

# KTM

BEDIENUNGSANLEITUNG  
OWNER'S HANDBOOK  
MANUEL D'UTILISATION  
MANUAL DE INSTRUCCIONES

ART. NR.  
320533

60 SX

65 SX

'98





## IMPORTANT

PLEASE READ THIS MANUAL THOROUGHLY BEFORE LETTING YOUR YOUNGSTER RIDE THE MOTORCYCLE FOR THE FIRST TIME. THIS MANUAL CONTAINS IMPORTANT INFORMATION AND RECOMMENDATIONS THAT WILL HELP YOU AND YOUR YOUNGSTER TO OPERATE AND HANDLE THE MOTORCYCLE PROPERLY.

IN THE INTEREST OF EVERYBODY INVOLVED, WE URGE YOU TO PAY PARTICULAR ATTENTION TO INSTRUCTIONS AND INFORMATION MARKED AS FOLLOWS:

---

⚠ **WARNING** ⚠

---

IGNORING THESE INSTRUCTIONS, CAN ENDANGER YOUR BODY AND YOUR LIFE.

---

! **CAUTION** !

---

IGNORING THESE INSTRUCTIONS COULD CAUSE DAMAGE TO PARTS OF THE MOTORCYCLE OR THAT THE MOTORCYCLE IS NOT ROAD-SAFE ANYMORE.

Please insert below the series numbers of the motorcycle

Frame number

Engine number

Stamp of dealer

## Introduction

Now you own a modern motorcycle that you and your youngster will certainly enjoy, provided that you service and maintain it properly. This manual contains important information on the operation and maintenance of your new KTM motorcycle. It went to press describing your model's latest state of development. Nevertheless, the descriptions may deviate slightly from the current design as our motorcycles are permanently improved.

Maybe you are one of those riders who have acquired good technical skills and can perform many of the maintenance tasks themselves using the instructions contained in this manual. If this is not the case, please keep in mind that the maintenance tasks marked with an asterisk (\*) in the chapter „Maintenance of chassis and engine“ should rather be performed by a KTM dealer to protect you and your youngster.

Please strictly observe the prescribed running-in periods and inspection and maintenance intervals. Compliance with these instructions will significantly prolong the life of your motorcycle. Maintenance work should only be performed by a KTM dealer.

When special needs arise, please contact a KTM dealer, who will seek the assistance of the KTM importer if necessary.

PARENTS SHOULD KEEP IN MIND that the safety of their youngsters always depends on the efforts made by the parents to ensure that the motorcycle is kept in good working order and only used on safe terrains. Nevertheless, driving the motorcycle, like driving any other vehicle, involves a potential risk. Therefore, please make sure that all fundamental precautions are taken. Please also read the „INFORMATION ON SAFE DRIVING FOR PARENTS“ on page 4.

Riding an off-highway motorcycle is a wonderful form of outdoor recreation and we certainly hope that you and your youngsters will enjoy it to the full. However, this enjoyable outdoor activity can cause environmental problems or lead to conflicts with other people. Responsible use of the motorcycle will prevent such problems and conflicts. You can contribute to securing the future of motorcycling by making sure that you and your youngsters only use the motorcycle within the limits established by the applicable laws, making environmental protection one of your top priorities and never violating other people's rights.

In this spirit, we hope that you and your youngsters will always safely enjoy your motorcycle!



KTM Austria's AG certificate of achievement for its Quality System ISO 9001 is the beginning of an on-going total re-engineering quality plan for a brighter tomorrow.

KTM SPORTMOTORCYCLE AG  
5230 MATTIGHOFEN, AUSTRIA

Attachments: 1 spare parts manual chassis  
1 spare parts manual engine

ALL RIGHTS RESERVED TO MAKE ALTERATIONS TO DESIGN AND MODEL.

# INDEX

	Page
IMPORTANT INFORMATION ON SAFE DRIVING FOR PARENTS	.4
SERIAL NUMBER LOCATIONS	.5
Chassis number	.5
Engine number, engine type	.5
OPERATION INSTRUMENTS	.5
Clutch lever	.5
Hand brake lever	.5
Short circuit button	.6
Filler cap	.6
Refueling, fuel	.6
Fuel tap	.6
Choke	.7
Shift lever	.7
Kickstarter	.7
Rebound damping function of the shock absorber	.7
Changing the spring preloading of the shock absorber	.7
DRIVING INSTRUCTIONS	.8
What you should check before each start	.8
Instructions for the first ride	.8
Running in	.8
Starting when engine is cold	.8
Starting when engine is warm	.9
What to do when the engine is „flooded“	.9
Starting off	.9
Driving, shifting	.9
Braking	.9
Stopping	.9
PERIODIC MAINTENANCE SCHEDULE	.10
MAINTENANCE WORK ON CHASSIS AND ENGINE	.11
Checking and adjusting the steering head bearing	.11
General information about KTM disc brakes	.12
Adjusting of free travel at the hand brake lever	.12
Checking of brake fluid level - front brake	.12
Refilling the front brake fluid reservoir	.12
Checking the front brake pads	.13
Replacing the front brake pads	.13
Adjusting the rear wheel brake cable	.13
Checking the rear brake linings for wear	.14
Exchanging the rear brake linings	.14
Drum brake maintenance	.14
Removing and installing the front wheel	.15
Removing and installing the rear wheel	.15
Checking the chain tension	.16
Correcting the chain tension	.16
Chain maintenance	.16
Tires, air pressure	.17
Checking spoke tension	.17
Removal of seat	.17
Cleaning the dust scrubbers of the telescopic fork	.17
Cleaning of air filter	.18
Adjusting the clutch cable	.18
Adjusting the throttle cable	.18
Adjusting the idle speed	.19
Checking the gear oil level	.19
Changing the gear oil	.19
Cooling system	.20
Checking the coolant level	.20
Exhaust system	.20
Carburetor adjustment	.21
CLEANING	.22
STORAGE	.22
TECHNICAL DATA - CHASSIS	.23
TECHNICAL DATA - ENGINE	.24

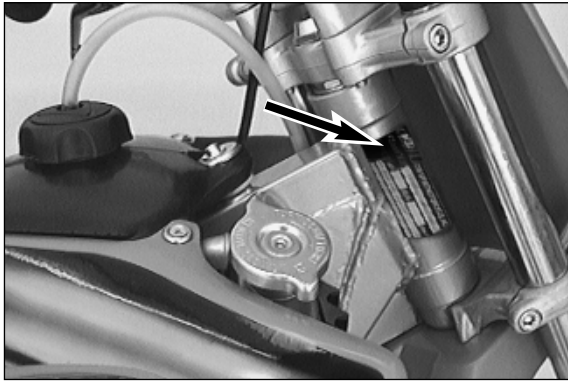
## IMPORTANT INFORMATION ON SAFE DRIVING FOR PARENTS

SX mini motorcycles are off-road motorcycles designed for one person only. They are not allowed on public roads.

Motorcycle dimension and components are designed for the following age and weight groups:

60 SX and 65 SX: age 8 - 12 years, maximum weight 50 kg (110 lbs), maximum body height 160 cm (65 in)

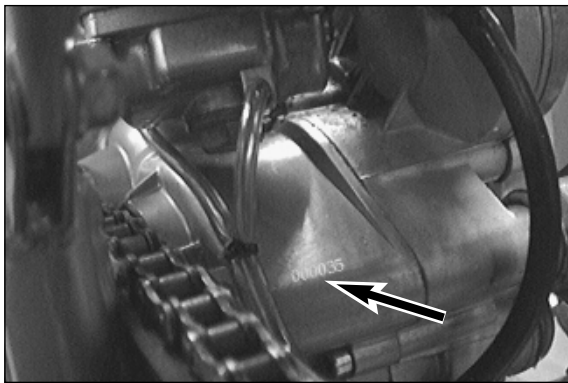
- Have your youngster wear proper protective gear whenever he or she rides the motorcycle: helmet, eye protection, chest, back, arm and leg protectors, gloves and boots. To set a good example, be sure to wear protective gear yourself whenever riding a motorcycle!
- Adjust the hand brake lever to your youngster's hand size (with gloves).
- Before your youngster takes his or her first ride, explain how each of the controls works and check if your youngster has understood what you explained. We recommend to review the entire owner's manual with your youngster item by item, paying particular attention to the specially marked warnings and pointing out the danger of injury.
- Instruct your youngster about riding and falling techniques, explain how the motorcycle will respond to shifting of the rider's weight, etc.
- Before using the motorcycle you should always check all components for proper operation (see maintenance schedule). Have your youngster perform these technical checks himself / herself as well.
- Whenever you go for a ride with your youngster, keep in mind that the speed should be adjusted to your youngster and not the other way around.
- Your youngster must understand that all instructions he or she receives from you or any other supervising adult must be followed.
- Your child must be physically ready to ride a motorcycle. This means that he or she must at least be able to ride a bicycle. Being good at sports that require fast reactions is an additional advantage. Your youngster should be strong enough to pick up the motorcycle after a fall.
- Never demand too much of your youngster. Give him or her time to get used to the motorcycle and to improve his / her riding skills. Do not even consider letting your youngster participate in a race before his / her physical condition, riding skills and motivation have sufficiently developed.
- Explain to your youngster that he / she should always adjust his / her riding speed to the local conditions as well as to his / her own riding skills and that excessive speed can cause falls and severe injuries. Always keep in mind that youngsters tend to underestimate dangers or fail to recognize them altogether. The riding speed must be reduced, in particular, on unknown terrain.
- Never let your youngster ride the motorcycle without supervision. An adult should always be present.
- The motorcycle is designed for one rider only. Your youngster is not allowed to transport a passenger.
- When you go for a ride, somebody at home should always know where you are going and when you will be back. This makes it easier to send you help, should problems occur.



## SERIAL NUMBER LOCATIONS

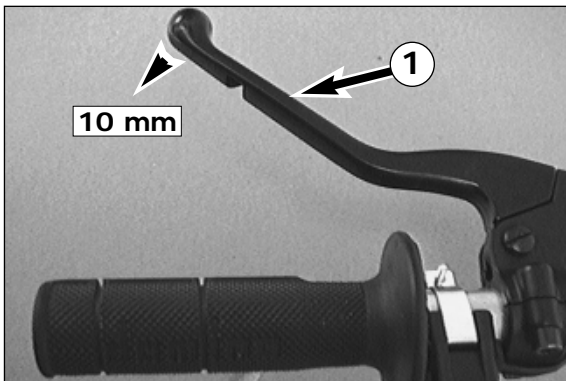
### Chassis number

The chassis number is located on the type plate on the steering head. Write this number into the field on page no 1.



### Engine number

The engine number is stamped into the engine housing underneath the carburetor. Write this number into the field on page no 1.



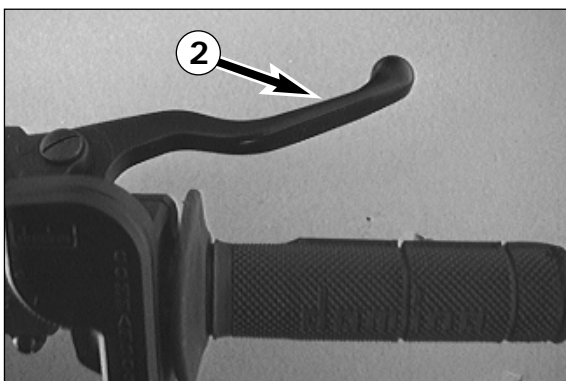
## OPERATION INSTRUMENTS

### Clutch lever

The clutch lever ❶ is fitted on the left hand side of the handle bar. When engine is cold, there should always be a play of 10 mm (0,4 in) at this lever (measured at outer edge).

### ! CAUTION !

IF THERE IS NO PLAY ON THE CLUTCH LEVER, THE CLUTCH WILL START TO SLIP. THE CLUTCH WILL THEN OVERHEAT, DESTROYING THE CLUTCH LININGS.

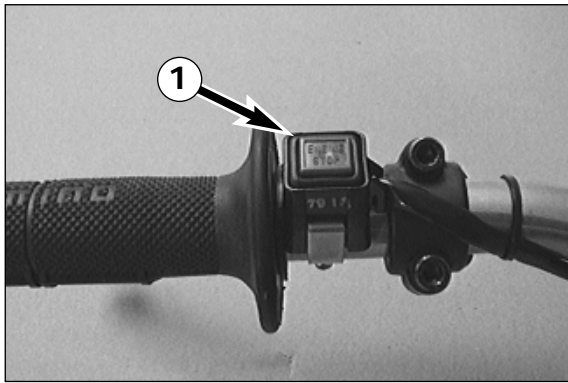


### Hand brake lever

The hand brake lever ❷ is mounted on the handle bars on the right and actuates the front wheel brake.

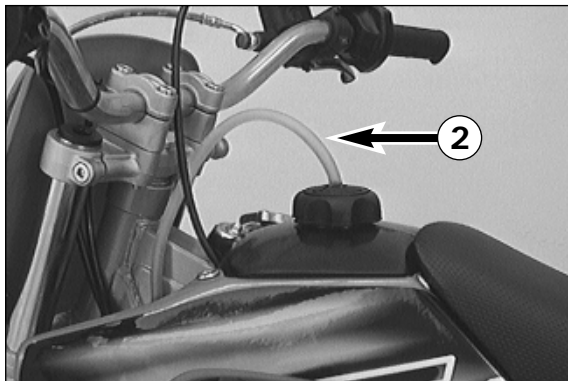
### ⚠ WARNING ⚠

IF THE RESISTANCE IN THE HAND BRAKE LEVER FEELS "SPONGY" (TOO MUCH GIVE), THIS IS AN INDICATION THAT SOMETHING IS WRONG WITH THE BRAKE SYSTEM. DON'T LET YOUR CHILD RIDE THE MOTORCYCLE ANYMORE WITHOUT FIRST HAVING THE BRAKE SYSTEM LOOKED OVER BY A KTM DEALER.



### Short circuit button

The short circuit button ❶ turns off the engine. When pressing this button, the ignition circuit is short-circuited.



### Filler cap

To open it: turn filler cap counter-clockwise.

To close it: put filler cap back on and tighten it by turning it clockwise. Install tank breather hose ❷ without kinks.



### Refueling, fuel

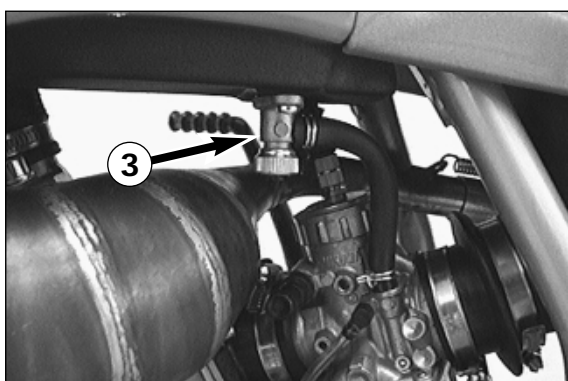
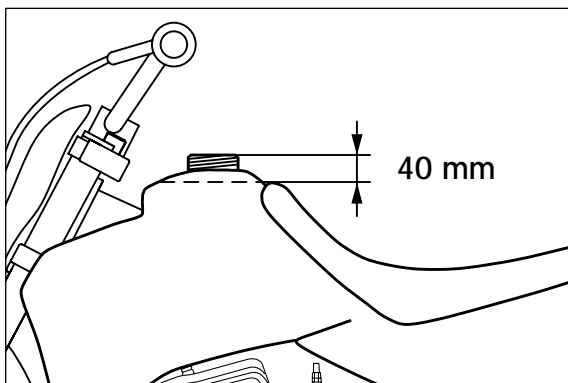
Oil (high-grade two-stroke engine oil; i.e. Shell Advance Racing X) must be mixed with the fuel (ROZ 95) at a mixing ratio of 1:40.

⚠ **WARNING** ⚠

GASOLINE IS HIGHLY FLAMMABLE AND POISONOUS. EXTREME CAUTION SHOULD BE USED WHEN HANDLING GASOLINE. NEVER REFUEL THE MOTORCYCLE NEAR OPEN FLAMES OR BURNING CIGARETTES. ALWAYS SWITCH OFF THE ENGINE BEFORE REFUELING. BE CAREFUL NOT TO SPILL GASOLINE ON THE ENGINE OR EXHAUST PIPE WHILE THE ENGINE IS HOT. WIPE UP SPILLS PROMPTLY. IF GASOLINE IS SWALLOWED OR SPLASHED IN THE EYES, SEEK A DOCTOR'S ADVICE IMMEDIATELY.

! **CAUTION** !

- ONLY USE PREMIUM-GRADE GASOLINE ROZ 95 MIXED WITH HIGH-GRADE TWO-STROKE ENGINE OIL. OTHER TYPES OF GASOLINE CAN CAUSE ENGINE FAILURE.
- ONLY USE KNOWN BRANDS OF HIGH-GRADE 2-STROKE ENGINE OIL (SHELL ADVANCE RACING X).
- NOT ENOUGH OIL OR LOW-GRADE OIL CAN CAUSE EROSION OF THE PISTON. WHEN USING TOO MUCH OIL, THE ENGINE MAY START SMOKING AND FOUL THE SPARK PLUG.
- FUEL EXPANDS WHEN ITS TEMPERATURE RISES. THEREFORE DO NOT FILL THE TANK TO THE TOP. (SEE FIG.)



### Fuel tap

The fuel tap ❸ is located on the left side of the tank.

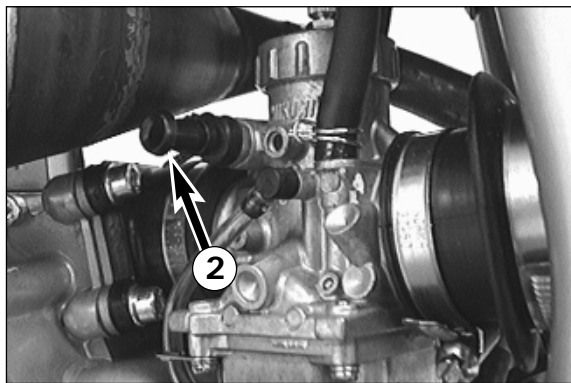
Opening the fuel tap: Turn the knob all the way to the left.

Closing the fuel tap: Turn the knob all the way to the right.

! **CAUTION** !

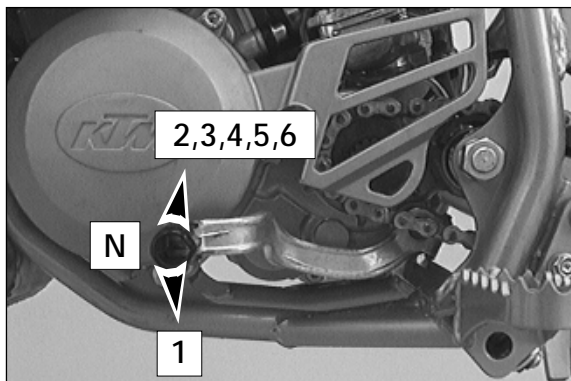
THE FUEL TAP SHOULD BE LOCKED WHENEVER THE MOTORCYCLE IS PARKED. IF THE TAP IS NOT CLOSED THE CARBURETOR MAY OVERFLOW AND FUEL GET INTO THE ENGINE.





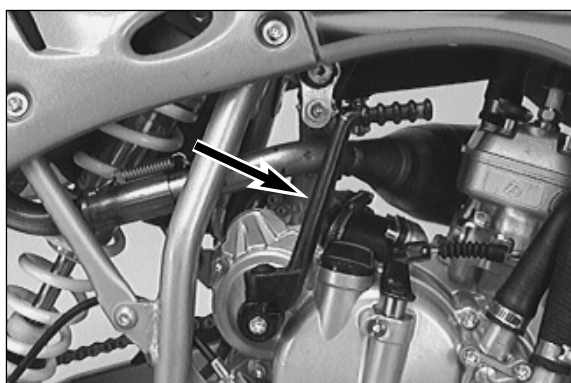
### Choke

The choke button ② is located on the left side of the carburetor. Pulling the choke button ② all the way out opens a bore in the carburetor through which the engine can take in additional fuel, thus achieving the "rich" fuel air mixture needed for cold starting. Pushing the choke button back in closes the bore in the carburetor.



### Shift lever

The shift lever is mounted on the left side of the engine. The position of the gears is shown in the illustration. Neutral, or the idle speed, is located between first and second gear.

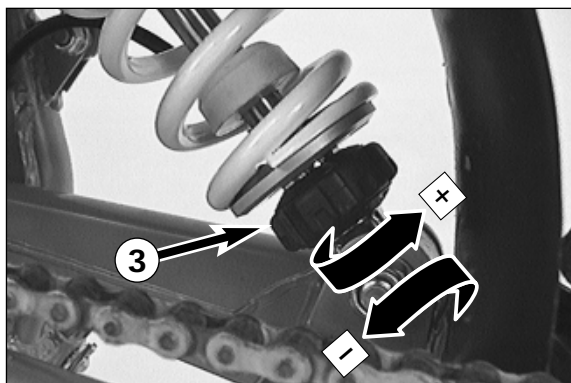


### Kickstarter

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

**⚠ WARNING ⚠**

WHEN STARTING THE ENGINE, PUT ON MOTORCYCLE BOOTS IN ORDER TO AVOID INJURIES. YOU MAY SLIP OFF THE KICKSTARTER, OR THE ENGINE MAY STRIKE BACK WHEN KICKING NOT VEHEMENTLY ENOUGH.



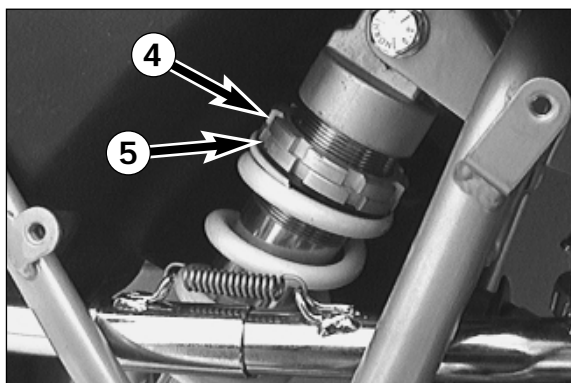
### Rebound damping function of the shock absorber

The damping effect of the rebound damping mechanism can be adjusted to 14 different levels by means of the setting wheel ③. Turn the setting wheel clockwise (in) to increase and counterclockwise (out) to reduce the damping effect.

STANDARD SETTING: 10 CLICKS OPEN

**⚠ WARNING ⚠**

- NEVER TURN THE SETTING WHEEL MORE THAN TWO CLICKS BETWEEN TWO TEST RIDES.  
- DO NOT TRY TO DISASSEMBLE THE SHOCK ABSORBER OR TO PERFORM MAINTENANCE WORK YOURSELF. DANGER OF INJURY!



### Changing the spring preloading of the shock absorber

This is easily done.

NOTE:

- Before changing the spring preload note down the basic setting, e.g. how many threads are visible above the adjusting ring.

Loosen the locking ring ④ with the hook spanner. Change the spring preload with the adjusting ring ⑤ and re-tighten the locking ring ⑤.

BASIC SETTING - SPRING PRELOAD  
3 mm (0.12 in)



## What you should check before each start

When you start off, the motorcycle must be in a perfect technical condition. For safety reasons, you should make it a habit to perform an overall check of your motorcycle before each start.

The following checks should be performed:

- 1 **CHECK TRANSMISSION OIL LEVEL.**  
A lack of gear oil leads to premature wear and finally results in destruction of the gear wheels.
- 2 **FUEL**  
Check that there is sufficient fuel in the tank; when closing the filler cap, check that the tank venting hose is free of kinks.
- 3 **CHAIN**  
A loose chain may fall off the chain wheels; an extremely worn chain may tear, and insufficient lubrication may result in unnecessary wear of chain and chain wheels.
- 4 **TIRES**  
Check for damaged tyres. Tyres showing cuts or dents must be replaced. Also check the air pressure. Insufficient tread and incorrect air pressure deteriorate the driving performance.
- 5 **BRAKES**  
Check if the brakes are working properly. Check the level of brake fluid in the brake fluid reservoir. The brake fluid reservoir is large enough so that the brake fluid need not be topped up even when the brake pads are worn. Dropping of the brake fluid level below the minimum mark indicates leaks in the brake system or totally worn brake pads. In this case, the brake system must be checked by a licensed KTM dealer to prevent brake failure.  
Additionally, check the condition of the brake hose (front) and the brake control cable (rear) as well as the thickness of the brake linings.
- 6 **CABLES**  
Check correct setting and easy running of all control cables.
- 7 **COOLING FLUID**  
Check the level of cooling fluid when the engine is cold.

### ⚠ **WARNING** ⚠

- HAVE YOUR YOUNGSTER WEAR PROPER PROTECTIVE GEAR WHENEVER HE OR SHE RIDES THE MOTORCYCLE: HELMET, EYE PROTECTION, CHEST, BACK, ARM AND LEG PROTECTORS, GLOVES AND BOOTS. TO SET A GOOD EXAMPLE, BE SURE TO WEAR PROTECTIVE GEAR YOURSELF WHENEVER RIDING A MOTORCYCLE!
- ONLY USE ACCESSORY PARTS RECOMMENDED BY KTM.

## Instructions for the first ride

- Verify that your KTM dealer performed the PREPARATION OF VEHICLE jobs (see Customer Service Manual).
- Before your youngster takes his or her first ride, explain how each of the controls works and check if your youngster has understood what you explained. We recommend to review the entire owner's manual with your youngster item by item, paying particular attention to the specially marked warnings and pointing out the danger of injury.
- Adjust the basic hand brake lever position to your youngster's hand size. Your youngster should, of course, wear gloves!
- To prevent injury, teach your youngster the basic riding skills on soft ground, e.g. on a meadow or in the garden. Be sure that there is room enough to maneuver, and that no other riders are close.

- To ensure that your youngster gets the feel of the hand brake, have your youngster operate the hand brake while you push the motorcycle. Do not start the engine before your youngster has learned to apply hand brake with appropriate pressure.
- To familiarize your youngster with the operation of the hand brake let him or her practice to operate the hand brake while you are pushing the motorcycle. Do not start the engine before he or she is thoroughly familiar with the use of the hand brake.
- Initially, your youngster should ride back and forth between two persons who help the young rider to stop the motorcycle. However, you should also teach your youngster how to stop the motorcycle himself/herself.
- To improve his/her riding skills, your youngster should practise to ride the motorcycle standing on the footpegs or to ride at the slowest possible speed. Additionally, you can arrange a series of obstacles and have your youngster drive around them, etc.
- Pay attention to running-in procedure.

### ⚠ **WARNING** ⚠

- SX MODELS ARE DESIGNED FOR ONE PERSON ONLY. PASSENGERS ARE NOT ALLOWED.
- THESE MODELS DO NOT COMPLY WITH THE REGULATIONS AND SAFETY STANDARDS ESTABLISHED BY THE LAW. THEREFORE, THEY ARE NOT PERMITTED ON PUBLIC ROADS.
- ALWAYS KEEP IN MIND THAT OTHER PEOPLE FEEL MOLESTED BY EXCESSIVE NOISE.

## Running in

- Even very precisely machined sections of engine components have rougher surfaces than components which have been sliding across one another for quite some time. Therefore, every engine needs to be broken in. For this reason, during its first 5 hours the engine must not be revved up to its performance limits.
- Apply low but changing loads for running-in.
- DO NOT DRIVE AT FULL LOAD FOR THE FIRST 5 HOURS!

## Starting when the engine is cold

- 1 Open fuel tap
- 2 Put the gear in neutral
- 3 Activate cold-starting aid (choke)
- 4 Leave throttle closed or open it no more than 1/3 and kick down kickstarter vigorously all the way.

### ⚠ **WARNING** ⚠

- TO AVOID INJURY WHEN STARTING THE ENGINE, ALWAYS WEAR BOOTS!
- 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.

### ! **CAUTION** !

DO NOT RIDE YOUR MOTORCYCLE WITH FULL LOAD AND DO NOT REV UP THE ENGINE WHEN COLD. SINCE THE PISTON IS WARMER AND EXPANDS FASTER THAN THE WATER COOLED CYLINDER, THIS MIGHT CAUSE ENGINE DAMAGE. ALWAYS LET ENGINE IDLE UNTIL WARM OR DRIVE IT WARM AT LOW R.P.M. SPEEDS.



### Starting when the engine is warm

- 1 Open fuel tap
- 2 Put the gear in neutral
- 3 Open throttle to ½ and kick down kickstarter vigorously

### What to do when the engine is „flooded“

- 1 Close fuel tap
- 2 Start engine with full throttle. If necessary, unscrew spark plug and dry it.
- 3 Once the engine is running, open fuel tap again.

### Starting off

Pull the clutch lever. Put the engine into first gear, slowly release the clutch lever and accelerate at the same time.

---

⚠ **WARNING** ⚠

---

- BEFORE YOU START OFF, CHECK THAT THE MAIN OR SIDE STAND HAS BEEN SWUNG RIGHT UP TO THE TOP. IF THE STAND DRAGS ON THE FLOOR, YOU MAY LOSE CONTROL OF YOUR MOTORCYCLE.

### Shifting/Riding

You are now in first gear, referred to as the drive or uphill gear. Depending on the conditions (traffic, hill size, etc.), you can shift to a higher gear. Turn down the throttle, at the same time pull clutch lever in and shift to the next higher gear. Let clutch lever go again and open the throttle. If you turned on the choke, make sure you turn it off again as soon as engine is warm.

When shifting down, use the brakes if necessary and turn down at the same time. Pull clutch lever and shift down to the next lower gear. Let clutch lever go slowly and open throttle or shift down again.

---

⚠ **WARNING** ⚠

---

- YOUR YOUNGSTER'S DRIVING SPEED SHOULD ALWAYS BE ADJUSTED TO HIS/HER DRIVING SKILLS AS WELL AS TO THE TERRAIN.
- YOUR YOUNGSTER SHOULD NEVER BE ALLOWED TO RIDE THE MOTORCYCLE WITHOUT SUPERVISION.
- REPLACE THE HELMET VISOR OR GOGGLE GLASSES EARLY ENOUGH. WHEN LIGHT SHINES DIRECTLY ON A SCRATCHED VISOR OR GOGGLES, YOU WILL BE PRACTICALLY BLIND.
- AFTER FALLING WITH THE MOTORCYCLE, CHECK ALL ITS FUNCTIONS THOROUGHLY BEFORE USING IT AGAIN.

---

! **CAUTION** !

---

- DRIVING A COLD ENGINE AT HIGH SPEED WILL REDUCE THE LIFE OF THE ENGINE. WE RECOMMEND TO WARM THE ENGINE UP AT A MEDIUM ENGINE SPEED FOR SEVERAL MINUTES BEFORE SWITCHING TO FULL LOAD.
- NEVER HAVE THE THROTTLE WIDE OPEN WHEN CHANGING DOWN TO A LOWER GEAR. THE ENGINE WILL OVERREV, DAMAGING THE VALVES. IN ADDITION, THE REAR WHEEL BLOCKS SO THAT THE MOTORCYCLE CAN EASILY GET OUT OF CONTROL.
- IF THE ENGINE RUNS WITHOUT THROTTLE DURING LONGER DOWNHILL TRAVEL, THE ENGINE SHOULD BE ACCELERATED OCCASIONALLY TO ENSURE THAT IT IS SUPPLIED WITH SUFFICIENT LUBRICANT WHICH IS MIXED IN THE FUEL.
- IN THE EVENT THAT, WHILE YOUR CHILD IS RIDING ON THE MOTORCYCLE, YOU NOTICE ANY UNUSUAL OPERATION-RELATED NOISE, YOUR CHILD SHOULD STOP IMMEDIATELY, TURN THE ENGINE OFF, AND CONTACT AN AUTHORIZED KTM DEALER.

### Braking

Turn off gas and apply the hand and foot brakes at the same time. When driving on sandy, wet or slippery ground use mainly the rear wheel brake. Always brake with feeling, blocking wheels can cause you to skid or fall. Also change down to lower gears depending on your speed.

---

⚠ **WARNING** ⚠

---

WHEN YOU BRAKE, THE BRAKE DISCS, BRAKE PADS, BRAKE CALIPER AND BRAKE FLUID HEAT UP. THE HOTTER THESE PARTS GET, THE WEAKER THE BRAKING EFFECT. IN EXTREME CASES, THE ENTIRE BRAKING SYSTEM CAN FAIL.

### Stopping

Brake motorcycle and shift gears to idling. To switch off the engine, depress short circuit switch until the engine stops. Close fuel tap.

---

⚠ **WARNING** ⚠

---

- NEVER LEAVE YOUR MOTORCYCLE WITHOUT SUPERVISION AS LONG AS THE ENGINE IS RUNNING.
- 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 STARTING THE MOTORCYCLE, AND TAKE CARE TO PARK IT WHERE PEDESTRIANS ARE NOT LIKELY TO TOUCH IT AND GET BURNED.

---

! **CAUTION** !

---

- CLOSE THE FUEL TAP WHEN LEAVING YOUR VEHICLE. OTHERWISE THE CARBURETOR MAY GET FLOODED AND FUEL WILL ENTER THE ENGINE.

# PERIODIC MAINTENANCE SCHEDULE 60 + 65 SX

2.98



	KTM rider		KTM dealer	
	before each start	after washing	Service after 20 hours	once a year
Check transmission oil level	•		•	
Change transmission oil				•
Check spark plug and electrode gap			•	
Check carburetor for tight fit on the intake flange		•	•	
Check intake manifold for leaks and cracks	•			
Drain and clean carburetor float chamber		•		•
Check idle setting when engine is warm			•	
Check air filter, filter box and filter boot		•		•
Check sprockets, chain guides and chain for wear		•	•	
Clean and lube chain		•	•	
Check chain tension	•		•	
Check coolant level	•		•	•
Check quality of antifreeze				•
Check cooling system for leaks - visual inspection	•		•	•
Check exhaust system for leaks			•	
Check exhaust brackets		•	•	
Check brake fluid level	•		•	•
Change brake fluid				•
Check brake lining thickness (rear)			•	•
Check thickness of disc brake pads (front)	•		•	•
Check brake drum and brake disc			•	
Check freeplay and operation of hand brake lever and foot brake lever	•		•	
Inspect condition and installation of brake hose	•		•	•
Check fork for function and tightness		•	•	
Service front fork completely				•
Check steering head bearing clearance / adjust		•	•	
Clean and grease steering head bearings				•
Check shock absorber for function and tightness	•		•	
Check bearings of swingarm for play			•	
Clean and grease bearings of swingarm				•
Check tightness of spokes and rim join	•		•	
Check wheel bearings for clearance		•	•	
Check tire condition and air pressure	•		•	
Check cables for damage, correct instalment and easy working	•		•	
Lube and adjust cables		•	•	
Check all screws, nuts and hose clamps for proper tightness	•		•	
Grease or lube all pivot points and sliding components		•	•	

# MAINTENANCE WORK ON CHASSIS AND ENGINE



## WARNING



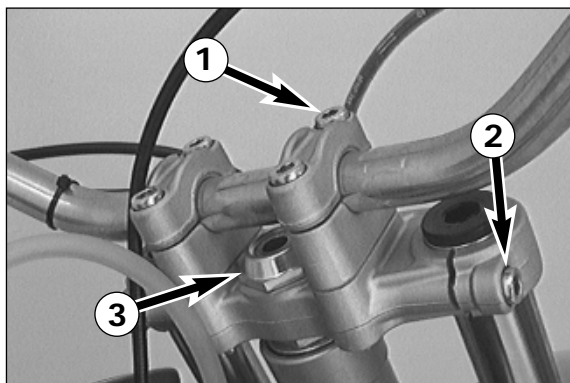
ALL MAINTENANCE AND ADJUSTEMENT OPERATIONS THAT ARE MARKED WITH A \* REQUIRE SPECIALIST KNOWLEDGE. FOR YOUR OWN SECURITY, LET THESE TASKS BE CARRIED OUT BY A KTM-DEALER !



## CAUTION



- WHEN CLEANING THE MOTORCYCLE, DO NOT USE A HIGH PRESSURE CLEANING UNIT IF POSSIBLE, OTHERWISE WATER WILL PENETRATE THE BEARINGS, CARBURETOR, ELECTRIC CONNECTORS ETC.
- WHEN TRANSPORTING YOUR KTM, ENSURE THAT IT IS HELD UPRIGHT WITH RESTRAINING STRAPS OR OTHER MECHANICAL FASTENING DEVICES AND THAT THE FUEL TAP IS IN THE OFF POSITION - IF THE MOTORCYCLE SHOULD FALL OVER, NO FUEL CAN LEAK FROM THE CARBURETOR OR FUEL TANK
- DO NOT USE TOOTHED WASHERS OR SPRING RINGS WITH THE ENGINE FASTENING SCREWS, AS THESE WORK INTO THE FRAME PARTS AND KEEP WORKING LOOSE. INSTEAD, USE SELF-LOCKING NUTS.
- LET YOUR MOTORCYCLE COOL DOWN BEFORE BEGINNING ANY MAINTENANCE WORK IN ORDER TO AVOID GETTING BURNED.
- REMOVE OILS, FATTY MATTERS, FILTERS, FUELS, WASHING DETERGENTS ETC. ORDERLY.
- UNDER NO CIRCUMSTANCES MAY USED OIL BE DISPOSED OF IN THE SEWAGE SYSTEM OR IN THE OPEN COUNTRYSIZE. 1 LITER USED OIL CONTAMINATES 1.000.000 LITERS WATER.



### Checking and adjusting the steering head bearing \*

The steering head bearing should regularly be checked for play. For this purpose, jack up the motorcycle by the frame so that the front wheel is in the air. Now try to move the fork forward and backward. There should be no play.

Undo the screw of the starting number plate and swing the starting number plate sideways.

Remove the four screws ① of the handlebar clamps and remove the handlebar clamps.

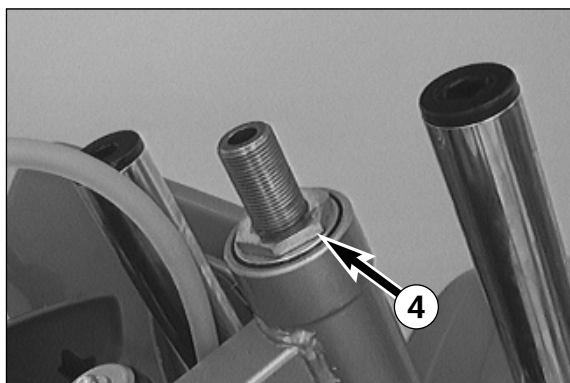
Then swing the handlebar sideways.

Undo the two clamp screws ② of the top triple clamp and remove the counter nut ③. Then remove the top triple clamp.

Then turn the adjusting nut ④ until almost no more play is left, but do not completely tighten the adjusting nut so as to prevent damaging of the bearings. Also keep in mind that the play of the bearings decreases when the counter nut ③ is tightened. Therefore, once again check the play of the bearings after tightening the counter nut ③.

To mount the components reverse the procedure described above.

After mounting the triple clamp lightly tap it with a plastic hammer to prevent jamming and tighten the two clamp screws (15 Nm/11 ft.lb).



## WARNING



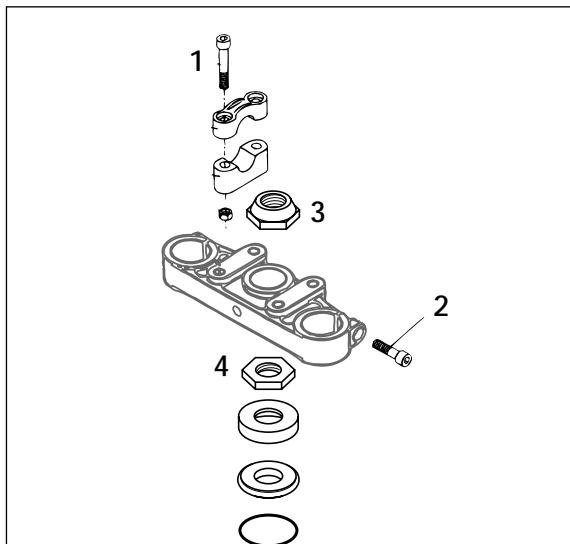
IF THE STEERING HEAD BEARING IS NOT ADJUSTED TO BE FREE OF PLAY, THE MOTORCYCLE WILL EXHIBIT UNSTEADY DRIVING CHARACTERISTICS AND CAN GET OUT OF CONTROL.



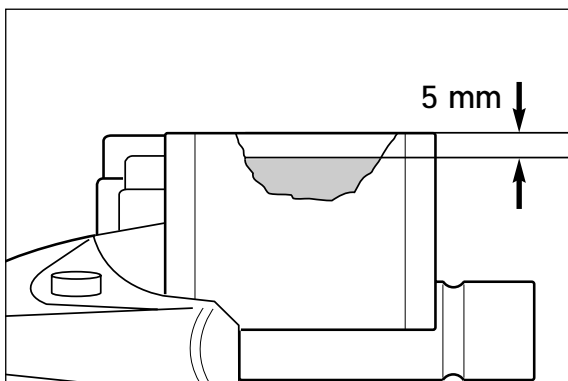
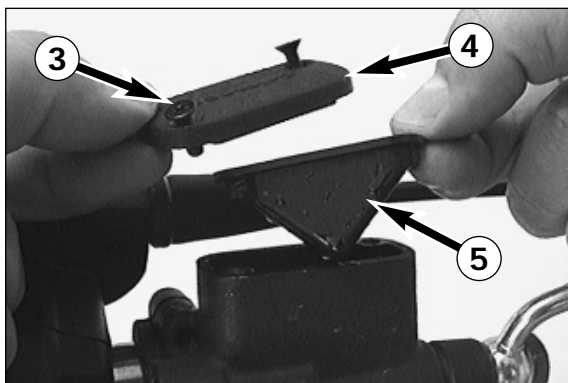
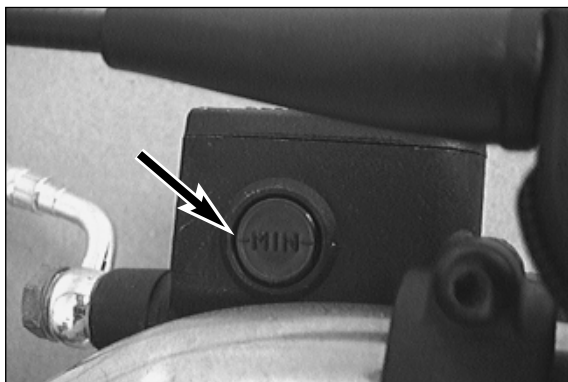
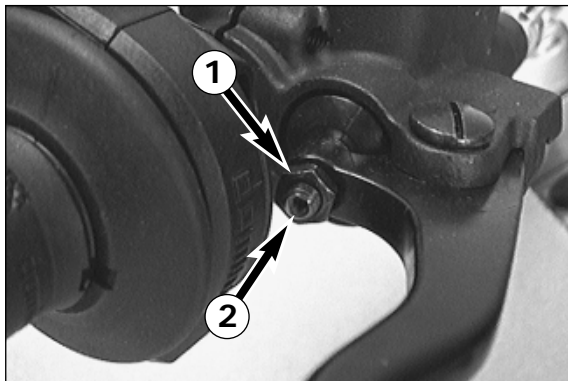
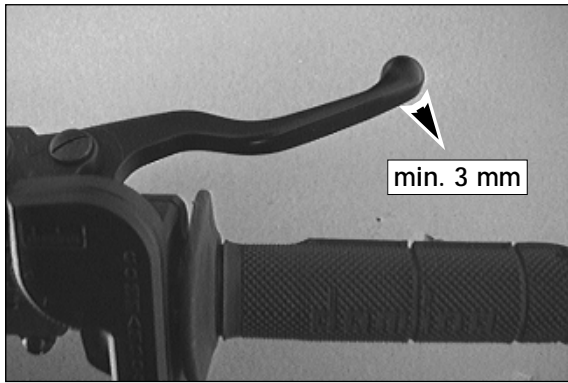
## CAUTION



- THE HANDLEBAR MUST MOVE EASILY. OTHERWISE THE BEARINGS WILL BE DAMAGED.
- IF YOU DRIVE WITH PLAY IN THE STEERING HEAD BEARING FOR LONGER PERIODS, THE BEARINGS AND SUBSEQUENTLY THE BEARING SEATS IN THE FRAME WILL BE DESTROYED.



At least once a year, the steering head bearings should be smeared with waterproof grease.



**General information about KTM disc brakes**

**BRAKE FLUID RESERVOIR:**

The brake fluid reservoir on front wheel brake 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 level either the brake system has a leak or the brake pads are completely worn. In this case, consult an authorized KTM dealer immediately.

**BRAKE FLUID:**

KTM fills the brake system with "Shell Advance Brake DOT 5.1", one of the best brake fluids currently available. We recommend that you continue to use it. DOT 5.1 brake fluid is based on glycol ether and of an amber color. If you do not have any DOT 5.1 for refilling, you may use DOT 4 brake fluid. However, you should replace it as soon as possible by DOT 5.1.

**Adjusting of free travel at the hand brake lever**

Free travel at the hand brake lever may be readjusted by using adjustment screw 2. In this way, the position of the point of pressure (i.e., the resistance you feel on the hand brake lever when the brake pads are pressed against the brake disc) can be adjusted for any hand size. For this purpose, undo the counter nut 1 and twist the adjustment screw 2 until the desired adjustment is achieved. After the adjustment process retighten the counter nut.

**! CAUTION !**

AT THE HAND BRAKE LEVER, FREE TRAVEL MUST AT LEAST BE 3 MM (0.1 IN). ONLY THEN MAY THE PISTON IN THE HAND BRAKE CYLINDER BE MOVED (TO BE RECOGNIZED BY THE GREATER RESISTANCE OF THE HAND BRAKE LEVER). IF THIS FREE TRAVEL IS NOT PROVIDED, PRESSURE WILL BUILD UP IN THE BRAKING SYSTEM, AND THE FRONT-WHEEL BRAKE MAY FAIL DUE TO OVERHEATING.

**Checking of brake fluid level - front brake**

The brake fluid reservoir is combined with the hand brake cylinder on the handlebar and provided with an inspection glass. When the brake fluid reservoir is in a horizontal position, the brake fluid level should not drop below the "MIN" mark on the inspection glass.

**⚠ WARNING ⚠**

DROPPING OF THE BRAKE FLUID LEVEL BELOW THE "MIN" MARK INDICATES LEAKS IN THE BRAKE SYSTEM OR TOTALLY WORN BRAKE PADS. IN THIS CASE, IMMEDIATELY CONTACT A LICENSED KTM DEALER.

**Refilling the front brake fluid reservoir \***

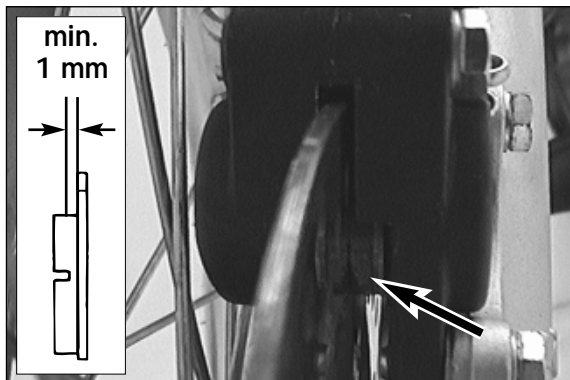
When the brake fluid falls to the middle of the inspection glass, new brake fluid has to be added. Loosen screws 3 and remove lid 4 and membrane 5. Place hand brake cylinder in a horizontal position and fill the brake fluid reservoir to 5 mm (0.2 in) below the rim with clean brake fluid DOT 5.1 (Shell Advance Brake DOT 5.1). Replace membrane and lid, tighten screws. Rinse off spilled or overflowing brake fluid with water.

**⚠ WARNING ⚠**

- NEVER USE DOT 5 BRAKE FLUID! IT IS BASED ON SILICONE OIL AND OF A PURPLE COLOR. SEALS AND BRAKE HOSES MUST BE ESPECIALLY ADAPTED TO IT.
- STORE BRAKE FLUID OUT OF REACH OF CHILDREN.
- BRAKE FLUID CAN CAUSE SKIN IRRITATION. AVOID CONTACT WITH SKIN AND EYES. IF YOU GET BRAKE FLUID IN YOUR EYES, RINSE WITH PLENTY OF WATER AND CONSULT A DOCTOR !

**! CAUTION !**

- DON'T LET BRAKE FLUID GET IN CONTACT WITH PAINT, IT IS AN EFFECTIVE PAINT REMOVER.
- USE ONLY CLEAN BRAKE FLUID TAKEN FROM A TIGHTLY SEALED CONTAINER.



### Checking the front brake pads

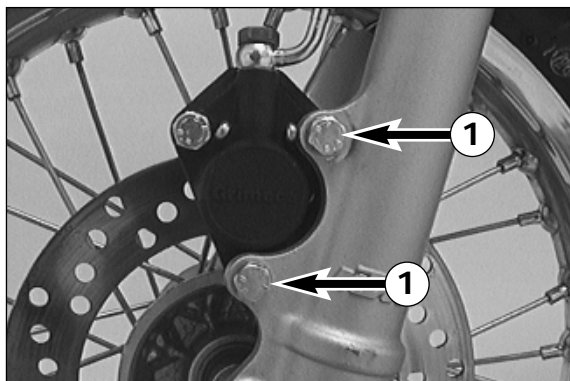
Inspect the brake pads from in front of the vehicle. The linings must be at least 1 mm (0.04 in) thick.

⚠ **WARNING** ⚠

AT THEIR MOST WORN POINT BRAKE PAD LININGS SHOULD NOT BE THINNER THAN 1 MM, OTHERWISE THEY COULD LEAD TO BRAKE FAILURE. FOR YOUR OWN SAFETY DON'T PUT OFF HAVING YOUR BRAKE PADS CHANGED.

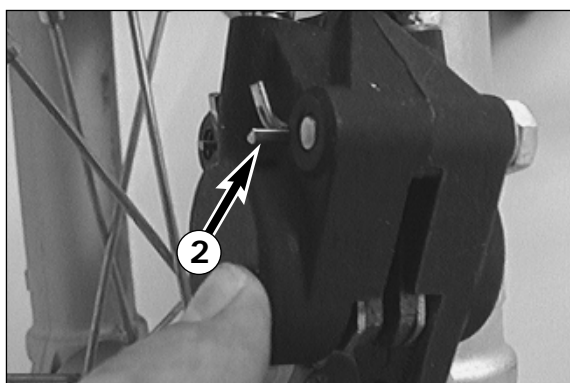
! **CAUTION** !

IF THE BRAKE PADS ARE REPLACED TOO LATE SO THAT THE LINING IS PARTLY OR ENTIRELY WORN, THE STEEL COMPONENTS OF THE BRAKE PAD WILL RUB AGAINST THE BRAKE DISC, THEREBY IMPAIRING THE BRAKING EFFECT AND DESTROYING THE BRAKE DISC.

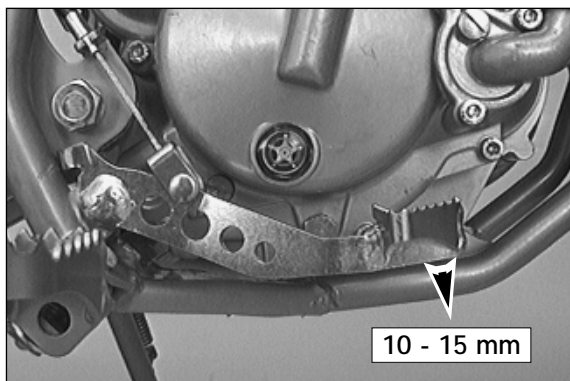


### Replacing front brake pads

- Remove the two screws ❶ and take the brake caliper off the brake disc.
- Undo the two pins ❷ and take them out of the brake caliper. Then remove the brake pads by pulling them downwards.

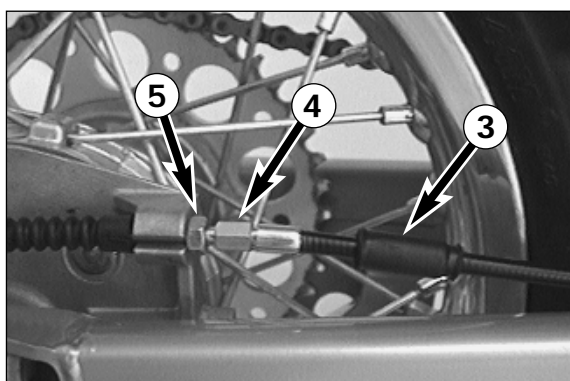


- Before installing the new brake pads push the brake pistons backwards with an appropriate screwdriver.
- Insert the brake pads into the brake caliper from below and mount two new pins. Secure both pins by folding up the edges.
- Apply Loctite 242 to the threads of the screws ❶ and mount the screws. Tightening torque: 20 Nm (15 ft.lb).



### Adjusting the rear wheel brake cable

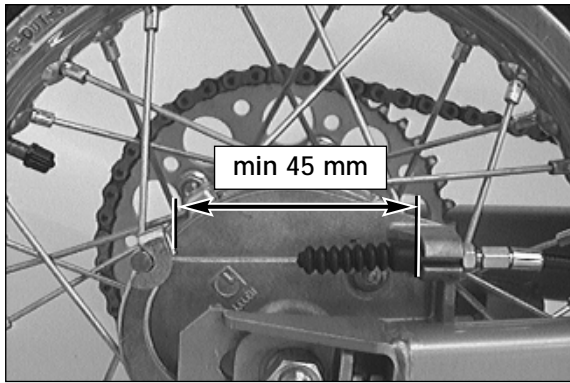
You should be able to depress the foot brake pedal 10 - 15 mm before the rear wheel brake begins to take effect.



Before adjusting the brake control cable push back the protection cover ❸. Undo the counter nut ❺ and twist the adjustment screw ❹ until the desired adjustment is achieved. After the adjustment process retighten the counter nut ❺ and mount protection cover.

! **CAUTION** !

AFTERWARDS ALWAYS VERIFY THAT THE REAR WHEEL IS TURNING SMOOTHLY.

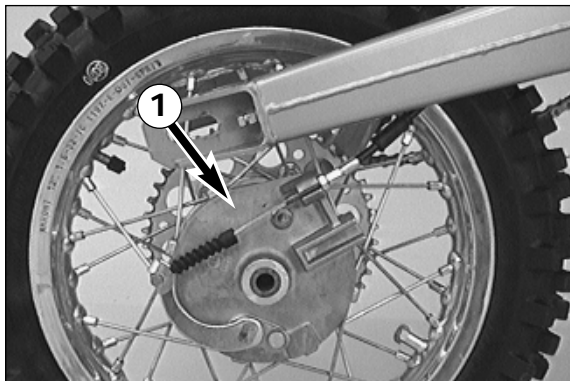


### Checking the rear brake linings for wear

The brake linings must be replaced when the distance between the hub brake lever and the cable support, measured with the brake lever squeezed, is less than 45 mm (1.8 in) (see illustration).

**! CAUTION !**

IF THE BRAKE LININGS ARE REPLACED TOO LATE, I.E. WHEN THE LINING IS PARTLY OR FULLY WORN AWAY, THE METAL SHOES WILL RUB AGAINST THE BRAKE DRUM, THUS REDUCING THE BRAKING EFFECT AND DESTROYING THE BRAKE DRUM.



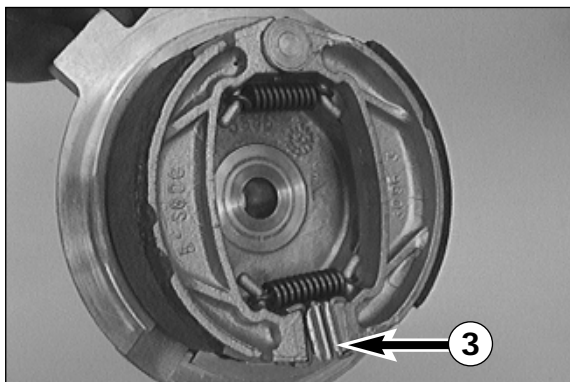
### Exchanging the rear brake linings

Remove the rear wheel (see page 15)

Unhook the rear wheel brake control cable from the brake anchor plate **1**. Simply take the brake anchor plate out of the brake drum and turn up the brake shoes.

Now the springs can be unhooked from the brake shoes.

Before mounting new brake shoes check the brake cam **3** for smooth operation and apply a thin coat of copper paste to the contact surfaces for the brake shoes.



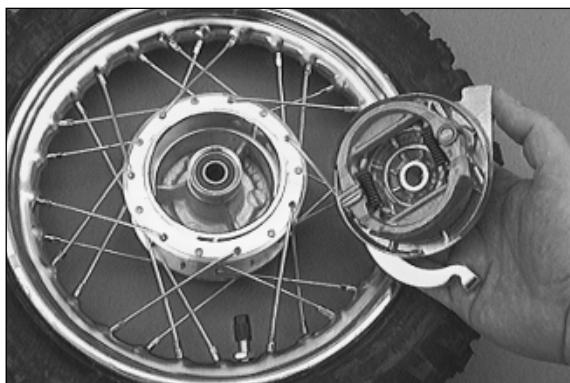
Slightly roughen the new brake shoes with an abrasive cloth and hook both springs into the brake shoes.

Position the brake shoes and lever them into their proper position with a screwdriver.

Roughen the brake drum with an abrasive cloth and clean it with compressed air.

Hook the rear wheel brake control cable back into the brake anchor plate. Insert the brake anchor plate into the brake drum and install the rear wheel.

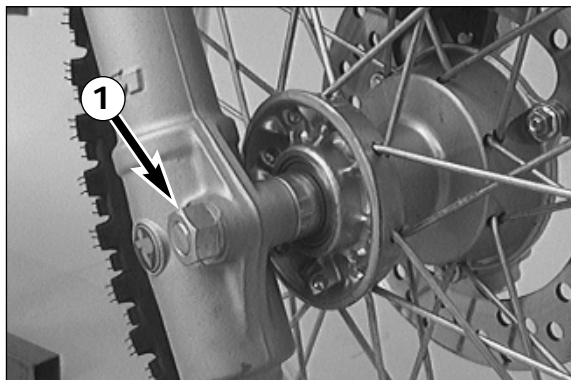
After installing the rear wheel adjust the rear wheel brake control cable and check the play of the foot brake pedal.



### Drum brake maintenance

Drum brake maintenance is limited to occasional blowing out of brake drum and brake shoes. Brake drum and brake linings can be slightly roughened with an abrasive cloth.





## Removing and installing the front wheel

- Jack the motorcycle up by the frame so that the front wheel is suspended above the ground.
- Undo the hexagon nut **1** and remove it together with the washer.
- Hold the front wheel and pull out the wheel spindle **2**.
- Carefully take the front wheel out of the fork.

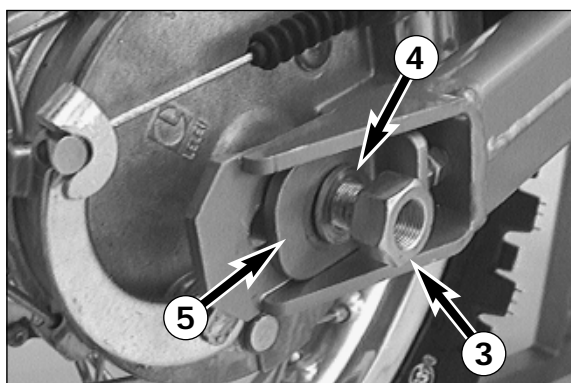
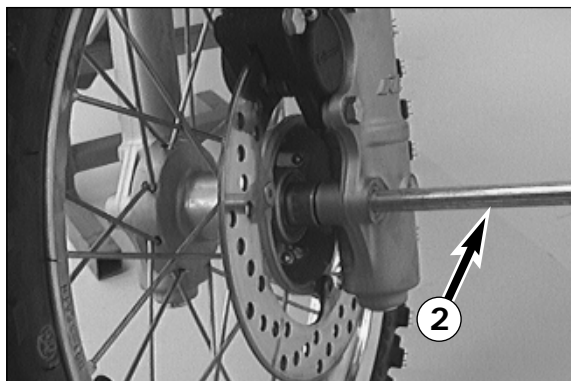
**! CAUTION !**

DO NOT OPERATE THE HAND BRAKE WHEN THE FRONT WHEEL HAS BEEN DISMOUNTED.

- Lift the front wheel into the fork and correctly position it.
- Mount the wheel spindle **2**.
- Mount the washer and the hexagon nut **1** and tighten (50 Nm/37 ft.lb).
- Put the motorcycle back on the ground and operate the front wheel brake until the working point is reached.

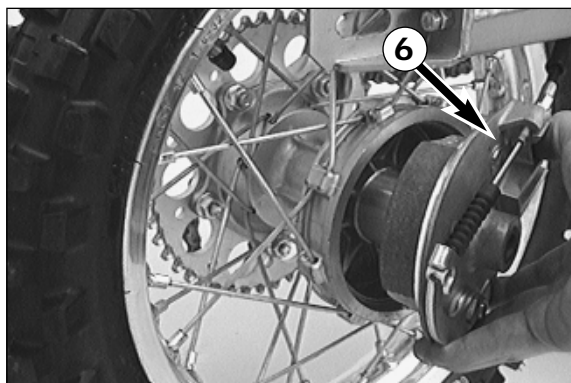
**⚠ WARNING ⚠**

- IF YOU DON'T HAPPEN TO HAVE A TORQUE WRENCH AT HAND, MAKE SURE YOU HAVE THE TIGHTENING TORQUE CORRECTED BY A KTM DEALER AS SOON AS POSSIBLE. A LOOSE AXLE MAY LEAD TO AN UNSTABLE DRIVING BEHAVIOR OF YOUR MOTORCYCLE.
- AFTER MOUNTING THE FRONT WHEEL, KEEP OPERATING THE HAND BRAKE UNTIL THE PRESSURE POINT RETURNS.
- IT IS VERY IMPORTANT TO KEEP THE BRAKE DISK FREE FROM OIL AND FATTY MATTERS, OTHERWISE THE BRAKING EFFECTS WOULD BE STRONGLY REDUCED.

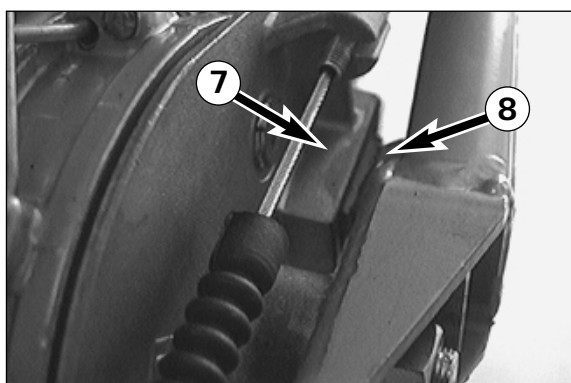


## Removing and installing the rear wheel

- Jack the motorcycle up by the frame.
- Remove the hexagon nut **3** of the wheel spindle together with the washer **4** and remove the chain adjuster **5**.
- Hold the rear wheel and pull out the wheel spindle.
- Turn the rear wheel forwards and take the chain off the rear sprocket.



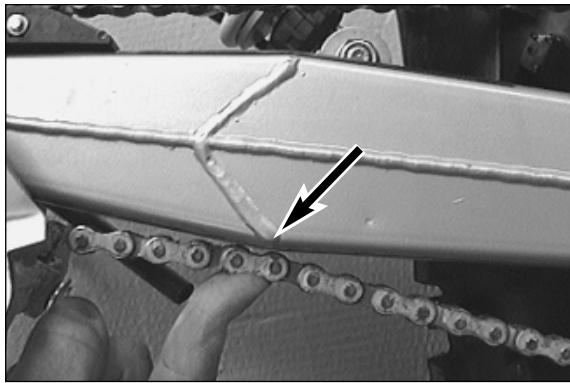
- Pull the rear wheel backwards until the brake anchor plate unhooks from its support **3** on the swing arm. Then move the rear wheel downwards.
- Pull the brake anchor plate **6** out of the brake drum and remove the rear wheel.



- To install the rear wheel reverse the procedure described above.
- Keep in mind to hook the brake anchor plate **7** into its support **8** on the swing arm (see illustration).
- Slightly grease the wheel spindle.
- Before tightening the hexagon nut **3** make sure that the chain adjusters **5** are properly resting against the tensioning screws. Additionally, make sure that the rear wheel is properly aligned with the front wheel.
- Mount the hexagon nut and tighten with 50 Nm (37 ft.lb).

**⚠ WARNING ⚠**

- IF YOU DON'T HAPPEN TO HAVE A TORQUE WRENCH AT HAND, MAKE SURE YOU HAVE THE TIGHTENING TORQUE CORRECTED BY A KTM DEALER AS SOON AS POSSIBLE. A LOOSE AXLE MAY LEAD TO AN UNSTABLE DRIVING BEHAVIOR OF YOUR MOTORCYCLE.

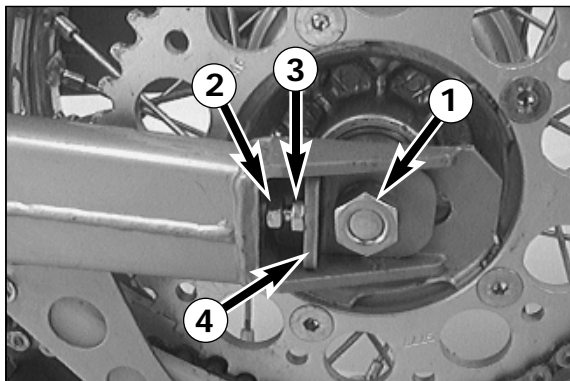


### Checking the chain tension

- Put the motorcycle on the side stand.
- Push the chain upwards at a point approximately 10 mm behind the V-shaped weld of the swing arm.
- At this point you should be able to push the chain easily all the way up to the swing arm. The upper part of the chain must be tight while this test is performed.
- If necessary correct the chain tension.

⚠ **WARNING** ⚠

- If the chain is too tight the secondary transmission components (chain, sprockets, bearings of the transmission and of the rear wheel) will be put under additional strain that can, in addition to premature wear, also cause chain breakage.
- If the chain is not tight enough it can slip off the sprockets and block the rear wheel or damage the engine.
- In both cases the rider is very likely to lose control of the motorcycle.

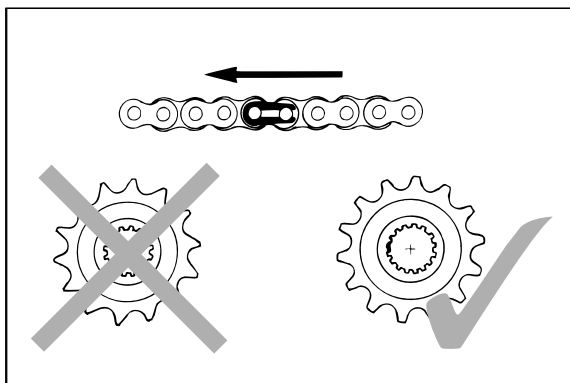
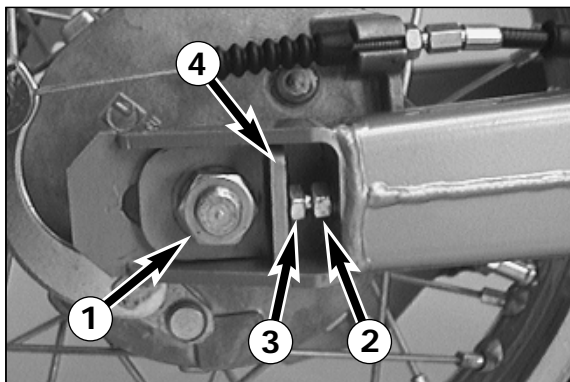


### Correcting the chain tension

- Undo the left or right hexagon nut ①, then undo both counter nuts ② and turn the left and the right tensioning screws ③ equally far. Then retighten the counter nuts ②.
- Before tightening the two hexagon nuts ① make sure that the chain adjuster ④ is properly resting against the tensioning screws ③ and that the rear wheel is properly aligned with the front wheel.
- Tighten the hexagon nuts ① with 50 Nm (37 ft.lb).

⚠ **WARNING** ⚠

- If you don't happen to have a torque wrench at hand, make sure you have the tightening torque corrected by a KTM dealer as soon as possible. A loose axle may lead to an unstable driving behavior of your motorcycle.
- Tighten the collar nut with the required torque. A loose wheel spindle may lead to an unstable behavior of your motorcycle.



### Chain maintenance

For long chain life, good maintenance is very important. The chain should be cleaned in fireproof solvent regularly and afterwards treated with hot grease or chain spray (i.e. Shell Advance Bio Chain).

⚠ **WARNING** ⚠

NO LUBRICATION IS ALLOWED TO REACH THE REAR TIRE, OTHERWISE THE ROAD ADHERENCE WOULD BE STRONGLY REDUCED AND THE MOTORCYCLE COULD EASILY LOSE CONTROL.

! **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.



## Tires, air pressure

Tire type, tire condition, and air pressure level affect the way your motorcycle rides, and they must therefore be checked whenever you are getting ready to go anywhere on your motorcycle.

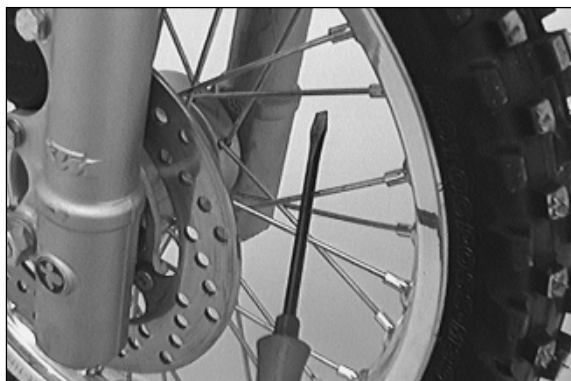
- Tire size can be found in the technical specifications
- Tire condition has to be checked every time you want to ride your motorcycle. Before leaving, check tires for punctures and nails or other sharp objects that might have become embedded in them.
- Tire pressure should be checked regularly on a "cold" tire. Proper pressure (1.0 bar) ensures optimum driving comfort and extends the life of your tires.



### WARNING



- DAMAGED TIRES MUST BE REPLACED IMMEDIATELY TO PROTECT YOUR YOUNGSTER.
- WORN TIRES CAN HAVE A NEGATIVE EFFECT ON HOW THE MOTORCYCLE PERFORMS, ESPECIALLY ON WET SURFACES
- TIRE PRESSURE BELOW THE NORMAL LEVEL WILL LEAD TO PREMATURE TIRE WEAR.



## Checking spoke tension

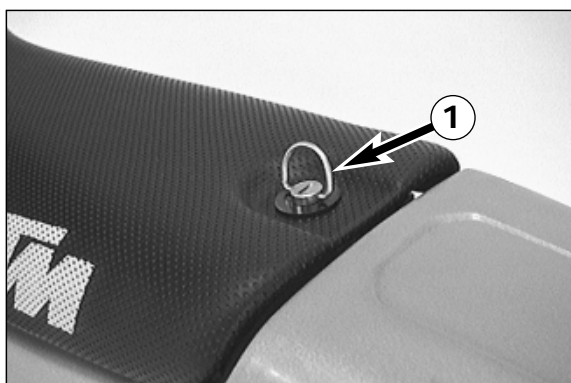
The correct spoke tension is very important for the stability of the wheels and thus for riding safety. A loose spoke causes the wheel to become unbalanced and before long other spokes will have come loose. Check spoke tension, especially on a new motorcycle, in regular intervals. For checking, tap on each spoke with the blade of a screwdriver (see photo). A clear tone must be the result. Dull tones are indicators of loose spokes. If necessary, have the spokes retightened and the wheel centered by a KTM dealer.



### WARNING

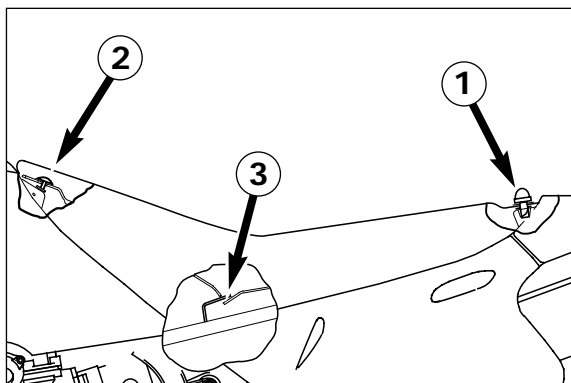


SPOKES CAN TEAR IF YOU CONTINUE TO RIDE WITH THEM LOOSE. THIS MAY LEAD TO AN UNSTABLE HANDLING OF YOUR MOTORCYCLE.

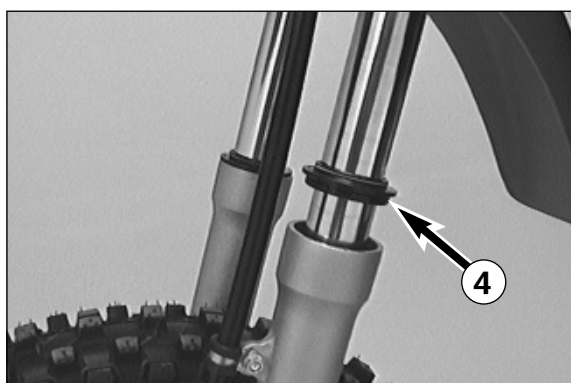


## Removal of seat

By using the quick-release fastener **1**, the seat can be removed without using tools. Turn the quick-release fastener about 180° counter clockwise and lift up the rear of the seat. Pull the seat backwards and unhook it from the front fastener screw **2**.



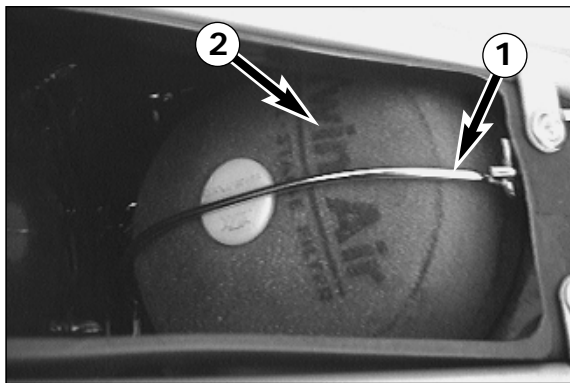
When installing the seat, be sure to insert the rear portion of the seat into the metal clasp **3**.



## Cleaning the dust scrubbers of the telescopic fork

The dust scrubbers **4** should be cleaned on a regular basis.

For this purpose, use a screwdriver to lever the dust scrubbers out of the slider tubes, clean them thoroughly with compressed air, spray the fork tubes and dust scrubbers with silicon oil and press the scrubbers back into the slider tubes.



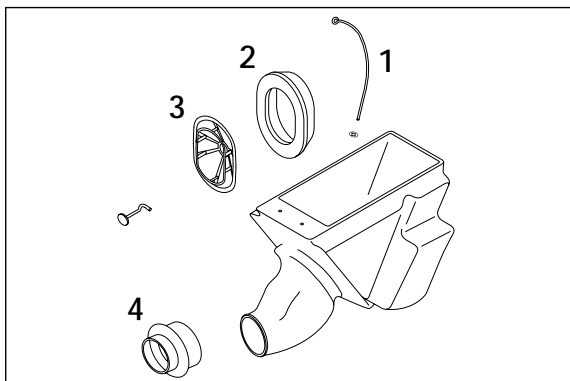
### Cleaning of air filter\*

To do this, remove the seat and the air filter cover from the air filter box. Unclasp the filter holder **1**, swing back and remove air filter **2** plus filter carrier **3** from the filter box.

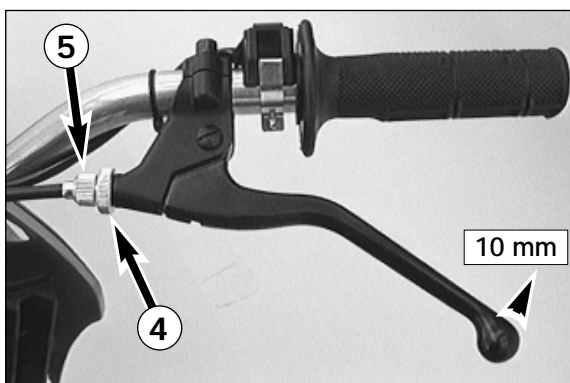
**! CAUTION !**

DO NOT CLEAN FOAM FILTER WITH FUEL OR PETROLEUM SINCE THESE DAMAGE THE FOAM. KTM RECOMMENDS THE PRODUCTS OF THE COMPANY PUTOLINE FOR AIR FILTER MAINTENANCE. „ACTION CLEANER“ FOR CLEANING PURPOSES AND „ACTION FLUID“ TO OIL THE FOAM FILTER.

Thoroughly wash the foam filter in special cleaning fluid and allow to dry well. Only press out the filter, do not wring out under any circumstances. Oil the dry foam filter with a high grade filter oil. Also clean the air filter box. Check carburettor collar **4** for damage and that it is fitted correctly.



Mount the air filter **2** on the filter support **3**. Grease the front side of the filter, to improve the seal. Mount the air filter and the filter support in the filter box. Make sure they are centered, and lock into place with the filter holder **1**.

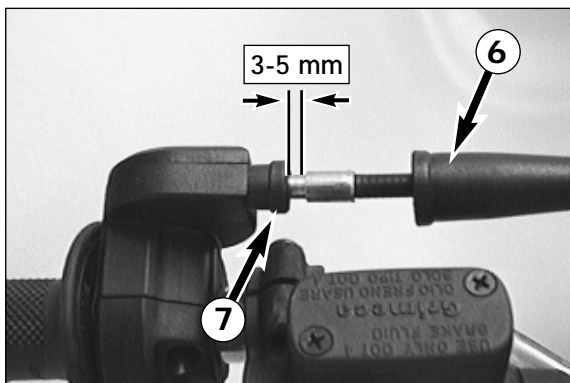


### Adjusting the clutch cable

When the engine is cold the play of the clutch lever should be 10 mm (measure play at the outer end of the clutch lever).

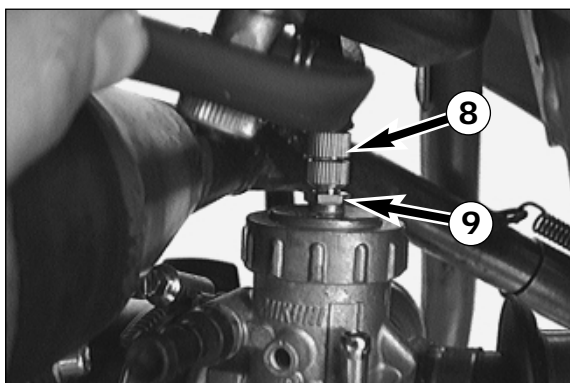
To adjust the clutch cable push back the protection cover. Undo the counter nut **4** and twist the adjustment screw **5** until the desired adjustment is achieved.

After the adjustment process retighten the counter nut **4** and put the protection cover back into place.

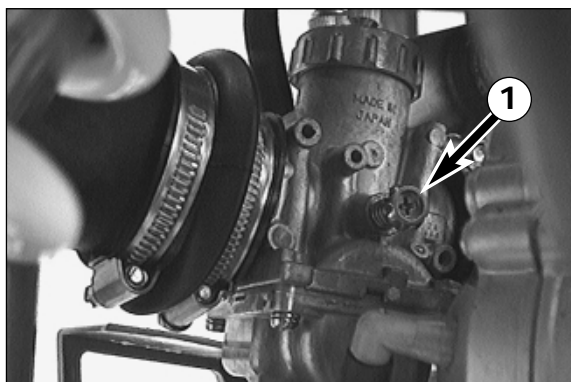


### Adjusting the throttle cable \*

The play of the throttle cable should be 3-5 mm at all times. To check the play of the throttle cable push back the protection cover **6** at the throttle grip. Now it should be possible to pull the outer sleeve of the throttle cable 3-5 mm off the throttle twist grip housing **7** before you begin to feel a slight resistance.



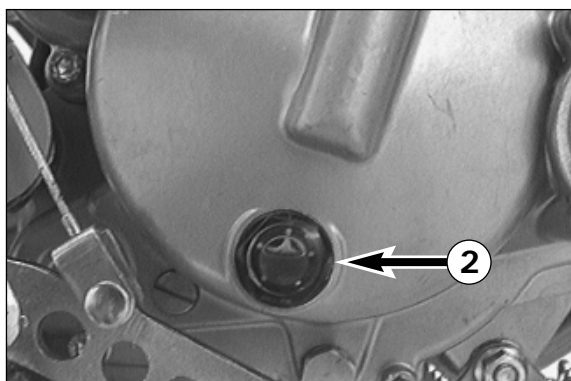
To adjust the throttle cable undo the counter nut **9** at the carburetor and twist the adjustment screw **8** until the desired adjustment is achieved. After the adjustment process retighten the counter nut **9** and make sure the protection cover is properly put back into place.



### Adjusting the idle speed \*

The idle speed can be adjusted with screw ❶.

Turn the screw clockwise to increase the idle speed.  
Turn the screw counterclockwise to reduce the idle speed.



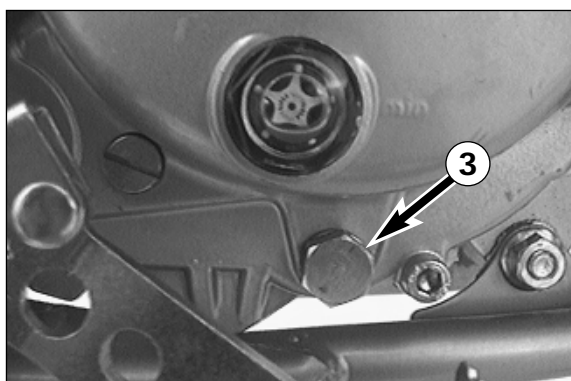
### Checking the gear oil level

An inspection glass ❷ on the left side of the engine allows easy checking of the gear oil level.

- Warm up the engine, then turn it off and wait two minutes until the oil has flown back into the gearbox case.
  - Park the motorcycle straight on a horizontal surface and check the oil level.
  - The oil level must not drop below the "MIN" mark of the inspection glass.
- Note: If the motorcycle is not parked properly for the oil level inspection it will not be possible to achieve a reliable result.
- If necessary add engine oil (10W40 (e.g. Shell Advance Ultra 4).

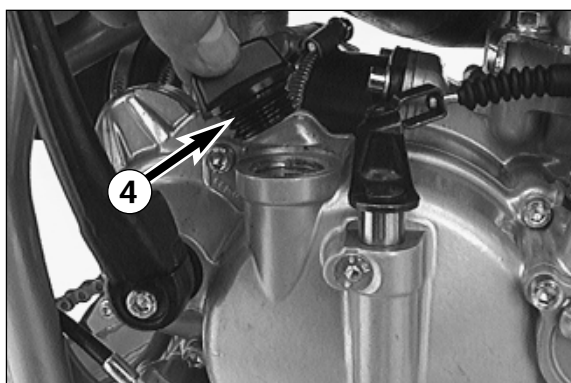
**! CAUTION !**

NOT ENOUGH OIL OR A POOR OIL QUALITY LEAD TO PREMATURE WEAR OF THE TRANSMISSION. THEREFORE, USE ONLY HIGH-QUALITY OILS (E.G. SHELL ADVANCE ULTRA 4).



### Changing the gear oil \*

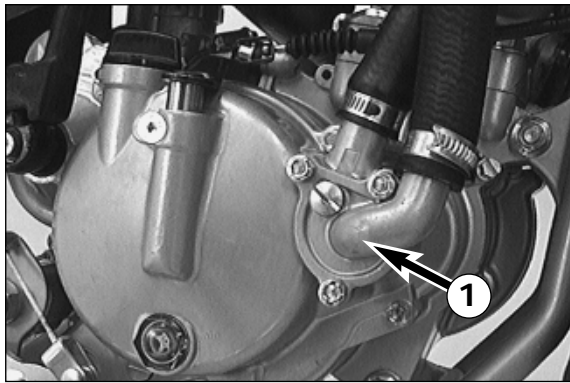
Before changing the gear oil warm up the engine and park the motorcycle on a horizontal surface. Remove the oil drain plug ❸ and drain the used oil into an appropriate container. Clean the sealing surface. Mount the oil drain plug together with its gasket and tighten with 15 Nm (11 ft.lb).



Remove the filler plug ❹ and add 0.30 l engine oil 10W40 (e.g. Shell Advance Ultra 4). Mount the filler plug and check the engine for leaks.

**! CAUTION !**

NOT ENOUGH OIL OR A POOR OIL QUALITY LEAD TO PREMATURE WEAR OF THE TRANSMISSION. THEREFORE, USE ONLY HIGH-QUALITY OILS (E.G. SHELL ADVANCE ULTRA 4).



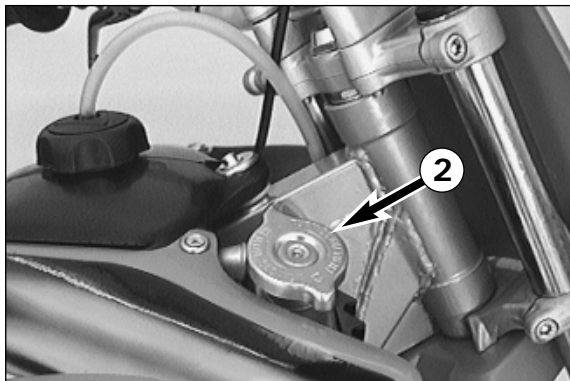
### Cooling system

The water pump ❶ in the engine keeps the cooling liquid in circulation. The cooling liquid is cooled by the air stream. Therefore, the cooling effect is reduced when the traveling speed is reduced. Dirty radiators additionally reduce the cooling effect.

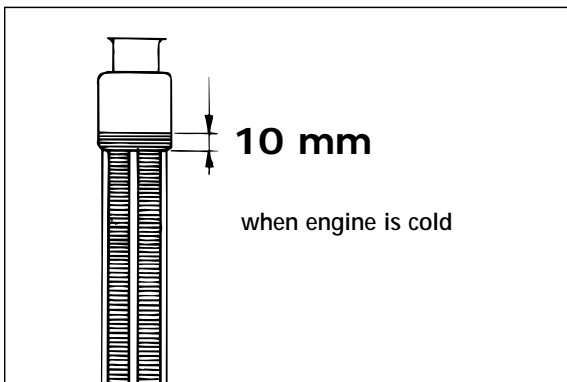
A mixture of 40% anti freeze liquid and 60% water is used as coolant. However, the anti-freeze protection must be at least -25° C (-13° F). This mixture offers anti-freeze protection but also good corrosion protection and should therefore not be replaced by pure water.

**! CAUTION !**

FOR THE COOLING SYSTEM, USE ONLY WITH HIGH-GRADE ANTIFREEZE (SHELL ADVANCE COOLANT). USING LOWER-GRADE ANTIFREEZE AGENTS, CAN CAUSE CORROSION AND COOLANT FOAMING.



Pressure induced by heating of the coolant in the system is controlled by a valve in the radiator cap ❷; a water temperature rising up to 120° C (248° F) is admissible, without fear of problems.

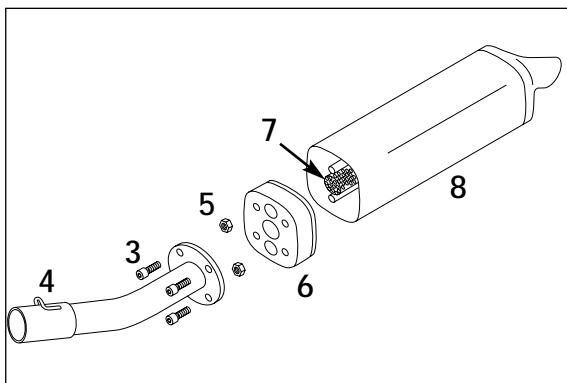


### Checking the coolant level

The coolant should be 10 mm (0.4 in) above the radiator fins when the engine is cold (see illustr.). In the event of the coolant being drained, always fill and bleed the system.

**⚠ WARNING ⚠**

IF POSSIBLE, ALWAYS CHECK LEVEL OF COOLING LIQUID WHEN ENGINE IS COLD. IF YOU HAVE TO OPEN THE RADIATOR CAP WHEN THE ENGINE IS HOT, USE A RAG TO COVER THE CAP AND OPEN SLOWLY TO RELEASE PRESSURE.



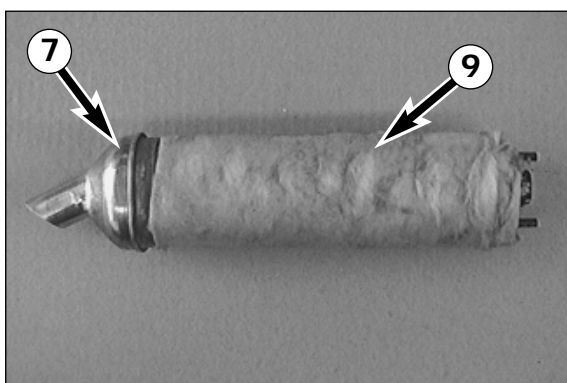
### Exhaust system

The main silencer is filled with glass fiber yarn. Heat, however, causes the glass fiber yarn filling to disintegrate which can reduce the overall performance of the motorcycle and the damping effect achieved by the main silencer. The glass fiber yarn package can easily and quickly be replaced.

Remove the main silencer and take off the 4 screws ❸ at the front end of the main silencer. Then take off the connecting pipe ❹.

Undo both hexagon nuts ❺ and pull the front closure cap ❻ out of the outer sleeve ❸.

Now the silencer cap ❼ can be removed together with the glass fiber yarn package ❾, pulling both backwards out of the outer sleeve. Take the old glass fiber yarn package off the inner exhaust pipe and clean the latter with a wire brush.



To reassemble the main silencer put the new glass fiber yarn package onto the inner exhaust pipe (see illustration) and push the inner pipe into the outer sleeve.

Mount the front closure cap and fasten it with the two hexagon nuts ❺. Then fasten the front exhaust pipe ❹ with the 4 screws ❸ and mount the main silencer on the vehicle. Check the exhaust system for leaks.

NOTE: Glass fiber yarn packages are offered by your licensed KTM dealer.

**⚠ WARNING ⚠**

THE EXHAUST SYSTEM BECOMES VERY HOT WHILE THE MOTORCYCLE IS RUNNING. TO AVOID BURNS DO NOT START WORK ON THE EXHAUST SYSTEM UNTIL IT HAS PROPERLY COOLED DOWN.

## Carburetor adjustment \*

### Basic information on the original carburetor setting

The original carburetor setting was adapted for an altitude of approx. 500 meters (1600 ft.) above sea level, and the ambient temperature of approx. 20° C (68° F), mainly for off-road use and central European premium-grade fuel (ROZ 95).

Mixing ratio 2-stroke motor oil : super fuel 1:40 .

### Basic information on a change of the carburetor setting

Always start out from the original carburetor setting. Essential requirements are a clean air filter system, air-tight exhaust system and an intact carburetor. Experience has shown that adjusting the main jet, the idling jet and the jet needle is sufficient and that changes of other parts of the carburetor will not greatly affect engine performance.

RULE OF THUMB: high altitude or high temperatures → choose leaner carburetor adjustment  
low altitude or low temperatures → choose richer carburetor adjustment



## WARNING

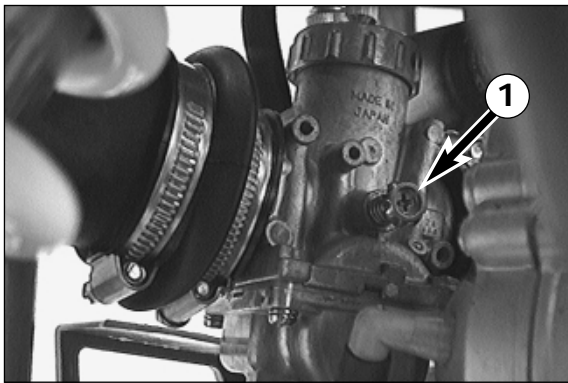


- ONLY USE PREMIUM-GRADE GASOLINE ROZ 95 MIXED WITH HIGH-GRADE TWO-STROKE ENGINE OIL. OTHER TYPES OF GASOLINE CAN CAUSE ENGINE FAILURE, AND USE OF SAME WILL VOID YOUR WARRANTY.
- ONLY USE HIGH-GRADE 2-STROKE ENGINE OIL OF KNOWN BRANDS (I. E. SHELL ADVANCE RACING X).
- NOT ENOUGH OIL OR LOW-GRADE OIL CAN CAUSE EROSION OF THE PISTON. USING TOO MUCH OIL, THE ENGINE CAN START SMOKING AND FOUL THE SPARK PLUG.
- IN THE CASE OF A LEANER ADJUSTMENT OF THE CARBURETOR PROCEED CAUTIOUSLY. ALWAYS REDUCE THE JET SIZE IN STEPS OF ONE NUMBER TO AVOID OVERHEATING AND PISTON SEIZURE.

NOTE: If despite a changed adjustment the engine does not run properly, look for mechanical faults and check the ignition system.

### Basic information on carburetor wear

As a result of engine vibrations, throttle valve, jet needle, and needle jet are subjected to increased wear. This wear may cause carburetor malfunction (e.g., overly rich mixture). Therefore, these parts should be replaced after 1000 hours of using.



### Idling range – A

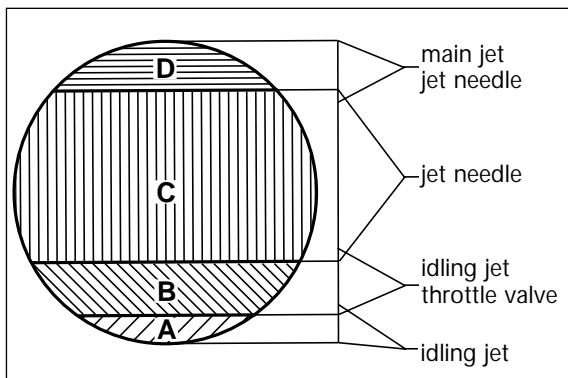
Operation with closed throttle valve. This range is influenced by the idle adjusting screw ①. Only make adjustments when the engine is hot.

The idling speed can be changed by turning the idle adjusting screw.

Turning it clockwise produces a higher idling speed and turning the screw counterclockwise produces a lower idling speed.

### Opening up – B

Engine behavior when the throttle opens. The idle jet and the shape of the throttle valve influences this range. If, despite good idling-speed and part-throttle setting, the engine sputters and smokes when the throttle is fully opened and develops its full power not smoothly but suddenly at high engine speeds, the mixture to the carburetor will be too rich, the fuel level too high or the float needle is leaking.



### Part-throttle range – C

Operation with partly open throttle valve. This range is only influenced by the jet needle (shape and position). The optimum part-throttle setting is controlled by the idling setting in the lower range and by the main jet in the upper range. If the engine runs on a four-stroke cycle or with reduced power when it is accelerated with the throttle partly open, the jet needle must be lowered by one notch. If then the engine pings, especially when accelerating under full power at maximum engine revs, the jet needle should be raised. If these faults should occur at the lower end of the part throttle range at a four-stroke running, make the idling range leaner; if the engine pings, adjust the idling range richer.

### Full throttle range – D

Operation with the throttle fully open (flat out). This range is influenced by the main jet and the jet needle. If the porcelain of the new spark plug is found to have a very bright or white coating or if the engine rings, after a short distance of riding flat out, a larger main jet is required. If the porcelain is dark brown or black with soot the main jet must be replaced by a smaller one.

## CLEANING

Clean your motorcycle regularly in order to keep its painted finish looking shiny and new.

The best manner would be to use warm water that has been mixed with a commercially available washing detergent and a sponge. The hard dirt can be removed before with the help of a soft water jet.

!

### CAUTION

!

NEVER CLEAN YOUR MOTORCYCLE WITH A HIGH-PRESSURED CLEANER OR A HIGH-PRESSURED WATER JET. OTHERWISE THE WATER MIGHT RUN INTO THE ELECTRICAL COMPONENTS, CONNECTORS, SHEATHED CABLES, BEARINGS, CARBURETOR ETC. AND CAUSE MALFUNCTIONS, I.E., LEAD TO THE PREMATURE DESTRUCTION OF THESE PARTS.

- You should use commercially available detergents to clean the motorcycle. Heavily soiled parts should also be cleaned with the help of a paint brush.
- After the motorcycle has been rinsed with a soft water jet, it should be dried by air pressure and a cloth. Then take a short drive until the engine has reached its operating temperature, and also operate the brakes. The heat also causes the water at the inaccessible parts of the engine and the brakes to evaporate.
- Slide back the protective covers on the handlebar-mounted instruments so that any water that may have seeped into this part of the motorcycle is allowed to evaporate.
- After the motorcycle has cooled down, oil and grease all the gliding bearing parts. Also treat the chain with a chain spray.
- To prevent failures in the electric system, you should treat the short circuit button with a contact spray.

## STORAGE

If you want to put your motorcycle away for longer periods of time, please observe the following instructions:

- Clean motorcycle thoroughly (see chapter: CLEANING)
- Change engine oil (old engine oil contains aggressive contaminations).
- Check antifreeze and amount of cooling liquid.
- Let the engine warm up again, close fuel tap and wait until the engine dies off by itself. In this way, the carburetor jets are prevented from becoming resin-clogged by the old fuel.
- Remove spark plug and fill in approx. 5 ccm of engine oil into the cylinder through the opening. Actuate kick-starter 10 times in order to distribute the oil onto the cylinder walls and mount the spark plug.
- Let fuel flow out of tank into an appropriate basin.
- Correct tire pressure.
- Lubricate bearing points of the control levers, foot rests, etc. as well as the chain.
- The storage place should be dry and not be subject to overly great temperature fluctuations.
- Cover the motorcycle with an air permeable tarpaulin or blanket. Do not use non-air-permeable materials, as possible humidity might not be able to escape and thereby cause corrosion.

⚠

### WARNING

⚠

IT WOULD BE VERY BAD TO LET THE ENGINE RUN FOR A SHORT TIME DURING THE STORAGE PERIOD. THE ENGINE WOULD NOT GET WARMED UP ENOUGH AND THE THUS DEVELOPED STEAM WOULD CONDENSE DURING THE COMBUSTION PROCESS AND CAUSE THE EXHAUST TO RUST.

### USE AFTER PERIOD OF STORAGE

- Fill up tank with fresh fuel.
- Check motorcycle as before each start (see driving instructions)
- Take a short, careful test ride first.



## TECHNICAL SPECIFICATIONS – CHASSIS 60 SX / 65 SX '98

Frame	single downtube, split-cradle
Fork	telescopic fork (Paioli)
Wheel travel front/rear	200 mm (8 in) / 230 mm (9.2 in)
Rear suspension	central shock absorber (Paioli)
Front brake	Disc brake Ø 200 mm (8 in), 1 piston
Rear brake	internal expanding, single/cam drum brake Ø 100 mm (4 in)
Tyres	front: Bridgestone M39 60/100-14 rear: Bridgestone M40 80/100-12
Air pressure	front / rear: 1.0 bar (14 psi) / 1.0 bar (14 psi)
Fuel tank capacity	3.5 liter (0.92 USgal)
Final drive ratio	12 : 46 t
Chain	1/2 x 3/16" 108 rolls
Steering angle	63.5 °
Wheel base	1128 mm (44.4 in)
Seat height, unloaded	740 mm (29.1 in)
Ground clearance	265 mm (10.4 in)
Dead weight without fuel	52 kg (114.8 lbs)
Rider's body height	max. 160 cm (63 in)
Rider's body weight	max 50 kg (110 lbs)
Recommended age of rider	8 to 12 years
Engine	CR 60 / CR63

TIGHTENING TORQUES			
Hexagon screw - brake caliper	M 8	Loctite 242 + 20 Nm	15 ft.lb.
Flat head screw - brake disc	M6	Loctite 242 + 10 Nm	7 ft.lb.
Hexagon nut - front wheel spindle	M 12x1	50 Nm	37 ft.lb.
Hexagon nut - rear wheel spindle	M 12x1	50 Nm	37 ft.lb.
Hexagon nut - swingarm bolt	M 12x1	50 Nm	37 ft.lb.
Clamping screws - upper fork bridge	M 8	15 Nm	11 ft.lb.
Clamping screws - lower fork bridge	M 8	15 Nm	11 ft.lb.
AH screw - handlebar clamp	M 8	20 Nm	15 ft.lb.
Other screws chassis	M 5	6 Nm	4,5 ft.lb.
	M 6	10 Nm	7 ft.lb.
	M 8	25 Nm	18 ft.lb.
	M 10	45 Nm	33 ft.lb.

STANDARD ADJUSTMENT – FORK	
Spring	2,91 N/mm
Preload bushing - length	80 mm
Oil capacity per fork leg	170 ccm
Fork oil	SAE 7,5

# TECHNICAL SPECIFICATIONS - ENGINE CR-60 / CR-63 '98

Engine	CR-60	CR-63
Design	Liquid cooled single cylinder two-stroke engine with reed valve intake	
Displacement	59.41 ccm	63.58 ccm
Bore/stroke	43.5 / 40 mm (1.71/1.57 in)	45 / 40 mm (1.77/1.57 in)
Compression ratio	9.1 : 1	
Fuel	SUPER fuel, research octane no 95, mixed with high grade two stroke oil	
Oil/gasoline ratio	1 : 40 when using high grade two stroke oil (i.ex. Shell Advance Racing X), when in doubt, please contact your importer	
Lubrication	mixture lubrication	
Crankshaft bearing	2 deep-groove ball bearing	
Connecting rod bearing	needle bearing	
Piston pin bearing	needle bearing	
Piston rings	1 compression ring	
Primary drive	straight cut spur gears, 23:75 t	
Transmission	6 speed, claw actuated	
Gear ratio	1 <sup>st</sup> gear 13 : 37 2 <sup>nd</sup> gear 16 : 34 3 <sup>rd</sup> gear 18 : 31 4 <sup>th</sup> gear 21 : 30 5 <sup>th</sup> gear 23 : 28 6 <sup>th</sup> gear 24 : 26	
Transmission oil	0.30 liter (0.0792 USgal) engine oil 10W40 (z B. Shell Advance Ultra 4)	
Ignition system	contactless controlled ignition (Selettra NW21)	
Spark plug	Champion C 55	
Electrode gap	0.60 mm (0.0236 in)	
Carburetor	Mikuni VM 24	
Coolant	0.55 liter (0.145 USgal), mixture coolant : water = 2 : 1, at least -25° C (-13° F)	
Air filter	wet foam type air filter insert	

<b>TOLERANCES AND FITTING CLEARANCES</b>			
Crankshaft	run out of crank stud	max. 0.050 mm	0.00196 in
Conrod bearing	radial play	max. 0.030 mm	0.00118 in
Piston	fitting clearance	0.03 - 0.05 mm	0.00118 – 0.00196 in
Piston ring	end gap	max. 0.15 mm	0.00590 in
Clutch springs	length min.	27 mm	1.06 in
Transmission shafts	end float	0.10 - 0.20 mm	0.00394 – 0.00787 in

<b>TIGHTENING TORQUES - ENGINE</b>		
Hexagon nut – primary gear	M 10	60 Nm (44 ft.lb)
Collar nut – flywheel	M 10x1.25	40 Nm (30 ft.lb)
AH screw – cylinder head	M 7	15 Nm (11 ft.lb)
Collar nut – cylinder base	M 8	25 Nm (18 ft.lb)
Hexagon screw – inner clutch hub	M 10	60 Nm (44 ft.lb)
Oil drain screw	M 8	12 Nm (9 ft.lb)
Crankcase and cover bolts	M 6	10 Nm (7 ft.lb)
Other screws – engine	M 5	6 Nm (5 ft.lb)
	M 6	10 Nm (7 ft.lb)

<b>BASIC CARBURETOR SETTING</b>	
Carburetor	Mikuni VM 24
Main jet	200
Needle jet	N-8
Idling jet	30
Jet needle	5114-3
Needle position from top	3.
Throttle valve	2.0
Starting jet	20

K T M - S P O R T M O T O R C Y C L E A G  
A-5230 Mattighofen • Postfach 91 • Austria  
Internet: <http://www.ktm.co.at>  
FN 102019 d - Landesgericht Ried im Innkreis



320533