OWNER'S HANDBOOK

INCAS

7.88

Art.Nr. 201.43

INTRODUCTION

We would like to congratulate you on your purchase of a KTM motorcycle. Your trust in us will be rewarded by a motorcycle of the highest quality developed from years of experience.

This handbook will provide you with important information on the operation and maintenance of your new KTM and has been written to cover the newest versions. However, the right to modifications in the interest of technical improvements is reserved without updating the current issue of Owner's Handbook.

We strongly suggest that you read this handbook carefully and completely before you take your first ride. Also, pay special attention to warnings and notes.

IMPORTANT: If you don't follow this point, injuries can occure.

CAUTION: If you don't follow these points, parts can be damaged on the motorcycle.

NOTE: These points include basic adjustments and useful hints.

Many motorcyclists are well versed in motorcycle mechanics so that they will be able to carry out maintenance work on their motorcycles themselves. The work marked by * in the section „Maintenance Work on Chassis and Engine" requires detailed knowledge and should not be performed by laymen.

Have services and maintenance work carried out by a KTM garage so that your warranty claim is safeguarded and your KTM can always perform at its best.

KTM MOTOR-FAHRZEUGBAU
Aktiengesellschaft
A-5230 MATTIGHOFEN

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ATTACHMENTS: 1 parts poster - chassis
1 parts poster - engine (with techn. data)

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IMPORTANT – safety warnings

- Gasoline is highly flammable and poisonous. Extreme caution should be used when working with gasoline. Do not refuel the motorcycle with the engine running. Take special care to not spill gasoline on the engine or exhaust pipe while the motorcycle is hot, wipe up spills promptly. If gasoline is swallowed, inhaled, or splashed into the eyes contact a physician immediately.
- Motorcycle engines produce a great amount of heat while running. The engine, exhaust pipe, muffler, brake rotors, and shock absorbers can become very hot. Do not touch any of these parts after operating the motorcycle, and take care to park it where pedestrians are not likely to touch it and get burned.
- Do not start the engine and allow it to idle in a closed area. Exhaust fumes are poisonous and can cause loss of consciousness and death. Always provide adequate ventilation while the engine is running.
- Motorcycles react sensitively to changes in weight distribution. Incorrect lading or fitting of accessories can lead to unstable driving performance.
- Remember to dress for the ride. Smart KTM riders always wear a helmet, boots, gloves and a jacket every time whether it's a day tour or just a quick trip down the road.
- If possible check level of cooling liquid when engine is cold. If you have to open the radiator cap when engine is hot, use a rage to cover the cap and open slowly to release pressure.
- Change brake fluid at least once a year. If M/C is being washed very often, change brake fluid more often. Brake fluid has the ability to absorb water; therefore, if the brake fluid is „old" it will build water bubbles already by low temperature. This will cause the brake system to fail.
- KTM motorcycles are filled with DOT 4 brake fluid. Only use DOT 4 brake fluid to top up – never DOT 5.
- The brake fluid reservoirs on the front and rear wheel brakes have been designed in such a way that even if the brake pads are worn it is not necessary to top up the brake fluid. If the brake fluid level drops below the minimum either the brake system has a leak or the brake pads are completely worn down.

CAUTION – hints to the motorcycles

- Only use unleaded super gasoline with 95 octane or leaded super gasoline with 98 octane. Under no circumstances should you use gasoline with less than 95 octane.
- Check engine oil level regularly. If possible for every ride.
- Only use fully synthetic engine oil for engine lubrication.
- Ride your motorcycle with low but changing load the first 1000 km (625 miles).
- Don't ride your motorcycle with full load and don't rev engine when cold. Because the piston is warming up faster than the water cooled cylinder, it can cause engine damage.
- Never kick kickstarter if the spark plug/ignition cable is not connected, the ignition system can be damaged.
- Never leave the parking light on for longer than 90 minutes when the motorcycle is parked. The battery will become very low and be damaged if the light is left on for any longer.
- In order to ensure that the tank is bled, the bleeding hose on the tank cap must always be installed without bending.
- Check mounting screws should abnormal vibrations occur during the ride.
- The fuel cocks should be locked whenever the motorcycle is parked. If the cocks are not closed the carburettor may overflow and fuel get into the engine.
- Never use teethed lockwashers on the mounting screws only self securing nuts. Teeth washers or spring washers can work themselves into the frame parts and become loose.
- If you remove the rear axle, always grease the axle and alu-nut to prevent the threads from getting locked.
- Avoid using pressure washer when cleaning M/C. Water can get into carburetor, electricity, etc.
- Everytime you wash your M/C, re-grease the grease nipples, to make sure water which might be trapped inside the pivot get pressed out.
- For the cooling system only use high-grade anti-freeze agent by a premix ratio of 2:1 with water. Using lower-grade anti-freeze agent, it can come to corrosion and building up of foam.
- Don't let brake fluid get in touch with paint, it is an effective paint remover.
- Only use ORIGINAL KTM SPARE PARTS if it is necessary to replace parts.

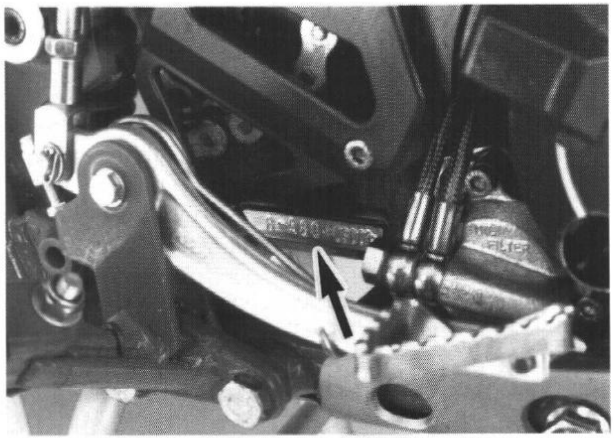
Operation instruments

Frame number

The frame number is stamped on the right side of the steering head tube.

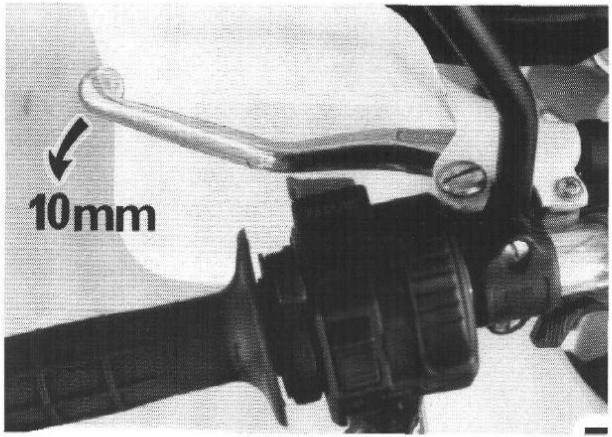
Engine number, Engine type

The engine number and engine type are stamped on the right hand side of the engine below the chain sprocket.



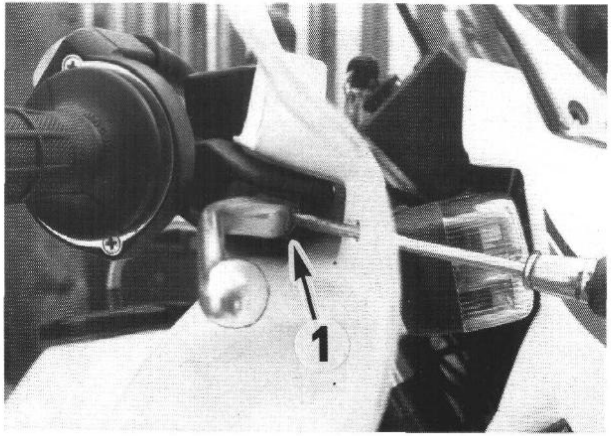
Clutch control lever

The clutch control lever is fitted on the left hand side of the handle bar. The lever should always exhibit a play of approx. 10 mm (measured at outer edge).



Setting pressure point at hand brake lever

The hand brake lever is fitted on the right hand side of the handlebar.
It is possible to adjust the position of the pressure point on the hand brake lever. The pressure point is understood to be the resistance felt at the hand brake lever when the brake pads are applied to the brake disc.
The position of the pressure point can be adjusted to suit any hand size by means of the adjustment screw (1) which can be reached with a screwdriver through the hole in the hand guard.



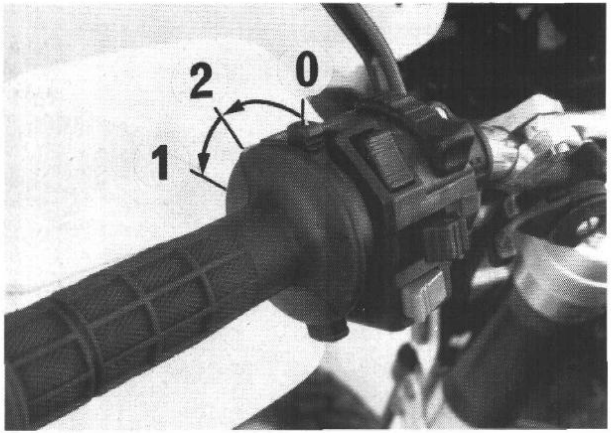
Choke ring

The choke ring is located on the left hand side of the handlebar next to the combination switch. It actuates the starting device in the carburettor via a control cable. The choke ring can be locked in 2 positions.

0 = Home position – cold start device at carburettor disengaged

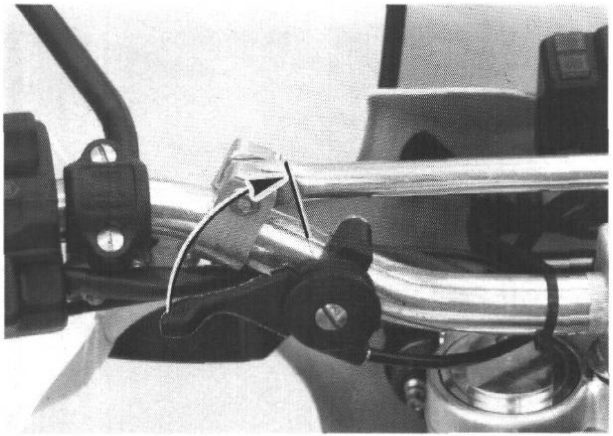
1 = Choke ring fully opened. In this position a „rich" fuel/air mixture is produced in the carburettor necessary for a cold start.

2 = Choke ring half opened. In this position the fuel/air mixture is not as „rich" as in position 1.



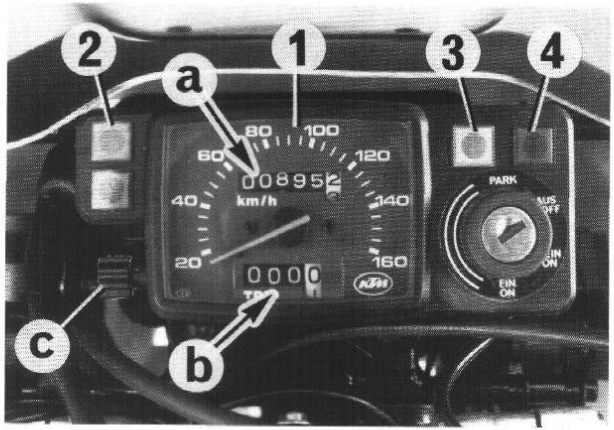
Decompression lever

The decompression lever is used to locate the start position for the piston (best position for the start operation).
Turn decompression lever approx. 90° in clockwise direction. If the decompression lever is locked in this position the piston is in an unfavourable position for the start operation. In order to bring the piston into start position the kickstarter must be moved slowly until the decompression lever springs back to home position.
If the decompression lever is not locked in position, position piston to compression (move kickstarter until a resistance is felt), actuate decompression lever once again (this is now locked) and move kickstarter slowly until the start lever springs back to home position.



Speedometer, control lamps

The mileage indicator (a) in the speedometer (1) indicates overall mileage. The day mileage indicator (b) can be set to 0 by means of the adjustment wheel (c). Turn back the adjustment wheel until only zeros can be seen in the display.
The red control lamp (2) begins to light up once the cooling water temperature has reached 110° C.
The yellow control lamp (3) flashes when the indicator is working in the same rhythm as the flashing indicator.
The blue control lamp (4) lights up when the high beam is on.
The green control lamp is a dummy.



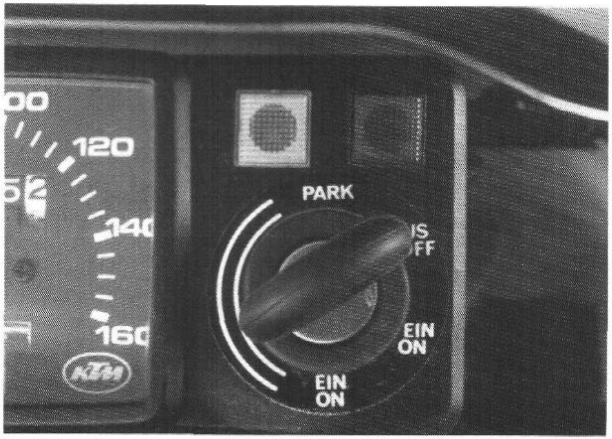
Ignition lock

The ignition lock has 4 switch positions.

OFF = Ignition off, the ignition key can be withdrawn from the ignition lock in this position.

ON = Ignition on, the engine can be started. It does not matter which of the two ON positions has been selected.

PARK = Ignition off, parking light on (if the light switch on the combination switch is turned to P or H). The ignition key can also be withdrawn in this position.



Combination switch

The combination switch contains the operating elements for the electrical system.

The light switch (1) has 3 switch positions.

- ● = Light off
- P = Parking light on if the ignition lock is in position PARK. Engine running or stopped.
  CAUTION:
  Never leave the parking light on for longer than 90 minutes when the motorcycle is parked. The battery will become very low and be damaged if the light is left on for any longer.
- H = Parking light on, main light on. Only when engine is running.

The rocker switch (2) actuates the high beam and low beam.

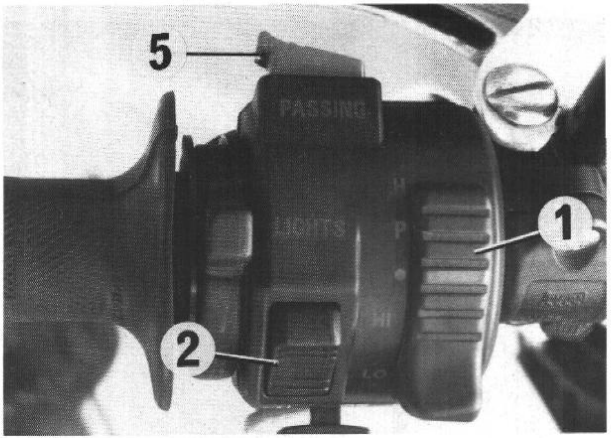
- HI = High-beam light
- LO = Low-beam light

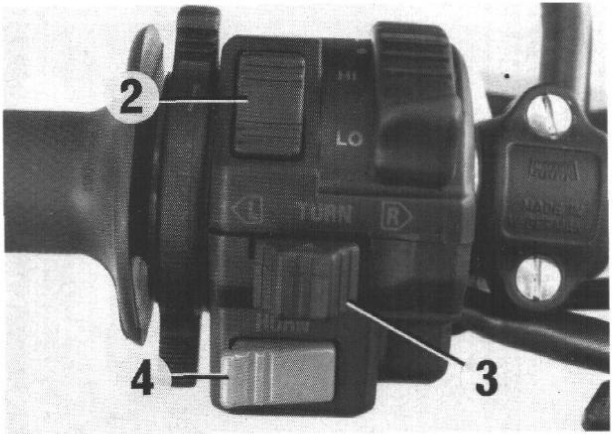
The indicator switch (3) returns to central position after actuation. Press indicator switch towards switch housing to switch off the indicator.

- L = Indicator left
- R = Indicator right

The horn is sounded with button (4).
The light signal (high beam) is actuated with button (5).

NOTE:
The engine must be running in order to be able to check that all current consumers are functioning correctly.





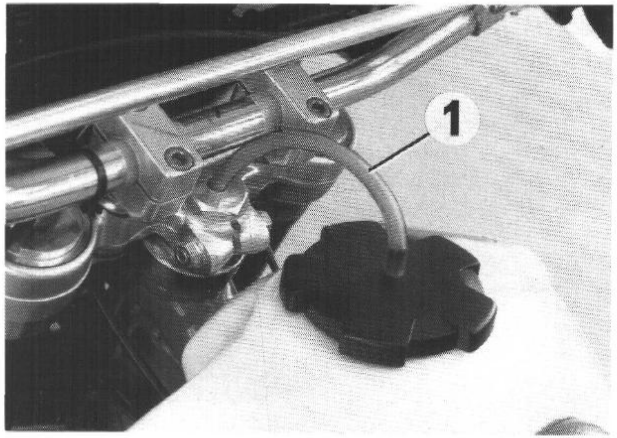
Filler cap

The filler cap has a bayonette lock.
To open: Fully turn cap to left and remove.
To close: Position cap and fully turn to right.

IMPORTANT:
Gasoline is highly flammable and poisonous. Extreme caution should be used when working with gasoline. Do not refuel the motorcycle with the engine running. Take special care to not spill gasoline on the engine or exhaust pipe while the motorcycle is hot, wipe up spills promptly. If gasoline is swallowed, inhaled, or splashed into the eyes contact a physician immediately.

CAUTION:
Only use unleaded super gasoline with 95 octane or leaded super gasoline with 98 octane. Under no circumstances should you use gasoline with less than 95 octane.

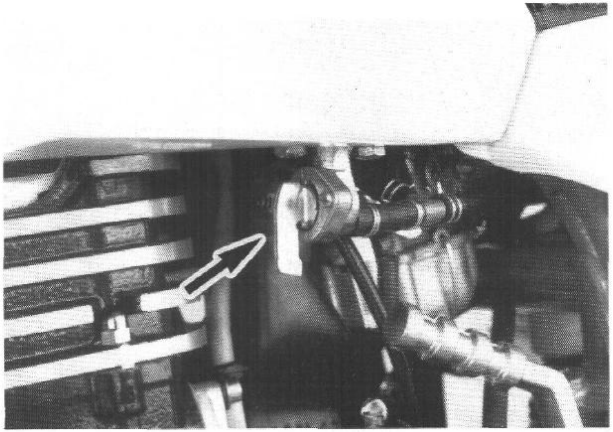
CAUTION:
In order to ensure that the tank is bled, the bleeding hose on the tank cap must always be installed without bending.



Fuel cocks

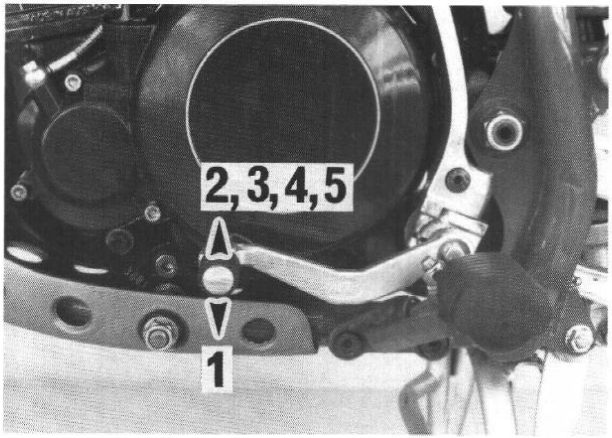
The fuel cocks are closed in the OFF position. When the vehicle is running the twist grips are brought to the ON position. In this position the fuel tank is emptied leaving a reserve of 4.2 litres. This reserve is only used in the RES position.

CAUTION:
The fuel cocks should be locked whenever the motorcycle is parked. If the cocks are not closed the carburettor may overflow and fuel get into the engine.



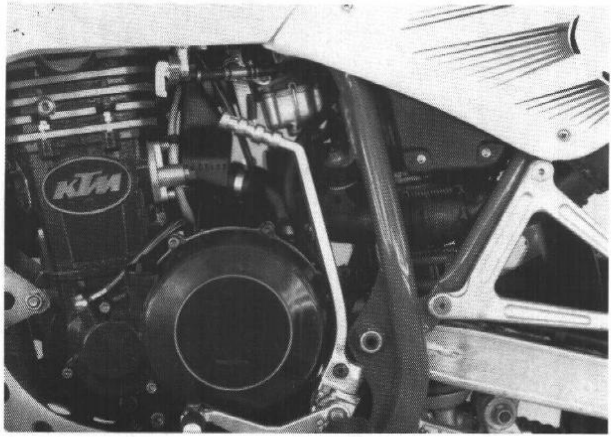
Shift lever

The shift lever is mounted on the left side of the engine. The position of the gears is shown in the illustration. Idling is located between the first and second gear.



Kickstarter

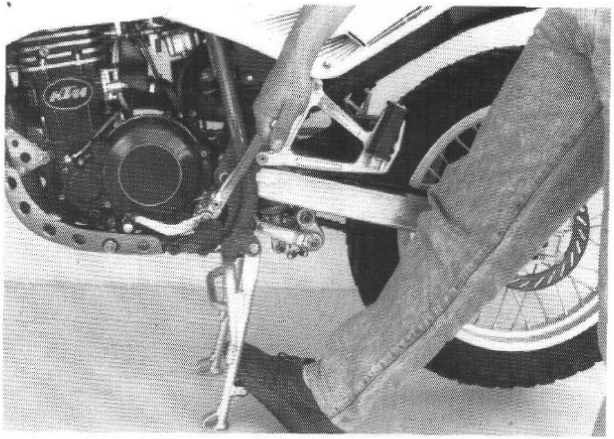
The kickstarter is mounted on the left side of the engine. The upper part can be swivelled.



Main stand

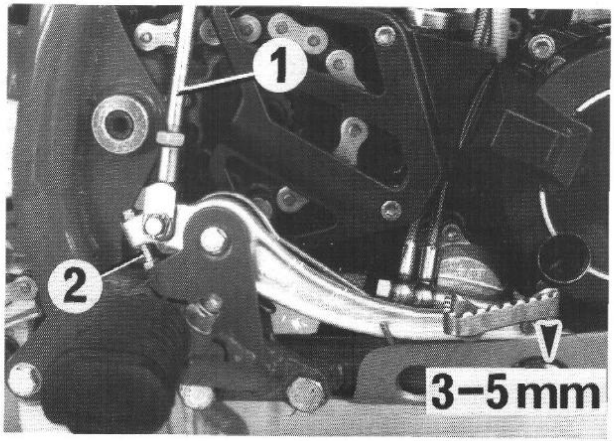
We advise the following procedure to place the motorcycle on the main stand as effortlessly as possible:

a) Press main stand to ground using foot
b) Swing out kickstarter and position rear of motorcycle at an angle (see illustration).



Rear brake lever

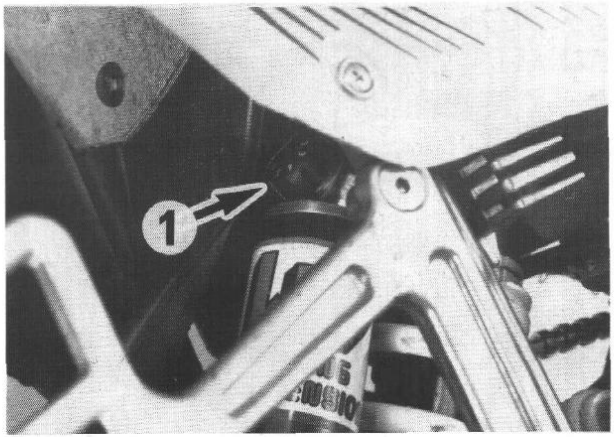
The rear brake lever is mounted on the right, adjacent to the engine. The free play on the rear brake lever (measured at outer edge), should be 3–5 mm. Only then, the push rod (1) can move the piston in the rear brake cylinder (indicated by increased resistance on rear brake lever). If the free play is not 3–5 mm, pressure will build up in the brake system when engine is running and the back wheel will lock.
By adjusting the push rod and the hexagon screw (2), the basic position of the rear brake lever can be changed.



Shock absorber compression setting

The shock absorber damping level can be adjusted at the spring strut. A 7-stage ratchet adjuster (1) is located at the spring strut reservoir. The adjuster enables the rear wheel suspension system to be adapted to different requirements. The ratchet adjuster can best be reached by reaching through the right foot peg holder using your left hand. Turning the adjuster in a clockwise direction produces a harder compression turning in an anti-clockwise direction produces a softer compression.

BASIC SETTING: SETTING 1

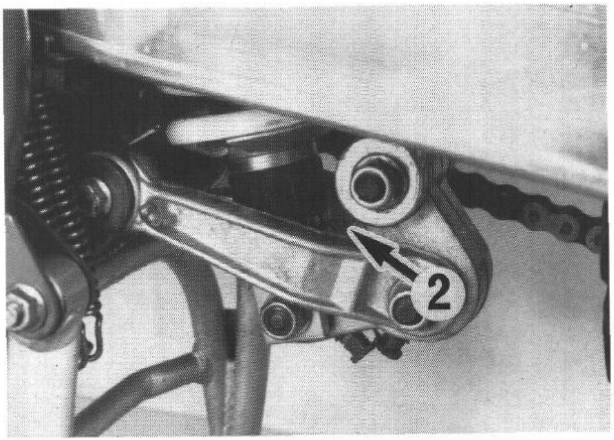


Shock absorber rebound setting

The shock absorber rebound setting comprises 11 positions. The 11-position ratchet adjuster (2) is located beneath the spring retaining washer.

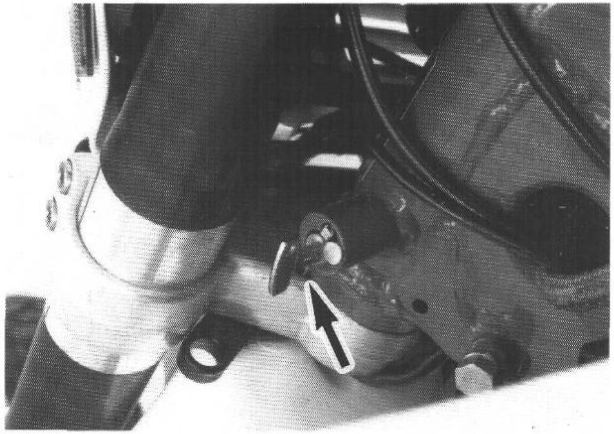
Shock absorber position 1 = low setting (fast shock absorber return)
Shock absorber position 11 = high setting (slow shock absorber return)

BASIC ADJUSTMENT: SETTING 3



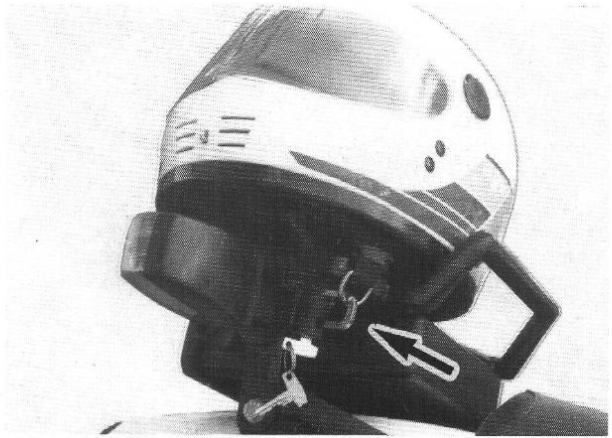
Handlebar lock

The handlebar can be locked by means of the lock located on the control head. Fully turn handlebar to right to lock, insert key, turn to left, press in, turn to right and withdraw.



Helmet lock

The helmet lock is located on the right hand side of the luggage rack. Insert key and open helmet lock, then attach helmet and relock helmet lock.



Tool box compartment

The tool box compartment is located beneath the luggage rack.
When locking the tool box compartment it must be ensured that the complete cover is fitted correctly on the tool box compartment.

Riding Instructions

Before starting off

In the interests of riding safety you should get used to checking your motorcycle each time before starting off.
The following checks should be made:

1 Check engine oil level.
2 Check fuel level in tank and ensure that the tank bleeding hose is free from bends when closing the filler cap.
3 Check tension, condition and lubrication of the chain.
4 Check tyres for damage, check tread, check tyre pressure.
5 Check that brakes are functioning correctly, check brake fluid level in the reservoirs, check brake pads for wear.
6 Check that control cables are working smoothly, check play of clutch lever.
7 Check coolant level.
8 Check that electrical system is in correct order (carry out this check when the motor is running).

ATTENTION:

- Remember to dress for the ride. Smart KTM riders always wear a helmet, boots, gloves and a jacket whether it's a day trip or just a quick trip down the road.
- Motorcycles react sensitively to changes in weight distribution. Incorrect lading or fitting of accessories can lead to unstable driving behaviour.
- Do not start the engine and allow it to idle in a closed area. Exhaust fumes are poisonous and can cause loss of consciousness and death. Always provide adequate ventilation while the engine is running.

Starting procedure for cold engine

1 Open gasoline cocks
2 Switch on ignition
3 Fully actuate choke ring
4 Set piston to start position. Pull decompression lever
   a) If the decompression lever is locked, slowly move kickstarter until the decompression lever springs back to home position.
   b) If the decompression lever is not locked, release decompression lever, set piston to compression (move kickstarter until slight resistance is felt), pull decompression lever once again (this is now locked) and slowly move kickstarter until the decompression lever springs back to home position.
5 Move kickstarter to home position. Leave throttle closed and strongly kick the starter **all the way** down.
6 a) If the engine starts the choke ring must be half-opened as soon as the engine starts to splutter.
   b) If the engine fails to start, repeat steps 4-6.

Starting procedure for warm engine

1 Open gasoline cocks
2 Switch on ignition
3 Set piston to start position (see above)
4 Move kickstarter to home position, leave throttle closed and kick the starter **all the way** down.
5 If the engine fails to start, repeat steps 3–5.

By driving on

Pull clutch lever in, put motorcycle in first gear, let clutch lever go slowly and at the same time give gas.

Shifting / Riding

You are now in first gear, refered to as the drive or uphill gear. Depending on the conditions (traffic, hill size, etc.), you can shift to a higher gear. Turn of gas, at the same time pull clutch lever in and shift to the next higher gear. Let clutch lever go again and give gas. If you turned on the choke, make sure you turn it off again as soon as engine is warm.
When you reach full speed through opening the throttle all the way, turn throttle back to 3/4; the speed hardly decreases although the engine will use less gas. Only give as much gas as the engine can handle. Through quick and high reving of throttle, the gas usage increases. By shifting down, use the brakes if necessary and turn off gas at the same time. Pull clutch lever and shift down to the next gear. Let clutch lever go slowely and give gas or shift down again.

CAUTION:

- Don't ride your motorcycle with full load and don't rev engine when cold. Because the piston is warming up faster than the water cooled cylinder, it can cause engine damage.
- Check mounting screws should abnormal vibrations occur during the ride.

Braking

Turn off gas and brake with front and rear brake at the same time. In sandy, wet, and slippery conditions, use mainly the rear brake. Brake carefully to avoid locking of the wheels which can lead to spinning of the motorcycle or even crashes.

Stoping and Parking

Brake motorcycle and put transmission into neutral. Turn off engine ignition switch, close fuel cocks and lock motorcycle when parking.

CAUTION:

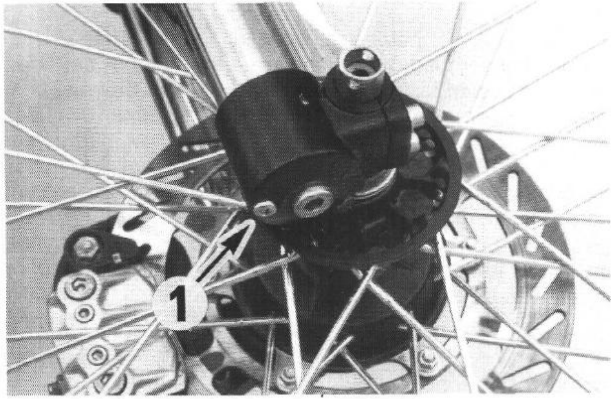
- Never leave the parking light on for longer than 90 minutes when the motorcycle is parked. The battery will become very low and be damaged if the light is left on for any longer.
- The fuel cocks should be locked whenever the motorcycle is parked. If the cocks are not closed the carburettor may overflow and fuel get into the engine.

IMPORTANT:

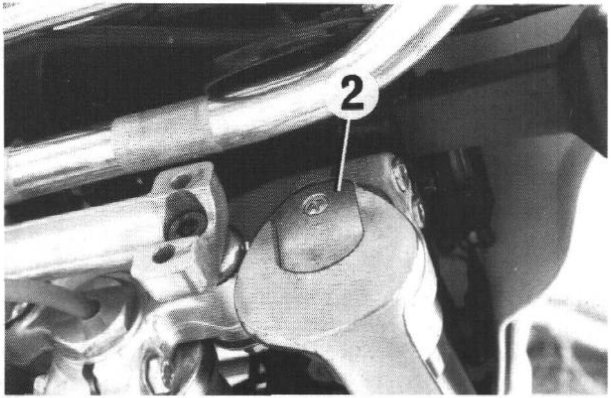
- Gasoline is highly flammable and poisonous. Extreme caution should be used when working with gasoline. Do not refuel the motorcycle with the engine running. Take special care to not spill gasoline on the engine or exhaust pipe while the motorcycle is hot, wipe up spills promptly. If gasoline is swallowed, inhaled, or splashed into the eyes contact a physician immediately.
- Motorcycle engines produce a great amount of heat while running. The engine, exhaust pipe, muffler, brake rotors, and shock absorbers can become very hot. Do not touch any of these parts after operating the motorcycle, and take care to park it where pedestrians are not likely to touch it and get burned.

Changing fork oil*

The fork oil should be changed after a long trip.
Remove screws (1) and allow oil to drain into a pan. After approx. 15 minutes pump chrome tube a couple of times to push all of the oil out of the damping part and replace screws.



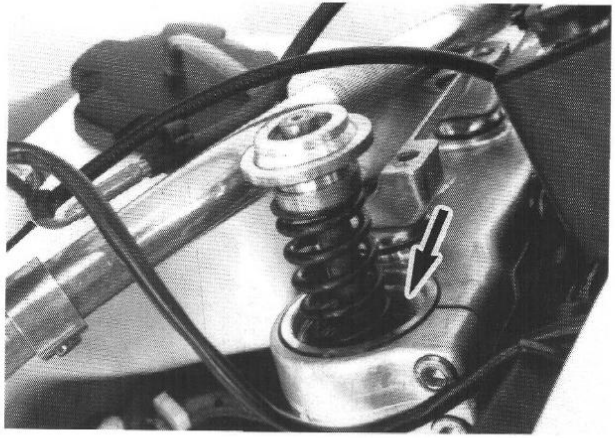
Jack up motorcycle on frame so that the front wheel is free. Remove the two handlebar connectors and swing out handlebar to rear. Unscrew the two screws (2) using a 32 mm open end wrench and telescope the fork 100 mm.



The shock oil can now be filled.

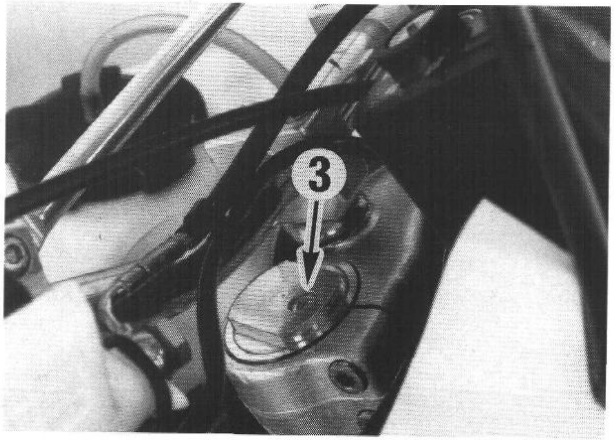
Fill quantity: 390 cm^3 shock oil SAE 10 per fork leg

Reposition fork, replace screws, mount handlebar and check fork for leaks.



Allowing fork airpressure to escape

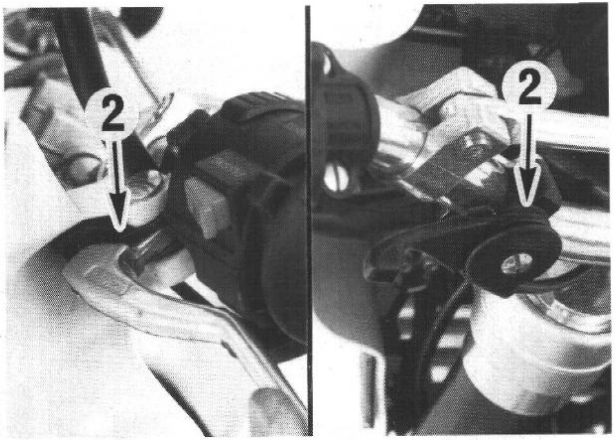
Airpressure can build up in the fork during riding. This leads to „hard" suspension during the ride. From time to time the two bleeding screws (3) in the caps should therefore be loosened so that any airpressure can escape. The airpressure builds up more quickly the more worn the fork seals are.

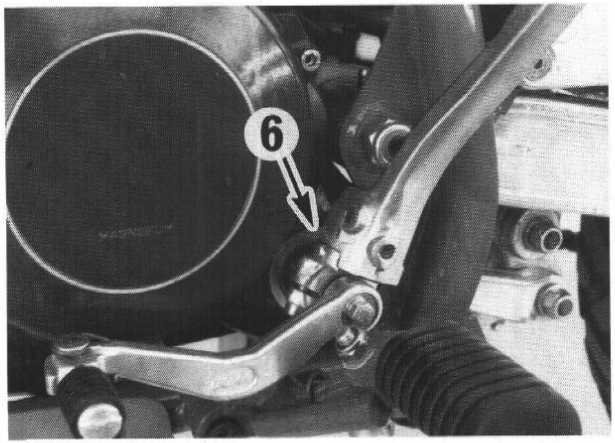


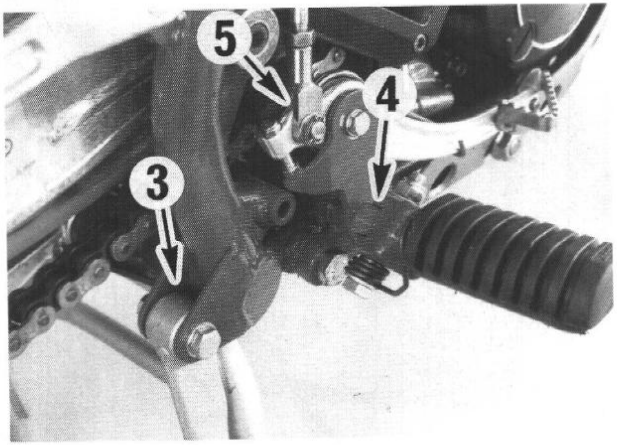
Lubricating the motorcycle

Every time the motorcycle is thoroughly cleaned the grease nipples and all bearings should be greased.

1 Grease the grease nipples of the suspension linkage and swingarm pivot
2 Oil moving parts of the hand lever
3 Oil stand bearings
4 Oil foot peg at bearings
5 Oil pressure rods on foot brake lever
6 Oil moving parts of the kickstarter
7 Grease chain with chain spray



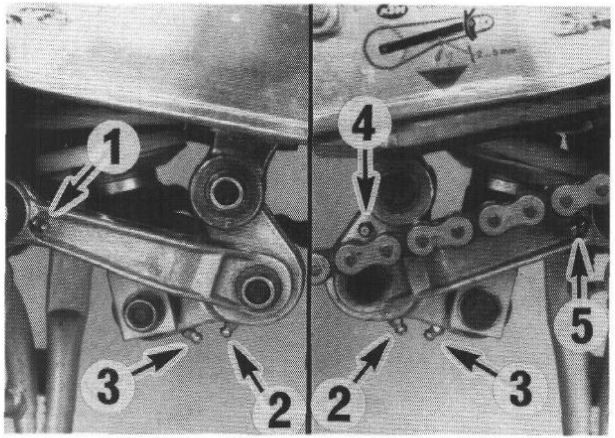


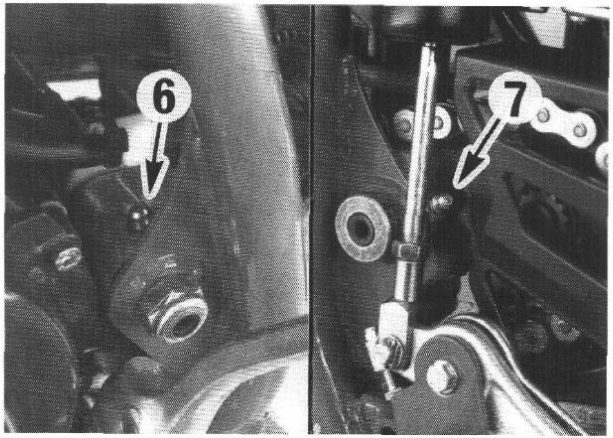


Grease swingarm pivot and suspension linkage

Grease nipples are mounted on the suspension linkage and swingarm pivot. These fittings must be re-greased periodically to prevent water and dirt from getting into the pivots. To do so, will save expensive repairs in the long run.

CAUTION:
After each time the motorcycle is washed, it is especially important to grease the fittings to push any water out of the bearing.

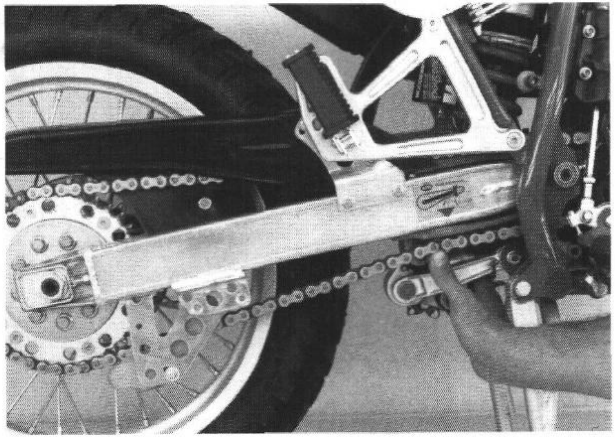




Chain tension, chain maintenance

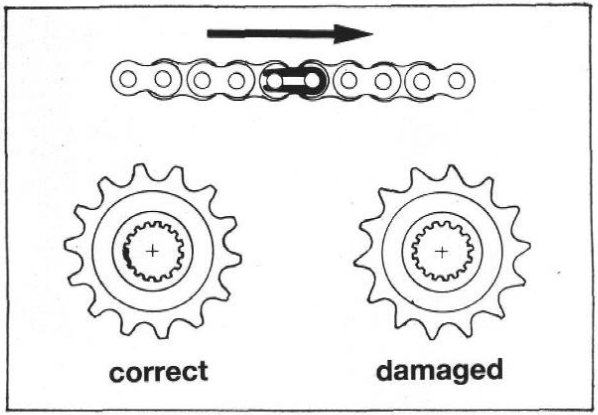
The chain should be so loose that when transmission is in neutral the distance between chain and chain guide is 2–5 mm.
In order to tension the chain the axle nut must be loosened using the universal spanner supplied, the counter-nuts of the tension screws loosened and the tension screws left and right turned by the same amount. Check whether the rear wheel is aligned with the front wheel, correct if need be, tighten counter-nuts of the tension screws and axle nut.

For long chain life, good maintenance is very important. Maintenance has been reduced to a minimum for O-ring chains as featured in this motorcycle. The best way to clean O-ring chains is to use lots of water, but never use brushes or cleaning liquids. After allowing the chain to dry, you can use a special O-ring chain spray.



CAUTION:
When mounting the chain masterlink clip, the closed side of the masterlink clip must point in running direction.
Also check sprockets and chain guides for wear, and replace if necessary.

NOTE: If you mount a new chain, the sprockets should also be replaced. New chains wear fastet if used on old used sprockets.



DISC BRAKES

In general

Disc brakes adjust automatically. Readjustment is therefore not necessary. It is only necessary to check the brake fluid level and the wear of the brake pads regularly.
The brakes use a „floating" mount. This means that the brake calipers are not solidly attached to the fork or caliper carrier which enables it to „float" for maximum braking contact.

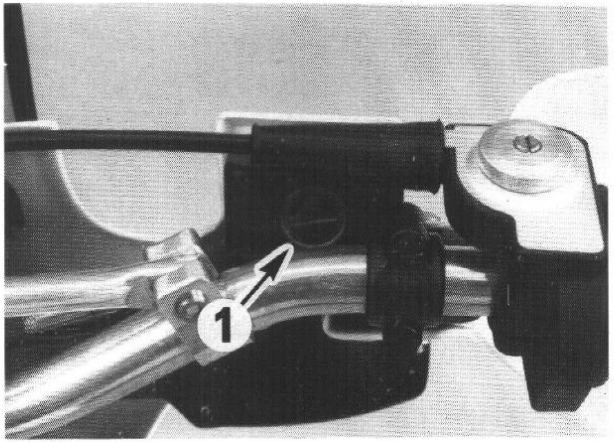
IMPORTANT:

- The brake fluid reservoirs on the front and rear wheel brakes have been designed in such a way that even if the brake pads are worn it is not necessary to top up the brake fluid. If the brake fluid level drops below the minimum either the brake system has a leak or the brake pads are completely worn down.
- Change the brake fluid at least once a year. If the motorcycle is washed very often, change brake fluid more often. Brake fluid has the ability to absorb water; therefore, if the brake fluid is „old" it will cause the brake system to fail.
- Only use DOT 4 brake fluid to top up – never DOT 5.
- All work on the braking system should be performed by a KTM garage.

CAUTION:
Don't let brake fluid get in contact with paint, it is an effective paint remover.

Checking the brake fluid level – front brake

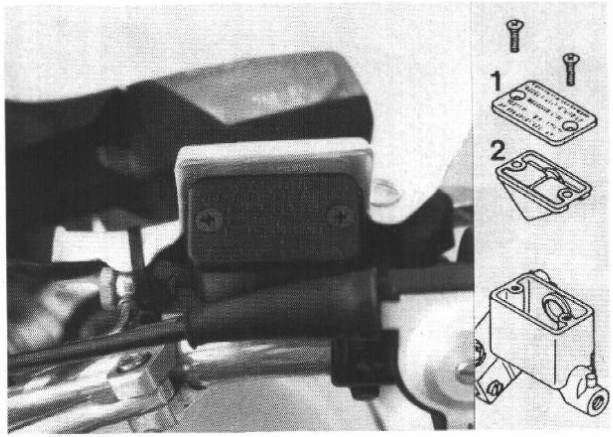
The brake fluid reservoir is linked with the hand brake cylinder at the handlebar and the reservoir is provided with an inspection glass (1). With the reservoir in a horizontal position, the brake fluid level should not fall below the centre of the glass.



Topping up the brake fluid on the front brake*

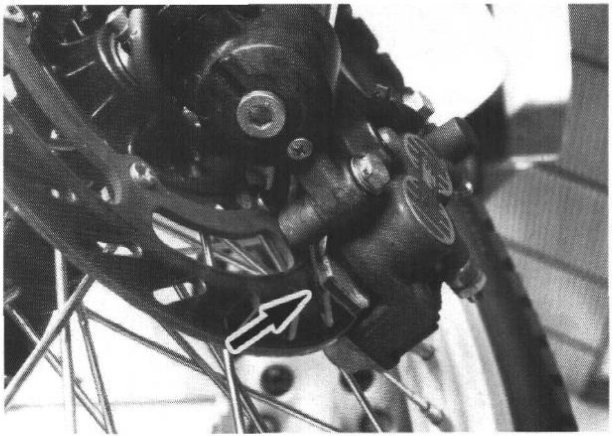
IMPORTANT: The brake fluid reservoir at the hand brake cylinder has been designed in such a way that even if the brake pads are worn it is not necessary to top up the brake fluid. If the brake fluid level drops below the minimum either the brake pads are completely worn down.

Should it, nevertheless, be necessary to top up the brake fluid the two vertical screws must be removed and the cover (1) with rubber joint (2) removed. Top up horizontal brake fluid reservoir to 3 mm below top edge with fresh brake fluid DOT 4 and replace cap with rubber joint. There should be as little air as possible in the brake fluid reservoir.



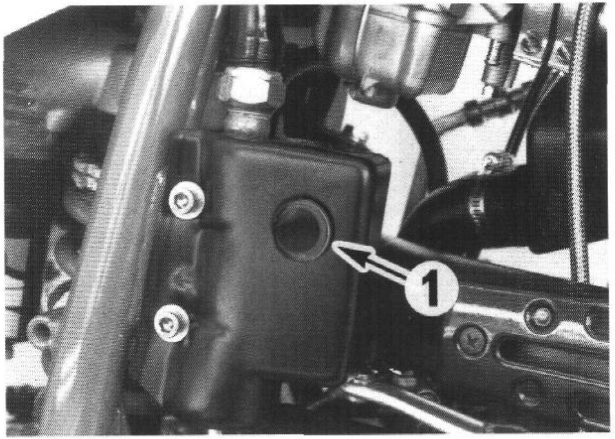
Checking the brake pads on front wheel

The brake pads of the front wheel brake must be inspected from beneath. Brake pad thickness should never fall below 1 mm.



Checking the brake fluid level on rear wheel

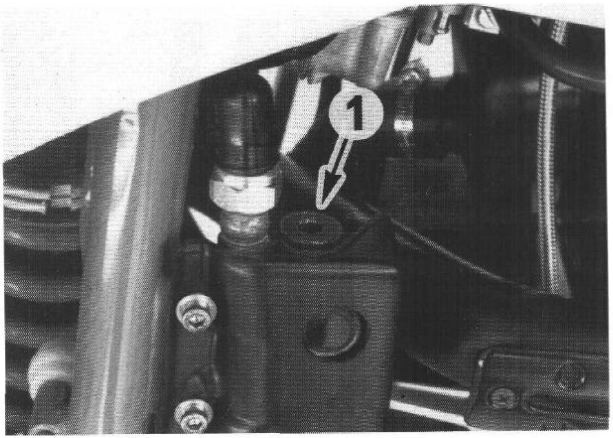
The brake fluid reservoir is linked with the foot brake cylinder and the reservoir is provided with an inspection glass (1). With the reservoir in a vertical position, the brake fluid level should not fall below the centre of the glass.



Topping up the brake fluid on the rear brake*

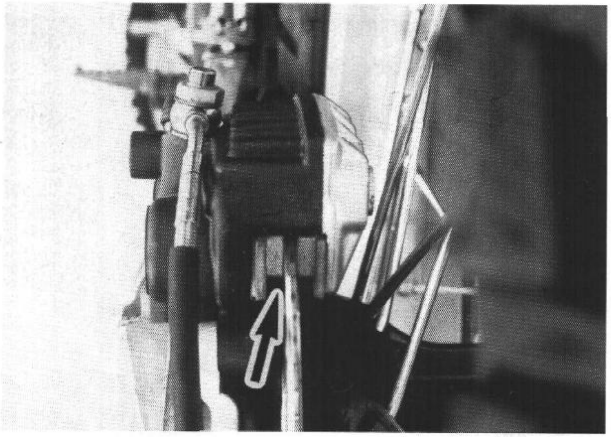
IMPORTANT: The brake fluid reservoir at the foot brake cylinder has been designed in such a way that even if the brake pads are worn it is not necessary to top up the brake fluid. If the brake fluid level drops below the minimum either the brake system has a leak or the brake pads are completely worn down.

Should it, nevertheless, be necessary to top up the brake fluid remove cap (1) using an 8 mm hexagonal head wrench. Top up brake fluid reservoir with fresh brake fluid DOT 4 and replace cap.



Checking the brake pads on rear wheel

The brake pads of the rear wheel brake are to be inspected from beneath. Brake pad thickness should never fall below 1 mm.



Fitting and dismantling the front wheel

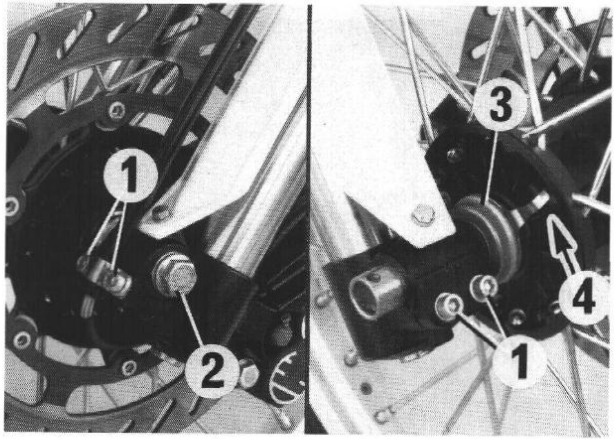
Dismantling

Jack up motorcycle frame so that there is no load on the front wheel. Loosen pinching screws (1) on the fork ends and remove hexagon head cap screw (2) from the axle. Pull out axle, move front wheel forward a little and remove speedometer drive (3) from the hub, remove front wheel from the fork.

Fitting

Position front wheel in the fork, position speedometer drive on the hub in such a way that the driver fits into a recess (4); guide brake disc into brake caliper, mount axle and hexagon head cap screw and tighten. Actuate hand brake lever and pump fork strongly a few times so that the fork elements are aligned. Tighten pinching screws at the fork ends.

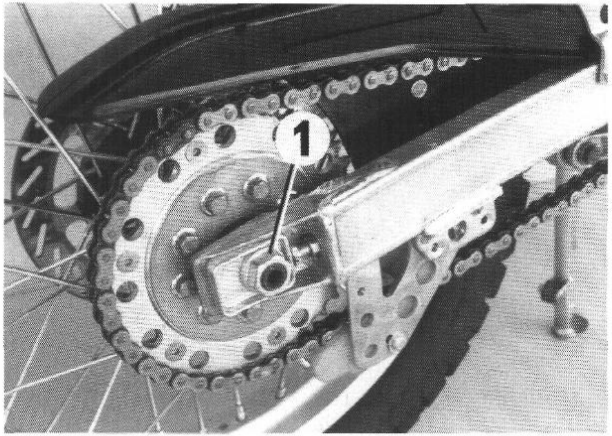
IMPORTANT:
Hand brake lever must be actuated after the front wheel is fitted so that the brake pads are applied to the brake disc.



Fitting and dismantling the rear wheel

Dismantling

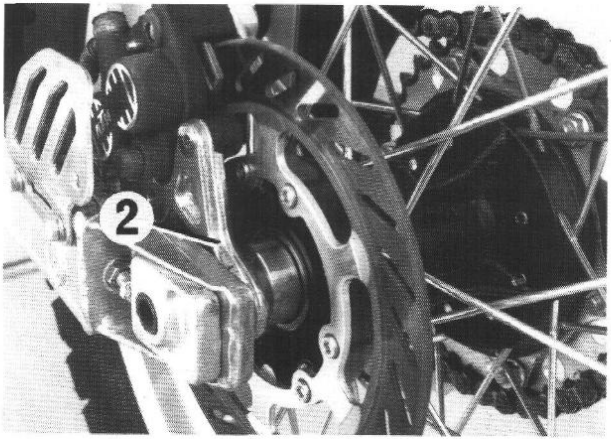
Place motorcycle on main stand. Unscrew hexagon nut (1) and pull out axle until the brake carrier (2) is still held, but the wheel is free. Push rear wheel to front a little, remove chain from chain wheel and remove rear wheel from swingarm.



Fitting

Lift rear wheel into the swingarm and guide brake disc into brake caliper. Position chain and push on axle. **Clean thread of axle and hexagon nut and regrease.** Fit hexagon nut, check whether the rear wheel is aligned with the front wheel and tighten hexagon nut.

ATTENTION:
The foot brake must be actuated after the rear wheel has been fitted so that the brake pads are applied to the brake disc.

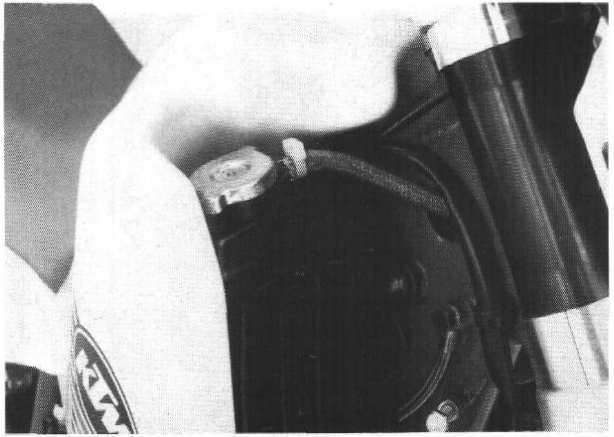


Cooling system

The cooling system is filled with approx. 1 Liter (0.22 gal.) cooling liquid. The coolant consists of a 2:1 mixture of antifreeze and water. In addition to frost protection, it ensures good corrosion resistance, and therefore should never be replaced with plain water.
The electrical water pump ensures forced circulation of the coolant. The water pump turns on as soon as the engine starts to run and the generator begins to produce energie.
The fan at the left hand cooler is switched on at a coolant temperature of 85° C and off at 80° C.
Pressure induced by heating of the coolant in the system is controlled by a valve in the radiator cap; a water temperature rising up to 110° C (242° F) is admissible, without fear of problems.

The red control lamp in the cockpit lights up at approximately 110° C.

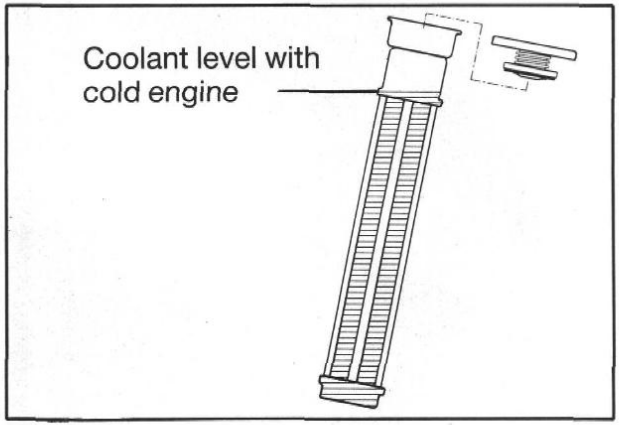
CAUTION:
For the cooling system, use only high-grade antifreeye agent. Using lower-grade antifreeze agents, can cause corrosion and coolant foaming.



Coolant level check

The coolant level should be checked both when the engine is running and cold. Please see the coolant level as indicated in the illustration.
In the event of the coolant being drained, always fill the system before hand, then top off while the engine is running.

IMPORTANT:
If possible, always check level of cooling liquid when engine is cold. If you have to open the radiator cap when engine is hot, use a rag to cover the cap and open slowly to release pressure.



Battery

The battery (1) is mounted under the righthand side casing. It is a high-performance maintenance-free battery.
To prevent oxidation at the terminals, these should be coated with an acid-free grease or silicon rubber.
Never open valves!

STORAGE:
Keep battery dry and clean. Charge before storing. Optimum storage temperature 0–35° C. At 20° C storage temperature recharge after 16 months. Recharge at shorter intervals at higher storage temperature. Discharged batteries must be recharged within 1 week at the latest.

CHARGING:
Charge not exceeding; **Max charging voltage of 14 V!** No current limitation is required if the charging voltage limit is observed.
Charging time up to 24 hours, depending on flatness of battery.

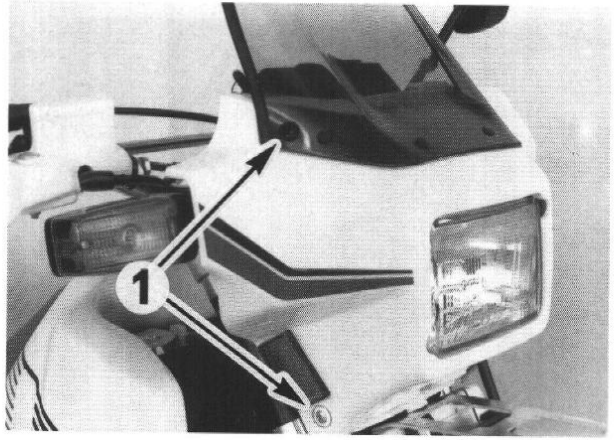
Fuse

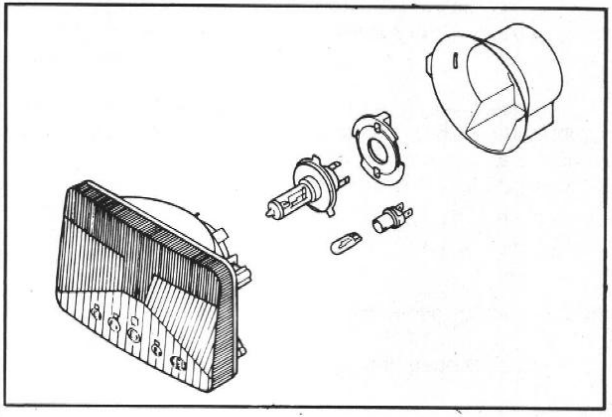
The fuse (1) is attached to the battery holder. This fuse protects indicators, horn, parking light and fan. All other current consumers are powered directly by the generator when the engine is running.
A melted fuse must only be replaced by one of equivalent quality. If a new fuse melts immediately after being fitted, it is essential to consult a KTM service station.

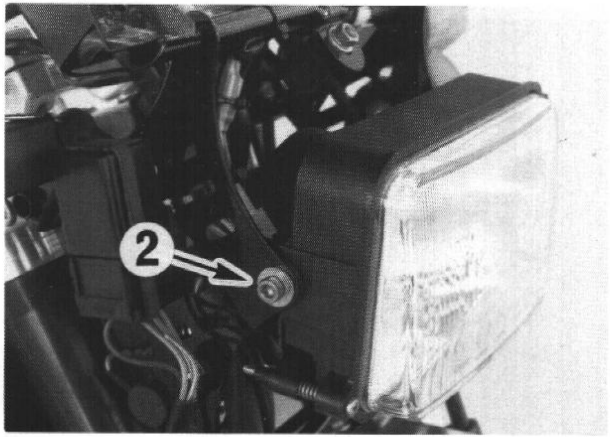
CAUTION:
Never fit a stronger fuse or „patch up" the fuse, because this can result in destruction of the entire electrical equipment.

Exchanging headlamp bulb

After the 4 screws (1) have been removed, remove headlamp facing. Remove fixing screws (2). Remove headlamp from holder. Remove cap, pull out multiple plug, turn lamp holder in an anticlockwise direction and remove bulb from reflector.
Fit new bulb in reverse order. Check for correct functioning before headlamp facing is replaced.







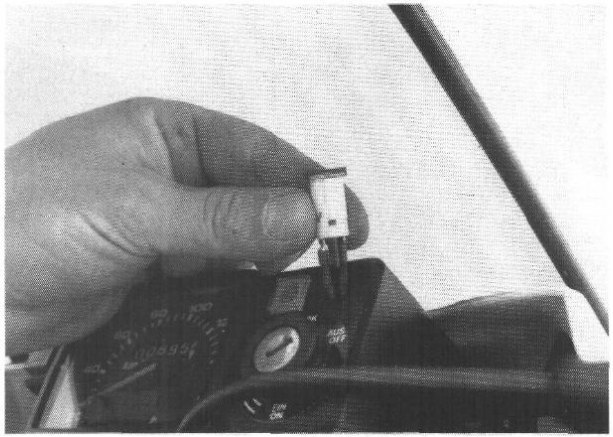
Exchanging tail lamp bulb

Loosen screws and remove lamp cover. Press bulb into holder, turn in an anticlockwise direction and pull out.
Fit in reverse order.

Exchanging control lamps

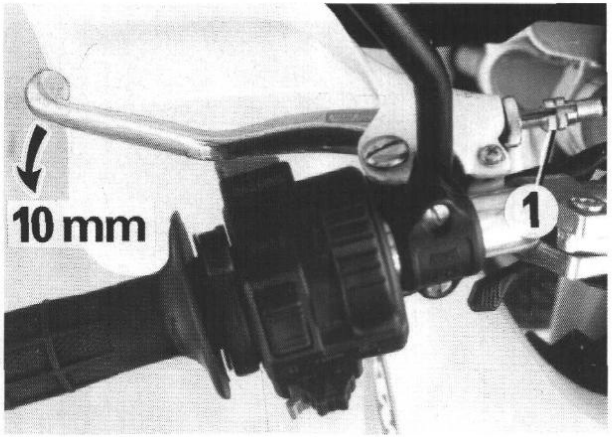
The control lamps can be exchanged without needling to open the speedometer box. The control lamp is lifted carefully from the speedometer box using a screwdriver and pulled out slowly together with the wires. Connect new control lamp and press into opening.

NOTE:
The green control lamp is only a dummy.



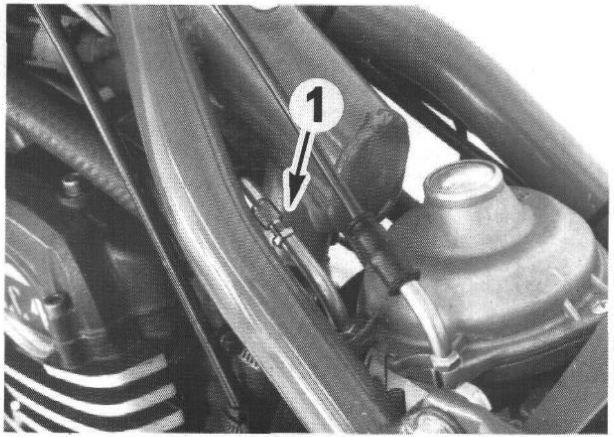
Checking and correcting the clutch control cable

Regularly check the play at the clutch lever and correct if need be by means of the adjustment screw (1).
The play at the end of the clutch lever should be approx. 10 mm.



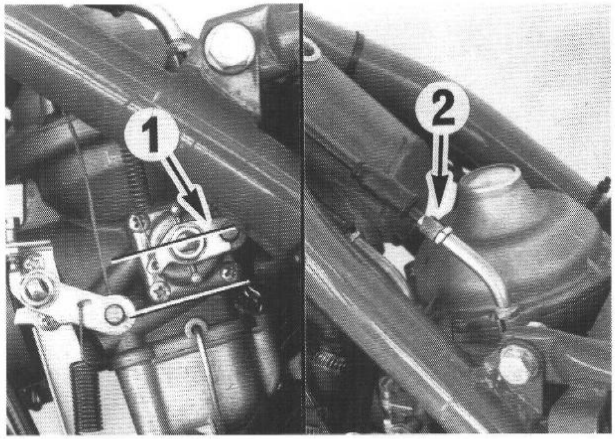
Checking and correcting the throttle twist grip*

There must always be play of 1-2 mm at the throttle twist grip, only then should the throttle valve open (can be recognised by the resistance).
If correction is necessary, the side cladding, seat and tank are to be removed.
The play can be adjusted by means of the adjustment screw (1).



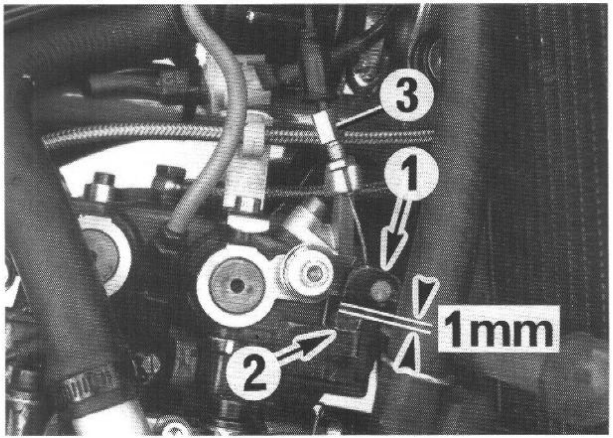
Checking and correcting of the choke control cable*

Move choke ring to half-opened position.
The choke lever at the carburettor (1) should now be positioned parallel to the edge of the choke housing (see illustration).
If correction is necessary, the side cladding, seat and tank are to be removed.
The adjustment can be made by means of the adjustment screw (2).



Checking and correcting the decompression control cable*

When the decompression lever on the handlebar is in home position the deco lever at the cylinder head (1) must be 1 mm away from the lever stop (2).
If correction is necessary, the side cladding, seat and tank are to be removed.
The adjustment can be made by means of the adjustment screw (3).

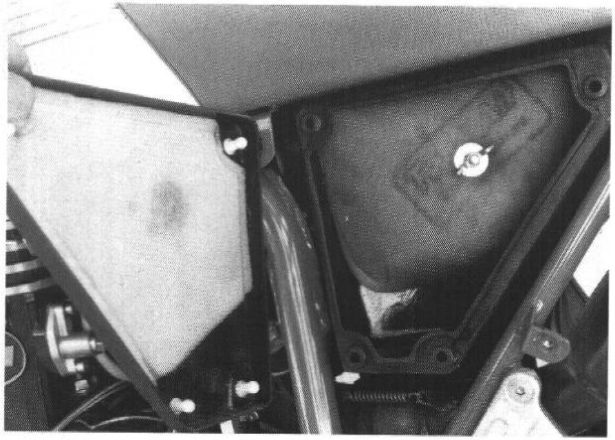


Cleaning of pre-filter

There is a pre-filter in the airbox cover to keep the air filter free of rough dirt. To clean the pre-filter, remove the side panel and airbox cover. Clean the airbox cover/pre-filter with soap and water and dry thoroughly. Do **not** oil the pre-filter.

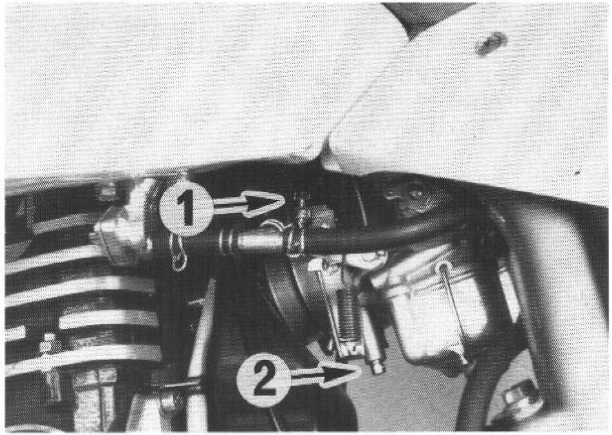
Cleaning of air filter*

To clean the filter, first remove the side cover and the airbox cover. Loosen wingnut (1) and remove filter and cage from airbox. Foam filter should be cleaned first in solvent and then in warm soapy water, and then dried completely. Re-oil filter with Twin Air foam filter oil or equivalent. Check filter element for cuts or holes; check airboot for cuts or holes and for secure clamps; clean filter box and inspect if drain tube is clean; grease sealing edge of filter element before re-installing.



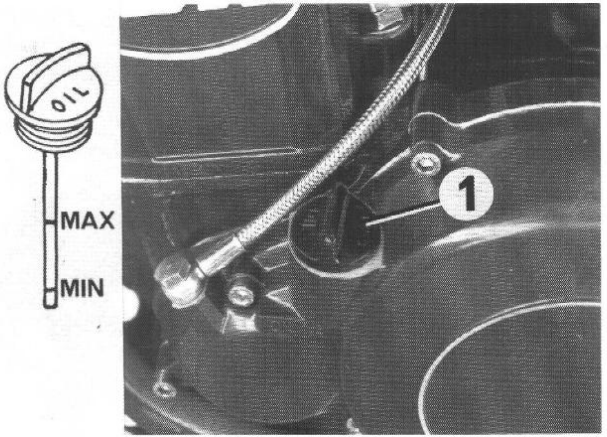
Adjusting idling*

Carry out any adjustment in the idling range with warm engine only. Turn throttle blade stop screw (1) so that the engine runs at fast idling speed. Then adjust the mixture control screw (2) until the engine is running as smoothly as possible (basic adjustment 2/3 turn open). Turn back the throttle blade stop screw to achieve speed of 1400 rpm. Readjust mixture control screw should the engine start to splutter at this idling speed.
Repeat until such times as the engine is just running smoothly without missing.



Checking engine oil level

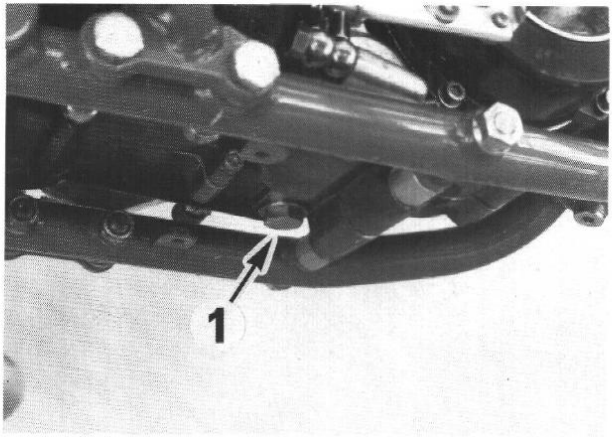
Place motorcycle on a level surface. Unscrew filler cap (1) and wipe off oil measure stick. Screw filler cap back in and unscrew again. Check oil level on measure stick. The oil level should be between the two marks; if necessary add fully synthetic engine oil 10W30.



Changing engine oil*

NOTE: For better cooling of the engine oil, the front frame down tube is an oil reservoir. If an oil change is necessary, the engine oil should also be drained from the front frame down tube.

Engine oil change is to be performed with a warm engine.
Remove stone guard, remove drain plug (2) and let oil run into a drain pan. Also remove drain plug (2) on bottom of front down tube. Clean drain plugs (magnetic) and mount again with seal rings.

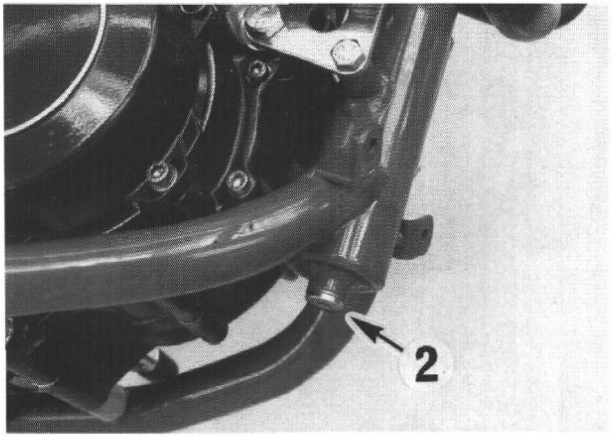


Remove filler cap at clutch cover and add 2.2 litres fully synthetic engine oil 10W30. Start engine and let it run in neutral for approx. 2 minutes so that the front frame down tube can be refilled with oil. Bleeding the oil system is not necessary.

CAUTION:
Be careful not to rev the engine during the two (2) minute warm-up period. You must allow the frame oil tank to fill and oil to start flowing to all the lubrication points or engine damage will result.

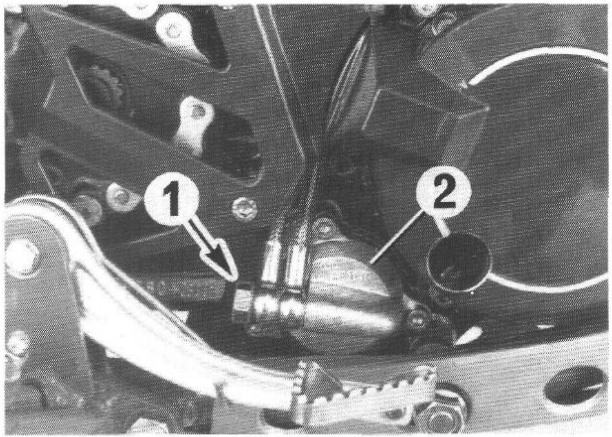
Oil flow: From oil pump to oil filter to front frame down tube to cylinder head. A second oil flow routing connects the oil filter direct with the crankshaft.

Afterwards check oil system for leakage and replace stone guard.

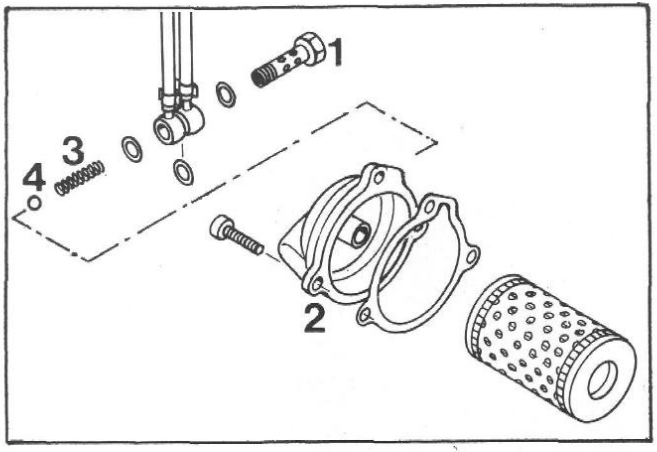


Changing oil filter*

Change oil filter when changing engine oil.
Remove foot peg holder with foot brake lever and the chain wheel cover. Remove hollow screw (1) and the three allen head screws. Pay attention to the spring (3) and bal (4) of the by-pass valve in the bore of the hollow screw when carefully removing oil filter cover (2).
Remove oil filter, clean oil filter cover and sealing surfaces and check whether oil channel in oil filter cover is clogged.

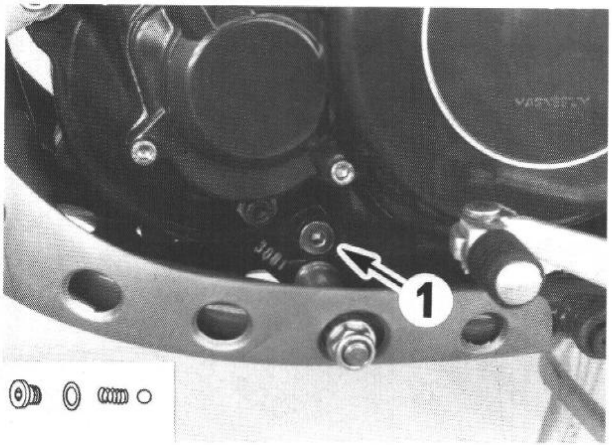


Fit new oil filter with rubber gasket on the fitting in oil filter cover. Mount oil filter cover with new gasket.
Start engine and check oil system for leakage. Finally mount chain wheel cover and foot peg holder and check free play of the foot brake lever.



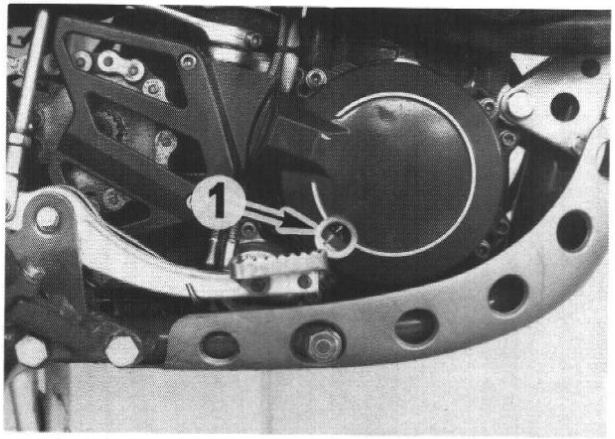
Changing return valve*

The return valve prevents the engine oil from flowing back into the crankcase. If the oil level in the crankcase is too high, oil consumption increases and the oil starts to foam.
Unscrew screw plug of return valve (1), remove spring and plastic ball from the bore. Clean screw plug (magnetic), insert new plastic ball and spring into the bore and mount screw plug with sealing. Be sure magnet of screw plug is no longer then 4.0 mm maximum. If the magnet is longer then 4 mm, it must be ground shorter or the return valve system will not function.



Adjust valve play*

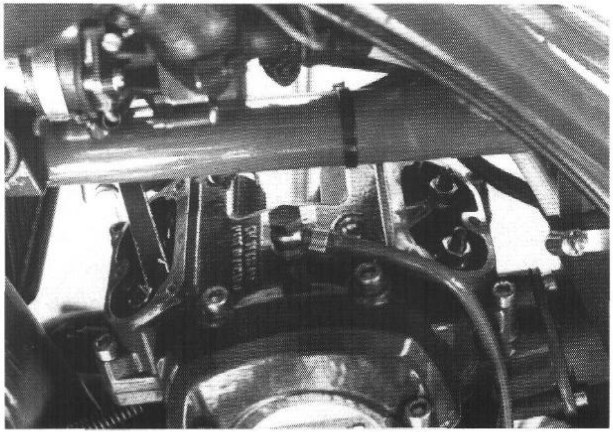
Remove side cladding, seat and tank. Place motorcycle on stand to remove load from rear wheel. Remove both valve covers, put motorcycle in 5th gear, set piston to compression and remove spark plug.
Remove ignition cover view plug and turn crankshaft by turning the rear wheel in running direction until the ignition mark (1) on the fly wheel is visible in the view hole.



The piston is now positioned at TDC and the valves can be adjusted.

Valve play by cold engine: INTAKE 0.15 mm
OUTLET 0.15 mm

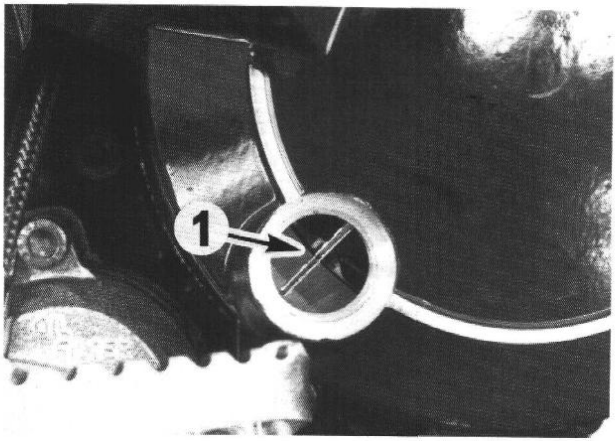
After the adjustment re-mount all parts.



Check and adjust ignition point*

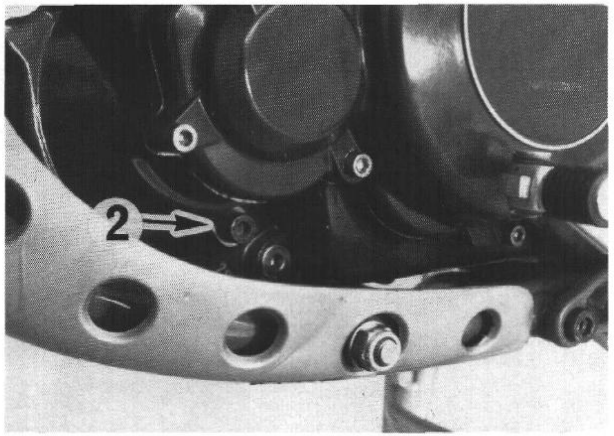
Place motorcycle on stand with rear wheel off ground.
Remove spark plug and put motorcycle in 5th gear. Remove ignition cover view plug and turn crankshaft by turning the rear wheel until the ignition mark (1) on the fly wheel is visible in view hole.
Unscrew crankshaft locking bolt (2), remove copper seal ring and re-fit lokking bolt by hand. If any resistance is felt, lightly move rear wheel back and forth to enable the locking bolt to engage in the recess in the crankshaft.

CAUTION:
Under no circumstances apply force to screw in the locking bolt as **this will damage the crankshaft.**



After installing the crankshaft locking bolt, the ignition marks on the stator and the fly wheel must be aligned.

If necessary, loosen the 4 allen head screws of the ignition cover and rotate so that the two marks are aligned. Re-tighten allen head screw, remove lokking bolt and fit copper sealing ring (3 mm thick). Mount spark plug and ignition cover view plug.



Technical Specifications – Chassis

Frame	Central chrome-moly-steel-frame
Fork	Marzocchi USD 40 FDGR 260 4T
Whell travel front/rear	240/300 mm
Rear suspension	Central shock absorber with PRO-LEVER linkage to rear swing-arm with needle bearing
Front brake	Disc brake with carbon-steel brake disc ∅ 260 mm, 2-piston brake caliper floated, effective braking surface 30 cm^2
Rear brake	Disc brake with carbon-steel brake disc ∅ 220 mm, 2-piston brake caliper floated, effective braking surface 30 cm^2
Tyres front/air pressure	90/90–21 METZELER Enduro 3 / 2,6 bar
Tyres rear/air pressure	120/80–18 METZELER Enduro 3 / 2,6 bar
Fuel tank capacity/reserve	15/4,2 Liter
Final drive ratio	16:40
Chain	$^5/_8 \times {}^1/_4''$, 108 rolls
Steering angle	62,5°
Wheel base	1500 ± 10 mm
Seat high	880 mm
Weight with full tank	148 kg
Permissible total weight	350 kg

Lubricants / Filling levels / Resources

Fork	390 cm^3 shock oil SAE 10 per fork leg
Lubricating nipple	Waterproof multipurpose grease on lithium soap base
Engine	2.2 litres fully synthetic engine oil 10W30
Brake	Brake fluid DOT 4
Cooling	1 litre coolant; mix ratio antifreeze : water - 2 : 1
Fuel	Unleaded super fuel 95 octane (EUROSUPER) or leaded super fuel 98 oktane. Under no circumstances fuel with less than 95 octane!

KTM SERVICE

WIRING DIAGRAMME KTM 500 - 600 INCAS

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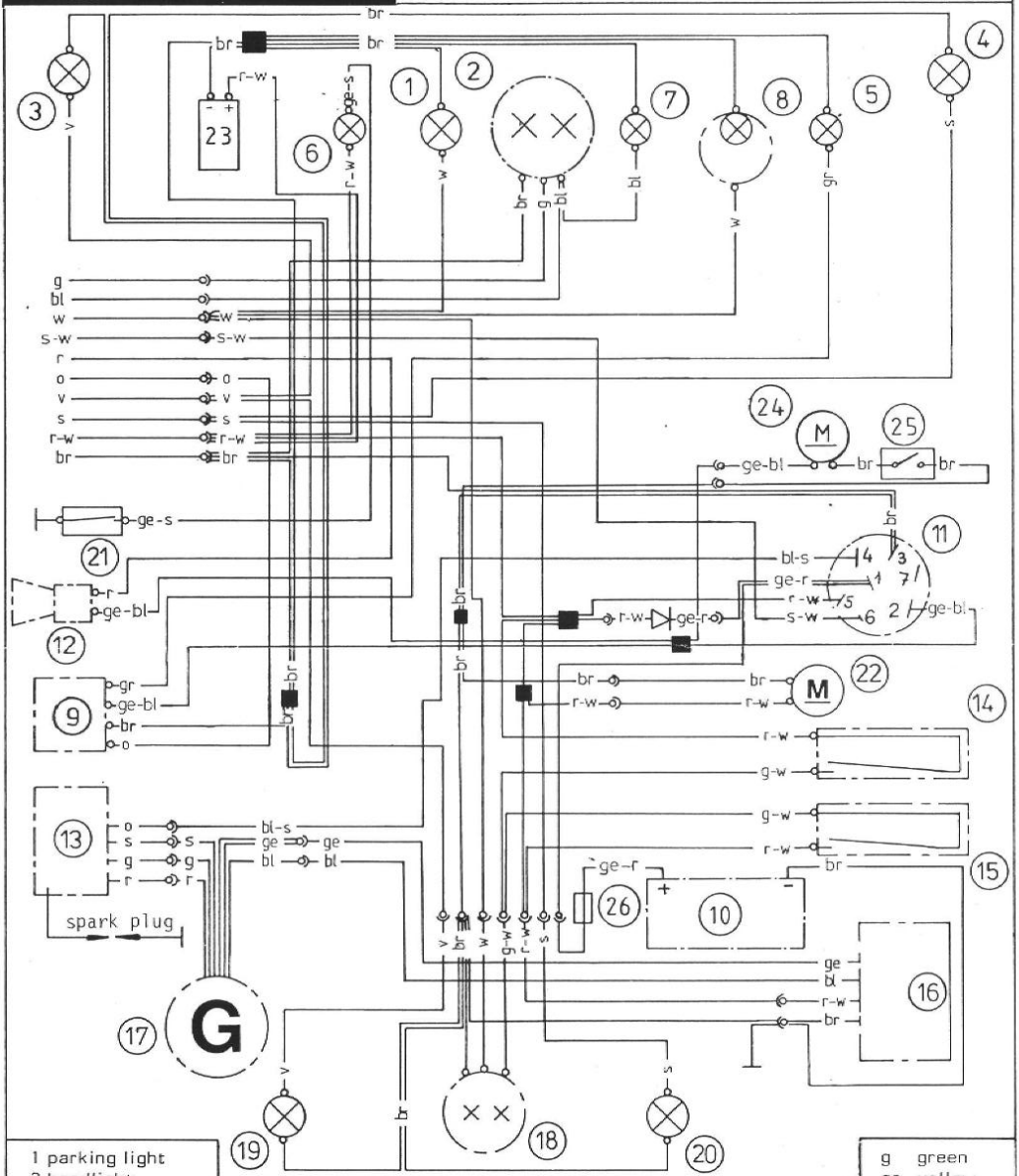

1 parking light	11 ignition switch	19 blinker left b.
2 headlight	12 horn	20 blinker right b.
3 blinker left f.	13 ignition coil	21 temp. switch
4 blinker right f.	14 stoplight switch f.	22 water pump
5 blink control	15 stoplight switch b.	23 condensator
6 temp. control	16 voltage regulator	24 ventilator
7 light beam control	17 generator	25 temp. switch ventil.
8 tachometer light	18 brake rear light	26 fuse 10 A
9 blink signal system		
10 battery		

g	green
ge	yellow
gr	grey
bl	blue
br	brown
r	red
o	orange
w	white
s	black
v	violet

KTM MOTOR-FAHRZEUGBAU

AKTIENGESELLSCHAFT

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