Rider's Manual (US Model)

HP2 Sport



BMW Motorrad

The Ultimate Riding Machine

Motorcycle/Retailer Data

Motorcycle data

Model

Vehicle Identification Number

Color number

First registration

Registration number

Retailer Data

Contact in Service

Ms./Mr.

Phone number

Retailer's address/phone number (company stamp)

Welcome to BMW

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

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

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

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

If you have any questions concerning your motorcycle, your authorized BMW Motorrad retailer is always happy to provide advice and assistance.

We wish you many miles of safe and enjoyable riding

BMW Motorrad.

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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 carried out on your motorcycle will be documented in Chapter 13. Proof of the maintenance work performed is a prerequisite for generous treatment of claims. When the time comes to sell your BMW, please remember to hand over this Rider's Manual; it is an important part of the motorcycle.

Abbreviations and symbols

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

Special information on operating and inspecting your motorcycle as well as maintenance and adjustment procedures.

◀ Indicates the end of an item of information.

• Instruction.

» Result of an activity.

Reference to a page with more detailed information.

◁ Indicates the end of accessory or equipment-dependent information.

Tightening torque.

Technical data.

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

OA Optional accessories
BMW optional accessories can be purchased and installed at your authorized BMW Motorrad retailer.

EWS Electronic immobilizer.

ABS Anti-Lock Brake System.

Equipment

When you ordered your BMW motorcycle, you chose various items of custom equipment. This Rider's Manual describes optional equipment (OE) offered by BMW and selected optional accessories (OA). This explains why the manual may also contain descriptions

of equipment which you have not ordered. Please note, too, that your motorcycle might not be exactly as illustrated in this manual on account of country-specific differences.
If your BMW is equipped with options or accessories not described in this Rider's Manual, then this equipment is described in a separate operating manual.

Technical data

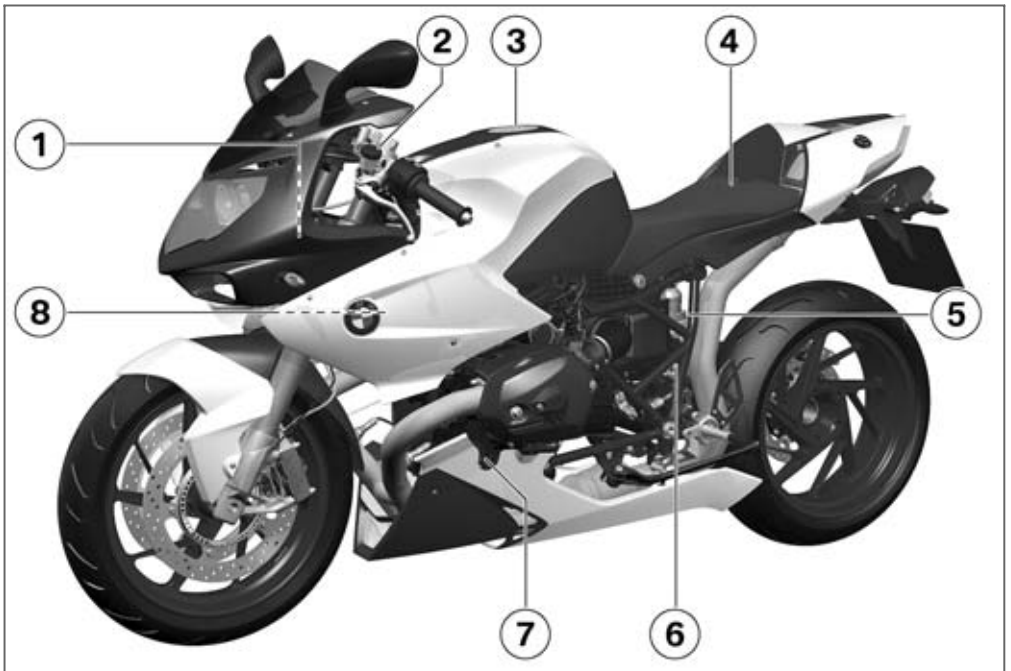
All dimensions, weights and outputs in the Rider's Manual refer to the Deutsche Institut für Normung e. V. (DIN) and comply with its tolerance regulations. Versions for individual countries may differ.

Currentness of this manual

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

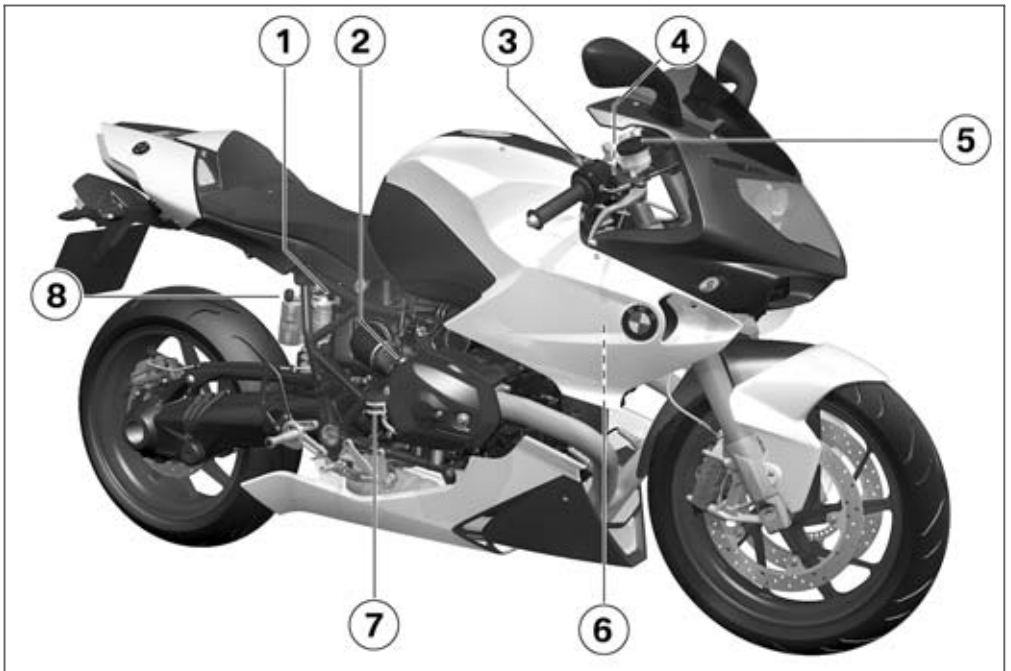
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General view, left side

1 Headlight range adjustment (below instrument cluster) (➡ 80)
2 Clutch fluid reservoir (➡ 125)
3 Fuel filler opening (➡ 92)
4 Seat lock (➡ 80)
5 Adjuster for spring preload, rear (➡ 67)
6 Adjustment of rear damping (rebound) (➡ 72)
7 Oil level indicator (➡ 119)
8 Adjustment of front spring preload (behind side panel) (➡ 67)

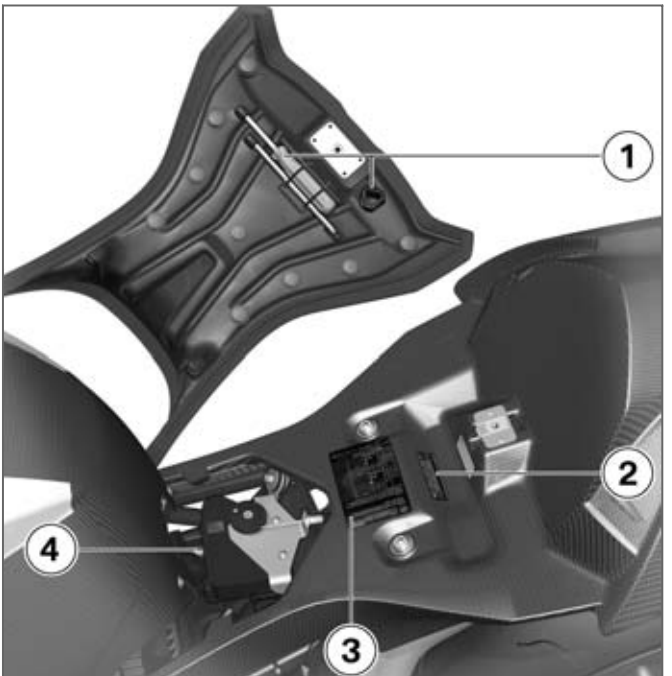

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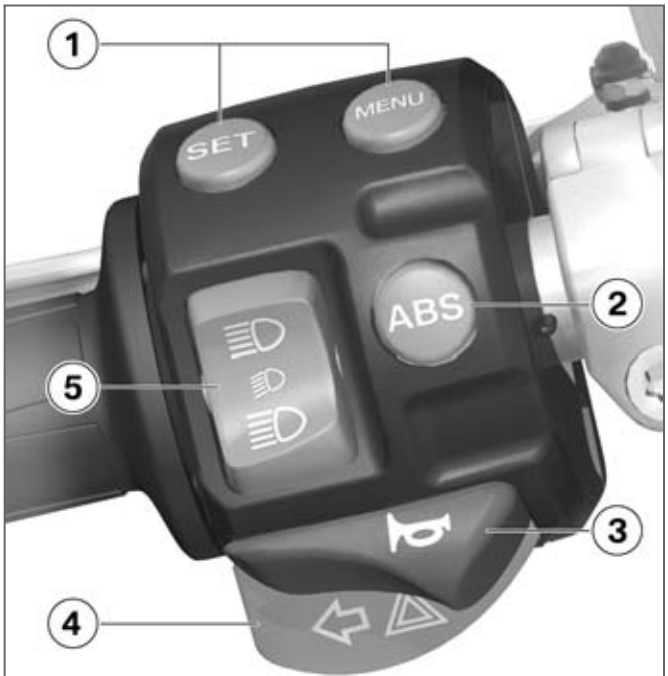
General view, right side

1 Onboard socket [OA] (➡ 108)
2 Engine oil fill location (➡ 120)
3 Adjustment of front damping (rebound, before fuel fill location) (➡ 72)
4 Vehicle Identification Number (below upper fork bridge)
5 Brake-fluid reservoir, front (➡ 123)
6 Adjustment of front damping (compression) (➡ 72)
7 Brake-fluid reservoir, rear (➡ 123)
8 Adjustment of rear damping (compression) (➡ 72)

Underneath seat

1 Onboard toolkit
2 Type plate
3 Tire inflation pressure table
4 Battery (➟ 141)



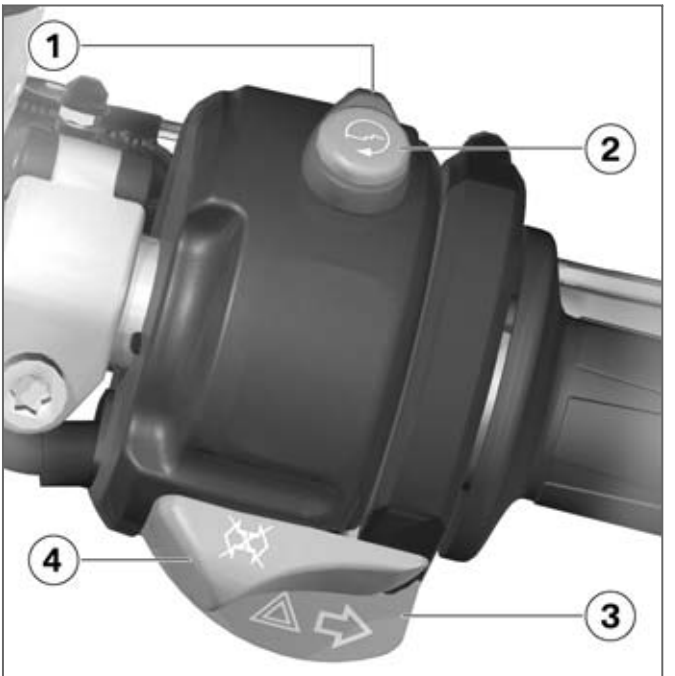


Left handlebar fitting

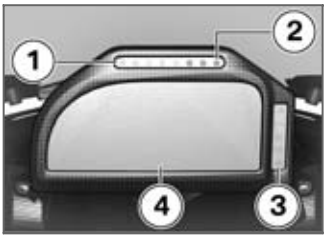
1 Operating instrument cluster (➡ 32)
2 ABS operation OE (➡ 61)
3 Horn
4 Flashing turn indicators, left (➡ 59), Hazard warning flashers (➡ 59)
5 Headlight flasher and high-beam headlight (➡ 58)

Handlebar fitting, right

1 Emergency ON/OFF switch (➡ 60)
2 Starter button (➡ 86)
3 Flashing turn indicators, right (➡ 59), Hazard warning flashers (➡ 59)
4 Turn indicators off (➡ 59), Hazard warning flashers off (➡ 60)

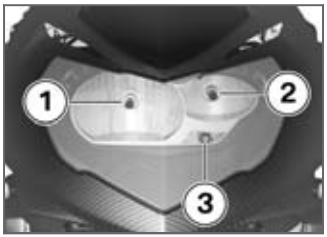


Instrument cluster



1 LED strip for visualizing warm-up phase (➡ 87), For visualizing engine speed limit (➡ 21), Shifting flash (➡ 36)
2 Ambient brightness sensor (for brightness adjustment of LEDs and indicator lights)
3 Indicator lights (➡ 21)
4 Multifunction display (➡ 20)

Headlight



1 Low-beam headlight
2 High-beam headlight
3 Parking lights

Status indicators

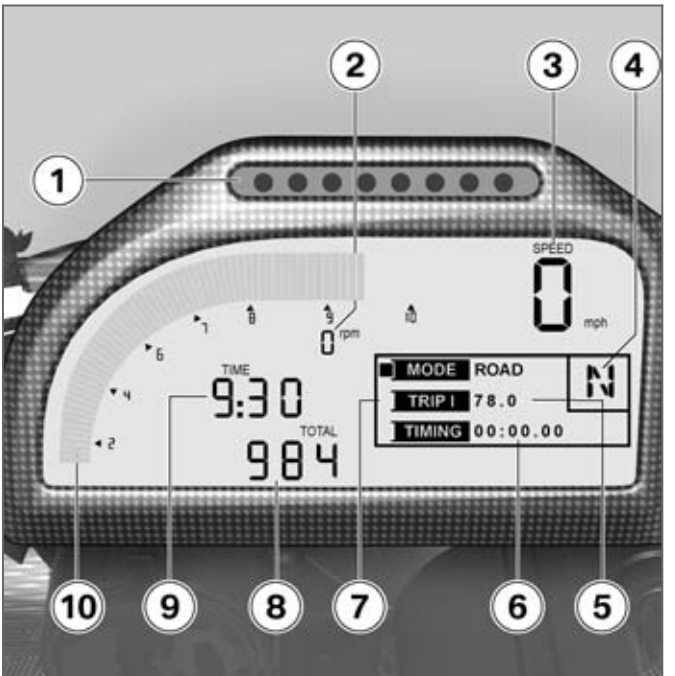
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Displays in ROAD mode

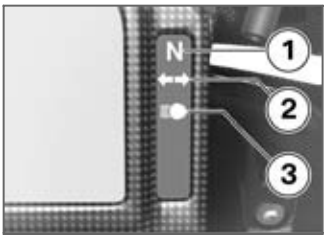
Multifunction display

1 LED strip for visualizing warm-up phase (➡ 87), For visualizing engine speed limit (➡ 21)
2 Tachometer (digital display)
3 Speedometer
4 Gear indicator (➡ 21)
5 Trip meter (➡ 34)
6 Stopwatch (➡ 35)
7 Control panel (➡ 32)
8 Odometer
9 Clock (➡ 47)
10 Tachometer (analog display)

The ROAD mode is the default mode for road operation. The other modes are described in the following chapters.◀



Indicator lights



1 Idling
2 Turn indicators
3 High-beam headlight

Gear indicator

N The gear engaged or N for neutral appears on the display.

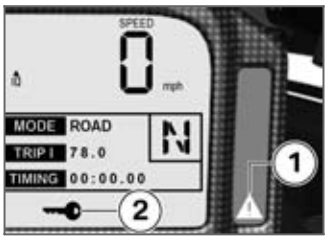
N If no gear is engaged, the 'neutral' indicator light also lights up.

Engine speed warning

When approaching the engine speed limit, the four right-hand LEDs light up consecutively, and if the engine speed continues to increase, all four LEDs begin to flicker.

Warning indicators

Display



Warnings are indicated with the general warning light **1** in combination with one of the warning symbols, e.g. **2**. The 'General' warning light shows red or yellow, depending on the urgency of the warning. If several warnings are active, all corresponding warning lights and warning symbols are displayed.
The possible warnings are listed on the next page.

Overview of warning indicators

Indicator lights	Displays	Meaning
 Lights up yellow	 Is indicated	Electronic immobilizer is active (➡ 24)
 Lights up yellow	 Flashes	Fuel down to reserve (➡ 24)
 Lights up yellow	 Is indicated	Engine in emergency-operation mode (➡ 24)
 Flashes red	 Is indicated	Engine oil pressure insufficient (➡ 25)
 Lights up red	 Is indicated	Battery charge current insufficient (➡ 25)
	 Is indicated	Rear bulb defective (➡ 25)
	 Is indicated	Front bulb defective (➡ 26)
	 Is indicated	Bulb defective (➡ 26)

Electronic immobilizer is active

General warning light shows yellow.

Key symbol is displayed.

Possible cause:

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

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

Fuel down to reserve

General warning light shows yellow.

Gas pump symbol flashes.

A fuel shortage can lead to misfiring and to the engine dying unexpectedly. Misfiring can damage the catalytic converter, and the engine dying unexpected can lead to accidents.
Do not drive until the fuel tank is completely empty.◀

Possible cause:

At the most, the fuel tank still contains the reserve fuel quantity.

Reserve fuel quantity
– ≥3.2 quarts (≥3 l)

- Refueling (➨ 92)

Engine in emergency-operation mode

General warning light shows yellow.

Engine symbol appears on the display.

The engine is in the emergency operating mode. Only reduced engine performance may be available, which can lead to danger driving situations, especially during passing maneuvers.
Adapt your driving style to the possibly reduced engine performance.◀

Possible cause:

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

- Continued driving is possible, however the accustomed engine performance may not be available.
- Have the malfunction corrected as soon as possible by a specialized workshop, preferably

an authorized BMW Motorrad retailer.

Engine oil pressure insufficient


General warning light flashes red.


Oil-can symbol appears on the display.

The oil pressure in the lubricating oil circuit is too low. Stop immediately and switch off the engine.

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

Possible cause:

The engine oil level is too low.

- Checking engine oil level (➡ 119)

If oil level is too low:

- Topping up engine oil (➡ 120)

Possible cause:

The engine oil pressure is insufficient.

Driving with insufficient engine oil pressure can result in engine damage.
Do not continue driving.◀

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

Battery charge current insufficient


General warning light shows red.


Battery symbol appears on the display.

A discharged battery leads to the failure of various motorcycle systems, e.g. lighting, engine or ABS. This can result in dangerous driving situations.
If possible, do not continue driving.◀

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

Alternator or alternator belt defective

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

Rear bulb defective


Lamp symbol with arrow pointing to the rear is displayed.

A defective bulb places your safety at risk because it is easier for other users to oversee the motorcycle.

Replace defective bulbs as quickly as possible.◀

Possible cause:

Taillight or brake light bulb defective.

- The diode taillight can only be completely replaced. Please contact a specialized workshop for this purpose, preferably an authorized BMW Motorrad retailer.

Front bulb defective

 Lamp symbol with arrow pointing to the front is displayed.

 A defective bulb places your safety at risk because it is easier for other users to oversee the motorcycle.
Replace defective bulbs as soon as possible; always carry a complete set of spare bulbs if possible.◀

Possible cause:

Low-beam headlight, high-beam headlight or parking-light bulb defective.

- Replacing low-beam/high-beam bulb (➡ 135)
- Replacing parking light bulb (➡ 137)

Bulb defective

 Lamp symbol with arrows is displayed

 A defective bulb places your safety at risk because it is easier for other users to oversee the motorcycle.
Replace defective bulbs as soon as possible; always carry a complete set of spare bulbs if possible.◀

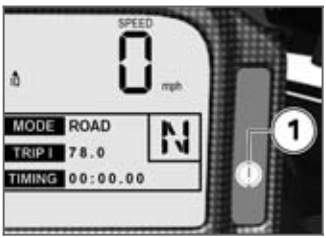
Possible cause:

Turn indicator bulb or several bulbs defective.

- Locate defective bulb with visual check.
- Replacing low-beam/high-beam bulb (➡ 135)
- Replacing parking light bulb (➡ 137)
- Replacing front and rear turn indicator bulbs (➡ 138)
- The diode taillight can only be completely replaced. Please contact a specialized workshop for this purpose, preferably an authorized BMW Motorrad retailer.

ABS warning indicators[OE]

Display



ABS warnings are indicated by the ABS warning light **1**.

Additional information on the BMW Motorrad ABS is provided from page (➠ 96); an overview of the possible warnings is provided on the following page.

Overview of warning indicators

Indicator lights	Displays	Meaning
	Flashes	Self-diagnosis not completed (➡ 29)
	Lights up	ABS deactivated (➡ 29)
	Lights up	ABS error (➡ 29)

Self-diagnosis not completed


ABS warning light flashes.

Possible cause:

The ABS function is not available, because the self-diagnosis has not been completed. To check the wheel sensors, the motorcycle must be driven a few yards.

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

ABS deactivated


ABS warning light lights up.

Possible cause:

The ABS system has been deactivated by the driver.

– with BMW Motorrad ABS OE

- Switching on ABS function (➡ 61)

ABS error


ABS warning light lights up.

Possible cause:

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

- Continued driving is possible while taking the failed ABS function into account. Observe additional information on situations which can lead to an ABS error (➡ 97).
- Have the malfunction corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Instrument cluster

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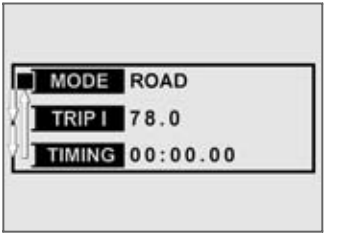
Diversity

The instrument cluster offers a broad range of views and adjustment options.
The ROAD mode provides all information required for operation on public roads. In the RACE mode the information important for racetrack operation is shown. This can be saved for each race lap and displayed again in the INFO mode.
The SETUP mode enables the instrument cluster to be adapted to personal preferences.

Operation



- The cursor is positioned before the desired line on the control panel with the MENU button **2**.



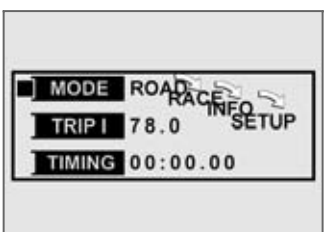
Each time the MENU button is pressed, the cursor jumps to the next line.

If the left-hand end of the line is open, it can be selected.

If the left-hand end of the line is closed, it cannot be selected.

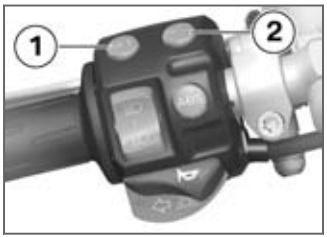


- The selected line is operated with the SET button **1**.

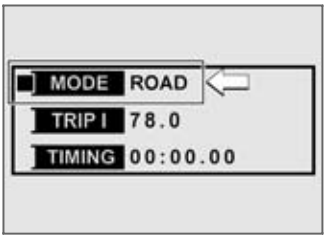


When the SET button is pressed, the next option is displayed.

Selecting display mode



- Press MENU button **2** repeatedly until cursor is located before MODE field.
- Press SET button **1**.

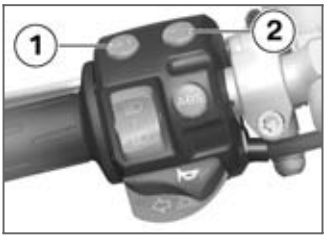


Each time the button is pressed, the display shows modes starting with the current mode in the following order:

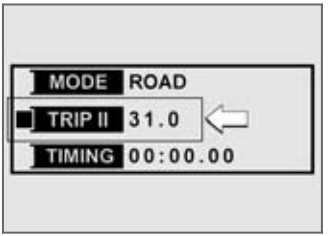
– Road operation (ROAD)
– Racetrack operation (RACE)
– Displaying of stored racing data (INFO) (only with motorcycle stopped)
– Basic settings (SETUP) (only with motorcycle stopped)

ROAD mode

Selecting odometer



- Press MENU button **2** repeatedly until cursor is located before middle field.
- Press SET button **1**.



Each time the button is pressed, the display shows values starting with the current value in the following order:

– Tripmeter 1 (Trip I)
– Tripmeter 2 (Trip II)
– Operating range (RANGE) (after reaching reserve quantity)

Resetting tripmeter

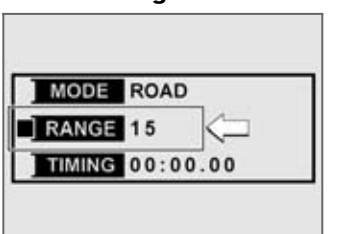
- Select desired tripmeter.



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

» Tripmeter is reset.

Residual range



The operating range is displayed together with the lettering RANGE and indicates what

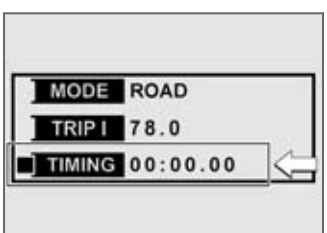
distance can still be driven with the remaining fuel. It is only displayed after the fuel reserve is reached. This distance is calculated on the basis of fuel level and average consumption. When refueling after running on reserve, make sure that you top up the tank to a level above reserve, as otherwise the sensor will not be able to register the new level. Otherwise neither the fill level nor the operating range display can be updated.

The determined residual range is an approximate reading. BMW Motorrad therefore recommends that you do not try to use the full remaining range before refueling.◀

Operating stopwatch



- Press MENU button **2** repeatedly until cursor is located before TIMING field.





- Press SET button **1** with stopwatch stopped.
» Stopwatch runs starting from indicated time in steps of one-tenth of a second.
» Stopwatch continues to run even after a mode change or after switching off ignition.
- Press SET button with stopwatch running.
» Stopwatch shows the time measured.
- Press and hold SET button.
» Stopwatch is reset.

RACE mode

Display in RACE mode

In the RACE mode information on each race lap is displayed and saved. Operation is carried out via the SET button on the handlebar or via an infrared sensor available as an optional accessory. The information can then be displayed in the INFO mode with the motorcycle stopped.
The LED strip acts as a shifting flash in the RACE mode. The engine speed threshold can be set for each LED.
The display can be shown as a LAP Monitor or as a SPEED Monitor.

Displays of LAP Monitor:

– expired time of current lap
– fastest lap time
– number of laps covered
– expired race time

If a lap has been completed, the measured time is frozen for an adjustable time for improved readability. Then the expired time of the current lap is shown again.

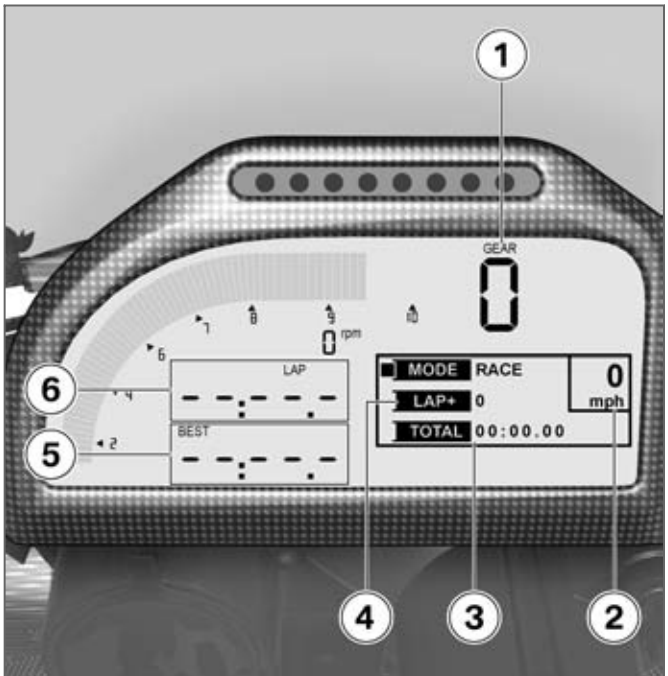
Displays of SPEED Monitor:

– top speed of current lap
– lowest speed of current lap
– number of laps covered
– expired race time

The scope of the information that can be displayed in the INFO mode is independent of the monitor selected. If the ROAD mode is temporarily changed over to during a race, all measurements are continued in the RACE mode.

The measurement of the race time is automatically interrupted while the motorcycle is stopped. The measurement is continued as soon as the motorcycle moves again.
The measurement of the lap time also continues to run when the motorcycle is stopped.

If the ignition is switched off, the measured values are retained. The measurements are continued as soon as the ignition is switched on again.

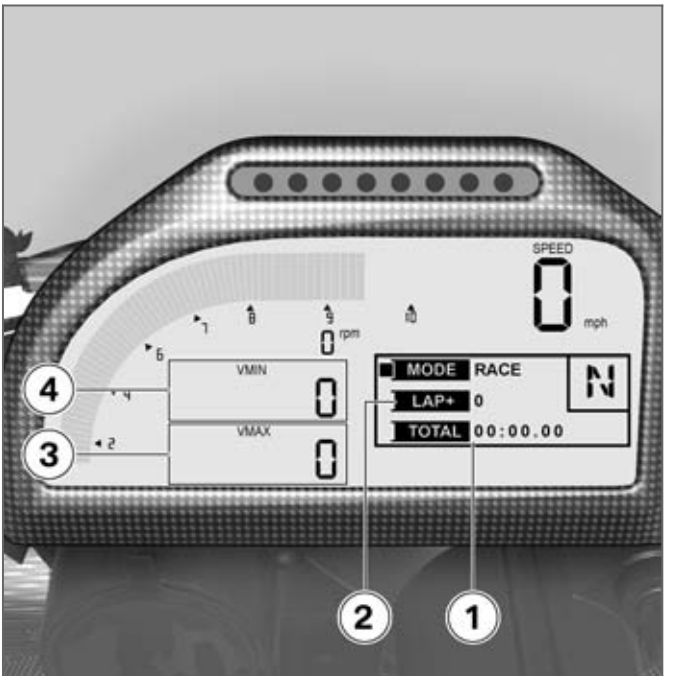


Display as LAP Monitor

1 Gear indicator in place of speedometer
2 Speedometer in place of gear indicator
3 Race time
4 Number of laps driven
5 fastest lap time
6 expired time of current lap

Display as SPEED Monitor

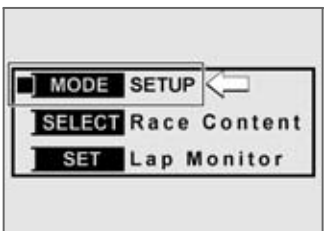
1 Race time
2 Number of laps driven
3 Top speed of current lap
4 Lowest speed of current lap

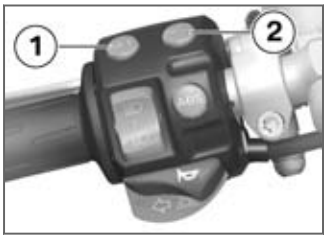


Selecting RACE Monitor

• Select SETUP mode.

This adjustment can only be carried out with the motorcycle at a standstill.◄

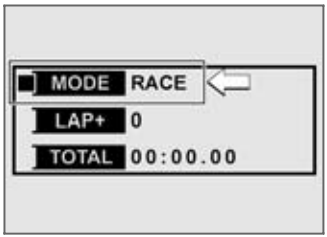




• Press MENU button **2** twice.
» The cursor is located before the SET field.
• Press SET button **1** repeatedly until desired monitor is shown.
» possible settings:
– Lap Monitor
– Speed Monitor
» After changing to the RACE mode, the set monitor is displayed.

Operating RACE Monitor

• Select RACE mode.





• Press MENU button **2** once.
» The cursor is located before the LAP+ field.
» The lap number 0 flashes.

If a lap number is already shown:
- Resetting RACE Monitor (➟ 40)



- Press SET button **1** at start of race.
» The measurement of the race and lap times is started.
» The laps driven are counted.
» in the LAP Monitor:
– the lap time is shown
– from the second lap the fastest lap time is shown
» in the SPEED Monitor:
– the highest and lowest speed of the current lap are shown
- Press SET button at end of each lap.
» The measurements for the next lap are started.
- Press and hold SET button.
» The measurements are stopped.
» The lap number flashes.
- Press SET button.
» The measurements are continued.

Resetting RACE Monitor



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

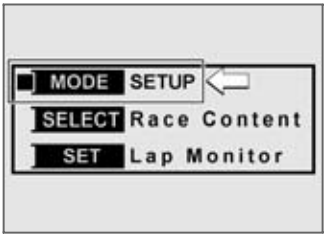
If the RACE Monitor is reset in the next step, all save data are deleted and can no longer be displayed in the INFO mode.◀

» The measurements are stopped.
» The lap number flashes.
- Press and hold SET button **1** again.
» The measured values are reset.

Setting display duration of lap time in LAP Monitor

- Select SETUP mode.

This adjustment can only be carried out with the motorcycle at a standstill.◀

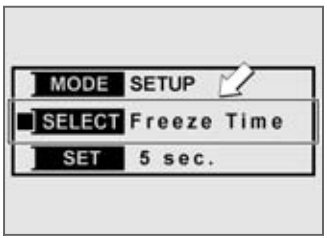




- Press MENU button **2** once.

» The cursor is located before the SELECT field.

- Press SET button **1** repeatedly until Freeze Time is displayed.





- Press MENU button **2** once.

» The cursor is located before the SET field.

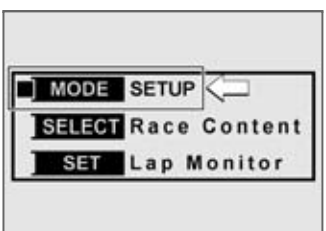
- Press SET button **1** repeatedly until desired time is shown.

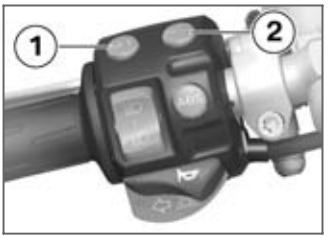
» The displayed time increases by five seconds each time the button is pressed. The setting range is 0 to 30 seconds.

Setting shifting flash

- Select SETUP mode.

▷ This adjustment can only be carried out with the motorcycle at a standstill.◀

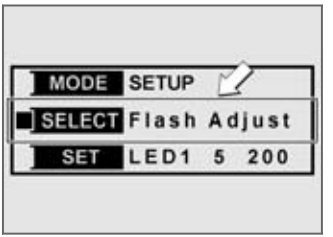


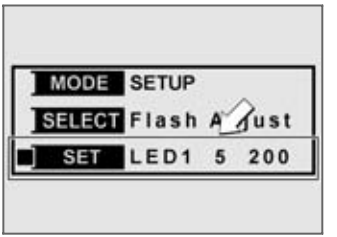


- Press MENU button **2** once.

» The cursor is located before the SELECT field.

- Press SET button **1** repeatedly until `Flash Adjust` is displayed.





» The first LED lights up and the set engine speed threshold is shown (LED 1 lights up at 5200 rpm in picture).



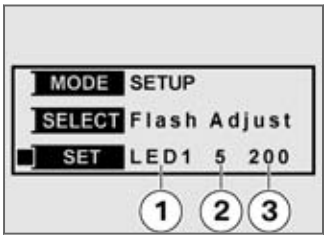
- Press MENU button **2** once.

» The cursor is located before the SET field.



- SET button **1** pressed once each time.

» Each time the button is pressed, the next LED lights up and the corresponding engine speed threshold is shown.



- Press SET button repeatedly until desired LED lights up.

» The number of the active LED is shown at position **1**.

- Press and hold SET button until thousands place **2** flashes.
- Press SET button repeatedly until desired number is shown.
- Press and hold SET button until hundreds place **3** flashes.
- Press SET button repeatedly until desired number is shown.
- Press and hold SET button until hundreds place no longer flashes.

» The desired display duration has been applied.

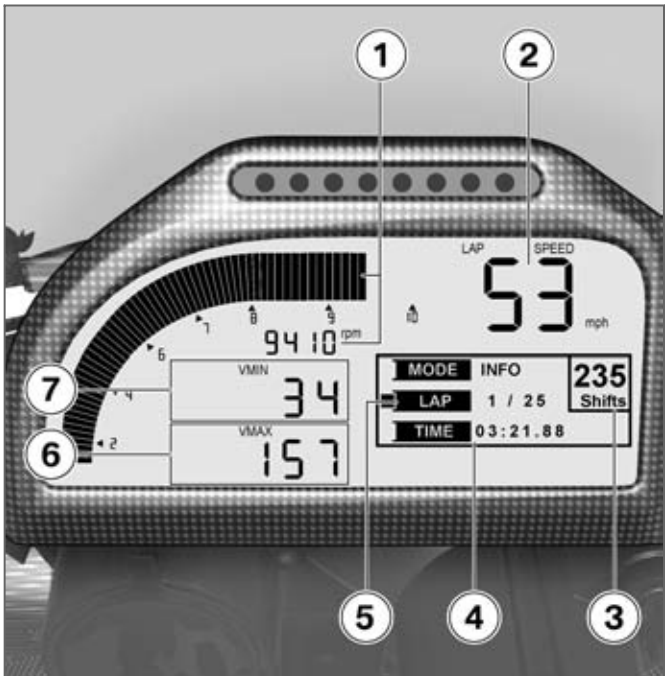
INFO mode

Display in INFO mode

In the INFO mode the information which has been stored on each race lap in the RACE mode can be displayed.

Displays in INFO mode:

- Top engine speed
- Average speed
- Number of shifts carried out
- Lap time
- Displayed lap and number of laps recorded
- Top speed
- Lowest speed
- Lap length
- Average throttle valve opening
- Percentage of driving with brakes actuated



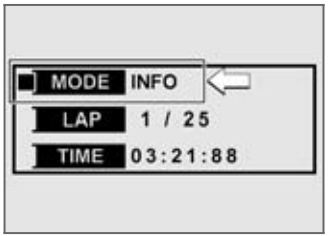
Display in INFO mode

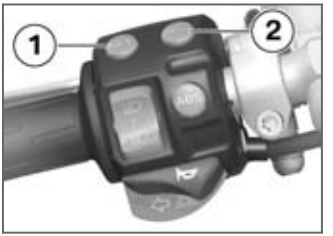
1 Maximum engine speed of displayed lap
2 Average speed of displayed lap
3 Number of shifts in displayed lap
4 Lap time of displayed lap
5 Lap to which the displayed data refer/number of clocked laps
6 Top speed of displayed lap
7 Lowest speed of displayed lap

Operating INFO mode

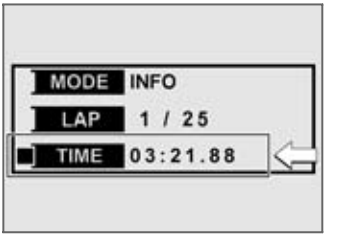
• Select INFO mode.

This adjustment can only be carried out with the motorcycle at a standstill.◀





• Press MENU button **2** once.
» The cursor is located before the LAP field.
• Press SET button **1** once each time.
» The data of the next lap described above are shown each time the button is pressed.
• To display the value for the lap length, the average throttle valve position and the percentage of driving with the brakes actuated: press the MENU button **2** once.
» The cursor is located before the TIME field.
• Press SET button **1** once each time.



Each time the button is pressed, the following information is displayed consecutively:

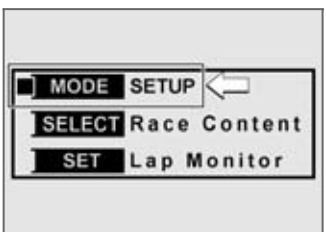
– Lap time (TIME)
– Track length (DIST.)
– average throttle valve position (THROT.)
– Percentage of driving with brakes actuated (BRAKE)
» The minimum and maximum value are marked with min! or max! respectively in each of these value rows.

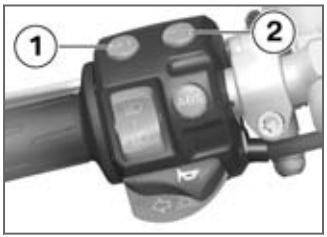
Settings

Setting clock

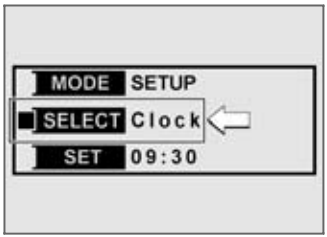
- Select SETUP mode.

This adjustment can only be carried out with the motorcycle at a standstill.◄





- Press MENU button **2** once.
» The cursor is located before the SELECT field.
- Press SET button **1** repeatedly until SELECT Clock is displayed.





- Press MENU button **2** once.
» The cursor is located before the SET field.
- Press and hold SET button **1** until hours display flashes.

- Press SET button repeatedly until desired hours are shown.
- Press and hold SET button until minutes display flashes.
- Press SET button repeatedly until desired minutes are shown.
- Press and hold SET button until minutes display no longer flashes.

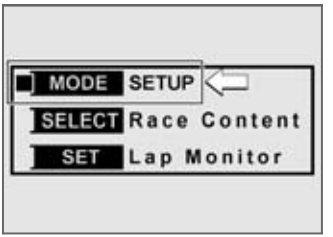
» The desired time of day has been applied.

Setting brightness of LED strip

- Select SETUP mode.

▷ This adjustment can only be carried out with the motorcycle at a standstill.◀

▷ The instrument cluster is equipped with an automatic day/night switchover function. The brightness for the LEDs is set for the daytime value. The brightness in darkness is decreased starting from this value.◀

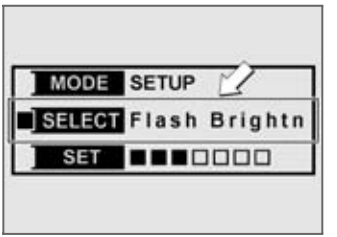




- Press MENU button **2** once.

» The cursor is located before the SELECT field.

- Press SET button **1** repeatedly until Flash Brightn is displayed.





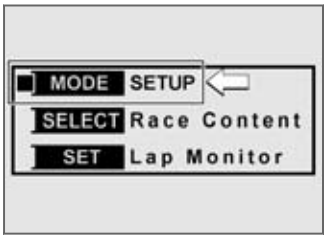
- Press MENU button **2** once.

» The cursor is located before the SET field.
• Press SET button **1**.
» Each time the button is pressed, the brightness increases. This is indicated by the number of filled-in boxes. If all boxes are empty, the LEDs are switched off.

Setting background lighting

• Select SETUP mode.

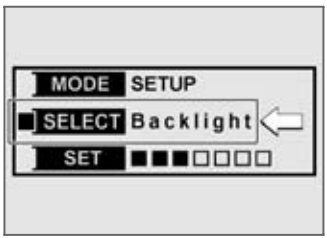
This adjustment can only be carried out with the motorcycle at a standstill.◀





• Press MENU button **2** once.
» The cursor is located before the SELECT field.

• Press SET button **1** repeatedly until Backlight is displayed.





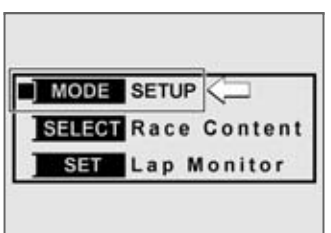
• Press MENU button **2** once.

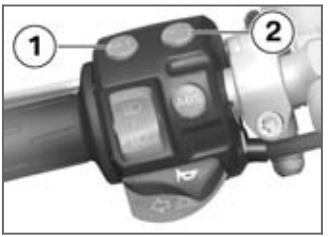
» The cursor is located before the SET field.
• Press SET button **1**.
» Each time the button is pressed, the brightness increases. This is indicated by the number of filled-in boxes (the background lighting cannot be completely switched off).

Setting startup animation

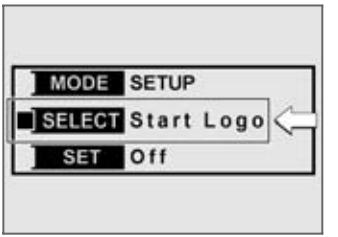
• Select SETUP mode.

▷ This adjustment can only be carried out with the motorcycle at a standstill.◀





• Press MENU button **2** once.
» The cursor is located before the SELECT field.
• Press SET button **1** repeatedly until Start Logo is displayed.





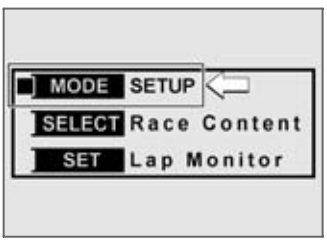
• Press MENU button **2** once.
» The cursor is located before the SET field.
• Press SET button **1**.

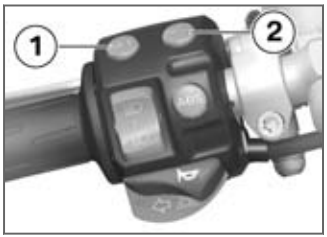
» The startup animation is toggled on (On) and off (Off).

Restoring delivered state

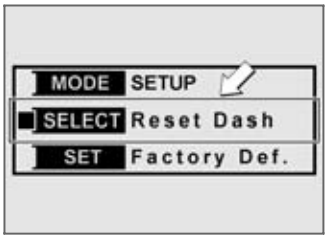
• Select SETUP mode.

This adjustment can only be carried out with the motorcycle at a standstill.◀





• Press MENU button **2** once.
» The cursor is located before the SELECT field.
• Press SET button **1** repeatedly until Reset Dash is displayed.





• Press MENU button **2** once.
» The cursor is located before the SET field.
• Press and hold SET button **1**.

» The lettering
Factory Res.
flashes; the delivered state is restored.

Infrared receiver OA

Convenient lap timing

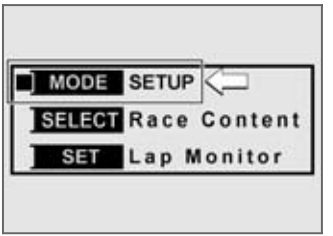
Operation of the instrument cluster in the RACE mode can be carried out conveniently with an infrared signal. For this purpose, the infrared receiver available as an optional accessory must be connected to the instrument cluster. Operation with the SET button is also possible with the integrated sensor.

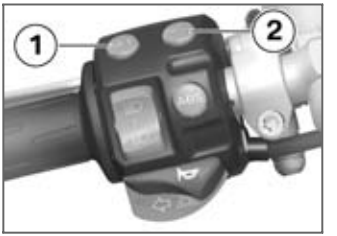
To avoid the premature detection of a completed lap due to interference signals, a minimum lap time can be specified. Signals received before this time expires are then ignored. The minimum lap time does not apply to operation with the SET button.

Setting minimum lap time

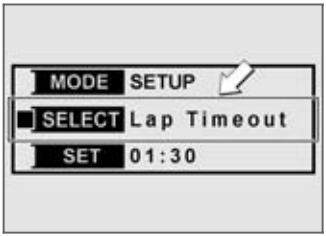
• Select SETUP mode.

▷ This adjustment can only be carried out with the motorcycle at a standstill.◀





• Press MENU button **2** once.
» The cursor is located before the SELECT field.
• Press SET button **1** repeatedly until Lap Timeout is displayed.





- Press MENU button **2** once.

» The cursor is located before the SET field.

» The set minimum lap time is displayed.

- Press and hold SET button **1** until minutes display flashes.
- Press SET button repeatedly until desired minutes are shown.

» Settable time: 00:00 to 10:59

- Press and hold SET button until seconds display flashes.
- Press SET button repeatedly until desired seconds are shown.
- Press and hold SET button until seconds display no longer flashes.

» The desired minimum lap time has been applied.

Operation

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Shift lever..... 62
Brakes 63
Mirrors..... 64
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Footrests 66
Spring preload 67
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Chassis height..... 75
Tires..... 79
Headlight 79
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Ignition switch and steering lock

Keys

You are provided with a main key and a reserve key, as well as a key for removing the seat. If a key is lost, please note the information on the electronic immobilizer (EWS) (➡ 57).
The ignition switch and steering lock and the tank filler cap lock are operated with the same key.

Switching on ignition



• Turn key to position **1**.
» Parking lights and all function circuits switched on.
» Engine can be started.
» Pre-ride check is performed. (➡ 87)

– with BMW Motorrad ABS OE
• Turn key to position **1**.
» In addition to the points named above, the ABS self-diagnosis is also carried out. (➡ 88)◁

Switching off ignition



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

Locking handlebars



If the motorcycle is on the side stand, the surface of the ground will determine whether it is better to turn the handlebars to the left or right. However, the motorcycle is more stable on a level surface with the handlebars turned to the left than

with the handlebars turned to the right.
On level ground, always turn the handlebars to the left to set the steering lock.◀

- Turn handlebars to full left or right lock position.
- Turn key to position **3** while moving handlebars slightly.

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

Electronic immobilizer EWS

Theft protection

The electronic immobilizer helps protect your BMW motorcycle from theft, and this enhanced security is at your disposal without any need for you to set parameters or activate additional systems. The engine of a motorcycle fitted with this electronic immobilizer can be started only with the keys that belong to the motorcycle. You can also have your authorized BMW Motorrad retailer disable particular keys, for example in the event that you lose your keys. The engine cannot be started with a key that has been barred.

Electronics in key

The motorcycle's electronics exchange certain continuously changing signals with the electronics in the key; these signals are specific to your motorcycle and they are transmitted via the ring antenna in the ignition lock. The ignition is not enabled for starting until the key has been recognized as "authorized" for your motorcycle.



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

Replacement and extra keys

Replacement and spare keys are only available through an authorized BMW Motorrad retailer. The keys are part of an integrated security system, so the retailer is under an obligation to check the legitimacy of all applications for replacement/extra keys. If you want to have a lost key barred, you must bring along all other keys that belong to the motorcycle. A key that has been barred can subsequently be cleared and reactivated for use.

Lights

Parking lights

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

The parking lights are a strain on the battery. Do not leave the ignition switched on longer than absolutely necessary.◀

Low-beam headlight

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

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

High-beam headlight and headlight flasher



- Press top section of full-beam headlight switch **1**.

» High-beam headlight is switched on.

- Move full-beam headlight switch **1** to center position.

» High-beam headlight is switched off.

- Press bottom section of full-beam headlight switch **1**.

» High-beam headlight is switched on as long as switch is pressed (headlight flasher).

Switching on parking lights

- Switch off ignition.



- Immediately after switching off ignition, press and hold left-hand turn indicator button **1**.

» Parking light switches on.

Switching off parking lights

- Switch ignition on and then off again.

» Parking light switched off.

Turn indicators

Switching on left-hand turn indicator

• Switch on ignition.

After driving for approx. ten seconds or after covering a distance of approx. 650 ft (200 m), the turn indicators are automatically switched off.◀



• Press left-hand turn indicator button **1**.
» Left-hand turn indicator is switched on.
» Turn indicator light flashes.

Switching on right-hand turn indicator

• Switch on ignition.

After driving for approx. ten seconds or after covering a distance of approx. 650 ft (200 m), the turn indicators are automatically switched off.◀



• Press right-hand turn indicator button **2**.
» Right-hand turn indicator is switched on.
» Turn indicator light flashes.

Switching off turn indicator



• Press turn-indicator cancel button **3**.
» Turn indicator is switched off.
» Turn indicator light off.

Hazard warning flashers

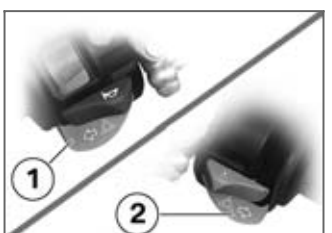
Switching on hazard warning flashers

• Switch on ignition.

The hazard warning flashers place a strain on the battery. Do not use the hazard

warning flashers for longer than absolutely necessary.◀

If a turn indicator button is pressed with the ignition switched on, the flashing function replaces the emergency flashing function as long as the button is pressed. If the turn indicator button is released, the emergency flasher function becomes active again.◀



- Press left **1** and right-hand **2** turn indicator buttons simultaneously.

» Hazard warning flashers are switched on.
» Turn indicator light flashes.

General warning light flashes red.

- Switch off ignition.

» Hazard warning flashers continue to operate.
» Turn indicator light and general warning light off.

Switching off hazard warning flashers



- Press turn-indicator cancel button **3**.

» Hazard warning flashers are switched off.

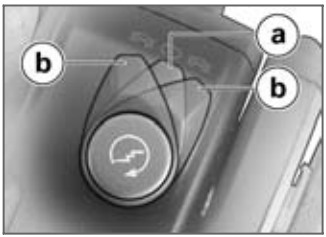
Emergency ON/OFF switch



1 Emergency ON/OFF switch

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

The engine can be switched off easily and quickly using the emergency ON/OFF switch.



a Operating position
b Engine switched off.

The engine can only be started in the operating position.◀

BMW Motorrad ABS OE

Switching off ABS function

- Stop motorcycle or switch on ignition with motorcycle stationary.



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

ABS warning light lights up.

- Release ABS button within two seconds.

ABS warning light continues to light up.

» ABS function is switched off.

Switching on ABS function



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

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

- Release ABS button within two seconds.

ABS warning light remains off or continues to flash.

» ABS function is switched on.

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

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

Clutch

Adjusting clutch lever

If the position of the clutch fluid reservoir is changed, air can enter the clutch system. Do not reposition the handlebar controls on the handlebars or the handlebars in their mounts.◀

Adjusting the clutch lever while driving can lead to accidents.
Only adjust the clutch lever when the motorcycle is stationary.◀



- Turn adjusting screw **1** clockwise.

The adjusting screw has a limit position and can be turned more easily when you press the clutch lever forward.◀

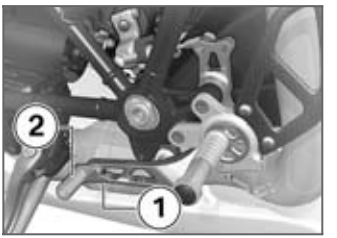
» Distance between handlebar grip and clutch lever increases.

- Turn adjusting screw **1** counterclockwise.

» Distance between handlebar grip and clutch lever decreases.

Shift lever

Adjusting shift lever



- Slacken screw **1**.
- Turn foot piece **2** into desired position.

A foot piece adjusted too high or too low can cause problems when shifting. In case of shifting problems, check the adjustment of the foot piece.◀

Threaded fasteners not tightened to the specified torque can work loose or their threads can suffer damage. Always have the tightening

torques checked by a specialized workshop, preferably an authorized BMW Motorrad retailer.◀

- Tighten screw **1** with specified torque.

	Eccentric foot piece on shift lever
–	Thread-locking compound: Micro-encapsulated
–	6 lb/ft (8 Nm)



- To set the factory setting: align foot piece on marking **3**.

Brakes

Adjusting handbrake lever

Changing the position of the brake-fluid reservoir can allow air to penetrate the brake system.
Do not reposition the handlebar controls on the handlebars or the handlebars in their mounts.◀

Adjusting the brake lever while driving can lead to accidents.
Only adjust the brake lever when the motorcycle is stationary.◀



- Turn adjusting screw **1** clockwise.

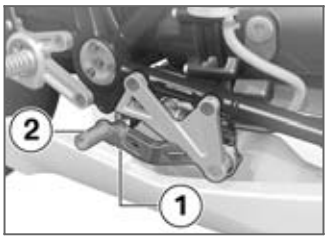
The adjusting screw has a limit position and can be turned more easily when you press the handbrake lever forward.◀

» Distance between handlebar grip and handbrake lever increases.

- Turn adjusting screw **1** counterclockwise.

» Distance between handlebar grip and handbrake lever decreases.

Adjusting footbrake lever



- Slacken screw **1**.
- Turn foot piece **2** into desired position.

Threaded fasteners not tightened to the specified torque can work loose or their threads can suffer damage. Always have the tightening torques checked by a specialized workshop, preferably an authorized BMW Motorrad retailer.◀

- Tighten screw **1** with specified torque.

Eccentric of foot piece on brake pedal
– Thread-locking compound: Micro-encapsulated
– 6 lb/ft (8 Nm)



- To set the factory setting: align foot piece on marking **3**.

Mirrors

Adjusting mirrors



- Move mirror into desired position by applying light pressure at edge.

Handlebars

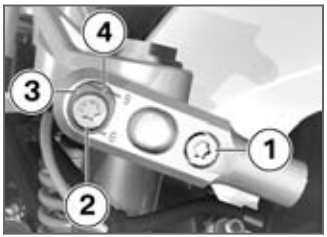
Adjusting handlebars

The work on the clutch lever fitting and the left-hand handlebar half described in the following basically also applies to the handbrake fitting and the right-hand handlebar half.◀



When fluid reservoirs are positioned at an angle, air can enter the system when the handlebar lever is actuated.
Do not actuate the handlebar lever while removed.◀

- Remove screw **1** and take off clutch lever fitting.



- Slacken screw **1**.
- Remove screw **2**.
- Remove bushing **3** and insert in desired position.

» Marking line **4** at top: low position.

» Marking line **4** at bottom: high position.

Threaded fasteners not tightened to the specified torque can work loose or their threads can suffer damage.
Always have the tightening torques checked by a specialized workshop, preferably an authorized BMW Motorrad retailer.◀

- Install screw **2**, tighten screws **1** and **2** with specified torque.

Handlebar halves on handlebar bridge
– Tightening sequence: first tighten screw inside motorcycle
– 7 lb/ft (10 Nm) (Initial torque)
– 15 lb/ft (21 Nm) (Final torque)



- Position clutch lever fitting and align with opening **2** at marking **3** as shown.



Threaded fasteners not tightened to the specified torque can work loose or their threads can suffer damage. Always have the tightening torques checked by a specialized workshop, preferably an authorized BMW Motorrad retailer.◀

- Install screw **1** with specified torque.

Handlebar fitting on handlebars
– 4 lb/ft (5 Nm)

- Check operation of clutch lever.

Footrests

Adjusting footrests



- Loosen screws **1** on left and right.
- Turn footrests **2** on left and right into desired positions.

» Footrests audibly engage.

- Tighten screws **1** on left and right.

Pinch bolt of eccentric adjustment of footrests
– Thread-locking compound: Micro-encapsulated
– 11 lb/ft (15 Nm)

- To set factory setting: align footrests toward front.

Spring preload

Setting

The spring preloads on the front and rear wheel must be adjusted to the weight of the driver. The negative spring travel is set via a differential measurement.

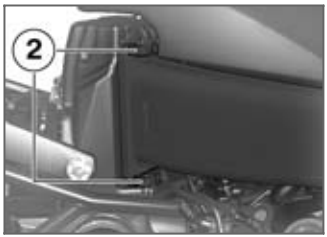
Adjusting spring preload on front wheel



- Remove screws **1** on left and right.
- Take off fuel tank cover toward rear.



- Remove screw **1** from air intake snorkel.

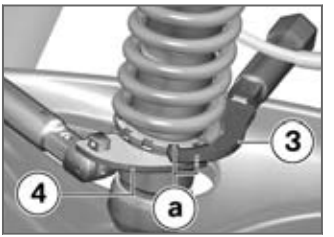


- Release both retaining brackets **2** by pressing on their rear ends and pull out.
- Remove intake snorkel.



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

- Adjust spring preload with adjustment rings **1** and **2**.



- To turn adjustment rings: insert tool from toolkit **3** for bracing and tool from toolkit **4** for turning. Make sure hooks **a** securely engage in a groove.



- To loosen locking, turn adjustment ring **1** in direction **b** while bracing adjustment ring **2**.
- Completely remove load from front wheel.



- Measure distance **d** between upper edge of upper **5** and lower fork bridge **6**.
- Load motorcycle with driver.
- With the assistance of a helper, measure distance **d** between points **5** and **6** again and calculate difference between measured values.

Adjustment of spring preload dependent on loading
– 1.3 in (33 mm) (Negative spring displacement of front wheel under load)



- If you want to decrease the difference (i.e. increase spring preload), turn adjusting ring **2** in direction **c**.
- If you want to increase the difference (reduce spring preload, in other words), turn adjusting ring **2** in direction **b**.
- Tighten lock by tightening adjusting ring **1** in direction **c** with tool from toolkit, while holding adjusting ring **2** with second tool from toolkit.

Locknut of spring base adjustment on spring plate
– 4 lb/ft (5 Nm)

- Adjust the damping characteristic to suit spring preload.



- Position intake snorkel.
- Push in both retaining hoops **2** until they audibly engage.



- Make sure that throttle valve cable is seated in guide **3** of intake manifold and throttle valve is resting against stop.



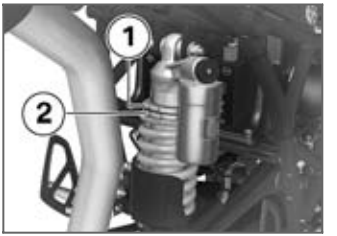
- Install screw **1** hand-tight.



- Slide fuel tank cover over fuel tank from rear.
- Install screws **1** on right and left hand-tight.

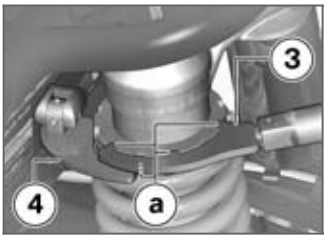
Adjusting spring preload for rear wheel

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



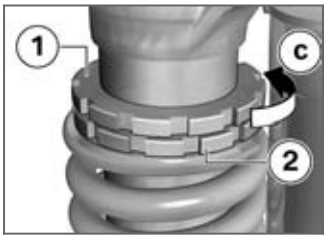
⚠ Your motorcycle's handling will suffer if you do not match the spring-preload and damping-characteristic settings. Adjust the damping characteristic to suit the spring preload.◀

- Adjust spring preload with adjustment rings **1** and **2**.

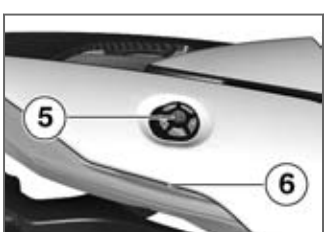


Danger of short circuit on positive battery terminal
Make sure not to touch the positive battery terminal when inserting the toolkit.◀

- To turn adjustment rings: insert tool from toolkit **4** for bracing and tool from toolkit **3** for turning. Make sure hooks **a** securely engage in a groove.



- Release the lock by turning adjusting ring **1** in direction **c** with the tool from the toolkit, while holding adjusting ring **2** with second tool from the toolkit.



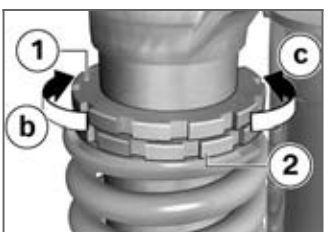
- To ensure a clear read-off point during the following distance measurement, always guide the measuring tape centered over the screw **5** and read off the distance to the edge **6**.
- Make sure there is no load on the rear wheel; remove all items of luggage, if carried.



- Measure distance **d** between edge of tail section **6** described above and upper edge of axle tube **7**.
- Load motorcycle with driver.
- With the assistance of a helper, measure distance **d** between points **6** and **7** again and cal-

culate difference between measured values.

Adjustment of spring preload dependent on loading
– 1.4 in (36 mm) (Negative spring displacement of rear wheel under load)



- If you want to reduce the difference (i.e. increase spring preload), turn adjusting ring **2** in direction **b**.
- If you want to increase the difference (i.e. reduce spring preload), turn adjusting ring **2** in direction **c**.
- Tighten lock by tightening adjusting ring **1** in direction **b** with tool from toolkit, while holding adjusting ring **2** with second tool from toolkit.

Locknut of spring base adjustment on upper spring plate
– 4 lb/ft (5 Nm)

- Adjust the damping characteristic to suit spring preload.

Damping

Setting

The damping must be adjusted to the road conditions and the spring preload.

– A rough road surface requires softer damping than a smooth road surface.

– An increase in spring preload requires firmer rebound-stage damping, while a reduction in spring preload requires softer rebound-stage damping.

Rebound-stage damping on front wheel



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

- Adjust damping on adjustment wheel **1**.



- To increase damping, turn adjustment wheel **1** in direction **H**.
- To decrease damping, turn adjustment wheel **1** in direction **S**.

Rebound stage, basic setting, front

– Turn damping completely closed on upper adjustment wheel, then open 8 clicks. (Full tank of gas, with rider 187 lbs (85 kg))

Adjusting compression damping on front wheel



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

- Adjust damping on adjustment wheel **1**. Access from below behind side panel.



- To increase damping, turn adjustment wheel **1** in direction **H**.
- To decrease damping, turn adjustment wheel **1** in direction **S**.

Compression stage, basic setting, front

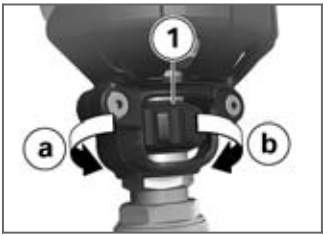
– Turn damping completely closed on lower adjustment wheel, then open 14 clicks. (Full tank of gas, with rider 187 lbs (85 kg))

Adjusting rebound-stage damping for rear wheel

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



- Adjust rebound-stage damping on adjustment wheel **1**.

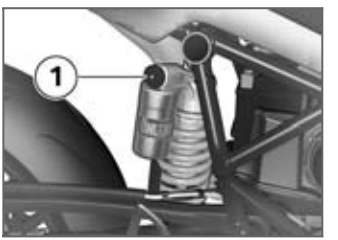


- To decrease rebound-stage damping, turn adjustment wheel **1** in direction **a**.
- To increase rebound-stage damping, turn adjustment wheel **1** in direction **b**.

Rebound stage, basic setting, rear
– Turn damping completely closed with lower adjustment wheel, then open 16 clicks. (Full tank of gas, with rider 187 lbs (85 kg))

Adjusting compression damping for rear wheel

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



- Adjust compression damping on adjustment wheel **1**.



- To increase compression damping, turn adjustment wheel **1** in direction **H**.
- To decrease compression damping, turn adjustment wheel **1** in direction **S**.

	Compression stage, basic setting, rear
–	Turn damping completely closed with upper adjustment wheel, then open 14 clicks. (Full tank of gas, with rider 187 lbs (85 kg))

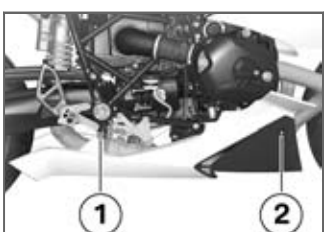
Chassis height

Setting

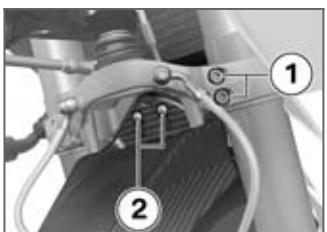
The chassis height can be changed. This is done by moving the front fork in the lower fork bridge and adjusting the suspension strut length.

Adjusting height of front fork

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



- Remove screw **1** on left and right.
- Remove screw **2** on left and right while supporting engine spoiler.
- Push engine spoiler slightly toward rear and take off downward.



- Loosen screws **1** on left and right immersion tube.
- Loosen screws **2** on front mudguard.
- Raise motorcycle with a suitable lifting tool until front wheel is suspended. BMW Motorrad recommends the BMW Motorrad center stand.

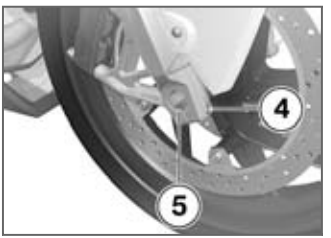
- Attaching center stand (➡ 134)



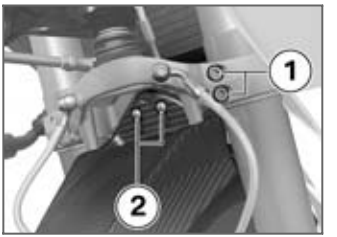
- Adjust desired fork height by moving immersion tubes in fork bridge within adjustment range **a**. When doing so, make sure that highest position **3** is not exceeded.

Front height of motorcycle
– max 0.6 in (max 15 mm) (Adjustment range between lower edge of fork slider tube bridge and stop of slider tube)

- To set factory setting: push immersion tubes completely to top.



- If immersion tubes stick in fork bridge: loosen axle clamping screw **4**.
- Loosen quick-release axle **5**.
- Adjust fork height as described further above.

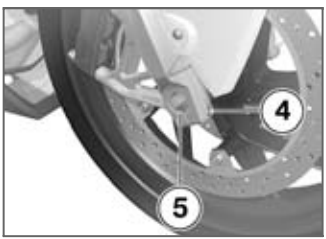


- Tighten screws **2** on front mudguard hand-tight.

⚠ Threaded fasteners not tightened to the specified torque can work loose or their threads can suffer damage. Always have the tightening torques checked by a specialized workshop, preferably an authorized BMW Motorrad retailer.◀

- Tighten screws **1** on left and right immersion tube with specified torque.

Bottom fork brace with slider tube
– Tightening sequence: 2x each side, alternately
– 18 lb/ft (25 Nm)



- If necessary, tighten quick-release axle **5** with specified torque.

Quick-release axle in axle mount
– 37 lb/ft (50 Nm)

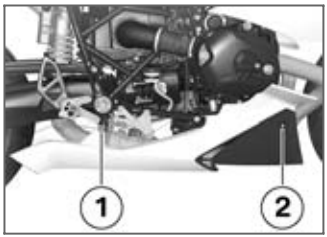
- If necessary, tighten axle clamping screw **4** with specified torque.

Clamping screw for quick-release axle
– 14 lb/ft (19 Nm)

- Lower motorcycle and remove lifting tool.



- Lay engine spoiler with holders **3** on mounts **4** on left and right from behind and support at front.



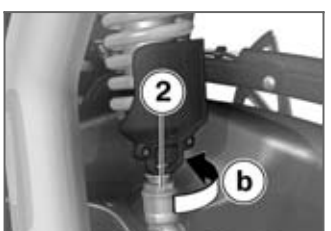
- Install screw **2** on left and right hand-tight.
- Install screw **1** on left and right hand-tight.

Adjusting suspension strut length

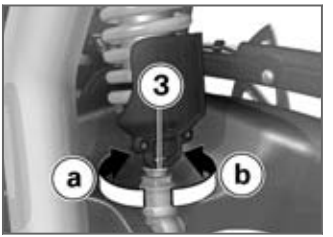
- Make sure ground is level and firm and park motorcycle.
- Removing rear wheel (➡ 131)



- Loosen screws **1** of splash guard.



- Slacken nut **2** by turning it in direction **b**.



- Turn nut **3** in direction **b**.

» Increases suspension strut length.

- Turn nut **3** in direction **a**.

» Decreases suspension strut length.

- Set desired suspension strut length.
- To set factory setting: turn nut **3** as far as possible in direction **a**.



- Tighten nut **2** by turning it in direction **a**.

	Locknut of length adjustment on lower spring plate
–	30 lb/ft (40 Nm)



- Tighten screws **1** of splash guard hand-tight.
- Installing rear wheel (➡ 131)

Tires

Checking tire pressure

⚠ Incorrect tire inflation pressure results in poorer handing characteristics of the motorcycle and reduces the life of the tires.
Ensure proper tire inflation pressure.◀

⚠ At high road speeds, tire valves installed perpendicular to the wheel rim have a tendency to open as a result of centrifugal force.
In order to avoid a sudden loss of tire inflation pressure, fit a valve cap with rubber sealing ring to the rear tire and make sure that the cap is screwed on firmly.◀

- Make sure ground is level and firm and park motorcycle.
- Check tire pressures against data below.

Tire pressure, front
– 31.9 psi (2.2 bar) (With tire cold)

Tire pressure, rear
– 36.3 psi (2.5 bar) (With tire cold)

Tire pressure for sport riding
– $30.5^{\pm 2.9}$ psi ($2.1^{\pm 0.2}$ bar) (With tire cold)

If tire pressure is too low:
- Correct tire pressure.

Headlight

Adjusting headlight for RHD/LHD traffic

If the motorcycle is ridden in a country where the opposite rule of the road applies, its asymmetric low-beam headlight will tend to dazzle oncoming traffic.
Have the headlight adjusted to the relevant conditions by a specialized workshop, preferably an authorized BMW Motorrad retailer.

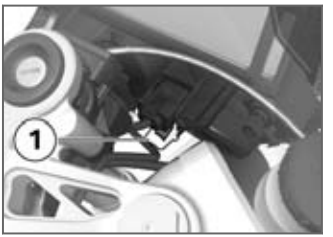
Headlight range and spring preload

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

Spring preload adjustment may only be insufficient when the motorcycle is very heavily loaded. In this case, the headlight range must be adjusted to the weight.

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

Headlight range adjustment



1 Headlight range adjustment

In the case of very high payloads, the available spring preload adjustment might not be adequate. To avoid dazzling oncoming traffic, the headlight adjustment can be corrected by adjusting the swivel lever.

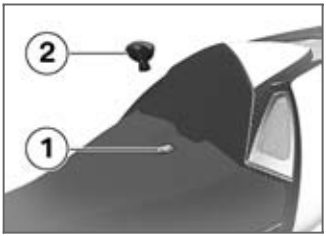


a Neutral position
b Position with heavy payload

Driver's seat

Removing driver's seat

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

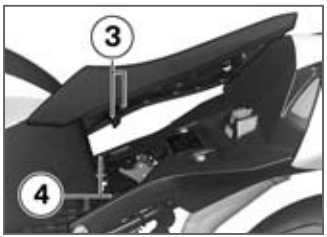


• Unscrew the screw **1** with the seat key **2**.

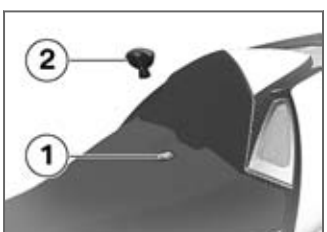


• Pull seat toward rear and upward to release it from its holders.

Installing seat



• Insert the seat with the mounts **3** in the holders **4**.



• Tighten the screw **1** hand-tight with the seat key **2**.

Riding

Safety instructions 84
Checklist 85
Starting 86
Running in 88
Shifting gear 89
Brakes 90
Parking your motorcycle 91
Refueling 92

Safety instructions

Rider's equipment

Do not ride without the correct clothing. Always wear:
– Helmet
– Rider's suit
– Gloves
– Boots

This applies even to short journeys, and to every season of the year. Your authorized BMW Motorrad retailer will be happy to advise you and has the correct clothing for every purpose.

Speed

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

Correct loading

Overloading and imbalanced loads can adversely affect the motorcycle's handling. Do not exceed the gross weight limit and observe the loading information.◀

Alcohol and drugs

Even small amounts of alcohol or drugs will adversely affect your perception and your ability to assess situations and make decisions, and slow down your reflexes. Medication can exacerbate these effects.
Do not ride your motorcycle after consuming alcohol, drugs and/or medication.◀

Risk of poisoning

Exhaust fumes contain carbon monoxide, which is colorless and odorless but highly toxic.

Inhaling exhaust fumes therefore represents a health hazard and can even cause loss of consciousness with fatal consequences.
Do not inhale exhaust fumes.
Do not run the engine in closed rooms.◀

High voltage

Touching live parts of the ignition system with the engine running can cause electric shock.
Do not touch parts of the ignition system when the engine is running.◀

Catalytic converter

If misfiring causes unburned fuel to enter the catalytic converter, there is a danger of overheating and damage.
For this reason, observe the following points:
- Do not run the fuel tank dry
- Do not run the engine with the spark-plug cap removed
- Stop the engine immediately if it misfires
- Use unleaded fuel only
- Comply with all specified maintenance intervals.

Unburned fuel will destroy the catalytic converter.
Note the points listed for protection of the catalytic converter.◀

Risk of fire

Temperatures at the exhaust are high.

Flammable materials (e.g. hay, leaves, grass, clothing and luggage, etc.) could ignite if allowed to come into contact with the hot exhaust pipe.
Make sure that no highly flammable materials can come in contact with the hot exhaust system.◀

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

Tampering with the engine control unit

Tampering with the engine control unit can damage the motorcycle and cause accidents.
Do not tamper with the engine control unit.◀

Tampering with the engine control unit can result in mechanical loads that the motorcycle's components are not designed to withstand. Damage caused in this way is not covered by the warranty.
Do not tamper with the engine control unit.◀

Checklist

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

– Brakes
– Front and rear brake fluid levels
– Clutch
– Clutch fluid level
– Damping setting and spring preload
– Tread depth and tire inflation pressure
– Secure luggage attachment

At regular intervals:
– Engine oil level (every time you refuel)
– Brake pad wear (during every third stop for refueling)

Starting

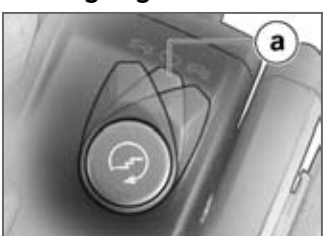
Side stand

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 transmission in neutral and then engage a gear before retracting the side stand.

Transmission

You can start the engine when the transmission is in neutral or if you pull the clutch with a gear engaged. Do not engage the clutch until after switching on the ignition, as otherwise the engine cannot be started.

Starting engine



- Emergency ON/OFF switch in run position **a**.
- Switch on ignition.

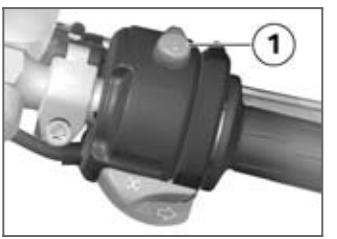
» Pre-ride check is performed. (➡ 87)

– with BMW Motorrad ABS OE

- Switch on ignition.

» Pre-ride check is performed. (➡ 87)

» ABS self-diagnosis is performed. (➡ 88)◁



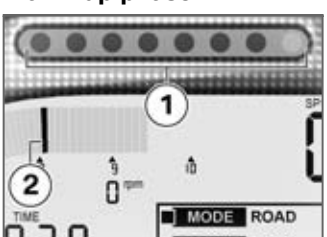
- Press starter button **1**.

▷ At extremely low temperatures it may be necessary to operate the throttle twist grip during starting. At ambient temperatures below 32 °F (0 °C), actuate the clutch after switching on the ignition.◀

The start attempt is automatically interrupted if battery voltage is too low. Recharge the battery before you start the engine, or use jump leads and a donor battery to start.◀

» Engine starts.
» Consult the troubleshooting chart if the engine refuses to start. (➡ 150)

Warm-up phase



During the warm-up phase, the LEDs **1** indicate the engine temperature; the colder the engine is, the more LEDs are switched on. At the same time, a segment **2** for the recommended maximum engine speed is shown in the tachometer. A decreasing number of LEDs light up as the temperature rises and the recommended maximum engine speed increases. When the operating temperature is reached, all LEDs are switched off and the entire engine speed range can be used. The remaining segment in the tachometer shows the maximum speed.
If the indicated maximum engine speed is exceeded, the LEDs flicker.

Pre-ride check

The instrument cluster runs a test of the 'General' warning light when the ignition is switched on: this is the "Pre-Ride-Check" The 'General' warning light shows first red and then yellow, so that you can check that it is in working order. The test is aborted if you start the engine before it completes.

If the startup animation is switched on, the tachometer is also activated.

Phase 1

General warning light shows red.

Phase 2

General warning light shows yellow.

If the 'General' warning light does not show:

Some malfunctions cannot be indicated if the 'General' warning light cannot be displayed.
Check that the 'General' warning

light comes on, and that it shows red and yellow.◀

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

ABS self-diagnosis OE

The readiness for operation of the BMW Motorrad ABS is checked by the self-diagnosis. Self-diagnosis is performed automatically when you switch on the ignition. To check the wheel sensors, the motorcycle must drive faster than 3 mph (5 km/h).

Phase 1

» Checking the diagnosable system components while stopped.


ABS warning light flashes.

Phase 2

» Checking wheel sensors while starting off.


ABS warning light flashes.

ABS self-diagnosis completed

» The ABS warning light goes out.

If an ABS fault is indicated after the ABS self-diagnosis is completed:

- Continued driving is possible. It must be noted that the ABS function is not available.
- Have the malfunction corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Running in

The first 600 miles (1000 km)

- While running in the motorcycle, vary the throttle opening and engine-speed range frequently.
- Try to do most of your riding during this initial period on twisting, fairly hilly roads, avoiding high-speed main roads and highways if possible.

Exceeding the specified engine speeds while running in will lead to increased engine wear.
Adhere to the specified engine run-in speeds.◀

- Do not exceed the engine run-in speeds.

 Engine break-in speed
– <5000 min^{-1}

- Do not accelerate at full throttle.
- Avoid low engine speeds at full load.
- After 300 - 750 miles (500 - 1200 km), have the first inspection performed.

Brake pads

New brake pads must "bed down" and therefore do not achieve their optimum friction levels during the first 300 miles (500 km). This initial reduction in braking efficiency can be compensated for by exerting greater pressure on the levers.

⚠ New brake pads can extend stopping distance by a significant margin.
Brake early.◀

Tires

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

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

Shifting gear

Gearshift assistant

Your motorcycle is equipped with a shifting assistant developed based on racing requirements. It enables upshifting without actuating the clutch or throttle valve in virtually all load and engine speed ranges. During acceleration the throttle valve can remain open, and the shifting time is reduced to a minimum. The gears are shifted into as usual with foot force on the shift lever.



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

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

shifting assistant should not be used in the area of the rev-limiter.

No shifting support is provided in the following situations:
– during shifting with the clutch actuated
– during shifting with the throttle valve closed (overrun)
– during downshifts

Shift reversal OA

The external shift linkage is designed so that a shift reversal can be retrofitted. Among other things, an altered shift sensor is also required for this purpose. Consult a certified workshop, preferably an authorized BMW Motorrad retailer, to have the shift reversal retrofitted.

Riding with shift reversal is not permitted on public roads.

Do not use shift reversal on public roads.◀

Brakes

How is the shortest braking distance achieved?

The dynamic load distribution between the front and rear wheel changes during braking. The heavier you brake, the more the front wheel is loaded. The greater the wheel load, the more braking force can be transferred. To achieve the shortest possible braking distance, the front brake must be applied quickly and with increasing force. This optimally utilizes the dynamic load increase on the front wheel. At the same time, the clutch should also be actuated. With the "forced braking" often practiced in which the brake pressure is generated as quickly as possible and with great force, the dynamic load distribution cannot follow the increased deceleration and the braking force cannot be completely transferred to the road surface. The front wheel can lock up.

– with BMW Motorrad ABS OE

To prevent the front wheel from locking, the ABS system must intervene and reduce the brake pressure; the braking distance increases.◁

Descending mountain passes

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

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

Wet brakes

After washing the motorcycle, after driving through water or in the rain, braking can be delayed due to damp brake disks and brake pads.
Brake early until the brakes are dry or braked until dry.◀

Salt on brakes

The full braking effect can be delayed if the motorcycle is ridden on salt-covered roads and the brakes are not applied for some time.
Brake early until the salt layer of the brake disks and brake pads has been braked off.◀

Oil or grease on brakes

Oil and grease on the brake disks and pads considerably diminish braking efficiency.
Especially after repair and maintenance tasks, make sure that the brake disks and brake pads are free of oil and grease.◀

Dirt or mud on brakes

When the motorcycle is ridden on loose surfaces or muddy roads, the brakes may fail to take effect immediately because of dirt or moisture on the disks or brake pads.
Brake early until the brakes are braked clean.◀

Driving on unpaved or dirty roads leads to increased brake pad wear.
Check the brake pad thickness more often and replace the brake pads sooner.◀

Parking your motorcycle

Placing on side stand

If the ground is soft or uneven, there is no guarantee that the motorcycle will rest firmly on the stand.
Always check that the ground under the stand is level and firm.◀

- Switch off the engine.
- Pull handbrake lever.
- Hold motorcycle upright and balanced.
- Use your left foot to extend side stand fully.

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

- Slowly lean motorcycle to side until its weight is taken by stand and dismount to left.

If the motorcycle is on the side stand, the surface of the ground will determine whether it is better to turn the handlebars to the left or right. However, the motorcycle is more stable on a level surface with the handlebars turned to the left than with the handlebars turned to the right.
On level ground, always turn the handlebars to the left to set the steering lock.◀

- Turn handlebars to full left or right lock position.
- Check that the motorcycle is standing firmly.

On a grade, the motorcycle should always face uphill; select 1st gear.◀

- Lock steering lock.

Remove from side stand

- Unlock steering lock.
- From left, grip handlebars with both hands.
- Pull handbrake lever.
- Swing your right leg over the seat and lift motorcycle to upright position.
- Hold motorcycle upright and balanced.

An extended side stand can catch on the ground when the motorcycle is moving and lead to a fall.
Retract the side stand before moving the vehicle.◀

- Sit on motorcycle and use your left foot to retract side stand.

Refueling

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

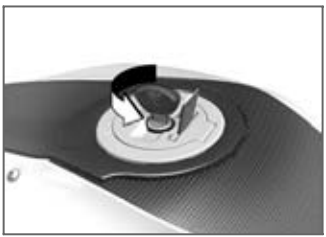
Fuel expands when exposed to heat. When the tank is overfilled, fuel can escape and get onto the rear wheel. This results in a danger of falling. Do not fill the tank past the bottom edge of the filler neck.◀

Fuel attacks plastic surfaces, making them cloudy or unattractive.
Wipe off any fuel that gets onto plastic parts immediately.◀

Fuel can attack the material of the windshield and the side wind deflectors, making them cloudy or unattractive.
Wipe off any fuel that gets onto the windshield and wind deflectors immediately.◀

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

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



- Open protective cap.
- Open fuel tank cap with ignition key by turning it counterclockwise.



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

Recommended fuel quality
– 98 ROZ/RON (Super Plus unleaded)
– 95 ROZ/RON (Super unleaded (fuel type can be used with reduced performance and consumption))

Usable fuel quantity
– approx. 4.2 gal (16 liters)

Reserve fuel quantity
– ≥3.2 quarts (≥3 l)

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

Technology in detail

Brake system with BMW Motorrad ABS[OE] 96

High Performance 98

Brake system with BMW Motorrad ABS OE

How does ABS work?

The maximum braking force that can be transferred to the road surface is partially dependent on the friction coefficient of the road surface. Gravel, ice, snow and wet roads offer a considerably poorer friction coefficient than a dry, clean asphalt surface. The poorer the friction coefficient of the road surface is, the longer the braking distance will be.
If the maximum transferrable braking force is exceeded when the driver increases the brake pressure, the wheels begin to block and driving stability is lost, and a fall can result. Before this situation occurs, ABS intervenes and adjusts the brake pressure to the maximum transferrable braking force. This enables the wheels to continue to turn and maintains driving stability regardless of the road surface condition.

What happens when rough roads are encountered?

Bumpy or rough roads can briefly lead to a loss of contact between the tires and the road surface, until the transferrable braking force is reduced to zero. If braking is carried out in this situation, ABS must reduce the brake pressure to ensure driving stability when restoring contact to the road. At this point in time, the BMW MotorradABS must assume extremely low friction coefficients (gravel, ice, snow) so that the running wheels turn in every imaginable case and the driving stability is ensured. After detecting the actual conditions, the system adjusts the optimum brake pressure.

Lifting off rear wheel

However, during extremely heavy and rapid decelerations it is possible that the BMW Motorrad ABS cannot prevent the rear wheel from lifting off the ground. In these cases, the motorcycle can also flip end over end.

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

What are the design characteristics of the BMW Motorrad ABS?

The BMW Motorrad ABS ensures driving stability on any surface within the limits of driving physics. The system is not optimized for special requirements

resulting under extreme weather conditions on the racetrack.

Special situations

To detect the tendency of the wheels to lock up, the speeds of the front and rear wheel are compared. If implausible values are detected over a longer period of time, the ABS function is deactivated for safety reasons and an ABS fault is indicated. The condition for a fault message is the completed self-diagnosis.
In addition to problems on the BMW Motorrad ABS, unusual driving conditions can also lead to a fault message.

Unusual driving conditions:

- Driving on the rear wheel (wheely) for a longer period.
- Rear wheel spinning in place with front brake pulled (burn out).
- Heating up on the main or auxiliary stand at idle or with gear engaged.
- Locked-up rear wheel for a longer period of time, e.g. when riding downhill offroad.

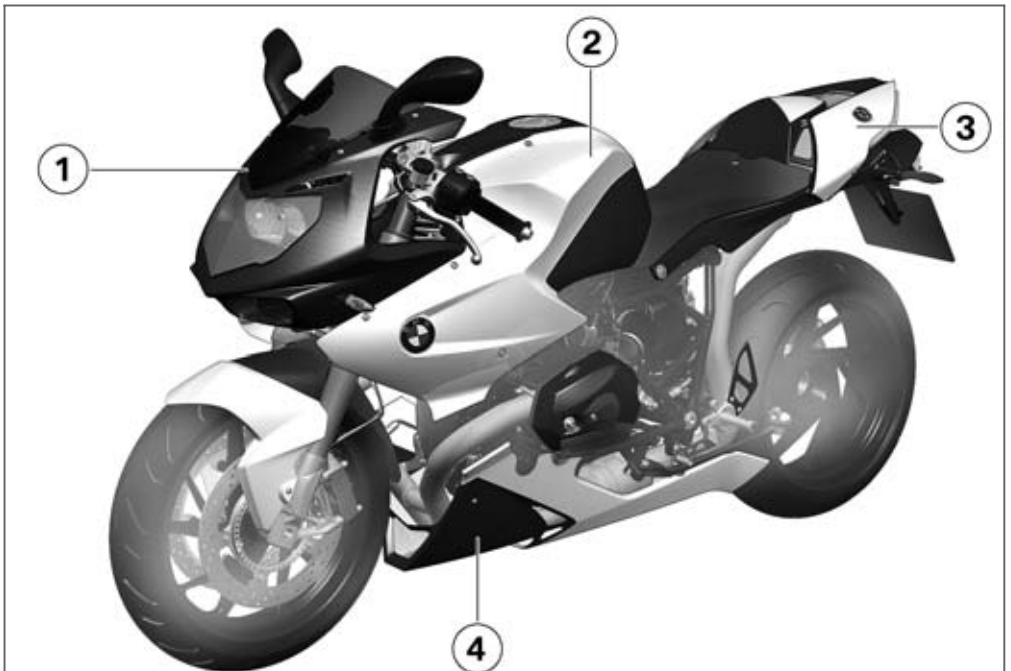
Should a fault message result due to one of the driving conditions described above, the ABS function can be reactivated by switching the ignition off and then on again.

How important is regular maintenance?

Any technical system is always only as good as its maintenance condition.
To ensure that the BMW Motorrad ABS is in an optimally maintained condition, it is vital that the specified inspection intervals be complied with.◀

Reserves for safety

But remember: the potentially shorter braking distances which BMW Motorrad 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 ABS is unable to counteract their effects.


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High Performance

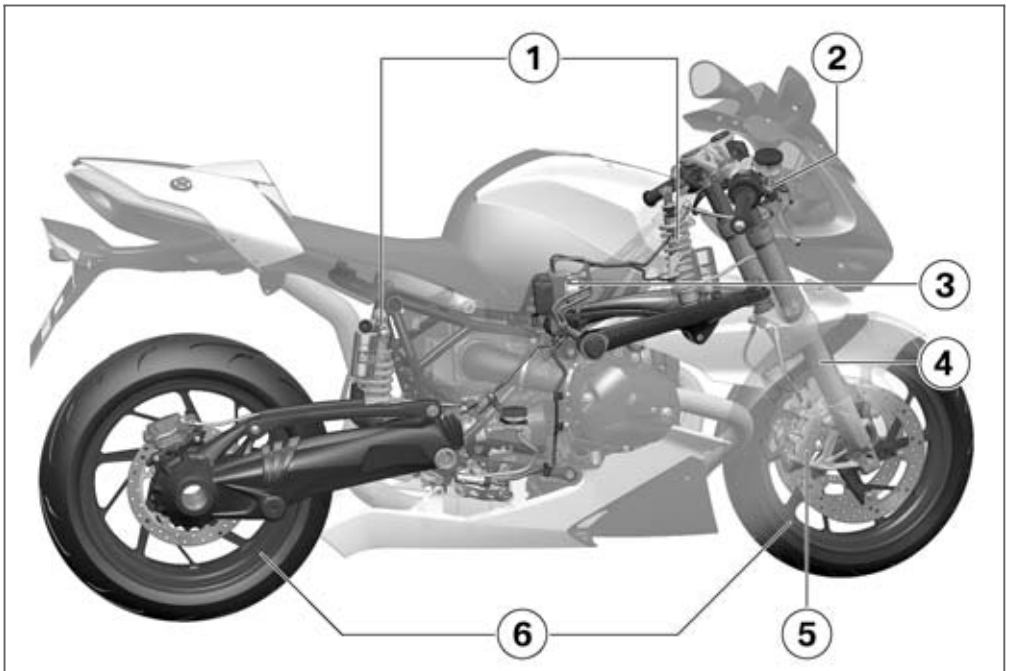
Body

1 The carbon self-supporting front end of the motorcycle is secured with two screws. The headlight, instrument cluster and oil cooler are installed directly in this section to reduce the number of components used and the weight.

2 The carbon side panel for the fuel tank is designed as one piece. This results in low weight and easy removability.

3 The extremely light, self-supporting carbon rear end comes without an auxiliary frame. In addition to serving as a seat, it is also used to mount the muffler and the license-plate carrier, which can easily be removed for the racetrack.

4 The carbon engine spoiler can be removed and installed quickly via four screw points. The rear screw points are provided with contact surfaces for easier mounting.


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Chassis components

1 The rebound, compression and spring preload of the front and rear Öhlins spring strut can be adjusted. To change the steering geometry and to increase the clearance with the motorcycle inclined, the length of the rear spring strut can also be adjusted.

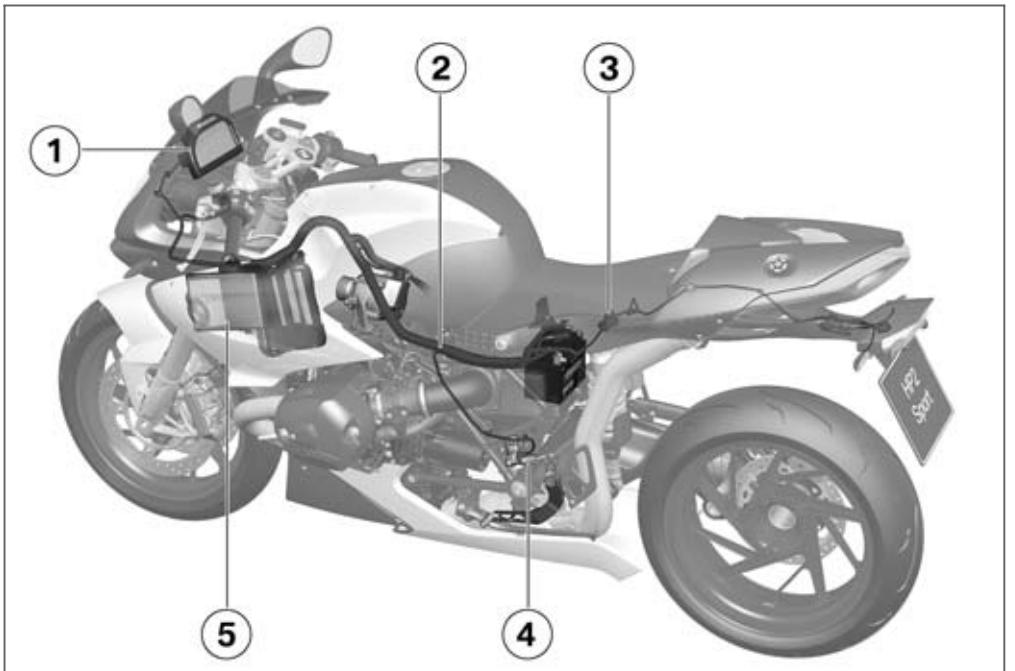
2 Thanks to its design and the favorable lever ratio, the Magura radial brake fitting enables the offered braking performance to be utilized sensitively. The clutch lever fitting also has a radial design. The handlebar stubs are installed in a milled fork bridge and can be adjusted in the offset.

3 In addition to its compact design and a low system weight, the BMW Motorrad ABS available as optional equipment also enables the ABS function to be deactivated. And high braking performance is made possible by the integrated pressure sensor.

4 To increase the clearance with the motorcycle inclined, the position of the slider tubes in the lower fork bridge can be changed. Maximum ease of handling is achieved for the racetrack when the fork bridge is set as low as possible and the spring strut as high as possible. Maximum clearance with the motorcycle inclined is achieved by also positioning the fork bridge as high as possible.

5 The radially screwed Brembo Monobloc brake calipers and the 320 mm brake disks enable the deceleration values required for the racetrack.

6 The light, exclusive forged wheels are also overmilled for maximum weight reduction.


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HP2
Sport

Electrical system

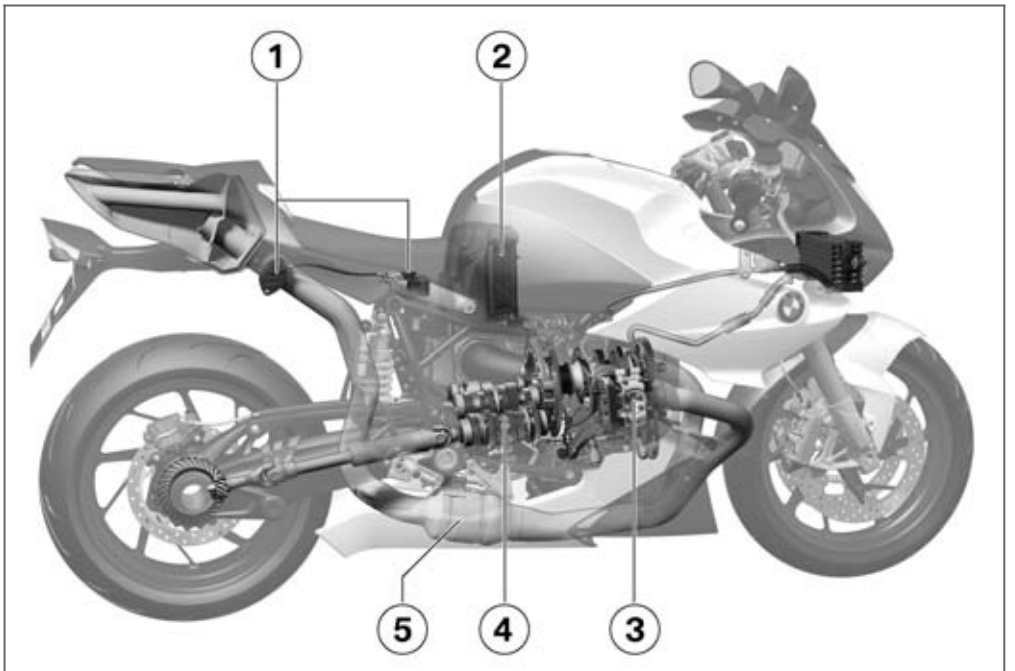
1 The instrument cluster from 2D offers functions for road and racetrack operation. On the racetrack extensive data can be saved for each lap driven and then displayed again. An infrared sensor available as an optional accessory can be connected for exact lap recording.

2 The onboard electrical system features CAN bus technology. This enables the high-performance control units to communicate via a wiring harness consisting of just a few wires.

3 The wiring harness need only be disconnected at one connector to remove the license-plate carrier.

4 The sensor of the shifting assistant is connected to the engine control unit. The integrated software ensures an extremely short interruption in pulling force, enabling rapid upshifting without clutch operation and without reducing throttle application.

5 The lighting functions are controlled centrally in the control unit of the central motorcycle electronics. There is no need for fuses thanks to the use of switchable power modules.


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Drive

1 To increase the clearance with the motorcycle inclined, the stainless-steel manifold is already joined before the engine in order to route it as closely below the engine as possible. The exhaust flap actuated by the positioning motor affects the noise emissions depending on the operating state.

2 The airbox optimized for a high air throughput holds a high-quality, oil-wetted sport filter of metal-reinforced woven material.

3 Valve control (➡ 106)

4 The engine output is passed on to the six-speed sport transmission via a reinforced clutch, which is matched to the requirements for racetrack use with a specially selected gear ratio. Together with the standard shifting assistant, the pulling force provided by the motor is fully utilized for optimum acceleration.

5 An enlarged metal-substrate catalytic converter is integrated in the stainless-steel exhaust system.

Valve control



The valves are arranged radially to obtain a compact combustion chamber with favorable flow characteristics. To achieve an optimum flow of fresh gas, the inlet channels are remachined. Four valves per cylinder are actuated by two overhead camshafts with diagonally ground cams and short trailing valve levers. To adjust the valve clearance, the hemispherical balls can be removed with the trailing valve levers in one service-friendly operation. The carbon cylinder-head covers are equipped with replaceable skid pads.

Accessories

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Luggage 109

General instructions

BMW Motorrad recommends the use of parts and accessories for your motorcycle that are approved by BMW for this purpose. Your authorized BMW Motorrad retailer is the right place to go for genuine BMW parts and accessories,other BMW approved products, and expert advice on their installation and use.
These parts and products have been tested by BMW for safety, function and suitability. BMW accepts product liability for these products.
Conversely, BMW is unable to accept any liability whatsoever for parts and accessories which it has not approved.

BMW Motorrad cannot examine or test each product of outside origin to ensure that it can be used on or in connection with BMW motorcycles without constituting a safety hazard. Nor is this guarantee provided when the official approval of a specific country has been granted. Tests conducted by these instances cannot make provision for all operating conditions experienced by BMW motorcycles and, consequently, they are not sufficient in some circumstances.
Use only parts and accessories approved by BMW for your motorcycle.◀

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

Onboard socket OA

Ratings



The supply to the onboard socket **1** is cut off if battery voltage is low or the load exceeds the maximum rating.

Operating electrical accessories

You can start using electrical accessories only when the ignition is switched on. The accessory remains operational if the ignition is subsequently switched off. Approx. 15 minutes after switching off the ignition and/or during

starting, the onboard socket is switched off to take the load off the motorcycle electrical system.

Cable routing

The cables from the onboard socket to the auxiliary device must be routed in such a way that they:

– Do not impede the rider
– Do not restrict or obstruct the steering angle and handling characteristics
– Cannot be trapped


Improperly routed cables can impede the rider.
Route the cables as described above.◀

Luggage

Stowing luggage


Air heated by the muffler flows upward through the grill areas in the tail section.
Loading with excessive weight can damage the tail section.
Do not transport luggage etc. on the tail section.◀

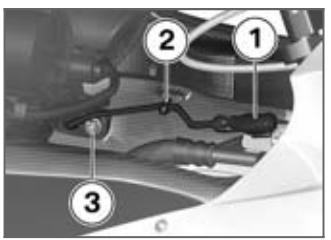
For the racetrack

Turn indicators 112
Mirrors 114
License-plate carrier 115
On public roads 116

Turn indicators

Removing front right turn indicator

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



- Disconnect connector **1**.

To disconnect the connector: grasp the cable close to the front connector, first pull toward the inside and then forward.◀

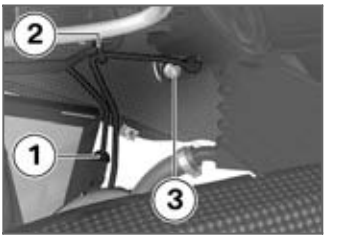
- Remove cable tie **2**.
- Brace nut **3** in next step.



- Remove screw **4**.
- Rotate turn indicator 90° and remove.
- Thread out cable.

Removing front left turn indicator

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



- Disconnect connector **1**.

To disconnect the connector: grasp the cable close to the lower connector, first pull toward the inside and then downward.◀

- Remove cable tie **2**.
- Brace nut **3** in next step.

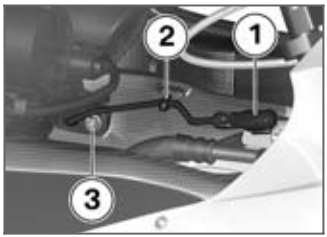


- Remove screw **4**.
- Rotate turn indicator 90° and remove.
- Thread out cable.

Installing front right turn indicator



- Thread in cable, mount turn indicator and rotate by 90°.
- Mount bolt **4** with nut hand-tight in next step.

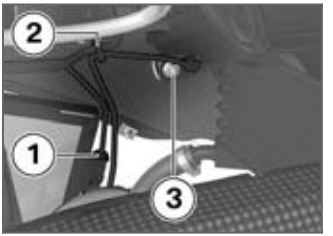


- Brace nut **3** to install bolt.
- Close connector **1**.
- Secure cable with cable tie **2**.

Installing front left turn indicator



- Thread in cable, mount turn indicator and rotate by 90°.
- Insert bolt **4** with install with nut hand-tight in next step.



- Brace nut **3** to install bolt.
- Close connector **1**.
- Secure cable with cable tie **2**.

Mirrors

Removing mirror

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



- Remove screws **1**.
- Remove mirror.

Installing mirrors

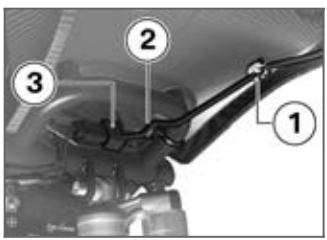


- Position mirror.
- Tighten screws **1** hand-tight.

License-plate carrier

Removing license-plate carrier

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



- Take cable out of brackets **1** and **2**.
- Disconnect connector **3**.

▷ To disconnect the connector: press together the locking devices on the narrow sides of the connector and pull off the connector.◀

- Protect connector on vehicle from soiling.



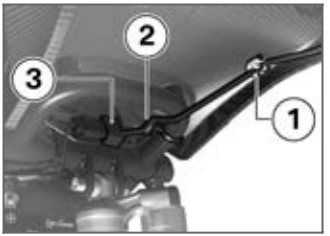
- Remove screws **4** on left and right and take off license-plate carrier.

Installing license-plate carrier



- Position license-plate carrier and install screws **4** on left and right with specified torque.

License-plate carrier on tail section
– Thread-locking compound: Micro-encapsulated
– 6 lb/ft (8 Nm)



- Close connector **3**.
- Insert cable in brackets **1** and **2**.

On public roads

Tire inflation pressure

A tire inflation pressure reduced for driving on the racetrack results in poorer handing of the motorcycle in normal road traffic and can result in accidents.
Ensure proper tire inflation pressure.◀

Removed parts

Vehicle parts removed for the racetrack may be required for driving on public roads. Remount all parts required for the road registration.◀

Shift reversal OA

Riding with shift reversal is not permitted on public roads.
Do not use shift reversal on public roads.◀

Maintenance

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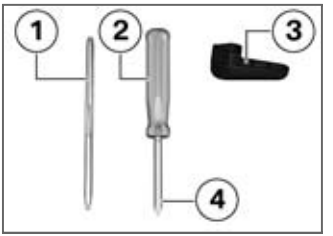
General instructions

The 'Maintenance' chapter describes work involving the checking and replacement of wear parts that can be performed with a minimum of effort.
If special tightening torques are to be taken into account for assembly, these are listed. An overview of all required tightening torques is contained in the chapter "Technical Data".
Information on additional maintenance and repair work is contained in the Repair Manual on DVD/CD-ROM also included with your motorcycle.

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

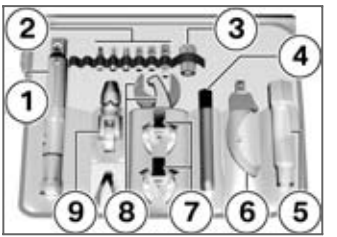
Onboard toolkit

Underneath seat



1 Reversible screwdriver insert
with Phillips and Torx T25 blade
2 Screwdriver handle
3 Tool for oil cap
for opening oil fill location
4 Reversible screwdriver insert
with Phillips and straight blade

Service set



1 Pull-out tool holder
for mounting all tools via adapters and for removing spark plug
2 1/4" bits
Bits of various sizes
3 Torx E12 socket wrench insert
4 Flashlight
5 3/8" Allen key, 22 mm
for removing quick-release axle on front wheel
6 large hook wrench
for adjusting spring preload

7 Socket wrench
Open-ended wrench,
10 mm, 13 mm
8 Adapter
for holding 1/4" bits and
9x12 mm and 3/8" jointed
adapter
small hook wrench
for adjusting spring preload
9 Adapter
for holding 1/4" bits and
9x12 mm and 3/8" jointed
adapter

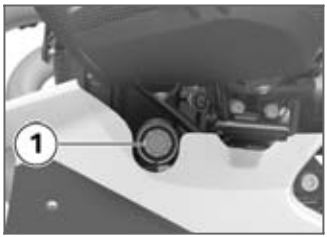
Engine oil

Checking engine oil level

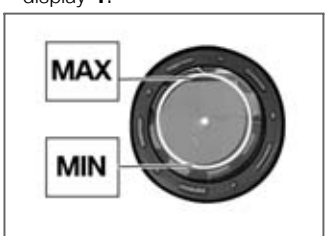
⚠ The engine can seize if the oil level is low, and this can lead to accidents.
Always make sure that the oil level is correct.◀

⚠ The oil level varies with the temperature of the oil. The higher the temperature, the higher the level of oil in the sump.
Checking the oil level with the engine cold or after a short trip leads to misinterpretations and therefore to incorrect oil fill quantities.
To ensure that the display of the engine oil level is correct, only check the oil level after a longer trip.◀

- Make sure ground is level and firm and park motorcycle at operating temperature.
- Wait five minutes after switching off the engine at operating temperature.



- Read off the oil level from the display **1**.



Engine oil level

– between MIN and MAX marking

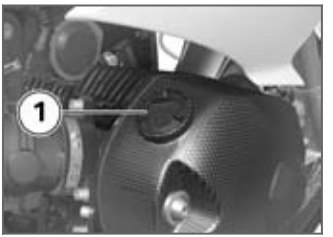
Engine oil level
– max 0.5 quarts (max 0.5 l) (Difference between MIN and MAX)

If oil level is below MIN mark:
- Topping up engine oil (➨ 120)

If oil level is above MAX mark:
- Have oil level corrected by a specialized workshop, preferably an authorized BMW Motorradretailer.

Topping up engine oil

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



- Wipe area around fill location clean.
- Remove cap **1** of engine oil fill location with toolkit.

Both too little and too much engine oil can lead to engine damage.
Always make sure that the oil level is correct.◀

- Add engine oil up to specified level.
- Checking engine oil level (➨ 119)
- Reinstall engine oil fill location cap.

Brake system

Brake safety

A fully functional brake system is a basic requirement for the road safety of your motorcycle.
Do not ride the motorcycle if you have any doubts about the dependability of the brake system. In this case, have the brake system checked by a specialized workshop, preferably by an authorized BMW Motorrad retailer.

Incorrect working practices endanger the reliability of the brakes.
Have all work on the brake system performed by a specialized workshop, preferably by an authorized BMW Motorrad retailer.◀

Checking brake operation

- Pull handbrake lever.

» Pressure point must be clearly perceptible.

- Press footbrake lever.

» Pressure point must be clearly perceptible.

If no clear pressure points are perceptible:

- Have the brakes checked by a certified workshop, preferably an authorized BMW Motorrad retailer.

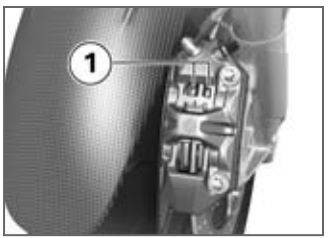
Brake pads

Checking front brake pad thickness

Dropping below the minimum pad thickness leads to reduced braking performance and may result in damage to the brakes.

In order to ensure the operating reliability of the brake system, make sure that the brake pads are not worn beyond their minimum thickness.◀

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



- Visually check brake pad thickness **1** on left and right.

Front brake-pad wear limit
– min 0.04 in (min 1 mm) (Only friction material without carrier plate)

If brake pads are worn:

- Have the brake pads replaced by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Checking rear brake pad thickness

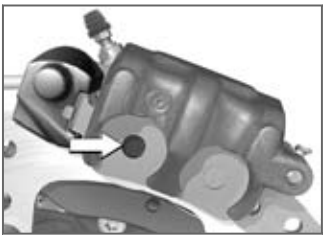
Dropping below the minimum pad thickness leads to reduced braking performance and may result in damage to the brakes.

In order to ensure the operating reliability of the brake system, make sure that the brake pads are not worn beyond their minimum thickness.◀

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



- Check the brake pad thickness on the brake caliper **1** with visual inspection from the left.



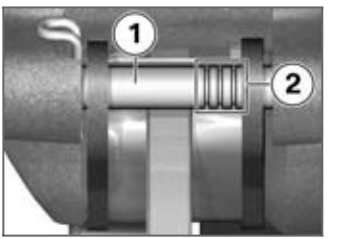
	Rear brake-pad wear limit
– 0.04 in (1 mm) (Only friction material without carrier plate)	
– Brake disk must not be visible through bore hole of inner brake pad.	

If brake disk is visible:

- Have the brake pads replaced by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Brake pad wear

The rear brake has a brake-pad wear indicator.



Shaft **1** with three marker rings **2** is between the brake pads.

How to interpret the marks:

- Three rings visible: brake-pad thickness is at least 75 %
- Two rings visible: brake-pad thickness is at least 50 %
- One ring visible: brake-pad thickness is at least 25 %
- No rings visible: brake pads worn to wear limit; check as described above

Brake fluid

Checking front brake fluid level

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

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



- Read off brake fluid level at front brake-fluid reservoir **1**.

▷ In the event of brake pad wear, the brake fluid level in the brake-fluid reservoir falls.◀



Front brake fluid level (visual check)
– Brake fluid DOT4
– The brake fluid level must not fall below the MIN mark. (Brake-fluid reservoir horizontal)

If brake fluid level drops below permissible level:

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

Checking rear brake fluid level

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

- Make sure ground is level and firm and position motorcycle vertically.



- Read off brake fluid level at reservoir **1**.

In the event of brake pad wear, the brake fluid level in the brake-fluid reservoir falls.◀



Rear brake fluid level
– Brake fluid DOT4
– The brake fluid level must not fall below the MIN mark. (Brake-fluid reservoir horizontal)

If brake fluid level drops below permissible level:

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

Clutch

Checking clutch operation

- Pull the clutch lever.

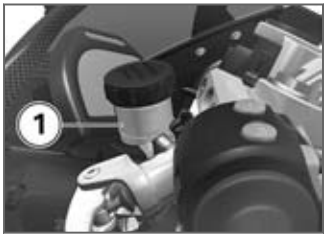
» Pressure point must be clearly perceptible.

If no clear pressure point can be felt:

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

Checking clutch fluid level

- Make sure ground is level and firm and position motorcycle vertically.
- Move handlebars into straight-ahead position.



- Read off clutch fluid level at reservoir **1**.

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



Clutch fluid level (visual check)

– Clutch fluid level must not drop.

If fluid level drops:

⚠ Unsuitable hydraulic fluids could cause damage to the clutch system.
No fluids may be poured in.◀

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

The clutch system is filled with a special hydraulic fluid that does not require changing.◀

Tires

Checking tire tread depth

The handling of your motorcycle can already change for the worse before the legally prescribed minimum tread depth is reached.
Have tires replaced even before the minimum tread depth is reached.◀

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

Tires have wear indicators integrated into the main tread grooves. If the tire tread has worn down to the level of the marks, the tire is completely worn. The locations of the marks are indicated on the edge of the tire, e.g. by the letters TI, TWI or by an arrow.◀

When the minimum tread depth is reached:

- Replace tires concerned.

Rims

Checking rims

- Make sure ground is level and firm and park motorcycle.
- Visually inspect rims for defects.
- Have damaged rims checked and, if necessary, replaced by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Wheels

Tire recommendation

For every size of tire, BMW Motorrad has tested and approved certain makes as roadworthy. BMW Motorrad cannot evaluate the suitability of other tires, and can therefore take no responsibility for their driving safety.
BMW Motorrad recommends only using the tires tested and approved by BMW Motorrad. Extensive information is available at your authorized BMW Motorrad retailer or on the Internet at www.bmw-motorrad.com.

Affect of wheel sizes on chassis control systems

The wheel sizes play a major role with the ABS system. Especially the diameter and width of the wheels are stored in the control unit as the basis for all necessary calculations. A change in these

sizes due to conversion to others than the wheels installed as standard equipment can seriously affect the control comfort of these systems.
The sensor wheels required for wheel speed detection must also match the ABS system installed and may not be replaced.
If you want to equip your motorcycle with different wheels, please speak to a specialized workshop, and preferably a BMW Motorrad retailer. In some cases the data stored in the control units can be adapted to the new wheel sizes.

Removing front wheel

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

– with BMW Motorrad ABS OE

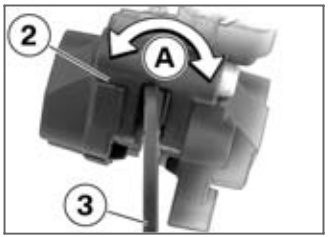


- Unclip retaining clip of ABS sensor cable on brake line.◁
- Mask off area of wheel rim that could be scratched in process of removing brake calipers.



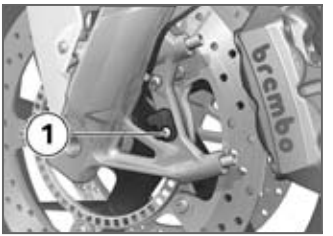
Once the calipers have been removed, there is a risk of the brake pads being pressed together to the extent that they cannot be slipped back over the brake disk on reassembly.
Do not operate the handbrake lever when the brake calipers have been removed.◀

- Remove mounting bolts **1** of brake calipers on left and right.



- Press brake pads in brake caliper **2** apart slightly by rocking back and forth **A** in relation to brake disks **3**.
- Carefully pull brake calipers back and out until clear of brake disks.

– with BMW Motorrad ABS OE

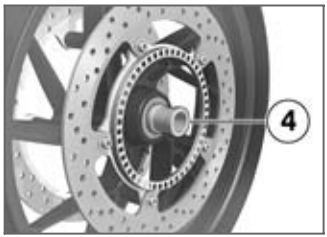


- Remove screw **1** and take ABS sensor out of hole.◁

- Place motorcycle on an auxiliary stand; BMW Motorrad recommends BMW Motorrad rear wheel stand.
- Installing rear-wheel stand (➡ 133)
- Raise front of motorcycle until the front wheel can turn freely. BMW Motorrad recommends the BMW Motorrad front-wheel stand for lifting the motorcycle.
- Mounting front wheel stand (➡ 132)



- Remove axle clamping screw **2**.
- Remove quick-release axle **3** while supporting wheel.
- Place the front wheel in the front wheel guide on the ground.
- Roll front wheel forward to remove.

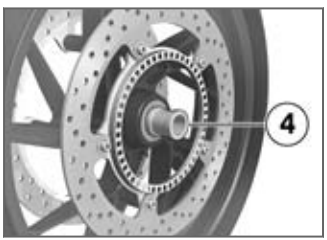


- Remove spacer bushing **4** from front wheel hub.

Installing front wheel

Malfunctions may occur during control interventions by ABS if a wheel other than the standard wheel is installed. Please see the information on the effect of wheel sizes on the ABS system at the beginning of this chapter.◀

Threaded fasteners not tightened to the specified torque can work loose or their threads can suffer damage. Always have the tightening torques checked by a specialized workshop, preferably an authorized BMW Motorrad retailer.◀



- Insert spacer bushing **4** into wheel hub.

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

- Roll front wheel into front wheel guide.



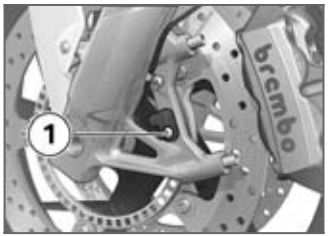
- Lift front wheel and install quick-release axle **3** with torque.

Quick-release axle in axle mount	
– 37 lb/ft (50 Nm)	

- Tighten axle clamping screw **2** with appropriate torque.

Clamping screw for quick-release axle	
– 14 lb/ft (19 Nm)	

– with BMW Motorrad ABS OE



- Insert ABS sensor into hole and install screw **1**.◁
- Remove front-wheel and rear-wheel stand.
- Ease brake calipers onto brake disks.



- Install securing screws **1** on left and right with specified torque.

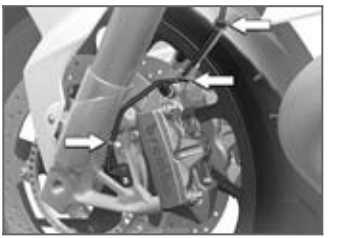
	Radial brake caliper on slider tube
– 22 lb/ft (30 Nm)	

- Remove adhesive tape from wheel rim.

Braking efficiency is impaired if the brake pads are not correctly bedded against the disks.
Before driving off, check that the braking effect kicks in without any delay.◀

- Operate brakes several times until brake pads contact brake disk.

– with BMW Motorrad ABS OE



- Clip in retaining clips of ABS sensor cable on brake line.

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

- Make sure that ABS sensor cable is routed as shown.◁

Removing rear wheel

- Place motorcycle on an auxiliary stand; BMW Motorrad recommends BMW Motorrad rear wheel stand.
- Installing rear-wheel stand (➡ 133)
- Shift into first gear.



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

- Remove bolts **1** of rear wheel, holding wheel as you do so.
- Set down rear wheel and roll out toward rear.

Installing rear wheel

Malfunctions may occur during control interventions by ABS if a wheel other than the standard wheel is installed. Please see the information on the effect of wheel sizes on the ABS system at the beginning of this chapter.◀

Threaded fasteners not tightened to the specified torque can work loose or their threads can suffer damage. Always have the tightening torques checked by a specialized workshop, preferably an authorized BMW Motorrad retailer.◀

- Place rear wheel on rear wheel support.



- Install wheel studs **1** with specified torque.

Rear wheel on wheel carrier
– Tightening sequence: Tighten diagonally
– 44 lb/ft (60 Nm)

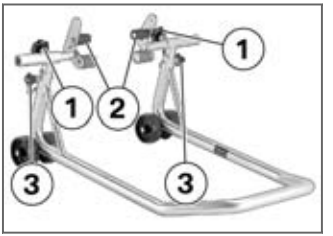
- Remove rear wheel stand.

Front wheel stand

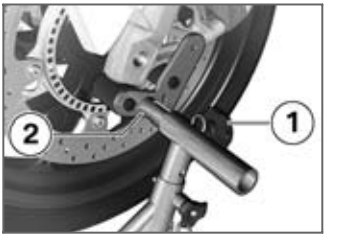
Mounting front wheel stand

The BMW Motorrad front wheel stand is not designed for holding motorcycles without a center or other auxiliary stands. A motorcycle standing on the front wheel stand and the rear wheel alone can fall over.
Place the motorcycle on the center stand or an auxiliary stand before lifting it with the BMW Motorrad front wheel stand.◀

- Place motorcycle on an auxiliary stand; BMW Motorrad recommends BMW Motorrad rear wheel stand.
- Installing rear-wheel stand (➡ 133)
- Use basic stand with tool number (0 402 241) in combination with front-wheel adapter (0 402 242).



- Loosen adjusting screws **1**.
- Push two mounts **2** far enough apart that front forks fit between them.
- Use locating pins **3** to set front wheel stand to desired height.
- Center front wheel stand relative to front wheel and push it against front axle.



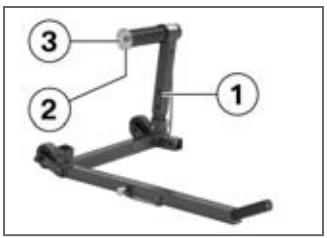
- Align two mounts **2** so that front forks rest securely on them.
- Tighten adjusting screws **1**.



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

Rear-wheel stand

Installing rear-wheel stand



- Set desired height of rear wheel stand using bolt **1**.
- Remove the lock washer **2**; to do so, press the unlock button **3**.



- Push the rear-wheel stand from the right onto the rear axle.
- Apply the retaining disk from the left; to do so, press the unlock button.
- Secure motorcycle with left hand and place right hand on lever of rear wheel stand **4**.

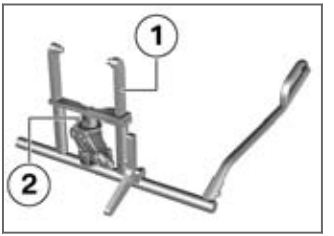


- Raise motorcycle while simultaneously pressing lever downward until motorcycle stands vertically.
- Press lever onto ground.

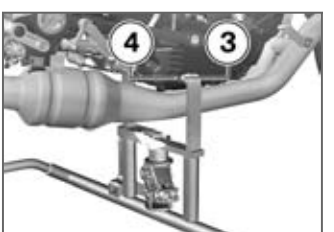
Center stand

Attaching center stand

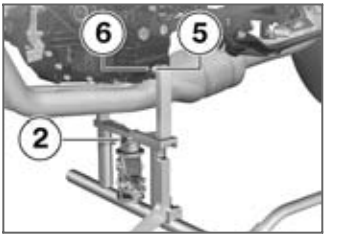
- Make sure ground is level and firm and park motorcycle.
- Use auxiliary stand with number (0 401 358) and H-adapter with number (0 430 386).



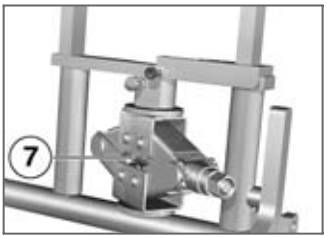
- Unlock left-hand guide **1** by pulling out pin **2** and pull outward.



- Insert bolt **3** on right side into mount **4** on motorcycle.



- Insert bolt **5** on left side into mount **6** on motorcycle. When doing so, make sure that pin **2** locks.
- Position motorcycle horizontally so that auxiliary stand rests completely on floor.
- Press lifting lever to floor.



- Height of auxiliary stand can be adjusted with scissors jack **7** for a safe stance.

Lamps

General instructions

A warning appears in the multi-function display if a bulb is defective. If the brake or rear light fails, the symbol is accompanied by the 'General' warning light, which lights up yellow.

A defective bulb places your safety at risk because it is easier for other users to oversee the motorcycle.

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

The bulb is pressurized and can cause injury if damaged.
Wear eye and hand protection when replacing bulbs.◀

An overview of the bulb types installed in your motorcycle is provided in the chapter "Technical Data".◀

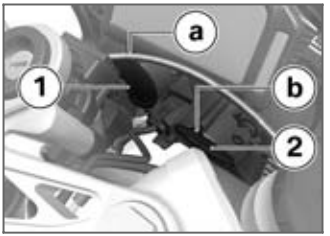
Do not touch the glass of new bulbs with your fingers. For installation, use a clean, dry cloth. Dirt deposits, in particular oil and grease, interfere with heat radiation from the bulb. Overheating and therefore short service life of the bulbs are the consequence.◀

Replacing low-beam/high-beam bulb

The alignment of the connector and the spring strap may differ from the illustration.◀

If it is not standing firmly, the motorcycle could topple in the course of the operations described below.
Make sure that the motorcycle is steady on its stand.◀

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



- Remove cover for high-beam headlight **1** by releasing at position **a**.
- Remove cover for low-beam headlight **2** by releasing at position **b**.



- Disconnect plug **3**.



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

- Replace defective bulb.

Bulb for low-beam headlight
– H7 / 12 V / 55 W

Bulb for high-beam headlight
– H7 / 12 V / 55 W



- Insert bulb **5** while ensuring correct position of lug **6**.

The alignment of the bulb may differ from the illustration.◀

- Insert spring clip **4** into catch.



- Insert plug **3**.



- Install cover for high-beam headlight **1** and lock at position **a**.
- Install cover for low-beam headlight **2** and lock at position **b**.

Replacing parking light bulb

If it is not standing firmly, the motorcycle could topple in the course of the operations described below.
Make sure that the motorcycle is steady on its stand.◀

- Make sure ground is level and firm and park motorcycle.
- Switch off ignition.
- Turn handlebars to the right.



- Remove bulb holder **1** from headlight housing.



- Pull bulb out of socket.
- Replace defective bulb.

Bulb for parking light
– W5W / 12 V / 5 W



• Insert bulb into bulb socket.



• Insert bulb holder **1** into headlight housing.

Replacing front and rear turn indicator bulbs

If it is not standing firmly, the motorcycle could topple in the course of the operations described below.
Make sure that the motorcycle is steady on its stand.◀

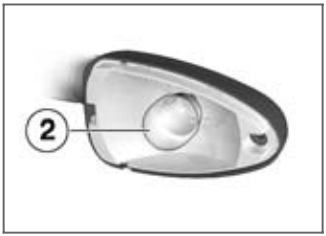
• Make sure ground is level and firm and park motorcycle.



• Remove screw **1**.



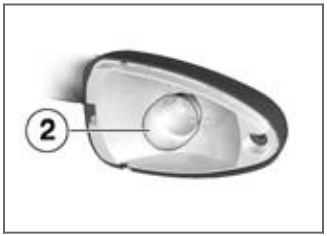
• Pull glass on screw connection side out of mirror housing.



- Remove bulb **2** from light housing by turning it counterclockwise.
- Replace defective bulb.

Bulbs for flashing turn indicators, front
– LED / 12 V

Bulbs for flashing turn indicators, rear
– LED / 12 V



- Install bulb **2** by turning clockwise in light housing.



- Insert inside end of lens into light housing and close.



- Install screw **1**.

Replacing brake and taillight bulb

- The diode taillight can only be completely replaced. Please contact a specialized workshop for this purpose, preferably an authorized BMW Motorrad retailer.

Jump-starting

The wires leading to the power socket do not have a load-capacity rating adequate for jump-starting the engine. Ex-

cessively high current can lead to a cable fire or damage to the motorcycle electronics.
Do not use the onboard socket to jump-start the engine of the motorcycle.◀

Touching live parts of the ignition system with the engine running can cause electric shock.
Do not touch parts of the ignition system when the engine is running.◀

A short-circuit can result if the crocodile clips of the jump leads are accidentally brought into contact with the motorcycle.
Use only jump leads fitted with fully insulated crocodile clips at both ends.◀

Jump-starting with a donor-battery voltage higher than 12 V can damage the motorcycle electronics.
The battery of the donor vehicle must have a voltage of 12 V.◀

- Make sure ground is level and firm and park motorcycle.
- When jump-starting the engine, do not disconnect the battery from the onboard electrical system.



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

- Begin by connecting one end of red jump lead to positive terminal of your own battery **1** and other end to positive terminal of second battery.
- Then connect one end of black jump lead to a grounding point on your own motorcycle and other end to negative terminal of second battery.
- Run engine of donor vehicle during jump-starting.
- Start engine of the vehicle with discharged battery in usual way; if engine does not start, wait a few minutes before repeating attempt in order to protect starter motor and donor battery.
- Allow both engines to idle for a few minutes before disconnecting jump leads.
- Disconnect jump lead from negative terminals first, then disconnect second lead from positive terminals.

To start the engine, do not use start sprays or similar items.◀

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 maximize battery life:

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

If the battery is not disconnected, the onboard electronics (clock etc.) will drain the battery. This can cause the battery to run flat. If this happens, warranty claims will not be accepted.

During periods when the motorcycle is not being used, of more than four weeks, disconnect the battery from the motorcycle or connect a trickle charger to the battery.◀

BMW Motorrad has developed a trickle-charger specially designed for compatibility with the electronics of your motorcycle. Using this charger, you can keep the battery charged during long periods when the motorcycle is not being used without having to disconnect the battery from the motorcycle's onboard systems. Additional information is available at your authorized BMW Motorrad retailer.◀

Charging connected battery

Charging the connected battery directly at the battery terminals can damage the motorcycle electronics.

To charge the battery via the battery terminals, disconnect the battery first.◀

If you switch on the ignition and the multifunction display and indicator lights fail to light up, the battery is completely flat. Attempting to charge a completely flat battery via the onboard socket can cause damage to the motorcycle's electronics. Always charge a completely drained battery directly at the terminals of the disconnected battery.◀

Charging the battery via the onboard socket is only possible with suitable chargers. Unsuitable chargers can result in

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

- Charge disconnected battery via onboard socket.

The motorcycle's onboard electronics know when the battery is fully charged. The onboard socket is switched off when this happens.◀

- Comply with operating instructions of charger.

If you are unable to charge the battery via the onboard socket, you may be using a charger that is not compatible with your motorcycle's electronics. In this case, please charge the battery directly at the terminals of the disconnected battery.◀

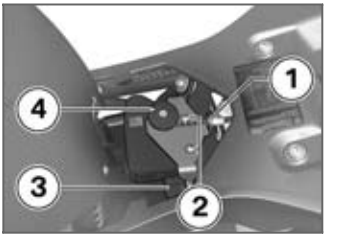
Charging disconnected battery

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

In the case of longer periods when the motorcycle is not being used, the battery must be recharged regularly. See the instructions for caring for your battery. Always fully recharge the battery before returning it to use.◀

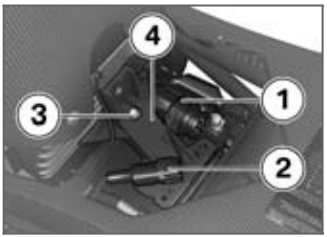
Removing battery

- Removing driver's seat (➡ 80)
- Switch off ignition.



Hand may strike rear fairing when pulling the Bowden cable out of the holder.
Ensure sufficient free space at hand.◀

- Pull Bowden cable out of holder **1**.
- Remove screws **2**.
- Open connector **3**.
- Remove Bowden cable end **4** from deflection pulley.
- Remove control unit.



- Take diagnosis plug **1** out of holder.
- Disconnect connector **2** and take out of holder.
- Remove screw **3** and take out battery holder **4**.



⚠ An incorrect disconnection sequence increase the risk of short-circuiting.
Always observe the proper sequence.◀

- Remove battery ground wire **5** first.
- Then remove positive battery cable **6**.
- Lift out battery upward.

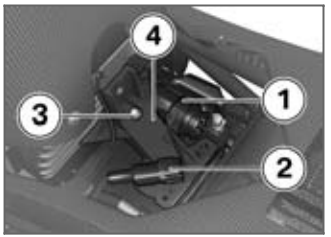
Installing battery

- Place battery in battery compartment with positive terminal on left in driving direction.

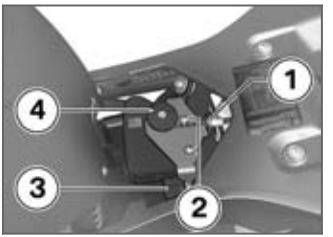


⚠ An incorrect installation sequence increases the risk of short-circuiting.
Always observe the proper sequence.
Never install the battery without the protective cap.◀

- First install positive battery cable **6**.
- Attach negative battery cable **5**.



- Route cable of diagnosis plug **1** below battery holder. Position battery holder **4** and install screw **3**.
- Insert connector **2** in holder and close.
- Install diagnosis plug **1** into holder.



- Insert end of Bowden cable **4** into deflection pulley.
- Close connector **3**.
- Position control unit and install screws **2**.
- Insert Bowden cable into holder **1** with pressure.

» Bowden cable clicks audibly into place.

- Installing seat (➟ 81)
- Setting clock (➟ 47)

Care

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Cleaning carbon parts

The carbon body parts are derived from racing and are produced in a complex manufacturing process with a large portion of manual labor.

The descriptions in the sections Care Agents and Paint Care also apply to carbon parts. To treat surface scratches, BMW Motorrad recommends the BMW Polish Kit available from your BMW Motorrad retailer.

Please contact your BMW Motorrad retailer for the repair of damage incurred from falling, tipping over or from other causes, which exceeds minor surface damage.

Care products

BMW Motorrad recommends that you use cleaning and care products available at your authorized BMW Motorrad retailer. BMW Care Products have been materials tested, laboratory tested, and field tested and provide optimum care and protection for the materials used in your motorcycle.

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

For cleaning, do not use any solvents such as nitro-thinners, cold cleaning agents, fuel or similar, and do not use cleaning agents that contain alcohol.◀

Washing your motorcycle

BMW Motorrad recommends that you use BMW Insect Remover to soften and wash off insects and stubborn dirt from painted parts before washing the motorcycle.

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

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

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

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

Brake early until the brakes are dry or braked until dry.◀

Warm water intensifies the effect of salt.

Only use cold water to remove road salt.◀

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

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

Cleaning sensitive motorcycle parts

Plastics

Clean plastic parts with water and BMW plastic care emulsion. This includes in particular:

- Windshields and wind deflectors
- Headlight lens made of plastic
- Covering glass of the instrument cluster
- Black, unpainted parts

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

Do not use cleaning agents that contain alcohol, solvents or abrasives to clean plastic parts.

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

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

Windshield

Clean off dirt and insects with a soft sponge and plenty of water.

Fuel and chemical solvents attack the windshield material; the windshield becomes cloudy or dull.

Do not use cleaning agents.◀

Rubber

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

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

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

Paint care

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

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

Contamination of the paint finish is particularly easy to see after the motorcycle has been washed. Remove this type of soiling with cleaning naphtha or spirit on a

clean cloth or cotton ball. BMW Motorrad recommends removing tar spots with BMW Tar Remover. Then add a protective wax coating to the paint at these locations.

Protective wax coating

To preserve the finish of your motorcycle, BMW Motorrad recommends using BMW Car Wax or agents that contain carnauba or synthetic waxes.
A sure sign that the paint must be protected, is the fact that water no longer pearls up on it.

Storing motorcycle

- Clean the motorcycle.
- Remove battery.
- Spray the brake and clutch lever, and the main and side stand pivots with a suitable lubricant.
- Coat bare metal and chrome-plated parts with an acid-free grease (e.g. Vaseline).
- Park motorcycle in a dry room so that both wheels are unloaded. Appropriate auxiliary stands are available at your authorized BMW Motorrad retailer.

Before putting the motorcycle into storage, have the engine oil and the oil filter element changed by a specialist workshop, preferably an authorized BMW Motorrad retailer. Combine work for storing/returning to use with maintenance service or an inspection.◀

Returning motorcycle to use

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

Technical data

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Troubleshooting chart

Possible cause	Remedy
Emergency ON/OFF switch	Emergency ON/OFF switch in operating position
Side stand	Retract the side stand. (➡ 86)
Gear engaged and clutch not operated	Select neutral or pull clutch lever (➡ 86)
Clutch disengaged before ignition on	Switch on the ignition, then pull the clutch lever
No fuel in tank	Refueling (➡ 92)
Battery drained	Charging connected battery (➡ 141)

Threaded fasteners

Spark plugs	Value	Valid
Spark plug on cylinder head		
NGK MAR9A-J, M10 x 1,00, Apply a thin coat of Klüberpaste HEL 46-450 to thread on new spark plugs	Initial torque, 9 lb/ft (12 Nm)	
	Loosen spark plug by 90°	
	Final torque, 9 lb/ft (12 Nm)	

Front wheel	Value	Valid
Radial brake caliper on slider tube		
M8 x 65 - 10.9	22 lb/ft (30 Nm)	
Clamping screw for quick-release axle		
M8 x 40	14 lb/ft (19 Nm)	
Quick-release axle in axle mount		
M24 x 1.5	37 lb/ft (50 Nm)	

Front suspension	Value	Valid
Locknut of spring base adjustment on spring plate		
	4 lb/ft (5 Nm)	
Bottom fork brace with slider tube		
M8 x 25	**2x each side, alternately**	
	18 lb/ft (25 Nm)	

Rear wheel	Value	Valid
Rear wheel on wheel carrier		
M10 x 40 x 1.25	**Tighten diagonally**	
	44 lb/ft (60 Nm)	

Rear suspension	Value	Valid
Locknut of spring base adjustment on upper spring plate		
	4 lb/ft (5 Nm)	
Locknut of length adjustment on lower spring plate		
	30 lb/ft (40 Nm)	

Tail section	Value	Valid
License-plate carrier on tail section		
M6 x 30, Replace bolt Micro-encapsulated	6 lb/ft (8 Nm)	

Steering adjustment	Value	Valid
Handlebar halves on handlebar bridge		
M8 x 25	**first tighten screw inside motorcycle**	
	Initial torque, 7 lb/ft (10 Nm)	
	Final torque, 15 lb/ft (21 Nm)	
Handlebar fitting on handlebars		
M6 x 20	4 lb/ft (5 Nm)	

Footrests and levers	Value	Valid
Eccentric foot piece on shift lever		
M6 x 20 Thread-locking compound is used as corrosion protection, Micro-encapsulated	6 lb/ft (8 Nm)	

Footrests and levers	Value	Valid
Eccentric of foot piece on brake pedal		
M6 x 20 Thread-locking compound is used as corrosion protection, Micro-encapsulated	6 lb/ft (8 Nm)	
Pinch bolt of eccentric adjustment of footrests		
M8 x 30 Thread-locking compound is used as corrosion protection, Micro-encapsulated	11 lb/ft (15 Nm)	

Engine

Engine design	Longitudinally mounted two-cylinder opposed-twin engine with two overhead camshafts each, four radially arranged valves per cylinder, air cooling, oil-cooled outlet area and electronic engine management
Displacement	1170 cc (1170 cm^3)
Cylinder bore	4 in (101 mm)
Piston stroke	2.9 in (73 mm)
Compression ratio	12.5:1
Rated output	133 hp (98 kW), at engine speed: 8750 min^{-1}
Torque	85 lb/ft (115 Nm), at engine speed: 6000 min^{-1}
Maximum engine speed	max 9500 min^{-1}
Idle speed	$1200^{\pm 50}$ min^{-1}

Fuel

Recommended fuel quality	98 ROZ/RON, Super Plus unleaded 95 ROZ/RON, Super unleaded (fuel type can be used with reduced performance and consumption)
Usable fuel quantity	approx. 4.2 gal (16 liters)
Reserve fuel quantity	≥3.2 quarts (≥3 l)

Engine oil

Engine oil, capacity	max 1.1 gal (max 4 l), with filter change
Lubricant	Castrol Power 1 Racing 4T (SAE 10W-50; API SJ)
Alternative lubricant	Castrol TWS Motorsport (SAE 10W-60; API SJ/ CF)

Clutch

Clutch design	Single-plate dry clutch

Transmission

Transmission design	Helical 6-speed transmission with integrated torsional vibration damper, claw shifting via sliding sleeves
Transmission gear ratios	1.734 (19:33 teeth), Primary gear ratio 2.176 (37:17 teeth), 1st gear 1.625 (39:24 teeth), 2nd gear 1.296 (35:27 teeth), 3rd gear 1.065 (33:31 teeth), 4th gear 0.939 (31:33 teeth), 5th gear 0.848 (28:33 teeth), 6th gear

Rear-wheel drive

Type of final drive	Shaft drive with bevel gears
Number of teeth on rear-wheel drive (gear ratio)	33:12, Stamped in on underside of rear-wheel drive case

Running gear

Front wheel	
Design of front suspension strut	Central spring strut with coil pressure spring and single-tube gas-pressure shock absorber, adjustable spring preload and adjustable rebound and compression
Type of front suspension	BMW Telelever, leading link mounted in engine and on telescopic fork, centrally positioned spring strut mounted in leading link and main frame
Spring travel, front	4.1 in (105 mm), On wheel

Rear wheel	
Type of rear suspension	BMW Paralever, consisting of rear-wheel swinging arm with centrally arranged suspension strut, torque strut supported on rear-wheel drive and on frame.
Type of rear suspension	Central spring strut with single-tube gas-filled shock absorber, external expansion tank, separately adjustable rebound-stage damping and pressure-stage damping, adjustable spring preload and length adjustment
Spring travel at rear wheel	4.7 in (120 mm), On wheel

Brakes

Type of front brake	Hydraulically operated twin disk brake with radially screwed-on 4-piston fixed calipers and floating brake disks
Brake-pad material, front	Sintered metal
Type of rear brake	Hydraulically actuated disk brake with 2-piston floating caliper and brake disk mounted on rear-wheel drive
Brake-pad material, rear	Sintered metal

Wheels and tires

Tire combinations recommended at time of going to press	You can obtain an overview of the current tire approvals from your authorized BMW Motorrad retailer or on the Internet at www.bmw-motorrad.com.
Front wheel	
Front wheel design	Forged wheel with 10 spokes, MT H2
Front-wheel rim size	3.50" x 17"
Front tire designation	120/70-17
Rear wheel	
Rear wheel design	Forged wheel with 10 spokes, MT H2
Rear-wheel rim size	6.00" x 17"
Rear tire designation	190/55-17
Tire inflation pressures	
Tire pressure, front	31.9 psi (2.2 bar), With tire cold
Tire pressure, rear	36.3 psi (2.5 bar), With tire cold
Tire pressure for sport riding	$30.5^{\pm 2.9}$ psi ($2.1^{\pm 0.2}$ bar), With tire cold

Electrical system

Electrical rating of onboard socket	
– with power socket [OA]	max 5 A
Fuses	The electrical circuits are electronically protected. If an electronic fuse trips and de-energizes a circuit, the circuit is active as soon as the ignition is switched on after the fault has been rectified.
Battery	
Battery manufacturer and designation	ETZ 12 BS
Battery design	AGM (Absorbent Glass Matt) battery
Battery voltage	12 V
Battery capacity	12 Ah
Spark plugs	
Spark plugs, manufacturer and designation	NGK MAR9A-J
Electrode gap of spark plug	$0.03^{\pm 0.01}$ in ($0.8^{\pm 0.1}$ mm), New max 0.04 in (max 1 mm), Wear limit

Bulbs	
Bulb for high-beam headlight	H7 / 12 V / 55 W
Bulb for low-beam headlight	H7 / 12 V / 55 W
Bulb for parking light	W5W / 12 V / 5 W
Bulb for taillight/brake light	LED / 12 V
Bulbs for flashing turn indicators, front	LED / 12 V
Bulbs for flashing turn indicators, rear	LED / 12 V

Frame

Frame design	Steel lattice-tube frame, CFRP rear frame and carrying drive unit
Location of type plate	Under seat on self-supporting CFRP rear frame
Location of vehicle identification number	On front frame below upper fork bridge

Dimensions

Motorcycle length	84.1 in (2135 mm)
Motorcycle height	45.8 in (1163 mm), At DIN unladen weight; above mirror
Motorcycle width	29.5 in (750 mm), Above cylinder skid pad
Driver's seat height	32.7 in (830 mm), at unladen weight
Rider's inside-leg arc, heel to heel	71.3 in (1810 mm)

Weights

Unladen weight	439 lbs (199 kg), DIN unladen weight, ready for road, 90 % full tank of gas, without OE
Permissible gross weight	728 lbs (330 kg)
Maximum payload	289 lbs (131 kg)

Riding specifications

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

Service

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Reporting Safety Defects

If you believe that your vehicle has a defect which could cause a crash or could cause injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying BMW of North America, LLC.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or BMW of North America, LCC.

To contact NHTSA, you may call the Vehicle Safety Hotline toll-free at 1-888-327-4236 (TTY: 1-800-424-9153); go to http://www.safercar.gov; or write to: Administrator, NHTSA, 400 Seventh Street, SW., Washington, DC 20590. You can also obtain other information about motor vehicle safety from http://www.safercar.gov.

BMW Motorrad Service

Advanced technology requires specially adapted methods of maintenance and repair.

If this maintenance and repair work is performed inexpertly, there is a danger of damage and associated safety risks. BMW Motorrad recommends having corresponding work on your motorcycle carried out by a specialized workshop, preferably by an authorized BMW Motorrad retailer.◀

You can obtain information on the contents of the BMW Services from your BMW Motorrad retailer.
Have all maintenance and repair work carried out confirmed in the "Service" chapter in this manual.
Your authorized BMW Motorrad retailer is supplied with all the latest technical information and therefore possesses the necessary technical know-how. BMW Motorrad recommends that you refer any questions about your motorcycle to your authorized BMW Motorrad retailer.

BMW Motorrad Service Quality

BMW Motorrad means not only quality workmanship and high reliability, but also an outstanding quality of service.
To ensure that your BMW is always in optimum condition, BMW Motorrad recommends that you adhere to the regular maintenance schedule for your motorcycle, preferably having the work done by your authorized BMW Motorrad retailer. For generous treatment of claims submitted after the warranty period has expired, evidence of regular maintenance is essential.
Certain signs of wear, moreover, may otherwise not be noticed until it is too late to correct them at moderate cost. The workshop personnel at BMW Motorrad retailers have thorough knowledge of your motorcycle and can take action before minor problems can turn into major trouble. By having the necessary repairs done properly and in good time, you save time and money in the long run.

BMW Motorrad Service Card - On-the-spot breakdown assistance

With all new BMW motorcycles, the BMW Motorrad Service Card protects you in the event of a breakdown with an extensive range of services such as breakdown assistance, motorcycle transportation etc. (differing regulations are possible in individual countries). In the case of a breakdown, you contact the Mobile Service of BMW Motorrad. Here you will find our specialists

ready to help with both advice and action.
Important country-specific contact addresses and the relevant after-sales service organization phone numbers as well as information on Mobile Service and the retail network can be found in the "Service Kontakt/Service Contact" brochures.

BMW Motorrad Service Network

With its worldwide service network, BMW Motorrad can attend to you and your motorcycle in over 100 countries around the globe. In Germany alone, there are approximately 200 authorized BMW Motorrad retailers ready to assist you.
All information concerning the international dealership network can be found in the brochure "Service Contact Europe" or "Service Contact Africa, America, Asia, Australia, Oceania".

Maintenance work

BMW Pre-Delivery Check

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

BMW Running-in Check

The BMW running-in check has to be performed when the motorcycle has covered between 300 miles (500 km) and 750 miles (1200 km).

BMW Service

BMW Service is carried out once a year. The scope of the services performed may be dependent on the vehicle owner and the mileage driven. Your BMW Motorrad retailer confirms that the service has been performed and enters the date for the next service.
For drivers who drive long distances annually, it may be necessary to come in for service before the entered date. In this case a corresponding maximum odometer reading will also be entered in the confirmation of service. If this odometer reading is reached before the next service date, service must be performed sooner.

BMW engine service

After 30000 miles (50000 km) special engine service must be performed.

Confirmation of maintenance work

BMW Pre-Delivery Check

Conducted

on_____

_____

Stamp, Signature

BMW Running-in Check

Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

_____

Stamp, Signature

BMW Service
Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
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Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
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Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

BMW Service
Conducted

on_____

Odometer reading_____

Next service
at the latest

on_____
or, if reached sooner,

Odometer reading_____

Stamp, Signature

Confirmation of service

The table is intended as proof of maintenance, warranty and repair work, the installed optional accessories and any special campaign (recall) work carried out.

Work carried out	Odometer reading	Date

Work carried out	Odometer reading	Date

A
Abbreviations and symbols, 6
ABS
Operating element, 15
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Details described or illustrated in this booklet may differ from the motorcycle's actual specification as purchased, the accessories fitted or the national-market specification. No claims will be entertained as a result of such discrepancies.
Dimensions, weights, fuel consumption and performance data are quoted to the customary tolerances.
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The most important data for a filling station stop can be found in the following chart.

Fuel	
Recommended fuel quality	98 ROZ/RON, Super Plus unleaded 95 ROZ/RON, Super unleaded (fuel type can be used with reduced performance and consumption)
Usable fuel quantity	approx. 4.2 gal (16 liters)
Reserve fuel quantity	≥3.2 quarts (≥3 l)
Tire inflation pressures	
Tire pressure, front	31.9 psi (2.2 bar), With tire cold
Tire pressure, rear	36.3 psi (2.5 bar), With tire cold
Tire pressure for sport riding	$30.5^{\pm 2.9}$ psi ($2.1^{\pm 0.2}$ bar), With tire cold

BMW recommends Castrol

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