



BMW Motorrad



The Ultimate
Riding Machine

Rider's Manual **S 1000 R**

Vehicle data/dealership details

Vehicle data

Model

Vehicle Identification Number

Colour code

Date of first registration

Registration number

Dealership details

Person to contact in Service department

Ms/Mr

Phone number

Dealership address/phone number (company stamp)

Welcome to BMW

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

About this Rider's Manual

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

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 8 565 351



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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 vehicle is a precondition for generous treatment of goodwill claims.

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

Abbreviations and symbols



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



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



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



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



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



Indicates the end of an item of information.



Instruction.



Result of an activity.



Reference to a page with more detailed information.



Indicates the end of a passage relating to specific accessories or items of equipment.



Tightening torque.



Technical data.

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 extras. The vehicles are assembled complete with all the BMW Motorrad optional extras originally ordered.
OA	Optional accessories. You can obtain BMW Motorrad optional accessories through your authorised BMW Motorrad dealer; optional accessories have to be retrofitted to the vehicle.

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

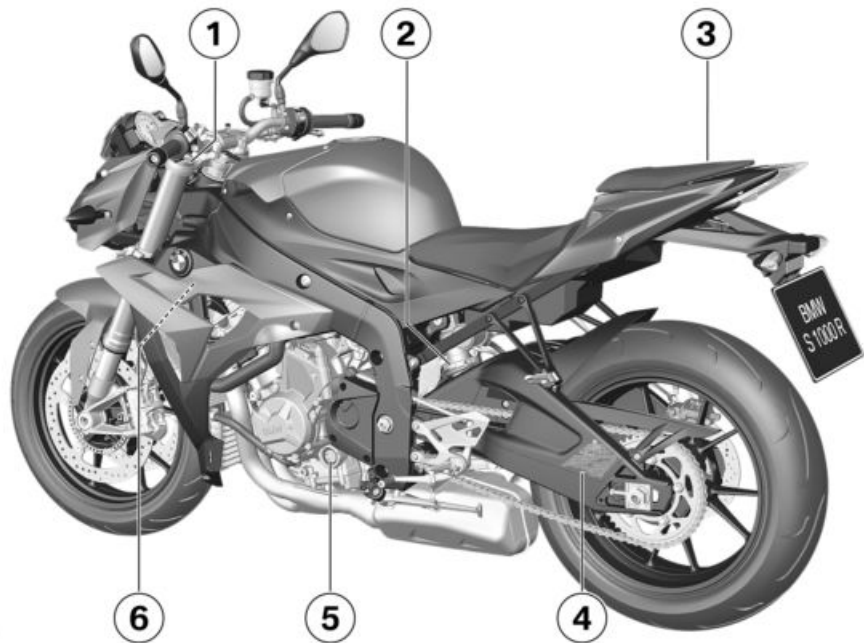
tolerance requirements of the Deutsches Institut für Normung e.V. (DIN). Versions for individual countries may differ.

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.

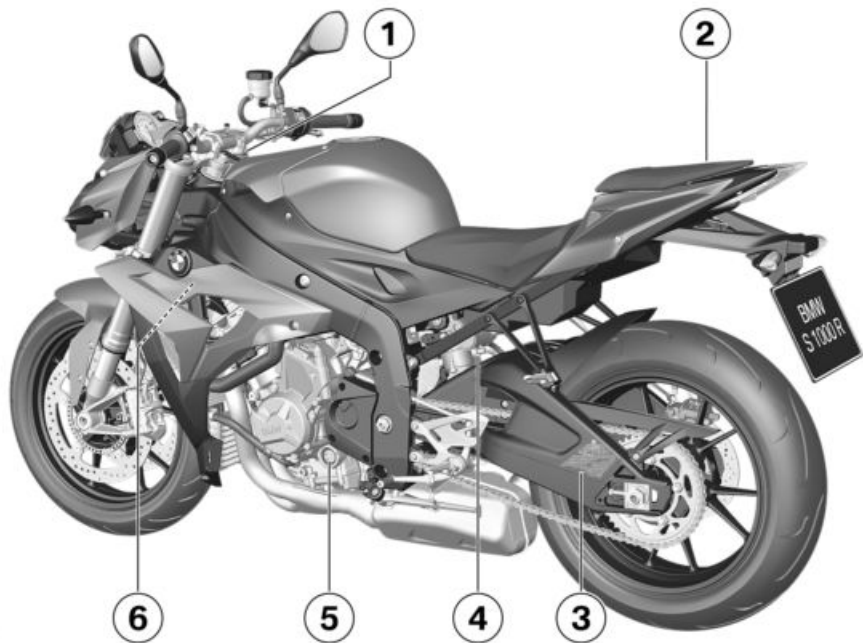
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General view, left side

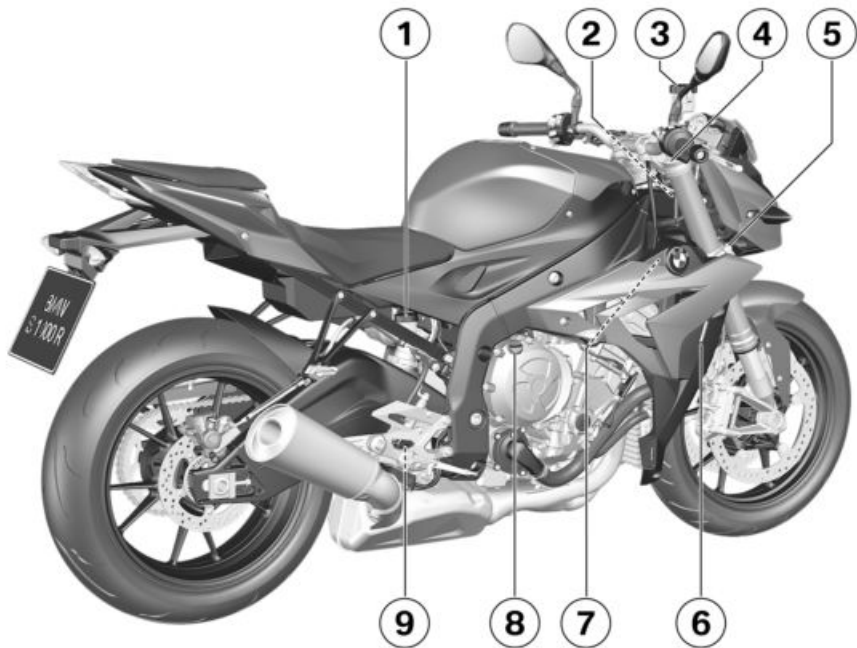
- 1** Adjuster for front
compression-stage
damping (red scale)
( 82)
- 2** Adjuster for spring preload,
rear ( 78)
- 3** Seat lock ( 61)
- 4** Table of tyre pressures
Payload table
Chain settings
- 5** Engine oil level indicator
( 126)
- 6** OA connector for navigation system



General view, left side, with DDC

– with Dynamic Damping Control
(DDC)^{OE}

- 1** Adjusting spring preload
for front wheel (▮▮▮▮ 80).
- 2** Seat lock (▮▮▮▮ 61)
- 3** Table of tyre pressures
Payload table
Chain settings
- 4** Adjuster for spring preload,
rear (▮▮▮▮ 79)
- 5** Engine oil level indicator
(▮▮▮▮ 126)
- 6** OA connector for navigation system

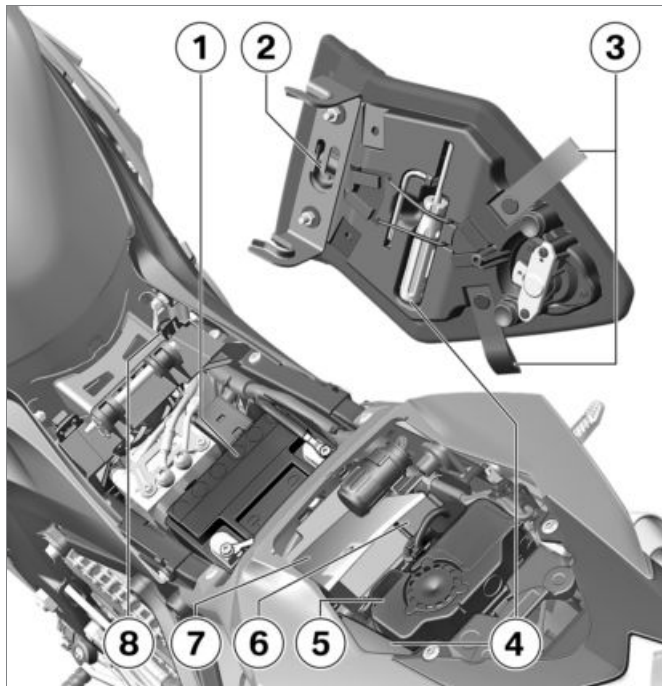


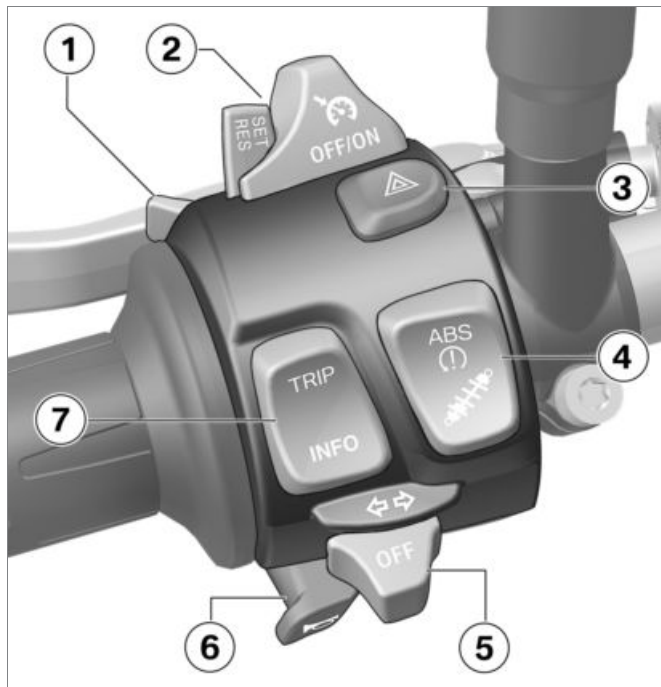
General view, right side

- 1** Brake-fluid reservoir, rear
( 131)
- 2** Vehicle identification number (VIN) and type plate
(on steering-head bearing)
- 3** Brake-fluid reservoir, front
( 130)
- 4** Adjuster for front rebound-stage damping (yellow scale) ( 82)
- 5** Steering damper
- 6** Coolant-level indicator
( 132)
- 7** OA connector
- 8** Oil filler neck ( 127)
- 9** Adjuster for rear rebound-stage damping (low on spring strut; yellow scale)
( 83)

Underneath the seat

- 1** Battery (➡ 158)
- 2** Helmet holder (➡ 62)
- 3** Luggage loops (➡ 63)
- 4** Toolkit (➡ 122)
- 5** – with alarm system
(DWA)^{OE}
- Anti-theft alarm (➡ 46)
- 6** Fuse box (➡ 156)
- 7** Rider's Manual
- 8** – with Pro riding modes^{OE}
- Coding plug (➡ 56)





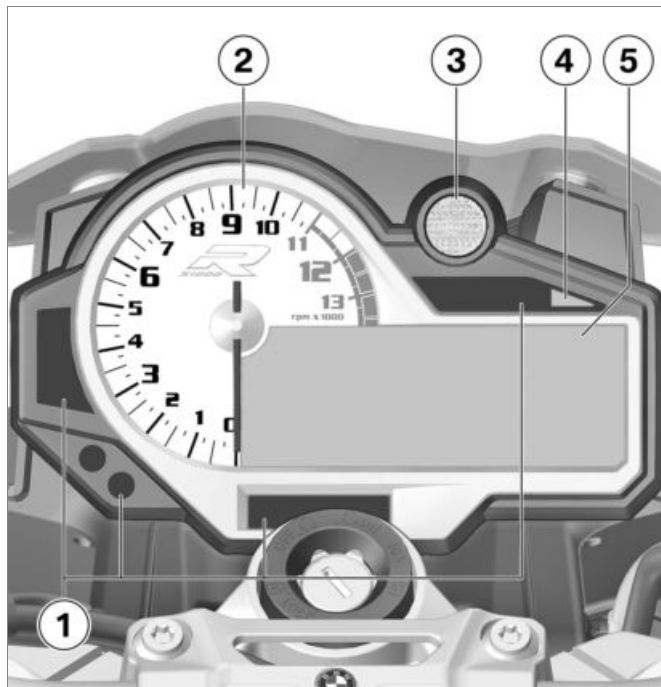
Multifunction switch, left

- 1** High-beam headlight and headlight flasher (➡ 48)
Lap timer (➡ 68)
- 2** – with cruise control^{OE}
Cruise-control system (➡ 56)
- 3** Hazard warning flashers (➡ 49)
- 4** BMW Motorrad Race ABS (➡ 50)
ASC (➡ 52)
– with Dynamic Traction Control (DTC)^{OE}
DTC (➡ 53)
– with Dynamic Damping Control (DDC)^{OE}
DDC (➡ 85)
- 5** Turn indicators (➡ 49)
- 6** Horn
- 7** Display-mode selection (➡ 42)

Multifunction switch, right

- 1 – with heated handlebar grips^{OE}
Heated handlebar grips (➡ 60)
- 2 Riding mode (➡ 54)
- 3 Emergency off switch (kill switch) (➡ 50)
- 4 Start engine (➡ 94)





Instrument panel

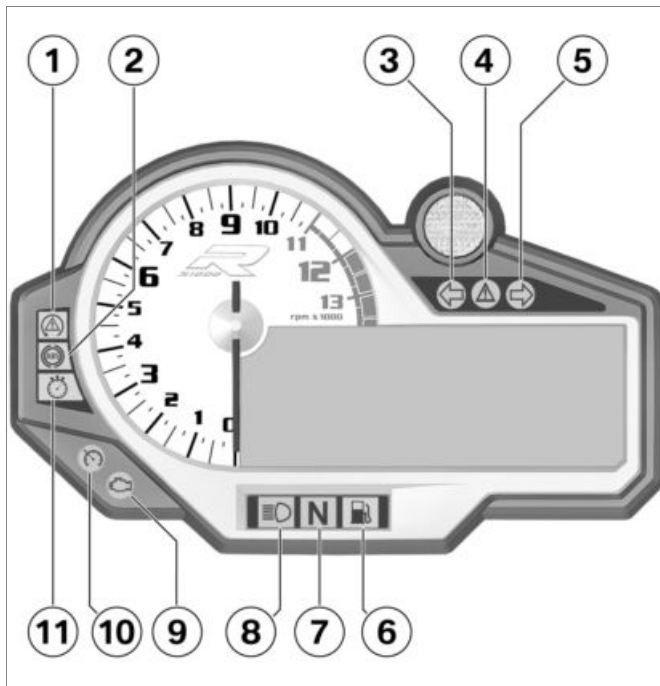
- 1 Panels for warning and tell-tale lights (►► 22)
- 2 Rev. counter
- 3 Gearshift light (►► 99)
- 4 Ambient-light brightness sensor (for adapting the brightness of the instrument lighting)
– with alarm system (DWA)^{OE}
DWA status indicator light (►► 46)
- 5 Multifunction display (►► 24)

Status indicators

Warning and telltale lights.....	22
Multifunction display	24
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Fuel down to reserve	36
Range	37
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Warning and telltale lights

- 1 ASC telltale and warning light (➡ 33)
– with Dynamic Traction Control (DTC)^{OE}
 - 2 DTC warning light (➡ 34)
 - 3 ABS telltale and warning light (➡ 32)
 - 4 Turn indicators, left
 - 5 General warning light (in combination with warnings in the display) (➡ 25)
 - 6 Turn indicators, right
 - 7 Fuel reserve (➡ 36)
 - 8 Idle
 - 9 High-beam headlight
 - 10 Warning light for engine electronics (➡ 30)
 - 11 Cruise-control system
– with cruise control^{OE}
- Switching on cruise control (➡ 56).



- 11** Light for the fastest lap
( 69)

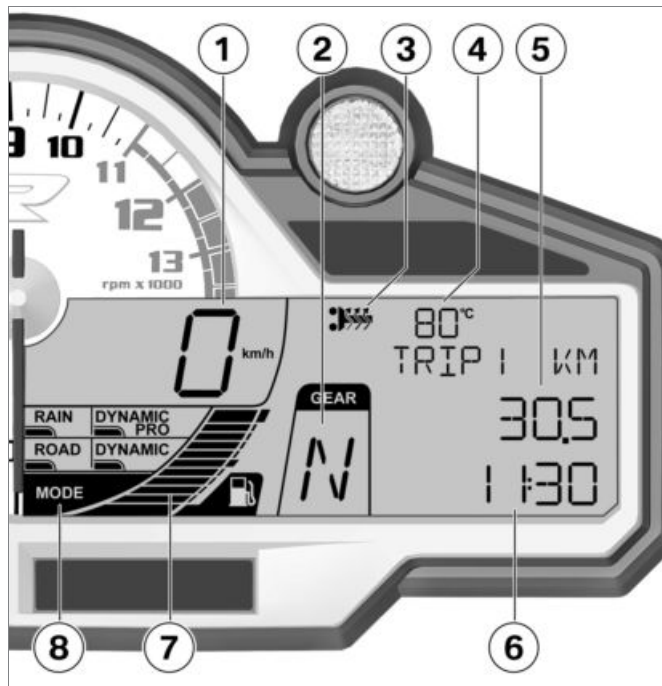
Multifunction display

- 1 Speedometer
- 2 Gear indicator; "N" indicates neutral
- 3 – with heated handlebar grips^{OE}
Operating the heated handlebar grips (► 60)
- 4 Coolant temperature
- 5 General information (► 44)
- 6 Clock (► 44)
- 7 Fuel level
- 8 Riding mode (► 54)



NOTICE

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 (→ 30)
	flashes red	Coolant-temperature reading flashes	Coolant temperature too high (→ 30)
	lights up		Engine in emergency-operation mode (→ 30)
	lights up yellow	LAMPR ! appears on the display	Rear light defective (→ 31)
	lights up yellow	LAMPF ! appears on the display	Bulbs for front parking light defective (→ 31)
			Front lights defective (→ 31)
		LAMP ! appears on the display	Bulbs for flashing turn indicators defective (→ 31)
		VDS ! appears on the blank display	Motorcycle dropped (→ 32)

Warning and telltale lights

Warning symbols in the display

Meaning

	VDS ! appears on the display	Drop sensor defective (→ 32)
 flashes		ABS self-diagnosis not completed (→ 32)
 lights up		ABS switched off (→ 33)
 lights up		ABS fault (→ 33)
 quick-flashes		ASC intervention (→ 33)
 slow-flashes		ASC self-diagnosis not completed (→ 33)
 lights up		ASC switched off (→ 34)
 lights up		ASC fault (→ 34)

Warning and telltale lights

Warning symbols in the display

Meaning

	quick-flashes		DTC intervention (→ 34)
	slow-flashes		DTC self-diagnosis not completed (→ 34)
	lights up		DTC switched off (→ 35)
	lights up		DTC fault (→ 35)
	lights up yellow	DDC ! appears on the display	DDC fault (→ 35)
		DWALO ! appears on the display	DWA battery weak (→ 35)
	lights up yellow	DWA ! appears on the display	DWA battery flat (→ 36)
	lights up red	NO CAN appears on the display	CAN open circuit/short circuit (→ 36)

Warning and telltale lights

Warning symbols in the display

Meaning



lights up yellow

NO CODING
appears on the
display

No coding (→ 36)

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.



ATTENTION

Riding with overheated engine.

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.



WARNING

Unusual ride characteristics when engine running in emergency-operation mode.

Risk of accident

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

Possible cause:

The engine control unit has diagnosed a fault. 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.

LAMP R ! 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).

LAMP F ! appears on the display.

WARNING

Failure of lights on the vehicle adds to possibility of other road users overlooking the vehicle.

Safety risk

- 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 (148).
- Replacing parking-light bulb, right (152).

Front lights defective

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

WARNING

Failure of lights on the vehicle adds to possibility of other road users overlooking the vehicle.

Safety risk

- 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 (148).
- Replacing bulb for high-beam headlight (150).

Bulbs for flashing turn indicators defective

LAMP ! appears on the display.



WARNING

Failure of lights on the vehicle adds to possibility of other road users overlooking the vehicle.

Safety risk

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

Possible cause:

Bulb for turn indicator defective.

- Replacing bulbs for front and rear turn indicators (▮▮▮▶ 153).

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 (▮▮▮▶ 87).



NOTICE

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 telltale and warning light flashes.

Possible cause:



ABS self-diagnosis not completed

The ABS function is not available, because self-diagnosis did not complete. (The motor-cycle 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 telltale and warning light shows.

Possible cause:

The rider has switched off the ABS system.

- Switch on the ABS function (► 51).

ABS fault



ABS telltale and warning light shows.

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 (► 112).
- Have the fault rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad dealer.

ASC intervention



ASC telltale and warning light quick-flashes.

The ASC control unit has detec-

ted 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 telltale and warning light slow-flashes.

Possible cause:



ASC self-diagnosis not completed

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

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

ASC switched off



ASC telltale and warning light shows.

Possible cause:

The rider has switched off the ASC system.

- Switch on the ASC function (→ 52).

ASC fault



ASC telltale and warning light shows.

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 (→ 113).

- 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-speed sensors to be checked: min 5 km/h)

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

DTC switched off

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



DTC 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 (►► 113).
- 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 alarm system (DWA)^{OE}

DWA LO ! appears on the display.



NOTICE

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 alarm system (DWA)^{OE}



General warning light shows yellow.

DWA ! appears on the display.



NOTICE

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.



WARNING

Irregular engine operation or engine shutdown due to lack of fuel.

Risk of accident. Damage to catalytic converter.

- Do not run the fuel tank dry. ◀

Possible cause:

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

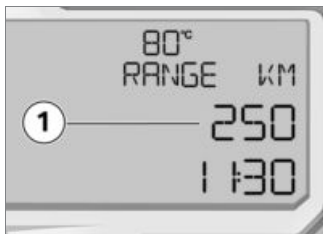


Fuel reserve

approx. 4 l

- Refuelling (100 103).

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.

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

When the motorcycle is propped on its side stand the slight angle of inclination means that the sensor cannot register the fuel

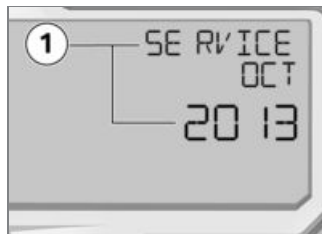
level correctly. This is the reason why the range is calculated only when the side stand is in the retracted position.



NOTICE

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 completes. 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.



NOTICE

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

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

Operation

Ignition switch/steering lock	40	Cruise-control system	56
Ignition	40	Brakes	58
Electronic immobiliser EWS	41	Tyres	59
Multifunction display	42	Heated handlebar grips	60
Anti-theft alarm (DWA)	46	Mirrors	61
Headlight	48	Front and rear seats	61
Lights	48	Helmet holder	62
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Emergency off switch (kill switch)	50		
BMW Motorrad Race ABS	50		
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Dynamic Traction Control DTC	53		
Riding mode	54		

Ignition switch/steering lock

Keys

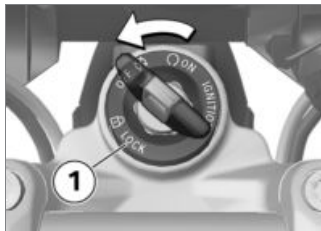
You receive 2 ignition keys. Consult the information on the electronic immobiliser (EWS) (► 41) if a key is lost or mislaid.

One-key system

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

Lock the handlebars

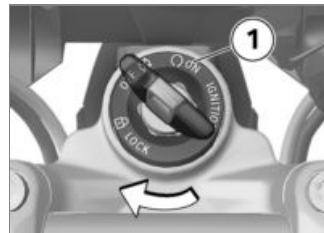
- Turn the handlebars to the left full-lock position.



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

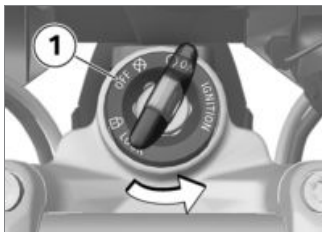
Ignition

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. (► 95)
 - » ABS self-diagnosis is in progress. (► 96)
 - » ASC self-diagnosis is in progress. (► 97)
 - with Dynamic Traction Control (DTC)^{OE}
 - » DTC self-diagnosis is in progress. (► 97)◁

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 electronic design of the motorcycle allows it to access data stored in the ignition key by means of a ring antenna loc-

ated in the ignition switch/steering lock. The engine control unit will only allow the engine to be started if the key is identified as "authorised".



NOTICE

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

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

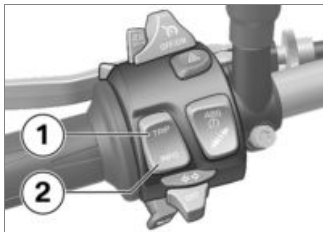
If you wish to do this, you will need to bring all other keys for the motorcycle with you. The engine cannot be started by a barred key, but a key that has

been barred can subsequently be reactivated.

You can obtain 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:

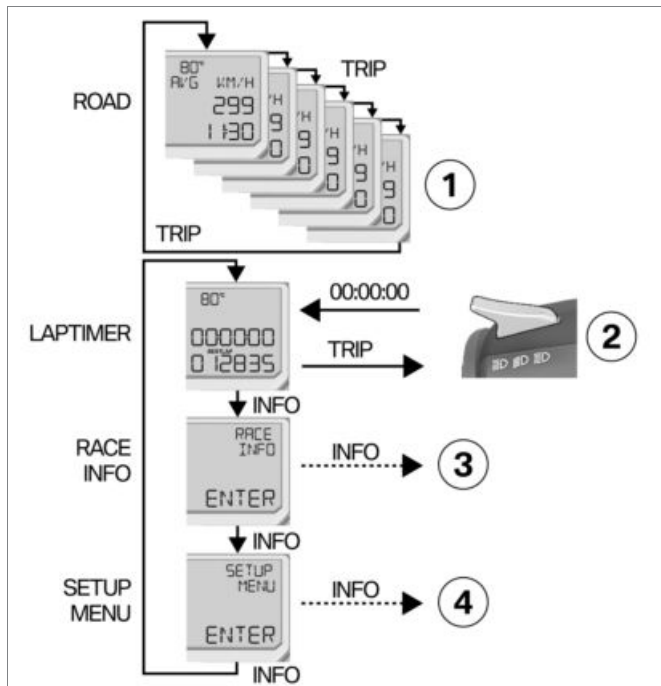
- **ROAD:** All the information necessary for riding on public roads is presented here.
- **LAPTIMER:** Lap times and other data can be logged here and subsequently retrieved

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 (→ 68)
- 3** Start RACE INFO (→ 70)
- 4** Start SETUP MENU (→ 75)

Selecting readings in ROAD mode

- Switch on the ignition.



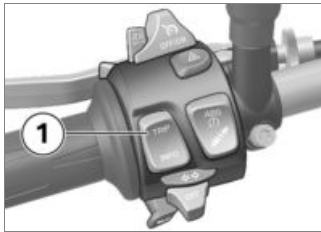
- Repeatedly press button **1** until the value you want appears in panel **2**.

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

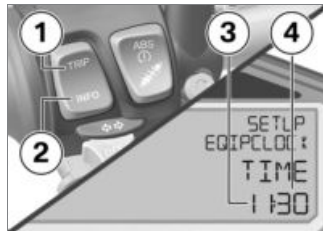
- Switch on the ignition.



- 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 alarm system (DWA)^{OE}

Activation

- Switching on ignition (➡ 40).
- DWA adjusting (➡ 47).
- Switch off the ignition.
- » If the alarm system (DWA) is activated, then the alarm system (DWA) 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 LED then indicates 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

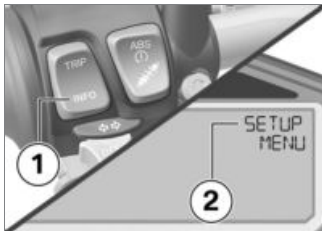
Deactivation

- 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.



NOTICE

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

Lights

Side light

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



NOTICE

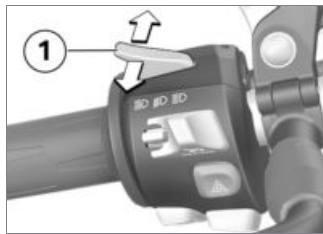
The side lights place a strain on the battery. Do not switch the ignition on for longer than absolutely necessary.◀

Low-beam headlight

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

High-beam headlight and headlight flasher

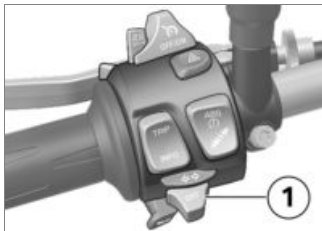
- Start the engine.



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

Parking lights

- Switch off the ignition.



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



NOTICE

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.

Turn indicators

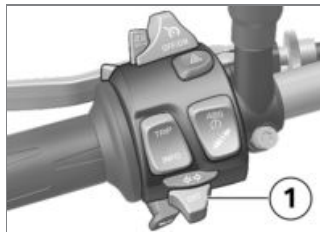
Operating the turn indicators

- Switch on the ignition.



NOTICE

The turn indicators are cancelled automatically after the defined time and distance. The defined time and distance can be set by an authorised BMW Motorrad dealer.◀



- 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.



NOTICE

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



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

Emergency off switch (kill switch)



- 1** Emergency off switch (kill switch)



WARNING

Operation of the kill switch while riding.

Risk of fall due to rear wheel locking.

- Do not operate the kill switch when riding.◀

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



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

BMW Motorrad Race ABS

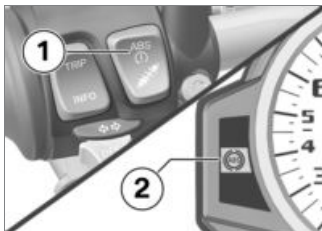
Switch off the ABS function

- Switch on the ignition.



NOTICE

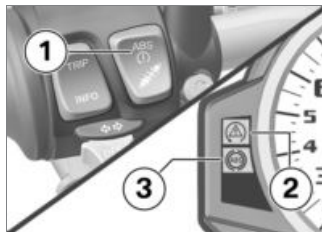
You have the option of deactivating the ABS function while the motorcycle is on the move.◀



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



ABS telltale and warning light shows.



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



ABS telltale and warning light shows.

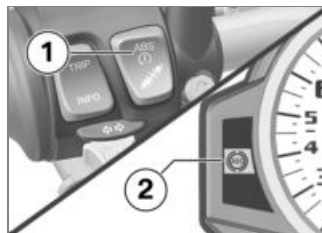
- Release button **1** within two seconds.



ABS telltale and warning light remains on.

» ABS function is switched off.

Switch on the ABS function



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



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

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



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

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

min 5 km/h

BMW Motorrad ASC

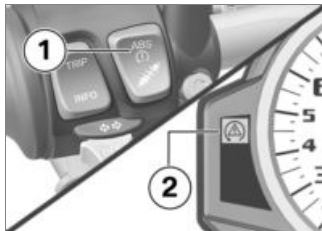
Switch off the ASC function

- Start the engine.



NOTICE

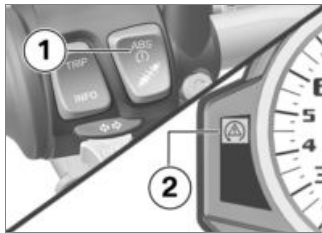
You have the option of deactivating the ASC function while the motorcycle is on the move. ◀



- Press and hold down button **1** until ASC telltale and warning light **2** changes status.
-  ASC telltale and warning light starts to show.
- Release button **1** within two seconds.
-  ASC telltale and warning light remains on.

» ASC function is switched off.

Switch on the ASC function



- Press and hold down button **1** until ASC telltale and warning light **2** changes status.
-  ASC telltale and warning light goes out; if self-diagnosis has not completed it starts flashing.
- Release button **1** within two seconds.
-  ASC telltale and 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 telltale and warning light shows when the motorcycle accelerates to a speed in excess of the minimum stated below after the ignition was switched off and then on again.

min 5 km/h

Dynamic Traction Control DTC

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

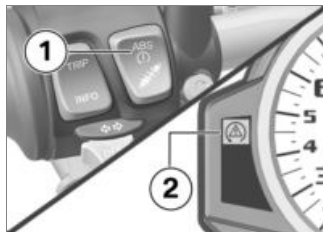
Switch off the DTC function

- Start the engine.



NOTICE

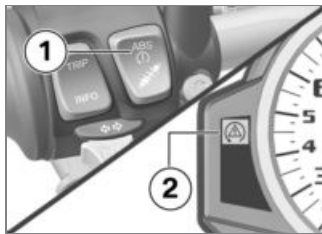
You have the option of deactivating the DTC function while the motorcycle is on the move.◀



- 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.

Switch on the DTC function



- 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.
- with 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).

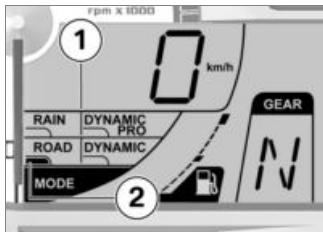


- Press button **1**.



NOTICE

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 appears 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:

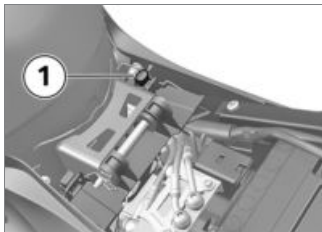
- RAIN: For riding on a rain-wet road surface.
- ROAD: For riding on a dry road surface.
- with Pro riding modes^{OE}
 - » The following riding modes are additionally available for selection:
- DYNAMIC: For dynamic riding on a dry road surface.

- 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

– with Pro riding modes^{OE}

- Switching off ignition (➡ 41).
- Remove the front seat (➡ 62).



ATTENTION

Dirt and damp penetrating inside open connectors.

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 (➡ 62).

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.



NOTICE

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



Telltale light for cruise control shows.

Switching off cruise control



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

Brakes

Adjusting brake lever



WARNING

Changed position of the brake fluid reservoir.

Air in the brake system.

- Do not turn the handlebars or the handlebar fitting on the handlebar.◀

! WARNING

Adjusting the brake lever while riding.

Risk of accident

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



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

! NOTICE

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

- » Adjustment options:
 - Position 1: largest span between handlebar grip and brake lever
 - Position 6: smallest span between handlebar grip and brake lever

Tyres

Checking tyre pressure

! WARNING

Incorrect tyre pressure.

Impairment of the motorcycle's handling characteristics. Shorter useful tyre life.

- Always check that the tyre pressures are correct.◀

! WARNING

Tendency of valve inserts to open by themselves at high riding speeds.

Sudden loss of tyre pressure.

- Install valve caps fitted with rubber sealing rings and tighten firmly.◀
- 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.



NOTICE

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



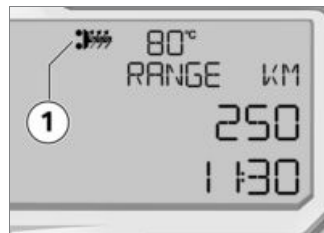
NOTICE

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

to ensure the battery's starting capability.◀



- 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

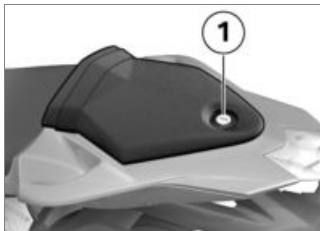


- Turn the mirror to the desired position.

Front and rear seats

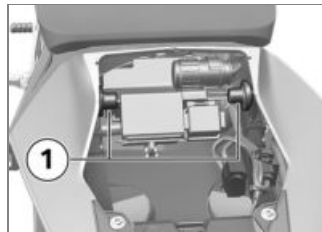
Removing rear seat

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

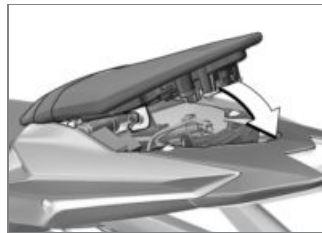


- Open seat lock **1** with the ignition key.
- Lift the rear seat at the rear and then work it back and up to remove.
- Remove the ignition key from the lock and place the rear seat, upholstered side down, on a clean surface.

Install the rear seat



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



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

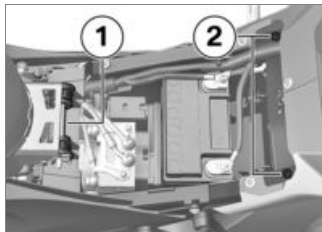
- Lock the seat lock with the ignition key.

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.

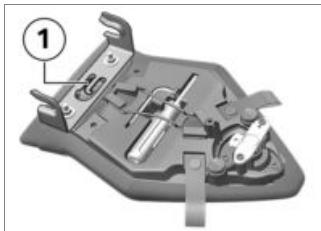


- Push the upholstery of the front seat forward slightly above the screw holes and hold it in this position.
- Install screws **1**.

Helmet holder

Securing the helmet to motorcycle

- Removing rear seat (➡ 61).
- Turn the rear seat upside down.



ATTENTION

Incorrect positioning of the helmet lock.

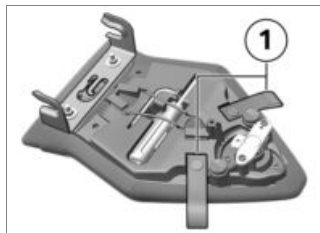
Scratch marks on trim panel.

- 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 (➡ 61).
- Place the helmet on the front seat.

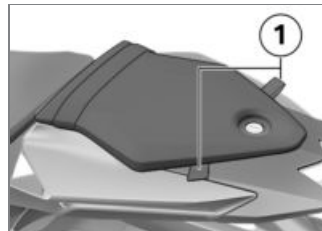
Luggage loops

Securing luggage to motorcycle

- Removing rear seat (➡ 61).
- Turn the rear seat upside down.



- Pull loops **1** out of the holders and to the outside and down.
- Install the rear seat (➡ 61).



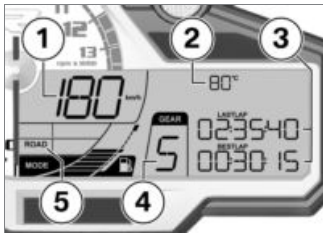
- Use the loops **1** and the rear footrests, for example, to secure luggage to the rear seat. In this process, take care not to damage the rear trim panels.

On the race track

LAPTIMER	66
RACE INFO.....	70
SETUP MENU.....	75
Spring preload	78
Damping	81
Removing/installing mirrors	85
Removing and installing number- plate carrier	86
Removing and installing front turn indicators	89

LAPTIMER

Mode of presentation



- 1 Speedometer
- 2 Engine temperature
- 3 The readings in these lines can be changed by the rider. (→ 66)
LAST LAP: Time for the preceding lap.
BEST LAP: The fastest of the laps currently 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:

- LAST LAP: The time for the preceding lap.

The following times can be displayed in the fourth line:

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

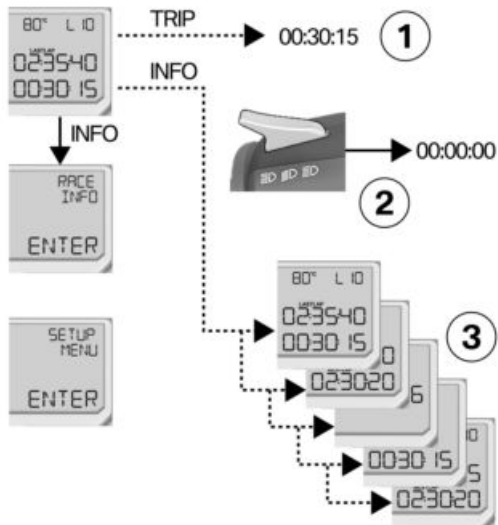
The third and fourth lines can be combined to show other readings:

- 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 BEST EV: The third line shows the running time for the current lap, the best-ever lap is shown in the fourth line.

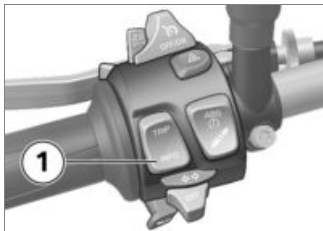
At the start of each new lap the time for the preceding lap is shown briefly before the display switches to the running time of the current lap.



Display overview

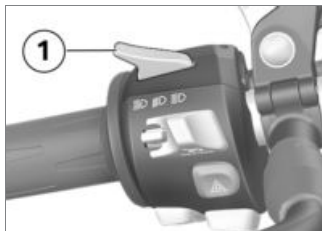
- Solid line: short-press the button.
 - - Broken line: press and hold down the button.
- 1** Interrupting timing (➡ 69).
 - 2** Starting timing (➡ 68).
 - 3** View the times (➡ 68).

Viewing times



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

Starting timing



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



NOTICE

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 switch **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.

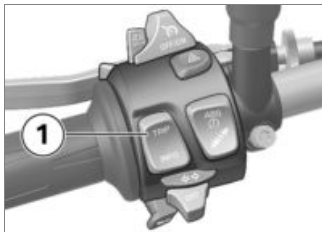
Infrared receiver

– 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.

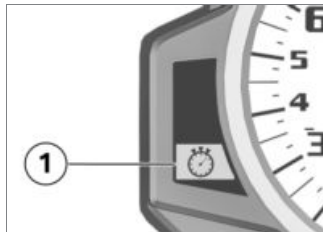


NOTICE

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.



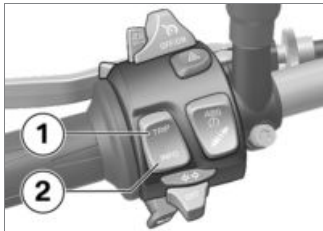
The lap section for the intermediate time

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

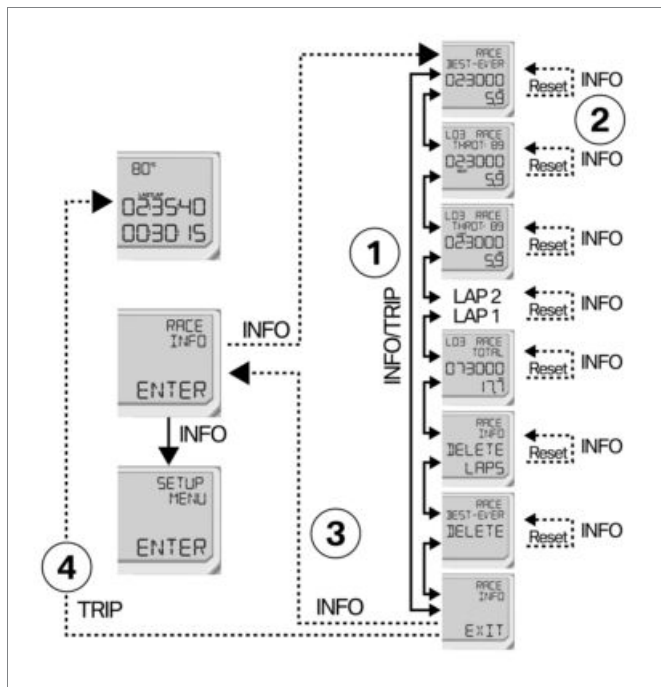


- Repeatedly press button **1** or button **2** to view each lap stored in memory one after the other.

Repeatedly press button **1** to step through the laps stored in memory in the following sequence. Repeatedly press button **2** to step through them in the opposite sequence:

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

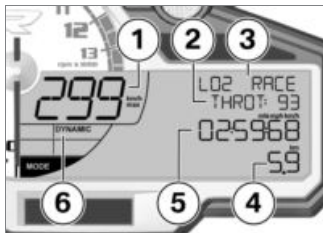
- Last lap logged in memory LAST
- All other laps logged in memory
- Aggregate time for all laps logged in memory TOTAL
- Delete lap data logged in memory DELETE LAPS.
- Delete the best-ever lap logged in memory BEST-EVER DELETE.
- Exit the RACE INFO EXIT display mode.



Display overview

- Solid line: short-press the button.
- - Broken line: press and hold down the button.
- 1 Selecting saved lap (→ 70).
- 2 Deleting lap times (→ 73).
- 3 Exit the INFO MENU (→ 72).
- 4 Delete the timing logs (→ 73).

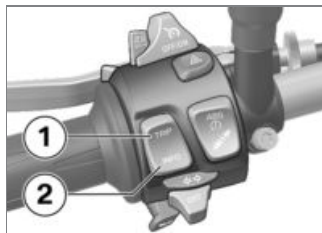
Information for a lap



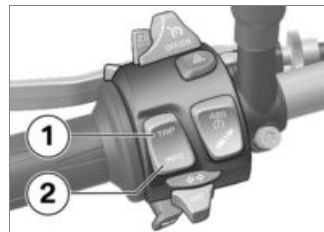
- 1 In sequence: Top speed (max), average speed (Ø) and lowest speed (min) on the lap currently displayed.
- 2 In sequence: Average throttle twistgrip position (THROT) in percent, percentage of lap ridden with brakes applied (BRAKE) and number of gearshifts (GEAR) on the lap currently displayed.
- 3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

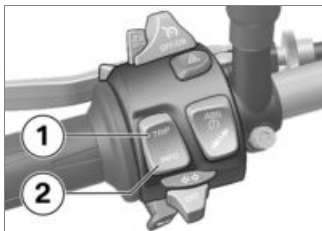


- Repeatedly press button 1 or button 2 until RACE INFO EXIT appears on the display.



- 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

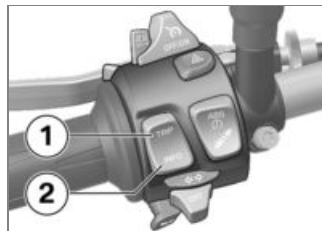
The all-time best lap (BEST-EVER) is the fastest of all timed laps and is updated as soon as a faster lap BESTLAP is timed. The all-time best lap remains stored in memory even if the

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

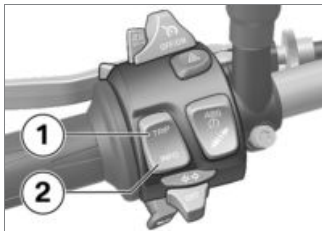


- Repeatedly press button **1** or button **2** until the lap you want to delete appears on the display.
- Press and hold down button **2** to delete the lap from memory.
 - » If the lap you select for deletion was
 - the best lap in memory BEST, the lap in question is deleted. The lap that was the second-best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

- Adjust the alarm system setting (DWA) **DWA AUTO ON/OFF**.
- Set the time **CLOCK TIME**.
- Adjust display 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.

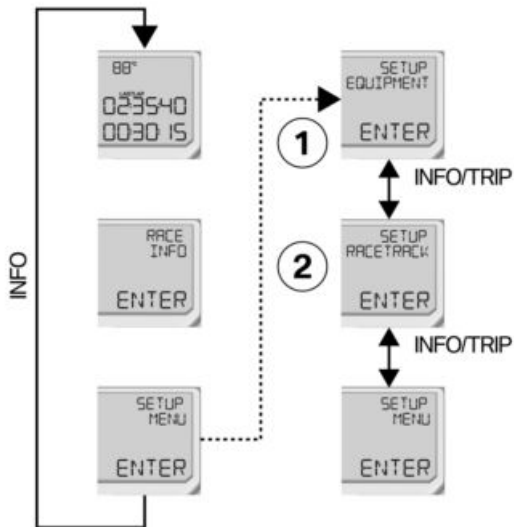
Overview SETUP MENU

— Solid line: short-press the button.

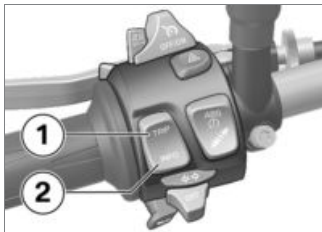
-- Broken line: press and hold down the button.

1 Settings of the display

2 Settings for the racetrack

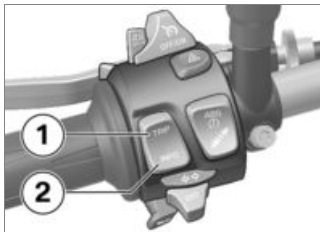


Setting parameters



- 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 for front suspension

- with Dynamic Damping Control (DDC)^{OE}

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.

Adjustment for rear suspension

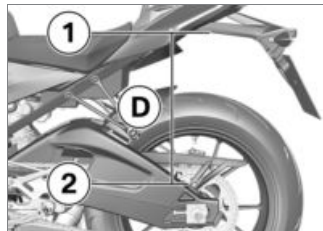
It is essential to set spring preload of the rear suspension to suit the load carried by the motorcycle. Increase spring preload when the vehicle is heavily loaded and reduce spring preload accordingly when the vehicle is lightly loaded.

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**.



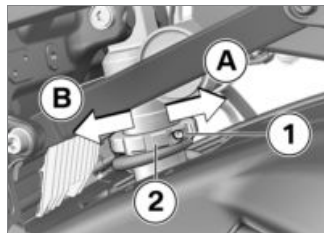
- Hold the motorcycle upright (do not prop it on the side stand) and measure distance **D** from bottom edge **1** of the number-plate carrier to screw **2** of the chain guard.
- Apply the rider's weight to the motorcycle.
- With the assistance of a second person, measure distance **D** between points **1** and **2** again and calculate the difference (negative spring displacement) between the two readings.



Load-dependent adjustment of spring preload

Suspension compression at rear wheel

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



WARNING

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

Impaired handling.

- Adjust spring-strut 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 (DDC)^{OE}

3 Nm◀

Adjusting spring preload for rear wheel

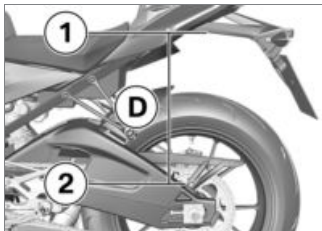
– with Dynamic Damping Control (DDC)^{OE}

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



NOTICE

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

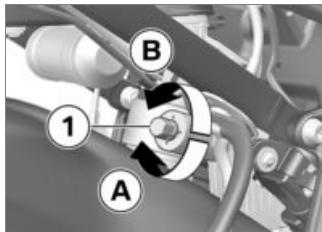
displacement) between the two readings.



Load-dependent adjustment of spring preload

Suspension compression at 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

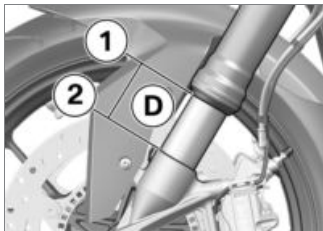
– with Dynamic Damping Control (DDC)^{OE}

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



NOTICE

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.◀



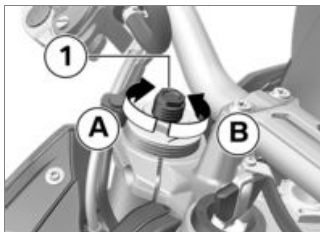
- Hold the motorcycle upright, preferably with the assistance of a second person (do not prop the motorcycle on the side stand).
- Measure distance **D** between bottom edge **1** of the slider tube and front axle **2**.
- Apply the rider's weight to the motorcycle.
- With the assistance of a second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



WARNING

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

Impaired handling.

- Adjust spring-strut 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 **3** 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 re-

duction 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.



- 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.



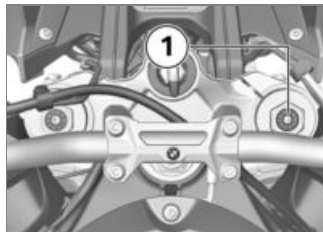
Compression stage, basic setting, front

Position 1 (comfortable setting with rider 85 kg)

Position 3 (normal setting with rider 85 kg)

Position 7 (sports setting with rider 85 kg)

Adjust the rebound-stage damping for front wheel



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



Rebound stage, basic setting, front

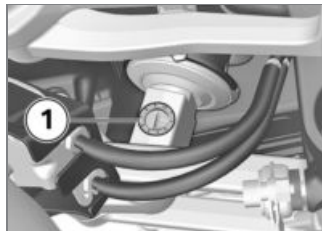
Position 1 (comfortable setting with rider 85 kg)

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

- 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.

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

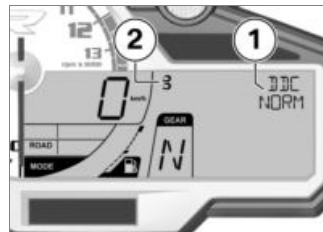
Position 4

Viewing suspension damping with DDC

- with Dynamic Damping Control (DDC)^{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 (DDC)^{OE}

- Switching on ignition (III 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.

NOTICE

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.

NOTICE

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

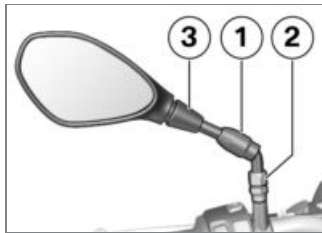
The following settings are available:

 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**.

NOTICE

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



Locknut (mirror) to clamping piece

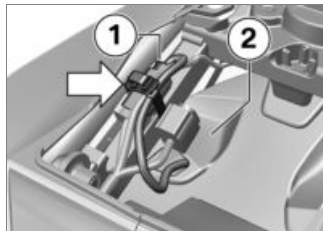
20 Nm

- Clip 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 (➡ 61).



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

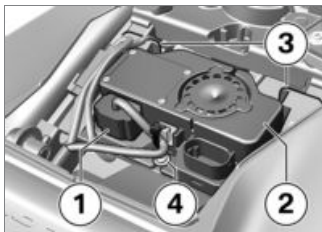


NOTICE

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 alarm system (DWA)^{OE}



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

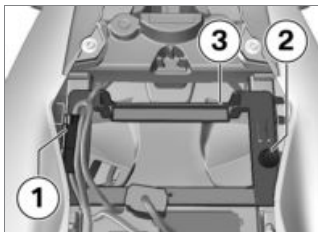


NOTICE

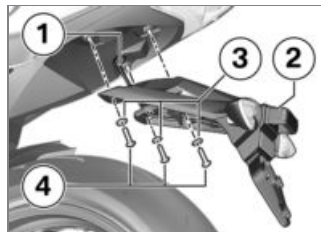
Before disconnecting the plug for the anti-theft alarm, check that DWA has been deactivated in the **SETUP MENU**.◀

- Remove screw **4**.

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



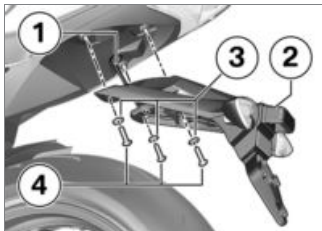
- Disengage plug **1** for the number-plate carrier.
- Remove body-bound rivet **2**.
- Remove bracket **3** for the anti-theft alarm.◀



- Remove screws **4** with washers **3**.
- Remove number-plate carrier **2** and work cable leg **1** out until clear.
- Install the rear seat (➡ 61).

Installing number-plate carrier

- Make sure the ground is level and firm and place the motor-cycle on its stand.
- Removing rear seat (➡ 61).



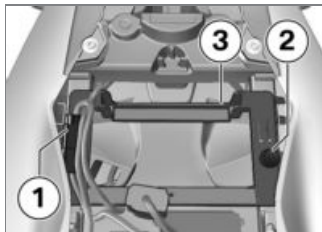
- Hold number-plate carrier **2** in position and work cable leg **1** into position.
- Install screws **4** with washers **3**.



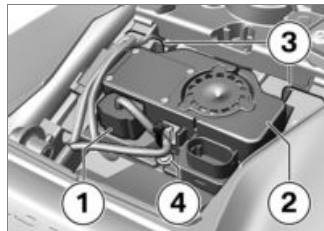
Number-plate carrier to rear frame

5 Nm

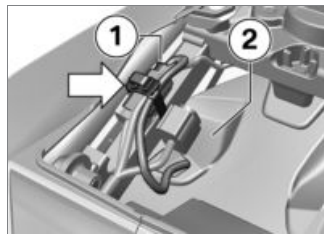
– with alarm system (DWA)^{OE}



- 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**.



NOTICE

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 (➡ 61).

Removing and installing front turn indicators

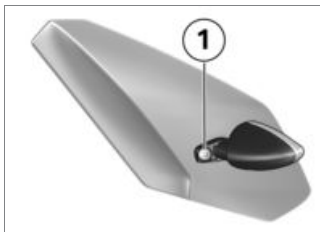
Removing front flashing turn indicator



NOTICE

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

- Removing right cover (➡ 135).



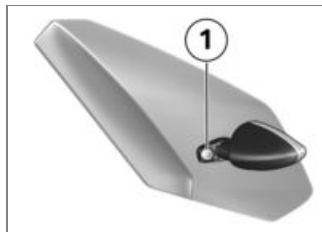
- Remove screw **1** and remove the turn indicator. Work the cable through the fairing side panel.
- Protect the plug on the motorcycle to prevent the ingress of foreign matter.

- Installing right cover (➡ 136).

Installing front flashing turn indicator

- Removing right cover (➡ 135).

- Work the cable through the fairing side panel.



- Hold the flashing turn indicator in position and install screw **1**.
- Installing right cover (➡ 136).

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



WARNING

Handling adversely affected by overloading and imbalanced loads.

Risk of falling

- Do not exceed the permissible gross weight and be sure to comply with the instructions on loading. ◀
- 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.



Payload of tank rucksack

≤5 kg◀

- with rear softbag^{OA}
- Note the maximum payload and the speed limit for riding with the rear softbag fitted.



Payload of rear softbag

max 5 kg



Maximum permissible speed for riding with the rear softbag fitted to the motorcycle

max 220 km/h◀

Speed

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

- Settings of 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.

WARNING

Exhaust gases adversely affecting health.

Risk of asphyxiation

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

Risk of burn injury

CAUTION

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

Risk of burn injury

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

Catalytic converter

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

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.

ATTENTION

Unburned fuel in catalytic converter.

Damage to catalytic converter.

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

Risk of overheating

ATTENTION

Engine running for prolonged period with vehicle at standstill.

Overheating due to insufficient cooling. In extreme cases, the motorcycle could catch fire.

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

Tampering

ATTENTION

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

Damage to the affected parts, failure of safety-relevant functions. Damage due to tampering is not covered by the warranty.

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

Comply with checklist

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

Always before riding off:

- Operation of the brake system
- Operation of the lights and signalling equipment
- Checking clutch function (▮▮▮ 136).
- Check the tyre tread depth (▮▮▮ 140).
- Cases correctly installed and luggage secured

Every 3rd refuelling stop:

- without Dynamic Damping Control (DDC)^{OE}
- Adjusting spring preload for rear wheel (▮▮▮ 78).

- Adjusting compression-stage damping for front wheel (▮▮▮ 82).
- Adjust the rebound-stage damping for front wheel (▮▮▮ 82).
- Adjusting rebound-stage damping for rear wheel (▮▮▮ 83).◀

– with Dynamic Damping Control (DDC)^{OE}

- Adjusting spring preload for rear wheel (▮▮▮ 79).
- Adjusting spring preload for front wheel (▮▮▮ 80).
- Adjust the suspension damping with DDC (▮▮▮ 85).◀
- Checking engine oil level (▮▮▮ 126).
- Checking front brake pad thickness (▮▮▮ 128).
- Checking rear brake pad thickness (▮▮▮ 129).

- Checking brake-fluid level, front brakes (▮▮▮ 130).
- Checking the brake-fluid level, rear brakes (▮▮▮ 131).
- Check coolant level (▮▮▮ 132).
- Lubricating chain (▮▮▮ 137).
- Checking chain tension (▮▮▮ 138).

Starting

Start engine

- Switch on the ignition.
- » Pre-Ride-Check is performed. (▮▮▮ 95)
- » ABS self-diagnosis is in progress. (▮▮▮ 96)
- » ASC self-diagnosis is in progress. (▮▮▮ 97)
- with Dynamic Traction Control (DTC)^{OE}
- » DTC self-diagnosis is in progress. (▮▮▮ 97)◀
- Select neutral or, if a gear is engaged, pull the clutch lever.



NOTICE

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

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



NOTICE

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.

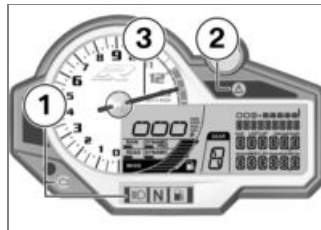
See the subsection on jump starting in "Maintenance" for more details.◀

- » The engine starts.
- » Consult the troubleshooting chart below if the engine refuses to start. (► 168)

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.



- Press starter button **1**.

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:



WARNING

Faulty warning lights.

No indication of malfunctions.

- Check all the warning and telltale lights. ◀
- 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 telltale and warning light flashes.

Phase 2

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



ABS telltale and 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 telltale and warning light slow-flashes.

Phase 2

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



ASC telltale and warning light slow-flashes.

ASC self-diagnosis completed

- » The ASC symbol no longer shows.

- Check all the warning and telltale lights.



ASC self-diagnosis not completed

The ASC 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-speed 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 motorcycle has to reach a defined minimum speed with the engine running for the wheel-speed sensors to be checked: min 5 km/h)

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



Running-in speed

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



Running-in speed

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

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

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



NOTICE

Engine rpm is governed by the electronic engine management system until the vehicle has undergone its running-in check. The authorised BMW Motorrad dealer deactivates this rpm governing function when the motorcycle is brought in for its running-in check. ◀



Mileage until the running-in check

500...1200 km



Engine-rpm governing until the running-in check

max 9000 min⁻¹

Brake pads

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



WARNING

New brake pads.

Longer stopping distance. Risk of accident.

- Apply the brakes in good time.◀

Tyres

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



WARNING

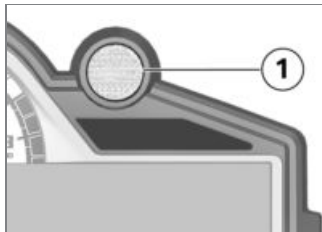
New tyres losing grip on wet roads and at extreme bank angles.

Risk of accident

- Ride carefully and avoid extremely sharp inclines.◀

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.

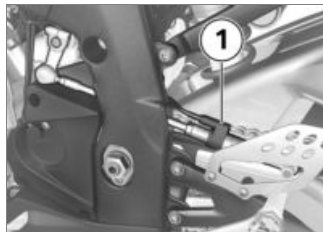
- Gearshift light flashes at preset frequency: approaching upshift rpm
- Gearshift light goes out: the engine has revved past upshift rpm

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.



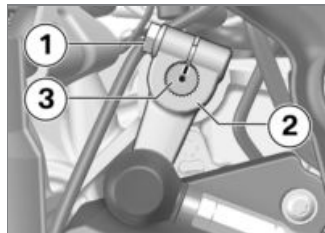
The sensor **1** in the shift linkage registers the shift request and triggers shift assistance.

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.

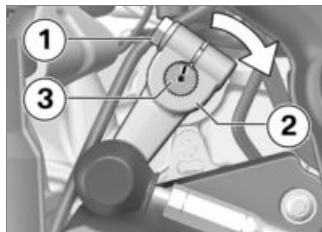
Shift assistance is not available in the following situations:

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

Installing 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



WARNING

Braking only with the rear brake on mountain descents. Brake fade. Destruction of the brakes due to overheating.

- Use both front and rear brakes, and make use of the engine's braking effect as well. ◀

Wet and dirty brakes

Wetness and dirt on the brake discs and the brake pads diminish braking efficiency.

Delayed braking action or poor braking efficiency must be reckoned with in the following situations:

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



WARNING

Moisture and dirt.

Diminished braking effect.

- 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.



ATTENTION

Poor ground underneath the stand.

Risk of damage to parts if vehicle topples.

- Always check that the ground under the stand is level and firm. ◀
- Extend the side stand and prop the motorcycle on the stand.



ATTENTION

Additional weight placing strain on the side stand.

Risk of damage to parts if vehicle topples.

- Do not sit or lean on the vehicle while it is propped on the side stand. ◀
- 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.



ATTENTION

Leaded fuel.

Damage to catalytic converter.

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



WARNING

Fuel is highly flammable.

Risk of fire and explosion.

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



WARNING

Escape of fuel due to heat-induced expansion if fuel tank is overfilled.

Risk of falling

- Do not overfill the fuel tank. ◀



ATTENTION

Fuel attacks plastic surfaces.

Surfaces become unsightly or dull.

- Clean plastic parts immediately after contact with fuel. ◀

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



NOTICE

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.



NOTICE

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



NOTICE

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



Usable fuel capacity

approx. 17.5 l



Fuel reserve

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.

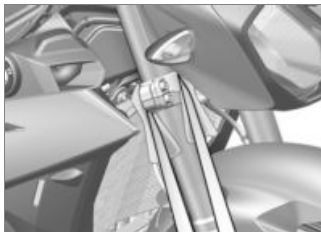


ATTENTION

Vehicle topples to side when being lifted on to stand.

Risk of damage to parts if vehicle topples.

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



ATTENTION

Trapping of components.

Component damage

- Do not trap components such as brake lines or cable legs.◀

- 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 motorcycle's suspension should be compressed as tightly as possible front and rear.

Engineering details

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Riding mode

Riding mode selection

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

RAIN

ROAD (standard mode)

– with Pro riding modes^{OE}

DYNAMIC

DYNAMIC PRO (only with coding plug inserted)



ATTENTION

Riding on public roads with coding plug inserted, vehicles with power reduction.

Risk of accident. Voiding of homologation for riding on public roads.

- Do not use the coding plug for riding a vehicle with power reduction 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.

– with 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. The rear wheel can lift clear of the ground.

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

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

– with 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.



ATTENTION

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).

Damage to rear brake and clutch.

- Do not attempt a burn-out unless the ABS function is 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.



WARNING

Rear wheel lift due to severe braking.

Risk of falling

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

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?



WARNING

Brake system not regularly serviced.

Risk of accident

- 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 motor-

cycle), 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.

WARNING

Risky riding.

Risk of accident despite ASC.

- Invariably, it remains the rider's responsibility to adapt riding style to riding conditions.
- Do not take risks that would negate the additional safety offered by this system. ◀

Special situations

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

The speeds of the front and rear wheels are compared 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).
- 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.



WARNING

Risky riding.

Risk of accident despite DTC.

- Invariably, it remains the rider's responsibility to adapt riding style to riding conditions.
- Do not take risks that would negate the additional safety offered by this system. ◀

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).

- 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 un-

able to control a situation of this nature.

Dynamic Damping Control

How does DDC work?

- with Dynamic Damping Control (DDC)^{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. Front-wheel damping also depends on the riding mode, but spring travel is not measured.

Accessories

General instructions.....	118
Luggage	118

General instructions



CAUTION

Use of other-make products.

Safety risk

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

BMW has conducted extensive testing of the parts and ac-

cessory products to establish that they are safe, functional and suitable. Consequently, BMW accepts product liability. BMW accepts no liability whatsoever for parts and accessories that it has not approved.

Whenever you are planning modifications, comply with all the legal requirements. Make sure that the vehicle does not infringe the national road-vehicle construction and use regulations applicable in your country. Your BMW Motorrad dealer can offer expert advice on the choice of genuine BMW parts, accessories and other products.

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

"www.bmw-motorrad.com".

Luggage

Loading



WARNING

Handling adversely affected by overloading and imbalanced loads.

Risk of falling

- Do not exceed the permissible gross weight and be sure to comply with the instructions on loading. ◀
- 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.



Payload of tank rucksack

≤5 kg◀

– with rear softbag^{OA}

- Note the maximum payload and the speed limit for riding with the rear softbag fitted.



Payload of rear softbag

max 5 kg



Maximum permissible speed for riding with the rear softbag fitted to the motorcycle

max 220 km/h<1

Maintenance

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General instructions

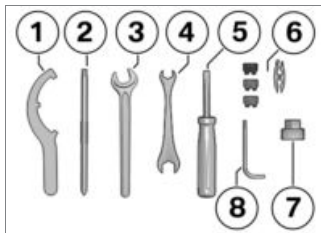
The Maintenance chapter describes straightforward procedures for checking and replacing certain wear parts.

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 (➡ 78).
- 2** Reversible screwdriver blade
Phillips PH1 and Torx T25
 - Removing and installing body panels.
 - Remove the front seat (➡ 62).
 - Replacing bulbs for front and rear turn indicators (➡ 153).
- 3** Open-ended spanner
Width across flats 17

- 3** – Mirror clamp
- 4** Open-ended spanner
Width across flats 10/13
 - Removing battery (➡ 159).
 - with Dynamic Damping Control (DDC)^{OE}
 - Adjusting spring preload for rear wheel (➡ 79).
 - Installing gearshift lever (➡ 101).
- 5** Reversible-blade screwdriver with star-head and plain tips
 - Adjusting compression-stage damping for front wheel (➡ 82).
 - Adjust the rebound-stage damping for front wheel (➡ 82).
 - Adjusting rebound-stage damping for rear wheel (➡ 83).

- 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 (DDC)^{OE}
– Adjusting spring preload for front wheel (► 80).
- 8** Torx bit, T25
– Removing and installing body panels.
– Remove the front seat (► 62).

Rear-wheel stand

Install the rear-wheel stand



ATTENTION

Vehicle topples to side when being lifted on to stand.

Risk of damage to parts if vehicle topples.

- Secure the vehicle to prevent it toppling, preferably with the assistance of a second person.◀
- 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.

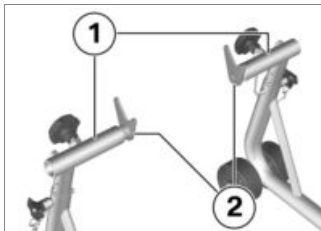


- Install adapter pins **1** in the rear wheel swinging arm on left and right and tighten to the specified torque.

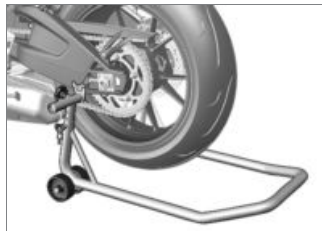


Swinging-arm adapter to rear wheel swinging arm

20 Nm



- 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



ATTENTION

Vehicle supported only on a front-wheel stand and its rear wheel.

Risk of damage to parts if vehicle topples.

- First prop the vehicle on the rear-wheel stand, then lift it with the front-wheel stand.◀



ATTENTION

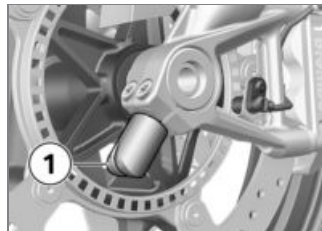
Vehicle topples to side when being lifted on to stand.

Risk of damage to parts if vehicle topples.

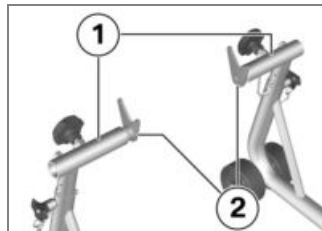
- Secure the vehicle to prevent it toppling, preferably with the assistance of a second person.◀
- Lift the motorcycle, preferably with a BMW Motorrad rear-wheel stand.
- Install the rear-wheel stand (123).



- 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



ATTENTION

The oil level varies with the temperature of the oil. The higher the temperature, the higher the level of oil in the sump.

Misinterpretation of the oil level

- Check the oil level only after a lengthy ride or when the engine is at operating temperature.◀
- Make sure the engine is at operating temperature and hold the motorcycle upright.
- Allow the engine to idle for one minute.

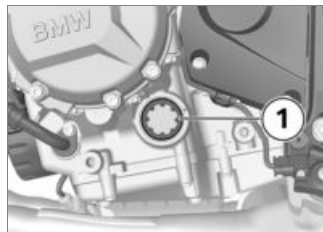


NOTICE

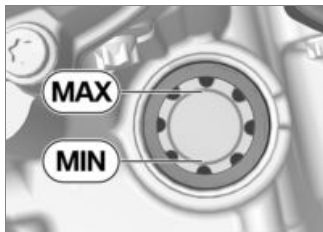
As a contribution to reducing environmental impact, BMW Motorrad recommends

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:

- Top up the engine oil (➡ 127).

If the oil level is above the MAX mark:

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

Top up the engine oil

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



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



ATTENTION

Not enough or too much engine oil.

Engine damage

- Always make sure that the oil level is correct.◀
- Top up the engine oil to the specified level.
- Checking engine oil level (➡ 126).
- Install oil filler cap **1**.

Brake system

Checking function of brakes

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

If pressure points are not clearly perceptible:



ATTENTION

Work on brake system not in compliance with correct procedure.

Risk to operational reliability of the brake system.

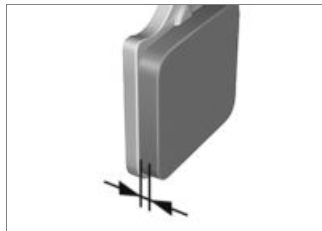
- Have all work on the brake system undertaken by trained and qualified specialists. ◀
- Have the brakes checked by a specialist workshop, preferably an authorised BMW Motorrad dealer.

Checking front brake pad thickness

- 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:



WARNING

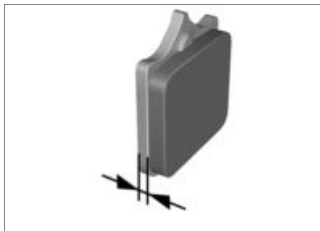
Brake-pad thickness less than permissible minimum.

Diminished braking effect. Damage to the brakes.

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

wear past the minimum permissible thickness.◀

- Have the brake pads replaced by a specialist workshop, preferably an authorised BMW Motorrad dealer.
- 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:



Use of unsuitable brake pads.

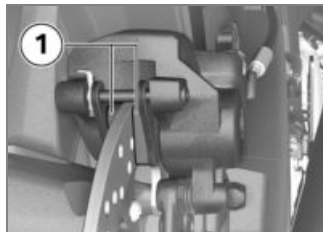
Failure of the brake system due to loss of the brake pads.

- 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:



WARNING

Brake-pad thickness less than permissible minimum.

Diminished braking effect. Damage to the brakes.

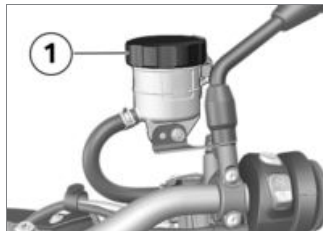
- In order to ensure the dependability of the brake system, do not permit the brake pads to

wear past the minimum permissible thickness. ◀

- Have the brake pads replaced by a specialist workshop, preferably an authorised BMW Motorrad dealer.

Checking brake-fluid level, front brakes

- 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**.



NOTICE

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



Brake fluid level, front

Brake fluid, DOT4

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

If the brake fluid level drops below the permitted level:



WARNING

Not enough brake fluid in brake fluid reservoir.

Considerably reduced braking power due to air in the brake system.

- Check the brake-fluid level at regular intervals.◀
- 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 motor-cycle upright.



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



NOTICE

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



Brake fluid level, rear

Brake fluid, DOT4

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

If the brake fluid level drops below the permitted level:



WARNING

Not enough brake fluid in brake fluid reservoir.

Considerably reduced braking power due to air in the brake system.

- Check the brake-fluid level at regular intervals. ◀
- Have the defect rectified as quickly as possible by a specialist workshop, preferably an authorised BMW Motorrad dealer.

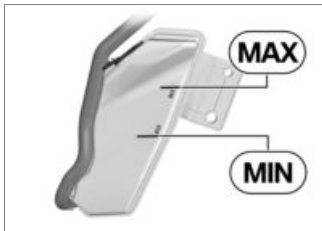
Coolant

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 direction: 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
(➡ 134).



- Open cap **1** of the expansion tank.
- Top up coolant to specified level.
- Check coolant level (➡ 132).
- Close the cap of the expansion tank.
- Installing right side panel
(➡ 134).

Body panels

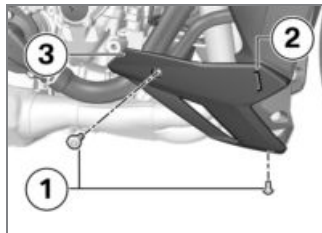
Removing right side panel



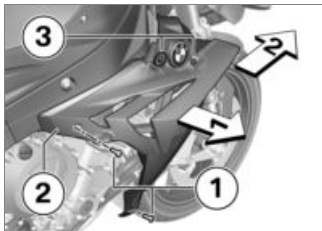
NOTICE

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}

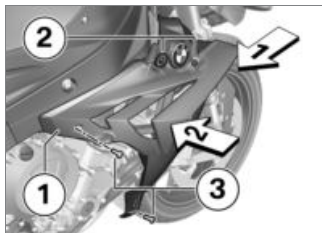


- Remove screws **1**.
- Disengage retaining hook **2**
and remove engine spoiler **3**.◀



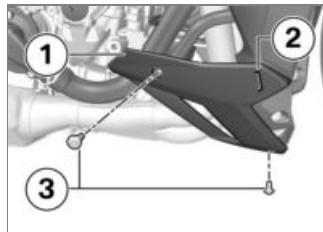
- Remove screws **1**.
- Disengage right side panel **2** from grommets **3**, taking care to start by disengaging the rear first, and then work the side panel forward to remove.

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**.

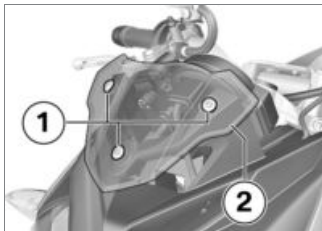
– with engine spoiler^{OE}



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

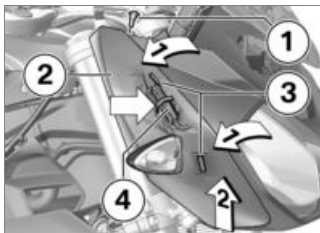
Removing headlight fairing

- Switching off ignition (➡ 41).

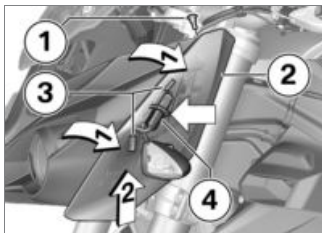


- Remove screws **1** and remove windscreen **2**.

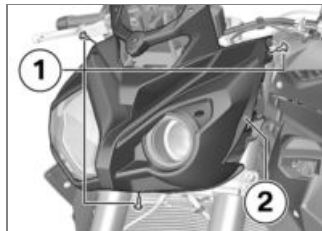
- Disconnect plug **4** for the flashing turn indicators.



- 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.

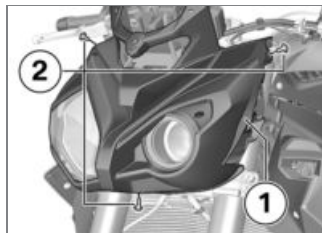


- Remove screw **1**.
- Ease left cover **2** aside and disengage it from both holders **3**.

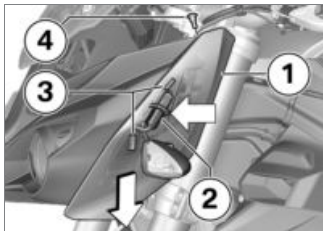


- Remove screws **1** and headlight fairing **2**.

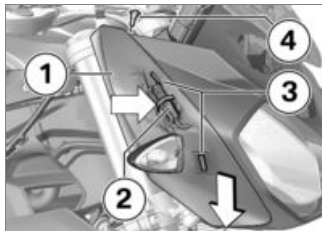
Installing headlight fairing



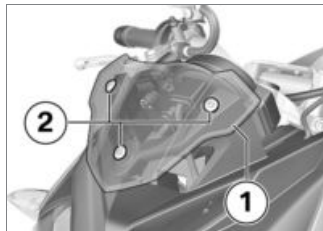
- Hold headlight fairing **1** in position and secure with screws **2**.



- 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

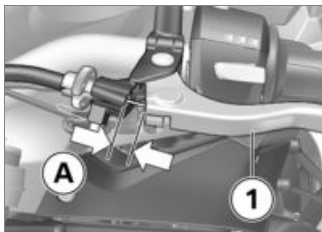
- Pull the clutch lever.
- » The pressure point must be clearly perceptible.

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.



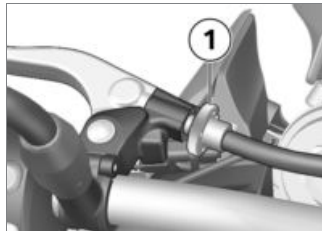
Clutch-lever play

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

Clutch play is out of tolerance:

- Adjust the clutch-lever play (➡ 137).

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 (➡ 137).

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

Chain

Lubricating chain



ATTENTION

Inadequate cleaning and lubrication of the drive chain.

Accelerated wear.

- 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.

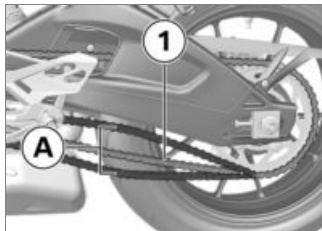


Chain deflection

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

If measured value is outside permitted tolerance:

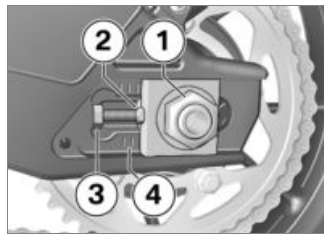
- Adjust the chain tension (► 138).



- 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**.

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 (► 138).

- 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

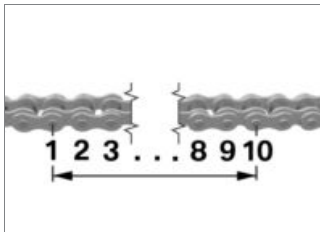
Thread-locking compound:
mechanical

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



WARNING

Riding with badly worn tyres

Risk of accident due to impaired handling

- If applicable, have the tyres changed in good time before they wear to the minimum tread depth permitted by law.◀

- 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.



NOTICE

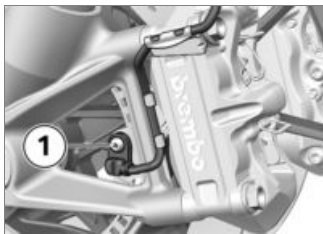
Wear indicators are built into the main profile grooves on each tyre. The tyre is worn out when the tyre tread has worn down to the level of the marks. The locations of the marks are indicated on the edge of the tyre, e.g. by the letters TI, TWI or by an arrow.◀

If the tyre tread is worn to minimum:

- Replace tyre or tyres, as applicable.

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.

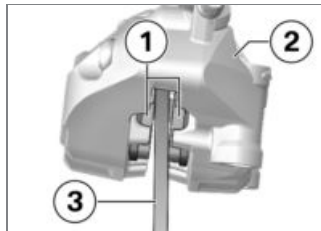


ATTENTION

Brake pads pushed together with brake caliper removed.

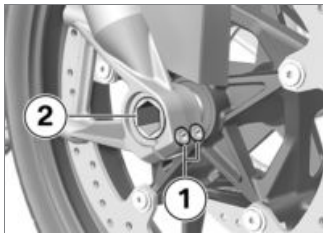
It is not possible to slip the brake caliper over the brake disc.

- Do not operate the brake lever while a brake caliper has 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 (► 123).
- 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 (► 124).



ATTENTION

Incorrectly aligned threaded bush in front suspension.

Damage to wheel speed sensor. ABS malfunction.

- Left axle clamping screws locate the threaded bush; do not loosen or remove these screws.◀

- 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



WARNING

Use of a non-standard wheel.

Malfunctions in operation of ABS and ASC/DTC.

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



ATTENTION

Tightening threaded fasteners to incorrect tightening torque.

Damage, or threaded fasteners work loose.

- Always have the security of the fasteners checked by a specialist workshop, preferably an authorised BMW Motorrad dealer.◀

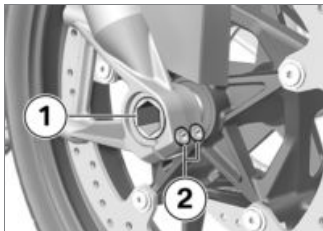


ATTENTION

Front wheel installed wrong way round.

Risk of accident

- Note direction-of-rotation arrows on tyre or rim.◀
- Roll the front wheel into position between the front forks.



- 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.

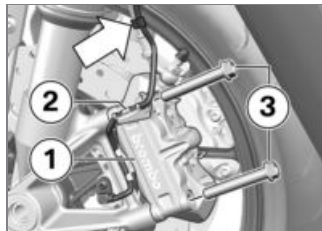


 Clamping screws in axle holder

Tightening sequence: Tighten screws six times in alternate sequence

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.

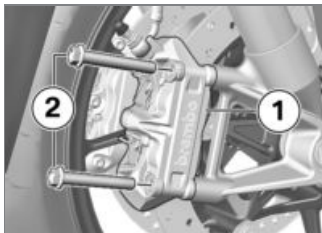
 Radial brake caliper to axle mount

38 Nm

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



- 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.



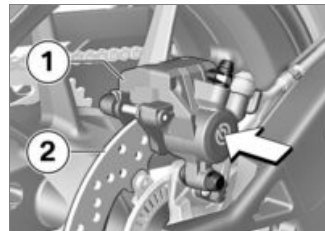
Radial brake caliper to axle mount

38 Nm

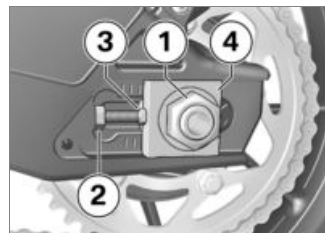
- Remove the adhesive tape from the wheel rim.
- Firmly pull the brake lever until the pressure point is perceptible, and repeat this operation several times.

Removing rear wheel

- Lift the motorcycle, preferably with a BMW Motorrad rear-wheel stand.
- Install the rear-wheel stand (→ 123).
- Slip wooden chocks or similar under the rear wheel to prevent it from dropping out after the quick-release axle has been removed.

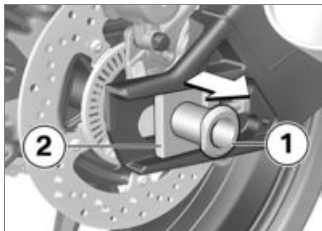


- Press brake caliper **1** against brake disc **2**
» Brake pistons are pushed back.



- 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.



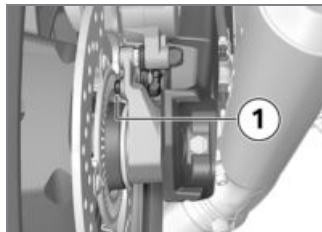
- Remove quick-release axle **1** and remove adjusting plate **2**.



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

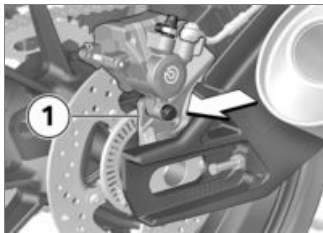


- Remove screw **1** and disengage the brake line from holder **2**.



- 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.



NOTICE

The sprocket and the spacer sleeves on left and right are loose fits in the wheel. Take care when removing to ensure that no parts are damaged or mislaid.◀

Installing the rear wheel



WARNING

Use of a non-standard wheel.

Malfunctions in operation of ABS and ASC/DTC.

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



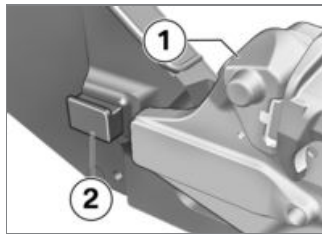
ATTENTION

Tightening threaded fasteners to incorrect tightening torque.

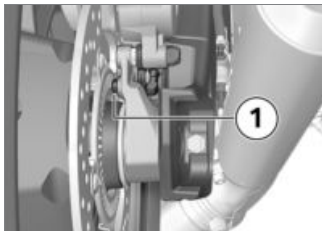
Damage, or threaded fasteners work loose.

- Always have the security of the fasteners checked by a specialist workshop, preferably an authorised BMW Motorrad dealer.◀

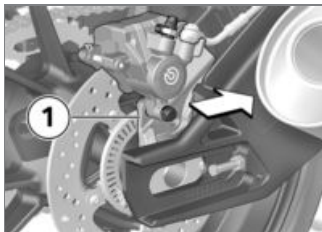
- Roll the rear wheel on the support into the swinging arm as far as necessary to permit the brake-caliper carrier to be inserted.



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



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

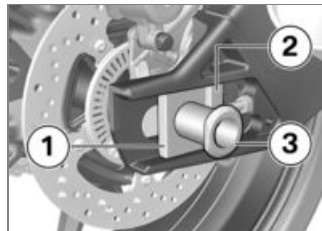


- Roll the rear wheel further into the swinging arm, while push-

ing brake-caliper carrier **1** forward at the same time.



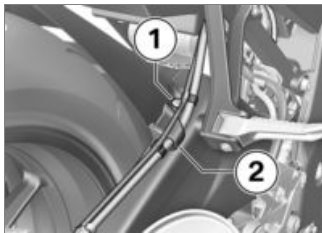
- Roll the rear wheel as far forward as possible and loop chain **1** over the sprocket.



- 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 (➡ 138).

Lighting

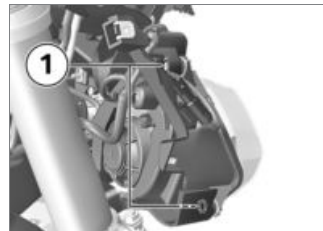
Replacing bulb for low-beam headlight



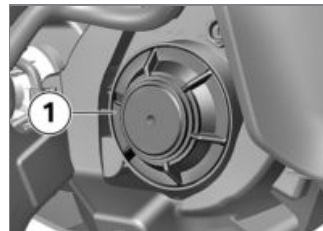
NOTICE

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

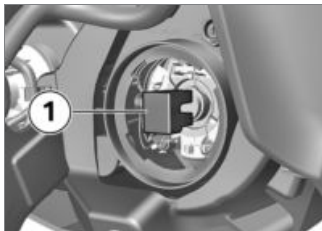
- Switching off ignition (➡ 41).
- Removing right cover (➡ 135).



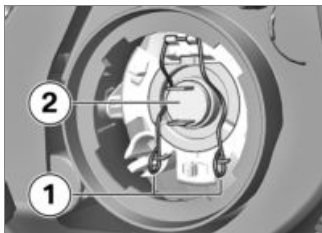
- Remove screws **1** and tilt the right headlight slightly to the side.



- 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.



NOTICE

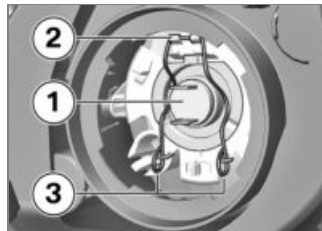
Bulbs with higher light-intensity ratings are available through aftermarket suppliers. These bulbs burn out more rapidly and generate more heat than conventional bulbs. Under adverse conditions the extra heat can cause damage to the headlight. ◀



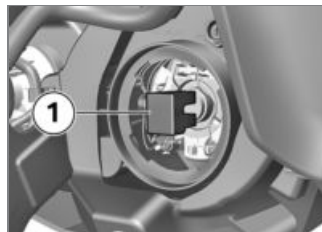
Bulbs for the low-beam headlight

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 (➡ 136).

Replacing bulb for high-beam headlight

- Switching off ignition (➡ 41).
- Removing left cover (➡ 135).



- 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.



NOTICE

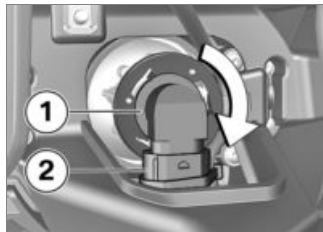
Bulbs with higher light-intensity ratings are available through aftermarket suppliers. These bulbs burn out more rapidly and generate more heat than conventional bulbs. Under adverse conditions the extra heat can cause damage to the headlight. ◀



Bulb for high-beam headlight

HB3 / 12 V / 60 W

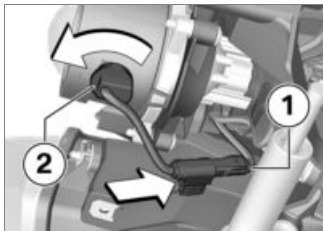
- Hold the bulb by the base only, in order to keep the glass free of foreign matter.



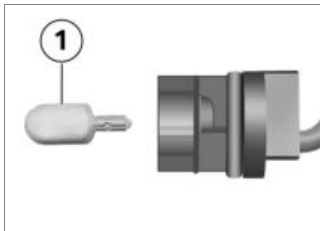
- To secure bulb **1** for the high-beam headlight, seat the bulb in the carrier and turn it clockwise.
- Connect plug **2** for the high-beam headlight.
- Installing left cover (➡ 136).

Replacing bulb for left parking light

- Switching off ignition (➡ 41).
- Removing headlight fairing (➡ 134).



- 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.



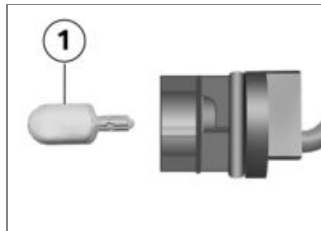
- Remove bulb **1** from the socket.
- Replace the defective bulb.



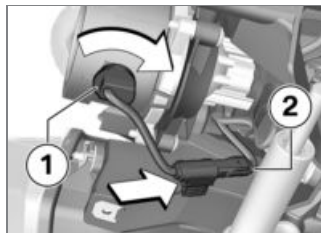
Bulb for parking light

W3W / 12 V / 3 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.

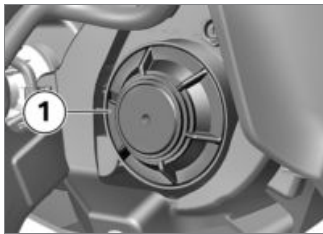


- Insert socket **1** into the carrier and turn it clockwise.
- Seat the plug in the holder **arrow** and connect it to plug **2**.

- Installing headlight fairing (➡ 135).

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 (➡ 135).



- 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

W3W / 12 V / 3 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).



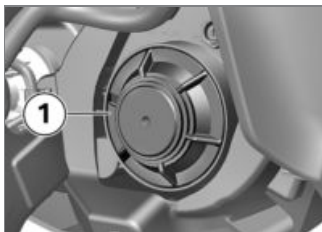
- Insert socket **1** into the headlight housing, making sure that the retainer engages.



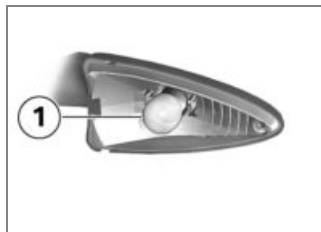
- Remove screw **1**.



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



- Install cover **1**.
- Installing right cover (▮▮▮ 136).



- 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<



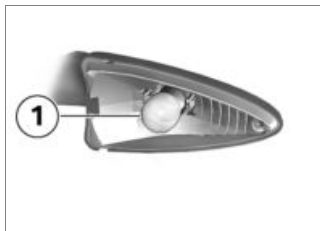
Bulbs for flashing turn indicators, rear

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.



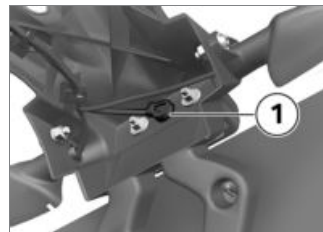
- Working from the inboard side, insert the glass into the light housing and close the housing.



- 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.

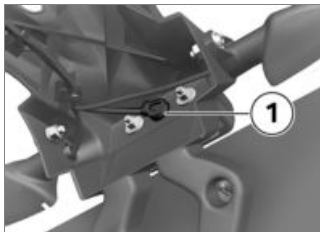
 Bulb for number-plate light

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



ATTENTION

Jumpering of blown fuses.

Risk of 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 (►► 61).



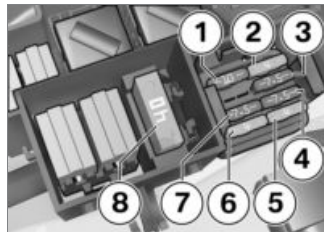
- Squeeze the latches together and remove cover of fuse box **1**.
- To replace the main fuse, remove cover **2** of the relay box.
- Pull the defective fuse up and out of the fuse box.



NOTICE

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.



NOTICE

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 (►► 61).

Jump-starting

CAUTION

Touching live parts of the ignition system when the engine is running.

Electric shock

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

ATTENTION

Excessive current flowing when the motorcycle is jump-started

Wiring smoulders/ignites or damage to the on-board electronics

- If the motorcycle has to be jump-started connect the leads to the battery terminals; never attempt to jump-start the engine by connecting leads to the on-board socket.◀

ATTENTION

Contact between crocodile clips of jump leads and vehicle.

Risk of short-circuit

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

ATTENTION

Jump-starting with a voltage greater than 12 V.

Damage to the on-board electronics.

- Make sure that the battery of the donor vehicle has a voltage rating of 12 V.◀
- When jump-starting the engine, do not disconnect the battery from the on-board electrical system.
- Remove the front seat (►► 62).

- 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 (🔧➔ 62).

Battery

Maintenance instructions

Correct upkeep, recharging and storage will prolong the life of the battery and are essential if warranty claims are to be considered.

Compliance with the points below is important in order to maximise battery life:

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

- Do not turn the battery upside down.



ATTENTION

On-board electronics (e.g. clock) draining connected battery.

Battery is deep-discharged; this voids the guarantee.

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



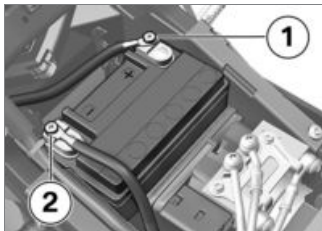
NOTICE

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

tems. 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 (🔧➔ 62).



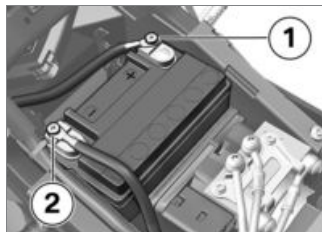
ATTENTION

Battery not disconnected in accordance with correct procedure.

Risk of short-circuit

- Always proceed in compliance with the specified disconnection 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 (►► 62).

Recharging battery

- Disconnecting battery from motorcycle (►► 158).
- Charge the battery using a suitable charger.

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



NOTICE

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

- Connecting battery to motorcycle (►► 159).

Removing battery

- Remove the front seat (►► 62).
- Disconnecting battery from motorcycle (►► 158).
- Lift the battery up and out; work it slightly back and forth if it is difficult to remove.

Installing battery



NOTICE

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 (➡ 159).

- Installing front seat (➡ 62).
- Setting the clock (➡ 44).

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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.



ATTENTION

Use of unsuitable cleaning and care products.

Damage to vehicle parts.

- Do not use solvents such as cellulose thinners, cold cleaners, fuel or the like, and do not use cleaning products that contain alcohol.◀

Washing the vehicle

BMW Motorrad recommends that you use BMW insect remover to soften and wash off insects and stubborn dirt on painted parts prior to washing the motorcycle.

To prevent stains, do not wash the vehicle immediately after it has been exposed to strong sunlight and do not wash it in the sun.

Make sure that the vehicle is washed frequently, especially during the winter months.

To remove road salt, clean the motorcycle with cold water immediately after every trip.



WARNING

Wet brake discs and brake pads after vehicle wash, after riding through water and in rainy conditions.

Diminished braking effect.

- Apply the brakes in good time to allow the friction and heat to dry the brake discs and brake pads.◀



ATTENTION

Effect of road salt intensified by warm water.

Corrosion

- Use only cold water to wash off road salt.◀



ATTENTION

Damage due to high water pressure from high pressure cleaners or steam cleaners.

Corrosion or short-circuit, damage to seals, to the hydraulic brake system, to the electrics and the seat.

- Exercise restraint when using a steam jet or high-pressure cleaning equipment.◀



NOTICE

Aluminium cases and topcases do not have a surface coating. Care in accordance with the instructions set out below will help ensure the best possible appearance:

Remove road salt and corrosive deposits by cleaning with cold water immediately after every trip.◀

Cleaning easily damaged components

Plastics



ATTENTION

Use of unsuitable cleaning agents.

Damage to plastic surfaces.

- Do not use cleaning agents that contain alcohol, solvents or abrasives.

- Do not use insect-remover pads or cleaning pads with hard, scouring surfaces.◀



NOTICE

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.



NOTICE

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.



ATTENTION

Radiator fins easily bent.

Damage to radiator fins.

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

Rubber

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



ATTENTION

Application of silicone sprays to rubber seals.

Damage to the rubber seals.

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

Paint care

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

Remove particularly aggressive substances immediately, however, as otherwise the paint can

be affected or become discoloured. Substances of this nature include spilt fuel, oil, grease, brake fluid and bird droppings. We recommend BMW vehicle polish or BMW paint cleaner for this purpose.

Marks on the paintwork are particularly easy to see after the 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.

Laying up the motorcycle

- Clean the motorcycle.
- Fill the motorcycle's fuel tank.
- Removing battery (🔧 159).

- 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 (preferably using the front-wheel and rear-wheel stands from BMW Motorrad).

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 paintwork when water "puddles" on the surface, instead of forming beads.

Restoring motorcycle to use

- Remove the protective wax coating.
- Clean the motorcycle.
- Installing battery (▮▮▮ 160).
- Comply with checklist (▮▮▮ 94).

Technical data

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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 (103).
Battery flat	Recharge the battery.

Threaded fasteners

Front wheel	FR	Valid
Quick-release axle in threaded bush		
M24 x 1.5	50 Nm	
Clamping screws in axle holder		
M8 x 35	Tighten screws six times in alternate sequence	
	19 Nm	
Radial brake caliper to axle mount		
M10 x 65	38 Nm	
Rear wheel	FR	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		FR	Valid
Swinging-arm adapter to rear wheel swinging arm			
M8 x 30		20 Nm	
Spring strut to main frame			
M10 x 65		56 Nm	
Mirrors		FR	Valid
Locknut (mirror) to clamping piece			
M14 x 1 Multi-wax spray		20 Nm	

Engine

Engine design	Water-/oil-cooled four-cylinder four-stroke inline engine, four valves per cylinder, two overhead camshafts
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
Fuel reserve	approx. 4 l

Engine oil

Engine oil, capacity	approx. 3.5 l, with filter change
Specification	SAE 5W-40, API SL / JASO MA2, Additives (e.g. molybdenum-based) are not permissible because they can attack coated components of the engine, BMW Motorrad recommends BMW Motorrad ADVANTEC Ultimate oil
Engine oil, quantity for topping up	max 0.8 l, Difference between MIN and MAX

BMW recommends **ADVANTEC**
ORIGINAL BMW ENGINE OIL

Clutch

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

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 rear suspension	Aluminium double 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	Aluminium double swinging arm
Type of final drive	Chain drive
Spring travel, rear	120 mm, at wheel

Brakes

Type of front brake	Hydraulically radially operated twin disc brake with 4-piston radial fixed 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	Your authorised BMW Motorrad dealer will be happy to supply an up-to-date list of the approved wheel/tyre combinations, or you can check the information posted on the bmw-motorrad.com website.
Speed category, front/rear tyres	W, required at least: 270 km/h

Front wheel

Front wheel type	Aluminium cast wheel
Front wheel rim size	3.50" x 17"
Tyre designation, front	120/70 ZR 17
Load index, front tyre	min. 48
Permissible front-wheel imbalance	max 5 g

Rear wheel

Rear-wheel type	Aluminium cast wheel
Rear wheel rim size	6.0" x 17"
Tyre designation, rear	190/55 ZR 17
Load index, rear tyre	min. 63
Permissible rear-wheel imbalance	max 45 g

Tyre pressure

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

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	HB3 / 12 V / 60 W
Bulbs for the low-beam headlight	H7 / 12 V / 55 W
Bulb for parking light	W3W / 12 V / 3 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



WARNING

Maintenance and repair work not in compliance with correct procedure.

Risk of accident due to subsequent damage.

- BMW Motorrad recommends you to have all the associated work on your motorcycle car-

ried out by a specialist workshop, preferably an authorised BMW Motorrad dealer. ◀

In order to help ensure that your BMW is always in optimum condition, BMW Motorrad recommends compliance with the maintenance intervals specified for your motorcycle. Have all maintenance and repair work that is carried out confirmed in the "Service" chapter in this manual. For generous treatment of claims submitted after the warranty period has expired, evidence of regular maintenance is essential.

Your authorised BMW Motorrad dealer can provide information on BMW services and the work undertaken as part of each service.

BMW Motorrad Mobility services

As owner of a new BMW motorcycle, in circumstances in which assistance is required you can benefit from the protection afforded by the various BMW Motorrad mobility services (e.g. Mobile Service, breakdown service, vehicle recovery service). Your authorised BMW Motorrad dealer will be happy 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

500...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-

[illegible]

Maintenance schedule

- 1** BMW Running-in check
- 2** Standard BMW service
( 186)
- 3** Engine-oil change, with filter
- 4** Check valve clearance
- 5** Checking timing
- 6** Replace all spark plugs
- 7** Replacing air filter
- 8** Oil change in the telescopic forks
- 9** Change brake fluid, entire system
 - a** annually or every 10,000 km (whichever comes first)
 - b** for the first time after one year, then every two years

Standard BMW service

A standard BMW service consists of the following maintenance work:

- Perform vehicle test with the BMW Motorrad diagnosis system.
- Visually inspect the brake pipes, brake hoses and connections.
- Check the front and rear brake-fluid levels.
- Check the front and rear brake pads and brake discs for wear.
- Check the steering-head bearing.
- Check the coolant level.
- Check the fastener of the clutch lever fitting.
- Check the clutch cable and clutch-lever play.
- Lubricate the clutch mechanism.
- Check the drive chain, sprocket and pinion.
- Check the tyre pressures and tread depth.
- Check the ease of movement of the side stand.
- Lubricate the side stand.
- Check the lights and signalling equipment.
- Check that the engine start suppression system is in working order.
- Perform final inspection and check of roadworthiness.
- Set the service-due date and service countdown distance.
- Check the battery charge state.
- Confirm BMW service in the on-board documentation.

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 _____

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

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Odometer reading _____

Next service
at the latest

on _____

or, if logged beforehand,

Odometer reading _____

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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

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

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

[illegible]

Item	Odometer reading	Date

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FCC Approval

Ring aerial in the ignition switch



To verify the authorization of the ignition key, the electronic immobilizer exchanges information with the ignition key via the ring aerial.

This device complies with Part 15 of the FCC rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) this device must accept any interference received, including interference that may cause undesired operation.



Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. ◀

Approbation de la FCC

Antenne annulaire présente dans le commutateur d'allumage



Pour vérifier l'autorisation de la clé de contact, le système d'immobilisation électronique échange des

informations avec la clé de contact via l'antenne annulaire.

Le présent dispositif est conforme à la partie 15 des règles de la FCC. Son utilisation est soumise aux deux conditions suivantes :

- (1) Le dispositif ne doit pas produire d'interférences nuisibles, et
- (2) le dispositif doit pouvoir accepter toutes les interférences extérieures, y compris celles qui pourraient provoquer une activation inopportune.



Toute modification qui n'aurait pas été approuvée expressément par l'organisme responsable de l'homologation peut annuler l'autorisation accordée à l'utilisateur pour utiliser le dispositif. ◀

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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.

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Fuel

Fuel reserve	approx. 4 l
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Tyre pressure, rear 2.9 bar, Tyre cold

BMW recommends **ADVANTEC**
ORIGINAL BMW ENGINE OIL

