

# OWNER'S MANUAL 2007

125 SX

250 SX

ART. NR. 3.211.174 EN



ENGLISH

The KTM logo, consisting of the letters 'KTM' in a bold, italicized, sans-serif font, is positioned in the bottom right corner of the page.

We would like to congratulate you on your purchase of a KTM motorcycle.  
You are now the owner of a state-of-the-art sports motorcycle that guarantees to bring you lots of fun and enjoyment, provided that you clean and maintain it appropriately.

Please insert the serial numbers of your motorcycle in the boxes below

Frame number

Engine number

Stamp of dealer

## CONSUMER INFORMATION FOR AUSTRALIA ONLY

Tampering with noise control system prohibited

Owners are warned that the law may prohibit:

- (a) The removal or rendering inoperative by any person other than for purposes of maintenance, repair or replacement, of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use; and
- (b) the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

All information contained is without obligation. KTM-Sportmotorcycle AG particularly reserves the right to modify any equipment, technical specifications, prices, colors, shapes, materials, services, service work, constructions, equipment and the like so as to adapt them to local conditions or to cancel any of the above items, all without previous announcement and without giving reasons. KTM may stop manufacturing certain models without previous notice. KTM shall not be held liable for any deviations of availability and/or ability to deliver, illustrations, descriptions, printing and/or other errors. The illustrated models partly contain extra equipment, which is not applied to standard models.

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In accordance with the international quality management ISO 9001 standard, KTM uses quality assurance processes that lead to the highest possible product quality.

## INTENDED PURPOSE

KTM sports motorcycles are designed and constructed to resist the usual wear and tear of normal use in competitions.

The motorcycles comply with the regulations and categories currently in effect with the leading international motorcycle associations.

## THE SX MODELS ARE PROHIBITED ON PUBLIC ROADS.

## OWNER'S MANUAL

Please read this manual carefully and completely before going on your first ride. It contains a great deal of information and advice which will help you use and handle your bike properly. Only by doing so will you learn how to tune your motorbike to your specific needs and how to protect yourself against injury. Besides, this manual contains important information on motorcycle maintenance.

In your own interest, please pay particular attention to notices that are marked as follows:

### **WARNING**

– Ignoring these instructions can be dangerous to life and limb!

### **CAUTION**

– ignoring these instructions may damage parts of the motorcycle or impair the motorcycle's traffic safety!

At the time this manual was typeset, it was up-to-date with the latest state of this production series. It cannot be completely ruled out, however, that minor discrepancies may exist resulting from further design upgrades of these motorcycles. This manual is an important part of your motorbike and should be passed on to any subsequent owner in case you decide to sell it.

## SERVICE

Observance of the service, maintenance and tuning instructions for the engine and chassis specified in the Owner's Manual is a prerequisite for faultless operation and the avoidance of premature wear. An improperly tuned chassis can lead to damage and breakage of the chassis components (see chapter on checking the basic chassis setting).

The use of the motorcycle under extreme conditions, e.g. on extremely muddy and wet terrain, can lead to higher than average wear on components such as the drive train or the brakes. In this case it may become necessary to service or replace wear parts before the service limit specified in the maintenance schedule has been reached.

The service work specified in the "Lubrication and Maintenance Schedule" must be performed by a KTM workshop and recorded in the service manual otherwise claims under the warranty shall become void. The fuels and lubricants specified in the Owner's Manual or automotive fluids with equivalent specifications must be used in accordance with the maintenance schedule.

Take special care to follow the recommended run in, inspection, and maintenance intervals. Heeding these guidelines will significantly increase the life of your motorcycle.

## **WARRANTY**

The service work specified in the "Lubrication and Maintenance Schedule" must be performed by a KTM workshop and recorded in the service manual otherwise claims under the warranty shall become void.

No claims can be filed under the warranty for damage or consequential damage caused by manipulations or conversions to the motorcycle.

## **AUTOMOTIVE FLUIDS**

The fuels and lubricants specified in the Owner's Manual or automotive fluids with equivalent specifications must be used in accordance with the maintenance schedule.

## **SPARE PARTS, ACCESSORIES**

For your own safety, use KTM-approved parts and accessories only. KTM is not liable for damage that arises in connection with the use of other products.

## **TRANSPORT**

When transporting your motorcycle, secure it with elastic straps or other mechanical devices in an upright position. Be sure that the fuel tap is closed. If the motorcycle topples over, fuel can flow out of the carburetor or fuel tank

## **ENVIRONMENT**

Offroad-Motorcycle driving is a wonderful sport and we hope that you will be able to enjoy it to the full. It may, however, involve potential problems for the environment or lead to conflicts with others. These problems or conflicts can be avoided if the motorcycle is used responsibly. To safeguard the future of motorcycle sports, make sure that you use the motorcycle in accordance with the law, show that you are environmentally conscious and respect the rights of others.

Enjoy driving your motorcycle !

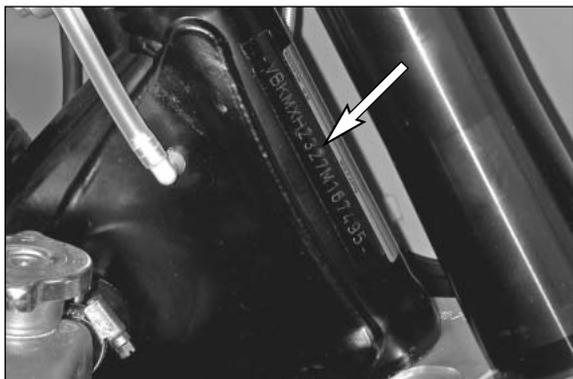
KTM-SPORTMOTORCYCLE AG  
5230 MATTIGHOFEN, AUSTRIA

Attachments: Spare parts manual chassis & engine

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## SERIAL NUMBER LOCATIONS »



### Chassis number

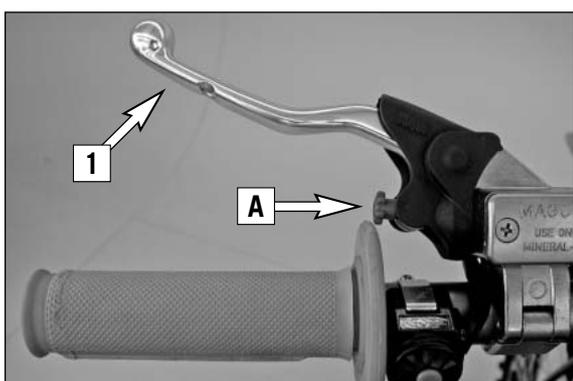
The chassis number is stamped on the right side of the steering head tube. Enter this number in the field on page no 1.



### Engine number, engine type

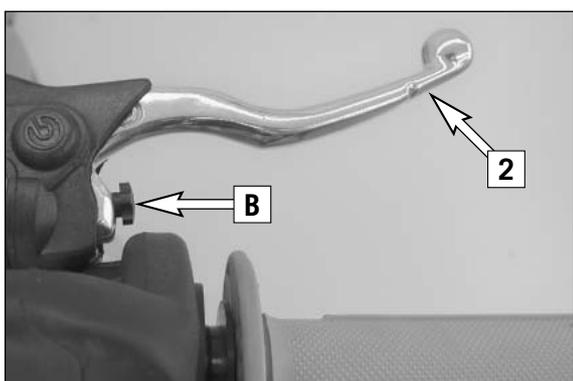
The engine number and the engine type are stamped into the left side of the engine below the engine sprocket. Enter this number on page 1.

## OPERATION INSTRUMENTS »



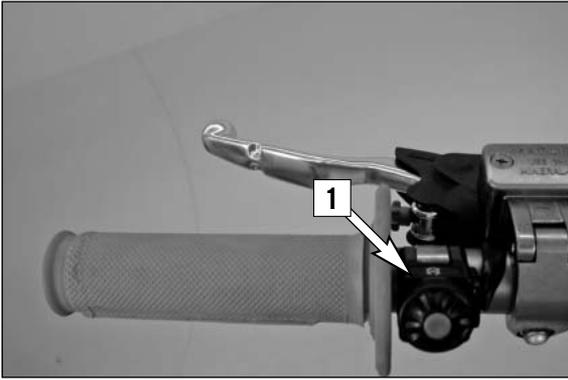
### Clutch lever

The clutch lever [1] is located on the left side of the handlebars. The adjusting screw [A] is used to change the original position of the clutch lever (see maintenance work on chassis and engine). The clutch is hydraulically actuated and adjusts itself automatically.



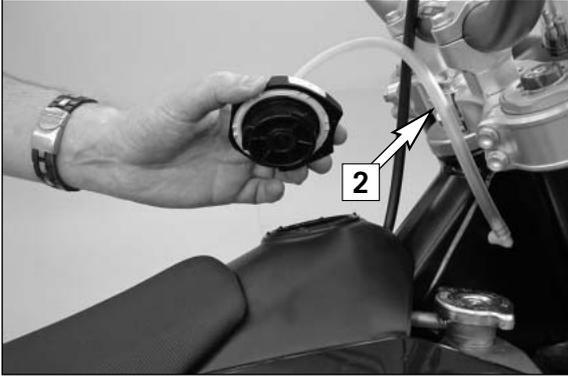
### Hand brake lever

The hand brake lever [2] is mounted on the handlebars on the right and actuates the front wheel brake. The adjusting screw [B] can be used to change the basic position of the hand brake lever (see maintenance work on chassis and engine).



## Short circuit button (SX)

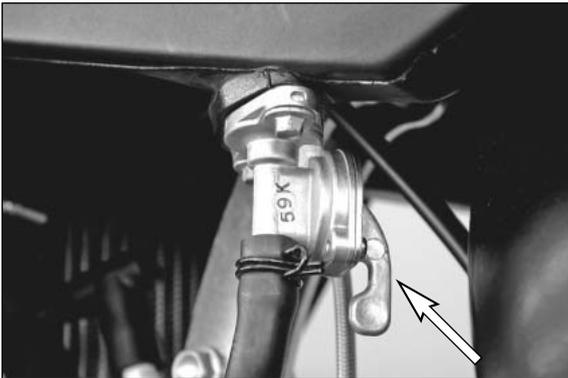
The short circuit button [1] turns off the engine. When pressing this button, the ignition circuit is short-circuited.



## Filler cap

**To open it:** turn filler cap counter-clockwise.

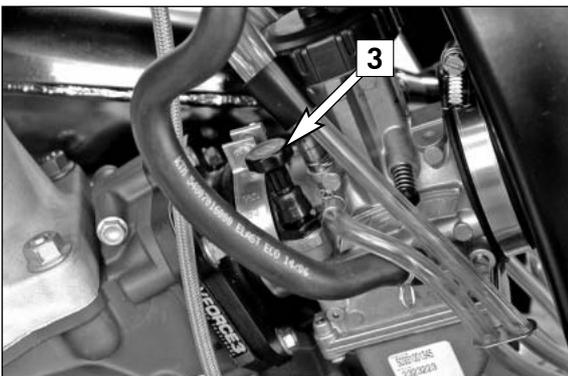
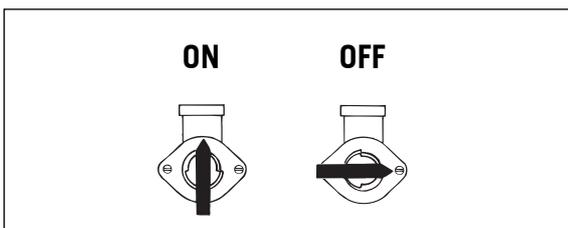
**To close it:** put filler cap back on and tighten it by turning it clockwise. Install tank breather hose [2] without kinks.



## Fuel tap

**OFF** In this position the fuel tap is closed. No fuel can flow to the carburetor.

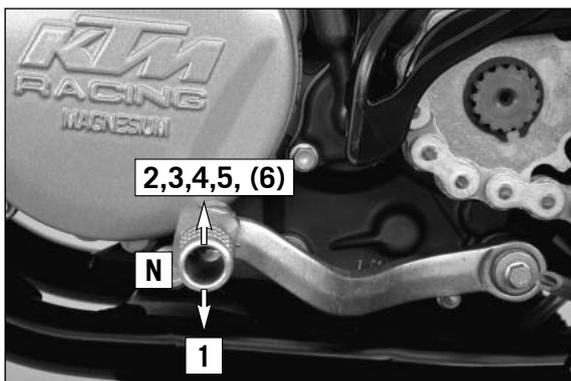
**ON** During operation the twist grip must be turned to ON. This means that the fuel can flow to the carburetor.



## Choke knob

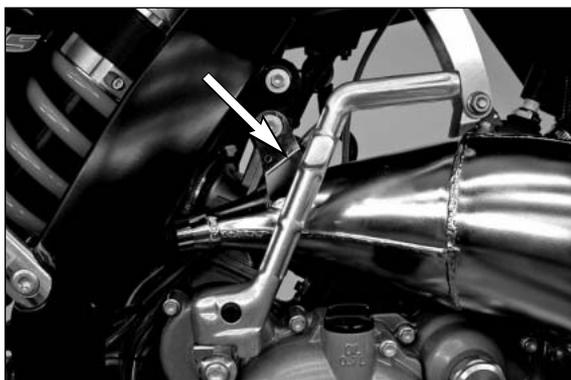
When pulling the choke knob [3] fully towards the top, a bore is opened in the carburetor. Through this bore the engine can take in additional fuel. This results in a rich fuel-air mixture, that is needed for a cold start.

When pressing the choke knob downward in the carburetor, the bore is closed again.



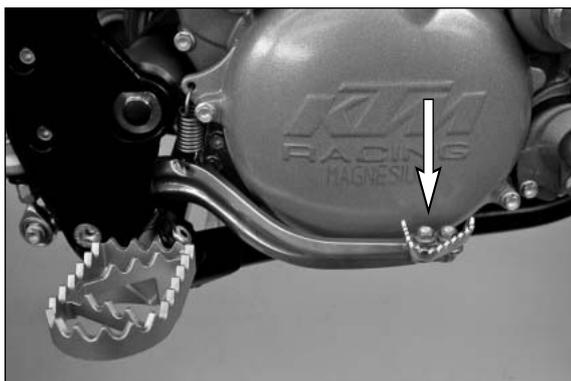
## Shift lever

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.



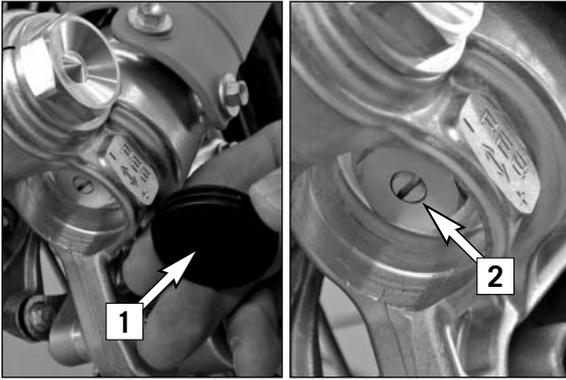
## Kickstarter

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



## Foot brake pedal

The foot brake pedal is disposed in front of the right foot rest. Its basic position can be adjusted to your seat position (see maintenance work).



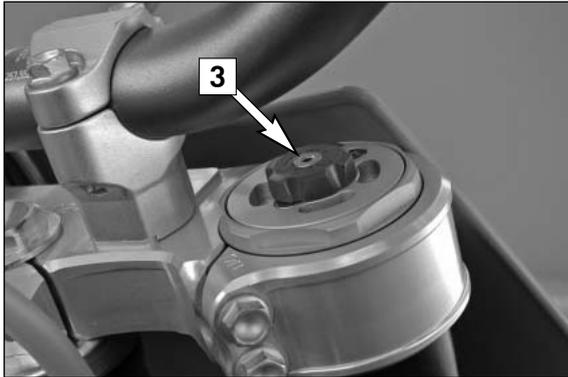
## Rebound damping of fork

Hydraulic rebound damping determines the reaction when the fork is rebound. Remove the protecting cap [1].

By turning the adjusting screw [2], the degree of damping of the rebound can be adjusted. Turn the knob clockwise to increase damping, turn it counterclockwise to reduce damping during rebounding.

### STANDARD ADJUSTMENT:

- turn adjusting screw clockwise as far as it will go
  - turn it back by as many clicks as are specified for the relevant type of fork
- |                            |                |
|----------------------------|----------------|
| Typ WP Suspension 14187C01 | .....21 clicks |
| Typ WP Suspension 14187C03 | .....20 clicks |



## Compression damping of fork

Hydraulic compression damping determines the reaction when the fork is compressed. The degree of compression can be adjusted with adjusting screws at the bottom of the fork legs.

Turn the screw [3] clockwise to increase damping, turn it counterclockwise to reduce damping during compression.

### STANDARD ADJUSTMENT:

- turn adjusting screw clockwise as far as it will go
  - turn it back by as many clicks as are specified for the relevant type of fork
- |                            |                |
|----------------------------|----------------|
| Typ WP Suspension 14187C01 | .....18 clicks |
| Typ WP Suspension 14187C03 | .....15 clicks |



## Damping action during compression of shock absorber

The shock absorber on the SX models can synchronize the compression damping in the low and high-speed range separately (Dual Compression Control). Low and high speed refers to the movement of the shock absorber during compression and not to the speed of the motorcycle.

The low and high-speed technology overlaps.

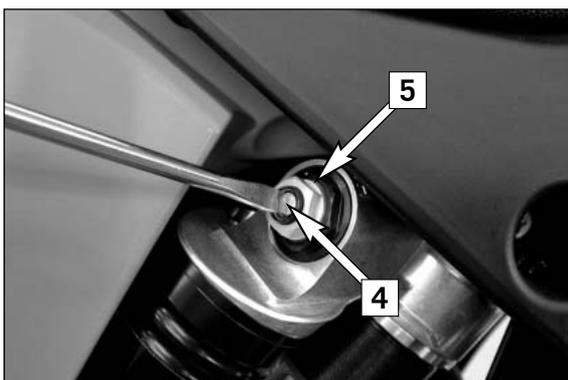
The low-speed setting is primarily for slow to normal shock absorber compression rates. The high-speed setting is effective at fast compression rates. Turning in a clockwise direction will increase the damping, turning counterclockwise will decrease the damping.

### STANDARD LOW-SPEED SETTING:

- Turn the adjusting screw [4] to the limit in a clockwise direction using a screwdriver.
- Unscrew the respective number of clicks for the specific type of shock absorber in a counterclockwise direction.

Typ WP Suspension 12187C01 .....15 clicks

Typ WP Suspension 12187C03 .....15 clicks



### **⚠ WARNING**

**The damping unit of the shock absorber is filled with high-compression nitrogen. Never try to take the shock absorber apart or to do any maintenance work yourself. Severe injuries could be the result.**

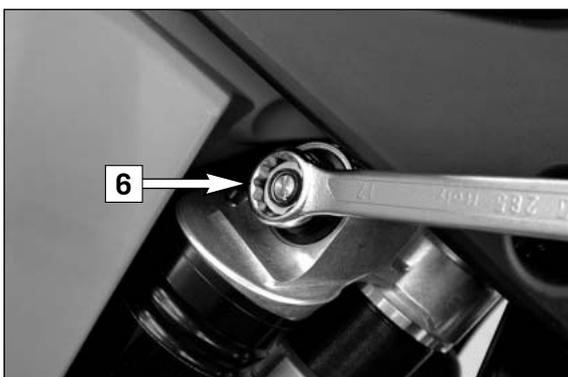
**Never unscrew the black screw [5] connection (24mm).**

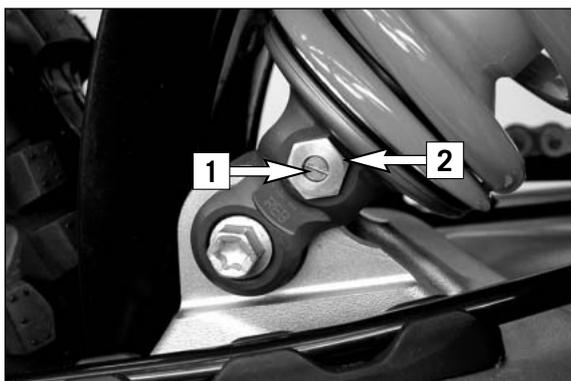
### STANDARD HIGH-SPEED SETTING:

- Turn the adjusting screw [6] to the limit in a counterclockwise direction using a box wrench.
- Unscrew the respective number of turns for the specific type of shock absorber in a clockwise direction.

Typ WP Suspension 12187C01 .....1 turn

Typ WP Suspension 12187C03 .....1 turn





## Rebound damping of shock absorber

By using the adjusting screw [4], the degree of damping of the rebound can be adjusted. Turn the knob to the right side to increase damping, turn it to the left side to reduce damping during rebounding.

### STANDARD ADJUSTMENT:

- Turn the adjusting screw clockwise to the stop.
- Then turn the adjusting screw counterclockwise, counting the number of clicks that corresponds to the respective type of shock absorber.

Typ WP Suspension 12187C01 . . . . .25 clicks

Typ WP Suspension 12187C03 . . . . .25 clicks

### ⚠ WARNING

The damping unit of the shock absorber is filled with high-compression nitrogen. Never try to take the shock absorber apart or to do any maintenance work yourself. Severe injuries could be the result.  
Never unscrew the black screw [5] connection (15mm).

# GENERAL TIPS AND WARNINGS FOR STARTING THE MOTORCYCLE »

## Instructions for your first ride

- Make sure the work for the "pre-delivery inspection" was performed by your authorized KTM workshop. The DELIVERY CERTIFICATE and SERVICE MANUAL will be handed over when you pick up your vehicle.
- Thoroughly read the whole instruction manual before starting for your first tour.
- Familiarize yourself with the controls.
- Adjust the clutch lever, the hand brake lever and the foot brake pedal to the most comfortable position.
- Get used to handling the motorcycle on an empty parking lot or open space, before going for a longer ride. Also try to ride as slowly as possible while standing upright, to improve your feeling for the vehicle.
- Do not drive along off-road trails which go beyond your ability and experience.
- Hold the handlebar with both hands and leave your feet on the foot rests while driving.
- Remove your foot from the foot brake lever when you are not braking. If the foot brake lever is not released the brake pads rub continuously and the braking system is overheated.
- Do not make any alterations to the motorcycle and always use ORIGINAL KTM SPARE PARTS. Spare parts from other manufacturers can impair the safety of the motorcycle.
- Motorcycles are sensitive to alterations in the distribution of weight. If you are taking luggage with you, it should be secured as close as possible to the middle of the vehicle; distribute the weight evenly between the front and the rear wheel. Never exceed the maximum permissible laden weight and the axle weights. The maximum permissible laden weight is made up of the following components:
  - Motorcycle ready for operation and tank full
  - Luggage
  - Driver and passenger with protective clothing and helmet.
- Pay attention to running-in procedure.

## 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 500 kilometers (300 miles) or 5 hours the engine must not be revved up to its performance limits.

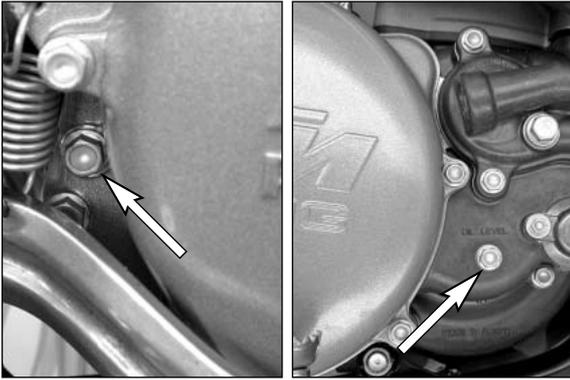
Apply low but changing loads for running-in.

### ! CAUTION

**Do not drive at full load for the first 500 kilometers (300 miles) or 5 hours!**

### ⚠ WARNING

- Wear suitable clothing when driving a motorcycle. smart KTM drivers always wear a helmet, boots, gloves, and a jacket, regardless of whether driving all day or just go for a short ride.
- Do not drive after having consumed alcohol.
- Only use accessory parts recommended by KTM.
- The front and rear wheel are allowed to be fitted only with tires that have the same profile type.
- Be sure to check the spoke tension after 30 minutes' running time. The spoke tension will decrease quickly on new wheels. If you continue to drive with loose spokes, the spokes may crack and lead to unstable handling (see "Checking the spoke tension").
- Adjust your driving speed to the conditions and your driving skills.
- Drive carefully on unknown roads or in unknown territory.
- When driving off-road, always have a friend on a second motorcycle to keep you company, so that you can help each other should difficulties arise.
- Replace the helmet visor or goggle glasses early enough. When light shines directly on a scratched visor or goggles, you will be practically blind.
- Never leave your motorcycle without supervision as long as the engine is running.
- The Above Models were designed and built for one person only - no additional passenger allowed!
- Neither do these models meet the applicable statutory regulations and safety standards. Using them on public roads, highways, freeways, etc. is against the law.
- When riding your motorcycle, please bear in mind that other people may feel molested by excessive noise.



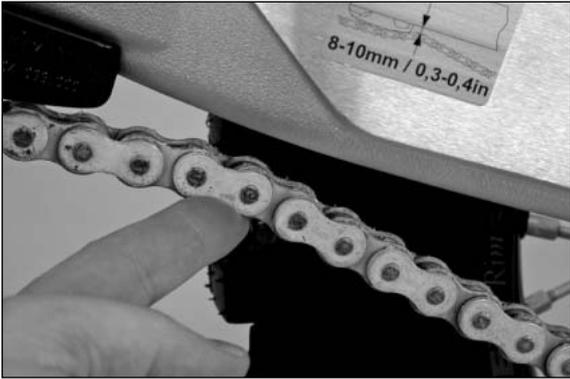
## What you should check before each start

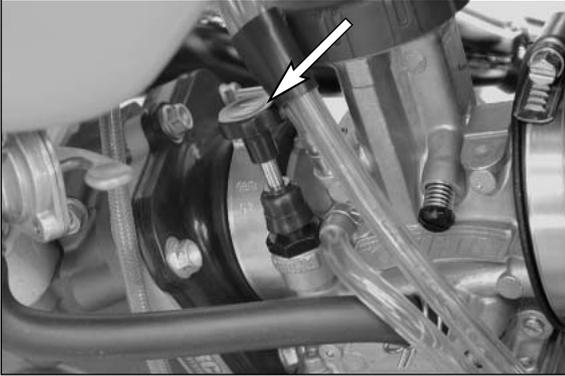
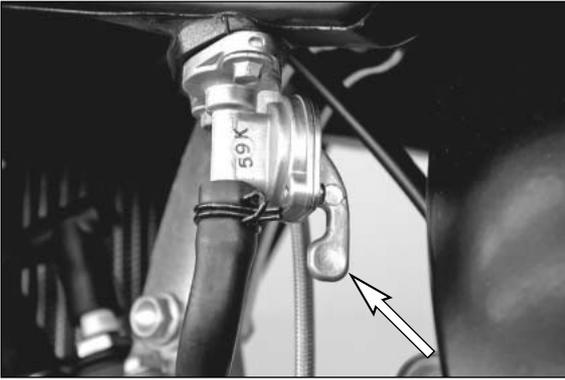
When you start off, the motorcycle must be in a perfect technical condition. For safety reasons, you should make it a habit to perform an overall check of your motorcycle before each start.

The following checks should be performed:

- 1 **CHECK TRANSMISSION OIL LEVEL**  
Too little transmission oil leads to premature wear and will ultimately destroy gear wheels and parts of the shift mechanism.
  - 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 the chain and chain wheels.
  - 4 **TIRES**  
Check for damaged tires. Tires showing cuts or dents must be replaced. The tread depth must comply with the legal regulations. Also check the air pressure. Insufficient tread and incorrect air pressure deteriorate the driving performance.
  - 5 **BRAKES**  
Check correct functioning of the braking system. Verify that there is sufficient brake fluid in the reservoir. The reservoirs have been designed in such a way that brake fluid does not need to be refilled even when the brake pads are worn. If the level of brake fluid falls below the minimum value, this indicates a leak in the braking system or completely worn out brake pads. Arrange for the braking system to be checked by an authorized KTM dealer, as complete failure of the braking system can be expected. Also check the state of the brake hose and the thickness of the brake linings.  
Check free travel of the hand brake lever and foot brake lever.
- ⚠ WARNING**

**If the resistance in the hand brake lever or foot brake pedal feels „spongy“ (too much give), this is an indication that something is wrong with the brake system. Don't ride your motorcycle anymore without first having the brake system looked over by a KTM dealer.**
- 6 **CABLES**  
Check correct adjustment and easy running of all control cables.
  - 7 **COOLING FLUID**  
Check the level of cooling fluid when the engine is cold.





## 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

- For starting always put on your motorcycle boots to avoid injuries. You could slip off the kickstarter or the motor could kick back and fling your foot upwards.
- Forcefully kick the kickstarter down the whole way and do not open the throttle. A kickstart with too little momentum and an opened throttle increases the kicking back risk.
- Check for power transmission at temperatures below 0°C (32°F) before you actuate the kickstarter. If you depress the kickstarter without feeling any resistance, power is not being transmitted. This could cause injuries.
- 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 warms up 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.

#### NOTE:

The highly inflammable components in modern fuels volatilize if left standing for longer periods of time. If the motorcycle has not been used for over 1 week, the fuel should be drained from the float chamber. The engine will start up immediately if the float chamber is filled with fresh, ignitable fuel

## Starting when the engine is warm

- 1 Open fuel tap
- 2 Put the gear in neutral
- 3 Open throttle to 1/2 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.
- Before starting for an off-road tour, it is recommended to additionally secure the side stand with the rubber band on the air filter box.

## Shifting/Riding

You are now in first gear, referred to as the drive or uphill gear. Depending on the conditions (hill size, etc.), you can shift to a higher gear. Turn down the throttle, at the same time pull the clutch lever in and shift to the next higher gear. Let the 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 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 revving of throttle, the gas consumption will increase. When shifting down, use the brakes if necessary and turn down at the same time. Pull the clutch lever and shift down to the next lower gear. Let the clutch lever go slowly and open the throttle or shift down again.

### ⚠ WARNING

- After falling with the motorcycle, check all its functions thoroughly before using it again.
- A twisted handlebar must always be replaced. Do not adjust the handlebar, it will lose stability.

### ! CAUTION

- High rpm rates when the engine is cold have an adverse effect on the life of your engine. We recommend you run the engine in a moderate rpm range for a few miles giving it a chance to warm up. After that no further precautions in this respect need to be taken.
- 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 will block 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 riding on your motorcycle, you notice any unusual operation-related noise, stop immediately, turn the engine off, and contact an authorized KTM dealer.

## Braking

Turn off the 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

- In case of rain, after washing the motorcycle, after rides through water and in case of rides on wet off-road tracks, humid or dirty brake discs can delay the braking effect. The brakes must be pulled until they are dry or clean.
- Rides on salt-strewn or dirty roads can also delay the braking effect. The brakes must be pulled until they are clean.
- Dirty brake discs cause increased tear of brake pads and brake discs.
- 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.
- If the resistance in the hand brake lever or foot brake pedal feels “spongy” (too much give), this is an indication that something is wrong with the brake system. Don't ride your motorcycle anymore without first having the brake system looked over by a KTM dealer.

## Stopping and parking

Close the throttle and apply the hand and foot brake simultaneously. Be especially careful when you apply the brakes on sandy, wet or slick surfaces. Always apply the brakes intuitively, locked wheels can cause the bike to skid or crash. Shift down to a lower gear to match your speed. Always apply the brakes before you enter a curve.

### ⚠ WARNING

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.
- Never park your motorcycle in places where there exist fire hazards due to dry grass or other easily flammable materials.

## Refueling, fuel

Unleaded premium gasoline RON 95 mixed with high grade two stroke oil.

Mixture ratio 125 SX: 1:40

Mixture ratio 250 SX: 1:60

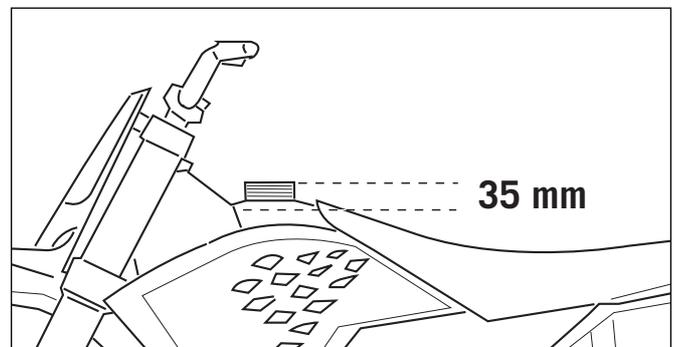
Fuel and engine oil should only be mixed immediately before use. KTM recommends Motorex Cross Power 2T.

### ⚠ WARNING

Gasoline is highly flammable and poisonous. Extreme caution should be used when handling gasoline. Do not 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 98 respectively 95 mixed with high-grade two-stroke engine oil. Other types of gasoline can cause engine failure.
- Do not use premixed two-stroke oils, oils for outboard engines or normal engine oil to prepare the mixture.
- Do not use gasoline and oil mixtures that are older than one week. The lubrication properties of some two-stroke oils can deteriorate very rapidly.
- Only use known brands of high-grade 2-stroke engine oil (i.e. Motorex Cross Power 2T).
- Never mix synthetic oils and mineral oils.
- 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.
- If your motorcycle is equipped with a catalytic converter, always keep in mind that leaded fuel will destroy the catalytic converter.
- Fuel expands when its temperature rises. Therefore do not fill the tank to the top. (see fig.)



35 mm

# PERIODIC MAINTENANCE SCHEDULE »

125/250 SX 2007		Before each race	1st service after 10 hours	every 20 hours	every 40 hours	at least once a year
<b>A CLEAN MOTORCYCLE CAN BE CHECKED MORE QUICKLY WHICH SAVES MONEY</b>						
<b>ENGINE</b>	Check gear box oil level			●		
	Change gear box oil	●	●		●	●
	Check spark plugs, adjust distance between electrodes		●	●		
	Renew spark plugs	●			●	
	Clean the spark-plug connector and check for a tight fit	●		●	●	
	Check the screws on the kick starter and shift lever for a tight fit	●		●	●	
<b>CARBURETOR</b>	Check the carburetor connection boot and intake flange for cracks or leaks	●			●	●
	Check idle speed setting	●	●		●	●
	Check that vent hoses are not damaged or bent	●	●		●	●
<b>ADD-ON-PARTS</b>	Check cooling system for leaks, check quantity of antifreeze	●	●		●	●
	Check exhaust system for leaks and fitment	●		●	●	
	Check cables for damage, smooth operation, bends; adjust and lubricate	●	●		●	
	Check the fluid level in the master cylinder of the hydraulic clutch	●	●	●	●	
	Clean air filter and filter box	●	●	●	●	●
	Check electric wires for damage and bends	●			●	
	Check headlamp setting	●			●	
	Check function of electric systems (low beam, high beam, break light, indicator, indicator lamps, speedometer illumination, horn, emergency OFF switch or button)	●	●		●	
<b>BRAKES</b>	Check brake fluid level, lining thickness, brake lining	●	●		●	
	Check brake lines for damage and leaks	●	●		●	
	Check/adjust the function, smooth operation and free travel of the hand/foot brake lever	●	●		●	
	Check the screws and guide bolts on the brake system for a tight fit	●	●		●	
<b>CHASSIS</b>	Check shock absorber and fork for leaks and function	●	●	●	●	
	Clean dust bellows	●		●	●	
	Bleed fork legs	●		●	●	
	Check swing arm bearings	●			●	
	Check/adjust steering head bearings	●	●		●	
	Check tightness of all chassis screws (triple clamps, fork leg axle passage axle nuts and screws, swing arm bearings, shock absorber)	●	●		●	
<b>WHEELS</b>	Check spoke tension and rim joint	●	●	●	●	
	Check tires and air pressure	●	●	●	●	
	Check chain, rear sprockets and chain guides for wear, fitment and tension	●	●	●	●	
	Lubricate chain, Clean and grease the adjusting screws on the chain tensioner	●	●	●	●	
	Check clearance of wheel bearings	●	●		●	

The kilometer reading for inspection intervals should not exceed 5 hours.

Maintenance work performed by your authorized KTM workshop is not a substitute for care and maintenance by the driver!

# PERIODIC MAINTENANCE SCHEDULE »

125/250 SX 2007	Every 20 hours	Every 40 hours	Every 60 hours	Every 80 hours	At least once a year	Every 2 years
<b>IMPORTANT SERVICE WORK THAT MUST BE PERFORMED BY AN AUTHORIZED KTM WORKSHOP UNDER A SEPARATE ORDER</b>						
Clean and adjust carburetor					●	
Replace the throttle slide, jet needle, float needle valve, needle nozzle				●		
Check the reed-type intake valve for wear	●	●	●	●		
Check the wear on the clutch disks and length of the clutch springs	●	●	●	●		
Check the cylinder and piston for wear	●	●	●	●		
Check function of exhaust control	●	●		●		
Check piston pin bearing	●	●	●	●		
Replace the crankshaft main bearings				●		
Replace the conrod bearings		●		●		
Check the entire transmission, the shift mechanism and bearings		●		●		
Complete maintenance of fork	●		●	●	●	
Complete maintenance of shock absorber				●		●
Clean and grease steering head bearings and gasket elements					●	
Replace the sealing cup for the foot brake cylinder	●	●	●	●		
Replace the glass-fiber yarn filling in the silencer	●	●	●	●		
Treat electric contacts and switches with contact grease					●	
Change break fluid	●	●	●	●	●	
Change the hydraulic clutch oil					●	

**Note:** If the inspection establishes that permissible tolerances are exceeded, the respective components must be replaced.

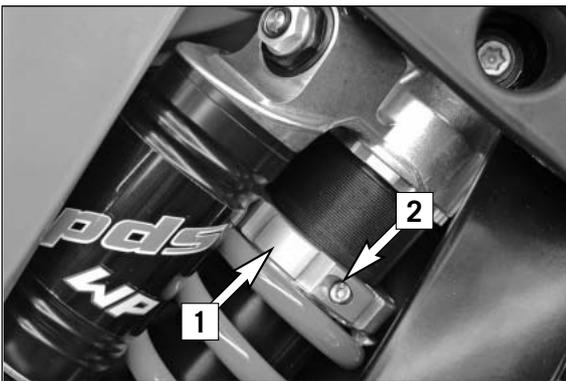
125/250 SX 2007	before each start	after every cleaning	for cross country use	once a year
<b>IMPORTANT CHECKS AND MAINTENANCE TO BE CARRIED OUT BY THE RIDER</b>				
Check gear box oil level	●			
Check brake fluid level	●			
Check brake pads for wear	●			
Check lights for function	●			
Check horn for function	●			
Lubricate and adjust cables and nipples		●		
Bleed fork legs regularly			●	
Remove and clean dust bellows regularly			●	
Clean and lubricate chain, check tension and adjust if necessary		●	●	
Clean air filter and filter box		●	●	
Check tires for pressure and wear	●			
Check cooling liquid level	●			
Check fuel lines for leaks	●			
Empty and clean float chamber		●		●
Remove, clean and oil the throttle slide		●		
Check all control elements for smooth operation	●			
Check brake performance	●	●		
Treat blank metal parts (with the exception of brake and exhaust systems) with wax-based anti corrosion agent		●		
Treat ignition and steering locks and light switches with contact spray		●		
Check tightness of screws, nuts and hose clamps regularly				●

## ⚠ WARNING

Maintenance and adjusting work marked with an asterisk \* requires expert skills and technical know-how. For your own safety, always have such work performed by a specialized KTM dealer where your motorcycle will be optimally serviced by appropriately qualified, skilled staff.

## ! CAUTION

- If using a power washer, do not point the water jet at the electric components, plugs, cables, bearings, carburetor, etc. The high pressure will cause water to penetrate into the components and can cause them to malfunction or lead to premature wear.
- 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
- Only use special screws with an appropriate thread length supplied by KTM to fix the spoilers on the tank. Using other screws or longer screws can cause leaks in the tank through which fuel can flow out.
- 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.
- If you unscrewed any screwed connections with self-locking nuts, they must be replaced when mounting. If no self-locking nuts are available, apply Loctite 243 to the thread. The screws and nuts must be replaced if the thread is damaged.
- All screws and nuts must be tightened to the specified torque figures using a torque wrench. If screws or nuts are not adequately tightened, they can become loose and cause the motorcycle to go out of control while you drive. Tightening the screws and nuts too tightly can damage the thread and components.
- Let your motorcycle cool down before beginning any maintenance work in order to avoid getting burned.
- Dispose of oils, fatty matters, filters, fuels, washing detergents, etc. properly.
- Under no circumstances may used oil be disposed of in the sewage system or in the open countryside. 1 liter of used oil contaminates 1,000,000 liters of water.



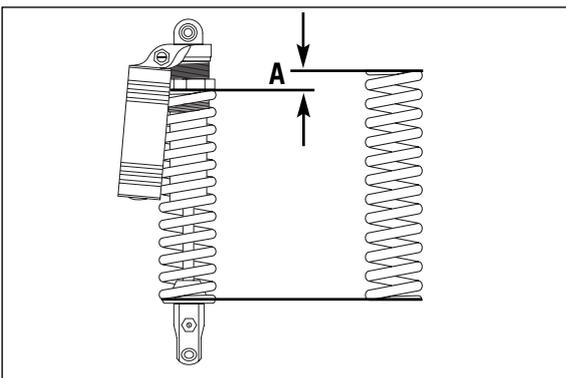
### Changing the spring preloading of the shock absorber

The spring preload can be changed by turning the adjusting ring [1]. For this purpose, you should dismount the shock absorber and clean it thoroughly.

#### NOTE:

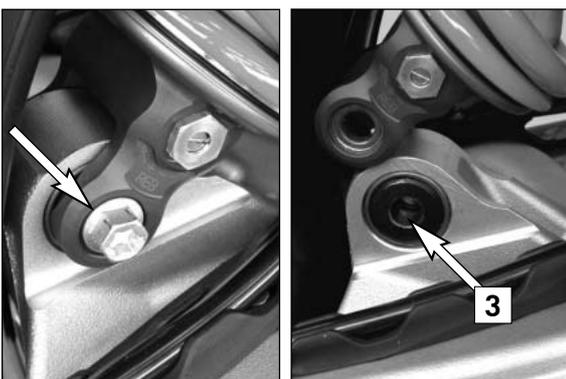
- Before changing the spring preload note down the basic setting, e.g. how many threads are visible above the adjusting ring.
- One rotation of the adjusting ring [1] changes the spring pretension by approximately 1.00 mm (0.04 in).

Loosen the clamping screw [2] and use the hook wrench contained in the vehicle tool set to turn the adjusting ring as desired. Turning it counterclockwise will reduce the preload, turning it clockwise will increase the preload. After readjusting the clamping screw [2], tighten it to 8 Nm (6 ft.lb)



#### ADJUSTMENT VALUES – SPRING PRELOAD [A]

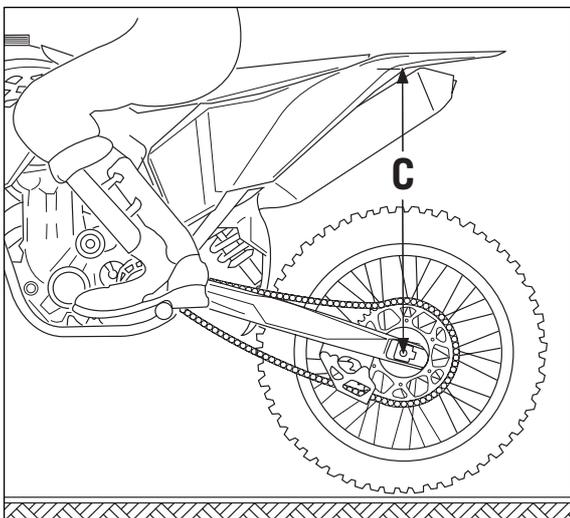
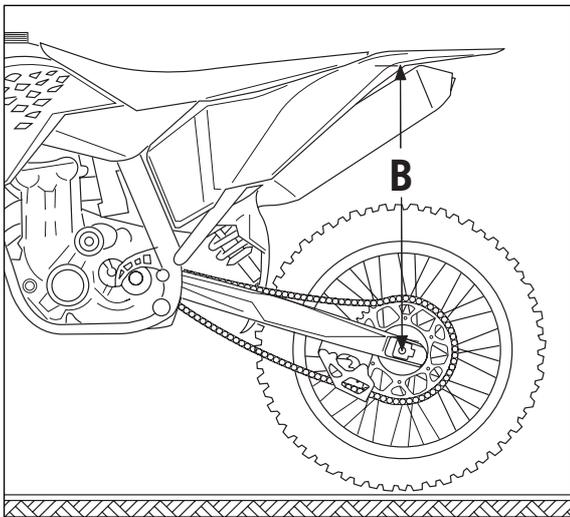
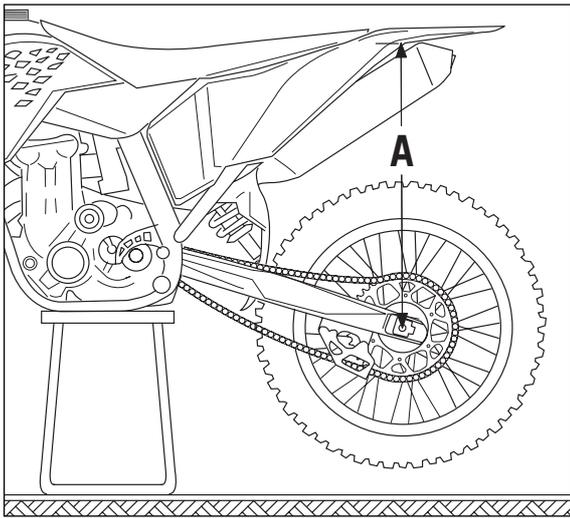
Typ WP Suspension 12187C01 . . . . . 5 mm (0.19 in)  
 Typ WP Suspension 12187C03 . . . . . 5 mm (0.19 in)



### Pivot bearing

The pivot bearing [3] for PDS suspension struts at the swinging fork is Teflon-coated and must not be lubricated with either grease or other lubricants. Grease and other lubricants cause the Teflon coat to dissolve, whereby the bearing's lifecycle will be reduced dramatically.

When cleaning your bike with a high-pressure cleaner, do not aim the high-pressure spray directly at the pivot bearing.



## Basic suspension setup for the weight of the driver

To achieve maximum handling performance and to prevent the fork, shock absorber, swing arm and frame from being damaged, the basic setup of the suspension components must be suitable for your weight. At delivery, KTM's offroad motorcycles are set to accommodate a driver weighing 75 bis 85 kg (wearing full protective clothing). If your weight exceeds or falls short of this range, you will need to adjust the basic setup for the suspension components accordingly. Minor deviations in weight can be compensated by adjusting the spring preload. Different springs must be installed for larger deviations.

## Checking the shock absorber and spring

You can establish whether or not the shock absorber spring is suitable for your weight by checking the riding sag. The static sag must be correctly adjusted before the riding sag can be determined.

## Determining the static sag of the shock absorber

The static sag should be as close as possible to 35 mm. Deviations of more than 2 mm can strongly influence the motorcycle's performance.

Procedure:

- Jack up the motorcycle until the rear wheel no longer touches the ground.
- Measure the vertical distance between the rear wheel axle and a fixed point (e.g. a mark on the side cover) and write it down as dimension A.
- Place the motorcycle on the ground again.
- Ask a helper to hold the motorcycle in vertical position.
- Measure the distance between the rear axle and the fixed point again to establish dimension B.
- The static sag is the difference between dimensions A and B.

EXAMPLE:

Motorcycle jacked up (dimension A) . . . . .600 mm  
**Motorcycle on ground, unloaded (dimension B)** . . . . .565 mm  
 Static sag . . . . .35 mm

If the static sag is lower, the spring preload of the shock absorber must be increased, if the static sag is reduced, the spring preload must be higher. See chapter "Changing the spring preload of the shock absorber."

## Determining the riding sag of the shock absorber

- Have a helper hold the motorcycle while you sit on the bike in a normal seating position (feet on the footrests) wearing full protective clothing and bounce up and down a few times to allow the rear wheel suspension to become level.
- Stay on the bike and have another person measure the distance between the same two points and write it down as dimension C.
- The riding sag is the difference between dimensions A and C.

EXAMPLE:

Motorcycle jacked up (dimension A) . . . . .600 mm  
**Motorcycle on ground, loaded (dimension C)** . . . . .500 mm  
 Riding sag . . . . .100 mm

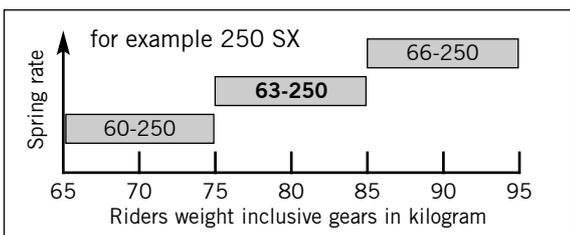
The riding sag should lie between 95 and 105 mm.

If the riding sag is less than 95 mm, the spring is too hard (the spring rate is too high). If the riding sag is more than 105 mm, the spring is too soft (the spring rate is too low).

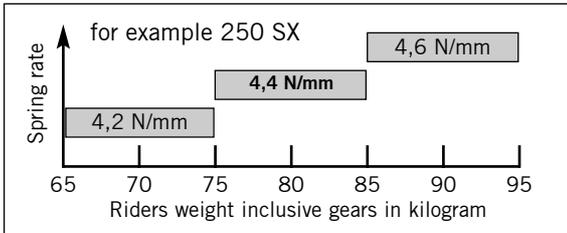
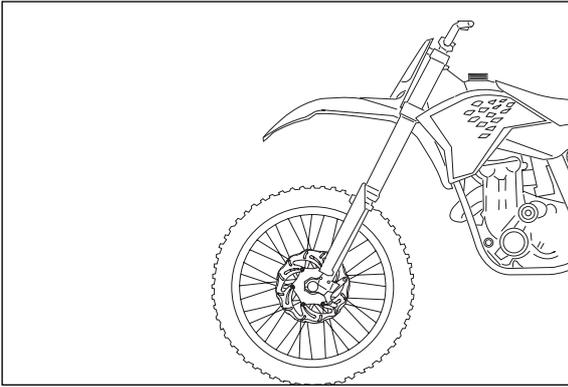
The spring rate is written on the outside of the spring (e.g. 63-250). The type number of the shock absorber is embossed on the front of the shock absorber. The illustrations show which spring should be installed. The standard spring is shown in bold print.

After installing a different spring, readjust the static sag to 35 mm (± 2 mm).

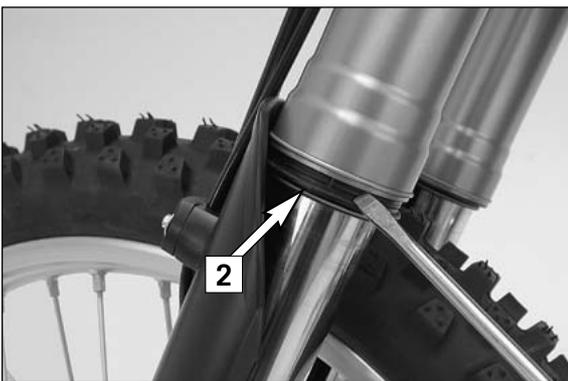
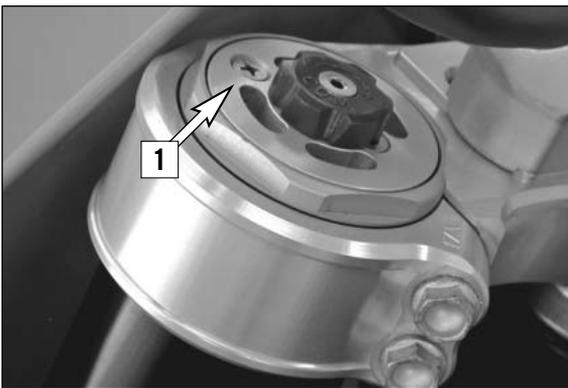
According to our experience, the damping rate of the compression stage can remain unchanged. The damping rate of the rebound stage can be reduced by a few clicks for a softer spring or increased by a few clicks for a harder spring.



MODELL	SOFTER	STANDARD	HARDER
12187C01 (125 SX)		<b>60-250</b>	63-250
12187C03 (250 SX)	60-250	<b>63-250</b>	66-250



MODELL	SOFTER	STANDARD	HARDER
12187C01 (125 SX)	432.455.00.040W	<b>432.455.00.042W</b>	432.455.00.046W
12187C03 (250 SX)	432.455.00.042W	<b>432.455.00.044W</b>	432.455.00.046W



## Checking the basic setup of the telescopic fork

The precise riding sag of the telescopic fork cannot be determined for various reasons. Similar to the shock absorber, smaller deviations in your weight can be compensated by adjusting the spring preload. However, if your telescopic fork bumps frequently (hard end stop during compression), you should install harder fork springs to avoid damaging the telescopic fork and frame.

## Changing the spring preload on the telescopic fork

The telescopic forks for these models must be partly disassembled to adjust the spring preload (see WP manual). Pretension spacers are available in heights of 1.5, 2.5, 5 and 10 mm (see spare parts catalog). The fork springs may not be pretensioned by more than 20 mm.

NOTE:

WP precisely adjusts the spring pressure by inserting pretension spacers. Fluctuations in production are compensated with pretension spacers in various heights. This can cause the fork springs in the fork legs to have different degrees of pretension. Fork springs and pretension spacers should always stay together.

## Replacing fork springs

If you weigh less than 75 kg or more than 85 kg, you should install the respective fork springs. The correct spring rate is shown in the illustrations. The standard spring is shown in bold print. The type number of the telescopic fork is embossed on the inside of the fork leg axle passage.

If you are uncertain which spring to use, contact your KTM workshop.

According to our experience, the damping rate of the compression stage can remain unchanged. The damping rate of the rebound stage can be reduced by a few clicks for a softer spring or increased by a few clicks for a harder spring.

## Breather plug front fork

After every 5 hours of use for competitive racing, slacken the breather plugs [1] a few turns in order to relieve excess pressure from the inside of the fork. To do this, place the motorcycle on a stand with the front wheel lifted off the ground. When riding the motorcycle mainly on the road, it will suffice to have this job performed in the course of the periodical maintenance service.

### ! CAUTION

Excessive pressure in the interior of the fork can cause leaks in the fork. If your fork is leaking, it is recommended to open the breather plugs before having the seals replaced.

## Cleaning the dust sleeves of the telescopic fork

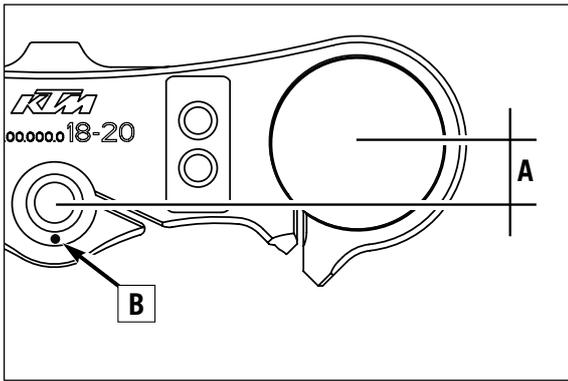
The dust-protection bellows [2] are to remove dust and coarse dirt particles from the fork tube. However, after some time, dirt may also get in behind the dust-protection bellows. If this dirt is not removed, the oil sealing rings located behind it may start to leak.

Use a screwdriver to lift the dust-protection bellows out of the outer tubes and slide them downward.

Clean the dust-protection bellows, outer tubes, and fork tubes thoroughly, and oil them thoroughly with Universal oil spray (Motorex Joker 440) or engine oil. Then, push the dust-protection bellows into the outer tubes by hand.

### ⚠ WARNING

No oil may reach the front tire or the brake disks since this would considerably reduce the tire's road grip and the braking effect of the front brake.



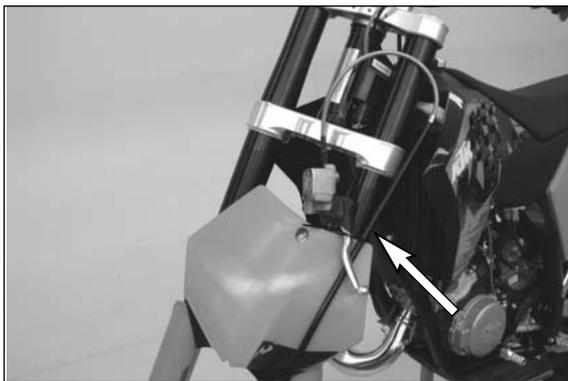
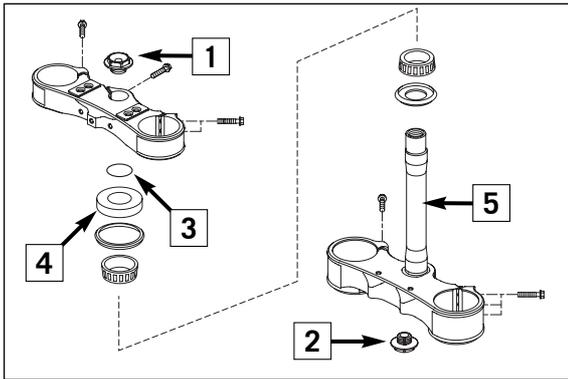
## Changing the fork offset (caster)

The fork offset [A] in the SX models (center fork legs - center steering head angle) can be set to either 18 or 20 mm. This allows you to optimize the handling to match the race course.

Remove the blind screw [1] to see which offset is set. If the mark [B] is in front, the offset is 18 mm. This setting will deliver more directional stability on fast race courses.

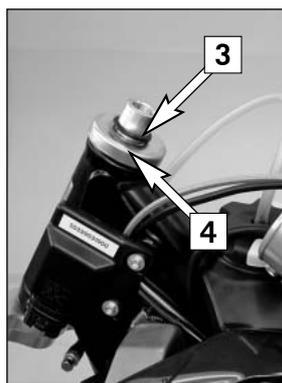
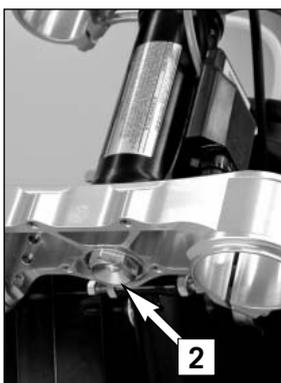
If the mark [B] is in the rear as illustrated, the offset is 20 mm. This setting will deliver better handling in curves.

The offset is set to 20 mm in the condition at delivery.



To adjust the offset, dismount the front wheel and remove the front wheel fender.

Remove the screw on the starting number plate. Remove the clamp screws on the hand brake cylinder and fasten the hand brake cylinder to the left fork leg with a cable tie to keep the brake line from kinking (see illustration).

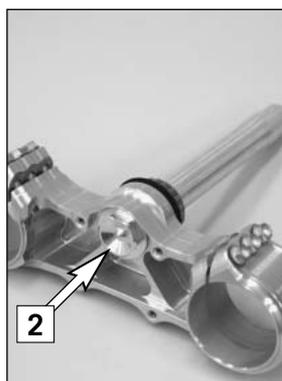
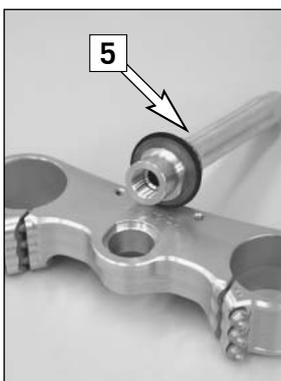


Loosen the clamp screws and take the fork legs out of the triple clamps.

Loosen the collar screw [2] on the lower triple clamp 2 turns.

Remove the blind screw [1] from the upper triple clamp, loosen the clamp screw and upper triple clamp on the seat. Remove the O-ring [3] and the protection ring [4].

Tap gently on the lower triple clamp with a rubber hammer to loosen the steering stem [5] out of the bearing seat. Take the lower triple clamp with the steering stem out of the steering head.



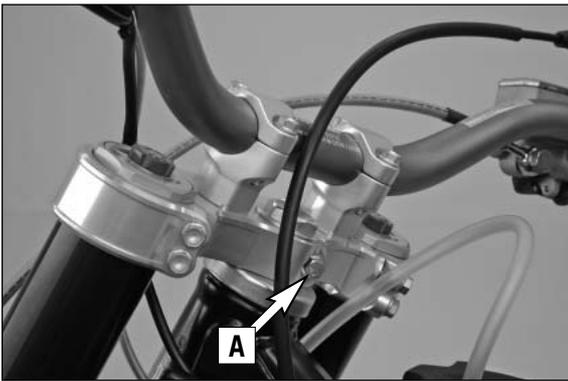
Remove the collar screw from the lower triple clamp and pull out the steering stem. Thoroughly clean all parts. Turn the steering stem 180° and insert it in the triple clamp, tighten the collar screw all the way to the stop.

Grease the steering head bearing and sealing elements.

### **⚠ WARNING**

Be sure to lock the thread on the collar screw [2] with Loctite 243. Do not confuse the collar screw [2] with the blind screw [1].

## MAINTENANCE WORK ON CHASSIS AND ENGINE »

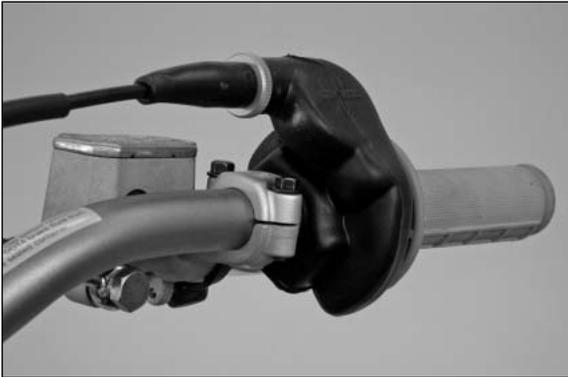


Mount the lower triple clamp, upper steering head bearing, protection ring, O-ring, upper triple clamp and the blind screw.  
Tighten the collar screw on the lower triple clamp to 60 Nm.  
Mount the fork legs and tighten the clamp screws on the lower triple clamp to 12 Nm in 3 stages.

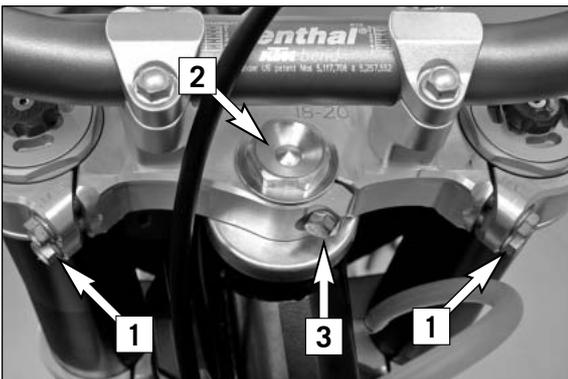
Adjust the steering head bearing with zero clearance (see section on checking and adjusting the steering head support). Hold the middle clamp screw [A] in place with Loctite 243. Tighten the clamp screws on the upper triple clamp to 17 Nm in 3 stages.

### ! CAUTION

Hold the middle clamp screw [A] in place with Loctite 243.



Mount the front wheel fender and tighten the screws to 10 Nm.  
Mount the hand brake cylinder and tighten the screws to 10 Nm.  
Mount the starting number plate.  
Mount the front wheel (see: Dismounting and mounting the front wheel).



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

Check steering head bearing for play periodically. To check, put the motorcycle on a stand so that the front wheel is off the ground. Now try to move the fork forward and backward. To adjust the 5 clamping screws [1] and [3], loosen the upper triple clamp and turn the end screw [2] until no play is left. Don't tighten the steering stem bolt all the way, otherwise the bearings will be damaged. With a plastic hammer, lightly tap on the triple clamp to release tension. Hold the middle clamp screw [3] in place with Loctite 243. Retighten the five pinch bolts.

17 Nm (pinch bolts 1)

Loctite 243 + 17 Nm (pinch bolts 3)

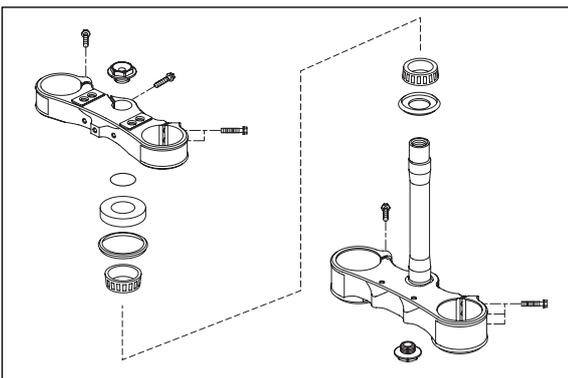
### ! WARNING

- 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.
- Hold the middle clamp screw [3] in place with Loctite 243.

### ! CAUTION

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.

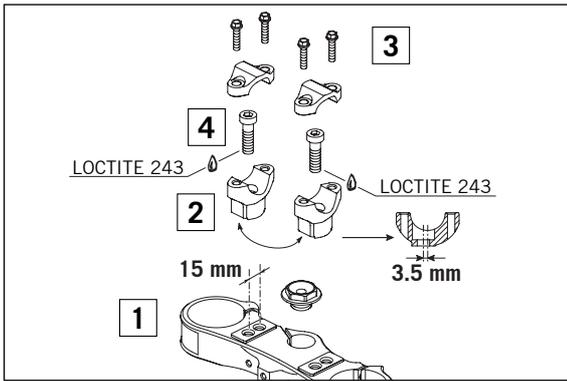
The steering head bearings should be regreased at least once a year (e.g. Motorex Long Term 2000).



### How to change the handlebar position

The handlebar position can be readjusted by 22 mm. Thus, you can put the handlebar in the position that is the most convenient for you.

# MAINTENANCE WORK ON CHASSIS AND ENGINE »



The upper triple clamp [1] includes 2 bores arranged at a distance of 15 mm (0.6 in) from one another. The bores at the handlebar support [2] are offset from the center by 3.5 mm (0.13 in). Accordingly, you can mount the handlebar in 4 different positions.

For this purpose, remove screws [3] of the handlebar clamps and screws [4] of the handlebar support. Position the handlebar support, and tighten screws [4] to 40 Nm (30 ft.lbs). Mount the handlebar and handlebar clamps, and tighten screws [3] to 20 Nm (15 ft.lbs). The gap between the handlebar support and the handlebar clamps should be the same size in the front and in the rear.

## ⚠ WARNING

The screws [4] must be secured with loctite 243.

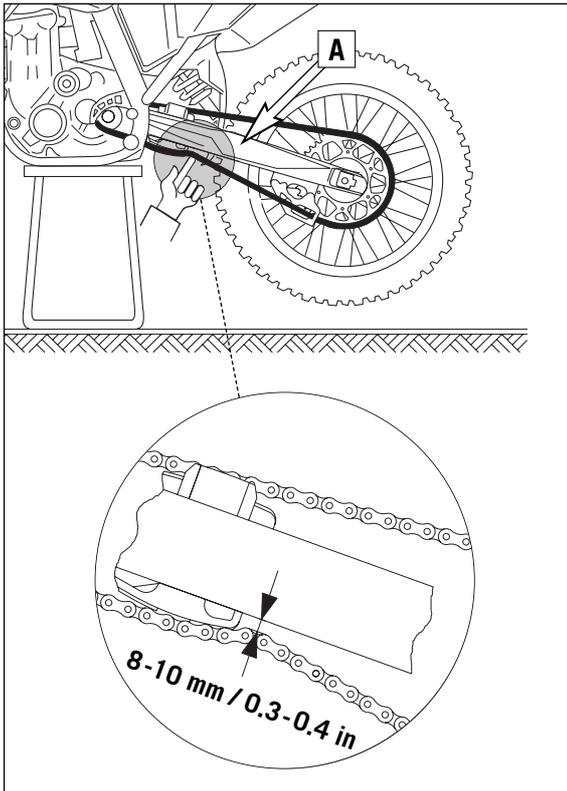
## Check chain tension

Jack the motorcycle up on its frame so that the rear wheel no longer touches the ground.

Press the chain upward at the end of the chain sliding component. The distance between the chain and the swing arm should be approx. 8 - 10 mm (0.31 - 0.39 in). In the course of this procedure, the upper chain portion [A] must be taut (see drawing). If necessary, correct the chain tension.

## ⚠ WARNING

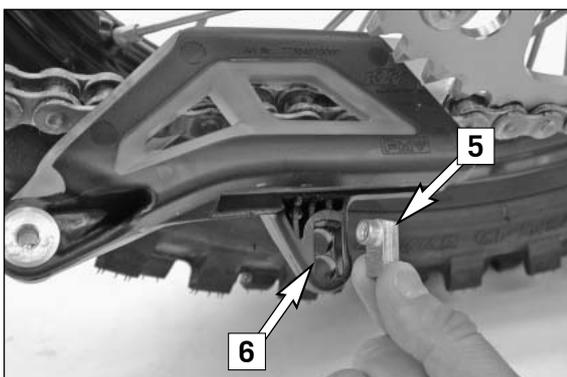
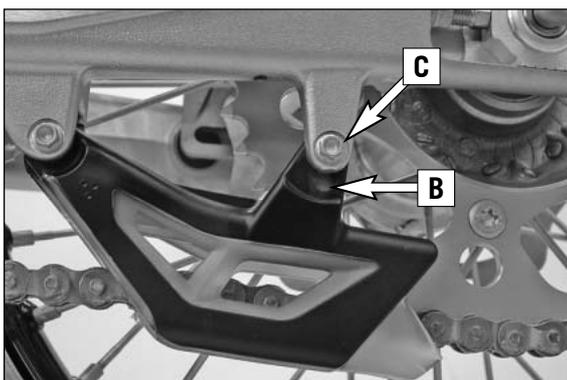
- If the chain tension is too great, parts within the secondary transmission (chain, chain wheels and rear wheel bearings) will be subjected to unnecessary stress, resulting in premature wear and even chain breakage.
- Too much slack in the chain, on the other hand, can result in the chain jumping off the chain wheels. If this happens, the chain could also block the rear wheel or damage the engine.
- In either case the operator is likely to lose control of the motorcycle.



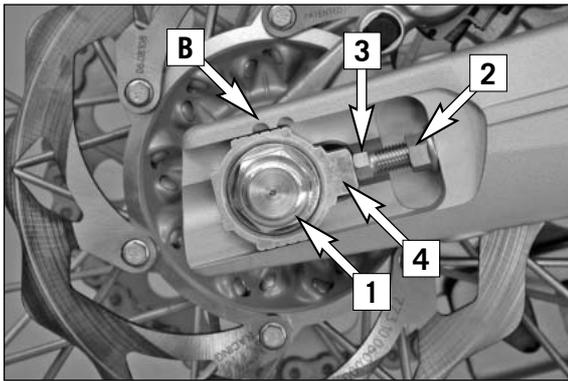
## Adapting the chain guide to the number of rear sprocket teeth

NOTE:

The position of the chain guide must be adjusted due to the large number of rear sprockets available. Up to 44 teeth, insert the retaining screw on the chain guide in the lower hole [C], from 45 teeth in the upper hole [D].



Loosen both screws on the chain guide and pull the chain guide off the swing arm. Turn the chain guide over, press out the retaining nut [5] and insert it in the other hole [6], turning the retaining nut around. Remount the chain guide and tighten the screws.



## Correct chain tension

Loosen collar nut [1], loosen lock nuts [2], and turn right and left adjusting screws [3] equally far. Tighten lock nuts.

To ensure the correct alignment of the rear wheel, the marks at the left and right chain adjusters must be positioned identically in relation to the reference marks [B]. Tighten the counter nut of the adjusting screws.

Before tightening the collar nut, verify that the chain adjusters [4] are sitting close to the adjusting screws and that the rear wheel has been aligned with the front wheel.

Tighten collar nut [1] to 80 Nm (60 ft.lb).

### ⚠ WARNING

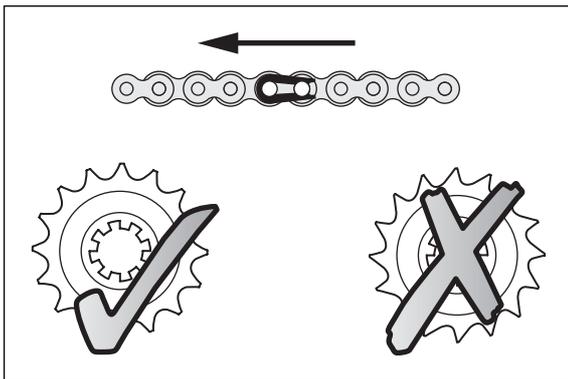
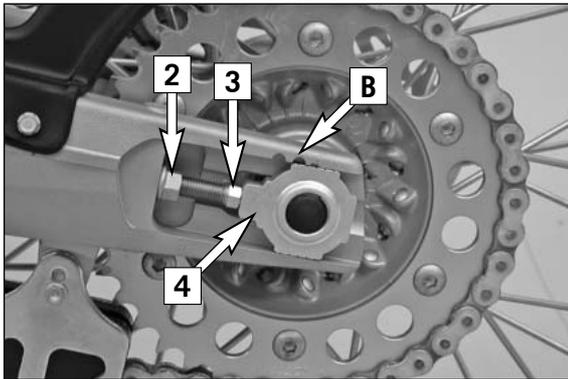
- If you don't happen to have a torque wrench at hand, make sure you have the tightening torque corrected by a KTM dealer as soon as possible. A loose axle may lead to an unstable driving behavior of your motorcycle.
- Tighten the collar nut with the required torque. A loose wheel spindle may lead to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

NOTE:

The large adjusting range of the chain adjusters (32mm / 1.25 in) allows you to use different secondary ratios in combination with the same chain length. The chain adjusters [4] can be rotated by 180°.

### ! CAUTION

Always mount the chain tensioner equally aligned.



## Chain maintenance

For a long chain life, good maintenance is very important. Chains without X-rings should be cleaned in fireproof solvent regularly and afterwards treated with hot grease or chain spray (e.g. Motorex Chainlube 622)..

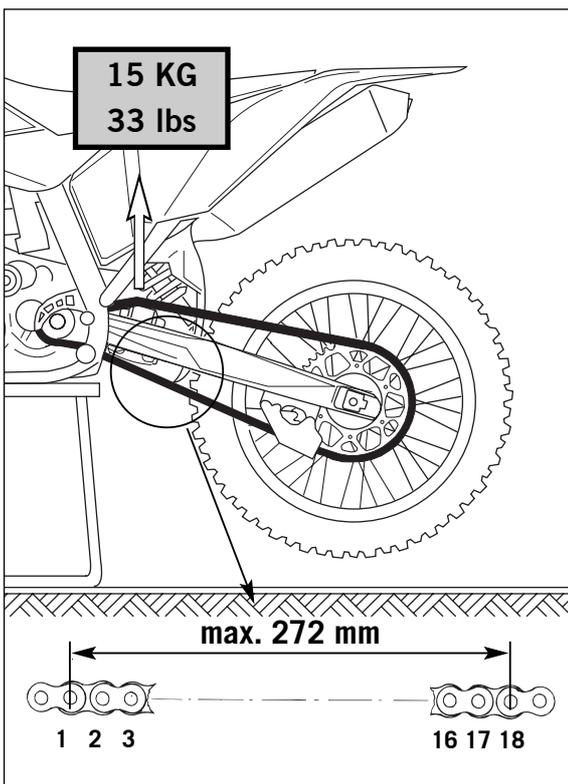
### ⚠ WARNING

No lubrication is allowed to reach the rear tire or the brake disk, otherwise the road adherence and the rear wheel braking effects would be strongly reduced and the motorcycle could easily get out of control.

### ! CAUTION

When mounting the chain joint, the closed side of the safety device must point in running direction.

Also check sprockets and chain guides for wear, and replace if necessary.



## Chain wear

To check the chain wear, observe the following indications:

Shift the gear into idling and pull the upper chain strand with approx. 10-15 kilograms (33 lb) upwards (see figure). Now one can measure a space of 18 chain reels at the lower chain strand. The chain should be replaced at the latest when a space of 272 mm (10.70 in) is measured. Chains do not always wear off evenly, therefore repeat the measurement at different places on the chain.

NOTE:

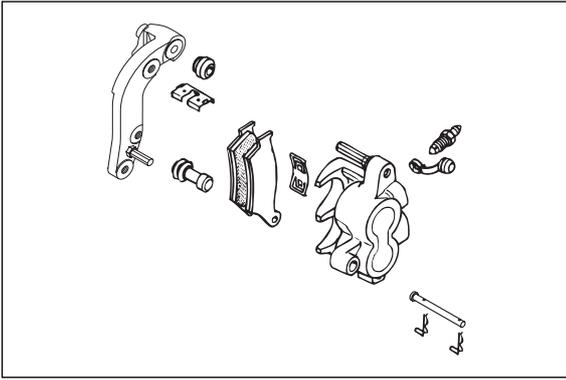
If you mount a new chain, the sprockets should also be replaced. New chains wear faster if used on old used sprockets.

### ! CAUTION

When you assemble a rear sprocket with 14t, the collar must be on the inside. Secure the screws of the chain wheel by applying Loctite and fasten them in a crosswise order.

Tightening torque for nuts: 35 Nm

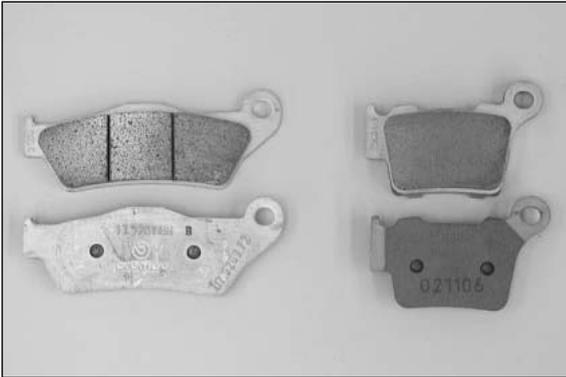
Tightening torque for screws: 50 Nm



## General information about KTM disc brakes

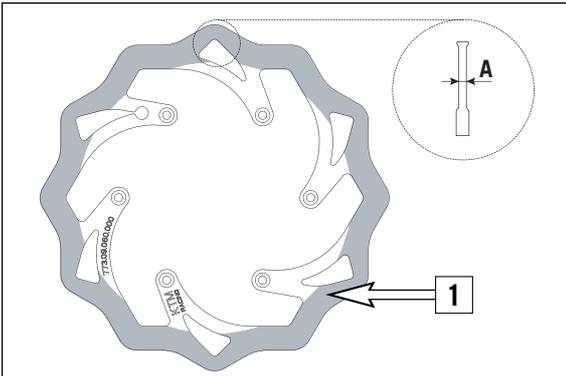
### BRAKE CALIPERS:

The brake calipers of this series use a „floating“ mount. This means that the brake calipers are not solidly attached to the caliper support, which enables them to "float" for maximum braking contact. Secure the screws of the caliper support with Loctite 243 and tighten to 25 Nm (19 ft.lb).



### BRAKE PADS:

The brake pads are fitted with TOSHIBA TT 2701HHB sintered lining at the front and TOYO B 143 FF sintered lining at the back. These linings provide an optimal combination of dosing, brake performance and life cycle.

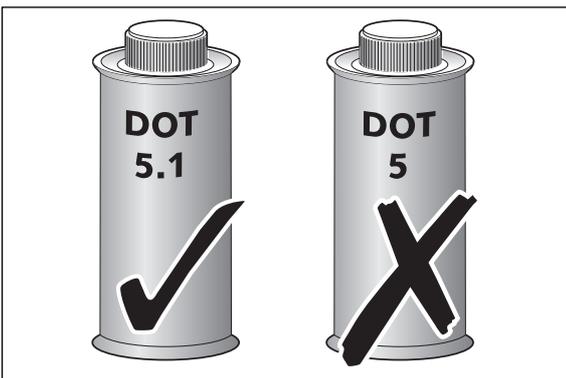


### BRAKE DISCS:

Due to wear, the thickness of the brake disc in the area of the contact face [1] of the brake pads decreases. The brake disk must be at least 2.50 mm (front) / 3.50 mm (rear) thick at the thinnest point [A]. Check the thickness of the brake disk at several points.

### ⚠ WARNING

- A brake disk worn down to less than 2.50 mm (Front) / 3.50 mm (Rear) is a safety risk. Have the brake disk replaced as soon as it reaches the service limit.
- Have any repairs on the brake system be performed by a KTM dealer.



### BRAKE FLUID RESERVOIRS:

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 level either the brake system has a leak or the brake pads are completely worn.

In this case, consult an authorized KTM dealer immediately.

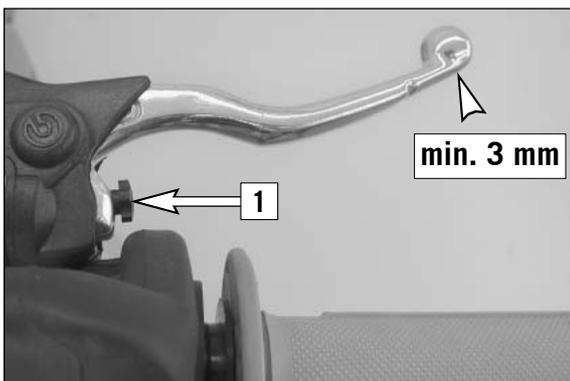
### BRAKE FLUID:

KTM fills the brake systems with Motorex Brake Fluid DOT 5.1 brake fluid, one of the best brake fluids is 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 with DOT 5.1.

Never use brake fluid DOT 5. The color of this silicon oil-based product is purple red. The gaskets and brake hoses of KTM motorcycles are not designed for DOT 5 brake fluid.

### ⚠ WARNING

Have the brake fluid changed at least once annually. If you wash your motorcycle often, the brake fluid should be changed even more frequently. Brake fluid tends to absorb water. Therefore, vapor pockets may form in „old“ brake fluids even at low temperatures, causing the brake system to fail.



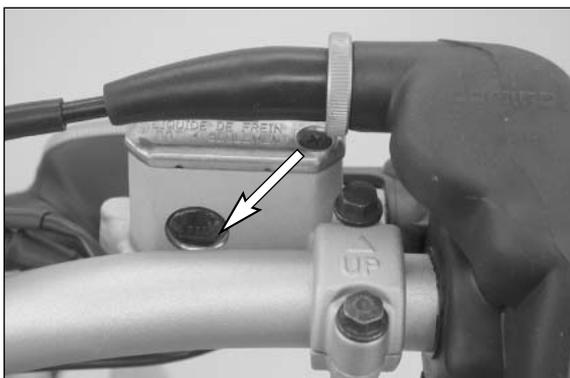
## Adjusting the free travel at the hand brake lever

Free travel at the hand brake lever may be readjusted by using adjustment screw [1]. 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.

When you press the hand brake lever forwards, you should have at least 3 mm free travel. Turn the adjusting screw [1] if necessary.

### ! 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.

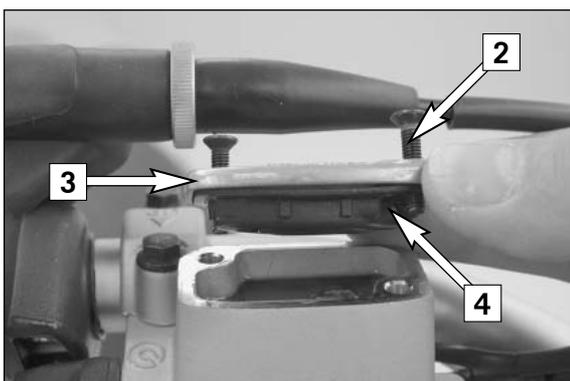


## Checking the brake fluid level - front brake

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

### ! WARNING

If the brake fluid level drops below the minimum either the brake system has a leak or the brake pads are completely worn. In this case, consult an authorized KTM dealer immediately.



## Refilling the front brake fluid reservoir \*

Loosen screws [2] and remove lid [3] and membrane [4].

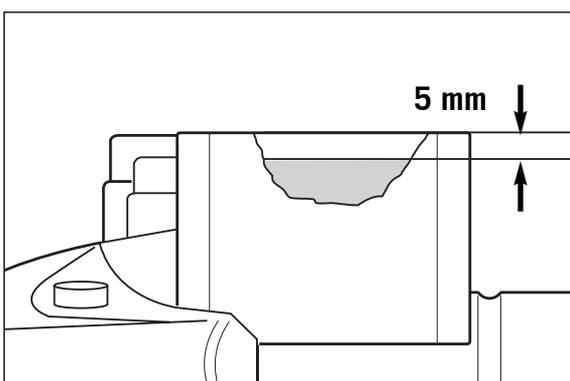
Place hand brake cylinder in a horizontal position and fill the brake fluid reservoir to 5 mm (0.2 in) below the rim with clean brake fluid DOT 5.1 (e.g. Motorex Brake Fluid DOT 5.1). Replace membrane and lid, tighten screws. Rinse off spilled or overflowing brake fluid with water.

### ! WARNING

- Never use DOT5 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

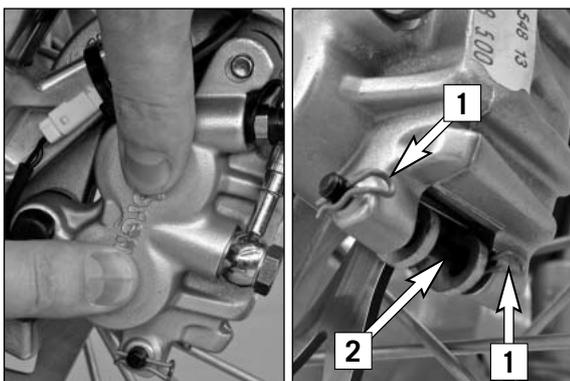
The brake pads can be inspected from below. The linings must be at least 1 mm (0.04 in) thick.

### ! 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 the front brake pads \*

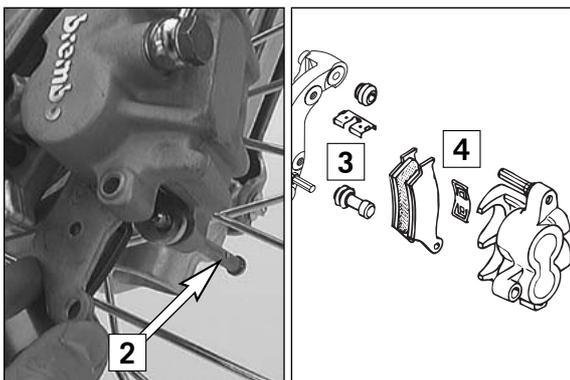
Press the brake caliper toward the brake disk, to put the brake piston in its basic position. Remove clips [1] and pull out bolt [2]. Remove brake pads from the brake caliper. Clean the brake caliper and the brake caliper support with compressed air. Check the sleeves of the guide bolts for damage, and grease guide bolts if necessary.

Mount the right brake pad and fix it with the bolt. Mount the left brake pad and insert the bolt until it stops. Mount the clips.

When mounting the brake pads, be sure to check for correct fit of the sliding metal-sheet [3] in the caliper support and of the leaf spring [4].

### ⚠ WARNING

- It is very important to keep the brake disk free from oil and fatty matters. Otherwise, the braking effect would be strongly reduced.
- After assembly, check if circlips have been fitted correctly.
- after working on the braking system, always actuate the hand brake lever or foot brake lever, respectively to ensure that the brake pads will lie against the brake disk and the pressure point is established.



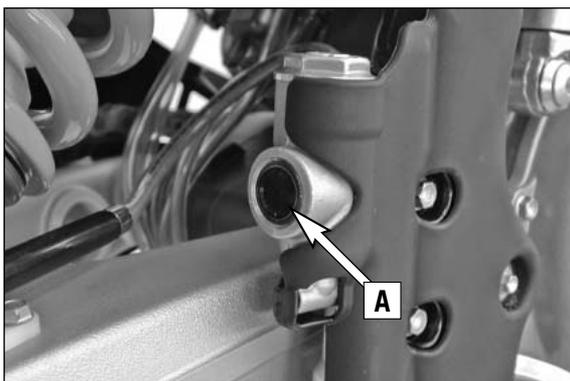
## Checking the rear brake fluid level

The reservoir for the rear brake disk is located on the right side of the motorcycle on the rear brake cylinder.

No air bubble should be visible in inspection glass [A] when the vehicle is parked in a vertical position.

### ⚠ WARNING

If the brake fluid level drops below the minimum either the brake system has a leak or the brake pads are completely worn. In this case, consult an authorized KTM dealer immediately.



## Refilling the rear brake fluid reservoir \*

Add brake fluid as soon as a bubble is visible in inspection glass [A].

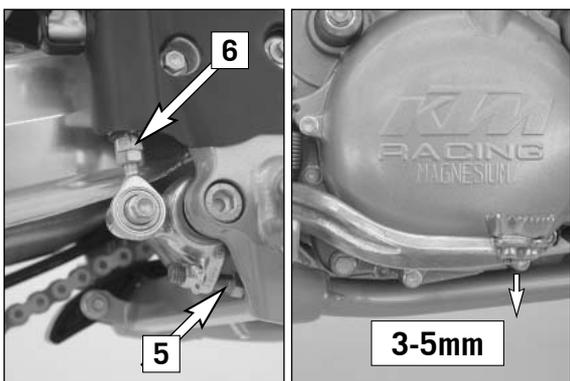
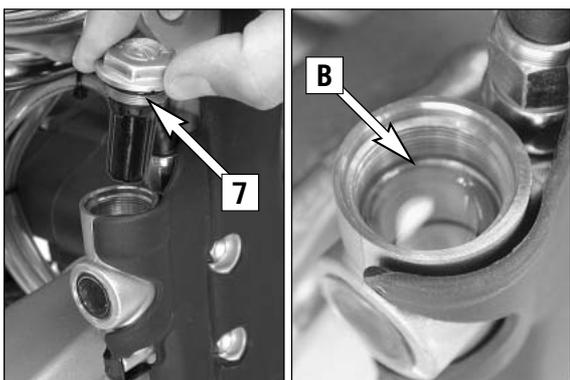
To top up, remove screw [7]. Fill DOT5.1 brake fluid (e.g. Motorex Brake Fluid 5.1) up to the mark [B] on the inside of the reservoir and remount the screw. Spilled brake fluid must be rinsed off with water.

### ⚠ WARNING

- Never use DOT5 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.



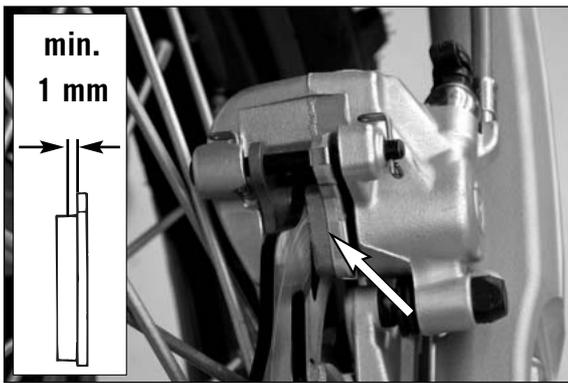
## Changing the basic position of the foot brake pedal \*

The basic position of the foot brake pedal can be altered by turning the stop screw [5]. The free play at the foot brake pedal must then be adjusted by means of the piston rod [6].

Measured on the outside, the foot brake pedal must have 3-5 mm (0.12-0.20 in) of free play before the piston rod can move the piston in the brake cylinder (to be recognised from the resistance on the foot brake pedal).

### ⚠ WARNING

If this free play is not present, then pressure can build up in the brake system when driving, causing the rear wheel to brake. The braking system overheats and may even fail completely in extreme cases.



## Checking the rear brake pads

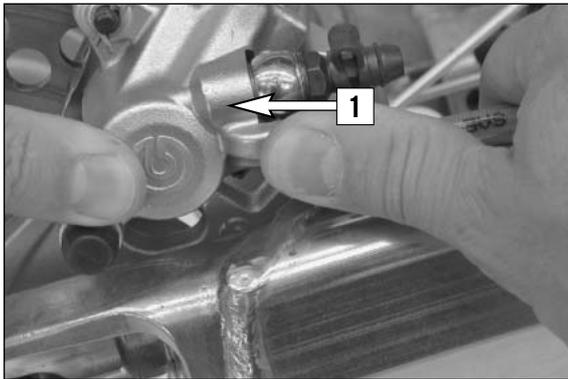
The brake pads can be inspected from the rear. The thickness of the linings may not be less than 1 mm (0.04 in).

### ⚠ 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.



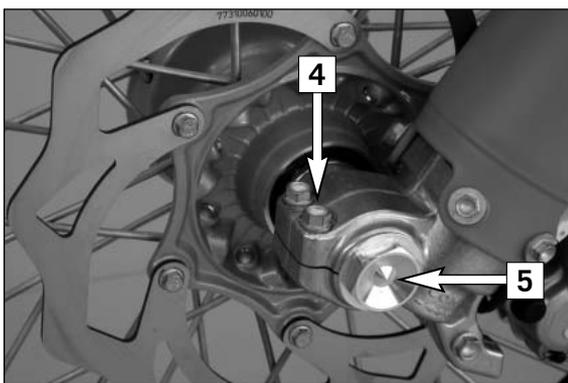
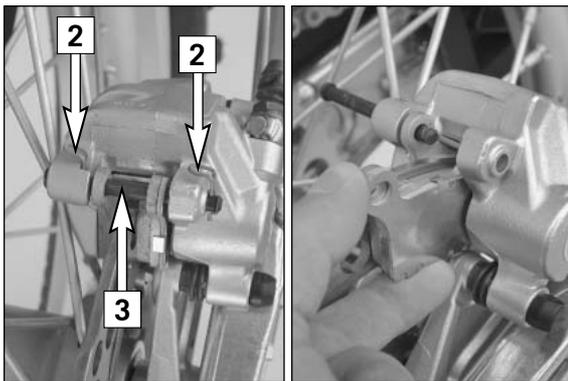
## Replacing the rear brake pads \*

Press the brake caliper [1] in the direction of the chain wheel for the brake piston to reach its basic position. Remove the safety device [2], knock out the guide pin [3] from the brake caliper with a drift towards the chain wheel and remove the brake pads. Carefully clean the brake caliper with compressed air and check the sleeves of the guide pins for damage.

Slide the left brake pad into the brake caliper and fix it with the pin. Slide in the right brake pad and knock the bolt [3] in as far as it will go. Mount the safety device [2].

### ⚠ WARNING

- It is very important to keep the brake disk free from oil and fatty matters. Otherwise, the braking effect would be strongly reduced.
- After assembly, check if circlips have been fitted correctly.
- After working on the braking system, one must always actuate the hand brake lever or foot brake lever, respectively so as to ensure that the brake pads will lie against the brake disk and the pressure point is established.



## Dismounting and mounting the front wheel

To remove the front wheel, jack the motorcycle up on its frame so that the front wheel no longer touches the ground.

Loosen the 2 clamping screws [4] on the left side of the fork fists.

Loosen and remove the collar nut [5], loosen the clamping screws [6] on the right side of the fork fist.

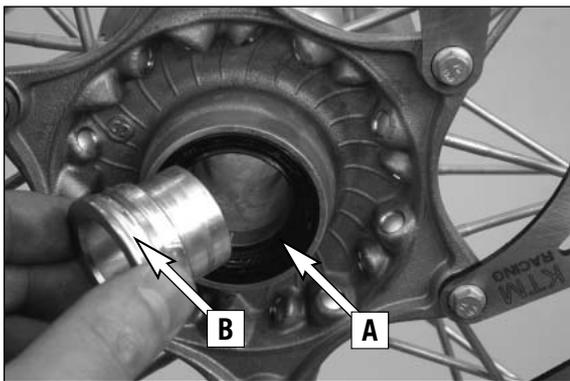
Hold the front wheel, pull out the wheel spindle [7].

Carefully remove the front wheel from the fork.

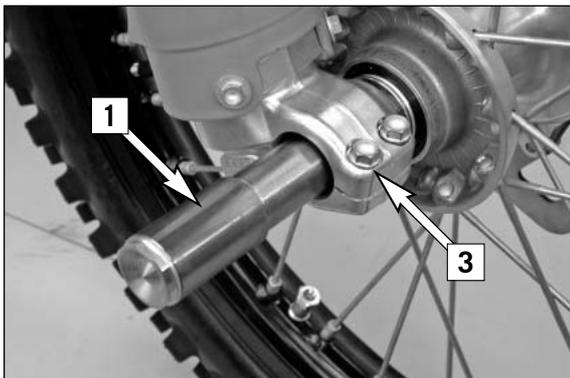
### ! CAUTION

- Do not operate the hand brake when the front wheel has been dismounted.
- Make sure the brake disc is always on top when you lay down the wheel, otherwise the brake disc can be damaged.





Before remounting the front wheel, clean and grease the shaft seal rings [A] and the bearing surface [B] of the distance bushings and mount the distance bushing.



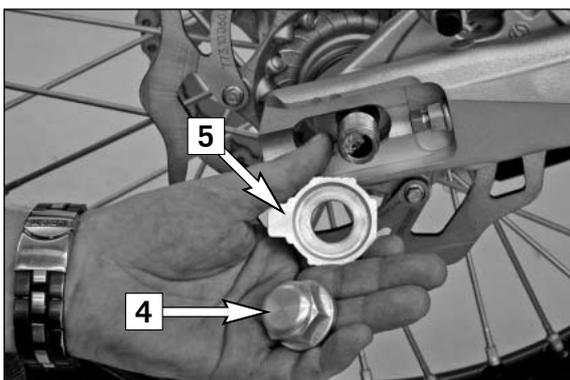
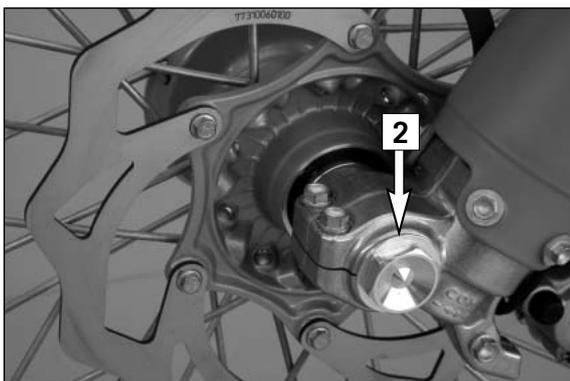
To install the front wheel, lift it into the fork, position and mount the axle shaft [1]. Mount the collar nut [2], tighten the clamping screws [3] on the right fork leg axle passage to prevent the axle shaft from turning and tighten the collar nut to 40 Nm (30ft.lb).

Loosen the clamp screws on the right fork leg. Take the motorcycle down from its stand. Press the front wheel brakes and push down on the fork a few times vigorously so that the fork legs come into alignment.

Only after this has been accomplished, tighten the clamp screws on both fork legs with 15 Nm (7 ft. lbs).

## ⚠ 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 effect would be strongly reduced.



## Dismounting and mounting the rear wheel

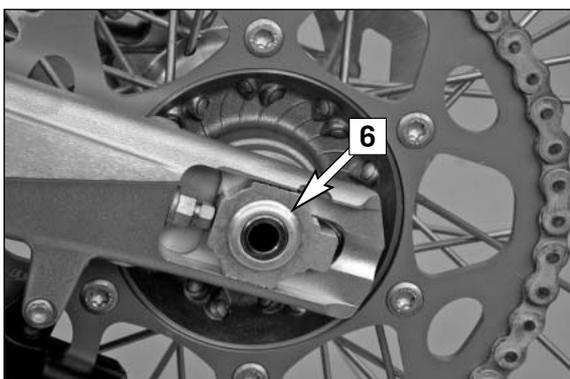
Jack the motorcycle up on its frame so that the rear wheel no longer touches the ground.

Remove the collar nut [4], remove the chain tensioner [5] and pull out the wheel spindle [6] until you can push the rear wheel forwards.

Take the chain off the rear sprocket, pull out the wheel spindle and carefully remove the rear wheel from the swing arm.

## ! CAUTION

- Do not operate the rear brake when the rear wheel has been dismantled.
- Make sure the brake disc is always on top when you lay down the wheel, otherwise the brake disc can be damaged.
- If the axle is dismantled, clean the thread of the wheel spindle and collar nut thoroughly and apply a new coat of grease to prevent the thread from jamming.



## MAINTENANCE WORK ON CHASSIS AND ENGINE »



The rear wheel is remounted in the reverse order. Before tightening the collar nut to 80 Nm (60 ft.lb), push the rear wheel forwards so that the chain tensioners lie on the tension screws.

### ⚠ 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 rear wheel, keep operating the rear 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.
- Tighten the collar nut with the required torque. A loose wheel spindle may lead to an unstable behavior of your motorcycle.



### Tires, air pressure

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

- Tire size can be found in the technical specifications and in the homologation certificate
- 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.
- Refer to the specific regulations in your country for minimum tire tread requirements. We recommend you replace the tires at the latest when the tread is down to 2 mm (0.08 in).
- Tire pressure should be checked regularly on a "cold" tire. Proper pressure ensures optimum driving comfort and extends the life of your tires.

#### TIRES - AIR PRESSURE

	front	rear
Offroad	1,0 bar	1,0 bar

### ⚠ WARNING

- Do not mount tires which have not been approved by KTM. Other tires could have adverse effects on the way your motorcycle behaves.
- front and rear wheels may only be fitted with tires having the same tread layout. Use homologated tires
- For your own safety replace damaged tires immediately.
- Worn tires can have a negative effect on how your motorcycle performs, especially on wet surfaces
- If air pressure is too low, abnormal wear and overheating of the tire can result



### 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, at 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.
- Excessively tensioned spokes may rupture due to local overloading. The spokes must be tensioned to 5 Nm.



## Cooling system

The water pump [1] in the engine circulates the cooling liquid. The cooling liquid is cooled by the air stream. This means that the cooling effect decreases with the traveling speed. Dirty radiators additionally reduce the cooling effect. Pressure induced by heating of the coolant in the system is controlled by a valve in the radiator cap [2]; a water temperature rising up to 120° C (248° F) is admissible, without fear of problems.

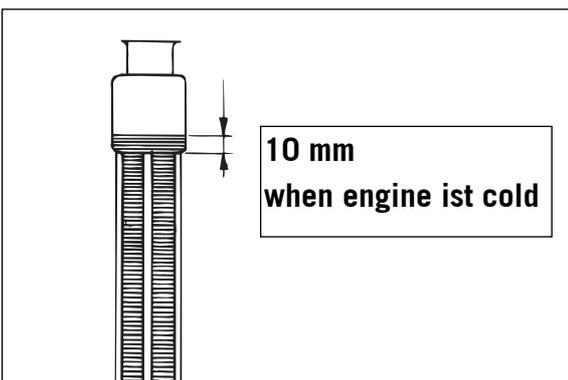
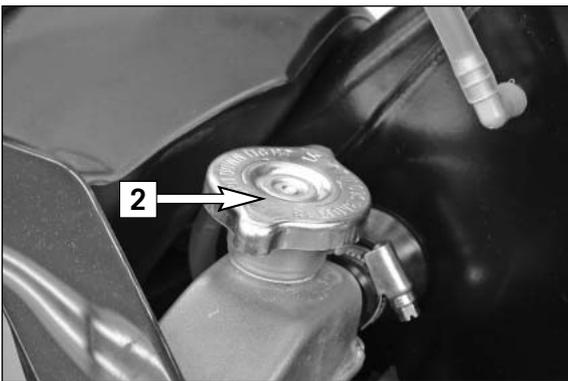
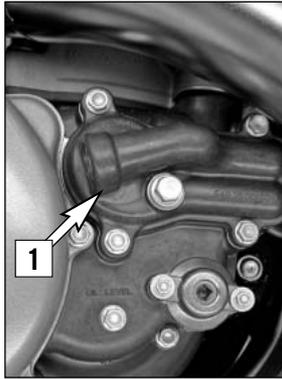
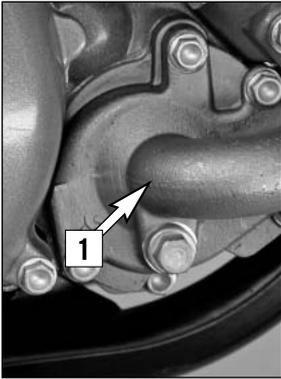
### ⚠ WARNING

- If possible, always check level of cooling liquid when engine is cold. If you have to open the radiator cap [2] when the engine is hot, use a rag to cover the cap and open slowly to release pressure.  
Caution - scalding hazard.
- Do not detach any radiator hoses while the engine is hot. The escaping hot coolant and the steam may cause serious burns.
- In case you get burnt, hold the affected part of your body under running cold water right away.
- Coolant is toxic. Keep the coolant out of the reach of children.
- In case coolant is ingested, consult a doctor immediately.
- If coolant gets into your eyes, rinse them out with water immediately and go see a doctor.

Use a mixture of 40% antifreeze and 60% distilled water for the cooling liquid. The antifreeze should be designed for temperatures of at least -25°C. This mixture offers frost protection as well as good corrosion protection and should not be replaced by water alone.

### ! CAUTION

For the cooling system, use only with high-grade antifreeze (e.g. Motorex Anti-Freeze). Using lower-grade antifreeze agents can cause corrosion and coolant foaming.



## Checking the coolant level

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

### ⚠ WARNING

If possible, always check the level of cooling liquid when the 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.

### ! CAUTION

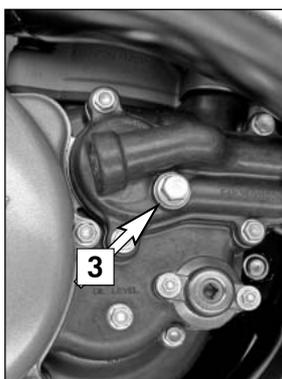
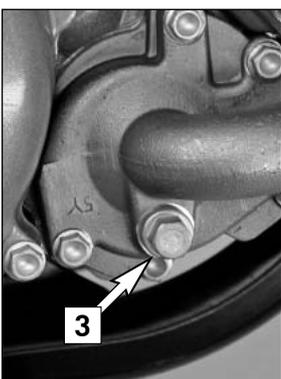
The cooling system must be bled after draining the cooling liquid or after adding more than 0.25 l (0.06 US gallons) cooling liquid.

## Bleeding the cooling system

By removing the screw [3] at the water pump cover you can drain the coolant.

To bleed the cooling system, add coolant up to approx. 10 mm above the radiator fins when the engine is cold.

After a short ride, check the coolant level once more.



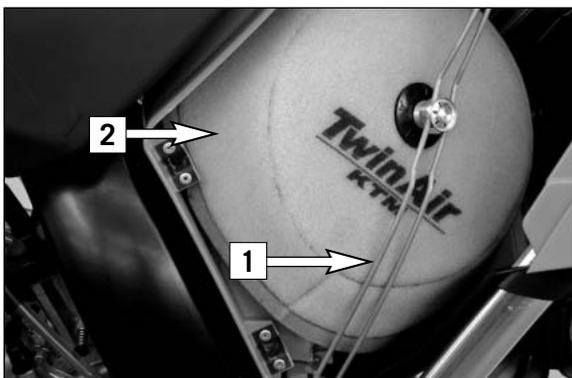


## Cleaning the air filter \*

The air filter must be cleaned prior to each race or whenever dust has accumulated. To clean, lift the filter box cover (see illustration) and pull off towards the front. Detach the bottom of the filter retaining bracket [1], tilt aside and remove the air filter [2] and filter support [3] from the filter box.

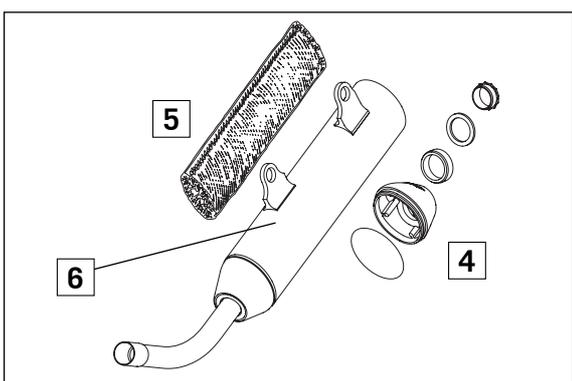
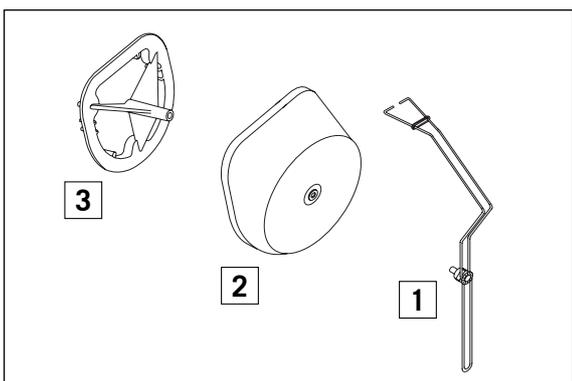
### ! CAUTION

- Do not clean foam filter with fuel or petroleum since these damage the foam. KTM recommends the products of the company Motorex for air filter maintenance (Bio Dirt Remover and Liquid Bio Power).
- Never start your motorcycle without any air filters. otherwise, dust and dirt may penetrate and cause damage and increased wear.
- Dust and dirt can accumulate and damage the engine if the air filter is not mounted correctly.



Thoroughly wash the air filter in special cleaning fluid (Motorex Bio Dirt Remover) and allow it to dry well. Only press out the filter, do not wring it out under any circumstances. Oil the dry air filter with a high-grade filter oil (Motorex liquid Bio Power). Also clean the air filter box. Check the carburetor collar for damage and that it is filled correctly.

Place the air filter on the filter support and insert both in the center of the filter box. Hold in place with the filter retaining clip.



## Exhaust system \*

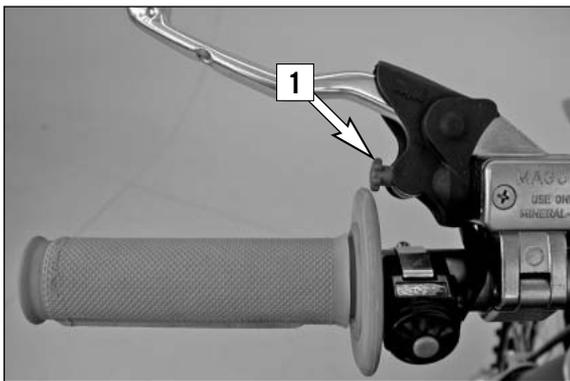
If the end cap [4] can be removed, the silencer is filled with glass-fiber yarn. Have the filling checked regularly by an authorized KTM workshop (see Lubrication and Service Chart). The insulating material fibers escape through the holes in the perforated pipe with time, causing the silencer to "burn out". In addition to causing a higher noise-level, it will also affect the power characteristic. The insulating material suitable for your exhaust is available from your authorized KTM workshop.

To replace the glass-fiber yarn set [5] remove the end cap and pull off the outer pipe [6]. Tape a new glass-fiber yarn set to the inner tube and slide on the outer pipe. Mount the end cap.

Make sure the caps are screwed on tightly. Mount the muffler stress-free before tightening the fixing screws.

### ⚠ WARNING

The exhaust system becomes very hot while the motorcycle is running. Do not start work on the exhaust system until it has properly cooled down, to avoid burns.



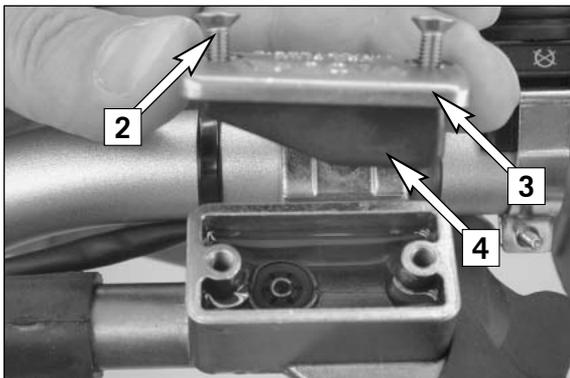
## Changing the original position of the clutch lever

The adjusting screw [1] can be used for individual adjustment of the original position of the clutch lever, thus allowing adjustment to an optimal position for every hand size.

The clutch lever moves closer to the handlebar if the adjusting screw is turned in a counterclockwise direction. The clutch lever moves away from the handlebar if the adjusting screw is turned in a clockwise direction.

### ! CAUTION

Adjustment of the clutch lever position is only possible within certain limits. Only turn the adjusting screw manually and never apply excessive force.



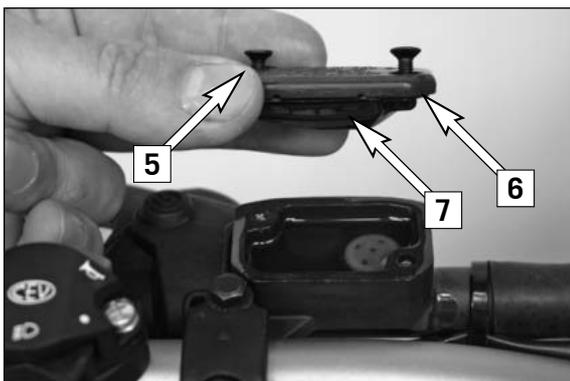
## Checking the oil level of the hydraulic clutch 125 SX

To check the oil level in the master cylinder of the clutch remove the cover. For this purpose, remove screws [2] and cover [3] together with the rubber boot [4]. The oil level in the horizontal-standing master cylinder should be 4 mm below the upper edge.

If necessary, add SAE 10 biodegradable hydraulic oil (Motorex clutch fluid 75), available from your authorized KTM shop.

### ! CAUTION

KTM uses biodegradable, hydraulic mineral oil to actuate the hydraulic clutch in 125/200 models. Do not mix this oil with any other hydraulic oil. Always use original KTM hydraulic oil (available from your authorized KTM workshop) to make sure your clutch operates smoothly. Never refill with brake fluid.



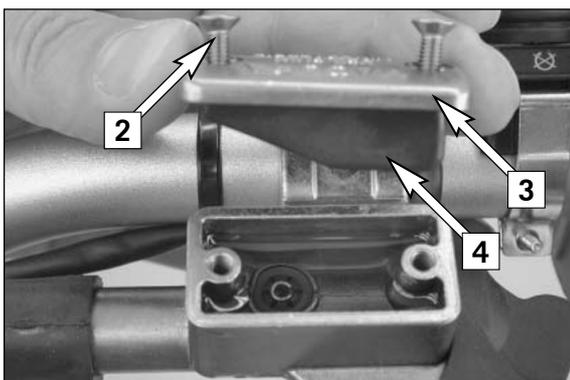
## Checking the oil level of the hydraulic clutch 250 SX

To check the oil level in the master cylinder of the clutch remove the cover. For this purpose, remove screws [5] and cover [6] together with the rubber boot [7]. The oil level in the horizontal-standing master cylinder should be 4 mm below the upper edge.

If necessary, add DOT 5.1 brake fluid (Motorex Brake Fluid 5.1).

### ! CAUTION

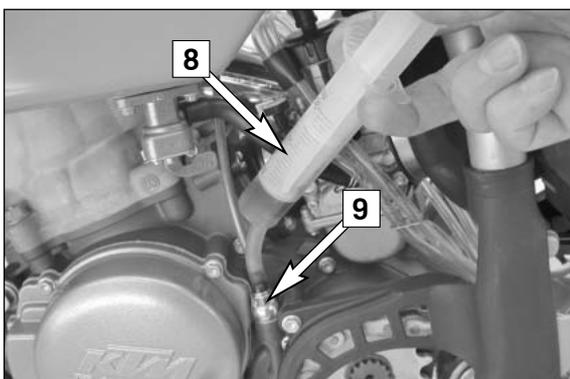
BREMBO clutch fittings are installed in the 250/300 models and filled with DOT 5.1 brake fluid. To make sure the clutch operates smoothly, never add hydraulic oil to these systems.



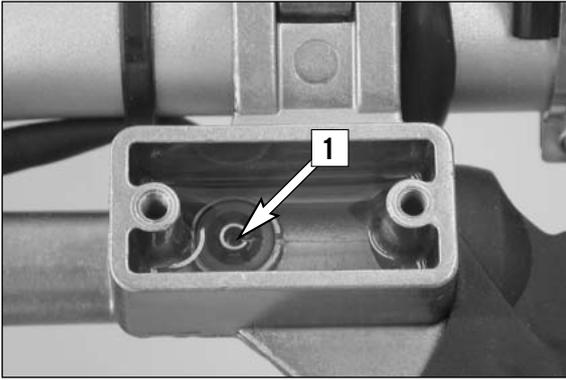
## Bleeding the hydraulic clutch \*

The clutch control needs to be bled as soon as the resistance in the clutch lever starts to feel unresponsive. You will need to use a bleeding syringe (special tool). Please note that Motorex 75 clutch fluid must be used for the 125 models and Motorex DOT. 5.1 brake fluid for the 250 models. Both are available from your KTM dealer.

Turn the handlebar until the master cylinder is in a horizontal position, remove the screws [2], the cover [3] and the rubber boot [4].



Fill the bleeder syringe [8] with a suitable fluid (see Technical Specifications - Engine). Remove the bleeder screw from the slave cylinder [9] and mount the bleeder syringe.



Press oil into the system until the fluid runs out of the hole [1] in the master cylinder without bubbles. Occasionally extract the fluid from the master cylinder reservoir to keep it from overflowing.

After you finish bleeding, remove the bleeder syringe, mount the bleeder screw, correct the level in the reservoir and mount the cover (see above).

## 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 (95 ROZ).

Mixing ratio (2-stroke motor oil/super fuel): **1:40 (125 SX), 1:60 (250 SX)**

### Basic information on changing the carburetor setting

Always start with the original carburetor setting (the provided factory setting is meant for break-in operation; after the break-in period, the carburetor needs to be adjusted according to the carburetor datasheet - see appendix). 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

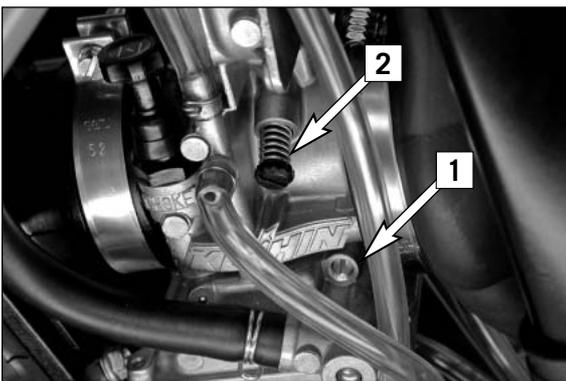
## ⚠ WARNING

- Only use premium-grade gasoline ROZ 95 (USA = Premium PON 91) mixed with high-grade two-stroke engine oil. Other types of gasoline can cause engine failure, and will void your warranty.
- Only use high-grade 2-stroke engine oil of known brands (e. g. Motorex Cross Power 2T).
- Not enough oil or low-grade oil can cause erosion of the piston. If you use too much oil the engine can start smoking and foul the spark plug and the exhaust control system.
- 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 the engine does not run properly despite a changed adjustment, look for mechanical faults and check the ignition system.

### General information on carburetor wear

Engine vibrations subject the throttle slide, jet needle, float needle valve and the needle jet to extreme wear. Wear leads to malfunctioning of the carburetor (e.g. over-enrichment). These parts should be replaced after 100 operating hours. The carburetor body, main jet holder and the float support should be replaced after 200 operating hours.



### Definitions

#### Mixture too rich:

Too much fuel in proportion to air.

#### Mixture too lean:

Not enough fuel in proportion to air.

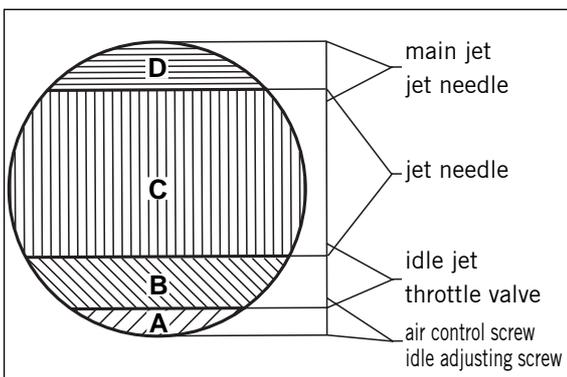
### Idling range A

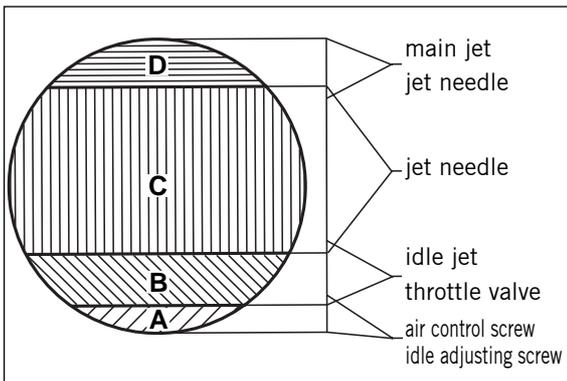
Operation with closed throttle valve. This range is influenced by the position of the air control screw [1] and the air control screw [2]. Only make adjustments when the engine is hot.

To this end, slightly increase the idling speed of the engine by means of the air control screw. Turning it clockwise produces a higher idling speed and turning the screw counterclockwise produces a lower idling speed. Create a round and stable engine speed using the air control screw (basic position of the air control screw = open by 1.5 turns). Then adjust to the normal idling speed by means of the air control screw.

### 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.

JET NEEDLE TYPE	RANGE OF ACTION	
	RICHER	LEANER
R1468D	←→	
R1469D	←→	
R1470D	←→	
R1471D	←→	

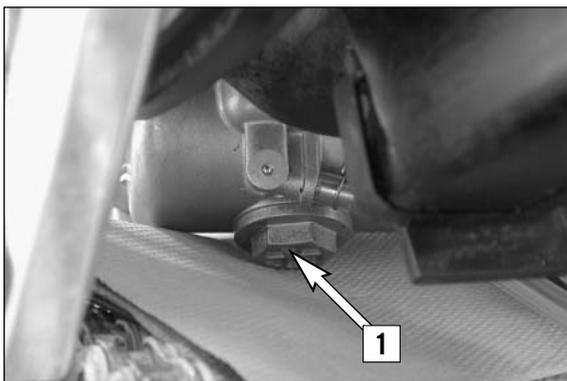
JET NEEDLE TYPE	RANGE OF ACTION	
	RICHER	LEANER
N1EF	←→	
N1EG	←→	
N1EH	←→	
N1EI	←→	
N1EJ	←→	

## Explanation of table - Example

Compared to the needle NOZJ, the jet needle NOZH is two steps leaner in the range from the closed position of the throttle to 1/4 throttle. Otherwise, there are no differences.

## ! CAUTION

Pay attention to the correct needle designation when replacing the jet needle. Detailed information on the type of jet needle for the respective models can be found in the carburetor setting table.



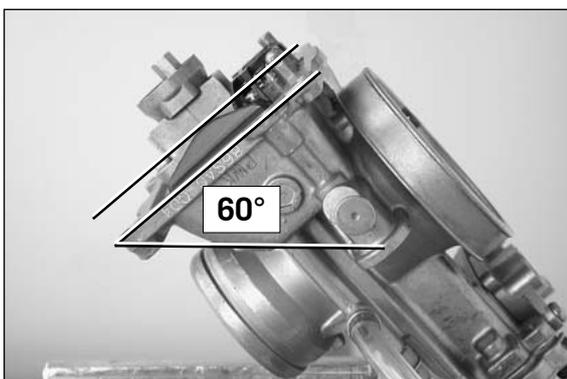
## Draining the float chamber of the carburetor

Following every wet-cleaning procedure, the float chamber of the carburetor should be drained in order to remove any water that may have penetrated into it. Water in the float chamber leads to engine malfunction.

Make sure you do this while the engine is cold. Close the fuel tap, and place a cloth under the carburetor, which is capable of absorbing the leaking fuel. Unscrew the plug [1] and clean it with compressed air. Then, mount the plug together with the gasket, open the fuel tap, and check the float chamber for leaks.

## ⚠ WARNING

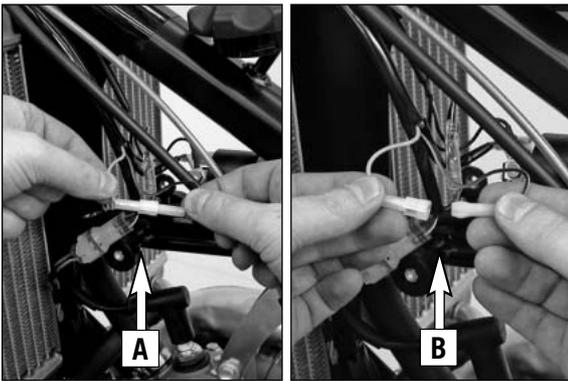
Fuel is easily flammable and toxic. When handling fuel, be sure to exercise the utmost caution. Never perform any work on the fuel system near open flames or burning cigarettes. Always allow the engine to cool off first. Immediately clean up any fuel which may have been spilled. Materials saturated with fuel are also easily flammable. In case you ingested fuel or fuel splashed into your eyes, consult a doctor immediately. Dispose of the fuel properly.



## Checking the float level \*

Arrange the carburetor diagonally at about 60° so that the spring in the float needle valve is not pressed together. In this position, the edge of the float should be parallel with the float chamber sealing surface (see illustration).

# MAINTENANCE WORK ON CHASSIS AND ENGINE »



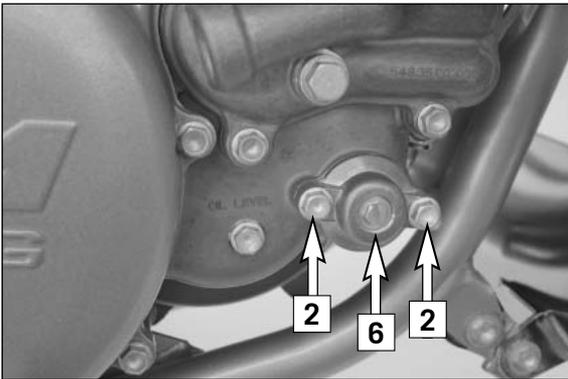
## Adjusting the engine characteristic via the ignition curve (125-250)

2 ignition curves (PERFORMANCE and SOFT) are stored in the digital box. The PERFORMANCE ignition curve is activated in the condition at delivery. The SOFT ignition curve can easily be activated by disconnecting the socket connector under the tank.

To change the ignition curve, remove the seat and tank.

A) PERFORMANCE (higher engine performance) socket connector connected  
B) SOFT (better driveability) socket connector disconnected

You can also change the ignition curve via the handlebar switch (Power Parts) while driving.



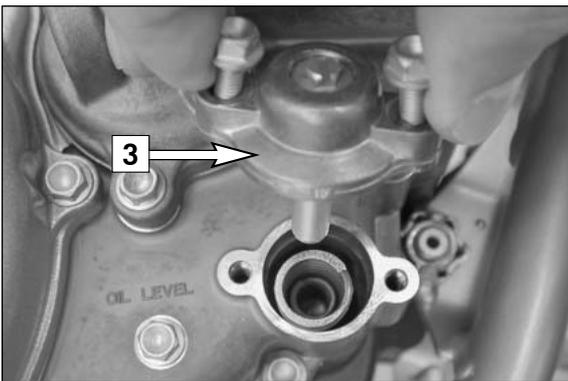
## Adjusting the engine characteristic via the auxiliary spring (250)

The engine characteristic can be modified through various thicknesses of the auxiliary spring [1]. An auxiliary spring designed for „good driveability“ (smooth power application) is mounted in the condition at delivery. One of the auxiliary springs can be mounted if you prefer an „even smoother power application“ or an „aggressive engine characteristic“.

Auxiliary spring for good driveability (mounted in condition at delivery)  
Spare part number 546.37.072.300, YELLOW color mark

Auxiliary spring for an even smoother power application (included in scope of supply)  
Spare part number 548.37.072.100, GREEN color mark

Auxiliary spring for aggressive engine characteristic (included in scope of supply).  
Spare part number 548.37.072.000, RED color mark

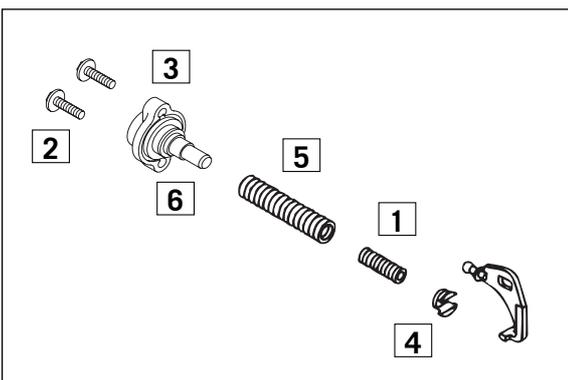


To mount, tilt the motorcycle approx. 45° to the left, remove both screws [2], lift off the closing cover [3] and remove the springs including the spring insert [4] from the clutch cover. Pull both springs off the spring insert, mount the auxiliary spring [1] and control spring [5] and slide both into the clutch cover until the recess in the spring insert [4] engages in the rocker arm. Check the O-ring in the closing cover mount the closing cover, ensuring that the dolly screw [6] engages in the auxiliary spring.

Make sure you do not turn the dolly screw since this will impair the engine characteristic.

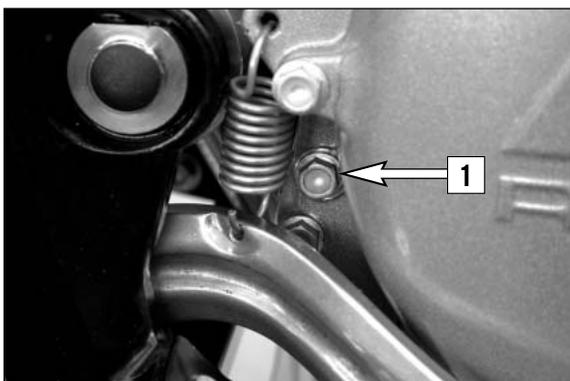
### ! CAUTION

Be careful not to turn the spring dolly [6], otherwise the engine characteristic will deteriorate.



You can also change the engine characteristic through the interaction between the ignition curve, auxiliary spring (250 only) and exhaust. The following table shows examples of possible combinations. Further combinations can be adjusted at random depending on the driving requirements.

125/250 SX 2007					
Engine performance	--	-	Standard setting	+	++
Driveability	++	+	Standard setting	-	--
Ignition curve	soft	soft	performance	performance	performance
Auxiliary spring (250/300)	green	yellow	yellow	yellow	red
Exhaust	250 SX standard	250 SX standard	250 SX standard	250 SXS	250 SXS
Example of application	extremely difficult track conditions: very selective, very hard, hardly any traction, very tiring	difficult track conditions: selective, not much traction, tiring	average track conditions	good track conditions: nonskid roadway, well prepared, MX special stage	special track conditions: deep sand, very fast track routing, very well-prepared track

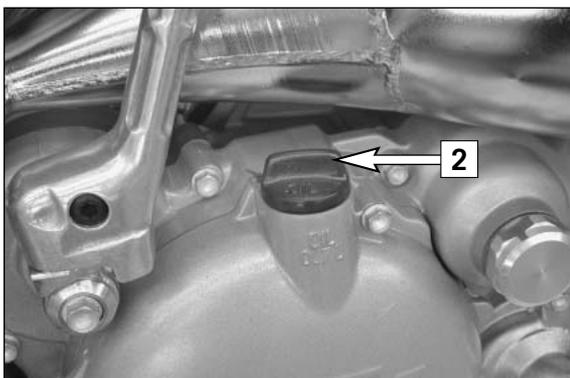


## Check transmission oil level (125 SX)

In order to check the transmission oil level the control screw [1] on the clutch cover is to be removed. Oil should just barely escape from the inspection opening when the motorcycle is in an upright position. If necessary, remove the plug [2] and top up with oil (e. g. Motorex Top Speed 4T 15W50).

### ! CAUTION

Transmission and clutch will be subjected to excessive wear and tear if you use too little or low grade oil. Use only high-grade oil (e. g. Motorex Top Speed 4T 15W50).



## Changing the transmission oil (125 SX)

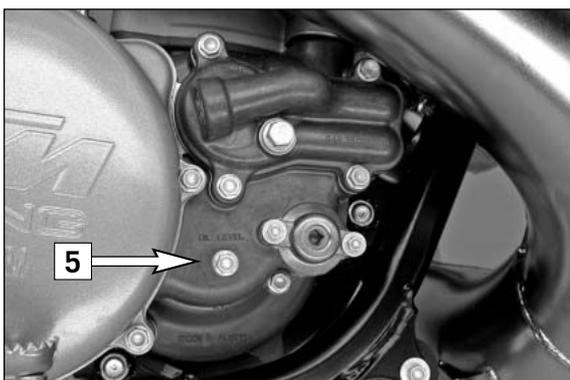
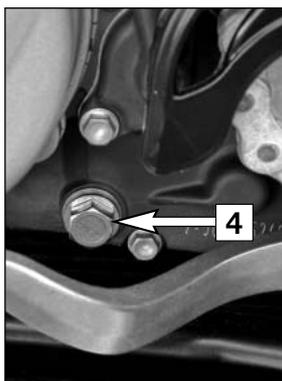
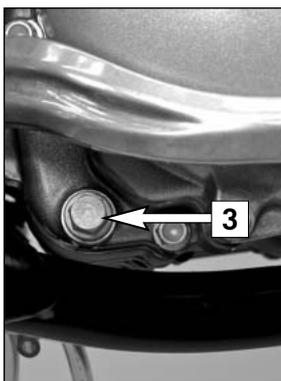
To change the gear oil warm up the engine and park the motorcycle on a horizontal surface. Remove oil drain plugs [3] and [4] and drain the used oil into an appropriate container. Clean the magnets of the oil drain plugs and mount them together with the appropriate gaskets.

M12x1,5                      20 Nm  
M10x1                         15 Nm

Fill in 0.7 l oil (e. g. Motorex Top Speed 4T 15W50), mount the plug [2] and check the engine for leaks.

### ! CAUTION

Transmission and clutch will be subjected to excessive wear and tear if you use too little or low grade oil. Use only high-grade oil (e. g. Motorex Top Speed 4T 15W50).

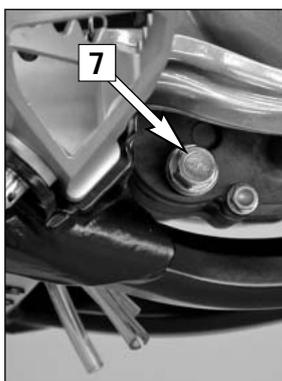
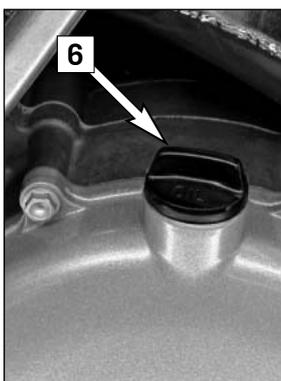


## Check transmission oil level (250 SX)

In order to check the transmission oil level the control screw [5] on the clutch cover is to be removed. Oil should just barely escape from the inspection opening when the motorcycle is in an upright position. If necessary, remove the plug [6] and top up with oil (e. g. Motorex Top Speed 4T 15W50).

### ! CAUTION

Transmission and clutch will be subjected to excessive wear and tear if you use too little or low grade oil. Use only high-grade oil (e. g. Motorex Top Speed 4T 15W50).



## Changing the transmission oil (250 SX)

To change the transmission oil run the engine warm and set up the motorcycle on a horizontal surface. Remove the oil drain screw [7] and drain used oil into a container. Clean the magnet of the oil drain screw and reinstall oil drain screw with seal.

M12x1,5                      20 Nm

Pour in 0.7 litres engine oil (e. g. Motorex Top Speed 4T 15W50), replace plug [6] and check engine for leaks.

### ! CAUTION

Transmission and clutch will be subject to excessive wear and tear, if you use too little or low grade oil. Use only high-grade oil (e. g. Motorex Top Speed 4T 15W50).

## CLEANING »

Clean your motorcycle regularly in order to maintain the beauty of its plastic surfaces. The best manner would be to use warm water that has been mixed with a normal brand-name washing detergent and a sponge. The hard dirt can be removed before washing with the help of a soft water jet.

### ! CAUTION

**If using a power washer, do not point the water jet at the electric components, plugs, cables, bearings, carburetor, etc. The high pressure will cause water to penetrate into the components and can cause them to malfunction or lead to premature wear.**

- Before cleaning with water, plug the exhaust pipe to prevent water ingress.
- You should use normal brand-name detergents to clean the motorcycle. Especially dirty 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 the working temperature and also use the brakes. By warming these components, the residual water can evaporate from inaccessible parts of the engine and the brakes.
- 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. Treat the chain with a chain spray.
- To prevent failures in the electric system, you should treat the ignition lock, the emergency OFF switch, the short circuit button, the light switch and the socket connectors with contact spray.

## CONSERVATION FOR WINTER OPERATION »

In the event that the motorcycle is also used in winter and on roads where one has to expect salt spraying, you will have to take precautions against the aggressive road salt.

- clean the motorcycle thoroughly and let it dry after each ride
- treat the engine, carburetor, swing arm, and all other bare or galvanized parts (except for brake discs) with a wax-based anti-corrosion agent.

### ⚠ WARNING

**Keep the anti-corrosion agent from getting into contact with the brake discs, otherwise this will significantly reduce the braking power.**

### ! CAUTION

**After rides on salted roads, clean motorcycle thoroughly with cold water and let it dry well.**

## STORAGE »

Should you wish to make a pause over a longer space of time, please observe the following instructions:

- Clean motorcycle thoroughly (see chapter: CLEANING)
- Change engine oil (old engine oil contains aggressive contaminants).
- Check antifreeze and amount of cooling liquid.
- Let the engine warm up again, close fuel cock 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 container.
- Correct tire pressure.
- Lubricate bearing points of the control levers, footrests, etc. as well as the chain.
- The storage place should be dry and not be subjected to too big temperature fluctuations.
- Cover the motorcycle with an air permeated tarp or blanket. Do not use non airtight materials as a possible humidity might not be able to escape and thereby cause corrosion.

### ! CAUTION

**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 valves and exhaust to rust.**

### USE AFTER A PERIOD OF STORAGE

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

NOTE: Before you put your motorcycle away for the winter, you should check all parts for their function and wear. Should any service jobs, repairs, or any refitting be necessary, you should have them carried out during the off-season (lower workload at mechanics' shops). This way, you can avoid the long waiting times at your shop at the beginning of the next biking season.

# TECHNICAL SPECIFICATIONS – CHASSIS 125/250 SX 2007»

CHASSIS	125 SX	250 SX
Frame	Central chrome-moly-steel frame	
Fork	WP – Up Side Down 4860 MXMA CC (Closed Cartridge Multi Adjuster)	
Wheel travel front/rear	300/335 mm (11.8/13.2 in)	
Rear suspension	WP PDS 5018 DCC B07	
Front brake	Disc brake with carbon-steel brake disc Ø 260 mm (10.2 in), brake caliper floated	
Rear brake	Disc brake with carbon-steel brake disc Ø 220 mm (8.7 in), brake caliper floated	
Brake discs	Wear limit 2.50 mm (0.1 in) front / 3.50 mm (0.14 in) rear	
Front tires	Bridgestone M59 80/100-21"	
Air pressure offroad	1,0 bar (14 psi)	
Rear tires	Bridgestone M70 100/90-19"	Bridgestone M70 110/90-19"
Air pressure offroad	1,0 bar (14 psi)	
Fuel tank capacity	7.5 Liter (liters)	
Final drive ratio	13:50 t	13:48 t
Available final sprockets	38t, 40t, 42t, 45t, 48t, 49t, 50t, 51t, 52t	
Chain	5/8 x 1/4 "	
Steering head angle	63°	63,5°
Wheel base	1471 ± 10 mm (57.9 in ± 0.4 in)	1475 ± 10 mm (58.1 in ± 0.4 in)
Seat height, unloaded	925 mm (36,5 in)	
Ground clearance, unloaded	390 mm (15.3 in)	385 mm (15.2 in)
Weight (without fuel)	89,5 kg (197.3 lbs)	95,4 kg (210.3 lbs)

STANDARD ADJUSTMENT – FORK		
	125 SX	250 SX
	WP 4860 MXMA CC 14.18.7C.01	WP 4860 MXMA CC 14.18.7C.03
Compression adjuster	18	15
Rebound adjuster	21	20
Spring	432.455.00.042W	432.455.00.044W
Fork oil	SAE 5	SAE 5

STANDARD ADJUSTMENT – SHOCK ABSORBER		
	125 SX	250 SX
	WP 5018 PDS DCC 12.18.7C.01	WP 5018 PDS DCC 12.18.7C.03
Compression adjuster	15 LS (low speed) 1 HS (high speed)	15 LS (low speed) 1 HS (high speed)
Rebound adjuster	25	25
Spring	60-250	63-250
Spring preload	5 mm (0.19 in)	5 mm (0.19 in)

# TECHNICAL SPECIFICATIONS – CHASSIS 125/250 SX 2007»

TIGHTENING TORQUES – CHASSIS		
Collar screw, front wheel spindle	M24x1,5	40 Nm
Brake caliper, front	M8	Loctite 243 + 25 Nm
Brake disks	M6	14 Nm
Clamping screws, upper fork bridge	M8	17 Nm
Clamping screws, lower fork bridge	M8	12 Nm
Clamping screws, upper steering stem	M8x25	Loctite 243 + 17 Nm
Blind screw (top)	M20x1,5	10 Nm
Collar screw (bottom)	M20x1,5	Loctite 243 + 60 Nm
Clamping screws, fork stubs	M8	15 Nm
Collar nut, rear wheel spindle	M20x1,5	80 Nm
Hexagon nut, swing arm bolt	M16x1,5	100 Nm
Hexagon collar screw, handlebar clamp	M8	20 Nm
Allan head screw, handlebar support	M10	Loctite 243 + 40 Nm
Shock absorber, top	M12	Loctite 243 + 70 Nm
Shock absorber, bottom	M12	Loctite 243 + 70 Nm
Sprocket screws	M8	Loctite 243 + 35 Nm
Ball joint for push rod	M6	10 Nm
Engine mounting bolt	M10	60 Nm
Engine brace	M8	33 Nm
Screw adjusting ring spring preload shock abs.	M6	8 Nm
Spoke nipple	SW 7	5 Nm
Other screws on chassis	M6	10 Nm
	M8	25 Nm
	M10	45 Nm
Other collar nuts on chassis	M6	15 Nm
	M8	30 Nm
	M10	50 Nm

# TECHNICAL SPECIFICATIONS – ENGINE 125/250 SX 2007»

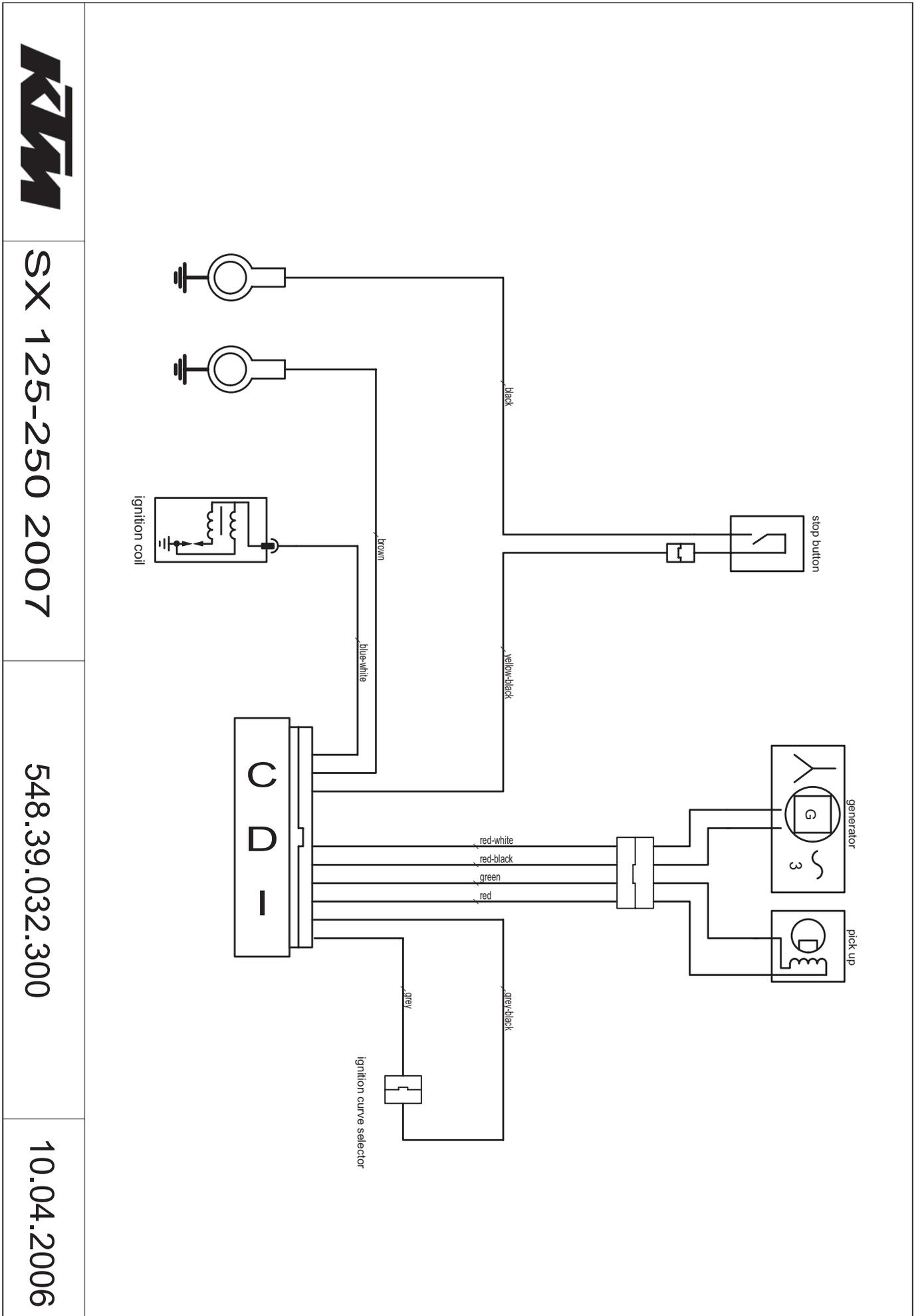
ENGINE	125 SX	250 SX
Design	Liquid-cooled, single-cylinder, two-stroke engine with intake and exhaust control	
Piston displacement	124,8 cm <sup>3</sup>	249 cm <sup>3</sup>
Bore / stroke	54 / 54,5 mm	66,4 / 72 mm
Fuel	unleaded fuel with at least RON 95 (USA = Premium PON 91), mixed with high grade two stroke oil	
Oil / gasoline ratio	1:40	1:60
	when using high grade, two- stroke oil (Motorex Cross Power 2T).	
Crankshaft bearing	1 deep-groove ball bearing / 1 cylinder roller bearing	
Connecting rod bearing	needle bearing	
Piston pin bearing	needle bearing	
Piston	cast piston	
Piston ring	two plain compression rings	
Dimension „X“ <small>(upper edge piston- upper edge cylinder)</small>	0,0 mm	0,0 + 0,1 mm
Ignition timing	1.4 mm (0.055 in) (16.5°) BTDC	1.6 mm (0.063 in) (17°) BTDC
Spark plug	NGK BR9 EVX	NGK BR8 ECM
Electrode gap	0,60 mm	
Dimension „Z“ <small>(height of the control flap)</small>	43,5 mm (1.68 in)	47 mm (1.85 in)
Exhaust control start open	-	5500/min
Exhaust control fully open	-	7000/7500/7900/min (red/yellow/green spring)
Primary drive	straight cut spur gears	
Primary ratio	23 : 73	26 : 72
Available chain sprockets	13t /14t for chain 5/8 x 1/4"	
Clutch	multiple disc clutch in oil bath, hydraulically operated	
	(Motorex hydraulic fluid 75)	Motorex brake fluid DOT 5.1
Transmission	6 speed, claw actuated	5 speed, claw actuated
Gear ratio		
1st gear	13 : 32 „1S32“	14 : 28
2nd gear	„2S15“ 15 : 30 „2S30“	15 : 24
3rd gear	„3S17H“ 17 : 28 „3S28H“	18 : 24
4th gear	„4S20H“ 20 : 28 „4S28“	21 : 24
5th gear	„5S19H“ 19 : 23 „5S23“H	22 : 21
6th gear	„6S22H“ 22 : 24 „6S24“H	
Gear lubrication	0,7 liter Motorex Top Speed 4T 15W50	
Available chain sprockets	13Z / 14Z für Kette 5/8 x 1/4"	
Coolant	1.2 litres, 40% anti freeze, 60% distilled water, at least -25 °C (-13 °F)	
Ignition system	KOKUSAN 2K-1	Stator 2K-1/Rotor 2K-2
Carburetor	flat-slide carburetor, carburetor setting see table	
Air-filter	wet foam type air filter insert	

# TECHNICAL SPECIFICATIONS – ENGINE 125/250 SX 2007»

TIGHTENING TORQUES - ENGINE		
Flange bolts - cylinder-head (125 SX)	M7	18 Nm
Flange bolts - cylinder-head (250 SX)	M8	27 Nm
Nuts-cylinder base (125 SX)	M8	30 Nm
Nuts-cylinder base (250 SX)	M10	35 Nm
Flywheel collar nut	M12x1	60 Nm
Nut for primary sprocket (125 SX)	M16x1,5 links	Loctite 243 + 130 Nm
Nut for primary sprocket (250 SX)	M18x1,5 links	Loctite 270 + 150 Nm
Nut for inner clutch hub (125 SX)	M18x1,5	130 Nm
Nut for inner clutch hub (250 SX)	M18x1,5	Loctite 270 + 100 Nm
Bundschraube Kupplungsfeder	M6	10 Nm
Oil drain plug (125/250 SX)	M12x1,5	20 Nm
Oil drain plug (125 SX) Kupplungsdeckel	M10x1	15 Nm
Drain plug for water pump cover	M10x1	15 Nm
Collar screw for water pump cover	M6	Loctite 243 + 10 Nm
Water pump wheel	M5	Loctite 243 + 6 Nm
Crankcase and clutch cover bolts	M6	10 Nm
Collar screws for ignition cover	M5	5 Nm
Collar screws for exhaust flange	M5	6 Nm
Spark plug	M14x1,25	25 Nm
Collar screws for ignition system	M5	6 Nm
Collar screw for kickstarter lever	M8	Loctite 243 + 25 Nm
Other screws	M 6 M 8 M 10	10 Nm 25 Nm 45 Nm

BASIC CARBURETOR SETTING		
	125 SX	250 SX
Carburetor	Keihin PWK 39	Keihin PWK 36 S AG
Carburetor setting mark	98SA0/98SA1	FK0160
Main jet	188 (185/190)	158 (155, 160)
Idling jet	45 (48)	45 (42)
Starting jet	85	85
Jet needle	R1469D (R1468D)	N1EI (N1EH)
Needle position from top	II	III
Throttle valve	5.5	6,5
Air adjustment screw open	1,5	1

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# SCHALTPLAN » WIRING DIAGRAMM »

## ENGLISH

### CABLE COLOURS

bl: black  
ye: yellow  
bu: blue  
gr: green  
re: red  
wh: white  
br: brown  
or: orange  
pi: pink  
gr: grey  
pu: purple

## DEUTSCH

### KABELFARBEN

bl: schwarz  
ye: gelb  
bu: blau  
gr: grün  
re: rot  
wh: weiß  
br: braun  
or: orange  
pi: rosa  
gr: grau  
pu: violett

## ITALIANO

### CAVO COLORATO

bl: nero  
ye: giallo  
bu: blu  
gr: verde  
re: rosso  
wh: bianco  
br: marrone  
or: arancione  
pi: rosa  
gr: grigio  
pu: violetto

## ENGLISH

### CABLE COLOURS

bl: black  
ye: yellow  
bu: blue  
gr: green  
re: red  
wh: white  
br: brown  
or: orange  
pi: pink  
gr: grey  
pu: purple

## FRANCAIS

### COULEUR DE CABLE

bl: noir  
ye: jaune  
bu: bleu  
gr: vert  
re: rouge  
wh: blanc  
br: brun  
or: orange  
pi: rose  
gr: gris  
pu: violet

## ESPAÑOL

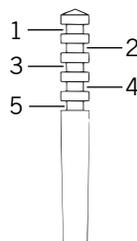
### COLOR DE CABLE

bl: negro  
ye: amarillo  
bu: azul  
gr: verde  
re: rojo  
wh: blanco  
br: marron  
or: naranja  
pi: rosado  
gr: gris  
pu: violeta

# VERGASERTABELLE » CARBURETOR TABLE

VERGASERREGULIERUNG CARBURETOR SETTING KEIHIN PWK-S 39 AG		125 SX 2007						
MEERESHÖHE ALTITUDE ↓	TEMPERATUR TEMPERATURE →	-20°C bis -7°C -2°F to 20°F	-6°C bis 5°C 19°F to 41°F	6°C bis 15°C 42°F to 60°F	16°C bis 24°C 61°F to 78°F	25°C bis 36°C 79°F to 98°F	37°C bis 49°C 99°F to 120°F	
3000 m 10000 ft ↑ 2301 m 7501 ft	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	1,5 45 R1469D 2 188	1,75 45 R1470D 2 185	2 42 R1470D 2 182	2,25 40 R1470D 2 180	2,5 38 R1471D 1 178		
2300 m 7500 ft ↑ 1501 m 5001 ft	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	1,5 48 R1469D 2 190	1,5 45 R1469D 2 188	1,75 45 R1470D 2 185	2 42 R1470D 2 182	2,25 40 R1470D 2 180	2,5 38 R1471D 1 178	
1500 m 5000 ft ↑ 751 m 2501 ft	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	1 48 R1468D 3 192	1,5 48 R1469D 2 190	1,5 45 R1469D 2 188	1,75 45 R1470D 2 185	2 42 R1470D 2 182	2,25 40 R1470D 2 180	
750 m 2500 ft ↑ 301 m 1001 ft	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	1 50 R1468D 3 195	1 48 R1468D 3 192	1,5 48 R1469D 2 190	<b>1,5</b> <b>45</b> <b>R1469D</b> <b>2</b> <b>188</b>	1,75 45 R1470D 2 185	2 42 R1470D 2 182	
300 m 1000 ft ↑ Meeresniveau Sea level	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	0,75 52 R1468D 4 198	1 50 R1468D 3 195	1 48 R1468D 3 192	1,5 48 R1469D 2 190	1,5 45 R1469D 2 188	1,75 45 R1470D 2 185	

LSO = Luftregulierschraube offen  
LD = Leerlaufdüse  
POS = Nadel Clip Position von oben  
HD = Hauptdüse



ASO = Air screw open from fully-seated  
IJ = Idling jet  
POS = Needle clip position from top  
MJ = Main jet

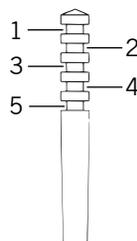
**NICHT FÜR STRASSEN BETRIEB**  
Kraftstoff: Super Bleifrei ROZ 95

**NOT FOR HIGHWAY USE**  
Fuel: unleaded fuel with at least RON 95  
USA = Premium PON 91

# VERGASERTABELLE » CARBURETOR TABLE

VERGASERREGULIERUNG CARBURETOR SETTING KEIHIN PWK-S 36 AG		250 SX 2007						
MEERESHÖHE ALTITUDE ↓	TEMPERATUR TEMPERATURE →	-20°C bis -7°C -2°F to 20°F	-6°C bis 5°C 19°F to 41°F	6°C bis 15°C 42°F to 60°F	16°C bis 24°C 61°F to 78°F	25°C bis 36°C 79°F to 98°F	37°C bis 49°C 99°F to 120°F	
3000 m 10000 ft ↑ 2301 m 7501 ft	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	1 45 N1EI 3 158	1 42 N1EI 3 158	1 40 N1EI 2 155	2 40 N1EI 2 152	2,5 38 N1EJ 1 150		
2300 m 7500 ft ↑ 1501 m 5001 ft	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	1 45 N1EH 3 160	1 45 N1EI 3 158	1 42 N1EI 3 158	1 40 N1EI 2 155	2 38 N1EI 2 152	2,5 38 N1EJ 1 150	
1500 m 5000 ft ↑ 751 m 2501 ft	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	1 48 N1EH 4 162	1 45 N1EH 3 160	1 45 N1EI 3 158	1 42 N1EI 3 158	1 40 N1EI 2 155	2 40 N1EI 2 152	
750 m 2500 ft ↑ 301 m 1001 ft	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	1 48 N1EG 4 165	1 48 N1EH 4 162	1 45 N1EH 3 160	<b>1</b> <b>45</b> <b>N1EI</b> <b>3</b> <b>158</b>	1 42 N1EI 3 158	1 40 N1EI 2 155	
300 m 1000 ft ↑ Meeresniveau Sea level	LSO ASO LD IJ NADEL NEEDLE POS POS HD MJ	0,75 50 N1EF 5 168	1 48 N1EG 4 165	1 48 N1EH 4 162	1 45 N1EH 3 160	1 45 N1EI 3 158	1 42 N1EI 3 158	

LSO = Luftregulierschraube offen  
LD = Leerlaufdüse  
POS = Nadel Clip Position von oben  
HD = Hauptdüse



ASO = Air screw open from fully-seated  
IJ = Idling jet  
POS = Needle clip position from top  
MJ = Main jet

**NICHT FÜR STRASSENBETRIEB**  
Kraftstoff: Super Bleifrei ROZ 95

**NOT FOR HIGHWAY USE**  
Fuel: unleaded fuel with at least RON 95  
USA = Premium PON 91



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