]

Function

A sensor integrated into each tyre measures the air temperature and the air pressure inside the tyre and transmits this information to the control unit. The sensors are fitted with a centrifugal-force tripswitch which allows the measured values to be transmitted after the minimum speed is exceeded the first time.


Minimum speed for transmission of the RDC measured values:

min 30 km/h

The display shows –– for each tyre until the tyre-pressure signal is received for the first time. The sensors continue to transmit the measured-value signals for some time after the vehicle comes to a stop.


Transmission duration of the measured values after vehicle standstill:

min 15 min

An error message is issued if wheels without sensors are fitted to a vehicle equipped with an RDC control unit.

Tyre-pressure ranges

The RDC control unit differentiates between three tyre-pressure ranges, all of which are parameterised for the motorcycle:

– Tyre pressure within permitted tolerance.
– Tyre pressure close to limit of permitted tolerance.
– Tyre pressure outside permitted tolerance.

Temperature compensation

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


The tyre pressures are shown in the multifunction display as compensating for the temperature and always refer to the following tyre air temperature:

20 °C

The air lines available to the public in petrol stations and motorway service areas have gauges that do not compensate for temperature; the reading shown by a gauge of this nature is the temperature-dependent tyre-

air pressure. In most instances, therefore, these gauge readings will not tally with the pressures shown by the multifunction display.

Pressure adaptation

Compare the RDC value on the multifunction display with the value in the table on the back cover of the Rider's Manual. Then use the air-line gauge at a service station to compensate for the difference between the RDC reading and the value in the table.

 Example
According to the rider's manual, the tyre pressure should be the following value:
2.5 bar

 Example
The following value appears in the multifunction display:
2.3 bar
Missing:
0.2 bar
The tester on the filling station shows:
2.4 bar
The tyre pressure must be increased to the following value to reach the correct tyre pressure:
2.6 bar

Shift assistant

– with shift assistant Pro OE

Shift assistant Pro

Your vehicle is equipped with a Pro shift assistant, a system originally developed for racing and now adapted for the touring sector. It permits upshifts and downshifts without declutching or closing the throttle in virtually all load and rpm ranges.

Advantages

– 70-80 % of all gearshifts on a trip can be done without using the clutch.
– Less relative movement between rider and passenger because the shift pauses are shorter.
– It is not necessary to close the throttle valve when shifting under acceleration.
– When braking and downshifting (throttle valve closed), engine speed is adjusted by blipping the throttle.

– Shift time is shorter than a gearshift with clutch actuation.

In order for the system to identify a request for a gearshift, the rider has to move the shift lever from its idle position in the desired direction against the force of the spring through a certain "overtravel" at ordinary speed or rapidly and keep the shift lever in this position until the gearshift is completed. It is not necessary to increase the force applied to the shift lever while shifting is in progress. Once the gearshift has completed the shift lever has to be fully released before another gearshift with the Pro shift assistant can take place. When shifting gears with the Pro shift assistant, the rider has to keep the load state (throttle twistgrip position) constant before and during the gearshift. A change in the position of the throttle twistgrip during a gearshift can cause the function to abort and/or lead to a missed shift. The Pro shift assistant provides no assistance for the gearshift if the rider declutches.

Downshifting

– Downshifting is assisted until maximum rpm for the target gear to be selected is reached. This prevents overreving.

 Maximum engine speed
max 9000 min^{-1}

Upshifting

– Upshifting is assisted until idle rpm for the target gear to be selected is reached.
– This prevents the engine from dropping below idle speed.

 Idle speed
1150 min^{-1} (Engine at regular operating temperature)

Hill Start Control

– with Hill Start Control[OE]

Hill Start Control function

Hill Start Control assistant prevents the motorcycle from rolling backwards uncontrolled on gradients by intervening specifically with the ABS brake system without the driver having to constantly operate the brake lever. Pressure in the rear brake system is built up when Hill Start Control is activated in order to keep the motorcycle stationary on a steep surface.

Influence of the holding pressure on the driving off behaviour

– If the motorcycle is stopped by applying little brake pressure, only low pressure is built up. In this case, the brakes are quickly released when driving off. The motorcycle can be moved off more gently. It is not necessary to turn the throttle grip again.
– If the motorcycle is stopped by applying high brake pressure, high pressure is built up. In this case, the brakes take longer to release when driving off. More torque is required for driving off which also requires the rider to turn the throttle grip again.

Behaviour when the motorcycle rolls or slips

– If the motorcycle rolls when Hill Start Control is activated, the holding pressure is increased.
– If the rear wheel slips, the brake is released again after approx. 1 m. This prevents, for example, slipping due to a blocked rear wheel.

Releasing the brake when stopping the engine

Hill Start Control is deactivated when the engine is stopped using the emergency stop switch or when the side stand is folded out.

In addition to the indicator and warning lights, the rider should be made aware that Hill Start Control has been deactivated by the following behaviour:

Brake warning jolt

– The brake is released briefly and reactivated immediately.
– This creates a jolt which the rider feels.
– The brake is released slowly.
– The motorcycle is not braked.
– The rider must brake the motorcycle manually.

NOTICE

The holding pressure is released immediately without a brake warning jolt as soon as the ignition is switched off.◀

Maintenance

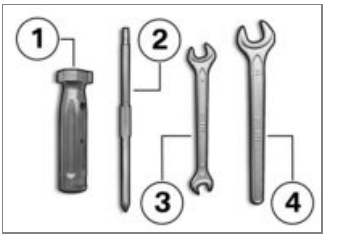
General instructions 136
Toolkit 136
Service toolkit 136
Front-wheel stand 137
Engine oil 138
Brake system 139
Clutch 144
Coolant 144
Tyres 146
Wheel rims and tyres 146
Wheels 147
Air filter 153
Light source 155
Jump-starting 160
Battery 161
Fuses 165
Diagnostic connector 167

General instructions

The "Maintenance" chapter describes straightforward procedures for checking and replacing certain wear parts.
Special tightening torques are listed as applicable. The tightening torques for the threaded fasteners on your vehicle are listed in the section entitled "Technical data".
Further information on maintenance and repair work is available from your BMW Motorrad authorised dealer in the form of a DVD.

Some of the work requires special tools and a thorough knowledge of the technology involved. If you are in doubt, consult a specialist workshop, preferably your authorised BMW Motorrad dealer.

Toolkit



1 Screwdriver handle
- Use with screwdriver insert.
- Topping up the engine oil (➠ 139).

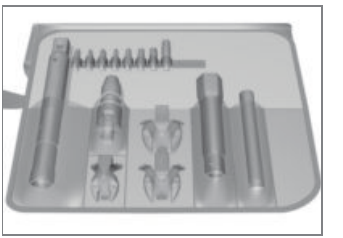
2 Reversible screwdriver blade
Phillips PH1 and Torx T25
- Removing bulbs for front and rear turn indicators (➠ 158).
- Removing battery cover (➠ 163).

3 Open-ended spanner
Width across flats 8/10
- Removing battery (➠ 163).

4 Open-ended spanner
Width across flats 14
- Adjusting mirror arm (➠ 94).

Service toolkit

– with service tool kit OA



BMW Motorrad has assembled a service toolkit that is ideal for carrying out extended service work (e.g. removing and installing wheels) on this motorcycle. You can obtain the tools set from

your authorised BMW Motorrad dealer.

Front-wheel stand

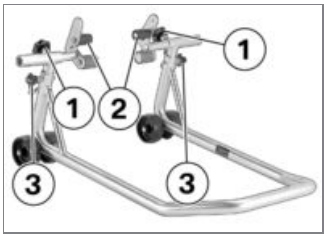
Installing the front-wheel stand

ATTENTION

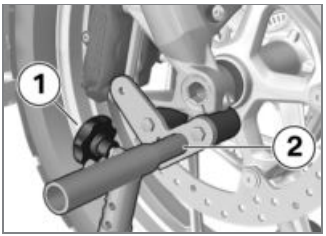
Use of the BMW Motorrad front wheel stand without accompanying use of centre stand or auxiliary stand

Risk of damage to parts if vehicle topples

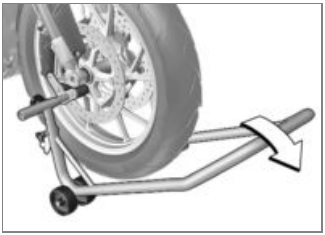
- Place the motorcycle on its centre stand or another auxiliary stand before lifting the front wheel with the BMW Motorrad front-wheel stand.◀
- Make sure the ground is level and firm and place the motorcycle on its centre stand.
- Use basic stand with front-wheel adapter. The basic stand and its accessory parts are available from your BMW Motorrad dealer.



- Remove screws **1**.
- Push the two adapters **2** apart until the front forks fit between them.
- Use locating pins **3** to set the front-wheel stand to the desired height.
- Centre the front-wheel stand relative to the front wheel and push it against the front axle.



- Align the two adapters **2** so that the front forks are securely seated.
- Tighten screws **1**.



ATTENTION

Centre stand retracts if motorcycle is lifted too high

Risk of damage to parts if vehicle topples

- When raising the vehicle, make sure that the centre stand remains on the ground.◀
- Apply uniform pressure to push the front-wheel stand down and raise the motorcycle.

Engine oil

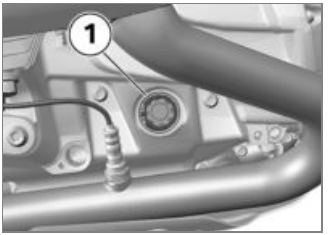
Checking engine oil level

ATTENTION

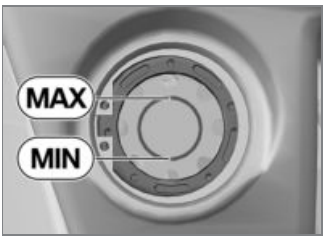
Misinterpretation of oil level reading, because oil level is temperature-dependent (the higher the temperature, the higher the oil level)

Engine damage

- Check the oil level only after a lengthy ride or when the engine is at operating temperature.◀
- Switch off the engine when it is at operating temperature.
- Make sure the ground is level and firm and place the motorcycle on its centre stand.
- Wait five minutes for the oil to drain into the oil pan.



- Check the oil level in oil-level indicator **1**.



Engine oil, specified level	
between MIN and MAX marks	

If the oil level is below the MIN mark:

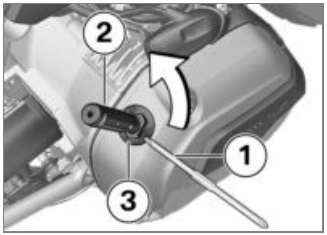
- Topping up the engine oil (➠ 139).

If the oil level is above the MAX mark:

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

Topping up the engine oil

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



- Wipe the area around the oil filler neck clean.
- Insert Torx end of reversible screwdriver insert **1** into screwdriver handle **2** (on-board toolkit) for additional leverage.
- Engage this tool in cap **3** of the oil filler neck and turn counter-clockwise to remove.
- Checking engine oil level (➠ 138).

ATTENTION

Use of insufficient engine oil or too much engine oil
Engine damage

- Always make sure that the oil level is correct.◀
- Top up the engine oil to the specified level.

Engine oil, quantity for topping up
max 0.95 l (Difference between MIN and MAX)

- Checking engine oil level (➠ 138).
- Install cap **3** of the oil filler neck.

Brake system

Checking function of brakes

- Pull the front brake lever.
» The pressure point must be clearly perceptible.
- Press the footbrake lever.
» The pressure point must be clearly perceptible.

If pressure points are not clearly perceptible:

ATTENTION

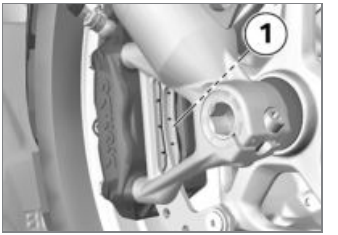
Work on brake system not in compliance with correct procedure

Risk to operational reliability of the brake system

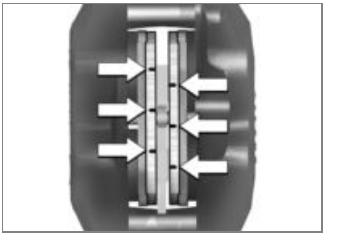
- Have all work on the brake system undertaken by trained and qualified specialists.◀
- Have the brakes checked by a specialist workshop, preferably an authorised BMW Motorrad dealer.

Checking front brake pad thickness

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



- Visually inspect the left and right brake pads to ascertain their thickness. View: between the wheel and front suspension through to the brake pads **1**.



	Brake-pad wear limit, front
1.0 mm (Friction pad only, without backing plate. The wear indicators (grooves) must be clearly visible.)	

If the wear indicating marks are no longer clearly visible:

WARNING

Brake-pad thickness less than permissible minimum

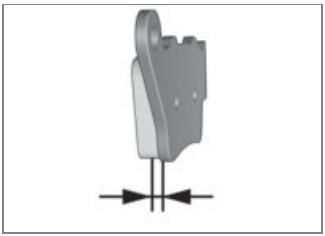
Diminished braking effect, damage to the brakes

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

Check rear brake pad thickness

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

- Visually inspect the brake pads to ascertain their thickness.
  View: between the spray guard and rear suspension through to the brake pads **1**.



	Brake-pad wear limit, rear
1.0 mm (Friction pad only, without backing plate.)	

If the wear limit has been reached:

WARNING

Brake-pad thickness less than permissible minimum

Diminished braking effect, damage to the brakes

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

Checking brake-fluid level, front brakes

WARNING

Not enough brake fluid in brake fluid tank

Considerably reduced braking power due to air in the brake system

- Adjust the riding mode immediately until the fault is rectified.
- Check the brake-fluid level at regular intervals.◀
- Make sure the ground is level and firm and place the motorcycle on its centre stand.
- Move the handlebars to the straight-ahead position.

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

NOTICE

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

Brake fluid level, front
Brake fluid, DOT4
It is impermissible for the brake fluid level to drop below the MIN mark. (Brake-fluid reservoir horizontal, motorcycle upright)

If the brake fluid level drops below the permitted level:

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

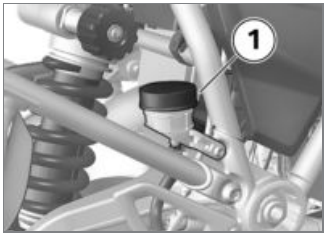
Checking the brake-fluid level, rear brakes

WARNING

Not enough brake fluid in brake fluid tank

Considerably reduced braking power due to air in the brake system

- Adjust the riding mode immediately until the fault is rectified.
- Check the brake-fluid level at regular intervals.◀
- Make sure the ground is level and firm and place the motorcycle on its centre stand.



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

NOTICE

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

Brake fluid level, rear
Brake fluid, DOT4
It is impermissible for the brake fluid level to drop below the MIN mark. (Brake-fluid reservoir horizontal, motorcycle upright)

If the brake fluid level drops below the permitted level:

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

Clutch

Checking clutch function

- Pull the clutch lever.

» The pressure point must be clearly perceptible.

If the pressure point is not clearly perceptible:

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

Coolant

Check coolant level

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

CAUTION

Hot engine

Risk of burn injury

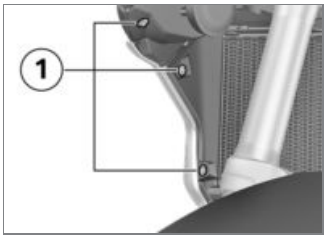
- Keep ell clear of all hot engine components.
- Do not touch hot engine components.◀
- Check the coolant level in expansion tank **1**.

	Coolant target level
between the **MIN** and **MAX** marking on the expansion tank (Engine cold)	

If the coolant drops below the permitted level:

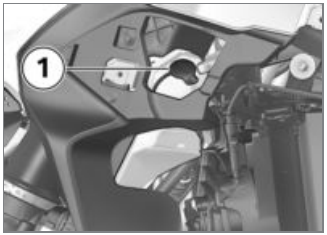
- Top up coolant (➠ 145).

Topping up coolant



- Remove screws **1**.

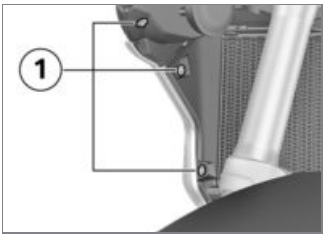
- Remove screws **1**.
- Pull the side trim panel **2** off the clamp **3** and remove it.



- Open the cap **1**.
- Top up coolant to specified level.
- Check coolant level (➠ 144).
- Close the cap of the expansion tank.

- Insert the side trim panel **2** into the slot **4**.
- Engage the clamp **3**.

- Install screws **1**.



- Install screws **1**.

Tyres

Checking tyre pressure

WARNING

Incorrect tyre pressure
Impaired handling characteristics of the motorcycle, shorter useful tyre life
- Always check that the tyre pressures are correct.◀

WARNING

Tendency of valve inserts installed vertically to open by themselves at high riding speeds
Sudden loss of tyre pressure
- Install valve caps fitted with rubber sealing rings and tighten firmly.◀

- Place the motorcycle on its stand on firm, even ground.
- Check tyre pressures against the data below.

Tyre pressure, front
2.5 bar (tyre cold)

Tyre pressure, rear
2.9 bar (tyre cold)

If tyre pressure is too low:
- Correct tyre pressure.

Wheel rims and tyres

Checking rims

- Place the motorcycle on its stand on firm, even ground.
- Visually inspect the rims for defects.
- Have damaged rims inspected by a specialist workshop and replaced if necessary, preferably by an authorised BMW Motorrad dealer.

Checking tyre tread depth

WARNING

Riding with badly worn tyres
Risk of accident due to impaired handling
- If applicable, have the tyres changed in good time before they wear to the minimum tread depth permitted by law.◀

- Place the motorcycle on its stand on firm, even ground.
- Measure the tyre tread depth in the main tread grooves with wear marks.

NOTICE

Wear indicators are built into the main profile grooves on each tyre. The tyre is worn out when the tyre tread has worn down to the level of the marks. The locations of the marks are indicated on the edge of the tyre, e.g. by the letters TI, TWI or by an arrow.◀

If the tyre tread is worn to minimum:

- Replace tyre or tyres, as applicable.

Checking spokes

– with cross-spoked wheels OE

- Place the motorcycle on its stand on firm, even ground.
- Use a screwdriver handle or similar object to brush over the spokes and pay attention to the sequence of sounds.

If the sequence of sounds is irregular:

- Have the spokes checked by a specialist workshop, preferably by an authorised BMW Motorrad Retailer.

Wheels

Effect of wheel size on chassis and suspension control systems

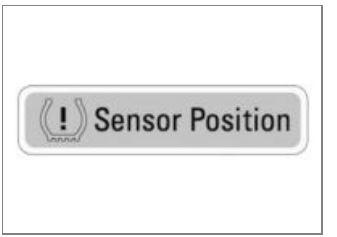
Wheel size is very important as a parameter for the chassis and suspension control systems ABS and ASC. In particular, the diameter and the width of a vehicle's wheels are programmed into the control unit and are fundamental to all calculations. Any change in these influencing variables, caused for example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

The sensor rings are essential for correct road-speed calculation, and they too must match the motorcycle's control systems and consequently cannot be changed.

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

RDC label

– with tyre pressure control (RDC) OE



ATTENTION

Tyre removal not in compliance with correct procedure

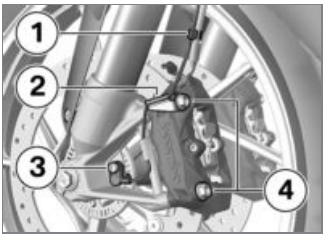
Damage to RDC sensors

- Be sure to explain to the specialist workshop or authorised BMW Motorrad dealer that the wheel is fitted with an RDC sensor.◀

If the motorcycle is equipped with RDC, each wheel rim bears an adhesive label indicating the position of the RDC sensor. When changing the tyre, take care not to damage the RDC sensor. Be sure to draw the attention of the authorised BMW Motorrad dealer or specialist workshop to the fact that the wheel is fitted with an RDC sensor.

Removing front wheel

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



- Disengage the cable for the wheel-speed sensor from retaining clips **1** and **2**.
- Remove screw **3** and remove the wheel-speed sensor from its bore.
- Mask off the parts of the wheel rim that could be scratched in the process of removing the brake calipers.

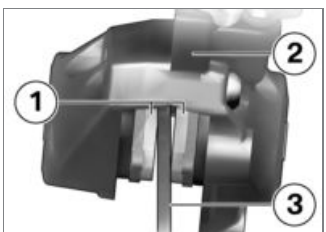
ATTENTION

Unwanted inward movement of the brake pads

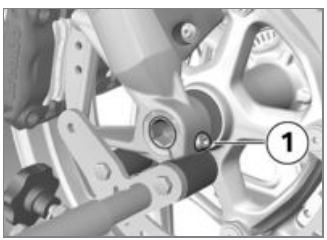
Component damage on attempt to install the brake caliper or be-

cause brake pads have to be forced apart

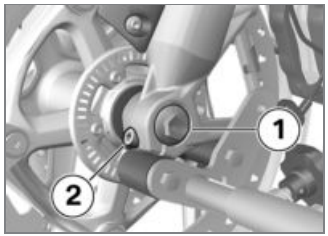
- Do not operate the brakes with a brake caliper not correctly secured.◀
- Remove securing screws **4** of the left and right brake calipers.



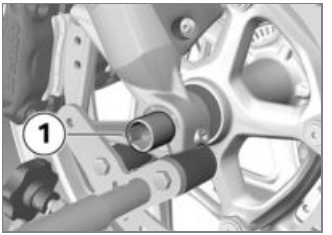
- Force the brake pads **1** slightly apart by rotational movement of the brake caliper **2** against brake disc **3**.
- Carefully pull the brake calipers back and out until clear of the brake discs.
- Lift the front of the motorcycle until the front wheel is clear of the ground, preferably using a BMW Motorrad front-wheel stand.
- Installing the front-wheel stand (➠ 137).



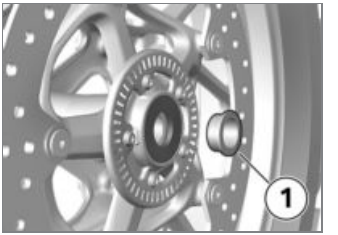
- Remove right-hand axle clamping screw **1**.



- Remove screw **1**.
- Remove left-hand axle clamping screw **2**.
- Press quick-release axle slightly toward the inside, so as to be better able to grip it on the right-hand side.



- Withdraw quick-release axle **1**, support the front wheel when doing this.
- Set down front wheel and roll forwards out of the front suspension.



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

Installing front wheel

WARNING

Use of a non-standard wheel

Malfunction as part of ABS and ASC control interventions

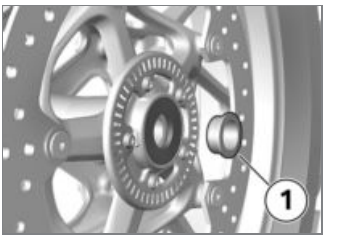
- See the information on the effect of wheel size on the ABS and ASC systems at the start of this chapter.◀

ATTENTION

Tightening threaded fasteners to incorrect tightening torque

Damage, or threaded fasteners work loose

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



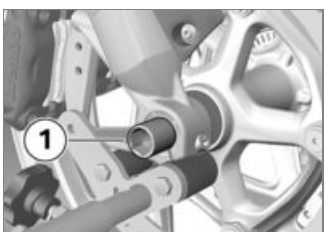
- Slip spacing bushing **1** into the wheel hub on the left-hand side.

ATTENTION

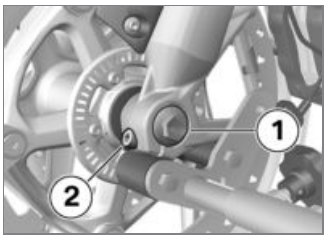
Front wheel installed wrong way round

Risk of accident

- Note direction-of-rotation arrows on tyre or rim.◀
- Roll the front wheel into position between the front forks.



- Lift front wheel and fit quick-release axle **1**.
- Remove front-wheel stand and firmly compress front forks several times. Do not operate front break lever.
- Installing the front-wheel stand (➠ 137).

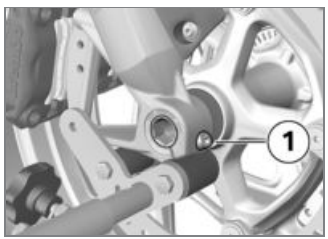


- Install screw **1** and tighten to specified torque. Counter-hold quick-release axle on the right-hand side.

Quick-release axle in telescopic forks
30 Nm

- Tighten left-hand axle clamping screw **2** to the specified torque.

Clamping screw for quick-release axle in telescopic fork
19 Nm

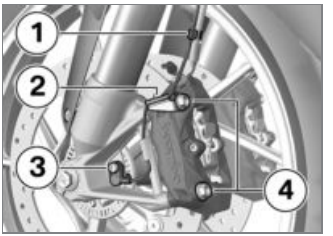


- Tighten right axle clamping screw **1** to the specified torque.

Clamping screw for quick-release axle in telescopic fork
19 Nm

- Removing the front-wheel stand.

- Position left and right brake calipers on the brake discs.



- Install securing screws **4** on left and right and tighten to specified tightening torque.

Brake caliper on telescopic fork
38 Nm

- Remove the adhesive tape from the wheel rim.

WARNING

Brake pads not lying against the brake disc

Risk of accident due to delayed braking effect.

- Before driving, check that the brakes respond without delay.◀
- Operate the brake several times until the brake pads are bedded.
- Seat the cable for the wheel-speed sensor in retaining clips **1** and **2**.
- Insert the wheel-speed sensor into the bore and install screw **3**.

Wheel-speed sensor to fork leg
Joining compound: Micro-encapsulated
8 Nm

Removing rear wheel

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

CAUTION

Hot exhaust system

Risk of burn injury

- Do not touch a hot exhaust system.◀
- Allow rear silencer to cool down.

- Remove studs **1** from the rear wheel, while supporting the wheel.
- Roll the rear wheel out toward the rear.

Install the rear wheel

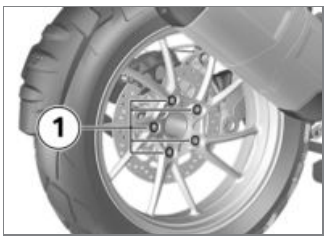
WARNING

Use of a non-standard wheel
Malfunction as part of ABS and ASC control interventions
- See the information on the effect of wheel size on the ABS and ASC systems at the start of this chapter.◀

ATTENTION

Tightening threaded fasteners to incorrect tightening torque
Damage, or threaded fasteners work loose
- Always have the security of the fasteners checked by a specialist workshop, preferably an authorised BMW Motorrad dealer.◀

- Seat the rear wheel on the rear-wheel adapter.



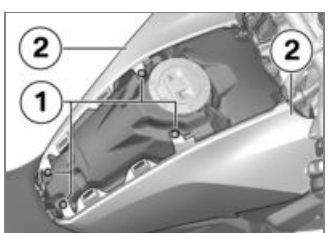
- Install wheel studs **1** and tighten to specified torque.

Rear wheel to wheel flange
Tightening sequence: tighten in diagonally opposite sequence
60 Nm

Air filter

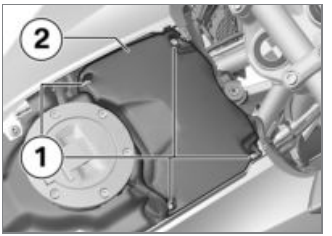
Replace air filter element

- Removing front seat (➠ 89).
- Remove screws **1** and **2**.
- Remove the centre trim panel.

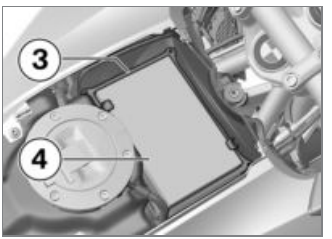


- Remove screws **1**.

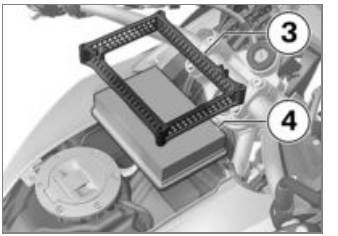
- Loosen the cover **2** on both sides.



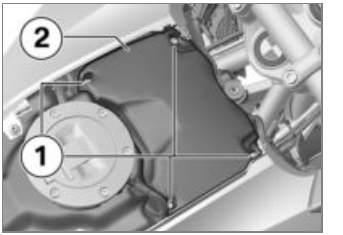
- Remove screws **1**.
- Remove the air filter cover **2**.



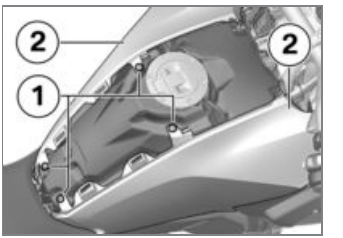
- Remove the frame **3**.
- Removing the air filter element **4**.



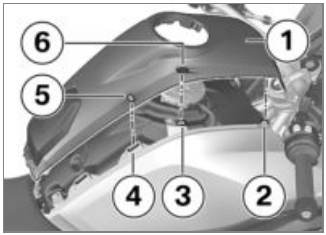
- Clean and (if necessary) renew the air filter element **4**.
- Insert the air filter element **4** and frame **3**.



- Fit the air filter cover **2**.
- Install screws **1**.



- Position the cover **2** on both sides.
- Install screws **1**.



- Attach the centre trim panel **1**.
- Press the right and left clamps **3** and **5** into the fixtures **4** and **6** while watching for the retaining lugs **2**.

- Install screws **1** and **2**.
- Installing front seat (➠ 90).

Light source

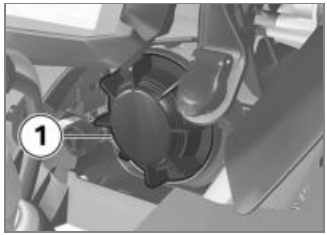
Replacing bulbs for low-beam and high-beam headlight

– without LED headlight OE

NOTICE

The positions of the plug, the spring wire retainer and the bulb might not be as illustrated below.◀

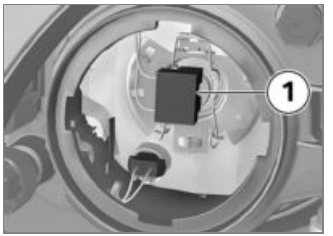
- Place the motorcycle on its stand on firm, even ground.
- Switch off the ignition.



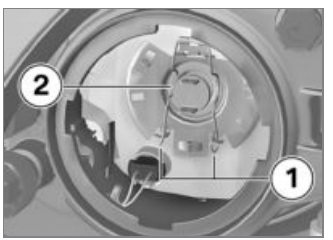
- Remove the cover **1** by turning it anti-clockwise in order to replace the low-beam headlight.

- Remove the cover **1** by turning it anti-clockwise in order to

replace the bulb for the high beam.



- Disconnect plug **1**.

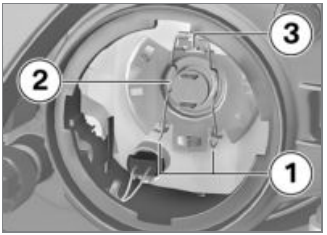


- Disengage spring clips **1** from the fastenings and swing them aside.
- Remove bulb **2**.
- Replace the defective bulb.

Bulbs for the low-beam headlight
H7 / 12 V / 55 W
– with LED headlight OE
LED◁

Bulb for high-beam headlight
H7 / 12 V / 55 W
– with LED headlight OE
LED◁

- Hold the bulb by the base only, in order to keep the glass free of foreign matter.

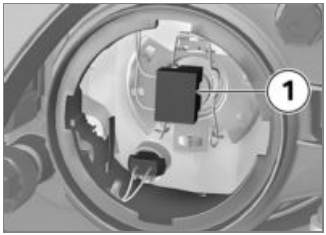


- Insert the bulb **2**, making sure that the tab **3** is correctly positioned.

NOTICE

The bulb might face in a direction other than that shown here.◀

- Set the wire spring clip **1** into the stop.

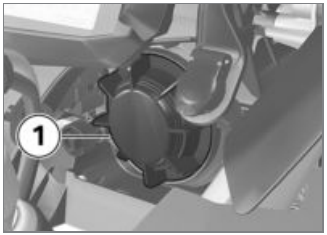


- Connect plug **1**.
- Place cover in position and fit by turning clockwise.

Replacing bulb for parking light

– without LED headlight[OE]

- Place the motorcycle on its stand on firm, even ground.
- Switch off the ignition.



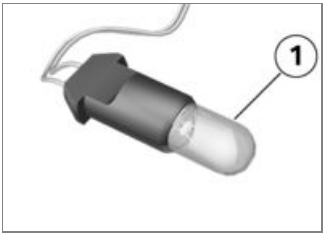
- Remove cover **1** by turning it anti-clockwise.

- Pull socket **1** out of the headlight housing.

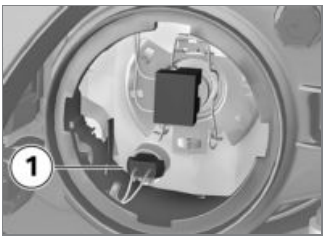
- Remove bulb **1** from the socket.
- Replace the defective bulb.

Bulb for parking light
W5W / 12 V / 5 W
– with LED headlight[OE]
LED◁

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



- Insert bulb **1** into the socket.



- Install the socket **1** into the headlight housing.
- Place cover in position and fit by turning clockwise.

Replacing bulbs for front and rear turn indicators

– without LED flashing turn indicators OE

- Place the motorcycle on its stand on firm, even ground.
- Switch off the ignition.

- Remove screw **1**.

- Pull the glass out of the light housing at the threaded-fastener side.

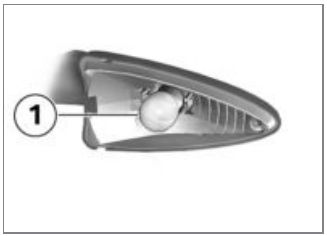
- Turn bulb **1** counter-clockwise and remove it from the light housing.◁

- Replace the defective bulb.

Bulbs for flashing turn indicators, front
RY10W / 12 V / 10 W
– with LED flashing turn indicators OE
LED◁

Bulbs for flashing turn indicators, rear
RY10W / 12 V / 10 W
– with LED flashing turn indicators OE
LED◁

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



- Turn bulb **1** clockwise to install it in the light housing.

- Working from the inboard side, insert the glass into the light housing and close the housing.

- Install screw **1**.

Replacing LED rear light

The LED rear light can be replaced only as a complete unit.

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

Replace LED flashing turn indicators

– with LED flashing turn indicators OE

- LED flashing turn indicators can only be replaced as a complete unit. Consult a specialist

workshop, preferably an authorised BMW Motorrad dealer.

Replace LED headlights

– with LED headlight OE

- LED headlights can only be replaced as a complete unit. Consult a specialist workshop, preferably an authorised BMW Motorrad dealer.

Replacing LED auxiliary headlights

– with LED auxiliary headlights OA

The LED auxiliary headlights can only be replaced as a unit; it is not possible to replace individual LEDs.
Consult a specialist workshop, preferably an authorised BMW Motorrad dealer.

Jump-starting

CAUTION

Touching live parts of the ignition system when the engine is running
Electric shock
- Do not touch parts of the ignition system when the engine is running.◀

ATTENTION

Excessive current flowing when the motorcycle is jump-started
Wiring smoulders/ignites or damage to the on-board electronics
- If the motorcycle has to be jump-started connect the leads to the battery terminals; never attempt to jump-start the engine by connecting leads to the on-board socket.◀

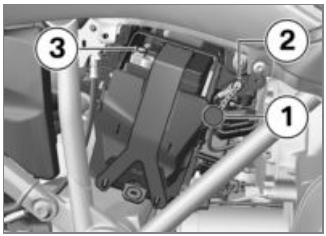
ATTENTION

Contact between crocodile clips of jump leads and vehicle
Risk of short-circuit
- Use jump leads fitted with fully insulated crocodile clips at both ends.◀

ATTENTION

Jump-starting with a voltage greater than 12 V
Damage to the on-board electronics
- Make sure that the battery of the donor vehicle has a voltage rating of 12 V.◀
- Place the motorcycle on its stand on firm, even ground.
- Removing battery cover (➠ 163).
- When jump-starting the engine, do not disconnect the battery

from the on-board electrical system.



- Remove the protective cap **1**.
- Use the red jump lead to connect the positive battery connection point **2** of the drained battery to the positive terminal of the donor battery.
- Then connect one end of the black jump lead to the negative terminal of the donor battery, and the other end to the negative terminal **3** of the drained battery.
- Run the engine of the donor vehicle during jump-starting.
- Start the engine of the vehicle with the discharged battery in the usual way; if the engine does not start, wait a few minutes before repeating the attempt in order to protect the starter motor and the donor battery.
- Allow both engines to idle for a few minutes before disconnecting the jump leads.
- Disconnect the jump lead from the negative terminals first, then disconnect the second lead from the positive terminals.

NOTICE

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

- Install the protective cap.
- Fitting battery cover (➠ 165).

Battery

Maintenance instructions

Correct upkeep, recharging and storage will prolong the life of the battery and are essential if warranty claims are to be considered.

Compliance with the points below is important in order to maximise battery life:

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

ATTENTION

On-board electronics (e.g. clock) draining connected battery

Battery is deep-discharged; this voids the guarantee

- Connect a float charger to the battery if the motorcycle is to remain out of use for more than four weeks.◀

NOTICE

BMW Motorrad has developed a float charger specially designed for compatibility with the electronics of your motorcycle. Using this charger, you can keep the battery charged during long periods of disuse, without having to disconnect the battery from the motorcycle's on-board systems. You can obtain additional information from your authorised BMW Motorrad dealer.◀

Charge battery when connected

ATTENTION

Charging the battery that is connected to the vehicle via the battery terminals

Damage to the on-board electronics

- Disconnect the battery at the battery terminals before charging.◀

ATTENTION

Charging a fully discharged battery via the socket or the extra socket

Damage to the on-board electronics

- If a battery has discharged to the extent that it is completely flat (battery voltage less than 9 V, status-indicator lights and multifunction display remain off when the ignition is switched on) **it has to be disconnected from the on-board circuits** and re-charged with the charger connected directly to the battery posts.◀

ATTENTION

Unsuitable chargers connected to a socket

Damage to charger and vehicle electronics

- Use suitable BMW chargers. The suitable charger is available from your authorised BMW Motorrad dealer.◀
- Charge via the charging socket, with the battery connected to the motorcycle's on-board electrical system.

NOTICE

The motorcycle's on-board electronics know when the battery is fully charged. The on-board

socket is switched off when this happens.◀

- Comply with the operating instructions of the charger.

NOTICE

If you are unable to charge the battery through the on-board socket, you may be using a charger that is not compatible with your motorcycle's electronics. If this happens, charge the battery directly at the terminals of the battery that is disconnected from the vehicle.◀

Charging battery when disconnected

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

NOTICE

The battery has to be recharged at regular intervals in the course of a lengthy period of disuse. See the instructions for caring for your battery. Always fully recharge the battery before restoring it to use.◀

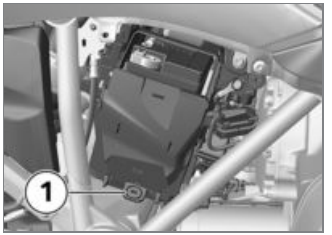
Removing battery

- Switch off the ignition.
- Remove screw **1**.
- Each battery cover slightly forward at the top at positions **2**.
- In order not to damage the battery cover or the mount, work the battery cover up at position **3** to remove.

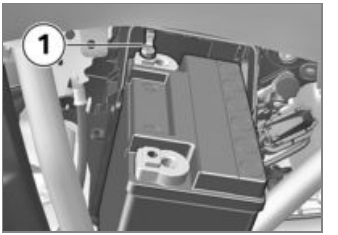
– with alarm system (DWA)[OE]

- If applicable, switch off the anti-theft alarm.◁

- Disconnect battery negative lead **1** and disengage rubber strap **2**.



- Pull retaining plate in position **1** outwards and remove in an upward direction.
- Slightly lift battery and remove from the mounting to such an extent that the battery positive terminal becomes accessible.

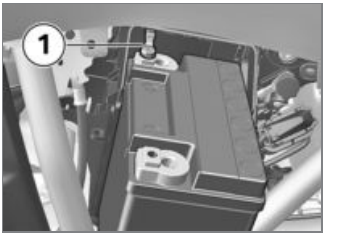


- Disconnect battery negative lead **1** and remove the battery.

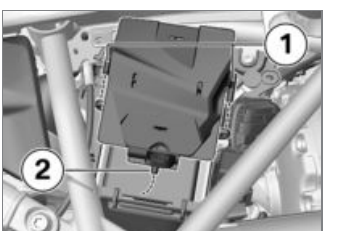
Installing battery

NOTICE

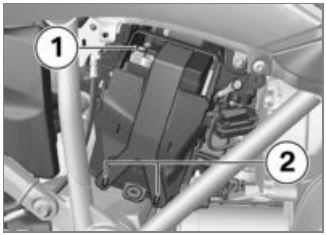
If the 12 V battery is not correctly installed or if the polarity of the terminals is reversed (e.g. in an attempt to jump-start the vehicle), this can cause the fuse for the alternator regulator to blow.◀



- Secure battery positive lead **1**.
- Push battery into the mounting.



- First insert retaining plate into the mountings **1** and then push under the battery in position **2**.



- Secure battery negative lead **1**.
- Secure the battery with rubber strap **2**.

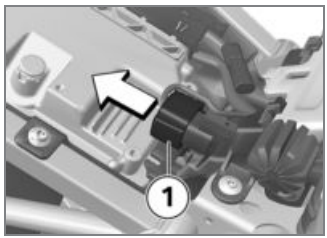
- Place battery cover into the mounting **1** and press into the mountings **2**.

- Install screw **1**.

- Setting the clock (➠ 64).
- Setting the date (➠ 65).

Fuses

Replace fuses



- Switch off the ignition.
- Removing front seat (➠ 89).
- Disconnect plug **1**.

ATTENTION

Jumpering of blown fuses

Risk of short-circuit and fire

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

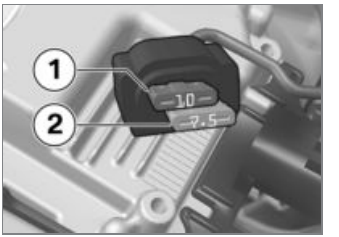
- Replace faulty fuse in accordance with the fuse allocation diagram.

NOTICE

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

- Install plug **1**.
- Installing front seat (➠ 90).

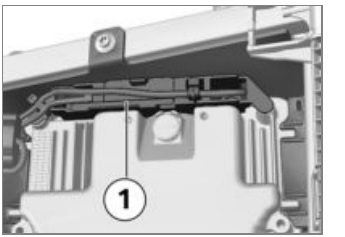
Fuse assignment



1 10 A
Instrument panel
Anti-theft alarm (DWA)
Ignition switch
Diagnostic socket

2 7.5 A
Multifunction switch, left
Tyre pressure monitoring (RDC)

Fuse for the alternator regulator



1 50 A
Alternator regulator

Diagnostic connector

Disengaging diagnostic connector

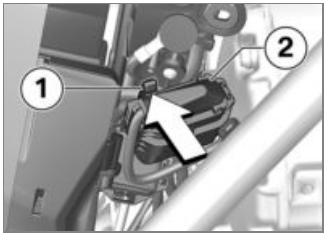
CAUTION

Incorrect procedure followed when loosening the diagnostic connector for the on-board diagnosis

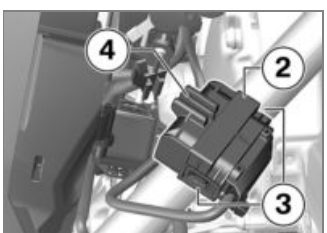
Motorcycle experiences malfunctions

- Only have the diagnostic connector loosened by a specialist workshop or other authorised persons during your next BMW Service appointment.
- Have the work performed by appropriately trained staff.
- Refer to the vehicle manufacturer specifications.◀

- Removing battery cover (➠ 163).



- Press the hook **1** and pull the diagnostic connector **2** out upwards.



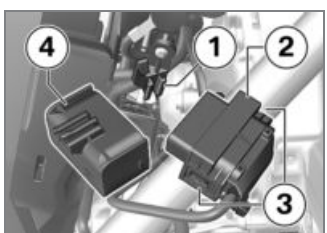
- Press the latches **3** on both sides.

- Disengage diagnostic connector **2** from holder **4**.

» The interface to the diagnosis and information system can be connected to diagnostic connector **2**.

Securing the diagnostic connector

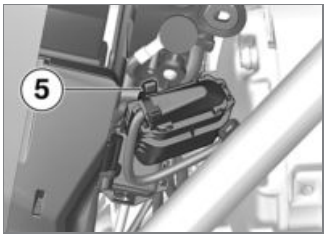
- Disconnect the interface for the diagnosis and information system.



- Seat diagnostic connector **2** in bracket **4**.

» The locks **3** engage on both sides.

- Seat the bracket **4** on the mounting **1**.



- Make sure the hook **5** has engaged.
- Fitting battery cover (➠ 165).

Accessories

General instructions 170
Power sockets 170
Cases 171
Topcase 174
Navigation system 180

General instructions

⚠ CAUTION

Use of other-make products
Safety risk
- BMW Motorrad cannot examine or test each product of outside origin to ensure that it can be used on or in connection with BMW vehicles without constituting a safety hazard. Country-specific official authorisation does not suffice as assurance. Tests conducted by these instances cannot make provision for all operating conditions experienced by BMW vehicles and, consequently, they are not sufficient in some circumstances.
- Use only parts and accessories approved by BMW for your vehicle.◀

BMW has conducted extensive testing of the parts and accessory products to establish that they are safe, functional and suitable. Consequently, BMW accepts product liability. BMW accepts no liability whatsoever for parts and accessories that it has not approved.
Whenever you are planning modifications, comply with all the legal requirements. Make sure that the vehicle does not infringe the national road-vehicle construction and use regulations applicable in your country.
Your BMW Motorrad dealer can offer expert advice on the choice of genuine BMW parts, accessories and other products.
To find out more about accessories go to:
bmw-motorrad.com/accessories

Power sockets

Connection of electrical devices
– You can start using electrical devices connected to the motorcycle's sockets only when the ignition is switched on.

Cable routing
– The cables from the power sockets to the auxiliary devices must be routed in such a way that they do not impede the rider.
– The cable routing should not restrict the steering angle or obstruct handling.
– The cables must not be trapped.

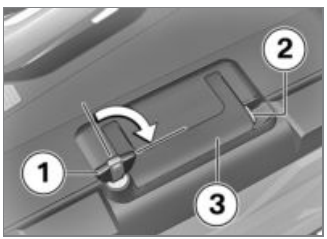
Automatic shutdown
– The sockets will be automatically switched off during the start procedure.

– The power supply to the sockets is switched off no more than 15 minutes after the ignition is switched off, in order to prevent overloading of the on-board electrics. Low-wattage electrical accessories might not be recognised by the vehicle's electronics. In such cases, power sockets are switched off very shortly after the ignition is turned off.
– If the battery charge state is too low to maintain the motorcycle's start capability, the power sockets are switched off.
– The power sockets are also switched off when the maximum load capability as stated in the technical data is exceeded.

Cases

Opening cases

– with cases OA



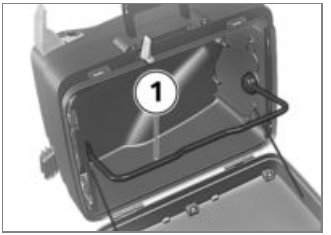
- Turn key **1** clockwise.
- Keep the yellow latch **2** held and fold out the carry handle **3**.

- Push yellow button **1** down and at the same time open the lid of the case.

Adjusting case volume

– with cases OA

- Open the case and remove all its contents.



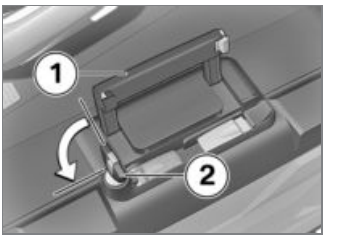
- Engage pivot lever **1** at the top limit position to set the case to minimum volume.
- Engage pivot lever **1** at the bottom limit position to set the case to maximum volume.
- Close the case.

Closing cases

– with cases OA

- Turn the lock with the key until it is at right angles to the forward direction of travel.
- Close the case lid.

» The lid engages with an audible click.



ATTENTION

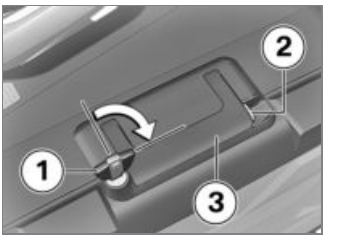
Closure of carrying handle with case lock latched

Damage to locking tab

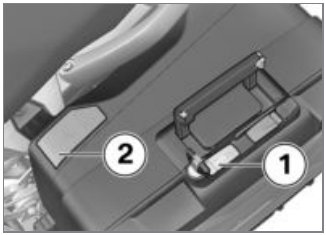
- Make sure that the case lock is at right angles to the forward direction of travel when you close the carry handle.◀
- Close carry handle **1**.
- Turn key **2** counter-clockwise and remove.

Removing cases

– with cases OA



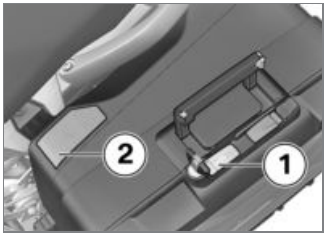
- Turn key **1** clockwise.
- Keep the yellow latch **2** held and fold out the carry handle **3**.



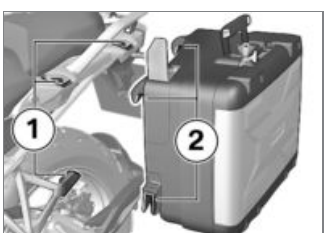
- Pull red release lever **1** up.
» Latching flap **2** pops up.
- Fully open the latching flap.
- Take a firm grip of the handle and lift the case out of the holder.

Mounting cases

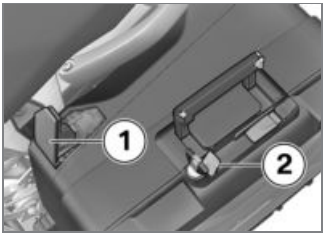
– with cases OA



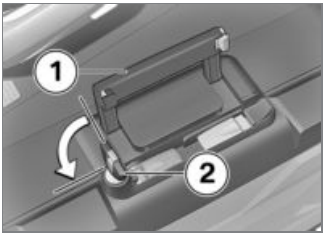
- Pull red release lever **1** up.
» Latching flap **2** pops up.
- Fully open the latching flap.



- Place box from the top into the mountings **1** and **2**.



- Press latching flap **1** down until resistance is felt.
- Then simultaneously press down latching flap and red release lever **2**.
» The latching flap engages.



ATTENTION

Closure of carrying handle with case lock latched

Damage to locking tab

- Make sure that the case lock is at right angles to the forward direction of travel when you close the carry handle.◀
- Close carry handle **1**.
- Turn key **2** counter-clockwise and remove.

Maximum payload and maximum permissible speed

Note the maximum permissible payload and the speed limit for riding with cases fitted, as stated on the label inside the case. Contact your authorised BMW Motorrad dealer if you cannot find your combination of vehicle and cases on the label. The values for the combination described here are as follows:

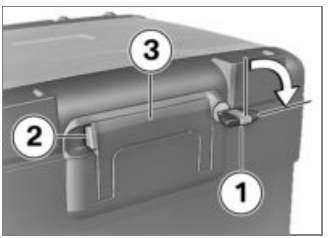
Maximum permissible speed for riding with Vario cases fitted to the motorcycle
max 180 km/h

Payload per Vario case
max 10 kg

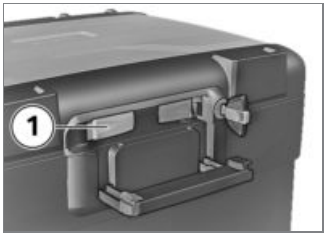
Topcase

Opening topcase

– with topcase OA



- Turn key **1** clockwise.
- Keep the yellow latch **2** held and fold out the carry handle **3**.



- Push yellow button **1** forward and at the same time open the lid of the topcase.

Adjusting topcase volume

– with topcase OA

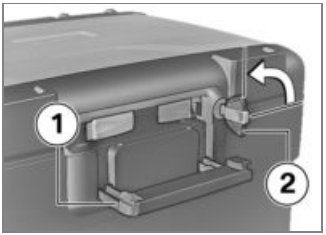
- Open the topcase and remove all its contents.

- Engage pivot lever **1** at the front limit position to set the case to maximum volume.
- Engage pivot lever **1** at the rear limit position to set the case to minimum volume.
- Close the topcase.

Closing topcase

– with topcase OA

- Press down firmly on the topcase lid to close.



ATTENTION

Closure of carrying handle with case lock latched

Damage to locking tab

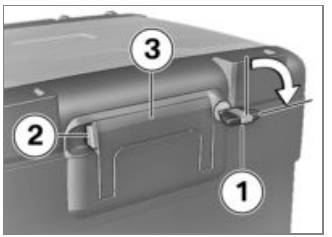
- Make sure that the topcase lock is vertical when you close the carry handle.◀
- Close carry handle **1**.

» The handle engages with an audible click.

- Turn key **2** counter-clockwise and remove.

Removing the topcase

– with topcase OA



- Turn key **1** clockwise.
- Keep the yellow latch **2** held and fold out the carry handle **3**.

- Pull red lever **1** back as far as it will go.

» Latching flap **2** pops up.

- Fully open the latching flap.
- Take a firm grip of the handle and lift the topcase out of the holder.

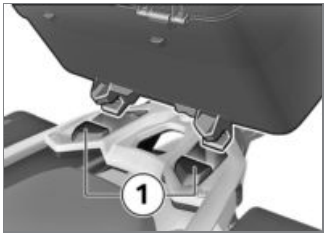
Mounting topcase

– with topcase OA

- Pull red lever **1** back as far as it will go.

» Latching flap **2** pops up.

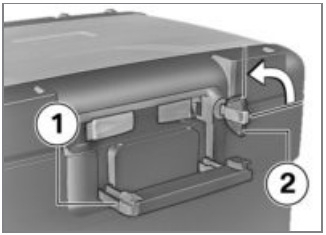
- Fully open the latching flap.



- Engage the topcase in front holders **1** of the topcase carrier plate.
- Press the topcase onto the topcase carrier plate at the rear.

- Press latching flap **1** forward until resistance is felt.
- Next simultaneously press down latching flap and red release lever **2**.

» The latching flap engages.



ATTENTION

Closure of carrying handle with case lock latched

Damage to locking tab

- Make sure that the topcase lock is vertical when you close the carry handle.◀
- Close carry handle **1**.

» The handle engages with an audible click.

- Turn key **2** counter-clockwise and remove.

Maximum payload and maximum permissible speed

Note the maximum permissible payload and the speed limit for riding with topcase fitted, as stated on the label inside the topcase.

Contact your authorised BMW Motorrad dealer if you cannot find your combination of vehicle and topcase on the label. The values for the combination described here are as follows:

Maximum speed for riding with a laden Vario topcase
max 180 km/h

Payload of Vario topcase
max 5 kg

Installing topcase

– with topcase 2 large, 49 l[OA]

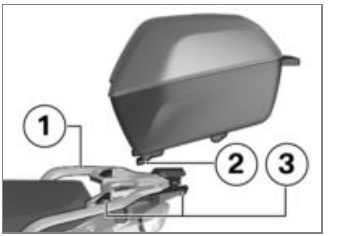
WARNING

Topcase not properly secured

Driving safety is impaired

- The topcase must not wobble and must be secured free from play.◀

- Pull handle **1** up as far as it will go.



- Hook the topcase into the luggage carrier **1**. Make sure that the hooks **2** fit securely into the fixtures **3**.
- Push the handle down until it engages.

- Turn the key in the topcase lock to position **1** and remove the key from the lock.

Maximum speed for journeys with big topcase 2, 49 l
max 180 km/h

Payload of big topcase 2, 49 l
max 5 kg

- Do not exceed the values for maximum speed and payload.

Opening topcase

– with topcase 2 large, 49 l[OA]

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

- Push lock barrel **1** forward.

» Lever **2** pops up.

- Pull the release lever all the way up.

» The lid of the topcase opens.

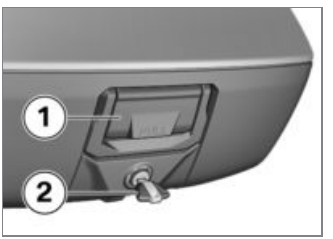
Closing topcase

– with topcase 2 large, 49 l[OA]

- Pull release lever **1** all the way up.
- Close the lid of the topcase and hold it down. Check that nothing is trapped between the lid and the case.

NOTICE

The topcase can also be locked by turning the lock to the LOCK position. In this case, ensure that the vehicle key is not left in the topcase.◀



- Push release lever **1** down until it engages.
- Turn key **2** in the topcase lock to the **LOCK** position and remove the key from the lock.

Removing the topcase

– with topcase 2 large, 49 l [OA]

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

» The handle pops out.

- Pull handle **1** up as far as it will go.
- Lift the topcase at the rear and remove it from the luggage carrier.

Navigation system

– with preparation for navigation system [OE]

Securing navigation device

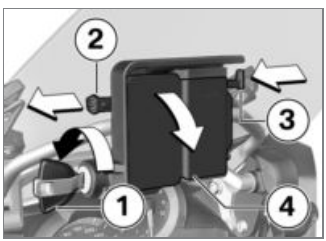
NOTICE

The navigation preparation option is compatible with the

BMW Motorrad Navigator IV and the BMW Motorrad Navigator V.◀

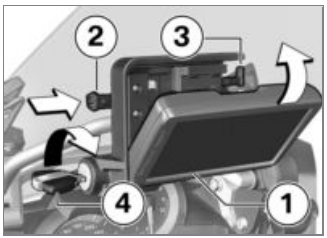
NOTICE

The latching system of the Mount Cradle is not designed to protect against theft.
Always remove the navigation system and stow it away safely as soon as you finish your ride.◀



- Turn ignition key **1** counterclockwise.
- Pull retainer **2** to the **left**.
- Press in lock **3**.

» The Mount Cradle is released and cover **4** can be pivoted forward and removed.



- Insert the navigation system **1** in the lower area and swing it towards the rear in one rotational movement.

» The navigation device is heard to engage.

- Push retainer **2** fully to the **right**.

» Lock **3** is engaged.

- Turn ignition key **4** clockwise.

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

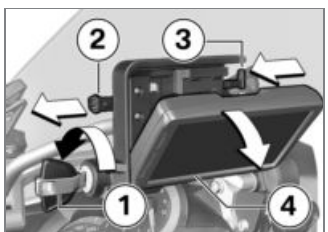
Removing navigation device and installing cover

ATTENTION

Dust and dirt on the Mount Cradle contacts

Damaged contacts

- Always reinstall the cover as soon as you finish your ride.◀

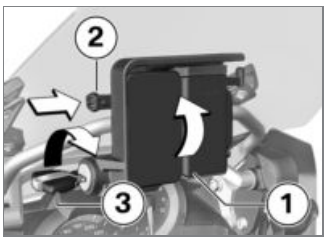


- Turn vehicle key **1** counterclockwise.
- Pull retainer **2** fully to the **left**.

» Lock **3** is disengaged.

- Push lock **3** fully to the **left**.

» Navigation system **4** is unlocked.
• Tilt the navigation device **4** and work it downward to remove.



• Insert cover **1** at bottom and pivot it up.
» The cover engages with an audible click.
• Push retainer **2** to the **right**.
• Turn vehicle key **3** clockwise.
» Cover **1** is secured.

Operating navigation system

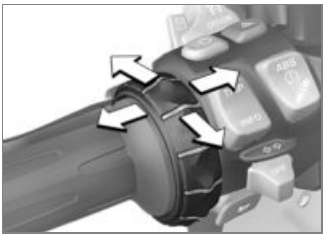
NOTICE

The description below is based on the Navigator V. The Navigator IV does not support all the possibilities described here.◀

NOTICE

Only the latest version of the BMW Motorrad communication system is supported. A software update of the BMW Motorrad communication system may be necessary. If this is the case, consult your authorised BMW Motorrad dealer.◀

If the BMW Motorrad Navigator is fitted, some of its functions can be controlled directly from the handlebars using the Multi-Controller.



The Multi-Controller is operated by means of six movements:
– Turning upwards and downwards.
– Short operation to the left and right.
– Extended operation to the left and right.

Turning the Multi-Controller with the Compass or Mediaplayer page open increases or decreases the volume of a BMW Motorrad communication system connected via Bluetooth.

In the BMW special menu, the menu items are selected by turning the Multi-Controller.

Short operation of the Multi-Controller to the left or right changes between the main pages of the Navigator:
– Map view
– Compass
– Mediaplayer
– BMW special menu
– My Motorcycle page

Long-pushing the Multi-Controller corresponds to activating certain functions on the Navigator display. An arrow to the right or to the left above the corresponding button area on the display indicates a function that can be activated in this way.


Long-push to the right to activate this function.


Long-push to the left to activate this function.

In detail, the following functions can be controlled:

Map view

– Turn up: Enlarge map section (Zoom in).
– Turn down: Reduce map section (Zoom out).

Compass page

– Turning increases or decreases the volume of a BMW Motorrad communication system connected via Bluetooth.

BMW special menu

– Speak: Repeat most recent navigation announcement.
– Waypoint: Save current location as a favourite.
– Home: Starts navigation to home address (greyed if no home address has been defined).
– Mute: Switch automatic navigation announcements off or on (off: a crossed-out lips symbol appears in the top line of the display). "Speak" will still activate navigation announcements. All other acoustic outputs remain switched on.
– Switch off display: Deactivate the display.
– Dial home number: Dials the home phone number saved in the Navigator (not shown unless a telephone is connected).
– Diversion: Activates the diversion function (not shown unless a route is active).
– Skip: Skips the next waypoint (not shown unless the route has waypoints).

My Motorcycle

– Turn: Changes the number of data shown.

– Touch a data field on the display to open the menu for selecting data.
– The values available fr selection depend on the optional extras installed on the vehicle.

NOTICE

The Mediaplayer function is only available when using an A2DP Bluetooth device, for example a BMW Motorrad communication system.◀

Mediaplayer

– Long-push to the left: Play preceding track.
– Long-push to the right: Play next track.
– Turning increases or decreases the volume of a BMW Motorrad communication system connected via Bluetooth.

Indicator and warning messages

Indicator and warning messages from the motorcycle are indicated by a symbol **1** which appears at the top left in the map view.

NOTICE

If a BMW Motorrad communication system is connected, warnings are accompanied by an acoustic signal.◀

If there are two or more active warnings the number appears below the warning triangle.

Touching the warning triangle when more than one warning is active opens a list of all the warnings.
Additional information appears as soon as a message is selected.

NOTICE

Detailed information cannot be displayed for all warnings.◀

Special functions

Integration of the BMW Motorrad Navigator has produced a number of deviations from the descriptions in the operating instructions for the Navigator.

Reserve fuel level warning

The settings for the fuel gauge are not available, because the reserve fuel level warning is sent by the vehicle to the Navigator. Touch the message when it is active to view the locations of the nearest filling stations.

Time and date

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

Security settings

The BMW Motorrad Navigator V can be secured against unauthorised use with a four-digit PIN (Garmin Lock). If this function is activated, while the Navigator is cradled on the motorcycle and the ignition is switched on you are prompted to add the motorcycle to the list of secured vehicles. If you answer "Yes" at this prompt the Navigator saves the VIN of this vehicle in its internal memory.
A maximum of five VINs can be saved in this way.
Subsequently, the PIN does not have to be entered when the Navigator is switched on by ignition ON while cradled in any of these vehicles.
If the Navigator is removed from the vehicle while switched on, a security prompt asking for the PIN to be entered is issued.

Screen brightness

Screen brightness is adjusted by the motorcycle while the unit is cradled. No manual input is necessary.
If you prefer, you can switch off automatic adjustment n the Navigator display settings.

Care

Care products 188
Washing the vehicle 188
Cleaning easily damaged components 189
Paint care 190
Protective wax coating 190
Laying up the motorcycle 190
Restoring motorcycle to use 191

Care products

BMW Motorrad recommends that you use the cleaning and care products you can obtain from your authorised BMW Motorrad dealer.
The substances in BMW Care Products have been tested in laboratories and in practice; they provide optimised care and protection for the materials used in your vehicle.

ATTENTION

Use of unsuitable cleaning and care products
Damage to vehicle parts
- Do not use solvents such as cellulose thinners, cold cleaners, fuel or the like, and do not use cleaning products that contain alcohol.◀

Washing the vehicle

BMW Motorrad recommends that you use BMW insect remover to soften and wash off insects and stubborn dirt on painted parts prior to washing the vehicle.
To prevent stains, do not wash the vehicle immediately after it has been exposed to strong sunlight and do not wash it in the sun.
Make sure that the vehicle is washed frequently, especially during the winter months.
To remove road salt, clean the motorcycle with cold water immediately after every trip.

WARNING

Wet brake discs and brake pads after vehicle wash, after riding through water and in rainy conditions
Diminished braking effect, risk of accident
- Apply the brakes in good time to allow the friction and heat to dry the brake discs and brake pads.◀

ATTENTION

Effect of road salt intensified by warm water
Corrosion
- Use only cold water to wash off road salt.◀

ATTENTION

Damage due to high water pressure from high pressure cleaners or steam cleaners
Corrosion or short circuit, damage to labels, seals, hydraulic brake system, electrical system and the motorcycle seat

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

NOTICE

Aluminium cases and topcases do not have a surface coating. Care in accordance with the instructions set out below will help ensure the best possible appearance:
Remove road salt and corrosive deposits by cleaning with cold water immediately after every trip.◀

Cleaning easily damaged components

Plastics

ATTENTION

Use of unsuitable cleaning agents
Damage to plastic surfaces

- Do not use cleaning agents that contain alcohol, solvents or abrasives.
- Do not use insect-remover pads or cleaning pads with hard, scouring surfaces.◀

Body panels

Clean the trim panels with water and BMW plastic care emulsion.

Windscreens and lenses made of plastic

Clean off dirt and insects with a soft sponge and plenty of water.

NOTICE

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

Clean with water and sponge only.


Do not use any chemical cleaning agents.

Chrome

Use plenty of water and BMW shampoo to clean chrome, particularly if it has been exposed to road salt. Use chrome polish for additional treatment.

Radiator

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

ATTENTION

Bending of radiator fins
Damage to radiator fins

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

Rubber components

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

ATTENTION

Application of silicone sprays to rubber seals

Damage to the rubber seals

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

Paint care

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

Remove particularly aggressive substances immediately, however, as otherwise the paint can be affected or become discoloured. Substances of this nature include spilt fuel, oil, grease, brake fluid and bird droppings. We recommend BMW vehicle polish or BMW paint cleaner for this purpose.

Marks on the paintwork are particularly easy to see after the vehicle has been washed. Remove stains of this kind immediately, using cleaning-grade benzine or petroleum spirit on a clean cloth or ball of cotton. BMW Motorrad recommends using BMW tar remover for removing specks of tar. Remember to wax the parts treated in this way.

Protective wax coating

If water is no longer forming beads on the paint surface, it must be waxed.

BMW Motorrad recommends applying only BMW car wax or products containing carnauba wax or synthetic wax.

Laying up the motorcycle

- Clean the motorcycle.
- Fill the motorcycle's fuel tank.
- Removing battery (➠ 163).
- Spray the brake and clutch lever pivots and the main and side stand pivots with a suitable lubricant.
- Preserve bright metal and chrome-plated parts with an acid-free grease (e.g. Vaseline).
- Park the motorcycle in a dry room so that no load applies to either wheel (preferably using the front-wheel and rear-wheel stand available from BMW Motorrad).

Restoring motorcycle to use

- Remove the protective wax coating.
- Clean the motorcycle.

- Installing battery (➠ 164).
- Comply with checklist (➠ 105).

Technical data

Troubleshooting chart 194
Threaded fasteners 195
Fuel..... 197
Engine oil 198
Engine 198
Clutch 199
Transmission 199
Final drive..... 200
Frame 201
Chassis and suspension 201
Brakes 203
Wheels and tyres 204
Electrical system..... 205
Anti-theft alarm 207
Dimensions 207
Weights..... 210
Riding specifications 210

Troubleshooting chart

The engine does not start.

Possible cause	Rectification
Side stand extended and gear engaged	Retract the side stand.
Gear engaged and clutch not disengaged	Select neutral or pull the clutch lever.
No fuel in tank	Refuelling (➠ 115).
Battery flat	Charge battery when connected (➠ 162).
Overheating protection for starter motor has been activated. Starter motor can only be operated for a limited period of time.	Allow the starter motor to cool down for approx. 1 minute before using it again.

Threaded fasteners

Front wheel	Value	Valid
Quick-release axle in telescopic forks		
M12 x 20	30 Nm	
Clamping screw for quick-release axle in telescopic fork		
M8 x 35	19 Nm	
Brake caliper on telescopic fork		
M10 x 65	38 Nm	
Wheel-speed sensor to fork leg		
M6 x 16 Micro-encapsulated	8 Nm	

Rear wheel	Value	Valid
Rear wheel to wheel flange		
M10 x 1.25 x 40	**Tightening sequence: tighten in diagonally opposite sequence**	
	60 Nm	

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

Handlebars	Value	Valid
Clamping block (handlebar clamp) on fork bridge		
M8 x 35	**Tightening sequence: Tighten in riding direction at the front of the block**	
	19 Nm	

Fuel

Recommended fuel grade	Super unleaded (max. 10 % ethanol, E10) 95 ROZ/RON 89 AKI
Alternative fuel grade	Regular unleaded (power and consumption-related restrictions.) (max. 10 % ethanol, E10) 91 ROZ/RON 87 AKI
Usable fuel capacity	approx. 20 l
Reserve fuel	approx. 4 l
Exhaust emissions standard	Euro 4

Engine oil

Engine oil, capacity	max 4 l, with filter change
Specification	SAE 5W-40, API SL / JASO MA2, Additives (e.g. molybdenum-based) are not permissible because they can attack coated components of the engine, BMW Motorrad recommends BMW Motorrad ADVANTEC Ultimate oil.
Engine oil, quantity for topping up	max 0.95 l, Difference between MIN and MAX

BMW recommends ADVANTEC ORIGINAL BMW ENGINE OIL

Engine

Location of engine number	Crankcase, bottom right, below starter motor
Engine type	122EN
Engine design	Air/liquid-cooled two-cylinder, four-stroke, opposed-twin engine with two overhead spur gear-driven camshafts and a counterbalance shaft.
Displacement	1170 cm^3
Cylinder bore	101 mm
Piston stroke	73 mm
Compression ratio	12.5:1

Nominal output	92 kW, at engine speed: 7750 min^{-1}
– with reduction of power[OE]	79 kW, at engine speed: 7750 min^{-1}
Torque	125 Nm, at engine speed: 6500 min^{-1}
– with reduction of power[OE]	122 Nm, at engine speed: 5250 min^{-1}
Maximum engine speed	max 9000 min^{-1}
Idle speed	1150 min^{-1}, Engine at regular operating temperature

Clutch

Clutch type	Multiplate oil-bath clutch, anti-hopping

Transmission

Gearbox type	Claw-shift 6-speed gearbox with helical gearing

Gearbox transmission ratios	1.000 (60:60 teeth), Primary transmission ratio 1.650 (33:20 teeth), Transmission input ratio 2.438 (39:16 teeth), 1st gear 1.714 (36:21 teeth), 2nd gear 1.296 (35:27 teeth), 3rd gear 1.059 (36:34 teeth), 4th gear 0.943 (33:35 teeth), 5th gear 0.848 (28:33 teeth), 6th gear 1.061 (35:33 teeth), Transmission output ratio

Final drive

Type of final drive	Shaft drive with bevel gears
Type of rear suspension	Cast aluminium single swinging arm featuring BMW Motorrad Paralever
Gear ratio of final drive	2.91 (32/11 teeth)

Frame

Frame type	Tubular steel frame with supporting drive unit, steel pipe rear frames
Type plate location	Frame, front left at steering head
Position of the Vehicle Identification Number	Frame, front right, on steering head

Chassis and suspension

Front wheel	
Type of front suspension	BMW Telelever, with anti-dive top fork bridge, leading link pivot-mounted on engine and telescopic forks, central spring strut supported by leading link and frame
Design of front wheel suspension	Central shock absorber with helical spring
– with Dynamic ESA OE	Central shock absorber complete with torsion spring and header tank, electrically adjustable decompression and compression-stage damping
Spring travel, front	190 mm, at wheel
– with style 1 OE – with sport suspension OE	210 mm, at wheel
– with lowered suspension OE	158 mm, at wheel

Rear wheel	
Type of rear suspension	Cast aluminium single swinging arm featuring BMW Motorrad Paralever
Type of rear suspension	Central spring strut with coil spring, adjustable rebound stage damping and spring preload
– with Dynamic ESA OE	Central spring strut with coil spring and reservoir, electrically adjustable rebound-.stage and compression-stage damping, electrically adjustable spring preload
Spring travel at rear wheel	200 mm
– with style 1 OE – with sport suspension OE	220 mm
– with lowered suspension OE	170 mm

Brakes

Front wheel	
Type of front brake	Hydraulically actuated twin-disc brake with 4-piston radial monobloc calipers and floating brake discs
Brake-pad material, front	Sintered metal
Play of brake controls (Front brake)	approx. 1.85 mm, at piston
Rear wheel	
Type of rear brake	Hydraulically actuated disc brake with 2-piston floating caliper and fixed disc
Brake-pad material, rear	Sintered metal
Blow-by clearance of the footbrake lever	1...1.5 mm, between the frame and the footbrake lever

Wheels and tyres

Recommended tyre sets	An overview of currently approved tyres is available from your authorised BMW Motorrad Retailer or on the Internet at bmw-motorrad.com.
Speed category, front/rear tyres	V, required at least: 240 km/h
Front wheel	
Front wheel type	Aluminium cast wheel
– with cross-spoked wheels OE	Cross-spoked wheel
Front wheel rim size	3.00" x 19"
Tyre designation, front	120/70 R 19
Load index, front tyre	min. 60
Permissible front-wheel imbalance	max 5 g
Rear wheel	
Rear-wheel type	Aluminium cast wheel
– with cross-spoked wheels OE	Cross-spoked wheel
Rear wheel rim size	4.50" x 17"
Tyre designation, rear	170/60 R 17
Load index, rear tyre	min. 72
Permissible rear-wheel imbalance	max 45 g

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

Electrical system

Electrical rating of on-board sockets	max 5 A, total for all sockets
Fuse carrier 1	10 A, Slot 1: Instrument cluster, anti-theft alarm (DWA), ignition lock, diagnostic socket 7.5 A, Slot 2: Left multifunction switch, tyre pressure monitoring (RDC)
Fuse holder	50 A, Fuse 1: Voltage regulator
Battery	
Battery type	AGM (Absorbent Glass Mat) battery
Battery rated voltage	12 V
Battery rated capacity	12 Ah
Spark plugs	
Spark plugs, manufacturer and designation	NGK LMAR8D-J
Electrode gap of spark plug	$0.8^{\pm 0.1}$ mm, when new 1.0 mm, Wear limit

Lighting	
Bulb for high-beam headlight	H7 / 12 V / 55 W
– with LED headlight[OE]	LED
Bulbs for the low-beam headlight	H7 / 12 V / 55 W
– with LED headlight[OE]	LED
Bulb for parking light	W5W / 12 V / 5 W
– with LED headlight[OE]	LED
Bulb for tail light/brake light	LED
Bulbs for flashing turn indicators, front	RY10W / 12 V / 10 W
– with LED flashing turn indicators[OE]	LED
Bulbs for flashing turn indicators, rear	RY10W / 12 V / 10 W
– with LED flashing turn indicators[OE]	LED

Anti-theft alarm

Activation time on arming	approx. 30 s
Alarm duration	approx. 26 s
Battery type	CR 123 A

Dimensions

Length of motorcycle	2207 mm, via spray guard
Height of motorcycle	1430...1490 mm, via windscreen at DIN unladen weight
– with style 1 OE	1312...1372 mm, via windscreen at DIN unladen weight
– with style 1 OE – with sport suspension OE	1332...1392 mm, via windscreen at DIN unladen weight
– with style 1 OE – with sport suspension OE – with passenger package OE	1450...1510 mm, via windscreen at DIN unladen weight
– with lowered suspension OE	1405...1465 mm, via windscreen, lower position at DIN unladen weight
Width of motorcycle	952 mm, with mirrors

Front-seat height	850...870 mm, without rider at unladen weight
– with comfort seat OE	825...845 mm, without rider at unladen weight
– with comfort seat, high OE	850...870 mm, without rider at unladen weight
– with low rider's seat OE	820...840 mm, without rider at unladen weight
– with style 1 OE	860 mm, without rider at unladen weight
– with style 1 OE – with motorcycle seat, extra high OE	880 mm, without rider at unladen weight
– with style 1 OE – with passenger package OE	850...870 mm, without rider at unladen weight
– with style 1 OE – with sport suspension OE	880 mm, without rider at unladen weight
– with style 1 OE – with sport suspension OE – with motorcycle seat, extra high OE	900 mm, without rider at unladen weight
– with style 1 OE – with sport suspension OE – with passenger package OE	870...890 mm, without rider at unladen weight
– with lowered suspension OE	800...820 mm, without rider at unladen weight
Rider's inside-leg arc, heel to heel	1870...1910 mm, without rider at unladen weight
– with comfort seat OE	1880...1900 mm, without rider at unladen weight
– with comfort seat, high OE	1920...1940 mm, without rider at unladen weight

– with low rider's seat [OE]	1820...1860 mm, without rider at unladen weight
– with style 1 [OE]	1880 mm, without rider at unladen weight
– with style 1 [OE] – with motorcycle seat, extra high [OE]	1920 mm, without rider at unladen weight
– with style 1 [OE] – with passenger package [OE]	1870...1910 mm, without rider at unladen weight
– with style 1 [OE] – with sport suspension [OE]	1920 mm, without rider at unladen weight
– with style 1 [OE] – with sport suspension [OE] – with motorcycle seat, extra high [OE]	1960 mm, without rider at unladen weight
– with style 1 [OE] – with sport suspension [OE] – with passenger package [OE]	1910...1950 mm, without rider at unladen weight
– with lowered suspension [OE]	1790...1830 mm, without rider at unladen weight

Weights

Vehicle kerb weight	244 kg, DIN unladen weight, ready for road 90 % load of fuel, without OE
Permissible gross weight	460 kg
Maximum payload	216 kg

Riding specifications

Top speed	>200 km/h

Service

BMW Motorrad Service 212
BMW Motorrad Mobility services 212
Maintenance work 212
BMW Service 213
Maintenance schedule 215
Maintenance confirmations 216
Service confirmations 230

BMW Motorrad Service

BMW Motorrad has an extensive network of dealerships in place to look after you and your motorcycle in more than 100 countries. Authorised BMW Motorrad dealerships have the technical information and the technical know-how to carry out reliably all maintenance and repair work on your BMW.

You can locate your nearest authorised BMW Motorrad dealership by visiting our website: **bmw-motorrad.com**

WARNING

Maintenance and repair work not in compliance with correct procedure

Risk of accident due to consequential damage

- BMW Motorrad recommends having work of this nature carried out on the vehicle by a specialist workshop, preferably an authorised BMW Motorrad dealer.◀

In order to help ensure that your BMW is always in optimum condition, BMW Motorrad recommends compliance with the maintenance intervals specified for your motorcycle. Have all maintenance and repair work that is carried out confirmed in the "Service" chapter in this manual. For generous treatment of claims submitted after the warranty period has expired, evidence of regular maintenance is essential.

Your authorised BMW Motorrad dealer can provide information on BMW services and the work undertaken as part of each service.

BMW Motorrad Mobility services

As owner of a new BMW motorcycle, in circumstances in which assistance is required you can benefit from the protection afforded by the various BMW Motorrad mobility services (e.g. Mobile Service, breakdown service, vehicle recovery service). Your authorised BMW Motorrad dealer will be happy provide information about the mobility services available to you.

Maintenance work

BMW Pre-delivery Check

Your authorised BMW Motorrad dealer conducts the BMW predelivery check before handing over the vehicle to you.

BMW Running-in Check

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

BMW Service

The BMW Service is carried out once a year; the extent of servicing can vary, depending on the age of the vehicle and the distance it has covered. Your authorised BMW Motorrad dealer confirms that the service work has been carried out and enters the date when the next service will be due.
Riders who cover long distances in a year might have to bring in their vehicles for service before the next scheduled date. It is to allow for these cases that a maximum odometer reading is entered as well in the confirmation of service. Servicing has to be brought forward if this odometer reading is reached before the next scheduled date for the service.
The service-due indicator in the multifunction display reminds you about one month or 1000 km in advance when the time for a service is approaching, on the basis of the programmed values.

To find out more about service go to:
bmw-motorrad.com/service

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

	500 -1200 km 300 - 750 mls	10 000 km 6 000 mls	20 000 km 12 000 mls	30 000 km 18 000 mls	40 000 km 24 000 mls	50 000 km 30 000 mls	60 000 km 36 000 mls	70 000 km 42 000 mls	80 000 km 48 000 mls	90 000 km 54 000 mls	100 000 km 60 000 mls	12 months	24 months
①	X												
②												X	
③		X	X	X	X	X	X	X	X	X	X	X[a]	
④			X		X		X		X		X		X[b]
⑤			X		X		X		X		X		
⑥			X		X		X		X		X		
⑦			X		X		X		X		X		
⑧		X	X	X	X	X	X	X	X	X	X	X[c]	
⑨												X[d]	X[d]

Maintenance schedule

1 BMW running-in check (including oil change)
2 BMW Service standard scope
3 Engine-oil change, with filter
4 Oil change in bevel gears rear
5 Check valve clearance
6 Replace all spark plugs
7 Replace air filter element
8 Check or replace air-filter element
9 Change brake fluid, entire system

a annually or every 10000 km (whichever comes first)
b every 2 years or every 20000 km (whichever comes first)
c if vehicle is used off-road, annually or every 10000 km (whichever comes first)
d for the first time after one year, then every two years

Maintenance confirmations

BMW Service standard scope

The repair tasks in the BMW Service standard scope are listed below. The actual scope of maintenance work applicable for your vehicle may vary.

– Performing vehicle test with BMW Motorrad diagnostic system
– Visual inspection of hydraulic clutch system
– Visually inspecting brake pipes, brake hoses and connections
– Checking front brake pads and brake discs for wear
– Checking brake-fluid level, front brakes
– Checking rear brake pads and brake disc for wear
– Checking brake-fluid level, rear brakes
– Checking coolant level
– Checking ease of movement of side stand
– Checking ease of movement of centre stand
– Checking tyre tread depth and tyre pressure
– Checking spoke tension, adjusting if necessary
– Check the lights and signalling equipment
– Function test, engine start suppression
– Final inspection and check for road safety
– Setting service-due date and service countdown distance
– Checking battery charge state
– Confirming the BMW service in the on-board literature

BMW pre-delivery check

carried out

at_____

_____

Stamp, signature

BMW Running-in Check

carried out

at_____

at km_____

Next service

at the latest

at_____

or, when reached earlier

at km_____

_____

Stamp, signature

BMW Service
carried out

at_____
at km_____

Next service
at the latest
at_____
or, when reached earlier
at km_____

_____
Stamp, signature

Work performed

	Yes	No
BMW Service	☐	☐
Oil change, engine, with filter	☐	☐
Oil change in rear bevel gears	☐	☐
Checking valve clearance	☐	☐
Renewing all spark plugs	☐	☐
Renewing air cleaner insert	☐	☐
Checking or replacing air filter element (for maintenance)	☐	☐
Change brake fluid in entire system	☐	☐

Notes

BMW Service
carried out

at_____
at km_____

Next service
at the latest
at_____
or, when reached earlier
at km_____

_____
Stamp, signature

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Change brake fluid in entire system	☐	☐

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at_____
or, when reached earlier
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_____
Stamp, signature

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Next service
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Notes

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Notes

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carried out

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Checking or replacing air filter element (for maintenance)	☐	☐
Change brake fluid in entire system	☐	☐

Notes

BMW Service
carried out

at_____
at km_____

Next service
at the latest
at_____
or, when reached earlier
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Stamp, signature

Work performed

	Yes	No
BMW Service	☐	☐
Oil change, engine, with filter	☐	☐
Oil change in rear bevel gears	☐	☐
Checking valve clearance	☐	☐
Renewing all spark plugs	☐	☐
Renewing air cleaner insert	☐	☐
Checking or replacing air filter element (for maintenance)	☐	☐
Change brake fluid in entire system	☐	☐

Notes

Service confirmations

The table is used to verify maintenance and repair work as well as installed optional accessories and purchased special promotions.

Work performed	at km	Date

Work performed	at km	Date

Appendix

Certificate for Electronic Immobiliser 234

Certificate for Keyless Ride 236

Certificate for Tyre Pressure Control (RDC) 238

FCC Approval

Ring aerial in the ignition switch

To verify the authorization of the ignition key, the electronic immobilizer exchanges information with the ignition key via the ring aerial.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and

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

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

Approbation de la FCC

Antenne annulaire présente dans le commutateur d'allumage

Pour vérifier l'autorisation de la clé de contact, le système d'immobilisation électronique échange des informations avec la clé de contact via l'antenne annulaire.
Le présent dispositif est conforme à la partie 15 des règles de la FCC. Son utilisation est soumise aux deux conditions suivantes :

(1) Le dispositif ne doit pas produire d'interférences nuisibles, et
(2) le dispositif doit pouvoir accepter toutes les interférences extérieures, y compris celles qui pourraient provoquer une activation inopportune.

Toute modification qui n'aurait pas été approuvée expressément par l'organisme responsable de l'homologation peut annuler l'autorisation accordée à l'utilisateur pour utiliser le dispositif. ◀

Certifications

BMW Keyless Ride ID Device

USA, Canada

Product name: BMW Keyless Ride ID Device
FCC ID: YGOHUF5750
IC: 4008C-HUF5750

Canada:
Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

USA:
This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and
(2) this device must accept any interference received, including interference that may cause undesired operation.

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

Declaration Of Conformity

We declare under our responsibility that the product

BMW Keyless Ride ID Device (Model: HUF5750)

camplies with the appropriate essential requirements of the article 3 of the R&TIE and the other relevant provisions, when used for its intended purpose. Applied Standards:

1. Health and safety requirements contained in article 3 (1) a)
   - EN 60950-1:2006+A11:2009+A1:2010+A12:2011; Information technology equipment- Safety
2. Protection requirements with respect to electromagnetic compatibility article 3 (1) b)
   - EN 301 489-1 (V1 .9.2, 09/2011), Electromagnetic compatibility and radio spectrum matters (ERM); Electromagnetic compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements
   - EN 301 489-3 (V1.4.1, 08/2002) Electromagnetic compatibility and radio spectrum matters (ERM); Electromagnetic compatibility (EMC) standard for radio equipment and services; Part 3: Specific conditions for short range devices (SRD) operating on frequencies between 9 kHz and 40 GHz
3. Means of the efficient use of the radio frequency spectrum article 3 (2)
   - EN 300 220-1 & -2 (V2.4.1, 05/2012), electromagnetic compatibility and radio spectrum matters (ERM); Short range devices (SRD); Radio equipment tobe used in the 25 MHz to 1000 MHz frequency range with power leveis ranging up to 500 mW; Part 1: Technical characteristics and test methods. Part 2: Harmonized EN covering essential requirements under article 3.2 ofthe R&TIE directive

The product is labeted wilh the CE marking: CE

Velbert, October 15th, 2013

Benjamin A. Müller
Product Development Systems
Car Access and Immobilization – Electronics
Huf Hülsbeck & Fürst GmbH & Co. KG
Steeger Straße 17, D-42551 Velbert

Certification Tire Pressure Control (TPC)

FCC ID: MRXBC54MA4 IC: 2546A-BC54MA4	FCC ID: MRXBC5A4 IC: 2546A-BC5A4

This device complies with Part 15 of the FCC Rules and with Industry Canada license-exempt RSS standard(s).
Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and
(2) This device must accept any interference received, including interference that may cause undesired operation.

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

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

WARNING: Changes or modifications not expressively approved by the party responsible for compliance could void the user's authority to operate the equipment. The term “IC:” before the radio certification number only signifies that Industry Canada technical specifications were met.

A
Abbreviations and symbols, 6
ABS
Control, 15
Engineering details, 122
operate, 68
Self-diagnosis, 106
Status indicators, 41
Accessories
General instructions, 170
Actuality, 7
Air filter
Position on the motorcycle, 13
Replacing the air filter element, 153
Ambient temperature
Outside temperature warning, 32
Reading, 32
Anti-theft alarm
Indicator light, 18
operate, 84
Technical data, 207
Warning, 38
ASC
Control, 15
Engineering details, 125
operate, 69
Reading, 42
Self-diagnosis, 107
switching off, 69
switching on, 70
Average values
reset, 63

B
Battery
Charge battery when connected, 162
Charging battery when disconnected, 163
Indicator light for vehicle voltage, 33
Installation, 164
Maintenance instructions, 161
Removal, 163
Technical data, 205
Brake fluid
Checking fluid level, front, 142
Checking fluid level, rear, 143
Reservoir, front, 13
Reservoir, rear, 13
Brake pads
Checking front, 140
checking rear, 141
Running in, 109
Brakes
ABS Pro in detail, 124
ABS Pro depending on riding mode, 113
Adjusting handlebar lever, 96
Checking function, 139
Safety instructions, 112
Technical data, 203

C
Cases, 171
Checklist, 105
Clock
Adjusting, 64

Clutch
Adjusting handlebar lever, 96
Checking function, 144
Technical data, 199
Coolant
Checking fill level, 144
Topping up, 145
Warning for overtemperature, 35
Cruise-control system
operate, 81

D
Damping
Adjuster, rear, 11
Daytime riding lights
automatic daytime riding light, 59
Manual daytime riding light, 58
Position on the vehicle, 11
Diagnostic connector
Loosen, 167
secure, 167
Dimensions
Technical data, 207
DTC
Engineering details, 126
Indicator and warning light , 42
operate, 70
Self-diagnosis, 108
switching off, 70
switching on, 71

E
Electrics
Technical data, 205
Emergency off switch (kill switch), 17
Operation, 56
Emissions warning light, 35
Engine
Indicator light for engine control unit, 36
Malfunction indicator lamp, 35
starting, 105
Technical data, 198
Warning for engine electronics, 36
Engine oil
Checking fill level, 138
Filling level indicator, 13
Oil filler opening, 13
Oil level, 34
Technical data, 198
Topping up, 139
Warning for engine oil level, 35
Equipment, 7
ESA
Control, 15
operate, 71

F
Frame
Technical data, 201
Front-wheel stand
Installing, 137
Fuel
Oil filler opening, 11
refuelling, 115
refuelling with Keyless Ride, 116, 117
Reserve volume, 45
Technical data, 197

Fuel reserve
Warning, 45
Fuses
replacing, 165

G
General views
Indicator and warning lights, 20
Instrument panel, 18
Left multifunction switch, 15
Left side of vehicle, 11
Multifunction display, 22
Right multifunction switch, 17
Right side of vehicle, 13
Underneath the seat, 14
Warning symbols, 24

H
Handlebars
Adjusting, 97
Hazard warning flashers
Control, 15, 17
operate, 60
Headlight
Beam throw, 94
Headlight beam-throw adjustment, 11
Headlight courtesy delay feature, 50, 57
Heated handlebar grips
Control, 17
operate, 87
Hill Start Control, 83, 133
cannot be activated, 46
Engineering details, 133
Indicator and warning lights, 45
operate, 83
Horn, 15

I
Ignition
switching off, 51
switching on, 50
Immobiliser
Emergency key, 54
Reserve key, 51
Warning, 32
Instrument panel
Ambient-light brightness sensor, 18
Overview, 18

J
Jump-start, 160

K
Keyless Ride
Battery of the radio-operated key is flat or the key has been lost, 55
Electronic immobiliser EWS, 54
Fuel filler cap, unlocking, 116, 117
Lock the handlebars, 52
Switching off ignition, 53
Switching on ignition, 53
Warning, 33
Keys, 50, 52

L
Lighting
High-beam headlight, 155
Low-beam headlight, 155

Replace LED headlights, 160
Replacing LED auxiliary headlights, 160
Replacing LED rear light, 159
Side light, 157
Technical data, 206
Turn indicators, 158
Warning for faulty bulb, 37
Lights
automatic daytime riding light, 59
Control, 15
Daytime riding light, 57
Headlight courtesy delay feature, 57
Headlight flasher, operating, 57
High-beam headlight, operating, 57
Low-beam headlight, 57
Manual daytime riding light, 58
Operating additional headlights, 58
Parking lights, 57
Side light, 57
Lowered suspension
Restrictions, 102
Luggage
Instructions for loading, 102

M
Maintenance
General instructions, 136
Maintenance schedule, 215
Maintenance confirmations, 216
Maintenance intervals, 212
Mirrors
Adjusting, 94
Mobility services, 212
Motorcycle
care, 187
cleaning, 187
Lashing, 118
Laying up, 190
parking, 114
Multifunction display, 18
Control, 15
operate, 61, 62
Overview, 22
Select display, 61
Multifunction switch
General view, left side , 15
General view, right side, 17

O
Odometer and tripmeters
reset, 62
Off-roading, 109
On-board voltage
Warning, 33

P
Parking, 114
Parking light, 57
Power socket
Notes on use, 170
Position on the vehicle, 13
Pre-Ride-Check, 106

R
RDC
Adhesive label for rim, 148
Engineering details, 131
Warnings, 39
Rear-wheel drive
Technical data, 200

Refuelling, 115
with Keyless Ride, 116, 117
Remote control
Replacing battery, 55
Rev. counter, 18
Rider's Manual
Position on the vehicle, 14
Riding mode
Adjusting, 74
Control, 17
Engineering details, 128
Setting the PRO riding mode, 76
Riding specifications
Technical data, 210
Running gear
Technical data, 201
Running in, 109

S

Safety instructions
for brakes, 112
for riding, 102
Seat
Position of the height adjustment, 14
Seats
Adjust the seat height, 89
Lock, 11
Removing and installing, 88
Service, 212
Service-due indicator, 47
Shift assistant
Engineering details, 132
Gear not trained, 47
Riding, 111
Shifting gear
Recommendation to upshift, 46
Spark plugs
Technical data, 205
Speedometer, 18
Spring preload
Adjuster, rear, 13
Adjusting, 97
Starting, 105
Control, 17
Steering lock
Locking, 50

T

Technical data
Anti-theft alarm, 207
Battery, 205
Brakes, 203
Bulbs, 206
Chassis and suspension, 201
Clutch, 199
Dimensions, 207
Electrical system, 205
Engine, 198
Engine oil, 198
Final drive, 200
Frame, 201
Fuel, 197
Riding specifications, 210
Spark plugs, 205
Standards, 7
Transmission, 199
Weights, 210
Wheels and tyres, 204
Telltale lights, 18
Overview, 20
Threaded fasteners, 195

Toolkit
Position on the vehicle, 14
Topcase
operate, 174
Torques, 195
Traction control
ASC, 125
DTC, 126
Transmission
Technical data, 199
Troubleshooting chart, 194
Turn indicators
Control, 15
Control, right, 17
operate, 61
Type plate
Position on the vehicle, 13
Tyre pressure monitoring RDC
Reading, 38
Tyres
Checking inflation pressure, 146
Checking tread depth, 146
Pressures, 205
Running in, 109
Table of tyre pressures, 14
Technical data, 204
Top speed, 103

V

Vehicle
Restoring to use, 191
Vehicle Identification Number
Position on the vehicle, 13

W

Warning lights, 18
Overview, 20
Warnings
ABS, 41
Anti-theft alarm, 38
ASC, 42
Bulb faulty, 37
Coolant temperature, 35
DTC, 42
Engine control unit, 36
Engine electronics, 36
Engine oil level, 35
Fuel reserve, 45
Gear not trained, 47
Hill Start Control, 45, 46
Immobiliser, 32
Malfunction indicator lamp, 35
Mode of presentation, 25
On-board voltage, 33
Outside temperature warning, 32
Overview, 24
RDC, 39
Warnings, overview, 26
Weights
Payload table, 14
Technical data, 210
Wheels
Change of size, 147
Checking rims, 146
Checking spokes, 147
Install the rear wheel, 153
Installing front wheel, 150
Removing front wheel, 148
Technical data, 204
Windscreen
Adjuster, 13
Adjusting, 95

Details described or illustrated in this booklet may differ from the vehicle's actual specification as purchased, the accessories fitted or the national-market specification. No claims will be entertained as a result of such discrepancies.
Dimensions, weights, fuel consumption and performance data are quoted to the customary tolerances.
The right to modify designs, equipment and accessories is reserved.
Errors and omissions excepted.

Original rider's manual, printed in Germany.

Important data for refuelling:

Fuel	
Recommended fuel grade	Super unleaded (max. 10 % ethanol, E10) 95 ROZ/RON 89 AKI
Alternative fuel grade	Regular unleaded (power and consumption-related restrictions.) (max. 10 % ethanol, E10) 91 ROZ/RON 87 AKI
Usable fuel capacity	approx. 20 l
Reserve fuel	approx. 4 l
Tyre pressures	
Tyre pressure, front	2.5 bar, tyre cold
Tyre pressure, rear	2.9 bar, tyre cold

You can find further information on all aspects of your vehicle at:
bmw-motorrad.com

BMW recommends ADVANTEC
ORIGINAL BMW ENGINE OIL

Order No.: 01 40 8 406 471
07.2017, 3rd edition, 01