

**50 SX**  
**50 SX Mini**

Art. no. 3211854en



**KTM**



# 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 wish you a lot of enjoyment in riding this vehicle.

Enter the serial numbers of your vehicle below.

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

The Owner's Manual corresponded to the latest state of this series at the time of printing. Slight deviations resulting from continuing development and design can, however, not be completely excluded.

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5230 Mattighofen, Austria





# TABLE OF CONTENTS

1	MEANS OF REPRESENTATION .....	4	10	TUNING THE CHASSIS .....	23
1.1	Symbols used .....	4	10.1	Adjusting the rebound damping of the shock absorber.....	23
1.2	Formats used.....	4	10.2	Measuring rear wheel sag unloaded.....	23
2	SAFETY ADVICE.....	5	10.3	Checking the static sag of the shock absorber ....	23
2.1	Use definition - intended use .....	5	10.4	Checking the riding sag of the shock absorber....	24
2.2	Safety advice.....	5	10.5	Adjusting the spring preload of the shock absorber 🛠️.....	24
2.3	Degrees of risk and symbols .....	5	10.6	Adjusting the riding sag 🛠️ .....	25
2.4	Tampering warning.....	5	10.7	Handlebar position.....	25
2.5	Safe operation .....	5	10.8	Adjusting handlebar position 🛠️.....	25
2.6	Protective clothing .....	6	10.9	Adjusting seat height 🛠️.....	26
2.7	Work rules.....	6	11	MAINTENANCE WORK ON THE CHASSIS.....	27
2.8	Environment.....	6	11.1	Raising the motorcycle with a lift stand.....	27
2.9	Owner's Manual .....	6	11.2	Removing the motorcycle from the lift stand.....	27
3	IMPORTANT INFORMATION .....	7	11.3	Cleaning the dust boots of the fork legs.....	27
3.1	Guarantee, warranty .....	7	11.4	Removing the fork protector 🛠️ .....	28
3.2	Operating and auxiliary substances .....	7	11.5	Installing the fork protector 🛠️ .....	28
3.3	Spare parts, accessories .....	7	11.6	Removing the fork legs 🛠️ .....	28
3.4	Service .....	7	11.7	Installing the fork legs 🛠️.....	29
3.5	Figures .....	7	11.8	Removing the lower triple clamp 🛠️.....	29
3.6	Customer service.....	7	11.9	Installing the lower triple clamp 🛠️ .....	30
4	VIEW OF VEHICLE .....	8	11.10	Checking play of steering head bearing .....	31
4.1	View of the vehicle from the left front (example).....	8	11.11	Adjusting the play of the steering head bearing 🛠️ .....	32
4.2	View of the vehicle from the right rear (example).....	9	11.12	Greasing the steering head bearing 🛠️ .....	32
5	SERIAL NUMBERS .....	10	11.13	Dismounting the start number plate.....	33
5.1	Chassis number .....	10	11.14	Installing the start number plate.....	33
5.2	Type label .....	10	11.15	Dismounting the front fender .....	33
5.3	Engine number .....	10	11.16	Installing the front fender .....	33
5.4	Fork part number .....	10	11.17	Removing the shock absorber 🛠️ .....	34
5.5	Shock absorber part number .....	11	11.18	Installing shock absorber 🛠️ .....	34
6	CONTROLS.....	12	11.19	Removing the seat .....	34
6.1	Hand brake lever.....	12	11.20	Mounting the seat .....	35
6.2	Throttle grip .....	12	11.21	Removing the air filter 🛠️ .....	35
6.3	Kill switch.....	12	11.22	Installing the air filter 🛠️.....	35
6.4	Opening filler cap .....	12	11.23	Cleaning the air filter and air filter box 🛠️ .....	36
6.5	Closing filler cap.....	13	11.24	Removing main silencer.....	36
6.6	Opening oil tank cap (50 SX Mini).....	13	11.25	Installing the main silencer.....	37
6.7	Closing oil tank cap (50 SX Mini) .....	13	11.26	Changing the glass fiber yarn filling of the main silencer 🛠️.....	37
6.8	Fuel tap .....	13	11.27	Removing the chain guard (50 SX) .....	37
6.9	Choke (50 SX).....	14	11.28	Installing the chain guard (50 SX).....	38
6.10	Choke (50 SX Mini).....	14	11.29	Removing the engine sprocket cover 🛠️ .....	38
6.11	Kickstarter .....	14	11.30	Installing the engine sprocket cover 🛠️ .....	38
6.12	Foot brake lever .....	14	11.31	Checking the chain for dirt.....	38
6.13	Plug-in stand.....	14	11.32	Cleaning the chain .....	39
7	PREPARING FOR USE.....	15	11.33	Checking the chain tension .....	39
7.1	Advice on first use .....	15	11.34	Adjusting chain tension .....	40
7.2	Running in the engine .....	16	11.35	Checking the chain, rear sprocket, engine sprocket and chain guide.....	40
8	RIDING INSTRUCTIONS.....	17	11.36	Adjusting the chain guide 🛠️ .....	42
8.1	Checks and maintenance measures when preparing for use.....	17	11.37	Checking the frame 🛠️ .....	43
8.2	Starting.....	17	11.38	Checking the swingarm 🛠️ .....	43
8.3	Starting up .....	18	11.39	Checking the throttle cable routing.....	43
8.4	Riding.....	18	11.40	Checking the rubber grip .....	44
8.5	Braking.....	18	11.41	Additionally securing the rubber grip.....	44
8.6	Stopping, parking.....	18	12	BRAKE SYSTEM .....	45
8.7	Transport .....	19	12.1	Checking play of handbrake lever .....	45
8.8	Refueling .....	19	12.2	Adjusting the play of the hand brake lever .....	45
8.9	Filling up with oil (50 SX Mini) .....	20	12.3	Adjusting the basic position of the hand brake lever .....	45
9	SERVICE SCHEDULE .....	21			
9.1	Service schedule.....	21			

12.4	Checking brake discs.....	46	19	TROUBLESHOOTING .....	74
12.5	Checking front brake fluid level .....	46	20	TECHNICAL DATA .....	76
12.6	Adding front brake fluid 🛠️.....	47	20.1	Engine .....	76
12.7	Checking the front brake linings .....	48	20.2	Engine tightening torques .....	76
12.8	Removing front brake linings 🛠️.....	48	20.3	Carburetor with carburetor tuning .....	77
12.9	Installing the front brake linings 🛠️.....	48	20.3.1	50 SX.....	77
12.10	Changing the front brake linings 🛠️.....	49	20.3.2	50 SX Mini .....	77
12.11	Checking the free travel of the foot brake lever .....	50	20.4	Capacities .....	77
12.12	Adjusting the free travel of the foot brake lever 🛠️.....	50	20.4.1	Gear oil.....	77
12.13	Adjusting the basic position of the foot brake lever 🛠️.....	50	20.4.2	Coolant.....	77
12.14	Checking rear brake fluid level .....	51	20.4.3	Fuel .....	77
12.15	Adding rear brake fluid 🛠️.....	51	20.5	Chassis .....	77
12.16	Checking the rear brake linings .....	52	20.6	Tires .....	78
12.17	Removing rear brake linings 🛠️.....	52	20.7	Fork.....	78
12.18	Installing the rear brake linings 🛠️.....	53	20.7.1	50 SX Mini .....	78
12.19	Changing the rear brake linings 🛠️.....	54	20.7.2	50 SX.....	79
13	WHEELS, TIRES .....	55	20.8	Shock absorber.....	79
13.1	Removing the front wheel 🛠️.....	55	20.8.1	50 SX.....	79
13.2	Installing the front wheel 🛠️.....	55	20.8.2	50 SX Mini .....	79
13.3	Removing rear wheel 🛠️.....	56	20.9	Chassis tightening torques .....	80
13.4	Installing the rear wheel 🛠️.....	56	21	SUBSTANCES .....	81
13.5	Checking the tire condition .....	56	22	AUXILIARY SUBSTANCES .....	83
13.6	Checking tire air pressure .....	57	23	STANDARDS .....	85
13.7	Checking spoke tension .....	57		INDEX .....	86
14	COOLING SYSTEM .....	59			
14.1	Cooling system .....	59			
14.2	Checking the antifreeze and coolant level .....	59			
14.3	Checking the coolant level .....	60			
14.4	Draining the coolant 🛠️.....	60			
14.5	Refilling coolant 🛠️.....	61			
15	TUNING THE ENGINE.....	62			
15.1	Checking the installation position of the throttle grip .....	62			
15.2	Checking the play of the throttle cable.....	62			
15.3	Adjusting the play in the throttle cable 🛠️.....	62			
15.4	Carburetor - idle (50 SX).....	63			
15.5	Carburetor - idle (50 SX Mini) .....	63			
15.6	Carburetor - adjusting idle speed 🛠️ (50 SX) .....	63			
15.7	Carburetor - adjusting idle speed 🛠️ (50 SX Mini) .....	64			
15.8	Emptying the carburetor float chamber 🛠️.....	65			
15.9	Checking the clutch setting 🛠️.....	65			
15.10	Removing the clutch cover 🛠️.....	66			
15.11	Adjusting the clutch 🛠️.....	66			
15.12	Installing the clutch cover 🛠️.....	67			
16	SERVICE WORK ON THE ENGINE .....	68			
16.1	Checking oil level (50 SX Mini) .....	68			
16.2	Bleeding the oil pump 🛠️ (50 SX Mini).....	68			
16.3	Checking the gear oil level .....	69			
16.4	Changing the gear oil 🛠️.....	69			
16.5	Draining the gear oil 🛠️.....	70			
16.6	Filling up with gear oil 🛠️.....	70			
16.7	Adding gear oil 🛠️.....	70			
17	CLEANING, CARE .....	72			
17.1	Cleaning motorcycle.....	72			
18	STORAGE.....	73			
18.1	Storage .....	73			
18.2	Preparing for use after storage.....	73			

## 1.1 Symbols used

The symbols used are explained in the following.

- 
- |  |   |
|--|---|
|  | Indicates an expected reaction (e.g., to a work step or a function).  |
|  | Indicates an unexpected reaction (e.g., to 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 serviced optimally by specially trained experts using the specialist tools required. |
|  | Identifies a page reference (more information is provided on the specified page).   |
- 

## 1.2 Formats used

The typographical and other formats used are explained in the following.

- 
- |                          |  |
|--------------------------|--|
| <b>Proper name</b>       | Identifies a proper name.                  |
| <b>Name<sup>®</sup></b>  | Identifies a protected name.               |
| <b>Brand<sup>™</sup></b> | Identifies a brand in merchandise traffic. |
-

## 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

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



### Warning

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



### Caution

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

### Note

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



### Warning

Identifies 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 of, or puncturing the main silencer, baffles, header pipes or any other components which conduct exhaust gases.
- 2 Removal or puncturing of any part of the intake system.
- 3 Lack of proper maintenance.
- 4 Replacing any 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.



## 3.1 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 record 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 record.

## 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 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>

## 4.1 View of the vehicle from the left front (example)



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

## 4.2 View of the vehicle from the right rear (example)



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

## 5.1 Chassis number



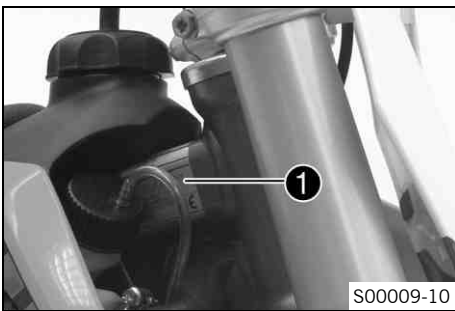
The chassis number ❶ is stamped on right of the steering head.

## 5.2 Type label



(50 SX)

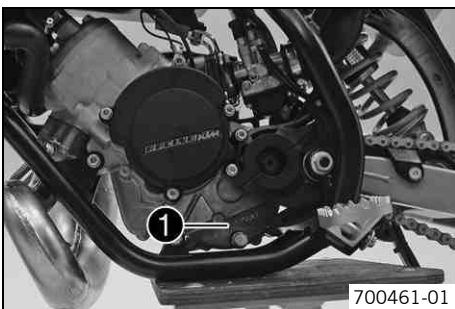
The type label ❶ is located on the front frame tube.



(50 SX Mini)

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

## 5.3 Engine number



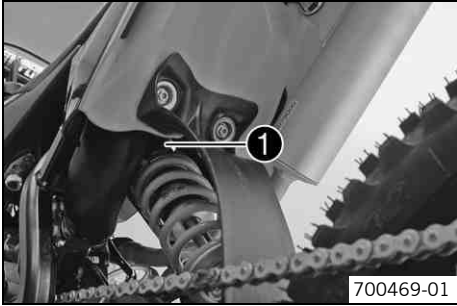
The engine number ❶ is stamped on the left side of the engine under the engine sprocket.

## 5.4 Fork part number



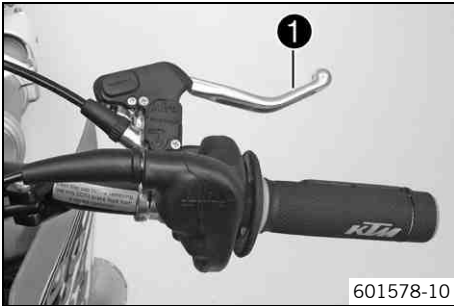
The fork part number ❶ is stamped on the outside of the axle clamp.

## 5.5 Shock absorber part number



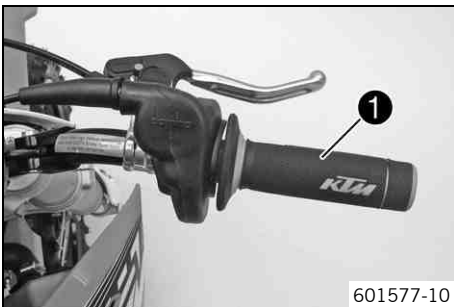
The shock absorber part number ❶ is stamped on the top of the shock absorber above the adjusting ring towards the rear.

## 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.
- Fuel in the fuel tank expands when warm and can escape if the tank is overfilled. See the notes on refueling.



### Warning

**Danger of poisoning** Fuel is poisonous and a health hazard.

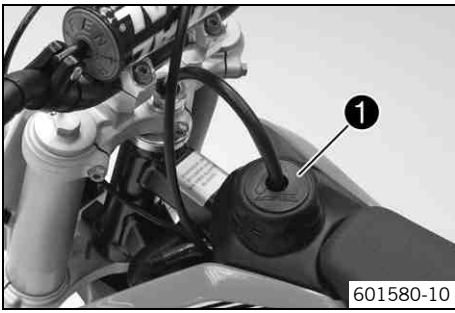
- Avoid contact between fuel and skin, eyes and clothing. Do not inhale fuel vapors. If fuel gets into your eyes, rinse immediately with water and contact a doctor. Wash affected skin areas immediately with soap and water. If fuel is swallowed, contact a doctor immediately. Change clothing that has come into contact with fuel. Store fuel in a suitable canister according to regulations and keep it out of the reach of children.



### Warning

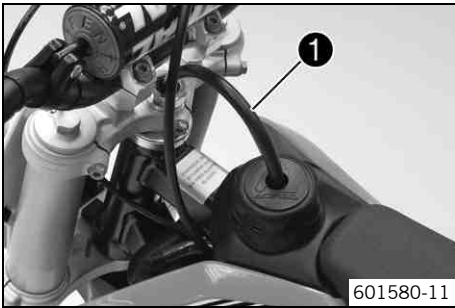
**Environmental hazard** Improper handling of fuel is a danger to the environment.

- 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



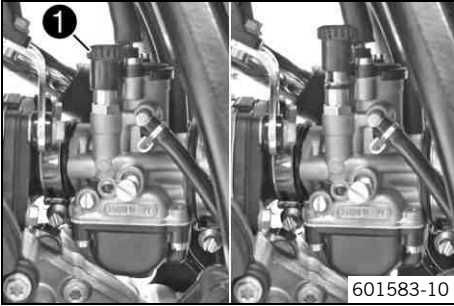
Fuel tap ❶ is on the left of the fuel tank.

### 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)



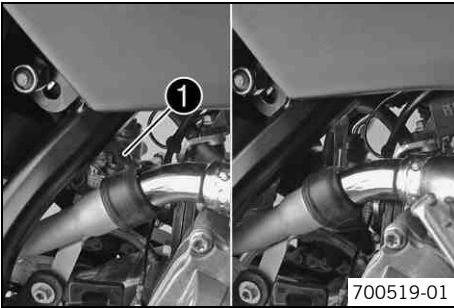
The choke knob ❶ is fitted on the left of the carburetor. Activating the choke function frees an opening through which the engine can draw extra fuel. This results in a richer fuel-air mixture, which is needed for a cold start.

**i 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)



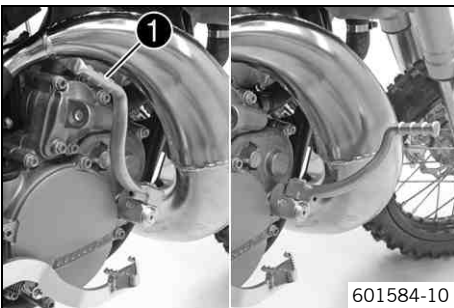
The choke lever ❶ is fitted on the right of the carburetor. Activating the choke function frees an opening through which the engine can draw extra fuel. This results in a richer fuel-air mixture, which is needed for a cold start.

**i 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.

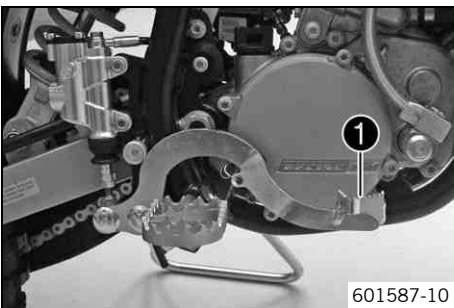
## 6.11 Kickstarter



The kickstarter ❶ is fitted on the right of the engine. The kickstarter can be swiveled.

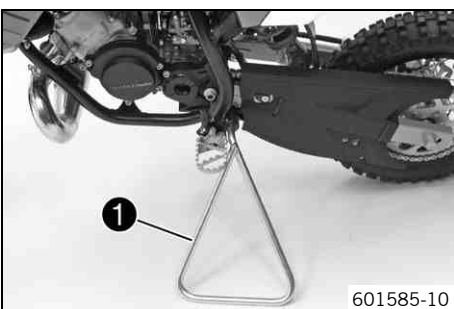
**i Info**  
Before riding, swing the kickstarter inwards towards the engine.

## 6.12 Foot brake lever



Foot brake lever ❶ is located in front of the right footrest. The foot brake lever is used to activate the rear brake.

## 6.13 Plug-in stand



The fixture for the 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.

**i Info**  
Remove the plug-in stand before riding.



## 7.1 Advice on first use



### Warning

**Danger of accidents** 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 it should not, under any circumstances, operate the vehicle without supervision and that your child may only drive at speeds that are 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 use 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 record 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 feel 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 drive 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 exceed 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 allowable rider weight.

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 riding the motorcycle for half an hour.

- 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!

## 8.1 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 dirt accumulation. (☞ p. 38)
  - Check the chain, rear sprocket, engine sprocket, and chain guide. (☞ p. 40)
  - Check the chain tension. (☞ p. 39)
  - Check the tire condition. (☞ p. 56)
  - Check the tire air pressure. (☞ p. 57)
  - Check the spoke tension. (☞ p. 57)
  - Clean the dust boots of the fork legs. (☞ p. 27)
  - 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. (☞ p. 65)
- 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. 27)

### 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.
- When you reach maximum speed after fully opening the throttle, turn back the throttle to about  $\frac{3}{4}$  of its range. The speed hardly drops, but the fuel consumption falls considerably.
- 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

**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.

## Note

**Material damage** Damage and destruction of components due to excessive load.

- The plug-in stand is designed for the weight of the motorcycle only. You or your child should not sit on the motorcycle when it is standing on the plug-in stand. The plug-in stand and/or the frame could be damaged and the motorcycle could fall over.

- 
- Brake 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

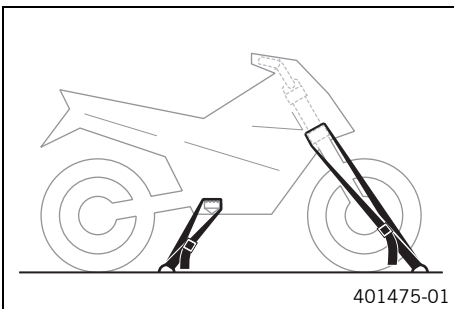
**Danger of damage** The parked vehicle may roll away or fall over.

- 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.



- 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.
- Fuel in the fuel tank expands when warm and can escape if the tank is overfilled. See the notes on refueling.



### Warning

**Danger of poisoning** Fuel is poisonous and a health hazard.

- Avoid contact of the fuel with skin, eyes and clothing. Do not inhale fuel vapors. If fuel gets into your eyes, rinse immediately with water and contact a doctor. Wash affected skin areas immediately with soap and water. If fuel is swallowed, contact a doctor immediately. Change clothing that has come into contact with fuel.

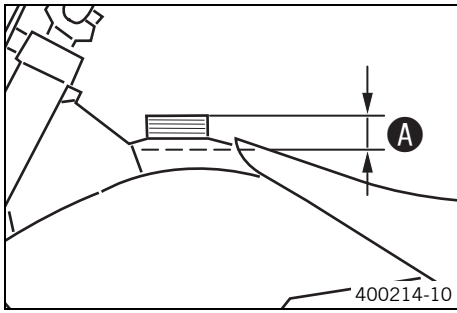


### Warning

**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 **A**.

Guideline

Measurement of <b>A</b>	35 mm (1.38 in)	
Fuel tank capacity, approx. (50 SX Mini)	2.0 l (2.1 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 gasoline, mixed with 2-stroke engine oil (1:60) (☛ p. 82)

- Close the filler cap. (☛ p. 13)

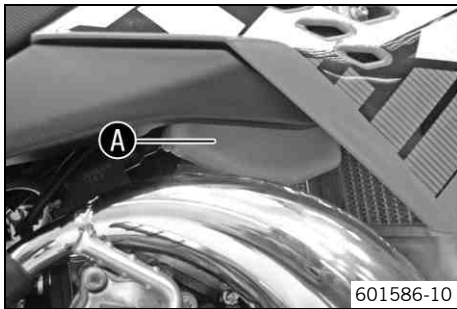
## 8.9 Filling up with oil (50 SX Mini)



### 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 **A**.

Guideline






<b>MIN</b> mark	Sufficient for a single tank filling	
Oil tank contents ca.	0.2 l (0.2 qt.)	2-stroke engine oil (☛ p. 81)

- Close the oil tank cap. (☛ p. 13)

## 9.1 Service schedule

	S10N	S20A	S40A	S80A	J1A
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. 50)	•	•	•	•	
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. 56)	•	•	•	•	
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. 40)	•	•	•	•	
Check the chain tension. (☞ p. 39)	•	•	•	•	
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. 32)					•
Check play of steering head bearing. (☞ p. 31)	•	•	•	•	
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. 36)	•	•	•	•	
Change the glass fiber yarn filling of the main silencer. 🛠️ (☞ p. 37)		•	•	•	
Check the screws and nuts for tightness. 🛠️	•	•	•	•	

# 9 SERVICE SCHEDULE

	S10N	S20A	S40A	S80A	J1A
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.	•	•	•	•	
Create a service entry in the <b>KTM DEALER.NET</b> and in the service record. 	•	•	•	•	

**S10N:** Once after 10 operating hours

**S20A:** Every 20 operating hours

**S40A:** Every 40 operating hours

**S80A:** Every 80 operating hours

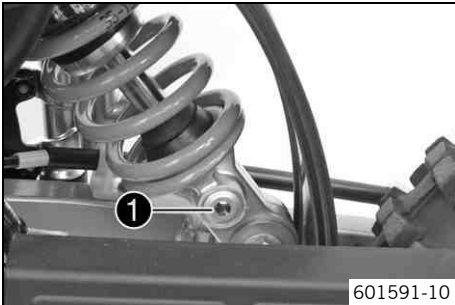
**J1A:** Annually



## 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.)



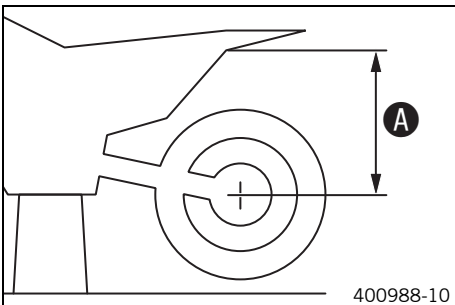
- Turn adjusting screw ❶ clockwise up to the last perceptible click.
- Turn back counterclockwise by the number of clicks corresponding to the shock absorber type.

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. 27)

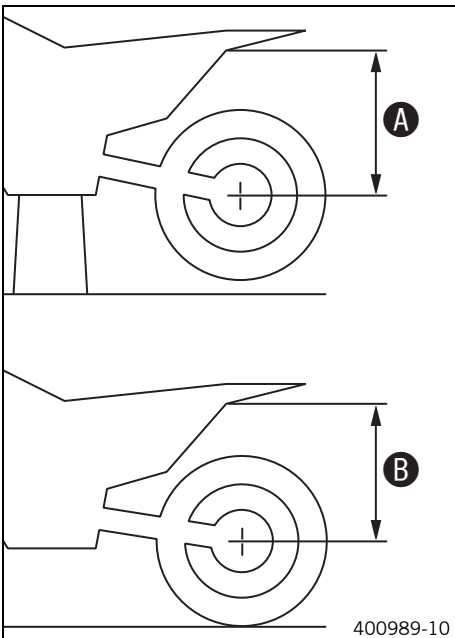
**Main work**

- 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 ❶.

**Finishing work**

- Remove the motorcycle from the lift stand. (☞ p. 27)

## 10.3 Checking the static sag of the shock absorber



- Measure distance ❶ of rear wheel unloaded. (☞ p. 23)
- Hold the motorcycle in a vertical position with the assistance of another person.
- Measure the distance between the rear axle and the fixed point again.
- Make a note of the value as measurement ❷.

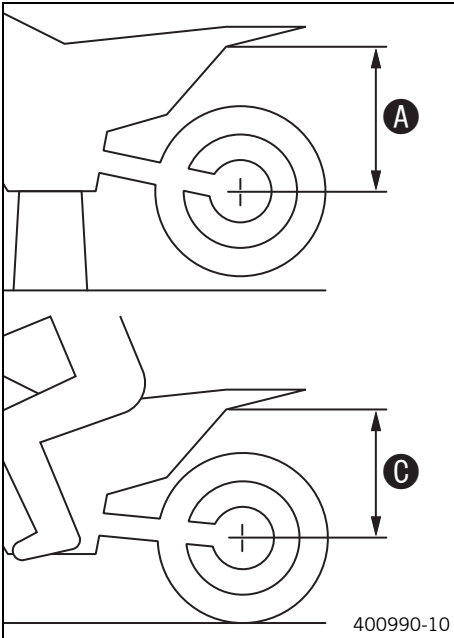
**Info**  
 The static sag is the difference between measurements ❶ and ❷.

- 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 sits down on the saddle in full protective clothing 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 a fixed point.
- Make a note of the value as measurement **C**.

### **i** 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)
-------------------------	-------------------------------

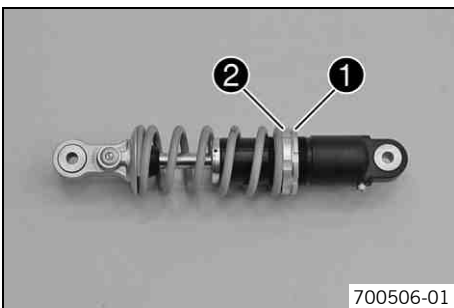
- » If the riding sag differs from the specified measurement:
  - Adjust the riding sag. ☞ (☞ p. 25)

## 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. 27)
- Remove shock absorber. ☞ (☞ p. 34)
- 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 when 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)

### **i** Info

The spring preload is the difference between the relaxed spring length and the tensioned spring length.

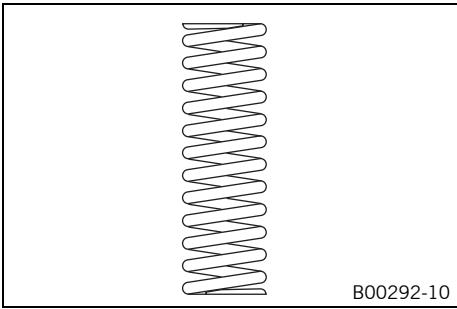
Depending on the static sag and/or the riding sag, it may be necessary to increase or decrease the spring preload.

- Tighten retaining ring **1**.

### Finishing work

- Install shock absorber. ☞ (☞ p. 34)
- Remove the motorcycle from the lift stand. (☞ p. 27)

## 10.6 Adjusting the riding sag



### Preparatory work

- Raise the motorcycle with a lift stand. (☛ p. 27)
- Remove shock absorber. (☛ p. 34)
- 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)



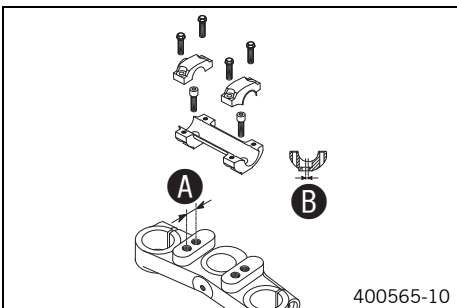
### Info

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 shock absorber. (☛ p. 34)
- Remove the motorcycle from the lift stand. (☛ p. 27)
- 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



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

Distance <b>A</b> between holes	15 mm (0.59 in)
---------------------------------	-----------------

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

Distance <b>B</b> between holes	3.5 mm (0.138 in)
---------------------------------	-------------------

The handlebar supports can be mounted in 4 different positions.

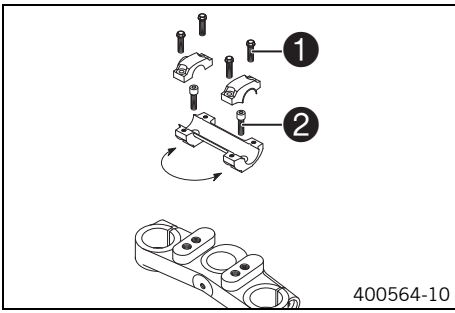
## 10.8 Adjusting handlebar position



### 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 four screws ❶. Remove the handlebar clamps. Remove the handlebar and lay it to one side.

**i Info**

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

- Remove the two screws ❷. Remove the handlebar support.
- Place the handlebar support in the required position. Mount and tighten the two screws ❷.

Guideline

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

- Position the handlebar.

**i Info**

Make sure cables and wiring are positioned correctly.

- Position the handlebar clamps. Mount and evenly tighten the four screws ❶.

Guideline

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

**i Info**

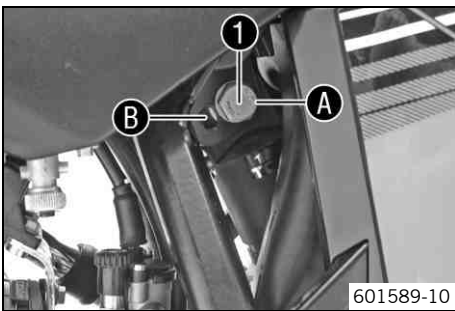
Make sure the gap width is even.

## 10.9 Adjusting 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. 27)

**Main work**

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

Guideline

Low seat position (standard)	<b>A</b>
High seat position	<b>B</b>

- Mount and tighten screw ❶.

Guideline

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

**Finishing work**

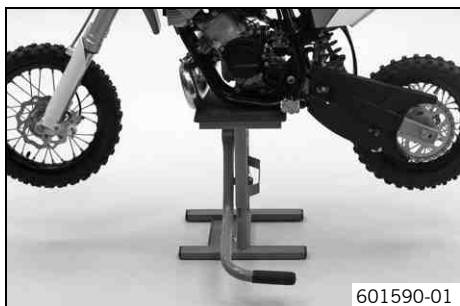
- Remove the motorcycle from the lift stand. (↩ p. 27)

## 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.



- Raise the motorcycle at the frame underneath the engine.

Lift stand (59229055000)

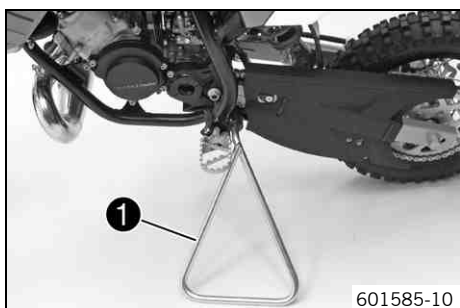
- ✓ The tires should no longer be in contact with the ground.
- Secure the motorcycle against falling over.

## 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.



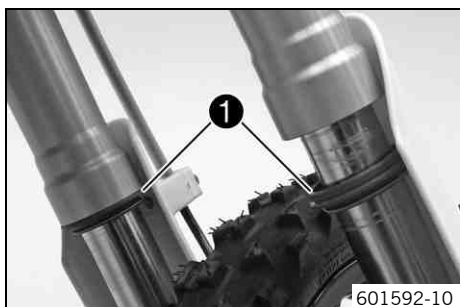
- Remove the motorcycle from the lift stand.
- Remove the lift stand.
- To park the motorcycle, insert plug-in stand ❶ into the plug-in stand bracket on the left side of the vehicle.



### 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. 27)

### Main work

- Push dust boots ❶ of both fork legs downwards.



### Info

The dust boots remove dust and coarse dirt particles from the inside fork tubes. Over time, dirt can penetrate behind the dust boots. If this dirt is not removed, the oil seals 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.

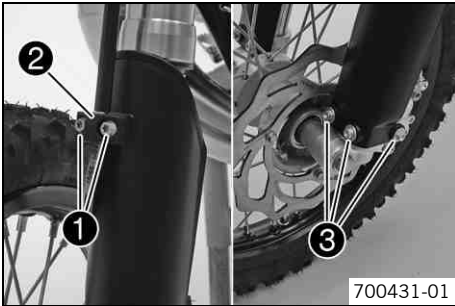
Universal oil spray (☞ p. 84)

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

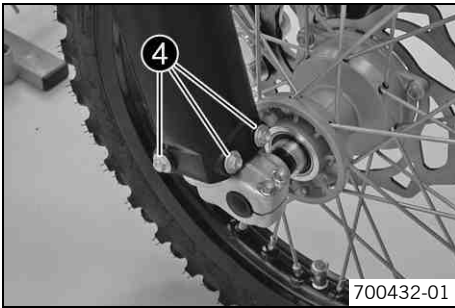
### Finishing work

- Remove the motorcycle from the lift stand. (☞ p. 27)

## 11.4 Removing the fork protector

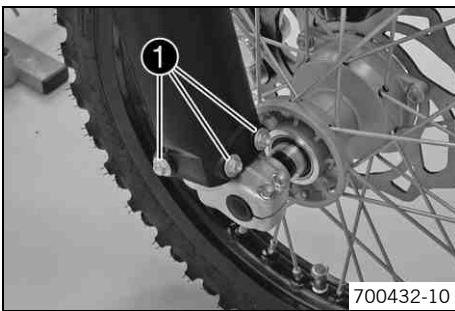


- Remove screws ❶. Take off clamp ❷.
- Remove screws ❸ on the left fork leg. Take off the fork protector.



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

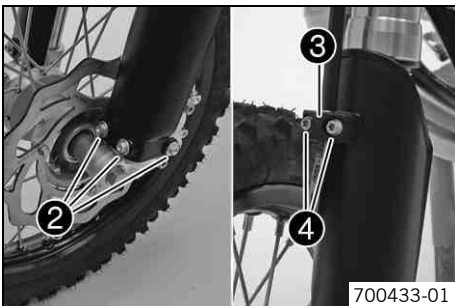
## 11.5 Installing the fork protector



- Position the fork protection on the right fork leg. Mount and tighten screws ❶.

Guideline

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



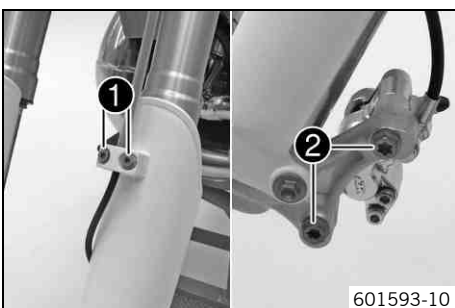
- Position the fork protection on the left fork leg. Mount and tighten screws ❷.

Guideline

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

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

## 11.6 Removing the fork legs

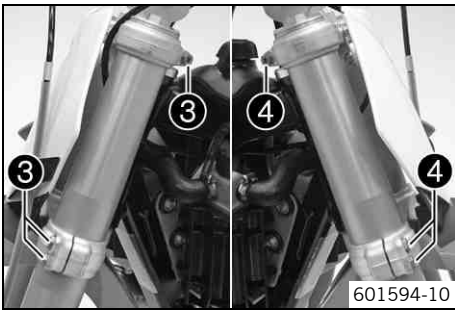


### Preparatory work

- Raise the motorcycle with a lift stand. (☛ p. 27)
- Remove the front wheel. ☛ (☛ p. 55)

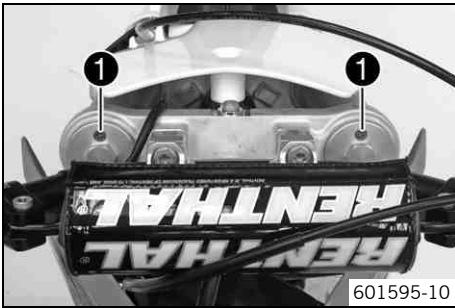
### Main work

- 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 ③. Remove the left fork leg.
- Loosen screws ④. Remove the right fork leg.

## 11.7 Installing the fork legs



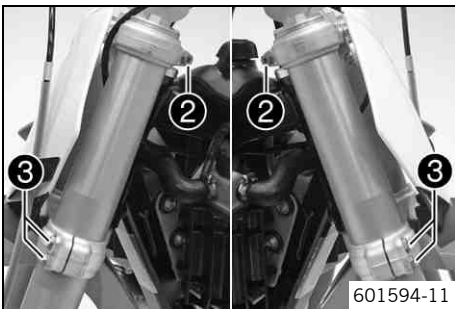
### Main work

- 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 ① to the front.



- Tighten screws ②.

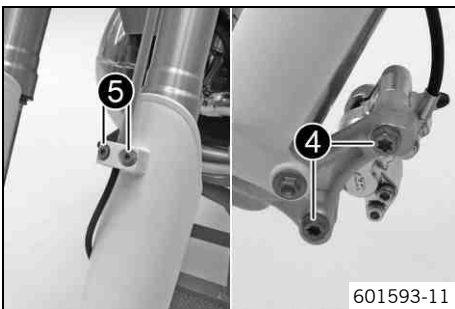
### Guideline

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

- Tighten screws ③.

### Guideline

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



- Position brake caliper, mount, and tighten screws ④.

### 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 ⑤.

### 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. 27)
- Remove the front wheel. (☞ p. 55)
- Remove the fork legs. (☞ p. 28)
- Dismount the start number plate. (☞ p. 33)
- Dismount the front fender. (☞ p. 33)

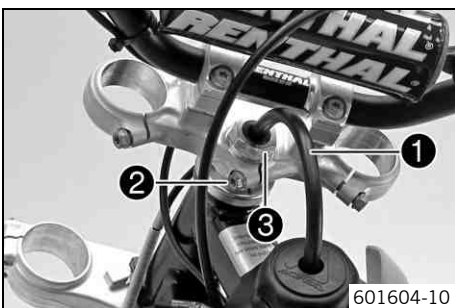
### Main work

- Remove fuel tank breather ①.
- Loosen screw ②. Remove nut ③, take off the top triple clamp with the handlebar, and place it on one side.

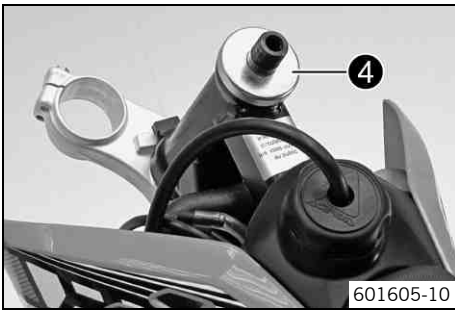


### Info

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

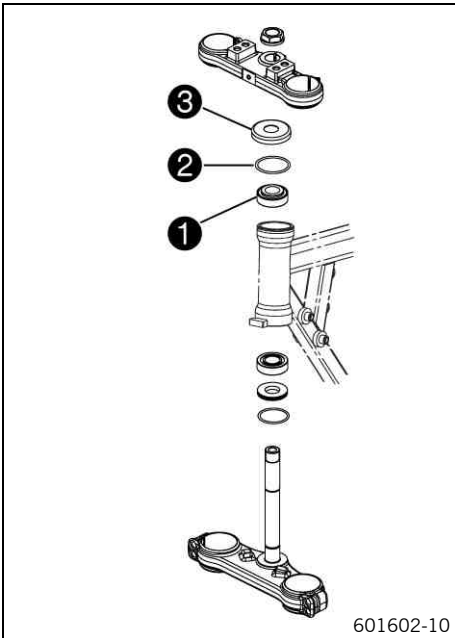






- Remove protective ring 4.
- Remove the lower triple clamp with the steering stem.
- Remove the upper steering head bearing.

## 11.9 Installing the lower triple clamp

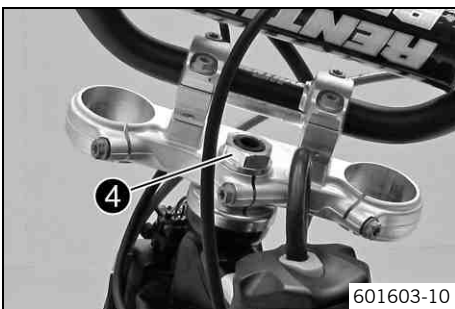


### Main work

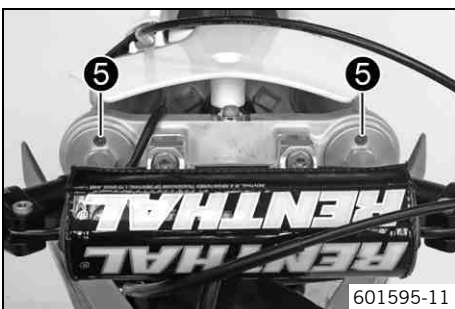
- Clean the bearing and sealing elements, check for damage, and grease.

High viscosity grease (☛ p. 83)

- Insert the lower triple clamp with the steering stem. Mount the upper steering head bearing 1.
- Check whether the top steering head seal 2 is correctly positioned.
- Slide on protective ring 3.



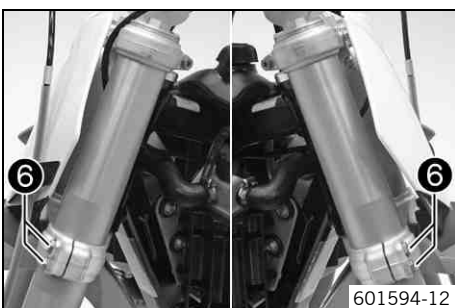
- Position the upper triple clamp with the steering.
- Mount nut 4, but do not tighten it yet.



- 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 5 to the front.

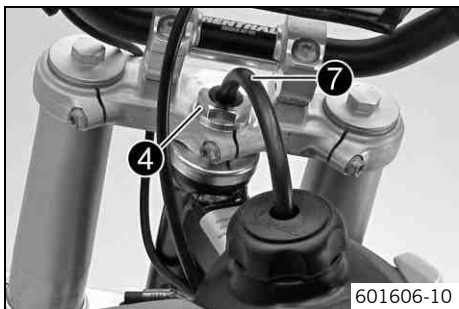


- Tighten screws 6.

### Guideline

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





- Tighten nut ④.

Guideline

Nut, steering head	M20x1.5	No play ≤ 9 Nm (≤ 6.6 lbf ft)	Only applies when using: Key for steering head bearing (45229050000)
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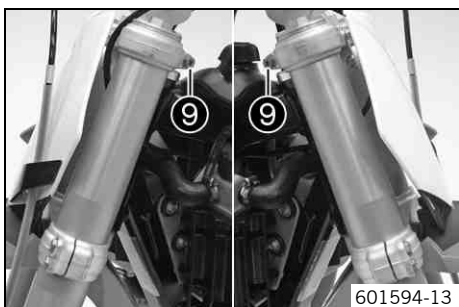
- Position the fuel tank breather ⑦.



- Tighten screw ⑧.

Guideline

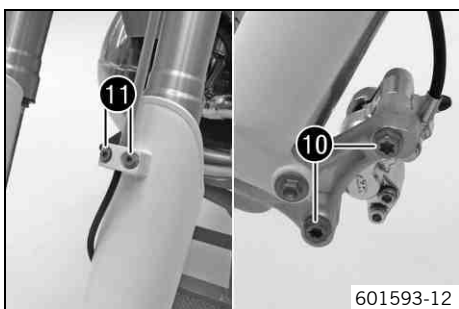
Screw, top triple clamp	M8	20 Nm (14.8 lbf ft)
-------------------------	----	------------------------



- Tighten screws ⑨.

Guideline

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



- Position brake caliper, and mount and tighten screws ⑩.

Guideline

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

- Position the brake line and clamp. Mount and tighten screws ⑪.
- Install the front fender. (☛ p. 33)
- Install the start number plate. (☛ p. 33)

### Finishing work

- 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. 31)
- Remove the motorcycle from the lift stand. (☛ p. 27)

## 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.)

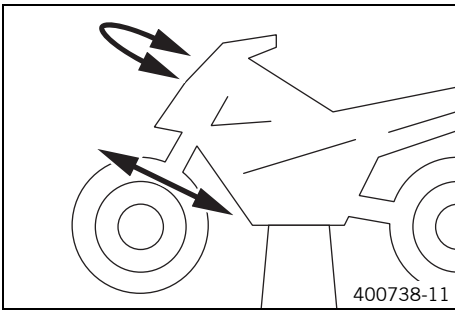


### Info

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. 27)



**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. 32)

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

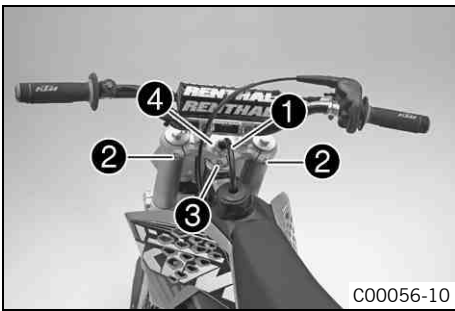
The handlebar must be able to move easily over the entire steering range. No resting locations should be noticeable.

- » If click positions are noticeable:
  - Adjust the play of the steering head bearing. (☛ p. 32)
  - Check the steering head bearing and replace if required.

**Finishing work**

- Remove the motorcycle from the lift stand. (☛ p. 27)

**11.11 Adjusting the play of the steering head bearing ☛**



**Preparatory work**

- Raise the motorcycle with a lift stand. (☛ p. 27)

**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: Key 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**

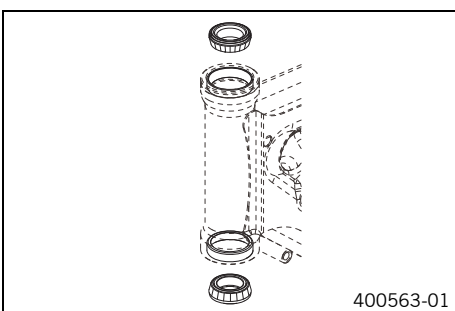
Screw, top triple clamp	M8	20 Nm (14.8 lbf ft)
-------------------------	----	------------------------

- Position the fuel tank breather ❶.

**Finishing work**

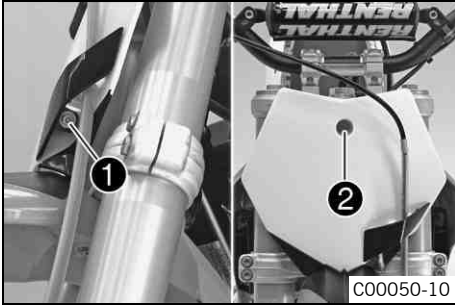
- Check play of steering head bearing. (☛ p. 31)
- Remove the motorcycle from the lift stand. (☛ p. 27)

**11.12 Greasing the steering head bearing ☛**



- Remove the lower triple clamp. (☛ p. 29)
- Install the lower triple clamp. (☛ p. 30)

## 11.13 Dismounting the start number plate

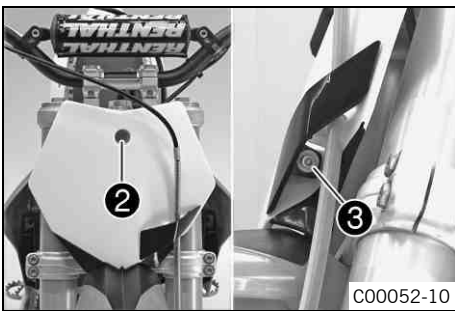


- Remove screw ❶ and take off clamp.
- Remove screw ❷. Remove the start number plate.

## 11.14 Installing the start number plate



- Position the start number plate with the drill holes onto the holding lugs ❶ of the fender.



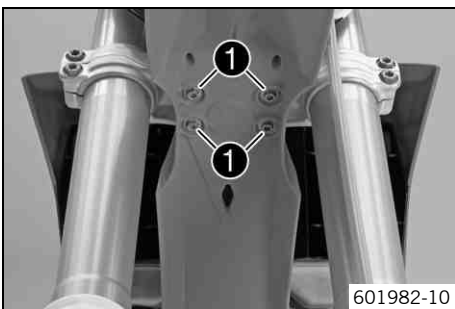
- Mount and tighten screw ❷.

Guideline

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

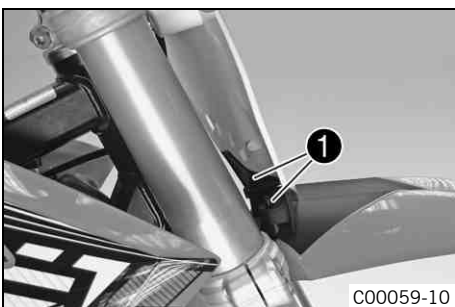
- Position the brake line. Put the clamp on, mount and tighten screw ❸.

## 11.15 Dismounting the front fender

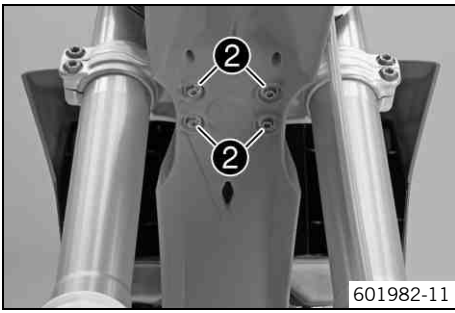


- Remove screws ❶. Remove the front fender.

## 11.16 Installing the front fender



- Position the fender with holding lugs ❶ into the drill holes on the start number plate.



- Position the front fender. Mount and tighten screws ②.

Guideline

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

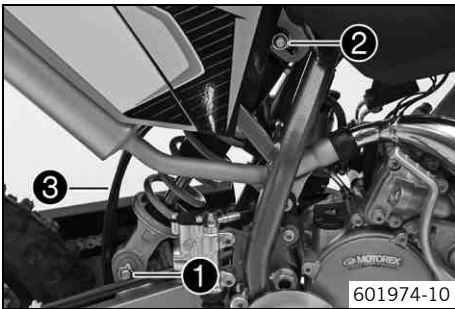
## 11.17 Removing the shock absorber

### Preparatory work

- Raise the motorcycle with a lift stand. (☛ p. 27)

### Main work

- Remove screw ① and lower the rear wheel with the swingarm as far as possible without blocking the rear wheel. Fix the rear wheel in this position.
- Remove screw ②, push splash protector ③ to the side, and remove the shock absorber.



## 11.18 Installing 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 the splash protector ① to the side and position the shock absorber according to the desired seat height. Mount and tighten screw ②.

Guideline

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

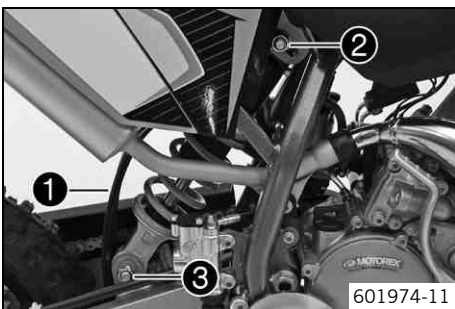
- Mount and tighten screw ③.

Guideline

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

### Finishing work

- Remove the motorcycle from the lift stand. (☛ p. 27)

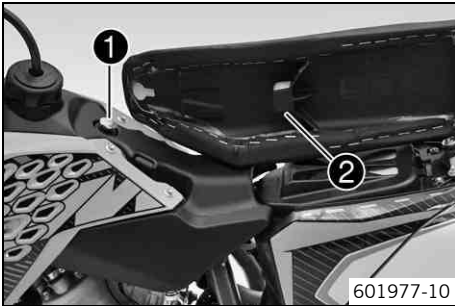


## 11.19 Removing the seat

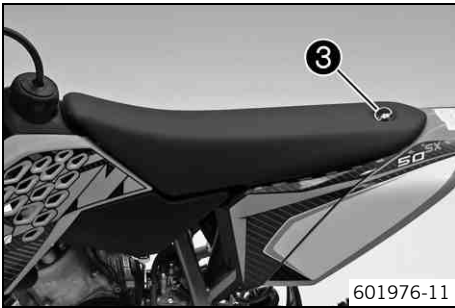


- Open quick release ① and raise the rear of the seat.
- Pull back the seat and remove it.

## 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 ride the vehicle without an air filter since dust and dirt can get into the engine and result in 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

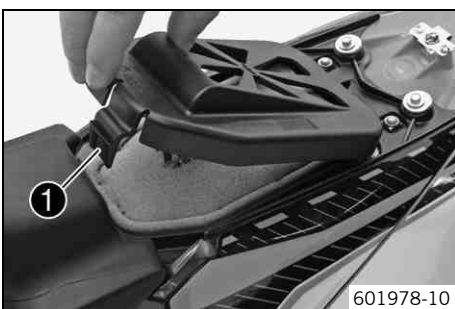
- Remove the seat. (☛ p. 34)

### Main work

- Press the rear holding lugs ❶ together slightly and swing the air filter cover upward. Pull out the front holding lug and take off the air filter 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 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. 35)

## 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. 34)
- Remove the air filter. 🛠️ (🔧 p. 35)

### 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. 84)

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

### Finishing work

- Install the air filter. 🛠️ (🔧 p. 35)
- Mount the seat. (🔧 p. 35)

## 11.24 Removing main silencer



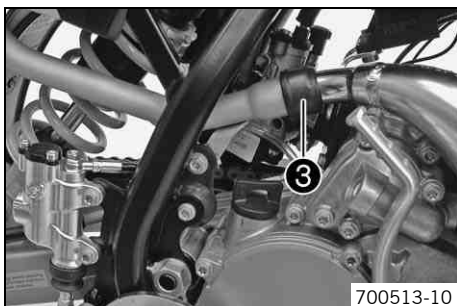
### Warning

**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.



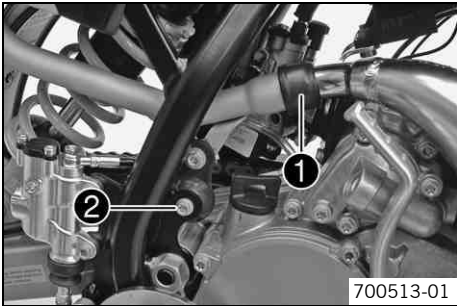
- Remove screw ❶.
- Remove screw ❷.



- Pull the main silencer off of the manifold at the rubber sleeve ❸.



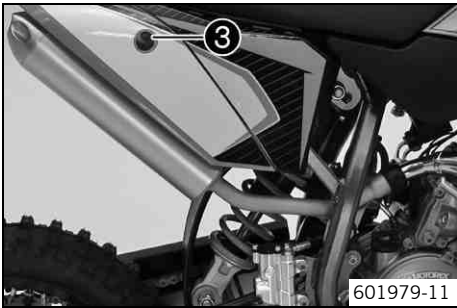
## 11.25 Installing the main silencer



- 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.

**i Info**  
 Over a period, the fibers of the insulating material vanish into the air, and the silencer "burns out". Not only is the noise level higher, the performance characteristic changes.

### Preparatory work

- Remove the main silencer. (☛ p. 36)

### Main work

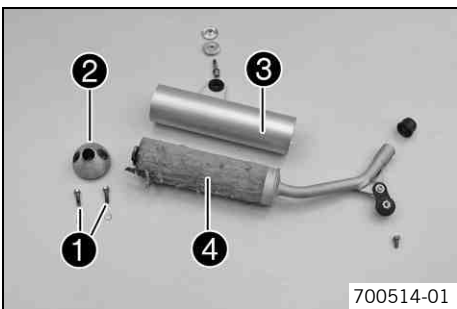
- Remove screws ❶ of locking cap ❷. Remove locking cap and outer tube ❸.
- Pull the glass fiber yarn filling ❹ from the inner tube.
- Clean the parts that are to be reinstalled.
- Mount the new glass fiber yarn filling on the inner tube.
- Slide the outer tube over the glass fiber yarn filling.
- Insert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

Guideline

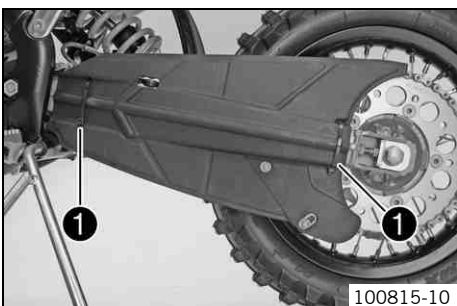
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)
---------------------------	----	--------------------

### Finishing work

- Install the main silencer. (☛ p. 37)

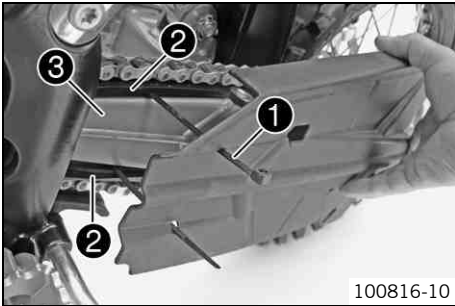


## 11.27 Removing the chain guard (50 SX)



- Remove cable binder ❶.
- Take off the chain guard.

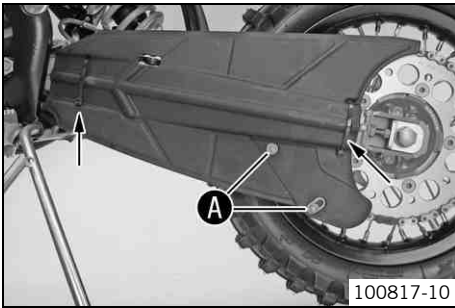
## 11.28 Installing the chain guard (50 SX)



- Position the chain guard. Mount cable binder ❶.

**i Info**

The cable binder must be run between chain sliding guard ❷ and swingarm ❸.



- Mount the cable binder at the rear.
- Align the chain guard so that screws A of the chain guide are visible.
- Tighten the cable binder and cut off the ends.

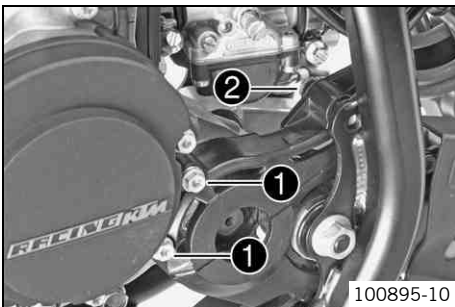
## 11.29 Removing the engine sprocket cover

**Preparatory work**

- Raise the motorcycle with a lift stand. (☛ p. 27)

**Main work**

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



## 11.30 Installing the engine sprocket cover

**Main work**

- 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**

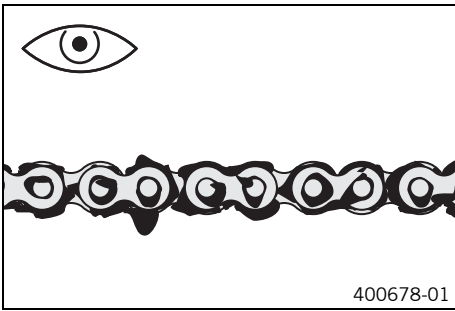
- Remove the motorcycle from the lift stand. (☛ p. 27)

## 11.31 Checking the chain for dirt

**Preparatory work (50 SX)**

- Remove the chain guard. (☛ p. 37)





**Main work**

- Check the chain for coarse dirt accumulation.
  - » If the chain is very dirty:
    - Clean the chain. (☛ p. 39)

**Finishing work  
(50 SX)**

- Install the chain guard. (☛ p. 38)

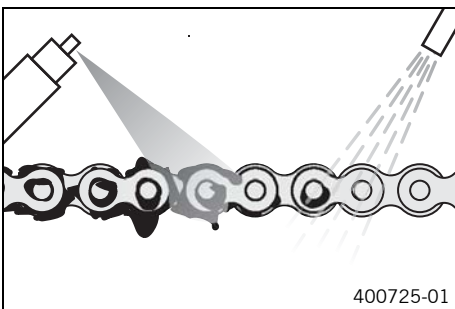
## 11.32 Cleaning the chain

**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.



- Clean the chain regularly and then treat with chain spray.

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

## 11.33 Checking the chain tension

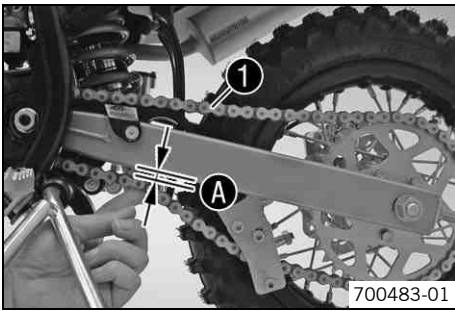
**Warning**  
**Danger of accidents** Danger caused by incorrect chain tension.  
 - If the chain tension is too high, the components of the secondary power train (chain, engine sprocket, rear sprocket, bearings in transmission and rear wheel) are under additional load. Apart from premature wear, in extreme cases the chain can rupture or the countershaft of the transmission can break. On the other hand, if the chain is loose, it can fall off the engine sprocket or the rear sprocket and block the rear wheel or damage the engine. Check the chain tension and correct if necessary.

**Preparatory work**

- Raise the motorcycle with a lift stand. (☛ p. 27)

**(50 SX)**

- Remove the chain guard. (☛ p. 37)



**Main work**

- Push the chain at the end of the chain sliding component upward to measure the chain tension **A**.

**i Info**

The upper chain section **1** must be taut. Because chain wear is not always even, repeat this measurement at different chain positions.

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

- » If the chain tension does not meet specifications:
  - Adjust the chain tension. (☛ p. 40)

**Finishing work (50 SX)**

- Install the chain guard. (☛ p. 38)
- Remove the motorcycle from the lift stand. (☛ p. 27)

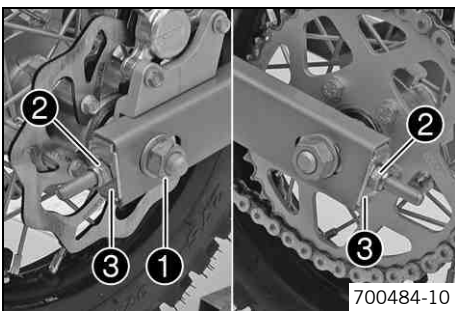
## 11.34 Adjusting chain tension

**Warning**  
**Danger of accidents** Danger caused by incorrect chain tension.

- If the chain tension is too high, the components of the secondary power train (chain, engine sprocket, rear sprocket, bearings in transmission and rear wheel) are under additional load. Apart from premature wear, in extreme cases the chain can rupture or the countershaft of the transmission can break. On the other hand, if the chain is loose, it can fall off the engine sprocket or the rear sprocket and block the rear wheel or damage the engine. Check the chain tension and correct if necessary.

**Preparatory work**

- Raise the motorcycle with a lift stand. (☛ p. 27)
- (50 SX)**
  - Remove the chain guard. (☛ p. 37)
  - Check the chain tension. (☛ p. 39)



**Main work**

- Loosen nut **1**.
- Adjust the chain tension by turning adjusting screws **2** left and right.

**Guideline**

Chain tension	5... 8 mm (0.2... 0.31 in)
Turn adjusting screws <b>2</b> equally on the left and right. The rear wheel must be aligned with the front wheel.	

- Make sure that the chain adjuster support plates **3** are in contact with adjusting screws **2**.
- Tighten nut **1**.

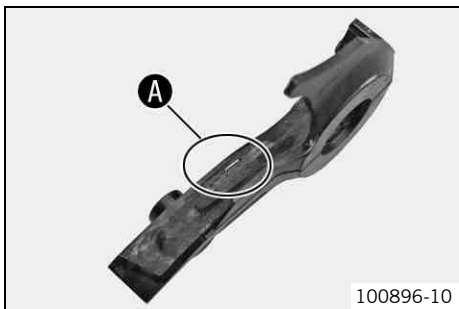
**Guideline**

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

## 11.35 Checking the chain, rear sprocket, engine sprocket and chain guide

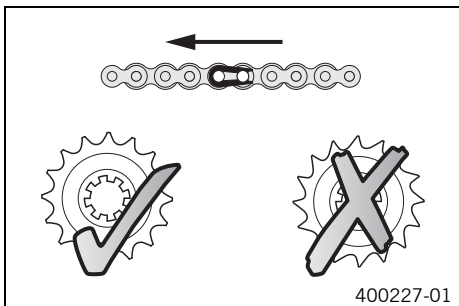
**Preparatory work**

- Raise the motorcycle with a lift stand. (☛ p. 27)
- (50 SX)**
  - Remove the chain guard. (☛ p. 37)
  - 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 **A**:
    - 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 rear sprocket or engine sprocket. 🛠️

---

**i Info**  
 The engine sprocket, rear sprocket, and chain should always be changed 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 chain. 🛠️

---

**i Info**  
 When you replace the chain, you should also change the rear sprocket and engine sprocket.  
 New chains wear out faster on old, worn sprockets.

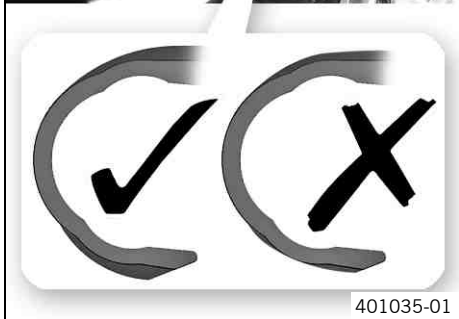
---



- 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 the chain sliding guard for tightness.
  - » If the chain sliding guard is loose:
    - Tighten the chain sliding guard.

**Guideline**

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

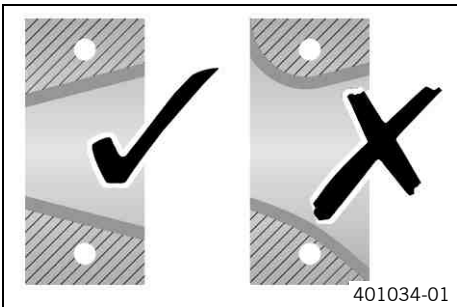




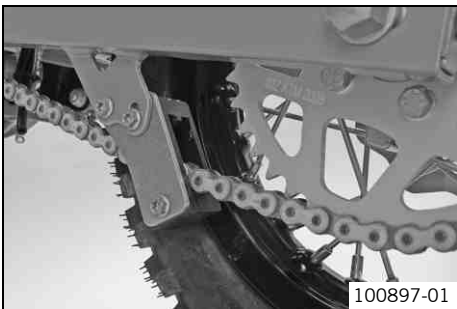
- Check the chain sliding piece for wear.
  - » If the lower edge of the chain pins is in line with or below the chain sliding piece:
    - Change the chain sliding piece. 🛠️
- Check the chain sliding piece for tightness.
  - » If the chain sliding piece is loose:
    - Tighten the chain sliding piece.

Guideline

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



- Check the chain guide for wear.
  - » If the chain guide is worn down to the top or bottom edge:
    - Change the chain guide. 🛠️



- Check the chain guide for tightness.
  - » If the chain guide is loose:
    - Tighten the chain guide.

Guideline

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

### Finishing work

- Install the engine sprocket cover. 🛠️ (☞ p. 38)
- (50 SX)**
  - Install the chain guard. (☞ p. 38)
  - Remove the motorcycle from the lift stand. (☞ p. 27)

## 11.36 Adjusting the chain guide 🛠️



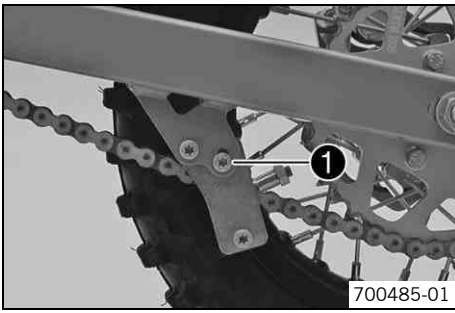
### Info

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

### Preparatory work

**(50 SX)**

- Remove the chain guard. (☞ p. 37)



**Main work**

- Loosen screw ❶.
- Position the chain guide.
- Tighten screw.

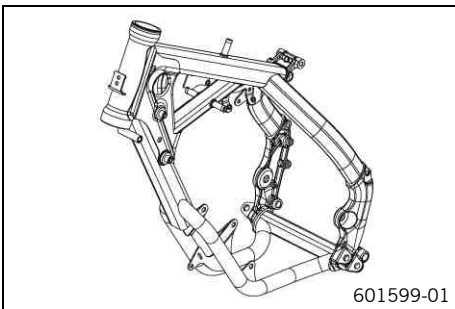
**Guideline**

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

**Finishing work (50 SX)**

- Install the chain guard. (☛ p. 38)

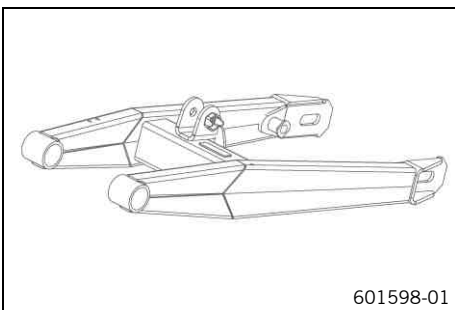
**11.37 Checking the frame ☛**



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

**i 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.

**11.38 Checking the swingarm ☛**



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

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

**11.39 Checking the throttle cable routing**



**Preparatory work**

- Remove the seat. (☛ p. 34)
- Turn the knurled screw on the fuel tap all the way clockwise.
- Remove the fuel tank. ☛

**Main work**

- Check the throttle cable routing.

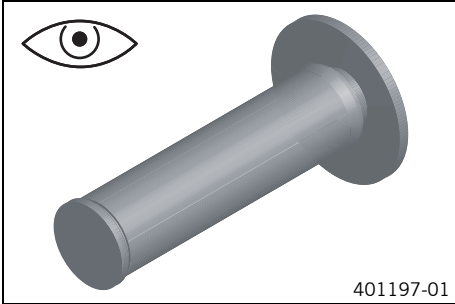
The throttle cable must be routed to the carburetor behind the handlebars above the fuel tank bearing.

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

**Finishing work**

- Install the fuel tank. ☛
- Mount the seat. (☛ p. 35)

## 11.40 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.

Rubber grip adhesive (00062030051) (☛ p. 84)

## 11.41 Additionally securing the rubber grip



### Preparatory work

- Check the rubber grip. (☛ p. 44)

### Main work

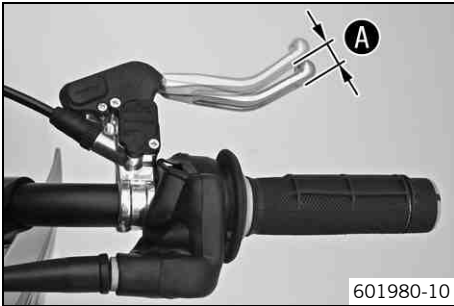
- Secure the rubber grip at two locations with the retaining wire.

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



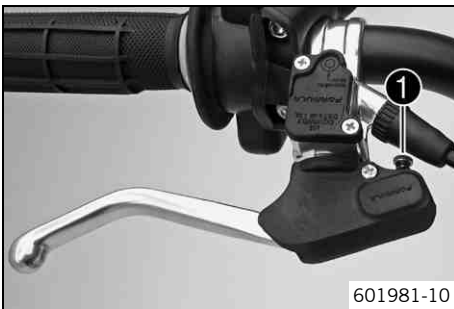
601980-10

- Push the handbrake lever forwards and check the play **A**.

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



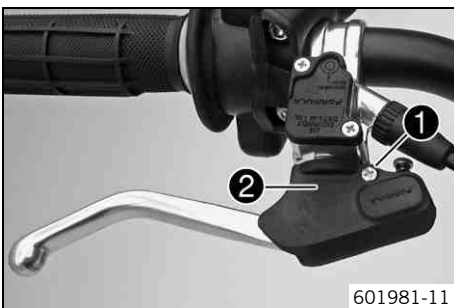
601981-10

- Check the play of the handbrake lever. (☛ p. 45)
- Adjust the play of the hand brake lever with the adjusting screw **1**.

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



601981-11

- Remove screw **1**. Take off cover **2**.

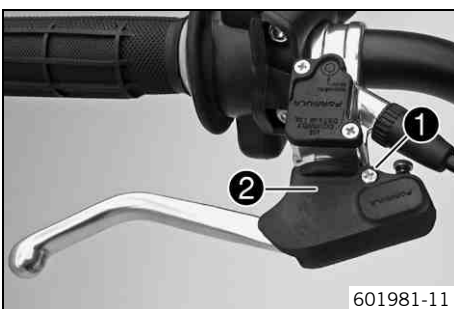


601983-10

- Check the play of the handbrake lever. (☛ p. 45)
- Adjust the basic position of the hand brake lever with adjusting screw **3** to the rider's hand size.

**i 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.



601981-11

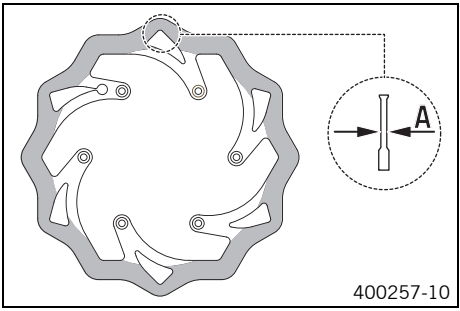
- Position cover **2**. Mount and tighten screw **1**.



## 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 **A**.

**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.

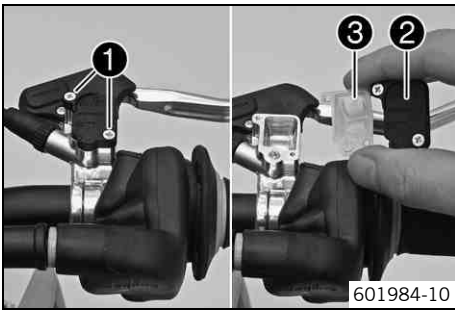
- Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized KTM workshop will be glad to help.)

**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.

**i 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.

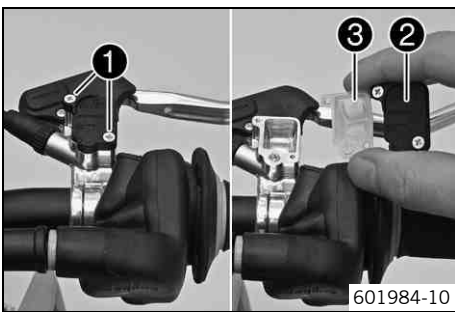
**⚠ Warning**  
**Danger of accidents** Reduced braking efficiency due to old brake fluid.

- 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.

**i 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.
- 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)
---------------------------------------

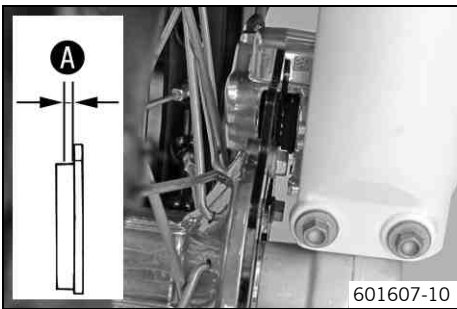
- Position the cover with the membrane. Mount and tighten the screws.

**i 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.)



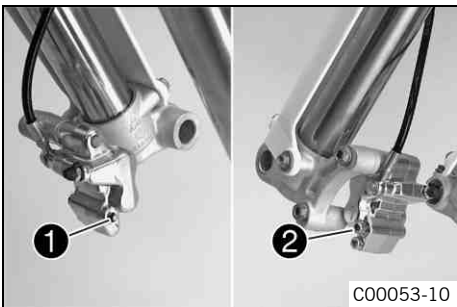
- Check the brake linings for minimum thickness **A**.

Minimum thickness <b>A</b>	≥ 1 mm (≥ 0.04 in)
----------------------------	--------------------

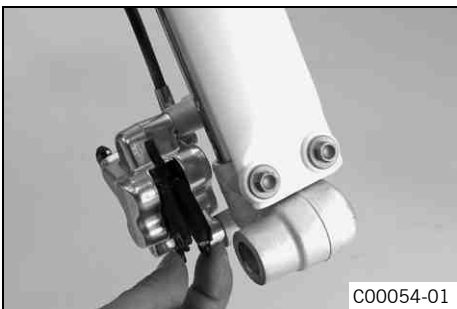
- » If the minimum thickness is less than specified:
  - Change the front brake linings. (☞ p. 49)
- Check the brake linings for damage and cracking.
  - » If damage or wear is encountered:
    - Change the front brake linings. (☞ p. 49)

## 12.8 Removing front brake linings

- Preparatory work**
- Raise the motorcycle with a lift stand. (☞ p. 27)
  - Remove the front wheel. (☞ p. 55)



- Main work**
- Remove the lock washer **1**.
  - Remove screw **2**.



- Remove the brake linings.
- Clean brake caliper and brake caliper support.

## 12.9 Installing the front brake linings

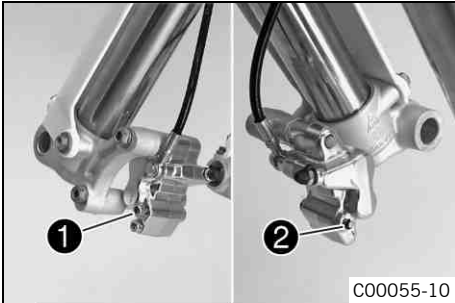
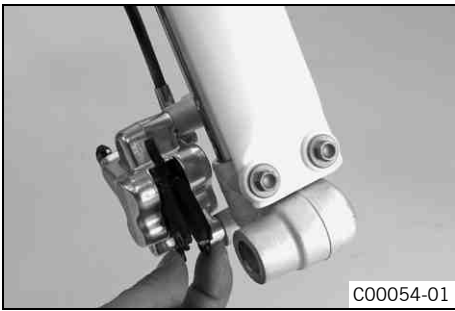
**Warning**  
**Danger of accidents** Reduced braking efficiency due to oil or grease on the brake discs.

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

**Warning**  
**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.

- Preparatory work**
- Check the brake discs. (☞ p. 46)



**Main work**

- Insert the brake linings.



**Info**

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

- Mount screw ❶.

**Guideline**

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

- Fit the lock washer ❷.

**Finishing work**

- Install the front wheel. 🛠️ (👉 p. 55)

**12.10 Changing the front brake linings 🛠️**



**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!

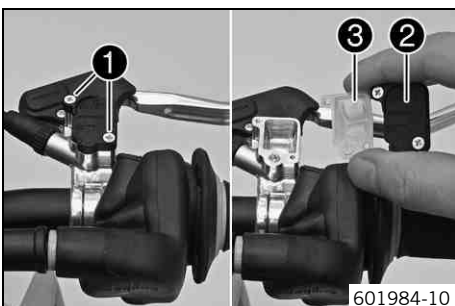
Use only clean brake fluid from a sealed container.

**Preparatory work**

- Raise the motorcycle with a lift stand. (👉 p. 27)
- Remove the front wheel. 🛠️ (👉 p. 55)
- Remove 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.
- Press the brake piston back to its basic position and make sure that no brake fluid overflows from the brake fluid reservoir.
- Install the front brake linings. 🛠️ (👉 p. 48)
- 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.

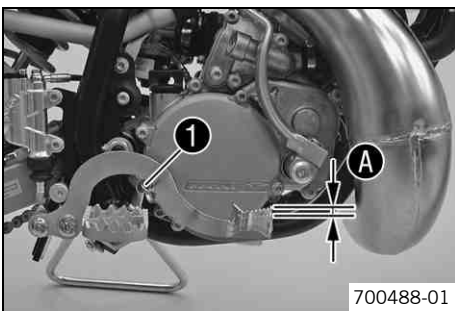
## 12.11 Checking the free travel of the foot brake lever



**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 may 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 A.

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.

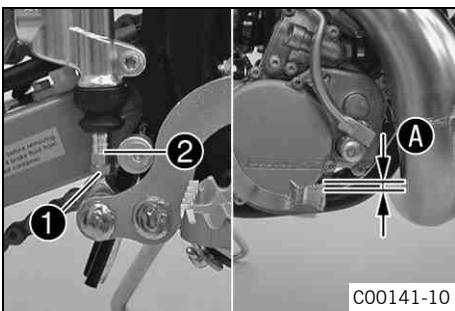
## 12.12 Adjusting the free travel of the foot brake lever ☞



**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 may 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 A 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)

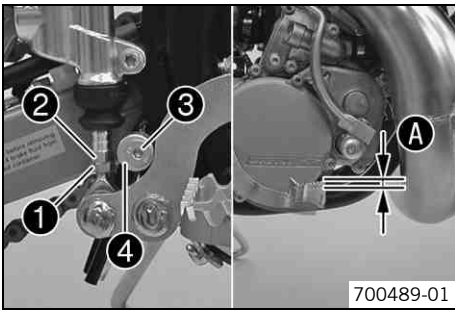
## 12.13 Adjusting the basic position of the foot brake lever ☞



**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 may 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 A 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.

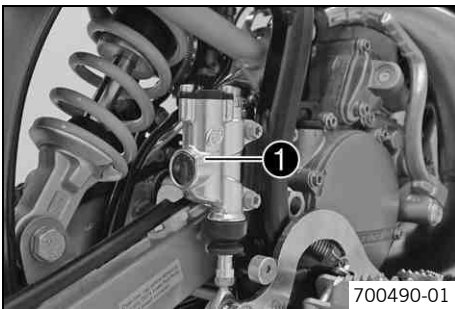
## 12.14 Checking rear brake fluid level

**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)

## 12.15 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.

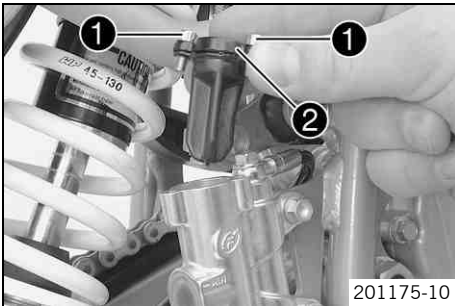
- Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized KTM workshop will be glad to help.)

**Warning**  
**Environmental hazard** Hazardous substances cause environmental damage.

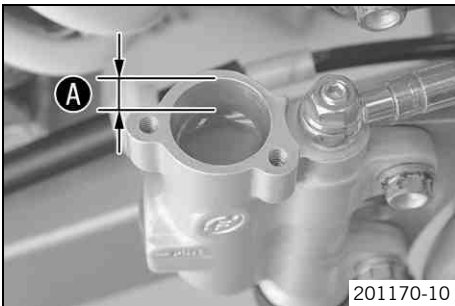
- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

**i 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.



- Raise the motorcycle with a lift stand. (☞ p. 27)
- Remove screws ❶.
- Take off cover ❷ with washer ❸ and membrane ❹.



- Add brake fluid to level ❶.

Guideline

Dimension ❶ (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.

**i Info**

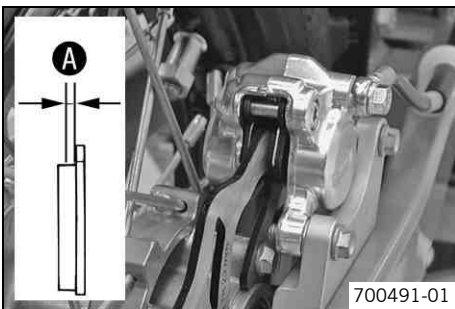
Clean up overflowed or spilt brake fluid immediately with water.

## 12.16 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 ❶.

Minimum thickness ❶	≥ 1 mm (≥ 0.04 in)
---------------------	--------------------

- » If the minimum thickness is less than specified:
  - Change the rear brake linings. ☞ (☞ p. 54)
- Check the brake linings for damage and cracking.
  - » If damage or wear is encountered:
    - Change the rear brake linings. ☞ (☞ p. 54)

## 12.17 Removing rear brake linings ☞

**Preparatory work**

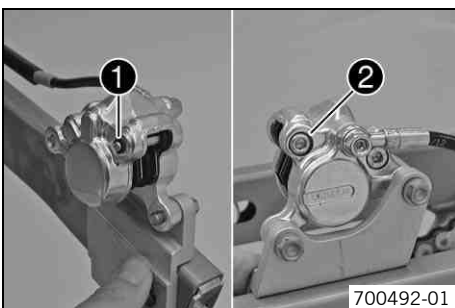
- Raise the motorcycle with a lift stand. (☞ p. 27)

**(50 SX)**

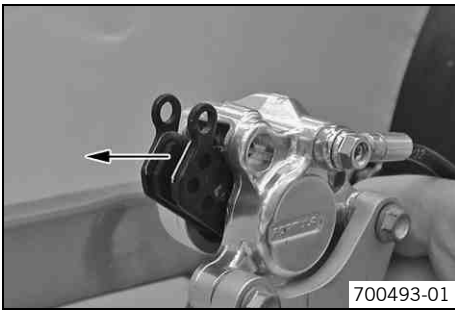
- Remove the chain guard. (☞ p. 37)
- Remove the rear wheel. ☞ (☞ p. 56)

**Main work**

- Remove the lock washer ❶.
- Remove screw ❷.







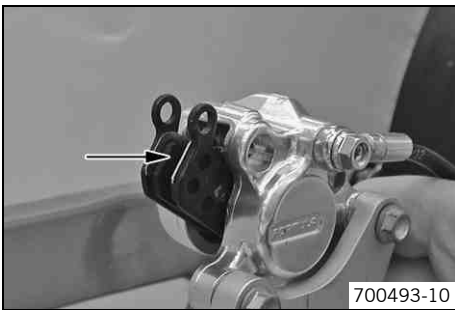
- Remove the brake linings.
- Clean brake caliper and brake caliper support.

## 12.18 Installing the rear brake linings

**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.

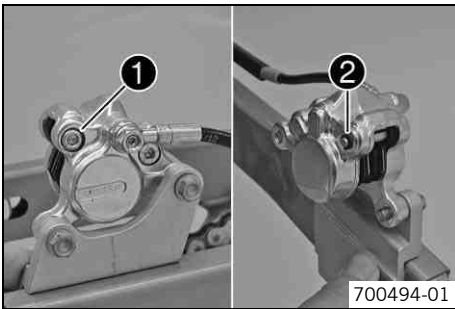
**Warning**  
**Danger of accidents** Reduced braking efficiency due to use of non-approved brake linings.  
 - Brake linings available from accessory suppliers are often not tested and approved for use on KTM vehicles. The construction and friction factor of the brake linings and therefore the brake 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.

**Preparatory work**  
 - Check the brake discs. (☛ p. 46)



**Main work**  
 - Insert the brake linings.

**i Info**  
 Ensure that the brake linings are correctly positioned in the holding spring.



- Mount screw ❶.

Guideline

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

- Mount lock washer ❷.

**Finishing work**  
 - Install the rear wheel. (☛ p. 56)

**(50 SX)**

- Install the chain guard. (☛ p. 38)
- Remove the motorcycle from the lift stand. (☛ p. 27)


## 12.19 Changing the rear brake linings






- 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.)

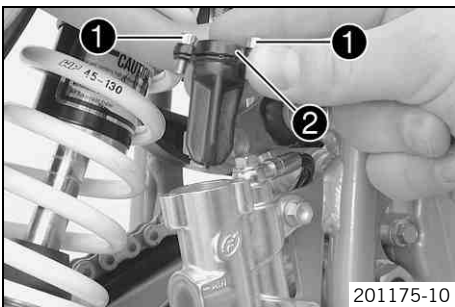
- Warning**  
**Environmental hazard** Hazardous substances cause environmental damage.
- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

**i 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. 27)

- (50 SX)**
- Remove the chain guard. ( p. 37)
  - Remove the rear wheel.  ( p. 56)
  - Remove the rear brake linings.  ( p. 52)


- Main work**
- Remove screws **1**.
  - Take off cover **2** with washer **3** and membrane **4**.
  - Press the brake piston back to its basic position and make sure that no brake fluid overflows from the brake fluid reservoir.
  - Install the rear brake linings.  ( p. 53)



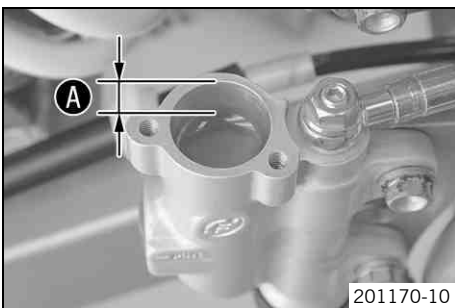
- Add brake fluid to level **A**.

Guideline

Dimension <b>A</b> (brake fluid level below top edge of container)	10 mm (0.39 in)
--	-----------------

Brake fluid DOT 4 / DOT 5.1 ( p. 81)

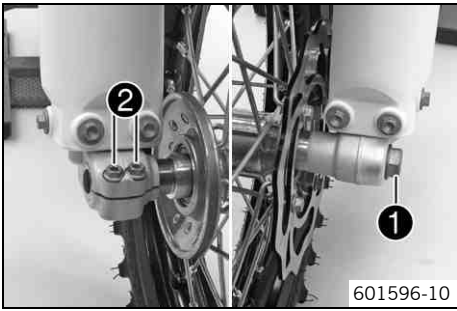
- Position the membrane and the cover with the washer. Mount and tighten the screws.



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



## 13.1 Removing the front wheel



### Preparatory work

- Raise the motorcycle with a lift stand. (☞ p. 27)

### 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.

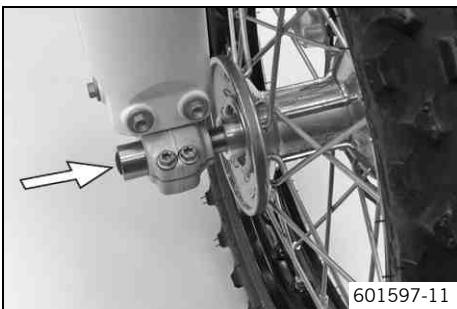
## 13.2 Installing the front wheel



### Warning

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

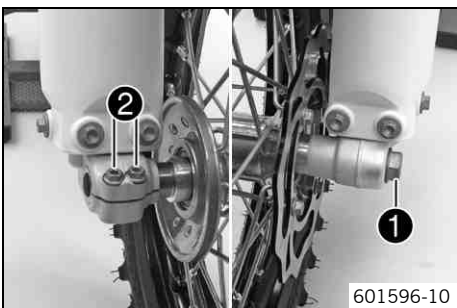
- Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.



- 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.



- Mount and tighten screw ❶.

### Guideline

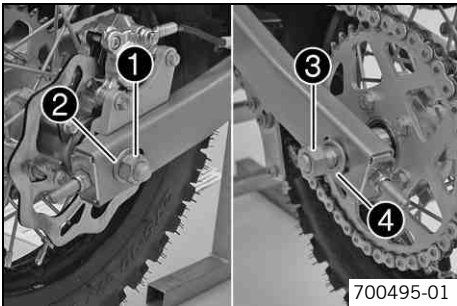
Front wheel spindle nut	M10	40 Nm (29.5 lbf ft)
-------------------------	-----	------------------------

- 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. 27)
- 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)
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## 13.3 Removing rear wheel



### Preparatory work

- Raise the motorcycle with a lift stand. (☞ p. 27)

### (50 SX)

- Remove the chain guard. (☞ p. 37)

### Main work

- Remove nut ❶.
- Remove the washer ❷.
- Pull out the wheel spindle ❸ with the washer ❹.
- Remove the chain from the rear sprocket.
- Take the rear wheel out of the swing arm.



### Info

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

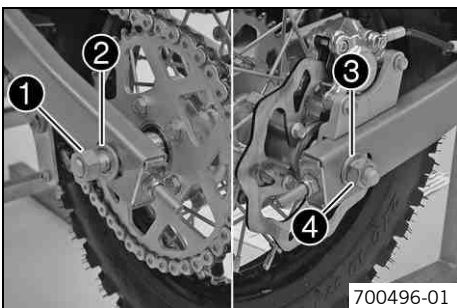
## 13.4 Installing the rear wheel



### 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 broken 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.
- Insert the wheel spindle ❶ with the washer ❷.
- Position washer ❸. Mount nut ❹, but do not tighten it yet.
- Make sure that the chain adjuster supports are fitted correctly on the adjusting screws.
- Check the chain tension. (☞ p. 39)
- 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 lie on the brake disc and there is a pressure point.

### Finishing work

### (50 SX)

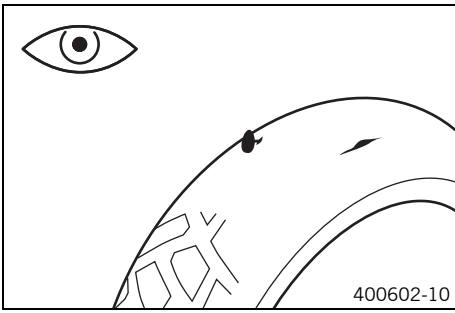
- Install the chain guard. (☞ p. 38)
- Remove the motorcycle from the lift stand. (☞ p. 27)

## 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.

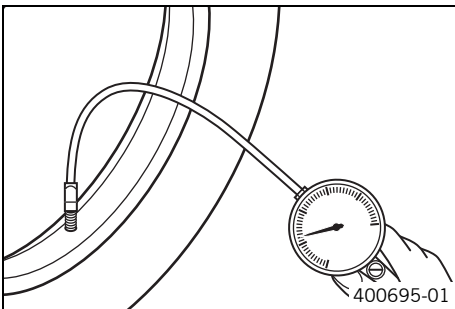
- » If a tire is more than 5 years old:
  - Change the tires.

## 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**

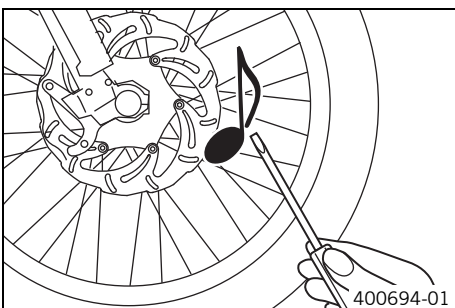
**Danger of accidents** Instable handling due to incorrect spoke tension.

- 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.
------------------------------

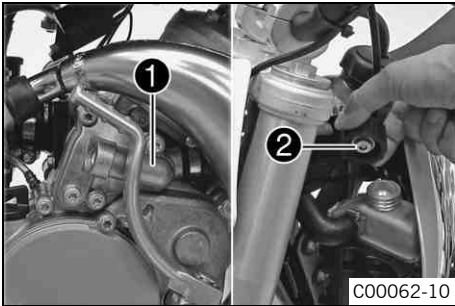
- » If the spoke tension differs:
  - Correct the spoke tension. 
- Check the spoke torque.

Guideline

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

Torque wrench with various accessories in set (58429094000)
---

## 14.1 Cooling system



C00062-10

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

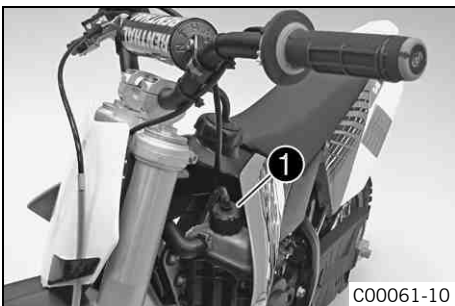
**Danger of poisoning** Coolant is poisonous and a health hazard.

- Avoid contact between coolant and skin, eyes and clothing. If it gets into your eyes, rinse immediately with water and contact a doctor. Wash affected skin areas immediately with soap and water. If coolant is swallowed, contact a doctor immediately. Change clothes that have come into contact with coolants. Keep coolant out of the reach of children.



### Info

Carry out this work with a cold engine.

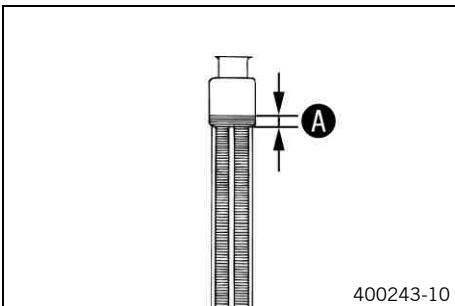


C00061-10

- Stand the motorcycle upright on a horizontal surface.
- Remove radiator cap ❶.
- Check the antifreeze of the coolant.

-25... -45 °C (-13... -49 °F)
-------------------------------

- » If the antifreeze of the coolant does not meet specifications:
  - Correct the antifreeze of the coolant.



400243-10

- Check the coolant level in the radiator.

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

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

#### Alternative 1

Coolant (☛ p. 81)
-------------------

#### Alternative 2

Coolant (mixed ready to use) (☛ p. 81)
--

- Mount the radiator cap.

## 14.3 Checking the coolant level

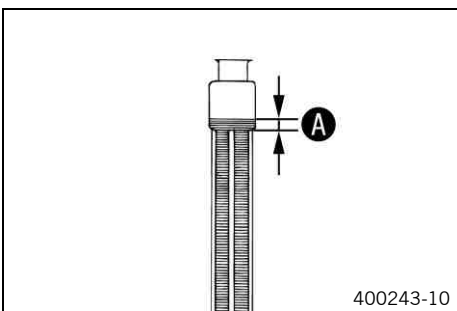
**Warning**  
**Danger of scalding** During motorcycle operation, the coolant gets very hot and is under pressure.

- 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.

- Avoid contact between coolant and skin, eyes and clothing. If it gets into your eyes, rinse immediately with water and contact a doctor. Wash affected skin areas immediately with soap and water. If coolant is swallowed, contact a doctor immediately. Change clothes that have come into contact with coolants. Keep coolant out of the reach of children.

**i 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 <b>A</b> above the radiator fins	10 mm (0.39 in)
--	-----------------

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

**Alternative 1**

Coolant (☛ p. 81)
-------------------

**Alternative 2**

Coolant (mixed ready to use) (☛ p. 81)
--

- Mount the radiator cap.

## 14.4 Draining the coolant ☛

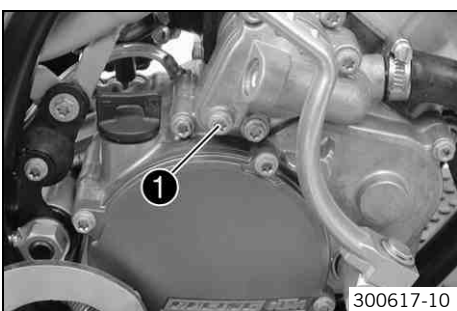
**Warning**  
**Danger of scalding** During motorcycle operation, the coolant gets very hot and is under pressure.

- 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.

- Avoid contact between coolant and skin, eyes and clothing. If it gets into your eyes, rinse immediately with water and contact a doctor. Wash affected skin areas immediately with soap and water. If coolant is swallowed, contact a doctor immediately. Change clothes that have come into contact with coolants. Keep coolant out of the reach of children.

**i Info**  
 Carry out this work with a cold engine.



- Stand the vehicle upright.
- Place a suitable container under the engine.
- Remove screw **1**. Remove the radiator cap.
- Completely drain the coolant.
- Mount screw **1** with a new seal ring and tighten it.

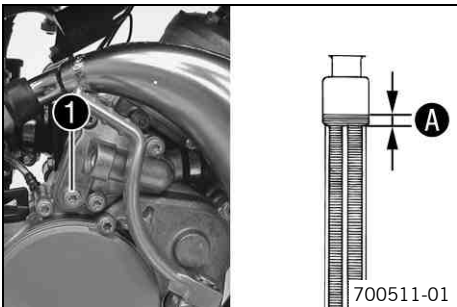
**Guideline**

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

## 14.5 Refilling coolant

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



- Avoid contact between coolant and skin, eyes and clothing. If it gets into your eyes, rinse immediately with water and contact a doctor. Wash affected skin areas immediately with soap and water. If coolant is swallowed, contact a doctor immediately. Change clothes that have come into contact with coolants. Keep coolant out of the reach of children.



### Main work

- Make sure that the screw ① is tightened.
- Stand the vehicle upright.
- Add coolant to level ①.

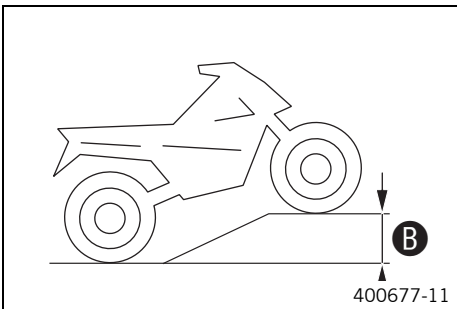
#### Guideline

Level ① above the radiator fins	10 mm (0.39 in)
Coolant	0.5 l (0.5 qt.)
	Coolant (  p. 81) Coolant (mixed ready to use) (  p. 81)

- Position the vehicle as shown and secure it against rolling away. A height difference of ② must be reached.

#### Guideline

Height difference ②	100 cm (39.4 in)
---------------------	------------------




### Info

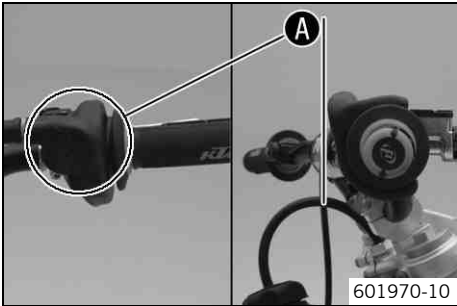
To ensure that all of the air can escape from the cooling system, the front of the vehicle must be jacked up. A poorly bled cooling system is less effective at cooling and may result in overheating of the engine.

- Place the vehicle back on a level surface.
- Add coolant to level ①.
- Mount the radiator cap.
- Make a short test ride.

### Finishing work

- Check the coolant level. ( p. 60)

## 15.1 Checking the installation position of the throttle grip



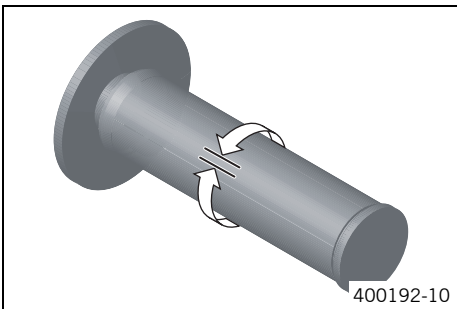
- Position the throttle grip so that surface **A** is vertical.



**Info**

If the throttle grip is tipped 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.

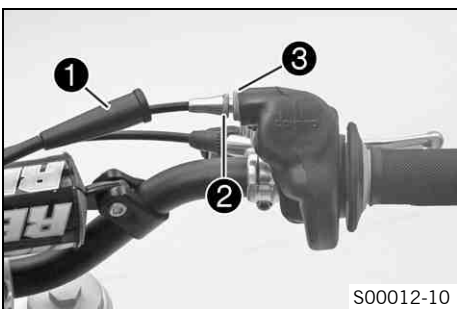
- When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in an enclosed space without an effective exhaust extraction system.

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

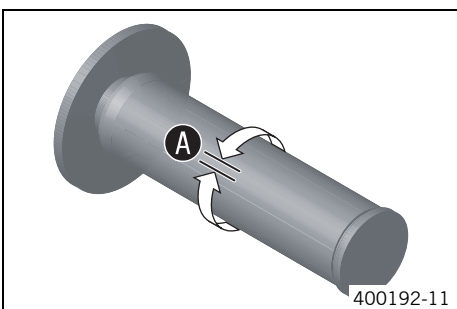
The idle speed should not change.
-----------------------------------

- » If the idle speed changes:
  - Adjust the play in the throttle cable. 🛠️ (📄 p. 62)

## 15.3 Adjusting the play in the throttle cable 🛠️



- Move the handlebar to the straight-ahead position.
- Push back sleeve **1**.
- Ensure that the throttle cable sleeve is pushed all the way into adjusting screw **2**.
- Loosen nut **3**.



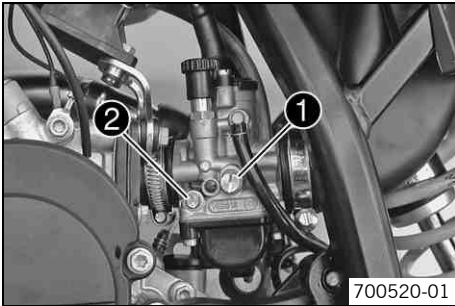
- Turn adjusting screw **2** so that there is throttle cable play **A** at the throttle grip. Guideline

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

- Tighten nut **3**.
- Slide on sleeve **1**.



## 15.4 Carburetor - idle (50 SX)

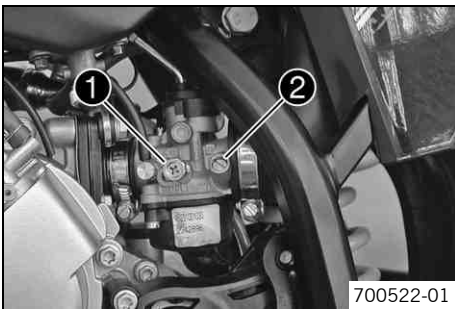


The idle setting of the carburetor has a big influence on the starting behavior, stable idling and the response to throttle opening. That means that an engine with a correctly set idle speed is easier to start than if the idle is set wrongly.

**i 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 the idle adjustment screw ①.  
The idle mixture is adjusted with the idle mixture adjustment screw ②.

## 15.5 Carburetor - idle (50 SX Mini)

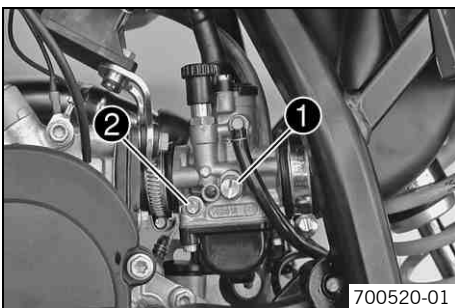


The idle setting of the carburetor has a big influence on the starting behavior, stable idling and the response to throttle opening. That means that an engine with a correctly set idle speed is easier to start than if the idle is set wrongly.

**i 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 the adjustment screw ①.  
The idle mixture is adjusted with the idle mixture adjustment screw ②.

## 15.6 Carburetor - adjusting idle speed (50 SX)



- Screw in the idle adjusting screw ② until it stops and then to the prescribed basic setting.

Guideline

Idle mixture adjusting screw	
Open	3 turns

- Run the engine until warm.

Guideline

Warm-up time	≥ 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 with the adjusting screw ①.

Guideline

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

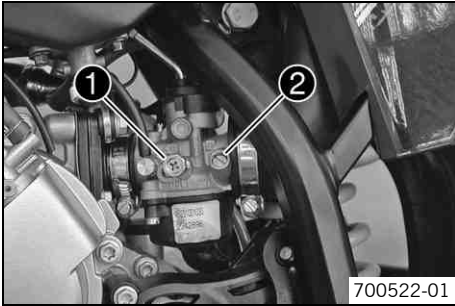
- Turn the idle adjusting screw ② slowly clockwise until the idle speed begins to fall.
- Note the position and turn the idle adjusting screw slowly counterclockwise until the idle speed falls.
- Adjust to the point between these two positions with the highest idle speed.



**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 ② 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

Warm-up time	≥ 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 with adjusting screw ①.

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 ② 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 Emptying the carburetor float chamber

 **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.
- Fuel in the fuel tank expands when warm and can escape if the tank is overfilled. See the notes on refueling.

 **Warning**  
**Danger of poisoning** Fuel is poisonous and a health hazard.

- Avoid contact between fuel and skin, eyes and clothing. Do not inhale fuel vapors. If fuel gets into your eyes, rinse immediately with water and contact a doctor. Wash affected skin areas immediately with soap and water. If fuel is swallowed, contact a doctor immediately. Change clothing that has come into contact with fuel. Store fuel in a suitable canister according to regulations and keep it out of the reach of 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.

 **Info**  
 Carry out this work with a cold engine.  
 Water in the float chamber results in malfunctioning.



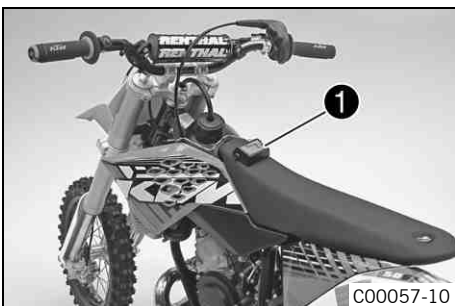
**Preparatory work**

- Turn the knurled screw on the fuel tap all the way clockwise.  
 No more fuel flows from the tank to the carburetor.

**Main work**

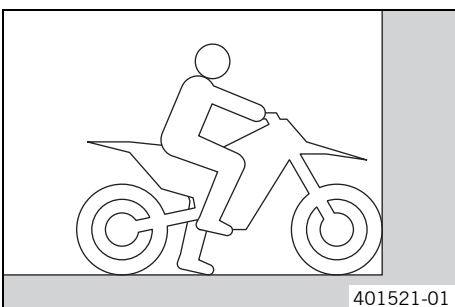
- Place a cloth beneath the carburetor to soak up emerging fuel.
- Remove plug 1.
- Completely drain the fuel.
- Mount and tighten the plug.

## 15.9 Checking the clutch setting




- Connect special tool 1.

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)

## 15.10 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.



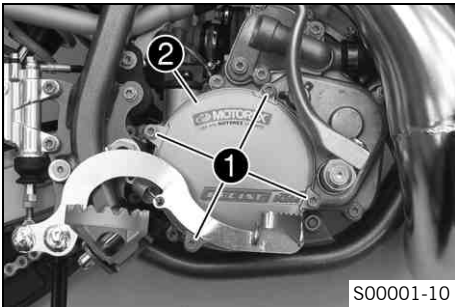
### Info

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



S00011-10

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



S00001-10

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

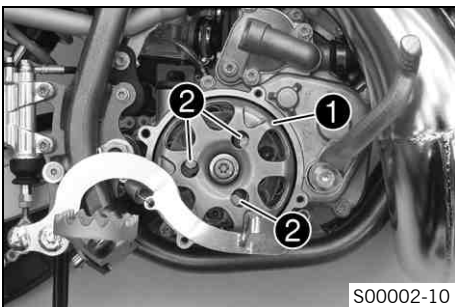
## 15.11 Adjusting the clutch 🛠️

### Preparatory work

- Remove the clutch cover. 🛠️ (📄 p. 66)

### Main work

- Turn the outer clutch hub ❶ until adjusting screws ❷ become accessible.



S00002-10

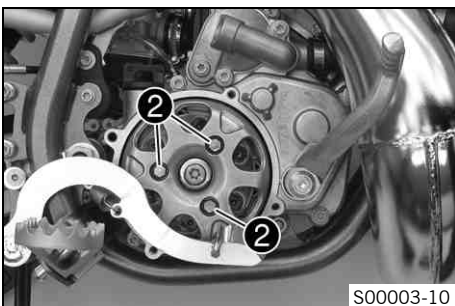
### Condition

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
-----------------------------	--------------------



S00003-10

**i 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 ② clockwise.

Guideline

1 click increases the slip speed by	250... 350 rpm
-------------------------------------	----------------

**i 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 ② counterclockwise.

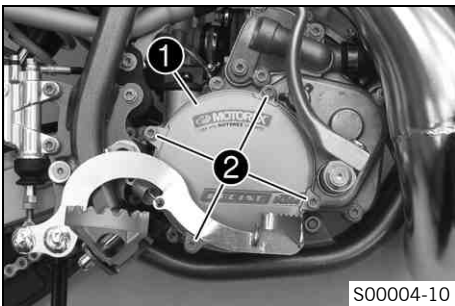
Guideline

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)

## 15.12 Installing the clutch cover 🛠️



S00004-10

**Main work**

- Position clutch cover ① with the seal ring.
- Mount and tighten screws ②.

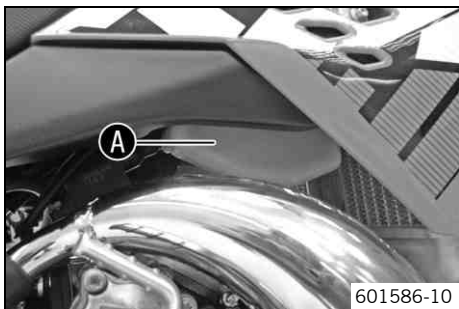
Guideline

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)



601586-10

### Preparatory work

- Stand the motorcycle upright on a horizontal surface.

### Main work

- Check the oil level in the oil tank.

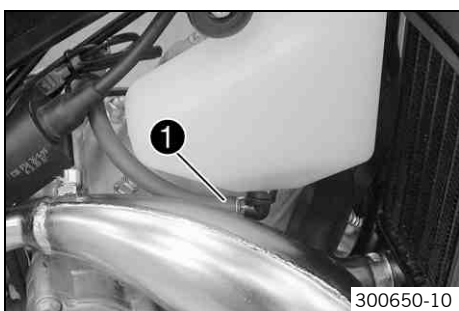
For a full fuel tank, the oil tank must be filled up to **MIN** mark **A** at a minimum.

- » If the oil level does not meet specifications:
  - Fill up with oil. (☛ p. 20)

## 16.2 Bleeding the oil pump (50 SX Mini)

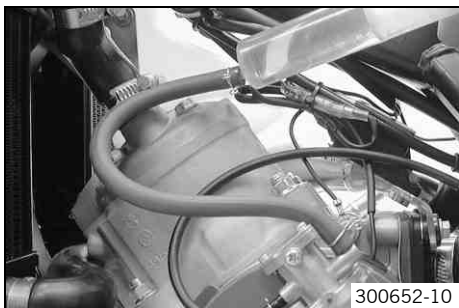
### Condition

The fuel tank has been removed.



300650-10

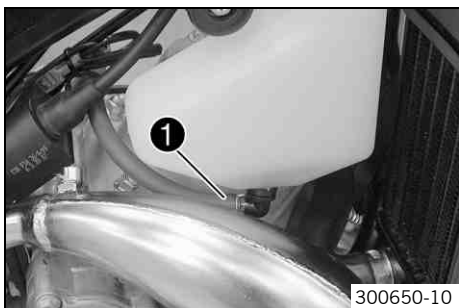
- Pull off oil line **1**.



300652-10

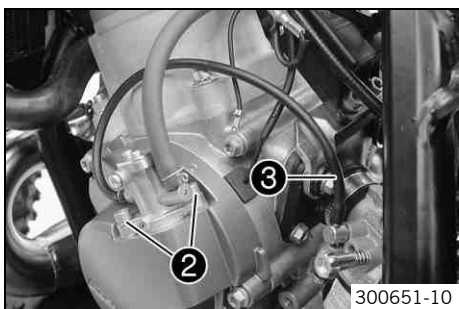
- Fill the oil line with a syringe.

2-stroke engine oil (☛ p. 81)



300650-10

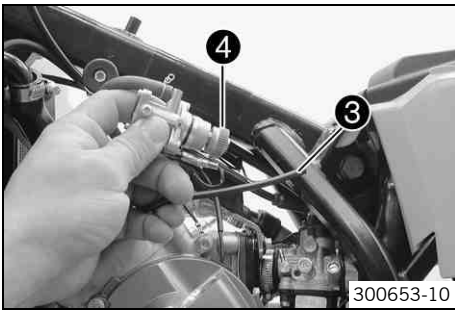
- Connect oil line **1**.



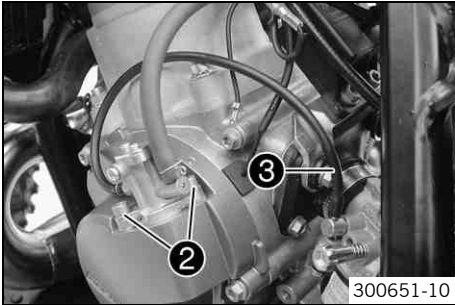
300651-10

- Remove screws **2**.
- Take off the oil pump.
- Pull off oil line **3** from the carburetor.





- Turn the oil pump gear ④ counterclockwise until oil flows out of oil line ③ without bubbles.



- Connect oil line ③.
- Position the oil pump.
- Mount and tighten screws ②.

Guideline

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

## 16.3 Checking the gear oil level

**Condition**

The motor is cold.

**Preparatory work**

- Stand the motorcycle upright on a horizontal surface.

**Main work**

- Remove gear oil level check screw ①.
- Check the gear oil level.



A small amount of gear oil should flow out.
---

» If no gear oil flows out:

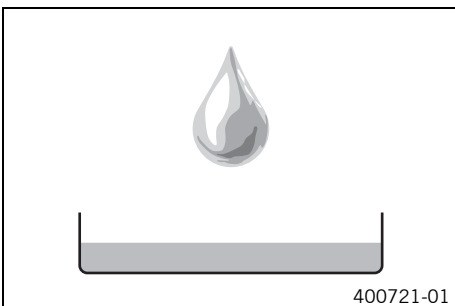
- Add gear oil. 🛠️ (📄 p. 70)

- Mount and tighten the gear oil level check screw.

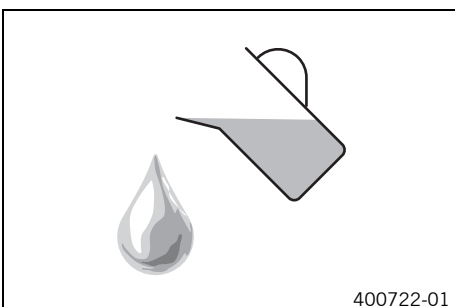
Guideline

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

## 16.4 Changing the gear oil 🛠️



- Drain the gear oil. 🛠️ (📄 p. 70)

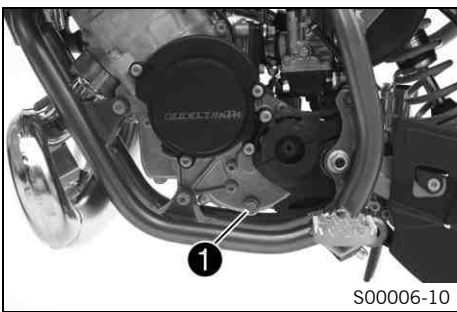


- Fill up with gear oil. 🛠️ (📄 p. 70)

## 16.5 Draining 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.

**i Info**  
 Drain the gear oil only when the engine is warm.



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

- Main work**
- Place a suitable container under the engine.
  - Remove the oil drain plug with magnet ❶.
  - Completely drain the gear oil.
  - Thoroughly clean the oil drain plug with magnet.
  - Clean the sealing area 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)
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## 16.6 Filling up with gear oil

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




- Main work**
- Remove screw cap ❶ and fill up with gear oil.

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

- Mount and tighten screw cap.

- ! 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.

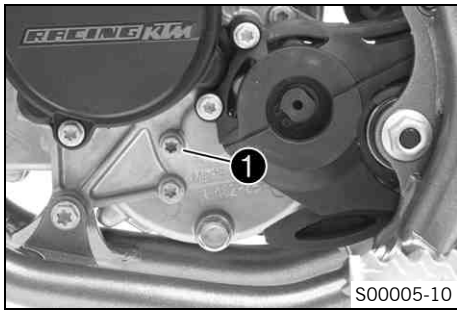
- Start the engine and check that it is oil-tight.

- Finishing work**
- Check the gear oil level. ( p. 69)

## 16.7 Adding gear oil

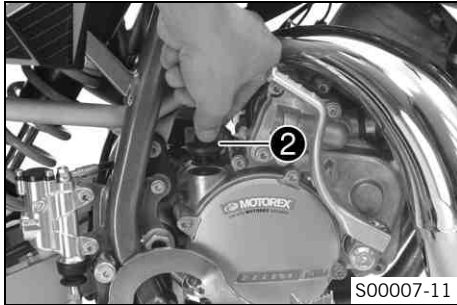
**i Info**  
 Too little gear oil or poor-quality oil results in premature wear of the transmission.





S00005-10

- Remove gear oil level check screw ❶.



S00007-11

- Remove screw cap ❷. Stand the vehicle upright.
- Add gear oil until it flows out of the bore of the gear oil level screw.

Gear oil (ATF Dexron 3) (☛ p. 81)
-----------------------------------

- Mount and tighten the gear oil level check screw.

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.

## 17.1 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.

**Preparatory work**

- Seal the exhaust system to prevent penetration by water.

**Main work**

- 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.

- After rinsing the motorcycle with a gentle water spray, allow it to dry thoroughly.

 **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.

 **Info**

The heat produced causes water at inaccessible positions in the engine and the brakes to evaporate.

- Push back the protection covers on the handlebar controls to allow water to evaporate.

**Finishing work**

- After the motorcycle has cooled off, lubricate all moving parts and bearings.
- Clean the chain. (☛ p. 39)
- Treat bare metal parts (except for brake discs and exhaust system) with anti-corrosion materials.

Cleaning and preserving materials for metal, rubber and plastic (☛ p. 83)

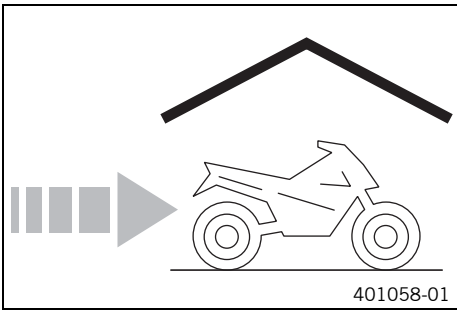
- Treat all plastic parts and powder-coated parts with a mild cleaning and care product.

Cleaning and preserving materials for metal, rubber and plastic (☛ p. 83)

## 18.1 Storage

- Warning**  
**Danger of poisoning** Fuel is poisonous and a health hazard.
- Avoid contact between fuel and skin, eyes and clothing. Do not inhale fuel vapors. If fuel gets into your eyes, rinse immediately with water and contact a doctor. Wash affected skin areas immediately with soap and water. If fuel is swallowed, contact a doctor immediately. Change clothing that has come into contact with fuel. Store fuel in a suitable canister according to regulations and keep it out of the reach of children.

**Info**  
 If you want to put the motorcycle into storage 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.



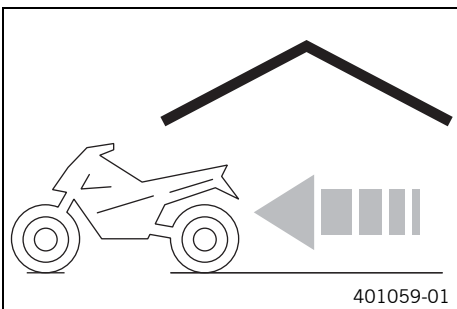
- When refueling for the last time before taking the vehicle out of service, add fuel additive.
- Fuel additive (☛ p. 83)
- Ride until the fuel tank is nearly empty to be able to add fresh fuel when taking the vehicle back into service.
  - Clean the motorcycle. (☛ p. 72)
  - Change the gear oil. 🛢️ (☛ p. 69)
  - Check the antifreeze and coolant level. (☛ p. 59)
  - Drain the fuel from the fuel tank into a suitable container.
  - 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. 27)
- 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



- Remove the motorcycle from the lift stand. (☛ p. 27)
- Fill up with fuel. (☛ p. 19)
- 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. ☛ (☛ p. 65)
	Fuel feed interrupted	– Check the fuel tank breather. – Clean the fuel tap. <b>(50 SX Mini)</b> – Check/set the carburetor components. ☛ <b>(50 SX)</b> – 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.
Engine has no idle	Water in carburetor or jets blocked	<b>(50 SX Mini)</b> – Check/set the carburetor components. ☛ <b>(50 SX)</b> – Check/set the carburetor components. ☛
	Idling jet blocked	<b>(50 SX Mini)</b> – Check/set the carburetor components. ☛ <b>(50 SX)</b> – Check/set the carburetor components. ☛
	Adjusting screws on carburetor distorted	<b>(50 SX Mini)</b> – Carburetor - adjust the idle speed. ☛ (☛ p. 64) <b>(50 SX)</b> – Carburetor - adjust the idle speed. ☛ (☛ p. 63)
	Spark plug defective	– Change spark plug.
Engine does not speed up	Ignition system defective	– Check the ignition coil. ☛ – Check the spark plug connector. ☛
	Carburetor running over because float needle dirty or worn	<b>(50 SX Mini)</b> – Check/set the carburetor components. ☛ <b>(50 SX)</b> – Check/set the carburetor components. ☛
	Loose carburetor jets	<b>(50 SX Mini)</b> – Check/set the carburetor components. ☛ <b>(50 SX)</b> – Check/set the carburetor components. ☛
Engine has too little power	Fault in ignition system	– Check the ignition system. ☛
	Fuel feed interrupted	– Check the fuel tank breather. – Clean the fuel tap. <b>(50 SX Mini)</b> – Check/set the carburetor components. ☛ <b>(50 SX)</b> – Check/set the carburetor components. ☛
	Air filter very dirty	– Clean the air filter and air filter box. ☛ (☛ p. 36)

Faults	Possible cause	Action
Engine has too little power	Exhaust system leaky, deformed or too little glass fiber yarn filling in main silencer	<ul style="list-style-type: none"> <li>– Check exhaust system for damage.</li> <li>– Change the glass fiber yarn filling of the main silencer. 🛠️ (📖 p. 37)</li> </ul>
	Ignition system defective	<ul style="list-style-type: none"> <li>– Check the ignition coil. 🛠️</li> <li>– Check the spark plug connector. 🛠️</li> </ul>
	Diaphragm or reed valve housing damaged	<ul style="list-style-type: none"> <li>– Check the diaphragm and reed valve housing.</li> </ul>
	Noticeable wear	<ul style="list-style-type: none"> <li>– Overhaul the engine.</li> </ul>
	Clutch engagement speed too low or too high	<ul style="list-style-type: none"> <li>– Check the clutch setting. 🛠️ (📖 p. 65)</li> </ul>
Engine stalls or is popping into the carburetor	Lack of fuel	<ul style="list-style-type: none"> <li>– Turn the knurled screw on the fuel tap all the way counterclockwise.</li> <li>– Fill up with fuel. (📖 p. 19)</li> </ul>
	Engine takes in bad air	<ul style="list-style-type: none"> <li>– Check the intake flange and carburetor for tightness.</li> </ul>
	The connector or ignition coil is loose or oxidized	<ul style="list-style-type: none"> <li>– Clean the plug-in connection and treat it with contact spray.</li> </ul>
Engine overheats	Too little coolant in cooling system	<ul style="list-style-type: none"> <li>– Check the cooling system for leakage.</li> <li>– Check the coolant level. (📖 p. 60)</li> </ul>
	Too little air stream	<ul style="list-style-type: none"> <li>– Switch off engine when standing.</li> </ul>
	Radiator fins very dirty	<ul style="list-style-type: none"> <li>– Clean radiator fins.</li> </ul>
	Foam formation in cooling system	<ul style="list-style-type: none"> <li>– Drain the coolant. 🛠️ (📖 p. 60)</li> <li>– Refill the coolant. 🛠️ (📖 p. 61)</li> </ul>
	Damaged cylinder head or cylinder head gasket	<ul style="list-style-type: none"> <li>– Check the cylinder head or cylinder head gasket.</li> </ul>
	Bent radiator hose	<ul style="list-style-type: none"> <li>– Change the radiator hose. 🛠️</li> </ul>
White smoke emission (steam in exhaust gas)	Damaged cylinder head or cylinder head gasket	<ul style="list-style-type: none"> <li>– Check the cylinder head or cylinder head gasket.</li> </ul>
Gear oil exits at the vent hose	Too much gear oil added	<ul style="list-style-type: none"> <li>– Check the gear oil level. (📖 p. 69)</li> </ul>
Water in the gear oil	Damaged shaft seal ring or water pump	<ul style="list-style-type: none"> <li>– Check the shaft seal ring and water pump.</li> </ul>

## 20.1 Engine

Design	1-cylinder 2-stroke engine, water-cooled, with reed intake
Displacement	49.0 cm <sup>3</sup> (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	3rd position from top
Idle mixture adjusting screw	
Open	3 turns
Main jet	85
Jet needle	W9
Idling jet	58
Needle jet	260AU
Throttle slide	60
Cold start jet	60

**20.3.2 50 SX Mini**

Carburetor type	Dell'Orto PHVA 12XS
Needle position	4th position from top
Idle air adjusting screw	
Open	1 turn
Main jet	60
Jet needle	A10
Idling jet	35
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)
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**20.4.2 Coolant**

Coolant	0.5 l (0.5 qt.)	Coolant (☛ p. 81)
		Coolant (mixed ready to use) (☛ p. 81)

**20.4.3 Fuel**

Fuel tank capacity, approx. (50 SX)	2.3 l (2.4 qt.)	Super unleaded gasoline, mixed with 2-stroke engine oil (1:60) (☛ p. 82)
Fuel tank capacity, approx. (50 SX Mini)	2.0 l (2.1 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	<b>WP Suspension</b> USD 35	
Shock absorber	<b>WP Suspension</b> 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	140 mm (5.51 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)	<b>60/100 - 12 36M TT</b> Pirelli SCORPION MX Mid Soft 32 NHS	<b>2.75 - 10 37J TT</b> Pirelli SCORPION MX Mid Soft 32 NHS
(50 SX Mini)	<b>2.50 - 10 33J TT</b> Pirelli SCORPION MX Mid Soft 32 NHS	<b>2.75 - 10 37J TT</b> Pirelli SCORPION MX Mid Soft 32 NHS

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	<b>WP Suspension USD 35</b>
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	<b>WP Suspension USD 35</b>	
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	<b>WP Suspension 3614 BAEM</b>	
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 oil (SAE 2.5) (50180342S1) (☛ p. 82)	

### 20.8.2 50 SX Mini

Shock absorber part number	03.18.9E.04	
Shock absorber	<b>WP Suspension 3614 BAEM</b>	
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 oil (SAE 2.5) (50180342S1) (☛ p. 82)	

## 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)	–
Screw, rear sprocket	M7	15 Nm (11.1 lbf ft)	Loctite® 243™
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, top triple clamp	M8	20 Nm (14.8 lbf ft)	–
Front wheel spindle nut	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 ≤ 10 Nm (≤ 7.4 lbf ft)	–

## 2-stroke engine oil

**According to**

- JASO FC (☛ p. 85)

**Guideline**

- Only use high quality 2-stroke engine oil of a well-known brand. KTM recommends **Motorex®** products.

Fully synthetic
-----------------

**Supplier**

**Motorex®**

- **Cross Power 2T**

## Brake fluid DOT 4 / DOT 5.1

**According to**

- DOT

**Guideline**

- Use only brake fluid that complies with the specified standard (see specifications on the container) and that possesses the corresponding properties. KTM recommends **Castrol** and **Motorex®** products.

**Supplier**

**Castrol**

- **RESPONSE BRAKE FLUID SUPER DOT 4**

**Motorex®**

- **Brake Fluid DOT 5.1**

## Coolant

**Guideline**

- Use only suitable coolant (also in countries with high temperatures). Use of low-quality antifreeze can lead to corrosion and foaming. KTM recommends **Motorex®** products.

**Mixture ratio**

Antifreeze protection: -25... -45 °C (-13... -49 °F)	50 % corrosion inhibitor/antifreeze 50 % distilled water
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## Coolant (mixed ready to use)

Antifreeze	-40 °C (-40 °F)
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**Supplier**

**Motorex®**

- **COOLANT G48**

## Fork oil (SAE 4) (48601166S1)

**According to**

- SAE (☛ p. 85) (SAE 4)

**Guideline**

- Use only oils that comply with the specified standards (see specifications on the container) and that possess the corresponding properties.

## Gear oil (ATF Dexron 3)

**According to**

- 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 corresponding properties. KTM recommends **Motorex®** products.

**Supplier**

**Motorex®**

- **ATF Dexron 3**

## Shock absorber oil (SAE 2.5) (50180342S1)

**According to**

- SAE (☛ p. 85) (SAE 2.5)

**Guideline**

- Use only oils that comply with the specified standards (see specifications on the container) and that possess the corresponding properties.

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

**According to**

- 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 gasoline, mixed with 2-stroke engine oil (1:60)

**According to**

- DIN EN 228
- JASO FC (☛ p. 85) (1:60)

**Mixture ratio**

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

**Motorex®**

- Cross Power 2T

## Air filter cleaner

### Guideline

- KTM recommends **Motorex®** products.

### Supplier

#### Motorex®

- **Twin Air Dirt Bio Remover**

## Chain cleaner

### Guideline

- KTM recommends **Motorex®** products.

### Supplier

#### Motorex®

- **Chain Clean**

## Cleaning and preserving materials for metal, rubber and plastic

### Guideline

- KTM recommends **Motorex®** products.

### Supplier

#### Motorex®

- **Protect & Shine**

## Fuel additive

### Guideline

- KTM recommends **Motorex®** products.

### Supplier

#### Motorex®

- **Fuel Stabilizer**

## High viscosity grease

### Guideline

- KTM recommends **SKF®** products.

### Supplier

#### SKF®

- **LGHB 2**

## Long-life grease

### Guideline

- KTM recommends **Motorex®** products.

### Supplier

#### Motorex®

- **Bike Grease 2000**

## Motorcycle cleaner

### Guideline

- KTM recommends **Motorex®** products.

### Supplier

#### Motorex®

- **Moto Clean 900**

## Off-road chain spray

### Guideline

- KTM recommends **Motorex®** products.

### Supplier

#### Motorex®

- **Chainlube Offroad**

### Oil for foam air filter

**Guideline**

- KTM recommends **Motorex®** products.

**Supplier****Motorex®**

- **Twin Air Liquid Bio Power**

### Rubber grip adhesive (00062030051)

**Supplier**

KTM-Sportmotorcycle AG

- **GRIP GLUE**

### Universal oil spray

**Guideline**

- KTM recommends **Motorex®** products.

**Supplier****Motorex®**

- **Joker 440 Synthetic**

### **JASO FC**

JASO FC 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.



<b>A</b>	
<b>Accessories</b>	7
<b>Air filter</b>	
cleaning	36
installing	35
removing	35
<b>Air filter box</b>	
cleaning	36
<b>Antifreeze</b>	
checking	59
<b>Auxiliary substances</b>	7
<b>B</b>	
<b>Brake discs</b>	
checking	46
<b>Brake fluid</b>	
front brake, adding	47
rear brake, adding	51
<b>Brake fluid level</b>	
front brake, checking	46
rear brake, checking	51
<b>Brake linings</b>	
front brake, changing	49
front brake, checking	48
front brake, installing	48
front brake, removing	48
rear brake, changing	54
rear brake, checking	52
rear brake, installing	53
rear brake, removing	52
<b>C</b>	
<b>Carburetor</b>	
float chamber, emptying	65
idle	63
idle speed, adjusting	63-64
<b>Chain</b>	
checking	40
cleaning	39
<b>Chain guard</b>	
installing	38
removing	37
<b>Chain guide</b>	
adjusting	42
checking	40
<b>Chain tension</b>	
adjusting	40
checking	39
<b>Chassis number</b>	10
<b>Choke</b>	14
<b>Cleaning</b>	72
<b>Clutch</b>	
adjusting	66
setting, checking	65
<b>Clutch cover</b>	
clutch cover, installing	67
clutch cover, removing	66

<b>Coolant</b>	
draining	60
refilling	61
<b>Coolant level</b>	
checking	59-60
<b>Cooling system</b>	59
<b>Customer service</b>	7
<b>D</b>	
<b>Dust boots</b>	
cleaning	27
<b>E</b>	
<b>Engine</b>	
running in	16
<b>Engine number</b>	10
<b>Engine sprocket</b>	
checking	40
<b>Engine sprocket cover</b>	
installing	38
removing	38
<b>Environment</b>	6
<b>F</b>	
<b>Figures</b>	7
<b>Filler cap</b>	
closing	13
opening	12
<b>Filling up</b>	
fuel	19
oil	20
<b>Foot brake lever</b>	14
basic position, adjusting	50
free travel, adjusting	50
free travel, checking	50
<b>Fork legs</b>	
installing	29
removing	28
<b>Fork part number</b>	10
<b>Fork protector</b>	
installing	28
removing	28
<b>Frame</b>	
checking	43
<b>Front fender</b>	
installing	33
removing	33
<b>Front wheel</b>	
installing	55
removing	55
<b>Fuel tap</b>	13
<b>G</b>	
<b>Gear oil</b>	
adding	70
changing	69
draining	70
refilling	70

<b>Gear oil level</b>	
checking	69
<b>H</b>	
<b>Hand brake lever</b>	12
basic position, adjusting	45
checking play	45
play, adjusting	45
<b>Handlebar position</b>	25
adjusting	25
<b>I</b>	
<b>Intended use</b>	5
<b>K</b>	
<b>Kickstarter</b>	14
<b>Kill switch</b>	12
<b>L</b>	
<b>Lower triple clamp</b>	
installing	30
removing	29
<b>M</b>	
<b>Main silencer</b>	
glass fiber yarn filling, changing	37
installing	37
removing	36
<b>Motorcycle</b>	
cleaning	72
raising with lift stand	27
removing from the lift stand	27
<b>O</b>	
<b>Oil level</b>	
checking	68
<b>Oil pump</b>	
bleeding	68
<b>Oil tank cap</b>	
closing	13
opening	13
<b>Operating substances</b>	7
<b>Owner's Manual</b>	6
<b>P</b>	
<b>Play in throttle cable</b>	
adjusting	62
checking	62
<b>Plug-in stand</b>	14
<b>Preparing for use</b>	
advice on first use	15
after storage	73
checks and maintenance measures when preparing for use	17
<b>Protective clothing</b>	6
<b>R</b>	
<b>Rear sprocket</b>	
checking	40
<b>Rear wheel</b>	
installing	56
removing	56

<b>Rebound damping</b>	
shock absorber, adjusting	23
<b>Riding sag</b>	
adjusting	25
<b>Rubber grip</b>	
checking	44
securing	44
<b>S</b>	
<b>Safe operation</b>	5
<b>Seat</b>	
mounting	35
removing	34
<b>Seat height</b>	
adjusting	26
<b>Service</b>	7
<b>Service schedule</b>	21-22
<b>Shock absorber</b>	
installing	34
removing	34
riding sag, checking	24
spring preload, adjusting	24
static sag, checking	23
<b>Shock absorber part number</b>	11
<b>Spare parts</b>	7
<b>Spoke tension</b>	
checking	57
<b>Start number plate</b>	
installing	33
removing	33
<b>Starting</b>	17
<b>Steering head bearing</b>	
greasing	32
<b>Steering head bearing play</b>	
adjusting	32
checking	31
<b>Storage</b>	73
<b>Swingarm</b>	
checking	43
<b>T</b>	
<b>Technical data</b>	
capacities	77
carburetor	77
chassis	77
chassis tightening torques	80
engine	76
engine tightening torques	76
fork	78
shock absorber	79
tires	78
<b>Throttle cable routing</b>	
checking	43
<b>Throttle grip</b>	12
<b>Tire air pressure</b>	
checking	57

<b>Tire condition</b>	
checking	56
<b>Transport</b>	19
<b>Troubleshooting</b>	74-75
<b>Type label</b>	10
<b>U</b>	
<b>Use definition</b>	5
<b>V</b>	
<b>View of vehicle</b>	
left front	8
right rear	9
<b>W</b>	
<b>Warranty</b>	7
<b>Work rules</b>	6



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