



BMW Motorrad

bmw-motorrad.com



The Ultimate
Riding Machine

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 8 388 381



Table of Contents

1 General instructions	5	4 Operation.....	49	Hill Start Control	83
Overview	6	Ignition switch/steering		Anti-theft alarm (DWA)	84
Abbreviations and		lock	50	Heated handlebar grips	86
symbols	6	Ignition with Key-		Front and rear seats.....	87
Equipment	7	less Ride	52	5 Adjustment.....	91
Technical data	7	Emergency off switch (kill		Mirrors	92
Actualty	7	switch)	56	Headlight	92
2 General views	9	Lights	57	Windscreen	93
General view, left side	11	Daytime riding light.....	58	Clutch	94
General view, right side	13	Hazard warning lights sys-		Brakes	94
Underneath the seat	14	tem	60	Handlebars	95
Multifunction switch, left	15	Turn indicators	61	Spring preload	95
Multifunction switch,		Multifunction display	61	Damping	96
right	17	Anti-lock brake system		6 Riding.....	99
Instrument panel	18	(ABS).....	68	Safety instructions	100
3 Status indicators	19	Automatic Stability Control		Comply with checklist	103
Indicator and warning		(ASC)	69	Always before riding off ...	103
lights	20	Dynamic Traction Control		Every 3rd refuelling	
Multifunction display	22	(DTC)	70	stop	103
Warning symbols in the		Electronic Suspension Ad-		Starting.....	103
display	24	justment (D-ESA)	71	Running in	107
Warnings	25	Riding mode	74	Off-roading	107
		PRO riding mode	76	Shifting gear	109
		Cruise-control system	81		

Brakes	110	Front-wheel stand.....	135	Paint care	188
Parking your motor- cycle	112	Engine oil	136	Protective wax coating	188
Refuelling	112	Brake system	137	Laying up the motor- cycle	188
Securing motorcycle for transportation	116	Clutch	142	Restoring motorcycle to use	188
7 Engineering		Coolant.....	142		
 details	119	Tyres.....	144	11 Technical data	189
General instructions	120	Rims and tyres	144	Troubleshooting chart.....	190
Anti-lock brake system (ABS).....	120	Wheels	145	Threaded fasteners	191
Automatic Stability Control (ASC)	123	Air filter.....	152	Fuel	193
Dynamic Traction Control (DTC)	124	Light source.....	153	Engine oil	194
Dynamic ESA	125	Jump-starting	158	Engine	194
Riding mode	126	Battery	160	Clutch	195
Tyre pressure monitoring (RDC)	129	Fuses	164	Transmission.....	195
Shift assistant	130	Diagnostic connector.....	165	Final drive	196
Hill Start Control	131	9 Accessories	167	Frame	197
8 Maintenance	133	General instructions	168	Chassis and suspension	197
General instructions	134	Power sockets	168	Brakes	199
Toolkit.....	134	Cases	169	Wheels and tyres.....	200
Service toolkit	134	Topcase.....	172	Electrical system	202
		Navigation system.....	178	Anti-theft alarm.....	203
		10 Care	185	Dimensions	204
		Care products.....	186	Weights	206
		Washing the vehicle.....	186	Riding specifications	207
		Cleaning easily damaged components.....	187		

12 Service 209

BMW Motorrad Service ... 210

BMW Motorrad Mobility

services 210

Maintenance work..... 210

BMW Service 211

Maintenance schedule 213

Confirmation of mainten-
ance work 214

Confirmation of service.... 228

13 Appendix..... 231

Certificate for Electronic

Immobiliser 232

Certificate for Key-

less Ride 234

Certificate for Tyre Pres-
sure Control (RDC)..... 236

14 Index 237

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.
- National-
market
version
- 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.

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.

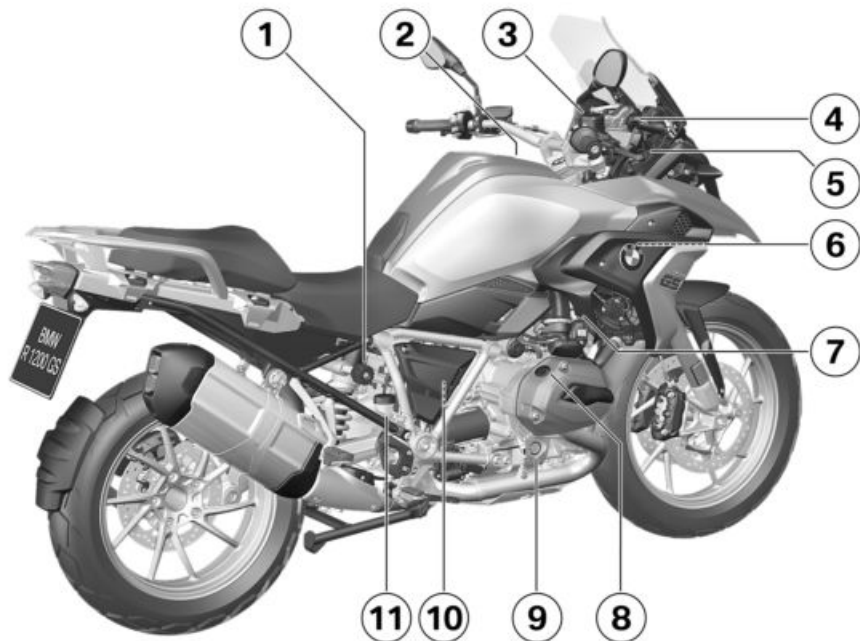
General views

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



General view, left side

- 1 Fuel filler neck (▮▮▮▮▶ 113)
- 2 Seat lock (▮▮▮▮▶ 87)
- 3 Setting the rear damping
(down at the spring strut)
(▮▮▮▮▶ 96)

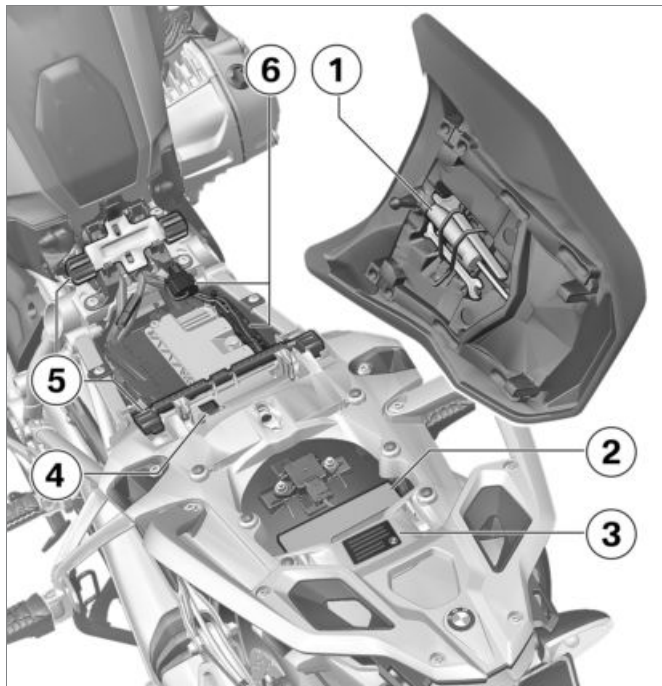


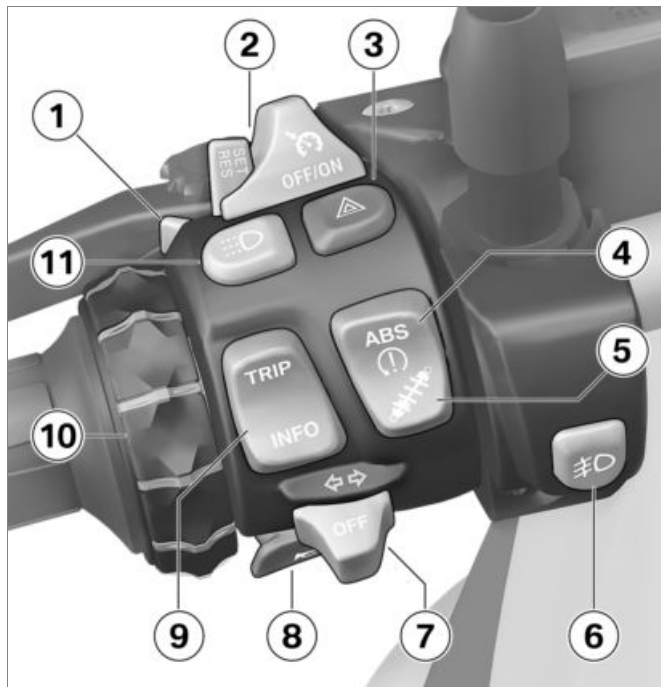
General view, right side

- 1** – without Dynamic ESA^{OE}
Adjuster for spring preload,
rear (▮▮▮ 95).
- 2** Air filter (underneath the
centre trim panel) (▮▮▮ 152)
- 3** Brake-fluid tank, front
(▮▮▮ 140)
- 4** Height adjustment of the
windscreen (▮▮▮ 93)
- 5** Power socket (▮▮▮ 168)
- 6** Vehicle identification num-
ber (on steering head)
Type plate (on the frame,
front right)
- 7** Coolant-level indicator
(▮▮▮ 142)
Coolant reservoir (▮▮▮ 143)
- 8** Oil filler neck (▮▮▮ 137)
- 9** Engine oil level indicator
(▮▮▮ 136)
- 10** Behind the side trim panel:
Battery (▮▮▮ 160)
Positive battery connection
point (▮▮▮ 158)
Diagnostic connector
(▮▮▮ 165)
- 11** Brake-fluid reservoir, rear
(▮▮▮ 141)

Underneath the seat

- 1 Standard toolkit (➡ 134)
- 2 Rider's Manual
- 3 Tyre pressure table
- 4 Payload table
- 5 Adjusting the front seat height (➡ 88)
- 6 Fuses (➡ 164)





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 (➡ 180)

Multi-Controller

- 11** – with LED headlight^{OE}

Daytime riding light
(➡ 58).

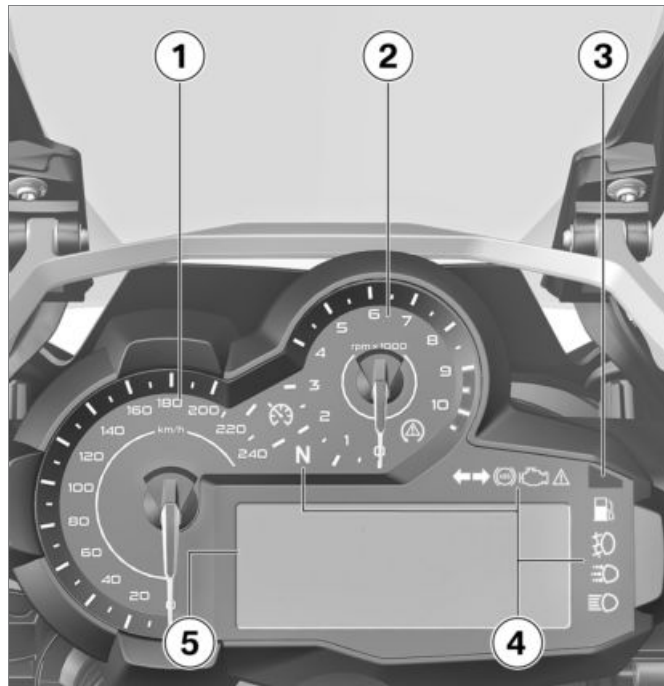


Multifunction switch, right

- 1** – with heated grips^{OE}
Heated handlebar grips (➡ 86).
- 2** Riding mode (➡ 74)
- 3** Emergency off switch (kill switch) (➡ 56)
- 4** Starter button
Start engine (➡ 103).

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 (➡ 84)
– 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

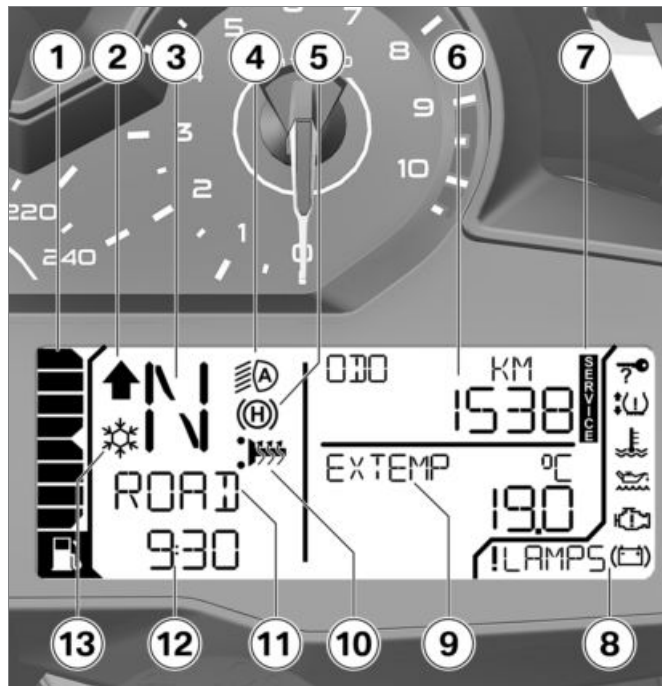
- 1 – with cruise control^{OE}
Cruise-control system
( 81).
- 2 Neutral
- 3 ASC ( 42)
– with riding modes Pro^{OE}
DTC ( 43)
- 4 Turn indicators
- 5 ABS ( 41)
- 6 Malfunction indicator lamp
Emissions warning ( 35)
- 7 General warning light (in
combination with warn-
ing symbols in the display)
( 25)



- 8** – with alarm system
(DWA)^{OE}
Alarm signal (▮▮▮▮ 84)
– 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 head-
lights^{OA}
LED auxiliary headlights
(▮▮▮▮ 58).
- 12** Fuel reserve (▮▮▮▮ 45)

Multifunction display

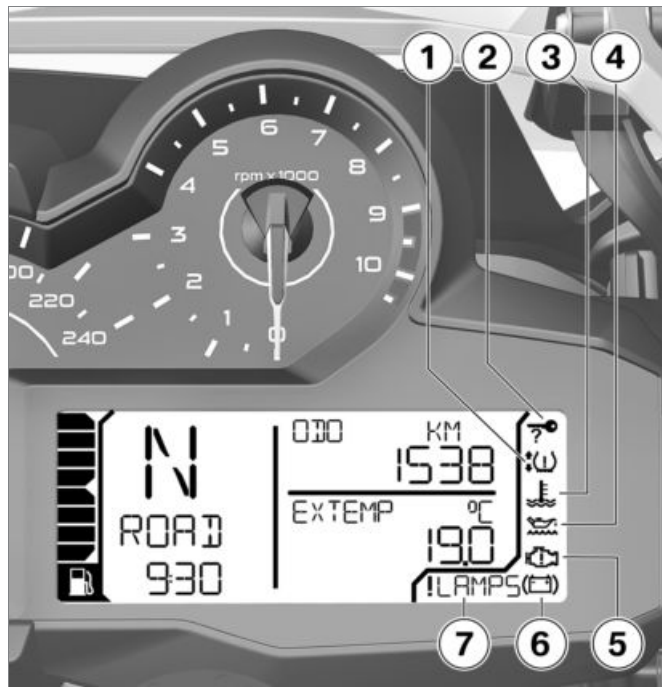
- 1 Fuel level
- 2 Recommendation to up-shift (► 46)
- 3 Gear indicator; "N" indicates neutral
- 4 – with LED headlight^{OE}
Automatic daytime riding light (► 59).
- 5 – with Hill Start Control^{OE}
Operate Hill Start Control (► 83).
- 6 Odometer and tripmeters (► 61)
- 7 Service-due indicator (maintenance interval) (► 210)
- 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 (► 86).



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

Warning symbols in the display

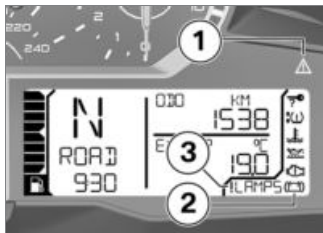
- 1 – with tyre pressure control (RDC)^{OE}
Tyre pressure (➡ 38)
- 2 EWS (➡ 32)
- 3 Coolant temperature (➡ 35)
- 4 Engine oil level (➡ 35)
- 5 Engine electronics (➡ 36)
- 6 On-board voltage (➡ 33)
- 7 Warnings (➡ 25)



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

Telltale and warning lights

Warning symbols in the display

Meaning

		Ice crystal symbol is displayed.	Outside temperature warning (→ 32)
		EWS warning symbol is displayed.	Electronic immobiliser active (→ 32)
		Radio-operated key warning symbol is displayed.	Radio-operated key out of range (→ 33)
		! KEYLO is displayed.	Replace the battery of the radio-operated key (→ 33)
		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.	

Telltale and warning lights

Warning symbols in the display

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)

Telltale and warning lights

Warning symbols in the display

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)

Telltale and warning lights

Warning symbols in the display

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)
	ASC telltale and warning light slow-flashes.	ASC self-diagnosis not completed (→ 42)
	ASC telltale and warning light shows.	ASC deactivated (→ 43)
	ASC telltale and warning light shows.	ASC fault (→ 43)
	DTC indicator and warning light flashes quickly.	DTC intervention (→ 43)

Telltale and warning lights

Warning symbols in the display

Meaning

	DTC indicator and warning light flashes slowly.		DTC self-diagnosis not completed (➡ 43)	
	DTC indicator and warning light shows.		DTC switched off (➡ 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 (➡ 44)	
			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)

Telltale and warning lights

Warning symbols in the display

Meaning



The arrow pointing upwards is displayed.

Recommendation to upshift (►► 46)



The gear indicator flashes.

Gear not trained (►► 46)



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**, irrespect-

ive 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 (136).

If the oil level is too low:

- Topping up the engine oil (137).

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 (142).

If the coolant level is too low:

- Leave the engine to cool down.
- Topping up coolant (143).
- 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 (► 153).
- Replacing bulb for parking light (► 155).
- with LED headlight^{OE}
- Replace LED headlights (► 158).
- Replacing bulbs for front and rear turn indicators (► 156).
- Replace the LED rear light (► 158).

- with LED flashing turn indicators^{OE}
- Replace LED flashing turn indicators (► 158).

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 (129).

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 (➡ 129)

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 (129)
- 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 (129).



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 (121).

- 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



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 af-

fords the rider visual feedback on control intervention even after the critical situation has been dealt with.

ASC self-diagnosis not completed



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.

ASC deactivated



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).

ASC fault



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 (→ 124).

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

DTC intervention

– with Dynamic Traction Control (DTC)^{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.

DTC self-diagnosis not completed

– with Dynamic Traction Control (DTC)^{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.

DTC switched off

- with Dynamic Traction Control (DTC)^{OE}



DTC indicator and warning light shows.

Possible cause:

The rider has switched off the DTC system.

- DTC Switching on (➡ 71).

DTC fault

- with Dynamic Traction Control (DTC)^{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 (➡ 124).
- 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. In this condition, the motorcycle has too much damping and is uncomfortable to drive, especially on roads in poor condition.

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

Fuel down to reserve



Fuel reserve indicator light lights up.



WARNING

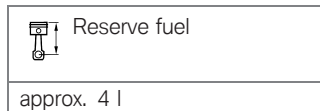
Irregular engine operation or engine shutdown due to lack of fuel

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.



- Refuelling (► 113).

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 (► 131).

- 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 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}



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 (130).
- 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 (160).

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	PRO riding mode	76
Ignition with Keyless Ride	52	Cruise-control system	81
Emergency off switch (kill switch)	56	Hill Start Control	83
Lights	57	Anti-theft alarm (DWA)	84
Daytime riding light	58	Heated handlebar grips	86
Hazard warning lights system	60	Front and rear seats	87
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		

Ignition switch/steering lock

Keys

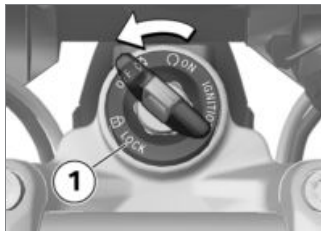
You receive 2 ignition keys. Please consult the information on the electronic immobiliser (EWS) if a key is lost or mislaid (► 51). Ignition switch/steering lock, fuel filler cap lock and seat lock are all operated with the same key.

- 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.

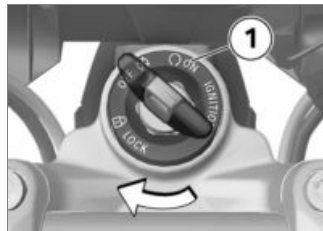
Lock the handlebars

- 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

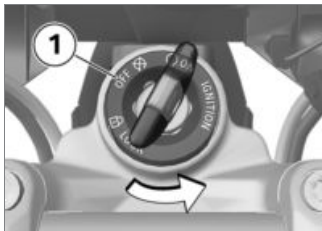


- Insert the key in the ignition switch and turn to position **1**.
 - » Side lights and all function circuits are switched on.
 - » Pre-Ride-Check is performed. (► 104)
 - » ABS self-diagnosis is in progress. (► 104)
 - » ASC self-diagnosis is performed. (► 105)
 - with Dynamic Traction Control (DTC)^{OE}
 - » DTC self-diagnosis is in progress. (► 106)◁

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 loc-

ated 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.◀



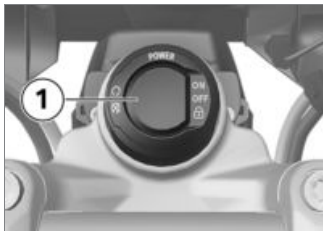
Range of the Keyless Ride radio-operated key

– with Keyless Ride^{OE}

approx. 1 m◀

Lock the handlebars Requirement

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

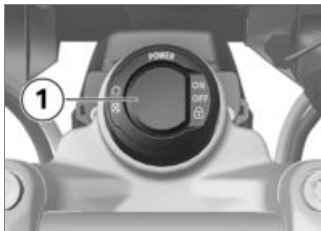


- Press and hold down button **1**.
 - » The steering lock engages with an audible click.
 - » Ignition, lights and all function circuits switched off.
- Short-press button **1** to disengage the steering lock.

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. (104)
 - » ABS self-diagnosis is in progress. (105)

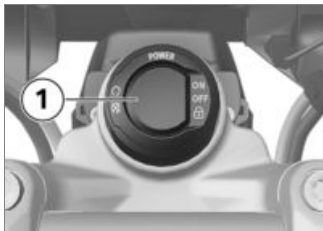
- » ASC self-diagnosis is performed. (105)

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. (104)
 - » ABS self-diagnosis is in progress. (104)
 - » ASC self-diagnosis is performed. (105)

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

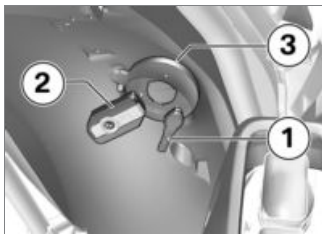
A spare vehicle key attached to the same ring as the radio-operated key used to start the engine could "irritate" the electronics, in which case the enabling signal for starting is not issued. The warning with the key symbol appears in the multifunction display. Always keep the spare key separately from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

ing 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 (103).

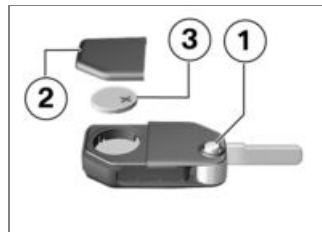
Replace the battery of the radio-operated key

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)



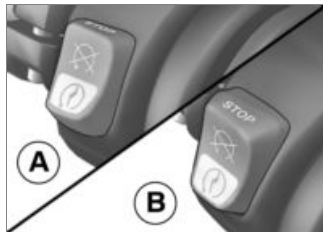
WARNING

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.◀

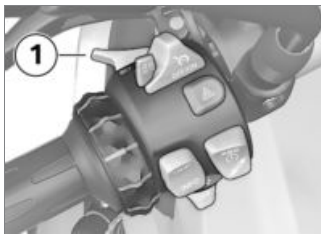
The low-beam headlight switches on automatically when the engine is started.

– 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

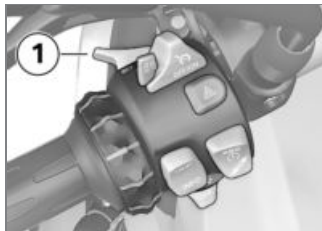
- Switching on ignition (▶▶▶ 50).



- 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 (→ 103).



- 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.◀

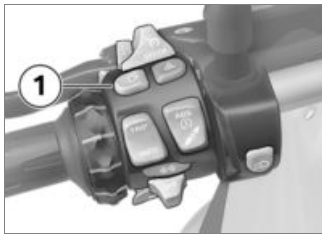


NOTICE

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 (103).
- 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. The auxiliary headlight is also switched on again.



NOTICE

If the high beam headlight is switched on whilst the daytime riding light is switched on, the daytime riding light will be switched off after approx. 2 seconds, and the high beam headlight, low beam headlight, front side lights and, if applicable, the auxiliary headlights will be switched on.

If the high beam headlight is switched off again, the daytime riding 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 re-activated, 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 flashers.



General warning light flashes red.



Turn signal indicator light flashes green.

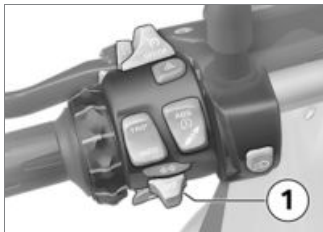
- » Ignition can be switched off.
- To switch off the hazard warning flashers, switch on the ignition and press the button **1** again.

- » 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 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 (EXTMP)
- 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 (III 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 (III 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 **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 tripmeter (TOP)
- EXTEMP: Ambient temperature (BELOW)
- ENGTEMP: Engine temperature (BELOW)
- RANGE: Range (TOP)
- CONS R: Average consumption for range calculation (OFF)
- CONS 1: Average consumption 1 (BELOW)

- 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.

- 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)

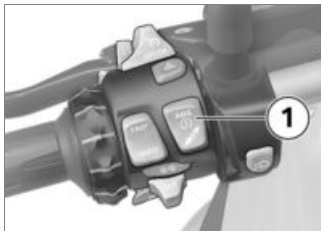
Deactivating the ABS function

- 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.

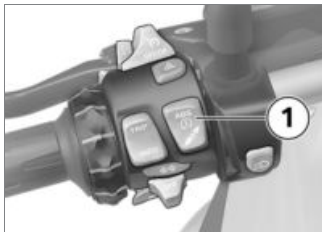


ABS telltale and warning light shows.

- 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 (➡ 120)
- with Hill Start Control^{OE}
- » Hill Start Control function (➡ 131)◀

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}

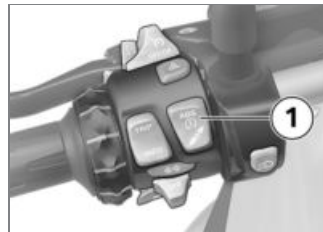
Deactivating the ASC function

- Switching on ignition (III 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.

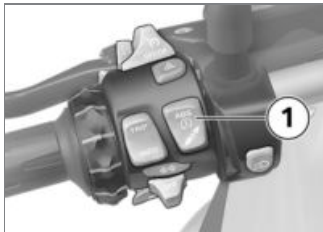
 ASC telltale and warning light shows.

- 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? (123)

Dynamic Traction Control (DTC)

DTC Switching off

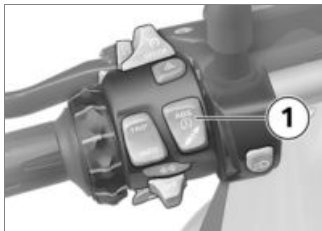
– with riding modes Pro^{OE}

- 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.

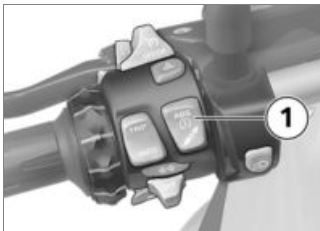


DTC indicator and warning light remains on.

» DTC is switched off.

DTC Switching on

– with Dynamic Traction Control (DTC)^{OE}



- Press and hold the **1** button until the DTC indicator and warning 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? (➡ 124)

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 (► 126).

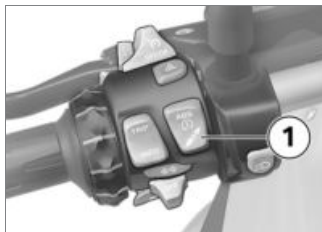
Available damping modes

- 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

Viewing suspension settings



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

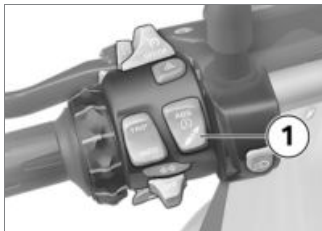


In the multifunction display, the damping is shown in area **1**, the spring preload in area **2**.

» 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** 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 (▶▶▶ 103).
- Repeatedly press button **1** and hold until the setting you want to use appears on the display.



NOTICE

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

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.

- If the temperature is very low, take the weight off the motorcycle before increasing spring preload; if applicable, have your passenger dismount.

» 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 road surface.
- Riding on a dry road surface.

– with riding modes Pro^{OE}

With riding modes Pro

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

With riding modes Pro 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 (➡ 126).

Selecting the 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

- Activate off-road mode (Enduro and Enduro Pro) only for off-road riding. ◀
- Press button **1** as often as necessary 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.
 - » 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**.

- » 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 (➡ 88).



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 off 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 (→ 89).

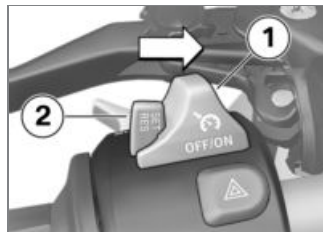
Cruise-control system

– with cruise control^{OE}

Switching on cruise control

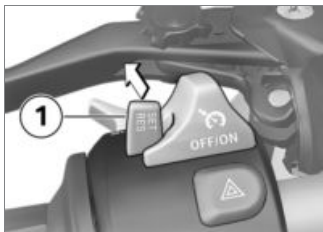
Requirement

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

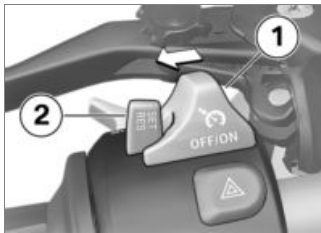
Opening the throttle does not deactivate the cruise-control system. If you release the twistgrip

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

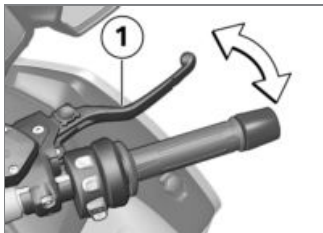
- It is essential to apply the brakes manually to hold the vehicle.◀



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 (▶▶▶ 131)

Anti-theft alarm (DWA)

– with alarm system (DWA)^{OE}

Activation

- Switching on ignition (▶▶▶ 50).
- Customising anti-theft alarm settings (▶▶▶ 85).
- Switch off the ignition.
 - » If the alarm system is activated, then the alarm system will be automatically activated when the ignition is switched off.
 - » Activation takes approximately 30 seconds to complete.
 - » Turn indicators flash twice.
 - » Confirmation tone sounds twice (if programmed).
 - » Anti-theft alarm is active.

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.

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.

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 (103).



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

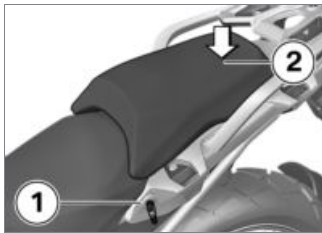
length of time to pass without making further changes.

- 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 pos-

ition 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

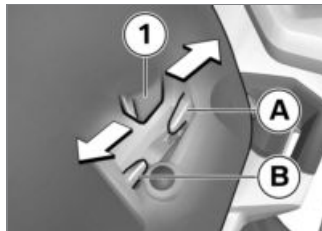


ATTENTION

Damaged components

Damage to sensors, for example, which causes malfunctions

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



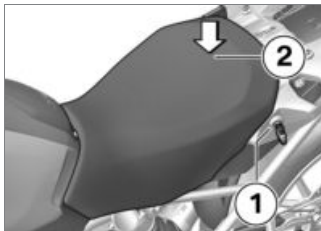
- Bear in mind the position of the rider's seat with regard to the direction for adjustment of the passenger seat.
 - The rear seat can be set to either of 2 different positions.
- Centre both lugs **1** on the rear seat in the mounts.
 - Rear seat position: Push passenger seat toward the rear **A**.
 - 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

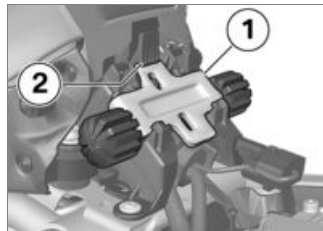
- Removing rear seat (➡ 87).



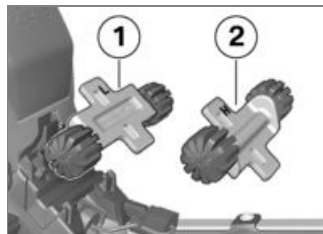
- Turn and hold the seat lock **1** to the left with the ignition key while pushing down the driver's seat at the rear **2**.
- Lift the driver's seat at the rear and release the key.
- Remove the driver's seat and place it on a clean surface with the upholstery facing down.

Setting the driver's seat height and inclination

- Removing front seat (➡ 88).



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



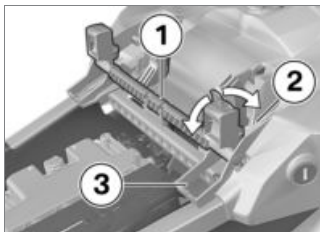
- To set the low seat position, install the height adjustment

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 **1** into position **2** (identification H).

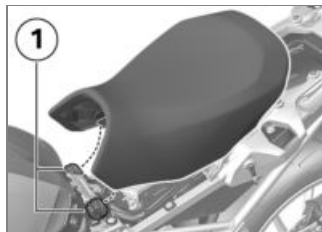
If the seat angle needs to be adjusted:

- Position the front and rear height adjustment differently.

Installing front seat

- Removing rear seat (➡ 87).

- Set the driver's seat height and inclination (➡ 88).



- 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	92
Headlight	92
Windscreen	93
Clutch	94
Brakes	94
Handlebars	95
Spring preload	95
Damping	96

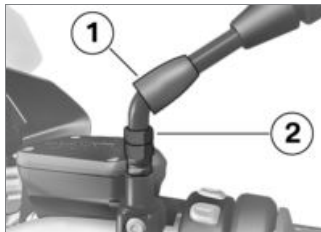
Mirrors

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



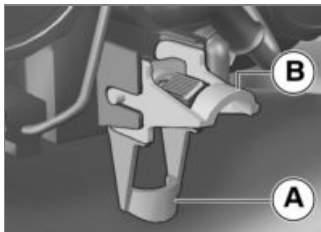
If, for a high load, the adjustment of the spring pre-load is no longer sufficient not to dazzle oncoming traffic:

- 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.

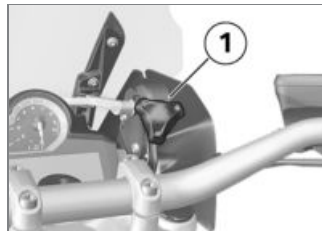
– with LED headlight^{OE}



- The headlight beam-throw is adjusted via an engage pivot lever.
- **A** Neutral position
- **B** Position for heavy load◀

Windscreen

Adjusting windscreen



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

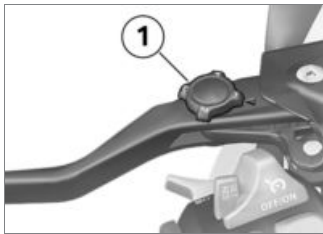


WARNING

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

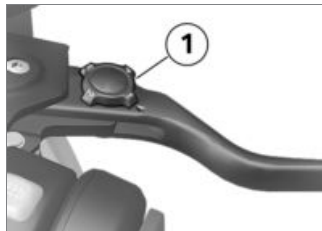


WARNING

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.



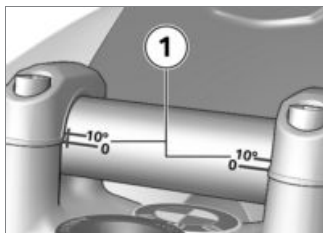
NOTICE

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	100
Comply with checklist.....	103
Always before riding off	103
Every 3rd refuelling stop	103
Starting	103
Running in	107
Off-roading	107
Shifting gear	109
Brakes	110
Parking your motorcycle	112
Refuelling	112
Securing motorcycle for transportation	116

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

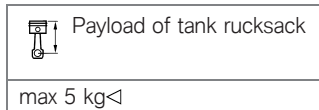
Handling adversely affected by overloading and imbalanced loads

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.



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



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 (▮▮▮ 142).
- Checking tyre tread depth (▮▮▮ 144).
- Checking tyre pressure (▮▮▮ 144).
- Check security of cases and luggage.

Every 3rd refuelling stop

- without Dynamic ESA^{OE}
 - Adjuster for spring preload, rear (▮▮▮ 95).
 - Adjusting the damping characteristic for rear wheel (▮▮▮ 96). ◀
- with Dynamic ESA^{OE}
 - Adjusting the chassis and suspension (▮▮▮ 72). ◀
 - Checking engine oil level (▮▮▮ 136).
 - Checking front brake pad thickness (▮▮▮ 138).
 - Check rear brake pad thickness (▮▮▮ 139).
 - Checking brake-fluid level, front brakes (▮▮▮ 140).
 - Checking the brake-fluid level, rear brakes (▮▮▮ 141).
 - Check coolant level (▮▮▮ 142).

Starting

Start engine

- Switch on the ignition.
 - » Pre-Ride-Check is performed. (▮▮▮ 104)
 - » ABS self-diagnosis is in progress. (▮▮▮ 104)
 - » ASC self-diagnosis is performed. (▮▮▮ 105)
- with Dynamic Traction Control (DTC)^{OE}
 - » DTC self-diagnosis is in progress. (▮▮▮ 106) ◀
- 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". (➡ 190)
- Recharge the battery before you start the engine, or use jump leads and a donor battery to start.
- Charge battery when connected (➡ 160).
 - Jump-starting (➡ 158).



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 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

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 Dynamic Traction Control (DTC)^{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

Lowering the tyre pressure for off-roading during operation on road.

Risk of accident due to impaired handling characteristics.

- Always check that the tyre pressures are correct.◀

Brakes



WARNING

Riding on unsurfaced roads or dirty road surfaces.

Delayed braking effect due to dirty brake discs and brake pads.

- Apply the brakes in good time until the brakes have been cleaned.◀



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 riding off-road.

Impaired handling characteristics on surfaced roads.

- If you have been off-roading, be sure to correct spring preload and spring-strut damping characteristics before you return to surfaced roads.◀

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

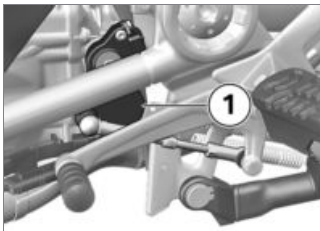
– with shift assistant Pro^{OE}

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 (➡ 130)

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 overshoot due to misjudgement or rider error. In extreme cases this can result in a crash.

Use on public roads

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

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.◀

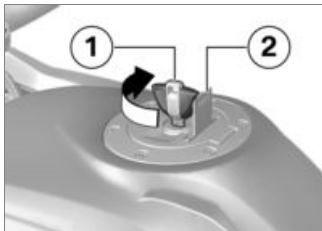


ATTENTION

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.....	120
Anti-lock brake system (ABS)	120
Automatic Stability Control (ASC)	123
Dynamic Traction Control (DTC)	124
Dynamic ESA	125
Riding mode	126
Tyre pressure monitoring (RDC)	129
Shift assistant	130
Hill Start Control	131

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 oc-

curs 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 it 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)

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)

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 ad-

opting 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 Dynamic Traction Control (DTC)^{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 (burn-out).

- 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 a low 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-off 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 twistgrip 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. During this calibration, chassis and suspension adjustment is not possible.

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
- 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 Dynamic Traction Control (DTC)^{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 Dynamic Traction Control (DTC)^{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 "over-travel" 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 de-clutches.

Downshifting

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

	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. The pressure in the rear brake system is built up when Hill Start Control is activated in order to keep the motorcycle stationary on an inclined surface. The holding pressure built up in the brake system depends on the steepness of the gradient.

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 brake pressure increases.

- If the rear wheel slips, the brake is released again after approx. 1 m. When driving offroad, this prevents the vehicle slipping down the hill with the rear wheel blocked.

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.....	134
Toolkit	134
Service toolkit.....	134
Front-wheel stand	135
Engine oil	136
Brake system	137
Clutch	142
Coolant	142
Tyres	144
Rims and tyres.....	144
Wheels	145
Air filter	152
Light source	153
Jump-starting.....	158
Battery.....	160

Fuses	164
Diagnostic connector	165

General instructions

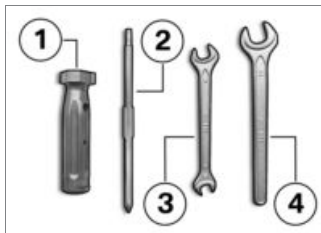
The "Maintenance" chapter describes straightforward procedures for checking and replacing certain wear parts.

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

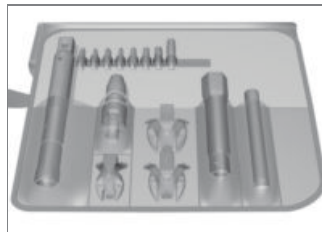


- 1** Screwdriver handle
 - Use with screwdriver insert.
 - Topping up the engine oil (➡ 137).
- 2** Reversible screwdriver blade
 - Phillips PH1 and Torx T25
 - Removing bulbs for front and rear turn indicators (➡ 156).
 - Removing battery cover (➡ 161).
- 3** Open-ended spanner
 - Width across flats 8/10

- 3** – Removing battery (➡ 161).
- 4** Open-ended spanner
 - Width across flats 14
 - Adjusting mirror arm (➡ 92).

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



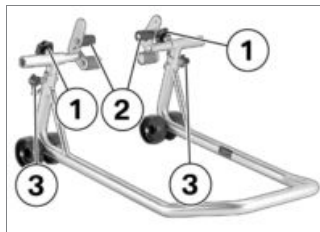
ATTENTION

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

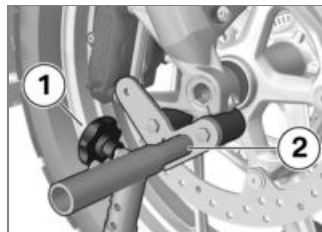
Risk of damage to parts if vehicle topples

- 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

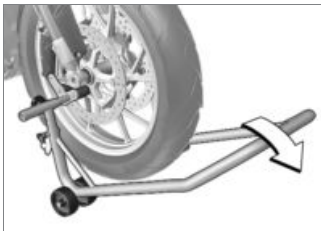
parts are available from your BMW Motorrad dealer.



- 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**

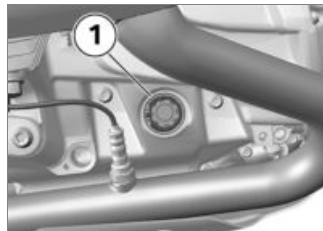
Risk of damage to parts if vehicle topples

- 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.
- 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.

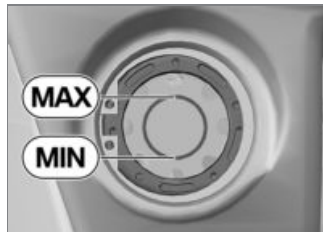
Engine oil**Checking engine oil level****ATTENTION**

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 in oil-level indicator **1**.



Engine oil, specified level

between MIN and MAX marks

If the oil level is below the MIN mark:

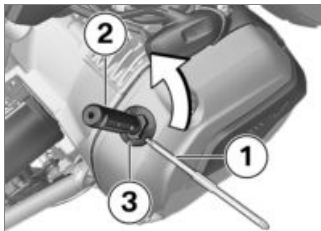
- Topping up the engine oil (➡ 137).

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 tool-kit) for additional leverage.
- Engage this tool in cap **3** of the oil filler neck and turn counter-clockwise to remove.
- Checking engine oil level (➡ 136).



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 (➡ 136).
- 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 reservoir

Considerably reduced braking power due to air in the brake system

- 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 reservoir

Considerably reduced braking power due to air in the brake system

- 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.



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**.



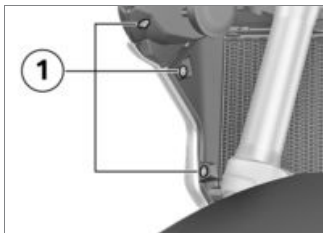
Coolant target level

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

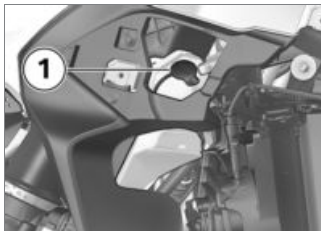
If the coolant drops below the permitted level:

- Top up coolant (►► 143).

Topping up coolant



- Remove screws **1**.



- Open the cap **1**.
- Top up coolant to specified level.
- Check coolant level (→ 142).
- Close the cap of the expansion tank.



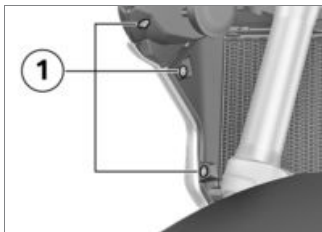
- Remove screws **1**.
- Pull the side trim panel **2** off the clamp **3** and remove it.



- 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 top 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.

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

Tyre recommendation

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

BMW Motorrad recommends using only tyres tested by BMW Motorrad.

It is absolutely essential to observe the maximum permissible speed and load-capacity ratings (see "Technical data").

Comply with the instructions regarding maximum speed for riding with knobbly tyres or winter tyres fitted (101).

Detailed information is available from your authorised BMW Motorrad dealer or in the internet at:

bmw-motorrad.com

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 pro-

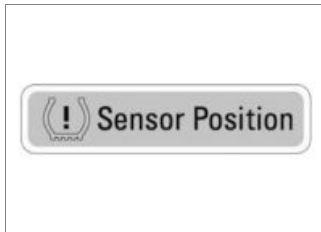
grammed into the control unit and are fundamental to all calculations. Any change in these influencing variables, caused for example by a switch to wheels other than those installed ex-works, can have serious effects on the performance of the control systems.

The sensor rings are essential for correct road-speed calculation, and they too must match the motorcycle's control systems and consequently cannot be changed.

If you decide that you would like to fit non-standard wheels to your motorcycle, it is very important to consult a specialist workshop beforehand, preferably an authorised BMW Motorrad 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

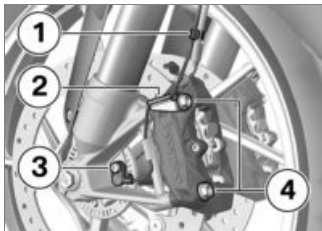
- Be sure to explain to the specialist workshop or authorised BMW Motorrad dealer that the wheel is fitted with an RDC sensor. ◀

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.



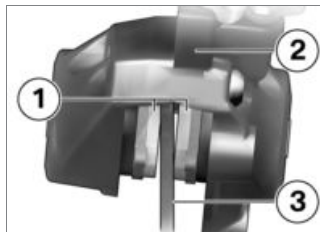
ATTENTION

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.

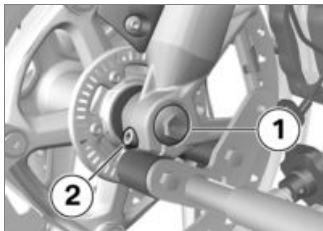


- Force the brake pads **1** slightly apart by rotational movement of the brake caliper **2** against brake disc **3**.
- Carefully pull the brake calipers back and out until clear of the brake discs.

- 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 (► 135).



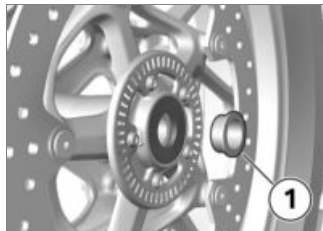
- Remove right-hand axle clamping screw **1**.



- 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. ◀

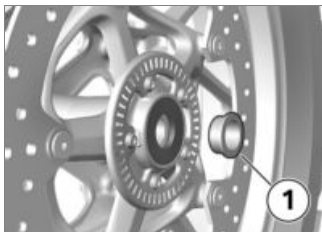


ATTENTION

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.

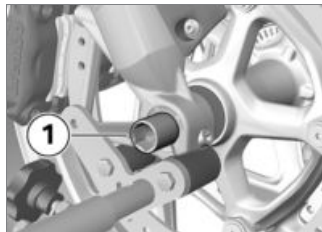


ATTENTION

Front wheel installed wrong way round

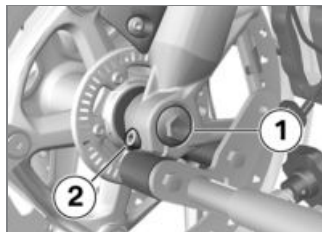
Risk of accident

- 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 brake lever.

- Installing the front-wheel stand (→ 135).



- 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.

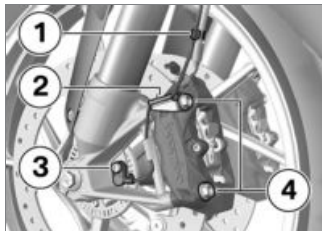


Clamping screw for quick-release axle in telescopic fork

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

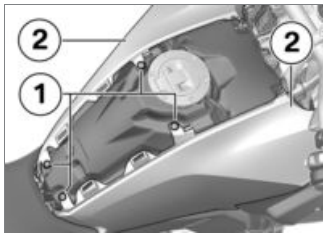
60 Nm

Air filter

Replace air filter element

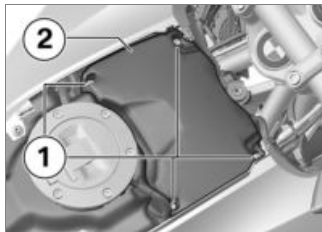


- Removing front seat (→ 88).
- Remove screws **1** and **2**.
- Remove the centre trim panel.

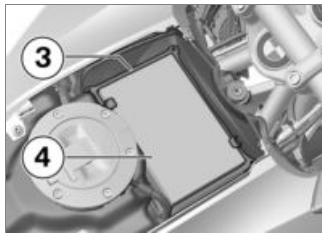


- Remove screws **1**.

- Loosen the cover **2** on both sides.

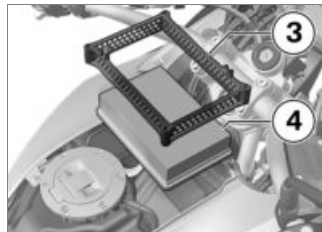


- Remove screws **1**.
- Remove the air filter cover **2**.

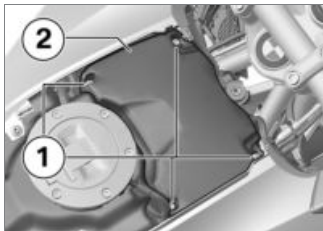


- Remove the frame **3**.

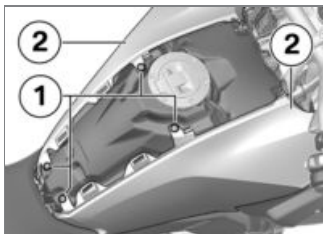
- Removing the air filter element **4**.



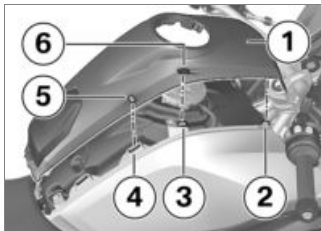
- Clean and renew the air filter element **4**.
- Insert the air filter element **4** and frame **3**.



- 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 (➡ 89).

Light source

Replacing bulbs for low-beam and high-beam headlight

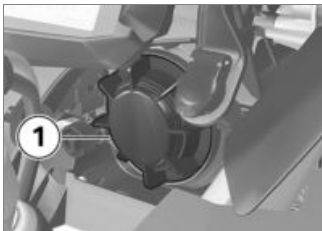
– without LED headlight^{OE}



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.

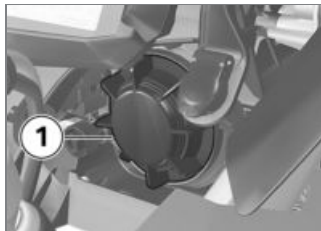


- Connect plug **1**.
- Place cover in position and fit by turning clockwise.

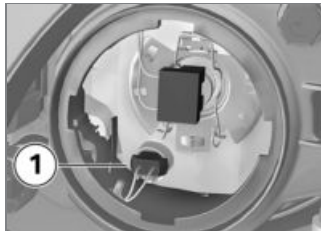
Replacing bulb for parking light

– 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

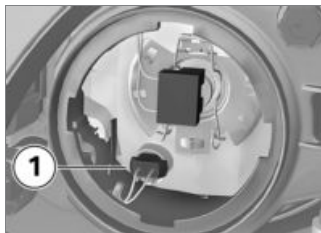
– with LED headlight^{OE}

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



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.◀

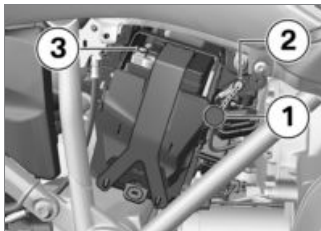


ATTENTION

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 (► 161).
- When jump-starting the engine, do not disconnect the battery from the on-board electrical system.



- Remove the protective cap **1**.
- Use the red jumper cable to connect the positive battery connection point **2** of the discharged 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 negative terminal **3** of the discharged 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 en-

gine 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 (► 163).

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

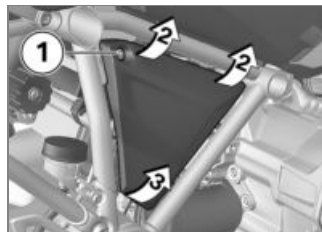
- Charge the battery using a suitable charger.
- Comply with the operating instructions of the charger.
- Once the battery is fully charged, disconnect the

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}

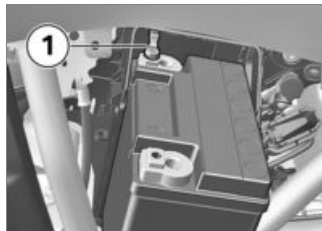
- If applicable, switch off the anti-theft alarm.◀



- 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.



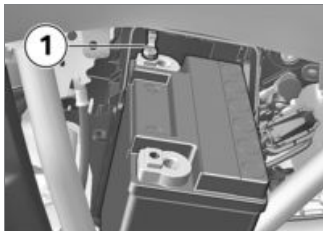
- Disconnect battery negative lead **1** and remove the battery.

Installing battery



NOTICE

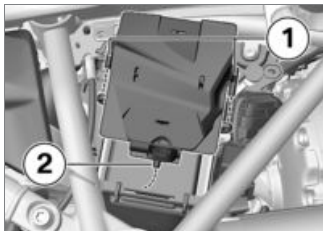
If the 12 V battery is not correctly installed or if the polarity of the terminals is reversed (e.g. in an attempt to jump-start the vehicle), this can cause the fuse for the alternator regulator to blow.◀



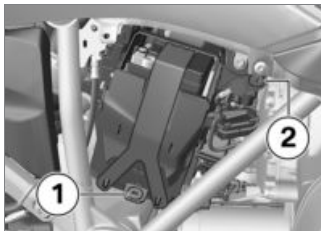
- Secure battery positive lead **1**.
- Push battery into the mounting.



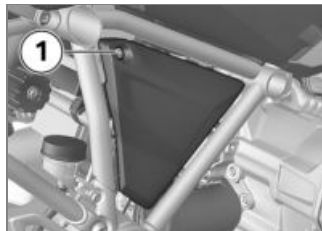
- Secure battery negative lead **1**.
- Secure the battery with rubber strap **2**.



- First insert retaining plate into the mountings **1** and then push under the battery in position **2**.



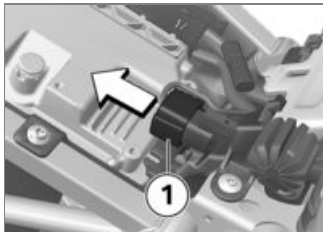
- Place battery cover into the mounting **1** and press into the mountings **2**.



- Install screw **1**.
- Setting the clock (➡ 64).
- Setting the date (➡ 65).

Fuses

Replace fuses



- Switch off the ignition.
- Removing front seat (➡ 88).
- 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.

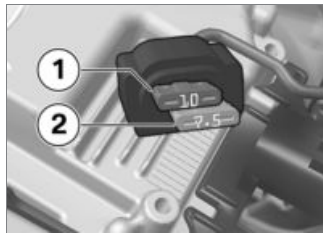


NOTICE

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

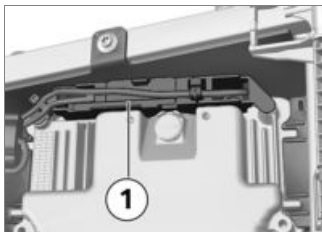
- Install plug **1**.
- Installing front seat (➡ 89).

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

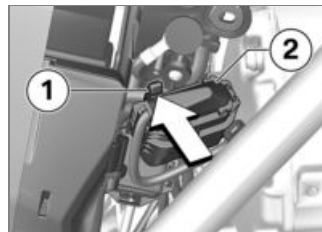
Diagnostic connector Disengaging diagnostic connector



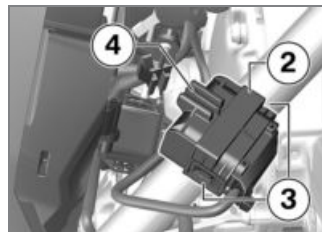
**Incorrect procedure
followed when loosening the
diagnostic connector for the
on-board diagnosis**

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 (➡ 161).



- Press the hook **1** and pull the diagnostic connector **2** out upwards.

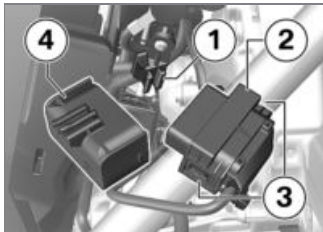


- Press the latches **3** on both sides.

- 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 (→ 163).

Accessories

General instructions.....	168
Power sockets	168
Cases.....	169
Topcase	172
Navigation system	178

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 ac-

cessory 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](http://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

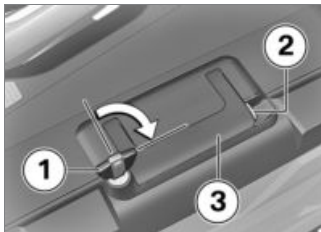
- The sockets will be automatically switched off during the start procedure.

- 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.



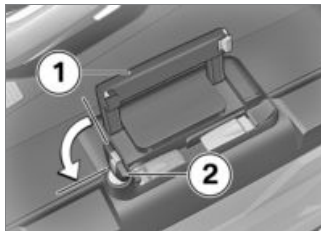
- Engage pivot lever **1** at the top limit position to set the case to minimum volume.
- Engage pivot lever **1** at the bottom limit position to set the case to maximum volume.
- Close the case.

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

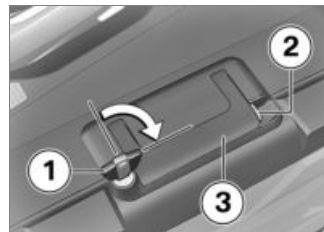
Closure of carrying handle with case lock latched

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}



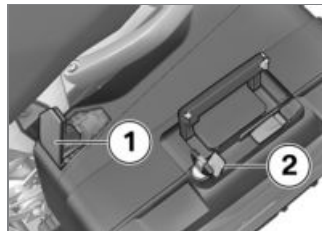
- Turn key **1** clockwise.
- Keep the yellow latch **2** held and fold out the carry handle **3**.



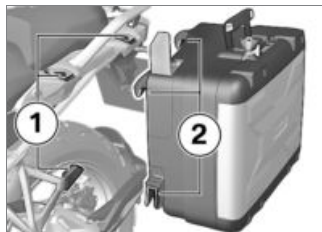
- Pull red release lever **1** up.
» Latching flap **2** pops up.
- Fully open the latching flap.
- Take a firm grip of the handle and lift the case out of the holder.



- Pull red release lever **1** up.
» Latching flap **2** pops up.
- Fully open the latching flap.



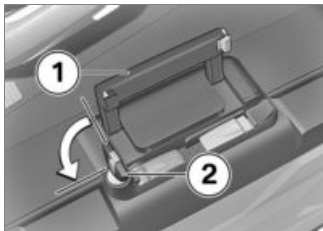
- Press latching flap **1** down until resistance is felt.
- Then simultaneously press down latching flap and red release lever **2**.
» The latching flap engages.



- Place box from the top into the mountings **1** and **2**.

Mounting cases

– with cases^{OA}



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



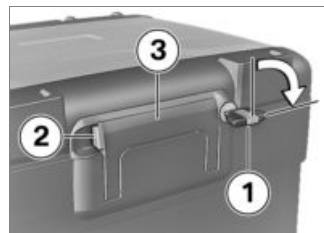
Payload per Vario case

max 10 kg

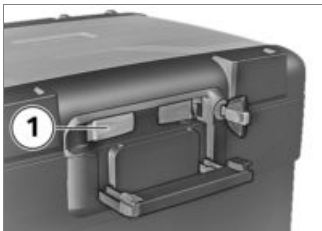
Topcase

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.

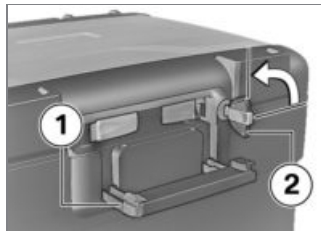


- Engage pivot lever **1** at the front limit position to set the case to maximum volume.
- Engage pivot lever **1** at the rear limit position to set the case to minimum volume.
- Close the topcase.

Closing topcase

– with topcase^{OA}

- Press down firmly on the topcase lid to close.



ATTENTION

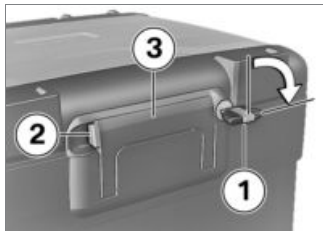
Closure of carrying handle with case lock latched

Damage to locking tab

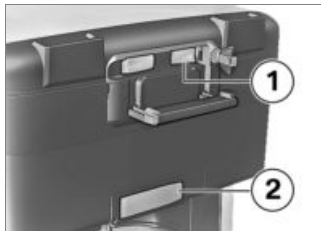
- Make sure that the topcase lock is vertical when you close the carry handle.◀
- Close carry handle **1**.
 - » The handle engages with an audible click.
- Turn key **2** counter-clockwise and remove.

Removing the topcase

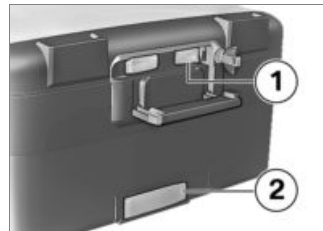
– with topcase^{OA}



- Turn key **1** clockwise.
- Keep the yellow latch **2** held and fold out the carry handle **3**.



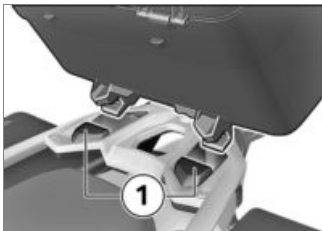
- Pull red lever **1** back as far as it will go.
- » Latching flap **2** pops up.
- Fully open the latching flap.
- Take a firm grip of the handle and lift the topcase out of the holder.



- Pull red lever **1** back as far as it will go.
- » Latching flap **2** pops up.
- Fully open the latching flap.

Mounting topcase

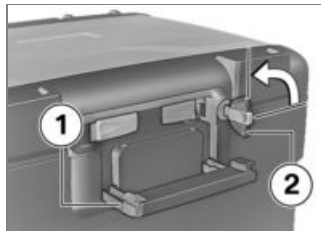
– with topcase^{OA}



- 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 permissible speed for riding with Vario topcase fitted to the motorcycle

max 180 km/h



Payload of Vario topcase

max 5 kg

Installing topcase

– with topcase 2 large, 49 l^{OA}



WARNING

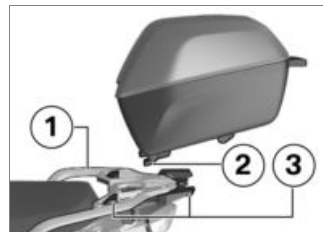
Topcase not properly secured

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 riding with
Topcase 2 large, 49 l

max 180 km/h



Payload of Top-
case 2 large, 49 l

max 5 kg

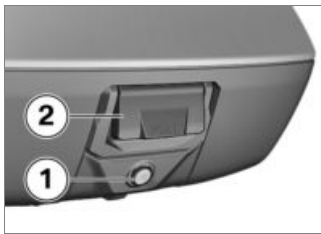
- Do not exceed the values for maximum speed and payload.

Opening topcase

– with topcase 2 large, 49 l^{OA}



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



- Push lock barrel **1** forward.

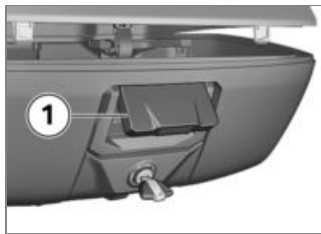
» Lever **2** pops up.

- Pull the release lever all the way up.

» The lid of the topcase opens.

Closing topcase

– with topcase 2 large, 49 l^{OA}

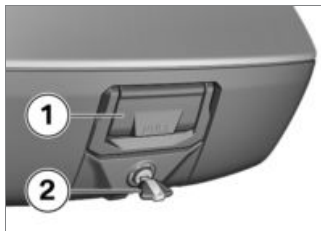


- Pull release lever **1** all the way up.
- Close the lid of the topcase and hold it down. Check that nothing is trapped between the lid and the case.



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

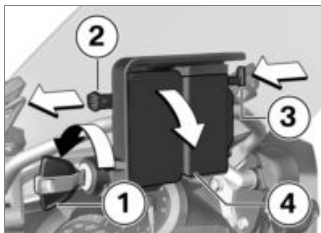
BMW Motorrad Navigator IV and the BMW Motorrad Navigator V.◀



NOTICE

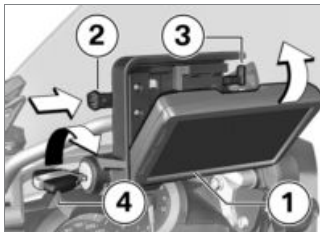
The latching system of the Mount Cradle is not designed to protect against theft.

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



- Turn ignition key **1** counter-clockwise.
- 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

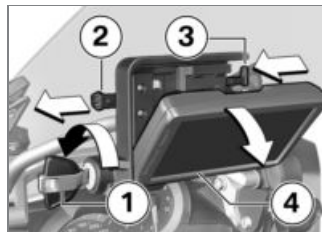


ATTENTION

Dust and dirt on the Mount Cradle contacts

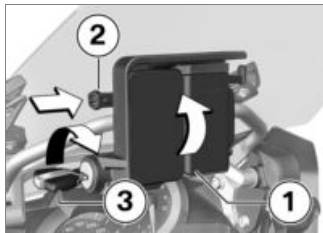
Damaged contacts

- Always reinstall the cover as soon as you finish your ride.◀



- Turn vehicle key **1** counter-clockwise.
- 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: Zoom in.
- Turn down: 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 from selection depend on the optional extras installed on the vehicle.



NOTICE

The Mediaplayer function is available only with a Bluetooth device supporting the A2DP standard, 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 in the Navigator display settings.

Care

Care products	186
Washing the vehicle	186
Cleaning easily damaged components.....	187
Paint care	188
Protective wax coating	188
Laying up the motorcycle	188
Restoring motorcycle to use	188

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.◀

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 (➡ 161).
- 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 (➡ 162).
- Comply with checklist (➡ 103).

Technical data

Troubleshooting chart	190
Threaded fasteners	191
Fuel.....	193
Engine oil	194
Engine	194
Clutch	195
Transmission	195
Final drive.....	196
Frame	197
Chassis and suspension	197
Brakes	199
Wheels and tyres	200
Electrical system.....	202
Anti-theft alarm	203
Dimensions	204

Weights.....	206
Riding specifications	207

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 (▮▮▮ 113).
Battery flat	Charge battery when connected (▮▮▮ 160).
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	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		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	EU 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 with 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}	210 mm, at wheel
– with sport suspension ^{OE}	
– with lowered suspension ^{OE}	158 mm, at wheel

Rear wheel

Type of rear suspension	Cast aluminium single swinging arm with BMW Motorrad paralever
Type of rear suspension	Central spring strut with coil spring, adjustable rebound stage damping and spring preload
– with Dynamic ESA ^{OE}	Central spring strut with coil spring and reservoir, electrically adjustable rebound-stage and compression-stage damping, electrically adjustable spring preload
Spring travel at rear wheel	200 mm
– with style 1 ^{OE}	220 mm
– with sport suspension ^{OE}	
– 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	Your authorised BMW Motorrad dealer will be happy to supply an up-to-date list of the approved wheel/tyre combinations, or you can check the information posted on the bmw-motorrad.com website.
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±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

Starting capability on uphill gradients (at permissible gross weight)	20°
Top speed	>200 km/h

Service

BMW Motorrad Service	210
BMW Motorrad Mobility services	210
Maintenance work	210
BMW Service	211
Maintenance schedule	213
Confirmation of maintenance work	214
Confirmation of service	228

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 pre-delivery check before handing over the vehicle to you.

BMW Running-in Check

The BMW running-in check has to be performed when the 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 odo-

meter 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:

[illegible]

Maintenance schedule

- 1** BMW Running-in check
 - 2** BMW Service standard scope
 - 3** Engine-oil change, with filter
 - 4** Oil change in bevel gears
 - 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

Confirmation of maintenance work

BMW Motorrad Service, standard scope

The activities in the BMW Motorrad Service standard scope are listed below. The actual scope of maintenance work for your vehicle may differ.

- 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

Completed

on _____

Stamp, signature

BMW Running-in Check

Completed

on _____

Odometer reading _____

Next service

at the latest

on _____

or, if reached beforehand

Odometer reading _____

Stamp, signature

BMW Service

Completed

on _____

Odometer reading _____

Next service

at the latest

on _____

or, if reached beforehand

Odometer reading _____

Stamp, signature

Item

BMW Motorrad Service, standard
scope

Yes

No

☐☐

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

Completed

on _____

Odometer reading _____

Next service

at the latest

on _____

or, if reached beforehand

Odometer reading _____

Item

Yes

No

BMW Motorrad Service, standard
scope☐☐

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

Stamp, signature

BMW Service

Completed

on _____

Odometer reading _____

Next service

at the latest

on _____

or, if reached beforehand

Odometer reading _____

Item

Yes

No

BMW Motorrad Service, standard
scope☐☐

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

Stamp, signature

BMW Service

Completed

on _____

Odometer reading _____

Next service

at the latest

on _____

or, if reached beforehand

Odometer reading _____

Stamp, signature

Item

Yes

No

BMW Motorrad Service, standard
scope

☐
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Oil change, engine, with filter

☐
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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

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☐☐

Notes

Stamp, signature

The table is intended as a record of maintenance and repair work, the installation of optional accessories and, if appropriate, special campaign (recall) work.

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[illegible]

Item	Odometer reading	Date

Appendix

Certificate for Electronic Immobiliser	232
Certificate for Keyless Ride	234
Certificate for Tyre Pressure Control (RDC)	236

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)

complies 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 to be used in the 25 MHz to 1000 MHz frequency range with power levels ranging up to 500 mW;
Part 1: Technical characteristics and test methods.
Part 2: Harmonized EN covering essential requirements under article 3.2 of the R&TIE directive

The product is labeled with 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 expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. The term "IC:" before the radio certification number only signifies that Industry Canada technical specifications were met.

A

Abbreviations and symbols, 6

ABS

Control, 15

Engineering details, 120

operate, 68

Self-diagnosis, 104

Status indicators, 41

Accessories

General instructions, 168

Actuality, 7**Air filter**

Position on the motorcycle, 13

Replacing the air filter
element, 152

Ambient temperature

Outside temperature
warning, 32

Reading, 32

Anti-theft alarm

Indicator light, 18

operate, 84

Technical data, 203

Warning, 38

ASC

Control, 15

Engineering details, 124

operate, 69

Reading, 42

Self-diagnosis, 105

switching off, 69

switching on, 70

Average values

reset, 63

B**Battery**

Charge battery when
connected, 160

Charging battery when
disconnected, 161

Indicator light for vehicle
voltage, 33

Installation, 162

Maintenance instructions, 160

Removal, 161

Technical data, 202

Brake fluid

Checking fluid level, front, 140

Checking fluid level, rear, 141

Reservoir, front, 13

Reservoir, rear, 13

Brake pads

Checking front, 138

checking rear, 139

Running in, 107

Brakes

ABS Pro in detail, 122

ABS Pro depending on riding
mode, 111

Adjusting handlebar lever, 94

Checking function, 137

Safety instructions, 110

Technical data, 199

C

Cases, 169

Checklist, 103

Clock

Adjusting, 64

- Clutch
 - Adjusting handlebar lever, 94
 - Checking function, 142
 - Technical data, 195
- Confirmation of maintenance work, 214
- Coolant
 - Checking fill level, 142
 - Topping up, 143
 - 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, 165
 - secure, 166

- Dimensions
 - Technical data, 204
- DTC
 - Engineering details, 124
 - Indicator and warning light , 43
 - operate, 70
 - Self-diagnosis, 106
 - switching off, 70
 - switching on, 71

E

- Electrics
 - Technical data, 202
- 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, 103
 - Technical data, 194
 - Warning for engine electronics, 36

- Engine oil
 - Checking fill level, 136
 - Filling level indicator, 13
 - Oil filler opening, 13
 - Oil level, 34
 - Technical data, 194
 - Topping up, 137
 - Warning for engine oil level, 35
- Equipment, 7
- ESA
 - Control, 15
 - operate, 71

F

- Frame
 - Technical data, 197
- Front-wheel stand
 - Installing, 135
- Fuel
 - Oil filler opening, 11
 - refuelling, 113
 - refuelling with Keyless Ride, 114, 115
 - Reserve volume, 45
 - Technical data, 193

Fuel reserve
Warning, 44

Fuses
replacing, 164

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, 95
Hazard warning flashers
Control, 15, 17
operate, 60

Headlight
Beam throw, 92
Headlight beam-throw
adjustment, 11
Headlight courtesy delay
feature, 50, 57
Heated handlebar grips
Control, 17
operate, 86
Hill Start Control, 83, 131
cannot be activated, 46
Engineering details, 131
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, 158

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, 114,
115
Lock the handlebars, 52
Switching off ignition, 53
Switching on ignition, 53
Warning, 33
Keys, 50, 52

L

Lighting
High-beam headlight, 153
Low-beam headlight, 153

- Replace LED headlights, 158
- Replacing LED auxiliary headlights, 158
- Replacing LED rear light, 158
- Side light, 155
- Technical data, 202
- Turn indicators, 156
- 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, 100
- Luggage
 - Instructions for loading, 100
- M**
- Maintenance
 - General instructions, 134
 - Maintenance schedule, 213
- Maintenance intervals, 210
- Mirrors
 - Adjusting, 92
- Mobility services, 210
- Motorcycle
 - care, 185
 - cleaning, 185
 - Lashing, 116
 - Laying up, 188
 - parking, 112
- 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, 107
- On-board voltage
 - Warning, 33
- P**
- Parking, 112
- Parking light, 57
- Power socket
 - Notes on use, 168
 - Position on the vehicle, 13
- Pre-Ride-Check, 104
- R**
- RDC
 - Adhesive label for rim, 146
 - Engineering details, 129
 - Warnings, 39
- Rear-wheel drive
 - Technical data, 196

Refuelling, 113
 with Keyless Ride, 114, 115
Remote control
 Replacing battery, 55
Rev. counter, 18
Rider's Manual
 Position on the vehicle, 14
Riding mode
 Adjusting, 74
 Control, 17
 Engineering details, 126
 Setting the PRO riding
 mode, 76
Riding specifications
 Technical data, 207
Running gear
 Technical data, 197
Running in, 107

S

Safety instructions
 for brakes, 110
 for riding, 100
Seat
 Position of the height
 adjustment, 14

Seats
 Adjust the seat height, 88
 Lock, 11
 Removing and installing, 87
Service, 210
Service-due indicator, 47
Shift assistant
 Engineering details, 130
 Gear not trained, 46
 Riding, 109
Shifting gear
 Recommendation to upshift, 46
Spark plugs
 Technical data, 202
Speedometer, 18
Spring preload
 Adjuster, rear, 13
 Adjusting, 95
Starting, 103
 Control, 17
Steering lock
 Locking, 50

T

Technical data
 Anti-theft alarm, 203
 Battery, 202
 Brakes, 199
 Bulbs, 202
 Chassis and suspension, 197
 Clutch, 195
 Dimensions, 204
 Electrical system, 202
 Engine, 194
 Engine oil, 194
 Final drive, 196
 Frame, 197
 Fuel, 193
 Riding specifications, 207
 Spark plugs, 202
 Standards, 7
 Transmission, 195
 Weights, 206
 Wheels and tyres, 200
Telltale lights, 18
 Overview, 20
Threaded fasteners, 191

Toolkit
 Position on the vehicle, 14
Topcase
 operate, 172
Torques, 191
Traction control
 ASC, 123, 124
 DTC, 124
Transmission
 Technical data, 195
Troubleshooting chart, 190
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, 144
 Checking tread depth, 144
 Pressures, 201
 Recommendation, 145

Running in, 107
Table of tyre pressures, 14
Technical data, 200
Top speed, 101

V

Vehicle
 Restoring to use, 188
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, 43
 Engine control unit, 36
 Engine electronics, 36
 Engine oil level, 35
 Fuel reserve, 44
 Gear not trained, 46

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, 206
Wheels
 Change of size, 145
 Checking rims, 144
 Checking spokes, 145
 Install the rear wheel, 151
 Installing front wheel, 148
 Removing front wheel, 146
 Technical data, 200
Windscreen
 Adjuster, 13
 Adjusting, 93

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.

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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

BMW recommends ADVANTEC
ORIGINAL BMW ENGINE OIL

