OWNER'S MANUAL 2016

WWW.KTM.COM

50 SX
50 SX Mini

Art. no. 3213327en

DEAR KTM CUSTOMER

Congratulations on your decision to purchase a KTM motorcycle. You are now the owner of a state-of-the-art sports motorcycle that will give you and your child enormous pleasure if you service and maintain it accordingly.

We hope you enjoy your new vehicle!

Enter the serial numbers of your vehicle below.

Chassis number (☛ p. 10)	Dealer's stamp
Engine number (☛ p. 10)	

The Owner's Manual contained the latest information for this model series at the time of going to print. Minor differences due to developments in design cannot be ruled out completely.

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KTM Sportmotorcycle GmbH
5230 Mattighofen, Austria

This document is valid for the following models:

50 SX (F6001P4)

50 SX Mini (F6001P5)

3213327en

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1 MEANS OF REPRESENTATION

1.1 Symbols used

The meaning of specific symbols is described below.

✓	Indicates an expected reaction (e.g. of a work step or a function).
✗	Indicates an unexpected reaction (e.g. of a work step or a function).
	All work marked with this symbol requires specialist knowledge and technical understanding. In the interest of the safety of your child, have these jobs performed in an authorized KTM workshop. There, your motorcycle will be optimally cared for by specially trained experts using the specialist tools required.
	Indicates a page reference (more information is provided on the specified page).
	Indicates information with more details or tips.
»	Indicates the result of a testing step.

1.2 Formats used

The typographical formats used in this document are explained below.

Proprietary name	Indicates a proprietary name.
Name®	Indicates a protected name.
Brand™	Indicates a brand available on the open market.
Underlined terms	Refer to technical details of the vehicle or indicate technical terms, which are explained in the glossary.

2 SAFETY ADVICE

2.1 Use definition - intended use

KTM sport motorcycles are designed and built to withstand the normal stresses and strains of competitive use. The motorcycles comply with currently valid regulations and categories of the top international motorsport organizations.

Info
The motorcycle may only be used in closed off areas remote from public road traffic.

2.2 Safety advice

A number of safety instructions need to be followed to operate the vehicle safely. Therefore, read this manual carefully. The safety instructions are highlighted in the text and are referred to at the relevant passages.

Info
The vehicle has various information and warning labels at prominent locations. Do not remove information/warning labels. If they are missing, you or others may not recognize dangers and may therefore be injured.

2.3 Degrees of risk and symbols

Danger
Indicates a danger that will immediately and invariably lead to fatal or serious permanent injury if the appropriate measures are not taken.

Warning
Indicates a danger that is likely to lead to fatal or serious injury if the appropriate measures are not taken.

Caution
Indicates a danger that may lead to minor injuries if the appropriate measures are not taken.

Note
Indicates a danger that will lead to considerable machine and material damage if the appropriate measures are not taken.

Warning
Indicates a danger that will lead to environmental damage if the appropriate measures are not taken.

2.4 Tampering warning

Tampering with the noise control system is prohibited. Federal law prohibits the following acts or the causing thereof:

1 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, or
2 the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

Among those acts presumed to constitute tampering are the acts listed below:

1 Removal or puncturing of the main silencer, baffles, header pipes or any other components which conduct exhaust gases.
2 Removal or puncturing of parts of the intake system.
3 Lack of proper maintenance.
4 Replacing moving part of the vehicle, or parts of the exhaust or intake system, with parts other than those specified by the manufacturer.

2.5 Safe operation

Danger
Danger of accidents Danger arising from the rider's judgement being impaired.

– Do not operate the vehicle while under the influence of alcohol, drugs and certain medications or physically or mentally impaired.

Danger
Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and/or death.

– When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.

Warning

Danger of burns Some vehicle components become very hot when the vehicle is operated.

– Do not touch hot components such as exhaust system, radiator, engine, shock absorber, and the brake system. Allow these components to cool down before starting work on them.

Only operate the vehicle when it is in perfect technical condition, in accordance with its intended use and in a safe and environmentally compatible manner.
The vehicle should only be used by trained persons.
Have malfunctions that impair safety promptly eliminated by an authorized KTM workshop.
Adhere to the information and warning labels on the vehicle.

2.6 Protective clothing

Warning

Risk of injury Missing or poor protective clothing presents an increased safety risk.

– Wear protective clothing (helmet, boots, gloves, pants and jacket with protectors) every time you ride the vehicle. Always wear protective clothing that is in good condition and meets the legal requirements.

In the interest of your own safety, KTM recommends that you only operate the vehicle while wearing protective clothing.

2.7 Work rules

Special tools are necessary for certain tasks. The tools are not contained in the vehicle but can be ordered under the number in parentheses. E.g.: bearing puller (15112017000)
During assembly, non-reusable parts (e.g. self-locking screws and nuts, seals and seal rings, O-rings, pins, lock washers) must be replaced by new parts.
In some instances, a thread locker (e.g. **Loctite®**) is required. The manufacturer instructions for use must be followed.
After disassembly, clean the parts that are to be reused and check them for damage and wear. Change damaged or worn parts.
After you complete the repair or service work, check the operating safety of the vehicle.

2.8 Environment

If you use your motorcycle responsibly, you can ensure that problems and conflicts do not occur. To protect the future of the motorcycle sport, make sure that you use your motorcycle legally, display environmental consciousness, and respect the rights of others.
When disposing of used oil, other operating and auxiliary fluids, and used components, comply with the laws and regulations of the respective country.
Because motorcycles are not subject to the EU regulations governing the disposal of used vehicles, there are no legal regulations that pertain to the disposal of an end-of-life motorcycle. Your authorized KTM dealer will be glad to advise you.

2.9 Owner's Manual

It is important that you read this Owner's Manual carefully and completely before making your first trip. The Owner's Manual contains useful information and many tips on how to operate, handle, and maintain your motorcycle. Only then will you find out how to customize the vehicle ideally for your own use and how you can protect yourself from injury.
Keep the Owner's Manual in an accessible place to enable you to refer to it as needed.
If you would like to know more about the vehicle or have questions on the material you read, please contact an authorized KTM dealer.
The Owner's Manual is an important component of the vehicle and should be handed over to the new owner if the vehicle is sold.

3 IMPORTANT NOTES

3.1 Guarantee, warranty

The work prescribed in the service schedule must be carried out by an authorized KTM workshop only and confirmed in the customer's Service & Warranty Booklet and in the **KTM Dealer.net**; otherwise, all warranty claims will be void. No warranty claims can be considered for damage resulting from manipulations and/or alterations to the vehicle.
Additional information on the guarantee or warranty and the procedures involved can be found in the Service & Warranty Booklet.

3.2 Operating and auxiliary substances

Warning
Environmental hazard Improper handling of fuel is a danger to the environment.

– Do not allow fuel to get into the ground water, the ground, or the sewage system.

Use operating and auxiliary substances (such as fuel and lubricants) as specified in the Owner's Manual.

3.3 Spare parts, accessories

For your own safety, only use spare parts and accessory products that are approved and/or recommended by KTM and have them installed by an authorized KTM workshop. KTM accepts no liability for other products and any resulting damage or loss.
Certain spare parts and accessory products are specified in parentheses in the descriptions. Your authorized KTM dealer will be glad to advise you.

The current **KTM PowerParts** for your vehicle can be found on the KTM website.
International KTM Website: http://www.ktm.com

3.4 Service

A prerequisite for perfect operation and prevention of premature wear is that the service, care, and tuning work on the engine and chassis is properly carried out as described in the Owner's Manual. Incorrect adjustment and tuning of the engine and chassis can lead to damage and breakage of components.
Use of the vehicle under difficult conditions, such as on sand or on wet and muddy surfaces, can lead to considerably more rapid wear of components such as the drive train, brake system, or suspension components. For this reason, it may be necessary to inspect or replace parts before the next scheduled service.
It is imperative that you adhere to the stipulated run-in times and service intervals. If you observe these exactly, you will ensure a much longer service life for your motorcycle.

3.5 Figures

The figures contained in the manual may depict special equipment.
In the interest of clarity, some components may be shown disassembled or may not be shown at all. It is not always necessary to disassemble the component to perform the activity in question. Please follow the instructions in the text.

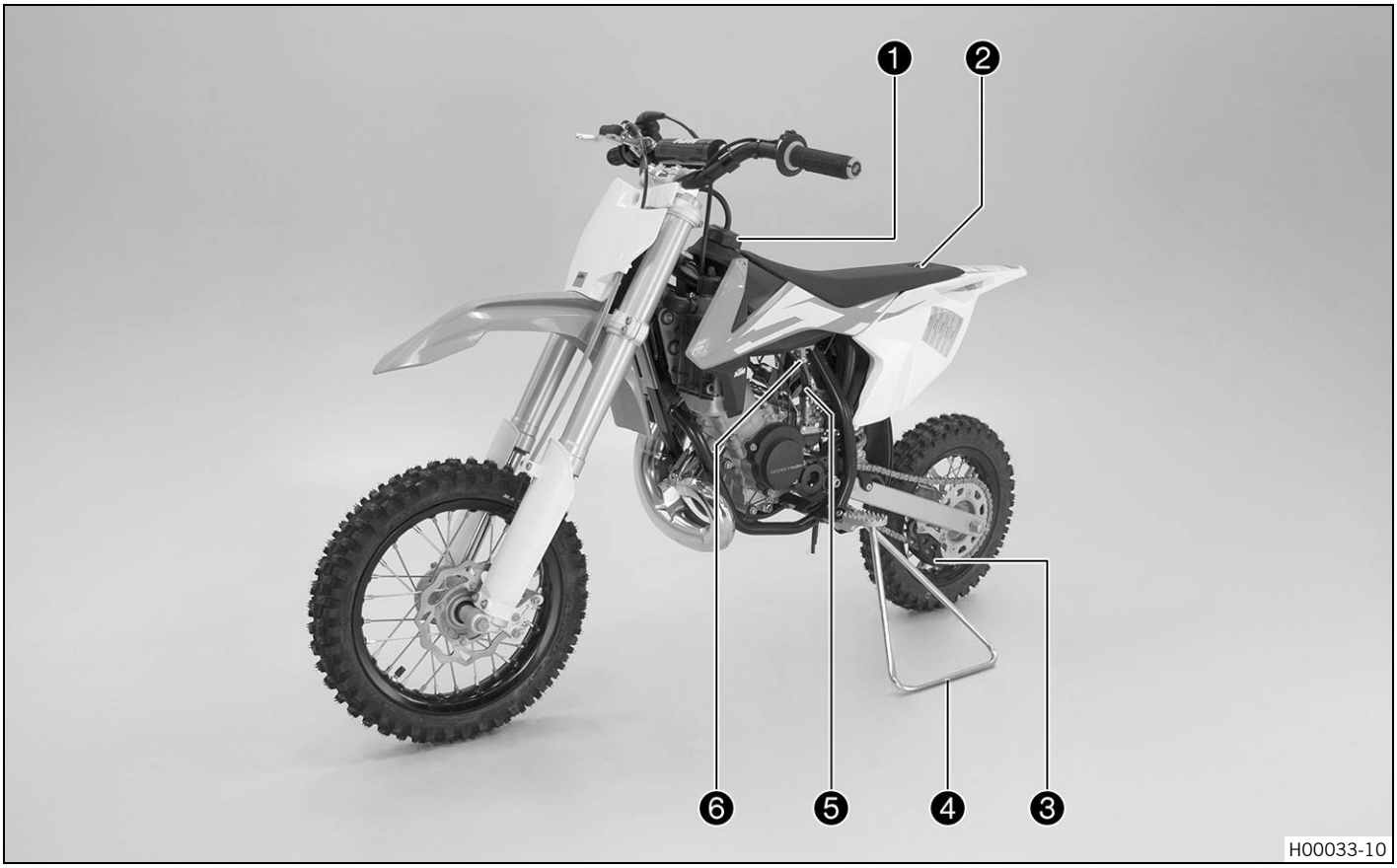
3.6 Customer service

Your authorized KTM dealer will be happy to answer any questions you may have on your vehicle and KTM.

A list of authorized KTM dealers can be found on the KTM website.
International KTM Website: http://www.ktm.com

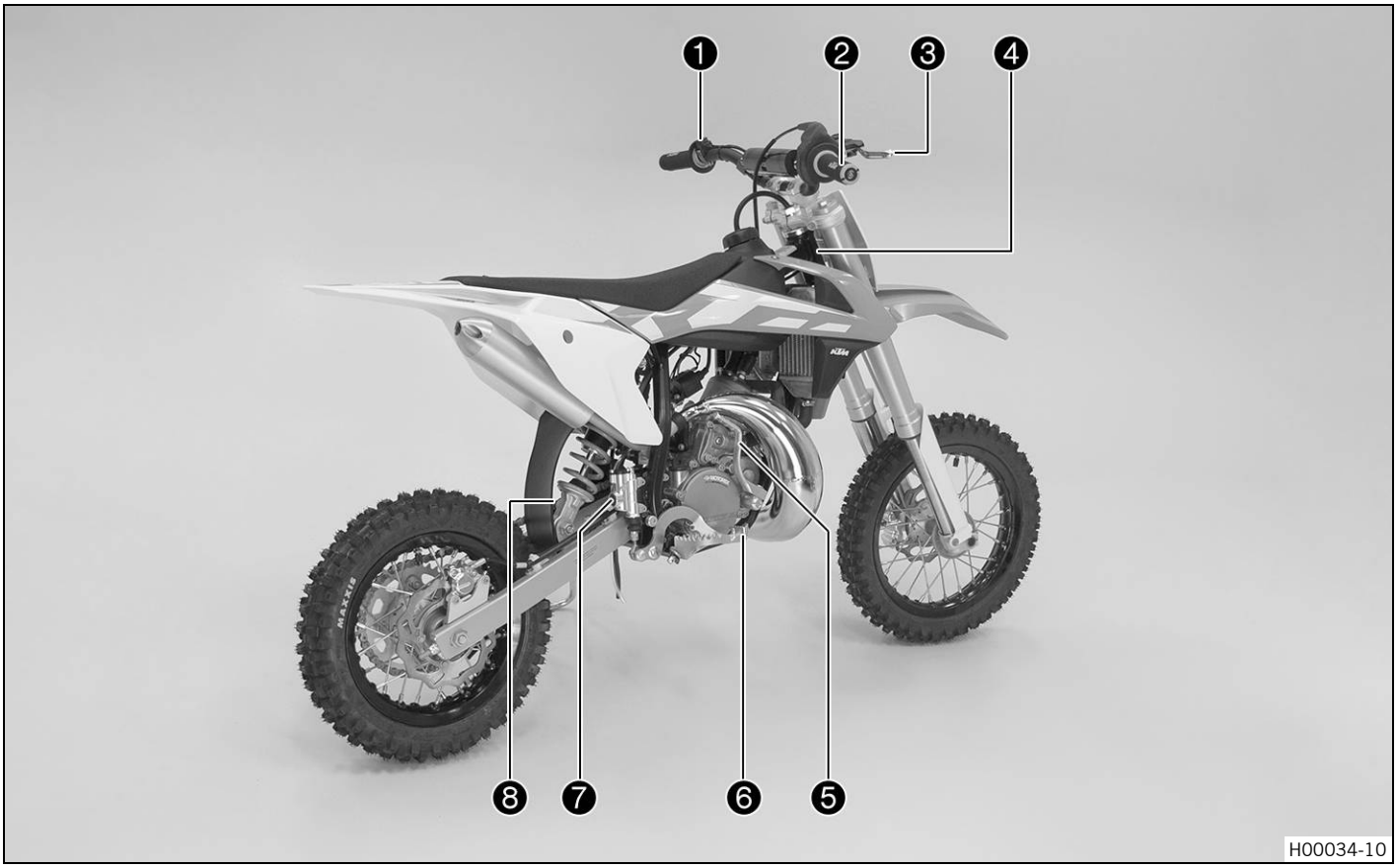
4 VIEW OF VEHICLE

4.1 View of vehicle, front left (example)



1	Filler cap
2	Quick release of seat
3	Chain guide
4	Plug-in stand (☛ p. 14)
5	Choke (☛ p. 14)
6	Fuel tap (☛ p. 13)

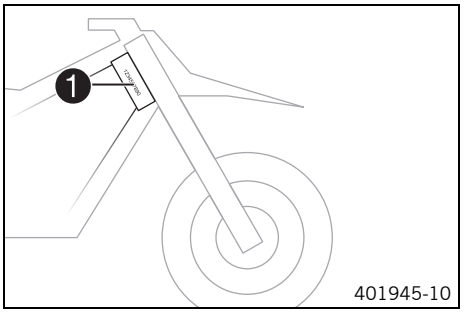
4.2 View of vehicle, rear right (example)



1	Kill switch (☛ p. 12)
2	Throttle grip (☛ p. 12)
3	Hand brake lever (☛ p. 12)
4	Chassis number (☛ p. 10)
5	Kick starter (☛ p. 14)
6	Foot brake lever (☛ p. 14)
7	Level viewer for brake fluid, rear
8	Shock absorber rebound adjustment

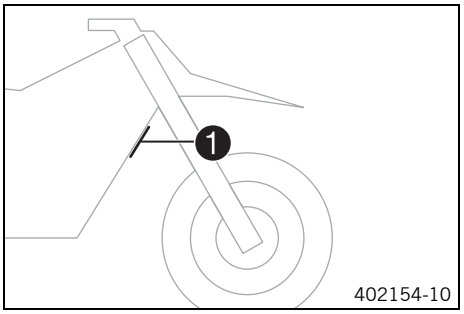
5 SERIAL NUMBERS

5.1 Chassis number



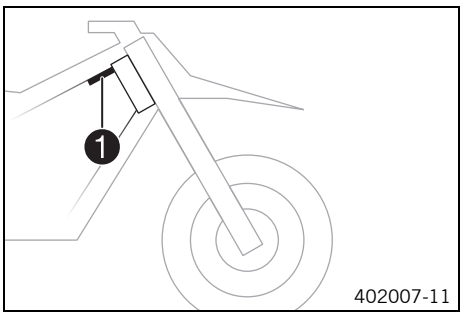
The chassis number ❶ is stamped on the right side of the steering head.

5.2 Type label



(50 SX)

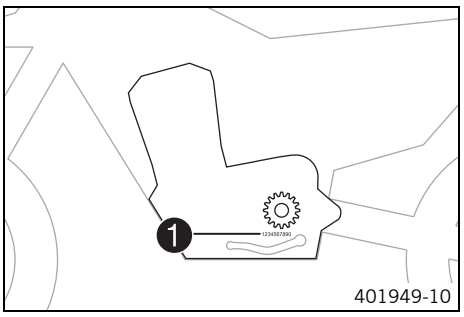
The type label ❶ is located on the front frame tube.



(50 SX Mini)

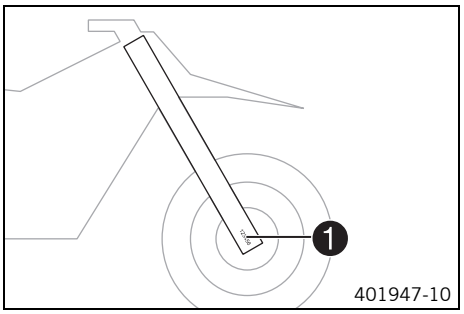
The type label ❶ is located on the frame at the front right.

5.3 Engine number



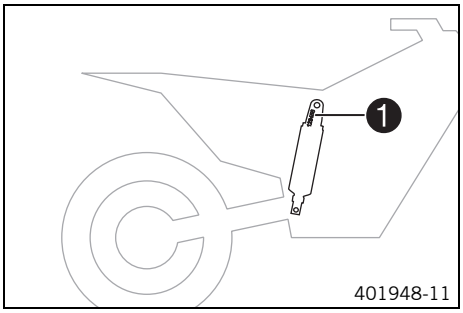
The engine number ❶ is located on the left side of the engine under the engine sprocket.

5.4 Fork part number



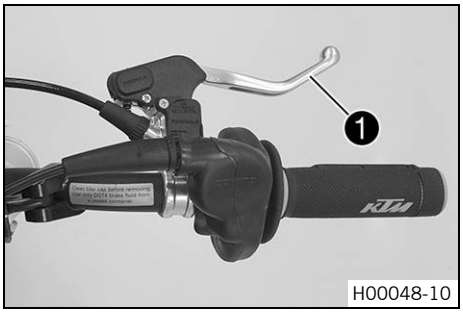
The fork part number ❶ is stamped on the outside of the axle clamp.

5.5 Shock absorber part number



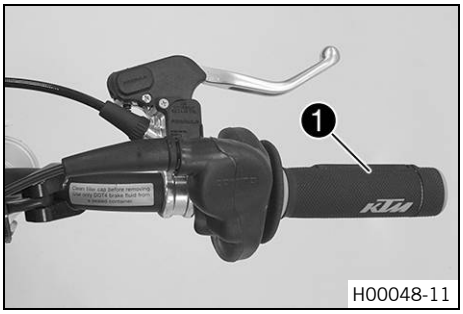
The shock absorber part number ❶ is stamped on the top of the shock absorber above the adjusting ring towards the rear.

6.1 Hand brake lever



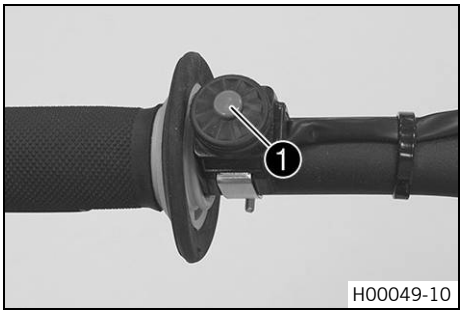
Hand brake lever ❶ is fitted on the right side of the handlebar.
The hand brake lever is used to activate the front brake.

6.2 Throttle grip



Throttle grip ❶ is fitted on the right side of the handlebar.

6.3 Kill switch



Kill switch ❶ is fitted on the left side of the handlebar.

Possible states

- Kill switch ⊗ in basic position – In this position, the ignition circuit is closed, and the engine can be started.
- Kill switch ⊗ pressed – In this position, the ignition circuit is interrupted, a running engine stops, and a non-running engine will not start.

6.4 Opening filler cap

Danger

Fire hazard Fuel is highly flammable.

– Never refuel the vehicle near open flames or burning cigarettes, and always switch off the engine first. Be careful that no fuel is spilt, especially on hot vehicle components. Clean up spilt fuel immediately.
– The fuel in the fuel tank expands when warm and may emerge if overfilled. Follow the instructions on refueling.

Warning

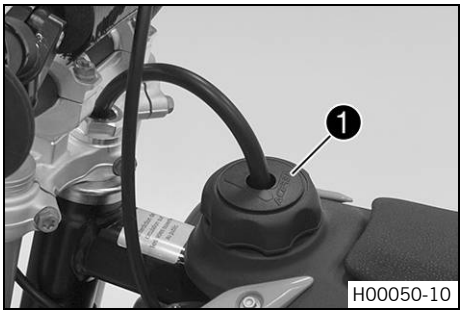
Danger of poisoning Fuel is poisonous and a health hazard.

– Fuel must not come into contact with the skin, eyes, or clothing. Do not breathe in the fuel vapors. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician immediately. Change clothing that has been contaminated with fuel. Store fuel properly in a suitable canister and keep away from children.

Warning

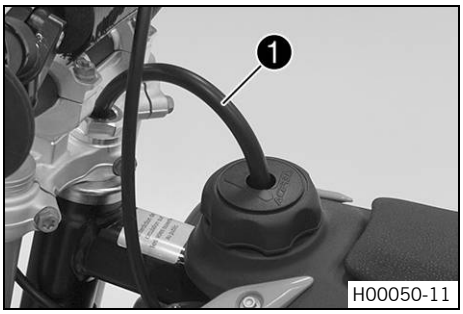
Environmental hazard Improper handling of fuel is a danger to the environment.

– Do not allow fuel to get into the ground water, the ground, or the sewage system.



– Turn the tank cap ❶ counterclockwise and pull it up.

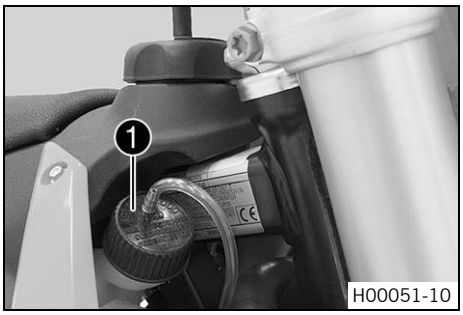
6.5 Closing filler cap



– Put the tank cap on and turn it clockwise.

Info
Run the fuel tank breather hose ❶ without kinks.

6.6 Opening oil tank cap (50 SX Mini)



– Turn the oil tank cap ❶ counterclockwise and pull it up.

6.7 Closing oil tank cap (50 SX Mini)

– Put the oil tank cap on and turn it clockwise.

Info
Run the oil tank breather hose ❶ without kinks.

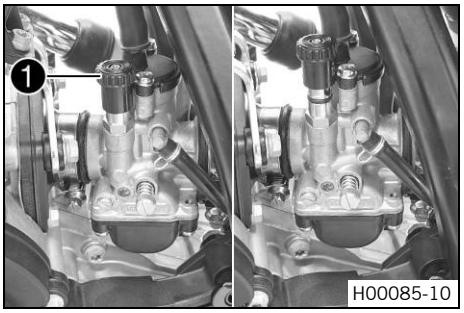
6.8 Fuel tap

Fuel tap ❶ is on the left of the fuel tank.

Possible states

- Fuel tap is closed – The knurled screw is turned all the way clockwise. Fuel cannot flow out of the fuel tank.
- Fuel tap is open – The knurled screw is turned all the way counterclockwise. Fuel can flow out of the fuel tank.

6.9 Choke (50 SX)

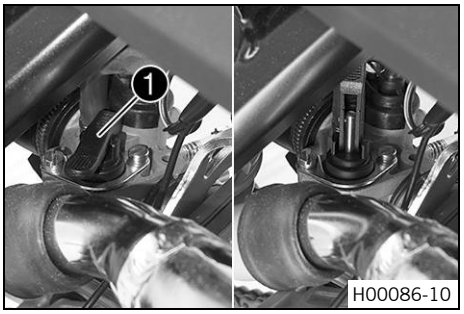


The choke knob ❶ is fitted on the left of the carburetor.
Activating the choke function frees an opening through which the engine can draw extra fuel. This results in a richer fuel-air mixture, which is needed for a cold start.

Info
If the engine is warm, the choke function must be deactivated.

Possible states
- Choke function activated – Choke knob is in upper position. The O-ring is visible.
- Choke function deactivated – Choke knob is in lower position. No O-ring is visible.

6.10 Choke (50 SX Mini)

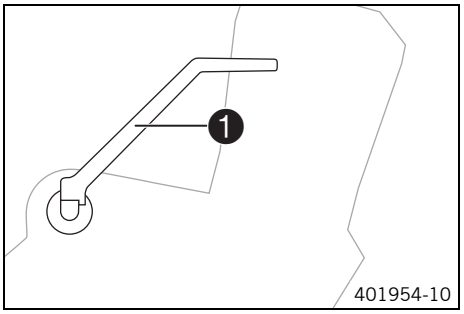


The choke lever ❶ is fitted on the right of the carburetor.
Activating the choke function frees an opening through which the engine can draw extra fuel. This results in a richer fuel-air mixture, which is needed for a cold start.

Info
If the engine is warm, the choke function must be deactivated.

Possible states
- Choke function activated – The choke lever is pushed up all the way.
- Choke function deactivated – The choke lever is pushed down all the way.

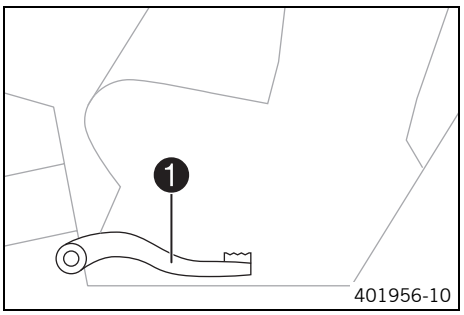
6.11 Kick starter



Kick starter ❶ is fitted on the right side of the engine.
The kick starter can be swiveled.

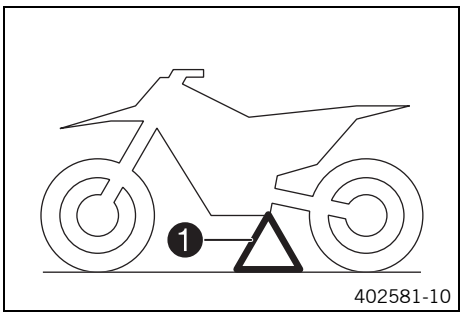
Info
Before riding, swing the kick starter inwards towards the engine.

6.12 Foot brake lever



Foot brake lever ❶ is located in front of the right footrest.
The rear brake is engaged with the foot brake lever.

6.13 Plug-in stand



The fixture for plug-in stand ❶ is located on the frame on the left side of the vehicle.
The plug-in stand is used to park the motorcycle.

Info
Remove the plug-in stand before riding.

7 PREPARING FOR USE

7.1 Advice on first use

Warning
Danger of accident Physical and mental readiness of a child.

– Your child must be able to ride a bicycle and must be able to erect the vehicle independently after a fall. In addition, your child must understand the regulations and instructions from you or from other guardians. Do not ask too much of your child; participation in competitive activities should not be considered until your child's stamina, riding techniques and motivation are at the necessary levels. Children often underestimate or fail to recognize dangerous situations; make it clear to your child that he or she should not, under any circumstances, operate the vehicle without supervision and that your child may only drive at speeds that commensurate with the child's riding abilities and the road conditions.
– Only let your child ride on the vehicle if it is physically and mentally ready to operate the vehicle.

Warning
Risk of injury Missing or poor protective clothing presents an increased safety risk.

– Wear protective clothing (helmet, boots, gloves, pants and jacket with protectors) every time you ride the vehicle. You and your child should always used protective clothing that is in good condition and meets the legal requirements. When you ride a motorcycle, set an example for your child and wear suitable protective clothing.

Warning
Danger of crashing Poor vehicle handling due to different tire tread patterns on front and rear wheels.

– The front and rear wheels must be fitted with tires with similar tread patterns to prevent loss of control over the vehicle.

Warning
Danger of accidents Critical riding behavior due to inappropriate riding.

– Ensure that your child adapts the riding speed to the road conditions and to his or her riding abilities.

Warning
Danger of accidents Accident risk caused by presence of a passenger.

– Your vehicle is not designed to carry passengers. Do not ride with a passenger.

Warning
Danger of accidents Brake system failure.

– If the foot brake lever is not released, the brake linings drag continuously. The rear brake may fail due to overheating. Ensure that your child raises his or her foot from the foot brake lever when the child does not want to brake.

Warning
Danger of accidents Destruction of chassis components.

– Do not exceed the maximum allowable rider weight.

Warning
Risk of misappropriation Usage by unauthorized persons.

– Never leave the vehicle while the engine is running. Secure the vehicle against use by unauthorized persons.

Info
When using your motorcycle, remember that others may feel disturbed by excessive noise.

– Make sure that the pre-delivery inspection work has been carried out by an authorized KTM workshop.
  ✓ You receive a delivery certificate and the Service and Warranty Booklet at vehicle handover.
– Carefully read the entire Owner's Manual together with your child before going for the first ride.

Info
Pay special attention to the safety warnings and injury risks.
Explain to your child the techniques of riding and falling, e.g. how shifting weight can influence handling characteristics.

– Familiarize your child with the controls.
– Adjust the basic position of the hand brake lever. (☛ p. 45)
– Adjust the basic position of the foot brake lever. 🔧 (☛ p. 50)
– Before using the vehicle for the first time, ensure that the basic settings of the chassis are suitable for the weight of your child.
– Accustom your child to the handling of the motorcycle on suitable terrain, preferably on a large open meadow.

Info
To give your child a feeling for the brake system, you should push your child at first. Do not start the engine until your child is able to apply the necessary front brake pressure.
Initially, let your child ride to another person who can help your child stop and turn.

– Erect obstacles for your child to navigate around to accustom your child to handling the vehicle.
– Your child should also try to ride as slowly as possible and in a standing position to get a better feeling for the vehicle.
– Do not let your child ride on terrain that exceeds your child's capabilities and experience.
– Your child should hold the handlebar firmly with both hands and keep his or her feet on the footrests when riding.
– Do not exceed the maximum permissible weight of the rider.

Guideline

Maximum rider weight	< 35 kg (< 77 lb.)
Maximum rider size	< 130 cm (< 51.2 in)

– Check the spoke tension. (☛ p. 57)

Info
The spoke tension must be checked after half an hour of operation.

– Run the engine in. (☛ p. 16)

7.2 Running in the engine

– During the running-in phase, do not exceed the specified engine performance.

Guideline

Maximum engine performance	
During the first 3 operating hours	< 70 %
During the first 5 operating hours	< 100 %

– Avoid fully opening the throttle!

8 RIDING INSTRUCTIONS

8.1 Checks and maintenance measures when preparing for use

Info
Before each use, check the condition of the vehicle and its operating safety.
The vehicle must be in perfect technical condition when it is being operated.

– Check the gear oil level. (☛ p. 69)

(50 SX Mini)
– Check the oil level. (☛ p. 68)
– Check the front brake fluid level. (☛ p. 46)
– Check the rear brake fluid level. (☛ p. 51)
– Check the front brake linings. (☛ p. 48)
– Check the rear brake linings. (☛ p. 52)
– Check that the brake system is functioning properly.
– Check the coolant level. (☛ p. 60)
– Check the chain for dirt. (☛ p. 39)
– Check the chain, rear sprocket, engine sprocket, and chain guide. (☛ p. 41)
– Check the chain tension. (☛ p. 40)
– Check the tire condition. (☛ p. 57)
– Check the tire air pressure. (☛ p. 57)
– Check the spoke tension. (☛ p. 57)
– Clean the dust boots of the fork legs. (☛ p. 28)
– Check the air filter.
– Check the settings of all controls and ensure that they can be operated smoothly.
– Check all screws, nuts and hose clamps regularly for tightness.
– Check the fuel supply.

8.2 Starting

Danger
Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and/or death.
– When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.

Note
Engine failure High engine speeds in cold engines have a negative effect on the service life of the engine.
– Always warm up the engine at low engine speeds.

Info
If the motorcycle is unwilling to start, the cause can be old fuel in the float chamber. The flammable elements of the fuel evaporate after a long time of standing.
If the float chamber is filled with fresh fuel, the engine starts immediately.

Engine has been out of use for more than 1 week
– Empty the carburetor float chamber. 🔧
– Turn the knurled screw on the fuel tap all the way counterclockwise.
✓ Fuel can flow from the fuel tank to the carburetor.

The engine is cold
– Raise the motorcycle with a lift stand. (☛ p. 28)

Info
The rear wheel must not be in contact with the ground.

(50 SX)
– Pull the choke knob fully out and turn it by max. ¼ turn.

(50 SX Mini)

– Push the choke lever up all the way.

– Forcefully step on the kick starter, pushing it all the way forward.

Info
Do not open the throttle.

8.3 Starting up

Info
The plug-in stand must be removed before beginning to ride.

– Open the throttle carefully.

8.4 Riding

Info
If you hear unusual noises while riding, stop immediately, switch off the engine, and contact an authorized KTM workshop.

– If the choke function was activated, deactivate it after the engine has warmed up.

– After reaching maximum speed by fully opening the throttle grip, turn the throttle back so it is ¾ open. This will barely reduce the speed but fuel consumption will be considerably lower.

– Your child should always open the throttle only as much as the engine can handle – abruptly opening the throttle increases fuel consumption.

– Your child should switch off the engine if he or she expects to be standing for a long time.

Guideline

≥ 2 min

8.5 Braking

Warning
Danger of accidents If you brake too hard, the wheels can lock.

– Adapt your braking to the traffic situation and the road conditions.

Warning
Danger of accidents Reduced braking efficiency caused by spongy pressure point of front or rear brake.

– Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)

Warning
Danger of accidents Reduced braking efficiency due to a wet or dirty brake system.

– Clean or dry a dirty or wet brake system by riding and braking gently.

– On sandy, wet or slippery surfaces, use the rear brake.

– Braking should always be completed before you go into a bend.

8.6 Stopping, parking

Warning
Risk of misappropriation Usage by unauthorized persons.

– Never leave the vehicle while the engine is running. Secure the vehicle against use by unauthorized persons.

Warning
Danger of burns Some vehicle components become very hot when the vehicle is operated.

– Do not touch hot components such as exhaust system, radiator, engine, shock absorber, and the brake system. Allow these components to cool down before starting work on them.

Note
Material damage The vehicle may be damaged by incorrect procedure when parking.
Significant damage may be caused if the vehicle rolls away or falls over.
The components for parking the vehicle are designed only for the weight of the vehicle.

– Park the vehicle on a firm and level surface.
– Ensure that nobody sits on the vehicle when the vehicle is parked on a stand.

Note

Fire hazard Some vehicle components become very hot when the vehicle is operated.

– Do not park the vehicle near flammable or explosive substances. Do not place objects on the vehicle while it is still warm from being run. Always let the vehicle cool first.

– Apply the brakes on the motorcycle.
– Press and hold the kill switch ⊠ while the engine is idling until the engine stops.
– Turn the knurled screw on the fuel tap all the way clockwise.
– Park the motorcycle on firm ground.

8.7 Transport

Note

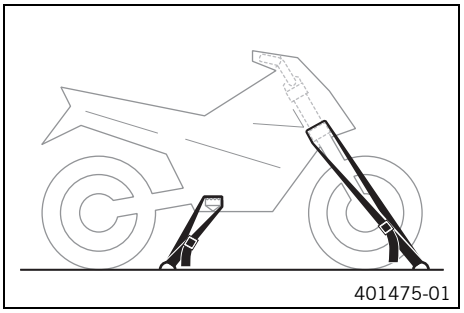
Danger of damage The parked vehicle may roll away or fall over.

– Always place the vehicle on a firm and even surface.

Note

Fire hazard Some vehicle components become very hot when the vehicle is operated.

– Do not park the vehicle near flammable or explosive substances. Do not place objects on the vehicle while it is still warm from being run. Always let the vehicle cool first.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– Switch off the engine.
– Use tension belts or other suitable devices to secure the motorcycle against accidents or falling over.

8.8 Refueling

Danger

Fire hazard Fuel is highly flammable.

– Never refuel the vehicle near open flames or burning cigarettes, and always switch off the engine first. Be careful that no fuel is spilt, especially on hot vehicle components. Clean up spilt fuel immediately.
– The fuel in the fuel tank expands when warm and may emerge if overfilled. Follow the instructions on refueling.

Warning

Danger of poisoning Fuel is poisonous and a health hazard.

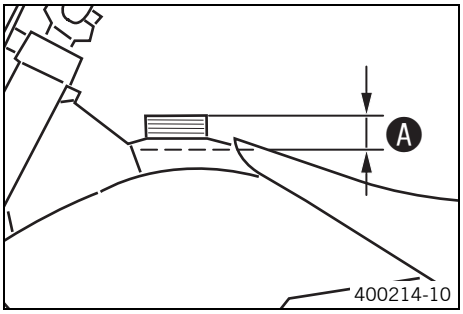
– Fuel must not come into contact with the skin, eyes, or clothing. Do not breathe in the fuel vapors. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician immediately. Change clothing that is contaminated with fuel.

Warning

Environmental hazard Improper handling of fuel is a danger to the environment.

– Do not allow fuel to get into the ground water, the ground, or the sewage system.

– Switch off the engine.
– Open the filler cap. (☛ p. 12)



– Fill the fuel tank with fuel up to measurement Ⓐ.

Guideline

Measurement of Ⓐ		35 mm (1.38 in)
Fuel tank capacity, approx. (50 SX Mini)	2.1 l (2.2 qt.)	Super unleaded (ROZ 95/RON 95/PON 91) (☛ p. 82)
Fuel tank capacity, approx. (50 SX)	2.3 l (2.4 qt.)	Super unleaded (95 octane) mixed with 2-stroke engine oil (1:60) (☛ p. 82)

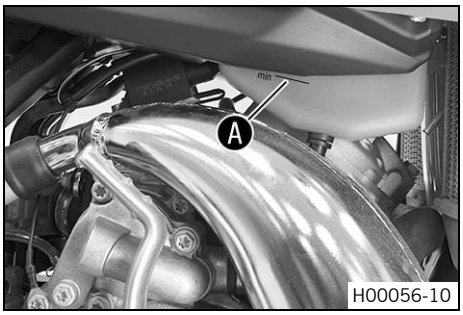
– Close the filler cap. (☛ p. 13)

8.9 Filling up with oil (50 SX Mini)

Warning

Engine failure If the vehicle is run without 2-stroke oil in the tank, the result is engine failure.

– The oil tank must always be filled up to the **MIN** mark.



– Switch off the engine.
– Open the oil tank cap. (☛ p. 13)
– Fill the oil tank at least up to the **MIN** mark Ⓐ.

Guideline

MIN mark		Sufficient for a single tank filling
Oil tank contents ca.	0.2 l (0.2 qt.)	Engine oil, 2-stroke (☛ p. 81)

– Close the oil tank cap. (☛ p. 13)

9 SERVICE SCHEDULE

9.1 Service schedule

	Once after 10 operating hours	Every 20 operating hours	Every 40 operating hours	Every 80 operating hours	Annually
Check the front brake linings. (☛ p. 48)	○	●	●	●	
Check the rear brake linings. (☛ p. 52)	○	●	●	●	
Check the brake discs. (☛ p. 46)	○	●	●	●	
Check brake lines for damage and leakage.	○	●	●	●	
Change the sealing sleeves of the foot brake cylinder. 🔧		●	●	●	
Change the rear brake fluid. 🔧					●
Check the rear brake fluid level. (☛ p. 51)	○	●	●	●	
Check the free travel of the foot brake lever. (☛ p. 49)	○	●	●	●	
Check the frame and swingarm. 🔧		●	●	●	
Check swingarm bearing. 🔧		●	●	●	
Check the heim joints on the upper and lower shock absorbers. 🔧		●	●	●	
Service the fork. 🔧			●	●	
Service the shock absorber. 🔧				●	
Check the tire condition. (☛ p. 57)	○	●	●	●	
Check the tire air pressure. (☛ p. 57)	○	●	●	●	
Check wheel bearing for play. 🔧		●	●	●	
Check the wheel hubs. 🔧		●	●	●	
Check rim run-out. 🔧	○	●	●	●	
Check the spoke tension. (☛ p. 57)	○	●	●	●	
Check the chain, rear sprocket, engine sprocket, and chain guide. (☛ p. 41)	○	●	●	●	
Check the chain tension. (☛ p. 40)	○	●	●	●	
Lubricate all moving parts (e. g. hand levers, chain, ...) and check for smooth operation. 🔧	○	●	●	●	
Change the front brake fluid. 🔧					●
Check the front brake fluid level. (☛ p. 46)	○	●	●	●	
Check the play of the handbrake lever. (☛ p. 45)	○	●	●	●	
Grease the steering head bearing. 🔧 (☛ p. 33)					●
Check play of steering head bearing. (☛ p. 32)	○	●	●	●	
Check the clutch. 🔧			●	●	
Change the piston. 🔧			●	●	
Change the connecting rod, conrod bearing and crank pin. 🔧			●	●	
Change the crankshaft bearing. 🔧			●	●	
Check the transmission. 🔧			●	●	
Change all engine bearings. 🔧				●	
Change the gear oil. 🔧 (☛ p. 69)	○		●	●	
Check the gear oil level. (☛ p. 69)		●	●	●	
Change the spark plug. 🔧		●	●	●	
Change the spark plug connector. 🔧			●	●	
Check the cylinder and piston. 🔧		●	●	●	
Check the intake membrane. 🔧		●	●	●	
Check all hoses (e. g. fuel, cooling, bleeding, drainage) and sleeves for tearing, tightness and correct routing. 🔧	○	●	●	●	
Check the antifreeze and coolant level. (☛ p. 59)	○	●	●	●	
Check the cables for damage and routing without sharp bends. 🔧	○	●	●	●	
Check the cables for damage, routing without sharp bends and correct adjustment.	○	●	●	●	
Clean the air filter and air filter box. 🔧 (☛ p. 37)	○	●	●	●	
Change the glass fiber yarn filling of the main silencer. 🔧 (☛ p. 38)		●	●	●	

9 SERVICE SCHEDULE

	Once after 10 operating hours	Every 20 operating hours	Every 40 operating hours	Every 80 operating hours	Annually
Check the screws and nuts for tightness. 🔧	○	•	•	•	
Check/set the carburetor components. 🔧					•
Check idle. 🔧	○	•	•	•	
Check the clutch setting. 🔧 (☛ p. 65)		•	•	•	
Final inspection: check the vehicle for operating safety and take a test ride.	○	•	•	•	
Make the service entry in the **KTM Dealer.net** and in the Service and Warranty Booklet. 🔧	○	•	•	•	

○ One-time interval

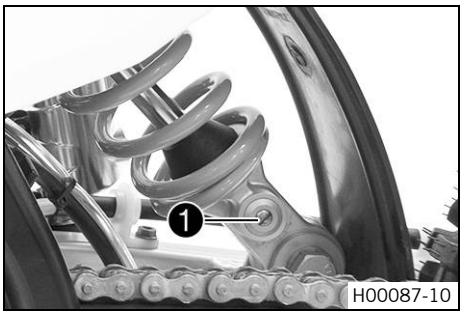
• Periodic interval

10.1 Adjusting the rebound damping of the shock absorber

Caution

Danger of accidents Disassembly of pressurized parts can lead to injury.

– The shock absorber is filled with high density nitrogen. Adhere to the description provided. (Your authorized KTM workshop will be glad to help.)



– Turn adjusting screw 1 clockwise up to the last perceptible click.
– Turn counterclockwise by the number of clicks corresponding to the shock absorber type.

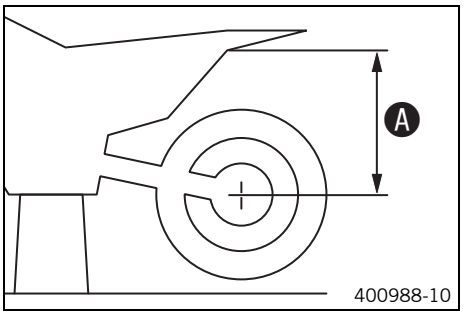
Guideline

Rebound damping (50 SX)	
Standard	10 clicks
Rebound damping (50 SX Mini)	
Standard	12 clicks

Info

Turn clockwise to increase damping; turn counterclockwise to reduce damping.

10.2 Measuring rear wheel sag unloaded



Preparatory work

– Raise the motorcycle with a lift stand. (☛ p. 28)

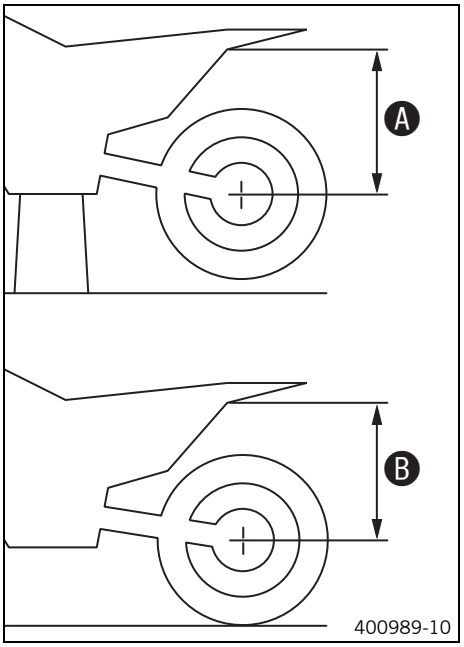
Main work

– Measure the distance – as vertical as possible – between the rear axle and a fixed point, for example, a mark on the side cover.
– Make a note of the value as measurement A.

Finishing work

– Remove the motorcycle from the lift stand. (☛ p. 28)

10.3 Checking the static sag of the shock absorber



– Measure distance A of rear wheel unloaded. (☛ p. 23)
– Hold the motorcycle upright with the aid of an assistant.
– Measure the distance between the rear axle and the fixed point again.
– Note down the value as dimension B.

Info

The static sag is the difference between measurements A and B.

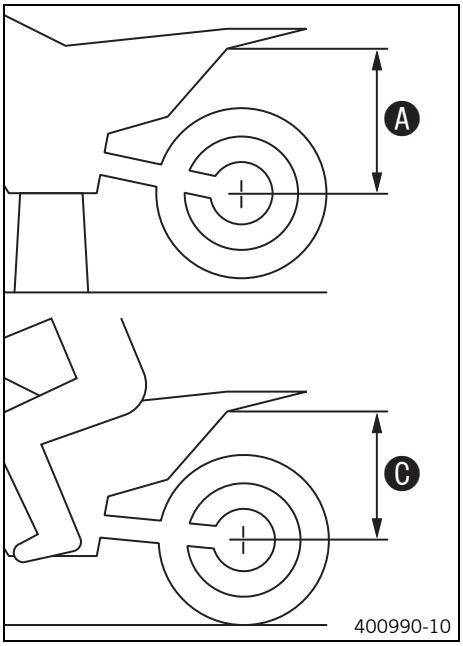
– Check the static sag.

Static sag (50 SX)	20 mm (0.79 in)

Static sag (50 SX Mini)	15 mm (0.59 in)

» If the static sag is less or more than the specified value:
  – Adjust the spring preload of the shock absorber. (☛ p. 24)

10.4 Checking the riding sag of the shock absorber



– Measure distance A of rear wheel unloaded. (☛ p. 23)
– With another person holding the motorcycle, the rider, wearing full protective clothing, sits on the seat in a normal sitting position (feet on footrests) and bounces up and down a few times.
✔ The rear wheel suspension levels out.
– Another person now measures the distance between the rear axle and the fixed point.
– Note down the value as dimension C.

Info
The riding sag is the difference between measurements A and C.

– Check the riding sag.

Riding sag (50 SX)	45... 55 mm (1.77... 2.17 in)

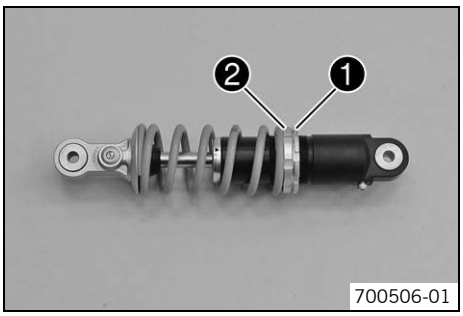
Riding sag (50 SX Mini)	40... 50 mm (1.57... 1.97 in)

» If the riding sag differs from the specified measurement:
– Adjust the riding sag. 🔧 (☛ p. 25)

10.5 Adjusting the spring preload of the shock absorber 🔧

Caution
Danger of accidents Disassembly of pressurized parts can lead to injury.
– The shock absorber is filled with high density nitrogen. Adhere to the description provided. (Your authorized KTM workshop will be glad to help.)

Preparatory work
– Raise the motorcycle with a lift stand. (☛ p. 28)
– Remove the shock absorber. 🔧 (☛ p. 35)
– After removing the shock absorber, clean it thoroughly.



Main work
– Measure the full spring length while it is under tension and note down the value.
– Loosen retaining ring 1.
– Turn adjusting ring 2 until the spring is no longer under tension.

Hook wrench (T106S)

– Measure the overall spring length while the spring is not under tension.
– Tighten the spring by turning adjusting ring 2 to the specified measurement.
Guideline

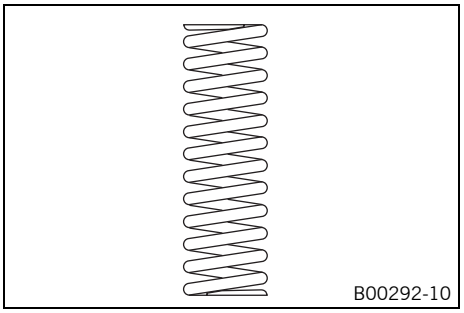
Spring preload (50 SX)	
Standard	3 mm (0.12 in)
Spring preload (50 SX Mini)	
Standard	5 mm (0.2 in)

Info
The spring preload is the difference between the relaxed spring length and the tensioned spring length.
Depending on the static sag and/or the riding sag, it may be necessary to increase or decrease the spring preload.

– Tighten retaining ring 1.

Finishing work
– Install the shock absorber. 🔧 (☛ p. 35)
– Remove the motorcycle from the lift stand. (☛ p. 28)

10.6 Adjusting the riding sag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Preparatory work
- Raise the motorcycle with a lift stand. (☛ p. 28)
- Remove the shock absorber. (☛ p. 35)
- After removing the shock absorber, clean it thoroughly.

Main work
- Choose and mount a suitable spring.

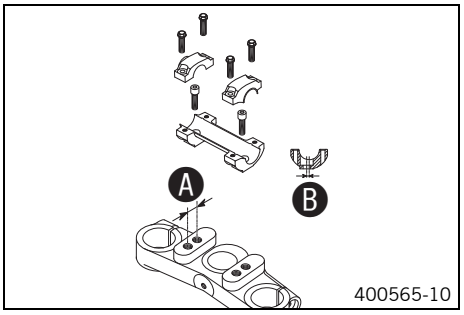
  Guideline

Spring rate (50 SX)	
Weight of rider: 15… 25 kg (33… 55 lb.)	30 N/mm (171 lb/in)
Weight of rider (standard): 25… 35 kg (55… 77 lb.)	35 N/mm (200 lb/in)
Weight of rider: 35… 45 kg (77… 99 lb.)	40 N/mm (228 lb/in)
Spring rate (50 SX Mini)	
Weight of rider: 15… 25 kg (33… 55 lb.)	65 N/mm (371 lb/in)
Weight of rider (standard): 25… 35 kg (55… 77 lb.)	75 N/mm (428 lb/in)
Weight of rider: 35… 45 kg (77… 99 lb.)	85 N/mm (485 lb/in)

Info
The spring rate is shown on the outside of the spring.
Smaller weight differences can be compensated by changing the spring preload.

Finishing work
- Install the shock absorber. (☛ p. 35)
- Remove the motorcycle from the lift stand. (☛ p. 28)
- Check the static sag of the shock absorber. (☛ p. 23)
- Check the riding sag of the shock absorber. (☛ p. 24)
- Adjust the rebound damping of the shock absorber. (☛ p. 23)

10.7 Handlebar position



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On the upper triple clamp, there are 2 holes at a distance of Ⓐ to each other.

Distance Ⓐ between holes	15 mm (0.59 in)

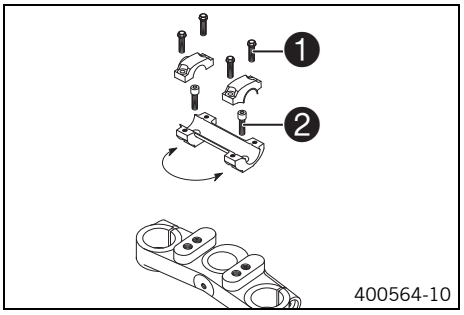
The holes on the handlebar support are placed at a distance of Ⓑ from the center.

Distance Ⓑ between holes	3.5 mm (0.138 in)

The handlebar supports can be mounted in 4 different positions.

10.8 Adjusting handlebar position

Warning
Danger of accidents Handlebar breakage.
- If the handlebar is bent or straightened it will cause material fatigue, and the handlebar can break. Always replace handlebar.



– Remove the screws 1. Take off the handlebar clamps. Remove the handlebar and lay it to one side.

Info
Protect the motorcycle and its attachments from damage by covering them. Do not bend the cables and lines.

– Remove the screws 2. Remove the handlebar support.
– Place the handlebar support in the required position. Fit and tighten the screws 2.

Guideline

Screw, handlebar support	M10	40 Nm (29.5 lbf ft)	**Loctite® 243™**

– Position the handlebar.

Info
Make sure cables and wiring are positioned correctly.

– Position the handlebar clamps. Fit and evenly tighten the screws 1.

Guideline

Screw, handlebar clamp	M8	20 Nm (14.8 lbf ft)

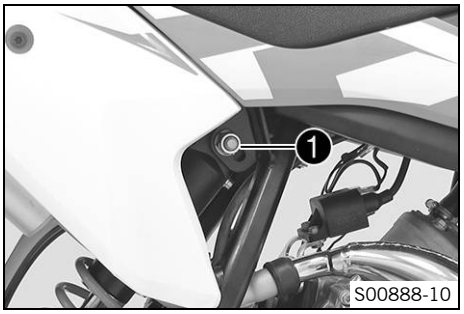
Info
Make sure the gap width is even.

10.9 Adjusting the seat height

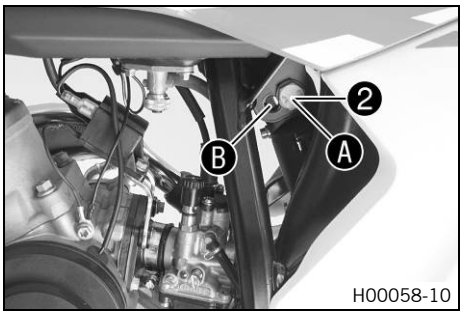
Warning
Danger of accidents Modifications to the suspension settings can seriously alter the vehicle's ride behavior.
– Following modifications, ride slowly at first to get the feel of the new ride behavior.

Preparatory work
– Raise the motorcycle with a lift stand. (☛ p. 28)

Main work



– Remove nut 1 with washer.

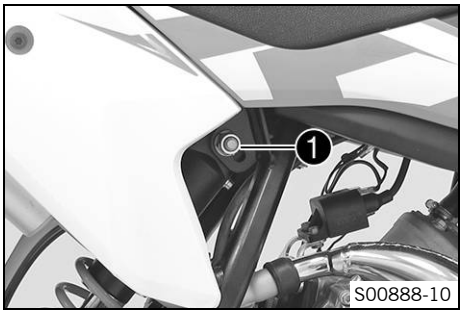


– Hold the rear wheel with the swingarm and remove screw 2.
– Position the shock absorber according to the required seat height.

Guideline

Low seat position (standard)	A
High seat position	B

– Position screw 2 with washer.



– Mount and tighten new screw ❶ with washer.
Guideline

Screw, top shock absorber	M10	45 Nm (33.2 lbf ft)

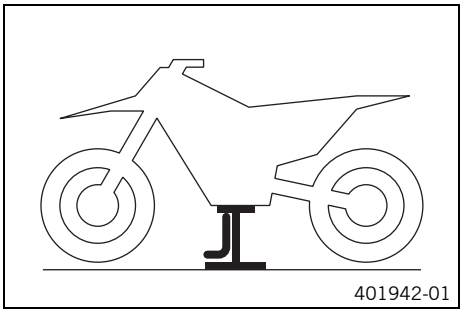
Finishing work
– Remove the motorcycle from the lift stand. (☛ p. 28)

11.1 Raising the motorcycle with a lift stand

Note

Danger of damage The parked vehicle may roll away or fall over.

– Always place the vehicle on a firm and even surface.


401942-01

– Raise the motorcycle at the frame underneath the engine.

Lift stand (78929955100)

✓ The wheels must no longer touch the ground.

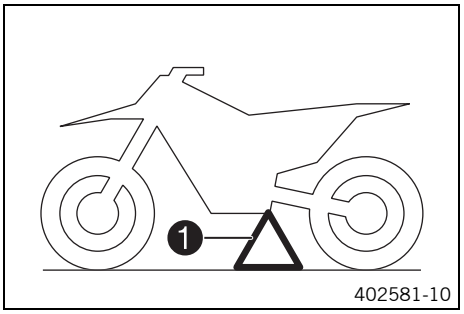
– Secure the motorcycle against falling over.

11.2 Removing the motorcycle from the lift stand

Note

Danger of damage The parked vehicle may roll away or fall over.

– Always place the vehicle on a firm and even surface.



402581-10

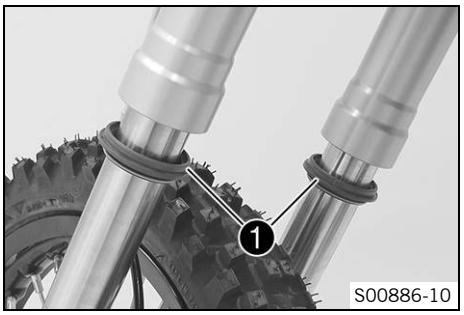
– Remove the motorcycle from the lift stand.
– Remove the lift stand.
– To park the motorcycle, insert plug-in stand ❶ into the plug-in stand bracket on the left side of the vehicle.

Info
Remove the plug-in stand before riding.

11.3 Cleaning the dust boots of the fork legs

Preparatory work

– Raise the motorcycle with a lift stand. (☛ p. 28)
– Remove the fork protector. (☛ p. 29)



S00886-10

Main work

– Push dust boots ❶ of both fork legs downward.

Info
The dust boots remove dust and coarse dirt particles from the inside fork tubes. Over time, dirt can accumulate behind the dust boots. If this dirt is not removed, the shaft seal rings behind can start to leak.

Warning
Danger of accidents Reduced braking efficiency due to oil or grease on the brake discs.

– Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.

– Clean and oil the dust boots and inner fork tube of both fork legs.

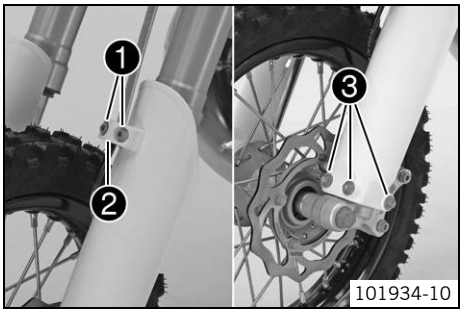
Universal oil spray (☛ p. 84)

– Press the dust boots back into their normal position.
– Remove excess oil.

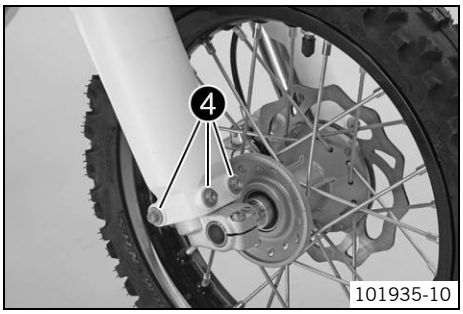
Finishing work

– Install the fork protector. (☛ p. 29)
– Remove the motorcycle from the lift stand. (☛ p. 28)

11.4 Removing the fork protector

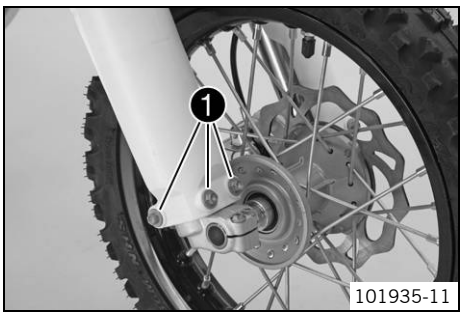


– Remove screws ❶. Take off clamp ❷.
– Remove screws ❸ on the left fork leg. Take off the fork protector.



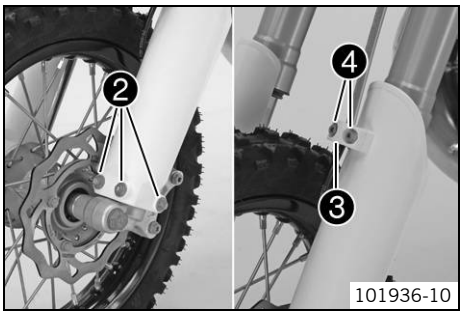
– Remove screws ❹ on the right fork leg. Take off the fork protector.

11.5 Installing the fork protector



– Position the fork protector on the right fork leg. Mount and tighten screws ❶.
Guideline

Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)



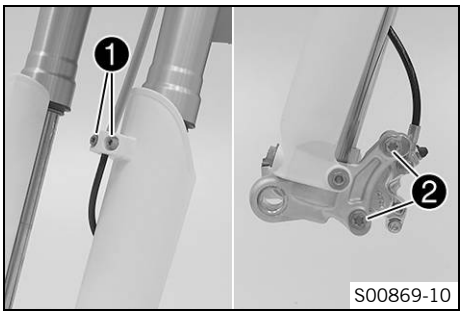
– Position the fork protector on the left fork leg. Mount and tighten screws ❷.
Guideline

Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)

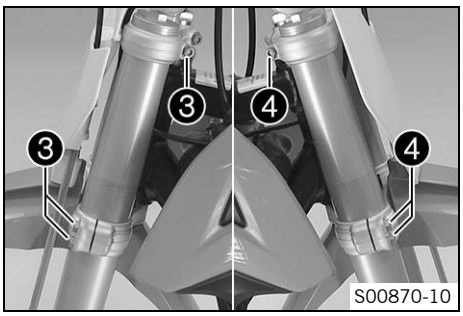
– Position the brake line. Mount clamp ❸.
– Mount screws ❹.

11.6 Removing the fork legs

Preparatory work
– Raise the motorcycle with a lift stand. (☛ p. 28)
– Remove the front wheel. (☛ p. 55)



Main work
– Remove screws ❶ and take off the clamp.
– Remove screws ❷ and take off the brake caliper.
– Hang the brake caliper and the brake line loosely to the side.



– Loosen screws ❸. Remove the left fork leg.
– Loosen screws ❹. Remove the right fork leg.

11.7 Installing the fork legs

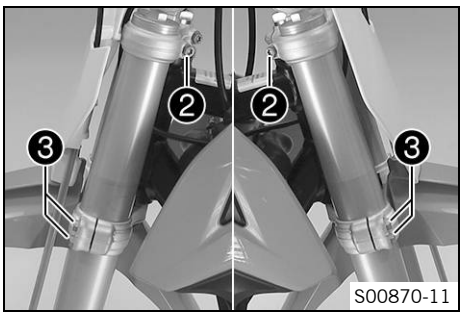
Main work

– Position the fork legs.

Info

The upper milled groove in the fork leg must be flush with the top edge of the upper triple clamp.

Position bleeder screws ❶ to the front.



– Tighten screws ❷.

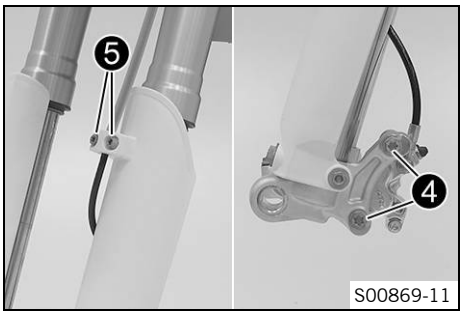
Guideline

Screw, top triple clamp	M8	20 Nm (14.8 lbf ft)

– Tighten screws ❸.

Guideline

Screw, bottom triple clamp	M8	15 Nm (11.1 lbf ft)



– Position brake caliper, mount, and tighten screws ❹.

Guideline

Screw, front brake caliper	M8	20 Nm (14.8 lbf ft)	**Loctite® 243™**

– Position the brake line. Put the clamp on, and mount and tighten screws ❺.

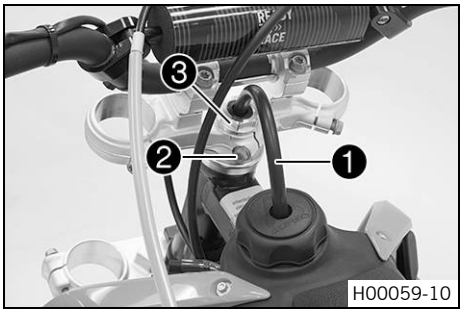
Finishing work

– Install the front wheel. (☛ p. 55)

11.8 Removing the lower triple clamp

Preparatory work

– Raise the motorcycle with a lift stand. (☛ p. 28)
– Remove the front wheel. (☛ p. 55)
– Remove the fork legs. (☛ p. 29)
– Remove the start number plate. (☛ p. 34)
– Dismount the front fender. (☛ p. 34)

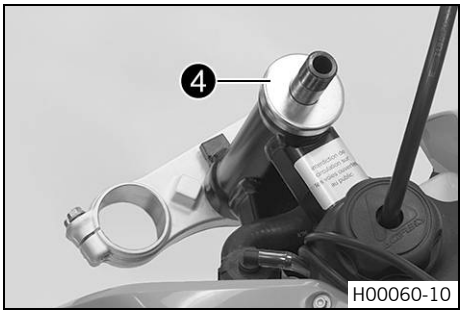


Main work

– Remove fuel tank breather ❶.
– Loosen screw ❷. Remove nut ❸, take off the top triple clamp with the handlebar, and place it on one side.

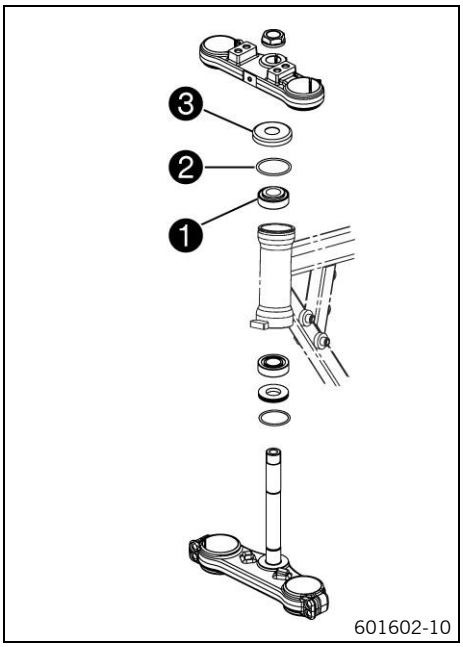
Info

Protect the motorcycle and its attachments from damage by covering them. Do not bend the cables and lines.



– Remove protective ring ❹.
– Remove the lower triple clamp with the steering stem.
– Remove the upper steering head bearing.

11.9 Installing the lower triple clamp

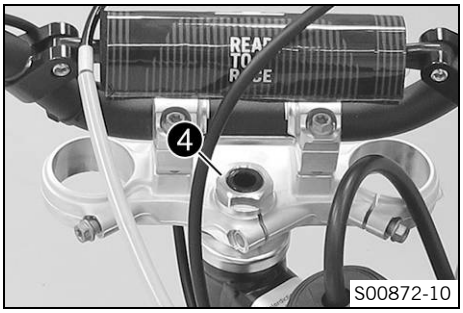


Main work

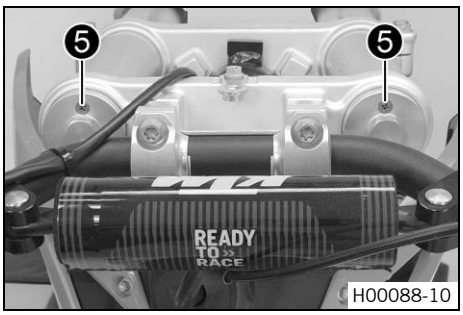
– Clean the bearing and sealing elements, check for damage, and grease.

High viscosity grease (☛ p. 83)

– Insert the lower triple clamp with the steering stem. Mount the upper steering head bearing ❶.
– Check whether the top steering head seal ❷ is correctly positioned.
– Slide on protective ring ❸.

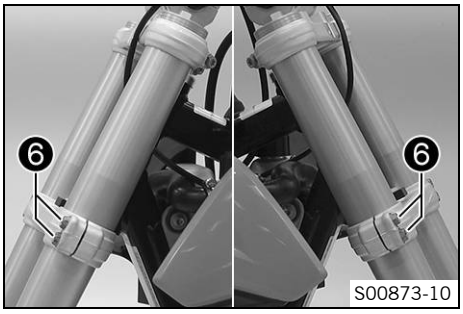


– Position the upper triple clamp with the steering.
– Mount nut ❹, but do not tighten it yet.



– Position the fork legs.

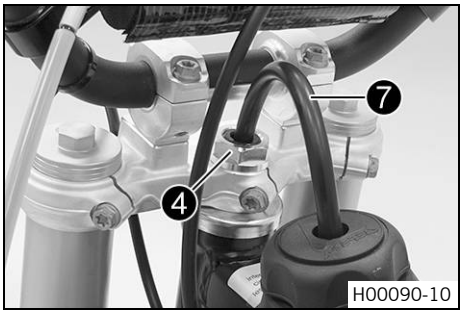
Info
The upper milled groove in the fork leg must be flush with the top edge of the upper triple clamp.
Position bleeder screws ❺ to the front.



– Tighten screws ❻.

Guideline

Screw, bottom triple clamp	M8	15 Nm (11.1 lbf ft)



– Tighten nut ❹.

Guideline

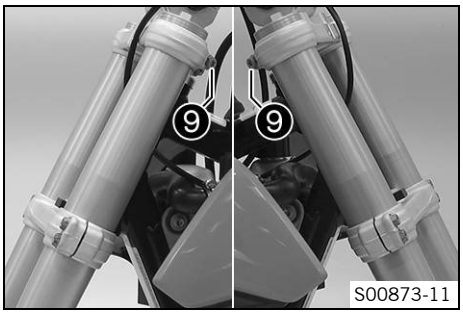
Nut, steering head	M20x1.5	No play ≤ 9 Nm (≤ 6.6 lbf ft)	Only applies when using: Holding wrench for steering head bearing (45229050000)

– Position the fuel tank breather ❼.

– Tighten screw ❽.

Guideline

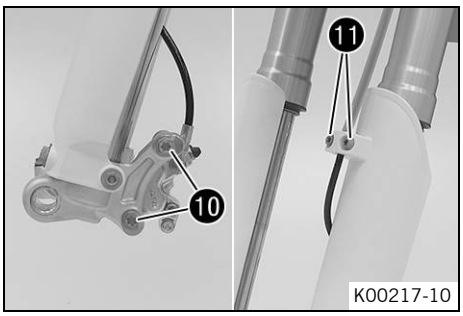
Screw, top triple clamp	M8	20 Nm (14.8 lbf ft)



– Tighten screws ❾.

Guideline

Screw, top triple clamp	M8	20 Nm (14.8 lbf ft)



– Position brake caliper, and mount and tighten screws ❿.

Guideline

Screw, front brake caliper	M8	20 Nm (14.8 lbf ft)	**Loctite® 243™**

– Position the brake line and clamp. Mount and tighten screws ⓫.

Finishing work

– Install the front fender. (☛ p. 34)
– Install the start number plate. (☛ p. 34)
– Check that the wiring harness, cables, and brake and clutch lines can move freely and are routed correctly.
– Install the front wheel. (☛ p. 55)
– Check play of steering head bearing. (☛ p. 32)
– Remove the motorcycle from the lift stand. (☛ p. 28)

11.10 Checking play of steering head bearing

Warning

Danger of accidents Unstable vehicle handling from incorrect steering head bearing play.

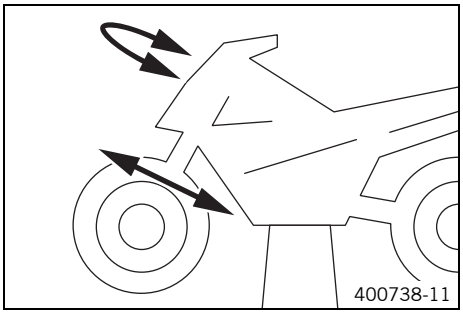
– Adjust the steering head bearing play without delay. (Your authorized KTM workshop will be glad to help.)

Info

If the bike is ridden with play in the steering head bearing, the bearing and the bearing seats in the frame can become damaged over time.

Preparatory work

– Raise the motorcycle with a lift stand. (☛ p. 28)



Main work

– Move the handlebar to the straight-ahead position. Move the fork legs to and fro in the direction of travel.

No play should be noticeable in the steering head bearing.

» If there is noticeable play present:

– Adjust the play of the steering head bearing. 🔧 (☛ p. 33)

– Move the handlebar to and fro over the entire steering range.

The handlebar must be able to move easily over the entire steering range. No resting locations should be noticeable.

» If click positions are noticeable:

– Adjust the play of the steering head bearing. 🔧 (☛ p. 33)

– Check the steering head bearing and replace if required.

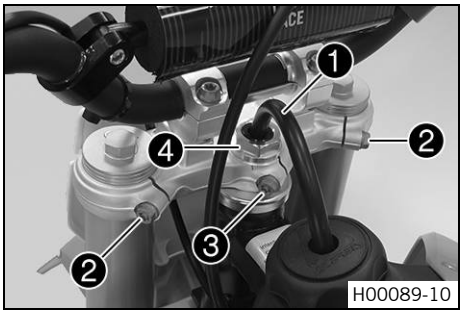
Finishing work

– Remove the motorcycle from the lift stand. (☛ p. 28)

11.11 Adjusting the play of the steering head bearing 🔧

Preparatory work

– Raise the motorcycle with a lift stand. (☛ p. 28)



Main work

– Remove fuel tank breather ❶.

– Loosen screws ❷.

– Loosen screw ❸.

– Loosen and retighten nut ❹.

Guideline

Nut, steering head	M20x1.5	No play ≤ 9 Nm (≤ 6.6 lbf ft)	Only applies when using: Holding wrench for steering head bearing (45229050000)

– Using a plastic hammer, tap lightly on the upper triple clamp to avoid strains.

– Tighten screw ❸.

Guideline

Screw, top triple clamp	M8	20 Nm (14.8 lbf ft)

– Tighten screws ❷.

Guideline

Screw, top triple clamp	M8	20 Nm (14.8 lbf ft)

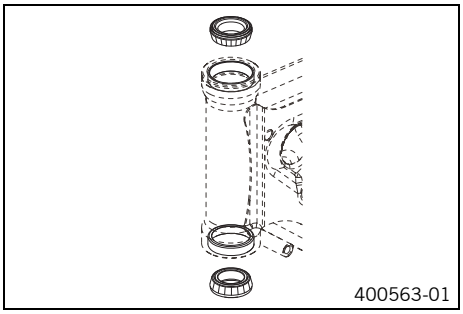
– Position the fuel tank breather ❶.

Finishing work

– Check play of steering head bearing. (☛ p. 32)

– Remove the motorcycle from the lift stand. (☛ p. 28)

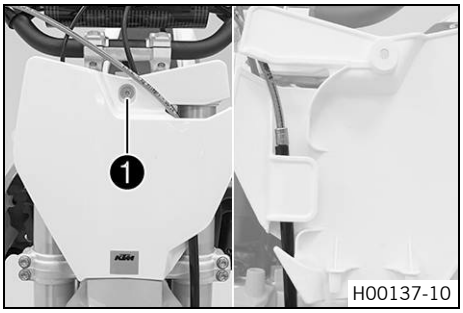
11.12 Greasing the steering head bearing 🔧



– Remove the lower triple clamp. 🔧 (☛ p. 30)

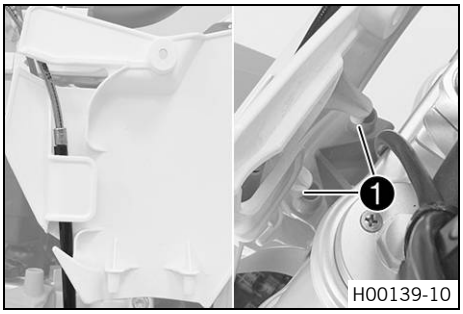
– Install the lower triple clamp. 🔧 (☛ p. 31)

11.13 Removing the start number plate

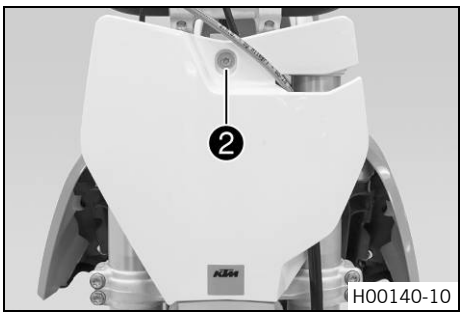


– Remove screw 1.
– Unhook the start number plate from the brake line and remove it.

11.14 Installing the start number plate



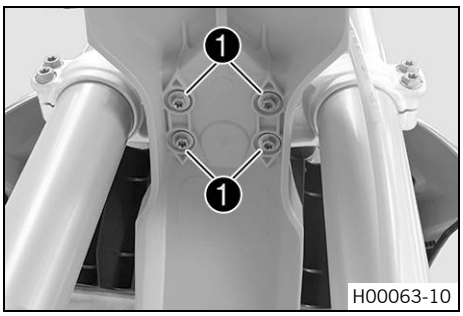
– Attach the start number plate to the brake line.
– Position the start number plate.
✓ Holding lugs 1 engage in the fender.



– Mount and tighten screw 2.
Guideline

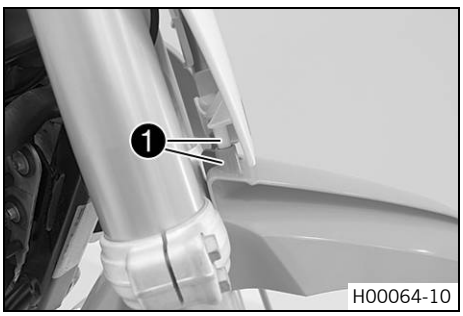
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)

11.15 Dismounting the front fender

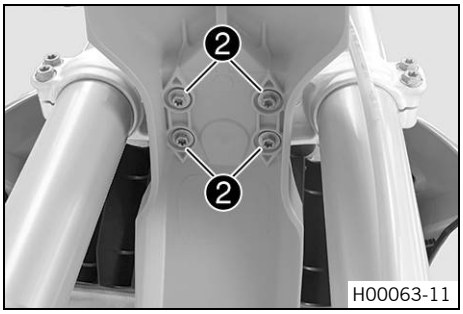


– Remove screws 1. Remove the front fender.

11.16 Installing the front fender



– Position the fender with holding lugs 1 into the drill holes on the start number plate.



– Position the front fender. Mount and tighten screws ❷.

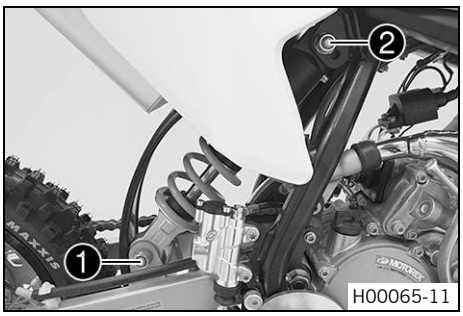
Guideline

Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)

11.17 Removing the shock absorber

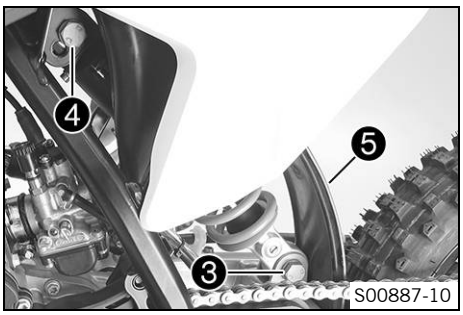
Preparatory work

– Raise the motorcycle with a lift stand. (☛ p. 28)



Main work

– Remove nuts ❶ and ❷ with the washers.



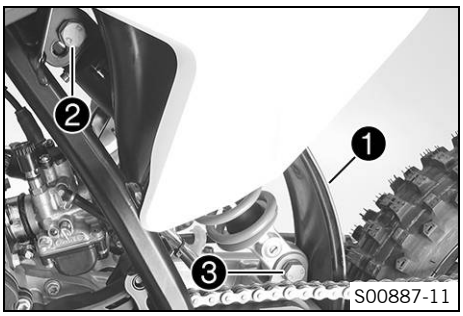
– Remove screw ❸ with the washer; lower rear wheel with the swingarm as far as possible without blocking the rear wheel. Fix the rear wheel in this position.
– Remove screw ❹ with the washer; push splash protector ❺ to the side and remove the shock absorber.

11.18 Installing the shock absorber

Warning

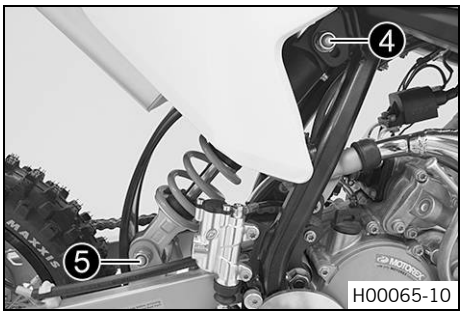
Danger of accidents Modifications to the suspension settings can seriously alter the vehicle's ride behavior.

– Following modifications, ride slowly at first to get the feel of the new ride behavior.



Main work

– Push splash protector ❶ to the side:
– Position the shock absorber with screw ❷ and the washer, depending on the desired seating height.
– Raise the swingarm; position the shock absorber with screw ❸ and the washer.



– Mount and tighten new nut ❹ with the washer.

Guideline

Screw, top shock absorber	M10	45 Nm (33.2 lbf ft)

– Mount and tighten new nut ❺ with the washer.

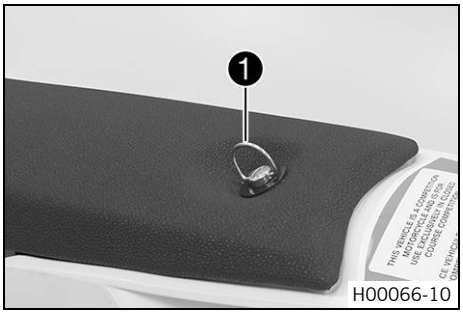
Guideline

Screw, bottom shock absorber	M10	45 Nm (33.2 lbf ft)

Finishing work

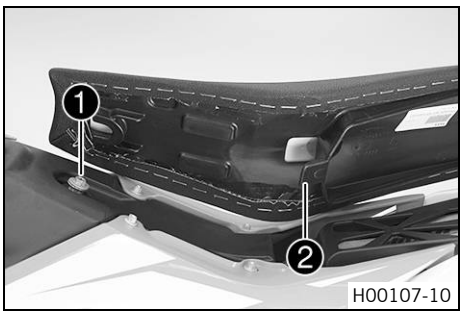
– Remove the motorcycle from the lift stand. (☛ p. 28)

11.19 Removing the seat



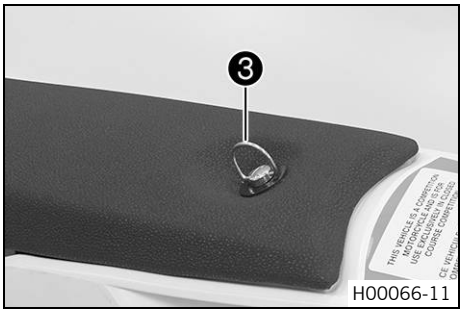
– Open quick release ❶ and raise the rear of the seat.
– Pull back the seat and remove it.

11.20 Mounting the seat



– Hook the seat onto screw ❶ and lower the seat at the rear while pushing it forward.

  ✔ Projection ❷ hooks into the fuel tank.



– Close quick release ❸.

11.21 Removing the air filter

Note

Engine failure Unfiltered intake air has a negative effect on the service life of the engine.

– Never operate the vehicle without an air filter as dust and dirt will enter the engine and lead to increased wear.

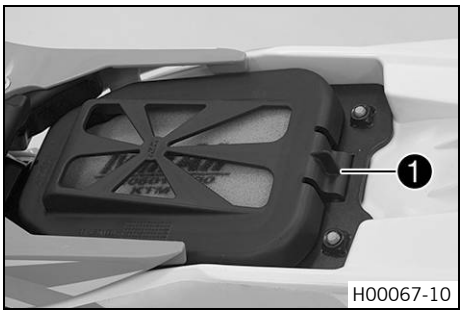
Warning

Environmental hazard Hazardous substances cause environmental damage.

– Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

Preparatory work

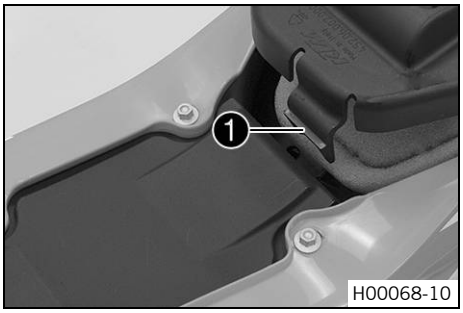
– Remove the seat. (☛ p. 36)



Main work

– Press the rear holding lugs ❶ together slightly and swing the air filter box cover upward. Pull out the front holding lug and take off the air filter box cover.
– Take off the air filter.

11.22 Installing the air filter



Main work
- Position the clean air filter.
- Position the rear holding lug. Lower the air filter box cover and allow the front holding lug ❶ to snap in.

Info
If the air filter is not correctly mounted, dust and dirt can enter the engine and cause damage.

Finishing work
- Mount the seat. (☛ p. 36)

11.23 Cleaning the air filter and air filter box

Warning
Environmental hazard Hazardous substances cause environmental damage.
- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

Info
Do not clean the air filter with fuel or petroleum since these substances attack the foam.

Preparatory work
- Remove the seat. (☛ p. 36)
- Remove the air filter. (☛ p. 36)

Main work
- Wash the air filter thoroughly in special cleaning liquid and allow it to dry properly.

Air filter cleaner (☛ p. 83)

Info
Only press the air filter to dry it, never wring it out.

- Oil the dry air filter with a high quality filter oil.

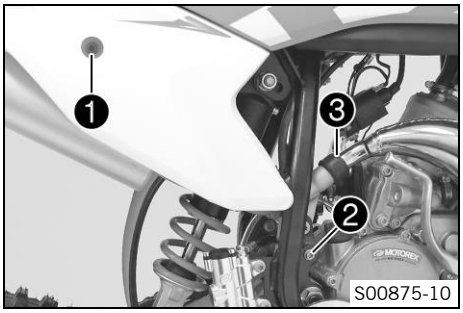
Oil for foam air filter (☛ p. 83)

- Clean the air filter box.
- Check the intake flange for damage and looseness.

Finishing work
- Install the air filter. (☛ p. 37)
- Mount the seat. (☛ p. 36)

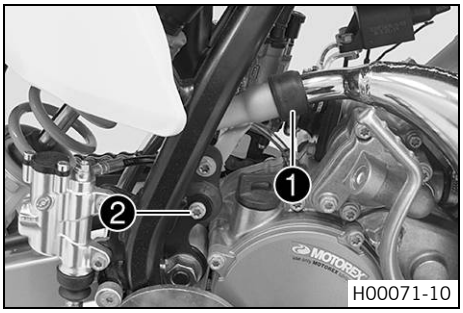
11.24 Removing the main silencer

Warning
Danger of burns The exhaust system gets very hot when the vehicle is driven.
- Allow the exhaust system to cool down. Do not touch hot components.



- Remove screw ❶.
- Remove screw ❷.
- Pull off the main silencer from the manifold at rubber sleeve ❸.

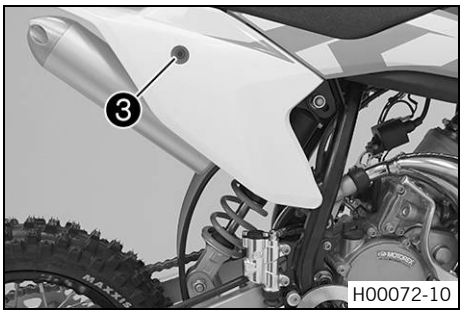
11.25 Installing the main silencer



– Position the main silencer.
– Mount the main silencer with the rubber sleeve ❶.
– Mount the silentblock with the screw ❷.

Guideline

Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)



– Position the collar sleeves.
– Mount and tighten screw ❸.

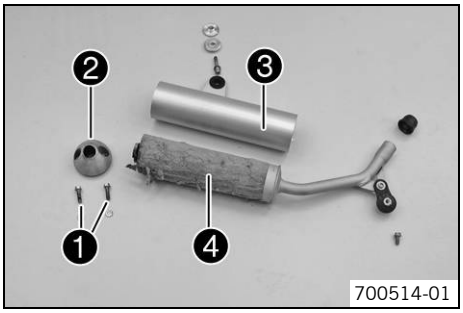
Guideline

Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)

11.26 Changing the glass fiber yarn filling of the main silencer

Warning
Danger of burns The exhaust system gets very hot when the vehicle is driven.
– Allow the exhaust system to cool down. Do not touch hot components.

Info
Over time, the fibers of the fiber glass yarn volatilize outwards; the silencer "burns" out.
Not only is the noise level higher, the performance characteristic changes.



Preparatory work
– Remove the main silencer. (☛ p. 37)

Main work
– Remove screws ❶ of end cap ❷. Remove end cap and outer tube ❸.
– Pull the glass fiber yarn filling ❹ from the inner tube.
– Clean the parts that are to be reinstalled.
– Mount the new glass fiber yarn filling on the inner tube.
– Slide the outer tube over the glass fiber yarn filling.
– Insert the end cap into the outer tube.
– Mount and tighten the screws with the toothed washers.

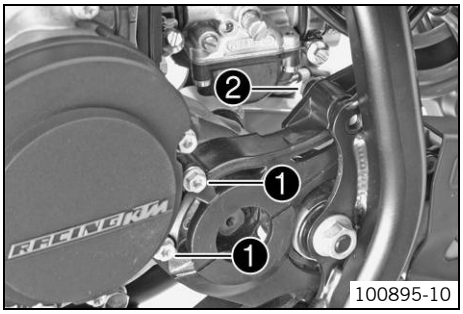
Guideline

Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)

Finishing work
– Install the main silencer. (☛ p. 38)

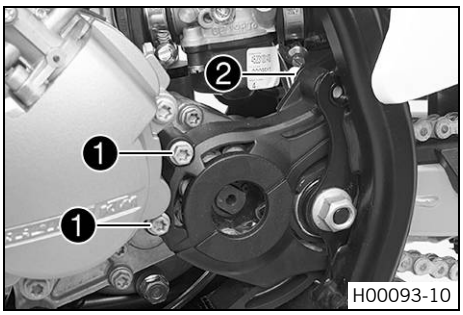
11.27 Removing the engine sprocket cover

Preparatory work
– Raise the motorcycle with a lift stand. (☛ p. 28)



Main work
(50 SX)

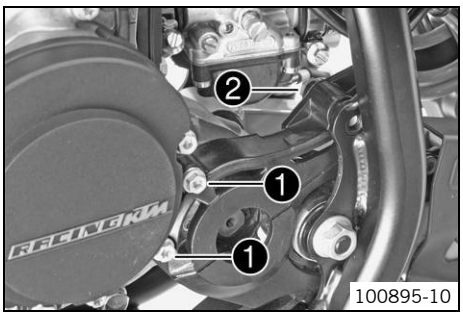
- Remove screws ❶.
- Remove screw ❷.
- Take off the engine sprocket cover.



(50 SX Mini)

- Remove screws ❶.
- Remove screw ❷.
- Take off the engine sprocket cover.

11.28 Installing the engine sprocket cover



Main work
(50 SX)

- Position the engine sprocket cover. Mount screws ❶, but do not tighten yet.
- Mount and tighten screw ❷.

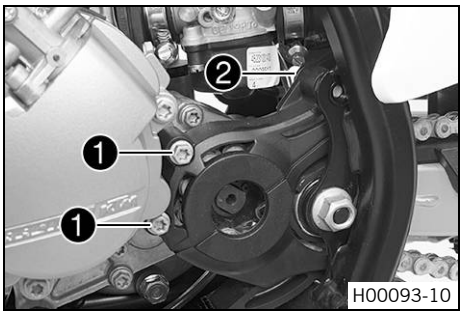
  Guideline

Screw, engine sprocket cover	M8	12 Nm (8.9 lbf ft)

- Tighten screws ❶.

  Guideline

Screw, engine sprocket cover	M6	10 Nm (7.4 lbf ft)



(50 SX Mini)

- Position the engine sprocket cover. Mount screws ❶, but do not tighten yet.
- Mount and tighten screw ❷.

  Guideline

Screw, engine sprocket cover	M8	12 Nm (8.9 lbf ft)

- Tighten screws ❶.

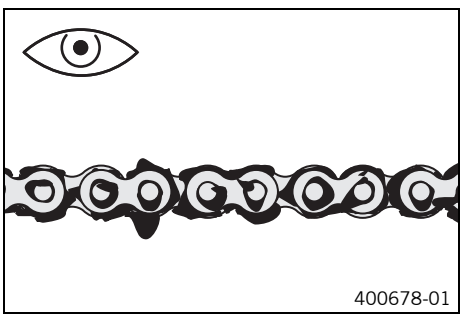
  Guideline

Screw, engine sprocket cover	M6	10 Nm (7.4 lbf ft)

Finishing work

- Remove the motorcycle from the lift stand. (☛ p. 28)

11.29 Checking the chain for dirt



- Check the chain for coarse dirt accumulation.
  - » If the chain is very dirty:
    - Clean the chain. (☛ p. 40)

11.30 Cleaning the chain

Warning
Danger of accidents Oil or grease on the tires reduces their grip.

– Remove oil and grease with a suitable cleaning material.

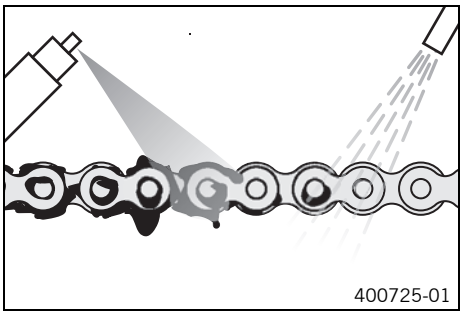
Warning
Danger of accidents Reduced braking efficiency due to oil or grease on the brake discs.

– Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.

Warning
Environmental hazard Hazardous substances cause environmental damage.

– Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

Info
The service life of the chain depends largely on its maintenance.


400725-01

Preparatory work
– Raise the motorcycle with a lift stand. (☛ p. 28)

Main work
– Clean the chain regularly and then treat with chain spray.

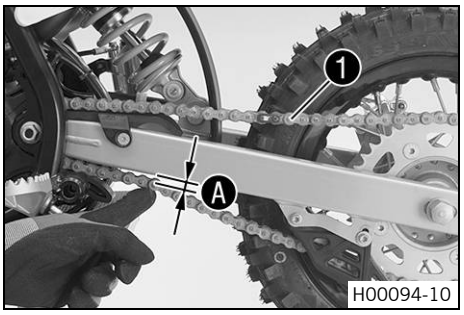
Chain cleaner (☛ p. 83)
Off-road chain spray (☛ p. 83)

Finishing work
– Remove the motorcycle from the lift stand. (☛ p. 28)

11.31 Checking the chain tension

Warning
Danger of accidents Danger caused by incorrect chain tension.

– If the chain is too taut, the components of the secondary power transmission (chain, engine sprocket, rear sprocket, bearings in the transmission and in the rear wheel) will be under additional load. In addition to premature wear, this can cause the chain or the countershaft of the transmission to break in extreme cases. If the chain is too loose, however, it may fall off the engine sprocket or rear sprocket and block the rear wheel or damage the engine. Ensure that the chain tension is correct and adjust it if necessary.



Preparatory work
– Raise the motorcycle with a lift stand. (☛ p. 28)

Main work
– Press the chain upward at the end of the chain sliding piece and determine chain tension Ⓐ.

Info
The upper chain section ❶ must be taut.
Chain wear is not always even, so you should repeat this measurement at different chain positions.

Chain tension	5... 8 mm (0.2... 0.31 in)

» If the chain tension does not meet the specification:
– Adjust the chain tension. (☛ p. 41)

Finishing work
– Remove the motorcycle from the lift stand. (☛ p. 28)

11.32 Adjusting chain tension

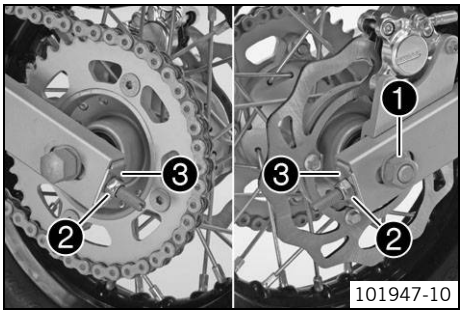
Warning

Danger of accidents Danger caused by incorrect chain tension.

– If the chain is too taut, the components of the secondary power transmission (chain, engine sprocket, rear sprocket, bearings in the transmission and in the rear wheel) will be under additional load. In addition to premature wear, this can cause the chain or the countershaft of the transmission to break in extreme cases. If the chain is too loose, however, it may fall off the engine sprocket or rear sprocket and block the rear wheel or damage the engine. Ensure that the chain tension is correct and adjust it if necessary.

Preparatory work

– Raise the motorcycle with a lift stand. (☛ p. 28)
– Check the chain tension. (☛ p. 40)



Main work

– Loosen nut ❶.
– Adjust the chain tension by turning adjusting nuts ❷ left and right.

  Guideline

Chain tension	5... 8 mm (0.2... 0.31 in)
Turn adjusting nuts ❷ equally on the left and right. The rear wheel must be aligned with the front wheel.	

– Make sure that the chain adjuster support plates ❸ are in contact with adjusting nuts ❷.
– Tighten nut ❶.

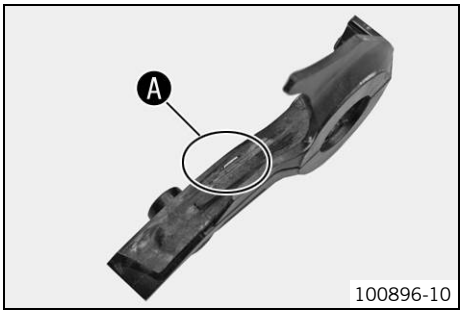
  Guideline

Nut, rear wheel spindle	M12x1	40 Nm (29.5 lbf ft)

11.33 Checking the chain, rear sprocket, engine sprocket, and chain guide

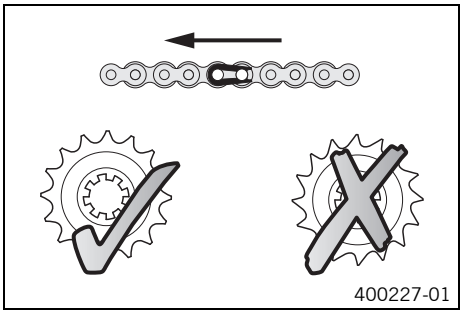
Preparatory work

– Raise the motorcycle with a lift stand. (☛ p. 28)
– Remove the engine sprocket cover. 🔧 (☛ p. 38)



Main work

– Check the engine sprocket cover for wear.
  » If the engine sprocket cover is worn through in the marked area Ⓐ:
    – Change the engine sprocket cover. 🔧



– Check the rear sprocket and engine sprocket for wear.
  » If the rear sprocket and engine sprocket are worn:
    – Change.the drive set. 🔧

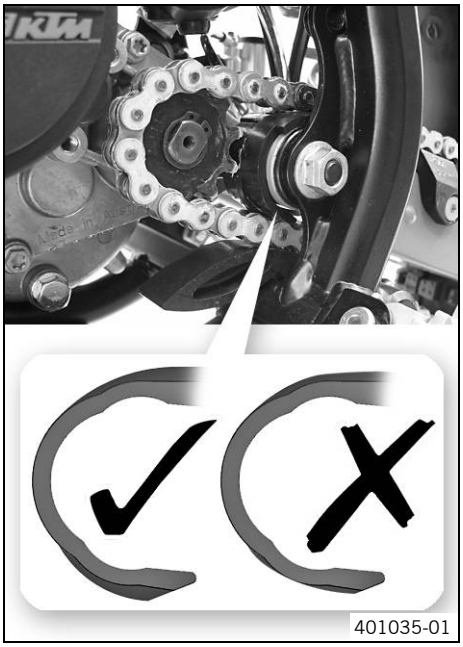
Info

The engine sprocket, rear sprocket, and chain should always be replaced together.
When fitting the chain joint, always make sure that the closed side of the joint faces forward (riding direction).

– Check the chain for wear.
  » If the chain is worn:
    – Change.the drive set. 🔧

Info

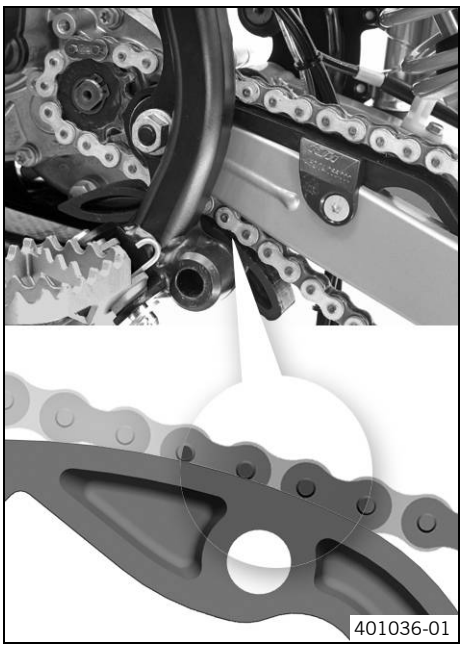
When the chain is replaced, the rear sprocket and engine sprocket should also be changed.
New chains wear out faster on old, worn sprockets.



– Check the chain sliding guard for wear.
  » If the ridge is worn down to the level of the main corpus:
    – Change the chain sliding guard.
– Check that the chain sliding guard is firmly seated.
  » If the chain sliding guard is loose:
    – Tighten the chain sliding guard.

    Guideline

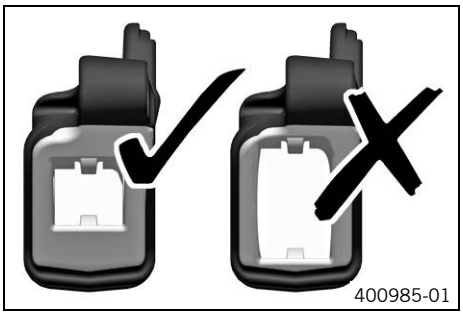
Screw, chain sliding piece	M6	3 Nm (2.2 lbf ft)



– Check the chain sliding piece for wear.
  » If the lower edge of the chain pins is in line with or below the chain sliding piece:
    – Change the chain sliding piece.
– Check that the chain sliding piece is firmly seated.
  » If the chain sliding piece is loose:
    – Tighten the chain sliding piece.

    Guideline

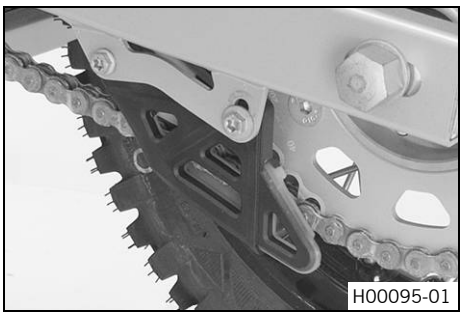
Screw, chain sliding piece	M8	15 Nm (11.1 lbf ft)



– Check the chain guide for wear.

Info
Wear can be seen on the front of the chain guide.

  » If the light part of the chain guide is worn:
    – Change the chain guide.



– Check that the chain guide is firmly seated.
  » If the chain guide is loose:
    – Tighten the chain guide.

    Guideline

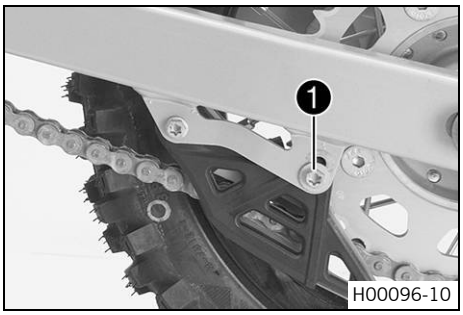
Remaining screws, chain	M6	10 Nm (7.4 lbf ft)

Finishing work
– Install the engine sprocket cover. (p. 39)

– Remove the motorcycle from the lift stand. (☛ p. 28)

11.34 Adjusting the chain guide

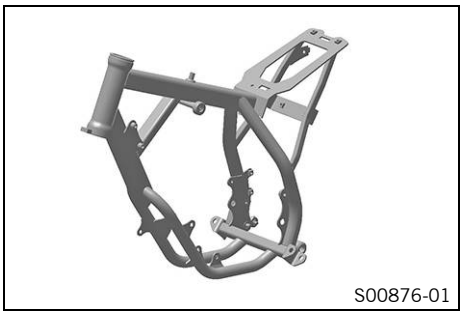
Info
The size of the chain wheel varies with the number of teeth. The chain guide can be adjusted on small sprockets.



– Loosen screw 1.
– Position the chain guide.
– Tighten the screw.
Guideline

Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)

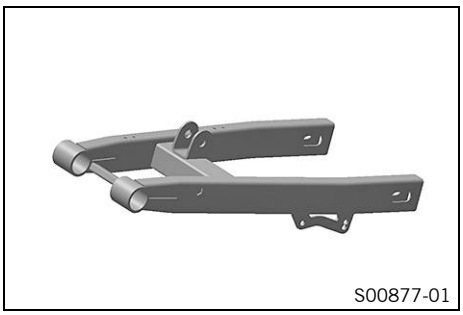
11.35 Checking the frame



– Check the frame for cracking and deformation.
» If the frame exhibits cracking or deformation due to a mechanical impact:
– Change the frame.

Info
A frame that has been damaged due to a mechanical impact must always be changed. Repair of the frame is not authorized by KTM.

11.36 Checking the swingarm



– Check the swingarm for damage, cracking, and deformation.
» If the swingarm exhibits damage, cracking, or deformation:
– Change the swingarm.

Info
Always replace a damaged swingarm. Repair of the swingarm is not authorized by KTM.

11.37 Checking the throttle cable routing

Preparatory work
– Remove the seat. (☛ p. 36)
– Turn the knurled screw on the fuel tap all the way clockwise.
– Remove the fuel tank.

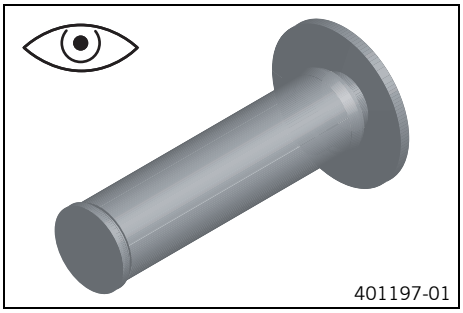
Main work
– Check the throttle cable routing.

The throttle cable must be routed to the carburetor behind the handlebars above the fuel tank bearing.

» If the throttle cable is not routed as specified:
– Correct the throttle cable routing.

Finishing work
– Install the fuel tank.
– Mount the seat. (☛ p. 36)

11.38 Checking the rubber grip



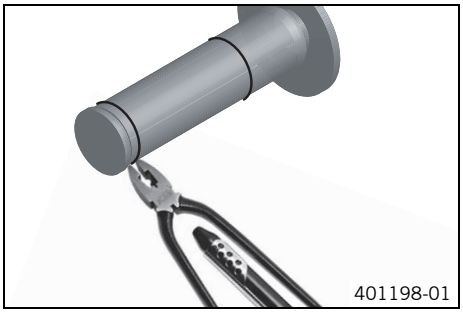
– Check the rubber grips on the handlebar for damage, wear, and looseness.
  » If a rubber grip is damaged, worn, or loose:
    – Change and secure the rubber grip.

Grip adhesive (00062030051) (☛ p. 83)

11.39 Additionally securing the rubber grip

Preparatory work

– Check the rubber grip. (☛ p. 44)



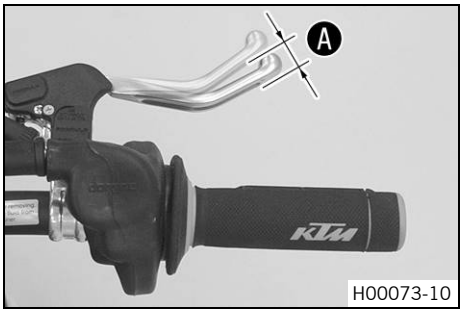
Main work

– Secure the rubber grip at two locations with the retaining wire.

Securing wire (54812016000)
Wire twister forceps (U6907854)

✓ The twisted wire ends face away from the palms and are bent in toward the rubber grip.

12.1 Checking play of handbrake lever

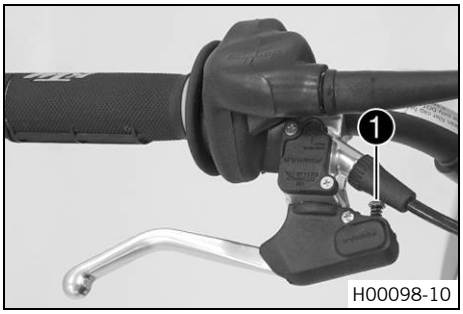


– Push the handbrake lever forwards and check the play Ⓐ.

Play of hand brake lever	3... 5 mm (0.12... 0.2 in)

» If the play does not meet specifications:
– Adjust the play of the hand brake lever. (☛ p. 45)

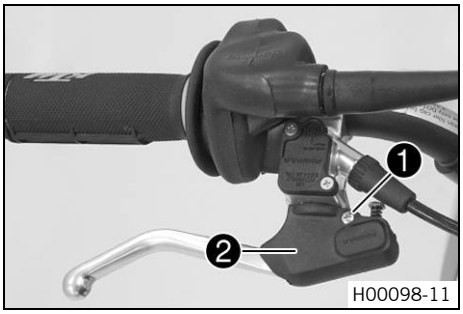
12.2 Adjusting the play of the hand brake lever



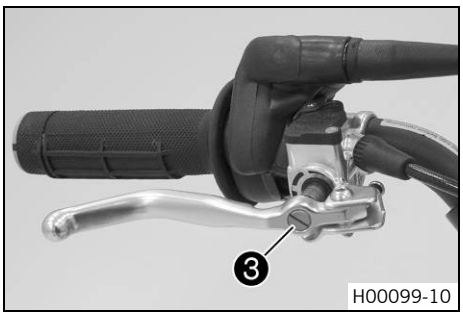
– Check the play of the handbrake lever. (☛ p. 45)
– Adjust the play of the hand brake lever with the adjusting screw ❶.
Guideline

Play of hand brake lever	3... 5 mm (0.12... 0.2 in)

12.3 Adjusting the basic position of the hand brake lever

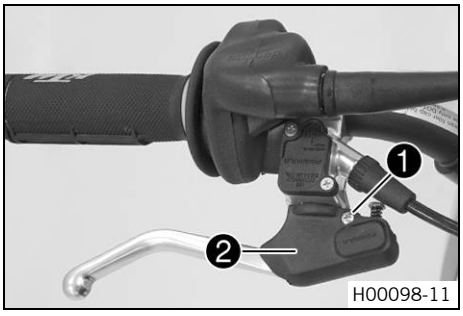


– Remove screw ❶. Take off cover ❷.



– Check the play of the handbrake lever. (☛ p. 45)
– Adjust the basic position of the hand brake lever with adjusting screw ❸ to the rider's hand size.

Info
Turn the adjusting screw clockwise to increase the distance between the hand brake lever and the handlebar.
Turn the adjusting screw counterclockwise to decrease the distance between the hand brake lever and the handlebar.
The range of adjustment is limited.

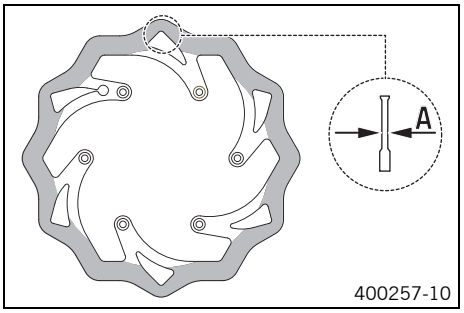


– Position cover ❷. Mount and tighten screw ❶.

12.4 Checking brake discs

Warning
Danger of accidents Reduced braking efficiency due to worn brake disc(s).

– Change the worn brake disc(s) without delay. (Your authorized KTM workshop will be glad to help.)



– Check the thickness of the front and rear brake discs at several places on the disc to see if it conforms to measurement Ⓐ.

Info
Wear reduces the thickness of the brake disc around the area used by the brake linings.

Brake discs - wear limits	
Front	2.5 mm (0.098 in)
Rear	2.5 mm (0.098 in)

» If the brake disc thickness is less than the specified value:
– Change the brake disc.

– Check the front and rear brake discs for damage, cracking and deformation.
» If the brake disk exhibits damage, cracking or deformation:
– Change the brake disc.

12.5 Checking front brake fluid level

Warning
Danger of accidents Brake system failure.

– If the brake fluid level drops below the specified marking or the specified value, this is an indication that the brake system is leaking or that the brake linings are completely worn down. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)

Warning
Skin irritation Brake fluid can cause skin irritation on contact.

– Avoid contact with skin and eyes, and keep out of the reach of children.
– Wear suitable protective clothing and goggles.
– If brake fluid comes into contact with the eyes, flush the eyes thoroughly with water and consult a physician immediately.

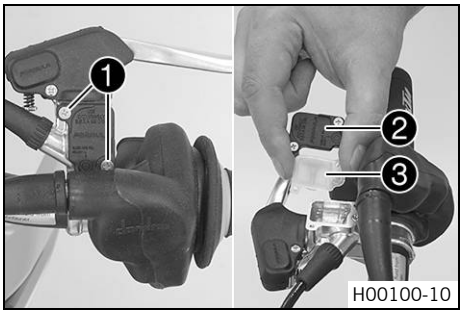
Warning
Danger of accidents Reduced braking efficiency due to old brake fluid.

– Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized KTM workshop will be glad to help.)

Warning
Environmental hazard Hazardous substances cause environmental damage.

– Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

Info
Never use DOT 5 brake fluid! It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.
Avoid contact between brake fluid and painted parts. Brake fluid attacks paint!
Use only clean brake fluid from a sealed container.



– Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
– Remove screws ❶.
– Remove cover ❷ with membrane ❸.
– Check the brake fluid level.

Brake fluid level under top level of container	5 mm (0.2 in)

» If the brake fluid level does not meet specifications:
– Add front brake fluid. 🔧 (☛ p. 47)
– Position the cover with the membrane. Mount and tighten the screws.

Info
Clean up overflowed or spilt brake fluid immediately with water.

12.6 Adding front brake fluid 🔧

Warning
Danger of accidents Brake system failure.

– If the brake fluid level drops below the specified marking or the specified value, this is an indication that the brake system is leaking or that the brake linings are completely worn down. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)

Warning
Skin irritation Brake fluid can cause skin irritation on contact.

– Avoid contact with skin and eyes, and keep out of the reach of children.
– Wear suitable protective clothing and goggles.
– If brake fluid comes into contact with the eyes, flush the eyes thoroughly with water and consult a physician immediately.

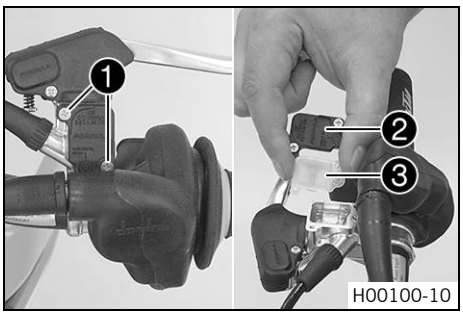
Warning
Danger of accidents Reduced braking efficiency due to old brake fluid.

– Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized KTM workshop will be glad to help.)

Warning
Environmental hazard Hazardous substances cause environmental damage.

– Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

Info
Never use DOT 5 brake fluid! It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.
Avoid contact between brake fluid and painted parts. Brake fluid attacks paint!
Use only clean brake fluid from a sealed container.



Preparatory work
– Check the front brake linings. (☛ p. 48)

Main work
– Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
– Remove screws ❶.
– Remove cover ❷ with membrane ❸.
– Correct the brake fluid level.
Guideline

Brake fluid level under top level of container	5 mm (0.2 in)

Brake fluid DOT 4 / DOT 5.1 (☛ p. 81)

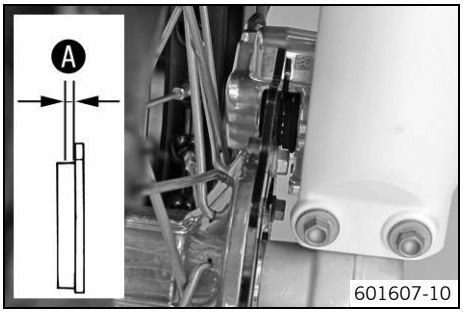
– Position the cover with the membrane. Mount and tighten the screws.

Info
Clean up overflowed or spilt brake fluid immediately with water.

12.7 Checking the front brake linings

Warning
Danger of accidents Reduced braking efficiency caused by worn brake linings.

– Change worn brake linings immediately. (Your authorized KTM workshop will be glad to help.)



– Check the brake linings for minimum thickness A.

Minimum thickness A	≥ 1 mm (≥ 0.04 in)

» If the minimum thickness is less than specified:
– Change the front brake linings. (☛ p. 48)

– Check the brake linings for damage and cracking.

» If damage or wear is encountered:
– Change the front brake linings. (☛ p. 48)

12.8 Changing the front brake linings

Warning
Danger of accident Brake system failure.

– Maintenance work and repairs must be carried out professionally. (Your authorized KTM workshop will be glad to help.)

Warning
Skin irritation Brake fluid can cause skin irritation on contact.

– Avoid contact with skin and eyes, and keep out of the reach of children.
– Wear suitable protective clothing and goggles.
– If brake fluid comes into contact with the eyes, flush the eyes thoroughly with water and consult a physician immediately.

Warning
Danger of accidents Reduced braking efficiency due to old brake fluid.

– Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized KTM workshop will be glad to help.)

Warning
Danger of accidents Reduced braking efficiency due to use of non-approved brake linings.

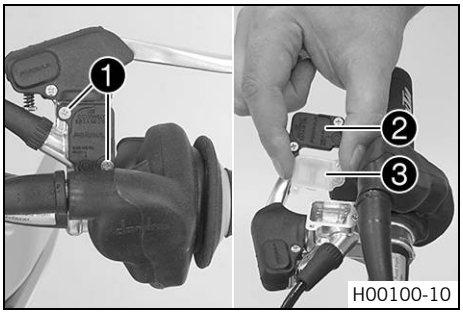
– Brake linings available from accessory suppliers are often not tested and approved for use on KTM vehicles. The construction and friction factor of the brake linings and therefore the brake power can differ considerably from the original KTM brake linings. If brake linings are used that differ from the originals, there is no guarantee that they comply with the original license. The vehicle no longer corresponds to the condition at delivery, and the warranty is no longer valid.

Warning
Environmental hazard Hazardous substances cause environmental damage.

– Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

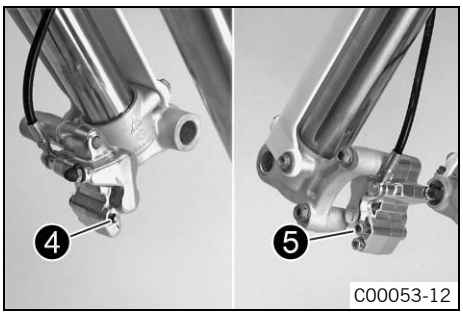
Info
Never use DOT 5 brake fluid! It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.
Avoid contact between brake fluid and painted parts. Brake fluid attacks paint!
Use only clean brake fluid from a sealed container.

Preparatory work
– Raise the motorcycle with a lift stand. (☛ p. 28)
– Remove the front wheel. (☛ p. 55)

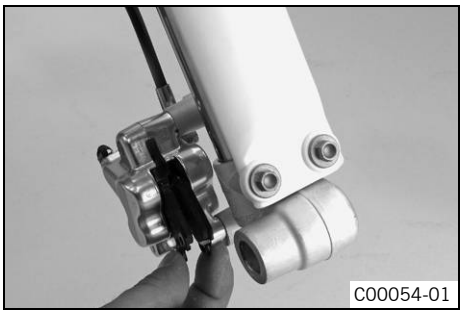


Main work

– Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
– Remove screws ❶.
– Remove cover ❷ with membrane ❸.
– Press the brake piston back to its basic position and make sure that no brake fluid overflows from the brake fluid reservoir.

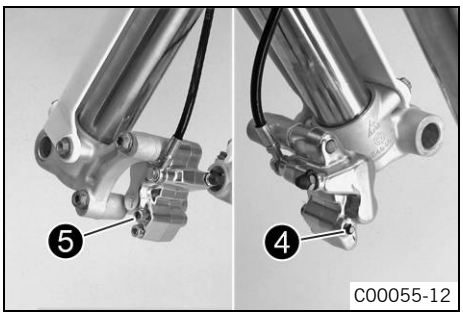


– Remove the lock washer ❹.
– Remove screw ❺.



– Remove the brake linings.
– Clean brake caliper.
– Insert new brake linings.

Info
Always change the brake linings in pairs.
Ensure that the brake linings are correctly positioned in the holding spring.



– Mount screw ❺.

Guideline

Screw, brake linings	M5	8 Nm (5.9 lbf ft)

– Mount lock washer ❹.
– Check the brake discs. (☛ p. 46)
– Install the front wheel. 🔧 (☛ p. 55)
– Correct the brake fluid level.

Guideline

Brake fluid level under top level of container	5 mm (0.2 in)

Brake fluid DOT 4 / DOT 5.1 (☛ p. 81)

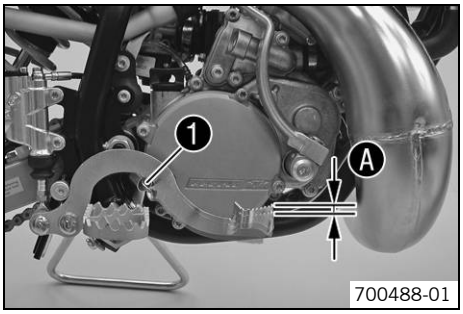
– Position the cover with the membrane. Mount and tighten the screws.

Info
Clean up overflowed or spilled brake fluid immediately with water.

12.9 Checking the free travel of the foot brake lever

Warning
Danger of accidents Brake system failure.

– If there is no free travel on the foot brake lever, pressure builds up on the rear brake circuit. The rear brake can fail due to overheating. Adjust the free travel on foot brake lever according to specifications.



– Disconnect spring ❶.
– Move the foot brake lever back and forth between the end stop and the foot brake cylinder piston bracket and check free travel Ⓐ.

Guideline

Free travel of foot brake lever	3... 5 mm (0.12... 0.2 in)

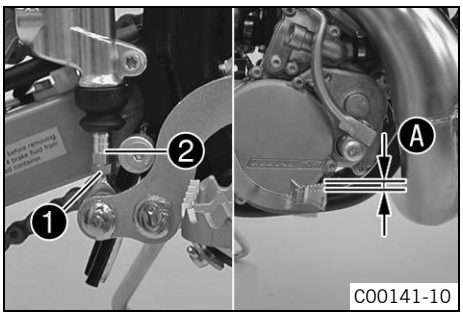
» If the free travel does not meet specifications:
– Adjust the free travel of the foot brake lever. (☛ p. 50)

– Attach spring ❶.

12.10 Adjusting the free travel of the foot brake lever

Warning
Danger of accidents Brake system failure.

– If there is no free travel on the foot brake lever, pressure builds up on the rear brake circuit. The rear brake can fail due to overheating. Adjust the free travel on foot brake lever according to specifications.



– Detach the spring.
– Loosen nut ❶.
– Turn push rod ❷ until clearance Ⓐ is created.

Guideline

Free travel of foot brake lever	3... 5 mm (0.12... 0.2 in)

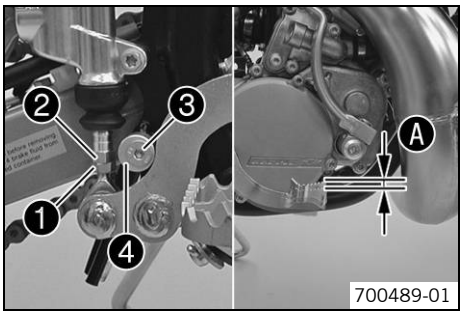
– Hold push rod ❷ and tighten nut ❶.
– Attach the spring.
– Check whether the basic position of the foot brake lever is suitable for the rider.

» When the basic position of the foot brake lever needs to be adjusted:
– Adjust the basic position of the foot brake lever. (☛ p. 50)

12.11 Adjusting the basic position of the foot brake lever

Warning
Danger of accidents Brake system failure.

– If there is no free travel on the foot brake lever, pressure builds up on the rear brake circuit. The rear brake can fail due to overheating. Adjust the free travel on foot brake lever according to specifications.



– Detach the spring.
– Loosen nut ❶.
– Turn back push rod ❷ until free travel is at a maximum.
– For an individual adjustment of the basic position of the foot brake lever, loosen the screw ❸ and turn the eccentric brake lever stop ❹ accordingly.
– Tighten screw ❸.

Guideline

Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)

– Turn push rod ❷ until clearance Ⓐ is created.

Guideline

Free travel of foot brake lever	3... 5 mm (0.12... 0.2 in)

– Hold push rod ❷ and tighten nut ❶.
– Attach spring.
– Check whether the basic position of the foot brake lever is suitable for the rider.

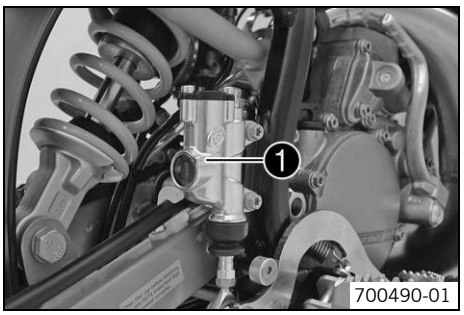
12.12 Checking rear brake fluid level

Warning
Danger of accidents Failure of the brake system.

– If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)

Warning
Danger of accidents Reduced braking efficiency due to old brake fluid.

– Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized KTM workshop will be glad to help.)



– Stand the vehicle upright.
– Check the brake fluid level in the viewer ❶.
  » When an air bubble is visible in the viewer ❶:
    – Add rear brake fluid. 🔧 (☛ p. 51)

12.13 Adding rear brake fluid 🔧

Warning
Danger of accidents Failure of the brake system.

– If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)

Warning
Skin irritation Brake fluid can cause skin irritation on contact.

– Avoid contact with skin and eyes, and keep out of the reach of children.
– Wear suitable protective clothing and goggles.
– If brake fluid comes into contact with the eyes, flush the eyes thoroughly with water and consult a physician immediately.

Warning
Danger of accidents Reduced braking efficiency due to old brake fluid.

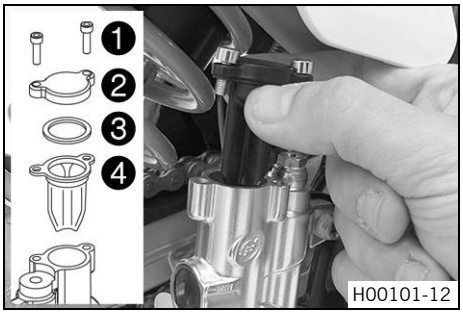
– Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized KTM workshop will be glad to help.)

Warning
Environmental hazard Hazardous substances cause environmental damage.

– Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

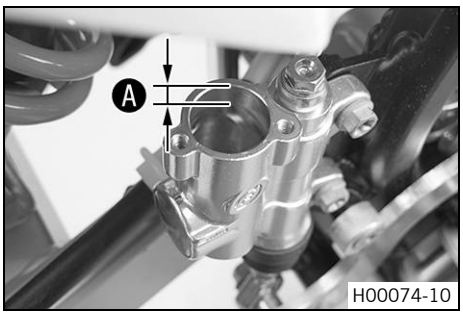
Info
Never use DOT 5 brake fluid! It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.
Avoid contact between brake fluid and painted parts. Brake fluid attacks paint!
Use only clean brake fluid from a sealed container.

Preparatory work
– Raise the motorcycle with a lift stand. (☛ p. 28)
– Check the rear brake linings. (☛ p. 52)



Main work

– Remove screws 1.
– Take off cover 2 with washer 3 and membrane 4.



– Add brake fluid to level A.

Guideline

Dimension A (brake fluid level below top edge of container)	10 mm (0.39 in)

Brake fluid DOT 4 / DOT 5.1 (☛ p. 81)

– Position the membrane and the cover with the washer. Mount and tighten the screws.

Info
Clean up overflowed or spilt brake fluid immediately with water.

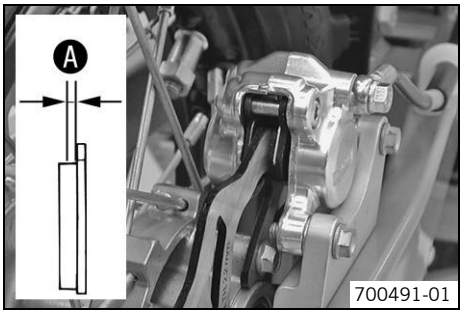
Finishing work

– Remove the motorcycle from the lift stand. (☛ p. 28)

12.14 Checking the rear brake linings

Warning
Danger of accidents Reduced braking efficiency caused by worn brake linings.

– Change worn brake linings immediately. (Your authorized KTM workshop will be glad to help.)



– Check the brake linings for minimum thickness A.

Minimum thickness A	≥ 1 mm (≥ 0.04 in)

» If the minimum thickness is less than specified:
– Change the rear brake linings. 🔧 (☛ p. 52)

– Check the brake linings for damage and cracking.

» If damage or wear is encountered:
– Change the rear brake linings. 🔧 (☛ p. 52)

12.15 Changing the rear brake linings 🔧

Warning
Danger of accident Brake system failure.

– Maintenance work and repairs must be carried out professionally. (Your authorized KTM workshop will be glad to help.)

Warning
Skin irritation Brake fluid can cause skin irritation on contact.

– Avoid contact with skin and eyes, and keep out of the reach of children.
– Wear suitable protective clothing and goggles.
– If brake fluid comes into contact with the eyes, flush the eyes thoroughly with water and consult a physician immediately.

Warning
Danger of accidents Reduced braking efficiency due to old brake fluid.

– Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized KTM workshop will be glad to help.)

Warning

Danger of accidents Reduced braking efficiency due to use of non-approved brake linings.

– Brake linings available from accessory suppliers are often not tested and approved for use on KTM vehicles. The construction and friction factor of the brake linings and therefore the brake power can differ considerably from the original KTM brake linings. If brake linings are used that differ from the originals, there is no guarantee that they comply with the original license. The vehicle no longer corresponds to the condition at delivery, and the warranty is no longer valid.

Warning

Environmental hazard Hazardous substances cause environmental damage.

– Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

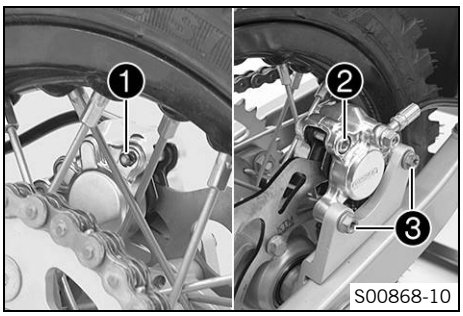
Info

Never use DOT 5 brake fluid! It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.
Avoid contact between brake fluid and painted parts. Brake fluid attacks paint!
Use only clean brake fluid from a sealed container.

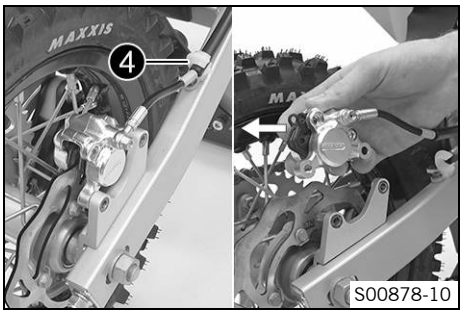
Preparatory work

– Raise the motorcycle with a lift stand. (☛ p. 28)

Main work



– Remove lock washer ❶.
– Remove screw ❷.
– Remove screws ❸.

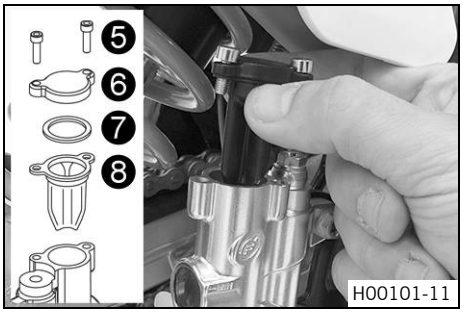


– Take off the brake caliper and pull the brake line out of holder ❹.

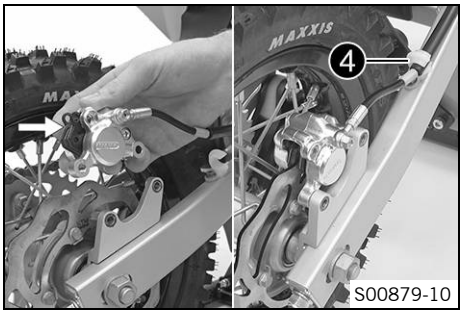
Info

Do not kink or damage the brake line.

– Remove the brake linings.
– Clean the brake caliper and brake caliper support.
– Allow the brake caliper and brake line to hang loosely to the side.



– Remove screws ❺.
– Take off cover ❻ with washer ❼ and membrane ❽.
– Press the brake piston back into the basic position and ensure that brake fluid does not flow out of the brake fluid reservoir, sucking it away if necessary.

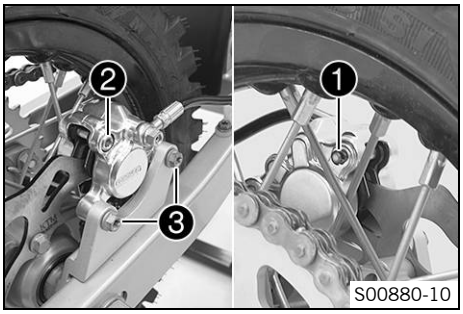


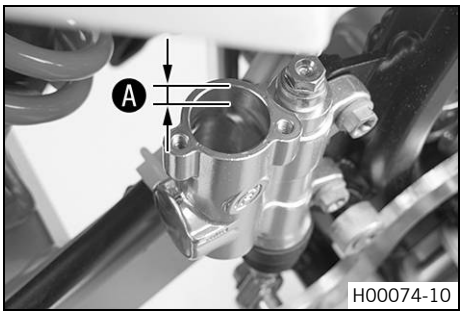
– Insert the new brake linings.

Info

Always change the brake linings in pairs.
Ensure that the brake linings are correctly positioned in the holding spring.

– Position the brake caliper on the brake disc.
✓ The brake linings are correctly positioned.
– Attach the brake line to holder ❹.





– Mount and tighten screws ❸.

Guideline

Rear brake caliper screw	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**

– Mount screw ❷.

Guideline

Screw, brake linings	M5	8 Nm (5.9 lbf ft)

– Mount lock washer ❶.
– Check the brake discs. (☛ p. 46)
– Add brake fluid to level Ⓐ.

Guideline

Level Ⓐ (brake fluid level below reservoir rim)	10 mm (0.39 in)

Brake fluid DOT 4 / DOT 5.1 (☛ p. 81)

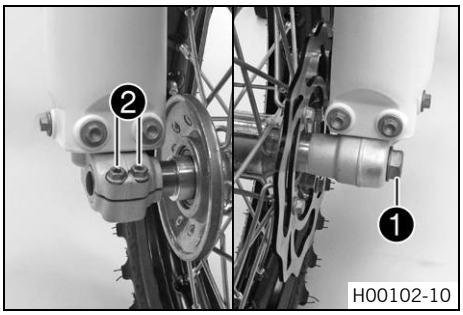
– Position the membrane and the cover with the washer. Mount and tighten the screws.

Info
Clean up overflowed or spilled brake fluid immediately with water.

– Operate the foot brake lever repeatedly until the brake linings are in contact with the brake disc and there is a pressure point.

Finishing work
– Remove the motorcycle from the lift stand. (☛ p. 28)

13.1 Removing the front wheel



Preparatory work

– Raise the motorcycle with a lift stand. (☛ p. 28)

Main work

– Remove screw ❶.

– Loosen screws ❷.

– Withdraw the wheel spindle while holding the front wheel. Take the front wheel out of the fork.

Info

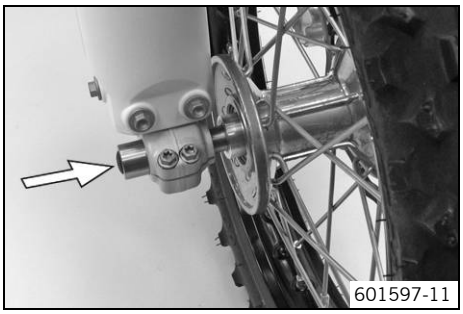
Do not pull the hand brake lever when the front wheel is removed. Always lay the wheel down in such a way that the brake disc is not damaged.

13.2 Installing the front wheel

Warning

Danger of accidents Reduced braking efficiency due to oil or grease on the brake discs.

– Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.



– Check the wheel bearing for damage and wear.

» If the wheel bearing is broken or worn:

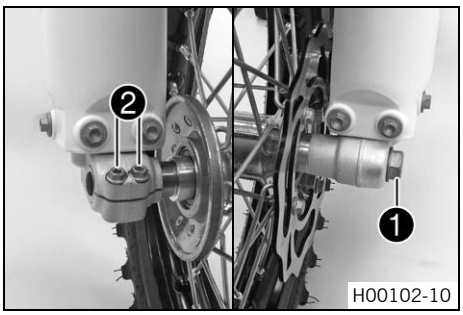
– Change the wheel bearing.

– Clean and grease wheel spindle.

Long-life grease (☛ p. 83)

– Lift the front wheel into the fork, position it, and insert wheel spindle.

✓ The brake linings are correctly positioned.



– Mount and tighten screw ❶.

Guideline

Front wheel spindle screw	M10	40 Nm (29.5 lbf ft)

– Operate the hand brake lever several times until the brake linings are in contact with the brake disc.

– Remove the motorcycle from the lift stand. (☛ p. 28)

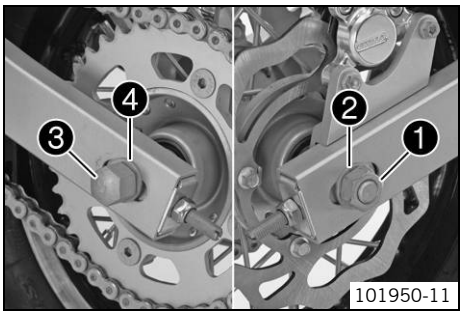
– Pull the front wheel brake and push down hard on the fork several times to align the fork legs.

– Tighten screws ❷.

Guideline

Screw, fork stub	M6	10 Nm (7.4 lbf ft)

13.3 Removing the rear wheel



Preparatory work

– Raise the motorcycle with a lift stand. (☛ p. 28)

Main work

– Remove nut ❶.
– Remove washer ❷.

Info
Protect the motorcycle and its attachments against damage by covering them.

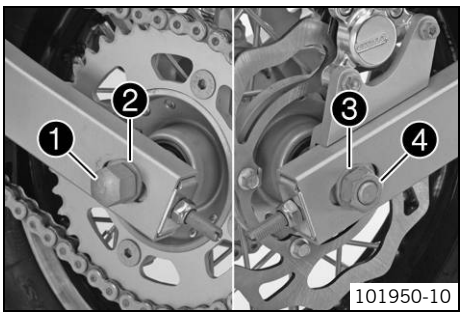
– Pull out wheel spindle ❸ with washer ❹.
– Remove the chain from the rear sprocket.
– Take the rear wheel out of the swingarm.

Info
Do not operate the foot brake lever when the rear wheel is removed. Always lay the wheel down in such a way that the brake disc is not damaged.

13.4 Installing the rear wheel

Warning
Danger of accidents Reduced braking efficiency due to oil or grease on the brake discs.

– Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.



Main work

– Check the wheel bearing for damage and wear.
  » If the wheel bearing is damaged or worn:
    – Change the wheel bearing.
– Clean and grease wheel spindle ❶.

Long-life grease (☛ p. 83)

– Lift the rear wheel into the swingarm and place the chain on the rear sprocket.
  ✓ The brake linings are correctly positioned.
– Insert wheel spindle ❶ with washer ❷.
– Position washer ❸. Mount nut ❹, but do not tighten it yet.
– Make sure that the chain adjuster support plates are in contact with the adjusting nuts.
– Check the chain tension. (☛ p. 40)
– Tighten nut ❹.

Guideline

Nut, rear wheel spindle	M12x1	40 Nm (29.5 lbf ft)

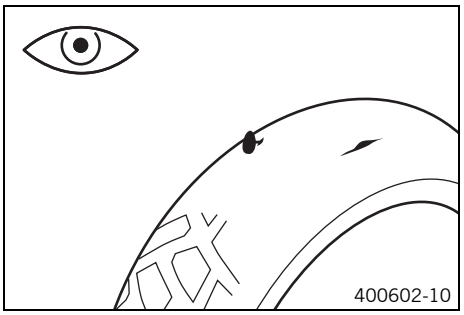
– Operate the foot brake lever repeatedly until the brake linings are in contact with the brake disc and there is a pressure point.

Finishing work

– Remove the motorcycle from the lift stand. (☛ p. 28)

13.5 Checking the tire condition

Info
Only mount tires that have been approved and/or recommended by KTM.
Other tires could have a negative effect on riding behavior.
The type, condition and air pressure of the tires all have an important impact on the riding behavior of the motorcycle.
The front and rear wheels must be mounted with tires with similar profiles.
Worn tires have a negative effect on riding behavior, especially on wet surfaces.



– Check the front and rear tires for cuts, run-in objects and other damage.
  » If the tires exhibit cuts, run-in objects or other damage:
    – Change the tires.
– Check the depth of the tread.

Info
Note local national regulations concerning the minimum tread depth.

Minimum tread depth	≥ 2 mm (≥ 0.08 in)

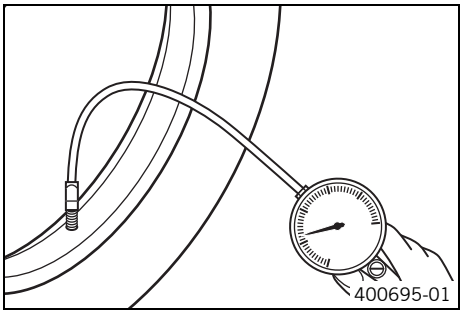
  » If the tread depth is less than the minimum permissible depth:
    – Change the tires.
– Check the tire age.

Info
The tire's date of manufacture is usually part of the tire markings and is indicated by the last four digits of the **DOT** marking. The first two digits refer to the week of manufacture and last two digits refer to the year of manufacture.
KTM recommends that the tires be changed after 5 years at the latest, regardless of the actual state of wear.

  » If a tire is more than 5 years old:
    – Change the tires.

13.6 Checking tire air pressure

Info
Low tire air pressure leads to abnormal wear and overheating of the tire.
Correct tire air pressure ensures optimal riding comfort and maximum tire service life.



– Remove the protection cap.
– Check the tire air pressure when the tires are cold.

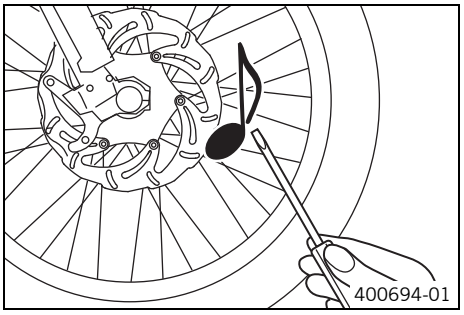
Tire air pressure off road	
Front	1.0 bar (15 psi)
Rear	1.0 bar (15 psi)

  » If the tire pressure does not meet specifications:
    – Correct the tire pressure.
– Mount the protection cap.

13.7 Checking spoke tension

Warning
Danger of accidents Instable handling due to incorrect spoke tension.
– Ensure that the spoke tension is correct. (Your authorized KTM workshop will be glad to help.)

Info
A loose spoke can cause wheel imbalance, which leads to more loose spokes in a short time.
If the spokes are too tight, they can break due to local overload.
Check the spoke tension regularly, especially on a new motorcycle.



– Briefly strike each spoke with the blade of a screwdriver.

Info
The frequency of the tone depends on the spoke length and diameter.
If you hear different tone frequencies from spokes of the same length and thickness, this is an indication that the spoke tension differs.

You should hear a high note.

» If the spoke tension differs:
  – Correct the spoke tension.

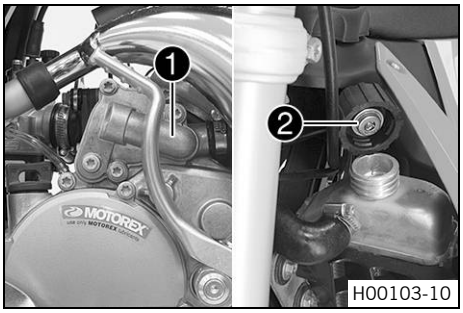
– Check the spoke torque.

Guideline

Spoke nipple	M3.5	3 Nm (2.2 lbf ft)

Torque wrench with various accessories in set (58429094000)

14.1 Cooling system



The water pump ❶ in the engine forces the coolant to flow.
The pressure resulting from the warming of the cooling system is regulated by a valve in the radiator cap ❷. This ensures that operating the vehicle at the specified coolant temperature will not result in a risk of malfunctions.

120 °C (248 °F)

Cooling is effected by the air stream.
The lower the speed, the less the cooling effect. Dirty cooling fins also reduce the cooling effect.

14.2 Checking the antifreeze and coolant level

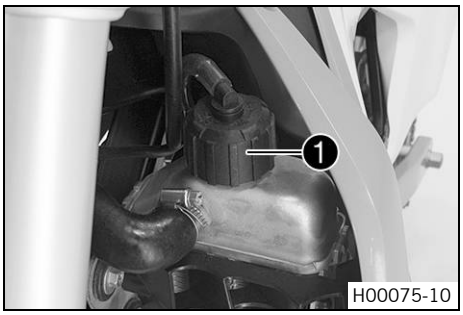
Warning
Danger of scalding During motorcycle operation, the coolant gets very hot and is under pressure.

– Do not remove the radiator cap, radiator hoses or other cooling system components when the engine is hot. Allow the engine and cooling system to cool down. In case of scalding, rinse immediately with lukewarm water.

Warning
Danger of poisoning Coolant is poisonous and a health hazard.

– Coolant must not come into contact with the skin, eyes, or clothing. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician immediately. Change clothing that is contaminated with coolant. Keep coolant out of reach of children.

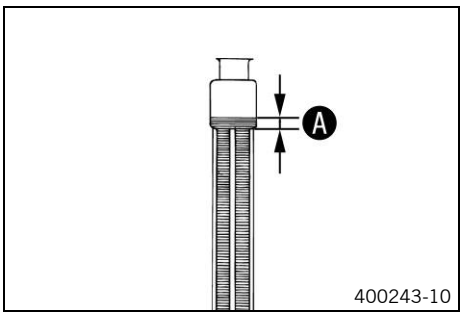
Info
Carry out this work with a cold engine.



– Stand the motorcycle upright on a horizontal surface.
– Take off radiator cap ❶.
– Check the antifreeze in the coolant.

−25... −45 °C (−13... −49 °F)

» If the antifreeze in the coolant does not equal the specified value:
– Correct the antifreeze in the coolant.



– Check the coolant level in the radiator.

Coolant level Ⓐ above the radiator fins	10 mm (0.39 in)

» If the coolant level does not meet specifications:
– Correct the coolant level.

Coolant (☛ p. 81)

– Mount the radiator cap.

14.3 Checking the coolant level

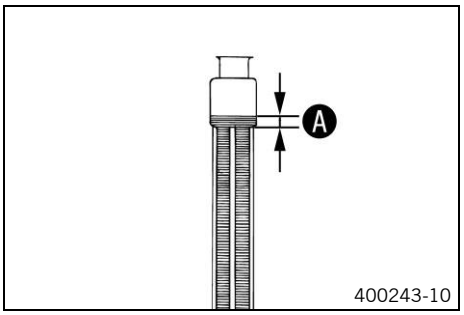
Warning
Danger of scalding During motorcycle operation, the coolant gets very hot and is under pressure.

– Do not remove the radiator cap, radiator hoses or other cooling system components when the engine is hot. Allow the engine and cooling system to cool down. In case of scalding, rinse immediately with lukewarm water.

Warning
Danger of poisoning Coolant is poisonous and a health hazard.

– Coolant must not come into contact with the skin, eyes, or clothing. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician immediately. Change clothing that is contaminated with coolant. Keep coolant out of reach of children.

Info
Carry out this work with a cold engine.



– Stand the motorcycle upright on a horizontal surface.
– Remove the radiator cap.
– Check the coolant level in the radiator.

Coolant level Ⓐ above the radiator fins	10 mm (0.39 in)

» If the coolant level does not meet specifications:
– Correct the coolant level.

Coolant (☛ p. 81)

– Mount the radiator cap.

14.4 Draining the coolant

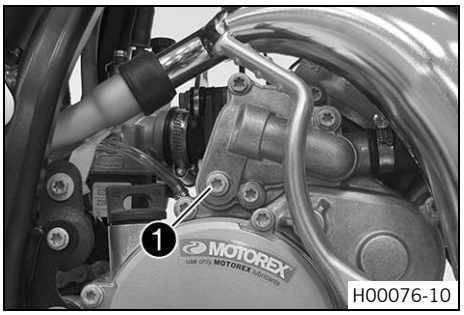
Warning
Danger of scalding During motorcycle operation, the coolant gets very hot and is under pressure.

– Do not remove the radiator cap, radiator hoses or other cooling system components when the engine is hot. Allow the engine and cooling system to cool down. In case of scalding, rinse immediately with lukewarm water.

Warning
Danger of poisoning Coolant is poisonous and a health hazard.

– Coolant must not come into contact with the skin, eyes, or clothing. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician immediately. Change clothing that is contaminated with coolant. Keep coolant out of reach of children.

Info
Carry out this work with a cold engine.



– Position the motorcycle upright.
– Place a suitable container under the engine.
– Remove screw ❶. Remove the radiator cap.
– Completely drain the coolant.
– Mount and tighten screw ❶ with a new seal ring.
Guideline

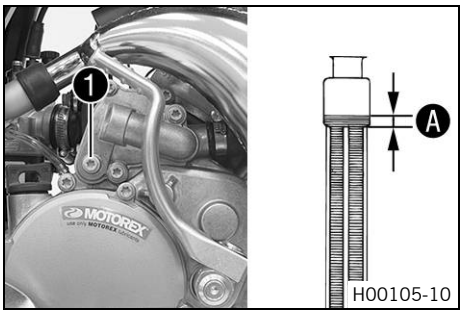
Drain plug, water pump cover	M6	6 Nm (4.4 lbf ft)

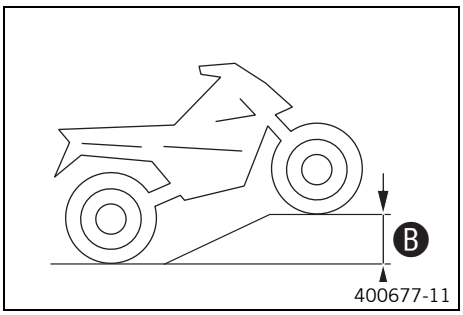
14.5 Refilling with coolant

Warning

Danger of poisoning Coolant is poisonous and a health hazard.

– Coolant must not come into contact with the skin, eyes, or clothing. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician immediately. Change clothing that is contaminated with coolant. Keep coolant out of reach of children.





Main work

– Make sure that screw 1 is tightened.
– Position the motorcycle upright.
– Add coolant to level A.

Guideline

Distance A above the radiator fins		10 mm (0.39 in)
Coolant	0.7 l (0.7 qt.)	Coolant (☛ p. 81)

– Move the vehicle into the position shown and prevent it from rolling away. Height difference B must be reached.

Guideline

Height difference B	50 cm (19.7 in)

Info

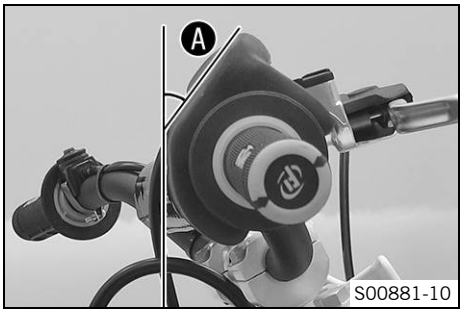
For all of the air to be able to escape from the cooling system, the vehicle must be raised at the front. If the cooling system is poorly de-aerated, its cooling power will be reduced and the engine may overheat.

– Return the vehicle to the horizontal position.
– Add coolant to level A.
– Mount the radiator cap.
– Go for a short test ride.

Finishing work

– Check the coolant level. (☛ p. 60)

15.1 Checking the installation position of the throttle grip



– Position the throttle grip so that adjustment angle Ⓐ is reached.

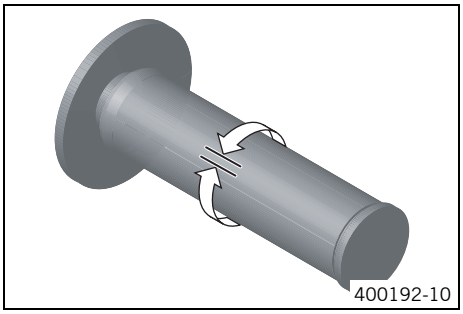
Guideline

Adjustment angle Ⓐ, throttle grip	35°

Info

If the throttle grip is turned too far forward, the throttle cable will slip out of the guide on the carburetor. The throttle slide can no longer be closed.

15.2 Checking the play of the throttle cable



– Check the throttle grip for smooth operation.
– Move the handlebar to the straight-ahead position. Move the throttle grip backwards and forwards to ascertain play in the throttle cable.

Play in gas throttle cable	3... 5 mm (0.12... 0.2 in)

» If the throttle cable play does not meet specifications:
– Adjust the play in the throttle cable. 🔧 (☛ p. 62)

Danger

Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and/or death.

– When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.

– Start the engine and let it idle. Move the handlebar to and fro over the entire steering range.

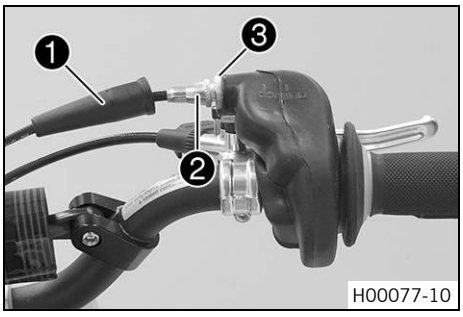
The idle speed should not change.

» If the idle speed changes:
– Adjust the play in the throttle cable. 🔧 (☛ p. 62)

15.3 Adjusting the play in the throttle cable 🔧

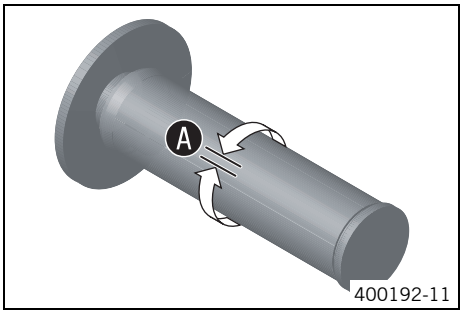
Preparatory work

– Remove the seat. (☛ p. 36)
– Turn the knurled screw on the fuel tap all the way clockwise.
– Remove the fuel tank. 🔧
– Check the throttle cable routing. (☛ p. 43)



Main work

– Move the handlebar to the straight-ahead position.
– Push back sleeve ❶.
– Ensure that the throttle cable sleeve is pushed all the way into adjusting screw ❷.
– Loosen nut ❸.



– Turn adjusting screw ❷ so that there is throttle cable play Ⓐ at the throttle grip.

Guideline

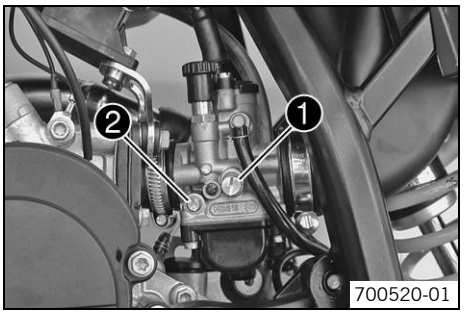
Play in gas throttle cable	3... 5 mm (0.12... 0.2 in)

– Tighten nut ❸.
– Slide on sleeve ❶.

Finishing work

– Install the fuel tank. 🔧
– Mount the seat. (☛ p. 36)
– Check the play of the throttle cable. (☛ p. 62)

15.4 Carburetor - idle (50 SX)



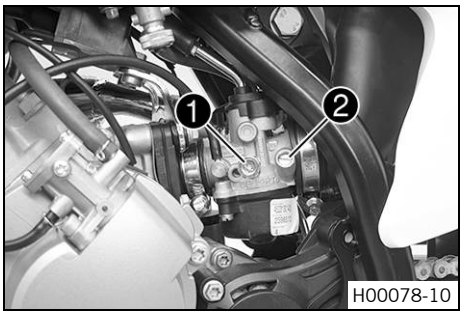
The idle setting of the carburetor has a big influence on the starting behavior, stable idling and the response to throttle opening. That means that an engine with a correctly set idle speed is easier to start than if the idle is set wrongly.

Info

The carburetor and its components are subject to increased wear caused by engine vibration. Wear can result in malfunctioning.

The idle speed is adjusted with idle speed adjusting screw ❶.
The idle mixture is adjusted with the idle mixture adjustment screw ❷.

15.5 Carburetor - idle (50 SX Mini)



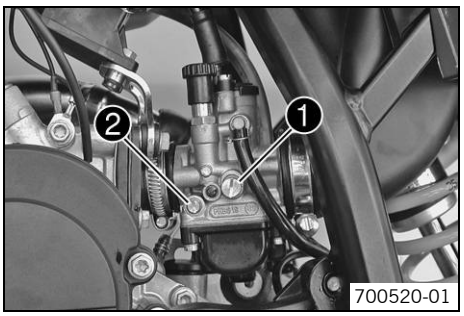
The idle setting of the carburetor has a big influence on the starting behavior, stable idling and the response to throttle opening. That means that an engine with a correctly set idle speed is easier to start than if the idle is set wrongly.

Info

The carburetor and its components are subject to increased wear caused by engine vibration. Wear can result in malfunctioning.

The idle speed is adjusted with idle speed adjusting screw ❶.
The idle mixture is adjusted with the idle mixture adjustment screw ❷.

15.6 Carburetor - adjusting idle speed 🔧 (50 SX)



– Screw in the idle adjusting screw ❷ until it stops and then to the prescribed basic setting.

Guideline

Idle mixture adjusting screw	
Open	3 turns

– Run the engine until warm.

Guideline

Warming-up phase	≥ 5 min

Danger

Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and/or death.

– When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.

– Adjust the idle speed using the idle speed adjusting screw ❶.

Guideline

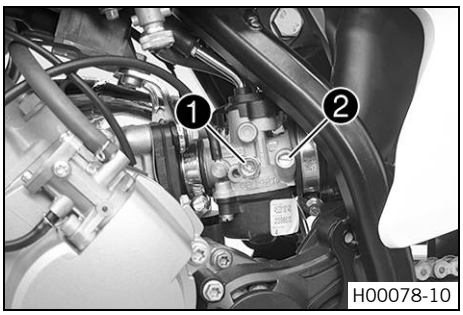
Choke function deactivated – Choke knob is in lower position. No O-ring is visible. (☛ p. 14)	
Idle speed	1,400… 1,500 rpm

– Turn the idle adjusting screw ❷ slowly clockwise until the idle speed begins to fall.
– Note the position and turn the idle adjusting screw slowly counterclockwise until the idle speed falls.
– Adjust to the point between these two positions with the highest idle speed.

Info

If the speed rise is too high, reduce the idle speed to a normal level and repeat the preceding steps.
If the procedure described here does not lead to satisfactory results, the cause may be a wrongly dimensioned idling jet.
If you can turn the idle adjusting screw to the end without any change of engine speed, you have to install a smaller idling jet.
After changing the idling jet, start from the beginning with the adjusting steps.
Following extreme air temperature or altitude changes, adjust the idle speed again.

15.7 Carburetor - adjusting idle speed (50 SX Mini)



– Screw in idle air adjusting screw ❷ all the way and turn it to the specified basic position.

Guideline

Idle air adjusting screw	
Open	1 turn

– Run the engine until warm.

Guideline

Warming-up phase	≥ 5 min

Danger

Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and/or death.

– When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.

– Adjust the idle speed using the idle speed adjusting screw ❶.

Guideline

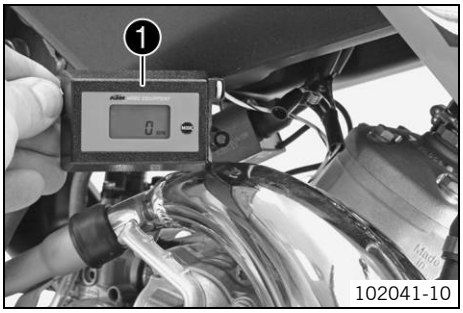
Choke function deactivated – The choke lever is pushed down all the way. (☛ p. 14)	
Idle speed	1,400... 1,500 rpm

– Turn idle air adjusting screw ❷ slowly in a clockwise direction until the idle speed begins to fall.
– Note the position and turn the idle air adjusting screw slowly counterclockwise until the idle speed falls again.
– Adjust to the point between these two positions with the highest idle speed.

Info

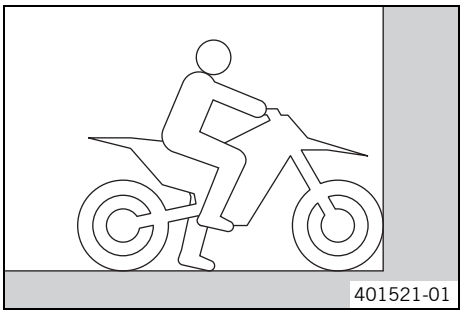
If the engine speed rises considerably, reduce the idle speed to a normal level and repeat the above steps.
If the procedure described here does not lead to satisfactory results, the cause may be a wrongly dimensioned idling jet.
If you can turn the idle air adjusting screw to the end without any change of engine speed, you need to install a smaller idling jet.
After changing the idling jet, start from the beginning with the adjusting steps.
Following extreme air temperature or altitude changes, adjust the idle speed again.

15.8 Checking the clutch setting



– Connect special tool ❶.

Tachometer (45129075000)



– Let the front wheel of the vehicle make contact with a fixed object.

Danger

Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and/or death.

– When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.

– Start the motorcycle.
– Only ride full throttle to the point where the maximum engine speed is reached.

Guideline

≤ 3 s

– Read the speed.

Slip speed	8,700… 9,300 rpm

» If the specified value is not reached:
– Adjust the clutch. (☛ p. 66)

15.9 Removing the clutch cover

Warning

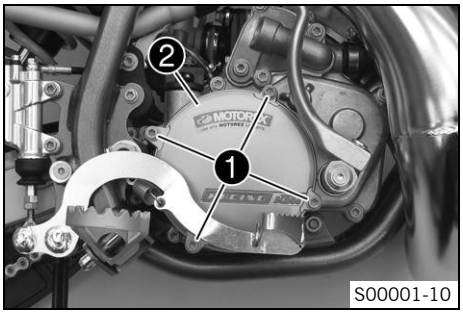
Environmental hazard Improper handling of fuel is a danger to the environment.

– Do not allow fuel to get into the ground water, the ground, or the sewage system.

Info

Fuel can emerge via the carburetor.
Capture emerging fuel using a suitable container.

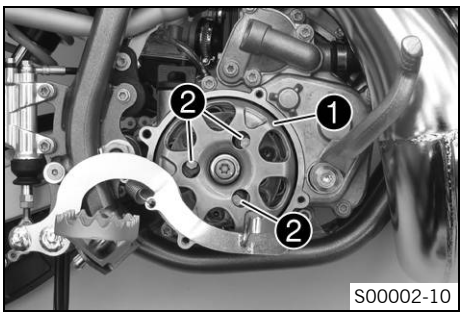
– Turn the knurled screw on the fuel tap all the way clockwise.
– Lay the vehicle down on its left side as shown.



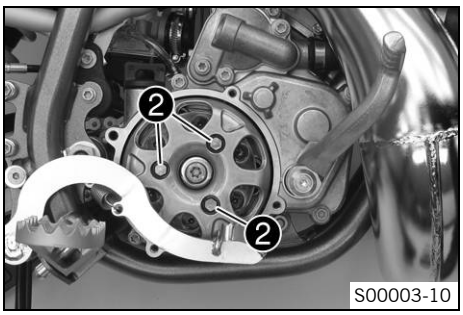
– Remove screws ❶.
– Remove clutch cover ❷ with the seal ring.

15.10 Adjusting the clutch

Preparatory work
– Remove the clutch cover. (☛ p. 65)



Main work
– Turn the outer clutch hub ❶ until adjusting screws ❷ become accessible.



Condition
If there is no reference point:
– Turn adjusting screws ❷ counterclockwise to the last detectable click.
– Turn adjusting screws ❷ clockwise by 9 clicks to the basic setting.

Guideline

Basic setting of slip speed	8,700… 9,300 rpm

Info
The springs may not be pretensioned by more than 17 clicks from the stop using the adjusting screws.

Condition
If the slip speed is too low:
– Turn adjusting screws ❷ clockwise.

Guideline

1 click increases the slip speed by	250… 350 rpm

Info
The springs may not be pretensioned by more than 17 clicks from the stop using the adjusting screws.

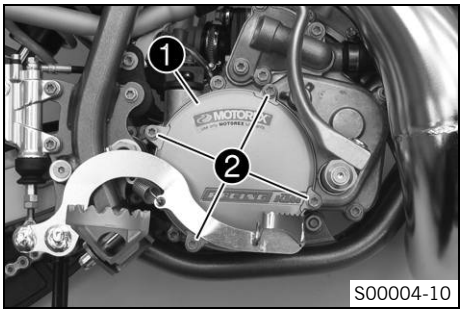
Condition
If the slip speed is too high:
– Turn adjusting screws ❷ counterclockwise.

Guideline

1 click decreases the slip speed by	250… 350 rpm

Finishing work
– Install the clutch cover. (☛ p. 67)
– Check the gear oil level. (☛ p. 69)
– Check the clutch setting. (☛ p. 65)

15.11 Installing the clutch cover



Main work

– Position clutch cover ❶ with the seal ring.

– Mount and tighten screws ❷.

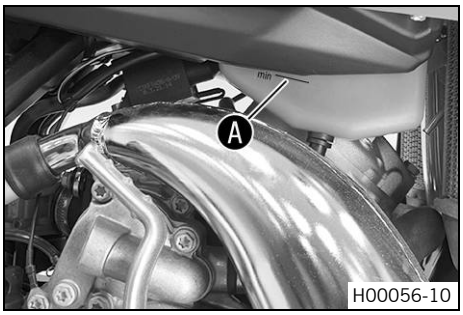
Guideline

Screw, clutch cover	M6	10 Nm (7.4 lbf ft)

Finishing work

– Check the gear oil level. (☛ p. 69)

16.1 Checking oil level (50 SX Mini)



Preparatory work

– Stand the motorcycle upright on a horizontal surface.

Main work

– Check the oil level in the oil tank.

For a full fuel tank, the oil tank must be filled up to **MIN** mark Ⓐ at a minimum.

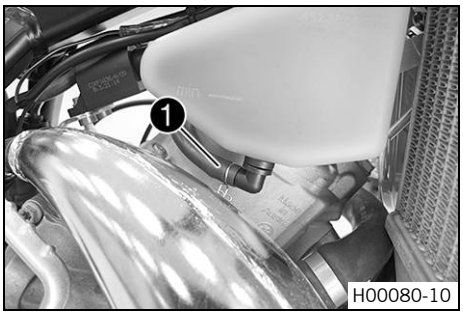
» If the oil level does not meet specifications:

– Fill up with oil. (☛ p. 20)

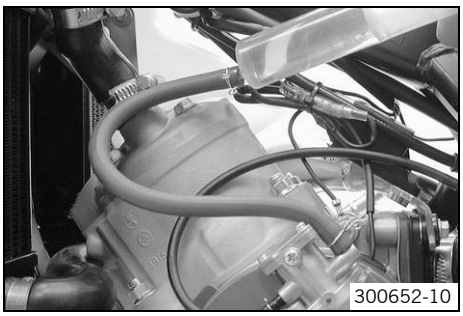
16.2 Bleeding the oil pump 🔧 (50 SX Mini)

Condition

The fuel tank has been removed.

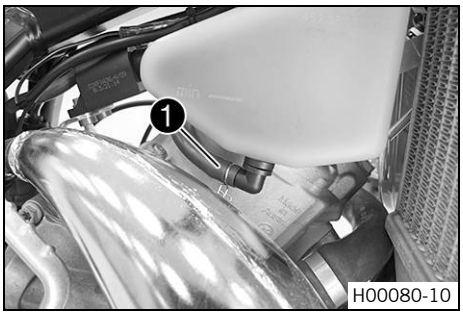


– Pull off oil line ❶.

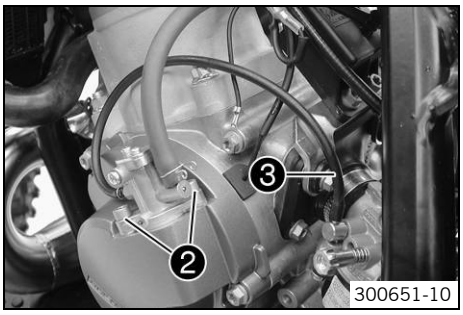


– Fill the oil line with a syringe.

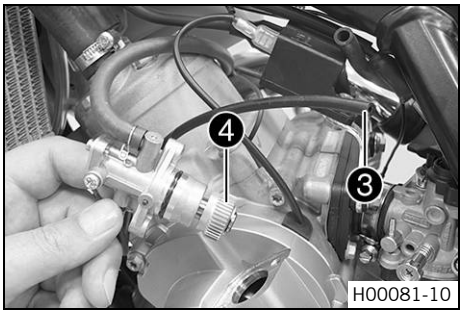
Engine oil, 2-stroke (☛ p. 81)



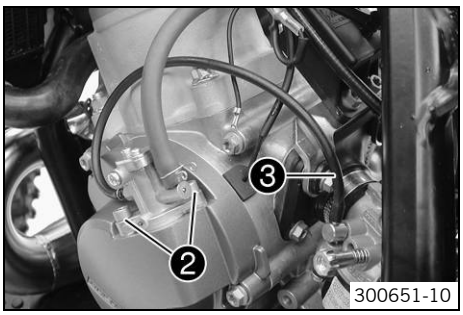
– Connect oil line ❶.



– Remove screws ❷.
– Take off the oil pump.
– Pull off oil line ❸ from the carburetor.



– Turn oil pump gear ❹ counterclockwise until oil flows out of oil line ❸ without bubbles.



– Connect oil line ❸.
– Position the oil pump.
– Mount and tighten screws ❷.

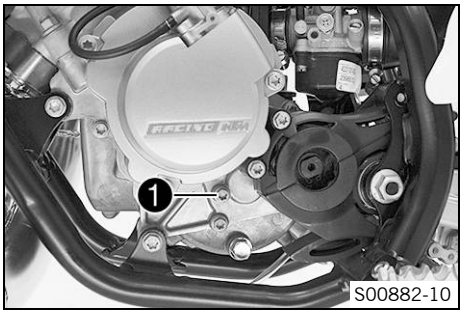
Guideline

Screw, oil pump	M5	6 Nm (4.4 lbf ft)

16.3 Checking the gear oil level

Condition
The engine is cold.

Preparatory work
– Stand the motorcycle upright on a horizontal surface.



Main work
(50 SX Mini)
– Remove gear oil monitoring screw ❶.
– Check the gear oil level.

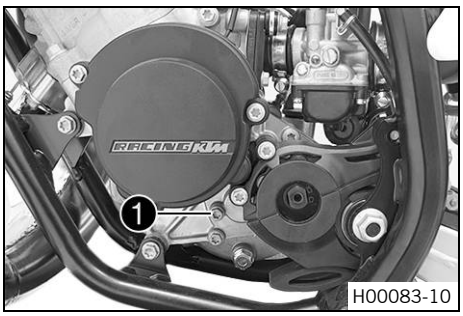
A small amount of gear oil should flow out.

» If no gear oil runs out:
– Add gear oil. (☛ p. 70)

– Mount and tighten the gear oil monitoring screw.

Guideline

Screw, gear oil level check	M6	6 Nm (4.4 lbf ft)



(50 SX)
– Remove gear oil monitoring screw ❶.
– Check the gear oil level.

A small amount of gear oil should flow out.

» If no gear oil runs out:
– Add gear oil. (☛ p. 70)

– Mount and tighten the gear oil monitoring screw.

Guideline

Screw, gear oil level check	M6	6 Nm (4.4 lbf ft)

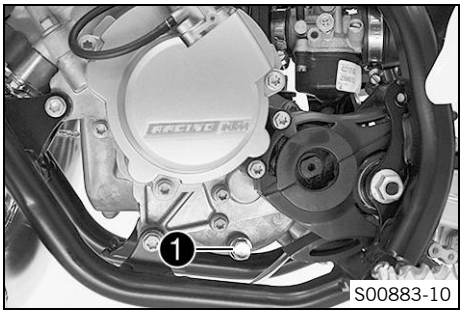
16.4 Changing the gear oil

Warning
Danger of scalding Engine oil and gear oil get very hot when the motorcycle is ridden.
– Wear appropriate protective clothing and safety gloves. In case of burns, rinse immediately with lukewarm water.

Warning
Environmental hazard Hazardous substances cause environmental damage.
– Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

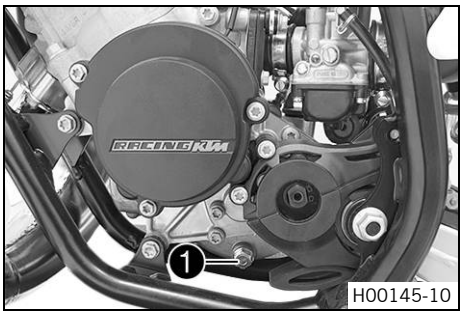
Info
Drain the gear oil while the engine is warm.

Preparatory work
– Stand the motorcycle on its side stand on a horizontal surface.



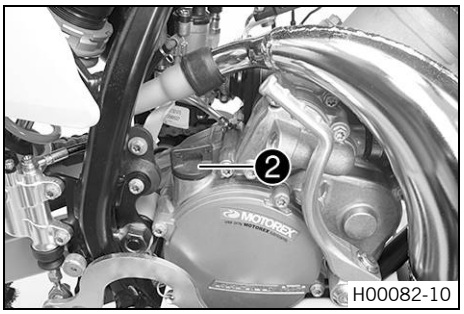
Main work
(50 SX Mini)
– Place a suitable container under the engine.
– Remove the oil drain plug with magnet ❶.
– Let the gear oil drain fully.
– Thoroughly clean the oil drain plug with magnet.
– Clean the sealing surface on the engine.
– Mount and tighten the oil drain plug with magnet and seal ring.
Guideline

Oil drain plug with magnet	M12x1.5	20 Nm (14.8 lbf ft)



(50 SX)
– Place a suitable container under the engine.
– Remove the oil drain plug with magnet ❶.
– Let the gear oil drain fully.
– Thoroughly clean the oil drain plug with magnet.
– Clean the sealing surface on the engine.
– Mount and tighten the oil drain plug with magnet and seal ring.
Guideline

Oil drain plug with magnet	M12x1.5	20 Nm (14.8 lbf ft)



– Remove screw cap ❷ and fill up with gear oil.

Gear oil	0.20 l (0.21 qt.)	Gear oil (ATF Dexron 3) (☛ p. 81)

Info
Too little gear oil or poor-quality gear oil results in premature wear to the transmission.

– Mount and tighten screw cap ❷.

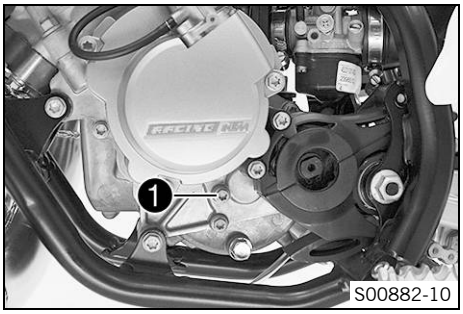
Danger
Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and/or death.
– When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.

– Start the engine and check that it is oil-tight.

Finishing work
– Check the gear oil level. (☛ p. 69)

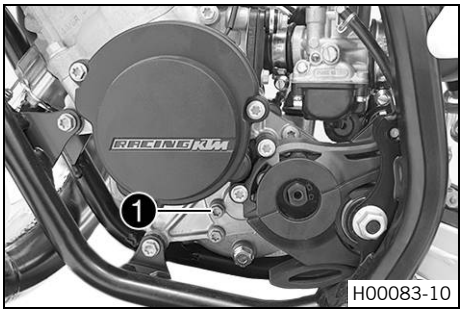
16.5 Adding gear oil

Info
Too little gear oil or poor-quality gear oil results in premature wear to the transmission.



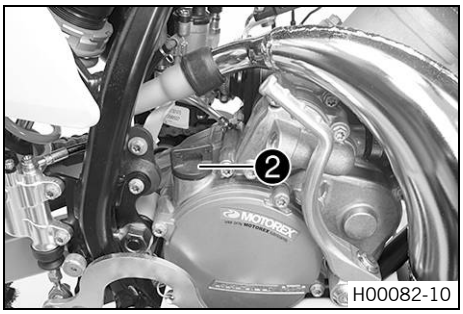
(50 SX Mini)

– Remove gear oil monitoring screw ❶.



(50 SX)

– Remove gear oil monitoring screw ❶.



– Remove screw cap ❷. Position the motorcycle upright.
– Add gear oil until it flows out of the hole in the gear oil monitoring screw.

Gear oil (ATF Dexron 3) (☛ p. 81)

– Mount and tighten screw ❶ in the opening used to check the gear oil level.

Guideline

Screw, gear oil level check	M6	6 Nm (4.4 lbf ft)

– Mount and tighten screw cap ❷.

Danger

Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and/or death.

– When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.

– Start the engine and check that it is oil-tight.

17 CLEANING, CARE

17.1 Cleaning motorcycle

Note

Material damage Damage and destruction of components by high-pressure cleaning equipment.

– When cleaning the vehicle with a pressure cleaner, do not point the water jet directly onto electrical components, connectors, cables, bearings, etc. Maintain a minimum distance of 60 cm between the nozzle of the pressure cleaner and the component. Excessive pressure can cause malfunctions or destroy these parts.

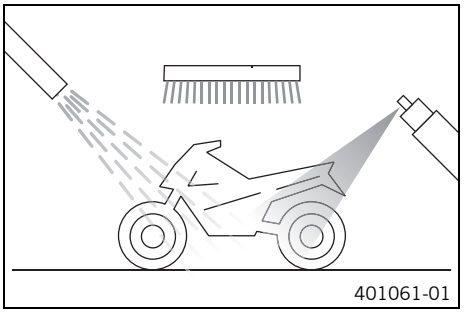
Warning

Environmental hazard Hazardous substances cause environmental damage.

– Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

Info

If you clean the motorcycle regularly, its value and appearance will be maintained over a long period.
Avoid direct sunshine on the motorcycle during cleaning.



– Seal the exhaust system to prevent penetration by water.
– First remove coarse dirt particles with a gentle water spray.
– Spray very dirty areas with a normal motorcycle cleaner and then clean with a brush.

Motorcycle cleaner (☛ p. 83)

Info

Use warm water containing normal motorcycle cleaner and a soft sponge. Never apply motorcycle cleaner to the dry vehicle; always rinse with water first.

– After rinsing the motorcycle with a gentle water spray, allow it to dry thoroughly.
– Remove the plug from the exhaust system.
– Empty the carburetor float chamber.

Warning

Danger of accidents Reduced braking efficiency due to a wet or dirty brake system.

– Clean or dry a dirty or wet brake system by riding and braking gently.

– After cleaning, let your child ride the vehicle a short distance until the engine warms up and the brakes are dried by applying the brakes carefully.

Info

The heat produced causes water at inaccessible locations in the engine and the brake system to evaporate.

– Push back the protection covers on the handlebar controls to allow water to evaporate.
– After the motorcycle has cooled off, lubricate all moving parts and bearings.
– Clean the chain. (☛ p. 40)
– Treat bare metal parts (except for brake discs and exhaust system) with anti-corrosion materials.

Preserving materials for paints, metal and rubber (☛ p. 83)

– Treat all plastic parts and powder-coated parts with a mild cleaning and care product.

Special cleaner for glossy and matte paint finishes, metal and plastic surfaces (☛ p. 83)

18 STORAGE

18.1 Storage

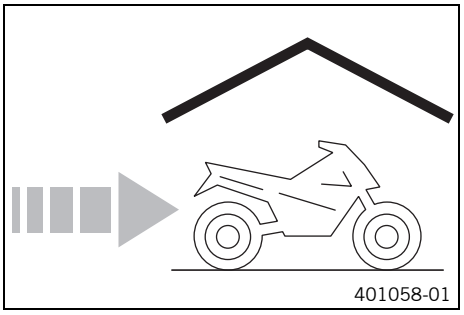
Warning

Danger of poisoning Fuel is poisonous and a health hazard.

– Fuel must not come into contact with the skin, eyes, or clothing. Do not breathe in the fuel vapors. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician immediately. Change clothing that has been contaminated with fuel. Store fuel properly in a suitable canister and keep away from children.

Info

If you want to garage the motorcycle for a longer period, take the following actions.
Before storing the motorcycle, check all parts for function and wear. If service, repairs or replacements are necessary, you should do this during the storage period (less workshop overload). In this way, you can avoid long workshop waiting times at the start of the new season.


401058-01

– When refueling the last time before taking the motorcycle out of service, add fuel additive.

Fuel additive (☛ p. 83)

– Fill up with fuel. (☛ p. 19)
– Clean the motorcycle. (☛ p. 72)
– Change the gear oil. 🔧 (☛ p. 69)
– Check the antifreeze and coolant level. (☛ p. 59)
– Empty the carburetor float chamber. 🔧
– Check the tire air pressure. (☛ p. 57)
– Store the vehicle in a dry location that is not subject to large fluctuations in temperature.

Info

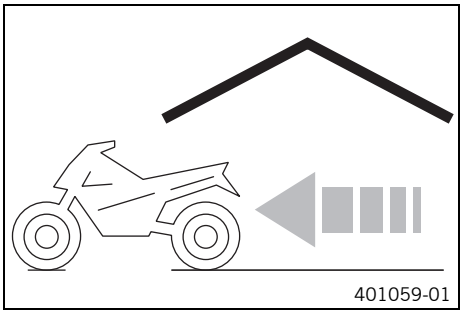
KTM recommends raising the motorcycle.

– Raise the motorcycle with a lift stand. (☛ p. 28)
– Cover the vehicle with a tarp or similar cover that is permeable to air.

Info

Do not use non-porous materials since they prevent humidity from escaping, thus causing corrosion.
Avoid running the engine for a short time only. Since the engine cannot warm up properly, the water vapor produced during combustion condenses and causes valves and exhaust system to rust.

18.2 Preparing for use after storage


401059-01

– Remove the motorcycle from the lift stand. (☛ p. 28)
– Perform checks and maintenance measures when preparing the motorcycle for use. (☛ p. 17)
– Take a test ride.

Faults	Possible cause	Action
Engine turns but does not start	Operating error	– Go through the steps of starting the engine. (☛ p. 17)
	Motorcycle was out of use for a long time and there is old fuel in the float chamber	– Empty the carburetor float chamber. 🔧
	Fuel feed interrupted	– Check the fuel tank breather. – Clean the fuel tap. **(50 SX Mini)** – Check/set the carburetor components. 🔧 **(50 SX)** – Check/set the carburetor components. 🔧
	Spark plug oily or wet	– Clean and dry the spark plug, or change it if necessary.
	Electrode distance (plug gap) of spark plug too wide	– Adjust the plug gap. Guideline Spark plug electrode gap 0.60 mm (0.0236 in)
	Fault in ignition system	– Check the ignition system. 🔧
	Short circuit cable in wiring harness frayed, kill switch defective	– Check the kill switch. 🔧
	The connector or ignition coil is loose or oxidized	– Clean the plug-in connection and treat it with contact spray.
	Water in carburetor or jets blocked	**(50 SX Mini)** – Check/set the carburetor components. 🔧 **(50 SX)** – Check/set the carburetor components. 🔧
Engine has no idle	Idling jet blocked	**(50 SX Mini)** – Check/set the carburetor components. 🔧 **(50 SX)** – Check/set the carburetor components. 🔧
	Adjusting screws on carburetor distorted	**(50 SX Mini)** – Carburetor - adjust the idle speed. 🔧 (☛ p. 64) **(50 SX)** – Carburetor - adjust the idle speed. 🔧 (☛ p. 63)
	Spark plug defective	– Change spark plug.
	Ignition system defective	– Check the ignition coil. 🔧 – Check the spark plug connector. 🔧
Engine does not speed up	Carburetor running over because float needle dirty or worn	**(50 SX Mini)** – Check/set the carburetor components. 🔧 **(50 SX)** – Check/set the carburetor components. 🔧
	Loose carburetor jets	**(50 SX Mini)** – Check/set the carburetor components. 🔧 **(50 SX)** – Check/set the carburetor components. 🔧
	Fault in ignition system	– Check the ignition system. 🔧
Engine has too little power	Fuel feed interrupted	– Check the fuel tank breather. – Clean the fuel tap. **(50 SX Mini)** – Check/set the carburetor components. 🔧 **(50 SX)** – Check/set the carburetor components. 🔧
	Air filter very dirty	– Clean the air filter and air filter box. 🔧 (☛ p. 37)

19 TROUBLESHOOTING

Faults	Possible cause	Action
Engine has too little power	Exhaust system leaky, deformed or too little glass fiber yarn filling in main silencer	– Check exhaust system for damage. – Change the glass fiber yarn filling of the main silencer. 🔧 (☛ p. 38)
	Ignition system defective	– Check the ignition coil. 🔧 – Check the spark plug connector. 🔧
	Diaphragm or reed valve housing damaged	– Check the diaphragm and reed valve housing.
	Noticeable wear	– Overhaul the engine.
	Clutch engagement speed too low or too high	– Check the clutch setting. 🔧 (☛ p. 65)
Engine stalls or is popping into the carburetor	Lack of fuel	– Turn the knurled screw on the fuel tap all the way counterclockwise. – Fill up with fuel. (☛ p. 19)
	Engine takes in bad air	– Check the intake flange and carburetor for tightness.
	The connector or ignition coil is loose or oxidized	– Clean the plug-in connection and treat it with contact spray.
Engine overheats	Too little coolant in cooling system	– Check the cooling system for leakage. – Check the coolant level. (☛ p. 60)
	Too little air stream	– Switch off engine when standing.
	Radiator fins very dirty	– Clean radiator fins.
	Foam formation in cooling system	– Drain the coolant. 🔧 (☛ p. 60) – Refill with coolant. 🔧 (☛ p. 61)
	Damaged cylinder head or cylinder head gasket	– Check the cylinder head or cylinder head gasket.
	Bent radiator hose	– Change the radiator hose. 🔧
White smoke emission (steam in exhaust gas)	Damaged cylinder head or cylinder head gasket	– Check the cylinder head or cylinder head gasket.
Gear oil exits at the vent hose	Too much gear oil added	– Check the gear oil level. (☛ p. 69)
Water in the gear oil	Damaged shaft seal ring or water pump	– Check the shaft seal ring and water pump.

20 TECHNICAL DATA

20.1 Engine

Design	1-cylinder 2-stroke engine, water-cooled, with reed intake
Displacement	49.0 cm³ (2.99 cu in)
Stroke	40 mm (1.57 in)
Bore	39.5 mm (1.555 in)
Crankshaft bearing	2 grooved ball bearings
Conrod bearing	Needle bearing
Piston pin bearing	Needle bearing
Pistons	Aluminum cast
Piston rings	1 rectangular ring
Engine lubrication (50 SX)	Mixture oil lubrication
Engine lubrication (50 SX Mini)	Separate lubrication
Primary transmission	33:61 straight cut spur gear
Clutch	Multi-disc automatic clutch on the main shaft/centrifugal force
Gearbox	Rigid 1-stage reduction gear
Transmission ratio	14:31
Ignition	SELETTRA 2p D36
Spark plug	NGK LR 8 B
Spark plug electrode gap	0.60 mm (0.0236 in)
Cooling	Water-cooled
Starting aid	Kickstarter

20.2 Engine tightening torques

Screw, bearing retainer	M5	5 Nm (3.7 lbf ft)	–
Screw, kickstarter	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Screw, oil pump (50 SX Mini)	M5	6 Nm (4.4 lbf ft)	–
Screw, stator clamp	M5	6 Nm (4.4 lbf ft)	**Loctite® 222™**
Screw, water pump wheel	M5	5 Nm (3.7 lbf ft)	**Loctite® 243™**
Bleeder flange of engine case	M6	4 Nm (3 lbf ft)	**Loctite® 243™**
Drain plug, water pump cover	M6	6 Nm (4.4 lbf ft)	–
Screw, alternator cover	M6	6 Nm (4.4 lbf ft)	–
Screw, clutch cover	M6	10 Nm (7.4 lbf ft)	–
Screw, engine case	M6	10 Nm (7.4 lbf ft)	–
Screw, engine sprocket cover	M6	10 Nm (7.4 lbf ft)	–
Screw, exhaust flange	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, fitting pin	M6	10 Nm (7.4 lbf ft)	**Loctite® 648™**
Screw, gear oil level check	M6	6 Nm (4.4 lbf ft)	–
Screw, ignition coil	M6	4 Nm (3 lbf ft)	**Loctite® 243™**
Screw, intake flange	M6	5 Nm (3.7 lbf ft)	**Loctite® 243™**
Screw, pressure plate	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, water pump cover	M6	10 Nm (7.4 lbf ft)	–
Screw, cylinder head	M7	18 Nm (13.3 lbf ft)	–
Nuts, cylinder base	M8	20 Nm (14.8 lbf ft)	–
Screw, outer clutch hub	M8	35 Nm (25.8 lbf ft)	**Loctite® 243™**
Stud bolt, cylinder base	M8	10 Nm (7.4 lbf ft)	–
Spark plug	M10x1	10... 12 Nm (7.4... 8.9 lbf ft)	–
Nut, primary gear	M10x1.25	40 Nm (29.5 lbf ft)	**Loctite® 243™**
Nut, rotor	M10x1.25	15 Nm (11.1 lbf ft)	**Loctite® 243™**
Oil drain plug with magnet	M12x1.5	20 Nm (14.8 lbf ft)	–

20.3 Carburetor with carburetor tuning

20.3.1 50 SX

Carburetor type	Dell`Orto PHBG 19BS
Needle position	2nd position from top
Idle mixture adjusting screw	
Open	3 turns
Main jet	95
Jet needle	W7
Idling jet	50
Needle jet	262AU
Throttle slide	40
Cold start jet	60

20.3.2 50 SX Mini

Carburetor type	Dell`Orto PHVA 12XS
Needle position	3rd position from top
Idle air adjusting screw	
Open	1 turn
Main jet	65
Jet needle	A8
Idling jet	30
Needle jet	211FA
Throttle slide	40
Cold start jet	60

20.4 Capacities

20.4.1 Gear oil

Gear oil	0.20 l (0.21 qt.)	Gear oil (ATF Dexron 3) (☛ p. 81)

20.4.2 Coolant

Coolant	0.7 l (0.7 qt.)	Coolant (☛ p. 81)

20.4.3 Fuel

Fuel tank capacity, approx. (50 SX)	2.3 l (2.4 qt.)	Super unleaded (95 octane) mixed with 2-stroke engine oil (1:60) (☛ p. 82)
Fuel tank capacity, approx. (50 SX Mini)	2.1 l (2.2 qt.)	Super unleaded (ROZ 95/RON 95/PON 91) (☛ p. 82)

20.5 Chassis

Frame	Central tube frame of chrome molybdenum steel tubing, powder-coated
Fork	**WP Suspension** USD 35
Shock absorber	**WP Suspension** 3614 BAEM
Suspension travel (50 SX)	
Front	205 mm (8.07 in)
Rear	185 mm (7.28 in)
Suspension travel (50 SX Mini)	
Front	100 mm (3.94 in)
Rear	171 mm (6.73 in)
Fork offset	22 mm (0.87 in)

Brake system	
Front	Disc brake with four-pot brake caliper
Rear	Disc brake with two-pot brake caliper
Brake disc diameters	
Front	160 mm (6.3 in)
Rear	160 mm (6.3 in)
Brake discs - wear limits	
Front	2.5 mm (0.098 in)
Rear	2.5 mm (0.098 in)
Tire air pressure off road	
Front	1.0 bar (15 psi)
Rear	1.0 bar (15 psi)
Secondary drive ratio (50 SX)	11:40
Secondary drive ratio (50 SX Mini)	10:42
Chain	1/2 x 3/16”
Rear sprockets available	38, 39, 40, 41, 42
Steering head angle (50 SX)	66°
Steering head angle (50 SX Mini)	67.4°
Wheelbase (50 SX)	1,032±10 mm (40.63±0.39 in)
Wheelbase (50 SX Mini)	914±10 mm (35.98±0.39 in)
Seat height unloaded (50 SX)	684 mm (26.93 in)
Seat height unloaded (50 SX Mini)	558 mm (21.97 in)
Ground clearance unloaded (50 SX)	252 mm (9.92 in)
Ground clearance unloaded (50 SX Mini)	184 mm (7.24 in)
Weight without fuel, approx. (50 SX)	41.5 kg (91.5 lb.)
Weight without fuel, approx. (50 SX Mini)	40.5 kg (89.3 lb.)

20.6 Tires

Validity	Front tires	Rear tires
(50 SX)	**2.50 - 12 42J TT** MAXXIS MAXX CROSS SI	**2.75 - 10 38J TT** MAXXIS MAXX CROSS SI
(50 SX Mini)	**2.50 - 10 38J TT** MAXXIS MAXX CROSS SI	**2.75 - 10 38J TT** MAXXIS MAXX CROSS SI
Additional information is available in the Service section under: http://www.ktm.com		

20.7 Fork

20.7.1 50 SX Mini

Fork part number	07.18.1L.01
Fork	**WP Suspension** USD 35
Fork length	580 mm (22.83 in)
Spring rate	
Weight of rider: 15... 25 kg (33... 55 lb.)	1.8 N/mm (10.3 lb/in)
Weight of rider (standard): 25... 35 kg (55... 77 lb.)	2.0 N/mm (11.4 lb/in)
Weight of rider: 35... 45 kg (77... 99 lb.)	2.2 N/mm (12.6 lb/in)
Spring length with preload spacer(s)	337.5 mm (13.287 in)

Fork oil per fork leg	240±10 ml (8.11±0.34 fl. oz.)	Fork oil (SAE 4) (48601166S1) (☛ p. 81)

20.7.2 50 SX

Fork part number	07.18.1L.03

Fork	**WP Suspension** USD 35
Fork length	685 mm (26.97 in)
Spring rate	
Weight of rider: 15... 25 kg (33... 55 lb.)	1.8 N/mm (10.3 lb/in)
Weight of rider (standard): 25... 35 kg (55... 77 lb.)	2.0 N/mm (11.4 lb/in)
Weight of rider: 35... 45 kg (77... 99 lb.)	2.2 N/mm (12.6 lb/in)
Spring length with preload spacer(s)	337.5 mm (13.287 in)

Fork oil per fork leg	240±10 ml (8.11±0.34 fl. oz.)	Fork oil (SAE 4) (48601166S1) (☛ p. 81)

20.8 Shock absorber

20.8.1 50 SX

Shock absorber part number	03.18.9L.02
Shock absorber	**WP Suspension** 3614 BAEM
Rebound damping	
Standard	10 clicks
Spring preload	
Standard	3 mm (0.12 in)
Spring rate	
Weight of rider: 15... 25 kg (33... 55 lb.)	30 N/mm (171 lb/in)
Weight of rider (standard): 25... 35 kg (55... 77 lb.)	35 N/mm (200 lb/in)
Weight of rider: 35... 45 kg (77... 99 lb.)	40 N/mm (228 lb/in)
Spring length	130 mm (5.12 in)
Gas pressure	10 bar (145 psi)
Static sag	20 mm (0.79 in)
Riding sag	45... 55 mm (1.77... 2.17 in)
Fitted length	275 mm (10.83 in)

Shock absorber oil	Shock absorber fluid (SAE 2.5) (50180751S1) (☛ p. 81)

20.8.2 50 SX Mini

Shock absorber part number	03.18.9P.01
Shock absorber	**WP Suspension** 3614 BAEM
Rebound damping	
Standard	12 clicks
Spring preload	
Standard	5 mm (0.2 in)
Spring rate	
Weight of rider: 15... 25 kg (33... 55 lb.)	65 N/mm (371 lb/in)
Weight of rider (standard): 25... 35 kg (55... 77 lb.)	75 N/mm (428 lb/in)
Weight of rider: 35... 45 kg (77... 99 lb.)	85 N/mm (485 lb/in)
Spring length	120 mm (4.72 in)
Gas pressure	10 bar (145 psi)
Static sag	15 mm (0.59 in)
Riding sag	40... 50 mm (1.57... 1.97 in)
Fitted length	245 mm (9.65 in)

Shock absorber oil	Shock absorber fluid (SAE 2.5) (50180751S1) (☛ p. 81)

20.9 Chassis tightening torques

Spoke nipple	M3.5	3 Nm (2.2 lbf ft)	–
Screw, brake linings	M5	8 Nm (5.9 lbf ft)	–
Rear brake caliper screw	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Remaining nuts, chassis	M6	10 Nm (7.4 lbf ft)	–
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)	–
Screw, ball joint of push rod on foot brake cylinder	M6	10 Nm (7.4 lbf ft)	–
Screw, chain sliding piece	M6	3 Nm (2.2 lbf ft)	–
Screw, fork stub	M6	10 Nm (7.4 lbf ft)	–
Screw, front brake disc	M6	14 Nm (10.3 lbf ft)	**Loctite® 243™**
Screw, rear brake disc	M6	14 Nm (10.3 lbf ft)	**Loctite® 243™**
Screw, throttle grip	M6	4.5 Nm (3.32 lbf ft)	–
Engine carrying screw	M8	25 Nm (18.4 lbf ft)	–
Nut, foot brake lever	M8	22 Nm (16.2 lbf ft)	–
Nut, rim lock	M8	10 Nm (7.4 lbf ft)	–
Remaining nuts, chassis	M8	25 Nm (18.4 lbf ft)	–
Remaining screws, chassis	M8	25 Nm (18.4 lbf ft)	–
Screw, bottom triple clamp	M8	15 Nm (11.1 lbf ft)	–
Screw, chain sliding piece	M8	15 Nm (11.1 lbf ft)	–
Screw, front brake caliper	M8	20 Nm (14.8 lbf ft)	**Loctite® 243™**
Screw, handlebar clamp	M8	20 Nm (14.8 lbf ft)	–
Screw, rear sprocket	M8	25 Nm (18.4 lbf ft)	**Loctite® 243™**
Screw, top triple clamp	M8	20 Nm (14.8 lbf ft)	–
Front wheel spindle screw	M10	40 Nm (29.5 lbf ft)	–
Nut, swingarm pivot	M10	45 Nm (33.2 lbf ft)	–
Remaining nuts, chassis	M10	45 Nm (33.2 lbf ft)	–
Remaining screws, chassis	M10	45 Nm (33.2 lbf ft)	–
Screw, bottom shock absorber	M10	45 Nm (33.2 lbf ft)	–
Screw, handlebar support	M10	40 Nm (29.5 lbf ft)	**Loctite® 243™**
Screw, top shock absorber	M10	45 Nm (33.2 lbf ft)	–
Nut, rear wheel spindle	M12x1	40 Nm (29.5 lbf ft)	–
Nut, steering head	M20x1.5	No play ≤ 9 Nm (≤ 6.6 lbf ft)	Only applies when using: Holding wrench for steering head bearing (45229050000)

Brake fluid DOT 4 / DOT 5.1

Standard/classification
– DOT

Guideline
– Use only brake fluid that complies with the specified standard (see specifications on the container) and that exhibits the corresponding properties.

Recommended supplier
Castrol
– **RESPONSE BRAKE FLUID SUPER DOT 4**

Motorex®
– **Brake Fluid DOT 5.1**

Coolant

Guideline
– Only use high quality coolant with corrosion inhibitor for aluminum motors (even in countries with high temperatures). Using inferior antifreeze can result in corrosion and foaming.

Mixture ratio

Antifreeze protection: −25… −45 °C (−13… −49 °F)	anti-corrosion/antifreeze distilled water

Recommended supplier
Motorex®
– **COOLANT M3.0**

Engine oil, 2-stroke

Standard/classification
– JASO FD (☛ p. 85)

Guideline
– Only use high grade 2-stroke engine oil of a reputable brand.

Fully synthetic

Recommended supplier
Motorex®
– **Cross Power 2T**

Fork oil (SAE 4) (48601166S1)

Standard/classification
– SAE (☛ p. 85) (SAE 4)

Guideline
– Use only oils that comply with the specified standards (see specifications on the container) and that exhibit the corresponding properties.

Gear oil (ATF Dexron 3)

Standard/classification
– Dexron III (ATF Dexron 3)

Guideline
– Use only ATF gear oils that comply with the specified standards (see specifications on the container) and that possess the necessary properties.

Recommended supplier
Motorex®
– **ATF Dexron 3**

Shock absorber fluid (SAE 2.5) (50180751S1)

Standard/classification
– SAE (☛ p. 85) (SAE 2.5)

Guideline
– Use only oils that comply with the specified standards (see specifications on the container) and that exhibit the corresponding properties.

Super unleaded (ROZ 95/RON 95/PON 91)

Standard/classification
– DIN EN 228 (ROZ 95/RON 95/PON 91)

Guideline
– Only use unleaded super fuel that matches or is equivalent to the specified fuel grade.
– Fuel with an ethanol content of up to 10 % (E10 fuel) is safe to use.

Info
Do **not** use fuel containing methanol (e. g. M15, M85, M100) or more than 10 % ethanol (e. g. E15, E25, E85, E100).

Super unleaded (95 octane) mixed with 2-stroke engine oil (1:60)

Standard/classification
– DIN EN 228
– JASO FD (☛ p. 85) (1:60)

Mixture ratio

1:60	Engine oil, 2-stroke (☛ p. 81) Super unleaded (ROZ 95/RON 95/PON 91) (☛ p. 82)

Recommended supplier
Motorex®
– **Cross Power 2T**

Air filter cleaner

Recommended supplier
Motorex®
– **Racing Bio Dirt Remover**

Chain cleaner

Recommended supplier
Motorex®
– **Chain Clean**

Fuel additive

Recommended supplier
Motorex®
– **Fuel Stabilizer**

Grip adhesive (00062030051)

Recommended supplier
KTM AG
– **GRIP GLUE**

High viscosity grease

Recommended supplier
SKF®
– **LGHB 2**

Long-life grease

Recommended supplier
Motorex®
– **Bike Grease 2000**

Motorcycle cleaner

Recommended supplier
Motorex®
– **Moto Clean**

Off-road chain spray

Recommended supplier
Motorex®
– **Chainlube Offroad**

Oil for foam air filter

Recommended supplier
Motorex®
– **Racing Bio Liquid Power**

Preserving materials for paints, metal and rubber

Recommended supplier
Motorex®
– **Moto Protect**

Special cleaner for glossy and matte paint finishes, metal and plastic surfaces

Recommended supplier
Motorex®
– **Quick Cleaner**

Universal oil spray

Recommended supplier
Motorex®
– **Joker 440 Synthetic**

23 STANDARDS

JASO FD

JASO FD is a classification for a 2-stroke engine oil that was specifically developed for the extreme demands of racing. Thanks to first rate synthetic esters and specially designed additives, superb combustion is achieved even under extreme operating conditions.

SAE

The SAE viscosity classes were defined by the Society of Automotive Engineers and are used for classifying oils according to their viscosity. The viscosity describes only one property of oil and says nothing about quality.

24 LIST OF ABBREVIATIONS

Art. no.	Article number
ca.	circa
cf.	compare
e.g.	for example
etc.	et cetera
i.a.	inter alia
no.	number
poss.	possibly

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MOTOREX Oil of Switzerland
KTM Group Partner

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