

Rider's Manual (US Model)

R 1200 ST



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 questions concerning your motorcycle, your

authorized BMW Motorrad retailer will gladly provide advice and assistance.

We wish you many miles of safe and enjoyable riding

BMW Motorrad.

Table of Contents

You can also use the index at the end of this Rider's Manual to find a specific topic.

1 General instructions ...	5	3 Status indicators	21	Odometer and	
Overview	6	Multifunction display	22	tripmeters	43
Abbreviations and		Warning and indicator		Clock	45
symbols	6	lights	22	Tire Pressure Control	
Equipment	7	ABS warning light ^{OE}	22	TPC ^{OE}	46
Technical data	7	Function indicators	22	Onboard computer ^{OE}	46
Currency	7	General warning		Emergency ON/OFF	
2 Overviews	9	indicators	23	switch	50
General view, left side ...	11	Warning indicators of Tire		Heated hand grips ^{OE}	50
General view, right		Pressure Control		Automatic Stability Control	
side	13	TPC ^{OE}	30	ASC ^{OE}	51
Underneath seat	15	ABS warning		Clutch	52
Left handlebar fitting	16	indicators ^{OE}	34	Brakes	52
Handlebar fitting, right ...	17	ASC warning		Handlebars	53
Instrument cluster	18	indicators ^{OE}	36	Lights	53
Headlight	19	4 Operation	39	Headlight	54
		Ignition switch and		Turn indicators	55
		steering lock	40	Front and rear seats	57
		Electronic immobilizer		Helmet holder	59
		EWS	41	Mirrors	60
		Hazard warning		Windshield	61
		flashers	42	Spring preload	61
				Shock absorbers	62

Electronic suspension adjustment ESA ^{OE}	63	Tires	65	5 Riding	67	7 Maintenance	93	Storing motorcycle	130
Safety instructions	68	5 Riding	67	General instructions	94	General instructions	94	Returning motorcycle to use	130
Checklist	70	Safety instructions	68	Toolkit	94	Toolkit	94	9 Technical data	133
Starting	70	Checklist	70	Engine oil	95	Engine oil	95	Troubleshooting chart	134
Running in	73	Starting	70	General brake system	97	General brake system	97	Threaded fasteners	135
Parking your motorcycle	74	Running in	73	Brake pads	97	Brake pads	97	Engine	137
Refueling	75	Parking your motorcycle	74	Brake fluid	99	Brake fluid	99	Riding specifications	140
Tire Pressure Control TPC ^{OE}	76	Refueling	75	Clutch	101	Clutch	101	Clutch	140
General brake system	77	Tire Pressure Control TPC ^{OE}	76	Tires	102	Tires	102	Transmission	140
Brake system with BMW Motorrad Integral ABS ^{OE}	78	General brake system	77	Rims	102	Rims	102	Rear-wheel drive	141
Engine management with BMW Motorrad ASC ^{OE}	81	Brake system with BMW Motorrad Integral ABS ^{OE}	78	Wheels	102	Wheels	102	Running gear	141
6 Accessories	85	Engine management with BMW Motorrad ASC ^{OE}	81	Front wheel stand	110	Front wheel stand	110	Bikes	142
General instructions	86	6 Accessories	85	Rear-wheel stand	111	Rear-wheel stand	111	Wheels and tires	142
Onboard socket	86	General instructions	86	Lamps	112	Lamps	112	Electrical system	143
Luggage	87	Onboard socket	86	Jump starting	120	Jump starting	120	Frame	145
Case ^{OA}	87	Luggage	87	Battery	121	Battery	121	Dimensions	145
Topcase ^{OA}	90	Case ^{OA}	87	8 Care	127	8 Care	127	Weights	146
		Topcase ^{OA}	90	Care products	128	Care products	128		
				Washing your motorcycle	128	Washing your motorcycle	128		
				Cleaning sensitive motorcycle parts	129	Cleaning sensitive motorcycle parts	129		
				Paint care	130	Paint care	130		
				Protective wax coating	130	Protective wax coating	130		

10 Service	147
BMW Motorrad service	148
BMW Motorrad service quality	148
BMW Motorrad Service Card - On-the-spot breakdown assistance	149
BMW Motorrad service network	149
Maintenance work	149
Maintenance schedules	150
Confirmation of maintenance work	151
Confirmation of service	156

General instructions

Overview.....	6
Abbreviations and symbols	6
Equipment	7
Technical data	7
Currency.....	7

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 10. Proof of the maintenance work performed is a prerequisite for generous treatment of claims. Should you want to sell your BMW one day, please also remember to turn over the Rider's Manual to the new owner; it is an important part of your motorcycle.

Abbreviations and symbols



Indicates warnings you should always observe to ensure your own safety, the safety of others and to

protect your motorcycle from damage.



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



Indicates the end of a note.



Instruction to take action.



Results of an action.



Reference to a page with additional information.



Indicates the end of accessory or equipment-dependent information.



Tightening torque.



Technical data.



Optional equipment BMW equipment available only as a factory installed option.



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



Electronic immobilizer.



Electronic Suspension Adjustment Electronic suspension adjustment.



Anti-theft alarm.

ABS Anti-Lock Brake System.

ASC Automatic Stability Control.

TPC Tire Pressure Control.

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.

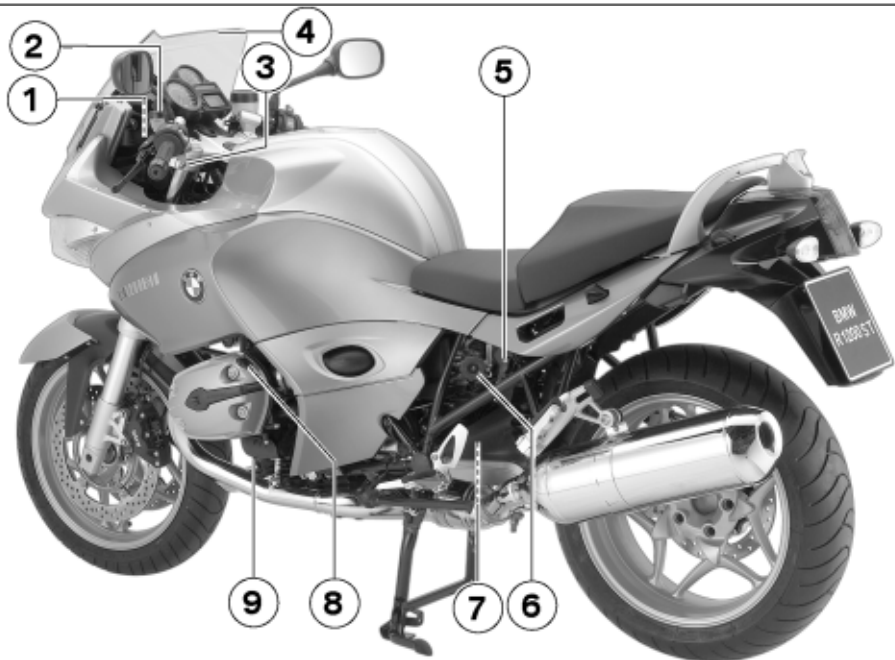
Currency

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 ad-

dition, 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.

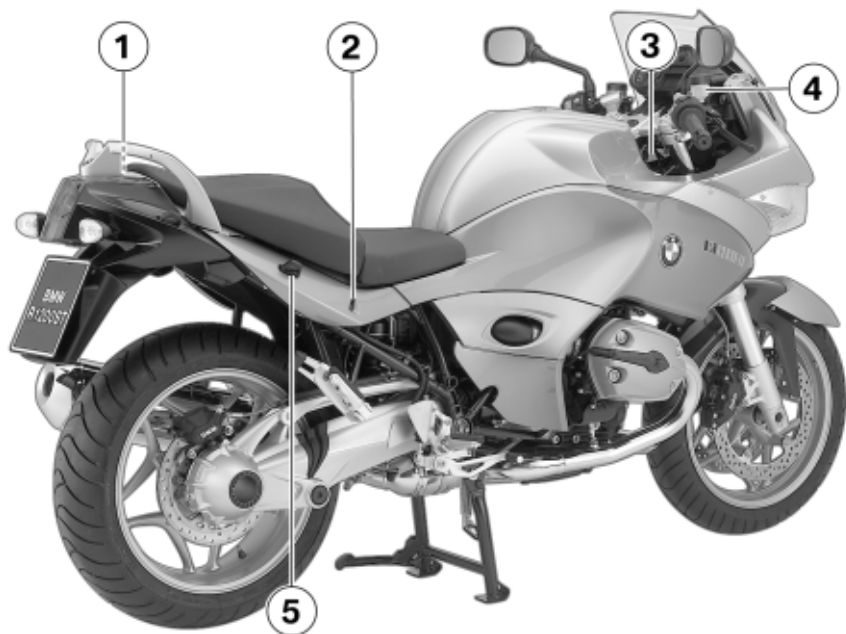
Overviews

General view, left side	11
General view, right side	13
Underneath seat	15
Left handlebar fitting	16
Handlebar fitting, right	17
Instrument cluster	18
Headlight	19



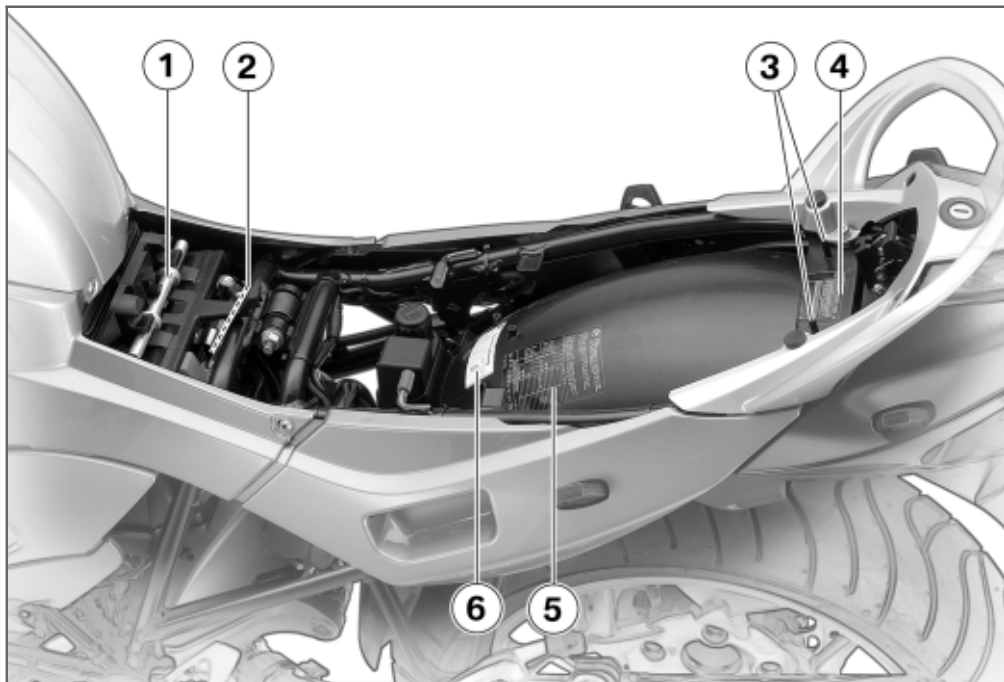
General view, left side

- 1 Headlight range adjustment (⇒ 55)
- 2 Clutch fluid reservoir (⇒ 101)
- 3 Adjusting handlebar height (⇒ 53)
- 4 Adjustable windshield (⇒ 61)
- 5 Onboard socket (⇒ 86)
- 6 Adjuster, spring preload, rear (⇒ 61)
- 7 Adjusting rear damping (⇒ 62)
- 8 Filler neck, engine oil (⇒ 96)
- 9 Oil sight glass (⇒ 95)



General view, right side

- 1 Seat lock (⇒ 57)
- 2 Brake-fluid reservoir, rear (⇒ 100)
- 3 Vehicle Identification Number
- 4 Brake-fluid reservoir, front (⇒ 99)
- 5 Case carrier^{OA} (⇒ 89)



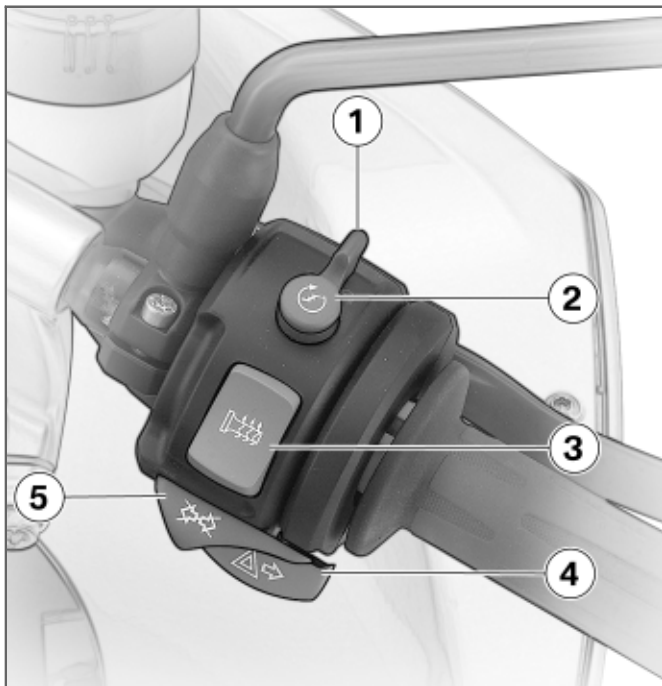
Underneath seat

- 1 Height adjuster, front seat (⇒ 57)
- 2 Battery (⇒ 121)
- 3 Helmet holder (⇒ 59)
- 4 Type plate
- 5 Tire pressure table
- 6 Label, payload

Left handlebar fitting

- 1 Control, odometer (➔ 43), Operation of onboard computer^{OE} (➔ 46)
- 2 ASC button^{OE} (➔ 51)
- 3 ESA button^{OE} (➔ 63)
- 4 Pushbutton, horn
- 5 Left turn indicator button (➔ 55), Hazard warning flashers button (➔ 42)
- 6 High-beam headlight switch (➔ 53), Switch for headlight flasher





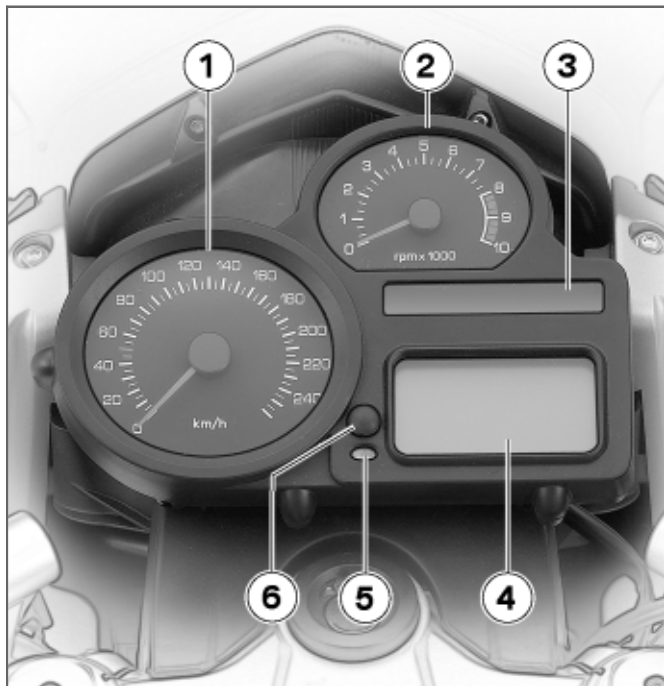
Handlebar fitting, right

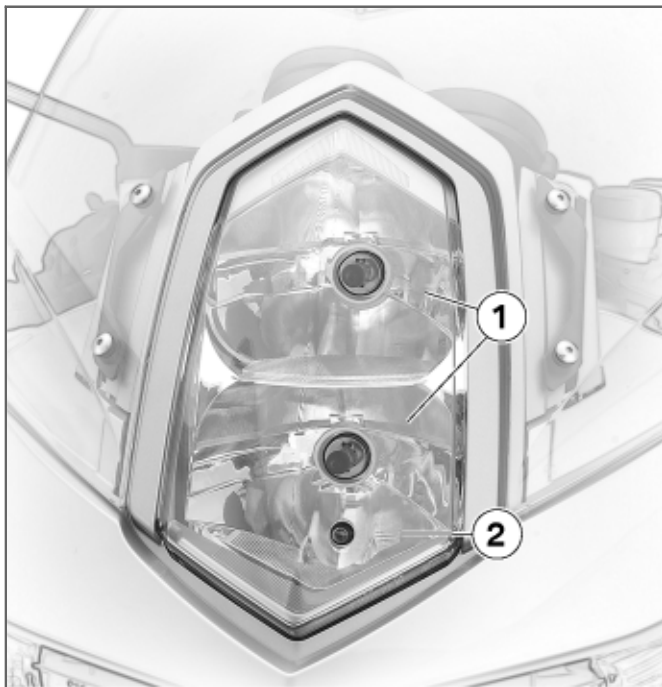
- 1 Emergency ON/OFF switch (⇒ 50)
- 2 Pushbutton, starter (⇒ 70)
- 3 Heated hand grips switch^{OE} (⇒ 50)
- 4 Right turn indicator button (⇒ 56), Hazard warning flashers button (⇒ 42)
- 5 Turn indicators off button (⇒ 56), Hazard warning flashers off button (⇒ 43)

Instrument cluster

- 1 Speedometer
- 2 Tachometer
- 3 Warning and indicator lights (⇒ 23)
- 4 Multifunction display (⇒ 23)
- 5 Indicator light for anti-theft alarm (OE) and sensor for instrument cluster lighting
- 6 Adjustment of clock (⇒ 45), Control, odometer (⇒ 43)

▶ The instrument-cluster lighting has automatic day and night switchover. ◀





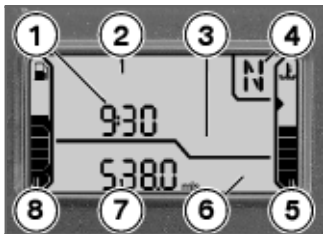
Headlight

- 1 Low and high-beam (→ 53)
- 2 Side lights (→ 53)

Status indicators

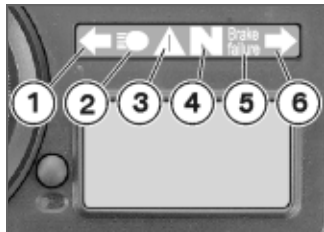
Multifunction display.....	22
Warning and indicator lights ...	22
ABS warning light ^{OE}	22
Function indicators	22
General warning indicators.....	23
Warning indicators of Tire Pressure Control TPC ^{OE}	30
ABS warning indicators ^{OE}	34
ASC warning indicators ^{OE}	36

Multifunction display



- 1 Clock (⇒ 45), Area for TPC displays^{OE} (⇒ 46), Area for oil level information^{OE} (⇒ 49)
- 2 Area for warning symbols (⇒ 23)
- 3 Area for onboard computer displays^{OE} (⇒ 46)
- 4 Gear indicator (⇒ 22)
- 5 Engine temperature indicator (⇒ 23)
- 6 Area for ESA displays^{OE} (⇒ 64)
- 7 Odometer display (⇒ 43)
- 8 Fuel gauge (⇒ 22)

Warning and indicator lights



- 1 Indicator light, left turn indicator
- 2 Indicator light, high-beam headlight
- 3 Warning light, general
- 4 Indicator light, neutral
- 5 ABS warning light (OE)
- 6 Indicator light, right turn indicator

ABS warning light^{OE}

In some countries a different display of the ABS warning light is possible.



Possible country-dependent versions.

Function indicators

Fuel capacity



The horizontal bars under the gas pump symbol indicated the remaining fuel quantity.

Gear



Engaged gear is indicated.

If no gear is engaged, the gear indicator displays N and the 'neutral' indicator light up.

Engine temperature



The lateral bars under the temperature symbol show the engine temperature level.

ASC intervention (OE)



General warning light flashes rapidly in yellow.



ASC symbol lights up.

The ASC has detected instability at the rear wheel and has reduced the torque. The warning light flashes one second longer than the ASC intervention lasts. As a result, the driver is provided with optical feedback on the regulation carried out even after the critical driving situation.

General warning indicators












Display

General warnings are displayed by means of information and symbols in the multifunction display. In some cases, an additional general warning light lights up red or yellow. If several warnings are active, all corresponding indicator lights and warning symbols are displayed. Warnings are shown alternately.

Overview of warning indicators

Display

Meaning

	Lights up yellow		EWS ! warning appears.	Electronic immobilizer is active (⇒ 26)
	Lights up yellow		FUEL ! warning appears.	Fuel down to reserve (⇒ 26)
	Lights up yellow		Is indicated	Engine electronics (⇒ 26)
	Flashes in red		Is indicated	Engine oil pressure insufficient (⇒ 27)
			Displayed with CHECK OIL warning	Engine oil level too low (⇒ 27)
	Lights up red		Is indicated	Battery charge current insufficient (⇒ 28)
	Lights up yellow		LAMP R ! warning appears.	Rear bulb defective (⇒ 28)
			LAMP F ! warning appears.	Front bulb defective (⇒ 28)
	Lights up yellow		LAMP S ! warning appears.	Bulbs defective (⇒ 29)

Display

Meaning



Is indicated

Ice warning (⇒ 29)

DWALO! warning
appears

Anti-theft alarm battery (OE) weak
(⇒ 29)




Lights up yellow

DWA! warning
appears.

Anti-theft alarm battery (OE) dead
(⇒ 30)


Electronic immobilizer is active

 General warning light lights up yellow.


EWS! warning appears. 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 lights up yellow.

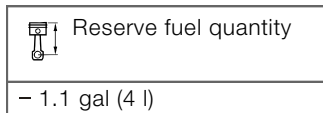
FUEL! warning appears.

 A fuel shortage can lead to misfiring and to the engine dying unexpectedly. Misfiring can damage the catalytic converter, and the engine dying unexpectedly can lead to accidents.

Do not drive until the fuel tank is completely empty.◀


 The probable operating range is indicated.◀


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




- Refueling (→ 75)

Engine electronics

 General warning light lights up yellow.

 Engine electronics symbol is displayed.

 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.◀

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



Engine oil pressure symbol is displayed.

The oil pressure in the lubricating oil circuit is too low. If the warning light lights up, 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. ◀

The cause of the warning on insufficient engine oil pressure can be an insufficient engine oil level.

- Checking engine oil level (⇒ 95)

If oil level is too low:

- Top up engine oil.

If the warning on insufficient engine oil pressure appears despite a correct engine oil level:



In addition to an insufficient engine oil level, other problems in the engine can lead to the warning on insufficient engine oil pressure. Continuing to ride in these cases can cause engine damage.

If this warning appears, do not continue to ride even though the engine oil level might be correct. ◀

- Do not continue driving.
- Have the malfunction corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Engine oil level too low



Oil level symbol is displayed with CHECK OIL warning.

The electronic oil level sensor has detected a low engine oil level.

The exact engine oil level can only be determined by conducting a check on the oil sight glass. During the next refueling stop:

- Checking engine oil level (⇒ 95)

If oil level is too low:

- Topping up engine oil (⇒ 96)

If "Check oil level" appears in the display, although a correct oil level has been read off at the oil sight glass, the oil level sensor may be defective.

- Checking engine oil level (⇒ 95)

If oil level is too low:

- Contact a specialized workshop, preferably an authorized BMW Motorrad retailer.

Battery charge current insufficient



General warning light lights up red.



Battery charge current symbol is displayed.



A discharged battery can result in the engine cutting out unexpectedly, causing a hazardous situation. Have faults eliminated as soon as possible. ◀



If the battery is no longer charged, continued driving can lead to deep discharging, and therefore to the destruction of the battery. If possible, do not continue driving. ◀

The battery is not being charged.

- Continued driving is possible until the battery is discharged. However, the engine can die suddenly and the battery can be exhaustively discharged and therefore destroyed.
- Have the malfunction corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Rear bulb defective



General warning light lights up yellow.

LAMPR ! warning appears.



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

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

Rear light or brake light bulb defective.

- Replacing brake light and tail light bulbs (⇒ 116)

Front bulb defective

LAMPF ! warning appears.



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

Replace defective bulbs as soon as possible; always car-

ry a complete set of spare bulbs if possible. ◀

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

- Replacing low-beam and high-beam bulbs (⇒ 113)
- Replacing parking light bulb (⇒ 115)
- Replacing front turn indicator bulb (⇒ 117)
- Replacing rear turn indicator bulb (⇒ 119)

Bulbs defective



General warning light lights up yellow.

LAMPS ! warning appears.



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

Replace defective bulbs as soon as possible; always car-

ry a complete set of spare bulbs if possible. ◀

A combination of several bulb defects is present.

- See the fault descriptions above.

Ice warning



Ice warning symbol is displayed.

The air temperature measured at the motorcycle is lower than 37 °F (3 °C).



The ice warning does not mean that there is no risk of black ice forming at measured temperatures above 3 °C.

Always take extra care and think well ahead when temperatures are low; remember that the danger of black ice is particularly high on bridges and where the road is in the shade. ◀

- Think well ahead when driving.

Anti-theft alarm battery (OE) weak

DWALO ! warning appears.




This error message is only displayed for a short time following the pre-ride check. ◀


The anti-theft alarm battery no longer has its full capacity. The operation of the anti-theft alarm is only ensured for a limited time with the motorcycle battery disconnected.

- Contact a specialized workshop, preferably an authorized BMW Motorrad retailer.

Anti-theft alarm battery (OE) dead

 General warning light lights up yellow.

DWA ! warning appears.

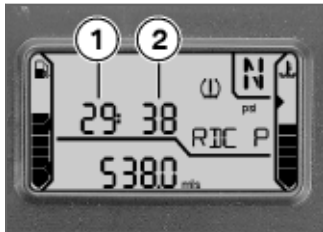
 This error message is only displayed for a short time following the pre-ride check. ◀

The anti-theft alarm battery has no capacity. The operation of the anti-theft alarm is no longer ensured with the motorcycle battery disconnected.

- Contact a specialized workshop, preferably an authorized BMW Motorrad retailer.

Warning indicators of Tire Pressure Control TPC^{OE}

Display of TPC warning indicators











In the display area of the clock or the onboard computer, the air pressure of the front wheel **1** and the rear wheel **2** are displayed with the text TPC. The critical air pressure flashes
If the critical value is at the limit of the permissible tolerance, the general warning light also lights up in yellow. If

the determined tire pressure is outside the permissible tolerance, the general warning light flashes in red.

Overview of warning indicators

Display

Meaning

 Lights up yellow	 The critical air pressure flashes	Tire pressure in limit area of permissible tolerance (⇒ 32)
 Flashes in red	 The critical air pressure flashes	Tire pressure outside permissible tolerance (⇒ 32)
	"--" or "-- --" is displayed	Transmission error (⇒ 32)
 Lights up yellow	 Is displayed with "--" or "-- --"	Sensor defective or system fault (⇒ 33)
 Lights up yellow	 Is displayed with TPC! note	Battery of tire pressure sensor weak (⇒ 33)

Tire pressure in limit area of permissible tolerance



General warning light flashes up yellow.



The critical air pressure flashes.

The measured tire pressure is in the limit area of the permissible tolerance.

- Correct tire pressure in accordance with instructions on back of cover of Rider's Manual.



The pressure values on the back of the cover refer to a tire air temperature of 68 °F (20 °C). To also adapt the air pressure at other tire temperatures, proceed as follows:

Calculate the difference between the nominal value according to the Rider's Manual and the value determined by the TPC system. Change the

air pressure in the tire by this difference using an air pressure tester at a filling station. ◀

Tire pressure outside permissible tolerance



General warning light flashes in red.



The critical air pressure flashes.

The measured tire pressure is outside the permissible tolerance.

- Check tire for damage and drivability.

Is it still possible to drive with tire:



Incorrect tire pressure result in poorer handling of the motorcycle.

Always adapt your driving style to the incorrect tire pressure. ◀

- Correct tire pressure at next opportunity.
- Have the tire checked for damage by a specialized workshop, preferably an authorized BMW Motorrad retailer.

If you are unsure about the drivability of the tire:

- Do not continue driving.
- Inform roadside service.
- Have the tire checked for damage by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Transmission error

"--" or "-- --" is displayed. The motorcycle's speed has not exceeded the threshold of approx. 20 mph (30 km/h). The TPC sensors do not transmit their signal until a speed above this threshold is reached (→ 76).

- Watch TPC display at higher speed. A permanent fault has not occurred until the general warning light also lights up. In this case:
- Have the fault eliminated by a specialized workshop, preferably an authorized BMW Motorrad retailer.

There is a fault in the radio connection to the TPC sensors. Possible causes are radio systems in the surrounding area, which interfere with the connection between the TPC control unit and the sensors.

- Watch the TPC display in another environment. A permanent fault has not occurred until the general warning light also lights up. In this case:
- Have the fault eliminated by a specialized workshop,

preferably an authorized BMW Motorrad retailer.

Sensor defective or system fault



General warning light lights up yellow.



Is displayed with "--" or "--- ---".

Tires without installed TPC sensors are mounted.

- Retrofit wheel set with TPC sensors.

One or two TPC sensors have failed.

- Have the fault eliminated by a specialized workshop, preferably an authorized BMW Motorrad retailer.

A system fault has occurred.

- Have the fault eliminated by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Battery of tire pressure sensor weak



General warning light lights up yellow.



Is displayed with TPC ! note.



This error message is only displayed for a short time following the pre-ride check. ◀

The battery of the tire pressure sensor no longer has its full capacity. The operation of the tire pressure control is only ensured for a limited time.

- Contact a specialized workshop, preferably an authorized BMW Motorrad retailer.

ABS warning indicators^{OE}

Display



ABS warnings are indicated by the ABS warning light. The warning light can light up continuously or flash.

In some countries an alternative display of the ABS warning light is possible.



Possible country-dependent versions.

Overview of warning indicators

Display

		Meaning
 Flashes		Self-diagnosis not completed ( 36)
 Lights up		ABS error ( 36)

Self-diagnosis not completed



ABS warning light flashes.

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 error



ABS warning light ON.

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

- Continue driving is possible. It must be noted that the

ABS function is not available. Observe additional information on situations which can lead to an ABS error (➡ 81).

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

ASC warning indicators^{OE}

Display



ASC warnings are indicated by the ASC warning light. The ASC warning light can light up continuously or flash.

Overview of warning indicators

Display

Meaning



Flashes slowly

Self-diagnosis not completed
(⇒ 38)



Is indicated

ASC deactivated (⇒ 38)



Is indicated

ASC error (⇒ 38)

Self-diagnosis not completed



ASC symbol flashes slowly.

The self-diagnosis was not completed; the ASC function is not available. So that the ASC self-diagnosis can be completed, the engine must be running and the motorcycle must be moved at a speed of at least 3 mph (5 km/h).

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

ASC deactivated



ASC symbol is displayed.

The ASC system has been deactivated by the driver. with OE Automatic Stability Control:

- Activating ASC function (⇒ 51)

ASC error



ASC symbol is displayed.

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

- Continue driving is possible. It must be noted that the ASC function is not available. Observe additional information on situations which can lead to an ASC error (⇒ 82).
- Have the malfunction corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Operation

Ignition switch and steering lock.....	40	Headlight	54
Electronic immobilizer EWS	41	Turn indicators	55
Hazard warning flashers	42	Front and rear seats	57
Odometer and tripmeters	43	Helmet holder	59
Clock	45	Mirrors	60
Tire Pressure Control TPC ^{OE} ...	46	Windshield	61
Onboard computer ^{OE}	46	Spring preload	61
Emergency ON/OFF switch	50	Shock absorbers	62
Heated hand grips ^{OE}	50	Electronic suspension adjustment ESA ^{OE}	63
Automatic Stability Control ASC ^{OE}	51	Tires	65
Clutch	52		
Brakes	52		
Handlebars	53		
Lights	53		

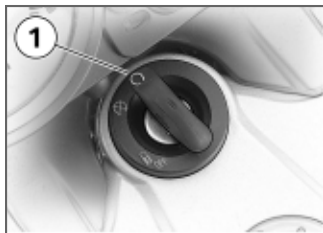
Ignition switch and steering lock

Keys

You receive one master key and one spare key. If a key is lost, please note the information on the electronic immobilizer (EWS) (⇒ 41).

▶ Ignition key and steering lock, tank filler cap lock and seat lock are all operated with the same key. On request the cases (OA) and the Topcase (OA) can be 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. (⇒ 71)

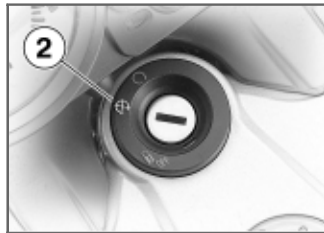
with OE BMW Motorrad Integral ABS:

- Turn key to position **1**.
 - » In addition to the points named above, the ABS self-diagnosis is also carried out. (⇒ 72)◀

with OE Automatic Stability Control:

- Turn key to position **1**.
 - » In addition to the points named above, the ASC self-diagnosis is also carried out. (⇒ 72)◀

Switching off ignition



⚠ Brake servo assistance is not available when the ignition is off.

Do not switch off the ignition while the motorcycle is being ridden. ◀

- 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.
- » The battery can be recharged via the onboard socket.

Locking handlebars



! When you prop the motorcycle 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 the handlebars to the 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 BMW Motorrad electronic immobilizer helps protect your 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 the key

An electronic component is integrated into each of your keys. 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. ◀

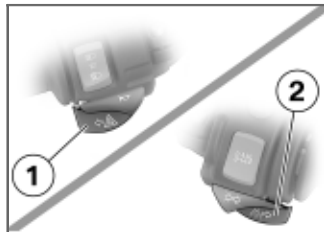
Replacement and extra keys

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.

Hazard warning flashers

Switching on hazard warning flashers

- Switch on ignition.



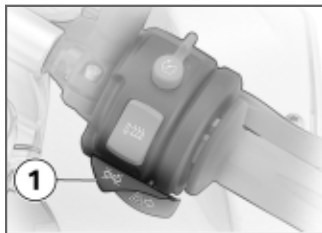
- Press button for left turn indicator **1** and right turn indicator **2** simultaneously.

▶ 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. ◀

- » Hazard warning flashers in operation.
- » Left/right turn indicator lights flash.
- Switch off ignition.
- » The hazard warning flashers continue to operate.
- » Left/right turn indicator lights off.

Switching off hazard warning flashers



- Press turn-indicator cancel button **1**.
- » The hazard warning flashers are switched off.

Odometer and tripmeters

Operating odometer



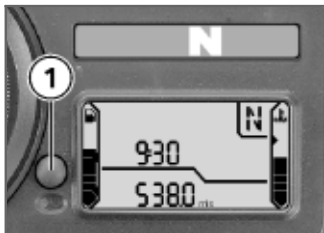
On motorcycles without an onboard computer and without TPC, the operation of the odometer described in the following can also be carried out with the INFO **1** button.

Selecting readings

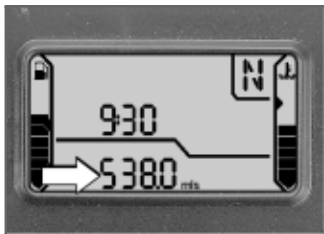
- Switch on ignition.

▶ When you switch on the ignition, the information shown by the odometer when the ignition was switched off

always reappears on the multifunction display. ◀



- Press button **1** once briefly.



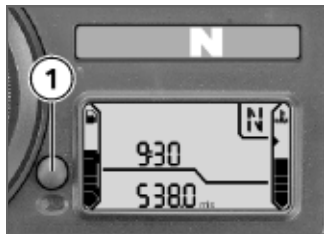
The odometer display field indicates the values below in

the following order beginning with the current value:

- Total distance covered
- Tripmeter 1 (Trip I)
- Tripmeter 2 (Trip II)
- Operating range (after reaching reserve level)

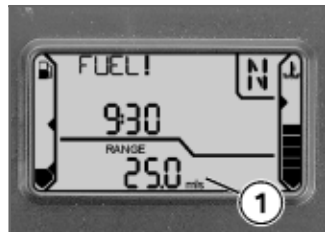
Resetting tripmeter

- Switch on ignition.
- Select desired tripmeter.



- Press and hold button **1** until display changes.
- » The tripmeter is reset to zero.

Residual range



The operating range **1** indicates what distance can still be driven with the remaining fuel. It is only displayed on motorcycles without an on-board computer after the fuel reserve is reached. The calculation is carried out based on the average consumption and the fuel level.

When refueling, fuel is not registered until the quantity added is approx. one gallon (several liters).

▶ 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.◀

Clock

Setting clock

⚠ Attempting to set the clock while riding the motorcycle can lead to accidents.

Adjust the clock only when the motorcycle is stationary.◀

- Switch on ignition.

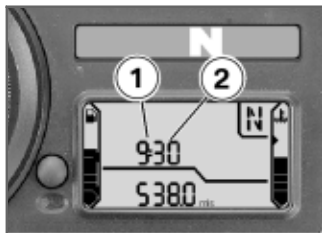


- Press INFO button **1** repeatedly until total mileage is shown.

with OE Onboard computer:



- Press INFO button **1** repeatedly until clock is shown.◀



- Press and hold INFO button until display changes.
 - » Hours reading **1** starts to flash.
- Press INFO button.
 - » The hour increments by one each time you press the button.
- Press and hold INFO button until display changes.
 - » Minutes reading **2** starts to flash.
- Press INFO button.
 - » The minute increments by one each time you press the button.

- Press and hold INFO button until display changes.
- » The display stops flashing.
- » Clock setting ended.

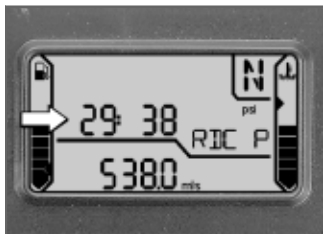
Tire Pressure Control TPCOE

Displaying tire pressures

- Switch on ignition.



- Repeatedly press INFO button **1** until the tire pressures appear in the display.



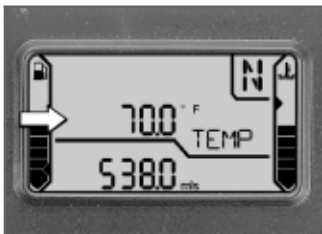
The tire pressures are shown alternately with the clock. The left-hand value indicates the air pressure of the front wheel, and the right-hand value the air pressure of the rear wheel. On motorcycles with an onboard computer, the tire pressures are displayed as an additional value of the onboard computer.

Onboard computer^{OE} Selecting readings

- Switch on ignition.



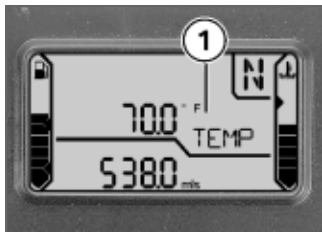
- INFO button **1** once each time.



The onboard-computer display field indicates the values below in the following order beginning with the current value:

- Ambient temperature
- Average speed
- Average consumption
- Range
- Oil level
- Tire pressures (OE)

Ambient temperature

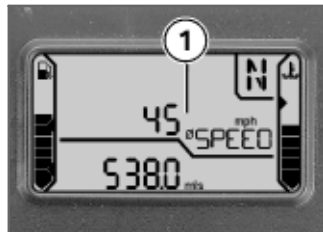


The current ambient temperature **1** is displayed.



An ice warning appears if the ambient-temperature reading drops below 37 °F (3 °C). The display automatically switches from any other mode to the temperature reading when the temperature drops below this threshold for the first time. The reading flashes until you select some other display mode.

Calculation of average speed



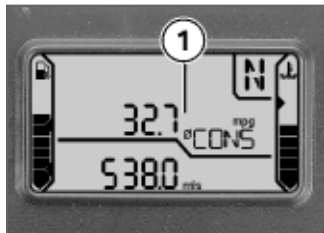
The average speed **1** is calculated based on the elapsed time since the last "RESET". Times during which the engine was stopped are excluded from the calculation.

Resetting average speed



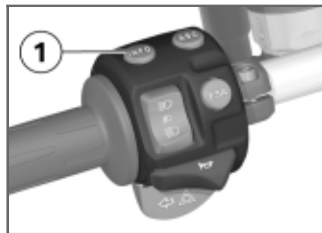
- Repeatedly press INFO button **1** until the average speed appears in the display.
 - Hold down INFO button for at least 2 seconds ("RESET").
- » Display shows "---.-- km"

Calculation of average consumption



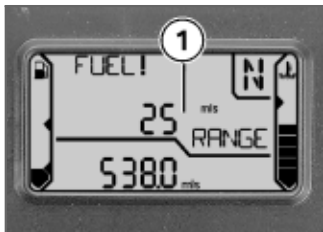
The average consumption **1** is calculated by dividing the distance covered since the last "RESET" by the corresponding amount of fuel used.

Resetting average consumption



- Repeatedly press INFO button **1** until average consumption appears in display.
 - Hold down INFO button for at least 2 seconds ("RESET").
- » Display shows "--.- mpg".

Range

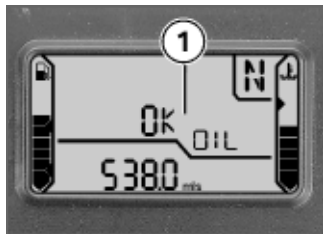


The functional description of the operating range (→ 44) also applies to the range display. However, the range **1** can also be displayed before the fuel reserve is reached. To calculate the range, a special average consumption is used, which does not always match the value that can be shown on the display.

▶ The determined range is an approximate reading. BMW Motorrad therefore recommends that you do not

try to use the full range before refueling. ◀

Oil level



The oil level warning **1** is displayed when the oil level on the oil sight glass must be checked.

The conditions for the oil level check are as follows:

- Engine idling (for at least 10 seconds).
- Engine at operating temperature.

– Side-stand retracted.

The readings mean:

OK: Oil level is correct.

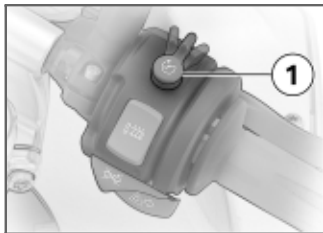
CHECK: Check oil level.

---: No measurement possible (above-mentioned conditions not met).

The most recently measured level is displayed for 5 sec. when you next switch on the ignition.

▶ If, despite a correct oil level on the oil sight glass, "Check oil level" continually appear on the display, the oil level sensor may be defective. In this case, please contact your authorized BMW Motorrad retailer. ◀

Emergency ON/OFF switch

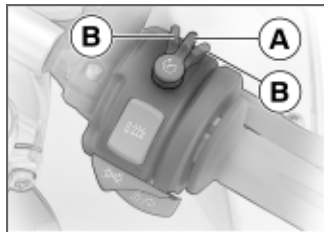


1 Emergency ON/OFF switch.

! Actuating the emergency ON/OFF switch while driving can cause the rear wheel to lock up, resulting in a fall.

Do not operate the emergency ON/OFF switch while riding. ◀

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

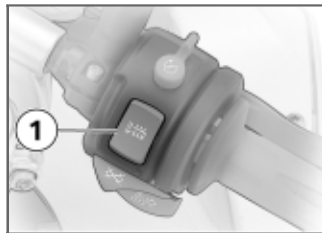


- A** Operating position.
- B** Engine switched off.

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

▶ If the emergency ON/OFF switch is operated with the ignition switched on, the BMW Motorrad Integral ABS continues to function. ◀

Heated hand grips^{OE}

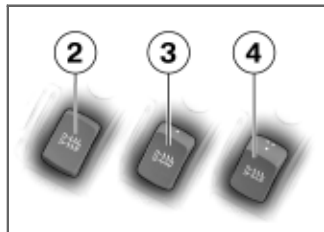


1 Heated hand grips switch

The handlebar grips can be heated at two different levels. The heated hand grips option can only be activated when the engine is running.

▶ The increase in power consumption caused by the heated hand grips can drain the battery if you are riding at low engine speeds. If the battery is inadequately charged, the heated hand

grips are switched off to ensure starting capability. ◀



- 2 Heating function off.
- 3 50 % heat output (one dot visible).
- 4 100 % heat output (three dots visible).



Automatic Stability Control ASC^{OE}

Deactivating ASC function

- Switch on ignition.


▶ The ASC function can also be deactivated while driving. ◀



- Hold down ASC button 1.
- ▶  ASC symbol is displayed; if self-diagnosis is not completed, ASC symbol stops flashing.
- Release ASC button within five seconds after ASC symbol lights up.
 - » ASC function is deactivated.
- ▶  ASC symbol continues to be displayed; if self-diagnosis is not completed, it continues to flash.

Activating ASC function



- Hold down ASC button 1.
- ▶  ASC symbol is no longer displayed; if self-diagnosis is not completed, ASC symbol begins to flash.
- Release ASC button within five seconds after ASC symbol goes out.
 - » ASC warning light remains off.
 - » If the ASC self-diagnosis is not completed, ASC warning light continues to flash.
 - » ASC function is activated.

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

▶ If the ASC warning light lights up after switching the ignition off and on and then continued driving over 5 mph (10 km/h), an ASC error has occurred.◀

Clutch

Adjusting clutch lever

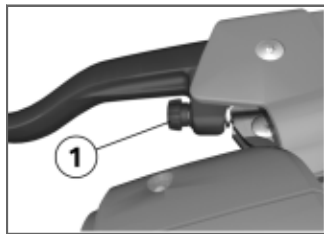
⚠ If the position of the clutch fluid reservoir is changed, air can enter the clutch system.

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.

Brakes

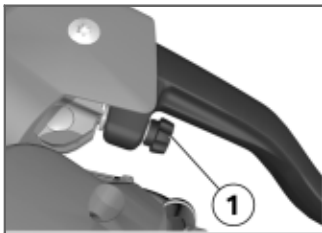
Adjusting handbrake lever

⚠ 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.◀



Handlebars

Adjustable handlebars

The height of the two handlebar halves can be adjusted to two different positions. Consult a certified workshop, preferably an authorized BMW Motorrad retailer, for adjustment of the handlebar halves.

Lights

Switching on side lights

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

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

- 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.

Switching on 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. ◀

Switching on high-beam headlight



- Press top part of switch **1** for high-beam headlight.

» The high-beam headlight is switched on.

- Move switch **1** for high-beam headlight to center position.


» High-beam headlight switched off.

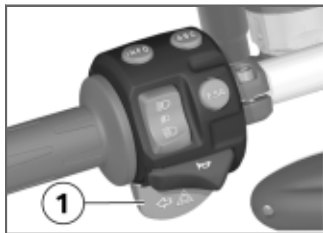
- Press bottom part of switch **1** for high-beam headlight.

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

Switching on parking lights

- Switch off ignition.

 You can switch on the parking lights only immediately after switching off the ignition. ◀



- Press and hold left turn indicator switch **1** until parking light is switched on.

Switching off parking lights

- Switch ignition on and then off again.
- » The parking lights are switched off.

Headlight

Adjusting headlight for RHD/LHD traffic

When riding in countries where traffic drives on the opposite side of the road to that in which the motorcycle was registered, the asymmetrical low headlight beam will dazzle oncoming traffic.

Have the headlight adjusted to the relevant conditions by a specialized workshop, preferably an authorized BMW Motorrad retailer.



Ordinary adhesive tape damages the plastic lens.

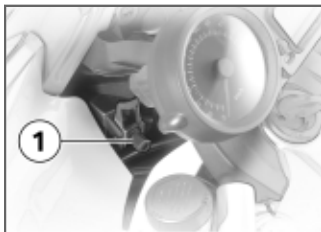
To prevent damage to the plastic lens, consult a specialized workshop, preferably an authorized BMW Motorrad retailer. ◀

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.

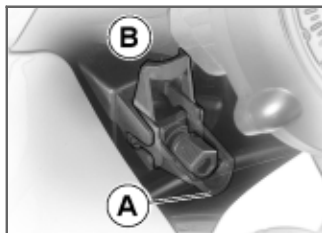
▶ If you are unsure whether the basic headlight setting is correct, consult a specialized workshop, preferably an authorized BMW Motorrad retailer. ◀

Adjusting headlight range



1 Headlight range adjustment

To avoid dazzling oncoming traffic, the headlight adjustment can be corrected by adjusting the swivel lever.



- A** Neutral position
- B** Position with heavy payload

Turn indicators Switching on left-hand turn indicator

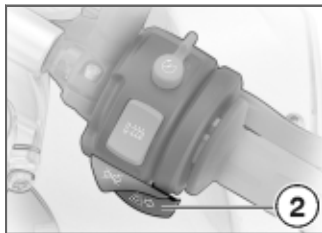
- Switch on ignition.



- Press left-hand turn indicator button **1**.
- » The left-hand turn indicator switched on.
- » The indicator light for left-hand turn indicator flashes.

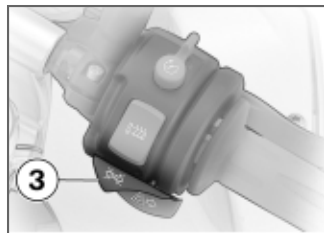
Switching on right-hand turn indicator

- Switch on ignition.



- Press right-hand turn indicator button **2**.
- » Right-hand turn indicator switched on.
- » Indicator light for right-hand turn indicator flashes.

Switching off turn indicators



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

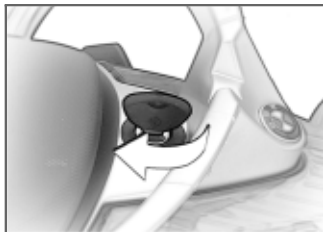
▶ After driving for approx. ten seconds or after covering a distance of approx. 650 ft (200 m), the turn indicators are automatically switched off. ◀

- » The turn indicator is switched off.
- » The turn indicator lights in the indicator light panel are off.

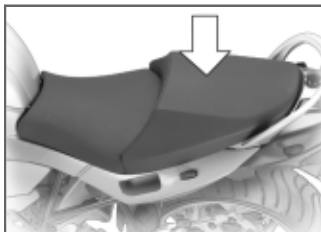
Front and rear seats

Removing passenger seat

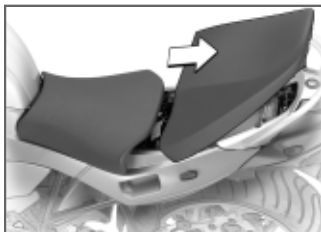
- Make sure the ground is level and firm and park the motorcycle.



- Turn key clockwise in seat lock.



- When doing so, press rear seat down.
- Lift seat and release key.



- Pull seat to rear to release it from its holders.

Removing driver's seat

- Make sure the ground is level and firm and park the motorcycle.
- Removing passenger seat (→ 57)



- Pull driver's seat slightly back and lift out.

Adjustable driver's seat

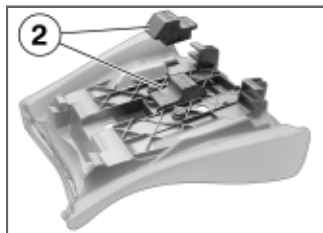
The front seat can be raised or lowered to either of two positions.

Adjusting front seat

- Make sure the ground is level and firm and park the motorcycle.
- Removing passenger seat (⇒ 57)
- Removing driver's seat (⇒ 57)



- Adjust seat by removing seat supporting rod **1** and reinserting it in appropriate holder.

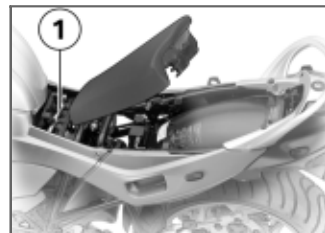


- Remove rubber wedge **2** on underside of driver's seat and reinsert it in desired position.
- Installing driver's seat (⇒ 58)
- Installing passenger seat (⇒ 59)

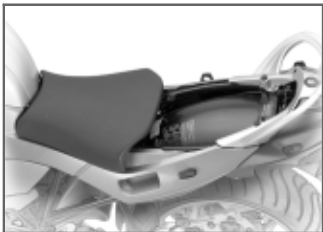
Installing driver's seat

! If too much pressure is applied in the forward direction, there is a danger that the motorcycle will be pushed off its stand.

Make sure that the motorcycle is steady on its stand. ◀




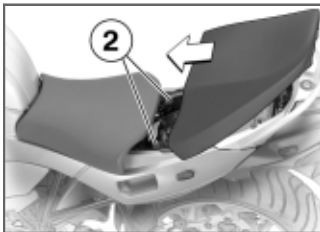
- Push driver's seat toward front into holder **1**.
- Place driver's seat at rear on mounts.



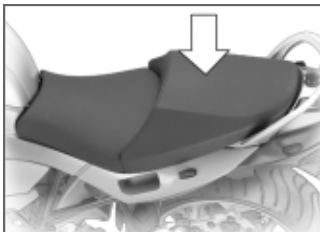
- Check that the seat is correctly seated.

Installing passenger seat

 If too much pressure is applied in the forward direction, there is a danger that the motorcycle will be pushed off its stand. Make sure that the motorcycle is steady on its stand. ◀



- Lay on passenger seat so that tongues grip under related holders **2**.

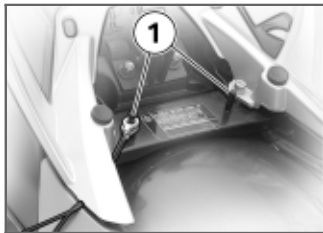


- Firmly press down on the seat at the rear.

» The seat engages with an audible click.

Helmet holder

Helmet holders under passenger seat

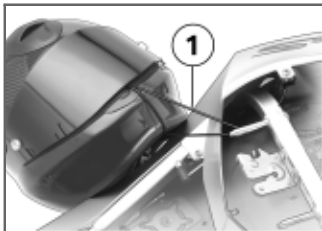


The helmet holders **1** are mounted at the rear under the passenger seat.

Using helmet holder

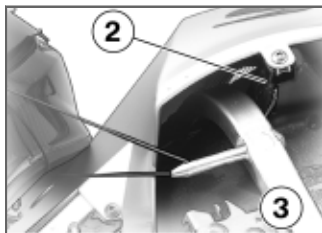
- Make sure the ground is level and firm and park the motorcycle.

- Removing passenger seat (⇒ 57)



⚠ The helmet catch can scratch the paneling. When hooking on the helmet, watch the position of the helmet lock. ◀

- Secure helmet on helmet holder using steel cable **1** available as optional accessory.



- Pull steel cable through under rear frame **3** and thread eyes of steel cable into helmet holder slit **2**.
- Installing passenger seat (⇒ 59)

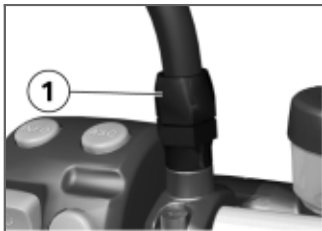
Mirrors

Adjusting mirrors




- Move mirror into desired position by twisting.

Adjusting mirror arm



- Slide the protective cap **1** up over the screw connection on the mirror arm.
- Loosen the nut.
- Turn the mirror arm into the desired position.
- Retighten nut.

 Mirror on clamping piece

– 18 lb/ft (25 Nm)

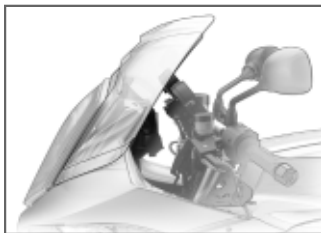
- Slide protective cap over threaded fastener.


Windshield

Adjustable windshield

The windshield can be adjusted to three different heights.

Adjusting windshield



 Adjusting the windshield while driving can cause a fall. For safety reasons, do not adjust the mechanical windshield while driving. To adjust, bring the motorcycle to a complete stop. ◀

- Raise or lower windshield manually as required.


» Windshield engages with an audible click.

Spring preload

Spring preload and weight

The spring preload must be adapted to the load of the motorcycle. Increase spring preload when the motorcycle is heavily loaded and reduce spring preload accordingly when the motorcycle is lightly loaded.

Adjusting spring preload for rear 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. ◀

! Adjusting the spring preload while the motorcycle is being ridden can lead to accidents.

Adjust the spring preload only when the motorcycle is stationary. ◀

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



- To increase spring preload, turn handwheel **1** in direction of arrow HIGH.

- To decrease spring preload, turn handwheel **1** in direction of arrow LOW.



Basic setting for spring-preload

- Handwheel on side marking set to "STD" (Driver with weight of 187 lbs (85 kg), full tank of gas)

Shock absorbers Damping and spring preload

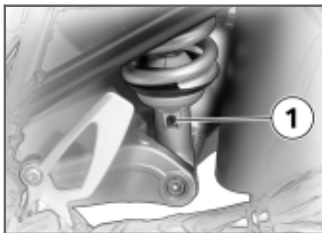
The damping must be adapted to the spring preload. An increase in spring preload requires firmer damping, a reduction in spring preload requires softer damping.

Adjusting damping on rear wheel

! The 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. ◀

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



- Adjust rear shock absorber, using a screwdriver to turn adjusting screw **1**.



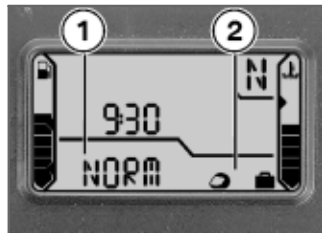
- To increase damping, turn adjusting screw **1** in arrow direction H.

- To decrease damping, turn adjusting screw **1** in arrow direction S.

	Basic setting for rear-wheel damping
<ul style="list-style-type: none"> - Single rider with one person weighing approx. 185 lbs (85 kg) 	
<ul style="list-style-type: none"> - Turn adjusting screw in arrow direction H until stop, then turn one and a half turns in arrow direction S. 	

Electronic suspension adjustment ESA^{OE}

Settings



Using the electronic suspension adjustment ESA you can conveniently adjust your motorcycle to various driving conditions. Three spring preloads can be combined with three damping settings to optimally adapt the motorcycle to the load and the road surface. The damping setting is displayed in the multifunction display in the area **1**, and the spring

preload in the area **2**. The display of the tripmaster is hidden for the duration of the ESA display.

Calling up settings

- Switch on ignition.



- Press button **1**.
 - » The current setting is displayed.
 - » Display goes out automatically after a few seconds.

Adjusting damping

- Switch on ignition.




- Press button **1**.
 - » The current setting is displayed.
- Press button **1** once briefly. Starting from the current state, the display is in the following order:
 - COMF comfortable damping
 - NORM normal damping
 - SPORT sporty damping
- » If button **1** is not pressed for a longer time, damping is set as indicated. During the setting procedure, the display flashes.

Adjusting spring preload

- Start engine.



- Press button **1**.
 - » The current setting is displayed.
- Press and hold button **1** once.

 The spring preload cannot be adjusted while the motorcycle is being ridden. ◀

Starting from the current state, the display is in the following order:



One-up



One-up with luggage



Two-up (with luggage)

» If button **1** is not pressed for a longer time, spring preload is set as indicated. During the setting procedure, the display flashes.

Tires

Checking tire pressures



Incorrect tire pressures result in poorer handling of the motorcycle and can lead to accidents.

Ensure proper tire pressure. ◀



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

To avoid a sudden loss of tire pressure, use a metal valve cap with rubber sealing ring on the rear wheel and tighten it securely. ◀



Incorrect tire pressure reduces the life of the tires.

Ensure proper tire pressure. ◀

- Check the tire pressure using the following data.



Front tire pressure

– 31.9 psi (2.2 bar) (Single rider, with cold tire)

– 36.3 psi (2.5 bar) (Driver with passenger and/or load, with cold tire)



Rear tire pressure

– 36.3 psi (2.5 bar) (Single rider, with cold tire)



Rear tire pressure

– 42.1 psi (2.9 bar) (Driver with passenger and/or load, with cold tire)

In case of insufficient tire pressure:

- Correct tire pressure.

Riding

Safety instructions.....	68
Checklist.....	70
Starting	70
Running in	73
Parking your motorcycle	74
Refueling	75
Tire Pressure Control TPC ^{OE} ...	76
General brake system	77
Brake system with BMW Motorrad Integral ABS ^{OE}	78
Engine management with BMW Motorrad ASC ^{OE}	81

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 glad 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 the spring-strut and shock absorber system
- Imbalanced load
- Loose clothing
- Insufficient tire pressure
- Poor tire tread
- Etc.

Correct loading



Overloading and uneven loading can diminish the riding stability of the motorcycle.

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 control unit of the electronic engine-management system

 Modification of the engine-electronics control unit can lead to damage to the motorcycle, and therefore to accidents. Do not modify the engine-electronics control unit.◀

 Tampering with control unit of electronic engine-management system 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 control unit of the electronic engine-management system.◀

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
- Shock absorber setting and spring preload
- Tread depth and tire pressure
- Firm seating of cases and luggage

At regular intervals:

- Engine oil level (every time you refuel)
- Brake pad wear (during every third stop for refueling)

Starting

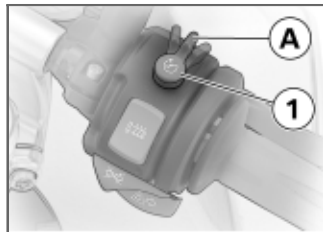
Side stand

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. When the transmission is in neutral, the green neutral indicator light is on and the gear indicator in the multifunction display shows N.

Starting engine



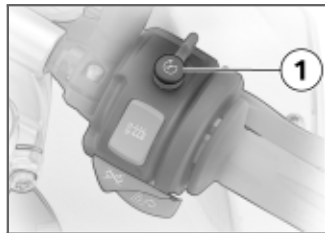
- Emergency ON/OFF switch **1** in operating position **A**.
- Switch on ignition.
- » Pre-ride check is performed. (⇒ 71)

with OE BMW Motorrad Integral ABS:

- Switch on ignition.
- » Pre-ride check is performed. (⇒ 71)
- » ABS self-diagnosis is performed. (⇒ 72)◁

with OE Automatic Stability Control:

- Switch on ignition.
 - » Pre-ride check is performed. (⇒ 71)
 - » ABS self-diagnosis is performed. (⇒ 72)
 - » ASC self-diagnosis is performed. (⇒ 72)◀



- Press starter button **1**.

◀ At extremely low temperatures it may be necessary to operate the throttle twist grip during starting. At ambient temperatures be-

low 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.◀


- » The engine starts.
- » Consult the troubleshooting chart if the engine refuses to start. (⇒ 134)

Pre-ride check

After the ignition is switched on, the instrument cluster carries out a general warning lamp test. In the process the warning lamp first lights up yellow and then red for checking. This test, called a "Pre-Ride Check", is indicated by the lettering **CHECK!**


in the display. If the engine is started during the test, the test is canceled.

Phase 1


 General warning light lights up red.

– **CHECK!** warning appears.

Phase 2

 General warning light lights up yellow.

– **CHECK!** warning appears. If the general warning lamp is not shown:

 If the general warning light cannot be displayed, several malfunctions cannot be indicated.

Watch the display of the general warning light in 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 Integral 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.



Possible country-specific version of ABS warning light.

Phase 2

- » Checking the wheel sensors while starting off.



ABS warning light flashes.



Possible country-specific version of ABS warning light.

ABS self-diagnosis completed

- » The ABS warning light goes out.

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

- Continue driving is possible. It must be noted that neither the ABS nor the integral function is available.
- Have the malfunction corrected as soon as possible by a specialized workshop, preferably an authorized BMW Motorrad retailer.

ASC self-diagnosis^{OE}

The readiness for operation of the BMW Motorrad ASC is checked by the self-diagnosis. Self-diagnosis is performed automatically when you switch on the ignition. So that the ASC self-diagnosis can be completed, the engine must be running and the motorcycle must drive at a speed of at least 3 mph (5 km/h).

Phase 1

- » Checking the diagnosable system components while stopped.



ASC symbol flashes slowly.

Phase 2

- » Checking the diagnosable system components while driving.



ASC symbol flashes slowly.

ASC self-diagnosis completed

» The ASC warning light goes out.

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

- Continue driving is possible. It must be noted that the ASC 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 (1,000 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 run-in speed
– 4000 min^{-1}	

- Do not accelerate at full throttle.
- Avoid low engine speeds at full load.

- After 300 - 750 miles (500 - 1,200 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.◀


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 the handbrake lever.
- Hold the 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 the motorcycle to the side until its weight is taken by the stand and dismount to the left.

 When you prop the motorcycle 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 the handlebars to the 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 the left, grip the handlebars with both hands.
- Pull the handbrake lever.
- Swing your right leg over the seat and lift the motorcycle to the upright position.
- Hold the 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 the motorcycle and use your left foot to retract the side stand.


Placing on center stand^{OA}

 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.
- Dismount and keep your left hand on the left handlebar grip.
- With your right hand, grip the rear grab handle or the rear frame.

- Place right foot on extended arm of center stand, and press stand down until its curved feet touch ground.
- Place full weight of body on center stand while pulling motorcycle toward rear.

 Excessive movements could result in the center stand retracting, and the motorcycle would topple as a result.

Do not sit on the motorcycle while it is resting on the center stand. ◀


- Check that the motorcycle is standing firmly.
- Lock steering lock.


Pushing off center stand^{OA}


- Unlock steering lock.
- Place your left hand on the left handlebar grip.


- With your right hand, grip the rear grab handle or the rear frame.
- Push motorcycle forward off center stand.
- Make sure that center stand is fully retracted.

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 on to plastic parts immediately. ◀


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



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




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

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

 The nominal value for mileage and consumption apply for the recommended fuel type. ◀

 Recommended fuel type
– 98 ROZ/RON (Super Plus unleaded)
– 95 ROZ/RON (Super unleaded (fuel type can be used with reduced performance and consumption))
 Usable fuel quantity
– 5.5 gal (21 l)

 Reserve fuel quantity
– 1.1 gal (4 l)

- Close fuel tank cap with firm pressure.
- Remove key and pull off protective cap.

Tire Pressure Control TPC^{OE}

Function

A sensor is located in each tire, which measures the air temperature and the air pressure inside the tire and sends these values to the control unit.

The sensors are equipped with a centrifugal controller, which does not enable the transmission of the measured values until a speed of approx. 20 mph (30 km/h) is reached. Before initial recep-

tion of the tire pressure, -- is shown in the display for each tire. The sensors continue to transmit the measured values for approx. 15 minutes after the motorcycle comes to a stop.

The control unit can manage four sensors, and as a result two sets of wheels with TPC sensors can be driven. If a TPC control unit is installed, however the wheels have no sensors, then an error message is output.

Temperature compensation

The tire pressures are shown temperature-compensated in the multifunction display; they refer to a tire air temperature of 68 °F (20 °C). As the air-pressure testers at filling stations show a temperature-dependent tire pressure, they

do not match the values indicated in the multifunction display in most cases.

Air pressure ranges

The TPC control unit distinguishes between three air pressure ranges matched to the motorcycle:

- Air pressure within the permissible tolerance.
- Air pressure at the limits of the permissible tolerance.
- Air pressure outside the permissible tolerance.

A warning is also output if the tire pressure drops rapidly within the permissible tolerance.

General brake system 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 the motorcycle has been washed, ridden through water or ridden in the rain, the brake disks and pads might be wet and the brakes might not take effect immediately.

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 discs 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. ◀

Brake system with BMW Motorrad Integral ABS^{OE}

Partially integral brake

Your motorcycle is equipped with a partially integral brake configuration. Both front and rear brakes are applied simultaneously when you pull the handbrake lever. The foot-brake lever acts only on the rear brake.

The BMW Motorrad Integral ABS adapts the braking force distribution between the front and rear wheel brake to the loading of the motorcycle during braking.

 Spinning of the rear wheel with the front brake pulled (burn out) is made considerably more difficult by the integral function. The result may be

damage to the rear wheel brake and the clutch. Avoid burn-outs.◀

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 Motorrad Integral ABS 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.

How is the BMW Motorrad Integral ABS noticeable to the rider?

If the ABS system must reduce the braking forces due to the conditions described above, then vibrations can be felt at the handbrake lever. If the handbrake lever is pulled, then braking pressure is built up at the rear wheel with the integral function. If the footbrake pedal is first actuated after this, the brake pressure already built up can be felt earlier than the counter-pressure, than when the footbrake pedal is

actuated before or together with the handbrake lever.

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 pos-

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

Rear wheel lift

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



Severe braking can cause the rear wheel to lift 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 Integral ABS?

The BMW Motorrad Integral 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 offroad or 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 Integral ABS, unusual driving conditions can also lead to a fault message.

Unusual driving conditions:

- Heating up on the main or auxiliary stand at idle or with gear engaged.
- Rear wheel locked-up for a longer period of time by engine brake, 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 Integral 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 Integral ABS permits must not be used as an excuse for careless riding. ABS is primarily

a means of ensuring a safety margin in genuine emergencies.

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

Engine management with BMW Motorrad ASC^{OE}

How does ASC work?

The BMW Motorrad ASC compares the wheel speeds of the front and rear wheel. From the speed difference the slip, and with it the stability reserves on the rear wheel are determined. When a slip limit is exceeded, the engine torque is adapted by the engine management system.

What are the design characteristics of the BMW Motorrad ASC?

The BMW Motorrad ASC is an assistance system for the driver and is designed for driving on public roads. Especially in at the limits of driving physics, the driver has a considerable influence on the control options of the ASC (shifting weight in curves, loose loads). The system is not optimized for special requirements resulting under extreme weather conditions offroad or on the racetrack. The BMW Motorrad ASC can be deactivated for these cases.



Even with ASC, physical laws cannot be overridden. The driver is always responsible for adapting his/her driving style.

Do not reduce the additional safety provided with risky driving. ◀

Special situations

At an increasing angle, the acceleration performance is increasingly limited in accordance with physical laws. This can result in delayed acceleration when coming out of very tight curves.

To detect spinning or slipping away of the rear wheel, the speeds of the front and rear wheel are compared. If implausible values are detected over a longer period of time, the ASC function is deactivated for safety reasons and an ASC fault is indicated. The condition for a fault message is the completed self-diagnosis.

In the following unusual driving states, the BMW Motorrad ASC can be automatically deactivated.

Unusual driving conditions:

- Driving on the rear wheel (wheely) for a longer period with ASC deactivated.
- 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.

The ASC is reactivated by switching the ignition on and off and then driving at a speed above 10 km/h.

If the front wheel loses contact to the ground during extreme acceleration, the ASC reduces the engine torque until the front wheel touches the ground again.

In this case, BMW Motorrad recommends turning back the throttle twist grip somewhat to achieve a stable driving state again as quickly as possible.

On a slippery surface, the throttle twist grip should never be suddenly turned back completely without pull the clutch at the same time. The engine braking torque can cause the rear wheel to block, resulting in an unstable driving state. This case cannot be controlled by the BMW Motorrad ASC.

Accessories

General instructions	86
Onboard socket	86
Luggage	87
Case ^{OA}	87
Topcase ^{OA}	90

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 Ratings



The supply to the socket is cut off automatically 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 the restart operation, 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

Correct loading

 Overloading and uneven loading can diminish the riding stability of the motorcycle.

Do not exceed the gross weight limit and observe the loading information.◀

Fitting a luggage system will affect the handling of your motorcycle. When driving with loaded cases (OA), a top speed of 112 mph (180 km/h) is recommended. Never drive faster than 112 mph (180 km/h) when the Topcase (OA) is mounted.

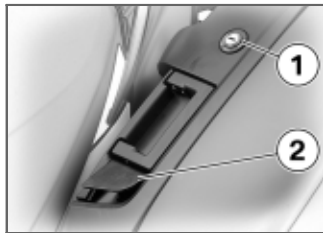
- Adjust setting of spring preload, damping characteristic and tire pressures to suit total weight.
- Make sure that the weight is uniformly distributed between right and left.

- Pack heavy items at bottom and toward inboard side.
- Max. load in each case (left and right): 22 lbs (10 kg).
- Max. load in tank rucksack 11 lbs (5 kg).

Case^{OA}

Opening case

- Turn key in case lock perpendicular to direction of travel.
- » Case is unlocked.



- Press lock barrel **1**.

» Unlocking lever **2** pops up.



- Fold lever **2** toward rear.
- Open case lid **3**.

Closing case



- Fold lever **2** completely toward rear.
- Close case lid **3** and press down. Check that nothing is trapped between lid and case.



- Press lever **2** down.
 - » The lever engages.
- Turn key in case lock parallel to direction of travel.
 - » Case is locked.

Removing case

- Turn key in case lock perpendicular to direction of travel.



- Turn the key clockwise (left case) or counterclockwise (right case).
- » Handle **4** pops out.

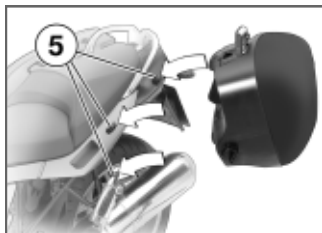


- Pull the handle out and then pull it up as far as it will go.

» The case is released and can be removed.

Mounting case

- Unlatch the handle and pull it up as far as it will go.



- Insert case in brackets **5**.



- Press case handle down until it engages.
 - » Case locks.
- Turn key in case lock parallel to direction of travel.
 - » Case is locked.
- Check case for firm seating.

Topcase^{OA}

Opening Topcase



- Position lock barrel vertically in Topcase.
- » Topcase is opened.
- Press lock barrel **7**.
- » Locking lever **8** pops out.
- Fully open locking lever **8**.



- Open lid **9**.

Closing Topcase



- Fully open locking lever **8**.
- Close lid and press down. Check that nothing is

trapped between the lid and the case.

- Press down locking lever **8** until it engages.



- Position lock barrel horizontally.
- » Topcase is closed.

Removing Topcase

- Position lock barrel horizontally.
- » Topcase is locked.



- Turn the key clockwise.
» Handle **6** pops out.
- Pull up handle **6** completely.

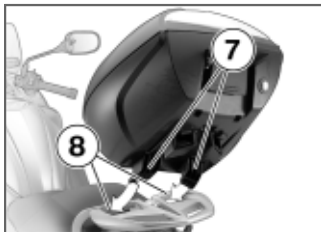
Mounting Topcase



- Pull handle **6** up as far as it will go.



- Lift the Topcase at the rear and pull it off the carrier.



- Hook the Topcase into position on the carrier. Make sure that hooks **7**

are securely seated in corresponding mounts **8**.



- Press handle down until it engages.
» Topcase is locked.

Maintenance

General instructions	94
Toolkit	94
Engine oil	95
General brake system	97
Brake pads.....	97
Brake fluid	99
Clutch	101
Tires	102
Rims.....	102
Wheels	102
Front wheel stand	110
Rear-wheel stand	111
Lamps	112
Jump starting	120
Battery.....	121

General instructions

The 'Maintenance' chapter describes work involving the checking and replacement of wear parts that can be performed with a minimum of effort.

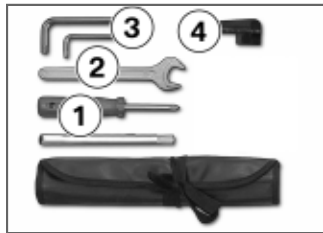
If special tightening torques are to be taken into account for assembly, these are listed. An overview of all required tightening torques is contained in the chapter "Technical Data".

Information on additional maintenance and repair work is provided in the Repair Manual for your motorcycle on DVD/CD-ROM (RepROM), which you can obtain from your authorized BMW Motorrad retailer.

Special tools and a thorough knowledge of motorcycles 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.

Toolkit

Standard onboard toolkit



1 Screwdriver, reversible blade

- Removing and installing turn indicator glasses
- Adjusting rebound

2 Open-ended wrench, 17 mm

- Adjusting mirror arm

3 TORX wrenches T25, T45

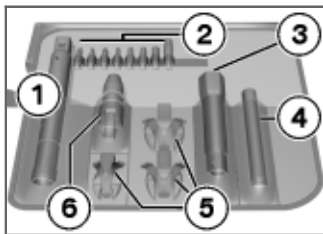
- Removing and installing tail light glass

4 Oil cap wrench

- Removing and installing cap of oil fill location

Onboard-toolkit service set

Your BMW Motorrad retailer offers the onboard-toolkit service set for additional work. Information on conducting this work is provided in the Repair Manual on DVD/CD-ROM, which is also available from your BMW Motorrad retailer.



1 Pull-out tool holder

- Holding of all tools with adapter

2 Bits, 1/4"

- 5x Torx
- 2x Phillips
- 1x Straight-blade

3 Allen key, 3/8", 22 mm

- Removing and installing front wheel

4 Flashlight

- LED technology

5 Socket wrench


- Removing and installing rear wheel


6 Adapter

- Mounting for 1/4" bits
- 9x12 mm and 3/8" jointed adapter


Engine oil

Checking engine oil level

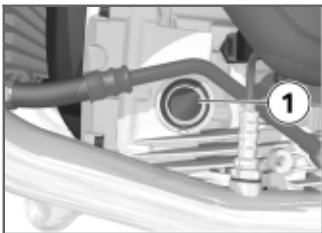
 The engine can seize if the oil level is low, and this can lead to accidents. Always make sure that the oil level is correct. ◀

 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.

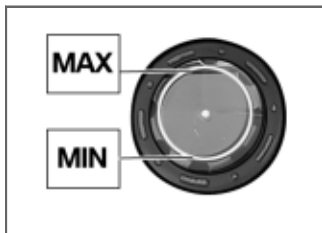
To ensure that the display of the engine oil level is correct, only check the oil level after a longer trip. ◀

 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. ◀

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



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



Specified level of engine oil

– between MIN and MAX marking

If the oil level is below the MIN mark:

- Top up engine oil.

If the oil level is above the MAX mark:

- Have oil level corrected by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Topping up engine oil



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

- Wipe area around filler neck clean.
- Remove cap of fill location for engine oil with toolkit.
- Add engine oil up to specified level.



Engine oil top-up quantity

– 0.5 quarts (0.5 l) (difference between MIN and MAX)

- Install cap of fill location for engine oil using toolkit.

General brake system

Brake safety

A properly functioning 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 the handbrake lever.
 - » The pressure point must be clearly perceptible.
- Press the footbrake lever.
 - » The 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

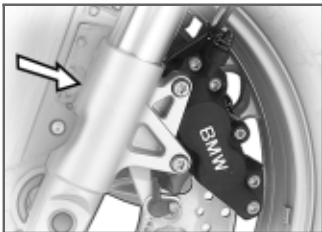
Checking front brake pad thickness



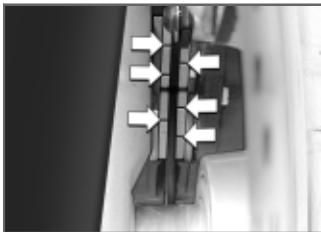
Continuing to use brake pads beyond the minimum pad thickness leads to reduced braking power and under certain circumstances to brake damage.

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 the ground is level and firm and park the motorcycle.



- Visually inspect the left and right brake pads to ascertain their thickness. Direction of view: between wheel and fork tube at brake caliper.



Front brake pads -
wear marking

- The wear markings must be clearly visible on the brake pads must.

If the wear indicating marks are no longer clearly visible:

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

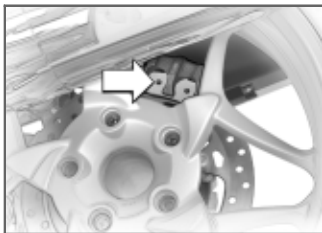
Checking brake pad thickness at rear



Continuing to use brake pads beyond the minimum pad thickness leads to reduced braking power and under certain circumstances to brake damage.

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 the ground is level and firm and park the motorcycle.



- Check brake pads on rear brake caliper with visual inspection from left.

 Rear brake pads - material thickness

– Wear limit


– 0.04 in (1 mm)

The brake disk must not be visible through the bore hole of the inner brake pad.

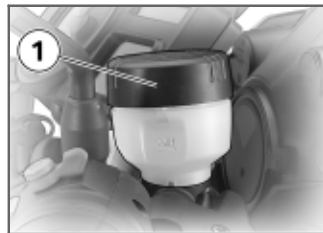
- Have the brake pads replaced by a specialized workshop, preferably an authorized BMW Motorrad retailer.

Brake fluid


Checking front brake fluid level

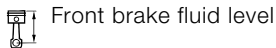
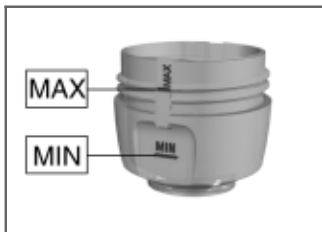
 A low fluid level in the brake reservoir can allow air to penetrate the brake system. This significantly reduces braking efficiency. Check brake fluid level regularly. ◀

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



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

 The brake fluid level in the brake-fluid reservoir drops due to brake pad wear. ◀



Front brake fluid level


– Brake fluid DOT4

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

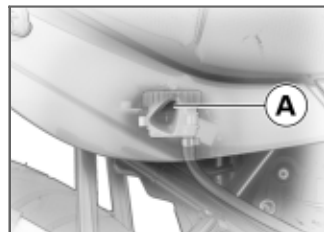
If the brake fluid level drops below the permissible level:

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


Checking rear brake fluid level

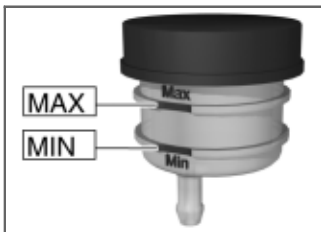
 A low fluid level in the brake reservoir can allow air to penetrate the brake system. This significantly reduces braking efficiency. Check brake fluid level regularly. ◀


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



- Check brake fluid level through inspection opening **A** in right-hand side panel.

 The brake fluid level in the brake-fluid reservoir drops due to brake pad wear. ◀



 Rear brake fluid level

– Brake fluid DOT4

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

If the brake fluid level drops below the 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.
 - » The 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 the ground is level and firm and park the motorcycle.
- Move handlebars into straight-ahead position.



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

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

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

 Clutch fluid level

– The clutch fluid level must not drop.

If the 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.


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 the ground is level and firm and park the 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. ◀

If the tire tread depth no longer complies with the legally required minimum tread depth:

- Replace tire.

Rims

Checking rims

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

Wheels

Approved wheels and tires

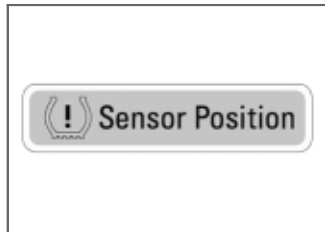
For every size of tire, BMW Motorrad has tested certain makes and approved those it has found to be roadworthy. If you use wheels and tires that have not been approved, BMW Motorrad cannot assess their suitability or pro-


vide any guarantee as to their road safety.

Use only wheels and tires that BMW Motorrad has approved for your type of motorcycle.

Extensive information is available at your authorized BMW Motorrad retailer or on the Internet at www.bmw-motorrad.com.

TPC sticker^{OE}



 The TPC sensors can be damaged by improper tire mounting.

Inform the BMW Motorrad retailer or the specialized

workshop that the wheel is equipped with a TPC sensor. ◀

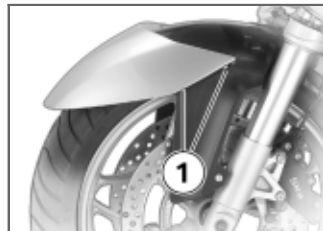
On motorcycles equipped with TPC, a corresponding sticker is located on the wheel rim at the position of the TPC sensor. During a tire change it must be ensured that the TPC sensor is not damaged. Inform the BMW Motorrad retailer or the specialized workshop of the TPC sensor.

Removing front wheel

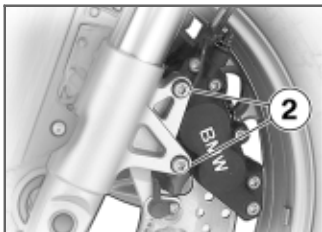
- Place motorcycle on an auxiliary stand; BMW Motorrad recommends BMW Motorrad rear wheel stand.
- Installing rear-wheel stand (➔ 112)

with OA Center stand:

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

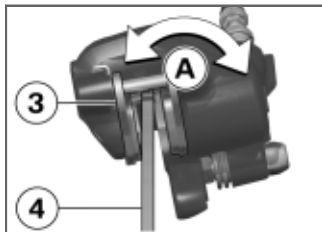


- Remove screws **1** on left and right.
- Lift off mudguard toward front while pressing part somewhat to side.



! 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 securing screws **2** of left and right brake calipers.



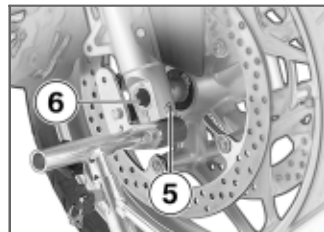
- Push brake pads in brake caliper **3** apart slightly by rocking back and forth **A** in relation to brake disks **4**.
- Mask off the parts of the wheel rim that could be scratched in the process of removing the brake calipers.
- Carefully pull brake calipers back and out until clear of brake disks.

with OE BMW Motorrad Integral ABS:

- When pulling off left brake caliper, make sure that

ABS sensor cable is not damaged. ◀

- Raise front of motorcycle until front wheel can rotate freely. To lift motorcycle, BMW Motorrad recommends using BMW Motorrad front wheel stand.
- Mounting front wheel stand (➔ 110)



- Remove axle clamping screw **5**.
- Remove quick-release axle **6** while supporting wheel.

▶ BMW Motorrad offers an adapter piece for removing the quick-release axle. This adapter can be combined with any commercially available 22-mm open-end or ring wrench. The adapter with the BMW special tool number 363691 can be obtained from your authorized BMW Motorrad retailer.

The supplemental onboard toolkit available as an optional accessory also contains a tool for removing the quick-release axle. ◀



- Roll the front wheel forward to remove.

with OE BMW Motorrad Integral ABS:

- When rolling out wheel, watch ABS sensor on left side. ◀
- Remove spacing bushing on left side from wheel hub.

Installing front wheel

⚠ 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. ◀

⚠ During the following work, parts of the front brake, and in particular of the BMW Integral ABS, can be damaged.

Take care not to damage the brake system, in particular the ABS sensor with cable and the ABS sensor ring. ◀

⚠ 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. ◀

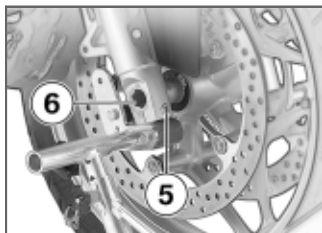
- Mount spacing bushing on left side on wheel hub.



- Roll front wheel into front forks.

with OE BMW Motorrad Integral ABS:

- When rolling in wheel, watch ABS sensor on left side. ◀



- Lift front wheel and install quick-release axle **6** with appropriate torque.



Quick-release axle in axle mount

– 37 lb/ft (50 Nm)

- Tighten axle clamping screw **5** with appropriate torque.



Clamping screw for quick-release axle

– 14 lb/ft (19 Nm)

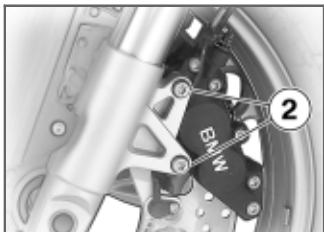
- Remove front wheel stand.

- Ease the brake calipers on to the brake disks. with OE BMW Motorrad Integral ABS:



The cable of the ABS sensor could chafe through if it comes into contact with the brake disk. Ensure installation of the ABS sensor cable close to the front suspension. ◀

- Route ABS sensor cable **7** as shown in picture. ◀



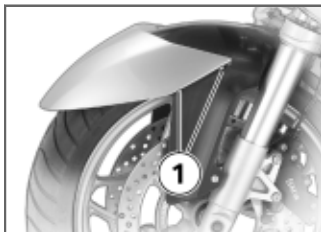
- Install mounting screws **2** with appropriate torque.




Brake caliper on slider tube

– 22 lb/ft (30 Nm)

- Remove the adhesive tape from the wheel rim.




- Lay on mudguard from front while watching lug on mudguard rear section.
- Install screws **1** on left and right.

 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.◀

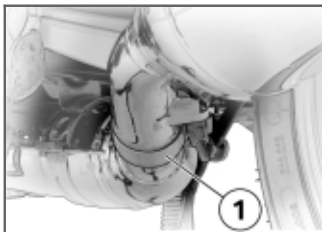
- Operate brakes several times until brake pads contact brake disk.

Removing rear wheel

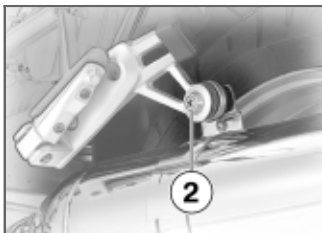
 Components of the exhaust system can be hot.

Do not touch hot parts of the exhaust system.◀

- Place motorcycle on an auxiliary stand; BMW Motorrad recommends BMW Motorrad rear wheel stand.
- Installing rear-wheel stand (➔ 112) with OA Center stand:
- Make sure ground is level and firm and place motorcycle on its center stand.◀



- Loosen clamp **1**.



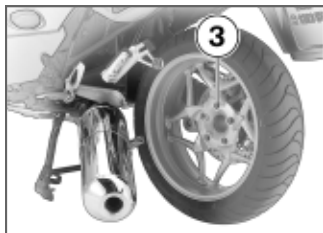
- Remove screw **2** for bracket of end muffler from passenger footrest.



- Turn the end silencer out.
- Engage first gear.



- Roll the rear wheel out toward the rear.



- Remove screws **3** from rear wheel while supporting wheel.

Installing rear wheel

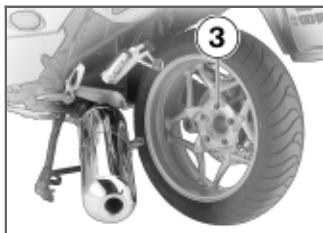
⚠ Threaded fasteners not tightened to the specified torque can work loose or their threads can suffer damage.

Always have the tightening torques checked by a specialized workshop, preferably an authorized BMW Motorrad retailer. ◀


- Make sure that wheel centering device and contact

surfaces of wheel hub are grease-free.

- Insert rear wheel in hole for wheel centering device.

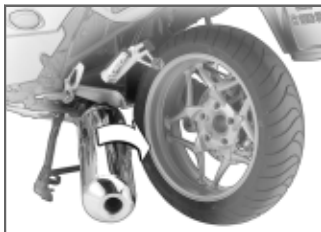


- Screw in screws **3** hand-tight and tighten diagonally with specified torque.

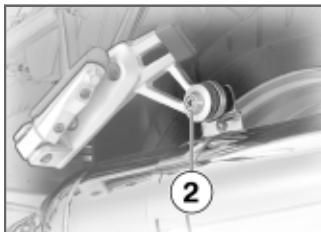
 Rear wheel on wheel carrier

– Tightening sequence:
Tighten diagonally

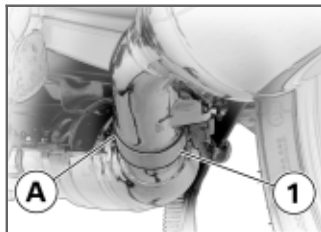
– 44 lb/ft (60 Nm)



- Turn the end silencer to its initial position.



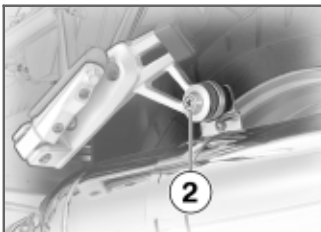
- Install screw **2** for bracket of end muffler on rear footrest, but do not tighten it at this point.



- Align clamp **1** on end muffler with marking **A** and install with torque.

 Torca clamp on muffler and manifold

– 41 lb/ft (55 Nm)



! If the gap between the rear wheel and the end muffer is too small, the rear wheel can overheat.

The gap between the rear wheel and the end muffer must be at least 15 mm. ◀

- Tighten screw **2** for bracket of end muffer on passenger footrest with torque.



End muffer on footrest system

– 14 lb/ft (19 Nm)

Front wheel stand

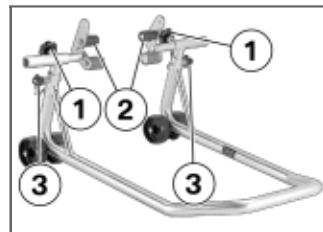
Use

A front wheel stand for simple, safe changing of the front wheel is available from BMW Motorrad. The front wheel stand with the BMW special tool number 36 3 970 can be obtained from your authorized BMW Motorrad retailer.

! 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. ◀

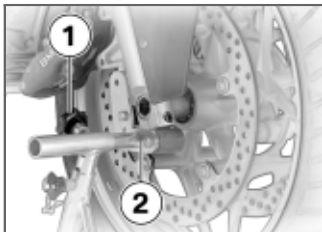
Mounting front wheel stand

- Place motorcycle on an auxiliary stand; BMW Motorrad recommends BMW Motorrad rear wheel stand.
- Installing rear-wheel stand (→ 112) with OA Center stand:
- Make sure ground is level and firm and place motorcycle on its center stand. ◀

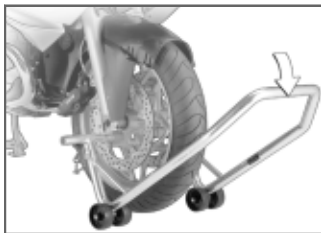


- Loosen adjusting screws **1**.

- 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 the front wheel stand relative to the front wheel and push it against the front axle.



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



⚠ If the motorcycle is resting on the center stand: The motorcycle is raised too far at the front, the center stand lifts off the ground and the motorcycle can tip over to the side.

When raising the motorcycle, make sure that the center stand remains on the ground. ◀

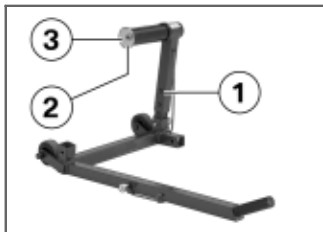
- Apply uniform pressure to push the front wheel stand down and raise the motorcycle.

Rear-wheel stand

Use

In order to be able to work safely on motorcycles without center stands, BMW Motorrad offers a rear wheel stand. This rear wheel stand with the BMW special tool number 36 3 980 can be obtained from your authorized BMW Motorrad retailer.

Installing rear-wheel stand



- Set the desired height of the rear wheel stand using the bolts **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.
- Mount lock washer **2** from left by pressing release button.
- Place your left hand on the motorcycle and your right hand on the lever **4** of the rear wheel stand.



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

Lamps

General instructions

A bulb failure is signaled to you in the multifunction display by a warning indicator. If the brake or rear light fails, the general warning light also lights up in yellow. If the rear light fails, the brake light is used as a substitute in that

the luminosity of the second glow filament is reduced to rear light level. Failure of the rear light is nevertheless indicated in the display.

! A defective bulb places your safety at risk because it is easier for other users to oversee you and your 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. ◀

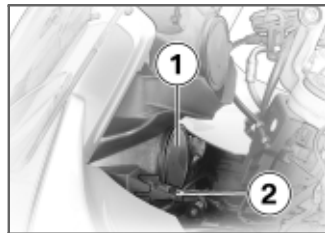
Replacing low-beam and high-beam bulbs

! 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. ◀

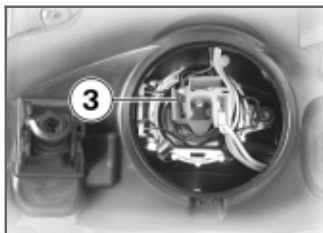
- Make sure the ground is level and firm and park the motorcycle.
- Switch off ignition.

▶ To achieve better accessibility, turn the handlebars to the left. ◀

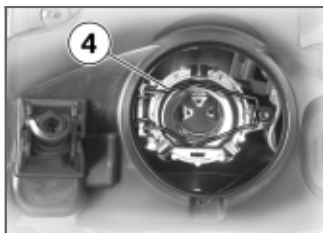
▶ The following description for the lower light also applies to the upper light. ◀



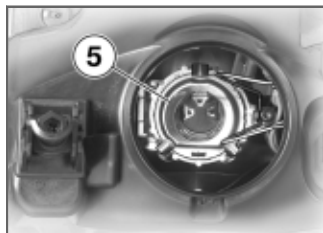
- Remove cover **1** by pulling on lower lever **2** (upper headlight: lever points toward right).




- Disconnect plug **3**.



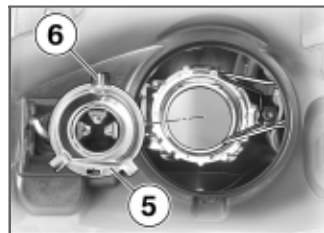
- Remove spring strap **4** from detents and fold to side.



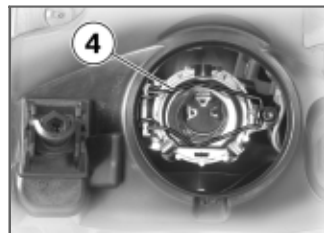
- Remove bulb **5**.
- Replace defective bulb.


 Bulb of low-beam and high-beam headlight

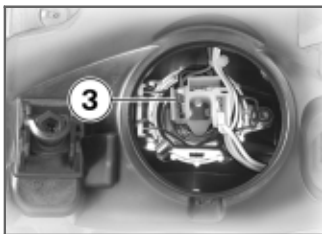
– H4 / 12 V / 55 W / 60 W



- Install bulb **5**. When doing so, make sure that lug **6** is pointing up and that bulb is securely seated.



- Install spring straps **4** in locks.



- Close connector **3**.



- Mount cover **1** at top and press on firmly.
- Check that bulb is correctly seated (by looking in through headlight lens).

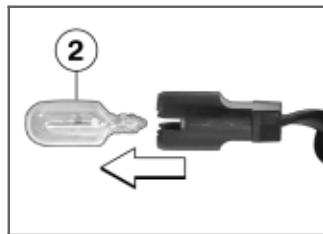
Replacing parking light bulb

! 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 the ground is level and firm and park the motorcycle.
- Switch off ignition.



- Pull bulb socket **1** out of lower headlight housing.

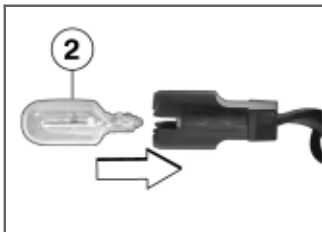


- Remove bulb **2** from bulb holder.
- Replacing defective bulb

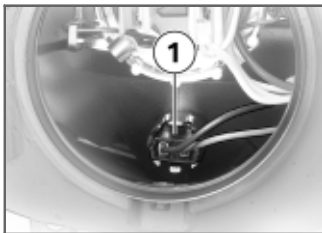


Side-light bulb

– W5W / 12 V / 5 W



- Insert bulb **2** into bulb socket.



- Mount bulb socket **1** in lower headlight housing.

Replacing brake light and tail light 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. ◀

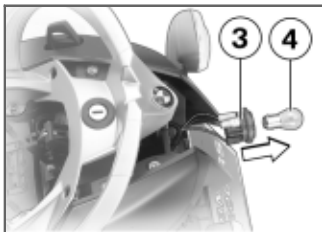
- Make sure the ground is level and firm and park the motorcycle.
- Switch off ignition.
- Removing passenger seat (→ 57)




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



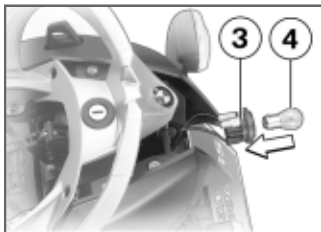
- Pull off bulb housing **2** toward rear.



- Turn bulb holder **3** counter-clockwise to remove it from bulb housing.
- Remove bulb **4** from bulb holder.
- Replace defective bulb.

 Bulb of tail/brake light

– P21/5W / 12 V / 5 W /
21 W



- Insert bulb **4** into socket.
- Install bulb socket **3** in lamp housing by turning clockwise.




- Install lamp housing **2**.



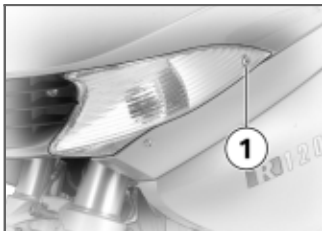
- Install screws **1** on left and right.
- Installing passenger seat (→ 59)

Replacing front turn indicator bulb

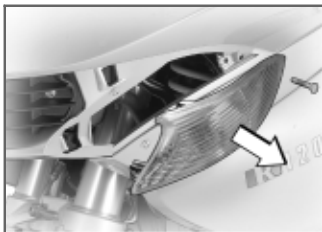
 If it is not standing firmly, the motorcycle could topple in the course of the operations described below. Make sure that the motorcycle is steady on its stand. ◀

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

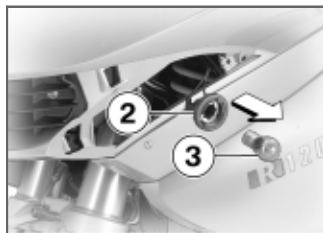
- Switch off ignition.



- Remove the screw **1**.



- Pull off turn indicator glass to side.

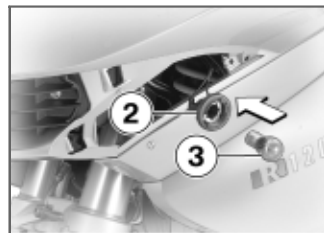


- Remove bulb holder **2** from lamp housing by turning it counterclockwise.
- Remove bulb **3** from bulb holder.
- Replace defective bulb.

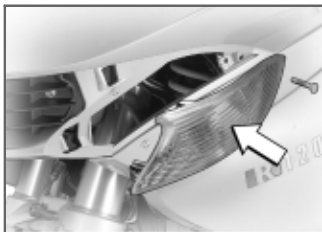


Bulb of front turn indicators

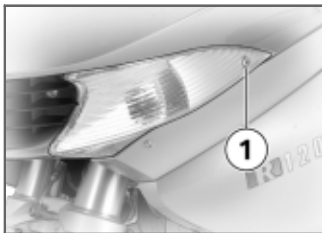
- PY21W / 12 V / 21 W



- Insert bulb **3** into bulb socket.
- Install bulb socket **2** in lamp housing by turning clockwise.



- Insert turn indicator glass in fairing.

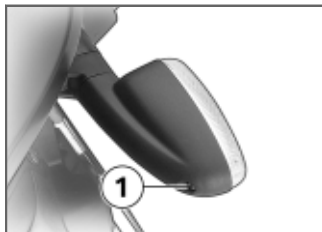


- Install screw **1**.

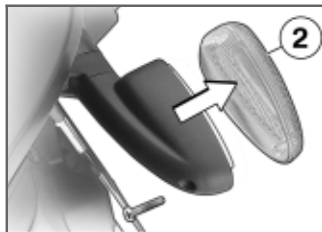
Replacing rear turn indicator bulb

! 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. ◀

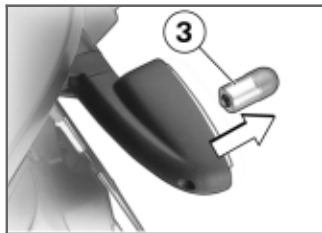
- Make sure the ground is level and firm and park the motorcycle.
- Switch off ignition.



- Remove the screw **1**.



- Remove turn indicator glass **2**.

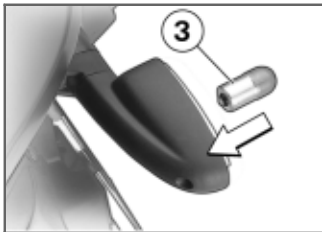


- Press bulb **3** into its socket and turn it counterclockwise to remove.
- Replace defective bulb.

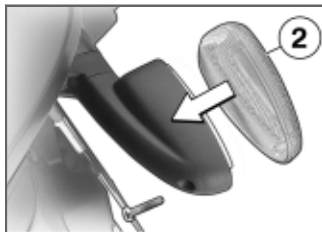


Bulb of rear turn indicators

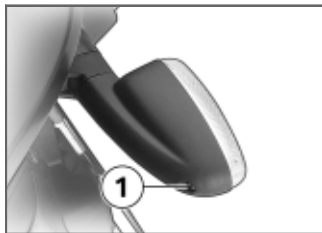
- RY10W / 12 V / 10 W



- Insert bulb **3** into socket.



- Place turn indicator glass **2** on turn indicator housing.



- Install screw **1**.

Jump starting

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

Do not use the onboard socket to jump-start 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 the ground is level and firm and park the motorcycle.
- Removing passenger seat (⇒ 57)
- Removing driver's seat (⇒ 57)
- Remove seat bearing rod.
- When jump-starting the engine, do not disconnect the battery from the onboard electrical system.
- Remove the protective cap from the positive battery terminal.

- Run engine of donor vehicle during jump-starting.
- Begin by connecting one end of the red jump lead to the positive terminal of the discharged battery and the other end to the positive terminal of the donor battery.
- Then connect one end of black jumper lead to negative terminal of donor battery, and other end to negative terminal of discharged battery.
- Start the engine of the motorcycle with the discharged battery in the usual way; if the engine refuses to start, wait a few minutes before repeating the attempt to protect the starter and the supporting battery.
- Allow both engines to idle for a few minutes before

disconnecting the jump leads.

- Disconnect jumper lead from negative terminal first, then from positive terminal.



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

- Install seat bearing rod.
- Installing driver's seat (⇒ 58)
- Installing passenger seat (⇒ 59)


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. ◀

 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 71 60 7 688 865 (110 V). If in doubt, charge the disconnected battery directly at the terminals. ◀

 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.◀

- Charge the disconnected battery via the onboard socket.
- Comply with the operating instructions of the charger.

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

Charging disconnected battery

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

- Make sure the ground is level and firm and park the motorcycle.
- Switch off ignition.
- Removing passenger seat (⇒ 57)
- Removing driver's seat (⇒ 57)



- Remove seat bearing rod 1.



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

- Remove negative cable **2** first.
- Then pull off protective cap **3** and remove positive cable.



- Remove screw **4** and take off battery retaining strap.
- Lift battery upwards; if it is difficult to move, moving it back and forth will help.

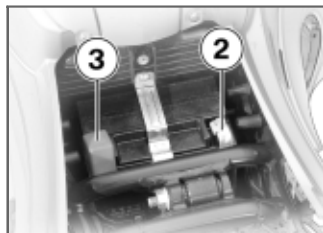
Installing battery


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

- Switch off ignition.
- Insert the battery into the battery compartment with the positive terminal on the left in the direction of travel.



- Push battery retaining strap over battery and install screw **4**.



 An incorrect installation sequence increases the risk of short-circuiting. Always observe the proper sequence.

Never install the battery without the protective cap. ◀

- Install positive cable.
- Push on protective cap **3**.
- Install negative cable **2**.




- Install seat bearing rod **1**.
- Installing driver's seat
(⇒ 58)
- Installing passenger seat
(⇒ 59)
- Setting clock (⇒ 45)

Care

Care products	128
Washing your motorcycle	128
Cleaning sensitive motorcycle parts	129
Paint care	130
Protective wax coating	130
Storing motorcycle	130
Returning motorcycle to use	130

Care products

BMW Motorrad recommends that you use cleaning and care products available at your authorized BMW Motorrad retailer. The materials in BMW Care Products have been tested in laboratories and in practice; they provide optimized 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 strong 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 the motorcycle has been washed, ridden through water or ridden in the rain, the brake disks and pads

might be wet and the brakes might not take effect immediately.

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. ◀


Chrome

Especially in the case of road salt, carefully clean chrome parts with a great deal of water and BMW auto shampoo. Use chrome polish for additional treatment.

Radiator

Clean the radiator regularly to prevent overheating of the engine due to inadequate cooling.


For example, use a garden hose with low water pressure.

 Cooling fins can be bent easily.

When cleaning the radiator, ensure that the fins are not bent. ◀

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 vehicle polish or BMW paint cleaner are recommended here.

Contamination on 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. The best way to see whether the paint has to be protected is that water no longer forms pearls.

Storing motorcycle

- Clean the motorcycle.
- Remove the battery.
- Spray the brake and clutch lever, the side stand pivot and, if necessary, the main

stand pivot with a suitable lubricant.

- Coat bare metal and chrome-plated parts with an acid-free grease (e.g. Vaseline).
- Park the motorcycle in a dry room so that both wheels are unloaded.

 Before storing the vehicle, have the engine oil and the oil filter element changed by a specialized 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 protective wax coating.
- Clean the motorcycle.

- Install a charged battery.
- Before starting: Observe checklist.

Technical data

Troubleshooting chart	134
Threaded fasteners	135
Engine	137
Riding specifications	140
Clutch	140
Transmission	140
Rear-wheel drive	141
Running gear.....	141
Bakes.....	142
Wheels and tires	142
Electrical system	143
Frame	145
Dimensions	145
Weights.....	146

Troubleshooting chart

Engine does not start at all or is very difficult to start

Possible cause	Remedy
Emergency ON/OFF switch activated.	Emergency ON/OFF switch in operating position.
Side stand extended and gear engaged.	Retract side stand (⇒ 70).
Gear engaged and clutch not operated.	Place transmission in neutral or disengage clutch (⇒ 70).
Clutch disengaged with ignition switched off.	Switch on ignition first, then disengage clutch.
No fuel in tank.	Refueling (⇒ 75)
Battery not adequately charged.	Charging connected battery (⇒ 122)

Threaded fasteners

Mirror arm	Value	Valid
Mirror on clamping piece		
M10	18 lb/ft (25 Nm)	
Clamping piece on clamping block		
	7 lb/ft (10 Nm)	
Handlebars	Value	Valid
Handlebar stub on slider tube		
M8 x 25	14 lb/ft (19 Nm)	
Front wheel	Value	Valid
Clamping screw for quick-release axle		
M8 x 35	14 lb/ft (19 Nm)	
Quick-release axle in axle mount		
M24 x 1.5	37 lb/ft (50 Nm)	

Rear wheel	Value	Valid
Rear wheel on wheel carrier		
M10 x 40 x 1.25	Tighten diagonally	
	44 lb/ft (60 Nm)	
End muffler on footrest system		
M8 x 35	14 lb/ft (19 Nm)	
Torca clamp on muffler and manifold		
M8	41 lb/ft (55 Nm)	
Brakes	Value	Valid
Brake caliper on slider tube		
M8 x 32 - 10.9	22 lb/ft (30 Nm)	

Engine

Engine design	Four-stroke opposed twin, air-cooled with oil-cooled exhaust section, installed longitudinally, two overhead camshafts, electronic engine management.
Effective displacement	1170 cc (1170 cm ³)
Cylinder bore	4 in (101 mm)
Piston stroke	2.9 in (73 mm)
Compression ratio	12.0:1
Rated output	110 hp (81 kW), At: 7500 min ⁻¹
with OE Power reduction:	101 hp (74 kW), At: 7500 min ⁻¹
Maximum torque	85 lb/ft (115 Nm), At: 6000 min ⁻¹
Permissible maximum engine speed	8000 min ⁻¹
Idle speed	1150 ^{±50} min ⁻¹

Fuel

Recommended fuel type	98 ROZ/RON, Super Plus unleaded 95 ROZ/RON, Super unleaded (fuel type can be used with reduced performance and consumption)
Usable fuel quantity	5.5 gal (21 l)
Reserve fuel quantity	1.1 gal (4 l)

Engine oil

Engine oil capacity	1.1 gal (4 l), with filter change
Lubricant	Engine oil 20W-50
Engine oil top-up quantity	0.5 quarts (0.5 l), difference between MIN and MAX
Oil grades	Engine oils of the API classification SF or better. Engine oils of the ACEA classification A2 or better. BMW Motorrad recommends not using synthetic oils for the first 6,000 miles (10,000 km). Ask your BMW Motorrad retailer for engine oils suitable for your motorcycle.

Permissible viscosity classes	
SAE 5 W- ≥ 30	-4...68 °F (-20...20 °C), Operation at low temperatures
SAE 10 W-40	14...86 °F (-10...30 °C), Operation at moderate temperatures
SAE 15 W- ≥ 40	≥ 32 °F (≥ 0 °C)
SAE 20 W- ≥ 40	≥ 32 °F (≥ 0 °C)
SAE 5 W- ≥ 50	≥ -4 °F (≥ -20 °C), High-quality and synthetic oil for operation at all temperatures
SAE 10 W- ≥ 50	≥ -4 °F (≥ -20 °C), High-quality and synthetic oil for operation at all temperatures

Riding specifications

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

Clutch design	single dry plate with high-leverage pressure plate
---------------	--

Transmission

Transmission design	Helical 6-speed transmission with integrated torsional vibration damper, claw shifting via sliding sleeves
---------------------	--

Gear ratios

Transmission gear ratios	1.824 (31:17 teeth), Primary gear ratio 2.277 (41:18 teeth), 1st gear 1.583 (38:24 teeth), 2nd gear 1.259 (34:27 teeth), 3rd gear 1.033 (31:30 teeth), 4th gear 0.903 (28:31 teeth), 5th gear 0.805 (29:36 teeth), 6th gear
--------------------------	---

Rear-wheel drive

Rear-wheel drive design	Shaft drive with bevel gears
Gear ratio of rear-wheel drive	2.62:1

Running gear

Front suspension design	BMW Telelever, leading link mounted in engine and on telescopic fork, centrally positioned spring strut supported on leading link and main frame
Total suspension travel of front suspension	4.3 in (110 mm), On wheel
Rear suspension design	Central spring strut with single-tube gas-filled shock absorber, steplessly adjustable rebound-stage damping and hydraulically adjustable spring preload
with OE Electronic Suspension Adjustment (ESA):	Central spring strut with single-tube gas-filled shock absorber, electric 3x adjustable rebound-stage damping and electrohydraulic 3x adjustable spring preload
Total spring travel at rear wheel	5.5 in (140 mm)

Bakes

Front-wheel brake design	Hydraulic two-disk brake with 4-piston fixed calipers and floating brake disks
Front brake-pad material	Sintered metal
Rear wheel brake design	Hydraulic disk brake with 2-piston floating caliper and fixed brake disk
Rear brake-pad thickness	Organic

Wheels and tires

Front wheel design	Cast wheel with 5 double spokes, MT H2
Front-wheel rim size	3.50" x 17"
Front-wheel tire designation	120/70 ZR17
Rear wheel design	Cast wheel with 5 double spokes, MT H2
Rear-wheel rim size	5.50" x 17"
Rear-wheel tire designation	180/55 ZR17

Tire pressures

Front tire pressure	31.9 psi (2.2 bar), Single rider, with cold tire 36.3 psi (2.5 bar), Driver with passenger and/or load, with cold tire
Rear tire pressure	36.3 psi (2.5 bar), Single rider, with cold tire 42.1 psi (2.9 bar), Driver with passenger and/or load, with cold tire

Electrical system

Rated load of onboard socket	5 A, per onboard socket
with OA Additional onboard socket:	5 A, all onboard sockets together
Fuses	All circuits are electronically protected, so plug-in fuses are no longer necessary. 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 design	AGM (Absorptive Glass Matt) battery
Battery nominal voltage	12 V
Battery nominal capacity	14 Ah

Spark plugs

Spark plug manufacturer and designation	Bosch YR5LDE NGK DCPR 8 EKC
Spark-plug electrode gap	0.03 \pm 0.01 in (0.8 \pm 0.1 mm), New 0.04 in (1 mm), Wear limit
Secondary spark plug manufacturer and designation	Bosch YR5LDE NGK DCPR 8 EKC
Secondary spark-plug electrode gap	0.03 \pm 0.01 in (0.8 \pm 0.1 mm), New 0.04 in (1 mm), Wear limit

Bulbs

Bulb of low-beam and high-beam headlight	H4 / 12 V / 55 W / 60 W
Side-light bulb	W5W / 12 V / 5 W
Bulb of tail/brake light	P21/5W / 12 V / 5 W / 21 W
Bulb of front turn indicators	PY21W / 12 V / 21 W
Bulb of rear turn indicators	RY10W / 12 V / 10 W

Frame

Frame design	Steel tube front frame section with steel tube rear frame section and carrying drive unit
Location of type plate	Rear frame section centered under passenger seat
Location of vehicle identification number (VIN)	Upper midsection of frame front

Dimensions

Motorcycle length	85.2 in (2165 mm)
Motorcycle height	48 in (1220 mm), In DIN normal-load position; without mirrors, windshield down
Vehicle width	29.5 in (750 mm), Handlebar width without mirrors
Driver's seat height	31.9...32.7 in (810...830 mm), - at unladen weight
with OE Low driver's seat:	30.7...31.5 in (780...800 mm)

Weights

Unladen weight	505 lbs (229 kg), DIN unladen weight, ready for road, 90 % full tank of gas, without OE
Permissible gross weight	1014 lbs (460 kg)
Maximum payload	509 lbs (231 kg)

Service

BMW Motorrad service	148
BMW Motorrad service quality	148
BMW Motorrad Service Card - On-the-spot breakdown assistance	149
BMW Motorrad service network	149
Maintenance work	149
Maintenance schedules	150
Confirmation of maintenance work	151
Confirmation of service	156

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 contact your authorized BMW Motorrad retailer for information on the procedures included in BMW service, inspections and the annual inspection.

Have all maintenance and repair work carried out con-

firmed 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 dealer-

ship 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 on the international retail network is contained in the "Service Contact Europe" brochure and "Service Contact Africa, America, Asia, Australia and Oceania".

Maintenance work Intervals

Some maintenance tasks must be performed after a certain time, others depend on the distance covered by the motorcycle.

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 (1,200 km).

BMW Annual Inspection

Some maintenance work must be carried out at least once a year. Other tasks depend on the distance the motorcycle has covered.

BMW Service

After the first 6,000 miles (10,000 km) and every additional 12,000 miles (20,000 km) (18,000 miles, 30,000 miles, 42,000 miles etc. (30 000 km, 50 000 km, 70 000 km etc.)) if this distance is covered within a year.

BMW Inspection

After the first 12,000 mi/20,000 km and every additional 12,000 mi/20,000 km (24,000 mi/40,000 km, 36,000 mi/60,000 km, 48,000 mi/80,000 km etc.), if this distance is covered within a year.

Maintenance schedules

The maintenance schedule for your motorcycle depends on the equipment installed, and on the motorcycle's age and the distance it has covered. Your authorized BMW Motorrad retailer will be happy to supply a copy of the current maintenance schedule for your motorcycle on request.

Confirmation of maintenance work

BMW Pre-Delivery Check

Carried out properly in accordance with workshop specifications.

Date, stamp, signature

BMW Running-In Check

Carried out properly in accordance with workshop specifications.

Odometer reading _____

Brake fluid changed

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out properly in accordance with workshop specifications.

Odometer reading _____

- Brake fluid changed

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out properly in accordance with workshop specifications.

Odometer reading _____

- Brake fluid changed

Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out properly in accordance with workshop specifications.

Odometer reading _____

- Brake fluid changed

Date, stamp, signature

BMW Service

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Date, stamp, signature

BMW Service

- BMW Annual Inspection
- BMW Service
- BMW Inspection

Carried out properly in accordance with workshop specifications.

Odometer reading _____

- Brake fluid changed

Date, 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

- A**
Abbreviations and symbols, 6
Accessories
 General instructions, 86
- B**
Battery, 15
 Battery charging-current warning indicator, 28
 Charging connected battery, 122
 Charging disconnected battery, 123
 Installing, 124
 Maintenance instructions, 121
 Removing, 123
Brake fluid
 Checking front brake fluid level, 99
 Checking rear brake fluid level, 100
Brake lever
 Adjusting handbrake lever, 52
- Brake pads
 Check front, 97
 Check rear, 98
 Running in, 73
- Brakes
 Checking operation, 97
 Fluid reservoir, 13
 Technical data, 142
- C**
Case
 Closing, 88
 Mounting, 89
 Opening, 87
 Removing, 88
Checklist, 70
Clock, 22
 Adjusting, 18, 45
Clutch
 Adjusting clutch lever, 52
 Checking operation, 101
 Fluid reservoir, 11
 Technical data, 140
Commissioning, 130
- Confirmation of maintenance work, 151
Currentness of this manual, 7
- D**
Dimensions
 Technical data, 145
Driver's seat
 adjusting, 58
 installing, 58
 removing, 57
- E**
Electrical system
 Technical data, 143
Emergency ON/OFF switch, 17, 50
Engine
 Engine-electronics warning indicator, 26
 Technical data, 137
 Temperature display, 22
Engine oil
 Checking level, 95
 Engine oil-level warning indicator, 27

Engine oil-pressure warning indicator, 27
Fill location, 11
Oil sight glass, 11
Technical data, 138
Temperature display, 23
topping up, 96

Equipment, 7

ESA, 63
Adjusting damping, 64
Adjusting spring preload, 64
Button, 16
Calling up settings, 64

EWS
Functional description, 42
Theft protection, 41
Warning indicator, 26

F

Frame
Technical data, 145

Front wheel stand, 110

Fuel
Quantity indicator, 22
refueling, 75
Reserve-quantity warning indicator, 26
Technical data, 4, 138

Fuses, 143

G

Gear indicator, 22

H

Handlebar fittings
General view, left, 16
General view, right, 17

Handlebars
Adjusting handlebar height, 11

Hazard warning flashers, 16
Switching off, 43
Switching on, 42

Headlight
Adjusting for RHD/LHD traffic, 54
Adjusting headlight range, 55

high-beam headlight, 19
low-beam headlight, 19
side lights, 19

Headlight flasher, 16

Heated hand grips, 17, 50

Helmet holder, 59

High-beam headlight, 16

Horn, 16

I

Ignition
Switching off, 40
Switching on, 40

Immobilizer
Warning indicator, 26

Indicator lights, 18

Instrument cluster
Lighting sensor, 18
Overview, 18

J

Jump-starting, 120

K

- Keys, 40
 - Replacement and extra keys, 42

L

- Lamps
 - Bulb-defect warning indicator, 28, 29
 - general instructions, 112
 - Replacing brake light and tail light bulbs, 116
 - Replacing front turn indicator bulb, 117
 - Replacing low-beam and high-beam bulbs, 113
 - Replacing parking-light bulb, 115
 - Replacing rear turn indicator bulb, 119
 - Technical data, 144
- Lights
 - Adjusting headlight range, 11, 55
 - Switching off parking lights, 54

- Switching on high-beam headlight, 53
- Switching on low-beam headlight, 53
- Switching on parking lights, 54
- Switching on side lights, 53

M

- Maintenance
 - General instructions, 94
 - Intervals, 149
- Mirrors
 - Adjusting, 60, 61
- Motorcycle
 - General view of left side, 11
 - General view of right side, 13
 - Returning to use, 130
 - Storing, 130
- Multifunction display, 22
 - Anti-theft alarm, 18

O

- Onboard computer
 - Ambient temperature, 47
 - Average consumption, 48
 - Average speed, 47
 - Button, 16
 - Oil level, 49
 - Range, 49
 - Resetting average consumption, 48
 - Resetting average speed, 48
 - Selecting readings, 46
- Onboard socket, 11
- Overview of warning indicators, 24, 31, 35, 37

P

- Passenger seat
 - installing, 59
 - removing, 57
- Pre-ride check, 71

R

- Rear shock absorber system
 - Adjusting, 11, 62

Rear suspension preload
 Adjusting, 11, 61

Rear-wheel drive
 Technical data, 141

Rear-wheel stand, 111

Refueling, 75

Reserve
 Warning indicator, 26

Residual range, 44

Running gear
 Technical data, 141

S

Safety instructions
 Correct loading, 68

Service, 148

Service Card, 149

Side stand
 during starting, 70

Spark plugs
 Technical data, 144

Speedometer, 18

Spring preload
 Adjusting, 61

Starter, 17

Steering lock, 41

Storing, 130

T

Tachometer, 18

Technical data
 Bakes, 142
 Bulbs, 144
 Clutch, 140
 Dimensions, 145
 Electrical system, 143
 Engine, 137
 Engine oil, 138
 Frame, 145
 Fuel, 4, 138
 Rear-wheel drive, 141
 Running gear, 141
 Spark plugs, 144
 Standards, 7
 Tire pressures, 4, 143
 Transmission, 140

Weights, 146

Wheels and tires, 142

Tire Pressure Control
 Operation, 46
 Sticker on wheel rim, 103

Tires
 Air pressure table, 15
 Approved tires, 102
 Checking air pressure, 65
 Checking tread depth, 102
 Inflation pressures, 4, 143
 Running in, 73
 Technical data, 142

Toolkit
 Service set, 94
 Standard equipment, 94

Topcase
 Closing, 90
 Mounting, 91
 Opening, 90
 Removing, 90

Torques, 135

Transmission
 During starting, 70
 Technical data, 140

Tripmaster, 22
 Resetting tripmeter, 44
 Selecting readings, 43
Troubleshooting chart, 134
Turn indicators
 Left, 16, 55
 Right, 17, 56
 Switching off, 17, 56
Type plate, 15

V

Vehicle Identification Number, 13

W

Warning indicators, 22
 Display, 23
Warning lamps, 18
Weights
 Technical data, 146

Wheels

 Installing front wheel, 105
 Installing rear wheel, 108
 Removing front wheel, 103
 Removing rear wheel, 107
 Technical data, 142

Windshield

 Adjusting, 11, 61

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.

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

Errors and omissions excepted.

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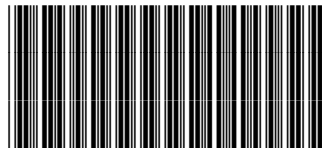
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Important data for refueling.

Fuel	
Recommended fuel type	98 ROZ/RON, Super Plus unleaded 95 ROZ/RON, Super unleaded (fuel type can be used with reduced performance and consumption)
Usable fuel quantity	5.5 gal (21 l)
Reserve fuel quantity	1.1 gal (4 l)
Tire pressures	
Front tire pressure	31.9 psi (2.2 bar), Single rider, with cold tire 36.3 psi (2.5 bar), Driver with passenger and/or load, with cold tire
Rear tire pressure	36.3 psi (2.5 bar), Single rider, with cold tire 42.1 psi (2.9 bar), Driver with passenger and/or load, with cold tire

BMW recommends 

Order No.: 01 47 7 706 687
06.2006, 3rd Edition



Please attach this sticker to the inside back cover page of your Rider's Manual

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>.

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08.2006