

**65 SX**

Art. no. 3213171en



**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 contained the latest information for this model at the time of going to print. Slight deviations resulting from continuing development and design can, however, not be completely excluded.

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# TABLE OF CONTENTS

1	MEANS OF REPRESENTATION .....	4	10.4	Adjusting the high-speed compression damping of the shock absorber .....	23
1.1	Symbols used .....	4	10.5	Adjusting the rebound damping of the shock absorber .....	23
1.2	Formats used .....	4	10.6	Measuring rear wheel sag unloaded .....	24
2	SAFETY ADVICE .....	5	10.7	Checking the static sag of the shock absorber ...	24
2.1	Use definition - intended use .....	5	10.8	Checking the riding sag of the shock absorber ...	24
2.2	Safety advice .....	5	10.9	Adjusting the spring preload of the shock absorber 🛠️ .....	25
2.3	Degrees of risk and symbols .....	5	10.10	Adjusting the riding sag 🛠️ .....	25
2.4	Tampering warning .....	5	10.11	Checking the basic setting of the fork .....	26
2.5	Safe operation .....	5	10.12	Adjusting the compression damping of the fork .....	26
2.6	Protective clothing .....	6	10.13	Adjusting the rebound damping of the fork .....	26
2.7	Work rules .....	6	10.14	Handlebar position .....	27
2.8	Environment .....	6	10.15	Adjusting handlebar position 🛠️ .....	27
2.9	Owner's Manual .....	6	11	MAINTENANCE WORK ON CHASSIS .....	28
3	IMPORTANT INFORMATION .....	7	11.1	Raising the motorcycle with a lift stand .....	28
3.1	Guarantee, warranty .....	7	11.2	Removing the motorcycle from the lift stand .....	28
3.2	Operating and auxiliary substances .....	7	11.3	Bleeding fork legs .....	28
3.3	Spare parts, accessories .....	7	11.4	Cleaning the dust boots of the fork legs .....	29
3.4	Service .....	7	11.5	Removing the fork protector 🛠️ .....	29
3.5	Figures .....	7	11.6	Installing the fork protector 🛠️ .....	29
3.6	Customer service .....	7	11.7	Removing the fork legs 🛠️ .....	30
4	VIEW OF VEHICLE .....	8	11.8	Installing the fork legs 🛠️ .....	30
4.1	View of vehicle, front left (example) .....	8	11.9	Removing the lower triple clamp 🛠️ .....	31
4.2	View of vehicle, rear right (example) .....	9	11.10	Installing the lower triple clamp 🛠️ .....	32
5	SERIAL NUMBERS .....	10	11.11	Checking play of steering head bearing .....	33
5.1	Chassis number .....	10	11.12	Adjusting the play of the steering head bearing 🛠️ .....	34
5.2	Engine number .....	10	11.13	Greasing the steering head bearing 🛠️ .....	34
5.3	Shock absorber part number .....	10	11.14	Dismounting the start number plate .....	34
6	CONTROLS .....	11	11.15	Installing the start number plate .....	35
6.1	Clutch lever .....	11	11.16	Dismounting the front fender .....	35
6.2	Hand brake lever .....	11	11.17	Installing the front fender .....	35
6.3	Throttle grip .....	11	11.18	Removing the shock absorber 🛠️ .....	36
6.4	Kill switch .....	11	11.19	Installing shock absorber 🛠️ .....	36
6.5	Opening the filler cap .....	11	11.20	Removing the seat .....	36
6.6	Closing the filler cap .....	12	11.21	Mounting the seat .....	36
6.7	Fuel tap .....	12	11.22	Removing the air filter 🛠️ .....	37
6.8	Choke .....	12	11.23	Installing the air filter 🛠️ .....	37
6.9	Shift lever .....	13	11.24	Cleaning the air filter and air filter box 🛠️ .....	38
6.10	Kickstarter .....	13	11.25	Removing main silencer .....	38
6.11	Foot brake lever .....	13	11.26	Installing the main silencer .....	38
6.12	Plug-in stand .....	13	11.27	Changing the glass fiber yarn filling of the main silencer 🛠️ .....	39
7	PREPARING FOR USE .....	14	11.28	Dismounting the fuel tank 🛠️ .....	39
7.1	Advice on first use .....	14	11.29	Installing the fuel tank 🛠️ .....	40
7.2	Running in the engine .....	15	11.30	Removing the chain guard .....	41
8	RIDING INSTRUCTIONS .....	16	11.31	Installing the chain guard .....	41
8.1	Checks and maintenance measures when preparing for use .....	16	11.32	Checking chain dirt .....	42
8.2	Starting .....	16	11.33	Cleaning the chain .....	42
8.3	Starting off .....	17	11.34	Checking the chain tension .....	42
8.4	Shifting, riding .....	17	11.35	Adjusting the chain tension .....	43
8.5	Braking .....	17	11.36	Checking the chain, rear sprocket, engine sprocket, and chain guide .....	44
8.6	Stopping, parking .....	18	11.37	Adjusting the chain guide 🛠️ .....	45
8.7	Transport .....	18	11.38	Checking the frame 🛠️ .....	46
8.8	Refueling .....	19	11.39	Checking the swingarm 🛠️ .....	46
9	SERVICE SCHEDULE .....	20	11.40	Checking the routing of the throttle cable .....	46
9.1	Service schedule .....	20	11.41	Checking the rubber grip .....	46
10	TUNING THE CHASSIS .....	22	11.42	Additionally securing the rubber grip .....	47
10.1	Checking the basic chassis setting with the rider's weight .....	22			
10.2	Compression damping of the shock absorber .....	22			
10.3	Adjusting the low-speed compression damping of the shock absorber .....	22			

11.43	Adjusting basic position of clutch lever .....	47	20.2	Engine tightening torques .....	76
11.44	Checking the fluid level of the hydraulic clutch .....	47	20.3	Carburetor .....	77
11.45	Changing the hydraulic clutch fluid  .....	47	20.3.1	Carburetor tuning.....	78
12	BRAKE SYSTEM .....	49	20.4	Capacities .....	79
12.1	Checking free travel of hand brake lever .....	49	20.4.1	Gear oil.....	79
12.2	Adjusting the basic position of the hand brake lever .....	49	20.4.2	Coolant .....	79
12.3	Checking brake discs.....	49	20.4.3	Fuel .....	79
12.4	Checking front brake fluid level .....	50	20.5	Fork.....	79
12.5	Adding front brake fluid  .....	50	20.6	Shock absorber.....	79
12.6	Checking the front brake linings .....	51	20.7	Chassis .....	80
12.7	Changing the front brake linings  .....	52	20.8	Chassis tightening torques .....	81
12.8	Removing front brake linings  .....	52	21	SUBSTANCES .....	82
12.9	Installing the front brake linings  .....	53	22	AUXILIARY SUBSTANCES .....	84
12.10	Checking the free travel of the foot brake lever .....	54	23	STANDARDS .....	86
12.11	Adjusting the free travel of the foot brake lever  .....	54	INDEX.....		87
12.12	Adjusting the basic position of the foot brake lever  .....	54			
12.13	Checking rear brake fluid level .....	55			
12.14	Adding rear brake fluid  .....	55			
12.15	Checking the rear brake linings .....	56			
12.16	Changing the rear brake linings  .....	56			
12.17	Removing rear brake linings  .....	57			
12.18	Installing the rear brake linings  .....	58			
13	WHEELS, TIRES .....	59			
13.1	Removing the front wheel  .....	59			
13.2	Installing the front wheel  .....	59			
13.3	Removing the rear wheel  .....	60			
13.4	Installing the rear wheel  .....	60			
13.5	Checking the tire condition .....	61			
13.6	Checking tire air pressure .....	61			
13.7	Checking spoke tension .....	62			
14	COOLING SYSTEM .....	63			
14.1	Cooling system .....	63			
14.2	Checking the antifreeze and coolant level .....	63			
14.3	Checking the coolant level .....	64			
14.4	Draining the coolant  .....	64			
14.5	Refilling the coolant  .....	65			
15	TUNING THE ENGINE.....	66			
15.1	Checking the play in the throttle cable .....	66			
15.2	Adjusting the play in the throttle cable  .....	66			
15.3	Carburetor - idle.....	67			
15.4	Carburetor - adjusting the idle speed  .....	67			
15.5	Emptying the carburetor float chamber  .....	68			
16	MAINTENANCE WORK ON THE ENGINE .....	69			
16.1	Checking the gear oil level .....	69			
16.2	Changing the gear oil  .....	69			
16.3	Draining the gear oil  .....	69			
16.4	Filling up with gear oil  .....	70			
16.5	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			
19	TROUBLESHOOTING .....	74			
20	TECHNICAL DATA.....	76			
20.1	Engine.....	76			

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

## 2.5 Safe operation



### Danger

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

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



### Danger

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

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



### Warning

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

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

Only operate the vehicle when it is in perfect technical condition, in accordance with its intended use and in a safe and environmentally compatible manner.

The vehicle should only be used by trained persons.

Have malfunctions that impair safety promptly eliminated by an authorized KTM workshop.

Adhere to the information and warning labels on the vehicle.

## 2.6 Protective clothing



### Warning

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

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

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

## 2.7 Work rules

Special tools are necessary for certain tasks. The tools are not contained in the vehicle but can be ordered under the number in parentheses. E.g.: bearing puller (15112017000)

During assembly, non-reusable parts (e.g. self-locking screws and nuts, seals and seal rings, O-rings, pins, lock washers) must be replaced by new parts.

In some instances, a thread locker (e.g. **Loctite**®) is required. The manufacturer instructions for use must be followed.

After disassembly, clean the parts that are to be reused and check them for damage and wear. Change damaged or worn parts.

After you complete the repair or service work, check the operating safety of the vehicle.

## 2.8 Environment

If you use your motorcycle responsibly, you can ensure that problems and conflicts do not occur. To protect the future of the motorcycle sport, make sure that you use your motorcycle legally, display environmental consciousness, and respect the rights of others.

When disposing of used oil, other operating and auxiliary fluids, and used components, comply with the laws and regulations of the respective country.

Because motorcycles are not subject to the EU regulations governing the disposal of used vehicles, there are no legal regulations that pertain to the disposal of an end-of-life motorcycle. Your authorized KTM dealer will be glad to advise you.

## 2.9 Owner's Manual

It is important that you read this Owner's Manual carefully and completely before making your first trip. The Owner's Manual contains useful information and many tips on how to operate, handle, and maintain your motorcycle. Only then will you find out how to customize the vehicle ideally for your own use and how you can protect yourself from injury.

Keep the Owner's Manual in an accessible place to enable you to refer to it as needed.

If you would like to know more about the vehicle or have questions on the material you read, please contact an authorized KTM dealer.

The Owner's Manual is an important component of the vehicle and should be handed over to the new owner if the vehicle is sold.



## 3.1 Guarantee, warranty

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

Additional information on the guarantee or warranty and the procedures involved can be found in the Service & Warranty Booklet.

## 3.2 Operating and auxiliary substances



### Warning

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

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

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

## 3.3 Spare parts, accessories

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

The current **KTM PowerParts** for your vehicle can be found on the KTM website.

International KTM Website: <http://www.ktm.com>

## 3.4 Service

A prerequisite for perfect operation and prevention of premature wear is that the service, care, and tuning work on the engine and chassis is properly carried out as described in the Owner's Manual. Incorrect adjustment and tuning of the engine and chassis can lead to damage and breakage of components.

Use of the vehicle under difficult conditions, such as on sand or on wet and muddy surfaces, can lead to considerably more rapid wear of components such as the drive train, brake system, or suspension components. For this reason, it may be necessary to inspect or replace parts before the next scheduled service.

It is imperative that you adhere to the stipulated run-in times and service intervals. If you observe these exactly, you will ensure a much longer service life for your motorcycle.

## 3.5 Figures

The figures contained in the manual may depict special equipment.

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

## 3.6 Customer service

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

A list of authorized KTM dealers can be found on the KTM website.

International KTM Website: <http://www.ktm.com>

## 4.1 View of vehicle, front left (example)



B02048-10

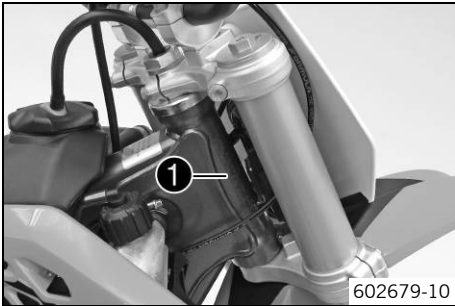
- |   |                                    |
|---|------------------------------------|
| 1 | Hand brake lever (☛ p. 11)         |
| 2 | Rebound damping of fork            |
| 3 | Clutch lever (☛ p. 11)             |
| 4 | Quick release for seat lock        |
| 5 | Fuel tap (☛ p. 12)                 |
| 6 | Choke (☛ p. 12)                    |
| 7 | Shift lever (☛ p. 13)              |
| 8 | Shock absorber, rebound adjustment |

## 4.2 View of vehicle, rear right (example)



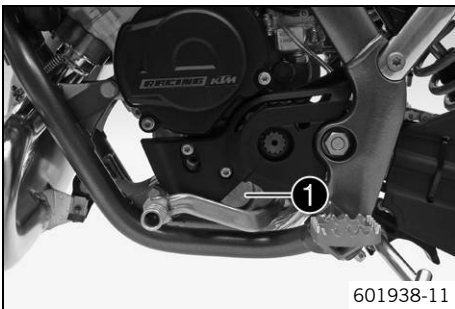
- |   |  |
|---|--|
| 1 | Filler cap                             |
| 2 | Kill switch (☛ p. 11)                  |
| 3 | Compression damping of fork            |
| 4 | Throttle grip (☛ p. 11)                |
| 5 | Chassis number (☛ p. 10)               |
| 6 | Level viewer, rear brake fluid         |
| 7 | Shock absorber, compression adjustment |
| 8 | Foot brake lever (☛ p. 13)             |
| 9 | Kickstarter (☛ p. 13)                  |

## 5.1 Chassis number



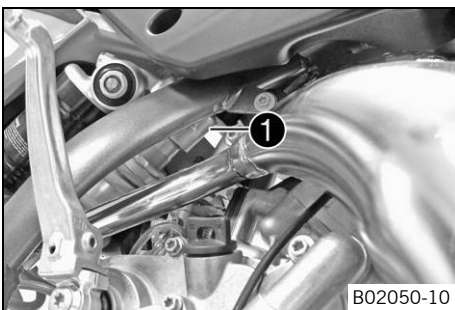
The chassis number ❶ is stamped on right of the steering head.

## 5.2 Engine number



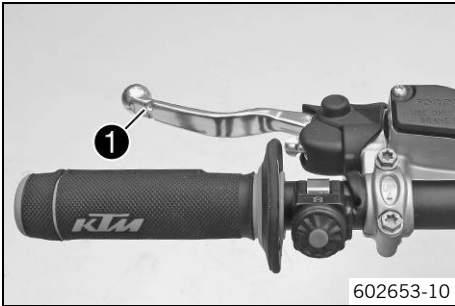
The engine number ❶ is stamped on the left side of the engine under the engine sprocket.

## 5.3 Shock absorber part number



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

## 6.1 Clutch lever



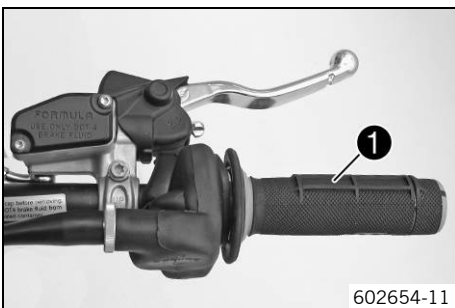
The clutch lever ❶ is fitted on the left side of the handlebar. The clutch is hydraulically operated and self-adjusting.

## 6.2 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.

## 6.3 Throttle grip



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

## 6.4 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.

## 6.5 Opening the filler cap



### Danger

**Fire hazard** Fuel is highly flammable.

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



**Warning**

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

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



**Warning**

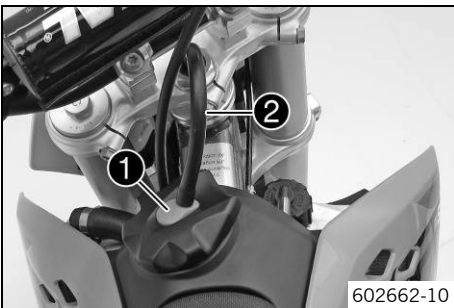
**Environmental hazard** Improper handling of fuel is a danger to the environment.

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



- Press release button ①, turn the filler cap counterclockwise, and lift it free.

## 6.6 Closing the filler cap



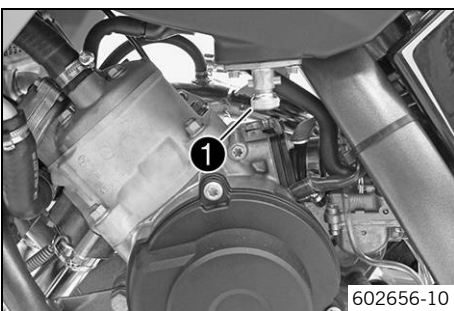
- Replace the filler cap and turn clockwise until the release button ① locks in place.



**Info**

Run the fuel tank breather hose ② without kinks.

## 6.7 Fuel tap

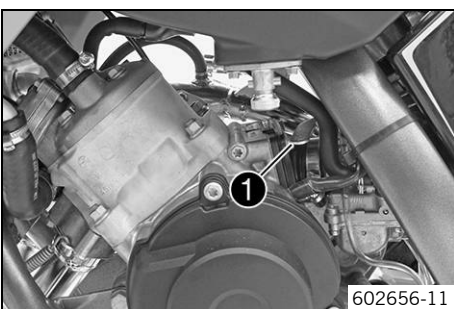


Fuel tap ① is on the left of the fuel tank.

**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.

## 6.8 Choke



Choke lever ① is fitted on the left side of the carburetor.

Activating the choke function frees an opening through which the engine can draw extra fuel. This results in a richer fuel-air mixture, which is needed for a cold start.



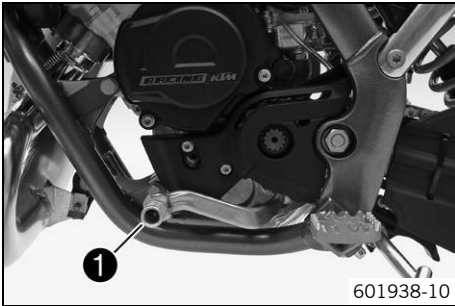
**Info**

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

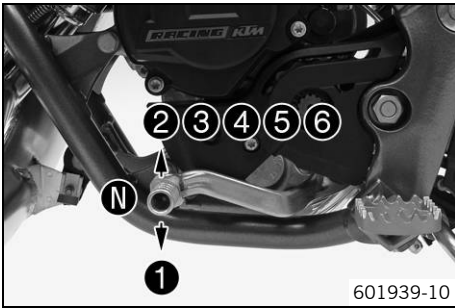
**Possible states**

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

## 6.9 Shift lever

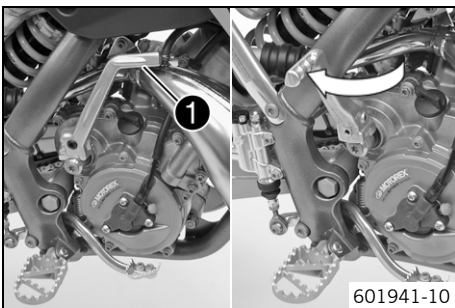


Shift lever **1** is mounted on the left side of the engine.



The gear positions can be seen in the photograph. The neutral or idle position **N** is between the first and second gears.

## 6.10 Kickstarter

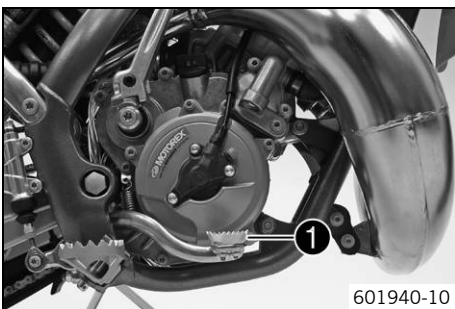


The kickstarter **1** is fitted on the right of the engine. The kickstarter can be swiveled.

**i** **Info**

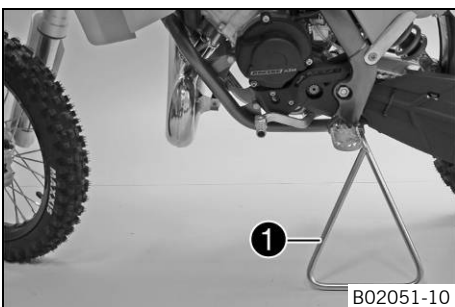
Before riding, swing the kickstarter inwards towards the engine.

## 6.11 Foot brake lever



Foot brake lever **1** is located in front of the right footrest. The foot brake lever is used to activate the rear brake.

## 6.12 Plug-in stand



The fixture for the plug-in stand **1** 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 clutch lever. (☞ p. 47)
- Adjust the basic position of the hand brake lever. (☞ p. 49)
- Adjust the basic position of the foot brake lever. ☞ (☞ p. 54)
- 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	50 kg (110 lb.)
----------------------	-----------------

- Check the spoke tension. (☛ p. 62)

**Info**

The spoke tension must be checked after riding the motorcycle for half an hour.

- Run the engine in. (☛ p. 15)

## 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)
- Check the front brake fluid level. (🔧 p. 50)
- Check the rear brake fluid level. (🔧 p. 55)
- Check the front brake linings. (🔧 p. 51)
- Check the rear brake linings. (🔧 p. 56)
- Check the brake system function.
- Check the coolant level. (🔧 p. 64)
- Check the chain dirt accumulation. (🔧 p. 42)
- Check the chain, rear sprocket, engine sprocket, and chain guide. (🔧 p. 44)
- Check the chain tension. (🔧 p. 42)
- Check the tire condition. (🔧 p. 61)
- Check the tire air pressure. (🔧 p. 61)
- Check the spoke tension. (🔧 p. 62)
- Clean the dust boots of the fork legs. (🔧 p. 29)
- Bleed fork legs. (🔧 p. 28)
- Check the air filter.
- Check the settings of all controls and ensure that they can be operated smoothly.
- Check all screws, nuts and hose clamps regularly for tightness.
- Check the fuel supply.

## 8.2 Starting

### Danger

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

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

### Note

**Engine failure** High engine speeds in cold engines have a negative effect on the service life of the engine.

- Always warm up the engine at low engine speeds.

### Info

If the motorcycle is unwilling to start, the cause can be old fuel in the float chamber. The flammable elements of the fuel evaporate after a long time of standing.

If the float chamber is filled with fresh fuel, the engine starts immediately.

### **Engine has been out of use for more than 1 week**

- Empty the carburetor float chamber. 🛠️ (🔧 p. 68)
- Turn the knurled screw on the fuel tap all the way counterclockwise.  
✓ Fuel can flow from the fuel tank to the carburetor.
- Remove the motorcycle from the stand.
- Shift gear to neutral.

### **The engine is cold**

- Push the choke lever down all the way.
- Forcefully step on the kickstarter, pushing it all the way down.

### Info

Do not open the throttle.

## 8.3 Starting off



### Info

The plug-in stand must be removed prior to riding.

- Pull the clutch lever, engage 1st gear, release the clutch lever slowly and simultaneously open the throttle carefully.

## 8.4 Shifting, riding



### Warning

**Danger of accidents** If you change down at high engine speed, the rear wheel can lock up.

- Do not change into a low gear at high engine speed. The engine races and the rear wheel can lock up.



### Info

If you hear unusual noises while riding, stop immediately, switch off the engine and contact an authorized KTM workshop. First gear is used for starting off or for steep inclines.

- When conditions allow (incline, road situation, etc.), your child can shift into a higher gear. To do so, release the throttle while simultaneously pulling the clutch lever, shift into the next gear, release the clutch and open the throttle.
- 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.
- To shift down, brake and close the throttle at the same time.
- Pull the clutch lever and shift into a lower gear, release the clutch lever slowly and open the throttle or shift again.
- Your child should switch off the engine if he or she expects to be standing for a long time.

Guideline

$\geq 2$ min
--------------

- Your child should avoid frequent and extended slipping of the clutch. This heats the engine oil, the engine and the cooling system.
- Insist that your child ride with a low rpm instead of with a high rpm and a slipping clutch.

## 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. Your child should change down to a lower gear appropriate to the road speed.
- Insist that your child take advantage of the braking action of the engine when riding on long downhill. To do so, shift back one or two gears, but do not overrev the engine. Your child will need to apply the brakes far less often and the brake system is not overheated.

## 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 to or destruction of components due to excessive load.

- The side stand is only designed for the weight of the motorcycle. Do not sit on the motorcycle when it is resting on the side stand. The side stand or the frame may become damaged and the motorcycle may fall over.

- Brake the motorcycle.
- Shift gear to neutral.
- Press and hold the kill switch  $\otimes$  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

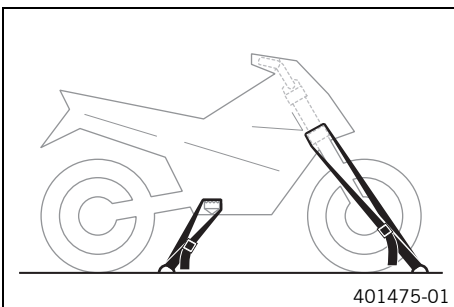
**Danger of damage** The parked vehicle may roll away or fall over.

- 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.
- The fuel in the fuel tank expands when warm and may emerge if overfilled. Follow the instructions on refueling.



### Warning

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

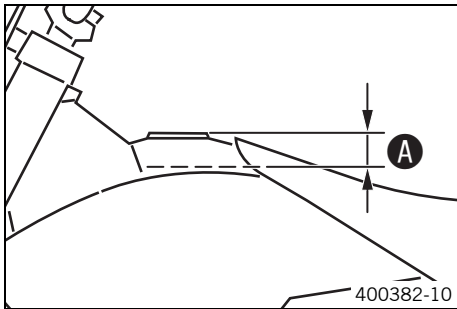
- Fuel must not come into contact with the skin, eyes, or clothing. Do not breathe in the fuel vapors. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician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



### Warning

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

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



- Switch off the engine.
- Open the filler cap. (☛ p. 11)
- Fill the fuel tank with fuel up to measurement **A**.

Guideline

Measurement of <b>A</b>	35 mm (1.38 in)	
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Fuel tank capacity, approx.	3.5 l (3.7 qt.)	Super unleaded gasoline (95 octane), mixed with 2-stroke engine oil (1:60) (☛ p. 83)
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2-stroke engine oil (☛ p. 82)		
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- Close the filler cap. (☛ p. 12)

## 9.1 Service schedule

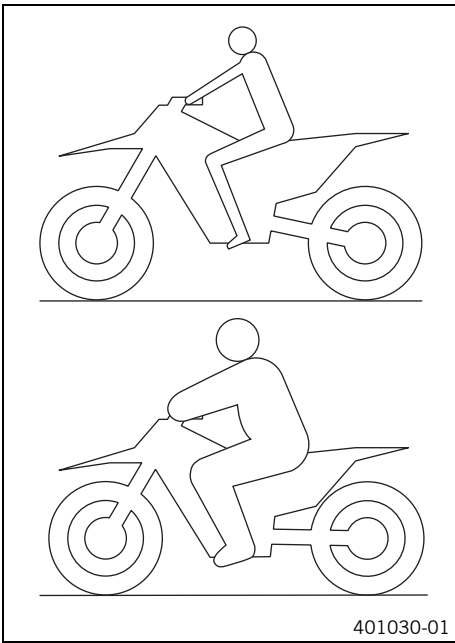
	Annually			
	Every 80 operating hours			
	Every 40 operating hours			
	Every 20 operating hours			
	Once after 10 operating hours			
Check the front brake linings. (☞ p. 51)	○	●	●	●
Check the rear brake linings. (☞ p. 56)	○	●	●	●
Check the brake discs. (☞ p. 49)	○	●	●	●
Check brake lines for damage and leakage.	○	●	●	●
Change the sealing sleeves of the foot brake cylinder. ☞		●	●	●
Change the rear brake fluid. ☞				●
Check the rear brake fluid level. (☞ p. 55)	○	●	●	●
Check the free travel of the foot brake lever. (☞ p. 54)	○	●	●	●
Check the frame and swingarm. ☞		●	●	●
Check swingarm bearing. ☞		●	●	●
Check the heim joints on the upper and lower shock absorbers. ☞		●	●	●
Service the fork. ☞			●	●
Perform a shock absorber service. ☞			●	●
Check the tire condition. (☞ p. 61)	○	●	●	●
Check the tire air pressure. (☞ p. 61)	○	●	●	●
Check wheel bearing for play. ☞		●	●	●
Check the wheel hubs. ☞		●	●	●
Check rim run-out. ☞	○	●	●	●
Check the spoke tension. (☞ p. 62)	○	●	●	●
Check the chain, rear sprocket, engine sprocket, and chain guide. (☞ p. 44)	○	●	●	●
Check the chain tension. (☞ p. 42)	○	●	●	●
Lubricate all moving parts (e. g. hand levers, chain, ...) and check for smooth operation. ☞	○	●	●	●
Change the hydraulic clutch fluid. ☞ (☞ p. 47)				●
Check the fluid level of the hydraulic clutch. (☞ p. 47)	○	●	●	●
Change the front brake fluid. ☞				●
Check the front brake fluid level. (☞ p. 50)	○	●	●	●
Check the free travel of the hand brake lever. (☞ p. 49)	○	●	●	●
Grease the steering head bearing. ☞ (☞ p. 34)				●
Check play of steering head bearing. (☞ p. 33)	○	●	●	●
Change the spring of the exhaust control. ☞			●	●
Change the piston. ☞			●	●
Change the connecting rod, conrod bearing and crank pin. ☞			●	●
Change the crankshaft bearing. ☞			●	●
Check the transmission and shift mechanism. ☞			●	●
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 the exhaust control for functioning and smooth operation. ☞		●	●	●
Check the clutch. ☞		●	●	●
Check all hoses (e. g. fuel, cooling, bleeding, drainage) and sleeves for tearing, tightness and correct routing. ☞	○	●	●	●

	Once after 10 operating hours	Every 20 operating hours	Every 40 operating hours	Every 80 operating hours	Annually
Check the antifreeze and coolant level. (☞ p. 63)	○	●	●	●	
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. 38)	○	●	●	●	
Change the glass fiber yarn filling of the main silencer. ☞ ☞ (☞ p. 39)		●	●	●	
Check the screws and nuts for tightness. ☞	○	●	●	●	
Check/set the carburetor components. ☞			●	●	●
Check idle. ☞	○	●	●	●	
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. ☞	○	●	●	●	

- One-time interval
- Periodic interval

## 10.1 Checking the basic chassis setting with the rider's weight

**i Info**  
When adjusting the basic chassis setting, first adjust the shock absorber and then the fork.



- For optimal motorcycle riding characteristics and to avoid damage to forks, shock absorbers, swingarm and frame, the basic settings of the suspension components must match the rider's weight.
- As delivered, KTM offroad motorcycles are adjusted for an average rider's weight (with full protective clothing).

Guideline

Standard rider weight	35... 45 kg (77... 99 lb.)
-----------------------	----------------------------

- If the rider's weight is above or below this range, the basic setting of the suspension components must be adjusted accordingly.
- Small weight differences can be compensated by adjusting the spring preload, but in the case of large weight differences, the springs must be replaced.

## 10.2 Compression damping of the shock absorber

The compression damping of the shock absorber is divided into two ranges: high-speed and low-speed. High-speed and low-speed refer to the compression speed of the rear wheel suspension and not to the vehicle speed. The high-speed setting, for example, has an effect on the landing after a jump: the rear wheel suspension compresses more quickly. The low-speed setting, for example, has an effect when riding over long ground swells: the rear wheel suspension compresses more slowly. These two ranges can be adjusted separately, although the transition between high-speed and low-speed is gradual. Thus, changes in the high-speed range affect the compression damping in the low-speed range and vice versa.

## 10.3 Adjusting the low-speed compression 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.)

**i Info**  
The low-speed setting can be seen during the slow to normal compression of the shock absorber.



- Turn adjusting screw **1** clockwise with a screwdriver up to the last perceptible click.

**i Info**  
Do not loosen fitting **2**.

- Turn counterclockwise by the number of clicks corresponding to the shock absorber type.

Guideline

Compression damping, low-speed	
Comfort	18 clicks
Standard	15 clicks
Sport	12 clicks



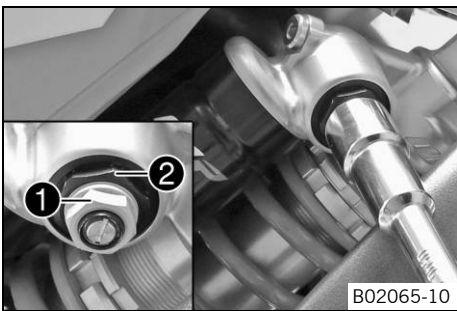
**i Info**  
Turn clockwise to increase damping; turn counterclockwise to reduce damping.

## 10.4 Adjusting the high-speed compression 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.)

**i Info**  
The high-speed setting can be seen during the fast compression of the shock absorber.



- Turn adjusting screw **1** all the way clockwise with a socket wrench.

**i Info**  
Do not loosen fitting **2**.

- Turn counterclockwise by the number of turns corresponding to the shock absorber type.

Guideline

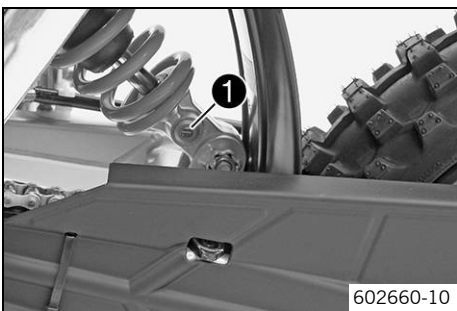
Compression damping, high-speed	
Comfort	1.5 turns
Standard	1 turn
Sport	0.5 turn

**i Info**  
Turn clockwise to increase damping; turn counterclockwise to reduce damping.

## 10.5 Adjusting the rebound damping of the shock absorber

**! Caution**  
**Danger of accidents** Disassembly of pressurized parts can lead to injury.

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



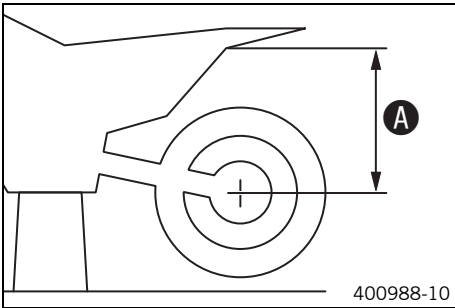
- Turn adjusting screw **1** clockwise up to the last perceptible click.
- Turn back counterclockwise by the number of clicks corresponding to the shock absorber type.

Guideline

Rebound damping	
Comfort	8 clicks
Standard	5 clicks
Sport	2 clicks

**i Info**  
Turn clockwise to increase damping; turn counterclockwise to reduce damping.

## 10.6 Measuring rear wheel sag unloaded



### Preparatory work

- Raise the motorcycle with a lift stand. (🔧 p. 28)

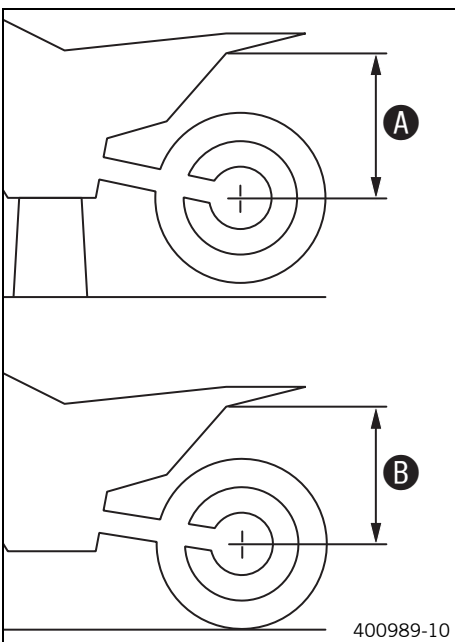
### Main work

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

### Finishing work

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

## 10.7 Checking the static sag of the shock absorber



- Measure distance **A** of rear wheel unloaded. (🔧 p. 24)
- 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 **B**.

### Info

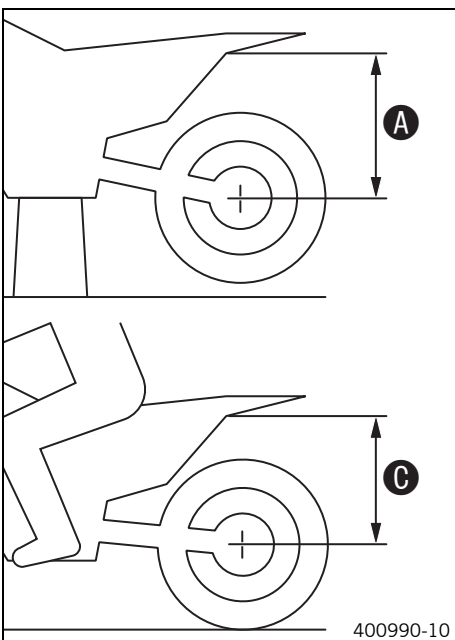
The static sag is the difference between measurements **A** and **B**.

- Check the static sag.

Static sag	30 mm (1.18 in)
------------	-----------------

- » If the static sag is less or more than the specified value:
  - Adjust the spring preload of the shock absorber. 🛠️ (🔧 p. 25)

## 10.8 Checking the riding sag of the shock absorber



- Measure distance **A** of rear wheel unloaded. (🔧 p. 24)
- 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**.

### Info

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

- Check the riding sag.

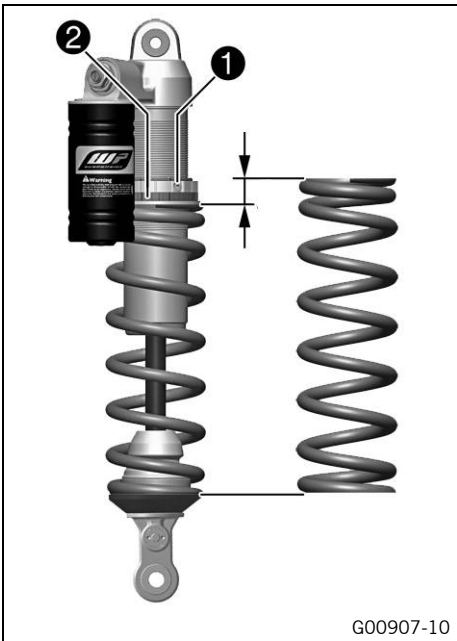
Riding sag	70 mm (2.76 in)
------------	-----------------

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

## 10.9 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.)



G00907-10

### Preparatory work

- Raise the motorcycle with a lift stand. (🔧 p. 28)
- Remove shock absorber. 🛠️ (🔧 p. 36)
- 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.

Combination wrench (50329080000)
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	
Standard	5 mm (0.2 in)

### Info

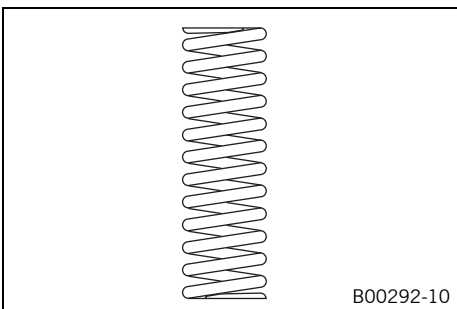
The spring preload is the difference between the relaxed spring length and the tensioned spring length. Depending on the static sag and/or the riding sag, it may be necessary to increase or decrease the spring preload.

- Tighten retaining ring ①.

### Finishing work

- Install the shock absorber. 🛠️ (🔧 p. 36)
- Remove the motorcycle from the lift stand. (🔧 p. 28)

## 10.10 Adjusting the riding sag 🛠️



B00292-10

### Preparatory work

- Raise the motorcycle with a lift stand. (🔧 p. 28)
- Remove shock absorber. 🛠️ (🔧 p. 36)
- After removing the shock absorber, clean it thoroughly.

### Main work

- Choose and mount a suitable spring.

### Guideline

Spring rate	
Weight of rider: < 35 kg (< 77 lb.)	35 N/mm (200 lb/in)
Weight of rider: 35... 45 kg (77... 99 lb.)	40 N/mm (228 lb/in)
Weight of rider: > 45 kg (> 99 lb.)	45 N/mm (257 lb/in)

### Info

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

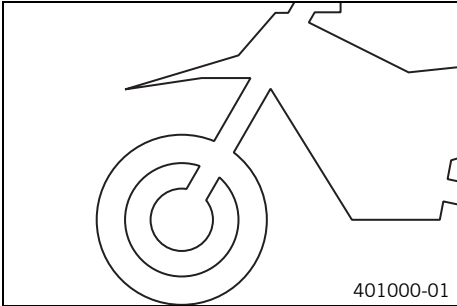
### Finishing work

- Install the shock absorber. 🛠️ (🔧 p. 36)
- Remove the motorcycle from the lift stand. (🔧 p. 28)
- Check the static sag of the shock absorber. (🔧 p. 24)
- Check the riding sag of the shock absorber. (🔧 p. 24)

- Adjust the rebound damping of the shock absorber. (☛ p. 23)

## 10.11 Checking the basic setting of the fork

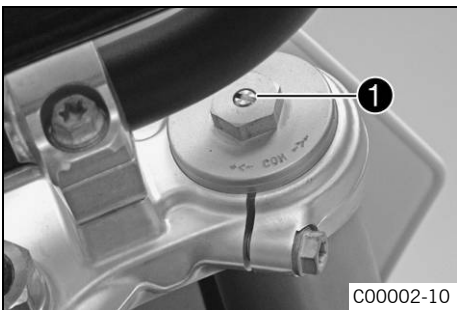
**i Info**  
For various reasons, no exact riding sag can be determined for the forks.



- As with the shock absorber, smaller differences in the rider's weight can be compensated by the spring preload.
- However, if the fork is often overloaded (hard end stop on compression), harder springs must be fit to avoid damage to the fork and frame.

## 10.12 Adjusting the compression damping of the fork

**i Info**  
The hydraulic compression damping determines the fork suspension behavior.



- Turn adjusting screw ① clockwise all the way.

**i Info**  
Adjusting screw ① is located at the top end of the right fork leg and is labeled with **COM**.

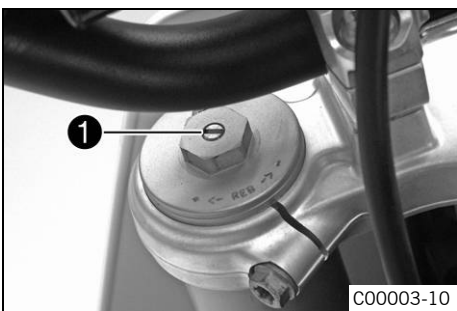
- Turn counterclockwise by the number of clicks corresponding to the fork type.
- Guideline

Compression damping	
Standard	2 turns

**i Info**  
Turn clockwise to increase damping; turn counterclockwise to reduce damping.

## 10.13 Adjusting the rebound damping of the fork

**i Info**  
The hydraulic rebound damping determines the fork suspension behavior.



- Turn adjusting screw ① clockwise all the way.

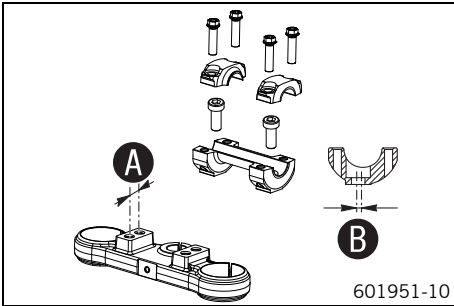
**i Info**  
Adjusting screw ① is located at the top end of the left fork leg and is labeled with **REB**.

- Turn counterclockwise by the number of clicks corresponding to the fork type.
- Guideline

Rebound damping	
Standard	2 turns

**i Info**  
Turn clockwise to increase damping; turn counterclockwise to reduce damping.

## 10.14 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.

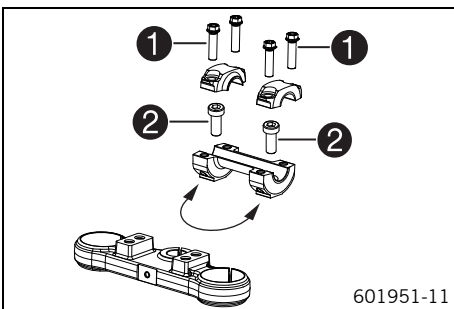
Distance <b>B</b> between holes	3.5 mm (0.138 in)
---------------------------------	-------------------

The handlebar supports can be mounted in 4 different positions.

## 10.15 Adjusting handlebar position

**Warning**  
**Danger of accidents** Handlebar breakage.

- If the handlebar is bent or straightened it will cause material fatigue, and the handlebar can break. Always replace handlebar.



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

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

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

Guideline

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

- Position the handlebar.

**Info**  
 Make sure cables and wiring are positioned correctly.

- Position the handlebar clamps. Fit and evenly tighten the screws **1**.

Guideline

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

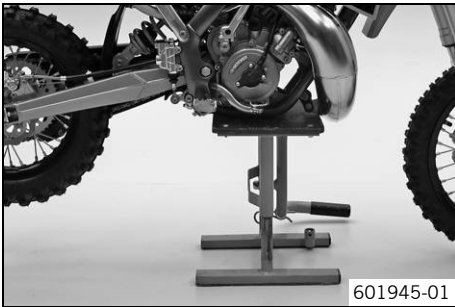
**Info**  
 Make sure the gap width is even.

## 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)

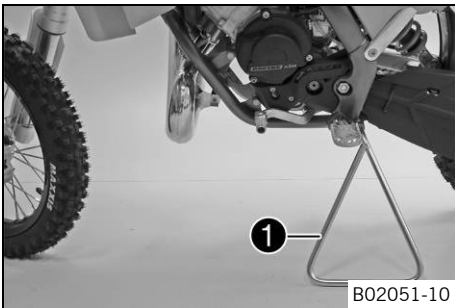
- ✓ The tires should no longer be in contact with the ground.
- Secure the motorcycle against falling over.

## 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.



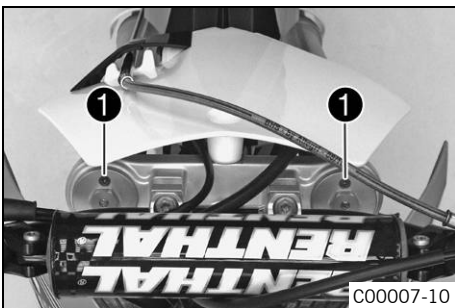
- Remove the motorcycle from the lift stand.
- Remove the lift stand.
- To park the motorcycle, insert plug-in stand ① into the plug-in stand bracket on the left side of the vehicle.



### Info

Remove the plug-in stand before riding.

## 11.3 Bleeding fork legs



### Preparatory work

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

### Main work

- Release bleeder screws ①.
  - ✓ Any excess pressure escapes from the interior of the fork.
- Tighten the bleeder screws.

### Finishing work

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

## 11.4 Cleaning the dust boots of the fork legs



### Preparatory work

- Raise the motorcycle with a lift stand. (☞ p. 28)

### Main work

- Push dust boots ① of both fork legs downwards.



### Info

The dust boots should 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.

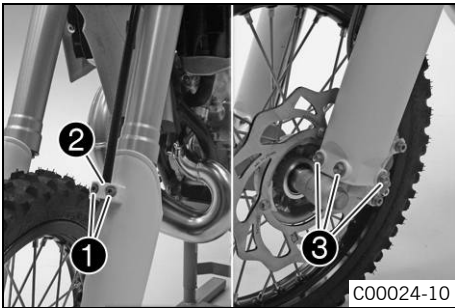
Universal oil spray (☞ p. 85)
-------------------------------

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

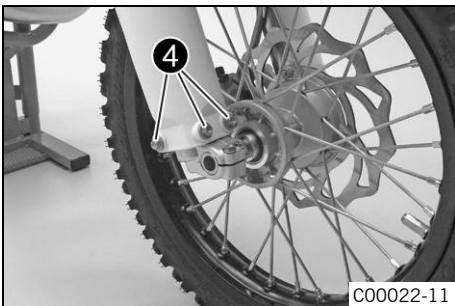
### Finishing work

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

## 11.5 Removing the fork protector

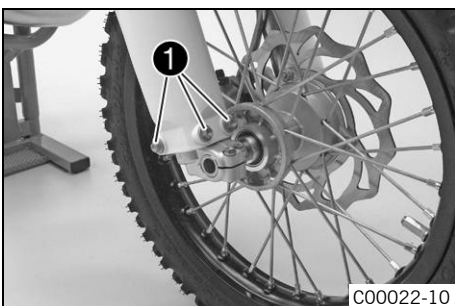


- Remove screws ①. Take off clamp ②.
- Remove screws ③ on the left fork leg. Take off the fork protector.



- Remove screws ④ on the right fork leg. Take off the fork protector.

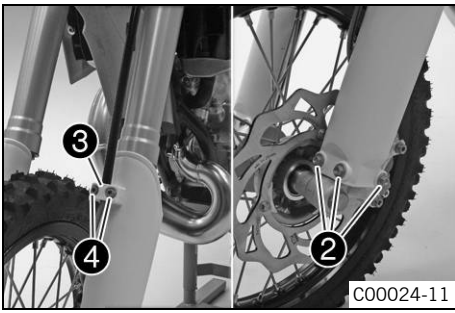
## 11.6 Installing the fork protector



- Position the fork protection on the right fork leg. Mount and tighten screws ①.

### Guideline

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



- Position the fork protection on the left fork leg. Mount and tighten screws ②.

Guideline

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

- Position the brake line. Mount clamp ③.
- Mount the screws ④.

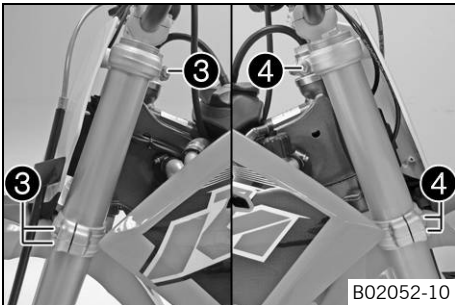
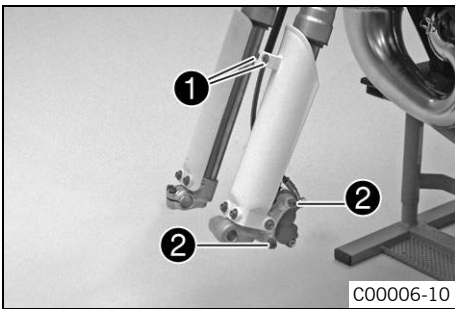
## 11.7 Removing the fork legs

### Preparatory work

- Raise the motorcycle with a lift stand. (☛ p. 28)
- Remove the front wheel. ☛ (☛ p. 59)

### Main work

- Remove screws ① and take off the clamp.
- Remove screws ② 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.

## 11.8 Installing the fork legs



### 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

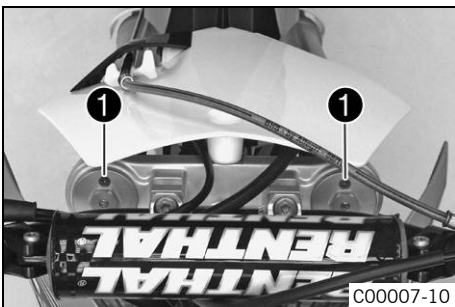
- Position the fork legs.



### 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.

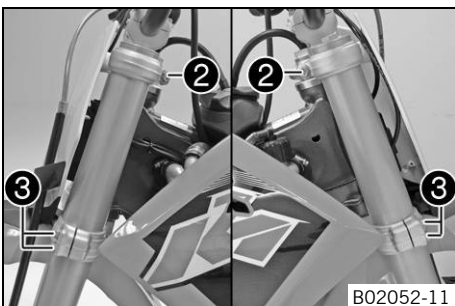
Guideline

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

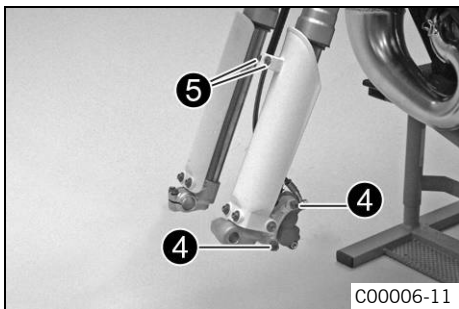
- Tighten screws ③.

Guideline

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







- Position brake caliper, mount and tighten screws ④.

Guideline

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

- Position the brake line. Mount the clamp and screws ⑤.

### Finishing work

- Install the front wheel. 🛠️ (👉 p. 59)

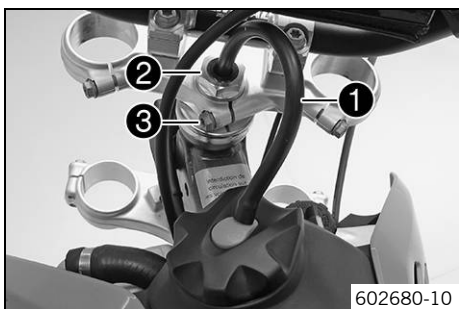
## 11.9 Removing the lower triple clamp 🛠️

### Preparatory work

- Raise the motorcycle with a lift stand. (👉 p. 28)
- Remove the front wheel. 🛠️ (👉 p. 59)
- Remove the fork legs. 🛠️ (👉 p. 30)
- Dismount the start number plate. (👉 p. 34)
- Dismount the front fender. (👉 p. 35)

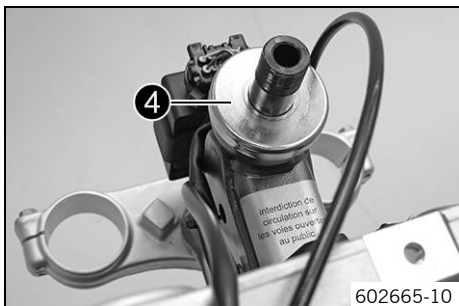
### Main work

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



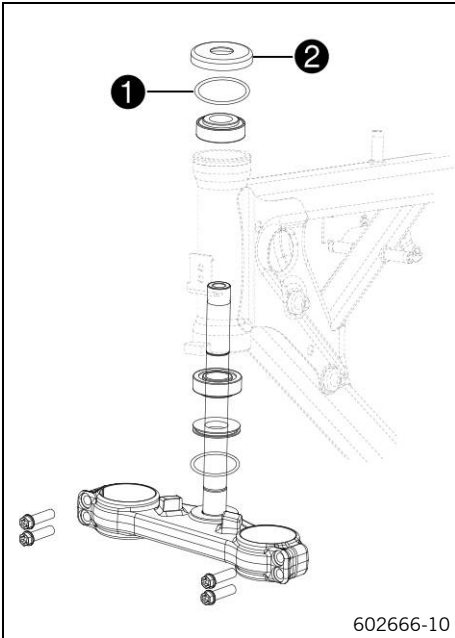
### Info

Protect the motorcycle and its attachments against 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.

## 11.10 Installing the lower triple clamp



### Main work

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

High viscosity grease (☛ p. 84)

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



- Position the upper triple clamp with the handlebar.
- Mount nut ③, but do not tighten it yet.

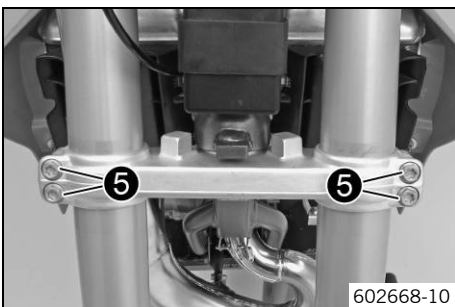


- Position the fork legs.

### Info

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

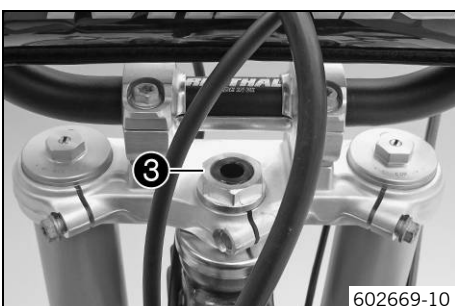
Position bleeder screws ④ to the front.



- Tighten screws ⑤.

### Guideline

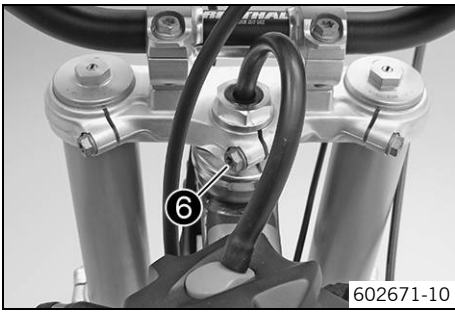
Screw, bottom triple clamp	M8	15 Nm (11.1 lbf ft)
----------------------------	----	------------------------



- Tighten nut ③.

### Guideline

Nut, steering stem	M20x1.5	10 Nm (7.4 lbf ft)
--------------------	---------	--------------------

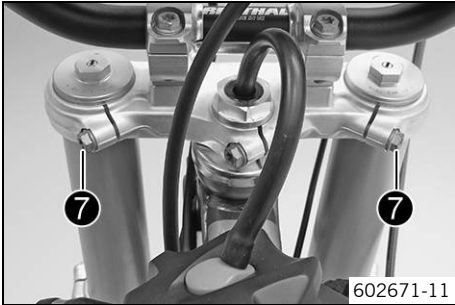


- Mount and tighten screw 6.

Guideline

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

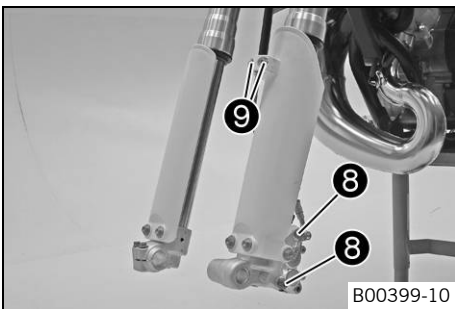
- Position the fuel tank breather.



- Tighten screws 7.

Guideline

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



- Position brake caliper, mount and tighten screws 8.

Guideline

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

- Position the brake line and clamp. Mount and tighten screws 9.

### Finishing work

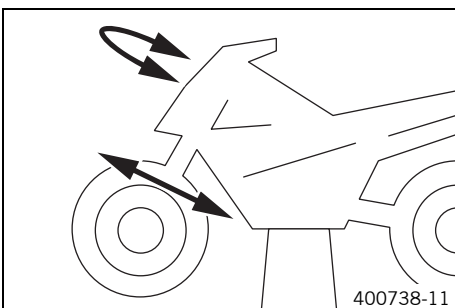
- Check that the wiring harness, cables, and brake and clutch lines can move freely and are routed correctly.
- Install the front fender. (☛ p. 35)
- Install the start number plate. (☛ p. 35)
- Install the front wheel. ☛ (☛ p. 59)
- Check play of steering head bearing. (☛ p. 33)
- Remove the motorcycle from the lift stand. (☛ p. 28)

## 11.11 Checking play of steering head bearing

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

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

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



### Preparatory work

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

### Main work

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

No play should be noticeable in the steering head bearing.

- » If there is noticeable play present:
  - Adjust the play of the steering head bearing. ☛ (☛ p. 34)

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

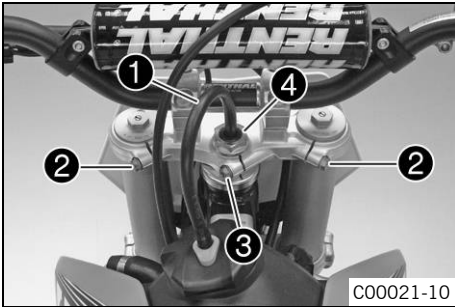
The handlebar must be able to move easily over the entire steering range. No resting locations should be noticeable.

- » If click positions are noticeable:
  - Adjust the play of the steering head bearing. 🛠️ (☞ p. 34)
  - Check the steering head bearing and replace if required.

**Finishing work**

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

**11.12 Adjusting the play of the steering head bearing 🛠️**



C00021-10

**Preparatory work**

- Raise the motorcycle with a lift stand. (☞ p. 28)

**Main work**

- Remove fuel tank breather ❶.
- Loosen screws ❷.
- Loosen screw ❸.
- Loosen and retighten nut ❹.

**Guideline**

Nut, steering stem	M20x1.5	10 Nm (7.4 lbf ft)
--------------------	---------	--------------------

- 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**

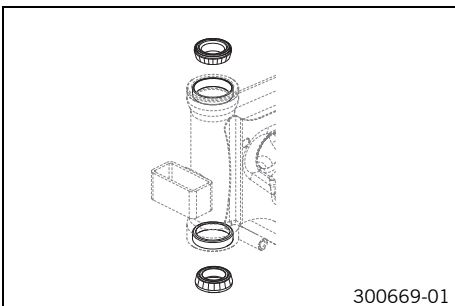
Screw, top triple clamp	M8	20 Nm (14.8 lbf ft)
-------------------------	----	---------------------

- Position the fuel tank breather ❶.

**Finishing work**

- Check play of steering head bearing. (☞ p. 33)
- Remove the motorcycle from the lift stand. (☞ p. 28)

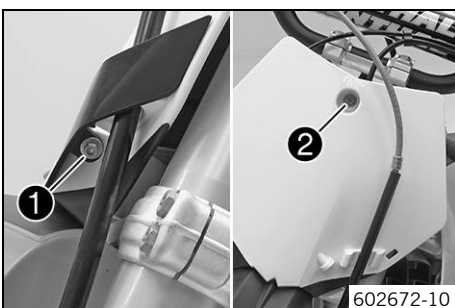
**11.13 Greasing the steering head bearing 🛠️**



300669-01

- Remove the lower triple clamp. 🛠️ (☞ p. 31)
- Install the lower triple clamp. 🛠️ (☞ p. 32)

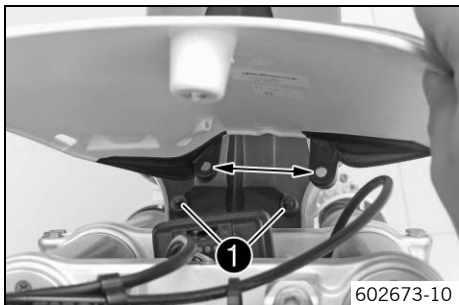
**11.14 Dismounting the start number plate**



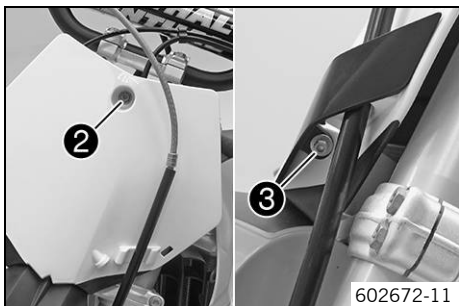
602672-10

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

## 11.15 Installing the start number plate



- Position the start number plate with the drill holes onto the holding lugs **1** of the fender.



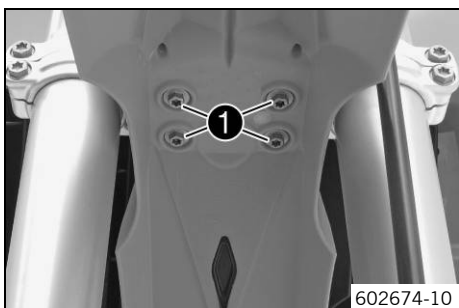
- Mount and tighten screw **2**.

Guideline

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

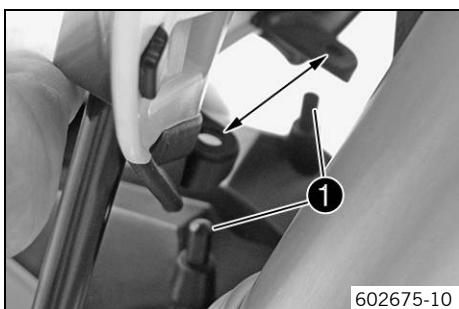
- Position the brake line. Put the clamp on, mount and tighten screw **3**.

## 11.16 Dismounting the front fender

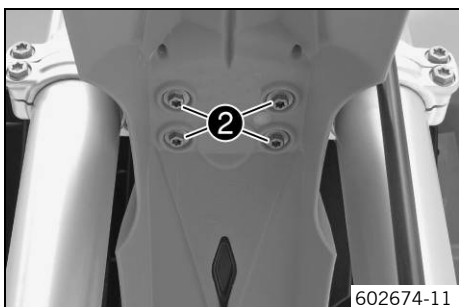


- Remove screws **1**. Remove the front fender.

## 11.17 Installing the front fender



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

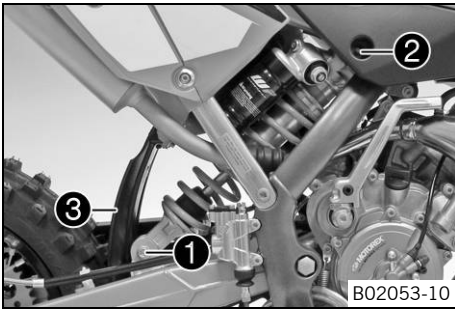


- Position the front fender. Mount and tighten screws **2**.

Guideline

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

## 11.18 Removing the shock absorber



B02053-10

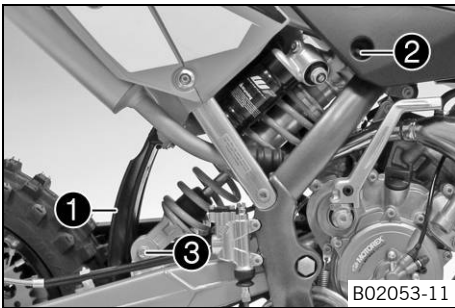
### Preparatory work

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

### Main work

- Remove screw ❶ 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 ❷, push splash protector ❸ to the side, and remove the shock absorber.

## 11.19 Installing shock absorber



B02053-11

### Main work

- Push splash protector ❶ to the side and position the shock absorber. Mount and tighten screw ❷.

#### Guideline

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

- Mount and tighten screw ❸.

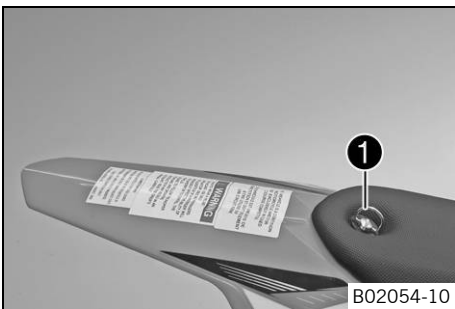
#### Guideline

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

### Finishing work

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

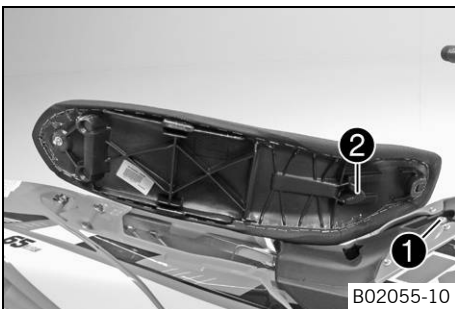
## 11.20 Removing the seat



B02054-10

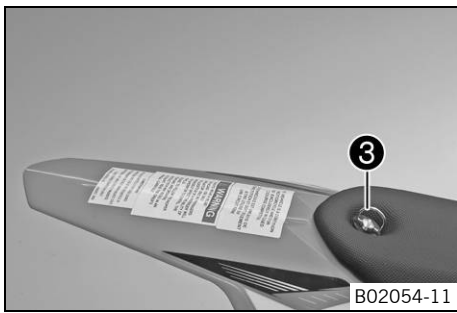
- Open quick release ❶ and raise the rear of the seat.
- Pull back the seat and remove it.

## 11.21 Mounting the seat



B02055-10

- 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 ③.

## 11.22 Removing the air filter

### Note

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

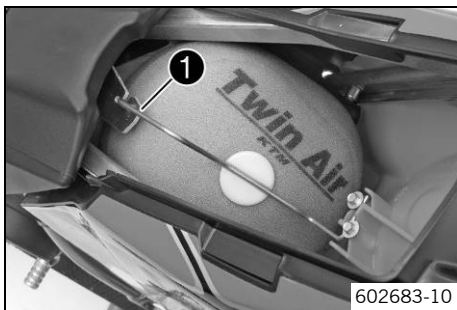
- Never operate the vehicle without an air filter as dust and dirt will enter the engine and lead to increased wear.



### Warning

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

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



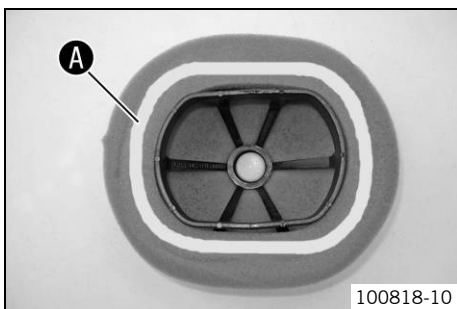
### Preparatory work

- Remove the seat. (☛ p. 36)

### Main work

- Unhook the air filter holder ① and swing it to the side. Remove the air filter with the air filter support.
- Remove the air filter from the air filter support.

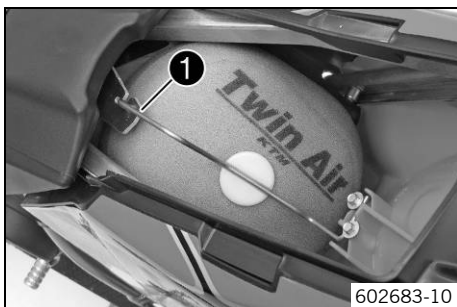
## 11.23 Installing the air filter



### Main work

- Mount the clean air filter onto the air filter support.
- Grease the air filter in area A.

Long-life grease (☛ p. 84)



- Put in both parts together, position them and fix them with the air filter support ①.



### Info

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

### Finishing work

- Mount the seat. (☛ p. 36)

## 11.24 Cleaning the air filter and air filter box



### Warning

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

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



### Info

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

### Preparatory work

- Remove the seat. (☞ p. 36)
- Remove the air filter. (☞ p. 37)

### Main work

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

Air filter cleaner (☞ p. 84)



### 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. 37)
- Mount the seat. (☞ p. 36)

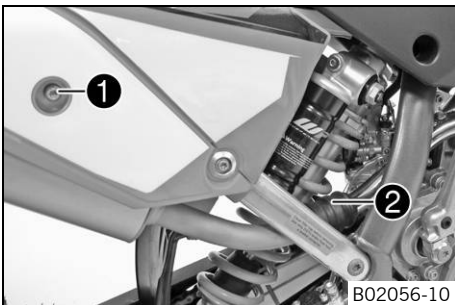
## 11.25 Removing main silencer



### Warning

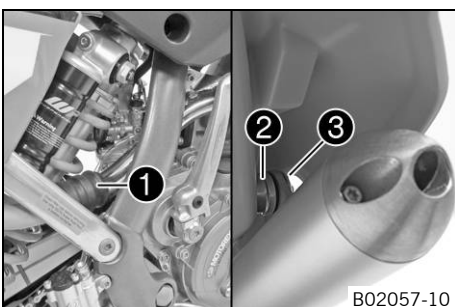
**Danger of burns** The exhaust system gets very hot when the vehicle is driven.

- Allow the exhaust system to cool down. Do not touch hot components.



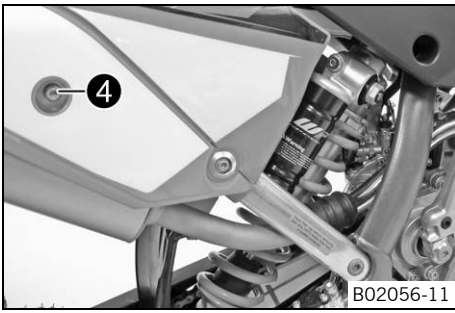
- Remove screw ❶.
- Pull the main silencer off of the manifold at the rubber sleeve ❷.

## 11.26 Installing the main silencer



- Mount the main silencer with the rubber sleeve ❶.
- Position the wide collar bushing ❷ and the narrow collar bushing ❸.





- Mount and tighten screw ④.

Guideline

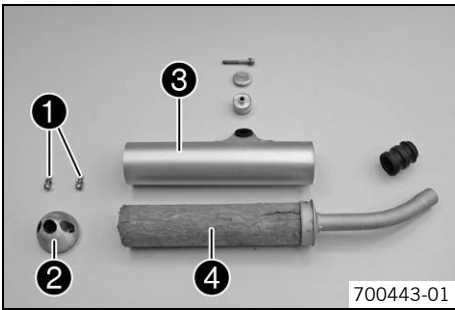
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)
---------------------------	----	--------------------

## 11.27 Changing the glass fiber yarn filling of the main silencer

**Warning**  
**Danger of burns** The exhaust system gets very hot when the vehicle is driven.

- Allow the exhaust system to cool down. Do not touch hot components.

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



**Preparatory work**

- Remove the main silencer. (☛ p. 38)

**Main work**

- Remove screws ① of end cap ②. Remove end cap and outer tube ③.
- Pull the glass fiber yarn filling ④ from the inner tube.
- Clean the parts that are to be reinstalled.
- Mount the new glass fiber yarn filling on the inner tube.
- Slide the outer tube over the glass fiber yarn filling.
- Insert the end cap into the outer tube.
- Mount and tighten the screws with the toothed washers.

Guideline

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

**Finishing work**

- Install the main silencer. (☛ p. 38)

## 11.28 Dismounting the fuel tank

**Danger**  
**Fire hazard** Fuel is highly flammable.

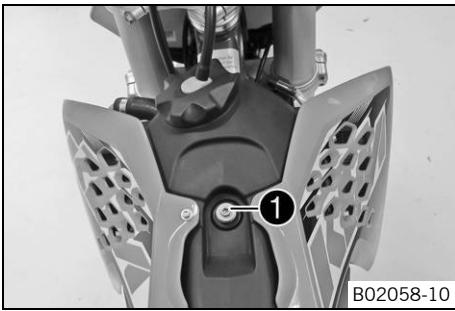
- Never refuel the vehicle near open flames or burning cigarettes, and always switch off the engine first. Be careful that no fuel is spilt, especially on hot vehicle components. Clean up spilt fuel immediately.
- The fuel in the fuel tank expands when warm and may emerge if overfilled. Follow the instructions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

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

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

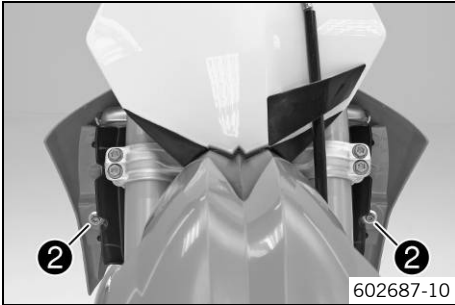
**Preparatory work**

- Remove the seat. (☛ p. 36)
- Turn the knurled screw on the fuel tap all the way clockwise.

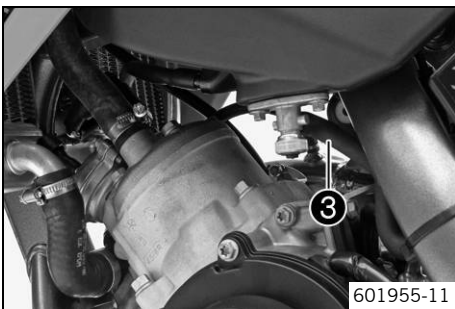


**Main work**

- Remove screw ①.



- Remove screws ②.



- Pull off fuel hose ③.



**Info**

Remaining fuel may run out of the fuel hose.

- Pull both spoilers off of the side of the radiator bracket and lift off the fuel tank.

## 11.29 Installing the fuel tank



**Danger**

**Fire hazard** Fuel is highly flammable.

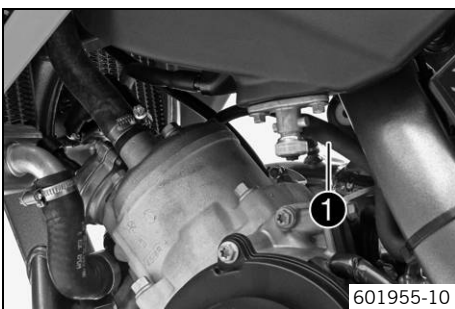
- Never refuel the vehicle near open flames or burning cigarettes, and always switch off the engine first. Be careful that no fuel is spilt, especially on hot vehicle components. Clean up spilt fuel immediately.
- The fuel in the fuel tank expands when warm and may emerge if overfilled. Follow the instructions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



**Warning**

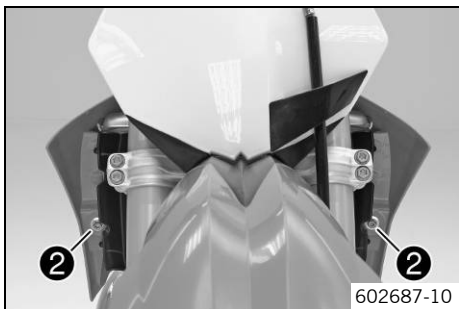
**Danger of poisoning** Fuel is poisonous and a health hazard.

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



**Main work**

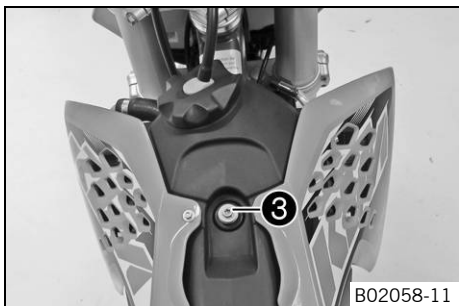
- Position the fuel tank and attach both spoilers onto the sides of the radiator bracket.
- Ensure that cables are not pinched or damaged.
- Connect fuel hose ①.



- Mount and tighten screws ②.

Guideline

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



- Mount and tighten screw ③.

Guideline

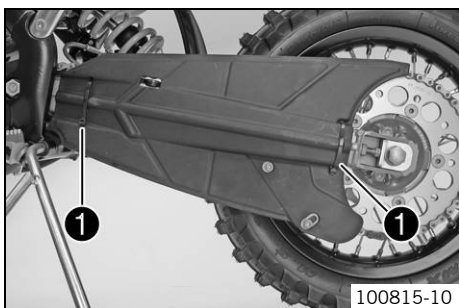
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)
---------------------------	----	--------------------

- Position the fuel tank breather.

### Finishing work

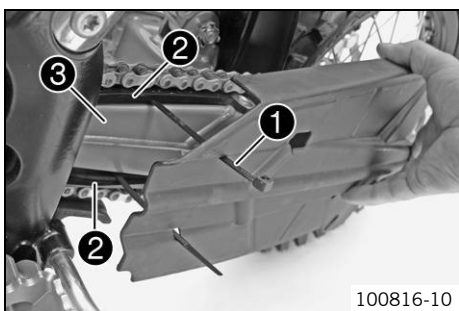
- Mount the seat. (☛ p. 36)

## 11.30 Removing the chain guard



- Remove cable binder ①.
- Take off the chain guard.

## 11.31 Installing the chain guard

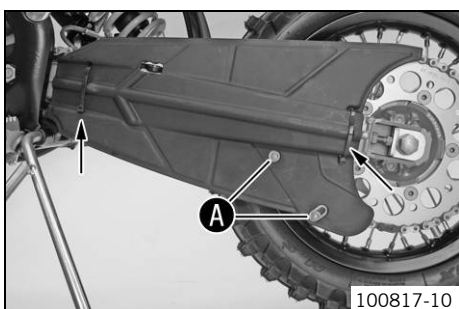


- Position the chain guard. Mount cable binder ①.



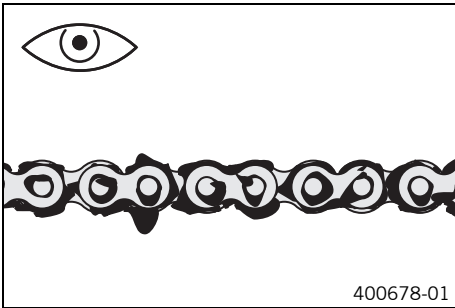
### Info

The cable binder must be run between chain sliding guard ② and swingarm ③.



- 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.

## 11.32 Checking chain dirt



### Preparatory work

- Remove the chain guard. (☛ p. 41)

### Main work

- Check the chain for coarse dirt accumulation.
  - » If the chain is very dirty:
    - Clean the chain. (☛ p. 42)

### Finishing work

- Install the chain guard. (☛ p. 41)

## 11.33 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

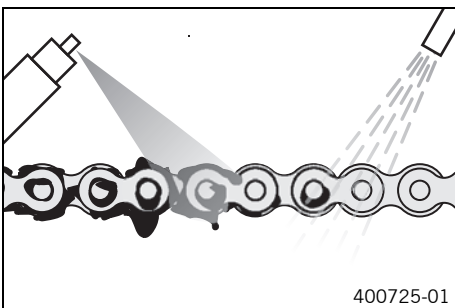
**Environmental hazard** Hazardous substances cause environmental damage.

- 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.



### Preparatory work

- Remove the chain guard. (☛ p. 41)

### Main work

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

Chain cleaner (☛ p. 84)
Off-road chain spray (☛ p. 84)

### Finishing work

- Install the chain guard. (☛ p. 41)

## 11.34 Checking the chain tension



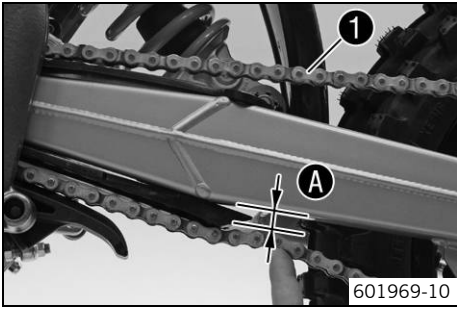
### Warning

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

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

### Preparatory work

- Remove the chain guard. (☛ p. 41)



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

**Main work**

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



**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. 43)

**Finishing work**

- Install the chain guard. (☛ p. 41)
- Remove the motorcycle from the lift stand. (☛ p. 28)

## 11.35 Adjusting the chain tension



**Warning**

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

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

**Preparatory work**

- Raise the motorcycle with a lift stand. (☛ p. 28)
- Remove the chain guard. (☛ p. 41)
- Check the chain tension. (☛ p. 42)

**Main work**

- Loosen nut **1**.
- Loosen nuts **2**.
- Adjust the chain tension by turning adjusting screws **3** left and right.

**Guideline**

Chain tension	5... 8 mm (0.2... 0.31 in)
Turn the left and right adjusting screws <b>3</b> so that the distance of the chain adjuster to the swingarm on the left and right is equal and the rear wheel is in line with the front wheel.	

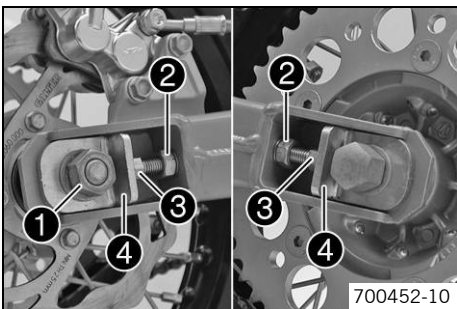
- Tighten nuts **2**.
- Make sure that chain adjusters **4** are fitted correctly on adjusting screws **3**.
- Tighten nut **1**.

**Guideline**

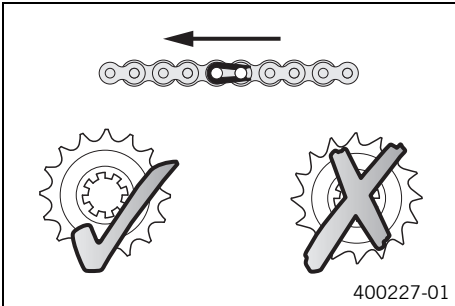
Nut, rear wheel spindle	M12x1	40 Nm (29.5 lbf ft)
-------------------------	-------	------------------------

**Finishing work**

- Install the chain guard. (☛ p. 41)
- Remove the motorcycle from the lift stand. (☛ p. 28)



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



### Preparatory work

- Raise the motorcycle with a lift stand. (☛ p. 28)
- Remove the chain guard. (☛ p. 41)

### Main work

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



### Info

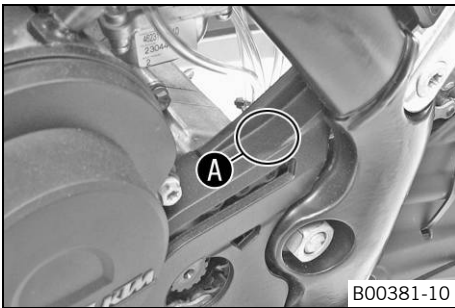
The rear sprocket, engine sprocket, and chain should always be changed together.  
When fitting the chain joint, always make sure that the closed side of the joint faces forward (riding direction).

- Check the chain for wear.
  - » If the chain is worn:
    - Change the drive set. 🛠️



### 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 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 engine sprocket cover for tightness.
  - » If the engine sprocket cover is loose:
    - Tighten the engine sprocket cover.

### Guideline

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



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

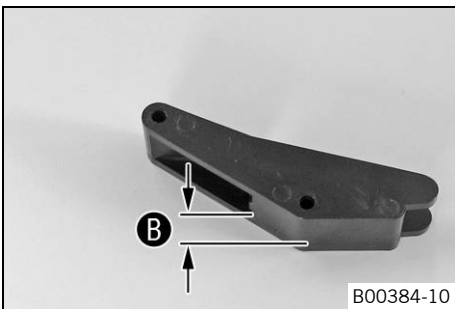


B00383-10

- 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

Remaining screws, chassis	M8	25 Nm (18.4 lbf ft)
---------------------------	----	------------------------



B00384-10

- Measure the material thickness **B** on the bottom of the chain guide.

Minimum distance <b>B</b> at the lowest position	13 mm (0.51 in)
--	-----------------

- » If distance **B** is less than the specified measurement:
  - Change the chain guide. 🛠️



B00385-01

- 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)
---------------------------	----	-----------------------

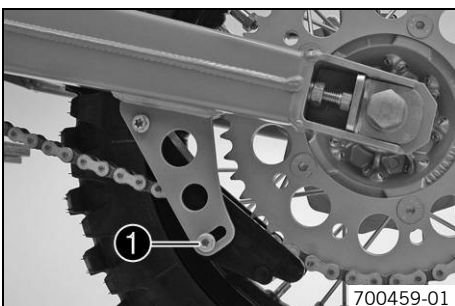
### Finishing work

- Install the chain guard. (🔧 p. 41)
- Remove the motorcycle from the lift stand. (🔧 p. 28)

## 11.37 Adjusting the chain guide 🛠️

### **i** Info

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



700459-01

### Preparatory work

- Remove the chain guard. (🔧 p. 41)

### Main work

- Loosen screw **1**.
- Position the chain guide.
- Tighten screw.

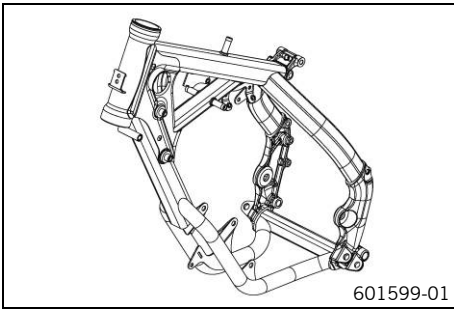
Guideline

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

## Finishing work

- Install the chain guard. (☛ p. 41)

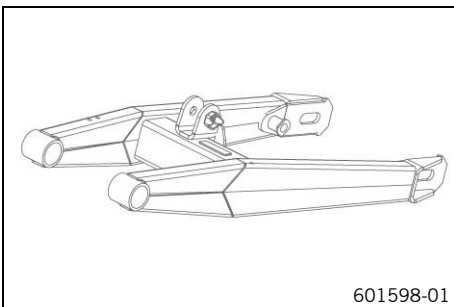
### 11.38 Checking the frame ☛



- 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.

### 11.39 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.

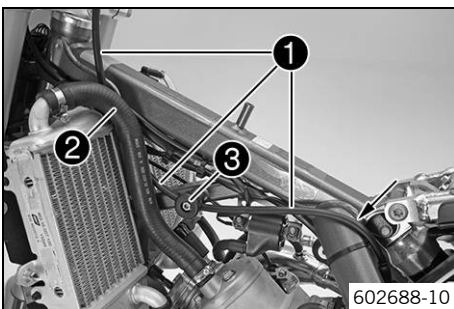
### 11.40 Checking the routing of the throttle cable

#### Preparatory work

- Remove the seat. (☛ p. 36)
- Turn the knurled screw on the fuel tap all the way clockwise.
- Dismount the fuel tank. ☛ (☛ p. 39)

#### Main work

- Check the routing of the throttle cable.



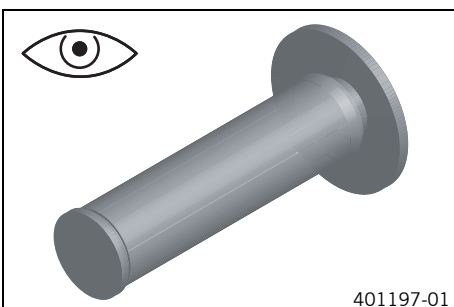
The throttle cable **1** must be routed behind the handlebar, behind the coolant hose **2** and below the fuel tank bracket **3**.

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

#### Finishing work

- Install the fuel tank. ☛ (☛ p. 40)
- Mount the seat. (☛ p. 36)

### 11.41 Checking the rubber grip

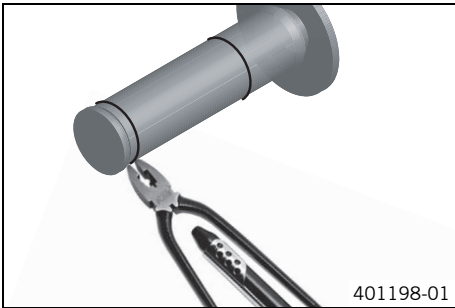


- Check the rubber grips on the handlebar for damage, wear, and looseness.
  - » If a rubber grip is damaged, worn, or loose:
    - Change and secure the rubber grip.

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



## 11.42 Additionally securing the rubber grip



### Preparatory work

- Check the rubber grip. (☛ p. 46)

### 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.

## 11.43 Adjusting basic position of clutch lever



- Adjust the basic position of the clutch lever to the size of the rider's hand using adjusting screw ①.

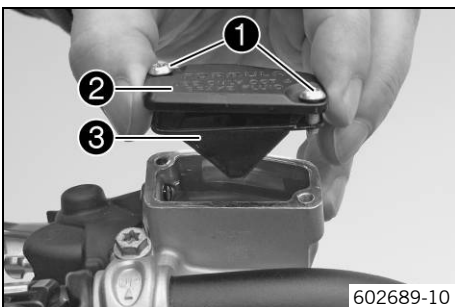
### Info

Turn the adjusting screw clockwise to increase the distance between the clutch lever and the handlebar.  
 Turn the adjusting screw counterclockwise to decrease the distance between the clutch lever and the handlebar.  
 The range of adjustment is limited.  
 Turn the adjusting screw by hand only, and do not apply any force.  
 Do not make any adjustments while riding!

## 11.44 Checking the fluid level of the hydraulic clutch

### Info

The fluid level rises with increasing wear of the clutch facing discs.  
 Do not use brake fluid.



- Move the clutch fluid reservoir mounted on the handlebar to a horizontal position.
- Remove screws ①.
- Remove cover ② with membrane ③.
- Check the fluid level.

Fluid level below container rim	4 mm (0.16 in)
---------------------------------	----------------

- » If the level of the fluid does not meet specifications:
  - Correct the fluid level of the hydraulic clutch.

Brake fluid DOT 4 / DOT 5.1 (☛ p. 82)
---------------------------------------

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

## 11.45 Changing the hydraulic clutch fluid ☛

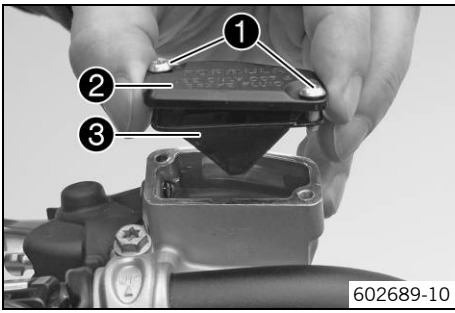
### Warning

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

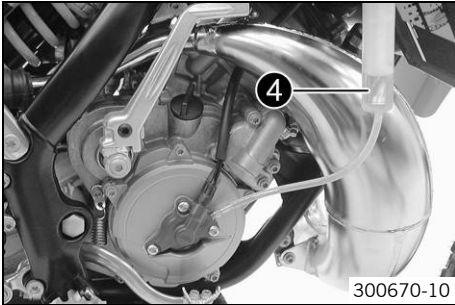
- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

### Info

The fluid level rises with increasing wear of the clutch facing discs.



- Move the clutch fluid reservoir mounted on the handlebar to a horizontal position.
- Remove screws ①.
- Remove cover ② with membrane ③.



- Fill bleeding syringe ④ with the appropriate hydraulic fluid.

Bleed syringe (50329050000)
-----------------------------

Brake fluid DOT 4 / DOT 5.1 (☛ p. 82)
---------------------------------------

- On the slave cylinder, remove the bleeder screw and mount bleeding syringe ④.



- Inject the liquid into the system until it escapes from drill hole ⑤ of the master cylinder without bubbles.
- To prevent overflow, drain fluid occasionally from the master cylinder reservoir.
- Remove the bleeding syringe. Mount and tighten screws bleeder screw.
- Correct the fluid level of the hydraulic clutch.

Guideline

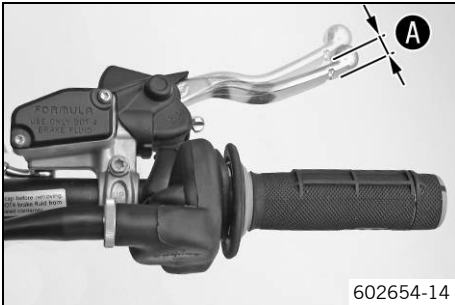
Fluid level below container rim	4 mm (0.16 in)
---------------------------------	----------------

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

## 12.1 Checking free travel of hand brake lever

**Warning**  
**Danger of accidents** Brake system failure.

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

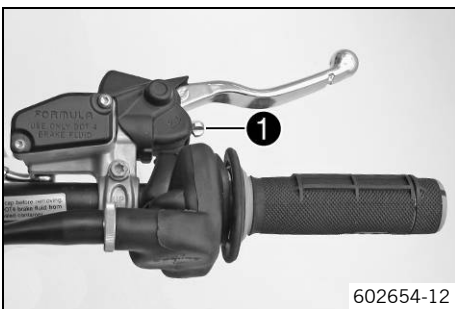


- Push the hand brake lever forwards and check free travel **A**.

Free travel of hand brake lever	$\geq 3 \text{ mm } (\geq 0.12 \text{ in})$
---------------------------------	---

- » If the free travel does not meet specifications:
  - Adjust the basic position of the hand brake lever. (☛ p. 49)

## 12.2 Adjusting the basic position of the hand brake lever



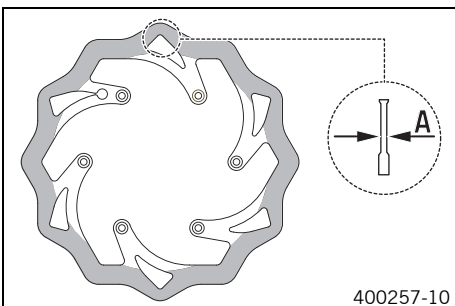
- Check the free travel of the hand brake lever. (☛ p. 49)
- Adjust the basic position of the hand brake lever with the adjusting screw **1** to the rider's hand size.

**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.  
 Turn the adjusting screw by hand only, and do not apply any force.  
 Do not make any adjustments while riding!

## 12.3 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**.

**i 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.

## 12.4 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.

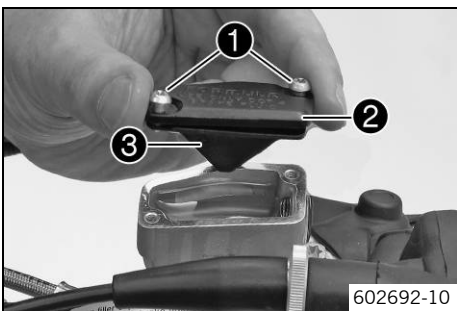
**Warning**  
**Danger of accidents** Reduced braking efficiency due to old brake fluid.

- 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 ①.
- Remove cover ② with membrane ③.
- 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. 50)
- Position the cover with the membrane. Mount and tighten the screws.

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

## 12.5 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.)

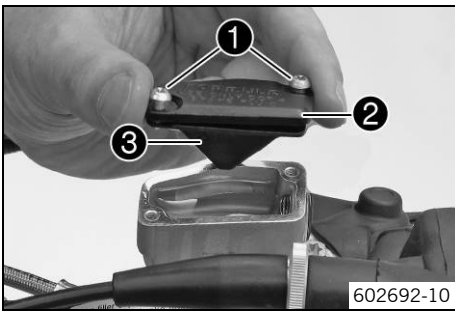
**Warning**  
**Skin irritation** Brake fluid can cause skin irritation on contact.

- 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.



**Preparatory work**

- Check the front brake linings. (☞ p. 51)

**Main work**

- Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
- Remove screws ①.
- Remove cover ② with membrane ③.
- Correct the brake fluid level.

**Guideline**

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

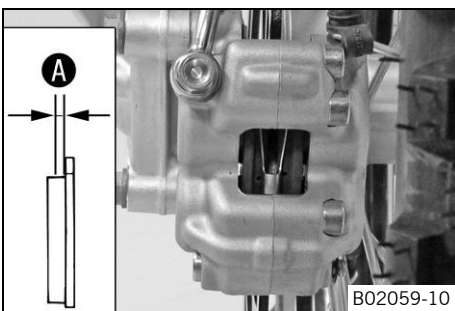
Brake fluid DOT 4 / DOT 5.1 (☞ p. 82)
---------------------------------------

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

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

## 12.6 Checking the front brake linings

- Warning**  
**Danger of accidents** Reduced braking efficiency caused by worn brake linings.
- Change worn brake linings immediately. (Your authorized KTM workshop will be glad to help.)



- Check the brake linings for minimum thickness A.

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

- » If the minimum thickness is less than specified:
  - Change the front brake linings. ☞ (☞ p. 52)
- Check the brake linings for damage and cracking.
  - » If damage or wear is encountered:
    - Change the front brake linings. ☞ (☞ p. 52)

## 12.7 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.

**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. 28)
- Remove the front wheel. 🛠️ (👉 p. 59)
- Remove the front brake linings. 🛠️ (👉 p. 52)

### Main work

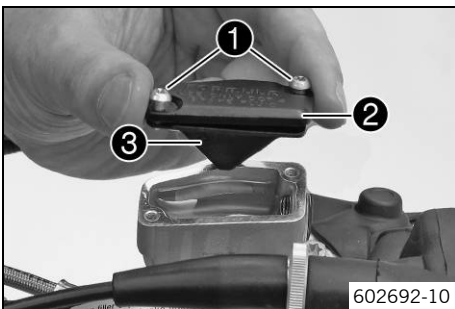
- Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
- Remove screws ❶.
- Remove cover ❷ with membrane ❸.
- Press the brake piston back to its basic position and make sure that no brake fluid overflows from the brake fluid reservoir.
- Install the front brake linings. 🛠️ (👉 p. 53)
- 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. 82)

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

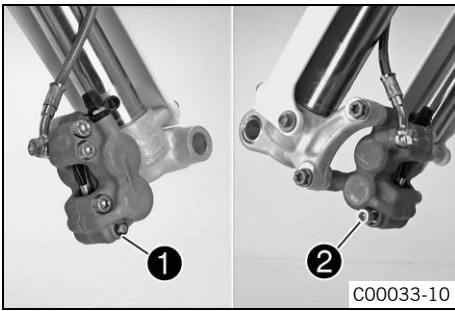


**i Info**  
 Clean up overflowed or spilt brake fluid immediately with water.

## 12.8 Removing front brake linings 🛠️

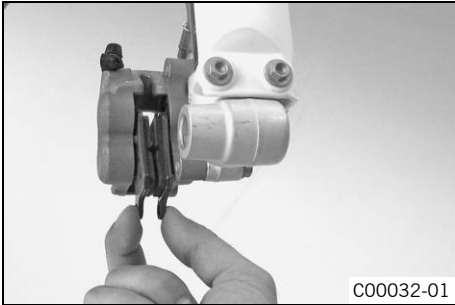
### Preparatory work

- Raise the motorcycle with a lift stand. (👉 p. 28)
- Remove the front wheel. 🛠️ (👉 p. 59)



**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. 49)

**Main work**

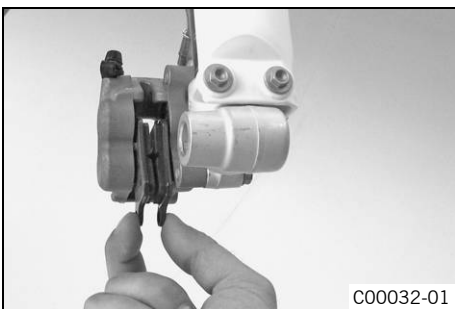
- Insert new brake linings.



**Info**

Always change the brake linings in pairs.

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

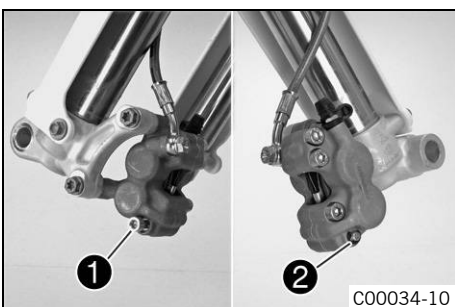


- Mount and tighten screw ①.

**Guideline**

Screw, brake linings	M6	10 Nm (7.4 lbf ft)
----------------------	----	--------------------

- Mount lock washer ②.



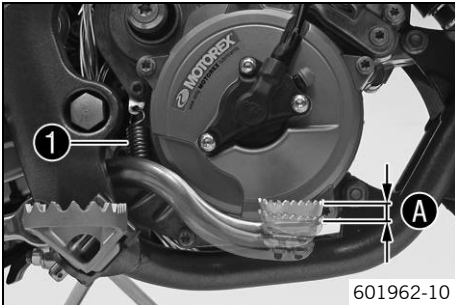
**Finishing work**

- Install the front wheel. 🛠️ (🛠️ p. 59)

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

**Warning**  
**Danger of accidents** Brake system failure.

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



- Disconnect spring ①.
- Move the foot brake lever back and forth between the end stop and the foot brake cylinder piston bracket and check free travel ①.

Guideline

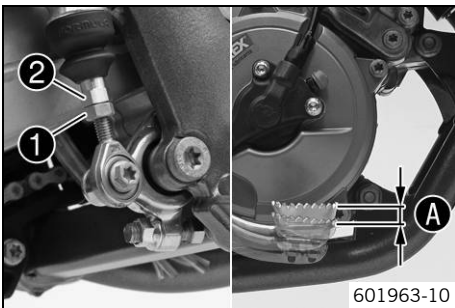
Free travel of foot brake lever	3... 5 mm (0.12... 0.2 in)
---------------------------------	----------------------------

- » If the free travel does not meet specifications:
  - Adjust the free travel of the foot brake lever. ↩️ (↪️ p. 54)
- Attach spring ①.

## 12.11 Adjusting the free travel of the foot brake lever ↩️

**Warning**  
**Danger of accidents** Brake system failure.

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



- Detach the spring.
- Loosen nut ①.
- Turn push rod ② until clearance ① is created.

Guideline

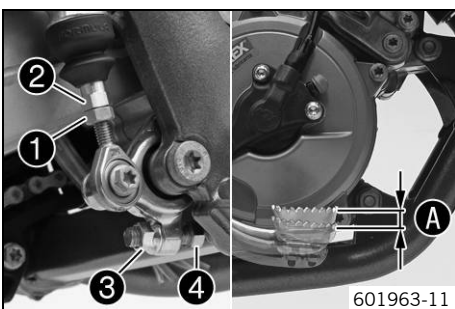
Free travel of foot brake lever	3... 5 mm (0.12... 0.2 in)
---------------------------------	----------------------------

- Hold push rod ② and tighten nut ①.
- 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. 54)

## 12.12 Adjusting the basic position of the foot brake lever ↩️

**Warning**  
**Danger of accidents** Brake system failure.

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



- Detach the spring.
- Loosen nut ①.
- Turn back push rod ②.
- Loosen nut ③.
- To adjust the basic position of the foot brake lever, turn screw ④ accordingly.

**i Info**  
 The range of adjustment is limited.

- Hold screw ④ and tighten nut ③.

Guideline

Remaining nuts, chassis	M8	25 Nm (18.4 lbf ft)
-------------------------	----	------------------------



- Check the free travel of the foot brake lever. (☞ p. 54)

Guideline

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

- » If the free travel at the foot brake lever does not meet specifications:
  - Adjust the free travel of the foot brake lever. ☞ (☞ p. 54)
- Attach spring ❶.

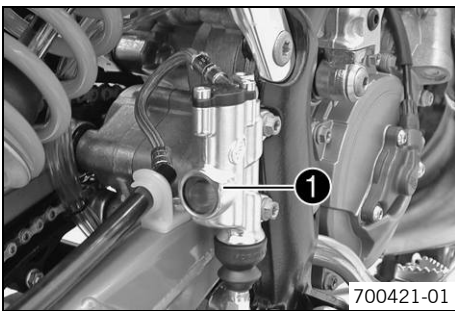
## 12.13 Checking rear brake fluid level

**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. 55)

## 12.14 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.

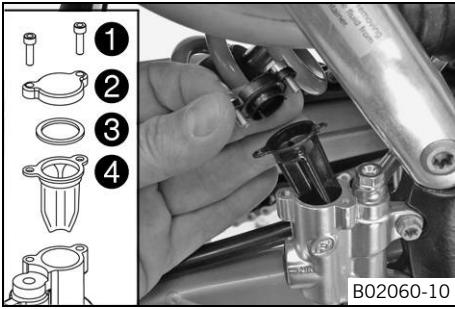
- Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized KTM workshop will be glad to help.)

**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.

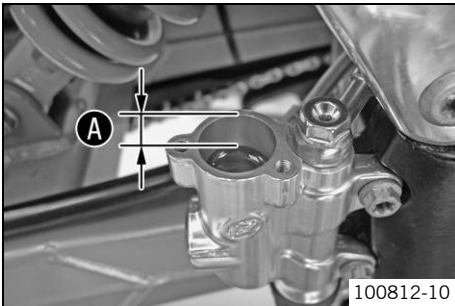
**Preparatory work**  
 - Raise the motorcycle with a lift stand. (☞ p. 28)



- Check the rear brake linings. (☞ p. 56)

**Main work**

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



- Add brake fluid to level A.

**Guideline**

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

Brake fluid DOT 4 / DOT 5.1 (☞ p. 82)
---------------------------------------

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

**Info**

Clean up overflowed or spilt brake fluid immediately with water.

**Finishing work**

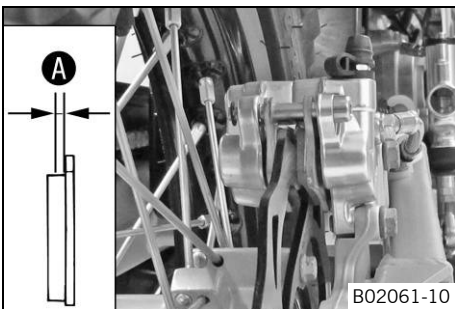
- Remove the motorcycle from the lift stand. (☞ p. 28)

## 12.15 Checking the rear brake linings

**Warning**

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

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



- Check the brake linings for minimum thickness A.

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

- » If the minimum thickness is less than specified:
  - Change the rear brake linings. ☞ (☞ p. 56)
- Check the brake linings for damage and cracking.
  - » If damage or wear is encountered:
    - Change the rear brake linings. ☞ (☞ p. 56)

## 12.16 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**

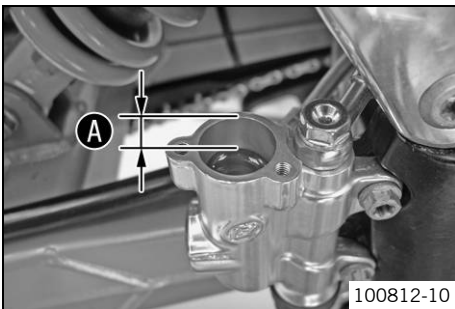
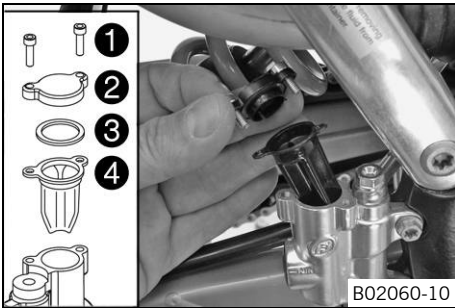
Never use DOT 5 brake fluid! It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.  
 Avoid contact between brake fluid and painted parts. Brake fluid attacks paint!  
 Use only clean brake fluid from a sealed container.

**Preparatory work**

- Raise the motorcycle with a lift stand. (☞ p. 28)
- Remove the chain guard. (☞ p. 41)
- Remove the rear wheel. 🛠️ (☞ p. 60)
- Remove the rear brake linings. 🛠️ (☞ p. 57)

**Main work**

- Remove screws ❶.
- Take off cover ❷ with washer ❸ and membrane ❹.
- 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. 58)



- Add brake fluid to level A.

**Guideline**

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

Brake fluid DOT 4 / DOT 5.1 (☞ p. 82)

- 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.

## 12.17 Removing rear brake linings 🛠️

**⚠ Warning**

**Danger of accident** Brake system failure.

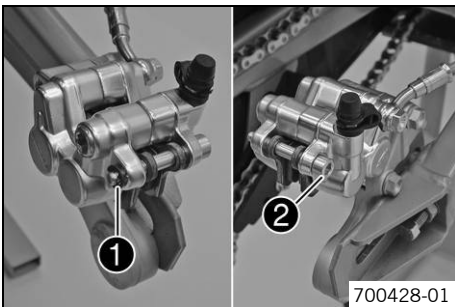
- Maintenance work and repairs must be carried out professionally. (Your authorized KTM workshop will be glad to help.)

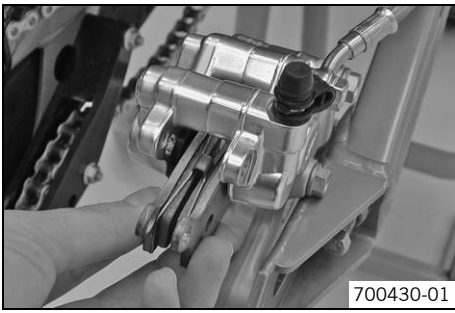
**Preparatory work**

- Raise the motorcycle with a lift stand. (☞ p. 28)
- Remove the chain guard. (☞ p. 41)
- Remove the rear wheel. 🛠️ (☞ p. 60)

**Main work**

- Remove 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

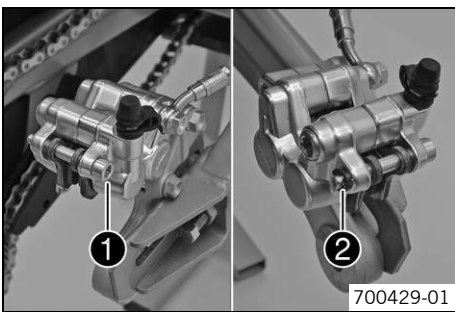
- Check the brake discs. (🔧 p. 49)

### Main work

- Insert new brake linings.

**i Info**

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



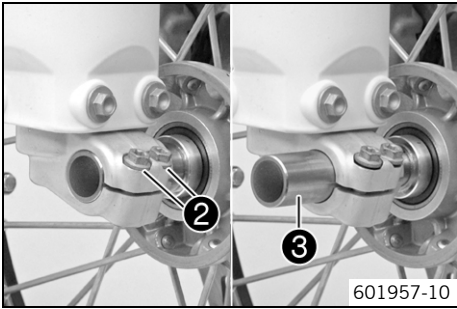
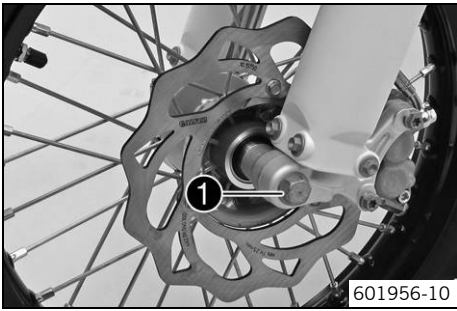
- Mount screw ①.

### Guideline

Screw, brake linings	M6	10 Nm (7.4 lbf ft)
----------------------	----	--------------------

- Mount lock washer ②.
- Install the rear wheel. (🔧 p. 60)
- Operate the foot brake lever repeatedly until the brake linings lie on the brake disc and there is a pressure point.

## 13.1 Removing the front wheel



### Preparatory work

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

### Main work

- Remove screw ❶.

- Loosen screw ❷.

- Hold the front wheel and pull out wheel spindle ❸. 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.

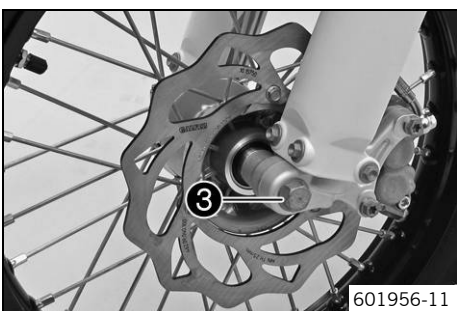
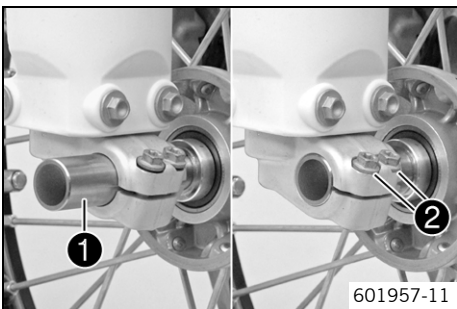
## 13.2 Installing the front wheel



### 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 ❶.

Long-life grease (☛ p. 84)

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

✓ The brake linings are correctly positioned.

- Tighten screws ❷.

### Guideline

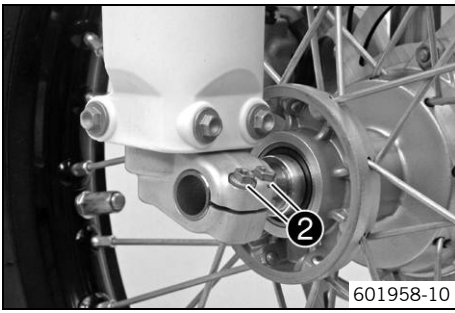
Screw, fork stub	M6	10 Nm (7.4 lbf ft)
------------------	----	--------------------

- Mount and tighten screw ❸.

### Guideline

Screw, front wheel spindle	M10	40 Nm (29.5 lbf ft)
----------------------------	-----	---------------------

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



- Operate the hand brake lever several times until the brake linings are in contact with the brake disc.
- Loosen screws ②.
- Pull the front wheel brake and push down hard on the fork several times.  
✓ This aligns the fork legs.
- Tighten screws ②.

Guideline

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

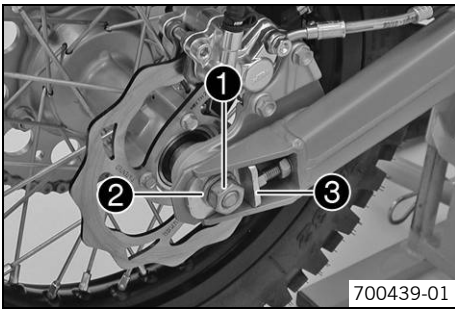
## 13.3 Removing the rear wheel

**Preparatory work**

- Raise the motorcycle with a lift stand. (☛ p. 28)
- Remove the chain guard. (☛ p. 41)

**Main work**

- Remove nut ①.
- Remove washer ② and chain adjuster ③.



- Withdraw the wheel spindle ④ only enough to allow the rear wheel to be pushed forward.
- Push the rear wheel forward as far as possible. Remove the chain from the rear sprocket.

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

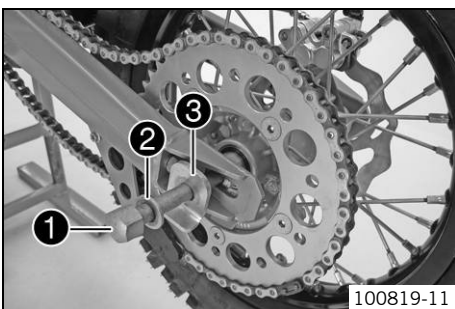
- Holding the rear wheel, withdraw the wheel spindle. Take the rear wheel out of the swingarm.

**i 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.

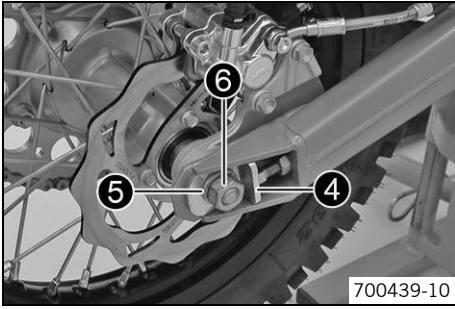


**Main work**

- 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 ①.

Long-life grease (☛ p. 84)

- Lift the rear wheel into the swingarm and position it.
- Insert the wheel spindle ① with washer ② and chain adjuster ③.  
✓ The brake linings are correctly positioned.
- Apply the chain.



- Position chain adjuster ③ and push the wheel spindle all the way in.
- Position chain adjuster ④ and washer ⑤. Mount nut ⑥, but do not tighten it yet.
- Make sure that the chain adjusters are fitted correctly on the adjusting screws.
- Check the chain tension. (☛ p. 42)
- Tighten nut ⑥.

**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.

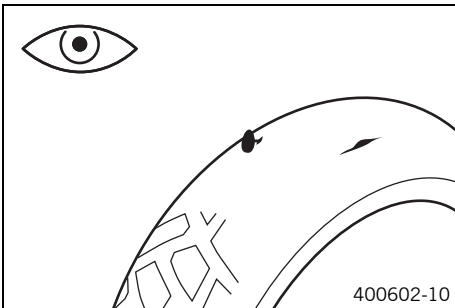
**Finishing work**

- Install the chain guard. (☛ p. 41)
- Remove the motorcycle from the lift stand. (☛ p. 28)

## 13.5 Checking the tire condition

**i 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.

**i 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.

**i Info**

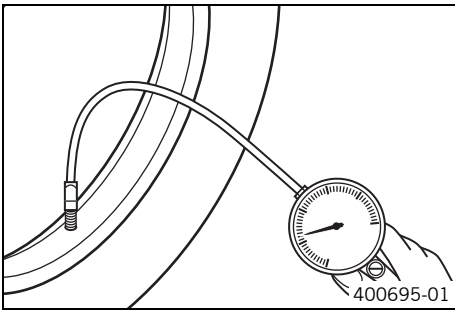
The tire's date of manufacture is usually part of the tire markings and is indicated by the last four digits of the **DOT** marking. The first two digits refer to the week of manufacture and last two digits refer to the year of manufacture. KTM recommends that the tires be changed after 5 years at the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

**i Info**

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



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

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

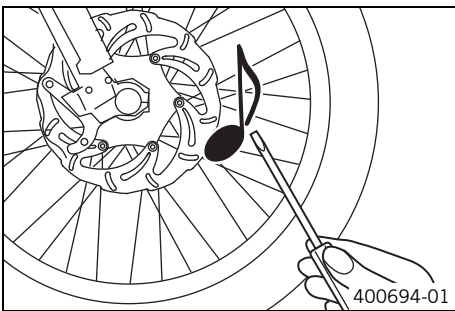
- » If the tire pressure does not meet specifications:
  - Correct the tire pressure.
- Mount the protection cap.

## 13.7 Checking spoke tension

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

- Ensure that the spoke tension is correct. (Your authorized KTM workshop will be glad to help.)

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



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

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

You should hear a high note.

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

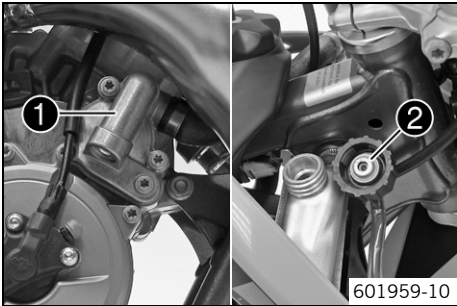
Guideline

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

Torque wrench with various accessories in set (58429094000)



## 14.1 Cooling system



The water pump ① 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 ②. This ensures that operating the vehicle at the specified coolant temperature will not result in a risk of malfunctions.

120 °C (248 °F)
-----------------

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

## 14.2 Checking the antifreeze and coolant level

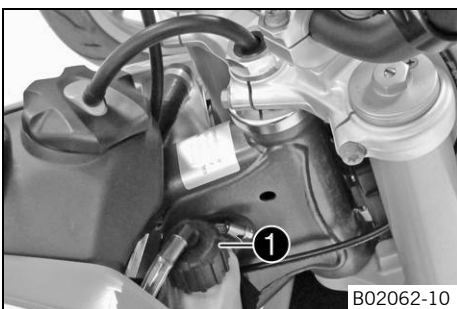
**Warning**  
**Danger of scalding** During motorcycle operation, the coolant gets very hot and is under pressure.

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

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

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

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



- Stand the motorcycle upright on a horizontal surface.
- Remove radiator cap ①.
- 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.

- Check the coolant level in the radiator.

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

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

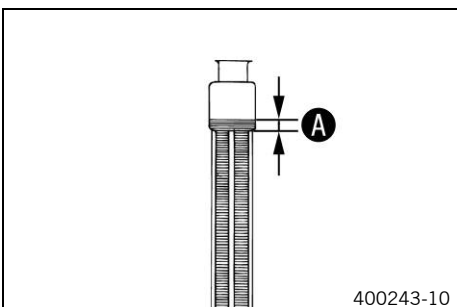
**Alternative 1**

Coolant (☛ p. 82)
-------------------

**Alternative 2**

Coolant (mixed ready to use) (☛ p. 82)
--

- Mount the radiator cap.



## 14.3 Checking the coolant level

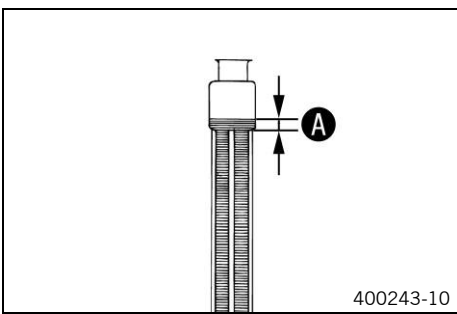
**Warning**  
**Danger of scalding** During motorcycle operation, the coolant gets very hot and is under pressure.

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

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

- Coolant must not come into contact with the skin, eyes, or clothing. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If coolant is swallowed, contact a physician immediately. Change clothing that is contaminated with coolant. Keep coolant out of 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. 82)
-------------------

**Alternative 2**

Coolant (mixed ready to use) (☛ p. 82)
--

- Mount the radiator cap.

## 14.4 Draining the coolant ☛

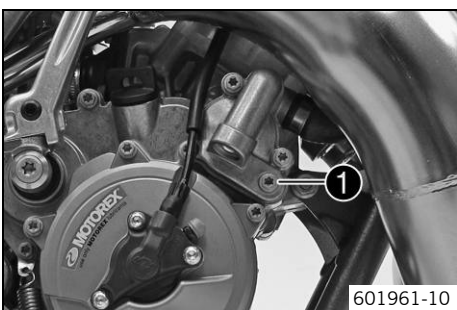
**Warning**  
**Danger of scalding** During motorcycle operation, the coolant gets very hot and is under pressure.

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

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

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

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



- Position the motorcycle upright.
- Place a suitable container beneath the water pump cover.
- Remove screw **1**. Remove the radiator cap.
- Completely drain the coolant.
- Mount and tighten screw **1** with a new seal ring.

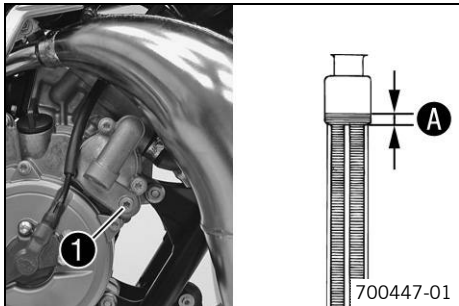
**Guideline**

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

## 14.5 Refilling the coolant

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



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

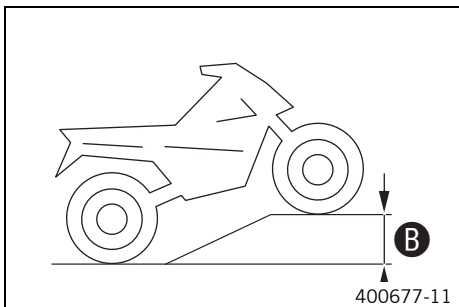


### Main work

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

#### Guideline

Level <b>A</b> above the radiator fins	10 mm (0.39 in)
Coolant	0.55 l (0.58 qt.)
	Coolant (  p. 82) Coolant (mixed ready to use) (  p. 82)



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

#### Guideline


Height difference <b>B</b>	100 cm (39.4 in)
----------------------------	------------------

### Info

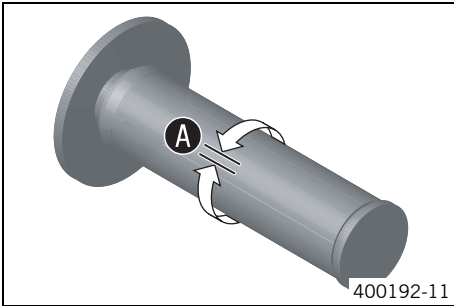
To ensure that all of the air can escape from the cooling system, the front of the vehicle must be jacked up. A poorly bled cooling system is less effective at cooling and may result in overheating of the engine.

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

### Finishing work

- Check the coolant level. ( p. 64)

## 15.1 Checking the play in 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 **A** 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. 66)



### 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.

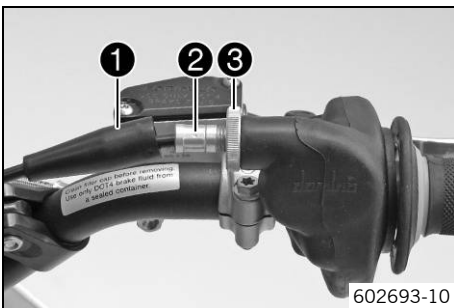
The idle speed should not change.
-----------------------------------

- » If the idle speed changes:
  - Adjust the play in the throttle cable. 🛠️ (📖 p. 66)

## 15.2 Adjusting the play in the throttle cable 🛠️

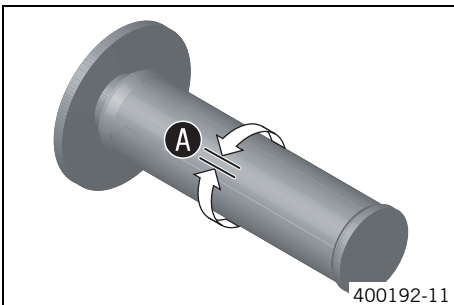
### Preparatory work

- Remove the seat. (📖 p. 36)
- Turn the knurled screw on the fuel tap all the way clockwise.
- Dismount the fuel tank. 🛠️ (📖 p. 39)
- Check the routing of the throttle cable. (📖 p. 46)



### Main work

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



- Turn barrel adjuster **2** until throttle cable play **A** exists at the bottom throttle cable sleeve.

### Guideline

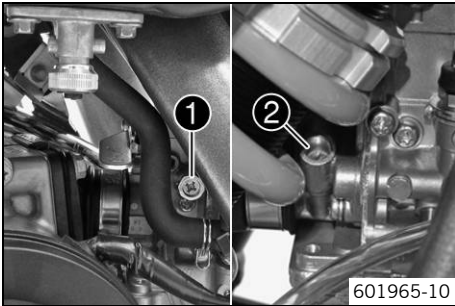
Play in gas throttle cable	3... 5 mm (0.12... 0.2 in)
----------------------------	----------------------------

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

### Finishing work

- Install the fuel tank. 🛠️ (📖 p. 40)
- Mount the seat. (📖 p. 36)
- Check the play in the throttle cable. (📖 p. 66)

## 15.3 Carburetor - idle

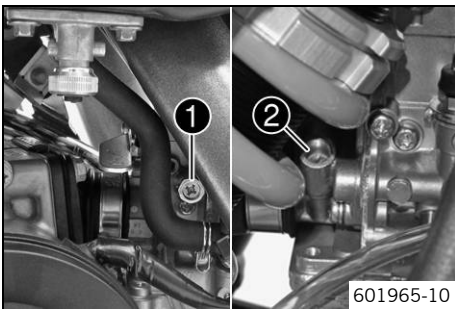


The idle setting of the carburetor has a big influence on the starting behavior, stable idling and the response to throttle opening. That means that an engine with a correctly set idle speed is easier to start than if the idle is set wrongly.

**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 adjusting screw **1**.  
The idle mixture is adjusted with idle adjusting screw **2**.

## 15.4 Carburetor - adjusting the idle speed



- Screw in idle air adjusting screw **2** all the way and turn it to the specified basic position.

Guideline

Idle air adjusting screw	
Open	3.5 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 – The choke lever is pushed up all the way. (☛ p. 12)	
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.

**i 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.

15.5 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.
- The fuel in the fuel tank expands when warm and may emerge if overfilled. Follow the instructions on refueling.

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

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

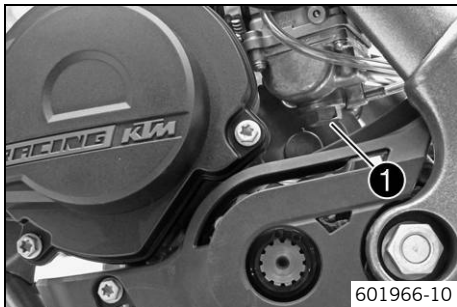
**Warning****Environmental hazard** Improper handling of fuel is a danger to the environment.

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

**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**

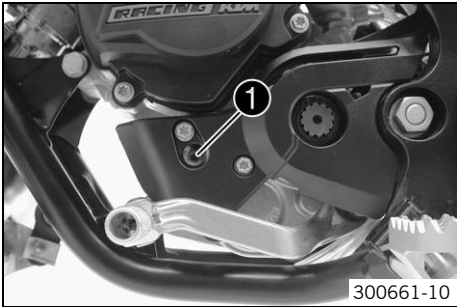
- Place a cloth beneath the carburetor to soak up emerging fuel.
- Remove plug ①.
- Completely drain the fuel.
- Mount and tighten the plug.

## 16.1 Checking the gear oil level



**Info**

The gear oil level must be checked while the engine is cold.



**Preparatory work**

- Stand the motorcycle upright on a horizontal surface.

**Main work**

- Remove the screw ① from the opening used to check the gear oil level.
- Check the gear oil level.

A small quantity of gear oil should flow out of the opening.

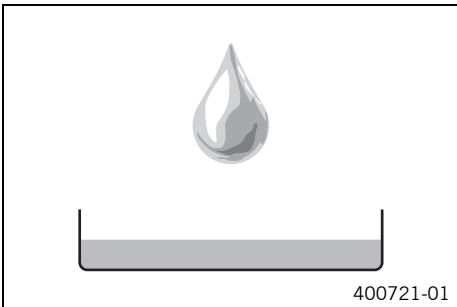
- » If gear oil does not flow out:
  - Add gear oil. 🛠️ (👉 p. 70)

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

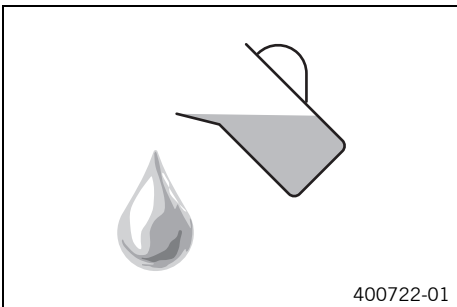
**Guideline**

Screw, gear oil level check	M6	6 Nm (4.4 lbf ft)
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## 16.2 Changing the gear oil 🛠️



- Drain the gear oil. 🛠️ (👉 p. 69)



- Fill up with gear oil. 🛠️ (👉 p. 70)

## 16.3 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.

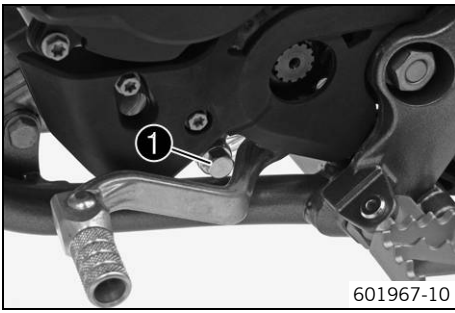


**Info**

Only drain the gear oil while 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 gear oil drain plug ❶ with magnet.
- Completely drain the gear oil.
- Clean the gear oil drain plug with the magnet thoroughly.
- Clean the sealing surface on the engine.
- Mount the gear oil drain plug with magnet and the seal ring and tighten it.

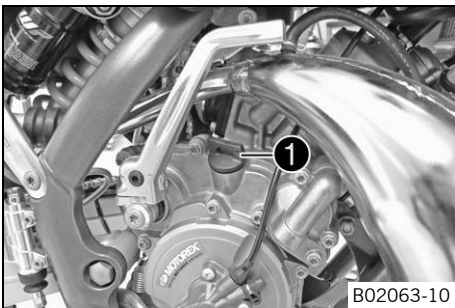
**Guideline**

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

## 16.4 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	0.50 l (0.53 qt.)	Engine oil (15W/50) (☛ p. 82)
----------	-------------------	-------------------------------

- 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.

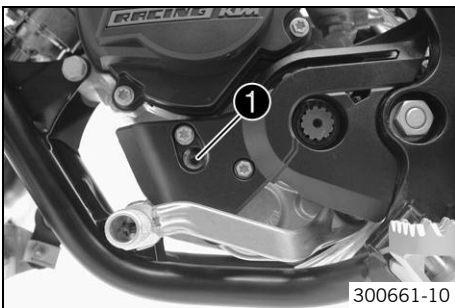
**Finishing work**

- Check the gear oil level. (☛ p. 69)

## 16.5 Adding gear oil

**i Info**

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

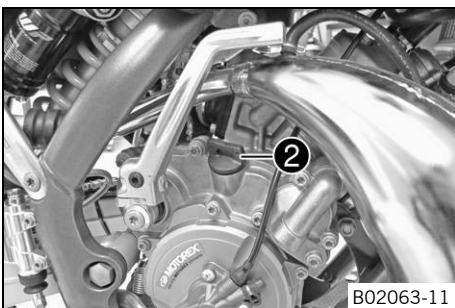


**Preparatory work**

- Stand the motorcycle upright on a horizontal surface.

**Main work**

- Remove the screw ❶ from the opening used to check the gear oil level.



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

Engine oil (15W/50) (☛ p. 82)
-------------------------------

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

**Guideline**

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

- Mount and tighten screw cap ❷.



**Danger**

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

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

## 17.1 Cleaning motorcycle

**Note**

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

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

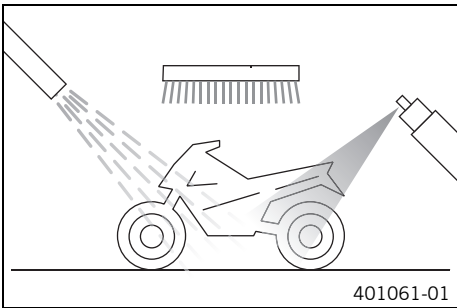
 **Warning**

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

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

 **Info**

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



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

Motorcycle cleaner (☛ p. 84)

 **Info**

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

- After rinsing the motorcycle with a gentle water spray, allow it to dry thoroughly.
- Remove the plug from the exhaust system.
- Empty the carburetor float chamber. ☛ (☛ p. 68)

 **Warning**

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

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

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

 **Info**

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

- Push back the protection covers on the handlebar controls to allow water to evaporate.
- After the motorcycle has cooled off, lubricate all moving parts and bearings.
- Clean the chain. (☛ p. 42)
- Treat bare metal parts (except for brake discs and exhaust system) with anti-corrosion materials.

Preserving materials for paints, metal and rubber (☛ p. 84)

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

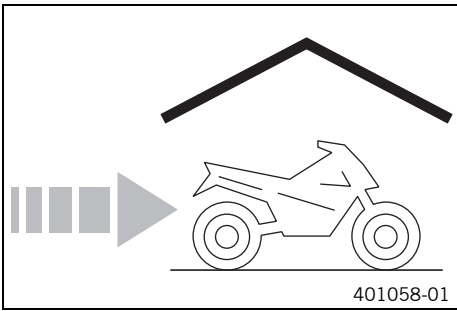
Special cleaner for glossy and matte paint finishes, metal and plastic surfaces (☛ p. 84)

## 18.1 Storage

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

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

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



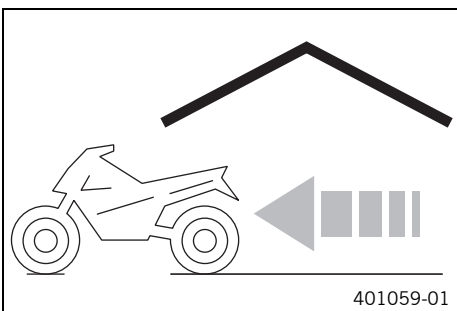
- When refueling the last time before taking the motorcycle out of service, add fuel additive.
- Fuel additive (☞ p. 84)
- Fill up with fuel. (☞ p. 19)
  - Clean the motorcycle. (☞ p. 72)
  - Change the gear oil. 🛠️ (☞ p. 69)
  - Check the antifreeze and coolant level. (☞ p. 63)
  - Empty the carburetor float chamber. 🛠️ (☞ p. 68)
  - Check the tire air pressure. (☞ p. 61)
  - Store the vehicle in a dry location that is not subject to large fluctuations in temperature.

**Info**  
 KTM recommends raising the motorcycle.

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

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

## 18.2 Preparing for use after storage



- Remove the motorcycle from the lift stand. (☞ p. 28)
- Perform checks and maintenance measures when preparing the motorcycle for use. (☞ p. 16)
- Take a test ride.

Faults	Possible cause	Action
Engine turns but does not start	Operating error	<ul style="list-style-type: none"> <li>Go through the steps of starting the engine. (☛ p. 16)</li> </ul>
	Motorcycle was out of use for a long time and there is old fuel in the float chamber	<ul style="list-style-type: none"> <li>Empty the carburetor float chamber. ☛ (☛ p. 68)</li> </ul>
	Fuel feed interrupted	<ul style="list-style-type: none"> <li>Check the fuel tank breather.</li> <li>Clean the fuel tap.</li> <li>Check/set the carburetor components. ☛</li> </ul>
	Spark plug oily or wet	<ul style="list-style-type: none"> <li>Clean and dry the spark plug, or change it if necessary.</li> </ul>
	Electrode distance (plug gap) of spark plug too wide	<ul style="list-style-type: none"> <li>Adjust the plug gap.</li> <li>Guideline Spark plug electrode gap 0.60 mm (0.0236 in)</li> </ul>
	Fault in ignition system	<ul style="list-style-type: none"> <li>Check the ignition system. ☛</li> <li>Adjust the ignition. ☛</li> </ul>
	Short circuit cable in wiring harness frayed, kill switch defective	<ul style="list-style-type: none"> <li>Check the kill switch. ☛</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>
	Water in carburetor or jets blocked	<ul style="list-style-type: none"> <li>Check/set the carburetor components. ☛</li> </ul>
Engine has no idle	Idling jet blocked	<ul style="list-style-type: none"> <li>Check/set the carburetor components. ☛</li> </ul>
	Adjusting screws on carburetor distorted	<ul style="list-style-type: none"> <li>Carburetor - adjust the idle speed. ☛ (☛ p. 67)</li> </ul>
	Spark plug defective	<ul style="list-style-type: none"> <li>Change spark plug.</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>
Engine does not speed up	Carburetor running over because float needle dirty or worn	<ul style="list-style-type: none"> <li>Check/set the carburetor components. ☛</li> </ul>
	Loose carburetor jets	<ul style="list-style-type: none"> <li>Check/set the carburetor components. ☛</li> </ul>
	Fault in ignition system	<ul style="list-style-type: none"> <li>Check the ignition system. ☛</li> <li>Adjust the ignition. ☛</li> </ul>
Engine has too little power	Fuel feed interrupted	<ul style="list-style-type: none"> <li>Check the fuel tank breather.</li> <li>Clean the fuel tap.</li> <li>Check/set the carburetor components. ☛</li> </ul>
	Air filter very dirty	<ul style="list-style-type: none"> <li>Clean the air filter and air filter box. ☛ (☛ p. 38)</li> </ul>
	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. 39)</li> </ul>
	Fault in ignition system	<ul style="list-style-type: none"> <li>Check the ignition system. ☛</li> <li>Adjust the ignition. ☛</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>
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. 64)</li> </ul>
	Too little air stream	<ul style="list-style-type: none"> <li>Switch off engine when standing.</li> </ul>

Faults	Possible cause	Action
Engine overheats	Radiator fins very dirty	– Clean radiator fins.
	Foam formation in cooling system	– Drain the coolant. 🛠️ (📄 p. 64) – Refill the coolant. 🛠️ (📄 p. 65)
	Damaged cylinder head or cylinder head gasket	– Check the cylinder head or cylinder head gasket.
	Bent radiator hose	– Change the radiator hose. 🛠️
	Incorrect ignition point due to loose stator	– Adjust the ignition. 🛠️
White smoke emission (steam in exhaust gas)	Damaged cylinder head or cylinder head gasket	– Check the cylinder head or cylinder head gasket.
Gear oil exits at the vent hose	Too much gear oil added	– Check the gear oil level. (📄 p. 69)
Water in the gear oil	Damaged shaft seal ring or water pump	– Check the shaft seal ring and water pump.

## 20.1 Engine

Design	1-cylinder 2-stroke engine, water-cooled, with reed intake and exhaust control
Displacement	64.85 cm <sup>3</sup> (3.9574 cu in)
Stroke	40.8 mm (1.606 in)
Bore	45 mm (1.77 in)
Idle speed	1,400... 1,500 rpm
Control	Exhaust control PCEV (Pneumatic Controlled Exhaust Valve)
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	Mixture oil lubrication
Primary transmission	23:75 straight cut spur gear
Clutch	Multidisc clutch in oil bath/hydraulically activated
Gearbox	6-gear, claw shifted
Transmission ratio	
1st gear	13:37
2nd gear	16:34
3rd gear	18:31
4th gear	21:30
5th gear	23:28
6th gear	24:26
Ignition	Non-contact controlled fully electronic ignition system with digital ignition adjustment
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

Nut, exhaust control diaphragm	M5	4 Nm (3 lbf ft)	–
Screw, clutch line holder	M5	5 Nm (3.7 lbf ft)	–
Screw, diaphragm cover of exhaust control	M5	4 Nm (3 lbf ft)	–
Screw, ignition system/stator	M5	5 Nm (3.7 lbf ft)	Loctite® 222™
Screw, main shaft bearing retainer	M5	5 Nm (3.7 lbf ft)	Loctite® 648™
Screw, reed valve housing of exhaust control	M5	5 Nm (3.7 lbf ft)	–
Screw, retaining bracket for return spring of shift shaft	M5	6 Nm (4.4 lbf ft)	Loctite® 243™
Screw, shift drum locating	M5	6 Nm (4.4 lbf ft)	Loctite® 243™
Screw, water pump wheel	M5	5 Nm (3.7 lbf ft)	Loctite® 243™
Drain plug, water pump cover	M6	6 Nm (4.4 lbf ft)	–
Screw, alternator cover	M6	8 Nm (5.9 lbf ft)	–
Screw, clutch intermediate cover	M6	10 Nm (7.4 lbf ft)	–
Screw, clutch slave cylinder	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, clutch springs	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, gear oil level check	M6	6 Nm (4.4 lbf ft)	–

Screw, intake flange/reed valve housing	M6	10 Nm (7.4 lbf ft)	–
Screw, kickstarter stop piece	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, outer clutch cover	M6	10 Nm (7.4 lbf ft)	–
Screw, reed valve housing of exhaust control	M6	10 Nm (7.4 lbf ft)	–
Screw, shift drum bearing retainer	M6	5 Nm (3.7 lbf ft)	Loctite® 648™
Screw, shift drum locating	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, shift lever	M6	14 Nm (10.3 lbf ft)	Loctite® 243™
Screw, water pump cover	M6	8 Nm (5.9 lbf ft)	–
Vacuum connection/vent connection	M6	5 Nm (3.7 lbf ft)	Loctite® 648™
Screw, cylinder head	M7	18 Nm (13.3 lbf ft)	–
Nuts, cylinder base	M8	20 Nm (14.8 lbf ft)	–
Screw, kickstarter	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
Stud, cylinder base (left section of the engine case)	M8	Tightening sequence: screw in until it projects by 27 mm (1.063 in)	Loctite® 243™
Stud, cylinder base (right section of the engine case)	M8	Tightening sequence: screw in until it projects by 29 mm (1.142 in)	Loctite® 243™
Screw, inner clutch hub	M10	60 Nm (44.3 lbf ft)	Loctite® 243™
Spark plug	M10x1	10... 12 Nm (7.4... 8.9 lbf ft)	–
Nut, rotor	M12x1	50 Nm (36.9 lbf ft)	–
Oil drain plug with magnet	M12x1.5	20 Nm (14.8 lbf ft)	–
Nut, primary gear	M14x1.25	40 Nm (29.5 lbf ft)	Loctite® 243™

## 20.3 Carburetor

Carburetor type	MIKUNI TM 24
Needle position	2nd position from top
Idle air adjusting screw	
Open	3.5 turns
Main jet	210
Jet needle	5IPL43
Idling jet	20
Needle jet	Q-0 (454)
Throttle slide	2.5

## 20.3.1 Carburetor tuning

MIKUNI TM 24							
M/FT ASL ↓	TEMP →	-20°C ... -7°C	-6°C ... 5°C	6°C ... 15°C	16°C ... 24°C	25°C ... 36°C	37°C ... 49°C
		-2°F ... 20°F	19°F ... 41°F	42°F ... 60°F	61°F ... 78°F	79°F ... 98°F	99°F ... 120°F
3.000 m 10,000 ft ↑ 2.301 m 7,501 ft	ASO IJ NDL POS MJ	3,5 20 5IPL43 2 210	3,5 20 5IPL43 1 210	3,5 15 5IPL43 1 205	3,5 15 5IPL43 1 200	3,5 10 5IPL43 1 195	
2.300 m 7,500 ft ↑ 1.501 m 5,001 ft	ASO IJ NDL POS MJ	3,5 20 5IPL43 2 210	3,5 20 5IPL43 2 210	3,5 20 5IPL43 1 210	3,5 15 5IPL43 1 205	3,5 15 5IPL43 1 200	3,5 10 5IPL43 1 195
1.500 m 5,000 ft ↑ 751 m 2,501 ft	ASO IJ NDL POS MJ	3,5 20 5IPL43 3 215	3,5 20 5IPL43 2 210	3,5 20 5IPL43 2 210	3,5 20 5IPL43 1 210	3,5 15 5IPL43 1 205	3,5 15 5IPL43 1 200
750 m 2,500 ft ↑ 301 m 1,001 ft	ASO IJ NDL POS MJ	2,5 25 5IPL43 3 220	3,5 20 5IPL43 3 215	3,5 20 5IPL43 2 210	<b>3,5</b> <b>20</b> <b>5IPL43</b> <b>2</b> <b>210</b>	3,5 20 5IPL43 1 210	3,5 15 5IPL43 1 205
300 m 1,000 ft ↑ 0 m 0 ft	ASO IJ NDL POS MJ	2 25 5IPL43 4 225	2,5 25 5IPL43 3 220	3,5 20 5IPL43 3 215	3,5 20 5IPL43 2 210	3,5 20 5IPL43 2 210	3,5 20 5IPL43 1 210

100810-01

M/FT ASL	Above sea level
TEMP	Temperature
ASO	Idle air adjusting screw open (rotations)
IJ	Idling jet
NDL	Jet needle
POS	Needle position from above
MJ	Main jet

The carburetor tuning depends on the defined ambient and operating conditions.



## 20.4 Capacities

### 20.4.1 Gear oil

Gear oil	0.50 l (0.53 qt.)	Engine oil (15W/50) (☛ p. 82)
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### 20.4.2 Coolant

Coolant	0.55 l (0.58 qt.)	Coolant (☛ p. 82)
		Coolant (mixed ready to use) (☛ p. 82)

### 20.4.3 Fuel

Fuel tank capacity, approx.	3.5 l (3.7 qt.)	Super unleaded gasoline (95 octane), mixed with 2-stroke engine oil (1:60) (☛ p. 83)
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## 20.5 Fork

Fork part number	07.18.7L.04	
Fork	<b>WP Suspension USD 35</b>	
Compression damping		
Standard	2 turns	
Rebound damping		
Standard	2 turns	
Spring rate		
Weight of rider: < 35 kg (< 77 lb.)	2.6 N/mm (14.8 lb/in)	
Weight of rider: 35... 45 kg (77... 99 lb.)	2.8 N/mm (16 lb/in)	
Weight of rider: > 45 kg (> 99 lb.)	3.0 N/mm (17.1 lb/in)	
Spring length with preload spacer(s)	377.5 mm (14.862 in)	
Fork length	735 mm (28.94 in)	
Fork oil per fork leg	240±10 ml (8.11±0.34 fl. oz.)	Fork oil (SAE 4) (48601166S1) (☛ p. 82)

## 20.6 Shock absorber

Shock absorber part number	03.18.70.03	
Shock absorber	<b>WP Suspension 3614 BAVP</b>	
Compression damping, high-speed		
Comfort	1.5 turns	
Standard	1 turn	
Sport	0.5 turn	
Compression damping, low-speed		
Comfort	18 clicks	
Standard	15 clicks	
Sport	12 clicks	
Rebound damping		
Comfort	8 clicks	
Standard	5 clicks	
Sport	2 clicks	
Spring preload		
Standard	5 mm (0.2 in)	
Spring rate		
Weight of rider: < 35 kg (< 77 lb.)	35 N/mm (200 lb/in)	
Weight of rider: 35... 45 kg (77... 99 lb.)	40 N/mm (228 lb/in)	
Weight of rider: > 45 kg (> 99 lb.)	45 N/mm (257 lb/in)	
Spring length	210 mm (8.27 in)	

Gas pressure	10 bar (145 psi)
Static sag	30 mm (1.18 in)
Riding sag	70 mm (2.76 in)
Fitted length	347 mm (13.66 in)

Shock absorber fluid (☛ p. 83)	SAE 2.5
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## 20.7 Chassis

Frame	Central tube frame of chrome molybdenum steel tubing, powder-coated
Fork	<b>WP Suspension USD 35</b>
Shock absorber	<b>WP Suspension 3614 BAVP</b>
Suspension travel	
Front	215 mm (8.46 in)
Rear	270 mm (10.63 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	198 mm (7.8 in)
Rear	160 mm (6.3 in)
Brake discs - wear limits	
Front	2.5 mm (0.098 in)
Rear	2.5 mm (0.098 in)
Tire air pressure off road	
Front	1.0 bar (15 psi)
Rear	1.0 bar (15 psi)
Secondary drive ratio	14:48
Chain	1/2 x 1/4" O-ring
Rear sprockets available	46, 48, 50
Steering head angle	64.5°
Wheelbase	1,137 mm (44.76 in)
Seat height unloaded	750 mm (29.53 in)
Ground clearance unloaded	280 mm (11.02 in)
Weight without fuel, approx.	55.4 kg (122.1 lb.)
Maximum rider weight	50 kg (110 lb.)
<b>Front tires</b>	<b>Rear tires</b>
<b>60/100 - 14 30M TT</b> MAXXIS MAXX CROSS SI M7311	<b>80/100 - 12 41M TT</b> MAXXIS MAXX CROSS SI M7312
Additional information is available in the Service section under: <a href="http://www.ktm.com">http://www.ktm.com</a>	

**20.8 Chassis tightening torques**

Spoke nipple	M3.5	3 Nm (2.2 lbf ft)	–
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, foot brake cylinder	M6	10 Nm (7.4 lbf ft)	–
Screw, fork stub	M6	10 Nm (7.4 lbf ft)	–
Screw, front brake disc	M6	14 Nm (10.3 lbf ft)	<b>Loctite® 243™</b>
Screw, rear brake disc	M6	14 Nm (10.3 lbf ft)	<b>Loctite® 243™</b>
Screw, throttle grip	M6	4.5 Nm (3.32 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, brake caliper	M8	20 Nm (14.8 lbf ft)	<b>Loctite® 243™</b>
Screw, engine bracket	M8	30 Nm (22.1 lbf ft)	–
Screw, handlebar clamp	M8	20 Nm (14.8 lbf ft)	–
Screw, rear sprocket	M8	25 Nm (18.4 lbf ft)	<b>Loctite® 243™</b>
Screw, tail piece	M8	35 Nm (25.8 lbf ft)	<b>Loctite® 243™</b>
Screw, top triple clamp	M8	20 Nm (14.8 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, foot brake lever	M10	35 Nm (25.8 lbf ft)	<b>Loctite® 243™</b>
Screw, front wheel spindle	M10	40 Nm (29.5 lbf ft)	–
Screw, handlebar support	M10	40 Nm (29.5 lbf ft)	<b>Loctite® 243™</b>
Screw, top shock absorber	M10	45 Nm (33.2 lbf ft)	–
Nut, rear wheel spindle	M12x1	40 Nm (29.5 lbf ft)	–
Nut, swingarm pivot	M12x1	40 Nm (29.5 lbf ft)	–
Nut, steering stem	M20x1.5	10 Nm (7.4 lbf ft)	–

## 2-stroke engine oil

### Standard/classification

- JASO FC (☛ p. 86)

### Guideline

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

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

### Recommended supplier

#### Motorex®

- Cross Power 2T

## Brake fluid DOT 4 / DOT 5.1

### Standard/classification

- DOT

### Guideline

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

### Recommended supplier

#### Castrol

- RESPONSE BRAKE FLUID SUPER DOT 4

#### Motorex®

- Brake Fluid DOT 5.1

## Coolant

### Guideline

- Use only suitable coolant (even in countries with high temperatures). Using inferior antifreeze can result in corrosion and foaming.
- Use only coolant based on ethylene glycol.

### 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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### Recommended supplier

#### Motorex®

- COOLANT M5.0

## Engine oil (15W/50)

### Standard/classification

- JASO T903 MA (☛ p. 86)
- SAE (☛ p. 86) (15W/50)

### Guideline

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

### Recommended supplier

#### Motorex®

- Top Speed 4T

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

### Standard/classification

- SAE (☛ p. 86) (SAE 4)

### Guideline

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

## Shock absorber fluid (SAE 2.5) (50180751S1)

### Standard/classification

- SAE (☛ p. 86) (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)

### Standard/classification

- DIN EN 228 (ROZ 95/RON 95/PON 91)

### Guideline

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



### Info

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

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

### Standard/classification

- DIN EN 228
- JASO FC (☛ p. 86) (1:60)

### Mixture ratio

1:60	2-stroke engine oil (☛ p. 82) Super unleaded (ROZ 95/RON 95/PON 91) (☛ p. 83)
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### Recommended supplier

#### Motorex®

- Cross Power 2T

## Air filter cleaner

Recommended supplier

Motorex®

- Twin Air Dirt Bio Remover

## Chain cleaner

Recommended supplier

Motorex®

- Chain Clean

## Fuel additive

Recommended supplier

Motorex®

- Fuel Stabilizer

## High viscosity grease

Recommended supplier

SKF®

- LGHB 2

## Long-life grease

Recommended supplier

Motorex®

- Bike Grease 2000

## Motorcycle cleaner

Recommended supplier

Motorex®

- Moto Clean

## Off-road chain spray

Recommended supplier

Motorex®

- Chainlube Offroad

## Oil for foam air filter

Recommended supplier

Motorex®

- Twin Air Liquid Bio Power

## Preserving materials for paints, metal and rubber

Recommended supplier

Motorex®

- Moto Protect

## Rubber grip adhesive (00062030051)

Recommended supplier

KTM-Sportmotorcycle AG

- GRIP GLUE

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

Recommended supplier

Motorex®

- Quick Cleaner

### Universal oil spray

Recommended supplier

Motorex®

– Joker 440 Synthetic

### **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.

### **JASO T903 MA**

Different technical development directions required a new specification for 4-stroke motorcycles – the JASO T903 MA Standard. Earlier, engine oils from the automobile industry were used for 4-stroke motorcycles because there was no separate motorcycle specification. Whereas long service intervals are demanded for automobile engines, high performance at high engine speeds are in the foreground for motorcycle engines. In most motorcycles, the gearbox and the clutch are lubricated with the same oil as the engine. The JASO MA Standard meets these special requirements.

### **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	38
installing	37
removing	37
<b>Air filter box</b>	
cleaning	38
<b>Antifreeze</b>	
checking	63
<b>Auxiliary substances</b>	7
<b>B</b>	
<b>Basic chassis setting</b>	
checking with rider's weight	22
<b>Brake discs</b>	
checking	49
<b>Brake fluid</b>	
front brake, adding	50
rear brake, adding	55
<b>Brake fluid level</b>	
front brake, checking	50
rear brake, checking	55
<b>Brake linings</b>	
front brake, changing	52
front brake, checking	51
front brake, installing	53
front brake, removing	52
rear brake, changing	56
rear brake, checking	56
rear brake, installing	58
rear brake, removing	57
<b>C</b>	
<b>Capacity</b>	
coolant	65, 79
fuel	19, 79
gear oil	70, 79
<b>Carburetor</b>	
float chamber, emptying	68
idle	67
idle speed, adjusting	67
<b>Chain</b>	
checking	44
cleaning	42
<b>Chain guard</b>	
installing	41
removing	41
<b>Chain guide</b>	
adjusting	45
checking	44
<b>Chain tension</b>	
adjusting	43
checking	42
<b>Chassis number</b>	10
<b>Choke</b>	12
<b>Cleaning</b>	72

<b>Clutch</b>	
fluid level, checking	47
fluid, changing	47
<b>Clutch lever</b>	11
basic position, adjusting	47
<b>Compression damping</b>	
fork, adjusting	26
<b>Compression damping, high-speed</b>	
shock absorber, adjusting	23
<b>Compression damping, low-speed</b>	
shock absorber, adjusting	22
<b>Coolant</b>	
draining	64
refilling	65
<b>Coolant level</b>	
checking	63-64
<b>Cooling system</b>	63
<b>Customer service</b>	7
<b>E</b>	
<b>Engine</b>	
running in	15
<b>Engine number</b>	10
<b>Engine sprocket</b>	
checking	44
<b>Environment</b>	6
<b>F</b>	
<b>Figures</b>	7
<b>Filler cap</b>	
closing	12
opening	11
<b>Filling up</b>	
fuel	19
<b>Foot brake lever</b>	13
basic position, adjusting	54
free travel, adjusting	54
free travel, checking	54
<b>Fork legs</b>	
basic setting, checking	26
bleeding	28
dust boots, cleaning	29
installing	30
removing	30
<b>Fork protector</b>	
installing	29
removing	29
<b>Frame</b>	
checking	46
<b>Front fender</b>	
installing	35
removing	35
<b>Front wheel</b>	
installing	59
removing	59
<b>Fuel tank</b>	
installing	40

removing	39
<b>Fuel tap</b>	12
<b>G</b>	
<b>Gear oil</b>	
adding	70
changing	69
draining	69
refilling	70
<b>Gear oil level</b>	
checking	69
<b>H</b>	
<b>Hand brake lever</b>	11
basic position, adjusting	49
free travel, checking	49
<b>Handlebar position</b>	27
adjusting	27
<b>I</b>	
<b>Intended use</b>	5
<b>K</b>	
<b>Kickstarter</b>	13
<b>Kill switch</b>	11
<b>L</b>	
<b>Lower triple clamp</b>	
installing	32
removing	31
<b>M</b>	
<b>Main silencer</b>	
glass fiber yarn filling, changing	39
installing	38
removing	38
<b>Motorcycle</b>	
cleaning	72
raising with lift stand	28
removing from the lift stand	28
<b>O</b>	
<b>Operating substances</b>	7
<b>Owner's Manual</b>	6
<b>P</b>	
<b>Plug-in stand</b>	13
<b>Preparing for use</b>	
advice on first use	14
after storage	73
<b>Protective clothing</b>	6
<b>Putting into operation</b>	
checks and maintenance measures when preparing for use	16
<b>R</b>	
<b>Rear sprocket</b>	
checking	44
<b>Rear wheel</b>	
installing	60
removing	60
<b>Rebound damping</b>	
fork, adjusting	26

shock absorber, adjusting	23
<b>Riding sag</b>	
adjusting	25
<b>Rubber grip</b>	
checking	46
securing	47
<b>S</b>	
<b>Safe operation</b>	5
<b>Seat</b>	
mounting	36
removing	36
<b>Service</b>	7
<b>Service schedule</b>	20-21
<b>Shift lever</b>	13
<b>Shock absorber</b>	
installing	36
removing	36
riding sag, checking	24
spring preload, adjusting	25
static sag, checking	24
<b>Shock absorber part number</b>	10
<b>Spare parts</b>	7
<b>Spoke tension</b>	
checking	62
<b>Start number plate</b>	
installing	35
removing	34
<b>Starting</b>	16
<b>Steering head bearing</b>	
greasing	34
<b>Steering head bearing play</b>	
adjusting	34
checking	33
<b>Storage</b>	73
<b>Swingarm</b>	
checking	46
<b>T</b>	
<b>Technical data</b>	
capacities	79
carburetor	77
chassis	80
chassis tightening torques	81
engine	76
engine tightening torques	76
fork	79
shock absorber	79
<b>Throttle cable play</b>	
adjusting	66
checking	66
<b>Throttle cable routing</b>	
checking	46
<b>Throttle grip</b>	11
<b>Tire air pressure</b>	
checking	61

<b>Tire condition</b>	
checking .....	61
<b>Transport</b> .....	18
<b>Troubleshooting</b> .....	74-75
<b>U</b>	
<b>Use definition</b> .....	5
<b>V</b>	
<b>View of vehicle</b>	
front left .....	8
rear right .....	9
<b>W</b>	
<b>Warranty</b> .....	7
<b>Work rules</b> .....	6



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