KTM SPORTMOTORCYCLES

BEDIENUNGSANLEITUNG

OWNERS HANDBOOK
MANUALE D'USO
MANUEL D'UTILISATION
MANUAL DE INSTRUCCIONES

2001

Art.Nr. 3.205.90 06/2000

IMPORTANT

WE STRONGLY SUGGEST THAT YOU 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. IN YOUR OWN INTEREST, PLEASE PAY PARTICULAR ATTENTION TO NOTICES THAT ARE MARKED AS FOLLOWS:

⚠ WARNING ⚠

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

! CAUTION !

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

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

Chassis number

Engine number

Stamp of dealer

COMSUMER 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.

Introduction

We would like to congratulate you on your purchase of a KTM motorcycle. Let us also take this opportunity to thank you for putting your trust in us; we will not let you down.

You are now owner of a sporty and modern motorcycle which you are bound to have a great time with provided you care for it properly. **Before going for a first ride on your motorbike, you should read this Owner's Handbook carefully, even if this takes some of your precious time, so as to familiarize yourself with how your motorbike is to be operated and which features it offers you. Only by doing so will you learn how you can best tune your motorcycle to your needs and how you can avoid bodily injuries. In addition, this Owner's Handbook contains invaluable information about motorcycle maintenance.** At the time of printing, this User's Guide corresponded to the latest state of this model family. It is, however, possible that we may have made slight modifications in the meantime due to development in our motorcycle design.
The Owner's Handbook is an essential part of the motorbike and should - when the bike is sold - be handed over to the new owner.

Many motorcyclists have a good working knowledge of motorcycle mechanics; if this is true in your case, you will be able to use this Owner's Handbook to carry out most of the maintenance steps yourself. If, on the other hand, you are not very familiar with motorcycles, it might be better to have a professional KTM dealer perform those steps marked by * found in the chapter entitled "Maintenance Work on Chassis and Engine" of this manual.

Take special care to follow the recommended run in, inspection, and maintenance intervals. Heeding these guidelines will significantly increase the life of your motorcycle. Be sure to have any maintenance jobs performed by an authorized KTM dealer.
Address your special requests to an authorized KTM dealer who, should the need arise, will be supported by the KTM importer.

Please do not forget to don your helmet, eye protection, and protective clothing when going for a ride. KTM riders are responsible riders! We wish you a lot of fun when driving !

TÜV CERT
FOR QUALITY SYSTEM
ISO 9001
REG.NO. 12 100 6061

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

KTM SPORTMOTORCYCLE AG
5230 MATTIGHOFEN, AUSTRIA

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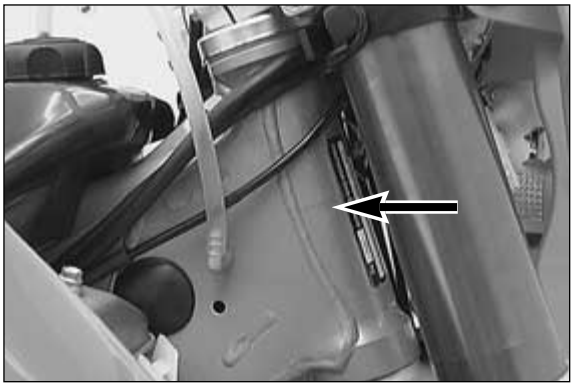
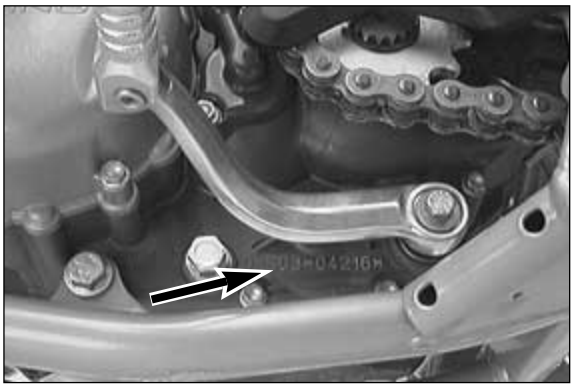


SERIAL NUMBER LOCATIONS

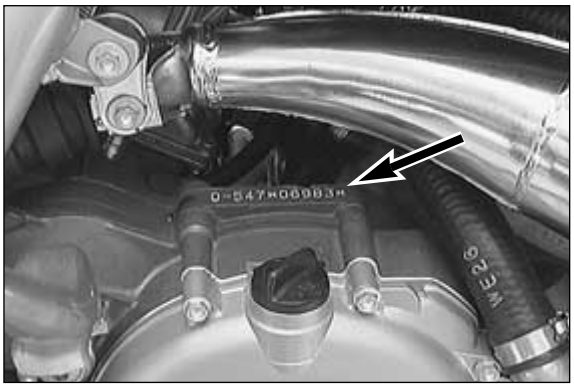
Chassis number

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



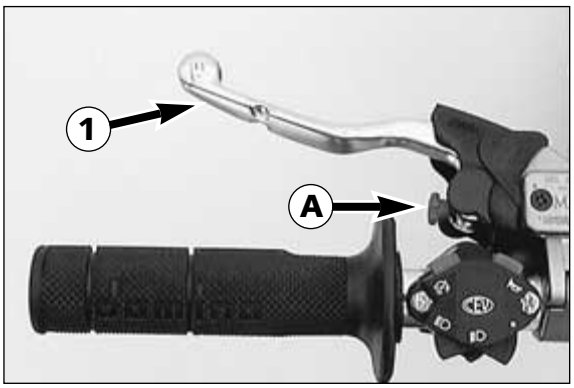
Engine number, engine type (125/200)

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



Engine number, engine type (250/300/380)

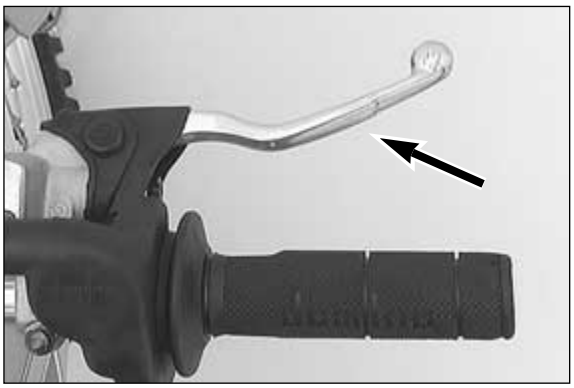
Engine number and engine type are stamped on the right hand side of the engine in front of the kickstarter. Write this number into the relevant area on page 1.



OPERATION INSTRUMENTS

Clutch lever

The clutch lever ❶ is located on the left side of the handlebar. The adjusting screw Ⓐ is used to change the original position of the clutch lever (see maintenance work on chassis and engine).



Hand brake lever

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

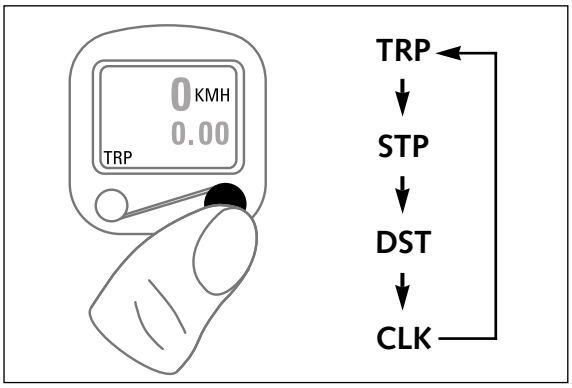
⚠ WARNING ⚠

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.

Digital speedometer, indicator lamp (EXC)

The green control lamp 1 flashes when the indicator is working in the same rhythm as the flashing indicator.

The blue control lamp 2 lights up when the high beam is on.



Speedometer – digital

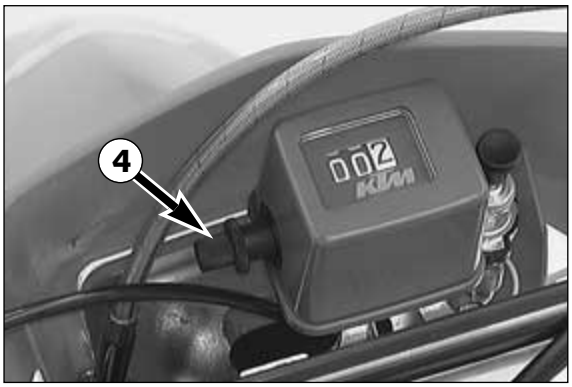
Some models are equipped with a digital speedometer ❸.

KMH = Speed, max. 200 km/h (is always indicated)

Aside from speed indication the following indications can be selected:

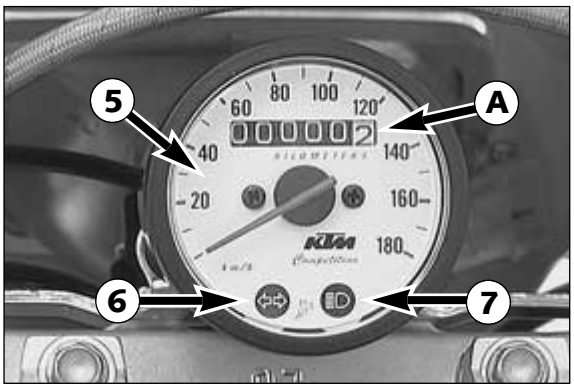
TRP = Trip distance
STP = Stopwatch max. 10 h, automatic start/stop function
DST = Total distance up to 99.999 km
CLK = clock

See maintenance work for change of battery and basic setting.



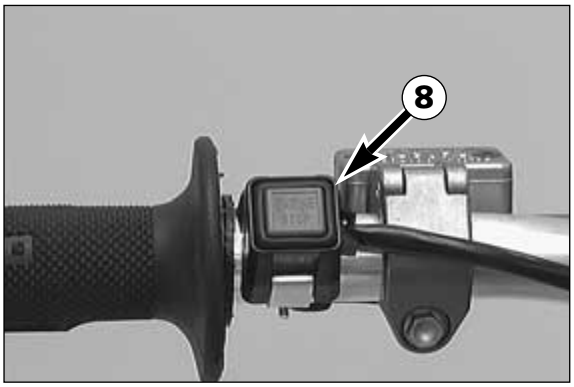
Odometer (EXC USA)

The odometer is a mileage indicator and can be set to 0 by means of the adjustment wheel ❹.



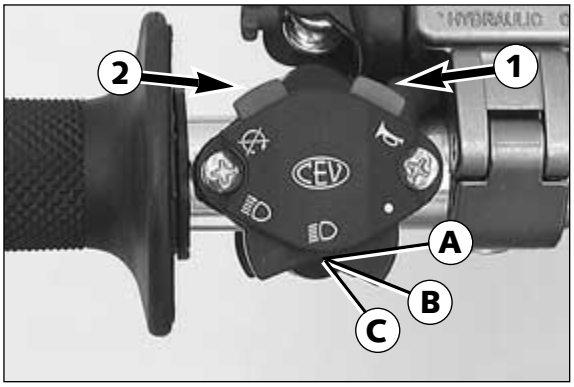
Speedometer, indicator lamps (EXC AUS)

The mileage indicator Ⓐ in the speedometer ❺ indicates overall mileage.
When the turn indicator is on, the green indicator lamp ❻ will be flashing in the same rhythm.
The blue indicator lamp ❼ will be lit when the high beam is on



Short circuit button (SX)

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

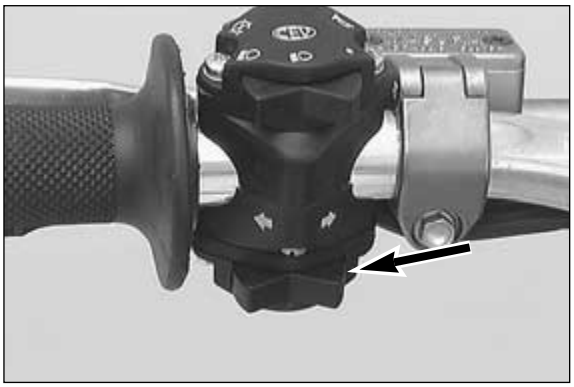


Combination switch (EXC)

The light switch has 2, respetively 3 switch positions.
Ⓐ = Light off (this function is not available in all models)
Ⓑ = Low beam on
Ⓒ = High beam on
You may use button ❶ to actuate the horn.
The red short circuit button ❷ serves to switch off the engine. Leave the switch pressed until the engine stops.

Headlamp switch (EXC USA)

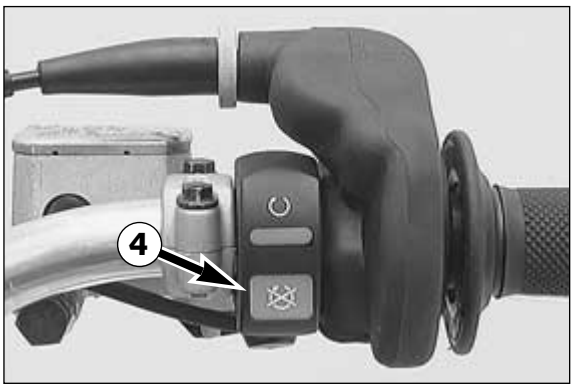
In this model the headlamp is switched on with the pull switch ❸.



Flasher switch

⇦ Flasher left

⇨ Flasher right

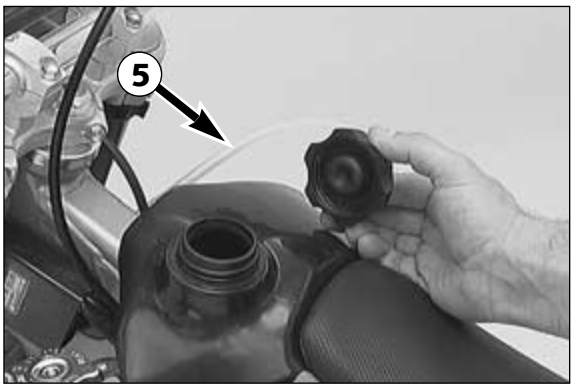


Emergency OFF switch (Australia)

The emergency OFF switch ❹ is located next to the throttle grip. Primarily designed as safety or emergency OFF switch, it should normally not be in its activated state.

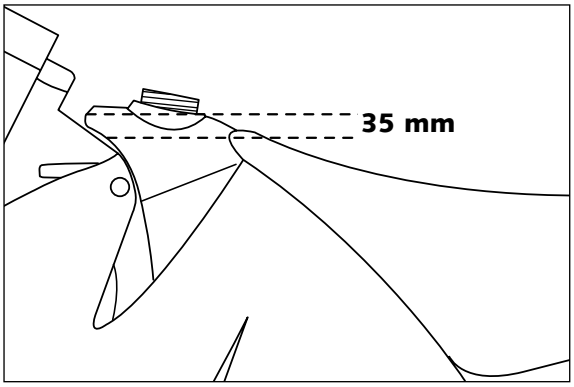
⊗ In this position, the ignition circuit is shorted; if the engine is running, it will stall immediately, if it is at standstill, it will not start.

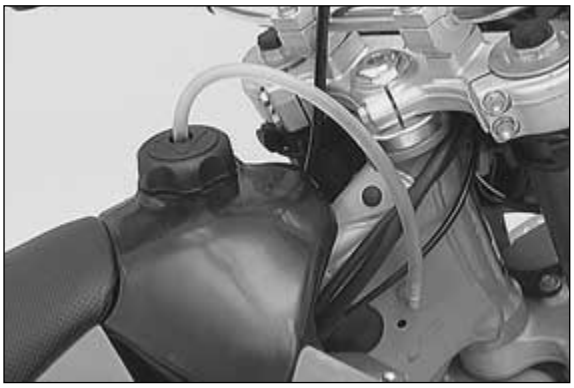
◯ In this position, the ignition circuit is enabled; the engine should start.

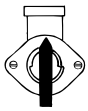
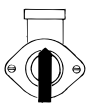
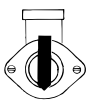


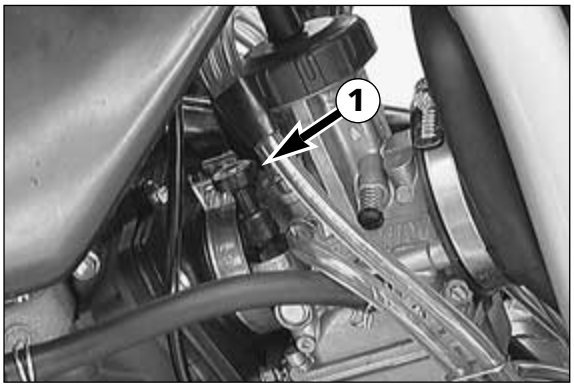
Filler cap

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 ❺ without kinks.





	OFF	ON	RES
SX			
MXC EXC			



Refueling, fuel

125-380: Unleaded premium gasoline **RON 95** mixed with high grade two stroke oil. Mixture ratio **1:40 - 1:60**

Fuel and engine oil should only be mixed immediately before use.
KTM recommends SHELL ADVANCE RACING X.

⚠ 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.
- 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.)

Fuel tap

OFF In this position the fuel tap is closed. No fuel may 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. With the twist grip in this position the tank will be emptied until only the reserve is left.

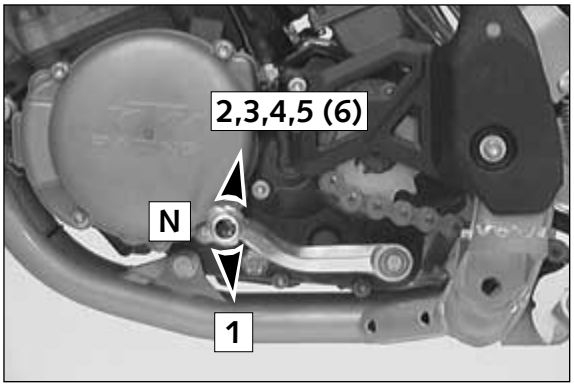
RES The reserve tank cannot be tapped until the rotating handle is turned to the RES position. Fill the tank as soon as possible and remember to turn the rotating handle back to the ON position so that you will have backup fuel next time, too.
Reserve of the 8,5 l tank: 1.2 l (0,32 US gallons)
Reserve of the 11 l tank: 1.7 l (0,45 US gallons)

! CAUTION !

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

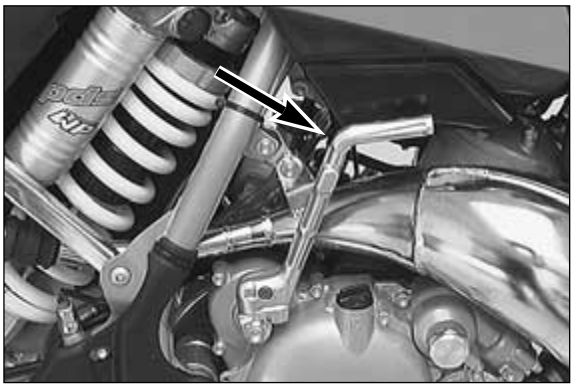
Choke knob

When pulling the choke knob ❶ fully towards the top, a bore is opened in the carburetor. Through this bore the engine can take in additional fuel. This encoure the 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.

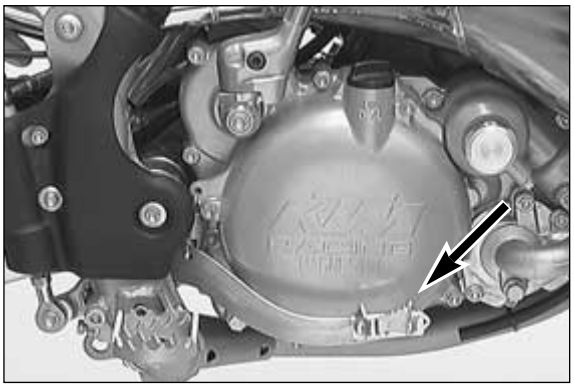


Kickstarter

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

⚠ WARNING ⚠

– If you want to start the engine, make sure that you always put on sturdy motorcycle boots in order to avoid injuries. You might slip off the kickstarter, or the engine may kick back and propel your foot upward with great vehemence.
– Always kick kickstarter briskly all the way without opening the throttle. Kicking the kickstarter with not enough momentum, and an opened throttle grip increase the kick-back hazard.

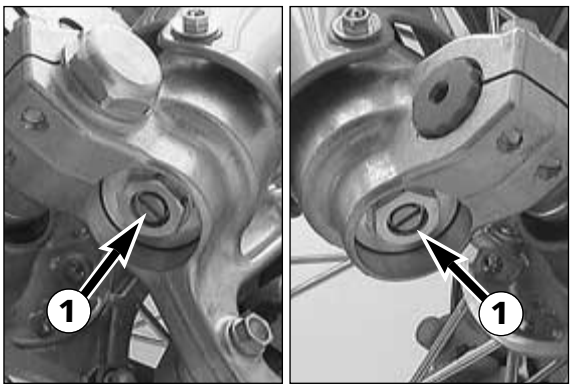


Foot brake pedal

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).

⚠ 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.

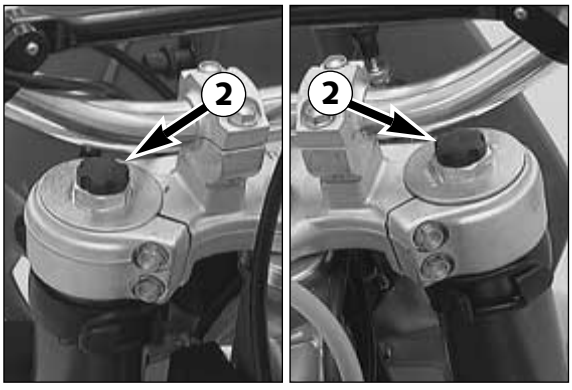


Compression damping of fork

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 knob ❶ 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

Type White Power 0518V701 .....16 clicks
Type White Power 0518V702 .....16 clicks
Type White Power 0518V703 .....14 clicks
Type White Power 0518V704 .....14 clicks

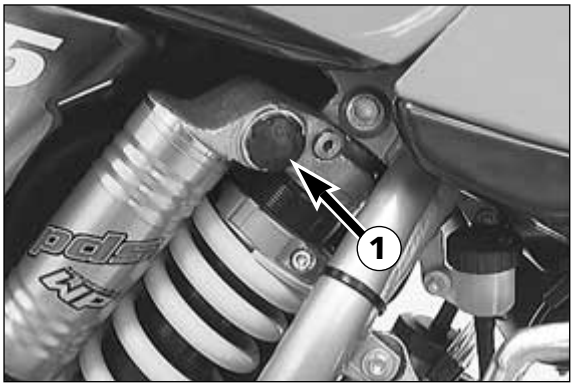


Rebound damping of fork

Hydraulic rebound damping determines the reaction when the fork is rebound. By turning the adjusting screw ❷ (REB), 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

Type White Power 0518V701 .....16 clicks
Type White Power 0518V702 .....12 clicks
Type White Power 0518V703 .....12 clicks
Type White Power 0518V704 .....12 clicks

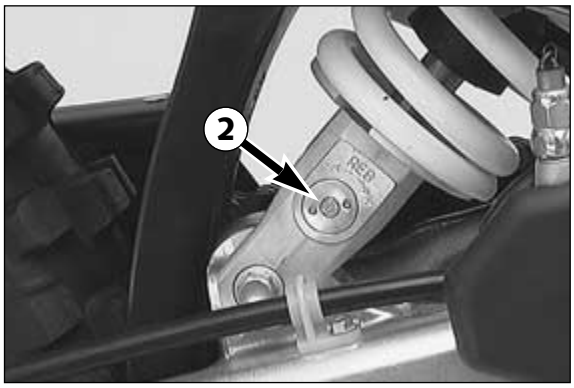


Compression damping of shock absorber

The damping force of the compression damping can be adjusted with knob ❶
The higher the number the higher the damping force.
STANDARD ADJUSTMENT:
Type White Power 1218V728 .....5 clicks
Type White Power 1218V729 .....5 clicks
Type White Power 1218V730 .....5 clicks
Type White Power 1218V731 .....5 clicks

⚠ WARNING ⚠

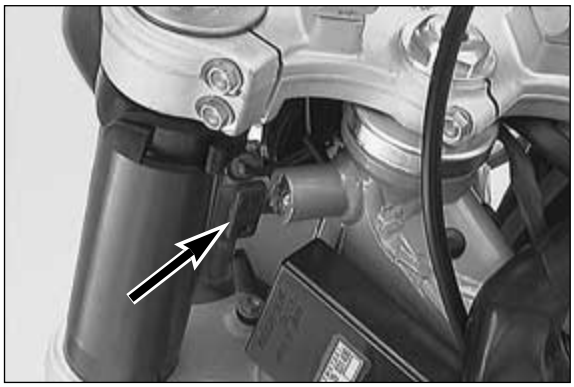
THE DAMPING UNIT OF THE SHOCK ABSORBER IS FILLED WITH HIGH-COMPRESSION NITROGEN. NEVER TRY TO TAKE THE SHOCK ABSORBER APART OR TO DO ANY MAINTENANCE WORK YOURSELF. SEVERE INJURIES COULD BE THE RESULT.



Rebound damping of shock absorber

By using the adjusting screw ❷, 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.

Type White Power 1218V728 .....25 clicks
Type White Power 1218V729 .....23 clicks
Type White Power 1218V730 .....25 clicks
Type White Power 1218V731 .....25 clicks

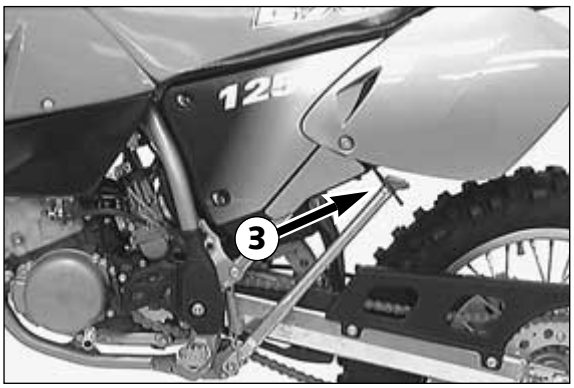


Steering lock

The handlebar can be locked by means of the lock located on the steering head. To lock it, turn handlebar all the way to the right, insert key, turn it to left, press it in, turn it to right, and remove it.

! CAUTION !

NEVER LEAVE THE KEY INSERTED IN THE STEERING LOCK. IF YOU TURN THE HANDLEBAR TO THE LEFT THE KEY COULD GET DAMAGED.



Side stand

Push the side stand to the ground with your foot and load it with the motorcycle. Make sure that you put your bike on solid ground and in a secure position. For off-road riding, you can use the rubber band ❸ to additionally secure the center stand in its folded-up position.

! CAUTION !

– THE SIDE STAND IS ONLY DESIGNED FOR THE WEIGHT OF THE MOTORCYCLE. IF YOU GET ON THE MOTORCYCLE AND THUS PUT ADDITIONAL WEIGHT ON THE SIDE STAND, THE SIDE STAND OR THE FRAME CAN BE DAMAGED AND THE MOTORCYCLE MAY FALL ON THE SIDE.
– ALWAYS CHECK BEFORE GOING FOR A RIDE THAT YOU HAVE FOLDED UP THE SIDE STAND AS FAR AS POSSIBLE. IF THE STAND TOUCHES THE GROUND WHILE YOU ARE DRIVING, YOU MAY LOSE CONTROLL OF YOUR MOTORCYCLE.

What you should check before each start

When you start off, the motorcycle must be in a perfect technbical 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 was fall off the chain wheels; an extremely worn chain may tear, and insufficient lubrication may result in unnecessary wear of chain and chain wheels.

4 TIRES
Check for damaged tyres. 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 at hand brake lever and foot brake lever.

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.

8 ELECTRICAL SYSTEM
Check correct functioning of headlamps, tail-lights, brake lights, turn indicators, indicator lamps and horn while the engine is running.

9 LUGGAGE
If you are taking luggage with you, check that it is securely fastened.

⚠ **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. THE PROTECTIVE CLOTHING SHOULD BE BRIGHTLY COLORED SO THAT OTHER USERS OF THE ROADS CAN SEE YOU AS EARLY AS POSSIBLE. OF COURSE YOUR PASSENGER WILL ALSO NEED SUITABLE PROTECTIVE CLOTHING.
- DO NOT DRIVE AFTER HAVING CONSUMED ALCOHOL.
- ONLY USE ACCESSORY PARTS RECOMMENDED BY KTM. FOR EXAMPLE, FRONT PANELLING CAN IMPAIR THE DRIVING CHARACTERISTICS OF THE MOTORCYCLE. CASES, EXTRA TANKS ETC. CAN ALTER THE WEIGHT DISTRIBUTION AND THUS ALSO IMPAIR THE VEHICLE'S DRIVING CHARACTERISTICS.

Instructions for your first ride

- Verify that your KTM dealer performed the PREPARATION OF VEHICLE jobs (see Customer Service Manual).
- 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 in 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.
- You may only take a passenger along if your motorcycle is fitted and registered for such purposes. During the ride, the passenger must hold on the straps or to the driver, with his feet on the passenger foot rests.
- 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.

⚠ **WARNING** ⚠

IMPORTANT INSTRUCTIONS FOR MODELS SX, MXC, AND EXC:

- 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.

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.
- DO NOT DRIVE AT FULL LOAD FOR THE FIRST 500 KILOMETERS (300 MILES) OR 5 HOURS!

Starting when the engine is cold

1 Open fuel tap
2 Turn on ignition or emergency OFF switch
3 Put the gear in neutral
4 Activate cold-starting aid (choke)
5 Leave throttle closed or open it no more than ⅓ 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.

– Do not start the engine and allow it to idle in a closed area. Exhaust fumes are poisonous and can cause loss of consciousness and death. Always provide adequate ventilation while the engine is running.

! CAUTION !

Do not ride your motorcycle with full load and do not rev up the engine when cold. Since the piston is 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.

Starting when the engine is warm

1 Open fuel tap
2 Turn on ignition or emergency OFF switch
3 Put the gear in neutral
4 Open throttle to ½ and kick down kickstarter vigorously

What to do when the engine is „flooded"

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

Starting off

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

⚠ WARNING ⚠

– Before you start off, check that the main or side stand has been swung right up to the top. If the stand drags on the floor, you may lose control of your motorcycle.
– Always turn on the light to make sure that other drivers become aware of you as early as possible.
– 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 (traffic, hill size, etc.), you can shift to a higher gear. Turn down the throttle, at the same time pull clutch lever in and shift to the next higher gear. Let clutch lever go again and open the throttle. If you turned on the choke, make sure you turn it off again as soon as engine is warm.
When you reach full speed through opening the throttle all the way, turn throttle back to ¾; 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 increase. When shifting down, use the brakes if necessary and turn down at the same time. Pull clutch lever and shift down to the next lower gear. Let clutch lever go slowly and open throttle or shift down again.

⚠ WARNING ⚠

– Observe the traffic regulations, drive defensively and try to look ahead as far as possible so that you recognize any hazards as early as possible.
– 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.
– 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 sta-bility.

! 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 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 blocks so that the motorcycle can easily get out of control.
– If the engine runs without throttle during longer downhill travel, the engine should be accelerated occasionally to ensure that it is supplied with sufficient lubricant which is mixed in the fuel.
– In the event that, while 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 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-strewed 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 breaking effect. In extreme cases, the entire braking system can fail.

Stopping and parking

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

⚠ WARNING ⚠

– Never leave your motorcycle without supervision as long as the engine is running.
– Motorcycle engines produce a great amount of heat while running. The engine, exhaust pipe, muffler, brake rotors, and shock absorbers can become very hot. Do not touch any of these parts after starting the motorcycle, and take care to park it where pedestrians are not likely to touch it and get burned.

! CAUTION !

– Close the fuel tap when leaving your vehicle. Otherwise the carburetor may get flooded and fuel will enter the engine.
– The side stand is only designed for the weight of the motorcycle. If you get on your motor-cycle and thus put additional weight on the motorcycle, the side stand or the frame can be damaged or the motorcycle may fall on the side.

PERIODIC MAINTENANCE SCHEDULE

125/200 SX/MXC/EXC
250/300/380 SX/MXC/EXC

	A washed motorcycle can be checked more quickly which saves money!	1. service after 10 hours or 1000 kilometer	after 20 hours or 2000 kilometer	after 4000 kilometer or once a year
ENGINE	Check gear box oil level		●	
	Change gear box oil	●		●
	Check spark plugs, adjust distance between electrodes	●	●	
	Renew spark plugs			●
CARBURETOR	Check the carburettor connection boot for cracks and leaks			●
	Check idle speed setting	●		●
	Check that vent hoses are not damaged or bent	●		●
ADD-ON-PARTS	Check cooling system for leaks, check quantity of anti freeze	●		●
	Check exhaust system for leaks and fitment			●
	Check cables for damage, smooth operation, bends; adjust and lubricate	●		●
	Check oil level of the clutch master cylinder	●	●	●
	Clean air filter and filter box			●
	Check electric wires for damage and bends			●
	Check headlamp setting			●
	Check function of electric systems (low-, high beam, break light, indicator, indicator lamps, speedometer illumination, horn, emergency OFF switch or button	●		●
BRAKES	Check break fluid level, lining thickness, break lining	●		●
	Check break lines for damage and leaks	●		●
	Check/adjust smooth operation and free travel of handbrake/foot brake lever	●		●
	Check tightness of break system screws	●		●
CHASSIS	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)	●		●
WHEELS	Check spoke tension and rim join			●
	Check tyres and air pressure	●		●
	Check chain, rear sprockets and chain guides for wear, fitment and tension	●		●
	Lubricate chain	●		●
	Check clearance of wheel bearings	●		●

IMPORTANT RECOMMENDED MAINTENANCE WORK THAT CAN BE CARRIED OUT BY EXTRA ORDER

	at least once a year	every 2 years or 20000 km
Check function of exhaust control	●	
Complete maintenance of shock absorber	●	
Complete maintenance of fork		●
Clean and grease steering head bearings and gasket elements	●	
Clean and adjust carburetor	●	
Replace glass fibre yarn filling of the exhaust main silencer	●	
Treat electric contacts and switches with contact grease	●	
Change hydraulic clutch fluid	●	
Change break fluid	●	

IF MOTORCYCLE IS USED FOR COMPETITION 4000KM SERVICE SHOULD BE CARRIED OUT AFTER EVERY RACE!
SERVICE INTERVALLS SHOULD NEVER BE EXCEED BY MORE THAN 5 HOURS OR 500 KM!
MAINTENANCE WORK DONE BY KTM AUTHORISED WORKSHOPS IS NOT A SUBSTITUTE OF CARE AND CHECKS DONE BY THE RIDER!

Important Checks and Maintenance to be Carried out by the Rider

	Before each start	After every cleaning	For cross-country use	Once a year
Check gear box oil level	●			
Check break fluid level	●			
Check break pads for wear	●			
Check lights for function	●			
Check horn for function	●			
Lubricate and adjust cables and nipples		●		
Bleed fork legs regulary			●	
Remove and clean dust bellows regulary			●	
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		●		
Check all control elements for smooth operation	●			
Check break 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 regular				●

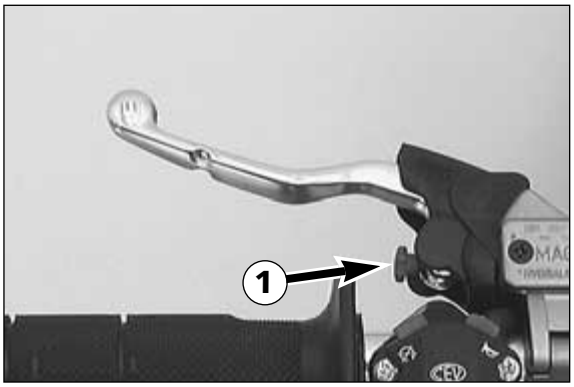
MAINTENANCE WORK ON CHASSIS AND ENGINE

⚠ 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 !

- When cleaning the motorcycle, do not use a high pressure cleaning unit if possible, otherwise water will penetrate the bearings, carburetor, electric connectors etc.
- When transporting your KTM, ensure that it is held upright with restraining straps or other mechanical fastening devices and that the fuel tap is in the OFF position - if the motorcycle should fall over, no fuel can leak from the carburetor or fuel tank
- 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.
- Let your motorcycle cool down before beginning any maintenance work in order to avoid getting burned.
- Remove Oils, fatty matters, filters, fuels, washing detergents etc. orderly.
- Under no circumstances may used oil be disposed of in the sewage system or in the open countrysize. 1 liter used oil contaminates 1.000.000 liters water.

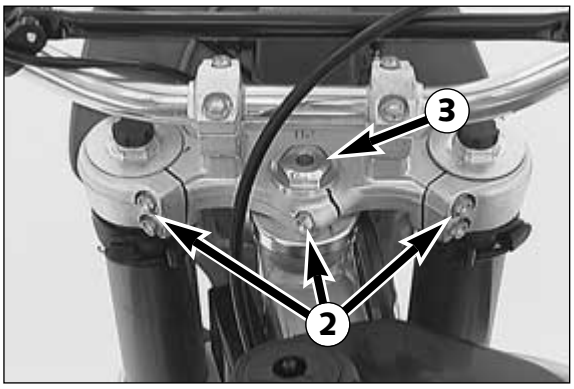


Changing the original position of the clutch lever

The adjusting screw ❶ 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.
Turning the adjusting screw clockwise reduces the distance between the clutch lever and the handlebar. Turning the adjusting screw counterclockwise increases the distance between the clutch lever and the handlebar.

! 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 and adjusting the steering head bearing *

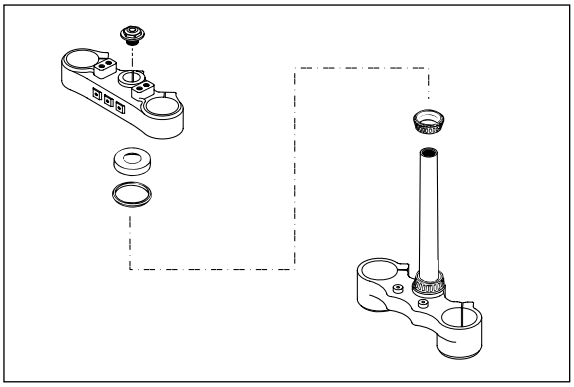
Check steering head bearing for play periodically. For check put motorcycle on stand so that the front wheel is off the ground. Now try to move the fork forward and backward. For readjusting, loosen the five pinch bolts ❷ of the top triple clamp and turn steering stem bolt clockwise ❸ until there is no more play. Don't tighten the steering stem bolt all the way, otherwise the bearings will be damaged. With a plastic hammer, lightly rap on the triple clamp to release tension. Retighten the five pinch bolts to 20 Nm (15 ft.lb).

⚠ WARNING ⚠

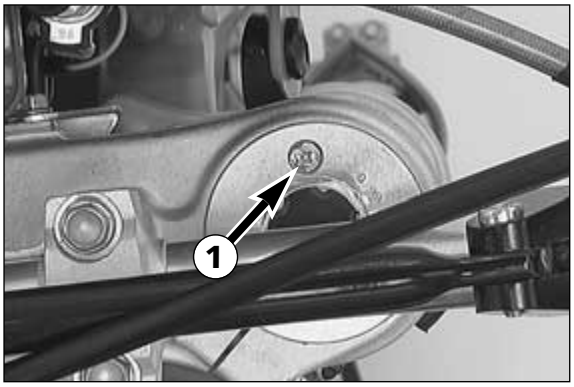
If the steering head bearing is not adjusted to be free of play, the motorcycle will exhibit unsteady driving characteristics and can get out of control.

! CAUTION !

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 (i.e. Shell Advance Grease).

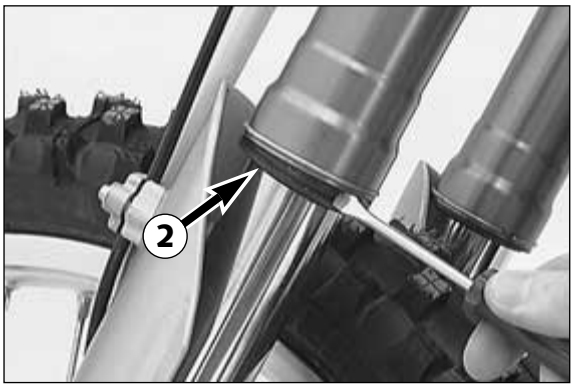


Breather plug front fork

After every 5 hours of use for competitive racing, slacken the breather plugs ❶ 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 street, it will be enough to have this job performed in the course of the periodical maintenance service.

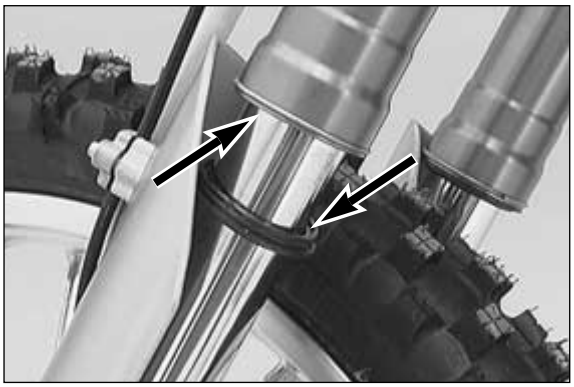
! CAUTION !

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.

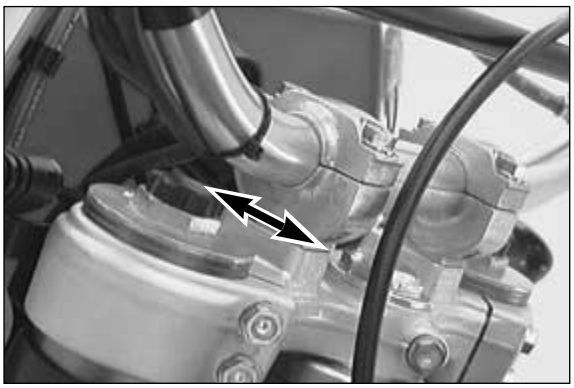


Cleaning the dust sleeves of the telescopic fork

The dust-protection bellows ❷ 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 lever the dust-protection bellows out of the outer tubes and slide them downward.

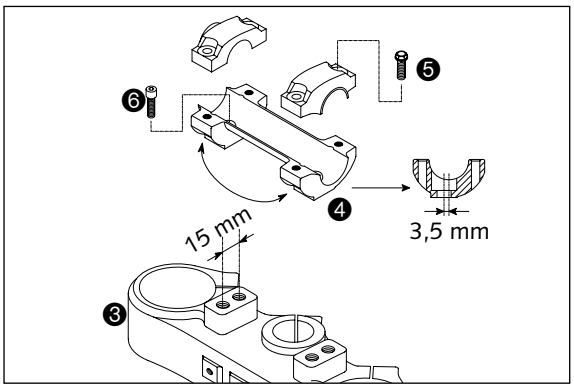


Clean dust-protection bellows, outer tubes, and fork tubes thoroughly, and oil them thoroughly with silicone spray or engine oil. Then, push dust-protection bellows into the outer tubes by hand.

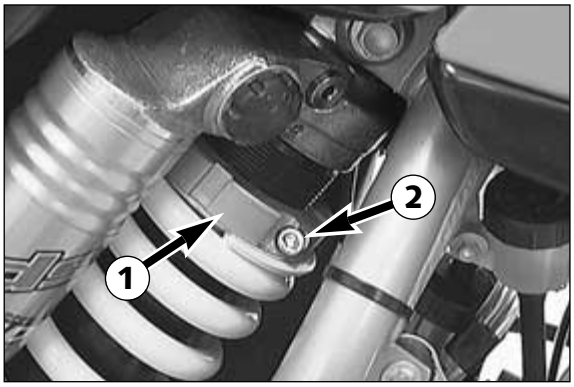


How to change the handlebar position

The handlebar position can be readjusted by 22 mm. Thus, you can put the handlebar to the position that is the most convenient for you. The upper triple clamp ❸ includes 2 bores arranged at a distance of 15 mm (0,6 in) from one another. The bores at the handlebar support ❹ 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 ❺ of the handlebar clamps and screws ❻ of the handlebar support. Position handlebar support, and tighten screws ❻ to 40 Nm (30 ft.lbs). Mount handlebar and handlebar clamps, and tighten screws ❺ to 20 Nm (15 ft.lbs). The gap between handlebar support and handlebar clamps is to be of equal size in the front and in the rear.



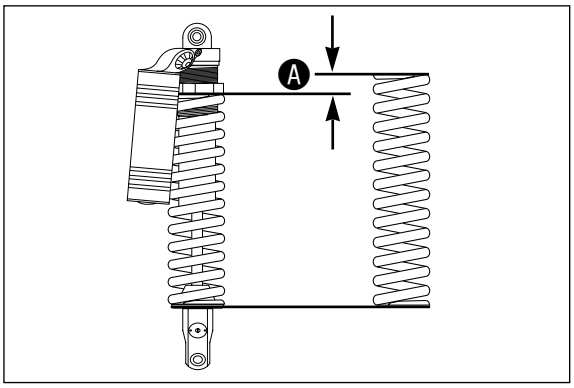
Changing the spring preloading of the shock absorber

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

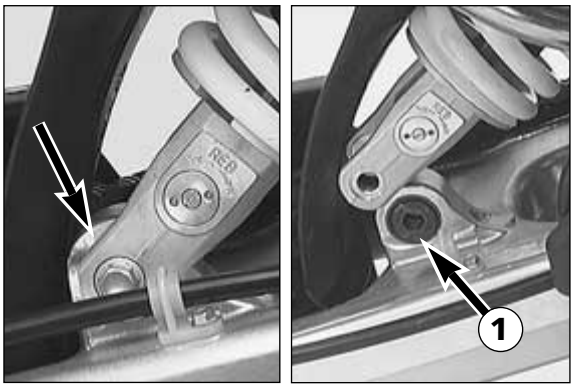
NOTE:

– 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 ❶ changes the spring pretension by approximately 1,75 mm (0,07 in).

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



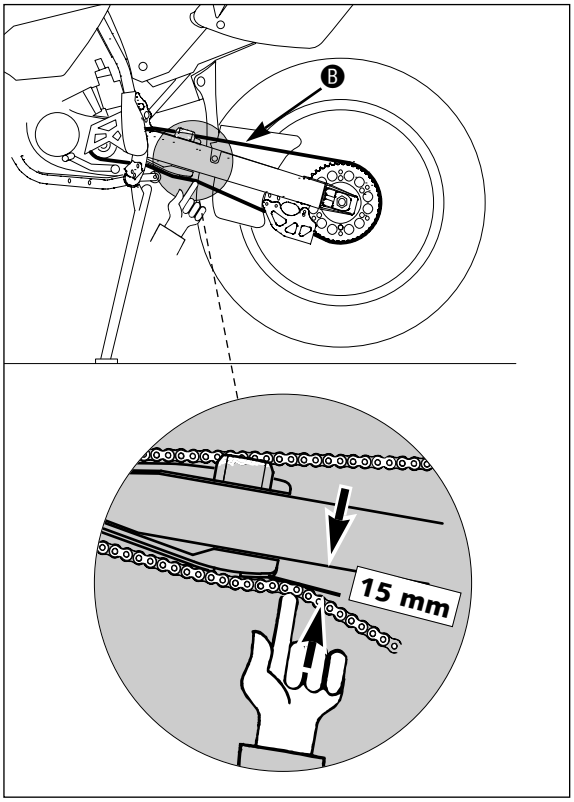
ADJUSTMENT VALUES - SPRING PRELOAD Ⓐ
minimum preload . . . . . 4 mm (0,15 in)
STANDARD PRELOAD . . . . . 6 mm (0,24 in)
maximum preload . . . . . 10 mm (0,4 in)



Pivot bearing

The pivot bearing ❸ 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.

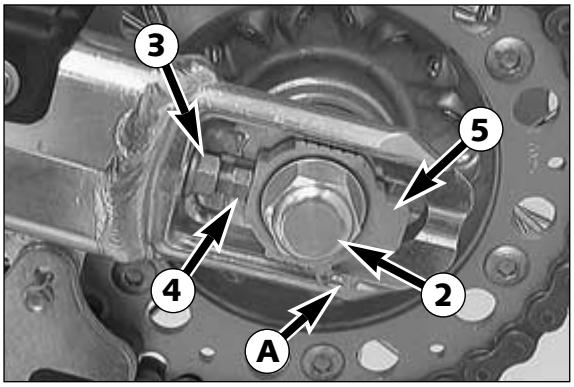


Check chain tension

To check the chain tension, park the motorcycle.
Press chain upward at the end of the chain sliding component. The distance between chain and swing arm should be approx. 15 mm (0.6 in). In the course of this procedure, the upper chain portion Ⓐ must be taut (see drawing).
If necessary, correct chain tension.

⚠ WARNING ⚠

– If 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.

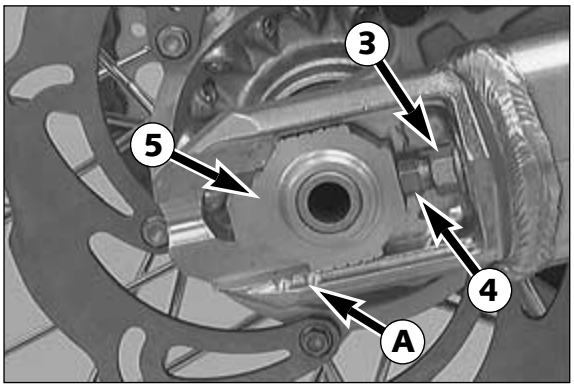


Correct chain tension

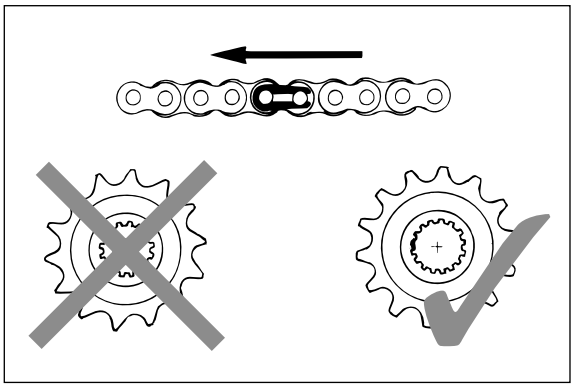
Loosen collar nut ❷, loosen lock nuts ❸, and turn right and left adjusting screws ❹ equally far. Tighten lock nuts.
Before tightening the collar nut, verify that the chain adjusters ❺ are sitting close to the adjusting screws and that the rear wheel has been aligned with the front wheel.
Tighten collar nut ❷ 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) allows you to use different secondary ratios in combination with the same chain length. The chain adjusters ❺ can be rotated around 180°.



Chain maintenance

For long chain life, good maintenance is very important. Chains without O-rings should be cleaned in fireproof solvent regularly and afterwards treated with hot grease or chain spray (i.e. Shell Advance Bio Chain).
O-ring chains on the other hand are very simple to clean. The best way is to use lots of water, but never use brushes or cleaning liquids. After letting the chain dry, you can use a special O-ring chain spray (i.e. Shell Advance Bio Chain).

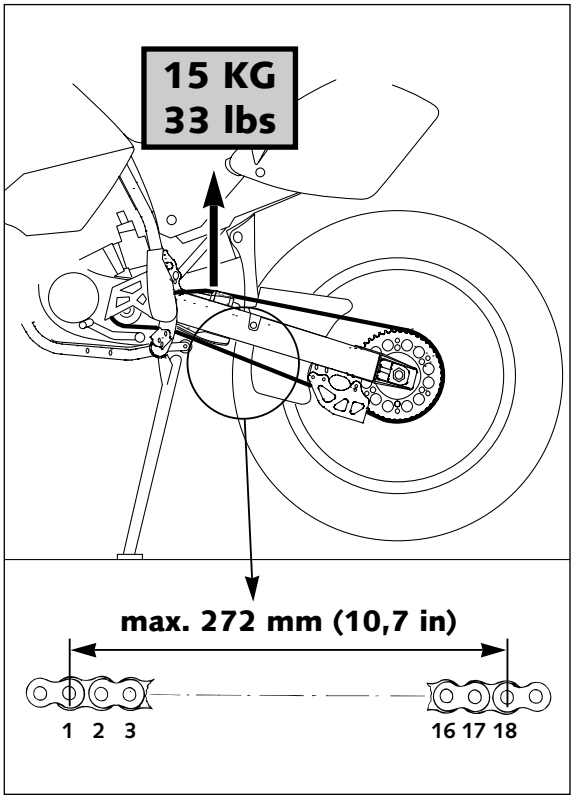
⚠ WARNING ⚠

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

! CAUTION !

When mounting the chain masterlink clip, the closed side of the masterlink clip must point in running direction.

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

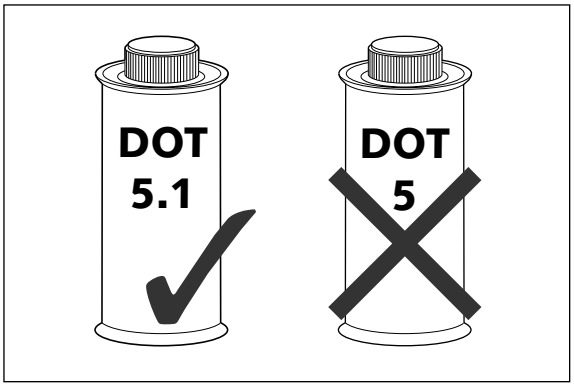


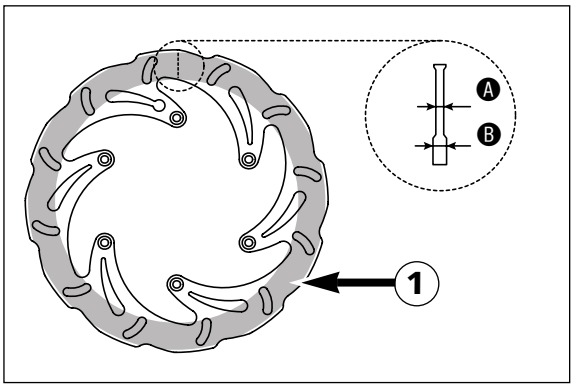
Chain wear

In order to check the chain wear, regard the following indications:
Shift the gear into idling and pull the upper chain strand with approx. 10-15 Kilogramm (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 (25 ft.lb)
Tightening torque for screws: 50 Nm (37 ft.lb)





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.

BRAKE PADS:
The brake pads are fitted with TOSHIBA TT 2701 sintered lining at the front and TOSHIBA H 38 sintered lining at the back. These linings provide an optimal combination of dosing, brake performance and lifecycle. The lining type is stated on the back of the brake pad and also recorded in the homologation papers.

Other brake pads are available for competition sports.
FRONT: TOSHIBA H 38 (SINTERED) – harder to dose, good brake performance, long life, for wet slippery terrain.
FERODO ID 450 (ORGANIC) – easy to dose, good brake performance, short life, for dry terrain, low price
REAR: FERODO ID 450 (ORGANIC) – easy to dose, good brake performance, short life, for dry terrain, low price.
FERRIT 222 (ORGANIC) – can be dosed better, short life cycle, for dry terrain.

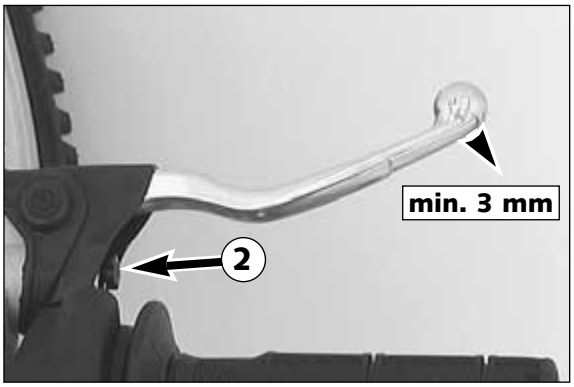
BRAKE DISCS:
Due to wear, the thickness of the brake disc in the area of the contact face ❶ of the brake pads decreases. At their thinnest point Ⓐ, the brake discs must not be more than 0.40 mm (0,016 in) thinner than the pad's nominal thickness. Measure the nominal thickness in a location Ⓑ outside the contact face. Check wear in several locations.

⚠ WARNING ⚠

– Brake discs suffering from wear greater than 0,4 mm (0,016 in) constitute a safety risk. Have the brake discs replaced immediately as soon as they reach the wear limit.
– Have any repairs on the brake system be performed by a KTM dealer

BRAKE FLUID RESERVOIRS:
The brake fluid reservoirs on 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 SHELL ADVANCE BRAKE DOT 5.1 brake fluid, one of the best brake fluids that 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 by 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!

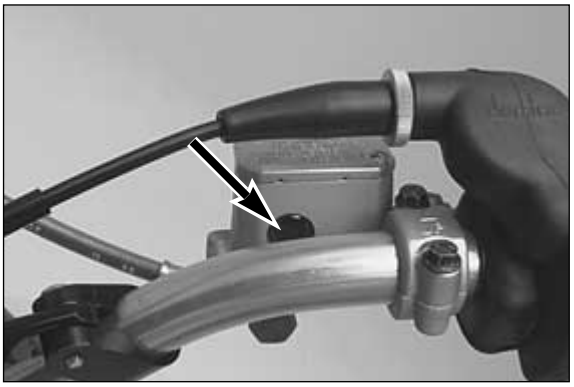


Adjusting of free travel at the hand brake lever

Free travel at the hand brake lever may be readjusted by using adjustment screw ❷. 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.

! CAUTION !

At the hand brake lever, free travel must at least be 3 mm (0.1 in). Only then may the piston in the hand brake cylinder be moved (to be recognized by the greater resistance of the hand brake lever). If this free travel is not provided, pressure will build up in the braking system, and the front-wheel brake may fail due to overheating.

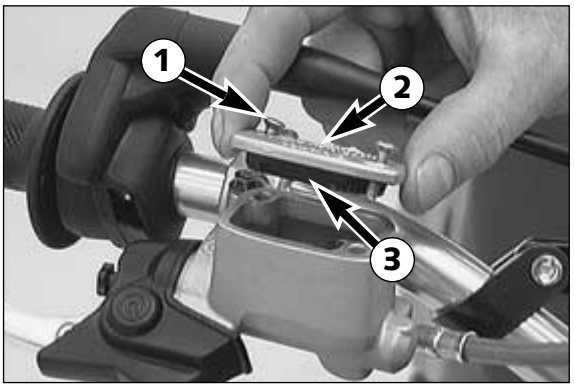


Checking of brake fluid level - front brake

The brake fluid reservoir is 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 *

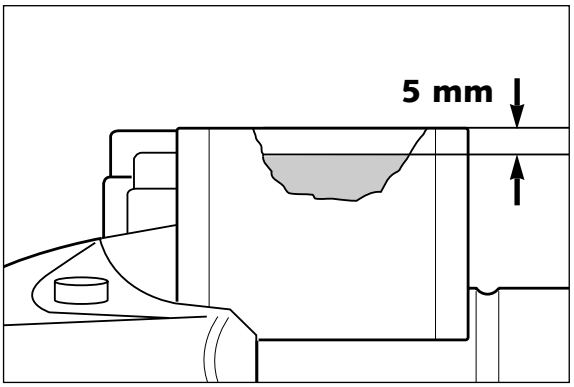
Loosen screws ❶ and remove lid ❷ and membrane ❸.
Place hand brake cylinder in a horizontal position and fill the brake fluid reservoir to 5 mm (0.2 in) below the rim with clean brake fluid DOT 5.1 (i.e. Shell Advance Brake DOT 5.1). Replace membrane and lid, tighten screws. Rinse off spilled or overflowing brake fluid with water.

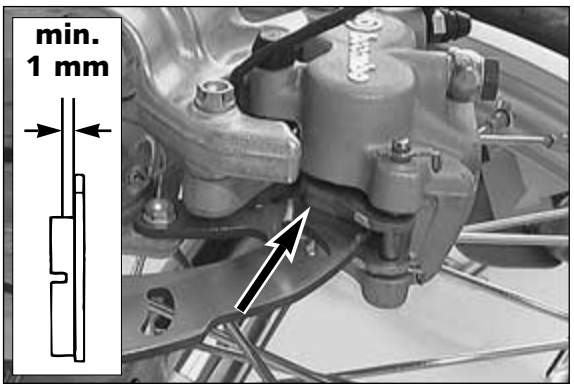
⚠ WARNING ⚠

- 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

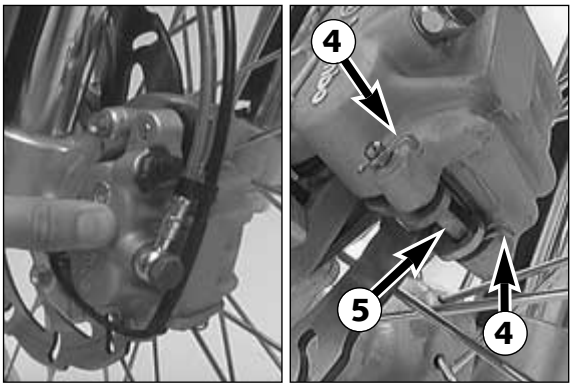
The brake pads can be inspected from below. The linings nust be at least 1 mm (0.04 in) thick.

⚠ 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.

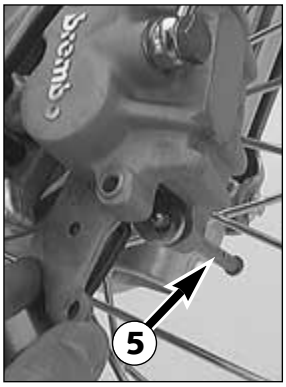
! CAUTION !

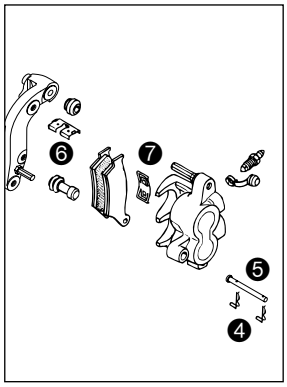
IF THE BRAKE PADS ARE REPLACED TOO LATE SO THAT THE LINING IS PARTLY OR ENTIRELY WORN, THE STEEL COMPONENTS OF THE BRAKE PAD WILL RUB AGAINST THE BRAKE DISC, THEREBY IMPARING THE BRAKING EFFECT AND DESTROYING THE BRAKE DISC.



Replacing front brake pads *

Press the brake caliper toward the brake disk, to put the brake piston in its basic position. Remove clips ❹ and pull out bolt ❺. 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.

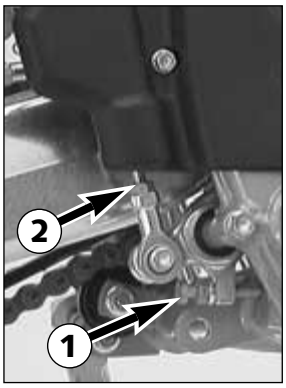




Mount the right brake pad and fix it with the bolt. Mount the left brake pad and insert the bolt until it stops. Mount the clips.
When mounting the brake pads, be sure to check for correct fit of the sliding metal-sheet ❻ in the caliper support and of the leaf spring ❼.

⚠ 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.
- Having performed any work 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.

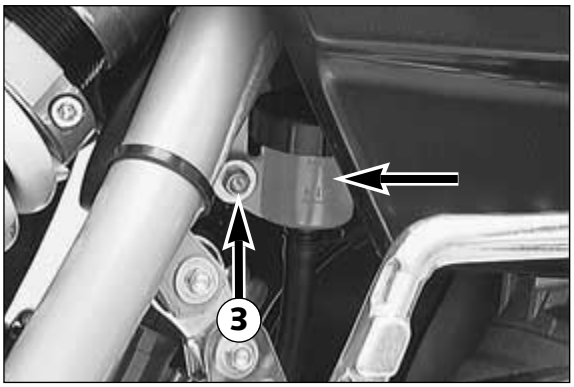


Changing the basic position of the foot brake pedal *

The basic position of the foot brake pedal can be altered by turning the stop screw ❶. The free play at the foot brake pedal must then be adjusted by means of the piston rod ❷.
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).

! CAUTION !

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 rear brake fluid level

The brake fluid reservoir of the rear disc brake is located on the right side of the motorcycle next to the kickstarter. The brake fluid level must not drop below the „MIN" marking when the vehicle is in an upright 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 *

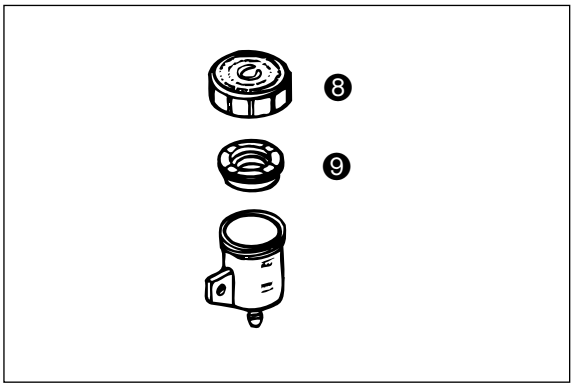
For this purpose, it is recommended to remove screw ❸ and to pull the brake fluid reservoir outwards. Now the screw cap ❽ and the rubber boot ❾ can be removed. Add brake fluid DOT 5.1 (Shell Advance Brake DOT 5.1) until the brake fluid level reaches the "MAX" mark, then mount the screw cap together with the rubber boot. Restore the brake fluid reservoir to its original position and fix it with the screw. The connecting hose between the reservoir and the foot brake cylinder must be carefully positioned, preventing kinks and keeping a safe distance between the hose and the exhaust pipe. Spilled brake fluid must be rinsed off with water.

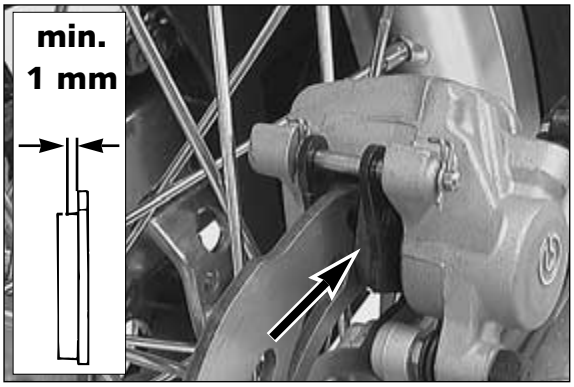
⚠ WARNING ⚠

- 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.





Checking the rear brake pads

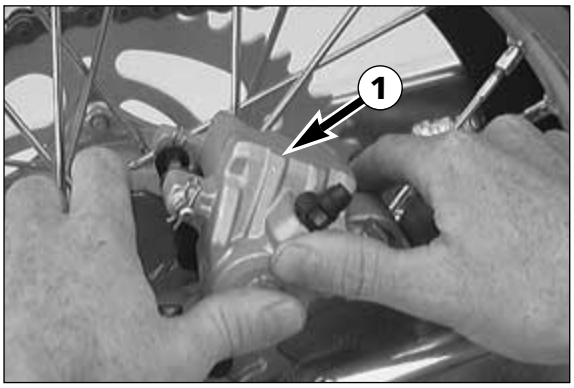
The brake pads can be inspected from the rear. The thickness of the linings may not be less than 1 mm (0.04 in).

⚠ 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 IMPARING THE BRAKING EFFECT AND DESTROYING THE BRAKE DISC.

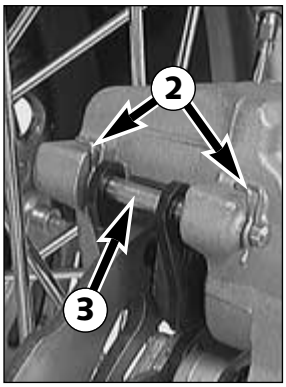


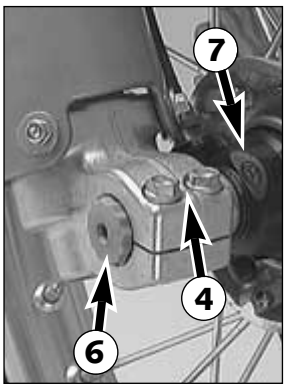
Replacing the rear brake pads *

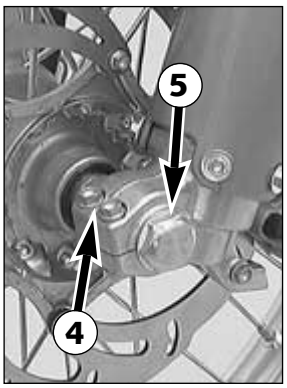
Press brake caliper 1 in direction of chain wheel for the brake piston to reach its basic position. Remove safety device 2, knock out the guide pin 3 from the brake caliper with a drift towards the chain wheel and remove brake pads. Carefully clean the brake caliper with compressed air and check sleeves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





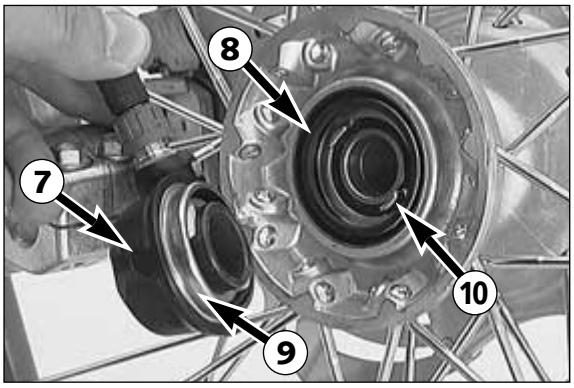


Dismounting and mounting the front wheel

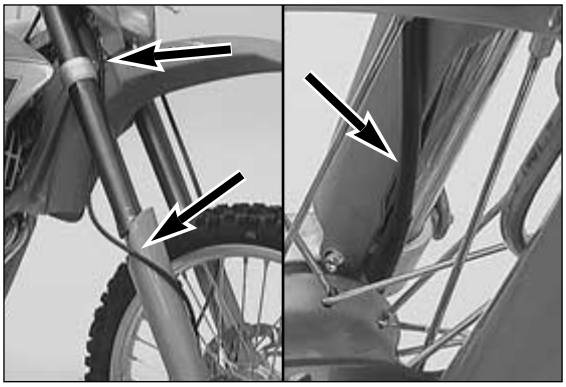
To remove the front wheel, jack the motorcycle up on its frame so that the front wheel no longer touches the ground.
Loosen the collar nut ❹.
Loosen the 4 clamping screws ❺ on the fork fists.
Hold the front wheel, pull out the wheel spindle ❻
NOTE: The wheel spindle can be easily removed if you slightly revolve it with a ring span-ner (SW 21 mm) or a hexagon socket screw key (6 mm).
Remove front wheel carefully from the fork and take the speedometer drive ❼ off the hub.
NOTE: Models with a digital speedometer have a distance bushing instead of the speed-ometer drive.

! 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.



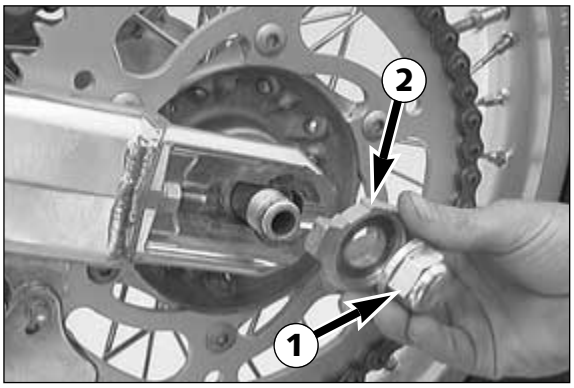
Prior to mounting the front wheel, clean and grease sealing ring ❽ and running surface ❾ at the speedometer drive.
Lift front wheel into fork, and insert speedometer drive or distance sleeve into hub. Make sure that the driving tabs ❿ engage with the slot of the drive.
Position front wheel and speedometer drive or distance sleeve and mount wheel spindle.



The speedometer shaft must be placed as running along the outside of the fork guard and pas the triple clamp toward the speedometer.
Mount collar nut ❺, turn speedometer drive in a way that the flexible speedometer shaft will curve upwards in a slight bow (see pict.) and tighten collar nut to 40 Nm (30 ft.lb).
Take the motorcycle off the stand and bounce the fork hard a few times to align the fork legs
Then tighten clamping screws ❹ to a max. torque of 10 Nm (7 ft.lbs)

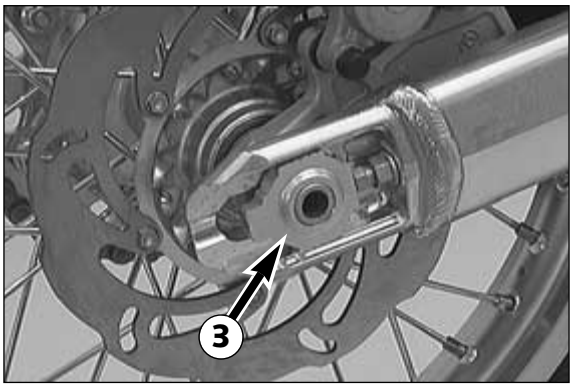
⚠ WARNING ⚠

- 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, eitherwise the braking effects would be strongly reduced.



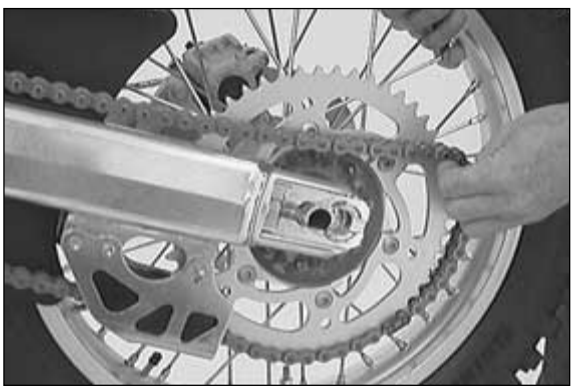
Dismounting and mounting the rear wheel

Jack the motorcycle up on its frame so that the rear wheel no longer touches the ground.
Loosen the collar nut ❶, remove chain tensioner ❷, hold the rear wheel and pull out the wheel spindle ❸ until the rear wheel is free but the brake caliper support is still held.
Push the rear wheel as far forward as possible, take the chain from the chain wheel and carefully take the rear wheel out of the swingarm.



! CAUTION !

- Do not operate the rear brake when the rear 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.
- If the axle is dismounted, clean the thread of the wheel spindle and collar nut thoroughly and apply a new coat of grease to prevent the thread from jamming.



The rear wheel is remounted in 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, eitherwise 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		
	front	rear
Off road	1,0 bar	1,0 bar
Road driver only	1,5 bar	2,0 bar

Tires, air pressure

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

– Tire size can be found in the technical specifications and in their 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.

⚠ **WARNING** ⚠

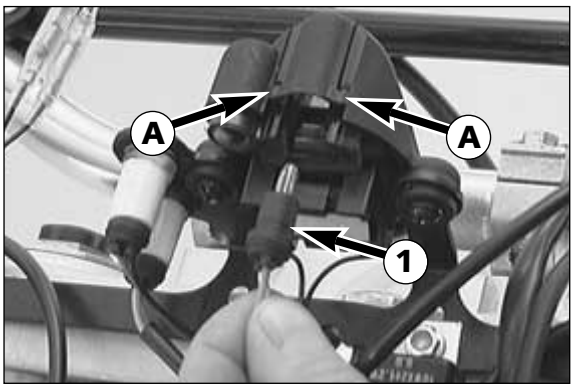
– DO NOT MOUNT TIRES WHICH HAVE NOT BEEN APPROVED BY KTM. OTHER TIRES COULD HAVE ADVERSE EFFECTS ON THE WAY YOUR MOTORCYCLE BEHAVES.
– FRONT AND REAR WHEELS MAY ONLY BE FITTED WITH TIRES HAVING THE SAME TREAD LAYOUT. USE HOMOLOGATED TIRES
– FOR YOUR OWN SAFETY REPLACE DAMAGED TIRES IMMEDIATELY.
– WORN 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

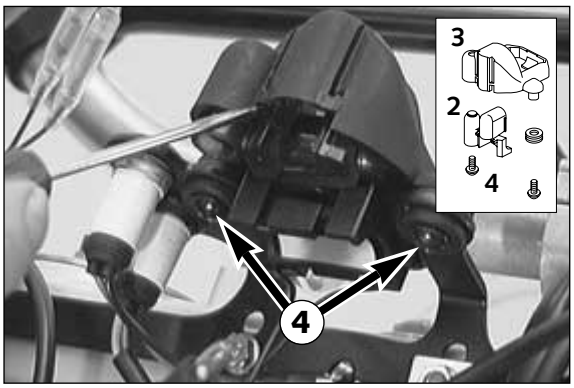
Checking spoke tension

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, in regular intervals. For checking, tap on each spoke with the blade of a screwdriver (see photo). A clear tone must be the result. Dull tones are indicators of loose spokes. If necessary, have the spokes retightened and the wheel centered by a KTM dealer.

⚠ **WARNING** ⚠

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





Replacing the battery of the digital speedometer

After approx. 2 years, the battery of the digital speedometer will be empty and must be replaced. For this purpose, the speedometer must be dismounted.

Remove headlight mask, and pull speedometer illumination system ❶ out of the speedometer housing.

Use a screwdriver to lever the blue speedometer glass ❷ downward and out of the speedometer housing ❸. The two noses Ⓐ must be disengaged from the speedometer housing. Remove screws ❹, and take speedometer out of housing.

Before you remove the battery, do not forget to write down the following data:

– total kilometer reading (DST)
– wheel circumference (WS) (KTM standard tires = 2205 mm)

– Remove the battery cover on the back of the speedometer and detach the batteries. The new batteries must be inserted with the plus pole on top.
– Make sure that the seal ring has the right position on the cover when mounting the battery cover.
– Now total mileage, wheel circumference and time have to be entered.

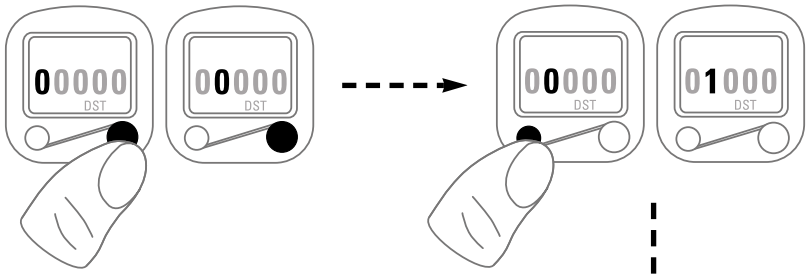
To mount the speedometer, proceed by following the reverse order of the above procedure.

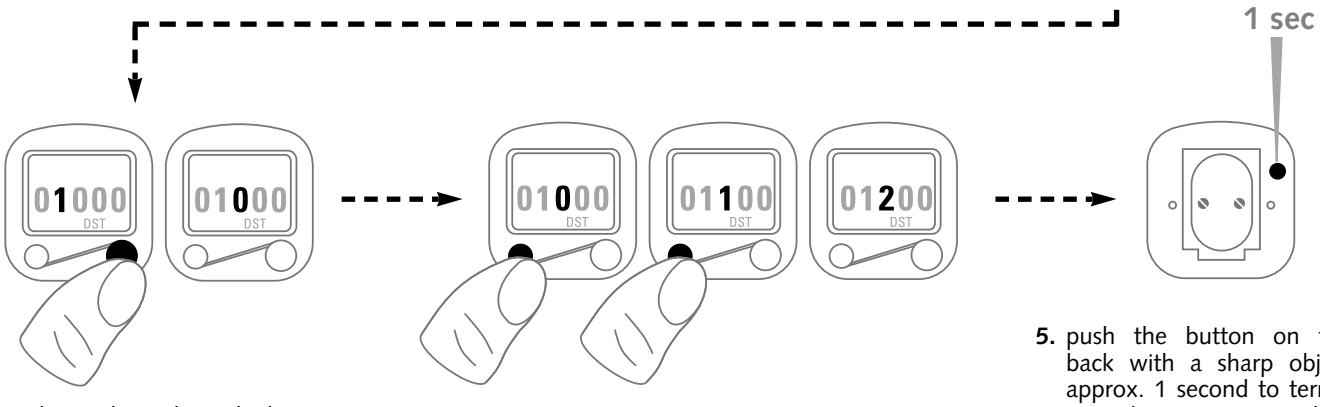
TOTAL MILEAGE „DST“

AFTER CHANGING BATTERY

1. use the right button to select the position to be changed

2. push the left button until the right figure is showed in the display





3. by pushing the right button you jump to the next figure

4. repeat nos. 2 + 3 until the previously noted total mileage is indicated

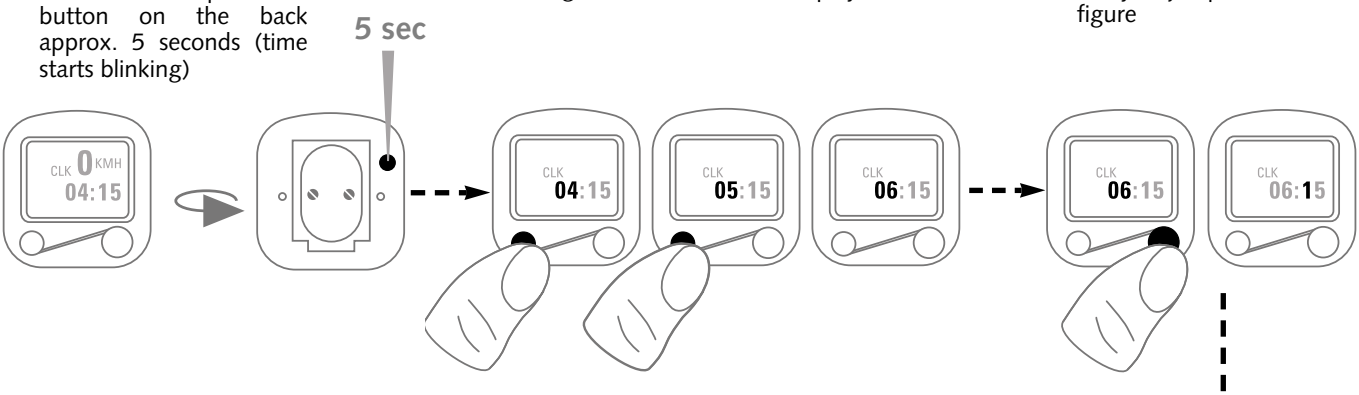
5. push the button on the back with a sharp object approx. 1 second to terminate the setting procedure (the value is thus stored)

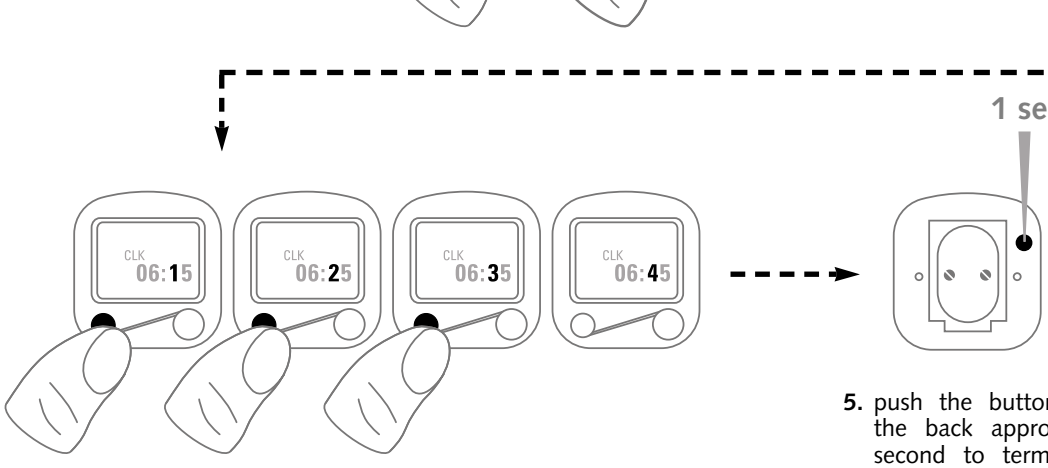
TIME „CLK“

1. make sure the time is indicated and push the button on the back approx. 5 seconds (time starts blinking)

2. push the left button until the right figure is showed in the display

3. by pushing the right button you jump to the next figure



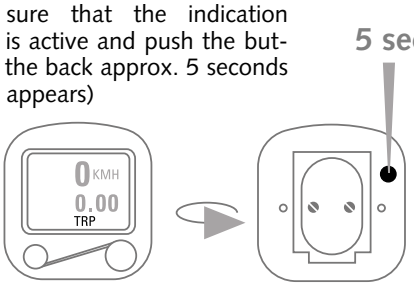


4. repeat nos. 2 + 3 until correct time is indicated

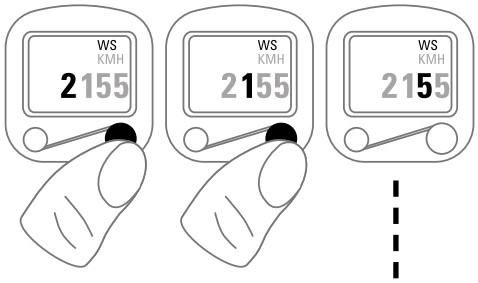
5. push the button on the back approx. 1 second to terminate the setting procedure

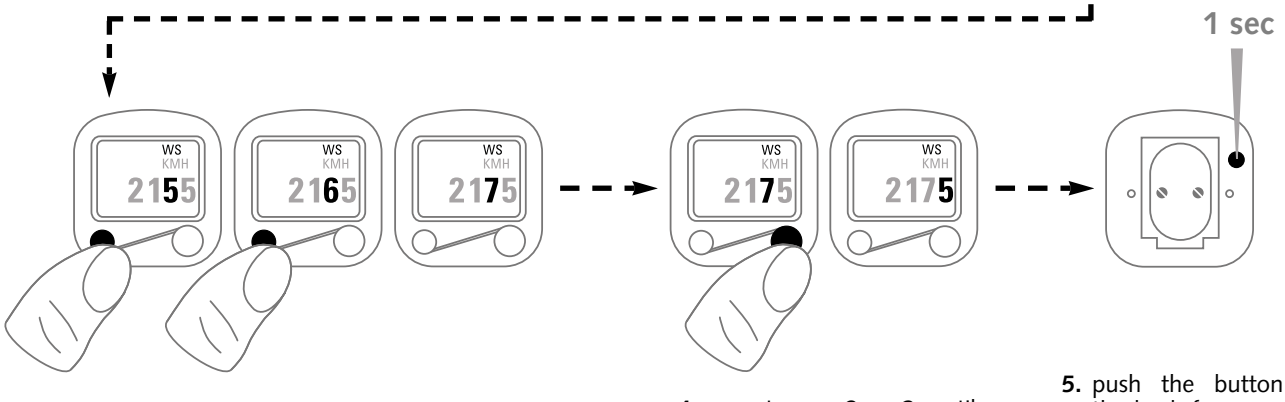
WHEEL CIRCUMFERENCE „WS“

1. make sure that the indication "TRP" is active and push the button on the back approx. 5 seconds ("WS" appears)



2. use the right button to select the position to be changed

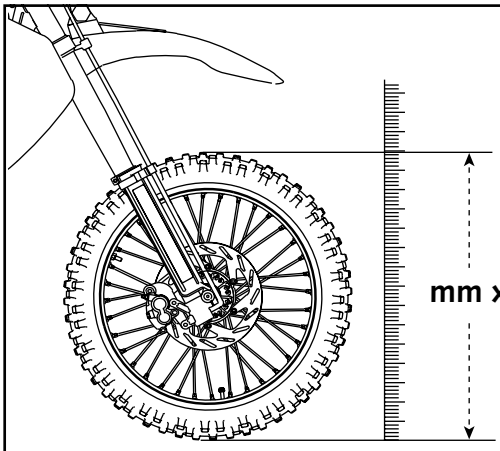




3. push the left button until the right figure is showed in the display

4. repeat nos. 2 + 3 until correct wheel circumference is indicated

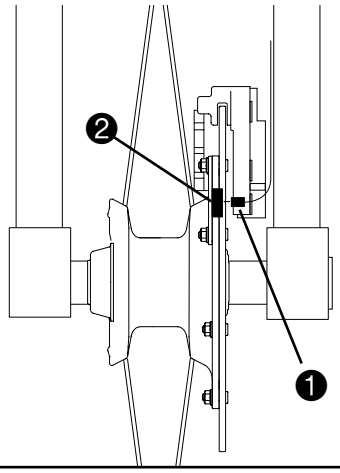
5. push the button on the back for approx. 1 second to terminate the setting procedure



km/h:
WS = mm x 3,14

mp/h:
WS = (mm x 3,14) : 1,61

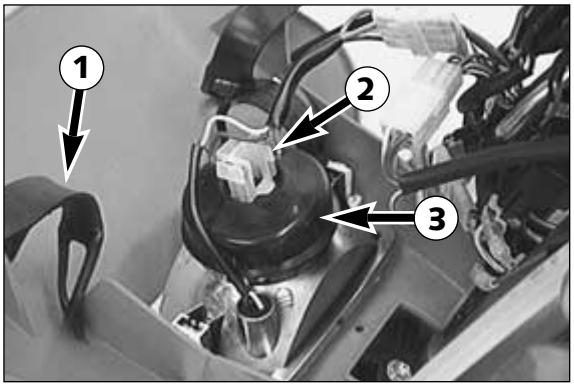
Wheel circumference with standard tires = 2205 mm



Check/set distance of the magnetic sensor

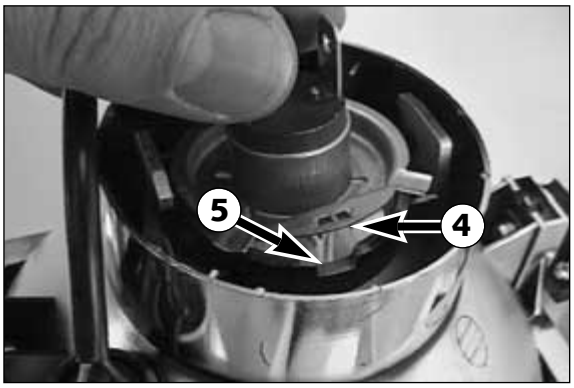
The distance between magnet ❷ and sensor ❶ must be 2-4 mm, otherwise malfunctions on the speedometer might occur.

This distance can be corrected by screwing in or off the sensor ❶.

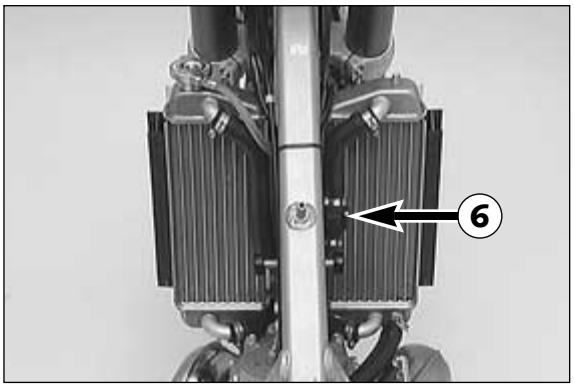


Replacing headlight lamp (H4)

Loosen both rubber bands ❶ and tilt headlight mask to the front. Remove bulb plug ❷ and remove rubber cap ❸. Turn the supporting ring counter-clockwise and remove it from the reflector together with the bulb.



Insert a new bulb such that the noses ❹ fit into the recess ❺. Do not touch the glass body of the bulb, to keep if free from grease. Mount supporting ring, rubber cap and plug. Position headlight mask with the bottom holders, and fasten it with the rubber bands.

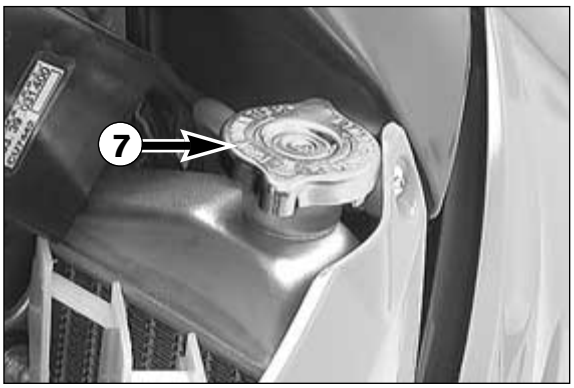


Cooling system

The water pump in the engine circulates the cooling liquid. However, the cooling liquid can only circulate properly if the cooling circuit contains no air bubbles.
Bleeding of the cooling system is therefore required
a) after adding more than 0.25 l cooling liquid and
b) after refilling the entire cooling system.
(see Bleeding the cooling system).

Some models are equipped with a thermostat ❻ so that the engine reaches its operating temperature more quickly. When the engine is cold, the liquid coolant circulates in the cylinder and the cylinder head. As soon as the cooling liquid has reached a temperature of approximately 55°C, the thermostat opens and the cooling liquid is also pumped through the two aluminum radiators.

The cooling liquid is cooled by the air stream. This means that the cooling effect decreases with the travelling speed. Dirty radiators additionally reduce the cooling effect.



⚠ WARNING ⚠

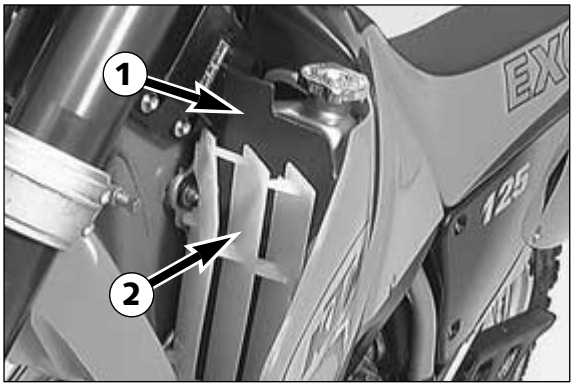
- If possible, always check level of cooling liquid when engine is cold. If you have to open the radiator cap ❼ when the engine is hot, use a rag to cover the cap and open slowly to release pressure. **Caution - scalding hazard !**
- Do not detach any radiator hoses while the engine is hot. The escaping 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, go see a doctor immediately!
- If coolant gets into your eyes, rinse them out with water immediately and go see a doctor!

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

! CAUTION !

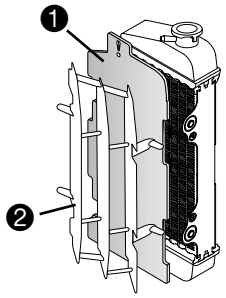
For the cooling system, use only with high-grade antifreeze (i.e. Shell Advance Coolant). Using lower-grade antifreeze agents, can cause corrosion and coolant foaming.

Pressure induced by heating of the coolant in the system is controlled by a valve in the radiator cap ❼; a water temperature of up to 120° C (248° F) is admissible therefore, having to expect any trouble.

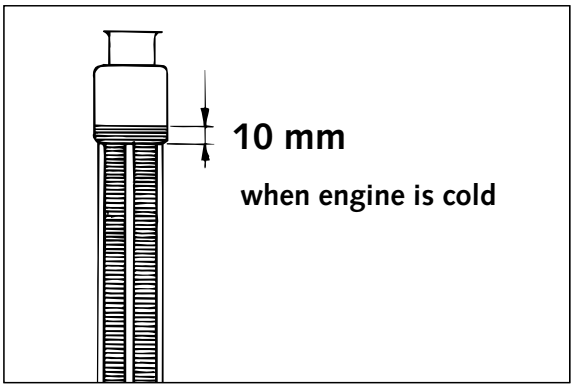


Radiator cover for the cold season

To ensure that the engine reaches its operative temperature also at low temperatures, the radiator cover ❶ must be mounted.
For this purpose, detach the left radiator protection ❷ and mount the cover in front of the left radiator as illustrated.
Remount the radiator protection.



NOTE: The radiator shutter can be obtained from your KTM dealer



Checking the coolant level

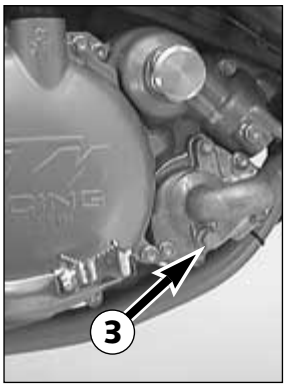
The coolant should be 10 mm (0.4 in) above the radiator fins when the engine is cold (cf. diagram). In the event of the coolant being drained, always fill and bleed the system.

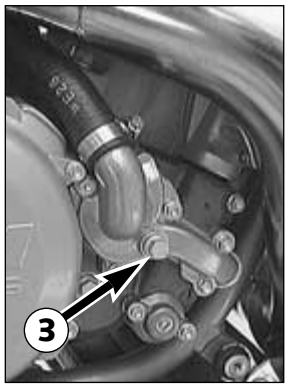
⚠ WARNING ⚠

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

! 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.

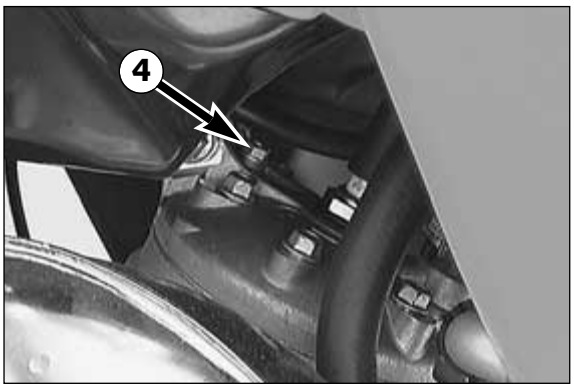




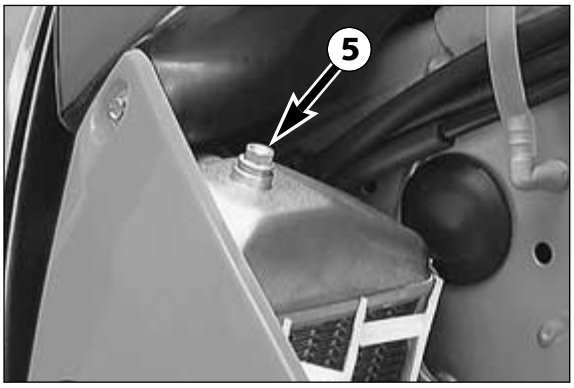
Refilling/Bleeding the cooling system

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

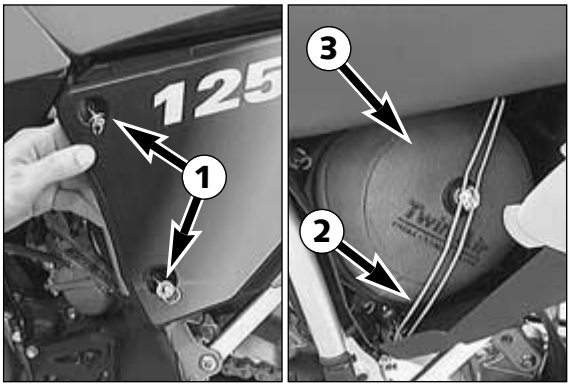
– Make sure that the drain screw ❸ is fastened.
– Pour approx. 0.5 litres (0.13 US gallons) coolant into the system.



– Remove screw ❹ at the cylinder head. Reinstall it as soon as the cooling liquid emerges free of air bubbles (only for 125/200 engines).



– Remove the screw ❺ on the right radiator.
– Now add cooling liquid until it emerges free of bubbles at the right radiator. Then immediately mount the screw so that no more air can enter the right radiator.
– Top up the left radiator until the coolant can be seen approx. 10 mm (0.4 in) above the radiator fins.
– Check the coolant level again after a short ride.

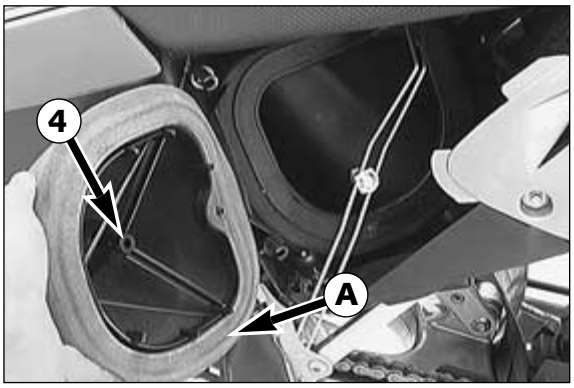


Cleaning the air filter *

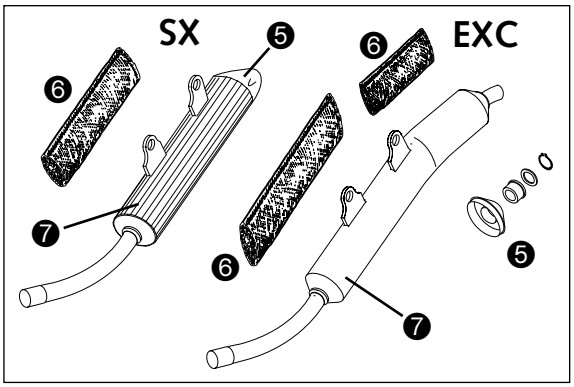
The air filter must be cleaned prior to every race or whenever the motorcycle has been exposed to great quantities of dust.
For this purpose, rotate the two quick-release fasteners ❶ counter-clockwise and pull them outward up to the stop, pull the filter box cover forward and remove it. Unhook the filter holding brackets ❷ at the bottom, swing them sideways and take the air filter ❸ together with the filter support ❹ out of the filter box.

! CAUTION !

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



Thoroughly wash the air filter in special cleaning fluid 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. Also clean the air filter box. Check carburetor collar for damage and that it is filled correctly.
Mount the air filter on the filter support. Apply grease to the face ❹ of the filter to improve its sealing properties. Mount the filter together with the filter support in the filter box, making sure to properly center them, and fix them with the filter holding bracket.



Exhaust system *

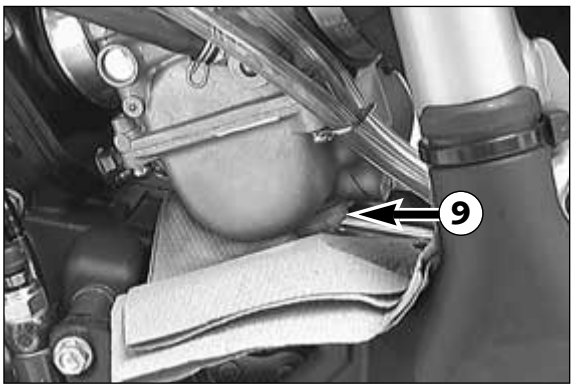
Silencers whose caps ❺ is detachable are filled with glass-fiber yarn. Let this package be ckecked at least after 4000 km or at once a year. Glass-fiber yarn that is too loose may cause a drop in performance and curtail the silencer's silencing effect.
To replace the glass-fiber yarn packing ❻, remove the silencer cap and pull off the outer tube ❼. Use adhesive tape to attach the new glass-fiber yarn packing to the inner tube, and slide on outer tube. Mount silencer cap.
Glass-fiber yarn packings are available at your authorized KTM dealer.

⚠ 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.

Cleaning the spark arrestor (EXC USA) *

With these models, the spark arrestor is part of the exhaust silencer. Clean it every 4000 km (2500 miles) to guarantee proper functioning. Also clean the spark arrestor when replacing the glass fiber yarn filling.
After assembling the silencer, remove the plug ❽ and start the motorcycle. Close the opening of the muffler with a rag and press the accelerator approximately 20 times. The carbon deposits will be blown out through the opening. Then turn off the engine and let the exhaust system cool down. Grease the plug with molycote grease and mount the plug.



Draining of 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 ❾, and clean it with compressed air. Then, mount plug together with gasket, open fuel tap, and check 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 IN THE PROXIMITY OF 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 THE FUEL PROPERLY!

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 – 1:60 (depands on oil quality)

Basic information on a change of 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.

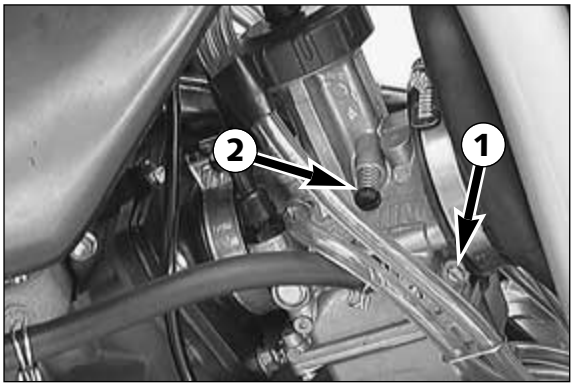
RULE OF THUMB: high altitude or high temperatures → choose leaner carburetor adjustment
low altitude or low temperatures → choose richer carburetor adjustment

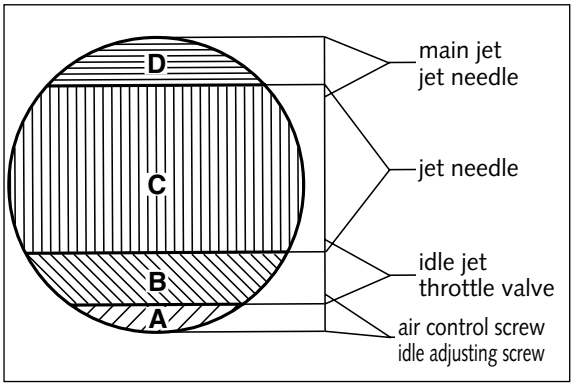
⚠ **WARNING** ⚠

- Only use premium-grade gasoline ROZ 95 mixed with high-grade two-stroke engine oil. Other types of gasoline can cause engine failure, and use of same will void your warranty.
- Only use high-grade 2-stroke engine oil of known brands (i. e. Shell Advance Racing X).
- Not enough oil or low-grade oil can cause erosion of the piston. Using too much oil, the engine can start smoking and foul the spark plug 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 despite a changed adjustment the engine does not run properly, look for mechanical faults and check the ignition system.

Basic information on carburetor wear
As a result of engine vibrations, throttle valve, jet needle, and needle jet are subjected to increased wear. This wear may cause carburetor malfunction (e.g., overly rich mixture). Therefore, these parts should be replaced after 10000 kilometers (6000 miles).





Definitions

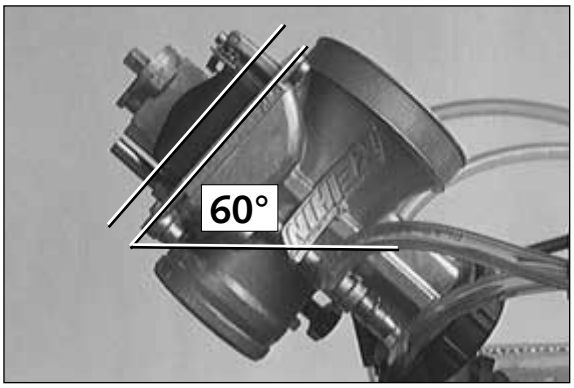
Mixture too rich:
Too much fuel in proportion to air.

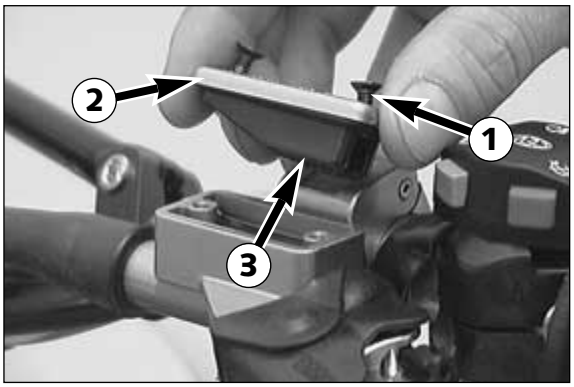
Mixture too lean:
Not enough fuel in proportion to air.

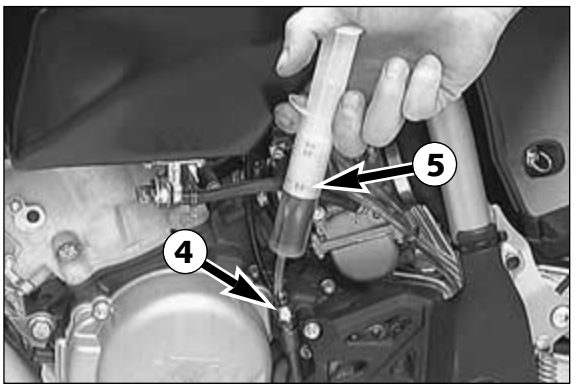
Idling range A
Operation with closed throttle valve. This range is influenced by the position of the air control screw ❶ and the air control screw ❷. Only make adjustments when the engine is hot.
To this end, slightly increase the idling speed of the engine by means of the air control screw. Turning 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.

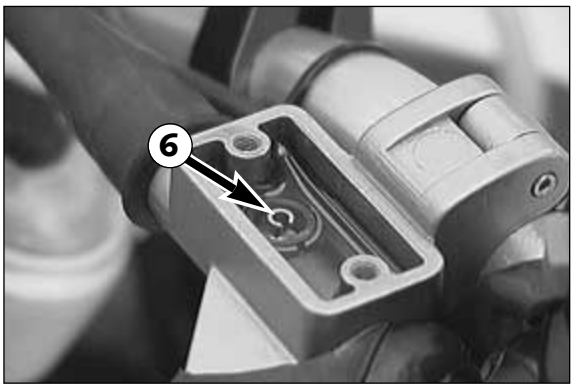
Opening up B
Engine behavior when the throttle opens. The idle jet and the shape of the throttle valve influences this range. If, despite good idling-speed and part-throttle setting, the engine sputters and smokes when the throttle is fully opened and develops its full power not smoothly but suddenly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

JET NEEDLE TYPE	RANGE OF ACTION RICHER ⟷ LEANER
NOZD	
NOZE	
NOZF	
NOZG	
NOZH	









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.

Powerjet (250 SX)

A magnetic valve, the Powerjet nozzle, is opened when maximum torque has been reached during acceleration, i.e. at between 6,800 – 8,500 rpm.
This sends additional petrol through the carburettor. If the engine is too fat a smaller Powerjet nozzle must be fitted. If the engine is too lean a larger Powerjet nozzle must be fitted.

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).

Checking the oil level of the hydraulic clutch

To check the oil level in the master cylinder of the clutch remove the cover. For this purpose, remove screws ❶ and cover ❷ together with the rubber boot ❸. The oil level in the horizontal-standing master cylinder should be 4 mm below the upper edge. If necessary add SAE 10 hydraulic oil

! CAUTION !

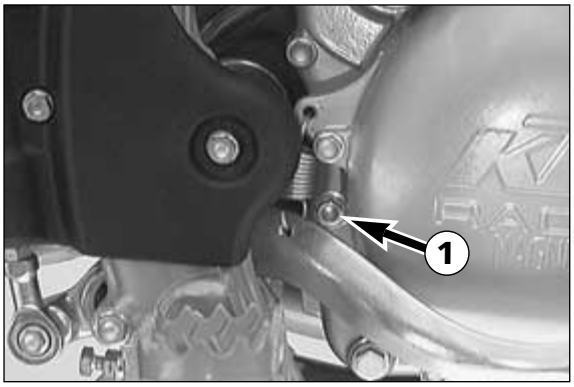
ONLY USE SAE 10 MINERAL HYDRAULIC OIL (i.e. Shell Naturelle HF-E15) TO REFILL THE MASTER CYLINDER. NEVER USE BRAKE FLUID!

Bleeding of the hydraulic clutch

For bleeding, the cover of the master cylinder of the clutch needs to be removed. For this purpose, remove screws ❶ and take off cover ❷ together with rubber bellows ❸. At the slave cylinder of the clutch, remove the bleeder nipple ❹. At its place, mount the bleeder syringe ❺ which is filled with SAE 10 hydraulic oil. Refill oil, until oil is discharged from the bore ❻ of the master cylinder in a bubble-free state. Make sure that the oil does not overflow. The bleeder syringe can be purchased at your KTM dealer.

! CAUTION !

HAVING COMPLETED THE BLEEDING PROCEDURE, YOU HAVE TO VERIFY THAT THE OIL LEVEL IN THE MASTER CYLINDER IS CORRECT. FOR FILLING OF THE MASTER CYLINDER, USE SAE 10 MINERAL HYDRAULIC OIL (e.g. Shell Naturelle HF-E15) ONLY; NEVER USE BRACKE FLUID!

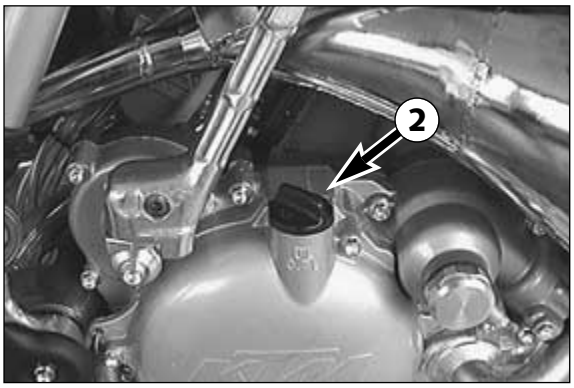


Check transmission oil level (125/200)

In order to check the transmission oil level the control screw ❶ 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 ❷ and top up with engine oil 20W-40 (i. e. Shell Advance VSX 4).

! CAUTION !

TRANSMISSION AND CLUTCH WILL BE SUBJECT TO AXCESSIVE WEAR AND TEAR, IF YOU USE TOO LITTLE OR LOW GRADE OIL. USE ONLY HIGH-GRADE OIL (i. e. Shell Advance VSX 4).

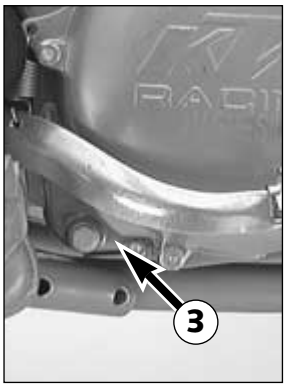


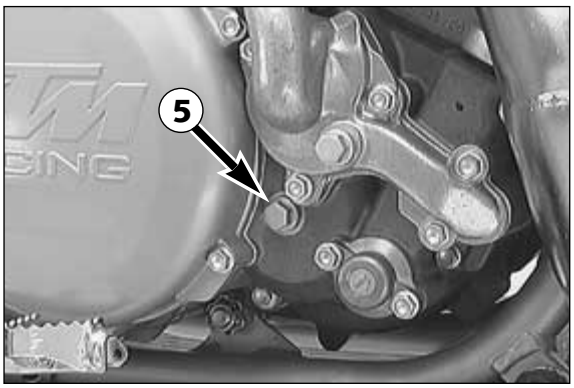
Changing the transmission oil (125/200) *

To change the gear oil warm up the engine and park the motorcycle on a horizontal surface. Remove oil drain plugs ❸ and ❹ 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. Fill in 0.7 l engine oil 20W-40 (i. e. Shell Advance VSX 4), mount the plug ❷ and check the engine for leaks.

! CAUTION !

TRANSMISSION AND CLUTCH WILL BE SUBJECT TO AXCESSIVE WEAR AND TEAR, IF YOU USE TOO LITTLE OR LOW GRADE OIL. USE ONLY HIGH-GRADE OIL (i. e. Shell Advance VSX 4).



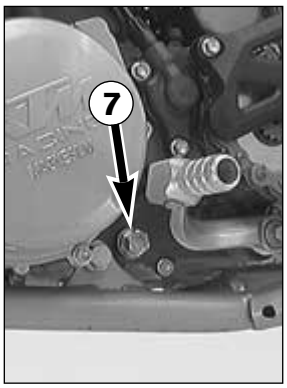


Check transmission oil level (250/300/380)

In order to check the transmission oil level the control screw ❺ 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 ❻ and top up with engine oil 20W-40 (i. e. Shell Advance VSX 4).

! 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 (i. e. Shell Advance VSX 4).



Changing the transmission oil (250/300/380) *

To change the transmission oil run the engine warm and set up the motorcycle on a horizontal surface. Remove the oil drain screw ❼ and drain used oil into a container. Clean the magnet of the oil drain screw and reinstall oil drain screw with seal. Pour in 0.8 litres (0.21 US gallons) engine oil 20W-40 (i. e. Shell Advance VSX 4), replace plug ❻ 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 (i. e. Shell Advance VSX 4).

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 !

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

- You should use normal brand-name detergents to clean the motorcycle. Especially dirty parts should be cleaned additionally 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 inaccessable 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 too.
- 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 motorcycle thoroughly and let it dry after each riding
- treat engine, carburetor, swing arm, and all other bare or galvanized parts (except for brake discs) with a wax-based anti-corrosion agent.

⚠ WARNING ⚠

KEEP ANTI-CORROSION AGENT FROM GETTING INTO CONTACT WITH THE BRAKE DISCS, FOR 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 desire 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 aggresive contaminants).
- Check antifreezer and amount of cooling liquid.
- Let the engine warm up again, close fuel cock and wait until the engine dies off by itself. By this means, carburetor jets are prevented from becoming resinous 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, foot rests, etc. as well as the chain.
- The storage place should be dry and not be subject to too big temperature fluctuations.
- Cover the motorcycle with an air permeated tarp or blanket. Do not use non air permeable 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.

RE-INITIATION AFTER TIME OF STORAGE

- Fill up tank with fresh fuel.
- Check 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 have to 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 mechanic at the beginning of the next biking season.

TECHNICAL SPECIFICATIONS CHASSIS 125 SX / EXC, 200 MXC / EXC 2001

	125 SX	125 EXC	200 MXC	200 EXC
Frame	Central chrome-moly-steel frame			
Fork	**W**hite **P**ower – **U**p **S**ide **D**own 43 MA			
Wheel travel front/rear	295/320 mm (11,3/12,6 in)			
Rear suspension	WP **P**rogressive **D**amping **S**ystem shock absorber, aluminium swingarm			
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 max. 0,4 mm (0,016 in)			
Front tires Front tires USA Air pressure offroad Air pressure road driver only	80/100 - 21"51M 80/100 - 21"51M 1,0 bar (14psi) –	90/90 - 21" 54R 80/100 - 21"51M 1,0 bar (14psi) 1,5 bar (21psi)	– 80/100 - 21"51M 1,0 bar (14psi) –	90/90 - 21" 54R 80/100 - 21"51M 1,0 bar (14psi) 1,5 bar (21psi)
Rear tires Rear tires USA Air pressure offroad Air pressure road driver only	100/90 - 19" 57M 100/90 - 19" 57M 1,0 bar (14psi) –	120/90 - 18" 65R 100/100 - 18" 59M 1,0 bar (14psi) 2,0 bar (28psi)	– 100/100 - 18" 59M 1,0 bar (14psi) –	120/90 - 18" 65R 100/100 - 18" 59M 1,0 bar (14psi) 2,0 bar (28psi)
Fuel tank capacity	7,5 liter (2 US Gallons)	8,5 liter (2,2 US Gallons)	11 liter (2,9 US Gallons)	8,5/11 liter (2,2/2,9 US Gallons)
Final drive ratio Final drive ratio USA	13:50t 13:50t	14:38t 13:50t	– 14:48t	14:45t / 14:48t 14:48t
Chain	5/8 x 1/4 "			
Available final sprockets	38t, 40t, 42t, 45t, 48t, 50t, 52t			
Steering head angle	63°			
Wheel base	1461 ± 10 mm (57,3 ± 0,4 in)			
Seat height, unloaded	925 mm (36,5 in)			
Ground clearance, unloaded	385 mm (15,2 in)			
Dead-weight * Dead-weight USA *	92 kg (203 lbs) 92 kg (203 lbs)	100 kg (221 lbs) 96 kg (212 lbs)	– 96 kg (212 lbs)	101 kg (223 lbs) 97 kg (214 lbs)

* Dead-weight without fuel

STANDARD ADJUSTMENT - FORK

	WP 0518V701	WP 0518V702
Compression adjuster	16	16
Rebound adjuster	16	12
Spring	3,8 N/mm	3,8 N/mm
Spring preload	5 mm (0.2in)	5 mm (0.2in)
Air chamber length	130 mm (5.1in)	150 mm (5.9in)
Fork oil	SAE 5	SAE 5

STANDARD ADJUSTMENT - SHOCK ABSORBER

	WP 1218V728	WP 1218V729
Compression adjuster	5	5
Rebound adjuster	25	23
Spring	PDS2–250	PDS1-250
Spring preload	5 mm (0.2 in)	6 mm (0.2 in)

TIGHTENING TORQUES - CHASSIS

Collar nut front wheel spindle	M 16x1,5	40 Nm (30 ft.lb)
Brake caliper front	M 8	25 Nm (19 ft.lb) + Loctite 243
Clamping screws upper fork bridge	M 8	20 Nm (15 ft.lb)
Clamping screws lower fork bridge	M 8	15 Nm (11 ft.lb)
Clamping screws fork stubs	M8	10 Nm (7 ft.lb)
Collar nut rear wheel spindle	M 20x1.5	80 Nm (59 ft.lb)
Hexagon nut swing arm bolt	M 14x1.5	100 Nm (74 ft.lb)
Collar screw handlebar clamp	M 8	20 Nm (15 ft.lb)
Allen head screw handlebar support	M 10	40 Nm (30 ft.lb) + Loctite 243
Shock absorber top	M 12	60 Nm (44 ft.lb)
Shock absorber bottom	M 12	60 Nm (44 ft.lb)
Screw adjusting ring spring preload	M 6	8 Nm (6 ft.lb)
Other screws on chassis	M 6 M 8 M 10	10 Nm (7 ft.lb) 25 Nm (19 ft.lb) 45 Nm (33 ft.lb)

TECHNICAL DATA - ENGINE 125 / 200 2001

Engine	125 SX	125 EXC	200 MXC	200 EXC
Design	Liquid-cooled single-cylinder two-stroke engine with intake and exhaust control			
Piston displacement	124.8 ccm		193 ccm	
Bore / stroke	54 / 54,5 mm (2.126 / 2.145 in)		64 / 60 mm (2.52 / 2.362 in)	
Fuel	unleaded SUPER fuel, research octane no 95, mixed with high grade two stroke oil			
Oil / gasolin ratio	1:40-1:60 when using high grade two stroke oil (Shell Advance Racing X). When in doupt, please contact your importer			
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	one plain compression ring	two plain compression rings		
Dimension "X" (upper edge piston-upper edge cylinder	0.0 mm (0.0 in)		0.55 mm (0.22 in)	
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 BR 8 EG	
Electrode gap	0.60 mm (0,024 in)			
Dimension "Z" height of the control flap	42,5 mm (1.67 in)		46 ,5 mm (1.83 in)	
Primary drive	straight cut spur gears, primary ratio 23:73			
Clutch	multiple disc clutch in oil bath, hydraulic operated (Shell HF-E15)			
Transmission	6 speed, claw actuated			
Gear ratio				
1st gear	13 : 32 „1S32“	12 : 33 „1G33“	13 : 32 „1S32“	12 : 33 „1G33“
2nd gear	„2S15“ 15 : 30 „2S30“	„2S15“ 15 : 31 „2G31“	„2S15“ 15 : 30 „2S30“	„2S15“ 15 : 31 „2G31“
3rd gear	„3S17“ 17 : 28 „3S28“	„3S17“ 17 : 28 „3S28“	„3S17“ 17 : 28 „3S28“	„3S17“ 17 : 28 „3S28“
4th gear	„4S19“ 19 : 26 „4S26“	„4S19“ 19 : 26 „4S26“	„4S19“ 19 : 26 „4S26“	„4S19“ 19 : 26 „4S26“
5th gear	„5S21“ 21 : 25 „5S25“	„5S21“ 21 : 25 „5S25“	„5S21“ 21 : 25 „5S25“	„5G17“ 17 : 19 „5G19“
6th gear	„6S22“ 22 : 24 „6S24“	„6G20“ 20 : 20 „6G20“	„6S22“ 22 : 23 „6S23“	„6G22“ 22 : 20 „6G20“
Gear lubrication	0.7 l engine oil 20W-40 (Shell Advance VSX4)	0.7 l engine oil 80W (Shell Gear EP 80)	0.7 l engine oil 20W-40 (Shell Advance VSX4)	0.7 l engine oil 80W (Shell Gear EP 80)
Available chain sprockets	13t / 14t / 15t for chain 5/8 x 1/4"			
Coolant	1.2 litres, 40% anti freeze, 60% water, at least -25 °C (-13 °F)			
Ignition system	KOKUSAN 2K-1	KOKUSAN 2K-3	–	KOKUSAN 2K-3
Generator output	no generator	12V / 110 W	–	12V 110 W
Ignition system USA	KOKUSAN 2K-1	KOKUSAN 2K-2		
Generator output	no generator	12V 40 W		
Carburetor	flat-slide carburetor, carburetor setting see table			
Air-filter	wet foam type air filter insert			
200 EXC Separate lubrication				
lubrication	Separate lubrication			
engine oilShell	Shell Advance Ultra 2 or 2-stroke engine oil for a mixture ratio 1:50 and for separate lubrication .			
oil tank	1,3 liter (0,34 US Gallons)			

TIGHTENING TORQUES - ENGINE			
Flange bolts - cylinder-head	M 7	18 Nm	(13 ft.lb)
Nuts-cylinder base	M 8	30 Nm	(22 ft.lb)
Flywheel collar nut	M 12x1	60 Nm	(44 ft.lb)
Nut for primary sprocket (LH thread)	M 16x1.5	180 Nm	(133 ft.lb)
Nut for inner clutch hub	M 18x1.5	120 Nm	(88 ft.lb)
Crankcase and clutch cover bolts	M 6	8 Nm	(6 ft.lb)
Spark plug	M 14x1.25	20 Nm	(14 ft.lb)
Other screws	M 6	10 Nm	(7 ft.lb)
	M 8	25 Nm	(19 ft.lb)
	M 10	45 Nm	(33 ft.lb)

TOLERANCES AND FITTING CLEARANCES	
Piston fitting clearance	125 = 0.06 mm 200 = 0.085 mm
Piston ring end cap	max. 0.40 mm
Connecting rod bearing - radial clearance	0.025–0.035 mm
Transmission shafts end float	0.20–0.40 mm
Clutch springs - length	new = 39 mm, minimum length = 38 mm

GASKET THICKNESSES	
Crankcase	0,5 mm
Clutch cover	0,5 mm
Clutch driving cylinder	0.30 / 0.50 / 0.75 mm
Cylinder bottom gasket	as required
Available bottom gasket	0.07 / 0.15 / 0.20 / 0.25 / 0.40 / 0.50 / 0.75 mm
Cylinder-head gasket	1.10 mm + O-ring

BASIC CARBURETOR SETTING					
	125 SX	**125 EXC USA 200 MXC/EXC USA**	**200 EXC AUS 200 EXC SGP**	**125 EXC EU**	**200 EXC EU**
Carburetor	Keihin PWK 39	Keihin PWK 38 AG	Keihin PWK 38 AG	Keihin PWK 38 AG	Keihin PWK 38 AG
Carburetor setting number	250200	270200	280200	260200	290200
Main jet	185 (182/188)	180 (185)	180 (185)	148 (180/185)	180 (185)
Idling jet	48 (45/50)	45 (48)	45 (48)	35 (45/48)	35 (45/48)
Starting jet	85	85	85	85	85
Jetneedle	R 1469 D (R 1470 D)	NOZ G (NOZ H)	NOZ G (NOZ H)	R 1472 N (NOZ G/NOZ H)	R 1475 J (NOZ G/NOZ H)
Needle position from top	III	III	III	IV	III
Throttle valve	55	6.5	6.5	6.5	6.5
Air adjustment screw open	1,5	1,5	1,5	1,5	1,5
Performance restrictor	–	–	slide stop 36mm	–	slide stop 36mm

TECHNICAL SPECIFICATIONS CHASSIS 250/300/380 SX, MXC, EXC 2001

	250/380 SX	250/300/380 MXC	250/300/380 EXC
Frame	Central chrome-moly-steel frame		
Fork	**W**hite **P**ower – **U**p **S**ide **D**own 43 MA		
Wheel travel front/rear	295/320 mm (11,3/12,6 in)		
Rear suspension	WP **P**rogressive **D**amping **S**ystem shock absorber, aluminium swingarm		
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 max. 0,4 mm (0,016 in)		
Front tires Front tires USA Air pressure offroad Air pressure road driver only	80/100 - 21"51M 80/100 - 21"51M 1,0 bar (14psi) –	– 80/100 - 21"51M 1,0 bar (14psi) 1,5 bar (21psi)	90/90 - 21" 54R 80/100 - 21"51M 1,0 bar (14psi) 1,5 bar (21psi)
Rear tires Rear tires USA Air pressure offroad Air pressure road driver only	100/90 - 19" 62M 100/90 - 19" 62M 1,0 bar (14psi) –	– 100/100 - 18" 64M 1,0 bar (14psi) 2,0 bar (28psi)	140/80 - 18" 70R 100/100 - 18" 64M 1,0 bar (14psi) 2,0 bar (28psi)
Fuel tank capacity	7,5 liter (2 US Gallons)	11 liter (2,9 US Gallons)	8,5/11 liter (2,2/2,9 US Gallons)
Final drive ratio Final drive ratio USA	14:50t 14:50t	– 14:52t	15:48t / 14:50t 14:52t
Chain	5/8 x 1/4 "		
Available final sprockets	38t, 40t, 42t, 45t, 48t, 50t, 52t		
Steering head angle	63,5°		
Wheel base	1481 ± 10 mm (58,3 ± 0,4 in)		
Seat height, unloaded	925 mm (36,5 in)		
Ground clearance, unloaded	385 mm (15,2 in)		
Dead-weight * Dead-weight USA *	101 kg (223 lbs) 101 kg (223 lbs)	– 102,5 kg (226,3 lbs)	109 kg (240,6 lbs) 103,7 kg (229 lbs)

* Dead-weight without fuel

STANDARD ADJUSTMENT-FORK

	WP 0518V703	WP 0518V704
Compression adjuster	14	14
Rebound adjuster	12	12
Spring	4,0 N/mm	4,0 N/mm
Spring preload	5 mm (0.20in)	5 mm (0.20in)
Air chamber length	130 mm (5.1in)	150 mm (5.9in)
Fork oil	SAE 5	SAE 5

STANDARD ADJUSTMENT - SHOCK ABSORBER

	WP 1218V730	WP 1218V731
Compression adjuster	5	5
Rebound adjuster	25	25
Spring	PDS7–265	PDS2-250
Spring preload	5 mm (0.2 in)	6 mm (0.24 in)

TIGHENING TORQUES - CHASSIS

Collar nut front wheel spindle	M 16x1,5	40 Nm (30 ft.lb)
Brake caliper front	M 8	25 Nm (19 ft.lb) + Loctite 243
Clamping screws upper fork bridge	M 8	20 Nm (15 ft.lb)
Clamping screws lower fork bridge	M 8	15 Nm (11 ft.lb)
Clamping screws fork stubs	M8	10 Nm (7 ft.lb)
Collar nut rear wheel spindle	M 20x1.5	80 Nm (59 ft.lb)
Hexagon nut swing arm bolt	M 14x1.5	100 Nm (74 ft.lb)
Collar screw handlebar clamp	M 8	20 Nm (15 ft.lb)
Allen head screw handlebar support	M 10	40 Nm (30 ft.lb) + Loctite 243
Shock absorber top	M 12	60 Nm (44 ft.lb)
Shock absorber bottom	M 12	60 Nm (44 ft.lb)
Screw adjusting ring spring preload	M 6	8 Nm (6 ft.lb)
Other screws on chassis	M 6 M 8 M 10	10 Nm (7 ft.lb) 25 Nm (19 ft.lb) 45 Nm (33 ft.lb)

TECHNICAL DATA - ENGINE 250/300/380 SX / MXC / EXC 2001 (only USA)

Engine	250 SX	250 EXC, MXC	300 EXC, MXC	380 SX	380 EXC, MXC
Design	Liquid-cooled single-cylinder two-stroke engine with **KTM** **T**win **V**alve **C**ontrol exhaust system and **K**TM **T**orque **C**hamber				
Piston displacement	249 ccm		297 ccm	368 ccm	
Bore / stroke	66.4 / 72 mm (2.62 / 2.84 in)		72 / 73 mm (2.84 / 2.88 in)	78 / 77 mm (3 / 2.98 in)	
Fuel	unleaded SUPER fuel, research octane no 95, mixed with high-grade two stroke oil (Shell Advance Racing X)				
Oil / gasolin ratio	1:40 – 1:60 when using high grade two stroke oil. When in doupt, please contact your importer or use 1:40 mix ratio to be on the safe side				
Crankshaft bearing	1 deep-groove ball bearing / 1 cylinder roller bearing				
Connecting rod bearing	needle bearing				
Piston pin bearing	needle bearing				
Piston	cast piston		forged piston	cast piston	
Piston ring	one plain compression rings	two plain compression rings			
Dimension "X" (upper edge piston - upper edge cylinder)	0 +0.1 mm (0 + 0.004 in)				
Ignition timing	2,2 mm (0,09 in)(19 °) BTDC	2.0 mm (0.07 in) (17 °) BTDC		2.2 mm (0.09 in) (17 °) BTDC	
Spark plug	NGK BR 8 ECM				
Electrode gap	0.6 mm (0.024 in)				
Dimension "Z" (height of the control flap)	49,5 mm (1.95 in)		46 mm (1.7 in)	50.5 mm (1.99 in)	
TVC start open TVC fully open	5000/min 7000/min		5900/min 7750/min	5200/min 7200/min	
Primary drive	straight cut spur gears, primary ratio 25:72			straight cut spur gears, primary ratio 26:72	
Clutch	multiple disc clutch in oil bath, hydraulic operated (Shell HF-E15)				
Transmission	5 speed, claw actuated				
Gear ratio		EXC MXC	EXC MXC		EXC MXC
1st Gear	15:29	15:29 15:29	15:29 15:29	15:29	15:29 15:29
2nd Gear	17:27	18:26 17:27	18:26 18:26	18:26	18:26 18:26
3rd Gear	19:25	19:22 19:25	19:22 19:24	19:24	19:22 19:24
4th Gear	21:23	21:20 21:23	21:20 21:23	21:23	21:20 21:23
5th Gear	23:21	23:18 23:21	23:18 23:21	23:21	23:18 23:21
Gear lubrication	SX / MXC 0.8 l engine oil 20W-40 (Shell Advance VSX4) EXC 0,8 l engine oil 80W (Shell Gear EP 80)				
Available chain sprockets	13t / 14t / 15t for chain 5/8 x 1/4"				
Coolant	1.3 litres, 40% anti freeze, 60% water, at least -25 °C (-13 °F)				
Ignition system	KOKUSAN 2K-4	KOKUSAN 2K-2		KOKUSAN 2K-3	KOKUSAN 2K-3
Generator output	no generator	12V 40W		no generator	12V 110W
Carburetor	flat-slide carburetor, carburetor setting see table 3				
Air-filter	wet foam type air filter insert				

TIGHTENING TORQUES - ENGINE		
Flange bolts - cylinder-head	M 8	35 Nm (25 ft.lb)
Nuts-cylinder base	M 10	35 Nm (25 ft.lb)
Flywheel collar nut	M 12x1	60 Nm (44 ft.lb)
Nut for primary sprocket (LH thread)	M 18x1.5	Loctite 243 150 Nm (110 ft.lb)
Nut for inner clutch hub	M 18x1.5	Loctite 243 100 Nm (74 ft.lb)
Crankcase and cover bolts	M 6	8 Nm (6 ft.lb)
Swingarm pivot	M 14	100 Nm (74 ft.lb)
Flat head screw release plate kickstarter	M 6x16	Loctite 648 19 Nm (14 ft.lb)
Other screws	M 6 M 8 M 10	10 Nm (7 ft.lb) 25 Nm (19 ft.lb) 45 Nm (33 ft.lb)

TOLERANCES AND FITTING CLEARANCES	
Piston fitting clearance	0.05 mm (250) 0.06 mm (300) 0.08 mm (380)
Piston ring end gap	0.3–0.4 mm
Connecting rod bearing - radial clearance	0.021–0.032 mm
Transmission shafts end float	0.1–0.2 mm
Clutch springs - length	Ø 2.5 new = 43 mm, minimum length = 42 mm

GASKET THICKNESSES	
Crankcase	0.5 mm
Clutch cover	0.5 mm
Cylinder bottom gasket	as required
Available cylinder bottom gaskets	0.2/0.4/0.5/0.75 mm
Cylinder-head gasket	O-rings

BASIC CARBURETOR SETTING

TABLE 3

	250 SX	250 MXC, EXC	300 MXC, EXC	380 SX, MXC, EXC
Carburetor	Keihin PWK 38 AG PJ	Keihin PWK 38 AG	Keihin PWK 38 AG	Keihin PWK 38 AG
Carburetor setting number	010300	030300	050300	070300
Main jet	172 (170,175)	178 (175,180)	175 (172,178)	170 (168,172)
Idling jet	48 (45,50)	45 (48)	45 (48)	45 (48)
Starting jet	85	85	85	85
Jet needle	NOZ E (NOZ F)	NOZ G (NOZ H)	NOZ H (NOZ I)	NOZ G (NOZ I/NOZ H)
Needle position from top	III	IV	III	III
Throttle valve	7	6,5	6,5	6,5
Air adjustment screw open	1,5	1,5	1,5	1,5
Performance restrictor	–	–	–	–
Power jet jet	55	–	–	–

TECHNICAL DATA - ENGINE 250/300/380 SX / EXC 2001 (all models out of USA)

Engine	**250 SX**	**250 EXC**	**300 EXC**	**380 SX**	**380 EXC**
Design	Liquid-cooled single-cylinder two-stroke engine with **KTM** **T**win **V**alve **C**ontrol exhaust system and **K**TM **T**orque **C**hamber				
Piston displacement	249 ccm		297 ccm	368 ccm	
Bore / stroke	66.4 / 72 mm (2.62 / 2.84 in)		72 / 73 mm (2.84 / 2.88 in)	78 / 77 mm (3 / 2.98 in)	
Fuel	unleaded SUPER fuel, research octane no 95, mixed with high-grade two stroke oil (Shell Advance Racing X)				
Oil / gasoline ratio	1:40 – 1:60 when using high grade two stroke oil. When in doupt, please contact your importer or use 1:40 mix ratio to be on the safe side				
Crankshaft bearing	1 deep-groove ball bearing / 1 cylinder roller bearing				
Connecting rod bearing	needle bearing				
Piston pin bearing	needle bearing				
Piston	cast piston		forged piston	cast piston	
Piston ring	one plain compression ring	two plain compression rings			
Dimension "X" (upper edge piston - upper edge cylinder)	0 + 0.1 mm (0 + 0.004 in)				
Ignition timing	2,2 mm (0,09 in)(19 °) BTDC	2.0 mm (0.07 in) (17 °) BTDC		2.2 mm (0.09 in) 17 °) BTDC	
Spark plug	NGK BR 8 ECM				
Electrode gap	0.6 mm (0.024 in)				
Dimension "Z" (height of the control flap)	49,5 mm (1.94 in)		46 mm (1.7 in)	50.5 mm (1.99 in)	
TVC start open TVC fully open	5000/min 7000/min		5900/min 7750/min	5200/min 7200/min	
Primary drive	straight cut spur gears, primary ratio 25:72			straight cut spur gears, primary ratio 26:72	
Clutch	multiple disc clutch in oil bath, hydraulic operated (Shell HF-E15)				
Transmission	5 speed, claw actuated				
Gear ratio 1st Gear 2nd Gear 3rd Gear 4th Gear 5th Gear	 15:29 17:27 19.25 21:23 23:21	 15:29 18:26 19:22 21:20 23:18		 15:29 18:26 19:24 21:23 23:21	 15:29 18:26 19:22 21:20 23:18
Gear lubrication	0,8 l engine oil 20W-40 (Shell Advance VSX4)	0,8 l engine oil 80W (Shell Gear EP 80)		0,8 l engine oil 20W-40 (Shell Advance VSX4)	0,8 l engine oil 80W (Shell Gear EP 80)
ailable chain sprockets	13t / 14t / 15t for chain 5/8 x 1/4"				
Coolant	1.3 litres, 40% anti freeze, 60% water, at least -25 °C (-13 °F)				
Ignition system Generator output	KOKUSAN 2K-4 no generator	KOKUSAN 2K-3 12V 110W		KOKUSAN 2K-3 no generator	KOKUSAN 2K-3 12V 110W
Carburetor	flat-slide carburetor, carburetor setting see table 3				
Air-filter	wet foam type air filter insert				

TOLERANCES AND FITTING CLEARANCES	
Piston fitting clearance	0.05 mm (250) 0.06 mm (300) 0.08 mm (380)
Piston ring end gap	0.3–0.4 mm
Connecting rod bearing - radial clearance	0.021–0.032 mm
Transmission shafts end float	0.1–0.2 mm
Clutch springs - length	Ø 2.5 new = 43 mm, minimum length = 42 mm

GASKET THICKNESSES	
Crankcase	0.5 mm
Clutch cover	0.5 mm
Cylinder bottom gasket	as required
Available cylinder bottom gaskets	0.2/0.4/0.5/0.75 mm
Cylinder-head gasket	O-rings

TIGHTENING TORQUES		
Flange bolts - cylinder-head	M 8	35 Nm (25 ft.lb)
Nuts-cylinder base	M 10	35 Nm (25 ft.lb)
Flywheel collar nut	M 12x1	60 Nm (44 ft.lb)
Nut for primary sprocket (LH thread)	M 18x1.5	Loctite 243 150 Nm (110 ft.lb)
Nut for inner clutch hub	M 18x1.5	Loctite 243 100 Nm (74 ft.lb)
Crankcase and cover bolts	M 6	8 Nm (6 ft.lb)
Swingarm pivot	M 14	100 Nm (74 ft.lb)
Flat head screw release plate kickstarter	M 6x16	Loctite 648 19 Nm (14 ft.lb)
Other screws	M 6 M 8 M 10	10 Nm (7 ft.lb) 25 Nm (19 ft.lb) 45 Nm (33 ft.lb)

TABLE 4 — BASIC CARBURETOR SETTING

	250 SX	380 SX	250/300 EXC throttled	250 EXC AUS throttled	300 EXC AUS throttled	380 EXC throttled
Carburetor	Keihin PWK 38 AG PJ	Keihin PWK 38 AG	Keihin PWK 38 AG	Keihin PWK 38 AG	Keihin PWK 38 AG	Keihin PWK 38 AG
Carburetor setting number	010300	070300	020300	040300	060300	080300
Main jet	172 (170,175)	170 (168,172)	175 (172,178,180)	178 (175,180)	175 (172,178)	170 (168,172)
Idling jet	48 (45,50)	45 (48)	35	45 (48)	45 (48)	45 (48)
Starting jet	85	85	85	85	85	85
Jet needle	NOZ E (NOZ F)	NOZ G (NOZ I/NOZ H)	R 1475 J	NOZ G (NOZ H)	NOZ H (NOZ I)	NOZ G (NOZ I/NOZ H)
Needle position from top	III	III	III	IV	III	III
Throttle valve	7	6,5	6,5	6,5	6,5	6,5
Air adjustment screw open	1,5	1,5	1,5	1,5	1,5	1,5
Performance restrictor	–	–	slide stop 34mm	slide stop 34mm	slide stop 34mm	slide stop 36mm
Power jet jet	55	–	–	–	–	–

HEAD WORD INDEX

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