



BMW Motorrad



The Ultimate
Riding Machine

Rider's Manual
S 1000 R

Motorcycle data/dealership details

Motorcycle 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.

Suggestions and criticism

If you have questions concerning your motorcycle, 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 41 8 550 781



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General instructions

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Overview

Chapter 2 of this Rider's Manual will provide you with an initial overview of your motorcycle. 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 motorcycle 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



Indicates warnings that you must comply with for reasons of your safety and the safety of others, and to protect your product against damage.



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



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.

ABS Anti-lock brake system.

ASC Automatic Stability Control.

DDC Dynamic Damping Control.

DTC Dynamic Traction Control.

DWA Anti-theft alarm (Diebstahlwarnanlage).

EWS Electronic immobiliser.

VDS Vertical Down Sensor (drop sensor).

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

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

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 descriptions of equipment which you have not ordered. Please note, too, that your motorcycle might not be exactly as illustrated in this manual on account of country-specific differences. If your 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.

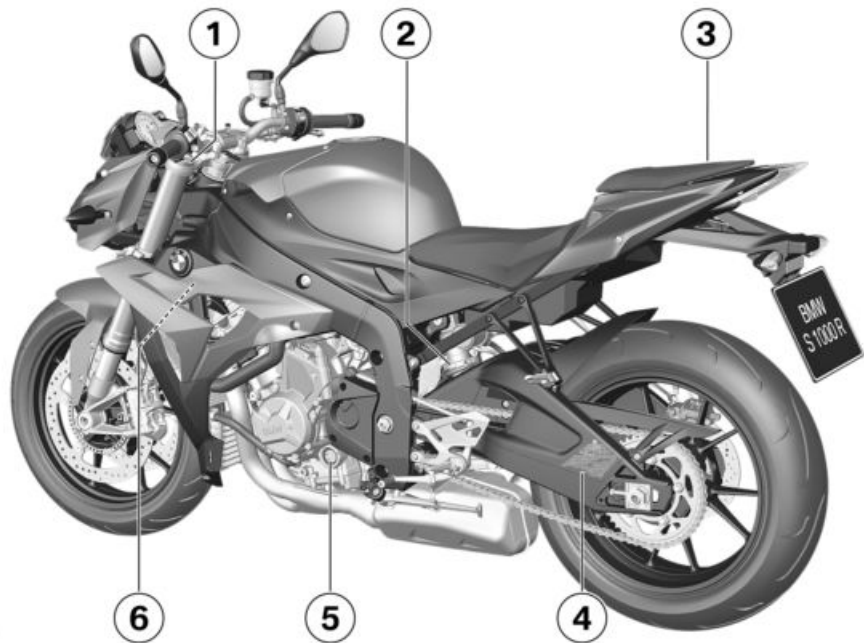
Actuality

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. We hope you will appreciate that no claims can be entertained on the

basis of the data, illustrations or descriptions in this manual.

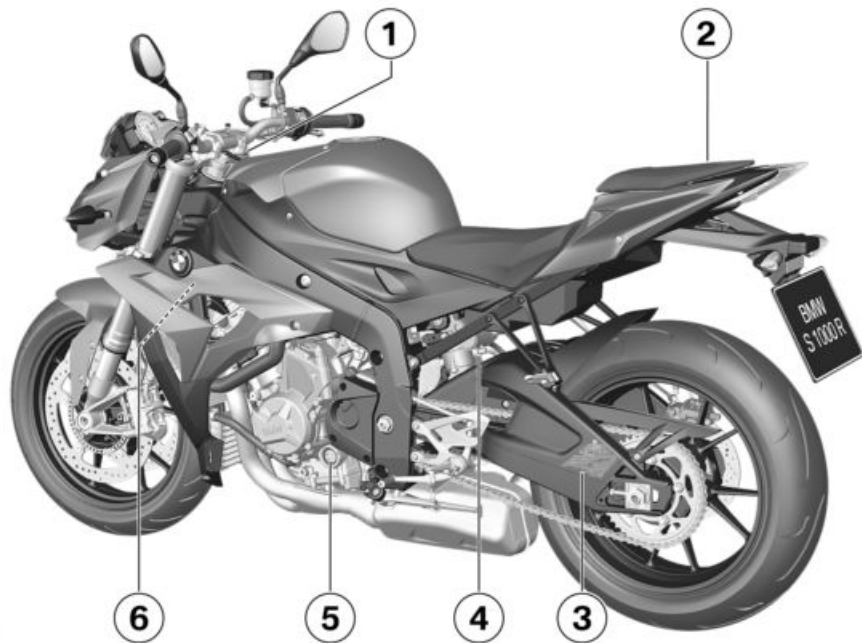
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General view, left side

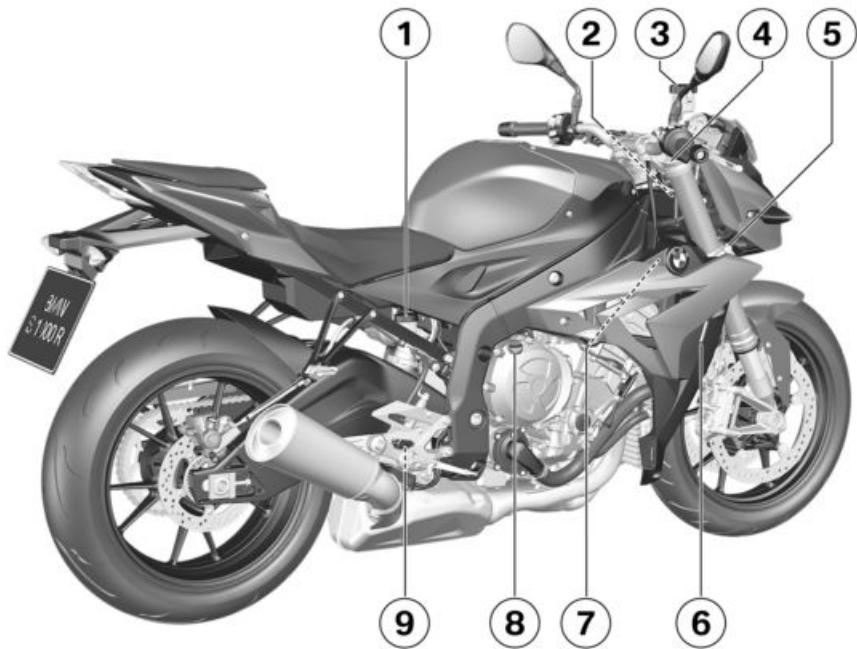
- 1** Adjuster for front
compression-stage
damping (red scale)
( 79)
- 2** Adjuster for spring preload,
rear ( 76)
- 3** Seat lock ( 60)
- 4** Table of tyre pressures
Payload table
Chain settings
- 5** Engine oil level indicator
( 119)
- 6** OA connector for navigation system



General view, left side, with DDC

– with Dynamic Damping Control^{OE}

- 1** Adjusting spring preload for front wheel (▮▮▮▮ 78).
- 2** Seat lock (▮▮▮▮ 60)
- 3** Table of tyre pressures
Payload table
Chain settings
- 4** Adjuster for spring preload, rear (▮▮▮▮ 77)
- 5** Engine oil level indicator (▮▮▮▮ 119)
- 6** OA connector for navigation system

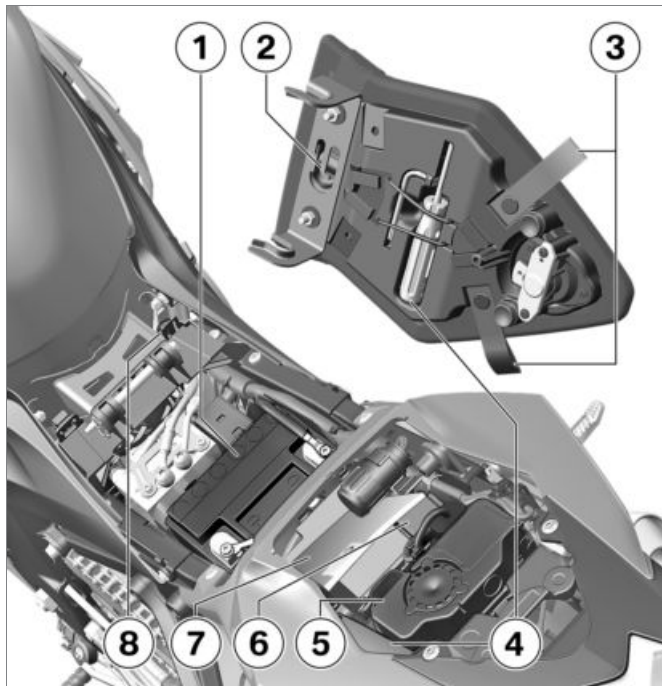


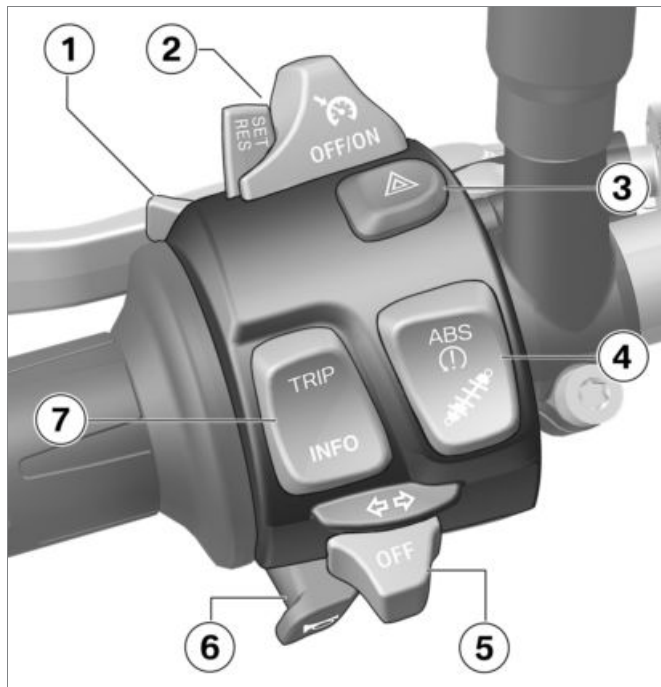
General view, right side

- 1** Brake-fluid reservoir, rear
( 124)
- 2** Vehicle identification number (VIN) and type plate
(on steering-head bearing)
- 3** Brake-fluid reservoir, front
( 123)
- 4** Adjuster for front rebound-stage damping (yellow scale) ( 80)
- 5** Steering damper
- 6** Coolant-level indicator
( 125)
- 7** OA connector
- 8** Engine-oil filler neck
( 120)
- 9** Adjuster for rear rebound-stage damping (low on spring strut; yellow scale)
( 81)

Underneath the seat

- 1 Battery (➡ 150)
- 2 Helmet holder (➡ 61)
- 3 Luggage loops (➡ 62)
- 4 Toolkit (➡ 116)
- 5 – with anti-theft alarm (DWA)^{OE}
- Anti-theft alarm (➡ 46)
- 6 Fuse box (➡ 148)
- 7 Rider's Manual
- 8 – Pro riding modes^{OE}
- Coding plug (➡ 55)





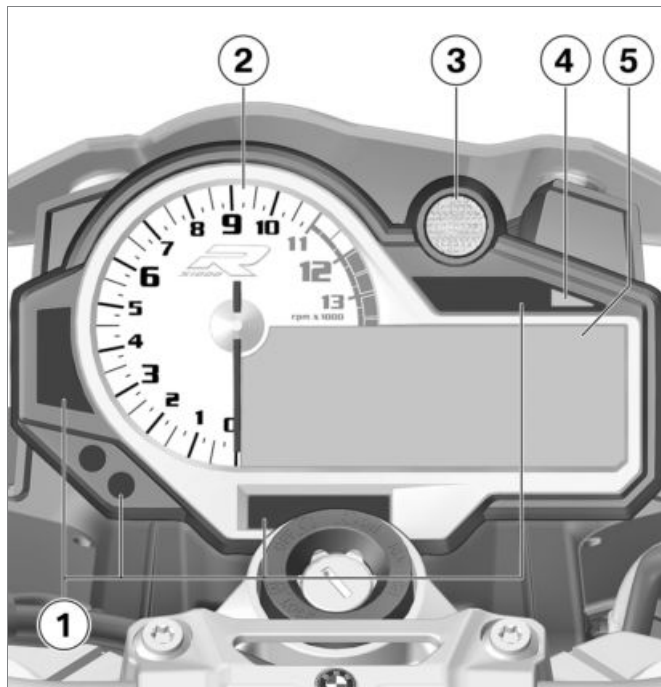
Multifunction switch, left

- 1** High-beam headlight and headlight flasher (➡ 48)
Lap timer (➡ 66)
- 2** – with cruise control^{OE}
Cruise-control system (➡ 56)
- 3** Hazard warning flashers (➡ 49)
- 4** BMW Motorrad Race ABS (➡ 50)
ASC (➡ 51)
– with Dynamic Traction Control (DTC)^{OE}
DTC (➡ 52)
– with Dynamic Damping Control^{OE}
DDC (➡ 82)
- 5** Turn indicators (➡ 49)
- 6** Horn
- 7** Display-mode selection (➡ 42)

Multifunction switch, right

- 1 – with heated handlebar grips^{OE}
Heated handlebar grips (➡ 59)
- 2 Riding mode (➡ 54)
- 3 Emergency off switch (kill switch) (➡ 50)
- 4 Start engine (➡ 92)





Instrument panel

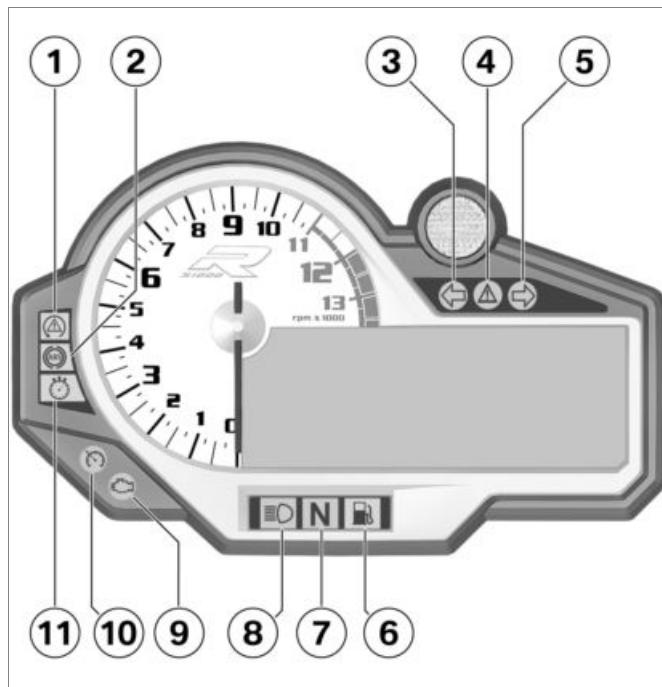
- 1 Panels for warning and tell-tale lights (➡ 22)
- 2 Rev. counter
- 3 Gearshift light (➡ 96)
- 4 Ambient-light brightness sensor (for adapting the brightness of the instrument lighting)
– with anti-theft alarm (DWA)^{OE}
DWA status indicator light (➡ 46)
- 5 Multifunction display (➡ 23)

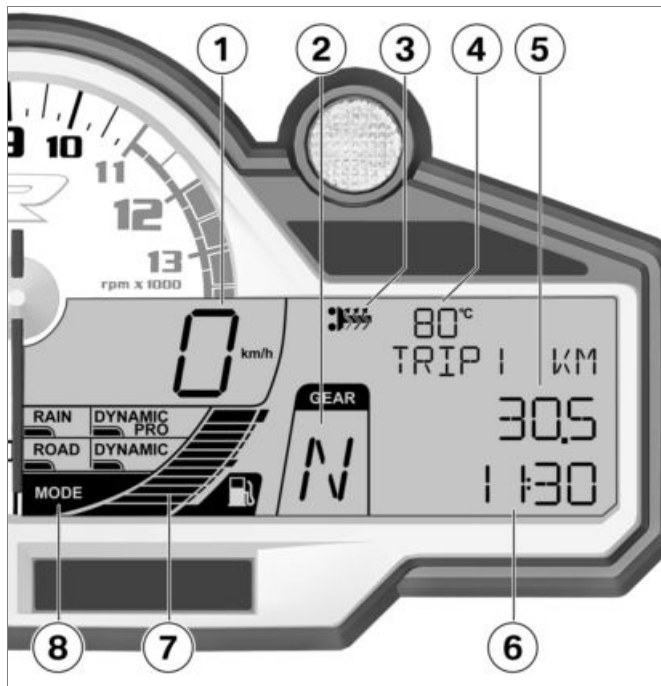
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Warning and telltale lights

- 1 ASC warning light (►► 32)
– with Dynamic Traction Control (DTC)^{OE}
- 2 DTC warning light (►► 33)
- 2 ABS warning light (►► 31)
- 3 Turn indicators, left
- 4 General warning light (in combination with warnings in the display) (►► 24)
- 5 Turn indicators, right
- 6 Fuel reserve (►► 35)
- 7 Idle
- 8 High-beam headlight
- 9 Warning light for engine electronics (►► 29)
- 10 Cruise-control system
– with cruise control^{OE}
Switching on cruise control (►► 56).
- 11 Light for the fastest lap (►► 67)





Multifunction display

- 1 Speedometer
- 2 Gear indicator; "N" indicates neutral
- 3 – with heated handlebar grips^{OE}
Operating the heated handlebar grips (➡ 59)
- 4 Coolant temperature
- 5 General information (➡ 44)
- 6 Clock (➡ 44)
- 7 Fuel level
- 8 Riding mode (➡ 54)

▶ See Section 5 for information on the display modes for the race track.◀

Warnings

Mode of presentation

Warnings are indicated by the corresponding warning lights.



Warnings for which there is no dedicated warning light are indicated by 'General' warning light **1** showing in combination with a warning such as, for example, **2** appearing on the multifunction display. The 'general' warning light shows red or yellow, depending on the urgency of the warning.

If two or more warnings occur at the same time, all the appropriate warning lights and warning symbols appear, alternating with warning words as applicable.

The possible warnings are listed on the next pages.

Warnings, overview

Warning and telltale lights

Warning symbols in the display Meaning

	lights up yellow	EWS ! appears on the display	EWS active (→ 29)
	flashes red	Coolant-temperature reading flashes	Coolant temperature too high (→ 29)
	lights up		Engine in emergency-operation mode (→ 29)
	lights up yellow	LAMPR ! appears on the display	Rear light defective (→ 30)
	lights up yellow	LAMPF ! appears on the display	Bulbs for front parking light defective (→ 30)
			Front lights defective (→ 30)
		LAMP ! appears on the display	Bulbs for flashing turn indicators defective (→ 30)
		VDS ! appears on the blank display	Motorcycle dropped (→ 31)

Warning and telltale lights

Warning symbols in the display

Meaning

	VDS ! appears on the display	Drop sensor defective (▣➡ 31)
	flashes	ABS self-diagnosis not completed (▣➡ 31)
	lights up	ABS switched off (▣➡ 31)
	lights up	ABS fault (▣➡ 32)
	quick-flashes	ASC intervention (▣➡ 32)
	slow-flashes	ASC self-diagnosis not completed (▣➡ 32)
	lights up	ASC switched off (▣➡ 32)
	lights up	ASC fault (▣➡ 32)

Warning and telltale lights

Warning symbols in the display

Meaning

	quick-flashes		DTC intervention (➡ 33)
	slow-flashes		DTC self-diagnosis not completed (➡ 33)
	lights up		DTC switched off (➡ 33)
	lights up		DTC fault (➡ 33)
	lights up yellow	DDC ! Appears on the display	DDC fault (➡ 34)
		DWA LO ! Appears on the display	DWA battery weak (➡ 34)
	lights up yellow	DWA ! appears on the display	DWA battery flat (➡ 34)
	lights up red	NO CAN appears on the display	CAN open circuit/short circuit (➡ 35)

Warning and telltale lights	Warning symbols in the display	Meaning
 lights up yellow	NO CODING Ap- pears on the dis- play	No coding (III➡ 35)

EWS active



General warning light shows yellow.

EWS ! appears on the display.
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 reserve key.
- Have the defective key replaced, preferably by an authorised BMW Motorrad dealer.

Coolant temperature too high



General warning light flashes red.

The coolant-temperature reading flashes.



Riding when the engine is overheated could result in engine damage.

Compliance with the information set out below is essential.◀

Possible cause:

The coolant temperature is too high.

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

Engine in emergency-operation mode



Warning light for engine electronics shows.



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

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

Possible cause:

The engine control unit has diagnosed a fault. In exceptional cases, the engine stops and refuses to start. Otherwise, the engine runs in emergency operating mode.

- You can continue to ride, but bear in mind that the usual engine power or the full range of engine rpm might not be available.
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad dealer.

Rear light defective



General warning light shows yellow.

LAMPR ! appears on the display.

Possible cause:

Rear light or brake light bulb defective.

- The LED rear light must be replaced. Consult a specialist workshop, preferably an authorised BMW Motorrad dealer.

Bulbs for front parking light defective



General warning light shows yellow (only if both parking lights fail).

LAMPF ! appears on the display.



A bulb failure on the motorcycle is a safety risk, because it is easy for other road users to overlook the vehicle.

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

Possible cause:

Bulb for parking light is defective.

- Replacing bulb for left parking light (➡ 142).
- Replacing parking-light bulb, right (➡ 144).

Front lights defective

No indication of a fault if the high-beam or low-beam headlight fails.



A bulb failure on the motorcycle is a safety risk, because it is easy for other road users to overlook the vehicle.

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

Possible cause:

Front bulb is defective.

- Replacing bulb for low-beam headlight (➡ 140).
- Replacing bulb for high-beam headlight (➡ 142).

Bulbs for flashing turn indicators defective

LAMP ! appears on the display.



A bulb failure on the motorcycle is a safety risk, because it is easy for other road users to overlook the vehicle.

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

Possible cause:

Bulb for turn indicator is defective.

- Replacing bulbs for front and rear turn indicators (➡ 145).

Possible cause:

The number-plate carrier has been removed; the motorcycle's on-board electronics know that the flashing turn indicators are not installed on the motorcycle.

- Installing number-plate carrier (➡ 85).



If the number-plate carrier is removed in preparation for a race-track session, the electronics detect a bulb failure and the appropriate warning appears on the display. Activating the EQUIP WARN LAMP function in the SETUP MENU suppresses this warning. ◀

Motorcycle dropped

VDS ! (Vertical Down Sensor) appears on the blank display.

Possible cause:

The drop sensor has detected a drop and has cut out the engine.

- Bring the motorcycle to the upright position
- Switch the ignition off and then on again or switch the kill switch on and then off again.

Drop sensor defective

VDS ! (Vertical Down Sensor) appears on the display.

Possible cause:

A defect in the drop sensor has been detected.

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

ABS self-diagnosis not completed



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

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

ABS switched off



ABS warning light flashes.

Possible cause:

The rider has switched off the ABS system.

- Switch on the ABS function (➡ 51).

ABS fault



ABS warning light flashes.

Possible cause:

The ABS control unit has detected a fault. The ABS function is not available or the functionality is subject to certain restrictions.

- You can continue to ride the vehicle, but make due provision for the fact that the ABS function is not available. Bear in mind the more detailed information on situations that can lead to an ABS fault (➡ 108).
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad dealer.

ASC intervention



ASC warning light quick-flashes.

The ASC control unit has detected

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

ASC self-diagnosis not completed



ASC 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 with the engine running for the wheel sensors to be checked: min 5 km/h)

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

ASC switched off



ASC warning light flashes.

Possible cause:

The rider has switched off the ASC system.

- Switch on the ASC function (➡ 52).

ASC fault



ASC warning light flashes.

Possible cause:

The ASC control unit has detected a fault. Bear in mind that the ASC function is not available or the functionality is subject to certain restrictions.

- You can continue to ride. Bear in mind the more detailed in-

formation on situations that can lead to an ASC fault (► 109).

- 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 warning light quick-flashes.

The DTC control unit has detected a degree of instability at the rear wheel and has intervened to reduce torque. The warning light flashes for longer than 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 warning light slow-flashes.

Possible cause:



DTC self-diagnosis not completed

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

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

DTC switched off

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



DTC warning light flashes.

Possible cause:

The rider has switched off the DTC system.

- Switch on the DTC function (► 53).

DTC fault

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



DTC warning light flashes.

Possible cause:

The DTC control unit has detected a fault. 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 an DTC fault (109).
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad dealer.

DDC fault



General warning light shows yellow.

DDC ! appears on the display.

Possible cause:

The DDC control unit has detected a fault.

- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad dealer.
- » In this condition, the motor-cycle has too much damping and is uncomfortable to drive,

especially on roads in poor condition.

DWA battery weak

– with anti-theft alarm (DWA)^{OE}

DWA!O ! appears on the display.

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

Possible cause:

The integral battery in the anti-theft alarm (DWA) has lost a significant proportion of its original capacity. There is no assurance of how long the DWA 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.

DWA battery flat

– with anti-theft alarm (DWA)^{OE}



General warning light shows yellow.

DWA ! appears on the display.

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

Possible cause:

The integral battery in the anti-theft alarm (DWA) has lost its entire original capacity. There is no assurance that the DWA 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.

CAN open circuit/short circuit



General warning light shows red.

NO CAN (Controller Area Network) appears on the display.
Possible cause:

A fault in the Controller Area Network has been detected.

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

No coding



General warning light shows yellow.

NO CODING appears on the display.

Possible cause:

A coding fault has been detected.

- The reading remains visible for 10 seconds before disappearing automatically.

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

Fuel down to reserve



Warning light for fuel down to reserve shows.

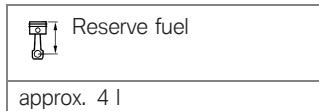


A shortage of fuel can result in misfires. This can cause the engine to switch off unexpectedly (risk of accident) and damage the catalytic converter.

Do not run the fuel tank dry.◀

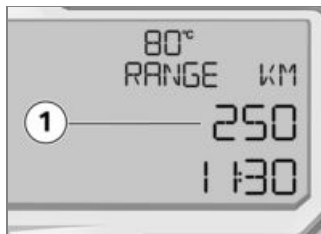
Possible cause:

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



- Refuelling (➡ 100).

Range



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

The odometer for the fuel reserve is reset when the amount of fuel after refuelling is greater than the reserve volume.

When the motorcycle is propped on its side stand the slight angle of inclination means that the sensor cannot register the fuel level correctly. This is the reason

why the range is calculated only when the side stand is in the retracted position.

▶ The calculated range is only an approximate figure. Consequently, BMW Motorrad recommends that you should not try to use the full range before refuelling.◀

Service-due indicator



If the next service is due in less than one month, the date for the next service **1** is shown briefly after the Pre-Ride-Check com-

pletes. In this example the reading means "October 2013".



If the vehicle covers long distances in the course of the year, under certain circumstances it might be necessary to have it serviced at a date in advance of the forecast due date. If the countdown distance to the early service is within the defined displayable range, this countdown distance **1** appears briefly on the display after the Pre-Ride-Check completes.



Maximum countdown
distance to next service:

1000 km



General warning light shows yellow and **SERVICE !** remains permanently visible on the display.

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

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



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.◀

Operation

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Ignition switch/steering lock

Keys

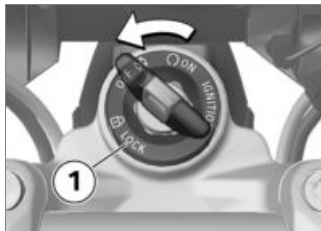
You receive 2 ignition keys. Consult the information on the electronic immobiliser (EWS) (► 41) if a key is lost or mislaid.

One-key system

- Ignition switch/steering lock
- Tank filler cap
- Seat lock
- Rear seat cover

Lock the handlebars

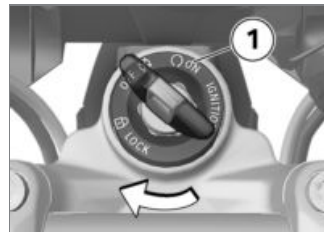
- Turn the handlebars to the left full-lock position.



- 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.

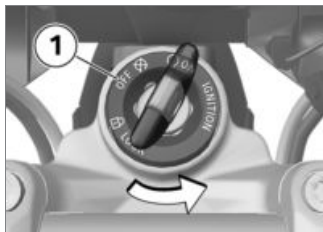
Ignition

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. (► 92)
 - » ABS self-diagnosis is in progress. (► 93)
 - » ASC self-diagnosis is in progress. (► 94)
 - with Dynamic Traction Control (DTC)^{OE}
 - » DTC self-diagnosis is in progress. (► 94)◁

Switching off ignition



- Turn the ignition key to position **1**.
 - » Lights are switched off.
 - » Handlebars (steering lock) are not locked.
 - » Key can be removed.
 - » The number-plate light goes out after 10 seconds.

Electronic immobiliser EWS

The on-board electronics access the data saved in the ignition key via a ring aerial in the ignition lock. The engine control unit

will only allow the engine to be started if the key is identified as “authorised”.

▶ A spare key attached to the same ring as the ignition key used to start the engine could “irritate” the electronics, in which case the enabling signal for starting is not issued. The EWS warning appears in the multifunction display. Always keep the spare key separately from the ignition key.◀

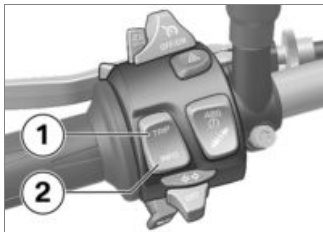
If you lose your key, you can have it barred by your BMW Motorrad authorised dealer.

If you wish to do this, you will need to bring all other keys for the motorbike 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 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.

Multifunction display

Selecting the display mode



- Press button **1** to view the ROAD display mode.
- Press button **2** to view other display modes.

The display modes at your disposal are as follows:

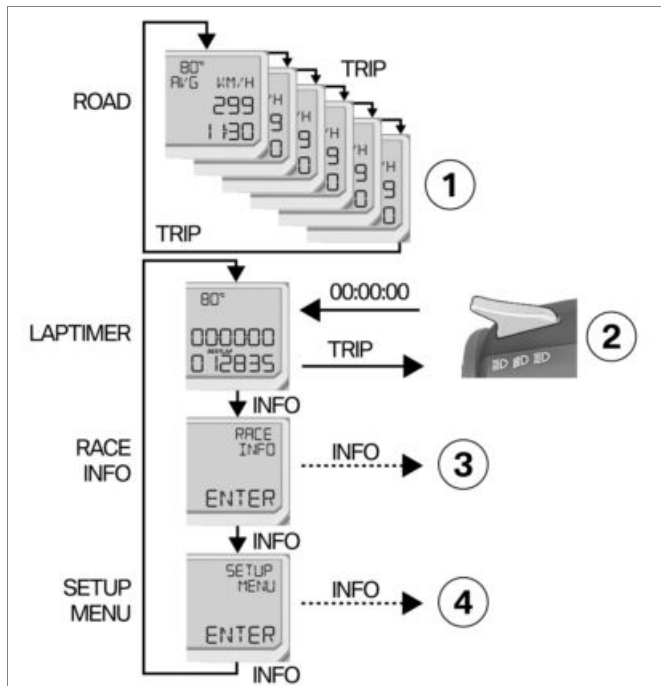
- **ROAD:** All the information necessary for riding on public roads is presented here.
- **LAPTIMER:** Lap times and other data can be logged here and subsequently retrieved

in the RACE INFO display mode.

- **RACE INFO:** The information logged with the LAPTIMER can be retrieved for viewing here. Note that this display mode can be activated only when the motorcycle is at a standstill.
- **SETUP MENU:** The instrument panel can be configured to suit the rider's preferences here. Note that this display mode can be activated only when the motorcycle is at a standstill.



- When the display shows RACE INFO or SETUP MENU, as applicable, press and hold down button **1** to activate the mode.



Overview of the display modes

- Solid line: short-press the button.
- - Broken line: press and hold down the button.
- 1 On-board computer readings (→ 44)
- 2 Starting timing (→ 66)
- 3 Start RACE INFO (→ 68)
- 4 Start SETUP MENU (→ 73)

Selecting readings in ROAD mode

- Switch on the ignition.



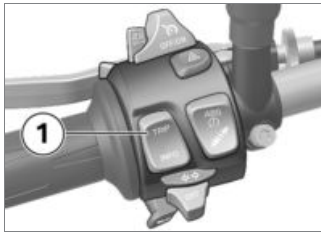
- Repeatedly press button **1** until the value you want appears in panel **2**.

The following values can be displayed:

- Total distance covered
- Range
- Tripmeter 1 Trip I
- Tripmeter 2 Trip II
- Average consumption
- Average speed

Resetting the average values

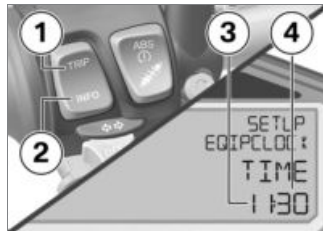
- Switch on the ignition.



- Repeatedly short-press button **1** until the average value you want to reset appears in the display line.
- Press and hold down button **1** until the value you selected has reset.

Setting the clock

- Switch on the ignition.



- Repeatedly press button **2** until SETUP MENU ENTER appears on the display.
- Press and hold down button **2**.
- Repeatedly press button **2** until SETUP EQUIPMENT ENTER appears on the display.
- Press and hold down button **2**.
- Repeatedly press button **2** until SETUP EQUIP:CLOCK TIME appears on the display.
- Press and hold down button **2** until the minutes number **4** flashes.

- Press button **1** to step the minutes reading up.
 - Press button **2** to step the minutes reading down.
 - When the minutes reading is correct, hold down button **2** until hours reading **3** flashes.
 - Press button **1** to step the hours reading up.
 - Press button **2** to step the hours reading down.
 - When the hours reading is correct, press and hold down button **2** until the number stops flashing.
- » This completes the process.

Anti-theft alarm (DWA)

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

Activation

- Switching on ignition (➡ 40).
- DWA adjusting (➡ 47).
- Switch off the ignition.
- » DWA If the alarm system (DWA) is activated, then the alarm system will be armed automatically 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 (DWA) is active.

Alarm

An alarm can be triggered by:

- Motion sensor
- An attempt to use an unauthorised 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 motorcycle 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 anti-theft alarm telltale light then signals the reason for the alarm for one minute.

The meanings of the flash codes are as follows:

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

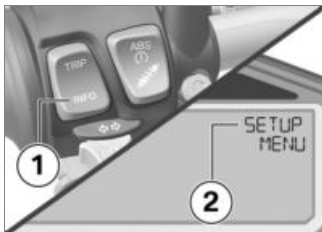
Deactivation

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

- » Turn indicators flash once.
- » Confirmation tone sounds once (if programmed).
- » Anti-theft alarm (DWA) is deactivated.

DWA adjusting

- Switching on ignition (🔑 40).



- Repeatedly short-press button **1** until SETUP MENU ENTER appears in display line **2**.
- Long-press button **1** to start the SETUP MENU.



- Repeatedly short-press button **1** until SETUP EQUIPMENT ENTER appears in display line **2**.
- Long-press button **1** to start the SETUP EQUIPMENT menu.



- Press button **1** briefly to go to the next menu item SETUP EQIP DWA.
 - » AUTO appears in display line **2**.
 - » The preset ON/OFF value appears in display line **3**.
 - Long-press button **1** to change the preset value.
- The following settings are available:
- AUTO ON: The DWA anti-theft alarm is active and will be armed automatically when the ignition is switched off.

- **AUTO OFF:** The DWA anti-theft alarm is deactivated.

Headlight

Adjusting headlight for driving on left/driving on right

This motorcycle has a symmetric-beam low-beam headlight. If the motorcycle is ridden in a country where the opposite rule of the road applies, its symmetric low-beam headlight means that no measures are necessary to prevent the headlight beam from dazzling oncoming traffic.

Headlight beam throw and spring preload

Headlight beam throw is generally kept constant when spring preload is adjusted to suit load.

▶ If there are doubts about the correct headlight range, seek the advice of a specialist workshop, preferably an authorised BMW Motorrad dealer.◀

Lights

Side light

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

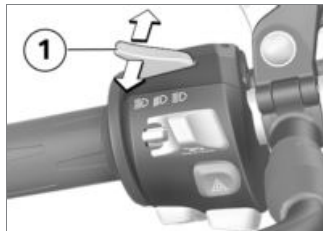
▶ The side lights place a strain on the battery. Do not switch the ignition on for longer than absolutely necessary.◀

Low-beam headlight

The low-beam headlight switches on automatically when you start the engine.

High-beam headlight and headlight flasher

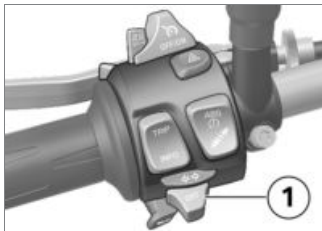
- Start the engine.



- Flip switch **1** up to switch on the high-beam headlight.
- Flip switch **1** down to operate the headlight flasher.

Parking lights

- Switch off the ignition.



Turn indicators

Operating the turn indicators

- Switch on the ignition.

▶ The turn indicators are cancelled automatically after you have ridden for approximately 10 seconds and covered a distance of about 300 m.◀



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

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

Hazard warning flashers

Switching on hazard warning flashers

- Switch on the ignition.

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



- Press button **1** to switch on the hazard warning flashers.

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

▶ You can switch on the parking lights within 10 seconds after switching off the ignition.◀

- Switch the ignition on and off again to switch off the parking lights.

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

Emergency off switch (kill switch)



- 1** Emergency off switch (kill switch)

 Operating the kill switch when riding can cause the rear wheel to lock and thus cause a fall.
Do not operate the kill switch when riding.◀

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



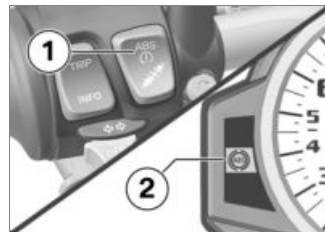
- a** Engine switched off
b Normal operating position (run)

BMW Motorrad Race ABS

Switch off the ABS function

- Switch on the ignition.

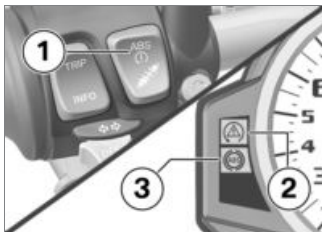
 You have the option of deactivating the ABS function while the motorcycle is on the move.◀



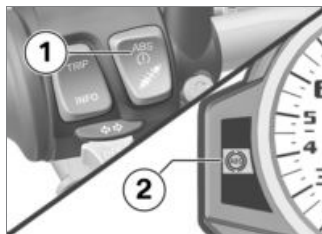
- Press and hold down button **1** until ABS warning light **2** changes status.



ABS warning light flashes.



Switch on the ABS function



- Press and hold down button **1** until first DTC warning light **2** and then ABS warning light **3** change their status.
- » The DTC setting remains unchanged.



ABS warning light flashes.

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



ABS warning light continues to flash.

- » ABS function is switched off.

- Press and hold down button **1** until ABS warning light **2** changes status.



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

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



ABS warning light remains off or continues to flash.

- » ABS function is switched on.
- If the coding plug is not inserted, you have the alternative of

switching the ignition off and then on again.

An ABS fault has occurred if the ABS 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.

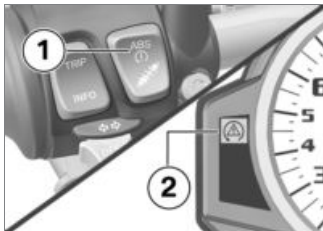
min 5 km/h

BMW Motorrad ASC

Switch off the ASC function

- Switch on the ignition.

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



- Press and hold down button **1** until ASC warning light **2** changes status.



ASC warning light starts to show.

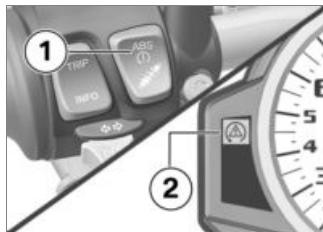
- Release button **1** within two seconds.



ASC warning light continues to flash.

» ASC function is switched off.

Switch on the ASC function



- Press and hold down button **1** until ASC warning light **2** changes status.



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

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



ASC warning light remains off or continues to flash.

- » ASC function is switched on.
- If the coding plug is not inserted, you have the alternative of

switching the ignition off and then on again.



An ASC fault has occurred if the ASC 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 5 km/h

Dynamic Traction Control DTC

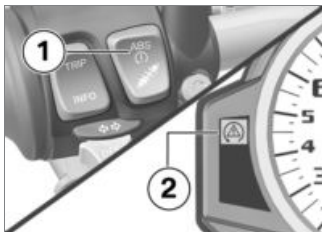
– with Dynamic Traction Control (DTC)^{OE}

Switch off the DTC function

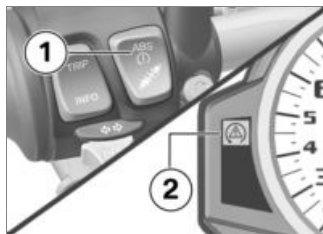
- Switch on the ignition.



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



Switch on the DTC function



- Press and hold down button **1** until DTC warning light **2** changes status.

 DTC warning light starts to show.

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

 DTC warning light continues to flash.

» DTC function is switched off.

- Press and hold down button **1** until DTC warning light **2** changes status.

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

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

 DTC warning light remains off or continues to flash.

- » DTC function is switched on.
- If the coding plug is not inserted, you have the alternative of

switching the ignition off and then on again.

 A DTC fault has occurred if the DTC 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 5 km/h

Riding mode

Using the riding modes

BMW Motorrad has developed 4 operational scenarios for your motorcycle from which you can select the scenario suitable for your situation:

- Riding on a rain-wet road surface.
- Riding on a dry road surface.

- Pro riding modes^{OE}
- Dynamic riding on a dry road surface.
- Sporty riding on a dry road surface.

The interplay of engine torque, throttle response, ABS control and ASC or DTC control is optimised for each of these 4 scenarios. The optimum setting is a preset with DDC.

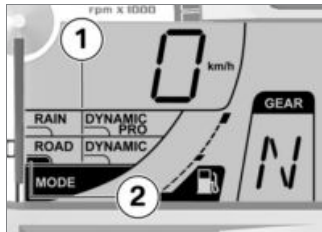
Setting riding mode

- Switching on ignition (➡ 40).



- Press button **1**.

▶ See the section entitled "Engineering details" for more information on the various ride modes that can be selected.◀



Selection menu **1** with the four selectable riding modes shows on the display. The highlight **2** tells you which riding mode is currently selected.



- Repeatedly press button **1** until the riding mode you want is highlighted.

The following ride modes can be selected:

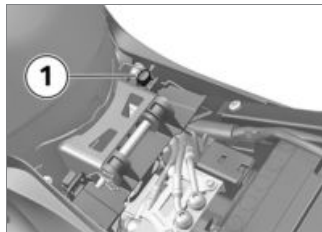
- RAIN: For riding on a rain-wet road surface.
- ROAD: For riding on a dry road surface.
- Pro riding modes^{OE}
 - » The following riding modes are additionally available for selection:
- DYNAMIC: For dynamic riding on a dry road surface.

- DYNAMIC PRO: For sporty riding (only with coding plug installed).◀
- » 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:
 - The throttle twistgrip is in the idle position.
 - The brake levers are in the released positions.
 - » The mode selected in this way is retained with the engine-characteristic, ABS, DTC and DDC adaptation settings even after the ignition has been switched off.

Installing coding plug

– Pro riding modes^{OE}

- Switching off ignition (➡ 41).
- Remove the front seat (➡ 61).



Dirt and moisture can penetrate the open plug and lead to malfunctions. Reinstall the cap after removing the coding plug.◀

- Remove cap of plug 1.



- To do so, press in latch 1 and remove the cap.
- Install the coding plug.
- Switch on the ignition.
- » The selected riding mode is retained in memory, even after the ignition is switched off.
- Installing front seat (➡ 61).

Cruise-control system

– with cruise control^{OE}

Switching on cruise control



- Slide switch **1** to the right.
- » Button **2** is enabled for operation.

Saving road speed



- Briefly push button **1** forward.



Adjustment range for
cruise control

30...180 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.



Increasing speed

Speed is increased each time
you press the button.

1 km/h

- 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.



Reducing speed

Speed is reduced each time you push the button.

1 km/h

- 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.

▶ 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.

Brakes

Adjusting the front brake lever



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

Do not twist the handlebar fitting or the handlebars.◀



Attempting to adjust the handbrake lever while riding the vehicle can lead to accidents. Do not attempt to adjust the handbrake lever unless the motorcycle is at a standstill.◀



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



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

- » Adjustment options:
- Position 1: widest span between handlebar grip and handbrake lever
 - Position 6: narrowest span between handlebar grip and handbrake lever

Tyres

Check the tyre pressure



Incorrect tyre pressures impair the motorcycle's handling characteristics and increase the rate of tyre wear.

Always check that the tyre pressures are correct.◀



At high road speeds, tyre valves have a tendency to open as a result of centrifugal force.

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

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

Heated handlebar grips

– with heated handlebar grips^{OE}

Operating the heated handlebar grips

- Start the engine.



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

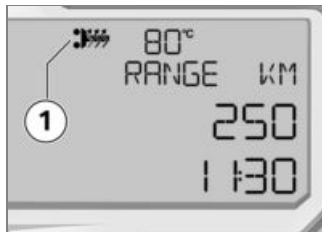


The increase in power consumption caused by having the heated handlebar grips switched on can drain the battery if you are riding at low engine speeds. If the charge level is low, the heated handlebar grips are

switched off to ensure the battery's starting capability.◀



- Repeatedly press button **1** until the heating stage you want to use appears on the multifunction display.



The handlebar grips have two-stage heating. Stage two **1** is for heating the grips quickly: it is advisable to switch to stage one as soon as the grips are warm.



Second stage: 100 % heating power



First stage: 50 % heating power

» The selected heating stage will be saved if you allow a certain length of time to pass without making further changes.

Mirrors

Adjusting mirrors

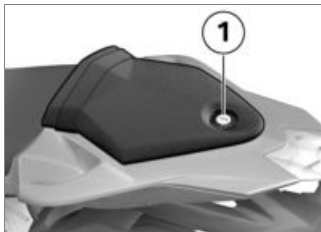


- Turn the mirror to the correct position.

Front and rear seats

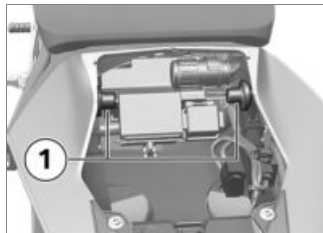
Removing rear seat

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

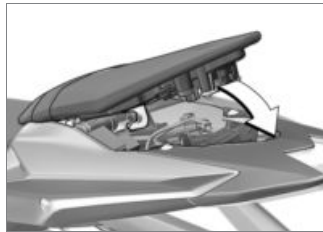


- Open seat lock **1** with the ignition key.
- Lift the rear seat at the rear and then work it back and up to remove.
- Remove the ignition key from the lock and place the rear seat, upholstered side down, on a clean surface.

Install the rear seat



- Engage the rear seat in mounts **1** on left and right.



- Swing the rear seat down, pushing it lightly forward.

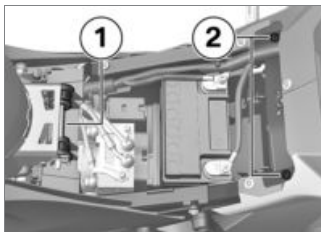
- Lock the seat lock with the ignition key.

Removing front seat



- Push the upholstery of the front seat forward slightly above screws **1** and hold it in this position.
- Remove screws **1**.
- Push the seat forward and lift it at the rear to remove. Take care not to let the screws scratch the trim panels.
- Place the seat, upholstered side down, on a clean surface.

Installing front seat



- Engage the front seat in mount **1**, then lower the rear of the seat to bring the holes into alignment with screw holes **2**. Take care not to let the screws scratch the trim panels.

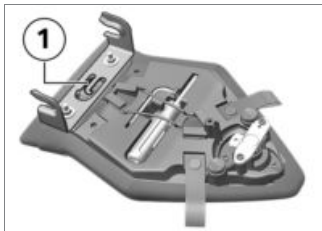


- Push the upholstery of the front seat forward slightly above the screw holes and hold it in this position.
- Install screws **1**.

Helmet holder

Securing the helmet to motorcycle

- Removing rear seat (➡ 60).
- Turn the rear seat upside down.



The helmet catch can scratch the panelling. Make sure the lock is out of the way when you hook the helmet into position.◀

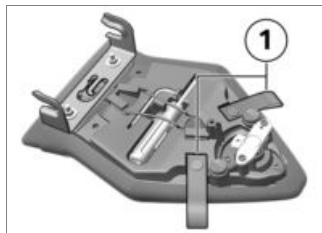
Make sure the lock is out of the way when you hook the helmet into position.◀

- Use a plastic-sheathed steel cable (not part of the vehicle) to secure the helmet to helmet holder **1**.
- Install the rear seat (➡ 60).
- Place the helmet on the front seat.

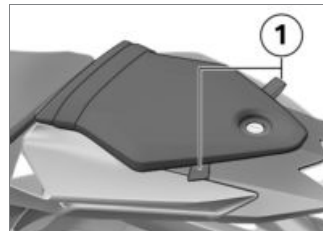
Luggage loops

Securing luggage to motorcycle

- Removing rear seat (➡ 60).
- Turn the rear seat upside down.



- Pull loops **1** out of the holders and to the outside and down.
- Install the rear seat (➡ 60).



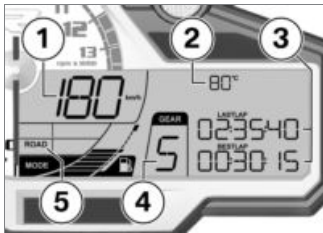
- Use the loops **1** and the rear footrests, for example, to secure luggage to the rear seat. In this process, take care not to damage the rear trim panels.

On the race track

LAPTIMER	64
RACE INFO.....	68
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Spring preload	76
Damping	79
Removing/installing mirrors	83
Removing and installing number- plate carrier	84
Removing and installing front turn indicators	86

LAPTIMER

Mode of presentation



- 1 Speedometer
- 2 Engine temperature
- 3 The readings in these lines can be changed by the rider. (▢▢▢▢ 64)
LASTLAP: Time for the preceding lap.
BESTLAP: The current fastest lap time of the laps logged in memory.
- 4 Gear indicator
- 5 Riding mode selected by the rider

Labels for the values shown on the display

The following times can be displayed in the third line:

- LASTLAP: The time for the preceding lap.

The following times can be displayed in the fourth line:

- BESTLAP: The fastest of the laps currently logged in memory.
- RUN: The running time for the current lap.

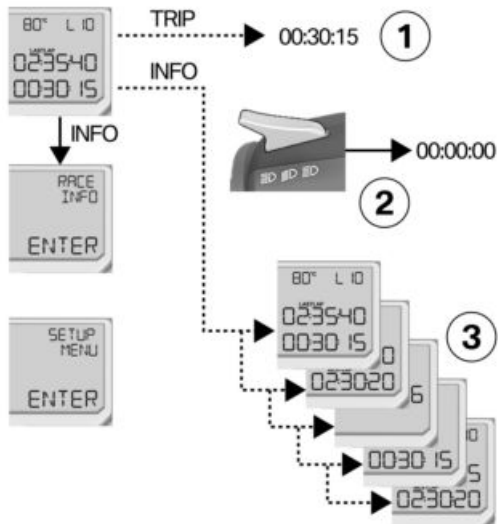
The third and fourth lines can be combined to show other readings:

- RUN BEST: The third line shows the running time for the current lap, the best lap currently logged in memory is shown in the fourth line.
- LAST RUN: The third line shows the time recorded for the preceding lap, the running

time for the current lap is shown in the fourth line.

- LAST BEST: The third line shows the time needed for the preceding lap, the best lap currently logged in memory is shown in the fourth line.
- RUN TOTAL: The third line shows the running time for the current lap, the total time for all the laps currently logged in memory is shown in the fourth line.
- RUN BESTEV: The third line shows the running time for the current lap, the best-ever lap is shown in the fourth line.

At the start of each new lap the time for the preceding lap is shown briefly before the display switches to the running time of the current lap.



Display overview

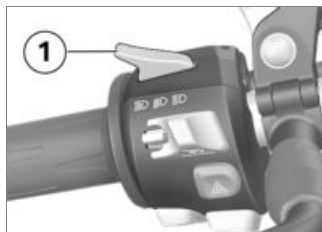
- Solid line: short-press the button.
 - - Broken line: press and hold down the button.
- 1** Interrupting timing (➡ 67).
 - 2** Starting timing (➡ 66).
 - 3** View the times (➡ 66).

Viewing times



- To view the time of your choice, repeatedly press button **1** until the display changes.

Starting timing



- Press button **1** to start timing.

 The engine has to be running in order for the headlight-flasher signal to be detected.◀

- Every time you cross the start/finish line, press button **1** again to start timing for the next lap.
 - » The data of the preceding lap are written into memory.
 - » Timing continues even if you exit the display mode. In the other display modes, however, timing of another lap can be

started only by an external signal.

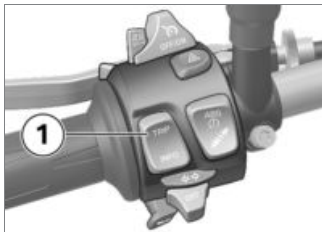
Infrared receiver

– with infrared receiver^{OA}

An infrared signal provides a convenient way of operating the lap timer. The instrument can be operated in this way only when the infrared receiver available as an optional accessory is connected to the IR receiver (on the right side, behind the side panel). The RACETRACK SETUP MENU enables you to choose between operation with the headlight-flasher button and the TRIP/INFO button, or operation by one or other of these buttons (see the section on the SETUP MENU). A lap timeout can be defined to stop the receiver from registering completion of a lap prematurely in response to spurious signals.

Signals received before this time elapses are ignored.

Interrupting timing

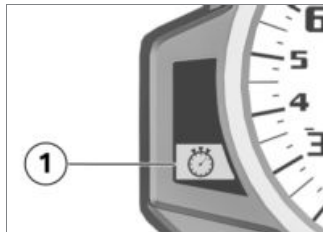


- Press and hold down button **1** to interrupt timing.
- Press and hold down button **1** again to resume timing.

▶ If more laps are subsequently timed, lap numbering resumes. Numbering is not restarted at lap 1 unless you delete the current timing session in the RACE INFO display mode.◀

Fastest lap anticipated

This function has to be activated in the SETUP RACETRACK menu (see the section on the SETUP MENU).



When you start a new lap your intermediate times are taken every time you cover a defined section of the track and compared with the corresponding intermediate times of the best lap stored in memory.



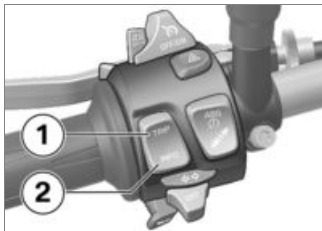
The lap section for the intermediate time

100 m

If your intermediate times show that you are faster than on your previous best lap the processor anticipates that this lap will be your new best time. The indicator for the fastest lap **1** lights up.

RACE INFO

Selecting saved lap

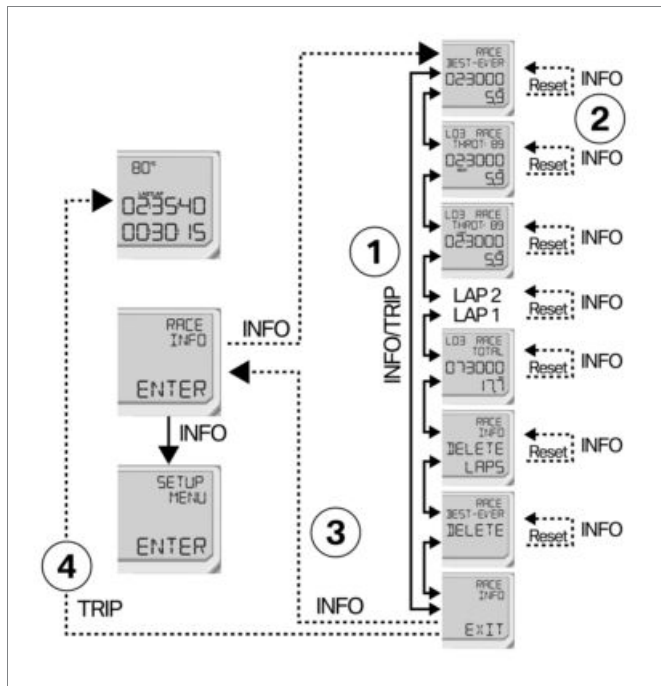


- Repeatedly press button **1** or button **2** to view each lap stored in memory one after the other.

Each time button **1** is pressed the laps saved in memory are shown in the sequence described below; each time button **2** is pressed the laps are shown in reverse sequence:

- Best-ever lap BEST-EVER
- Best lap logged in memory BEST

- Last lap logged in memory LAST
- All other laps logged in memory
- Aggregate time for all laps logged in memory TOTAL
- Delete lap data logged in memory DELETE LAPS
- Delete the best-ever lap logged in memory BEST-EVER DELETE
- Exit the RACE INFO EXIT display mode



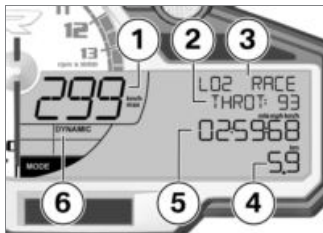
Display overview

— Solid line: short-press the button.

-- Broken line: press and hold down the button.

- 1 Selecting saved lap (→ 68).
- 2 Deleting lap times (→ 71).
- 3 Exit the INFO MENU (→ 70).
- 4 Delete the timing logs (→ 71).

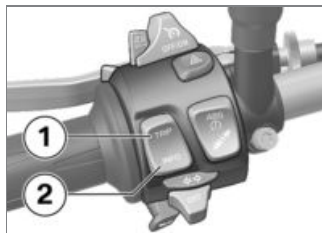
Information for a lap



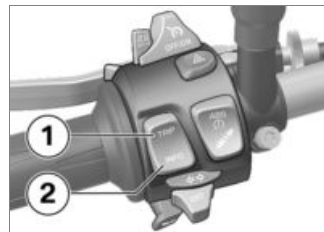
- 1 In sequence: Top speed (max), average speed (Ø) and lowest speed (min) on the lap currently displayed.
- 2 In sequence: Average throttle twistgrip position (THROT) in percent, percentage of lap ridden with brakes applied (BRAKE) and number of gearshifts (GEAR) on the lap currently displayed.
- 3 Lap for which the data on the display apply.
- 4 Distance ridden.

- 5 Time for the lap currently displayed.
- 6 The riding mode most commonly used is displayed continuously.

Exiting INFO MENU

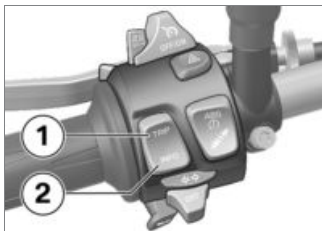


- Repeatedly press button 1 or button 2 until RACE INFO EXIT appears on the display.



- Press and hold down button 2 to exit the RACE INFO display mode.
 - » The readings already recorded remain saved in memory.
- **Alternatively:** Press and hold down button 1.

Deleting timing logs



- Repeatedly press button **1** or button **2** until RACE INFO DELETE LAPS appears on the display.
- Press and hold down button **2** to delete all the logged data from memory.

All-time best lap

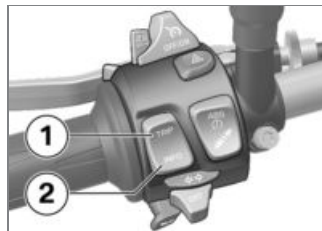
The all-time best lap (BEST-EVER) is the fastest of all timed laps and is updated as soon as a faster lap BESTLAP is timed. The all-time best lap remains stored in memory even if the

timed laps are deleted. This means that other races can subsequently be timed and the lap times of those races compared with the best lap from earlier races.

The all-time best lap can also be deleted from memory.

If the all-time best lap is from a race timed in the past, it is accompanied on the display by the appropriate lap number. If the all-time best lap shows without a lap number, this lack of a lap number indicates that the time is from a race timed in the past but subsequently deleted from memory.

Deleting lap times

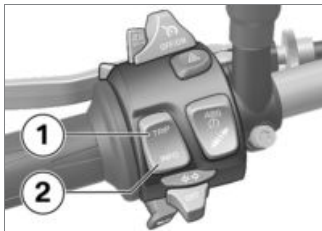


- Repeatedly press button **1** or button **2** until the lap you want to delete appears on the display.
- Press and hold down button **2** to delete the lap from memory.
 - » If the lap you select for deletion was
 - the best lap in memory BEST, the lap in question is deleted. The lap that was the second-best time until the best time was deleted becomes the new best lap.

- the last lap in memory LAST, the lap in question is deleted. The lap that was the second-last time until the last time was deleted becomes the new last lap.
- a lap stored in memory, the lap in question is deleted. The numbering of the remaining laps remains unchanged.
- » Total time is reduced by the time for the laps you delete.
- Select BEST-EVER DELETE and press and hold down button **2** to delete the BEST-EVER lap time.

SETUP MENU

Selecting a parameter



- Select the **SETUP MENU** and press and hold down button **2**.
- Repeatedly press button **1** or button **2** until the submenu you want appears on the display.
- Press and hold down button **2** to open the submenu you want.

Each time button **1** is pressed the possible parameters are shown in the sequence described below; each time button **2** is pressed the

parameters are shown in reverse sequence.

SETUP EQUIPMENT

- DWA adjusting
DWA AUTO ON/OFF
- Setting time **CLOCK TIME**
- Adjusting brightness
DISP BRIGHT
- Switch warning for defective bulbs on/off **WARN LAMP**
- Switch gearshift light on/off **GSL ON/OFF RPM**
- Gearshift-light brightness
GSL BRIGHT
- Gearshift-light frequency
GSL FREQ
- Change units of measure for speed, range, temperature, average consumption, distance and time **UNITS**

SETUP RACETRACK

- Set **LAPTIMER** readings: Current lap **RUN**, time required for preceding lap **LAST**, best lap

BEST, total of all laps logged in memory **TOTAL**, best-ever lap **BESTEV**

- Display-freeze period for the most recent time **HOLD**
- Debounce time (time that must elapse before a new lap can be started) of the **TRIP/INFO** button for operating the **LAP-TIME DEB-TM**
- Activate or deactivate **BESTLAP BLIP ON/OFF**
- Change settings for operating the **LAPTIME** by the headlight-flasher button and the **TRIP/INFO** button.
TRIG AUTO: operate by headlight-flasher button and **TRIP/INFO** button;
TRITG MANUAL: operate by headlight-flasher button only;
EXTERN: operate by **TRIP/INFO** button only.

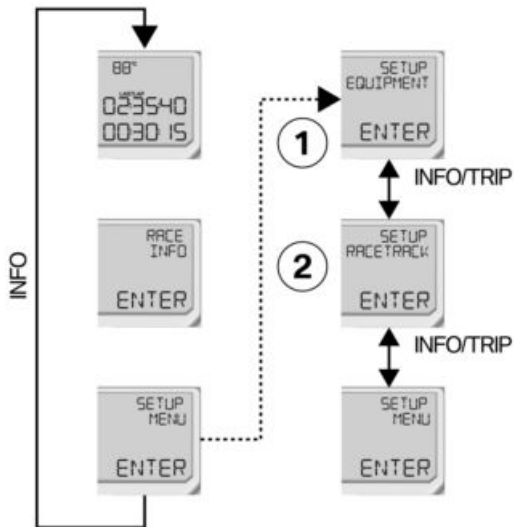
Overview SETUP MENU

— Solid line: short-press the button.

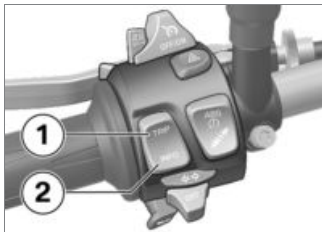
-- Broken line: press and hold down the button.

1 Settings of the display

2 Settings for the racetrack

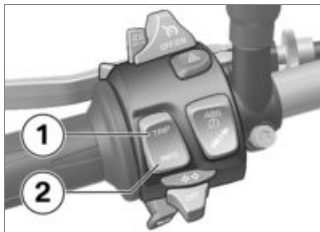


Setting parameters



- Press and hold down button **2** until the parameter starts to flash.
 - Repeatedly press button **1** or button **2** until the value you want appears on the display.
- When the value you want is shown:
- Press and hold down button **2** until the value stops flashing.
 - » The value is saved.

Exiting SETUP mode



- To exit the SETUP MENU, press and hold down button **1**.
 - » A value that is still flashing will not be saved.
 - **Alternatively:** Repeatedly press button **1** or button **2** until SETUP MENU EXIT appears on the display.
- When SETUP MENU EXIT appears:
- Press and hold down button **2** to exit the SETUP MENU.

Spring preload Adjustment

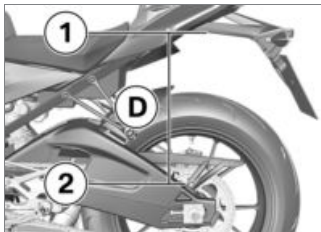
Front spring preload has to be adjusted to suit the rider's weight. Increase spring preload for heavier riders, decrease spring preload for lighter riders. It is essential to set spring preload of the rear suspension to suit the load carried by the motorcycle. Increase spring preload when the vehicle is heavily loaded and reduce spring preload accordingly when the vehicle is lightly loaded.

Adjusting spring preload for rear wheel

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Make sure there is no load on the motorcycle; remove all items of luggage, if carried.



- Use the tool from the on-board toolkit to slacken screw **1**.



- Hold the motorcycle upright (do not prop it on the side stand) and measure distance **D** from bottom edge **1** of the

number-plate carrier to screw **2** of the chain guard.

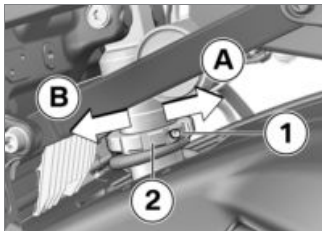
- Apply the rider's weight to the motorcycle.
- With the assistance of a second person, measure distance **D** between points **1** and **2** again and calculate the difference (negative spring displacement) between the two readings.



Load-dependent adjustment of spring preload

Negative spring displacement of rear wheel

20...24 mm (With rider 85 kg)



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

- To reduce negative spring displacement (increase spring preload, in other words), use the tool from the on-board toolkit to turn adjusting ring **2** in direction **B**.
- To increase negative spring displacement (reduce spring preload, in other words), use the tool from the on-board

toolkit to turn adjusting ring **2** in direction **A**.

- Tighten screw **1** to the specified tightening torque.



Clamping screw to top spring retainer

– without Dynamic Damping Control^{OE}

3 Nm◀

Adjusting spring preload for rear wheel

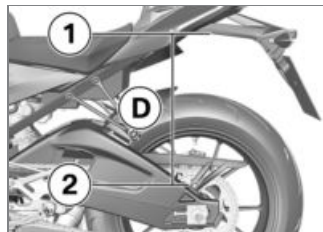
– with Dynamic Damping Control^{OE}

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Start the engine.



Before adjusting spring preload make sure there is no load on the motorcycle; remove all items of luggage, if carried.

Set the damping (DDC) to **SOFT** for one-up riding.◀



- Hold the motorcycle upright, preferably with the assistance of a second person (do not prop the motorcycle on the side stand).
- Measure distance **D** from bottom edge **1** of the number-plate carrier to screw **2** of the chain guard.
- Apply the rider's weight to the motorcycle.
- With the assistance of a second person, measure distance **D** between points **1**

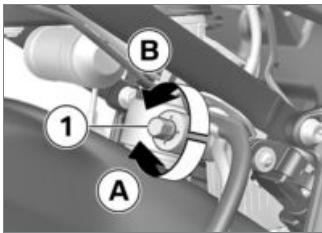
and **2** again and calculate the difference (negative spring displacement) between the two readings.



Load-dependent adjustment of spring preload

Negative spring displacement of rear wheel

20...24 mm (With rider 85 kg)



- To reduce negative spring displacement (increase spring preload, in other words), use the tool from the on-board toolkit

to turn adjusting ring **1** in direction **A**.

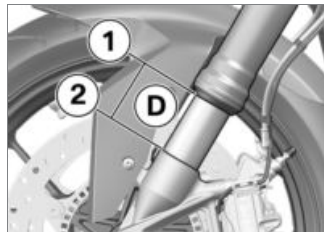
- To increase negative spring displacement (reduce spring preload, in other words), use the tool from the on-board toolkit to turn adjusting ring **1** in direction **B**.

Adjusting spring preload for front wheel

– with Dynamic Damping Control^{OE}

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Start the engine.

⚠ Before adjusting spring preload make sure there is no load on the motorcycle; remove all items of luggage, if carried. Set the damping (DDC) to **SOFT** for one-up riding.◀



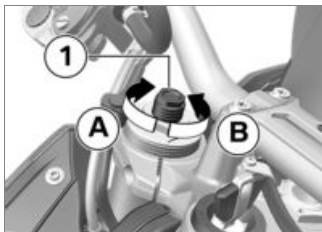
- Hold the motorcycle upright, preferably with the assistance of a second person (do not prop the motorcycle on the side stand).
- Measure distance **D** between bottom edge **1** of the slider tube and front axle **2**.
- Apply the rider's weight to the motorcycle.
- With the assistance of a second person, measure distance **D** between points **1** and **2** again and calculate the difference (negative spring displacement) between the two readings.



Load-dependent adjustment of spring preload

Negative spring displacement of front wheel

6...10 mm (With rider 85 kg)



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

- To reduce negative spring displacement (increase spring preload, in other words), use the

tool from the on-board toolkit to turn adjusting screws **1** in direction **A**.

- To increase negative spring displacement (reduce spring preload, in other words), use the tool from the on-board toolkit to turn adjusting screws **1** in direction **B**.

Damping

Correct setting for the damping characteristic

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 compression-stage damping for front wheel



- Adjust compression-stage damping by turning adjusting screw **1** on the left fork leg.



Compression stage, basic setting, front

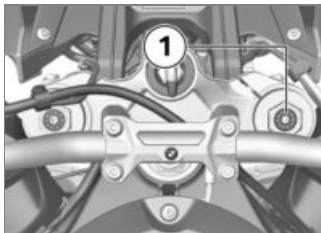
Position 1 (comfortable setting with rider 85 kg)

Position 3 (normal setting with rider 85 kg)

Position 7 (sports setting with rider 85 kg)

- To increase damping: Use the tool from the on-board kit to turn the adjusting screw in the appropriate direction so that mark **1** points to a higher reading on the scale.
- To reduce damping: Use the tool from the on-board kit to turn the adjusting screw in the appropriate direction so that mark **1** points to a lower reading on the scale.

Adjust the rebound-stage damping for front wheel



- Adjust rebound-stage damping by turning adjusting screw **1** on the right fork leg.



- To increase damping: Use the tool from the on-board kit to turn the adjusting screw in the appropriate direction so that mark **1** points to a higher reading on the scale.
- To reduce damping: Use the tool from the on-board kit to turn the adjusting screw in the appropriate direction so that mark **1** points to a lower reading on the scale.



Rebound stage, basic setting, front

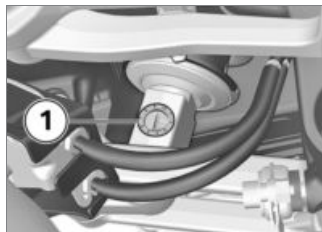
Position 1 (comfortable setting with rider 85 kg)

Position 3 (normal setting with rider 85 kg)

Position 7 (sports setting with rider 85 kg)

Adjusting rebound-stage damping for rear wheel

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



- Adjust compression-stage damping by turning adjusting screw **1**.



- To increase damping: Use the tool from the on-board kit to turn the adjusting screw in the appropriate direction so that

mark **1** points to a higher reading on the scale.

- To reduce damping: Use the tool from the on-board kit to turn the adjusting screw in the appropriate direction so that mark **1** points to a lower reading on the scale.



Rebound stage, basic setting, rear

Position 1 (comfortable setting with rider 85 kg)

Position 4 (normal setting with rider 85 kg)

Position 7 (sports setting with rider 85 kg)

Factory default settings, front wheel

- Reset the factory defaults as stated below.



Factory default settings
for compression/rebound
stages, front

Position 3

Factory default settings, rear wheel

- Reset the factory defaults as stated below.



Factory default setting
for rebound stage, rear

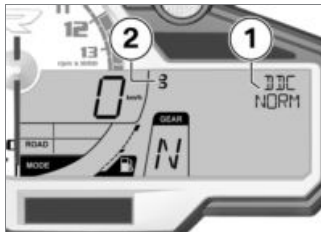
Position 4

Viewing suspension damping with DDC

- with Dynamic Damping Control^{OE}
- Switching on ignition (➡ 40).



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



Damping is shown in area **1** and load in area **2** of the multifunction display.

» The setting shows briefly, then disappears automatically.

Adjusting suspension damping with DDC

- with Dynamic Damping Control^{OE}
- Switching on ignition (➡ 40).



- 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.

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

The following settings are available:

- **SOFT**: Comfortable damping characteristic
- **NORM**: Normal damping characteristic
- **HARD**: Sporty damping characteristic

To adjust load:

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

▶ The load cannot be set while the motorcycle is in motion.◀

The following settings are available:

 One-up

 Two-up

Removing/installing mirrors

Removing mirror



- Push protective cap **1** up.
- Use the tool from the on-board toolkit to slacken nut **2**.

▶ When removing the right mirror, make sure that the brake-fluid reservoir remains correctly secured.◀

- Remove mirror **3**.

- Using the tool from the on-board toolkit, retighten nut **2**.

Installing mirrors



- Install mirror **3**.
- Use the tool from the on-board toolkit to tighten nut **2**.

 Locknut (mirror) to clamping piece

Joining compound: Multi-wax spray

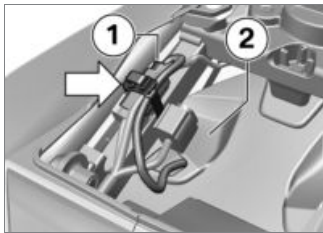
20 Nm

- Push protective cap **1** into position.

Removing and installing number-plate carrier

Remove the number-plate carrier

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Removing rear seat (➡ 60).



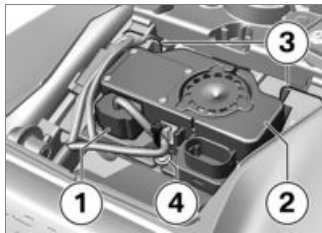
- Remove the cable tie **arrow** and disconnect plug **1** for the number-plate carrier.

▷ If the number-plate carrier is removed in preparation for a race-track session, the electronics detect a bulb failure and

the appropriate warning appears on the display. Activating the EQUIP WARN LAMP function in the SETUP MENU suppresses this warning.◀

- Work plug **1** with the cable through tail bottom section **2** until clear.

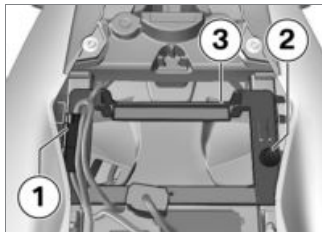
– with anti-theft alarm (DWA)^{OE}



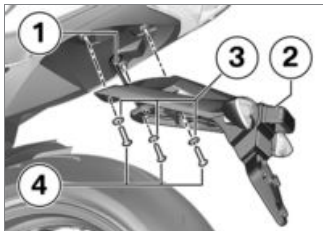
- Disconnect plug **1** for the anti-theft alarm.

▷ Before disconnecting the plug for the anti-theft alarm, check that DWA has been deactivated in the SETUP MENU.◀

- Remove screw **4**.
- Remove anti-theft alarm **2**, disengaging it from bracket **3**.



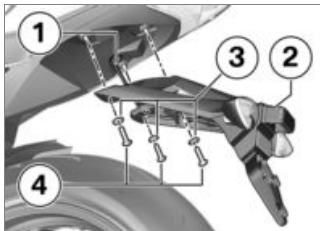
- Disengage plug **1** for the number-plate carrier.
- Remove body-bound rivet **2**.
- Remove bracket **3** for the anti-theft alarm.◀



- Remove screws **4** with washers **3**.
- Remove number-plate carrier **2** and work cable leg **1** out until clear.
- Install the rear seat (🔧 60).

Installing number-plate carrier

- Make sure the ground is level and firm and place the motor-cycle on its stand.
- Removing rear seat (🔧 60).



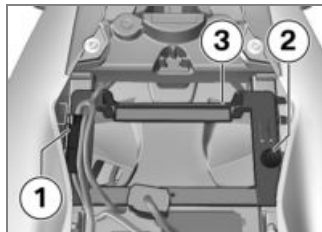
- Hold number-plate carrier **2** in position and work cable leg **1** into position.
- Install screws **4** with washers **3**.



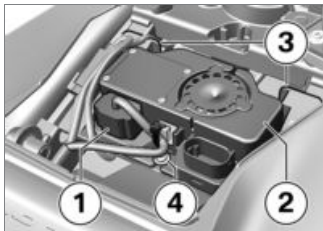
Number-plate carrier to rear frame

5 Nm

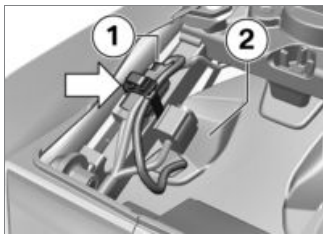
– with anti-theft alarm (DWA)^{OE}



- Install bracket **3** for the anti-theft alarm.
- Install body-bound rivet **2**.
- Secure plug **1** for the number-plate carrier.



- Insert anti-theft alarm **2**, engaging it in bracket **3**.
- Install screw **4**.
- Connect plug **1** for the anti-theft alarm.◀



- Work plug **1** with the cable through tail bottom section **2**.

- Connect plug **1**, hold it in position and secure the cable tie **arrow**.

▶ If the warning for bulb failure is suppressed in preparation for a race-track session, before the motorcycle is ridden on public roads the warning has to be reactivated by selecting the EQUIP WARN LAMP function in the SETUP MENU.◀

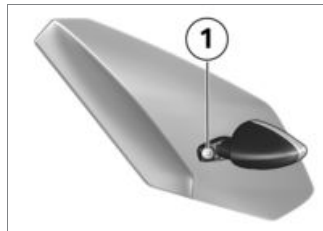
- Install the rear seat (▮▮▮ 60).

Removing and installing front turn indicators

Removing front flashing turn indicator

▶ The procedure described here for the right side apply by analogy to the left side panel.◀

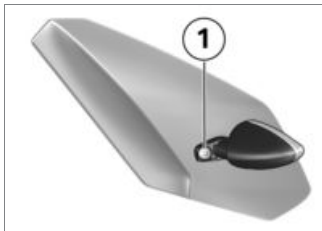
- Removing right cover (▮▮▮ 128).



- Remove screw **1** and remove the turn indicator. Work the cable through the fairing side panel.
- Protect the plug on the motorcycle to prevent the ingress of foreign matter.
- Installing right cover (▮▮▮ 129).

Installing front flashing turn indicator

- Removing right cover (▮▮▮ 128).
- Work the cable through the fairing side panel.



- Hold the flashing turn indicator in position and install screw **1**.
- Installing right cover (➡ 129).

Riding

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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.

Loading



Overloading and imbalanced loads can adversely affect the motorcycle's handling. Do not exceed the permissible gross weight and be sure to comply with the instructions on loading. ◀

- Set spring preload, damping characteristic and tyre pressures to suit total weight.
- with tank rucksack^{OA}
- Note the maximum permissible payload of the tank rucksack. ◀
- with rear softbag^{OA}
- Note the maximum payload of the rear softbag. ◀

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.

Risk of poisoning

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



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

Do not inhale exhaust fumes.

Do not run the engine in an enclosed space. ◀

Risk of burn injury



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

When you park the motorcycle make sure that no-one comes into contact with the engine and exhaust system. ◀

Catalytic converter

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

For this reason, observe the following points:

- Do not run the fuel tank dry.
- Do not 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.



Unburned fuel will destroy the catalytic converter.

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

Risk of overheating



Cooling would be inadequate if the engine were allowed to idle for a lengthy period with the motorcycle at a standstill: overheating would result. In extreme cases, the motorcycle could catch fire. Do not allow the engine to idle unnecessarily. Ride away immediately after starting the engine.◀

Tampering



Tampering with motorcycle settings (e.g. electronic engine management unit, throttle valves, clutch) can cause damages to the components in question and lead to failure of safety-relevant functions. Damage caused in this way is not covered by the warranty.

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

Checklist

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

Before each journey

- Brakes
- Brake-fluid levels, front and rear
- Coolant level
- Clutch function
- Damping characteristic setting and spring preload
- Tyre tread depth and tyre pressures
- Security of the luggage.

At regular intervals

- Engine oil level (every refuelling stop)
- Brake-pad wear (every third refuelling stop).

Starting

Start engine

- Switch on the ignition.
- » Pre-Ride-Check is performed. (➡ 92)
- » ABS self-diagnosis is in progress. (➡ 93)
- » ASC self-diagnosis is in progress. (➡ 94)
- with Dynamic Traction Control (DTC)^{OE}
- » DTC self-diagnosis is in progress. (➡ 94)◀
- Select neutral or, if a gear is engaged, pull the clutch lever.

▶ 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**.

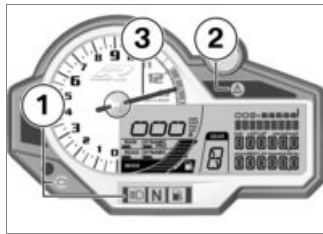
▶ The start attempt is automatically interrupted if battery voltage is too low. Recharge the battery before you start the engine, or use jump leads and a donor battery to start. See the subsection on jump starting in "Maintenance".◀

- » The engine starts.
- » Consult the troubleshooting chart below if the engine refuses to start. (➡ 158)

Pre-Ride-Check

The instrument panel runs a test of the warning lights and the revolution counter when the ignition is switched on: this is the Pre-Ride-Check. The test is aborted if you start the engine before it completes.

Phase 1



Telltale and warning lights **1** light up, 'General' warning light **2** shows yellow.

Needle **3** of the revolution counter moves all the way to the position for maximum engine revolutions.

All the segments in the display light up.

Phase 2

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

Phase 3

The needle of the revolution counter moves to the position for zero engine revolutions.

The telltale and warning lights go out.

The display switches to its ordinary display mode.

If a warning light does not show:



Some malfunctions cannot be indicated if one of the warning lights fails to show. Make sure that all the warning and telltale lights come on in the pre-ride check. ◀

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

an authorised BMW Motorrad dealer.

ABS self-diagnosis

BMW Motorrad Race ABS 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.



ABS warning light flashes.

Phase 2

- » Pullaway test of the system components with diagnostic capability.



ABS warning light flashes.

ABS self-diagnosis completed

- » The ABS symbol no longer shows.

- Check all the warning and telltale lights.



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 sensors to be checked: min 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 the ABS function and the integral braking function are 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.

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



ASC warning light slow-flashes.

Phase 2

- » Pullaway test of the system components with diagnostic capability.



ASC warning light slow-flashes.

ASC self-diagnosis completed

- » The ASC symbol no longer shows.

- Check all the warning and tell-tale 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 with the engine running 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 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.

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 warning light slow-flashes.

Phase 2

- » Pullaway test of the system components with diagnostic capability.



DTC warning light slow-flashes.

DTC self-diagnosis completed

- » The DTC symbol no longer shows.
- Check all the warning and tell-tale lights.



DTC self-diagnosis not completed

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

If an indicator showing a DTC fault appears after 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, avoid-

ing high-speed main roads and highways if possible.

- Comply with the rpm limits for running in.



Running-in speed

<7000 min⁻¹ (Odometer reading 0...300 km)

<9000 min⁻¹ (Odometer reading 300...1000 km)

No full load (Odometer reading 0...1000 km)



First running-in check

700...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.



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

Apply the brakes in good time.◀

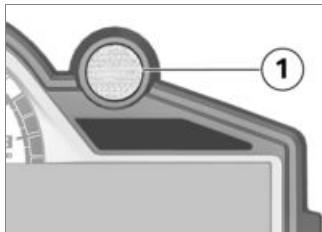
Tyres

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.



New tyres do not provide full grip straight away. Wet roads and extremely sharp inclines pose a risk of accident. Ride carefully and avoid extremely sharp inclines.◀

Shifting gear Gearshift light



Gearshift light **1** shows the rider two engine-speed thresholds:

Pullaway engine speed

When the motorcycle is at a standstill with the engine running, the gearshift light indicates the ideal engine speed for a racing start.

- Gearshift light off: engine speed too low
- Gearshift light on: ideal engine speed for pulling away

- Gearshift light flashing: engine speed too high

Shift speed

When the motorcycle is on the move, the gearshift light indicates the engine speed at which the rider should upshift.

- Gearshift light flashes at preset frequency: approaching upshift rpm
- Gearshift light goes out: the engine has revved past upshift rpm

The engine-speed thresholds and the way in which the gearshift light indicates the various states can be customised in the **SETUP EQUIPMENT** menu.

Shift assistant

- with shift assistant^{OE}

Your motorcycle is equipped with a shift assistant evolved from motorcycle-racing technology; the shift assistant enables you to upshift in virtually all load and engine-rpm ranges without pulling the clutch or changing the throttle-valve angle. The throttle valve remains open to accelerate the motorcycle and upshift time is reduced to a minimum. You select the gear in the usual way by means of the foot-operated shift lever.



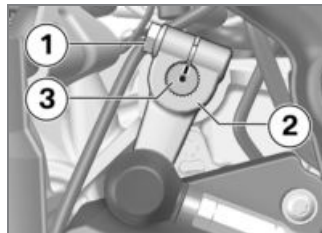
The sensor **1** in the shift linkage registers the shift request and triggers shift assistance.

When you are riding at constant speed with the engine revving high in a low gear, upshifting without disengaging the clutch can cause a severe reaction to the load change. BMW Motorrad recommends disengaging the clutch for upshifts in these circumstances. It is advisable to avoid using the shift assistant at engine speeds close to the limits at which the governor cuts in to limit engine rpm.

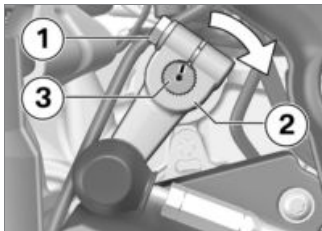
Shift assistance is not available in the following situations:

- Gearshifts with the clutch disengaged
- Gearshifts with the throttle valve closed (engine overrun)
- Downshifts

Adjusting gearshift lever



- Slacken screw **1**.
- Disconnect shift lever **2** from selector shaft **3**.



- Move shift lever **2** one tooth to the right and slip it into engagement.
- » Gearshift lever is moved down to a lower position.
- Align shift lever **2** with selector shaft **3** so that selector shaft **3** projects slightly and tighten screw **1**.



Selector lever to selector shaft

8 Nm

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 sudden-stop 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. This can increase stopping distance. Use both brakes. The rear wheel can evince a tendency to lift clear of the ground. The BMW rear-wheel lift assistant intervenes to prevent the rear wheel from losing contact with the ground.

Descending mountain passes



There is a danger of the brakes fading if you use only the rear brakes when descending mountain passes. Under extreme conditions, the brakes could overheat and suffer severe damage.

Use both front and rear brakes,

and make use of the engine's braking effect as well.◀

Wet 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.



Wetness and dirt result in poor braking efficiency. 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.◀

Parking your motorcycle

Side stand

- Switch off the engine.



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

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

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



The side stand is designed to support only the weight of the motorcycle. Do not lean or sit on the

motorcycle with the side stand extended.◀

- If the camber of the roadway permits, turn the handlebars all the way to the left.
- On a gradient, the motorcycle should always face uphill; select 1st gear.

Refuelling

Fuel grade

For optimum fuel consumption, fuel should be sulphur-free or with the lowest sulphur content possible.



Leaded fuel will destroy the catalytic converter.

Do not attempt to run the vehicle on leaded fuel or fuel with metallic additives, e.g. manganese or iron.◀

- Fuels with a maximum Ethanol content of 10%, i.e. E10, can be fuelled.



Recommended fuel grade

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

Refuelling



Fuel is highly flammable. A naked flame close to the fuel tank can cause a fire or explosion.

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



Fuel expands when hot. Fuel escaping from an overfilled tank could make its way onto the road surface. This could cause a fall.

Do not overfill the fuel tank.◀



Fuel attacks plastics, which become dull or unsightly. Wipe plastic parts immediately after contact with fuel.◀

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



The volume of the tank can be utilised to the full only when the motorcycle is propped on its side stand.◀

- Open the protective cap.



- Use the ignition key to unlock cap **1** of the fuel tank and pop the cap open.



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



If filling occurs after the fuel level has gone below the reserve limit, the amount filled must be greater than the reserve amount for the new fuel level to be recognised and the warning light to switch off.◀



The “usable fuel capacity” specified in the technical data is the quantity that the fuel tank could hold if it had been run

dry and the engine had cut out due to a lack of fuel.◀



Usable fuel capacity

approx. 17.5 l



Reserve fuel

approx. 4 l

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

Securing motorcycle for transportation

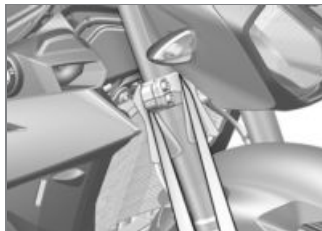
- Make sure that all components that might come into contact with straps used to secure the motorcycle are adequately protected against scratching. Use adhesive tape or soft cloths, for example, for this purpose.



The motorcycle can topple and fall on its side.

Secure motorcycle against toppling; this is best done with the support of a 2nd person.◀

- Push the motorcycle onto the transportation flat and hold it in position: do not place it on the side stand.



Risk of damaging components.

Take care not to trap components such as brake lines or wires.◀

- At the front, loop a strap over the bottom fork bridge on each side.
- Pull the straps down and tight.



- At the rear, secure the straps to the rear footrests on both sides 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

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Riding mode

Riding mode selection

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

- RAIN
- ROAD (standard mode)
- Pro riding modes^{OE}
- DYNAMIC
- DYNAMIC PRO (only with coding plug inserted)



The following applies to motorcycles with power reduction: Inserting the coding plug voids homologation for riding the motorcycle on public roads.

Do not use the coding plug for riding these vehicles on public roads. ◀

Mode selection is not available on vehicles with reduced power output.

Each of these modes produces perceptible differences in the way the motorcycle behaves. ABS and/or ASC/DTC can be switched off in each mode: the explanations below invariably apply to the behaviour of the motorcycle with these systems active. The mode last selected is automatically reactivated after the ignition has been switched off and then on again.

The basic rule is: the sportier the mode you select, the more directly can you tap into the engine's reserves of power. At the same time, the level of rider assistance that the ABS and ASC/DTC systems offer decreases accordingly.

The RAIN, ROAD and DYNAMIC riding modes are set up

for riding with standard tyres recommended by BMW Motorrad. The DYNAMIC PRO riding mode is for race-track conditions and surfaces with a very high level of grip.

Consequently, you must always bear the following in mind with regard to your selection of a ride mode: the sportier the setting, the greater the challenge to your riding skill!

RAIN

The engine's full power is not made available. Power increase when you open the throttle is virtually linear, engine response is soft.

The ABS system always intervenes early enough to prevent as effectively as possible the wheels from locking and the rear wheel from lifting off the ground.

The ASC/DTC system intervenes early enough to prevent the rear

wheel from spinning whenever possible.

ROAD

The engine's full power is available in ROAD mode.

The behaviour of the ABS is the same as in RAIN mode.

The ASC/DTC system intervenes later than in RAIN mode, so it is possible to induce slight drift when exiting corners.

– Pro riding modes^{OE}

DYNAMIC

DYNAMIC is the sportiest mode available without the coding plug inserted.

In this mode, the ABS intervenes later. It still prevents the wheels from locking, but the function that detects the tendency of the rear wheel to lift clear of the ground is deactivated. Under these circumstances, the rear wheel can lift off the ground.

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

The DTC system intervenes even later, so dynamic acceleration is possible.

– Pro riding modes^{OE}

DYNAMIC PRO

The DYNAMIC PRO mode cannot be activated unless the coding plug is inserted.

The DYNAMIC PRO mode was developed for situations in which the rider has an open view of the road ahead and the surroundings and is riding on surfaces with the high level of grip generally encountered only on race tracks. Similarly, the assumption on which the parameter settings for this mode are based is that the motorcycle is fitted with tyres with a very high level of surface grip.

The behaviour of the ABS is the same as in DYNAMIC mode, with

one exception: ABS control is not active at the rear wheel when the footbrake lever is pressed. Under these circumstances, the rear wheel can lock up. The function for detecting the rear wheel's tendency to lift clear of the ground is also deactivated.

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

When this mode is selected, the controller of the DTC system assumes that the motorcycle is running on tyres with maximum grip. Long wheelies are possible and the same applies to wheelies at slight angles of lean, and it is important to bear in mind that under these circumstances it is also possible that the motorcycle might flip over backwards.

Mode changes

A mode change involves functions in the engine management system, the ABS and the ASC/DTC and DDC is possible only in certain operating states:

- No drive torque at the rear wheel
- No brake pressure in the brake system.

In order to achieve this state,

- The motorcycle must be at a standstill with the ignition switched on

or

- The throttle twistgrip must be in the fully closed position,
- The brake levers must be in the released positions.

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.

Brake system with BMW Motorrad Race 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.



The integral braking function makes it very difficult to spin the rear wheel by opening the throttle with the front brake applied to keep the motorcycle stationary (Burn Out). Attempted burn-outs can result in damage to the rear brake and the clutch.

Do not attempt a Burn Out unless the ABS function has been switched off. ◀

How does ABS work?

The amount of braking force that can be transferred to the road depends on factors that include the coefficient of friction of the road surface. Loose stones, ice and snow or a wet road all have much lower coefficients of friction than a clean, dry asphalt surface. The lower the coefficient of friction, the longer the 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 can occur, ABS intervenes and adapts braking pressure to the maximum transferable braking

force, so the wheels continue to turn and directional stability is maintained irrespective of the condition of the road surface.

What are the effects of surface irregularities?

Humps and surface irregularities can cause the wheels to lose contact temporarily with the road surface; if this happens the braking force that can be transmitted to the road can drop to zero. If the brakes are applied under these circumstances the ABS has to reduce braking force to ensure that directional stability is maintained when the wheels regain contact with the road surface. At this instant the BMW Motorrad Integral ABS must assume an extremely low coefficient of friction (gravel, ice, snow), so that the wheels will continue to rotate under all imaginable circumstances, because

this is the precondition for ensuring directional 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 Race ABS?

If the ABS 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

Even under severe braking, a high level of tyre grip can mean that the front wheel does not lock up until very late, if at all. Consequently, ABS does not intervene until very late, if at all. Under these circumstances the rear wheel can lift off the ground, and the outcome can be a high-siding situation in which the motorcycle can flip over.



Severe braking can cause the rear wheel to lift off the ground.

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

Special situations

The speeds of the front and rear wheels are compared as one means of detecting a wheel's incipient tendency to lock. If the system registers implausible values for a lengthy period the ABS function is deactivated for safety reasons and an ABS fault message is issued. Self-diagnosis has to complete before fault messages can be issued. In addition to problems with the BMW Motorrad Race ABS, exceptional riding conditions can lead to a fault message being issued.

Exceptional riding conditions:

- Heating up with the motorcycle on an auxiliary stand, in neutral or with a gear engaged.
- Rear wheel locked by the engine brake for a lengthy period, for example while descending steep gradients.

If a fault message should be triggered due to one of the above-described driving conditions, the ABS function can be re-activated by switching the ignition off and then on again.

What significance devolves on regular maintenance?



Invariably, a technical system cannot perform beyond the abilities dictated by its level of maintenance.

In order to ensure that the BMW Motorrad Race 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 Race ABS permits must not be used as an excuse for careless riding. ABS is primarily a means of ensuring a safety margin in genuine emergencies.

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

Electronic engine management with BMW Motorrad ASC

How does ASC work?

The BMW Motorrad ASC system 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 an assistant system for the rider 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 style of riding takes rider and machine close to the limits imposed by physics.

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



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

Special situations

In accordance with the laws of physics, the accelerating ability is restricted more and more as the heel angle 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 as one means of detecting the rear wheel's incipient tendency to spin or slip sideways. If the system registers implausible values for a lengthy period the ASC

function is deactivated for safety reasons and an ASC fault message is issued. Self-diagnosis has to complete before fault messages can be issued.

The following exceptional riding conditions can lead to an automatic shutdown of the BMW Motorrad ASC:

- Riding for a lengthy period with the front wheel lifted off the ground (Wheelie) with ASC deactivated.
- Rear wheel rotating with the vehicle held stationary by applying the front brake (Burn Out).
- Heating up with the motorcycle on the centre stand or an auxiliary stand, engine idling or with a gear engaged.

If the front wheel lifts clear of the ground under severe acceleration, the ASC reduces engine

torque until the front wheel regains contact with the ground. Under these circumstances, BMW Motorrad recommends rolling the throttle slightly closed so as to restore stability with the least possible delay.

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 lock, with a corresponding loss of stability. The BMW Motorrad ASC is unable to control a situation of this nature.

Engine management with Dynamic Traction Control

How does DTC work?

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

The BMW Motorrad DTC system 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.



Even DTC is constrained by the laws of physics. 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 neg-

ate the additional safety offered by this system.◀

Special situations

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

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 the angle of heel taken into account as one means of detecting the rear wheel's incipient tendency to spin or slip sideways. If the electronic processor receives values that it considers implausible over a lengthy period, a dummy value is used for the angle of heel 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 DTC system 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) with DTC deactivated.
- 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 front wheel lifts clear of the ground under severe acceleration, the DTC reduces engine

torque until the front wheel regains contact with the ground. Under these circumstances, BMW Motorrad recommends rolling the throttle slightly closed so as to restore stability with the least possible delay.

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 Damping Control

How does DDC work?

- with Dynamic Damping Control^{OE}

Dynamic Damping Control (DDC) is a semi-active suspension system that reacts automatically to riding manoeuvres and changes in surface condition, constantly correcting the damping in accordance with the situation. Movement of the rear spring strut is registered by the ride height sensor. The electric damper valve is opened/closed depending on the determined direction of travel and speed of travel as well as on the chosen ride mode. Damping on the front wheel also depends on the ride mode; however, no measurement of the spring travel takes place.

Accessories

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Luggage	114

General instructions



BMW Motorrad cannot examine or test each product of outside origin to ensure that it can be used on or in connection with BMW motorcycles without constituting a safety hazard. Country-specific official authorisation does not suffice as assurance. Tests conducted by these instances cannot make provision for all operating conditions experienced by BMW motorcycles and, consequently, they are not sufficient in some circumstances. Use only parts and accessories approved by BMW for your motorcycle.◀

BMW has conducted extensive testing of the parts and accessory products to establish that they are safe, functional and suitable. Consequently, BMW accepts product liability. BMW

accepts no liability whatsoever for parts and accessories that it has not approved.

Whenever you are planning modifications, comply with all the legal requirements. Make sure that the vehicle does not infringe the national road-vehicle construction and use regulations applicable in your country.

Your BMW Motorrad dealer can offer expert advice on the choice of genuine BMW parts, accessories and other products.

You can examine all the optional accessories from BMW Motorrad by visiting our website:

"www.bmw-motorrad.com".

Luggage

Loading



Overloading and imbalanced loads can adversely affect the motorcycle's handling. Do not exceed the permissible

gross weight and be sure to comply with the instructions on loading.◀

- Set spring preload, damping characteristic and tyre pressures to suit total weight.
- with tank rucksack^{OA}
- Note the maximum permissible payload of the tank rucksack.<
- with rear softbag^{OA}
- Note the maximum payload of the rear softbag.<

Maintenance

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Front-wheel stand	118
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Fuses.....	148
Jump-starting.....	149
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General instructions

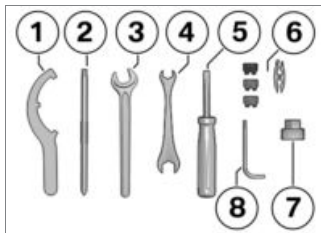
The Maintenance chapter describes straightforward procedures for checking and replacing certain wear parts.

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".

You will find information on more extensive maintenance and repair work in the Repair Manual on DVD for your vehicle, which is available from your authorised BMW Motorrad dealer.

Some of the work calls for 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** Hook wrench
 - Adjusting spring preload for rear wheel (► 76).
- 2** Reversible screwdriver blade
 - With Phillips PH1 and Torx T25
 - Removing and installing body panels
 - Remove the front seat (► 61).
 - Replacing bulbs for front and rear turn indicators (► 145).
- 3** Open-ended spanner
 - Width across flats 17
 - Mirror clamp
- 4** Open-ended spanner
 - Width across flats 10/13
 - Removing battery (► 151).
 - with Dynamic Damping Control^{OE}
 - Adjusting spring preload for rear wheel (► 77).
 - Adjust the gearshift lever (► 97).
- 5** Reversible-blade screwdriver with star-head and plain tips
 - Adjusting compression-stage damping for front wheel (► 79).
 - Adjust the rebound-stage damping for front wheel (► 80).
 - Adjusting rebound-stage damping for rear wheel (► 81).

- 6** Spare fuses with puller tool
Miniature fuses, 4 A, 7.5 A and 10 A
 - Puller tool for removing fuses
 - Spare fuses
- 7** Plastic adapter for socket wrench
 - with Dynamic Damping Control^{OE}
 - Adjusting spring preload for front wheel (➡ 78).
- 8** Torx bit, T25
 - Removing and installing body panels
 - Remove the front seat (➡ 61).

pling; this is best done with the support of a 2nd person.◀

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



- Use basic stand with the adapters. The basic stand and its accessory components are available from your BMW Motorrad authorised dealer.



- Install adapter pins **1** in the rear wheel swinging arm on left and right and tighten to the specified torque.

 Adapter to rear wheel swinging arm

20 Nm

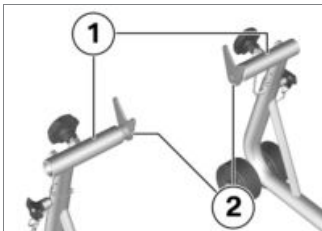
Rear-wheel stand

Install the rear-wheel stand



The motorcycle can topple and fall on its side.

Secure motorcycle against top-



- Turn brackets **1** long ends out.
- Adjust adapters **2** to the width of the pins inserted in the rear wheel swinging arm.
- Set the height of the rear-wheel stand to raise the rear wheel slightly clear of the ground.



- Engage the rear-wheel stand in the rear wheel swinging arm and apply even pressure to push it down to the ground.

Front-wheel stand

Installing the front-wheel stand

 The front wheel stand is not designed to support the motorcycle without the rear-wheel stand. A motorcycle resting only on the front wheel stand and the rear wheel can topple. Place the motorcycle on the rear-wheel stand before lifting the

front wheel with the front-wheel stand. ◀

 The motorcycle can topple and fall on its side.

Secure motorcycle against toppling; this is best done with the support of a 2nd person. ◀

- Lift the motorcycle, preferably with a BMW Motorrad rear-wheel stand.
- Install the rear-wheel stand (→ 117).

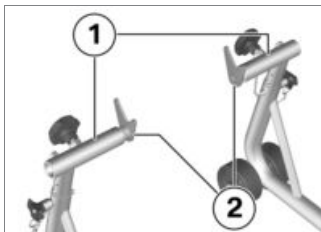


- Use basic stand with the adapters. The basic stand and its accessory components

are available from your BMW Motorrad authorised dealer.



- Insert adapter pins **1** into the front suspension on left and right.



- Turn brackets **1** with long ends facing inwards.
- Adjust adapters **2** to the width of the pins inserted in the front suspension.
- Set the height of the front-wheel stand to raise the front wheel far enough off the ground to turn freely.



- Engage the front-wheel stand in the front suspension and apply even pressure to push it down to the ground.

Engine oil

Checking engine oil level



The oil level varies with the temperature of the oil. The higher the temperature, the higher the level of oil in the sump. Checking the oil level with the engine cold or after no more than a short ride will lead to misinterpretation of oil level.

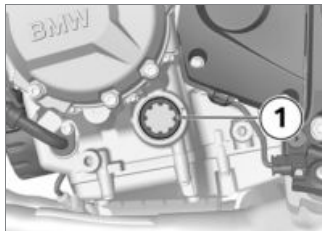
In order to ensure that the en-

gine oil level is read correctly, check the oil level only after at engine operating temperature.◀

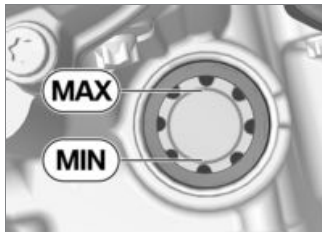
- Make sure the engine is at operating temperature and hold the motorcycle upright.
- Allow the engine to idle for one minute.

▶ As a contribution to reducing environmental impact, BMW Motorrad recommends checking the engine oil on occasion after a trip of at least 50 km.◀

- Switch off the ignition.
- Wait five minutes for the oil to drain into the oil pan.



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



Engine oil, specified level

Between MIN and MAX marks



Engine oil, capacity

Viscosity class

approx. 3.5 l (with filter change)

If the oil level is below the MIN mark:

- Topping up engine oil (➡ 120).

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 engine oil

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Wipe the area around the filler neck clean.



- Remove cap **1** from the oil filler neck.

! Damage to the engine can result if it is operated without enough oil, but the same also applies if the oil level is too high.

Always make sure that the oil level is correct. ◀

- Top up the engine oil to the specified level.
- Checking engine oil level (► 119).
- Install cap **1** 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:

! Incorrect working practices endanger the reliability of the brakes.

Have all work on the brake system undertaken by trained and qualified specialists. ◀

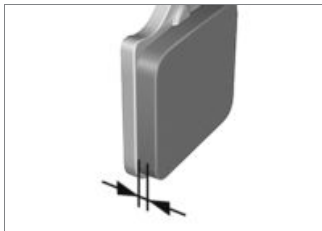
- Have the brakes checked by a specialist workshop, preferably an authorised BMW Motorrad dealer.

Checking front brake pad thickness

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Turn the handlebars to the full-lock position.



- Visually inspect the left and right brake pads to ascertain their thickness. Viewing direction: From the rear toward brake pads **1**.



 Brake-pad wear limit, front

min 0.8 mm (Friction pad only, without backing plate)

If the brake pads are worn:

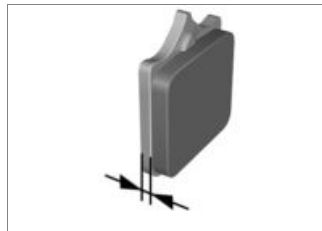


Brake pads worn past the minimum permissible thickness can cause a reduction in braking efficiency and under certain circumstances they can cause damage to the brake system.

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.
- If genuine BMW Motorrad brake pads are not installed, it is absolutely essential to measure the thickness of the brake-pad carrier plates.



 Thickness of brake-pad carrier plate

min 4.5 mm

If the thickness of the carrier plates is insufficient:



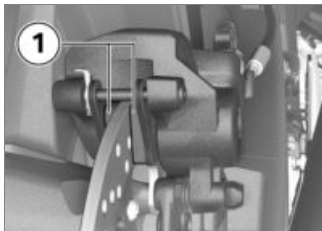
Failure of the brake system due to possible loss of the brake pads.

Use only brake pads with carrier plates at least 4.5 mm thick. ◀

- BMW Motorrad recommends installing only genuine BMW Motorrad brake pads.

Checking rear brake pad thickness

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



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



 Brake-pad wear limit, rear

min 1.0 mm (Friction pad only, without backing plate.)

If the wear indicating mark is no longer visible:



Brake pads worn past the minimum permissible thickness can cause a reduction in braking efficiency and under certain circumstances they can cause damage to the brake system.

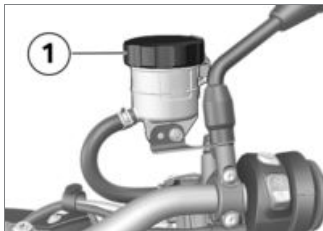
In order to ensure the dependability of the brake system, do not

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

- Make sure the ground is level and firm and hold the motorcycle upright.
- Move the handlebars to the straight-ahead position.



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



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)

If the brake fluid level drops below the permitted level:



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

Check the brake-fluid level at regular intervals.◀

- 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

- Make sure the ground is level and firm and hold the motorcycle upright.



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

▶ 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)

If the brake fluid level drops below the permitted level:



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

Check the brake-fluid level at regular intervals.◀

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

Coolant

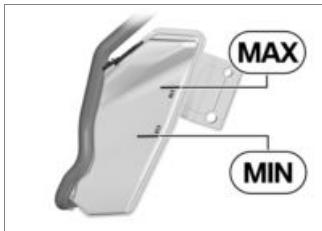
Check coolant level

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



- Check the coolant level in expansion tank **1**. Viewing direc-

tion: From in front toward the outside of the right side panel.



Coolant, specified level

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

If the coolant drops below the permitted level:

- Top up the coolant.

Top up coolant

- Remove the side panel (➡ 127).



- Open cap **1** of the expansion tank.
- Top up coolant to specified level.
- Check coolant level (➡ 125).
- Close the cap of the expansion tank.
- Installing right side panel (➡ 127).

Body panels

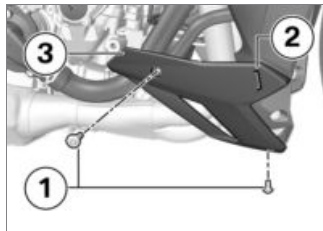
Removing right side panel



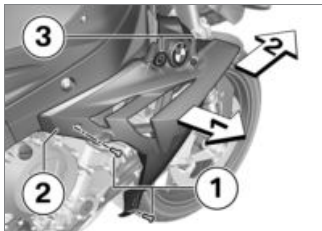
The procedure described here for the right side apply

applies by analogy to the left side panel.◀

- Switching off ignition (➡ 41).
- with engine spoiler^{OE}

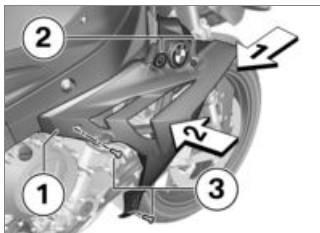


- Remove screws **1**.
- Disengage retaining hook **2** and remove engine spoiler **3**.◀



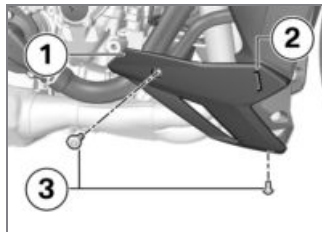
- Remove screws **1**.
- Disengage right side panel **2** from grommets **3**, taking care to start by disengaging the rear first, and then work the side panel forward to remove.

Installing right side panel



- Begin by seating side panel **1** at the front and then seat the rear of the panel in grommets **2**.
- Install screws **3**.

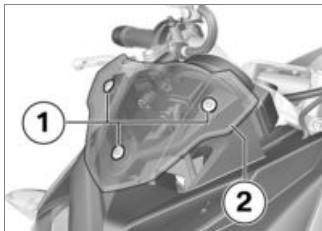
– with engine spoiler^{OE}



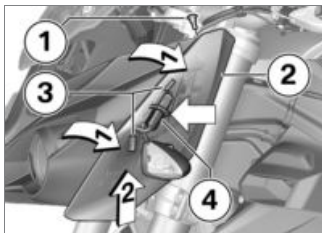
- Install engine spoiler **1**, making sure that retaining hook **2** is secured.
- Install screws **3**.<

Removing headlight fairing

- Switching off ignition (⏻ 41).

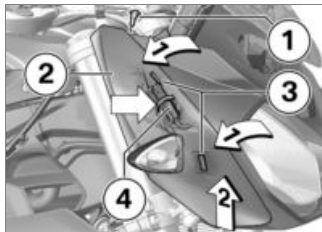


- Remove screws **1** and remove windscreen **2**.

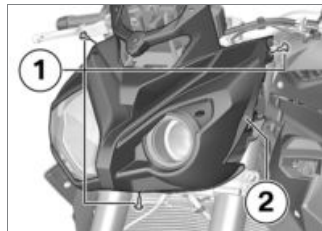


- Remove screw **1**.
- Ease left cover **2** aside and disengage it from both holders **3**.

- Disconnect plug **4** for the flashing turn indicators.

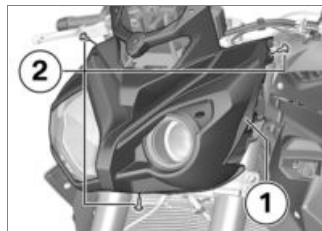


- Remove screw **1**.
- Ease right cover **2** aside and disengage it from both holders **3**.
- Remove cable tie **arrow**.
- Disconnect plug **4** for the flashing turn indicators.
- Remove the right cover.

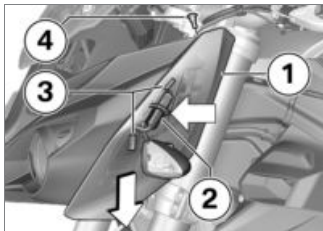


- Remove screws **1** and headlight fairing **2**.

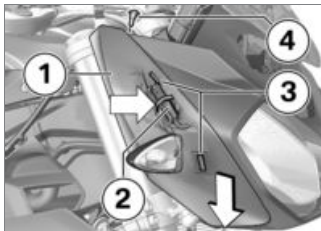
Installing headlight fairing



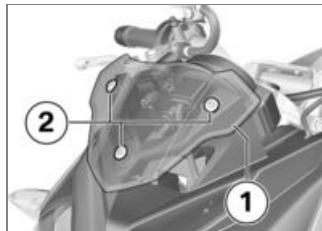
- Hold headlight fairing **1** in position and secure with screws **2**.



- Work left cover **1** into position from above.
- Connect plug **2** for the flashing turn indicators and route the cable.
- Secure the left cover in holders **3**.
- Install screw **4**.



- Work right cover **1** into position from above.
- Connect plug **2** for the flashing turn indicators and route the cable.
- Secure the right cover in holders **3**.
- Install screw **4**.



- Install windscreen **1** and screws **2**.



Windscreen to holder for instrument panel

5 Nm

Clutch

Checking clutch function

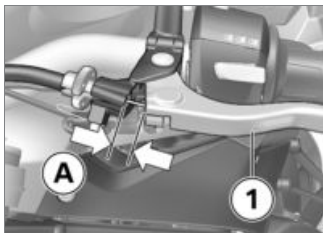
- Pull the clutch lever.
 - » The pressure point must be clearly perceptible.

If the pressure point is not clearly perceptible:

- Have the clutch checked by a specialist workshop, preferably

an authorised BMW Motorrad dealer.

Checking clutch-lever play



- Pull clutch lever **1** until resistance is perceptible.
- In this position, measure clutch play **A** between the handlebar fitting and the clutch lever.



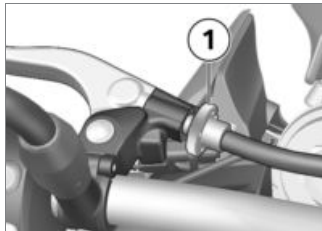
Clutch-lever play

0.5...1.0 mm (at the handlebar fitting, with engine cold)

Clutch play is out of tolerance:

- Adjust the clutch-lever play (130).

Adjust the clutch-lever play



- To increase clutch play: turn screw **1** in the tightening direction, i.e. into the handlebar fitting.
- To reduce clutch play: turn screw **1** in the loosening direction, i.e. out of the handlebar fitting.
- Checking clutch-lever play (130).

- Repeat the steps in this procedure until clutch play is set correctly.

Chain

Lubricating chain



Dirt, dust and inadequate lubrication will result in accelerated wear and significantly shorten the drive chain's useful life.

Clean and lubricate the drive chain at regular intervals. ◀

- Lubricate the chain more frequently if the motorcycle is ridden in wet, dusty or dirty conditions.



Lubricate the drive chain at regular intervals.

min 800 km

- Switch the ignition off and select neutral.

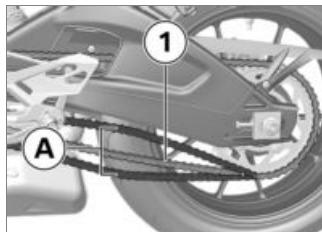
- Clean the drive chain with a suitable cleaning product, dry it and apply chain lubricant.
- To prolong chain life, BMW Motorrad recommends the use of BMW Motorrad chain lubricant or:

 Lubricant
Chain spray

- Wipe off excess lubricant.

Checking chain tension

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Turn the rear wheel until it reaches the position with the lowest amount of chain sag.



- Use a screwdriver to push chain **1** up and down at a point midway along the run between pinion and sprocket and measure difference **A**.



Chain deflection

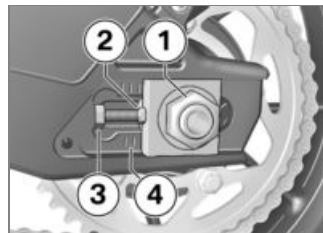
35...45 mm (Motorcycle with no weight applied, supported on its side stand)

If measured value is outside permitted tolerance:

- Adjust the chain tension (➡ 131).

Adjust the chain tension

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



- Slacken nut **1** for the quick-release axle.
- Slacken locknuts **3** on left and right.
- Use adjusting screws **2** on left and right to adjust chain tension.
- Checking chain tension (➡ 131).

- Make sure that scale readings **4** are the same on left and right.
- Tighten locknuts **3** on left and right to the specified tightening torque.



Locknut of the final-drive chain tensioning screw

19 Nm

- Tighten nut **1** for the quick-release axle to the specified tightening torque.



Rear quick-release axle in swinging arm

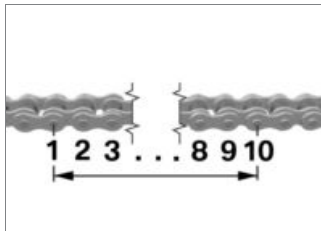
Thread-locking compound:
mechanical

100 Nm

Checking the chain wear

- Engage 1st gear.
- Turn the rear wheel in the normal direction of travel until the chain is tensioned.

- Measure the length of the chain over 10 rivets below the rear wheel swinging arm.



Permissible chain length

max 144.30 mm (measured
centre to centre over 10
pins, chain pulled taut)

If the chain has stretched to the maximum permissible length:

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

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.

You can obtain detailed information from your authorised BMW Motorrad dealer or on the Internet at **www.bmw-motorrad.com**.

Effect of wheel size on chassis and suspension control systems

Wheel size is very important as a parameter for the running-gear control systems ABS and ASC/DTC. In particular, the

diameter and the width of a vehicle's wheels are programmed into the control unit and are fundamental to all calculations.

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

The sensor rings are essential for correct wheel-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.

Checking rims

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Visually inspect the rims for defects.
- Have any damaged rims inspected by a specialist workshop and replaced if necessary, preferably by an authorised BMW Motorrad dealer.

Check the tyre tread depth



Your motorcycle's handling and grip can be impaired even before the tyres wear to the minimum tyre tread depth permitted by law. Have the tyres changed in good time before they wear to the minimum permissible tread depth. ◀

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Measure the tyre tread depth in the main tread grooves with wear marks.

 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.

Removing front wheel

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



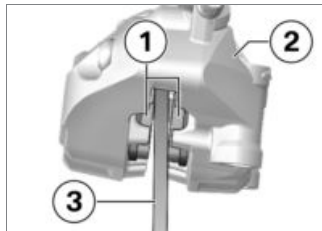
- Remove screw **1** and remove the wheel-speed sensor from its bore.
- Mask off the parts of the wheel rim that could be scratched in the process of removing the brake calipers.



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

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

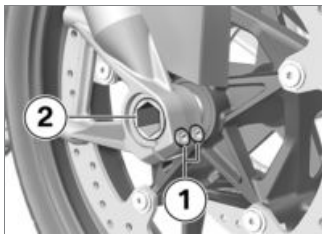
- Remove screws **1** of the brake calipers on left and right.



- 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 motorcycle, preferably with a BMW Motorrad rear-wheel stand.
- Install the rear-wheel stand (► 117).
- 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 (➡ 118).



! The left axle clamping screw locates the threaded bush in the front suspension. In order to ensure that the threaded bush remains correctly aligned, do not slacken or remove the left axle clamping screw.◀

- Slacken right axle clamping screws **1**.

- Remove quick-release axle **2**, while supporting the wheel.
- Roll the front wheel forward to remove.

Installing front wheel

! Possible malfunctions when ABS and ASC/DTC systems intervene if non-standard wheels are installed.

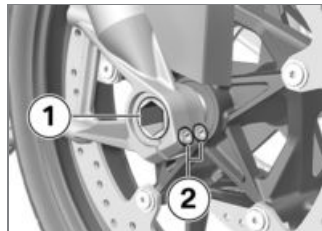
See the information on the effect of wheel size on the ABS and ASC/DTC systems at the start of this chapter.◀

! Threaded fasteners not tightened to the specified torque can work loose or their threads can suffer damage. Always have the security of the fasteners checked by a specialist workshop, preferably an authorised BMW Motorrad dealer.◀

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

Note the direction-of-rotation arrows on the tyre or the wheel rim.◀

- Roll the front wheel into position between the front forks.



- Raise the front wheel, insert quick-release axle **1** and tighten to specified torque.

 Quick-release axle in threaded bush

50 Nm

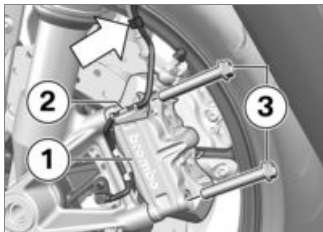
- Tighten right axle clamping screws **2** to the specified tightening torque.



Clamping screws in axle holder

19 Nm

- Remove the rear-wheel stand and the front wheel stand.
- Ease the brake calipers on to the brake discs.



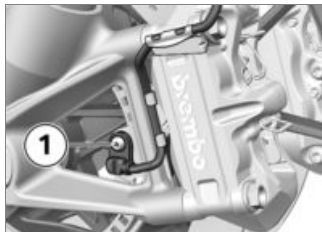
- Hold left brake caliper **1** in place and position cable guide **2**.
- Install screws **3** and tighten to the specified tightening torque.



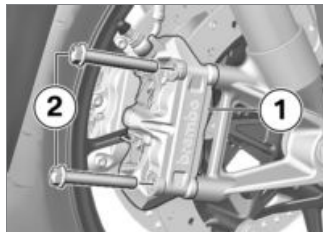
Radial brake caliper to axle mount

38 Nm

- Secure the cable for the wheel-speed sensor in the holder **ar-row**.



- Insert the wheel-speed sensor into the bore and secure it with screw **1**.



- Hold right brake caliper **1** in position, install screws **2** and tighten to specified torque.



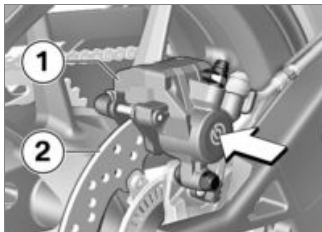
Radial brake caliper to axle mount

38 Nm

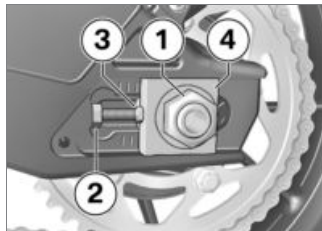
- Remove the adhesive tape from the wheel rim.
- Firmly pull the handbrake lever until the pressure point is perceptible, and repeat this operation several times.

Removing rear wheel

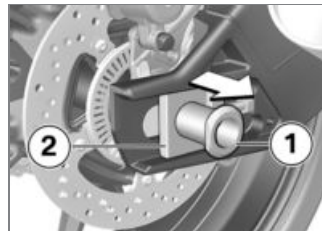
- Lift the motorcycle, preferably with a BMW Motorrad rear-wheel stand.
- Install the rear-wheel stand (► 117).
- Slip wooden chocks or similar under the rear wheel to prevent it from dropping out after the quick-release axle has been removed.



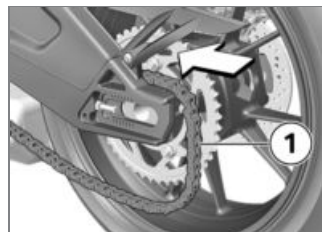
- Press brake caliper **1** against brake disc **2**
- » Brake pistons are pushed back.



- Remove axle nut **1** with washer.
- Slacken locknuts **2** on left and right.
- Slacken adjusting screws **3** on left and right.
- Remove adjusting plate **4** and push the axle in as far as it will go.



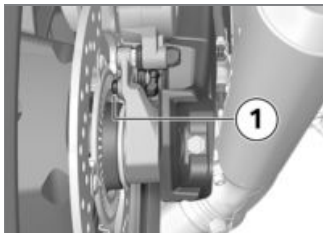
- Remove quick-release axle **1** and remove adjusting plate **2**.



- Roll the rear wheel as far forward as possible and disengage chain **1** from the sprocket.

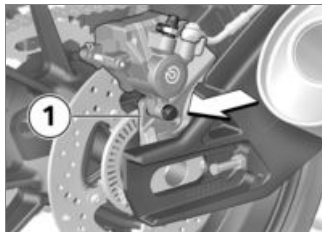


- Remove screw **1** and disengage the brake line from holder **2**.



- When rolling the rear wheel clear of the motorcycle, take

care not to damage wheel-speed sensor **1**.



- Roll the rear wheel to the rear and clear of the swinging arm and at the same time pull brake-caliper carrier **1** back far enough to allow the rear wheel to clear it.

▶ The sprocket and the spacer sleeves on left and right are loose fits in the wheel. Make sure that these parts are not damaged or lost on removal.◀

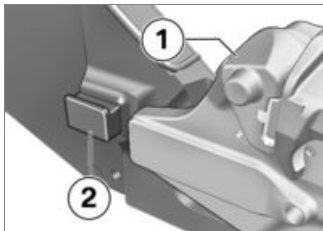
Installing the rear wheel

! Possible malfunctions when ABS and ASC/DTC systems intervene if non-standard wheels are installed.

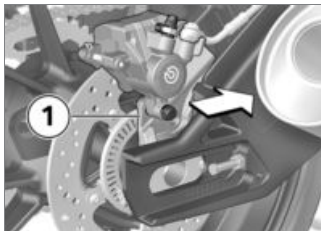
See the information on the effect of wheel size on the ABS and ASC/DTC systems at the start of this chapter.◀

! Threaded fasteners not tightened to the specified torque can work loose or their threads can suffer damage. Always have the security of the fasteners checked by a specialist workshop, preferably an authorised BMW Motorrad dealer.◀

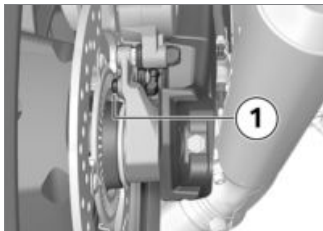
- Roll the rear wheel on the support into the swinging arm as far as necessary to permit the brake-caliper carrier to be inserted.



- Insert brake-caliper carrier **1** into guide **2**.



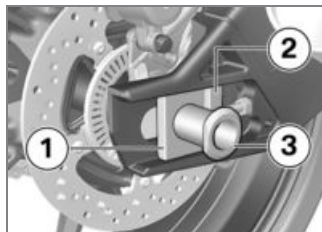
- Roll the rear wheel further into the swinging arm, while pushing brake-caliper carrier **1** forward at the same time.



- When rolling the rear wheel into position, take care not to damage wheel-speed sensor **1**.



- Roll the rear wheel as far forward as possible and loop chain **1** over the sprocket.



- Insert right adjusting plate **1** into the swinging arm with stop **2** to the front.

- Lift the rear wheel and work quick-release axle **3** through the adjusting plate and into the brake-caliper carrier and the rear wheel.
- Make sure that the quick-release axle is seated against the stop of the adjusting plate.



- Insert left adjusting plate **1**.
- Install axle nut **2** with its washer, but do not tighten the nut at this point.



- Secure the brake line in holder **2** and install screw **1**.
- Adjust the chain tension (➡ 131).

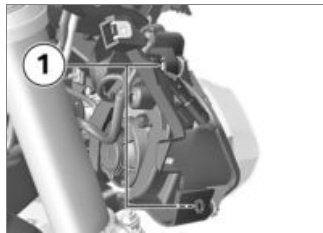
Lighting

Replacing bulb for low-beam headlight

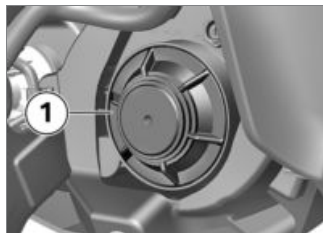
▶ The plug arrangement can differ from the illustration, depending on the bulb to be replaced.◀

- Switching off ignition (➡ 41).

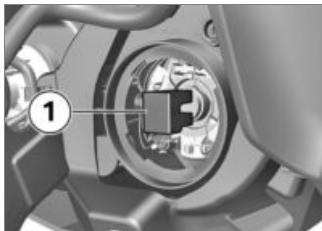
- Removing right cover (➡ 128).



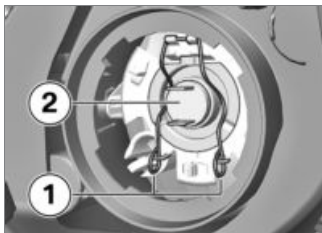
- Remove screws **1** and tilt the right headlight slightly to the side.



- Remove cover **1**.



- Disconnect plug **1**.



- Release spring clip **1** at left and right and swing it up.
- Remove bulb **2** from the socket.

- Replace the defective bulb.

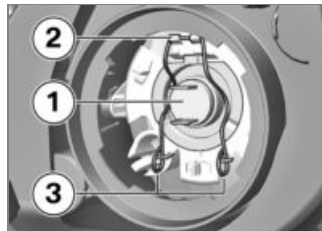
▶ Bulbs with higher light-intensity ratings are available through aftermarket suppliers. These bulbs burn out more rapidly and generate more heat than conceptual bulbs. Under adverse conditions the extra heat can cause damage to the headlight.◀



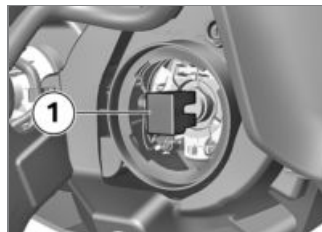
Bulbs for the low-beam headlight

H7 / 12 V / 55 W

- Hold the bulb by the base only, in order to keep the glass free of foreign matter.



- Install bulb **1**. Begin by seating lug **2** and then press the bulb into the socket.
- Engage spring clip **3** in the catch on left and right.



- Connect plug **1**.

- Install the cover.
- Installing right cover (➡ 129).

Replacing bulb for high-beam headlight

- Switching off ignition (➡ 41).
- Removing left cover (➡ 128).



- Disconnect plug **1** for the high-beam headlight.
- Turn socket **2** counter-clockwise and remove it from the carrier for the high-beam headlight.

- Replace the defective bulb.

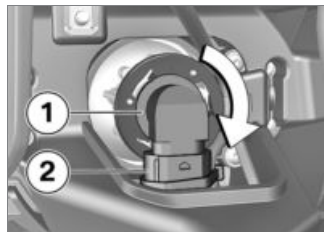
▶ Bulbs with higher light-intensity ratings are available through aftermarket suppliers. These bulbs burn out more rapidly and generate more heat than conventional bulbs. Under adverse conditions the extra heat can cause damage to the headlight.◀



Bulb for high-beam headlight

H7 / 12 V / 55 W

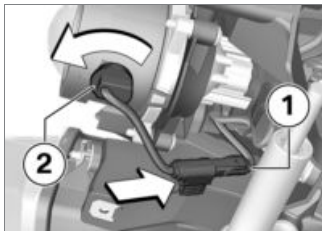
- Hold the bulb by the base only, in order to keep the glass free of foreign matter.



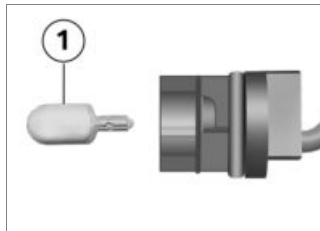
- To secure bulb **1** for the high-beam headlight, seat the bulb in the carrier and turn it clockwise.
- Connect plug **2** for the high-beam headlight.
- Installing left cover (➡ 129).

Replacing bulb for left parking light

- Switching off ignition (➡ 41).
- Removing headlight fairing (➡ 127).



- Disengage the plug from the holder **arrow** (using a screwdriver if necessary) and disconnect from plug **1**.
- Turn socket **2** counter-clockwise and remove it from the carrier.



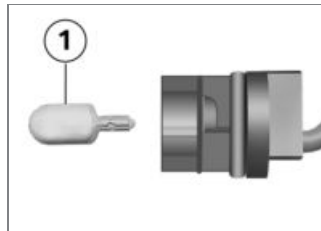
- Remove bulb **1** from the socket.
- Replace the defective bulb.



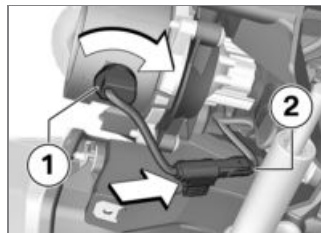
Bulb for parking light

W5W / 12 V / 5 W

- 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.

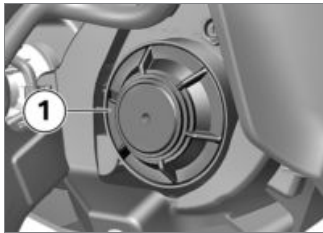


- Insert socket **1** into the carrier and turn it clockwise.
- Seat the plug in the holder **arrow** and connect it to plug **2**.

- Installing headlight fairing (➡ 128).

Replacing parking-light bulb, right

- Make sure the ground is level and firm and place the motorcycle on its stand.
- Switch off the ignition.
- Removing right cover (➡ 128).



- Remove cover **1**.



- Push aside the retainer (using a screwdriver if necessary) and work 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

- 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.

Replacing bulbs for front and rear turn indicators

- Switching off ignition (▮▮▮ 41).



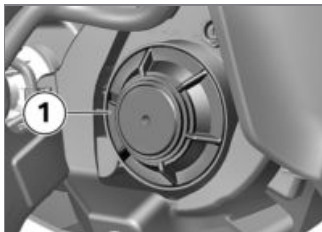
- Insert socket **1** into the headlight housing, making sure that the retainer engages.



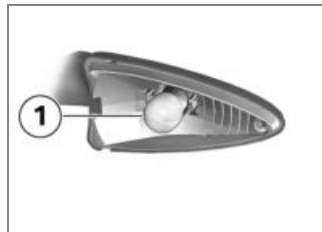
- Remove screw **1**.



- Pull the glass out of the light housing at the threaded-fastener side.



- Install cover **1**.
- Installing right cover (▮▮▮ 129).



- 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 turn indicators^{OE}

LED<



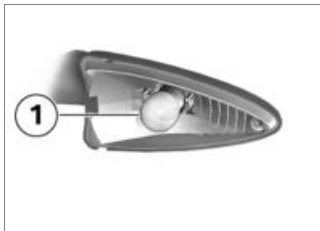
Bulbs for flashing turn indicators, rear

RY10W / 12 V / 10 W

– with LED 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.



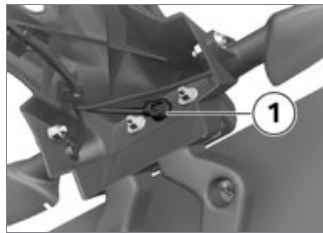
- Working from the inboard side, insert the glass into the light housing and close the housing.



- Install screw **1**.

Replacing bulb for number-plate light

- Switching off ignition (➡ 41).



- Pull number-plate light bulb **1** out of the light housing.



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

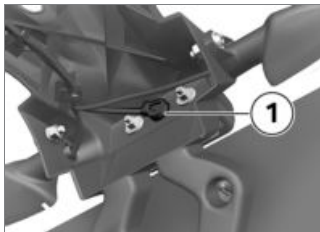
 Bulb for number-plate light

W5W / 12 V / 5 W

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



- Push the bulb into the bulb socket.



- Press number-plate light bulb **1** into the light housing.

Replacing LED turn indicators

- with LED turn indicators^{OE}
- The LED turn indicators can be replaced only as a complete unit. Consult a specialist workshop, preferably an authorised BMW Motorrad dealer.<

LED rear light

The rear light has to be replaced if more LEDs than stated below in the array fail. Under these circumstances:

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

 Maximum number of defective LEDs in rear-light unit

1

Fuses

Removing fuse



Any attempt to jumper a defective fuse gives rise to the risk of a short-circuit and fire. Always replace a defective fuse with a new fuse of the same amperage.◀

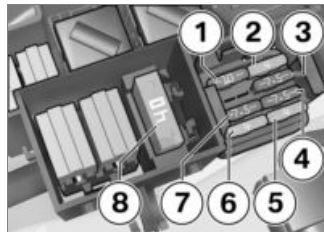
- Switch off the ignition.
- Make sure the ground is level and firm and place the motorcycle on its stand.
- Removing rear seat (➡ 60).



- Squeeze the latches together and remove cover of fuse box **1**.
- To replace the main fuse, remove cover **2** of the relay box.
- Pull the defective fuse up and out of the fuse box.

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

Replacing fuse



- Replace the defective fuse with a fuse of the correct amperage rating.

▶ The fuse assignments and fuse amperage ratings specified for your motorcycle are listed in the section entitled "Technical data". The figures in the graphic correspond to the fuse numbers.◀

- Close the fuse cover.
- » The latch engages with an audible click.
- Install the rear seat (➡ 60).

Jump-starting



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

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



Touching live parts of the ignition system with the engine running can cause electric shock.

Do not touch parts of the ignition system when the engine is running.◀



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

Use only jump leads fitted with

fully insulated crocodile clips at both ends.◀



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

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

- When jump-starting the engine, do not disconnect the battery from the on-board electrical system.
- Remove the front seat (► 61).
- Run the engine of the donor vehicle during jump-starting.
- Begin by connecting one end of the red jump lead to the positive terminal of the discharged battery and the other end to the positive terminal of the donor battery.
- Then connect one end of the black jump lead to the negative terminal of the donor battery,

and the other end to the negative terminal of the discharged battery.

- Start the engine of the vehicle with the discharged battery in the usual way; if the engine does not start, wait a few minutes before repeating the attempt in order to protect the starter motor and the donor battery.
- Allow both engines to idle for a few minutes before disconnecting the jump leads.
- Disconnect the jump lead from the negative terminals first, then disconnect the second lead from the positive terminals.
- Installing front seat (► 61).

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.



If the battery is not disconnected, the on-board electronics (e.g. clock, etc.) gradually drain the battery. This can cause the battery to run flat. If this hap-

pens, warranty claims will not be accepted.

Connect a float charger to the battery if the motorcycle is to remain out of use for more than four weeks.◀

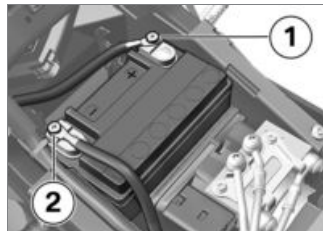


BMW Motorrad has developed a float charger specially designed for compatibility with the electronics of your motorcycle. Using this charger, you can keep the battery charged during long periods of disuse, without having to disconnect the battery from the motorcycle's on-board systems. You can obtain additional information from your authorised BMW Motorrad dealer.◀

Disconnecting battery from motorcycle

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

- Switch off the ignition.
- Remove the front seat (→ 61).

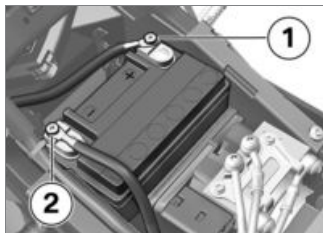


Disconnection in the wrong sequence increases the risk of short-circuits.

Always proceed in the correct sequence.◀

- Remove battery negative lead **2**. Also remove the washer between the battery and the battery negative lead.
- Remove battery positive lead **1**.

Connecting battery to motorcycle



- Connect battery positive lead **1** first.
- Place the washer in position between the battery and the battery negative lead. Then install battery negative lead **2**.
- Installing front seat (►► 61).

Recharging battery

- Disconnecting battery from motorcycle (►► 150).
- Charge the battery using a suitable charger.

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

▶ The battery has to be recharged at regular intervals in the course of a lengthy period of disuse. See the instructions for caring for your battery. Always fully recharge the battery before restoring it to use.◀

- Connecting battery to motorcycle (►► 151).

Removing battery

- Disconnecting battery from motorcycle (►► 150).
- Lift the battery up and out; work it slightly back and forth if it is difficult to remove.

Installing battery

▶ If the battery was disconnected from the motorcycle for a prolonged period of time it will be necessary to enter the current date in the instrument panel, in order to ensure that the service-due indicator functions correctly.

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

- Place the battery in the battery compartment, positive terminal on the right in the forward direction of travel.
- Place the battery in the battery compartment, negative terminal on the left in the forward direction of travel.
- Connecting battery to motorcycle (►► 151).
- Setting the clock (►► 44).

Care

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Washing the motorcycle	154
Cleaning easily damaged components.....	154
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Laying up the motorcycle	156
Restoring motorcycle to use	156

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 CareProducts have been tested in laboratories and in practice; they provide optimised care and protection for the materials used in your vehicle.

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

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 motorcycle.

To prevent stains, do not wash the motorcycle 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.

 After the motorcycle has been washed, ridden through water or ridden in the rain, the brake discs and pads might be wet and the

brakes might not take effect immediately.

Apply the brakes in good time until the brake discs and brake pads have dried out.◀

 Warm water intensifies the effect of salt.

Use only cold water to wash off road salt.◀

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

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

Cleaning easily damaged components

Plastics

 If plastic parts are cleaned using unsuitable cleaning agents, the surfaces can be damaged.

Do not use cleaning agents that contain alcohol, solvents or abrasives to clean plastic parts. Even insect-remover pads or cleaning pads with hard surfaces can produce scratches.◀

 Under conditions of use as intended by the manufacturer, sooner or later irremovable marks may appear on the seat coverings. Clothing that is not colour-fast is a major cause of this occurrence.◀

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.

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

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.



Cooling fins can be bent easily.

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

Rubber

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



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

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 motorcycle has been washed.

Remove stains of this kind immediately, using cleaning-grade benzene or petroleum spirit on a clean cloth or ball of cotton wool. BMW Motorrad recommends BMW tar remover for removing specks of tar. Remember to wax the parts treated in this way.

Protective wax coating

BMW Motorrad recommends applying only BMW car wax or products containing carnauba wax or synthetic wax.

It is time to rewax the paint-work when water "puddles" on the surface, instead of forming beads.

Laying up the motorcycle

- Clean the motorcycle.
- Remove the battery.
- Spray the brake and clutch lever pivots and the main and

side stand pivots with a suitable lubricant.

- Coat bright metal and chrome-plated parts with an acid-free grease (e.g. Vaseline).
- Stand the motorcycle in a dry room in such a way that there is no load on either wheel.

▶ Before laying the vehicle up out of use, have the engine oil and the oil filter element changed by a specialist workshop, preferably an authorised BMW Motorrad dealer. Combine work for laying up/restoring to use with a BMW service or inspection.◀

Restoring motorcycle to use

- Remove the protective wax coating.
- Clean the motorcycle.
- Install a charged battery.

- Before starting: work through the checklist.

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Troubleshooting chart

Engine does not start or is difficult to 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 ( 100).
Battery flat	Recharge the battery.

Threaded fasteners

Front wheel	Value	Valid
Quick-release axle in threaded bush		
M24 x 1.5	50 Nm	
Clamping screws in axle holder		
M8 x 35	19 Nm	
Radial brake caliper to axle mount		
M10 x 65	38 Nm	
Rear wheel	Value	Valid
Locknut of the final-drive chain tensioning screw		
M8	19 Nm	
Rear quick-release axle in swinging arm		
M24 x 1.5 mechanical	100 Nm	

Rear wheel		Value	Valid
Adapter to rear wheel swinging arm			
M8 x 30		20 Nm	
Spring strut to main frame			
M10 x 65		56 Nm	
Mirrors		Value	Valid
Locknut (mirror) to clamping piece			
M14 x 1 Multi-wax spray		20 Nm	

Engine

Engine design	Transversely mounted, four-cylinder four-stroke in-line engine tilted 32° forward, with four valves per cylinder, two overhead camshafts with cam followers; liquid cooled, with electronic fuel injection, integrated six-speed gearbox, wet-sump lubrication.
Displacement	999 cm ³
Cylinder bore	80 mm
Piston stroke	49.7 mm
Compression ratio	12 : 1
Nominal output	118 kW, at engine speed: 11000 min ⁻¹
Torque	112 Nm, at engine speed: 9250 min ⁻¹
Maximum engine speed	max 12000 min ⁻¹
Idle speed	1250 min ⁻¹ , engine at regular operating temperature

Fuel

Recommended fuel grade	Super unleaded (max. 10 % ethanol, E10) 95 ROZ/RON 89 AKI
Usable fuel capacity	approx. 17.5 l
Reserve fuel	approx. 4 l

BMW recommends BP fuels



Engine oil

Engine oil, capacity	approx. 3.5 l, with filter change
Viscosity class	
Product recommended by BMW Motorrad: Castrol Power 1 Racing	SAE 5W-40, API SL / JASO MA2
Engine oil, quantity for topping up	max 0.8 l, difference between MIN and MAX

BMW recommends



Clutch

Clutch type	Multiplate oil-bath clutch, anti-hopping
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Transmission

Gearbox type	Claw-shift 6-speed gearbox, integrated into engine block
Gearbox transmission ratios	1.652 (76:46 teeth), Primary transmission ratio 2.647 (45:17 teeth), 1st gear 2.091 (46:22 teeth), 2nd gear 1.727 (38:22 teeth), 3rd gear 1.500 (36:24 teeth), 4th gear 1.360 (34:25 teeth), 5th gear 1.261 (29:23 teeth), 6th gear

Rear-wheel drive

Type of final drive	Chain drive
Type of rear suspension	Two-arm aluminium swinging arm
Final drive, number of teeth (Pinion / sprocket)	17/45
Secondary transmission ratio	2.647

Running gear

Front wheel

Type of front suspension	Upside-down telescopic fork
Spring travel, front	120 mm, at wheel

Rear wheel

Type of rear suspension	Two-arm aluminium swinging arm
Type of final drive	Chain drive
Spring travel, rear	120 mm, at wheel

Brakes

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
Type of rear brake	Hydraulically actuated disc brake with 1-piston floating caliper and fixed disc
Brake-pad material, rear	Organic material

Wheels and tyres

Recommended tyre sets	You can obtain an up-to-date list of approved tyres from your authorised BMW Motorrad dealer or on the Internet at " www.bmw-motorrad.com ".
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Front wheel

Front wheel type	Aluminium cast wheel
Front wheel rim size	3.50" x 17"
Tyre designation, front	120/70 ZR 17

Rear wheel

Rear-wheel type	Aluminium cast wheel
Rear wheel rim size	6.0" x 17"
Tyre designation, rear	190/55 ZR 17

Tyre pressure

Tyre pressure, front	2.5 bar, tyre cold
Tyre pressure, rear	2.9 bar, tyre cold

Electrics**Fuses**

Retainer 1	10 A, instrument panel
Retainer 2	4 A, master relay, diagnosis plug, anti-theft alarm
Retainer 3	Not used
Retainer 4	7.5 A, low-beam headlight, load relief relay
Retainer 5	7.5 A, high-beam headlight

Retainer 6	7.5 A, socket for optional accessories, number-plate light
Retainer 7	4 A, ignition switch
Retainer 8	4 A, angular rate sensor, left multi-function switch
Main fuse	40 A

Battery

Battery type	AGM (Absorbent Glass Mat) battery
Battery rated voltage	12 V
Battery rated capacity	9 Ah

Spark plugs

Spark plugs, manufacturer and designation	NGK LMAR9D-J
Electrode gap of spark plug	0.8 mm

Lighting

Bulb for high-beam headlight	H7 / 12 V / 55 W
Bulbs for the low-beam headlight	H7 / 12 V / 55 W
Bulb for parking light	W5W / 12 V / 5 W
Bulb for tail light/brake light	LED
Maximum number of defective LEDs in rear-light unit	1
Bulbs for flashing turn indicators, front	RY10W / 12 V / 10 W

– with LED turn indicators ^{OE}	LED
Bulbs for flashing turn indicators, rear	RY10W / 12 V / 10 W
– with LED turn indicators ^{OE}	LED
Bulb for number-plate light	W5W / 12 V / 5 W

Frame

Frame type	Aluminium composite bridge frame, load-bearing engine
Type plate location	Steering head, right
Position of the Vehicle Identification Number	Steering head, right

Dimensions

Length of motorcycle	2060 mm
Height of motorcycle	1230 mm, to windscreen at DIN unladen weight
Width of motorcycle	845 mm, across mirrors
Front-seat height	815 mm, without rider
Rider's inside-leg arc, heel to heel	1805 mm, without rider

Weights

Unladen weight	207 kg, DIN unladen weight, ready for road, 90 % load of fuel, without optional extras
Permissible gross weight	407 kg
Maximum payload	200 kg

Riding specifications

Top speed	>200 km/h
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Service

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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 reliably carry out all maintenance and repair work on your BMW.

You can locate your nearest authorised BMW Motorrad dealership by visiting our website:

www.bmw-motorrad.com



If maintenance and repair work is performed inexpertly, it could result in consequential damage and thus constitute a safety risk.

BMW Motorrad recommends you to have all the associated work on your motorcycle carried out by a specialist work-

shop, 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 to 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



First running-in check

700...1200 km

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 a defined distance in advance when the time for a service is approaching, on the basis of the programmed values.



The countdown distance to the upcoming service

1000 km

The regular service intervals as stated apply to motorcycles used on public roads. In the case of motorcycles used for racing, the intervals have to be adapted accordingly in line with the increased wear and tear associated with this mode of use.

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-

Confirmation of maintenance work

BMW Pre-delivery Check

Completed

on _____

Stamp, signature

BMW Running-in Check

Completed

on _____

Odometer reading _____

Next service
at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature

BMW Service

Completed

on _____

Odometer reading _____

Next service
at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature**BMW Service**

Completed

on _____

Odometer reading _____

Next service
at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature**BMW Service**

Completed

on _____

Odometer reading _____

Next service
at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature

BMW Service

Completed

on _____

Odometer reading _____

Next service
at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature**BMW Service**

Completed

on _____

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or, if logged beforehand,

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Stamp, signature**BMW Service**

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Odometer reading _____

Stamp, signature

BMW Service

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Stamp, signature**BMW Service**

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or, if logged beforehand,

Odometer reading _____

Stamp, signature

BMW Service

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Odometer reading _____

Next service
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or, if logged beforehand,

Odometer reading _____

Stamp, signature**BMW Service**

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Next service
at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature**BMW Service**

Completed

on _____

Odometer reading _____

Next service
at the latest

on _____

or, if logged beforehand,

Odometer reading _____

Stamp, signature

Confirmation of service

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

Item	Odometer reading	Date

[illegible]

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

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

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

Errors and omissions excepted.

Original rider's manual, printed in Germany.

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80788 Munich, Germany
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Important data for refuelling:

Fuel

Recommended fuel grade	Super unleaded (max. 10 % ethanol, E10) 95 ROZ/RON 89 AKI
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Usable fuel capacity	approx. 17.5 l
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Reserve fuel	approx. 4 l
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Tyre pressure

Tyre pressure, front	2.5 bar, tyre cold
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Tyre pressure, rear	2.9 bar, tyre cold
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BMW recommends 

Order No.: 01 41 8 550 781
09.2013, 1st edition, 01

