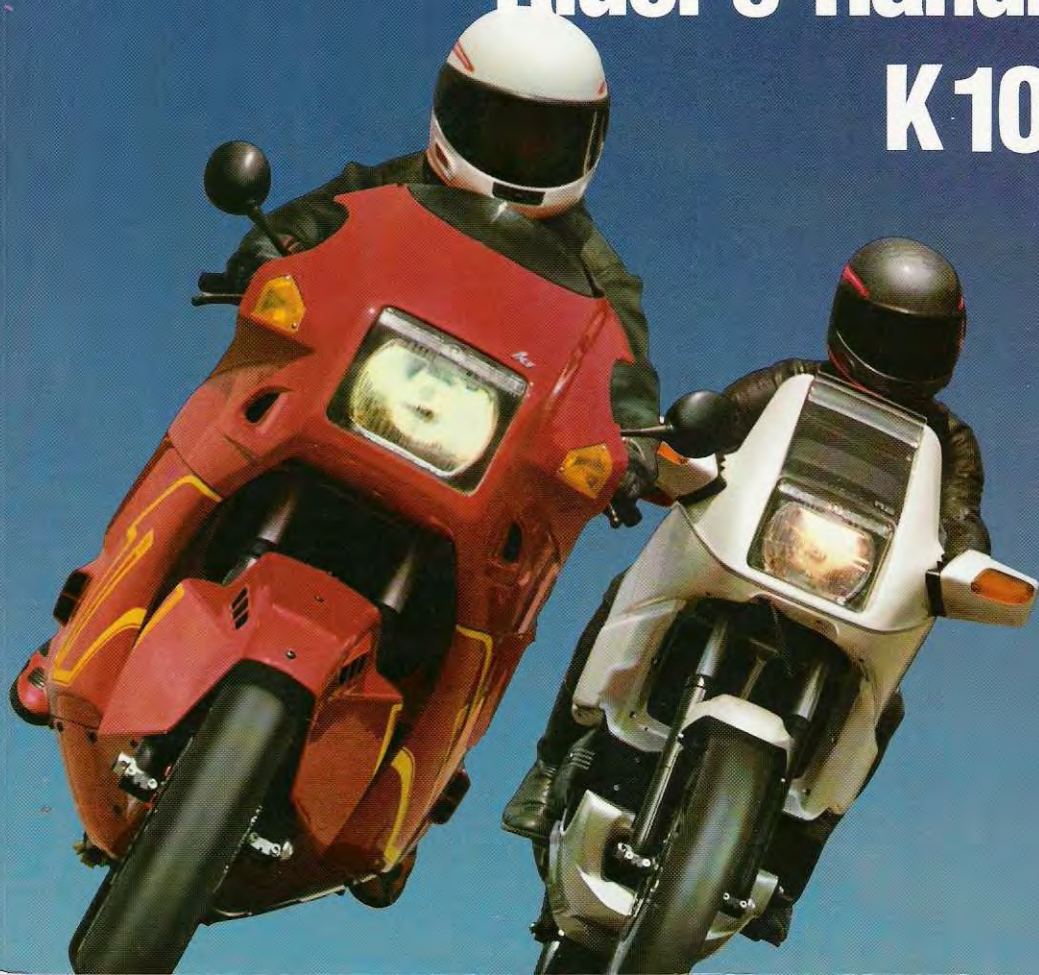


# Rider's Handbook

## K 100 RS

## K 1



**Rider's handbook**

**K 100 RS**

**K 1**



**BMW Motorrad GmbH + Co.**

In the interests of continuing technical development, we reserve the right to modify designs, equipment and accessories.

Dimensions, weights and performance data are quoted to generally accepted tolerances.

Fuel consumption figures were determined at the time of closing for press in accordance with ISO standard.

Depending on the equipment specification of your motorcycle and on the accessories fitted to it, discrepancies may occur in comparison with the information contained in the text and/or illustrations in this handbook. Furthermore, the specifications of versions sold in specific countries may differ in a similar manner. Please note that no claims will be entertained in this respect.

Errors and omissions excepted.

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BMW Motorrad GmbH + Co.  
Technical Service Department.

Printed in the Federal Republic of Germany.

#### Motorcycle and dealer data

Model \_\_\_\_\_ Frame No. \_\_\_\_\_

First registered on \_\_\_\_\_ Licence plate No. \_\_\_\_\_

Dealer's name and address  
with telephone number  
(dealer's stamp)

#### 1st owner

Name \_\_\_\_\_

Address \_\_\_\_\_

2nd owner \_\_\_\_\_ Licence plate No. \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

3rd owner \_\_\_\_\_ Licence plate No. \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

#### Keys to motorcycle

The ignition, fuel filler and storage compartments have identical locks. 1 folding head master key and 2 rigid head spare keys are supplied. A self adhesive label bearing the key number is also supplied. Keep it in a safe place and prevent unauthorized persons from seeing it.

**Dear motorcyclist and  
BMW enthusiast,**

We congratulate you on choosing a BMW motorcycle and welcome you to the group of BMW riders.

Safety is a prime consideration in motorcycling. The better acquainted you are with the motorcycle, the more serenely you can move in road traffic.

That is why we ask you to please spare a little time to read this Rider's Handbook thoroughly before you start serious riding. It contains important information on operating your motorcycle to enable you to fully exploit the technical delights of your BMW. You will also find helpful information regarding care and maintenance to ensure that your BMW motorcycle is always in proper operating condition to ensure maximum road safety and retention of its value.

In conclusion, may we wish you and those who ride with you many an enjoyable journey.

Yours sincerely,

**BMW Motorrad GmbH + Co.**



## **Please Note: Important Safety Information!**

**For your personal safety, BMW recommends that you use only parts and accessories approved by BMW.**

By using Genuine BMW Parts and Accessories tested and approved by BMW, you can enjoy the assurance of knowing that these products have been certified after appropriate testing as suitable for using on, or in conjunction with, your BMW motorcycle. BMW assumes full responsibility for these products when used as directed.

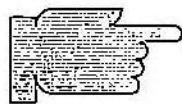
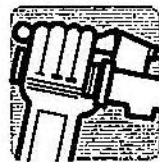
**BMW assumes no liability whatsoever for parts and accessories which it has not approved.**

When you use such non-approved products on your BMW motorcycle, you do so at your own risk. BMW is unable to determine whether each aftermarket part and accessory can be used without representing a risk for life and limb. A general operating permit also cannot provide a guarantee for spare parts or accessory products as the scope of testing for such parts is not generally adequate.

Genuine BMW Parts, BMW Accessories and other products approved by BMW, together with competent advice on all matters concerning them, can be obtained from any authorised BMW dealer.

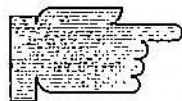
**Operating instructions**

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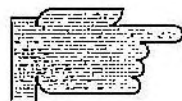
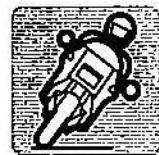
**Safety check**

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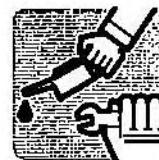
**Starting - Riding - Parking**

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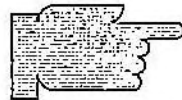
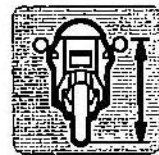
**Care and maintenance**

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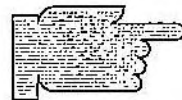


**Specifications**

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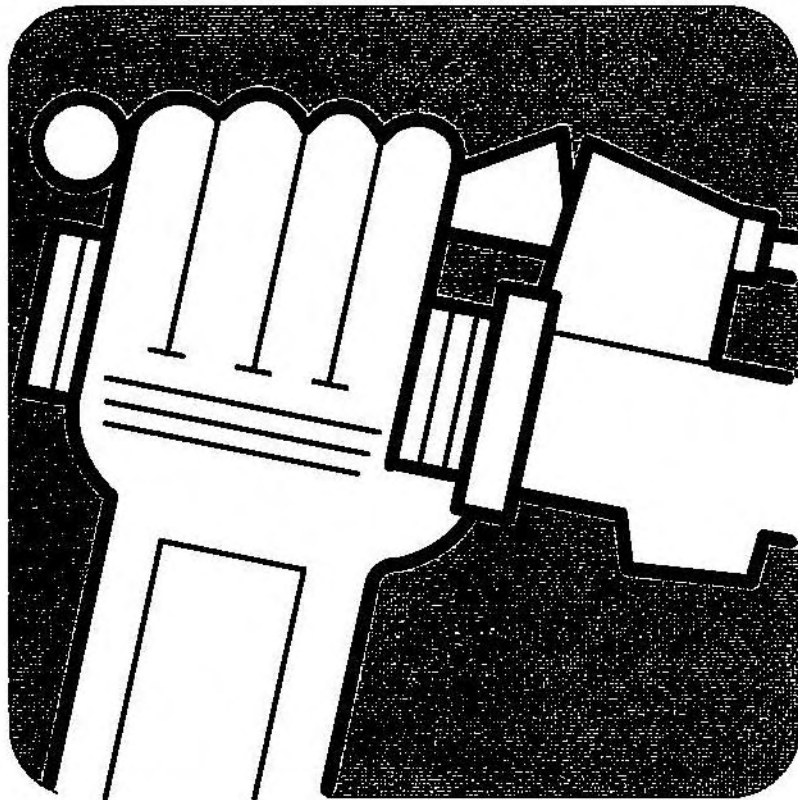


**Alphabetical index**





# Operating instructions



## Where is everything?

- General views of motorcycles (8,9)

## How does it work?

- Ignition and steering wheel lock (10)
- LCD Digital clock (10)
- Lefthand instrument unit (11)
- Central instrument unit (11)
- Righthand instrument unit (11)
- Fuel gauge (12)
- Temperature gauge (12)
- Lefthand handlebar controls (13)
- Righthand handlebar controls (13)
- Self-cancelling indicators (13)
- Hazard warning flashers (14)
- ABS switch (14)
- Heated handlebar grips (14)
- Refuelling (15)
- Storage space (15)
- Hump adjustment (16)
- Releasing dualseat lock (16)

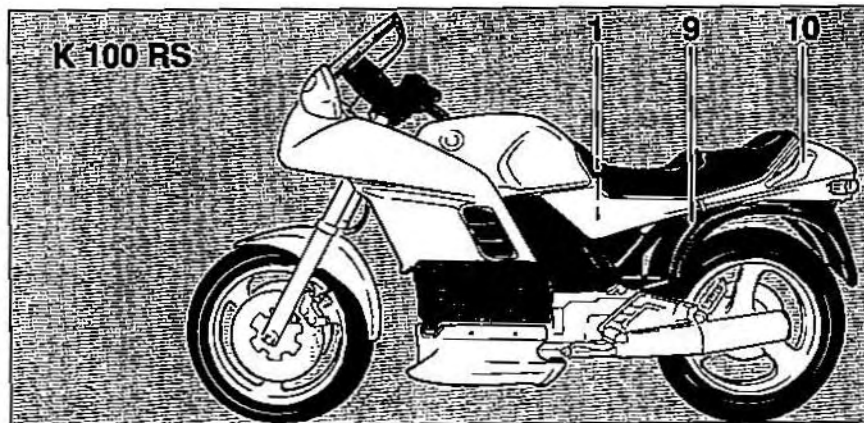
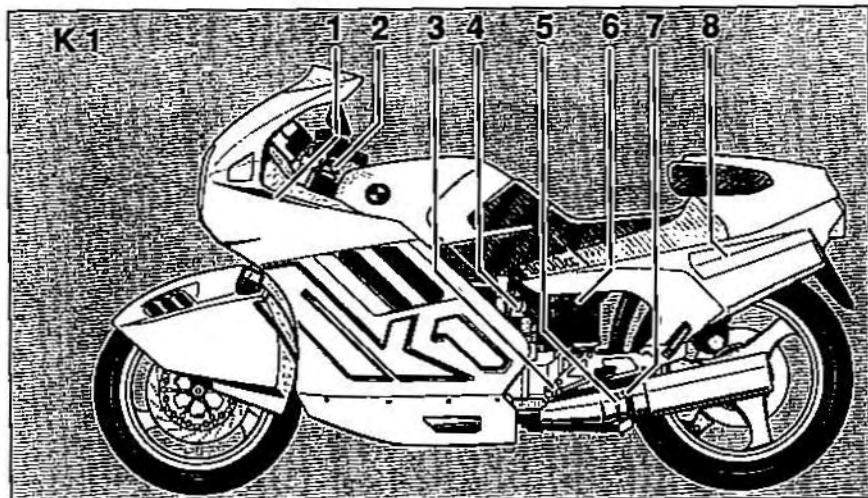
( ) Figures in brackets ⇒ Page on which item is described.



## Where is everything?

( ) Figures in brackets ⇒ Page on which item is described

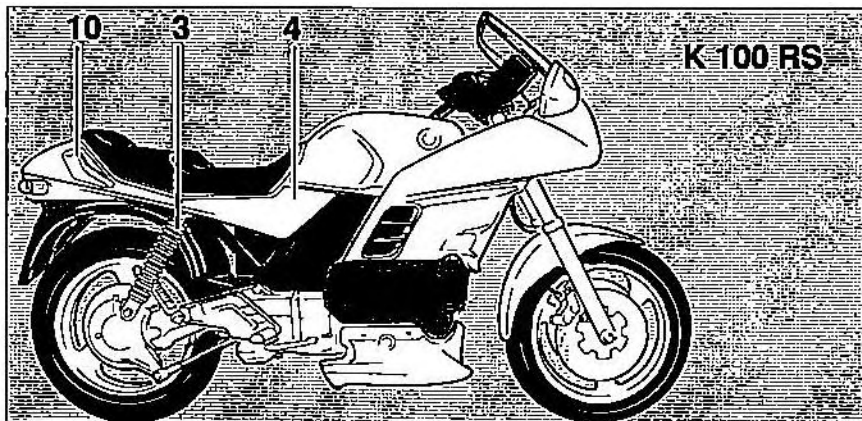
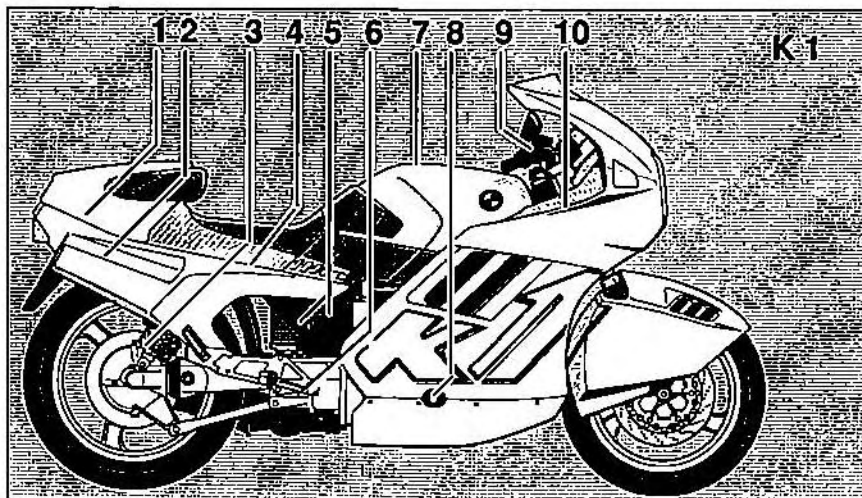
- 1 Cooling system expansion tank (55)
- 2 Ignition/steering lock (10)
- 3 Gear change pedal (33)
- 4 Electrical socket
- 5 Prop stands (23,34)
- 6 Folding handle (34)  
(For placing motorcycle on stand)
- 7 Centre stand (34)
- 8 Storage space on left with integrated dual-seat lock release/ helmet holder (15,16)
- 9 Dualseat lock release/ helmet holder (16)
- 10 Storage compartment (15)



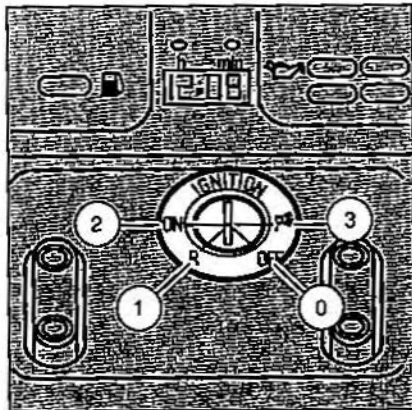
## Where is everything?

( ) Figures in brackets ⇒ Page on which item is described

- 1 Humps (detachable) (16)
- 2 Right storage space (15)
- 3 Spring strut (monoshock) adjuster (23)
- 4 Batterie (66)
- 5 Type plate and frame number
- 6 Brake pedal (21)
- 7 Fuel filler cap (15)
- 8 Oil level check aperture (19)
- 9 Brake fluid reservoir, front wheel brake (20)
- 10 Storage compartment, tool kit (38)



## How does it work? Operating instructions

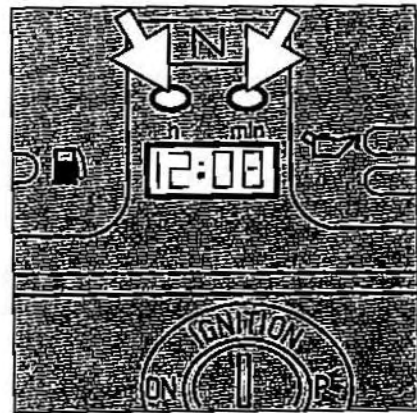


### Ignition and steering lock

- 0 Ignition off.  
Steering locked.
- 1 Ignition off.  
Key can be withdrawn
- 2 On position.  
Ignition and all other electrical circuits switched on.
- 3 Parking lights on.  
Key can be withdrawn.  
Steering locked.

#### Note

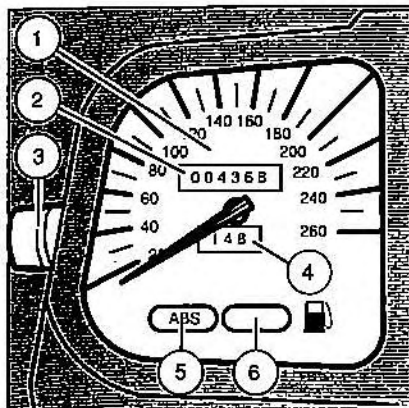
Do not leave the parking lights on for more than a short period. Ensure that the battery is always properly charged.



### LCD Digital clock

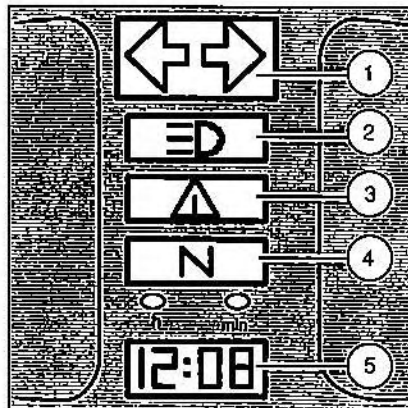
#### Setting to correct time

- Use a ballpoint pen or similar to press in the appropriate button (h/min).  
h For setting hours.  
min For setting minutes.



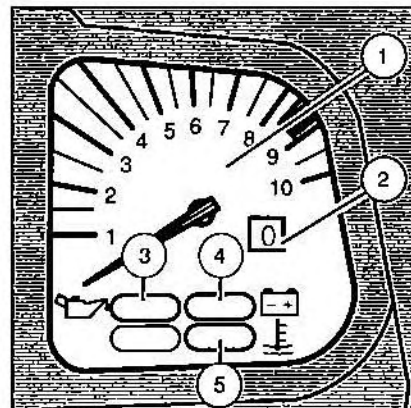
### Lefthand instrument unit

- 1 Speedometer
- 2 Distance recorder
- 3 Knob for resetting trip distance recorder
- 4 Trip distance recorder
- 5 ABS warning light  
Red (optional extra)
- 6 Fuel gauge  
Warning lamp  
Red if approx. 5 l reserve



### Central instrument unit

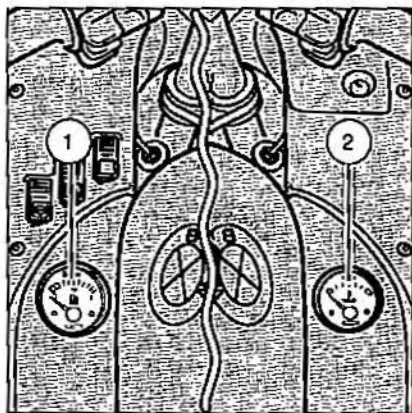
- 1 Turn indicator telltale  
Green
- 2 High beam telltale  
Blue
- 3 Rear light monitor  
Red (page 29)
- 4 Neutral/idle telltale  
Green
- 5 LCD Digital clock  
Setting (page 10)



### Righthand instrument unit

- 1 Revolution counter
- 2 Digital gear display
- 3 Engine oil pressure  
Red (page 32)
- 4 Alternator  
Red (page 32)
- 5 Coolant temperature warning light  
Red (page 20)

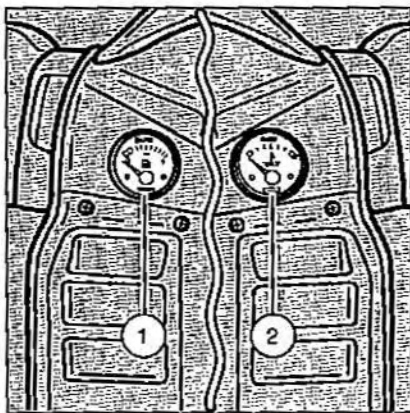




### Auxiliary instruments, K1

(optional extra)

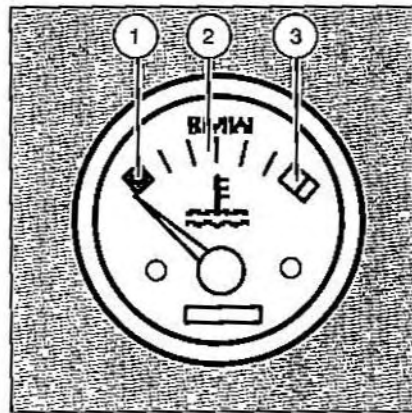
- 1 Fuel gauge
- 2 Temperature gauge



### Auxiliary instruments, K100RS

(optional extra)

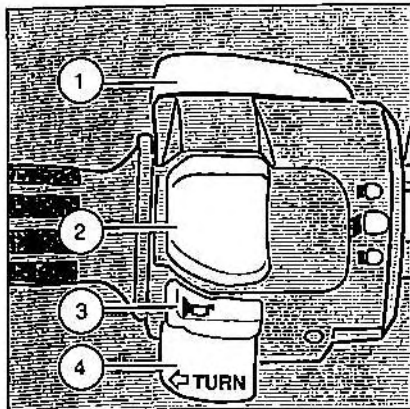
- 1 Fuel gauge
- 2 Temperature gauge






### Temperature gauge

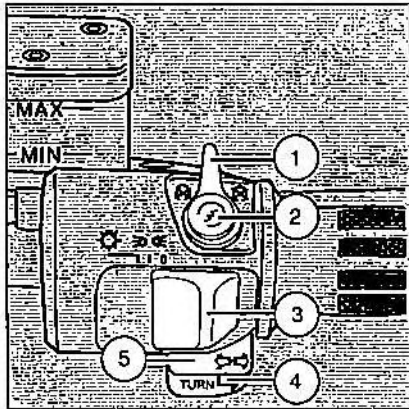
(optional extra, see also Page 32)

- 1 Engine cold (blue area)
- 2 Engine at operating temperature
- 3 Engine overheating (red area)  
(see Page 32)





### Left-hand handlebar controls

- 1 Choke control for cold start (page 31)
- 2 Headlight dipswitch:
  -  main beam
  -  dipped beam
  -  headlight flasher
- 3 Horn control
- 4 Left-hand indicator switch  
Pressed:  
Left-hand indicator flashes



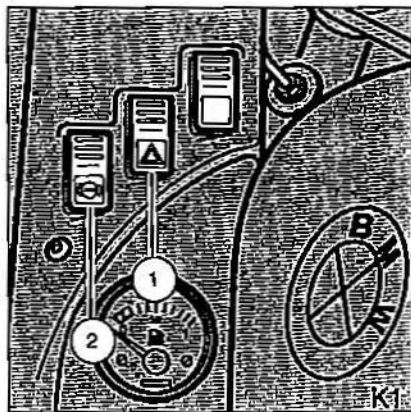
### Righthand handlebar controls

- 1 Ignition kill switch  
Centre position:  
All electrical circuits energized when ignition on
- 2 Starter pushbutton
- 3 Light switch:
  - 0 lights off
  -  parking lights
  -  dipped headlight
- 4 Right-hand indicator switch  
Pressed:  
Right-hand indicator flashes
- 5 Indicator cancel switch  
Pressed:  
Left/right indicator off

### Self cancelling indicators

The left or right indicators are cancelled automatically after a certain time or distance:

- Time:  
After approx. 10 seconds on open roads above approx. 50 km/h (30 mph)
- Distance:  
After approx. 210 m (690 ft) in urban or slow moving traffic.



### Operating the hazard warning flashers

- Switch on ignition.
- Operate switch (1);
  - Hazard warning flashers come on.
- Switch off ignition.
  - Hazard warning flashers remain on.

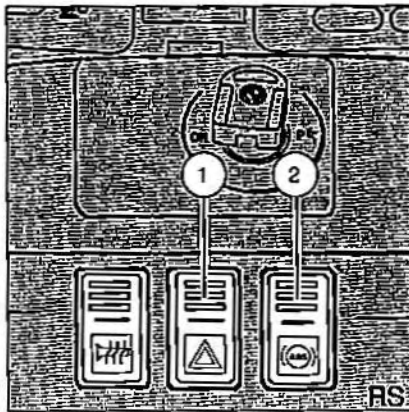
### Switching off hazard warning flashers

- Operate switch (1) for hazard warning flashers.

#### Note

When the ignition is switched off, the hazard warning flashers cannot be switched on.

Only leave the hazard warning flashers on for a limited period of time. Note battery charge.

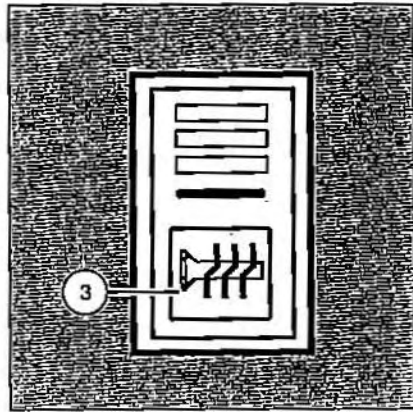


### ABS switch

(optional extra)

ABS cancel button (2).

See supplementary ABS operating instructions for function.

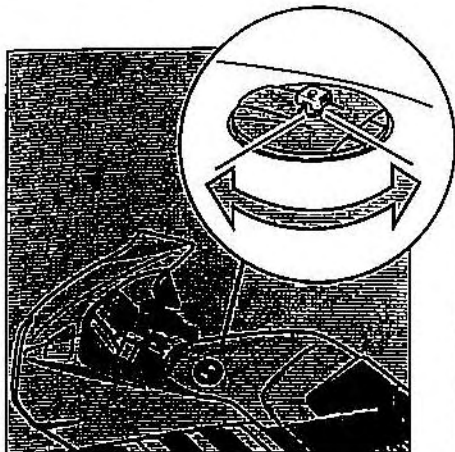


### Switching on heated handlebar grips

(optional extra)

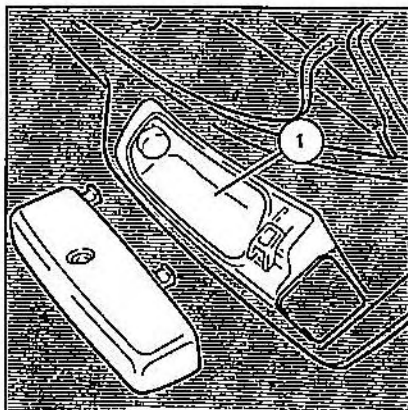
- Switch on ignition.
- Operate rocker switch (3):
 

|           |                    |
|-----------|--------------------|
| 1st stage | 50 % heat output.  |
| 2nd stage | 100 % heat output. |



## Refuelling

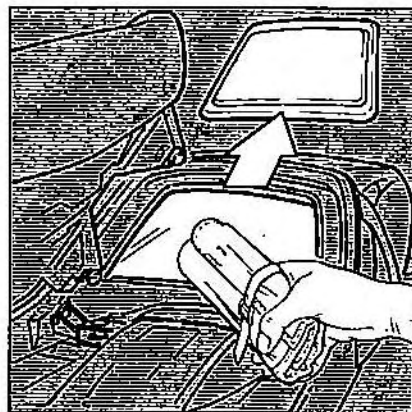
- Unlock the filler cap (key opens all locks on motorcycle).
- Cap jumps up automatically.
- Withdraw key.
- Refuel/push cap down to lock.



## Storage spaces

### K 1:

- Lefthand (1) storage spaces:  
In rear fairing (approx. 6 l). Lockable.
- Tool kit, breakdown set for tubeless tyres:  
In front right storage compartment. Lockable (see Page 38).



### K 100 RS:

- Open the dual seat (see Page 16).
- Take the cover off the rear storage compartment.
- The storage compartment (app. 9 litres) in the rear section is for the tool kit, tubeless tyre repair kit and vehicle documents.

### Caution

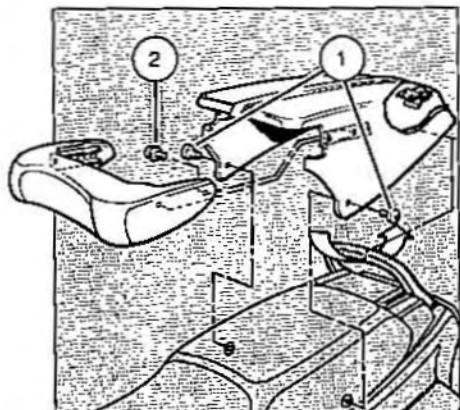
If the motorcycle has the catalytic converter option, use only unleaded premium grade (4-star) fuel, DIN 51607, minimum octane number 95 (research method) or 85 (motor method).

The use of fuel containing lead will destroy the catalytic converter.

Motorcycles without a catalytic converter may also run on leaded premium grade (4-star) fuel, DIN 51600, minimum octane number 98 (research method) or 88 (motor method).

Note that fuel expands when it warms up, e.g. If the motorcycle is left in direct sunlight. Never fill the tank to the brim.





### Dismantling/modifying raised tail section

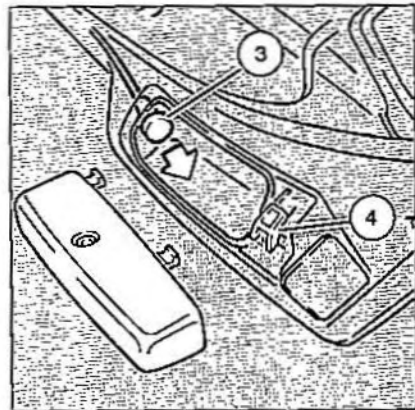
K 1:

**Tool required:**

Angled Allen key  
– 4 mm across flats

**Procedure:**

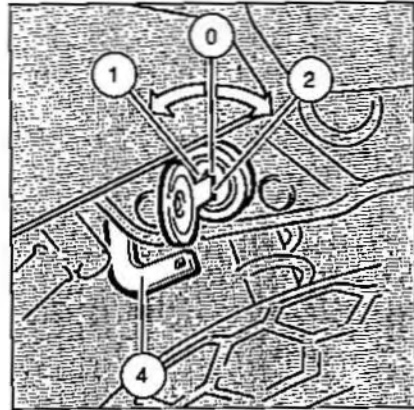
- Unscrew retaining bolts (1).
- Remove tail section to top and rear.
- Unscrew retaining bolts (2).
- The seat cushion can be set to three different positions to suit the size of the rider.



### Take off dualseat/Helmet holder

K 1:

- Dismantling hump
- Open lefthand storage compartment in rear fairing (key operates all locks).
- Pull cable (3) in direction of arrow.
- Dualseat lock is released.
- Take off dualseat.
- Helmet holder (4):  
Below lefthand storage compartment cover.



### Releasing dualseat lock/Helmet holder

K 100 RS:

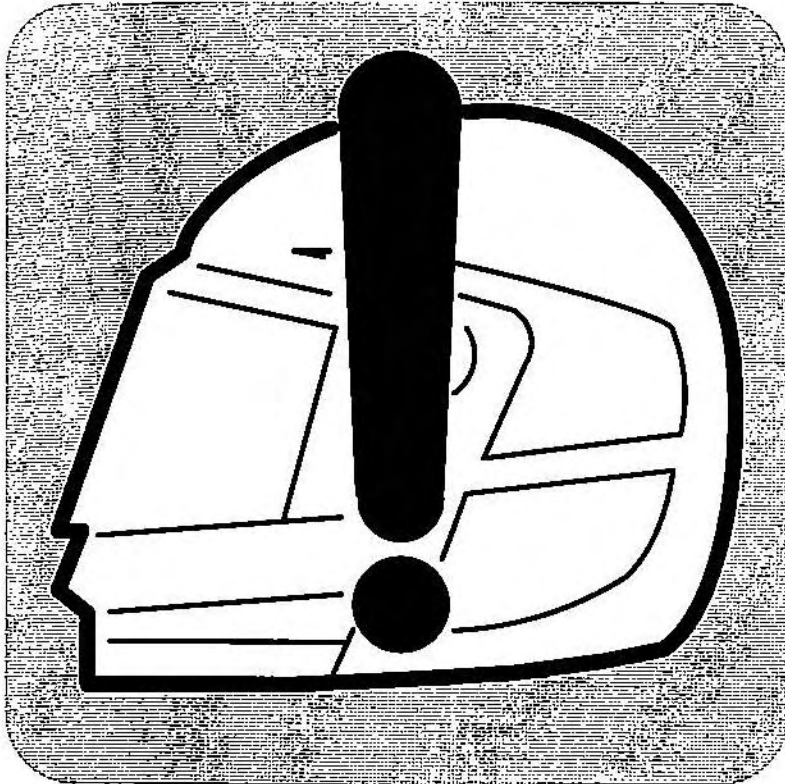
**In key positions:**

0 The dualseat is locked.

- 1 Press in the lock.  
The dualseat is unlocked and can be opened.  
The key can be withdrawn.
- 2 Press in the lock.  
The helmet holder (4) opens.

The dualseat and helmet holder can be locked again when the key is withdrawn.

# Safety check

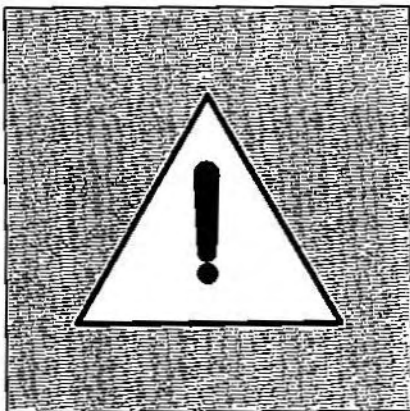


## Safety checks before you start

- General note (18)
- High performance ignition system (18)
- Engine oil level (19)
- Fuel level (19)
- Coolant level (20)
- Brake fluid level
  - front wheel brake (20)
  - rear wheel brake (20)
- Brake pedal travel (21)
- Handbrake lever travel (21)
- Clutch level travel (22)
- Tyre pressures (22)
- Tyre tread depth (22)
- Rims / valve caps (23)
- Spring strut setting (23)
- Prop stands (23)
- Loads (24)
- Footrest protective hoops (25)
- Lighting (25)

( ) Figure in brackets => Page on which item is described.

## Safety checks before you start

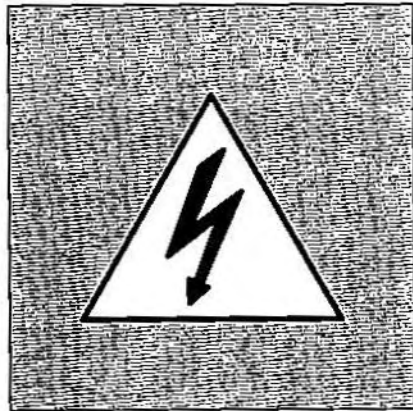


### General note

Perform the safety checks conscientiously. This allows you to rectify any faults on your motorcycle before you set off (refer to care and maintenance from page 35 on), or to have them rectified at your BMW Motor Cycle Service Shop. You will then have the assurance that your motorcycle is fully roadworthy.

Only a motorcycle which is in proper working order assures your own safety and the safety of other road users.

If you have any problems or difficulties, contact your BMW Motorcycle Service Shop who will be able to provide you with professional advice.

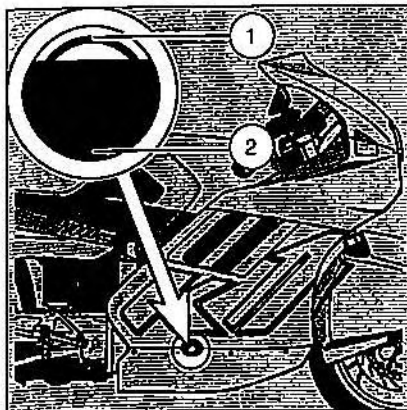


### High performance ignition system

Your motorcycle is equipped with a digital electronic engine management system (MOTRONIC) and a high performance ignition system.

#### Caution

Do not touch any live parts when the engine is running or the ignition switched on! Hazard!



## Engine oil level

### Checking

- Position motorcycle on its stand on a flat, level surface.
- Run the engine for a short time and then switch it off.
- Check the oil level reading after a few minutes at the ring marking.

maximum level (1)

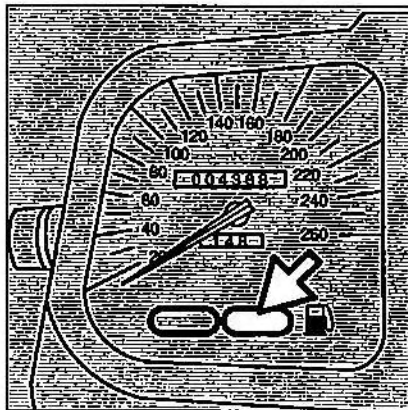
minimum level (2)

Capacities between Minimum/Maximum marks:

approx. 0.6 litres (1.05 pints)

### Caution

Always ensure oil level is not above Maximum and not below Minimum mark! Risk of damage to engine!



## Fuel level

### Checking

- Open fuel filler cap.
- Check fuel level visually.
- Close fuel filler cap.

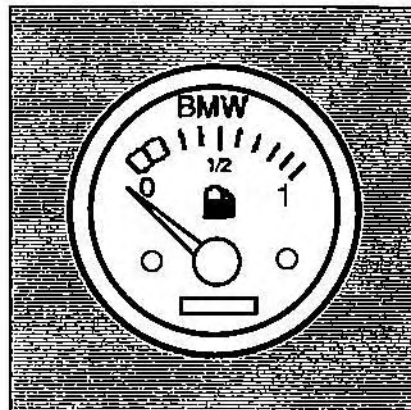
If telltale lamp lights up (arrow):

approx. 5 litres (1.1 gal) fuel reserve

### Caution

If the motorcycle has the catalytic converter option, use only unleaded premium grade (4-star) fuel and do not run the fuel tank empty.

Fuel constitutes a fire hazard and is explosive. Do not smoke. Extinguish naked flames before checking.



## Fuel gauge

(option extra)

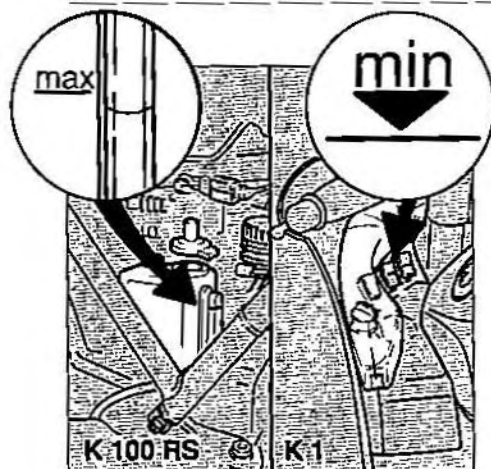
Fuel tank capacity:

22 litres (4.8 gal) fuel.

### Note

The fuel gauge only functions when the ignition is switched on.





## Coolant level

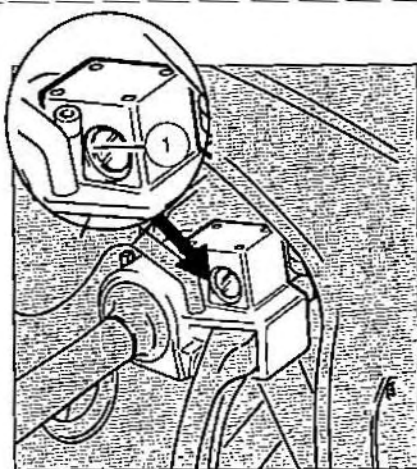
### Checking

- Engine cold.
- K 100 RS:**
  - Remove the battery cover on the right.
  - Read off coolant level at the MIN/MAX marks on the expansion tank (arrow).
- If necessary, top up with coolant to the lower edge of the filler neck/MAX mark (see Page 55).

### Note

If the coolant temperature warning lamp (red) comes on, check coolant level in expansion tank (see above).

If expansion tank full and warning lamp on or excessive coolant consumption, contact BMW Motorcycle Service Shop.



## Brake fluid level

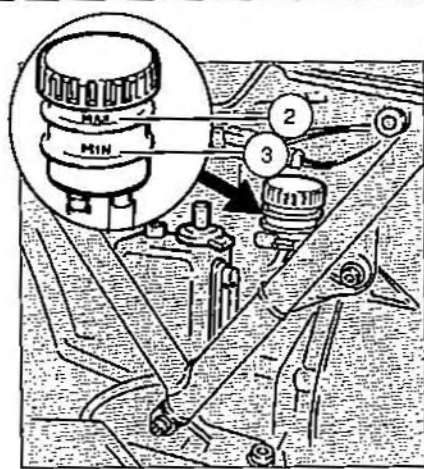
### Front wheel brake

#### Checking

- Turn handlebars to the left. Sight glass (1) must be fully covered with brake fluid.
- If air bubble in sight glass, top up brake fluid. Refer to p. 53 for topping up.

#### Caution

Do not allow fluid to drop below Minimum level!



## Brake fluid level

### Rear wheel brake

#### Checking

#### K 1:

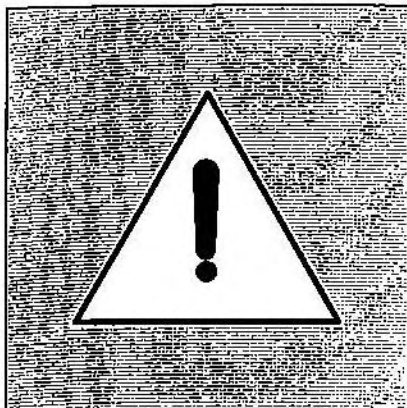
- Slightly raise the tank cover at the right.

#### K 100 RS:

- Remove the right-hand battery cover.
- Take reading of brake fluid level at MAX/ MIN markings.
  - Maximum level (2)
  - Minimum level (3)
- Top up brake fluid up to MAX marking, if necessary. Refer to p. 54 for topping up.

#### Caution

Do not allow fluid to drop below Minimum level!

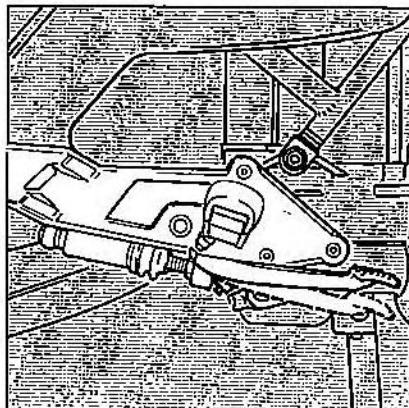


#### Caution

Brake discs and brake callipers must be free from oil and grease.

Do not ride the motorcycle if you are not sure that the brake system is functioning properly.

Take the motorcycle to an authorized BMW Motorcycle Service point without delay.



### Brake pedal travel

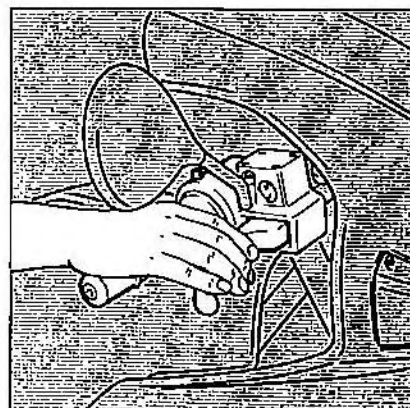
#### Checking

The brake pedal travel is factory set and must not be altered.

#### Caution

Sudden changes in the amount of free travel or a spongy feeling at the brake pedal are signs of possible malfunctions in the hydraulic system.

Contact a BMW Motorcycle Service Shop without delay!



### Handbrake lever travel

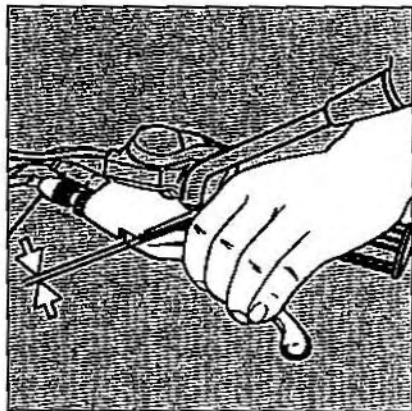
#### Checking

The handbrake lever travel is a design feature and cannot be altered.

#### Caution

Sudden changes in the amount of free travel or a spongy feeling at the brake lever are signs of possible malfunctions in the hydraulic system.

Contact a BMW Motorcycle Service Shop without delay!



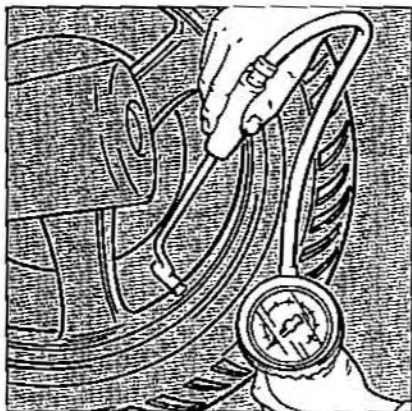
### Clutch lever travel

#### Checking

- Pull lever until resistance is felt.
- Measure free travel.  
Should be (arrow):  
4 +/-0.5 mm.

Normal clutch wear automatically causes reduction in travel. This should be corrected during a BMW Inspection.

Refer to p. 47 for basic setting.



### Tyre pressures

#### Checking

- Tyres cold
- Unscrew valve caps.
- Check/correct tyre pressure.
- Screw on valve caps

#### One up

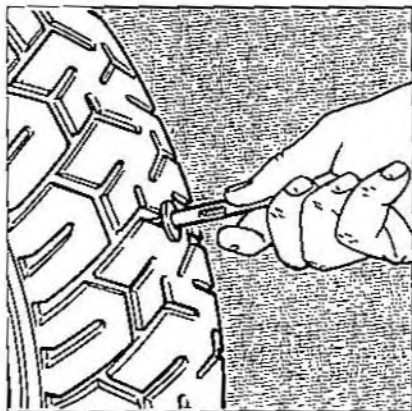
front 2.2 bar  
rear 2.5 bar

#### Two up

front 2.5 bar  
rear 2.9 bar

#### Caution

Incorrect tyre pressure can considerably affect the driving characteristics of the motor cycle and tyre life!



### Tread depth

#### Checking

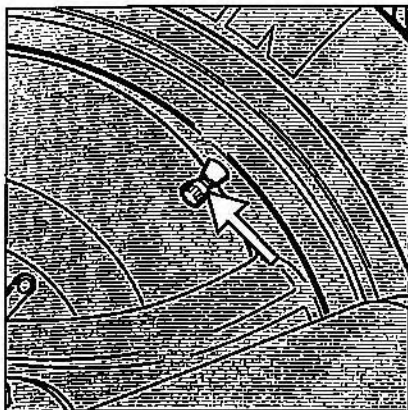
- Measure tread depth in the middle of the tyre with a tread depth gauge (arrow).

#### BMW recommendation (minimum) :

|                         |      |
|-------------------------|------|
| Front wheel             | 2 mm |
| Rear wheel              |      |
| up to 130 km/h (80 mph) | 2 mm |
| over 130 km/h (80 mph)  | 3 mm |

#### Caution

Ensure tyre always have minimum legal tread depth!



## Rims/valve caps

### Checking

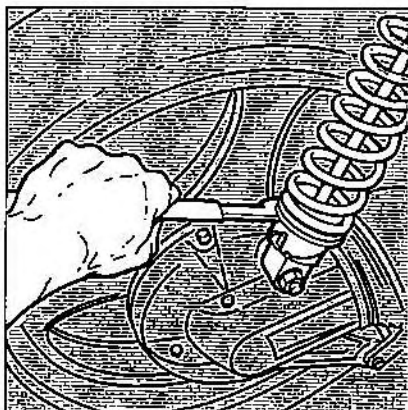
- Check rims for signs of damage.
- Check that metal valve caps with seal are tightly sealed on valves.

### Caution

**Always replace damaged rims without delay!**

**Tyre valves tend to open suddenly because of centrifugal forces at high speeds!**

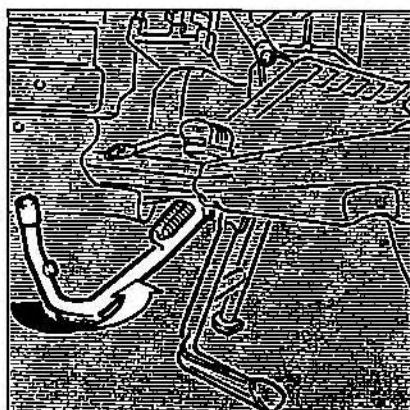
**Valve caps prevent a sudden loss of tyre pressure!**



## Spring strut preload

### Setting

- Adjustment at the drive end.
  - Using the hook wrench with extension from the motorcycle tool kit, set preload of coil spring according to operating condition.
0. Tension stage  
"normal" for solo riding.
- 1st Tension stage  
"medium" with pillion passenger or heavy luggage.
- 2nd Tension stage  
"hard" for heavy loads.



## Prop stands

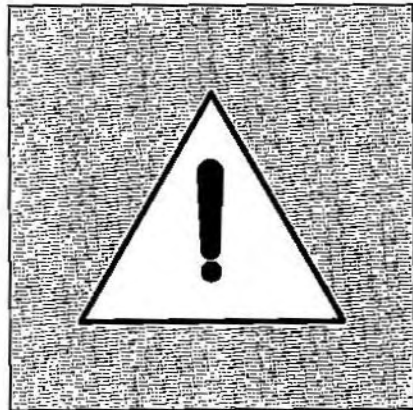
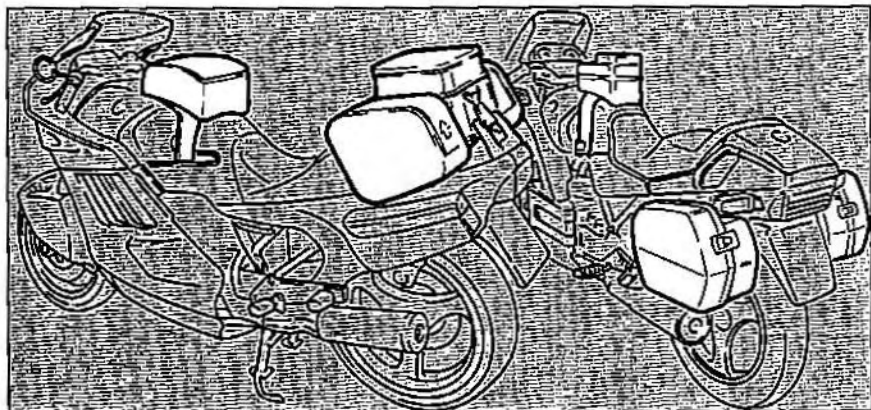
### Checking

- Position motorcycle on centre stand.
- Fold out prop stand as far as stop.
- Start the engine.
  - **If engine does not start: safety device is functioning properly.**
- Push back prop stand until return springs take effect and release it.
  - **The prop stand (arrow) must automatically be retracted fully by the return springs.**

### Note

**The prop stand is linked to the Motronic fuel relay.**

**When the prop stand is extended, the engine cannot be started.**



## Loads

Your motorcycle can be equipped with a specially developed luggage system.

For the K 100 RS, the BMW luggage system comprises:

- Integral BMW cases
- BMW top case
- BMW tank-top rucksack

and concerning K 1 composed of:

- two pannier cases
- one top case
- one tank top rucksack

Take off humps before fitting!

### Checking

- Pannier/integral cases must be used as pairs only.
- It is essential for weight to be distributed evenly between the right and left cases.

- Do not exceed the maximum load for each case.

### Maximum loads:

|                   |       |
|-------------------|-------|
| Each pannier case | 2 kg  |
| Centre bag        | 6 kg  |
| Per integral case | 10 kg |
| 20 litre top case | 5 kg  |

- Refer to system description for fitting and removing cases.
- Check that the fastenings are correctly located and tight.

### Note

Do not exceed these specified load limits.

Pannier/integral cases must be used as pairs only.

Ensure that the weight is evenly distributed on both sides.

### Caution

Do not exceed the permissible gross weight (480 kg) (1056 lbs).

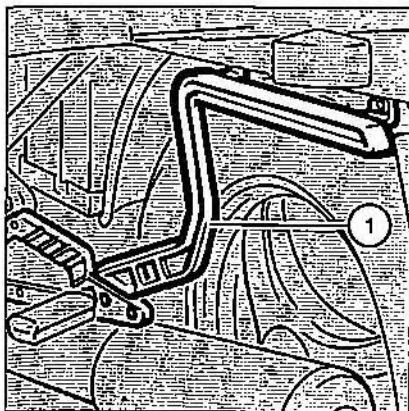
Permissible gross weight comprises:

- Motorcycle with full tank
- Rider
- Pillion passenger
- Luggage
- Accessories

Maximum speed with luggage system attached:

⇒ 130 km/h (80 mph)!

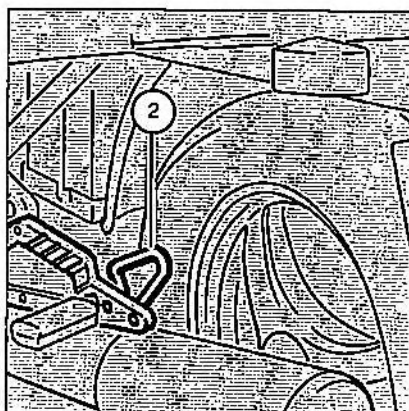
Ride behaviour affected at high speeds.



### Case holder

#### Caution

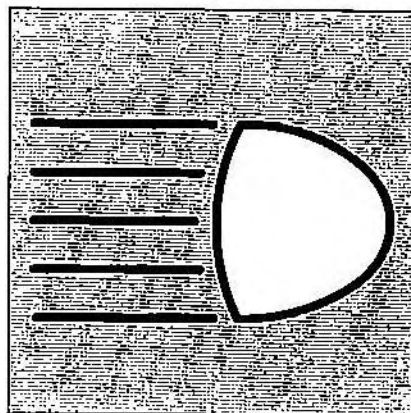
For safety reasons, the motorcycle may only be used with case holders (1) or footrest protective hoops (2) fitted.



### Footrest protective hoops

#### Caution

For safety reasons, the motorcycle may only be used with case holders (1) or footrest protective hoops (2) fitted.



### Lights

Before starting off, always check that the lights are working properly:

- dipped headlight
- main beam
- rear lights
- handbrake light
- footbrake light
- indicators

#### Note

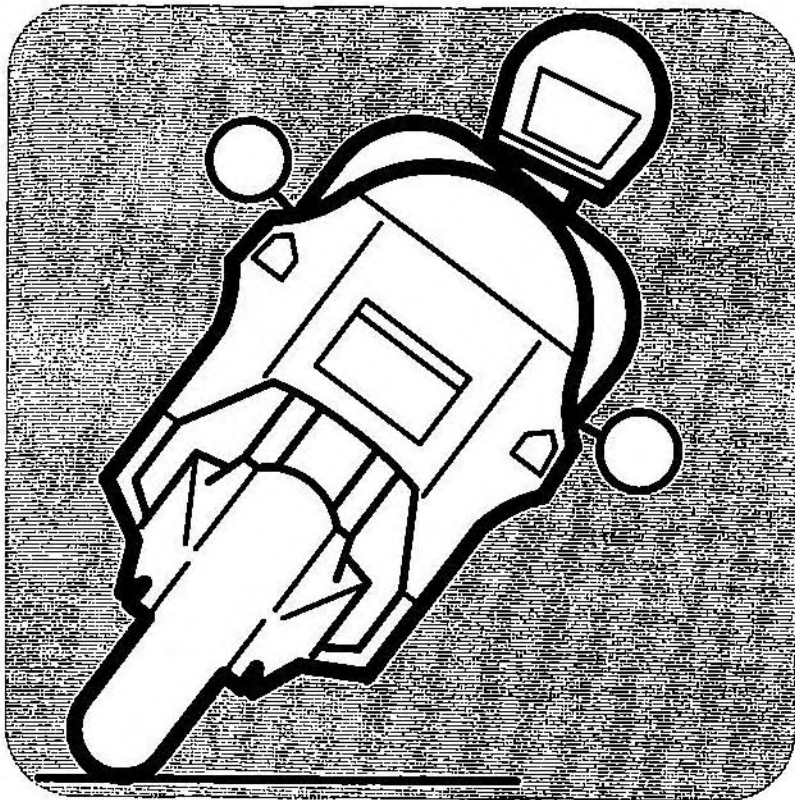
If the indicator lights flash at a faster frequency, this is a sign that a bulb or indicator relay is faulty.

Have the fault rectified at a BMW Motorcycle Service Shop.





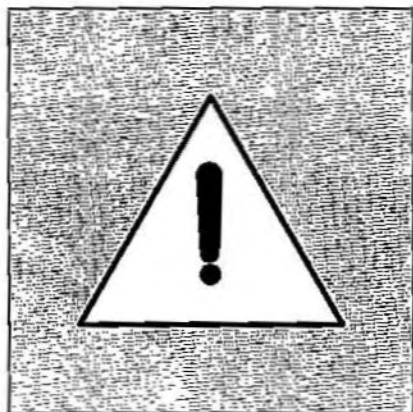
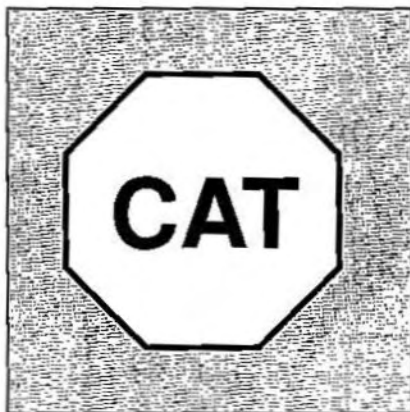
# Starting - Riding - Parking



## And now we're off!

- Note if catalytic converter is fitted (28)
  - Some running-in rules (29)
  - Engine speed limits (29)
  - Before starting the engine (30)
  - Switching on ignition (30)
  - Selecting neutral (30)
  - Operating the choke (31)
  - Pressing the starter switch (31)
  - Resetting choke (31)
  - Engine oil pressure (32)
  - Coolant temperature (32)
  - Battery charge current/alternator (32)
  - Changing gears (33)
    - Moving off/shifting up (33)
    - Shifting down (33)
  - Placing motorcycle on centre stand (34)
  - Moving motorcycle off centre stand (34)
  - Placing motorcycle on prop stand (34)
- ( ) Figure in brackets => Page on which item is described

**And now we're off!  
Starting - Riding - Parking**



**Catalytic converter option**

**Note**

If the motorcycle has a catalytic converter:

Always use unleaded premium grade (4-star) fuel.

Do not run the fuel tank empty.

Always have the prescribed maintenance work carried out.

If the engine misfires, switch it off immediately.

Only push-start when the engine is cold. It is preferable to use jump leads from another battery.

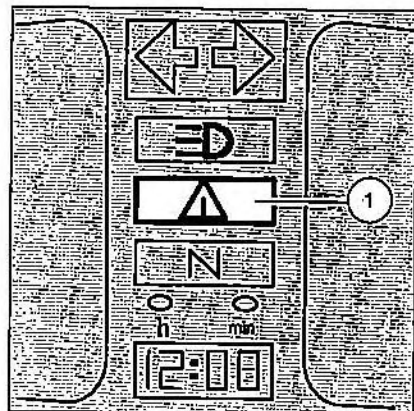
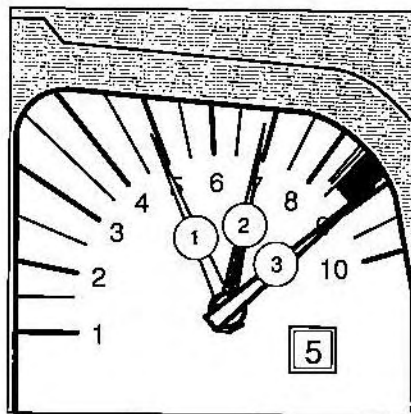
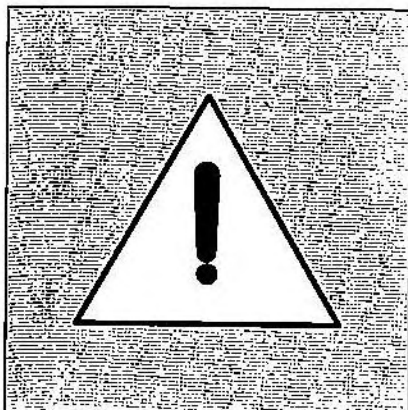
Do not allow the engine to run with any spark plug caps disconnected.

If the engine misfires or its power output deteriorates acutely, ride at low engine speed to the nearest authorized BMW Motorcycle Service point.

**Caution**

High temperatures build up at the exhaust (with or without catalytic converter).

Make sure that no easily combustible material (for example hay, leaves, grass etc.) comes into contact with the hot exhaust system when the motorcycle is being ridden, idling or parked. If this material were to ignite and cause a fire, very serious injuries or damage could result.



## Some running-in rules

Carefully running-in your motorcycle can make a positive contribution to performance and operating life. For this reason, please pay close attention to the running-in rules and engine speed limits given below.

While running-in your motorcycle, frequently vary engine load and speed. Running-in is ideally carried on roads with plenty of curves and gradients, rather than motorways.

Avoid, if possible, full brake applications until after the first 500 km (300 miles).

Run in the tyres for at least 500 km (300 miles) by frequently adopting leanover positions.

Remember to have the first inspection performed after 1000 km (600 miles).

## Engine speed limits

0 to 1000 km (600 miles)

max. 5000 rpm (1)

1000 to 2000 km (600 1200 miles)

max. 7000 rpm (2)

After 2000 km (1200 miles)

max. 8900 rpm (3)

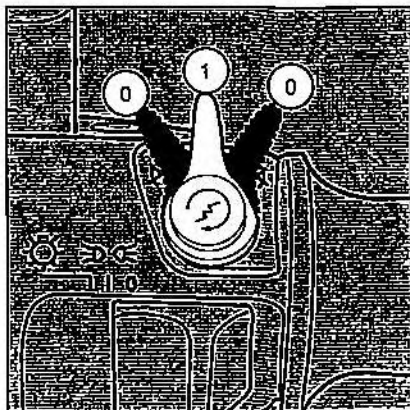
**Caution**  
Exceeding maximum engine speeds increases engine wear!

## Rear light telltale

### Checking

- Switch on ignition, parking lights/ dipped headlight.
- Operate handbrake and brake pedal.
  - Telltale light (1) goes out: Tail and brake light operating.
  - Telltale light does not go out: Bulb, cable or switch faulty.
  - Telltale lights up when on the move: Fault in brake or tail light.

A tail light fault can only be detected when the parking lights or dipped headlight are switched on.



### Before starting the engine

- Place motorcycle on centre stand.
- Check that ignition killswitch is in position (1).

#### Note

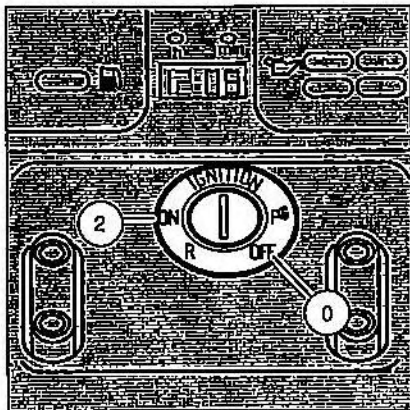
Engine can only be started when killswitch in position (1).

Ignition killswitch in positions (0):

Electrical circuits for ignition, injection system, fuel pump and starter deenergised.

Emergency stop:

Move switch into position (0).

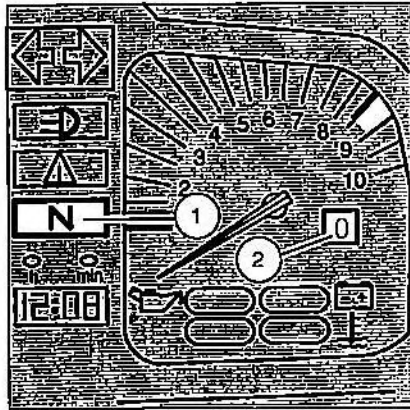


### Switching on ignition

- Use ignition key to turn ignition lock into On position (2).

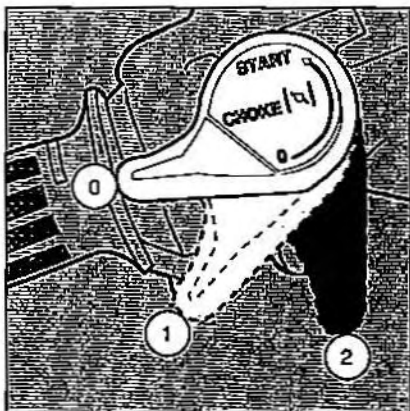
#### Caution

Place motorcycle on centre stand.  
Prop stand has start lockout.



### Selecting neutral

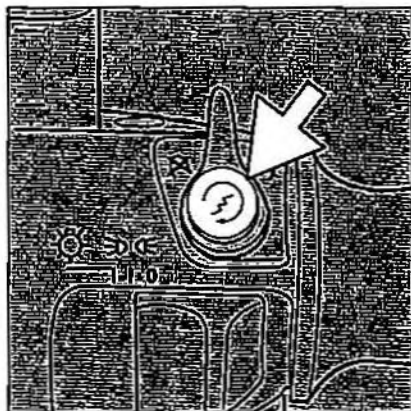
- Neutral telltale light (1) comes on.
- Digital gear display (2) in position ("0").



### Operating choke (increased cold starting speed)

Operate choke lever depending on engine or ambient temperature.

- Position 2 : below 0 °C.
- Position 1 : above 0 °C.
- Position 0 : engine at normal operating temperature.



### Pressing starter switch

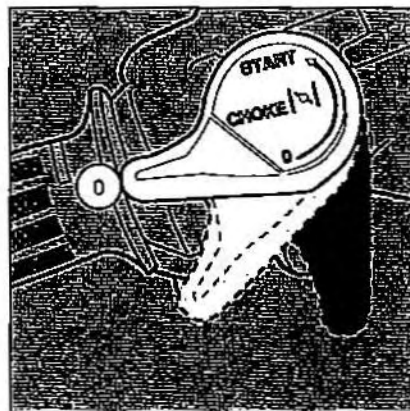
- Engine starts.
- If necessary, operate throttle twist grip gently.
- Disengage clutch when starting engine at ambient temperatures below 0 °C.

#### Note

Attempting to start engine with a flat battery will cause relay to chatter audibly.

Further attempts at starting will damage starter relay.

**Charge battery!**



### Resetting choke (increased cold starting speed)

As engine runs more smoothly

- Move gradually back to position (0).

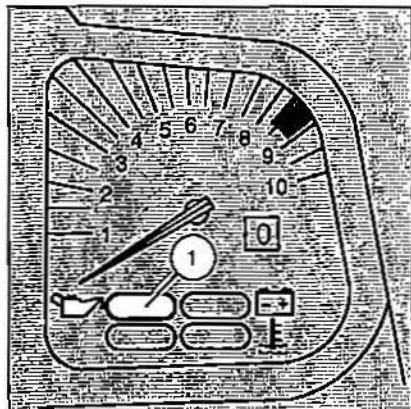
#### Note

Do not run engine at fast speeds for too long.

Move back choke lever as soon as possible.

Do not warm up engine at idling speed. Move off immediately after starting.





### Engine oil pressure

Telltale light (1) out:

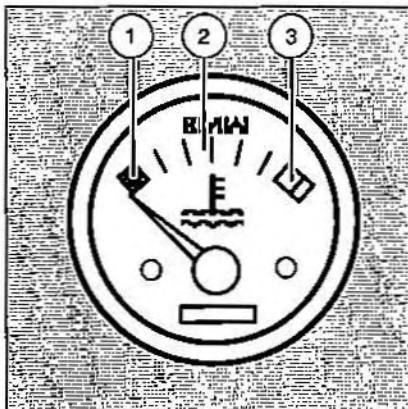
- After engine starts.
- At idling speed.

#### Caution

If telltale light lights up when on the move, immediately:

- declutch
- switch off ignition
- bring motorcycle safely to a stop
- check engine oil level

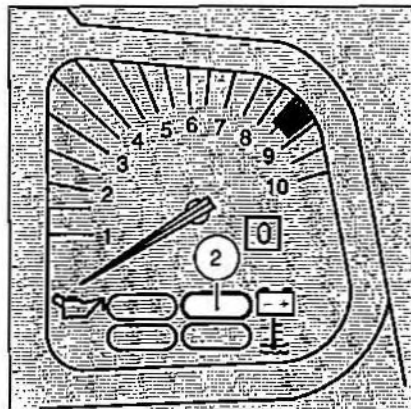
If there is enough oil in the engine, contact a BMW Motorcycle Service Shop.



### Coolant temperature gauge

(optional extra)

- 1 Engine cold (blue area): ride at low engine speeds.
- 2 Engine at operating temperature.
- 3 Engine overheating (red area): switch off immediately and allow to cool down, then consult an authorized BMW Motorcycle Service point.



### Charge current / Alternator

Telltale light (2) goes out:

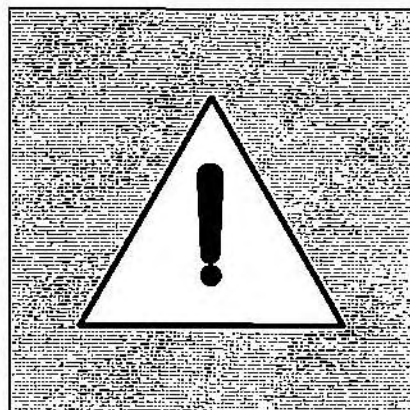
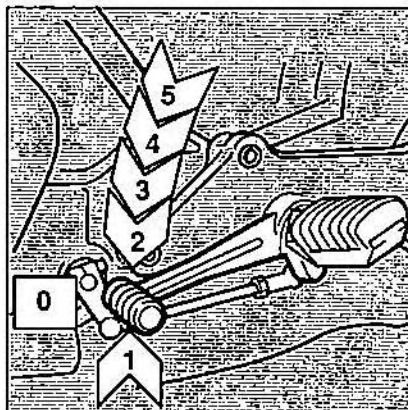
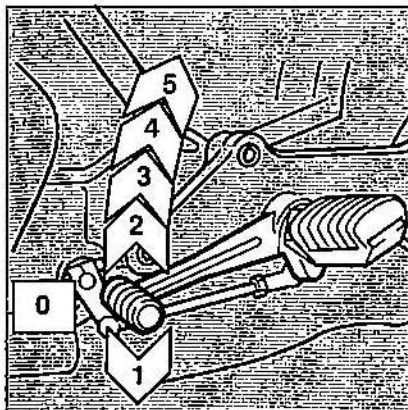
- after engine starts.
- at idling speed.

#### Note

If telltale light comes on when on the move:

Contact BMW Motorcycle Service Shop.

Battery will discharge.



## Changing gears

### Moving off/shifting up

- Pull clutch lever.
- Press gear change pedal down fully.
- Engage clutch smoothly.
- Increase engine speed slightly when engaging clutch.
- After clutch engaged, accelerate.
- Similar procedure for shifting up into 2nd, 3rd, 4th and 5th gear.

### Note

Do not allow clutch to slip when changing gears. Vary speed only with the throttle.

### Shifting down

- Close throttle twist grip.
- Pull clutch lever.
- Shift down into next lower gear.
- Engage clutch again slowly.
- After clutch engaged, accelerate.

### Note

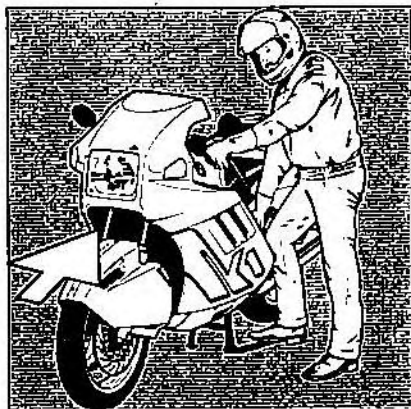
Alter throttle opening to reduce the jerk caused by selecting lower gear.

Digital gear display in revolution counter indicates gear selected.

Select a lower gear if engine speed drops below 1500 rpm during normal riding.

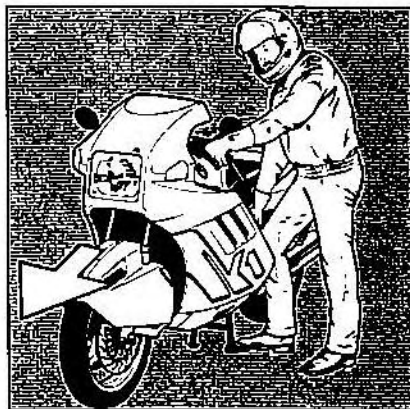
### Caution

Avoid sudden changes in transmission load, particularly on wet or slippery roads.



### Placing motorcycle on centre stand

- Left hand on left handlebar twist grip.
- Right hand on folding handle.
- Right foot on stand lever of centre stand.
- Transfer full body weight onto centre stand.
- Pull motorcycle up and back onto centre stand (arrow).
- Check that motorcycle is firmly supported.



### Lowering motorcycle down off centre stand

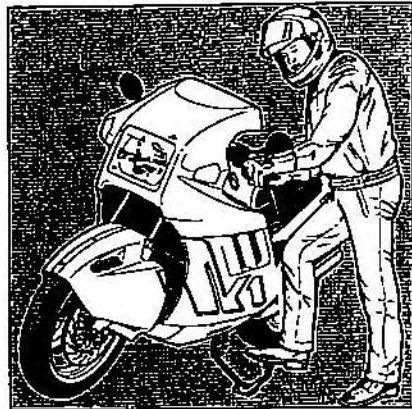
- Left hand on left handlebar twist grip.
- Right hand on folding handle.
- Push motorcycle forward off centre stand (arrow).
- Check that centre stand is fully retracted.

#### Note

Always ensure that the stand is resting on a firm surface.

#### Caution

Centre stand must be fully retracted before setting off!



### Placing motorcycle on prop stand

- Left hand on left handle bar twist grip.
- Right hand on dualseat, **not on humps!**
- Extend prop stand fully forward by means of it's extension arm.
- Tilt motorcycle slowly onto stand.

#### Note

Make sure the stand is always resting on a firm surface.

On a slope always position front of motorcycle pointing uphill and engage 1st gear.

#### Caution

Prop stand must be fully retracted before setting off!

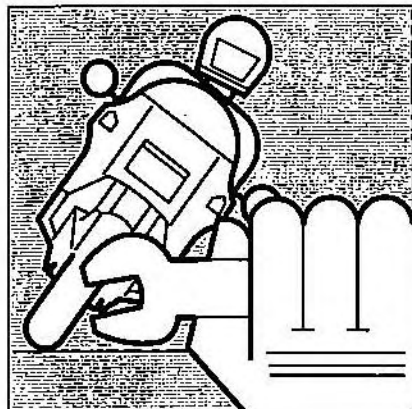
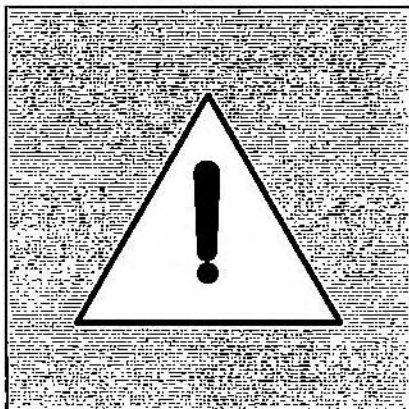
# Care and maintenance



- General notes (36,37)
- Tool kit, repair kit for tubeless tyres (38)
- Removing/installing front wheel (39,40)
- Removing/installing rear wheel (41,42)
- Changing/checking spark plugs (43-46)
- Adjusting clutch (47)
- Checking oil levels/changing oil (48-52)
- Topping up brake fluid
  - Front wheel brake (53,54)
  - Rear wheel brake (53,54)
- Correcting coolant level (55)
- Changing air filter element (56,57)
- Checking brake pads
  - Front wheel (58)
  - Rear wheel (59)
- Electrical system: replacing bulbs, adjusting headlight beam throw, aiming headlight beam, replacing fuses (60-66)
- Servicing battery (66-68)
- Troubleshooting table (69)
- Cleaning/care (70,71)
- Laying up motorcycle/restoring to service (72,73)

( ) Figures in brackets => Page on which item is described.

## Care and maintenance



### General notes

The section which follows provides you with information regarding care and maintenance of your motorcycle. You will need a certain technical knowledge and skill in using tools to perform the necessary care and maintenance jobs.

Only in this way can you be sure that the work which you perform will also bring you the desired success.

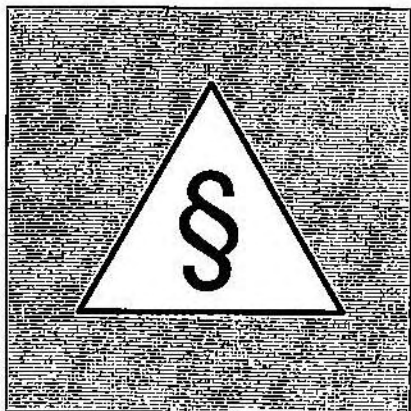
Your motorcycle reflects a high technical standard. Special tools, special diagnostics and test systems as well as expert knowledge are required to keep your motorcycle in top shape.

Your BMW Motorcycle Service Shop has the necessary technical expertise and properly trained staff. Take advantage of the help they can offer you. It will ensure that your motorcycle is always in proper working order. Think of your own safety and trouble free operation of your motorcycle.

Do not attempt to perform any more extensive work.

Have your motorcycle inspected and serviced at the specified intervals.

Use only Genuine BMW Parts and Accessories.



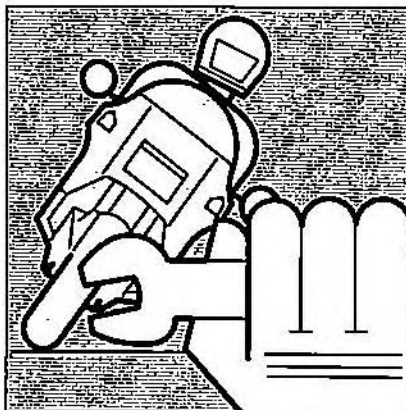
## Technical Modifications

Technical modifications are only permitted to a limited extent.

Remember to comply with any legal requirements when modifying your motorcycle.

Be aware of what is stated in the Construction & Use Regulations.

Your BMW Motorcycle Service Shop will be glad to advise you on the merits of any modifications you have in mind, the legal situation and factory recommendations concerning specific technical modifications to your motorcycle.



## Genuine BMW Parts and Accessories

For safety reasons use only Genuine BMW Parts and Accessories.

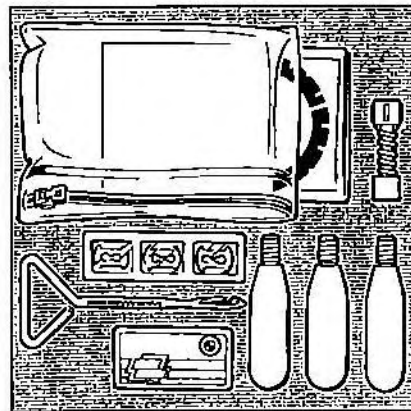
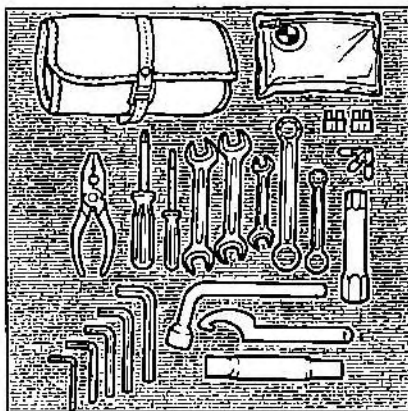
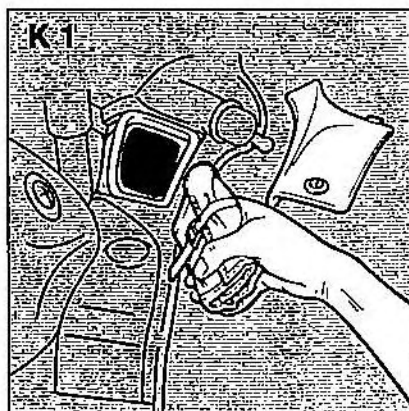
BMW is unable to inspect and test every after market part and accessory and therefore cannot assume any responsibility for such non BMW parts.

Genuine BMW Parts are identical to the parts originally used in your new BMW motorcycle.

Genuine BMW Parts are parts, components and accessory items supplied by BMW Motorrad GmbH + Co.

BMW Motorrad GmbH + Co. warrants that such parts are genuine and free of defects in respect of material and manufacture.





## Tool kit

### K 1:

- Toolkit in front right storage compartment in fairing.

### K 100 RS:

- Toolkit in rear-section compartment.

### Contents

- 1 leatherette wallet
- 1 all purpose pliers
- 1 large screwdriver (reversible blade)
- 1 small screwdriver
- 1 ABS feeler gauge 0,35 0,55 0,65 VAWI
- 3 open ended wrenches
  - waf\* 10 x 13 mm
  - waf 17 x 19 mm q
  - waf 16 x 18 mm .

- 2 ring wrenches
  - waf 10 x 12 mm
  - waf 17 x 19 mm
- 1 spark plug wrench
- 5 Allen keys
  - waf 3 mm,
  - waf 4 mm,
  - waf 5 mm,
  - waf 6 mm,
  - waf 8 mm.
- 1 box wrench for wheel studs
- 1 hook wrench for spring strut
- 1 lubular extension
- 1 flat fuses 15 A
- 1 flat fuses 7,5 A

\*waf ⇒ width across flats

## Repair kit for tubeless tyres

Only suitable for punctures up to 4 mm (0.61 in) in diameter.

Please refer to instructions with kit for repair procedure.

### Caution

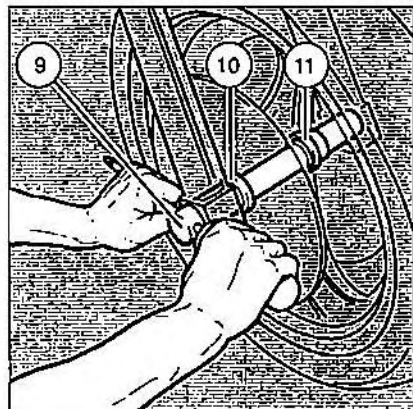
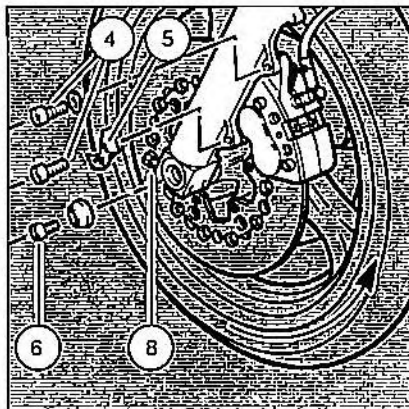
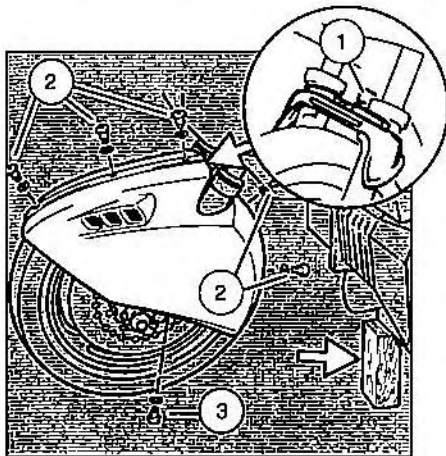
Maximum speed:

⇒ 60 km/h (37 mph) !

Maximum distance:

⇒ 400 km (250 miles)!

Always have tyre renewed as soon as possible.



## Removing/installing front wheel

### Tools required

#### Allen keys

- waf 4,
- waf 6,
- waf 8.

#### Open ended wrench

- waf 13.

#### Tubular extension

### Procedure for removing wheel

- Place motorcycle on centre stand.
- Position support below engine (arrow) (remove bottom section of fairing, if necessary):
- front wheel exposed.

### K 1:

- Loosen retaining bolts (1).
- Unscrew 7 fastening bolts (2,3).
- Withdraw left/right fairing section from guide rails.
- Mark installed position on tyre or note direction of rotation arrow on tyre.
- Unscrew fastening bolts (4) for left/right brake caliper, take off mounting brackets (5).
- Unscrew axle bolt (6).
- Slacken axle clamp bolts (8).

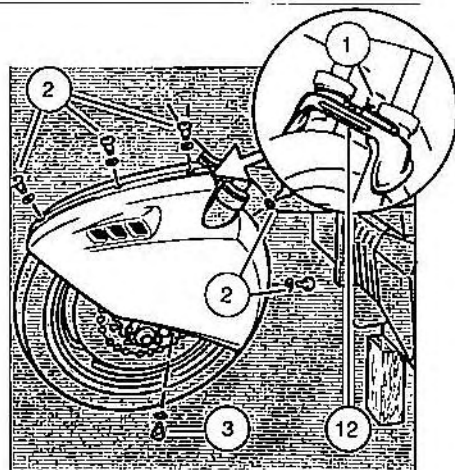
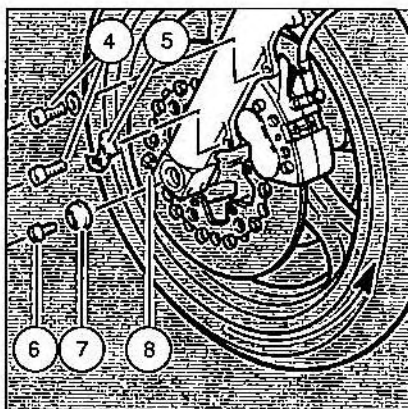
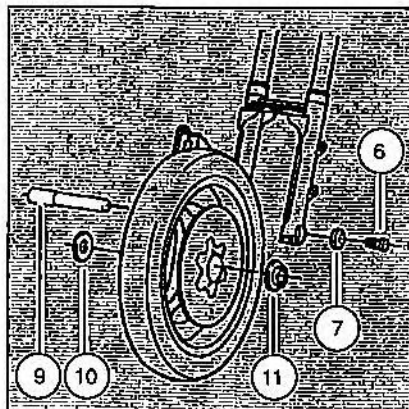
- Withdraw stub axle (9).
- Take out left/right spacing bushings (10,11).
- Take off brake calipers.
- Run front wheel out to the front.

### Caution

**Do not damage brake discs and pads when removing.**

**Do not operate handbrake lever when wheel removed.**

**Keep wheel bearings free of dirt and moisture.**



### Procedure for Installing wheel

- Roll front wheel in between forks. Pay attention to direction of rotation arrow or marking on tyre.
- Fit left/right brake caliper onto brake discs.
- Insert spacing bushings.  
On left in direction of travel: **wide bushing (11)**.  
On right in direction of travel: **narrow bushing (10)**.
- Grease stub axle (9).
- Install stub axle from the right (raising wheel at same time).
- Fit on profile disc (7).
- Tighten axle bolt (6).
- Install brake calipers with mounting brackets and tighten bolts (4).

- Tighten lefthand axle clamp bolts (8).
  - Remove support from below engine.
  - Vigorously compress telescopic forks several times with handbrake applied.
  - Tighten righthand axle clamp bolts.
- K 1:**
- Coat the guide rails (12) in the rubber support lightly with tyre assembly paste.
  - Insert left/right fairing sections into guide rails.
  - Screw in fastening bolts (2,3) with washers. Tighten gently.
  - Tighten the retaining bolts (1) on the retaining plate/fork stabilizer.

### Tightening torques

#### Axle bolt (6)

⇒ 33 +/-4 Nm .

#### Brake caliper bolt (4)

⇒ 32 +/-2 Nm .

#### Axle clamp bolts (8)

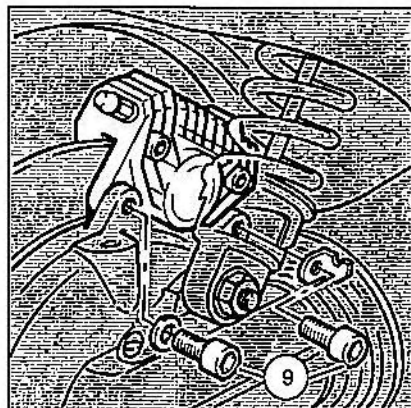
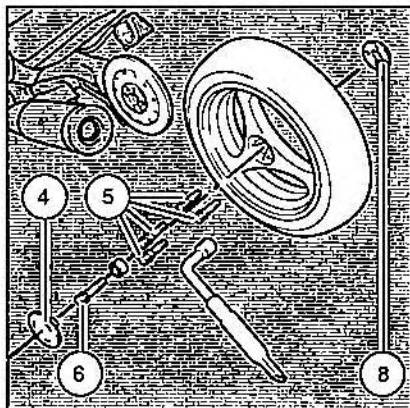
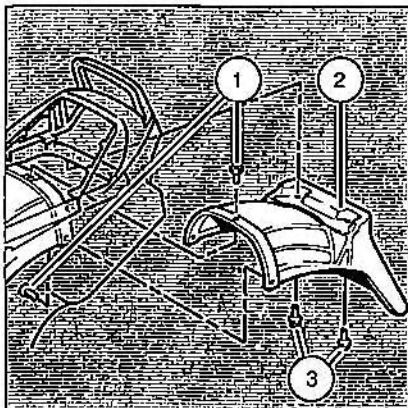
⇒ 14 +/-2 Nm .

### Caution

**Do not damage brake discs and pads when installing.**

**Have tightening torques checked by BMW Motorcycle Service Shop.**

**On motorcycles with ABS, it is essential to check/adjust the sensor gap. See ABS operating instructions.**



## Removing/installing rear wheel

### Tools required

Open ended wrench

– waf 10.

Allen keys

– waf 8.

Screwdriver with reversible blade.

Box wrench for wheel studs.

Tubular extension

### Procedure for removing wheel

- Place motorcycle on centre stand.
- Engage first gear.
- Take off humps and dual seat.
- Unscrew bolts (1,3) for rear wheel cover (2).
- Take off rear wheel cover.

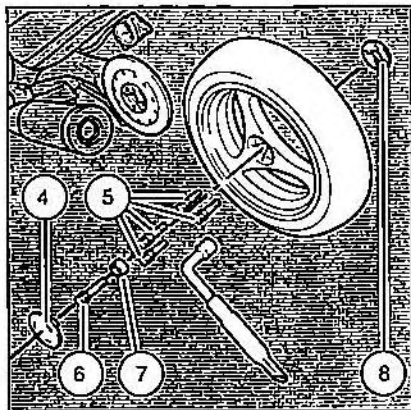
- Remove cover (4) for wheel studs.
- Unscrew 4 wheel studs (5).
- Unscrew central bolt (6).

- Unscrew bolts (9) for brake calipers.
- Carefully remove brake calipers; place down on swing arm.
- Lift rear wheel off centering spigot and roll out to the rear.
- Pay attention to shim(8).

### Caution

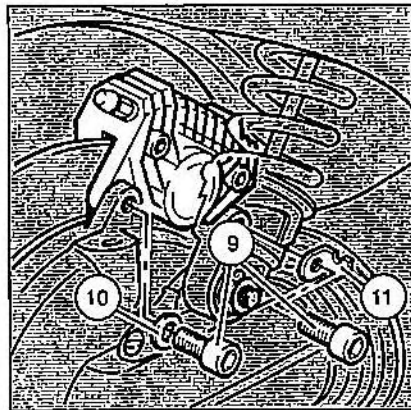
**Do not damage brake discs and pads when removing.**

**Do not operate brake pedal when wheel removed.**



#### Procedure for Installing wheel

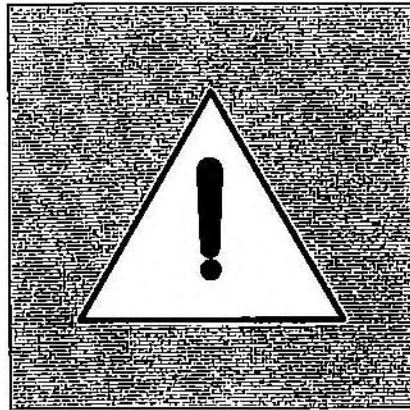
- Check that wheel centering spigot, contact faces of wheel hub and shims are free of grease.
- Fit shim(s) (8) onto wheel centering spigot.
- Insert rear wheel into hole for centering spigot.
- Carefully fit brake calipers onto brake discs.
- Screw in wheel studs (5) with taper rings handtight and screw tight crosswise with tubular extension.
- Tighten central bolt (6) and bushing (7) with tubular extension.



- Screw in brake caliper bolts (9) with washer (10). Ensure that angle plate (11) for pulse sensor cable is also secured.
- Insert cover for wheel/central bolts.
- Install rear wheel cover. Pay attention to plastic washers.
- Install dualseat and humps.

#### Tightening torques

- Wheel/central bolts (5,6)  
⇒ 105 +/-7 Nm .
- Brake caliper bolts (9)  
⇒ 32 +/-2 Nm .



#### Caution

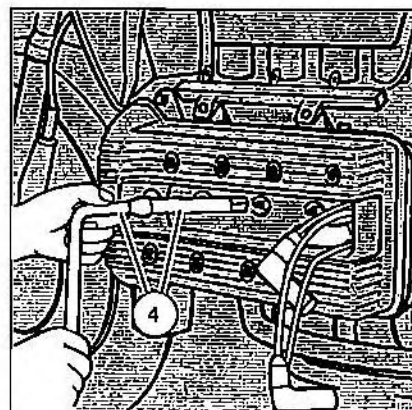
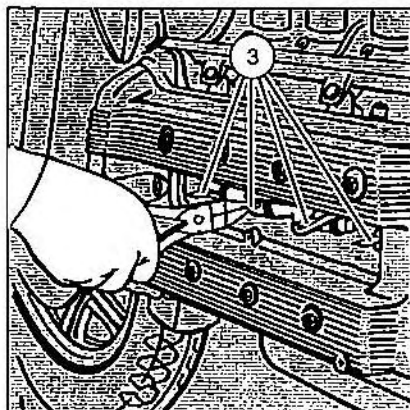
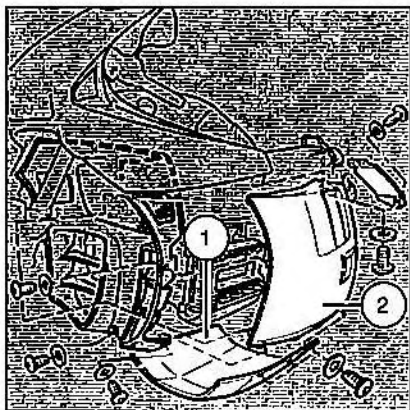
Do not damage brake discs and pads when installing.

Do not operate brake pedal when wheel removed.

Use only wheel and central bolts with the same length code number.

Have tightening torques checked by BMW Motorcycle Service Shop.

On motorcycles with ABS, it is essential to check/adjust the sensor gap. See ABS operating instructions.



## Renewing spark plugs

### Tools required

Allen keys

- waf 4,
- waf 8.

Screwdriver with reversible blade

All purpose pliers

Spark plug wrench

Wheel stud wrench

### Procedure

K 1:

- Remove bottom section of fairing (1).
- Remove middle section of fairing (2).

K 100 RS:

- Take off the spark plug cover.
- Carefully detach the spark plug connectors (3) with the pliers. Reconnect in the same way when installing.
- Check that the spark plug connectors are tight.

- Unscrew the spark plugs with the combined socket wrench (4).
- Check spark plugs (pages 44 - 46), clean or renew.
- Install in reverse order.

### Tightening torque

- Spark plugs  
⇒ 20 +/-2 Nm .

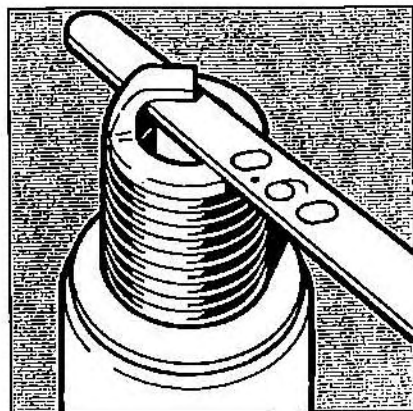
### Caution

Maintain an electrode gap of 0.6 + 0.1 mm.

Carefully tighten spark plugs without tubular extension.

Use only approved spark plugs with the correct heat rating.





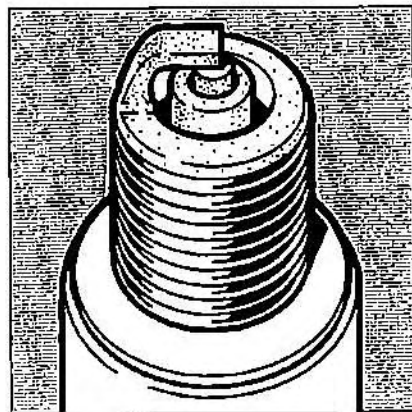
## Checking spark plugs

### Electrode gap

- Measure distance with feeler gauge.  
Specified value:  
**0.60 + 0.1 mm**  
Maximum value:  
**0.90 mm**

### Caution

It is essential to replace spark plugs which are at the maximum!  
Do not bend down earth electrode!



### Spark plug appearance

The spark plug appearance can provide information regarding operation of the ignition and fuel injection system as well as regarding the state and operating conditions of the engine.

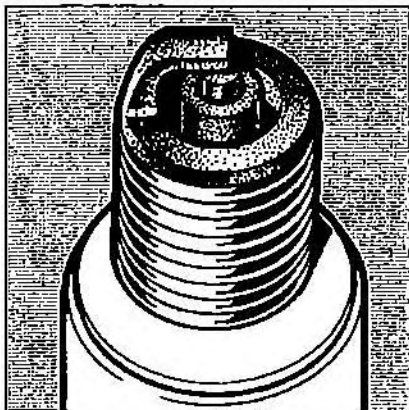
### Inspection

- Ride motorcycle for approx. 10 km (6 miles) at moderate engine speed to warm up engine.
- Switch off engine while motorcycle is still moving.
- Do not run engine for an extended period at idle speed immediately before switching it off.
- Unscrew spark plugs (page 43).

### Normal

- Insulator nose coloured light grey to fawn brown.
- Spark plug heat range is correct.
- Engine condition, combustion and combustion temperature are correct.
- Ignition and fuel system operating properly.





#### Carbon fouled

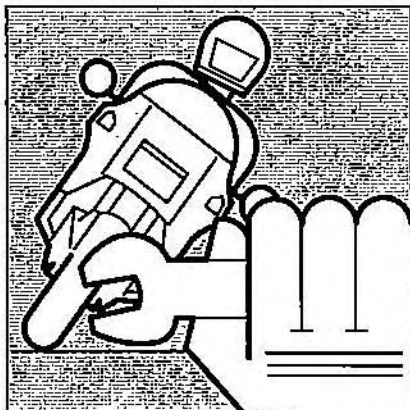
Spark plug covered with soft, dry carbon deposits.

#### Effects when riding

- Poor cold starting
- Ignition misfires (creep current)
- Dark exhaust emissions

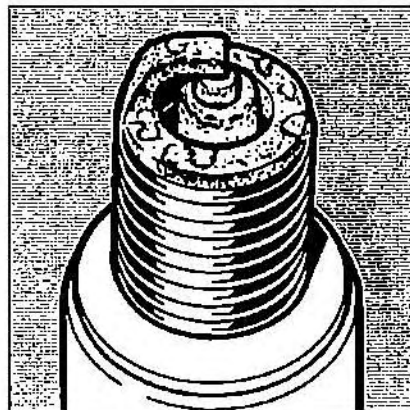
#### Possible causes

- Fuel injection system not operating properly (mixture too "rich").
- Air filter dirty.
- Frequent short journeys.
- Spark plug with incorrect heat rating installed (too "cold").



#### Remedy

- Have fuel injection system examined by BMW Motorcycle Service Shop.
- Renew air filter (page 56).
- Use spark plugs with the correct heat rating (page 84).



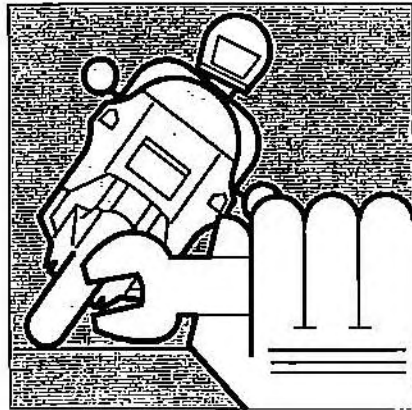
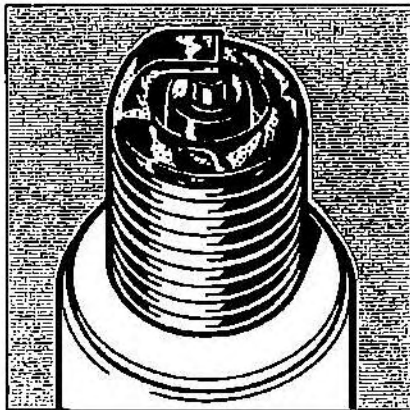
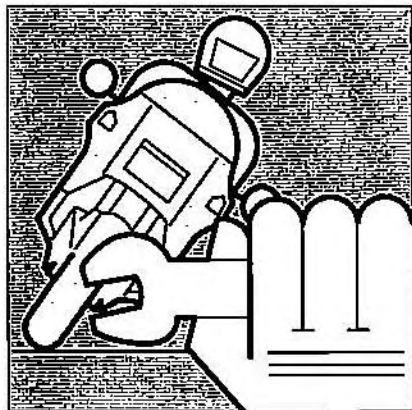
#### Bright (overheated)

Electrode and spark plug housing coloured snow white despite extended period of operation.

The centre and earth electrodes show signs of melting due to excessively high temperatures and self-ignition.

#### Effects when riding

- Power loss.
- Engine misfires.
- Total engine failure (engine damage).



#### Possible causes

- Fuel injection system not operating properly (mixture too "lean").
- Firing point incorrectly set (advanced too far).
- Deposits in combustion chamber.
- Spark plug too "hot" (incorrect heat rating).

#### Remedy

- Have ignition and fuel injection system, combustion chambers and valves examined by BMW Motorcycle Service Shop.
- Use spark plugs with correct heat rating (page 84).

#### Coated with oil

**Electrodes and interior of spark plug coated with film of black oil.**

#### Effect when riding

- Poor starting.
- Ignition misfires.

#### Possible causes

- Oil in combustion chamber.
- Worn pistons, piston rings, cylinders or valve guides.

#### Remedy

- Have engine repaired by BMW Motorcycle Service Shop.

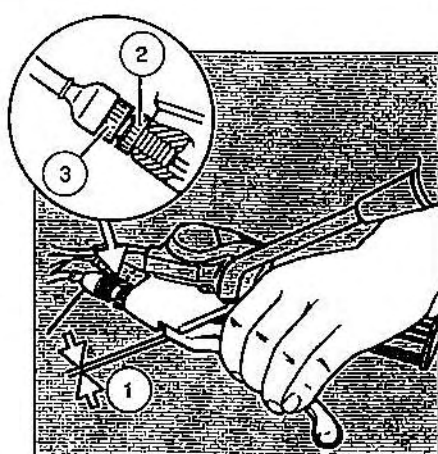
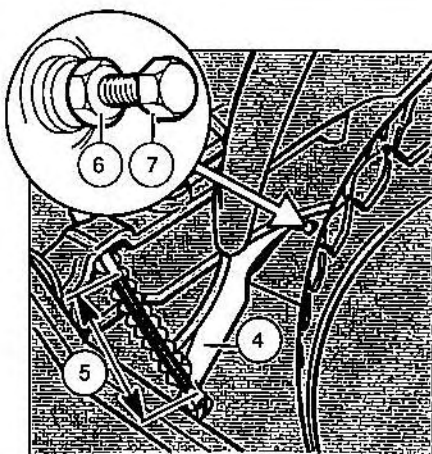
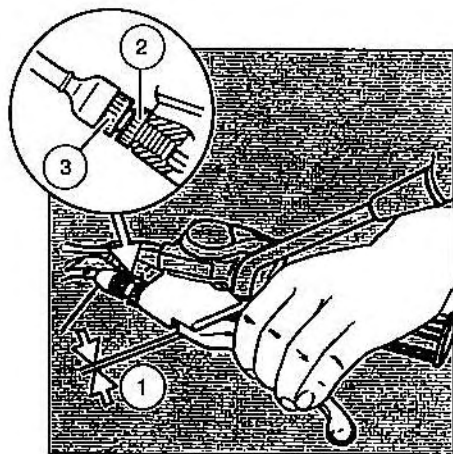
#### General

#### Worn electrodes:

- Poor starting.
- Ignition misfires, especially when accelerating.

#### Remedy

- Renew spark plugs.



## Adjusting clutch

### Tools required

Open ended wrench

– waf 13.

Box wrench

– waf 10.

### Procedur

- Measure free travel of lever (1).  
Specified value:  
4 +/-0.5 mm .
- Slacken lock nut (2).
- Turn adjusting screw (3) to the left:  
reduces free travel.
- Turn adjusting screw (3) to the right:  
increases free travel.

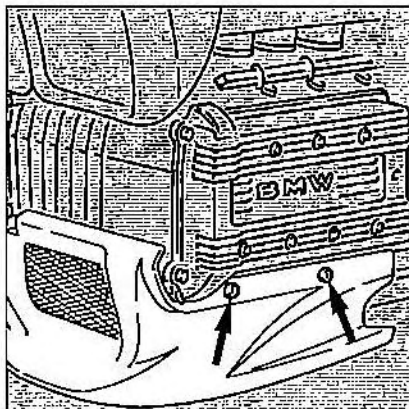
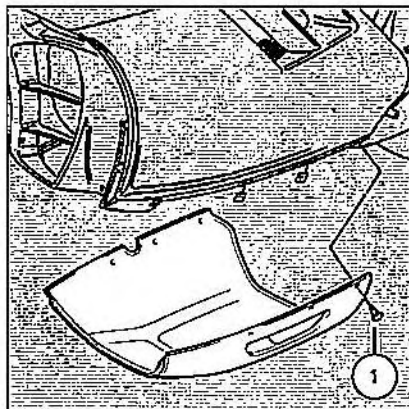
- Detach cable at release lever (4).
- Push rubber seal together towards middle of cable.
- Measure length of exposed cable (5) at release lever.

Specified value:

75 +/-1.

- Adjust to specified value with adjusting screw (3); attach cable.
- Slacken lock nut (6) at release lever.
- Slacken adjusting screw (7) 2 to 3 turns.
- Tighten adjusting screw by hand until resistance is felt (pressure point).
- Tighten lock nut (6).

- Adjust free travel of clutch lever (1) with adjusting screw (3) to specified value.
- Tighten lock nut (2).



## Changing engine oil/oil filter

### Tools required

Allen keys

- waf 5.
- waf 8.

Special wrench (for oil filter element).

### Procedure

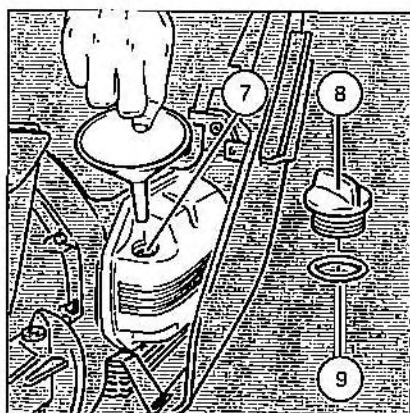
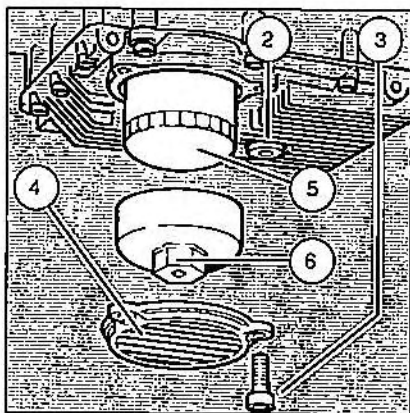
- Warm engine up to normal operating temperature.
- Place motorcycle on centre stand.

#### K 1:

- Unscrew fastening bolts (1) from bottom section of fairing.
- Take off fairing section to the rear/down the way.

#### K 100 RS:

- Take out the four retaining bolts (arrows) for the engine spoiler.
- Detach the engine spoiler.



- Unscrew oil drain plug (2). Drain oil into collecting vessel.
- Screw in oil drain plug with new seal.
- Unscrew bolts (3) for oil filter cover (4), take off cover.
- Unscrew oil filter element (5) with special wrench (6).
- Apply a light coating of oil to seal of new element. Screw in element hand-tight.
- Install oil filter cover with new O-ring seal.

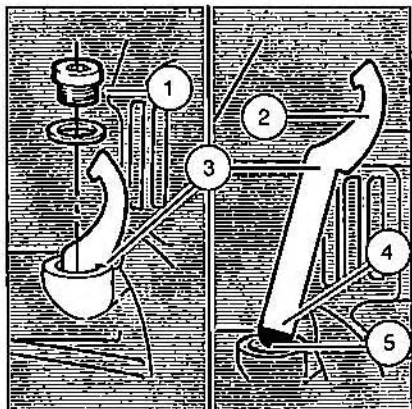
#### Tightening torque

Oil drain plug (2)  
 ⇒ 20 +/-4 Nm

- Pour in engine oil through funnel into filler opening (7). (Refer to p. 82 for oil grades).  
 Capacity:  
 3.75 l (6.6 pints) (with filter change),  
 3.50 l (6.2 pints) (without filter change).
- Screw in oil filler plug (8) with seal (9).
- Run engine briefly/switch off.
- Check oil level after a few minutes at oil sight glass.
- Install fairing section.

#### Note

Dispose of old oil and oil filter element properly.



## Checking gearbox oil level

### Tools required

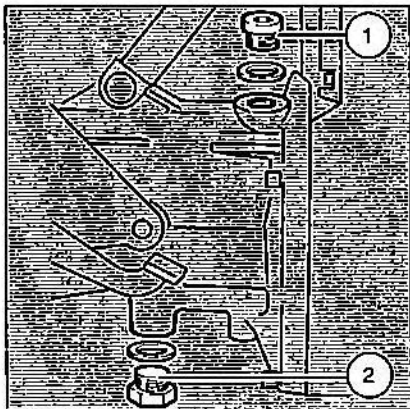
Allen key

- waf 8.

Hook wrench for spring strut (for use as dipstick).

### Procedure

- Place motorcycle on centre stand.
- Unscrew oil filler plug (1).
- Hold clean hook wrench (2) with handle and insert into hole as far as measuring edge (3)/ withdraw.
  - Marking line (4): **maximum level.**
  - Tip of key (5): **minimum level.**



## Changing gearbox oil

### Tools required

Allen key

- waf 8.

Box wrench

- waf 19.

### Procedure

- Warm engine up to normal operating temperature.
- Place motorcycle on centre stand.
- Position collecting vessel below oil drain plug (2).
- Unscrew oil filler plug (1).
- Unscrew oil drain plug/drain oil.

- Screw in oil drain plug (2) with new seal.
- Pour in gear oil through funnel into filler opening (refer to p. 83 for oil grades).
  - Capacity: **0.80 l (1.4 pints).**
- Check oil level.
- Screw in oil filler plug with new seal.

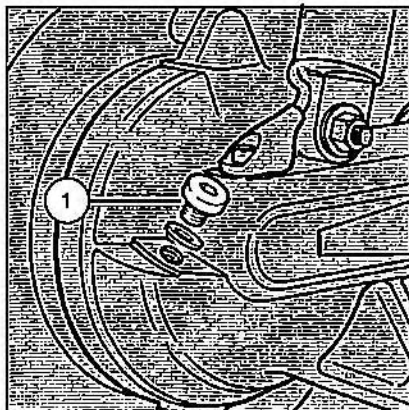
### Tightening torque:

Oil drain/oil filler plug (2,1)

⇒ 23 Nm.

### Note

**Dispose of old oil properly.**



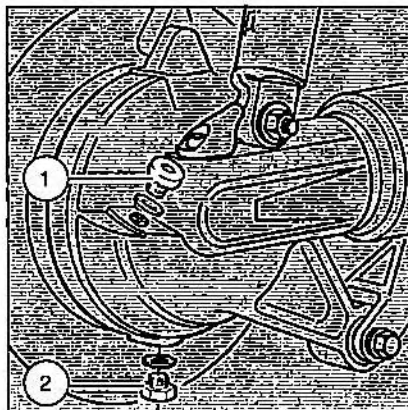
## Checking oil level in rear-wheel drive

### Tools required

- Allen key  
– waf 8.

### Procedure

- Place motorcycle on centre stand.
- Unscrew plug (1) from oil filler hole.
- Bottom turn of thread of oil filler opening: **maximum level.**



## Changing oil in rear-wheel drive

### Tools required

- Allen key  
– waf 8. 6  
Box wrench  
– waf 19.

### Procedure

- Warm engine up to normal operating temperature.
- Place motorcycle on centre stand.
- Position collecting vessel below oil drain plug (2).
- Unscrew oil filler plug (1).
- Unscrew oil drain plug/drain oil.

- Screw in oil drain plug with new seal.
- Pour in gear oil through funnel into filler opening (refer to p. 83 for oil grades).
- Capacity:  
**0.25 l (0.44 pints).**
- Check oil level.
- Screw in oil filler plug with new seal.

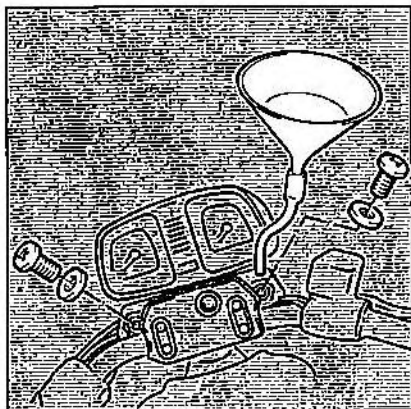
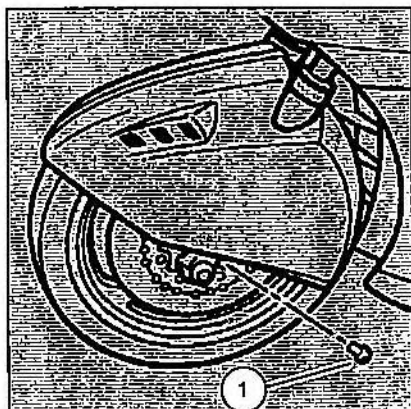
### Tightening torque

Oil drain/oil filler plug (2,1)  
⇒ 23 +/- 3 Nm.

### Note

**Dispose of old oil properly.**





## Changing telescopic fork oil

### Special tools

Screwdriver with reversible blade.

Allen key.

– waf 6.

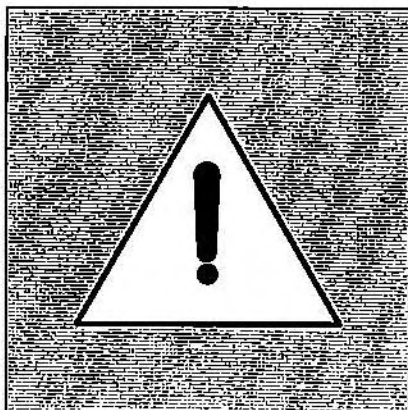
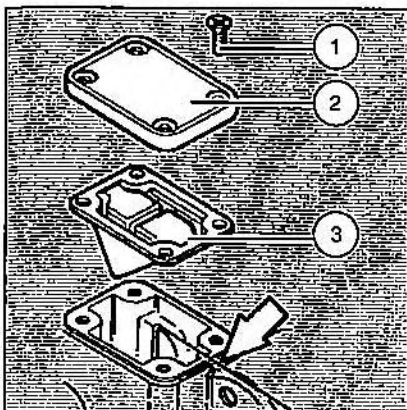
### Procedure

- Place motorcycle on centre stand.
- Position collecting vessel below oil drain plugs (1).
- Unscrew oil drain plugs on left/right station.
- Drain oil.

- Unscrew oil filler plugs on left/right slider tubes.
- Push motorcycle off centre stand.
- Compress and extend telescopic forks several times with handbrake applied.
- Position motorcycle on centre stand and take the load off the front wheel (see Page 39)
- Screw in oil drain plugs.
- Pour in telescopic fork oil through funnel into filler opening (refer to p. 83 for oil grades).
  - Capacity per fork:  
**0.40 - 0.01 l (0.8 - 0.02 pints).**
- Screw in oil filler plugs.

### Note

**Ensure equal quantity of oil in both forks.  
Dispose of old oil properly.**



## Topping up brake fluid

### Front wheel brake

#### Tools required

Screwdriver with reversible blade.

#### Procedure

- Unscrew 4 crosshead-screws (1) (press cover down when doing this).
- Turn handlebars fully to the left. Take off cover (2) and rubber membrane (3).
- Top up brake fluid to upper edge of sight glass (arrow).
- Fit on rubber membrane and cover.
- Press on cover, turn handlebars fully to the right. Tighten crosshead screws gently.

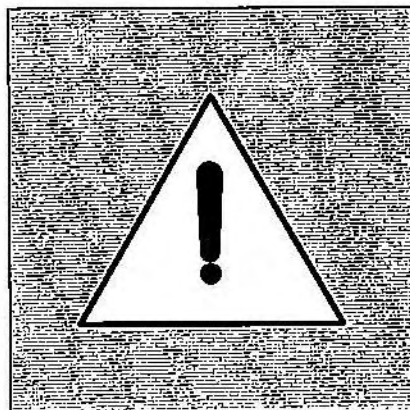
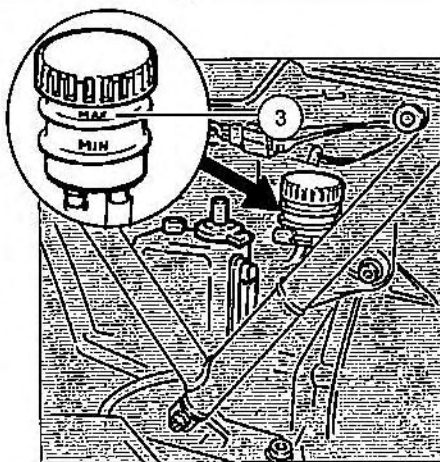
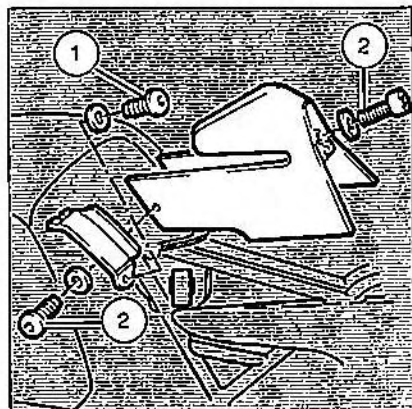
#### Caution

Only use new brake fluid to specification DOT 4.

Brake fluid is subjected to high thermal loads and gradually absorbs moisture from the atmosphere.

For this reason, the brake fluid must be renewed every year by an authorized BMW Motorcycle Service station.

Brake fluid can attack the motorcycle's paintwork.



### Rear wheel brake

#### Tools required

#### Angled allen key

- 4 mm across flats

#### Procedure

##### K 1:

- Take off the dualseat.
- Unscrew retaining bolts (1) from the kneepads.
- Remove the kneepads.
- Unscrew the bolts (2) holding the tank cover.
- Remove the tank cover.

##### K 100 RS:

- Take off the right-hand battery panel.
- Pull reservoir out of fixing clamp.
- Take off cover with rubber membrane.
- Top up brake fluid to MAX mark (3).
- Install in the reverse order.

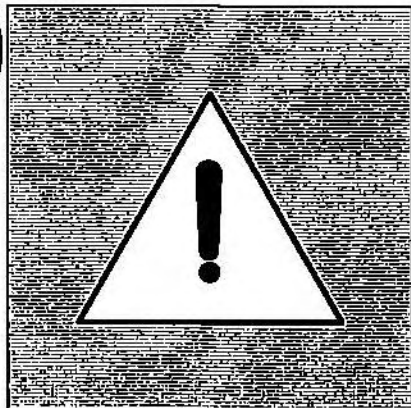
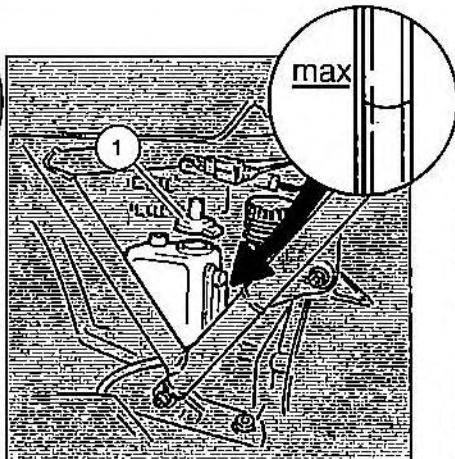
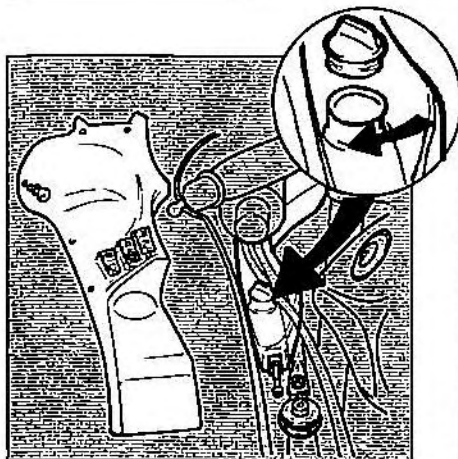
#### Caution

Only use new brake fluid to specification DOT 4.

Brake fluid is subjected to high thermal loads and gradually absorbs moisture from the atmosphere.

For this reason, the brake fluid must be renewed every year by an authorized BMW Motorcycle Service station.

Brake fluid can attack the motorcycle's paintwork.



## Correcting coolant level

### Tools required

Allen key  
– waf 3.

### Procedure

#### K 1:

- Place motorcycle on centre stand.
- Unscrew lefthand inside covering of fairing.
- Open cap of filler neck.
- Pour in coolant mixture up to visible mark.
- Close cap.
- Screw on lefthand inside covering of fairing.

#### K 100 RS:

- Place motorcycle on centre stand.
- Take off the right-hand battery panel.
- Remove the filler cap.
- Top up with coolant mixture as far as the "MAX" mark.
- Put the filler cap back on.

#### Note

Correct coolant level only when engine cold.

Refill at expansion tank only if there is a slight loss of coolant.

#### Mixing ratio:

40% antifreeze,  
60% water.

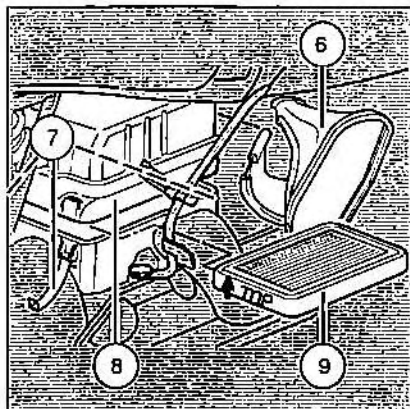
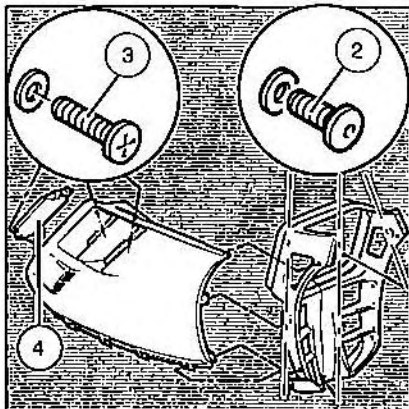
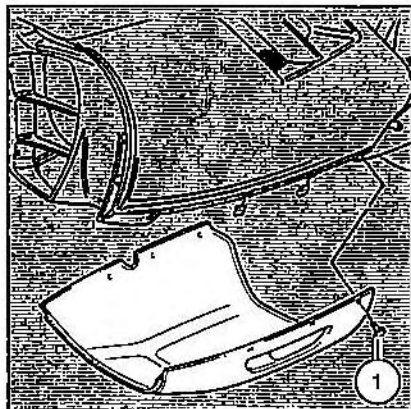
Provides antifreeze protection down to:

- 26 °C (8 °F).

Have coolant replaced only by BMW Motorcycle Service Shop.

#### Caution

Use only antifreeze and anticorrosion agents free of nitrite!



## Changing air filter element

### Tool required.

Screwdriver with reversible blade.

### Procedure K 1

- Place motorcycle on centre stand.
- Remove screws (1) from bottom section of fairing.
- Take of fairing section to the rear/down the way.

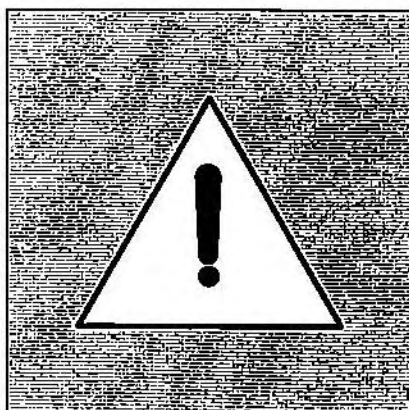
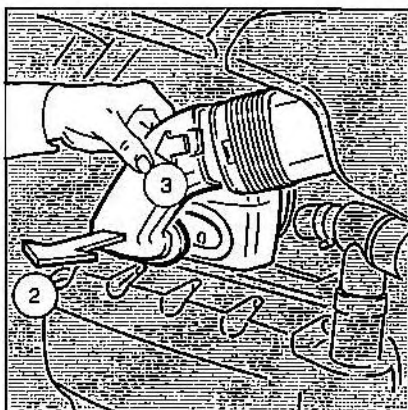
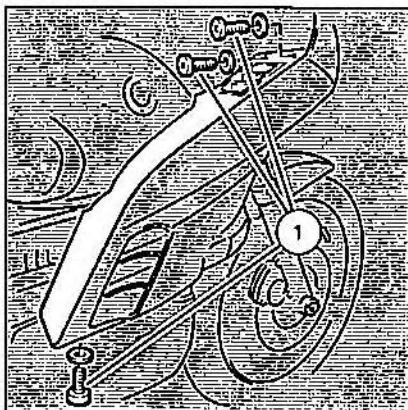
- Remove screws (3) from centre right section of fairing.
- Take off knee pad (4).
- Remove screw from fairing holder.
- Remove screws (2) from radiator fairing.
- Take off righthand fairing section.

- Remove air guide passage (6) by moving slightly to left and right.
- Slacken one front and 2 rear spring clips (7).
- Raise top section of housing (8) slightly. Withdraw air filter element (9) to the right.
- Insert new air filter element.
- Air filter is installed and fairing sections assembled in the reverse order.

### Note

Pay attention to arrow marking "TOP-OBEN".

Do not damage filter element when installing.



#### Procedure K 100 RS

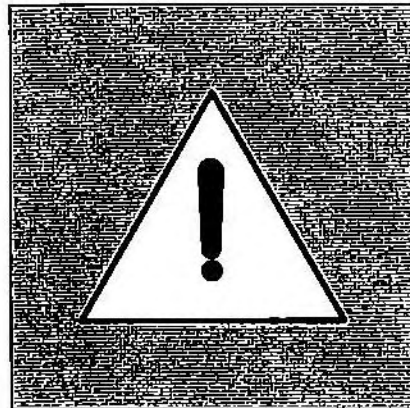
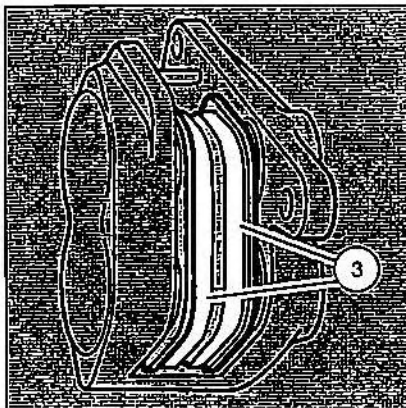
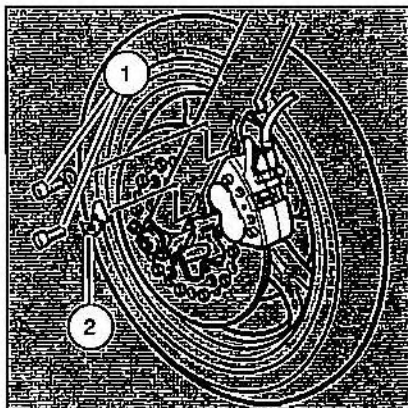
- Place motorcycle on centre stand.
- Unscrew the retaining bolts (1) from inside the fairing.
- Lift off the fairing.

- Withdraw air guide passage from lower section of air cleaner as shown by arrow (2).
- Moisten the rubber seat when re-installing.
- Remove the air guide passage to the rear as shown by arrow (3).
- Release one front and two rear spring clips.
- Raise top section of housing slightly. Withdraw air cleaner element to the right.
- Insert new air cleaner element.
- Air cleaner is installed and fairing sections assembled in the reverse order of work.

#### Note

Pay attention to arrow marking "TOP-OBEN".

Do not damage filter element when installing.



## Checking brake pads

### Front wheel

#### Tools required

#### Allen keys

- waf 4,
- waf 8.

Screwdriver with reversible blade.

#### Procedure

- Place motorcycle on centre stand.
- **K 1:**
  - Take off front wheel fairing (page 39).
  - Remove fastening screws (1) for left/right brake calipers, take off mounting brackets (2).
  - Carefully remove brake calipers.

- Check/measure thickness of brake pads (3).
- Minimum pad thickness:  
**1.5 mm (0.06 in).**
- Refit brake calipers and fairing in the reverse order.

#### Tightening torque

Brake caliper screws (1)

⇒ **32 +/- 2 Nm .**

#### Note

Have work performed on brake system by BMW Motorcycle Service Shop.

#### Caution

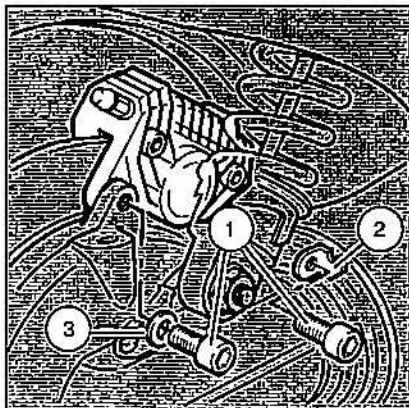
**Do not damage brake discs and pads when removing and installing brake callipers!**

**Do not operate handbrake lever when brake callipers removed!**

**Ensure brake pads have at least minimum thickness!**

**Have tightening torques checked by BMW Motorcycle Service Shop!**





## Rear wheel

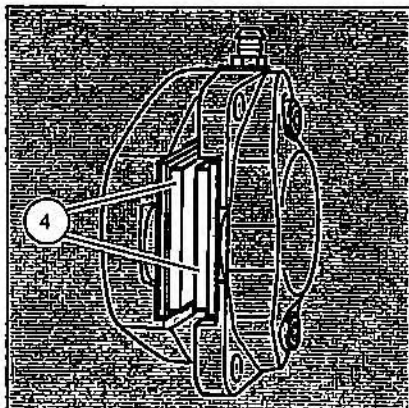
### Tools required

Allen key

- waf 8.

### Procedure

- Place motorcycle on centre stand.
- Remove screws (1) for brake caliper.
- Take off angle plate (2) for pulse sensor cable and washer(3).
- Carefully remove brake caliper.

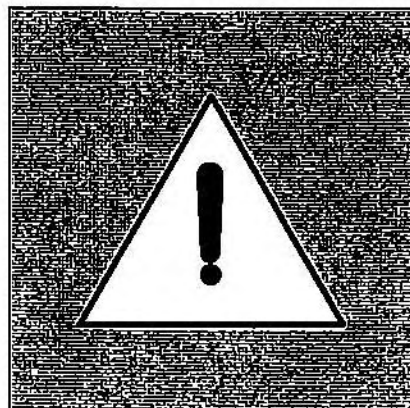


- Check thickness of brake pads (4).  
Minimum pad thickness:  
1.5 mm (0.06 in).
- Install in the reverse order.

### Tightening torque

Brake caliper screws (1)

⇒ 32 +/-2 Nm.



### Note

Have work performed on brake system by BMW Motorcycle Service Shop.

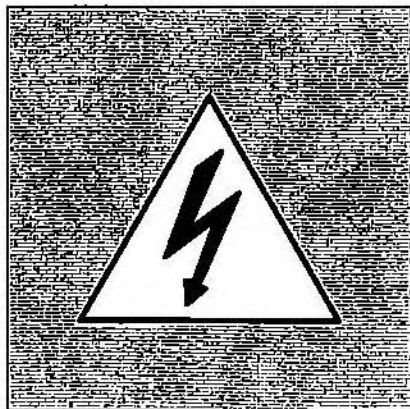
### Caution

Do not damage brake discs and pads when removing and installing brake callpers!

Do not operate handbrake lever when brake callpers removed!

Ensure brake pads have at least minimum thickness!

Have tightening torques checked by BMW Motorcycle Service Shop!



## Electrical system

### Caution

Perform work on the electrical system only when ignition switched off or battery negative cable disconnected!

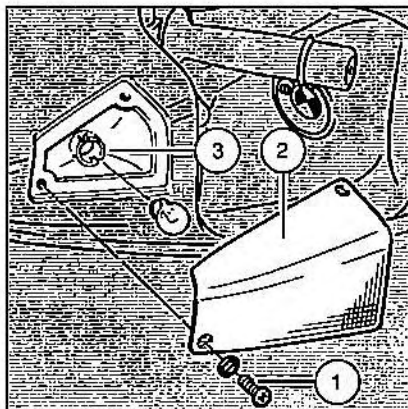
Do not touch any live parts when engine running!

Risk of fatal accident!

### Note

Do not touch new bulbs with your bare fingers.

Use a clean, dry cloth to install.



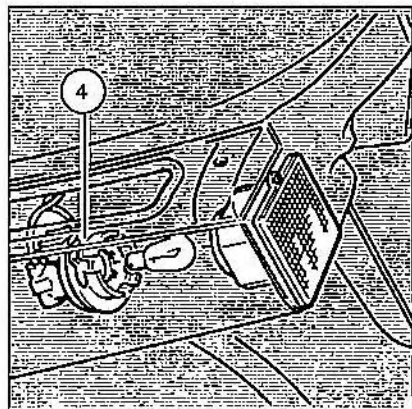
## Renewing front indicator bulb

### Tools required

Screwdriver with reversible blade.

### Procedure

- Place motorcycle on centre stand.
  - Remove fastening screws (1).
  - Take off indicator light lens (2).
  - Press in bulb and release by turning to the left. Remove bulb.
  - Insert new bulb by turning to the right to lock (3).
  - Refit indicator light lens.
- Front/rear indicator bulbs: ⇒ 12 V/21 W



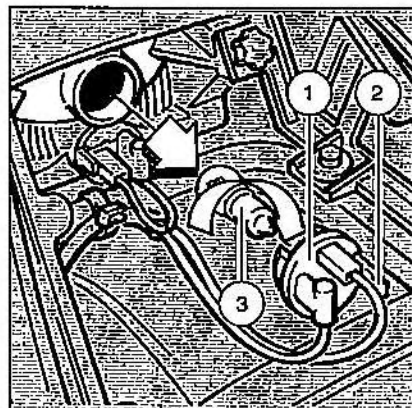
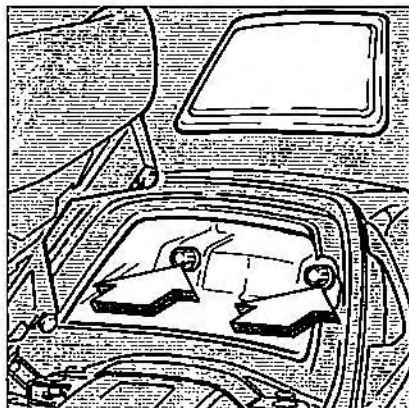
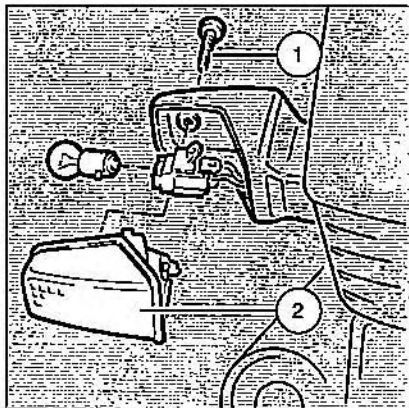
## Renewing rear indicator bulb

### Tools required

Screwdriver with reversible blade.

### Procedure

- Place motorcycle on centre stand.
- K 1:**
- Remove cover for storage compartment.
  - Withdraw indicator light assembly (4) by turning to the left.



## Renewing rear light bulb and brake light bulb

No tools required.

### Procedure for removing bulb

- Place motorcycle on centre stand.
- K 1:
  - Take off dualseat.
- K 100 RS:
  - Open the dualseat. Remove the cover from the stowage compartment.
- Take out the two knurled screws (arrow).
- Detach the rear light insert.

Light insert:

Top      ⇒    brake light

Bottom   ⇒    rear light

### K 100 RS:

- Unscrew and remove retaining bolts (1).
- Remove the flashing turn indicator cover (2).
- Press in bulb and release by turning to the left. Remove bulb.
- Insert new bulb and turn to the right to lock.
- Insert indicator light assembly.

- Remove the bulb insert (1) by pressing in plastic catch (2).
- Press the brake/rear light bulb (3) to the rear (arrow) and release it from its holder by turning it to the left (arrow). Take out the bulb.
- Install in the reverse order of work.

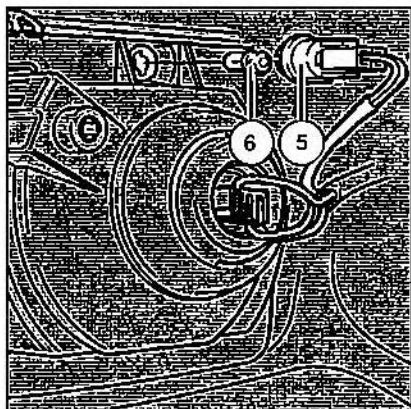
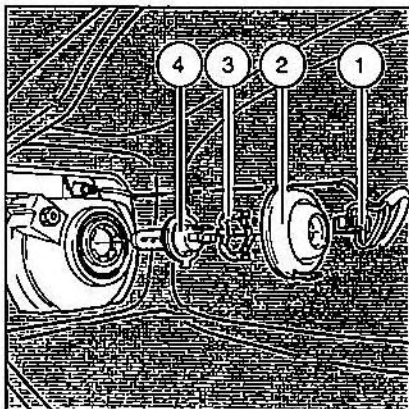
– Brake light:   ⇒    12 V/21 W

– Rear light:    ⇒    12 V/10 W

### Note

Do not touch new bulbs with your bare fingers.

Use a clean, dry cloth for installing.



## Renewing headlight bulb

No tools required.

### Procedure for removing bulb

Remove/install bulb through bottom fairing opening.

- Place motorcycle on centre stand.
- Take off multiple connector (1).
- Remove rubber seal (2).
- Release locking ring (3) by turning to the left. Remove bulb (4).
- Install bulb in the reverse order.

– Headlight bulb ⇒ 60/55 W

### Note

Do not touch new bulbs with your bare fingers.

Use a clean, dry cloth for installing.

## Renewing parking light bulb

No tools required.

### Procedure

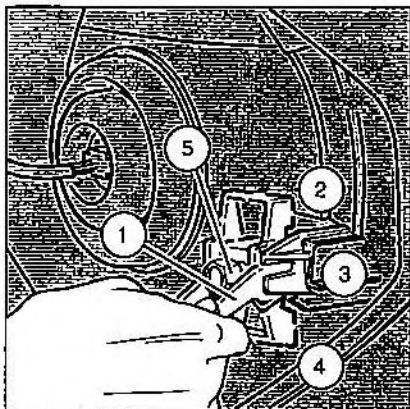
- Place motorcycle on centre stand.
- Release bulb holder (5) by turning to the left.
- Release bulb (6) by pressing in and turning to the left at the same time.
- Install bulb in the reverse order.

– Parking light bulb ⇒ 12 V/4 W

### Note

Do not touch new bulbs with your bare fingers.

Use a clean, dry cloth for installing.



## Adjusting headlight beam throw

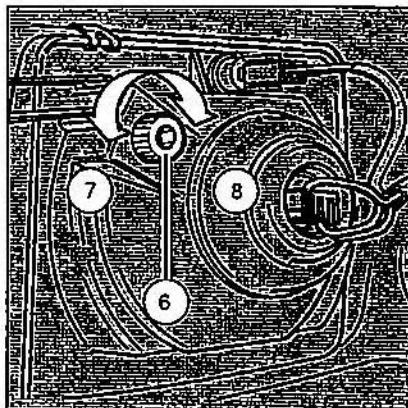
### High/low setting

No tools required.

Set vertical beam throw of headlight by adjusting lever (1) in top range of righthand stanchion.

- Lever moved up (2):  
⇒ long beam throw.
- Lever in middle position (3):  
⇒ neutral beam throw.
- Lever in bottom position (4):  
⇒ short beam throw.

Perform fine setting with hexagon plastic screw (5).



### Left/right setting

No tools required.

Set horizontal beam throw of headlight with knurled screw (6) in top area of lefthand stanchion

- Turning to the left (7):  
⇒ Light beam shifted to the right.
- Turning to the right (8):  
⇒ Light beam shifted to the left.

### Note

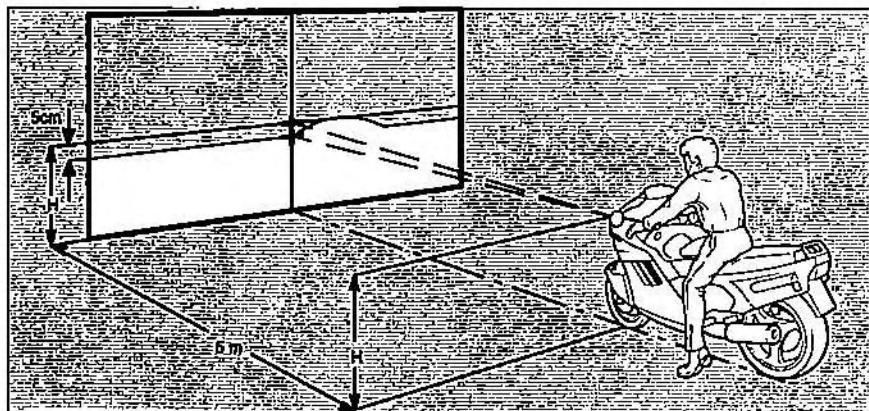
Adjust high/low setting of beam throw so as not to dazzle oncoming traffic.

Ensure that light beam illuminates road surface sufficiently far ahead.

Adjust left/right setting so that light beam illuminates road surface over a sufficiently wide area.

Perform headlight settings when motorcycle laden (rider, pillion passenger and luggage).

Refer to page 64 for precise aiming of headlight beam.

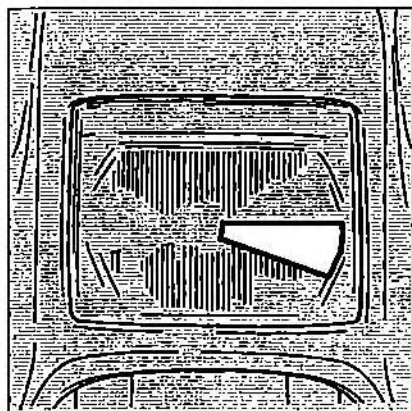


## Aiming headlight beam

Basic setting for solo ride.

- Adjust tyre inflation pressure to correct level (page 22).
- Adjust spring strut setting for one-up riding (page 23).
- Position motorcycle with rider seated on it on level ground at a distance of 5 metres (measured from centre of front wheel) from light-coloured wall.
- Transfer the distance from ground to centre of headlight (H) onto wall and mark with a cross.

- Mark a second cross 5 cm below the first.
- Switch on dipped headlight.
- Vary headlight with adjusting screws  $\text{E3}$  (page 58) so that cutoff point (1) passes through the centre of the bottom cross, rises to the right to the top of cross (2) and then drops back again (3).



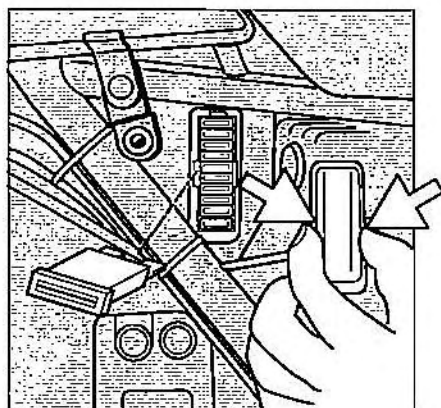
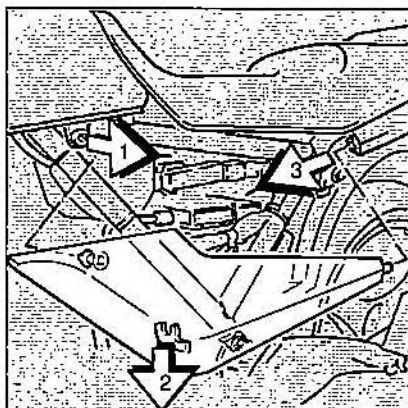
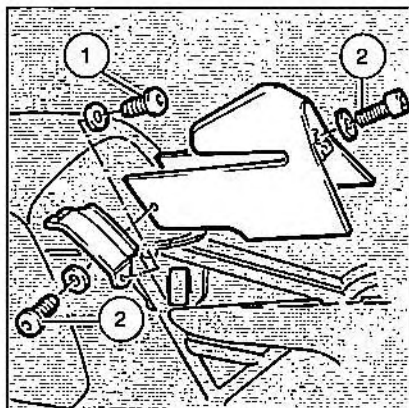
## For countries with lefthand rule of the road.

Motorcycles for countries with lefthand rule of the road are equipped with lefthand asymmetrical dipped headlight.

The headlight beam is correctly aimed by analogy to the description on the left.

### Note

If a motorcycle with righthand asymmetrical dipped headlight is ridden temporarily in countries with lefthand rule of the road, the wedge visible in the centre of the lens must be blanked off with adhesive tape cut to shape.



## Renewing fuses

### Tools required

- Allen key  
– wal 4.

### Procedure

- Place motorcycle on centre stand.

#### K 1:

- Take off dualseat.
- Remove fastening screws (1) from knee pad.
- Take off knee pad.
- Remove fastening screws (2) from fuel tank cover.
- Take off cover.

#### K 100 RS:

- Take off the battery cover as shown in the drawing.

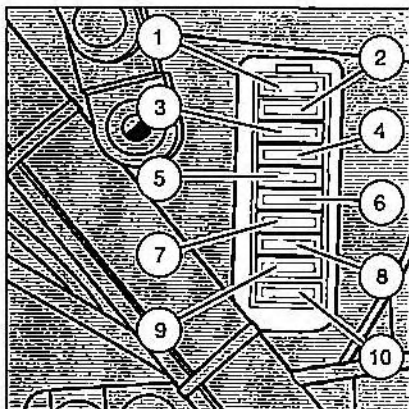
- Compress transparent cover slightly at the side (arrows) and withdraw.
- Pull blown fuse out of holder.
- Insert new fuse (spare fuses in tool kit).
- Install parts in the reverse order.

#### Note

Do not repair blown fuses.

If fuse blows frequently, have electrical system checked by BMW Motorcycle Service Shop.





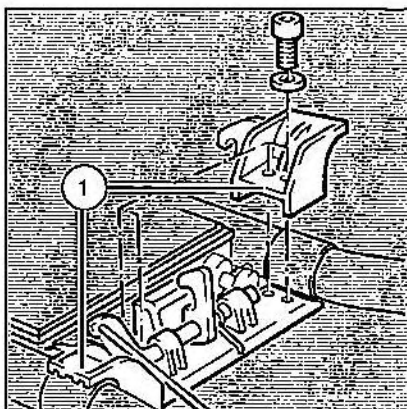
### Electrical circuits and fuses

#### Fuse assignment:

- |   |       |
|---|-------|
| 1 Instrument cluster, rear/brake lights | 15 A. |
| 2 Parking light                         | 15 A. |
| 3 Indicator lights, clock               | 15 A. |
| 4 Power socket                          | 15 A. |
| 5 Motronic                              | 15 A. |
| 6 Fuel pump                             | 15 A. |
| 7 Two-tone horns, fan                   | 15 A. |
| 8 Special equipment option              |       |
| 9 Special equipment option              |       |
| 10 Special equipment option             |       |

#### Caution

Use only specified fuse types and ratings.



### Removing and installing battery

#### Tools required

Allen keys

- waf 4,
- waf 5.

Open ended wrench

- waf 10.

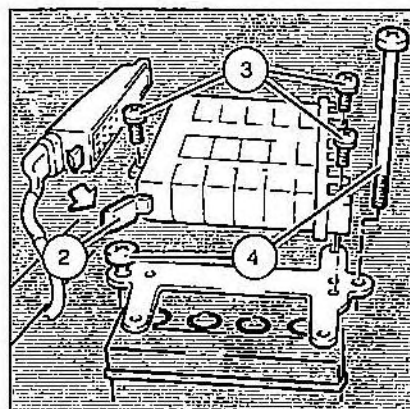
Screwdriver with reversible blade.

#### Procedure for removing battery

- Place motorcycle on centre stand.
- **Switch off ignition!**

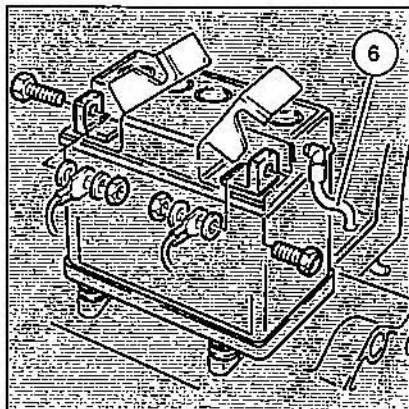
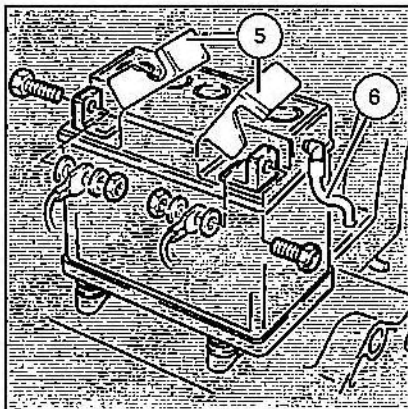
K 1:

- Take off humps/dualseat.
- Unscrew knee pads/fuel tank cover.
- Unscrew mounting bracket (1) for dualseat lock.



#### K 100 RS:

- Open the dualseat.
- Remove the left-hand battery cover.
- Detach snap catch (2) from multiple connector and press to the side.
- Remove fastening screws (3) from injection control unit.
- Withdraw injection control unit to the rear/up the way. At the same time detach multiple connector from injection control unit.
- Remove fastening screws (4) for battery mount.



- Use screwdriver to raise protective caps (5) for negative/positive terminal posts.
- Disconnect battery cables.
  - ⇒ first of all from negative terminal.
  - ⇒ then from positive terminal.
- Pull battery vent tube (6) out of hole in rear wheel cover.
- Lift out battery to the rear/up the way (arrow).

#### Caution

It is essential to disconnect negative/positive cables in the correct order!  
Disconnect battery terminals only when Ignition switched off!

#### Procedure for Installing battery

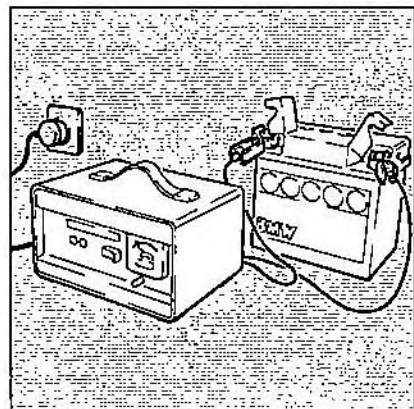
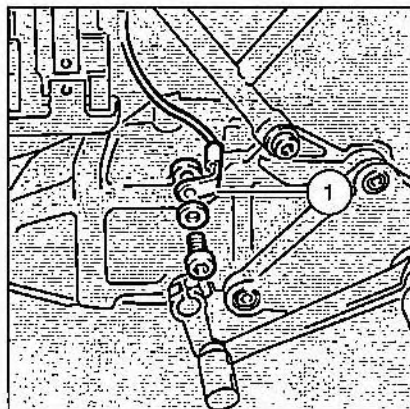
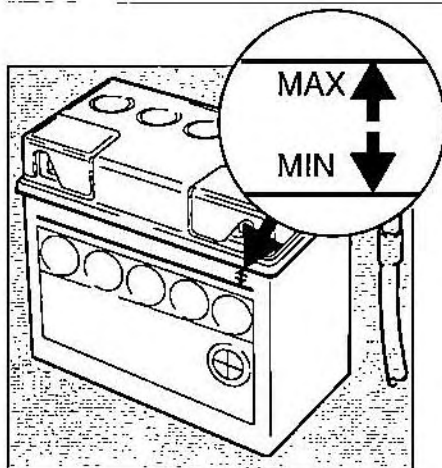
- Install bulb in the reverse order.
- Connect battery terminal cables.
  - ⇒ first positive terminal.
  - ⇒ then negative terminal.
- Grease terminal posts.

#### Note

Do not overtighten the battery holder screws.

#### Caution

Do not kink vent tube (6)!  
It is essential to connect positive/negative terminal cables in the correct order!  
Connect battery terminal cables only when Ignition switched off!



## Checking electrolyte level

### Tools required

Screwdriver with reversible blade (or coin, if need be).

### Procedure

- Read off electrolyte level at MIN/MAX markings.

### Note

Use only distilled water for topping up battery.

Remove filler plugs and screw in with a coin.

### Caution

Battery acid is extremely caustic! Protect eyes, face, hands and clothing!

## Maintenance instructions

- If the motorcycle is not ridden for more than a month, disconnect battery terminals.

### Procedure:

Unscrew the negative cable (1) at the gear box and insulate it.

- Top up distilled water to MAX mark.
- Store battery in a cool and dry place.
- Check electrolyte level regularly.

- Charge battery before taking motorcycle out of use and restoring to use. Pay attention to charging instructions.
- Have maintenance and storage performed by BMW Motorcycle Service Shop if any doubt exists.

### Caution

Improper treatment of battery invalidates warranty!

## Troubleshooting table

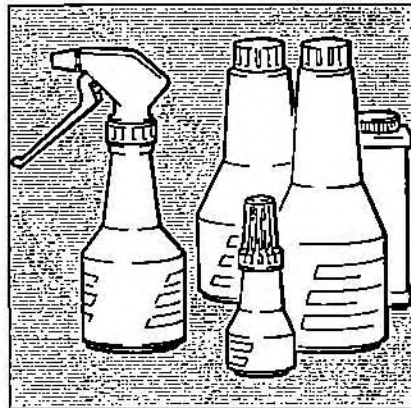
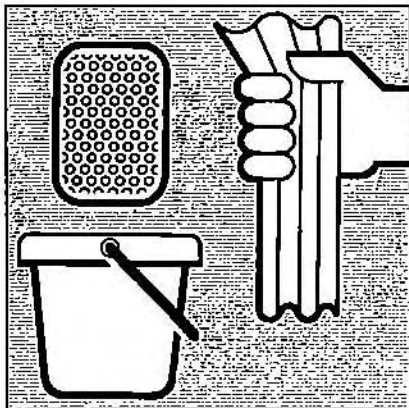
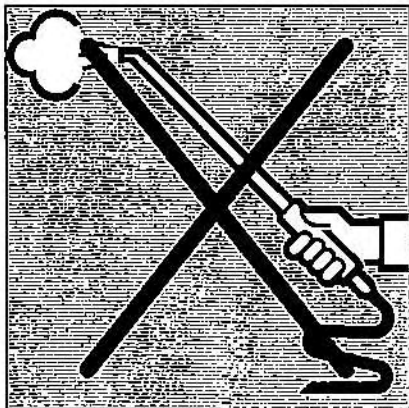
### Cautlon

Motorcycle is fitted with digital electronic engine control (MOTRONIC)! Do not touch live parts when engine running! Risk of fatal accident!

| Malfunction   | Possible cause  | Remedial action                         | Page  |
|---|---|---|-------|
| Engine will not start or is difficult to start  | Ignition key not in correct position                    | Refer to operating instructions         | 30    |
|   | Ignition kill switch not turned on                      | Refer to operating instructions         | 30    |
|   | Prop stand folded down                                  | Refer to operating instructions         | 23    |
|   | Power supply interrupted                                | Fuse 5 blown                            | 65,66 |
|   | Gear engaged, clutch lever not pulled up                | Select neutral or disengage clutch      | 30    |
|   | Fuel tank empty   | Refuel                                  | 15    |
|   | Fuel pump not working                                   | Fuse 6 blown                            | 65,66 |
|   | Throttle twistgrip/choke not operating properly         | Refer to operating instructions         | 31    |
|   | Air filter element blocked                              | Renew                                   | 56    |
|   | Spark plug(s) faulty/damp                               | Renew                                   | 43    |
| Coolant temperature too high, warning light remains on all the time (comes on above 115 °C) | Spark plug leads/caps damp                              | Dry with compressed air jet             |       |
|   | Battery insufficiently charged                          | Charge battery                          | 68    |
|   | Coolant too low   | Trace and repair any leaks; add coolant | 55    |
|   | Electric fan not switching on automatically (at 105 °C) | Fuse 7 blown                            | 65,66 |

### Note

Any more serious faults, and other faults not described on pages 35...68, should be entrusted to a BMW Motorcycle Service Shop for attention.



## Cleaning/Care

### General note

Regular and proper cleaning is an important factor for maintaining the value of your motorcycle.

This also ensures that important safety components are always fully operational.

Chrome and paintwork gleam like new even after years of hard use.

Rubber and plastic parts are not damaged by aggressive or penetrating cleaning agents and solutions.

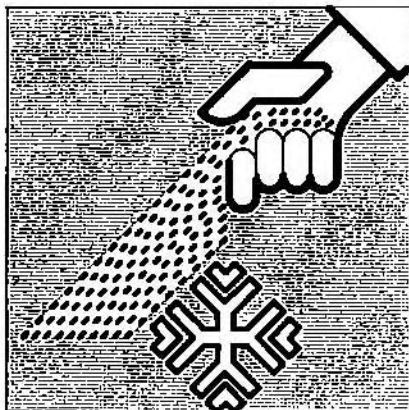
### Caution

Do not use steam cleaners or high pressure jets!

### Cleaning

- Place motor cycle on centre stand.
- Remove all fairing sections.
- Spray a mild cold cleaner onto wheels, engine block, transmission block and swing arms.
- Allow cleaner to soak in (as specified in instructions for use) and then wash off thoroughly with a sponge and plenty of water.
- Tilt motorcycle over to the left to drain water from top off engine.
- Dry wet areas thoroughly.
- Test the brakes.

- Clean/care for fairing sections only with cleaning/care products from BMW Care Products Set. Do not scratch windscreen.
- Do not clean instrument cluster and switches with cleaning agents or solutions.
- Remove tar stains only with approved removers. Rinse down thoroughly afterwards.
- Clean insects, flies, etc. off slanchions.
- Treat chrome parts and paintwork regularly with suitable care products.



### Removing road salt

- Clean motorcycle at the end of your ride immediately with cold water.
  - ⇒ **Do not use warm water as this increases the chemical action of the salt!**
- Dry motorcycle thoroughly.
- Use a commercial wax based corrosion proofing agent to treat rims, engine, swing arms and chrome parts.
- Rub/polish cleaned and dried fairing sections with an approved wax product.

#### Caution

**Do not use steam cleaners or high pressure jets!**

### Touching up paint damage

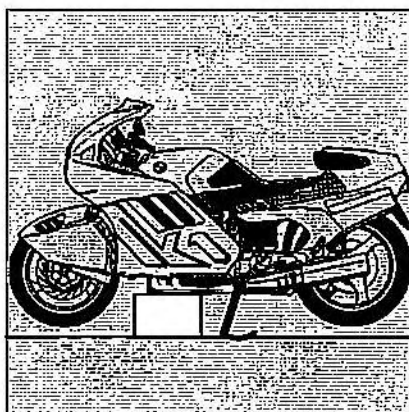
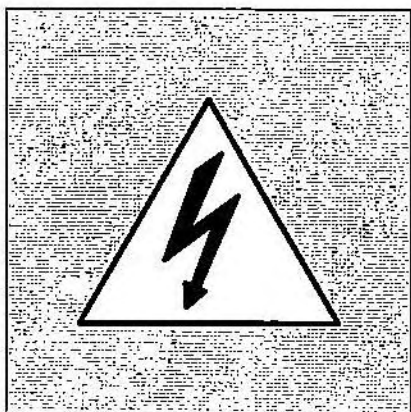
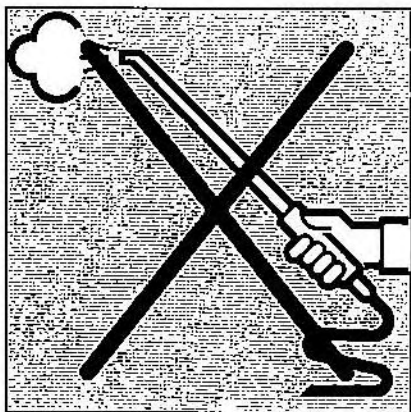
- Touch up minor paint damage caused by flying stones or similar with BMW Touch Up Stick.
  - ⇒ **Paint colour indicated on decal below dualseat.**
  - ⇒ **Pay attention to manufacturer's instructions for use.**
- Have major damage to paintwork attended to by BMW Motorcycle Service Shop.

### Caring for exhaust system

- Treat discolorations to exhaust system (caused by operation and exposure to environment) with "Metal Polish Uriblue" (supplied by Hugo Höhn GmbH, Rudolf Herbig Weg 10, D 5657 Haan).
- Following this, treat with "Wiener Kalk" (French chalk) (supplied by Schmitz Bonn GmbH, Rondorferstr. 74, D-4000 Düsseldorf 1).

#### Note

**Use only Wiener Kalk (French Chalk) for final cleaning. Available from hardware stores or drug stores. Do not use any abrasive products.**



## Laying up motorcycle

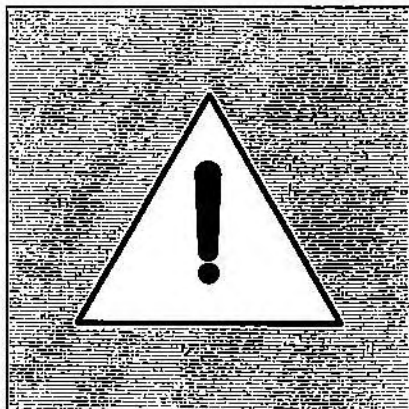
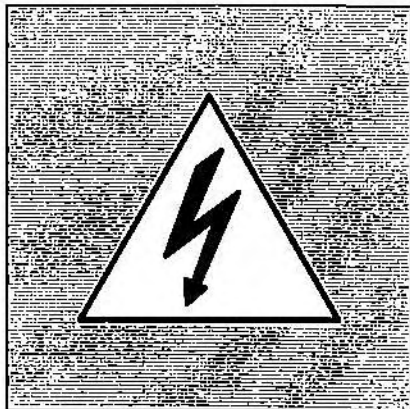
### Procedure

- Clean motorcycle (page 70).
- Drain engine oil when warm (page 48).
- Add special corrosion-inhibiting oil up to the lower mark on the sight glass.  
Capacity:  
**approx. 2.5 l (4.4 pints).**
- Run engine for about one minute without load.
- Drain gear oil in gearbox (page 50) and rear wheel drive (page 51) when warm.
- Add special corrosion-inhibiting oil to gearbox.  
Capacity:  
**approx. 0.4 l (0.6 pints).**

- Pour special corrosion-inhibiting oil into rear wheel drive.  
Capacity:  
**approx. 0.1 l (0.175 pints).**
- Run engine in second gear for a few seconds.
- Unscrew spark plugs (page 43) and spray in a little engine oil.  
Quantity:  
**approx. 0.01 l (0.018 pints).**
- Screw in spark plugs.
- Remove battery (page 66). Pay attention to maintenance instructions (page 68)!

- Spray a suitable lubricant onto brake, clutch lever joints, centre and prop stand bearings.
- Rub bright metal/chrome parts with acid-free grease (Vaseline).
- Store motorcycle in a dry room on centre stand.
- Detach bottom section of fairing (page 48).
- Place block under the engine so that both wheels are clear off the ground.





## Restoring motorcycle to use

### Procedure

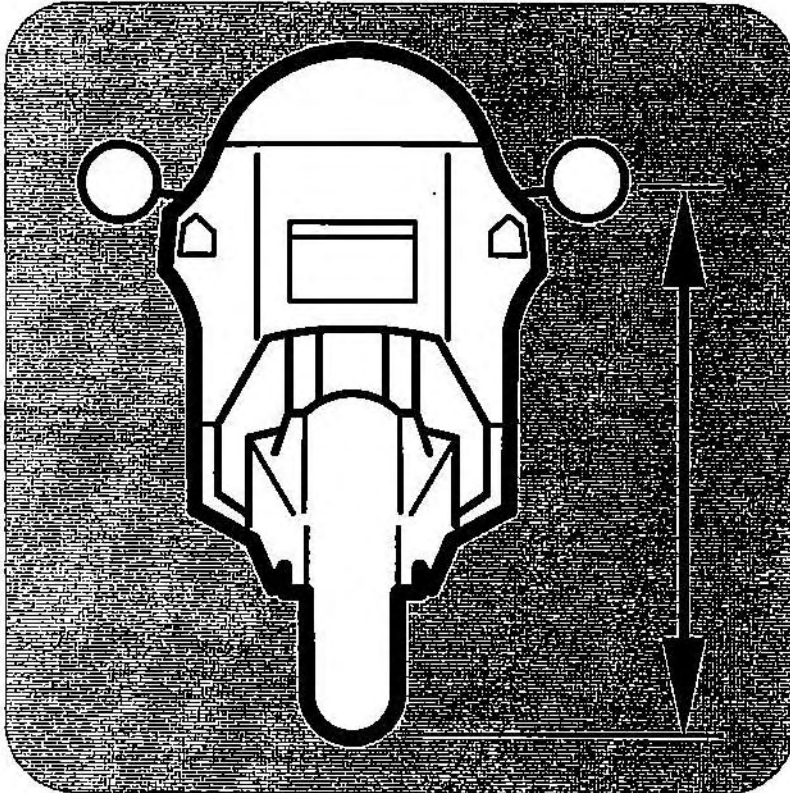
- Remove protective coatings applied to exterior.
- Clean motorcycle (page 70).
- Drain corrosion-inhibiting oil in engine, gearbox and rear wheel drive.
- Renew oil filter element (page 48).
- Renew oil in telescopic forks (page 52).
- Install fully-charged battery (page 66).
- Treat battery terminal posts and clips with protective grease.
- Unscrew spark plugs (page 43).
- Crank engine with starter and eject preservative from cylinders.
- Clean spark plugs, renew if necessary/ screw in.
- Check/correct tyre inflation pressure (page 22).
- Check brakes (page 20,21).
- Perform safety checks (pages 17 - 25).

### Note

Combine the work described above with inspection by BMW Motorcycle Service Shop.



# Specifications



## And just as important:

### Technical data and descriptions

- Engine (76)
- Cooling/lubrication system (77)
- Power transmission (78)
- Frame (79 - 81)
- Fuels, lubricants etc. (82,83)
- Electrical systems (84,85)
- Dimensions (86)
- Weights (87)
- Performance (88)

( ) Figure in brackets => Page on which item is described

## Technical data and descriptions

| Engine  |                 | K1  | K 100 RS |
|---|-----------------|---|----------|
| Type  |                 | Patented, horizontal four-stroke engine with four inline cylinders, cylinder head with four valves per cylinder, doubleoverhead camshafts and engine management by Digital Motor Electronics (MOTRONIC) incorporating fuel cut-off when coasting. |          |
| Displacement , effective<br>for tax purposes  | ccm             | 987,18  |          |
|   | ccm             | 980   |          |
| Max rated output acc.to DIN 70 020  | kW              | 74  |          |
|   | bhp             | 100   |          |
| at engine speed   | rpm             | 8000  |          |
|   |                 |   |          |
| Max torque  | Nm              | 100   |          |
|   | kpm             | 10.19   |          |
| at engine speed   | rpm             | 6750  |          |
|   |                 |   |          |
| Max. permissible engine speed   | rpm             | 8900  |          |
| Max. continuous engine speed  | rpm             | 8500  |          |
| Idle speed  | rpm             | 950 +/- 50  |          |
| Bore/stroke   | mm              | 67/70   |          |
| Compression ratio   |                 | 11.0:1  |          |
| Power-to-weight ratio ready for road with<br>at 75 kg (156 lbs) rider<br>gross weight limit         | kg/kW           | 4,5   |          |
|   | kg/kW           | 6,5   |          |
| Fuel consumption acc.to ISO DIS 7860<br>at steady 90 km/h (56 mph)<br>at constant 120 km/h (75 mph) | mile/gal(imp.)  | 67  | 60       |
|   | mile/gal(imp.)  | 56  | 53       |
| Type of fuel  |                 | Unleaded premium grade fuel DIN 51 607, minimum octane number 95 (RM) and 85 (MM) or<br>Leaded premium grade fuel DIN 51 600, minimum octane number 98 (RM) and 88 (MM).  |          |
| Max. oil consumption  | qt(imp.)/100 km | 0.17  |          |

| Cooling/lubricating system | K 1   | K 100 RS |
|----------------------------|---|----------|
| Cooling system             | Cuts in and cuts out automatically depending on coolant temperature.  |          |
| Type of radiator           | Crossflow aluminium radiator with plastic header tanks, integral thermostat and zero-pressure expansion tank. Pressure and vacuum relief valves at main filler pipe.  |          |
| Electric fan               | Cuts in and cuts out automatically according to coolant temperature.  |          |
| Switching and control data | Thermostat: Starts to open at 85 °C.<br>Fan: Cut-in temperature at 105 °C<br>Coolant overheat warning light: comes on at 115 °C<br>Pressure relief valve: opens at 125 °C = 1.5 bar.<br>Vacuum relief valve: opens at 0.1 bar (during cooling phase).       |          |
| Lubricating system         | Pressurised oil circuit (driven by gear pump) with full-flow oil filter, pressure regulating valve on pump side and safety bypass valve, with additional filler action at full-flow oil filter (wet sump).  |          |
| Switching and control data | Oil pressure switch at 0.2...0.5 bar.<br>Pressure regulating valve at 5...6 bar. <i>→ 115 ?</i><br>Bypass valve in oil filter element at 2.2 +/- 0.3 bar.<br>The coolant and engine oil pumps are integrated as a central combined assembly in one housing. |          |

| <b>Transmission</b>                                  |    | <b>K 1</b>   | <b>K 100 RS</b> |
|--|----|--|-----------------|
| <b>Clutch</b>  |    | Single dry plate, mounted on output shaft and revolving in opposite direction to crankshaft, with lever-action disc spring, aluminium forged flywheel and asbestos-free clutch linings; responsive mechanical release action with low release forces, clutch lever force approx. 70 N. |                 |
| Clutch plate dia. $\varnothing$                      | mm | 180  |                 |
| <b>Gear box</b>                                      |    | Constant-mesh 5 speed gearbox with integral shock-absorber and weight-reducing aluminium components.   |                 |
| Gear ratios  |    | 1st = 4.497<br>2nd = 2.959<br>3rd = 2.304<br>4th = 1.879<br>5th = 1.611  |                 |
| <b>Power transmission from gearbox to rear wheel</b> |    | Propeller shaft encapsulated in single swing arm (BMW PARALEVER), with universal joint and integral torsion damper at gearbox and axle drive ends.   |                 |
| <b>Rear wheel drive</b>                              |    | Crown wheel and bevel pinion with palloid gear pattern running in antifriction bearings, with rear wheel attached directly to flange formed on back of crown wheel. Integral castellated ring and inductive transmitter supply ratio-independent pulses to electronic speedometer.     |                 |
| Final drive ratio (Standard version)                 |    | 2.75:1   | 2.82:1          |
| Number of teeth                                      |    | 33/12  | 31/11           |

| Frame and suspension                               |    | K 1   | K 100 RS |
|--|----|---|----------|
| <b>Frame</b>                                       |    | Single-section torsionally rigid lattice tube frame enclosing engine and gear box assembly as stressed element; not approved for sidecar attachment.  |          |
| Location of type plate and frame number            |    | On centre right frame tube strut.   |          |
| <b>Suspension</b>                                  |    |   |          |
| Front  |    | Long-stroke responsive telescopic fork with travel-dependent hydraulic dampers and progressive spring rates.  |          |
| Total spring travel                                | mm | 135   |          |
| Stanchion diameter                                 | mm | 41.7  |          |
| Rear   |    | Variable single swing arm made from high-strength light alloy with thrust rod support (BMW PARALEVER) and gasfilled spring strut (travel-dependent damping) with progressive spring rates, four-position setting to suit varying loads. |          |
| Total spring travel (at wheel)                     | mm | 140   |          |
| Swing arm length                                   | mm | 450   |          |
| <b>Max lock angle of front wheel</b>               |    | 2 x 27 °  | 2 x 34 ° |
| <b>Front wheel caster</b>                          |    |   |          |
| At unladen weight                                  | mm | 90  |          |
| In normal load position with 75 kg (165 lbs) rider | mm | 95  |          |



## Frame and suspension

K 1

K 100 RS

### Front wheel brake

Hydraulically operated twin disc brake with four piston fixed calipers, floating stainless steel brake discs and centered metal brake pads for fade-free wet braking.

S11

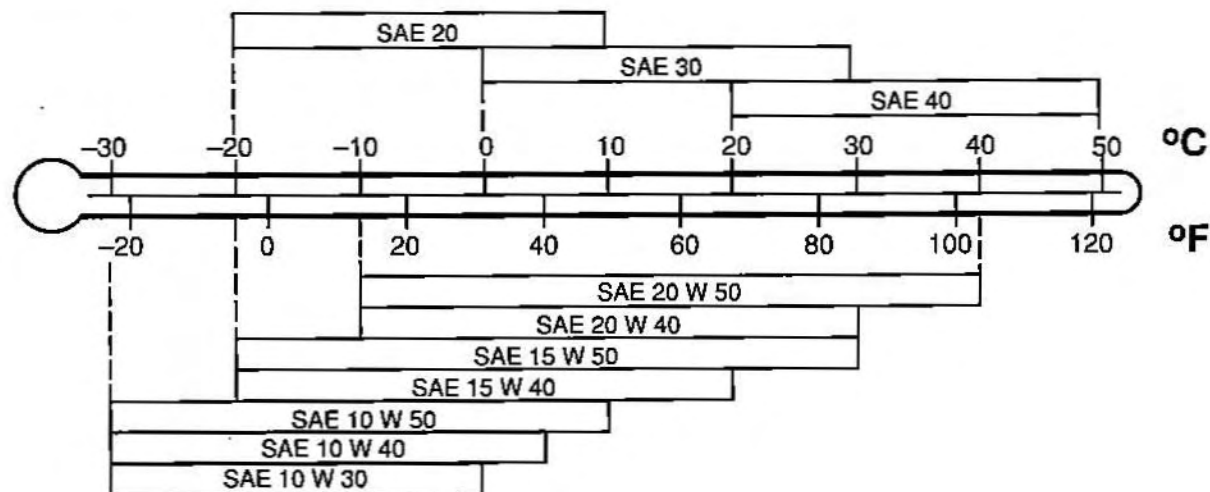
|                                     |                 |       |
|-------------------------------------|-----------------|-------|
| Brake disc diameter $\varnothing$   | mm              | 305   |
| Brake disc thickness                | mm              | 5     |
| Brake piston diameter $\varnothing$ | mm              | 32/34 |
| Actuating cylinder diameter         | mm              | 20    |
| Brake pad area                      | cm <sup>2</sup> | 100   |

### Rear wheel brake

Hydraulic fixed caliper disc brake partially integrated in rear wheel drive, with stainless steel brake disc, semi-metal brake pads fade-free in wet braking.

|   |                 |      |
|---|-----------------|------|
| Brake disc diameter $\varnothing$         | mm              | 285  |
| Brake disc thickness                      | mm              | 5    |
| Brake piston diameter $\varnothing$       | mm              | 38   |
| Actuating cylinder diameter $\varnothing$ | mm              | 12   |
| Brake pad area                            | cm <sup>2</sup> | 41.5 |

| <b>Frame and suspension</b>                      |       | <b>K 1</b>   | <b>K 100 RS</b>  |
|--|-------|--|--|
| <b>Wheels and tyres</b>                          |       | BMW light alloy cast wheels with U-spoke design, radial low-profile tyres.   |  |
| <b>Front wheel</b>                               |       | with inclined shoulder rim and double hump   |  |
| Size and designation                             |       | 3.50 - 17 MT - H2  |  |
| Tyre size and designation                        |       | 120/70 ZR 17 TUBELESS<br>Michelin A 59 X TL<br>Metzeler ME1 Front CompK<br>Dunlop K 455 FG<br>Dunlop Sportmax B<br>Bridgestone BT 53 F |  |
| <b>Rear wheel</b>                                |       | with inclined shoulder rim and double hump   |  |
| Size and designation                             |       | 4.50 - 18 MT - H2  |  |
| Tyre size and designation                        |       | 160/60 ZR 18 TUBELESS<br>Michelin A 59 X TL<br>Metzeler ME1 Front CompK<br>Dunlop K 455 A<br>Dunlop Sportmax<br>Bridgestone BT 53 R    |  |
| <b>Tyre pressures with cold tyres</b>            |       |  |  |
| One-up   | front | bar  | 2.2  |
|  | rear  | bar  | 2.5  |
| Two-up   | front | bar  | 2.5  |
|  | rear  | bar  | 2.9  |
| <b>Tyre tread depth (minimum recommendation)</b> |       |  |  |
| Front wheel                                      |       | mm   | 2  |
| Rear wheel                                       |       | mm   | 3  |
|  |       |  | <b>Caution</b><br><b>Note legal requirements concerning minimum tread depth.</b> |



## Oils and lubricants

### Engine oil

### K 1

### K 100 RS

Proprietary HT oil for spark-ignition engines of API Classification SE, SF, SG; combinations with CC or CD Specification.

Viscosity class related to outside temperature.

The temperature limits of the SAE classes may be exceeded for brief intervals.

In addition, we recommend use of SAE 5W50 HWB engine oil BMW Super Power for extreme conditions. All engine oils marketed by HWB are subject to constant BMW quality inspection.

### Engine oil capacities

without filter change

l (pints)

3.50 (6.16)

with filter change

l (pints)

3.75 (6.60)

| <b>Oils and lubricants</b>                                       |           | <b>K 1</b>  | <b>K 100 RS</b> |
|--|-----------|---|-----------------|
| <b>Gear oil</b>  |           | Proprietary Hypoid gear oil, API Class GL 5   |                 |
| <b>Gearbox capacity</b>  | l (pints) | 0.8 (1.4)   |                 |
| <b>Rear wheel drive capacity</b>                                 | l (pints) | 0.25 (0.44)   |                 |
| <b>Viscosity class at outside temperature</b>                    |           |   |                 |
| above 5 °C   | SAE       | 90  |                 |
| below 5 °C   | SAE       | 80  |                 |
| Alternatively  | SAE       | 80 W 90   |                 |
| <b>Telescopic fork oil – approved grades</b>                     |           | Esso Comfort → <i>Shell 10W</i><br>Aral SOFT (above 15 °C)<br>Aral HARD   |                 |
| <b>Capacity per fork leg</b>                                     | l (pints) | 0.40 +/- 0.01 (0.7 +/- 0.017)   |                 |
| <b>Steering bearing lubrication and other lubrication points</b> |           | Proprietary anti-friction grease, useful temperature range 30 °C...+140 °C, pour point 150 °C...230 °C, high corrosion protection, good water/oxidation resistance; e.g. Shell Relinax A. |                 |
| <b>Battery terminal posts - oxidation protection</b>             |           | Acid-free grease, e.g. Vaseline   |                 |
| <b>Brake fluid</b>   |           | ATE "SL"DOT4, Castrol Disc Brake, DOW ET 504 Shell Donax DOT4, Hydraulic DOT 4  |                 |
| <b>Engine coolant</b>  |           | Proprietary longlife antifreeze and corrosion inhibitor.  |                 |
|  |           | <b>Caution</b><br>Use only antifreeze and corrosion inhibitors free of nitrite!   |                 |
| <b>Capacity</b>  | l (pints) | 3 + 1 (5.3 + 1.76) (in expansion tank)  |                 |

| <b>Electrical system</b>           |      | <b>K 1</b>   | <b>K 100 RS</b> |
|------------------------------------|------|--|-----------------|
| <b>Battery</b>                     |      | BMW-Mareg  |                 |
| Voltage/capacity                   | V/Ah | 12/25  |                 |
| <b>Alternator</b>                  |      | Three-phase alternator with all-electronic voltage regulator, direct drive, ratio 1:1.5. |                 |
| Rating                             | W/V  | 460/14   |                 |
| <b>Starter motor</b>               |      | Permanent magnet version with 4 reduction gears (ratio 1:27) and freewheel.              |                 |
| Rating                             | kW   | 0.7  |                 |
| <b>Ignition timing (full load)</b> |      | °CS  |                 |
|                                    |      | 6...31 (advance)   |                 |
| <b>Firing order</b>                |      | Cyls.  |                 |
|                                    |      | 1-3-4-2  |                 |
| <b>Spark plugs</b>                 |      | M 12 x 1.25 thread   |                 |
| Approved makes and types           |      | Bosch XR 5 DC, Beru 12R-5 DU   |                 |
| Electrode gap                      |      | mm   |                 |
|                                    |      | 0.6 + 0.1  |                 |
| Wear limit                         |      | mm   |                 |
|                                    |      | 0.9  |                 |

| <b>Electrical system</b>                      |           | <b>K 1</b>   | <b>K 100 RS</b> |
|---|-----------|--|-----------------|
| <b>Circuit protection</b>                     |           | "Minifuse" (flatpin) fuses, 7 circuits   |                 |
| Load rating                                   | A         | 15   |                 |
| <b>Headlight</b>                              |           | Halogen rectangular headlight with two stage manual headlight beam throw adjustment. |                 |
| <b>Bulb</b>                                   |           |  |                 |
| Headlight high/dipped beam                    |           | H4 Halogen 55/60 W, asymmetric dipped beam   |                 |
| Parking light                                 | DIN 72601 | 12 V/ 4 W, standard designation T/4  |                 |
| Rear light: Tail light                        | DIN 72601 | 21 V/10 W, standard designation R 19/10  |                 |
| Brake light                                   | DIN 72601 | 12 V/21 W, standard designation P 25 - 1   |                 |
| Indicator lights                              | DIN 72601 | 12 V/21 W (4x), standard designation P 25 - 1  |                 |
| Indicator telltale lights                     | DIN 72601 | 12 V/ 4 W (2x), standard designation T 8/4   |                 |
| Other telltale lights and instrument lighting | DIN 72601 | 12 V/ 3 W (13x), standard designation W 10/3   |                 |

| <b>Dimensions</b>                                  |    | <b>K 1</b> | <b>K 100 RS</b> |
|--|----|------------|-----------------|
| <b>Overall length</b>                              | mm | 2230       |                 |
| <b>Width over mirrors</b>                          | mm | 875        |                 |
| <b>Width over handlebars (with weights)</b>        | mm | 740        | 700             |
| <b>Width over rider's footrests</b>                | mm | 640        | 620             |
| <b>Width over pillion footrests</b>                | mm | 700        |                 |
| <b>Max. height (excl. mirrors)</b>                 | mm | 1210       | 1260            |
| <b>Seat height at unladen weight</b>               | mm | 780        | 800 (760)       |
| <b>Wheel base</b>                                  |    |            |                 |
| at unladen weight                                  | mm | 1565       |                 |
| In normal load position with 75 kg (165 lbs) rider | mm | 1558       |                 |
| <b>Ground clearance</b>                            |    |            |                 |
| at unladen weight                                  | mm | 140        |                 |
| In normal load position                            | mm | 115        |                 |
| <b>Turning circle</b>                              | m  | 6.8        | 5,1             |
| <b>Tilt angle in normal load position</b>          | rd | 43° / 43°  | 46° / 46°       |



| <b>Weights</b>                                       |    | <b>K 1</b> | <b>K 100 RS</b> |
|--|----|------------|-----------------|
| Dry weight (without fuel, coolant, lubricant, tools) | kg | 234        | 235             |
| Unladen weight (ready for road, with full tank)      | kg | 258        | 259             |
| Gross weight limit                                   | kg | 480        |                 |
| <b>Wheel load limits</b>                             |    |            |                 |
| Front  | kg | 200        |                 |
| Rear   | kg | 290        |                 |
| <b>Axle load distribution front/rear</b>             |    |            |                 |
| at unladen weight                                    | %  | 49/51      |                 |
| in normal load position with 75 kg (165 lbs) rider   | %  | 46/54      |                 |

| <b>Performance</b>               |       | <b>K 1</b> | <b>K 100 RS</b> |
|----------------------------------|-------|------------|-----------------|
| <b>Top speed</b>                 |       |            |                 |
| Rider prone                      | km/h  | 240        | 232             |
| Acc. to type test                | km/h  | 240        | 230             |
| two-up                           | km/h  | 225        | 209             |
| after 400 metres                 | km/h  | 187        | 183             |
| <b>Acceleration</b>              |       |            |                 |
| 3rd gear 80 - 120 km/h           | s     | 3.28       |                 |
| 4th gear 80 - 120 km/h           | s     | 4.36       |                 |
| 5th gear 80 - 120 km/h           | s     | 5.28       |                 |
| <b>Noise level when riding</b>   |       |            |                 |
| Acc. to 78/1015/EEC mod.         | dB(A) | 81         |                 |
| <b>Noise level at standstill</b> |       |            |                 |
| Acc. to 78/1015/EEC mod.         | dB(A) | 98         |                 |

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