

OWNER'S MANUAL 2011

50 SX

50 SX Mini

Art. no. 3211593en



KTM

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. 9)	Dealer's stamp
Engine number (☛ p. 9)	

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

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Issued by: TÜV Management Service

KTM-Sportmotorcycle AG
5230 Mattighofen, Austria

MEANS OF REPRESENTATION	4	Removing the shock absorber 	31
IMPORTANT INFORMATION	5	Installing shock absorber 	31
VIEW OF VEHICLE.....	7	Dismounting the start number plate	32
View of the vehicle from the left front (example)	7	Installing the start number plate	32
View of the vehicle from the right rear (example)	8	Dismounting the front fender	32
SERIAL NUMBERS.....	9	Installing the front fender.....	32
Chassis number.....	9	Removing the seat.....	33
Engine number.....	9	Mounting the seat	33
Shock absorber part number.....	9	Removing the air filter 	33
CONTROLS.....	10	Installing the air filter 	34
Throttle grip.....	10	Cleaning the air filter and air filter box 	34
Hand brake lever	10	Removing main silencer	34
Kill switch	10	Installing the main silencer	35
Opening filler cap.....	10	Changing the glass fiber yarn filling of the main silencer 	35
Closing filler cap	10	Removing the chain guard (50 SX).....	36
Opening oil tank cap (50 SX Mini)	11	Installing the chain guard (50 SX).....	36
Closing oil tank cap (50 SX Mini).....	11	Removing the engine sprocket cover 	36
Fuel tap.....	11	Installing the engine sprocket cover 	37
Choke (50 SX).....	11	Checking the chain for dirt	37
Choke (50 SX Mini)	11	Cleaning the chain.....	37
Kickstarter	12	Checking the chain tension	38
Foot brake lever.....	12	Checking the chain, rear sprocket, engine sprocket and chain guide.....	38
Plug-in stand	12	Adjusting chain tension.....	40
PUTTING INTO OPERATION.....	13	Adjusting the chain guide 	40
Advice on first use.....	13	BRAKES	41
Running in the engine.....	14	Checking the play of the hand brake lever.....	41
RIDING INSTRUCTIONS	15	Adjusting the play of the hand brake lever.....	41
Checks and maintenance measures when preparing for use	15	Adjusting the basic position of the hand brake lever.....	41
Starting.....	15	Checking brake discs	41
Starting up	16	Checking front brake fluid level.....	42
Riding.....	16	Adding front brake fluid 	42
Braking	16	Checking the front brake linings.....	43
Stopping, parking.....	16	Removing front brake linings 	43
Refueling.....	17	Installing the front brake linings 	44
Filling up with oil (50 SX Mini).....	17	Changing the front brake linings 	44
SERVICE SCHEDULE.....	18	Checking the free travel of the foot brake lever	45
Service schedule	18	Adjusting the free travel of the foot brake lever 	45
TUNING THE CHASSIS.....	20	Adjusting the basic position of the foot brake lever 	46
Adjusting the rebound damping of the shock absorber.....	20	Checking rear brake fluid level.....	46
Measuring rear wheel sag unloaded	20	Adding rear brake fluid 	47
Checking the static sag of the shock absorber	20	Checking the rear brake linings	48
Checking the riding sag of the shock absorber	21	Removing rear brake linings 	48
Adjusting the spring preload of the shock absorber 	21	Installing the rear brake linings 	48
Adjusting the riding sag 	22	Changing the rear brake linings 	49
Vehicle level	22	WHEELS.....	51
Adjusting the fork overhang 	22	Removing front wheel 	51
Adjusting seat height 	23	Installing the front wheel 	51
Handlebar position	23	Removing rear wheel 	51
Adjusting handlebar position 	24	Installing the rear wheel 	52
MAINTENANCE WORK ON THE CHASSIS	25	Checking the tire condition.....	52
Raising the motorcycle with a lift stand	25	Checking tire air pressure.....	53
Removing the motorcycle from the lift stand	25	Checking spoke tension.....	53
Cleaning dust boots of fork legs	25	COOLING SYSTEM	54
Removing the fork legs 	26	Cooling system	54
Installing the fork legs 	26	Checking the antifreeze and coolant level	54
Checking play of steering head bearing.....	27	Checking the coolant level.....	55
Adjusting the play of the steering head bearing 	27	Draining the coolant 	55
Greasing the steering head bearing 	28	Refilling coolant 	56
Removing the lower triple clamp 	28		
Installing the lower triple clamp 	29		

TUNING THE ENGINE	57
Checking the play in the throttle cable.....	57
Adjusting the play in the throttle cable 	57
Carburetor - idle (50 SX)	57
Carburetor - idle (50 SX Mini).....	57
Carburetor - adjusting idle speed  (50 SX).....	57
Carburetor - adjusting idle  (50 SX Mini).....	58
Checking clutch engagement speed 	59
Adjusting the clutch engagement speed 	59
Removing the centrifugal force clutch 	60
Installing the centrifugal force clutch 	61
Checking the centrifugal force clutch 	61
Dismantling centrifugal clutch 	62
Assembling centrifugal clutch 	62
MAINTENANCE WORK ON THE ENGINE.....	64
Checking oil level (50 SX Mini).....	64
Bleeding the oil pump  (50 SX Mini)	64
Checking the gear oil level.....	65
Changing the gear oil 	65
Draining the gear oil 	66
Filling up with gear oil 	66
Adding gear oil 	66
CLEANING.....	68
Cleaning motorcycle	68
STORAGE	69
Storage.....	69
Putting into operation after storage	69
TROUBLESHOOTING.....	70
TECHNICAL DATA - ENGINE	72
Capacity - gear oil.....	72
Capacity - coolant.....	72
TECHNICAL DATA - ENGINE TIGHTENING TORQUES.....	73
TECHNICAL DATA - CARBURETOR.....	74
50 SX.....	74
50 SX Mini	74
TECHNICAL DATA - CHASSIS	75
Tires	75
Capacity - fuel.....	76
TECHNICAL DATA - FORK.....	77
50 SX.....	77
50 SX Mini	77
TECHNICAL DATA - SHOCK ABSORBER	78
50 SX.....	78
50 SX Mini	78
TECHNICAL DATA - TIGHTENING TORQUES FOR CHASSIS	79
SUBSTANCES.....	80
AUXILIARY SUBSTANCES.....	82
STANDARDS.....	84
INDEX	85

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 done 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). |
-

Formats used

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

-
- | | |
|--------------------------|--|
| Proper name | Identifies a proper name. |
| Name[®] | Identifies a protected name. |
| Brand[™] | Identifies a brand in merchandise traffic. |
-

Use definition

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 must be used only in closed off areas remote from public road traffic.

Service

A prerequisite for perfect operation and prevention of wear is that the engine and chassis service, care and adjustment work described in the owner's manual are properly carried out. Poor adjustment and tuning of the engine and chassis can lead to damage and breakage of components.

Using the motorcycle in difficult conditions such as on sand or very muddy or wet terrain can lead to above-average wear of components such as the transmission train or the brakes. For this reason, it may be necessary to service or replace worn parts before the limit specified in the service schedule is reached.

Pay careful attention to the prescribed running-in period, inspection and service intervals. If you observe these exactly, you will ensure a much longer service life for your motorcycle.

Warranty

The work prescribed in the service schedule must be carried out in an authorized KTM workshop only and confirmed in the customer's service record and in the **KTM dealer.net** since otherwise no warranty claims will be honored. No warranty claims can be honored for damage resulting from manipulations and/or alterations to the vehicle.

Fuel, oils, etc.

You should use the fuels, oils and greases according to specifications as listed in the owner's manual.

Spare parts, accessories

For your own safety, only use spare parts and accessory products that have been 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 accessories are specified in parentheses in the descriptions. Your KTM dealer will be glad to advise you.

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

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

Work rules

Special tools are needed for certain tasks. They are not included with the vehicle but can be ordered under the number in parentheses. Ex.: bearing puller (15112017000)

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

If a thread locker is used for the screw connections (e.g. **Loctite**®), follow the specific manufacturer instructions regarding its use.

Parts that are to be reused after disassembly must be cleaned and checked for damage and wear. Change damaged or worn parts.

After repair and maintenance, ensure that the vehicle is roadworthy.

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 straps or other suitable devices to secure the motorcycle against accidents or falling over.

Environment

Motorcycling is a wonderful sport and we naturally hope that you and your child will be able to enjoy it to the fullest. However, it is a potential problem for the environment and can lead to conflicts with other persons. But if you use your motorcycle responsibly, you can ensure that such problems and conflicts do not have to occur. To protect the future of motorcycle sport, make sure that your child uses the motorcycle legally, display environmental consciousness, and respect the rights of others.

Notes/warnings

Pay close attention to the notes/warnings.

-
-  **Info**
Various information and warning labels are affixed to the vehicle. Do not remove information/warning labels. If they are missing, you or others may not recognize potential hazards and may therefore be injured.
-

Grades of risks

-  **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.
-

Owner's manual

- Carefully read this owner's manual in its entirety together with your child before letting your child ride the motorcycle for the first time. It contains a lot of information and tips to help you and your child operate and handle the motorcycle. Only then will you find out how to customize the motorcycle ideally for your child's use and how to protect your child from injury. The owner's manual also contains important information on servicing the motorcycle.
- The owner's manual is an important component of the motorcycle and should be handed over to the new owner if the vehicle is sold.

View of the vehicle from the left front (example)



100855-10

1	Hand brake lever (☛ p. 10)
2	Filler cap
3	Fuel tap (☛ p. 11)
4	Quick release of seat
5	Shock absorber rebound adjustment
6	Chain guide
7	Plug-in stand (☛ p. 12)

View of the vehicle from the right rear (example)



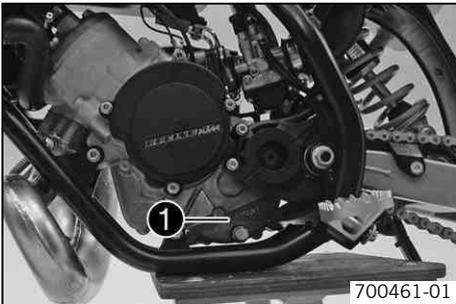
- | | |
|---|------------------------------------|
| 1 | Kill switch (☛ p. 10) |
| 2 | Chassis number (☛ p. 9) |
| 3 | Throttle grip (☛ p. 10) |
| 4 | Level viewer for brake fluid, rear |
| 5 | Foot brake lever (☛ p. 12) |
| 6 | Kickstarter (☛ p. 12) |

Chassis number



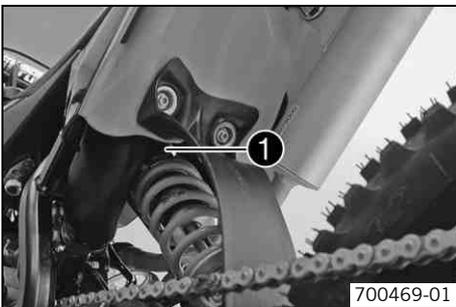
The chassis number ❶ is stamped on right of the steering head.

Engine number



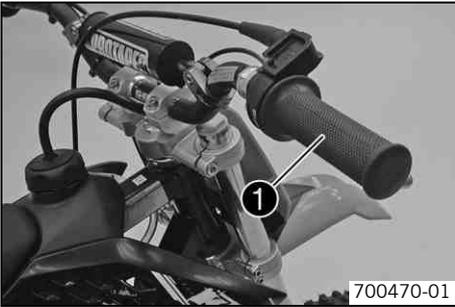
The engine number ❶ is stamped on the left side of the engine under the engine sprocket.

Shock absorber part number



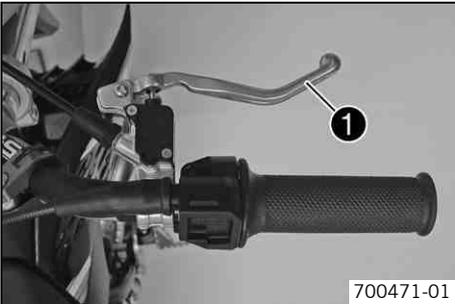
The shock absorber part number ❶ is stamped on the top of the shock absorber above the adjusting ring towards the rear.

Throttle grip



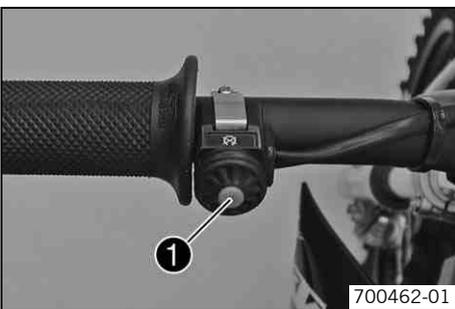
Throttle grip ❶ is fitted on the right side of the handlebar.

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.

Kill switch

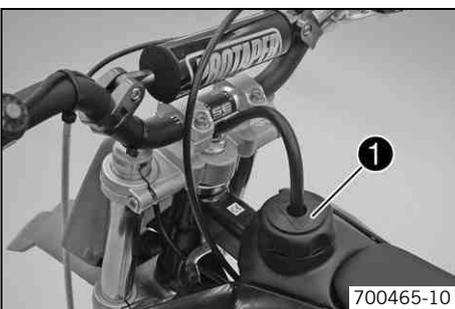


Kill switch ❶ is fitted on the left side of the handlebar.

Possible states

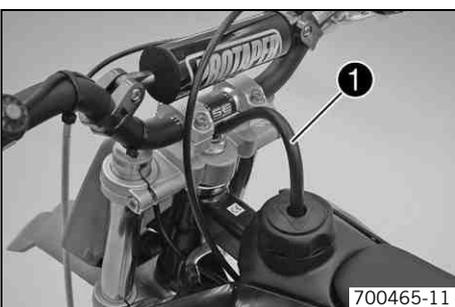
- Kill switch ☒ in basic position – In this position, the ignition circuit is closed, and the engine can be started.
- Kill switch ☒ pressed – In this position, the ignition circuit is interrupted, a running engine stops, and a non-running engine will not start.

Opening filler cap



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

Closing filler cap



- Put the tank cap on and turn it clockwise.



Info

Run the fuel tank breather hose ❶ without kinks.

Opening oil tank cap (50 SX Mini)



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

Closing oil tank cap (50 SX Mini)



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



Info

Run the oil tank breather hose ❶ without kinks.

Fuel tap

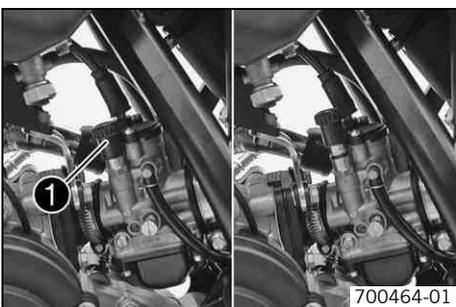


Fuel tap ❶ is on the left of the fuel tank.

Possible states

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

Choke (50 SX)



The choke knob ❶ is fitted on the left of the carburetor.

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



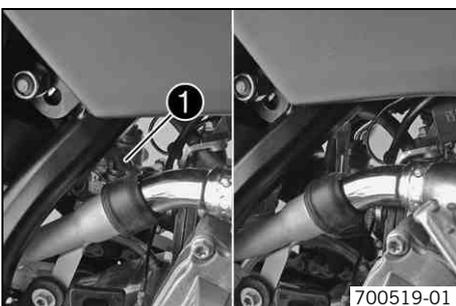
Info

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

Possible states

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

Choke (50 SX Mini)



The choke lever ❶ is fitted on the right of the carburetor.

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



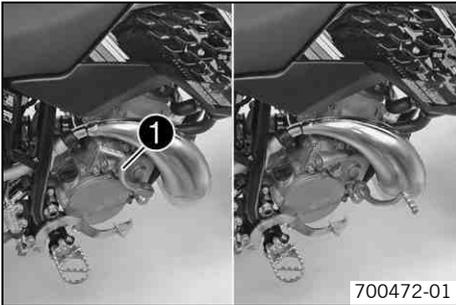
Info

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

Possible states

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

Kickstarter



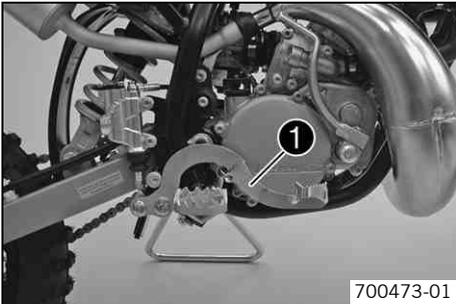
The kickstarter ❶ is fitted on the right of the engine.
The kickstarter can be swiveled.



Info

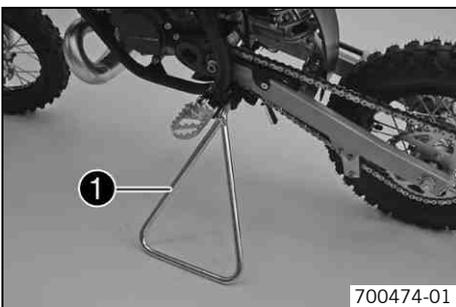
Before riding, swing the kickstarter inwards towards the engine.

Foot brake lever



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

Plug-in stand



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



Info

Remove the plug-in stand before riding.

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 present an increased safety risk.

- Wear protective clothing (helmet, boots, gloves, pants and jacket with protectors) every time you ride the motorcycle. 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 adjusts 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 permanently. The rear brake can fail due to overheating. Ensure that your child raises his or her foot from the foot brake lever when the child does not want to brake.



Warning

Danger of accidents Destruction of chassis components.

- Do not exceed the maximum allowable rider weight.



Warning

Risk of misappropriation Usage by unauthorized persons.

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



Info

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

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



Info

Pay special attention to the safety warnings and injury risks.

Explain to your child the techniques of riding and falling, e.g. how shifting weight can influence handling characteristics.

- Familiarize your child with the controls.
- Adjust the basic position of the hand brake lever. (👉 p. 41)
- Adjust the basic position of the foot brake lever. (👉 p. 46)
- 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, you should push your child at first. Do not start the engine until your child is able to apply the necessary brake pressure.

At the start, let your child ride to another person who can help him or her 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 try any off-road rides that would exceed the ability and experience of your child.
- Your child should hold the handlebar firmly with both hands and keep his or her feet on the footrests when riding.
- Do not exceed the maximum allowable rider weight.

Guideline

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

- Check the spoke tension. (☛ p. 53)



Info

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

- Run the engine in. (☛ p. 14)

Running in the engine

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

Guideline

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

- Avoid fully opening the throttle!

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. 65)

(50 SX Mini)

- Check the oil level. (☛ p. 64)
- Check the front brake brake fluid level. (☛ p. 42)
- Check the rear brake fluid level. (☛ p. 46)
- Check the front brake linings. (☛ p. 43)
- Check the rear brake linings. (☛ p. 48)
- Check that the brake system is functioning properly.
- Check the coolant level. (☛ p. 55)
- Check the chain dirt accumulation. (☛ p. 37)
- Check the chain, rear sprocket, engine sprocket and chain guide. (☛ p. 38)
- Check the chain tension. (☛ p. 38)
- Check the tire condition. (☛ p. 52)
- Check the tire air pressure. (☛ p. 53)
- Clean dust boots of fork legs. (☛ p. 25)
- 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.

Starting



Danger

Danger of poisoning Exhaust gases are poisonous 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.

- 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.

The engine is cold

(50 SX)

- Pull the choke knob fully out and turn it by max. ¼ turn.

(50 SX Mini)

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



Info

Do not open the throttle.

Starting up



Info

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

- Open the throttle carefully.

Riding



Info

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

- If the choke function was activated, deactivate it after the engine has warmed up.
- When you reach maximum speed after fully opening the throttle, turn back the throttle to about $\frac{3}{4}$ of its range. The speed hardly drops, but the fuel consumption falls considerably.
- Your child should always open the throttle only as much as the engine can handle – abruptly opening the throttle increases fuel consumption.
- Your child should switch off the engine if he or she expects to be standing for a long time.

Guideline

≥ 2 min

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 wet or dirty brakes.

- Clean or dry dirty or wet brakes 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.

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 brakes. Allow these components to cool down before starting work on them.

Note

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

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

Note

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

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

Note

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

- The plug-in stand is designed for the weight of the motorcycle only. You or your child should not sit on the motorcycle when it is standing on the plug-in stand. The plug-in stand and/or the frame could be damaged and the motorcycle could fall over.
- Brake the motorcycle.
- Press and hold the kill switch ☒ while the engine is idling until the engine stops.
- Turn the knurled screw on the fuel tap all the way clockwise.
- Park the motorcycle on firm ground.

Refueling

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

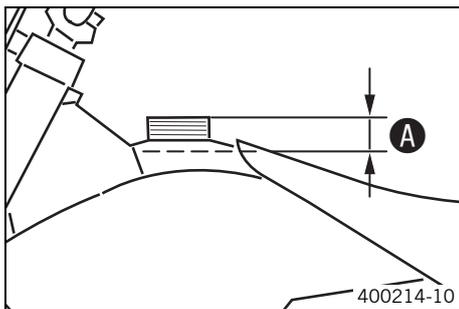
- Never refuel the vehicle near open flames or burning cigarettes, and always switch off the engine first. Be careful that no fuel is spilt, especially on hot vehicle components. Clean up spilt fuel immediately.
- Fuel in the fuel tank expands when warm and can escape if the tank is overfilled. See the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

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

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

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

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



- Switch off the engine.
- Open the filler cap. (☛ p. 10)
- Fill the fuel tank with fuel up to measurement **A**.

Guideline

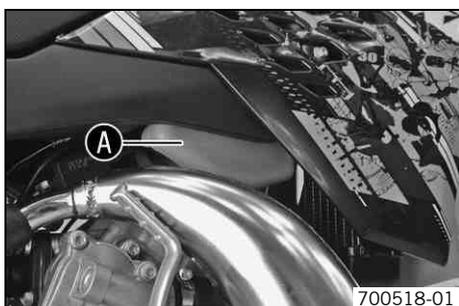
Measurement of A	35 mm (1.38 in)	
Fuel tank capacity, approx. (50 SX Mini)	2.0 l (2.1 qt.)	Super unleaded (ROZ 95 / RON 95 / PON 91) (☛ p. 81)
Fuel tank capacity, approx. (50 SX)	2.3 l (2.4 qt.)	Super unleaded gasoline, mixed with 2-stroke engine oil (1:60) (☛ p. 81)

- Close the filler cap. (☛ p. 10)

Filling up with oil (50 SX Mini)

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

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



- Switch off the engine.
- Open the oil tank cap. (☛ p. 11)
- Fill the oil tank at least up to the **MIN** mark **A**.

Guideline

MIN mark	Sufficient for a single tank filling	
Oil tank contents ca.	0.2 l (0.2 qt.)	2-stroke engine oil (☛ p. 80)

- Close the oil tank cap. (☛ p. 11)

Service schedule

	S20A	S40A	S80A	J1A
Change the gear oil. 🛠️ (📖 p. 65)		•	•	
Check the gear oil level. (📖 p. 65)	•	•	•	
Check the front brake linings. (📖 p. 43)	•	•	•	
Check the rear brake linings. (📖 p. 48)	•	•	•	
Check the brake discs. (📖 p. 41)	•	•	•	
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. 46)	•	•	•	
Check the free travel of the foot brake lever. (📖 p. 45)	•	•	•	
Check the frame and swingarm. 🛠️	•	•	•	
Check swingarm bearing. 🛠️	•	•	•	
Check the heim joints on the upper and lower shock absorbers. 🛠️	•	•	•	
Service the fork. 🛠️		•	•	
Service the shock absorber. 🛠️			•	
Check the tire condition. (📖 p. 52)	•	•	•	
Check the tire air pressure. (📖 p. 53)	•	•	•	
Check wheel bearing for play. 🛠️	•	•	•	
Check the wheel hub. 🛠️	•	•	•	
Check rim run-out. 🛠️	•	•	•	
Check the spoke tension. (📖 p. 53)	•	•	•	
Check the chain, rear sprocket, engine sprocket and chain guide. (📖 p. 38)	•	•	•	
Check the chain tension. (📖 p. 38)	•	•	•	
Lubricate all moving parts (e. g. hand levers, chain, ...) and check for smooth operation. 🛠️	•	•	•	
Change the front brake fluid. 🛠️				•
Check the front brake brake fluid level. (📖 p. 42)	•	•	•	
Check the play of the hand brake lever. (📖 p. 41)	•	•	•	
Grease the steering head bearing. 🛠️ (📖 p. 28)				•
Check play of steering head bearing. (📖 p. 27)	•	•	•	
Change the piston. 🛠️		•	•	
Change the connecting rod, conrod bearing and crank pin. 🛠️		•	•	
Check the crankshaft bearing. 🛠️		•	•	
Check the transmission. 🛠️		•	•	
Change all engine bearings. 🛠️			•	
Change the spark plug. 🛠️	•	•	•	
Change the spark plug connector. 🛠️		•	•	
Check the cylinder and piston. 🛠️	•	•	•	
Check the intake membrane. 🛠️	•	•	•	
Check the clutch. 🛠️	•	•	•	
Check all hoses (e. g. fuel, cooling, bleeding, drainage) and sleeves (e. g. for tearing, tightness and correct routing). 🛠️	•	•	•	
Check the antifreeze and coolant level. (📖 p. 54)	•	•	•	
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. 34)	•	•	•	
Change the glass fiber yarn filling of the main silencer. 🛠️ (📖 p. 35)	•	•	•	
Check the screws and nuts for tightness. 🛠️	•	•	•	

	S20A	S40A	S80A	J1A
Check/set the carburetor components. 🛠️				•
Check idle. 🛠️	•	•	•	
Check the clutch engagement speed. 🛠️ (📖 p. 59)	•	•	•	
Final inspection: check the vehicle for operating safety and take a test ride.	•	•	•	
Create a service entry in the KTM DEALER.NET and in the service record. 🛠️	•	•	•	

S20A: Every 20 operating hours

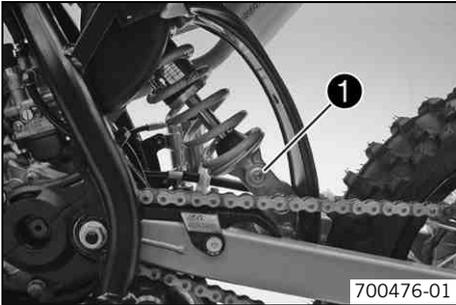
S40A: Every 40 operating hours

S80A: Every 80 operating hours

J1A: Annually

Adjusting the rebound damping of the shock absorber

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



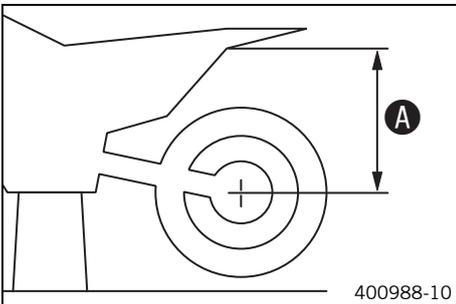
- Turn adjusting screw ❶ clockwise up to the last perceptible click.
- Turn back counterclockwise by the number of clicks corresponding to the shock absorber type.

Guideline

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

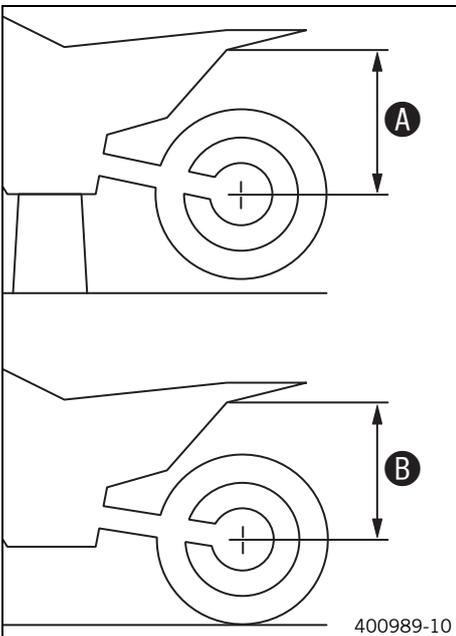
- Info**
 Turn clockwise to increase damping; turn counterclockwise to reduce damping.

Measuring rear wheel sag unloaded



- Raise the motorcycle with a lift stand. (☞ p. 25)
- 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.
- Remove the motorcycle from the lift stand. (☞ p. 25)

Checking the static sag of the shock absorber



- Measure distance A of rear wheel unloaded. (☞ p. 20)
- 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.

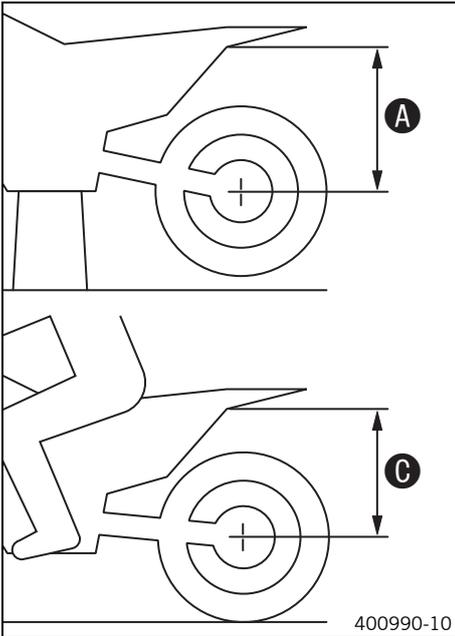
- Info**
 The static sag is the difference between measurements A and B.

- Check the static sag.

Static sag (50 SX)	20 mm (0.79 in)
Static sag (50 SX Mini)	15 mm (0.59 in)

- » If the static sag is less or more than the specified value:
 - Adjust the spring preload of the shock absorber. ☞ (☞ p. 21)

Checking the riding sag of the shock absorber



- Measure distance **A** of rear wheel unloaded. (☞ p. 20)
- With another person holding the motorcycle, the rider sits down on the saddle in full protective clothing in a normal sitting position (feet on footrests) and bounces up and down a few times.
 - ✓ The rear wheel suspension levels out.
- Another person now measures the distance between the rear axle and a fixed point.
- Make a note of the value as measurement **C**.

i Info

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

- Check the riding sag.

Riding sag (50 SX)	45... 55 mm (1.77... 2.17 in)
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Riding sag (50 SX Mini)	40... 50 mm (1.57... 1.97 in)
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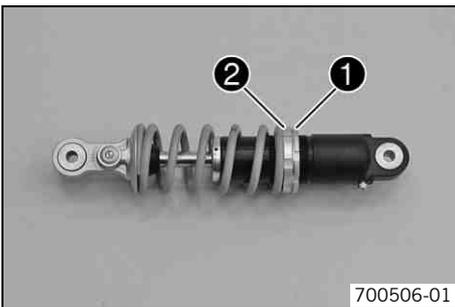
- » If the riding sag differs from the specified measurement:
 - Adjust the riding sag. ☞ (☞ p. 22)

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.)



- Remove shock absorber. ☞ (☞ p. 31)
- After removing the shock absorber, clean it thoroughly.
- Measure the full spring length while it is under tension and note down the value.
- Loosen lock ring **1**.
- Turn adjusting ring **2** until the spring is no longer under tension.

Hook wrench (T106S)

- Measure the overall spring length when not under tension.
- Tighten the spring by turning adjusting ring **2** to the specified measurement.

Guideline

Spring preload (50 SX)

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

Standard	5 mm (0.2 in)
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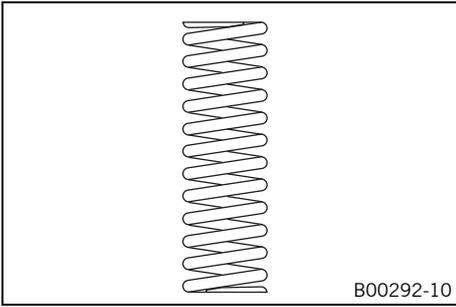
i Info

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

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

- Tighten lock ring **1**.
- Install shock absorber. ☞ (☞ p. 31)

Adjusting the riding sag 🛠️



- Remove shock absorber. 🛠️ (📖 p. 31)
- After removing the shock absorber, clean it thoroughly.
- Choose and mount a suitable spring.

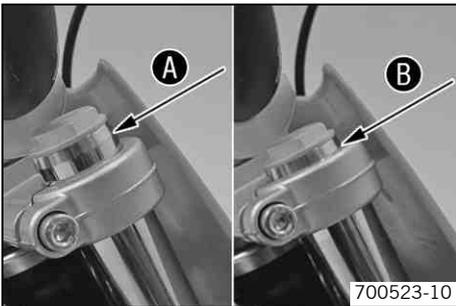
Guideline

Spring rate (50 SX)	
Weight of rider: < 25 kg (< 55 lb.)	30 N/mm (171 lb/in)
Weight of rider: 25... 35 kg (55... 77 lb.)	35 N/mm (200 lb/in)
Spring rate (50 SX Mini)	
Weight of rider: < 25 kg (< 55 lb.)	65 N/mm (371 lb/in)
Weight of rider: 25... 35 kg (55... 77 lb.)	75 N/mm (428 lb/in)

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

- Install shock absorber. 🛠️ (📖 p. 31)
- Check the static sag of the shock absorber. (📖 p. 20)
- Check the riding sag of the shock absorber. (📖 p. 21)
- Adjust the rebound damping of the shock absorber. (📖 p. 20)

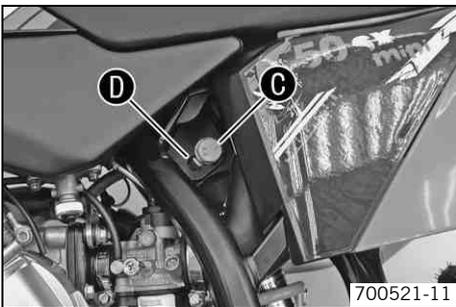
Vehicle level



The vehicle level can be adjusted at the front by means of the clamping of the fork legs and at the rear by means of the positioning of the shock absorber.

The fork overhang can be individually adjusted to the rider's body size. In the lower position **A** (standard), the fork is completely pushed through. In the higher position **B**, the cone is flush with the upper triple clamp.

Fork overhang over the upper triple clamp	10... 17 mm (0.39... 0.67 in)
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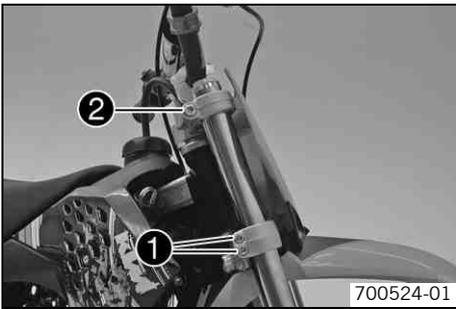
The seat height can be individually adjusted to the size of the rider. The shock absorber can be mounted at two different holes in the frame.

Difference between low seat position C (standard) and high seat position D	25 mm (0.98 in)
--	-----------------

Adjusting the fork overhang 🛠️

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.



- Loosen screws ❶ on the lower triple clamp.
- Loosen screw ❷ on the upper triple clamp.

i Info

Loosen the screws to the point where the fork legs can be moved without damaging it.
Make the adjustments first on one fork leg and then on the other.

- Adjust the fork overhang with the upper triple clamp.

Guideline

10... 17 mm (0.39... 0.67 in)

- Tighten screw ❷.

Guideline

Screw, top triple clamp	M8	25 Nm (18.4 lbf ft)
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- Fully tighten screws ❶.

Guideline

Screw, bottom triple clamp	M6	10 Nm (7.4 lbf ft)
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- Repeat the adjustment on the other fork leg.

i Info

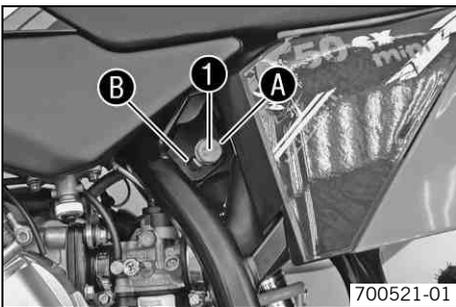
The setting of the vehicle level via the fork legs must be identical on both fork legs.

Adjusting seat height

Warning

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

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



- Raise the motorcycle with a lift stand. (☛ p. 25)
- Hold the rear wheel with the swingarm and remove screw ❶.
- Position the shock absorber according to the required seat height.

Guideline

Low seat position (standard)	Ⓐ
High seat position	Ⓑ

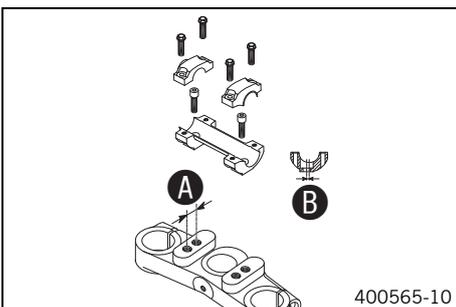
- Mount and tighten screw ❶.

Guideline

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

- Remove the motorcycle from the lift stand. (☛ p. 25)

Handlebar position



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

Distance Ⓐ between holes	15 mm (0.59 in)
--------------------------	-----------------

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

Distance Ⓑ between holes	3.5 mm (0.138 in)
--------------------------	-------------------

The handlebar supports can be mounted in 4 different positions.

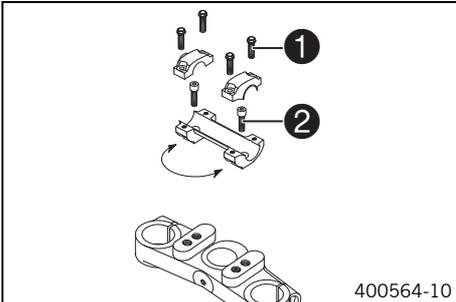
Adjusting handlebar position ↩



Warning

Danger of accidents Handlebar breakage.

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



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

Guideline

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

- Position the handlebar.



Info

Make sure cables and wiring are positioned correctly.

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

Guideline

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



Info

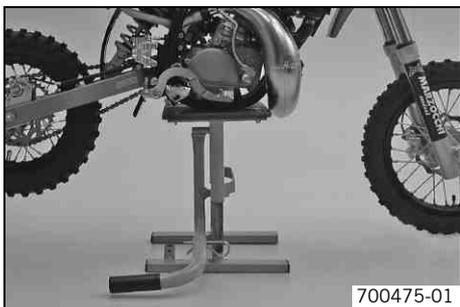
Make sure the gap width is even.

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)

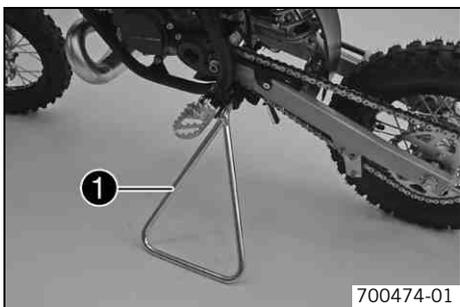
- ✓ The tires should no longer be in contact with the ground.
- Secure the motorcycle against falling over.

Removing the motorcycle from the lift stand

Note

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

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



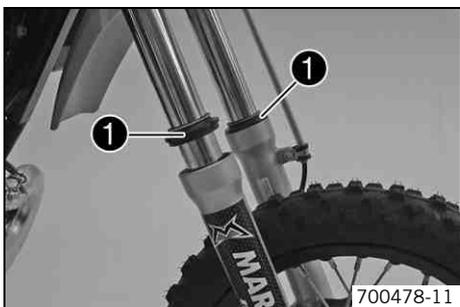
- Remove the motorcycle from the lift stand.
- Remove the lift stand.
- To park the motorcycle, insert plug-in stand ❶ into the plug-in stand bracket on the left side of the vehicle.



Info

Remove the plug-in stand before riding.

Cleaning dust boots of fork legs



- Raise the motorcycle with a lift stand. (☛ p. 25)
- Push dust boots ❶ of both fork legs upwards.



Info

The dust boots should remove dust and coarse dirt particles from the 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.

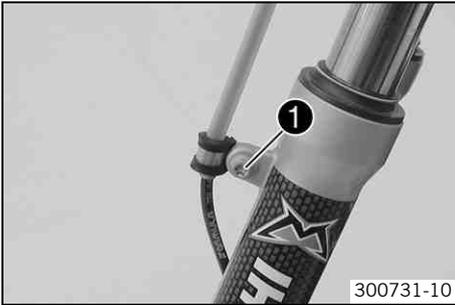
- Clean and oil the dust boots and inner fork tube of both fork legs.

Universal oil spray (☛ p. 83)

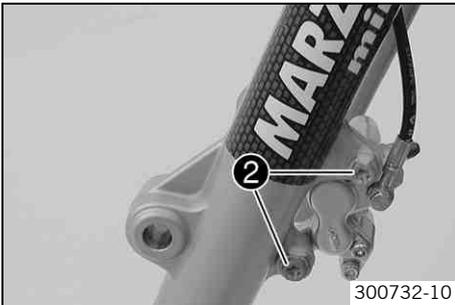
- Press the dust boots back into their normal position.
- Remove excess oil.
- Remove the motorcycle from the lift stand. (☛ p. 25)

Removing the fork legs

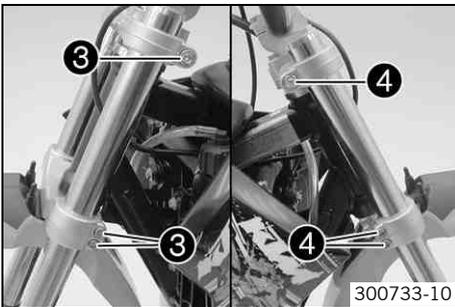
- Remove front wheel. (p. 51)
- Dismount the start number plate. (p. 32)
- Remove screw ①.



- Remove screws ② with the washer and take off the brake caliper.
- Hang the brake caliper and the brake line loosely to the side.



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



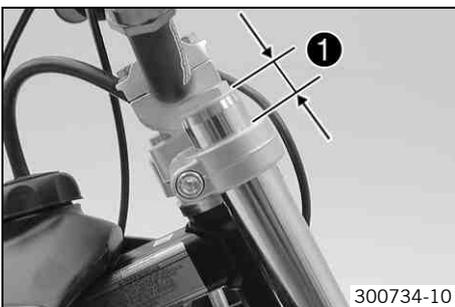
Installing the fork legs



Warning

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

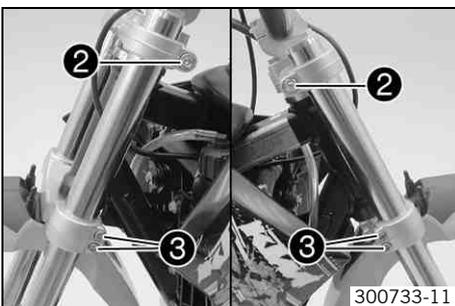
- Following modifications, ride slowly at first to get the feel of the new ride behavior.



- Position the fork legs.
- Adjust fork overhang ①.

Guideline

Upper fork projection	10... 17 mm (0.39... 0.67 in)
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- Tighten screws ②.

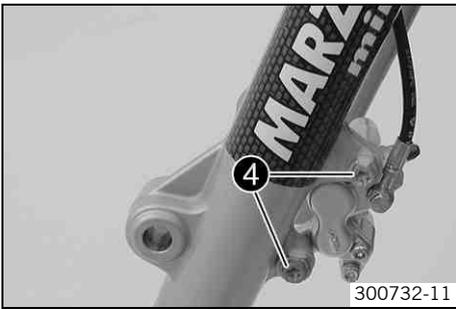
Guideline

Screw, top triple clamp	M8	25 Nm (18.4 lbf ft)
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- Tighten screws ③.

Guideline

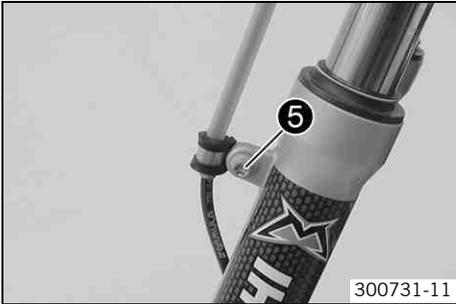
Screw, bottom triple clamp	M6	10 Nm (7.4 lbf ft)
----------------------------	----	--------------------



- Position the brake caliper. Mount and tighten screws 4 with the washer.

Guideline

Screw, front brake caliper	M8	20 Nm (14.8 lbf ft)	Loctite® 243™
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- Position the brake line and clamp. Mount and tighten screw 5.
- Install the start number plate. (☞ p. 32)
- Install the front wheel. ☞ (☞ p. 51)

Checking play of steering head bearing



Warning

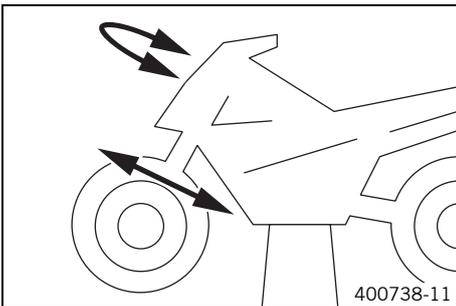
Danger of accidents Unstable vehicle handling from incorrect steering head bearing play.

- 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.



- Raise the motorcycle with a lift stand. (☞ p. 25)
- Move the handlebar to the straight-ahead position. Move the fork legs to and fro in the direction of travel.

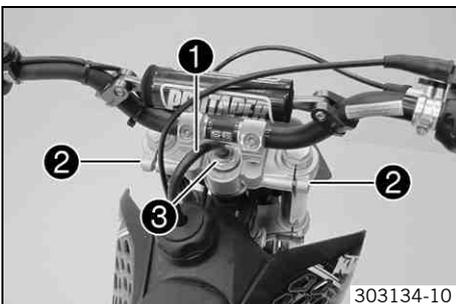
No play should be noticeable in the steering head bearing.

- » If there is noticeable play present:
 - Adjust the play of the steering head bearing. ☞ (☞ p. 27)
- 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.

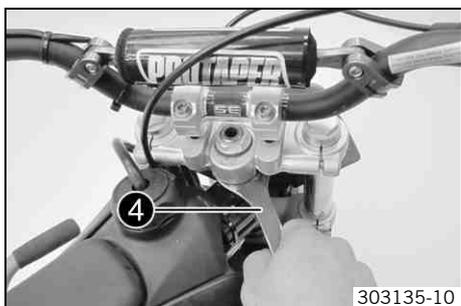
- » If click positions are noticeable:
 - Adjust the play of the steering head bearing. ☞ (☞ p. 27)
 - Check the steering head bearing and replace if required.
- Remove the motorcycle from the lift stand. (☞ p. 25)

Adjusting the play of the steering head bearing ☞



- Raise the motorcycle with a lift stand. (☞ p. 25)
- Remove fuel tank breather 1.
- Loosen screws 2.
- Loosen nut 3.

Key for steering head bearing (45229050000)

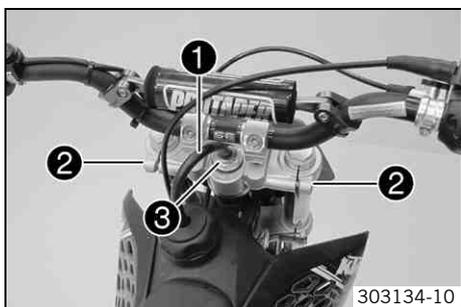


- Tighten nut with special tool ④.

Guideline

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



- Tighten nut ③.

Guideline

Nut, steering stem	M20x1.5	28 Nm (20.7 lbf ft)	Only applies when using: Key for steering head bearing (45229050000)
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Key for steering head bearing (45229050000)

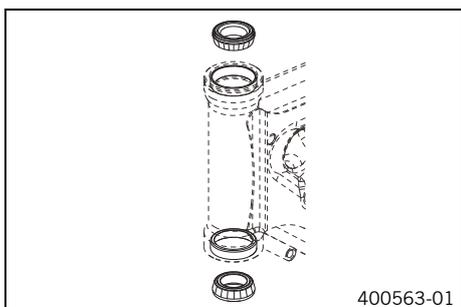
- Tighten screws ②.

Guideline

Screw, top triple clamp	M8	25 Nm (18.4 lbf ft)
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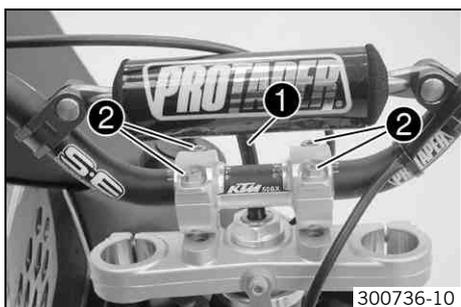
- Position the fuel tank breather ①.
- Check play of steering head bearing. (☞ p. 27)
- Remove the motorcycle from the lift stand. (☞ p. 25)

Greasing the steering head bearing ☞



- Remove the lower triple clamp. ☞ (☞ p. 28)
- Install the lower triple clamp. ☞ (☞ p. 29)

Removing the lower triple clamp ☞

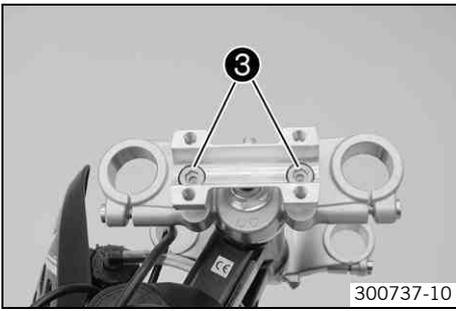


- Remove the fork legs. ☞ (☞ p. 26)
- Dismount the front fender. (☞ p. 32)
- Remove the fuel tank breather ①.
- Remove screws ②.
- Remove the handlebar clamp.
- Remove the handlebar and lay it to one side.

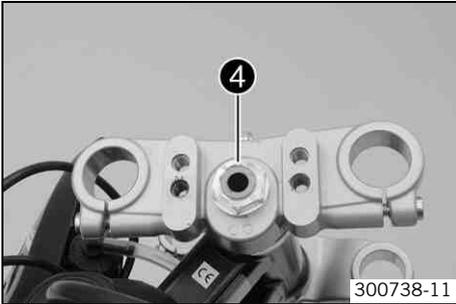


Info

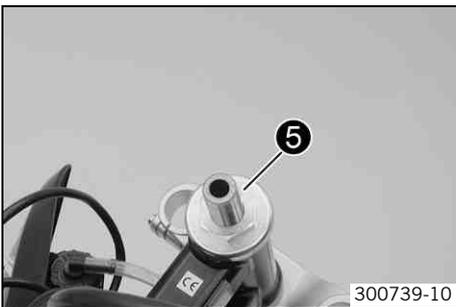
Protect the motorcycle and its attachments from damage by covering them. Do not bend the cables and lines.



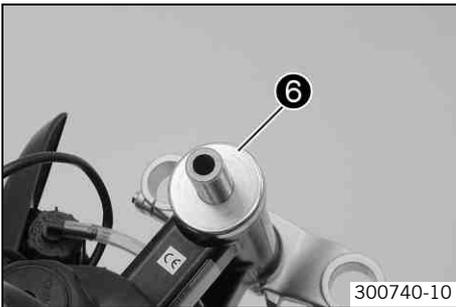
- Remove screws ③.
- Take off the handlebar support.



- Remove nut ④.
- Take off the upper triple clamp.

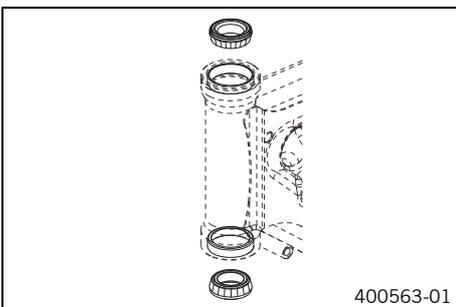


- Remove nut ⑤.



- Remove protector ring ⑥.
- Remove the lower triple clamp with the steering stem.
- Remove the upper steering head bearing.

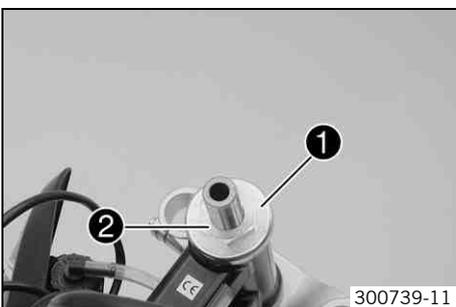
Installing the lower triple clamp 🛠️



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

High viscosity grease (🔧 p. 82)

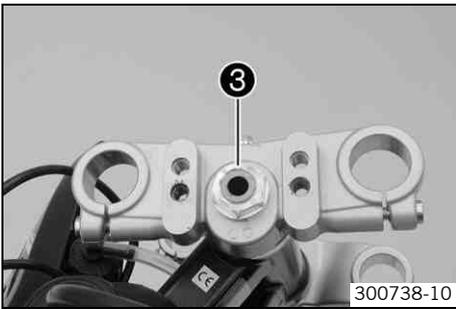
- Insert the lower triple clamp with the steering stem. Mount the upper steering head bearing.
- Check that the O-rings of the steering head seal are correctly positioned.



- Push on protective ring ①.
- Mount and tighten nut ②.

Guideline

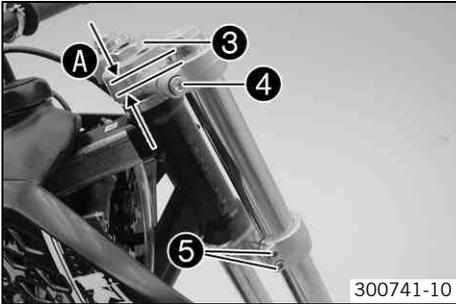
Nut, steering head	M20x1.5	No play ≤ 10 Nm (≤ 7.4 lbf ft)
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- Position the upper triple clamp.
- Mount nut 3, but do not tighten it yet.

Guideline

Nut, steering stem	M20x1.5	30 Nm (22.1 lbf ft)
--------------------	---------	------------------------



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.

- Position the fork leg.
- Adjust fork overhang A.

Guideline

Upper fork projection	10... 17 mm (0.39... 0.67 in)
-----------------------	-------------------------------

- Tighten screws 5.

Guideline

Screw, bottom triple clamp	M6	10 Nm (7.4 lbf ft)
----------------------------	----	--------------------

- Repeat these steps on the opposite side.

- Tighten nut 3.

Guideline

Nut, steering stem	M20x1.5	30 Nm (22.1 lbf ft)
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- Tighten screw 4.

Guideline

Screw, top triple clamp	M8	25 Nm (18.4 lbf ft)
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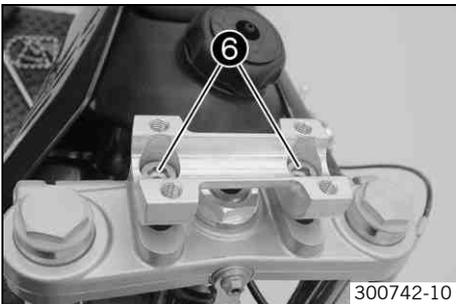
- Repeat this step on the opposite side.

- Position the handlebar support.

- Mount and tighten screws 6.

Guideline

Screw, handlebar support	M10	40 Nm (29.5 lbf ft)	Loctite® 243™
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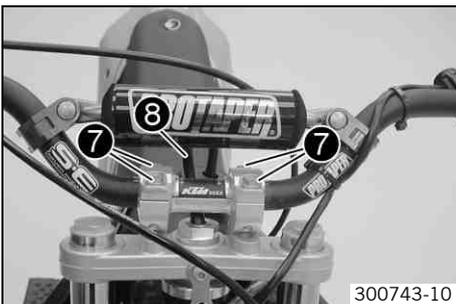
- Position the handlebar with handlebar clamps.

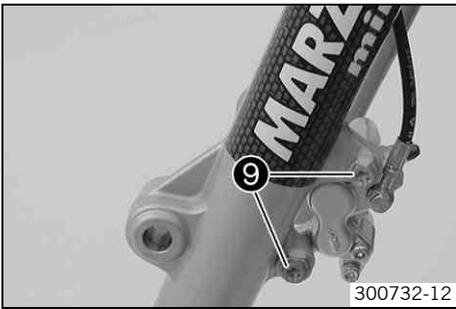
- Mount and tighten screws 7.

Guideline

Screw, handlebar clamp	M8	20 Nm (14.8 lbf ft)
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- Position the fuel tank breather 8.

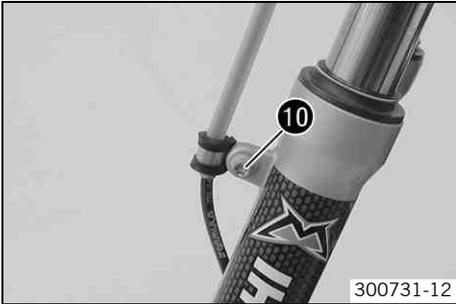




- Position the brake caliper. Mount and tighten screws 9 with the washer.

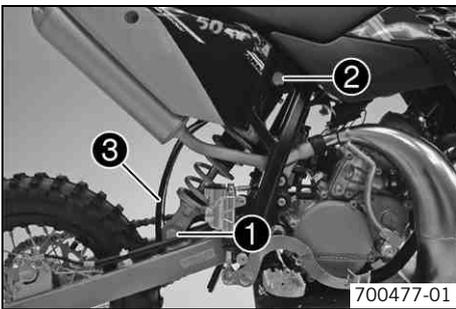
Guideline

Screw, front brake caliper	M8	20 Nm (14.8 lbf ft)	Loctite® 243™
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- Position the brake line and clamp. Mount and tighten screws 10.
- Install the front fender. (☛ p. 32)
- Install the start number plate. (☛ p. 32)
- Install the front wheel. ☛ (☛ p. 51)
- Check that the wiring harness, throttle cables and brake line have freedom of movement and are routed correctly.
- Check play of steering head bearing. (☛ p. 27)

Removing the shock absorber ☛



- Raise the motorcycle with a lift stand. (☛ p. 25)
- Remove screw 1 and lower the rear wheel with the swingarm as far as possible without blocking the rear wheel. Fix the rear wheel in this position.
- Remove screw 2, push splash protector 3 to the side, and remove the shock absorber.

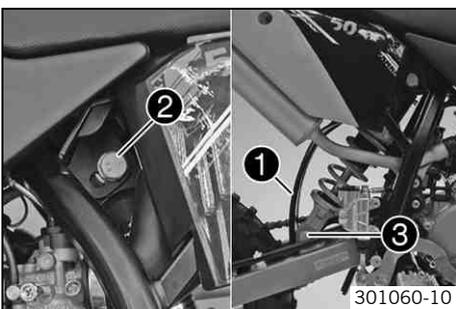
Installing shock absorber ☛



Warning

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

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



- Push the splash protector 1 to the side and position the shock absorber according to the desired seat height. Mount and tighten screw 2.

Guideline

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

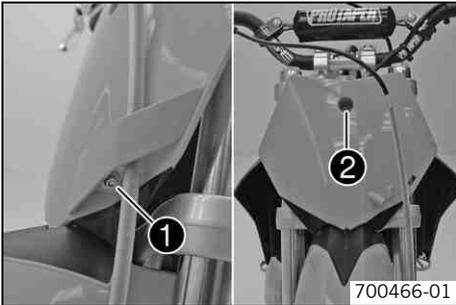
- Mount and tighten screw 3.

Guideline

Screw, bottom shock absorber	M10	45 Nm (33.2 lbf ft)
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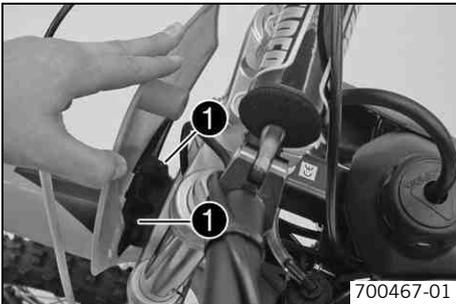
- Remove the motorcycle from the lift stand. (☛ p. 25)

Dismounting the start number plate

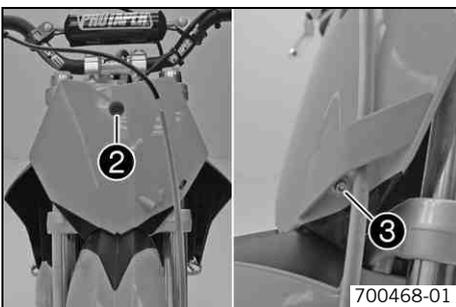


- Remove screw ❶ and take off clamp.
- Remove screw ❷. Remove the start number plate.

Installing the start number plate



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



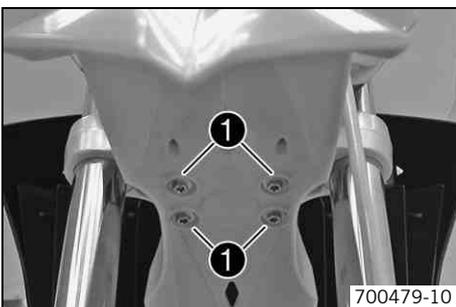
- Mount and tighten screw ❷.

Guideline

Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)
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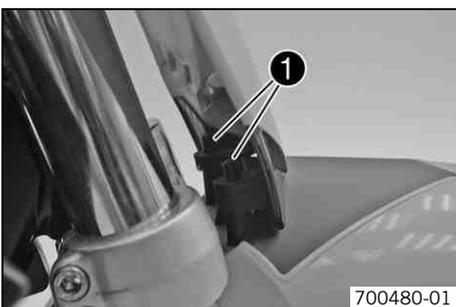
- Position the brake line. Put the clamp on, mount and tighten screw ❸.

Dismounting the front fender

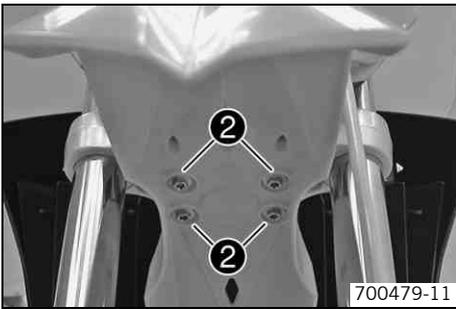


- Remove screws ❶. Remove the front fender.

Installing the front fender



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

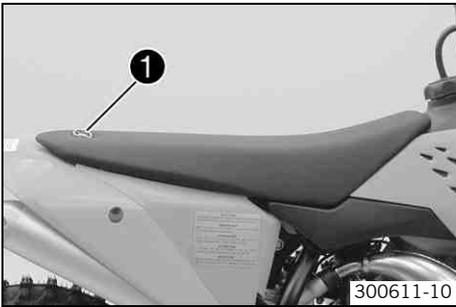


- Position the front fender. Mount and tighten screws ②.

Guideline

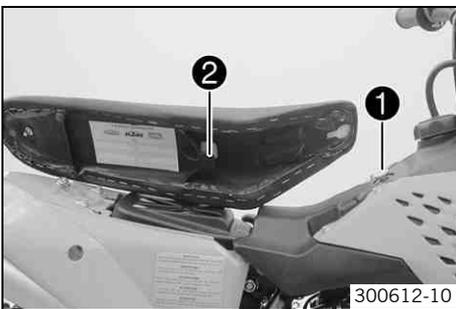
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)
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Removing the seat

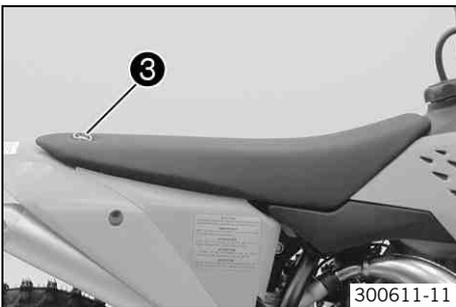


- Open quick release ① and raise the rear of the seat.
- Pull back the seat and remove it.

Mounting the seat



- Hook the seat onto screw ① and lower the seat at the rear while pushing it forward.
- ✓ Projection ② hooks into the fuel tank.



- Close quick release ③.

Removing the air filter 🛠️

Note

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

- Never ride the vehicle without an air filter since dust and dirt can get into the engine and result in increased wear.

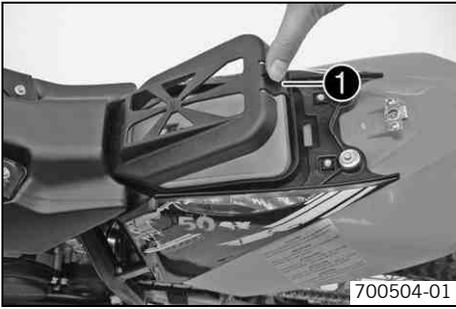


Warning

Environmental hazard Hazardous substances cause environmental damage.

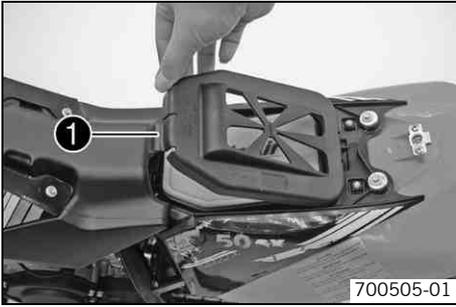
- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

- Remove the seat. (🔧 p. 33)



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

Installing the air filter 🛠️



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

i Info

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

- Mount the seat. (🔧 p. 33)

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.

i Info

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

- Remove the air filter. 🛠️ (🔧 p. 33)
- Wash the air filter thoroughly in special cleaning liquid and allow it to dry properly.

Air filter cleaner (🔧 p. 82)

i Info

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

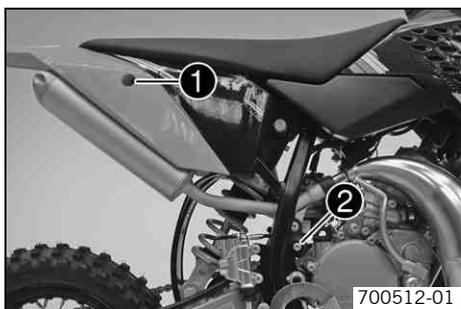
- Oil the dry air filter with a high/quality filter oil.
- Oil for foam air filter (🔧 p. 82)
- Clean the air filter box.
 - Check carburetor connection boot for damage and tightness.
 - Install the air filter. 🛠️ (🔧 p. 34)

Removing main silencer

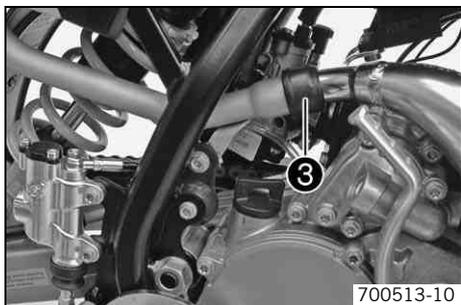
Warning

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

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

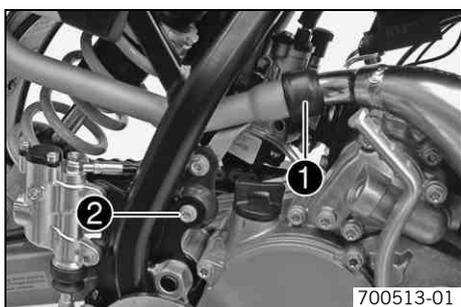


- Remove screw ❶.
- Remove screw ❷.



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

Installing the main silencer



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

Guideline

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



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

Guideline

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

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.

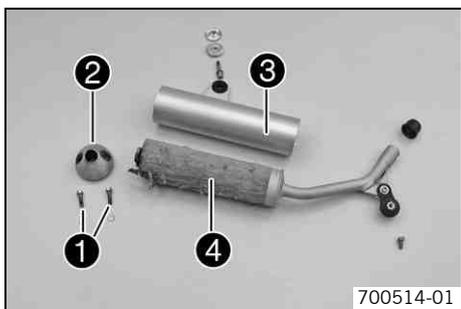
- Allow the exhaust system to cool down. Do not touch hot components.



Info

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

- Remove the main silencer. (🔧 p. 34)



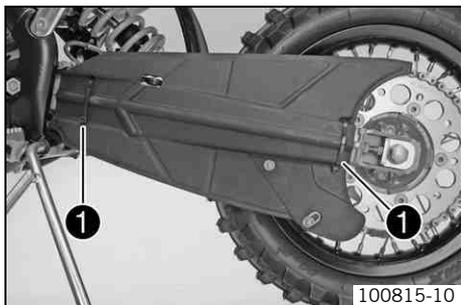
- Remove screws ❶ of locking cap ❷. Remove locking cap and outer tube ❸.
- Pull the glass fiber yarn filling ❹ from the inner tube.
- Clean the parts that are to be reinstalled.
- Mount the new glass fiber yarn filling on the inner tube.
- Slide the outer tube over the glass fiber yarn filling.
- Insert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

Guideline

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

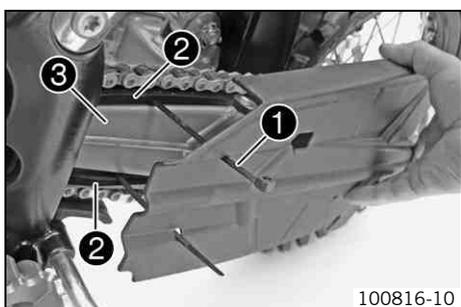
- Install the main silencer. (☛ p. 35)

Removing the chain guard (50 SX)



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

Installing the chain guard (50 SX)

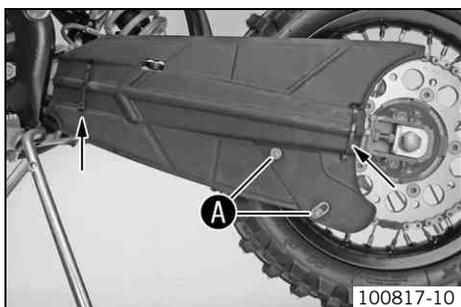


- Position the chain guard. Mount cable binder ❶.



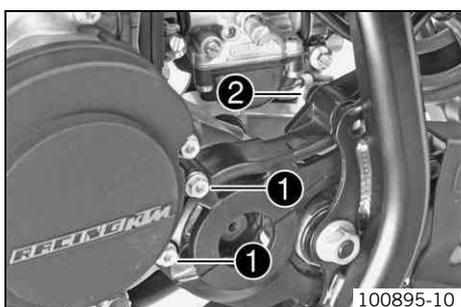
Info

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



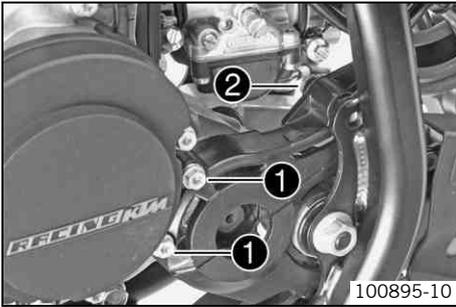
- Mount the cable binder at the rear.
- Align the chain guard so that screws A of the chain guide are visible.
- Tighten the cable binder and cut off the ends.

Removing the engine sprocket cover ☛



- Raise the motorcycle with a lift stand. (☛ p. 25)
- Remove screws ❶.
- Remove screw ❷.
- Take off the engine sprocket cover.

Installing the engine sprocket cover



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

Guideline

Screw, engine sprocket cover	M8	10 Nm (7.4 lbf ft)
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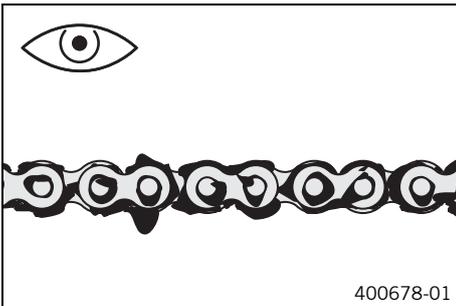
- Tighten screws ❶.

Guideline

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

- Remove the motorcycle from the lift stand. (☛ p. 25)

Checking the chain for dirt



(50 SX)

- Remove the chain guard. (☛ p. 36)
- Check the chain for coarse dirt accumulation.
 - » If the chain is very dirty:
 - Clean the chain. (☛ p. 37)

(50 SX)

- Install the chain guard. (☛ p. 36)

Cleaning the chain



Warning

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

- Remove oil and grease with a suitable cleaning material.



Warning

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

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



Warning

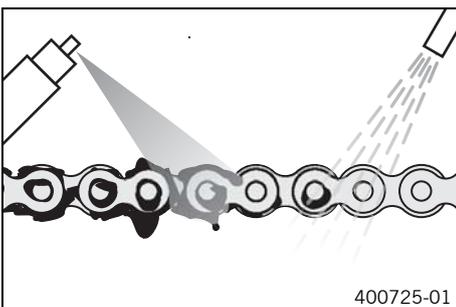
Environmental hazard Hazardous substances cause environmental damage.

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



Info

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



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

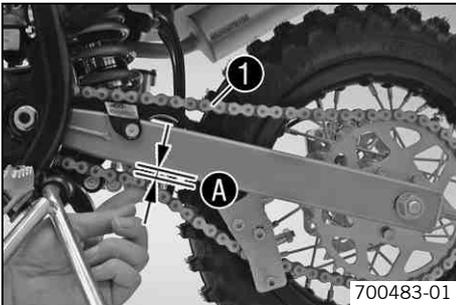
Chain cleaner (☛ p. 82)

Off-road chain spray (☛ p. 82)

Checking the chain tension

Warning
Danger of accidents Danger caused by incorrect chain tension.

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



- Raise the motorcycle with a lift stand. (☛ p. 25)

(50 SX)

- Remove the chain guard. (☛ p. 36)
- Push the chain at the end of the chain sliding component upward to measure the chain tension **A**.

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

Chain tension	5... 8 mm (0.2... 0.31 in)
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- » If the chain tension does not meet specifications:
 - Adjust the chain tension. (☛ p. 40)

(50 SX)

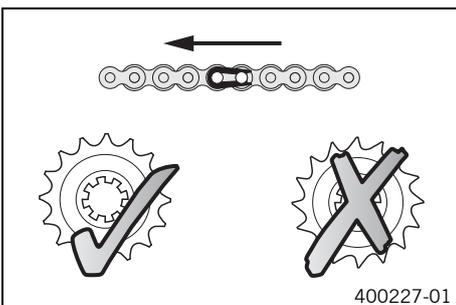
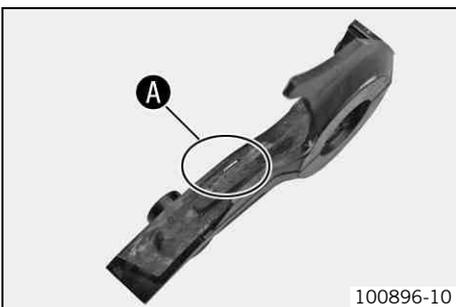
- Install the chain guard. (☛ p. 36)
- Remove the motorcycle from the lift stand. (☛ p. 25)

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

- Raise the motorcycle with a lift stand. (☛ p. 25)

(50 SX)

- Remove the chain guard. (☛ p. 36)
- Remove the engine sprocket cover. ☛ (☛ p. 36)
- Check the engine sprocket cover for wear.
 - » If the engine sprocket cover is worn through in the marked area **A**:
 - Change the engine sprocket cover. ☛

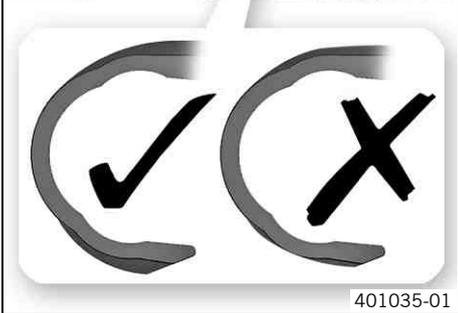


- Check the rear sprocket and engine sprocket for wear.
 - » If the rear sprocket and engine sprocket are worn:
 - Change the rear sprocket or engine sprocket. ☛

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

- Check the chain for wear.
 - » If the chain is worn:
 - Change the chain. ☛

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

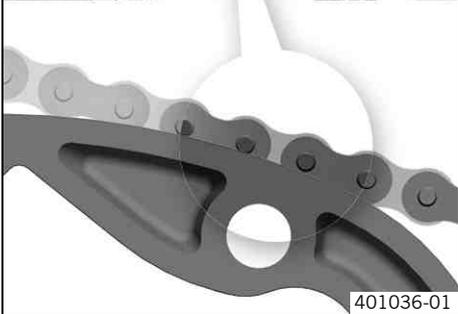


401035-01

- Check the chain sliding guard for wear.
 - » If the ridge is worn down to the level of the main corpus:
 - Change the chain sliding guard. 🛠️
- Check the chain sliding guard for tightness.
 - » If the chain sliding guard is loose:
 - Tighten the chain sliding guard.

Guideline

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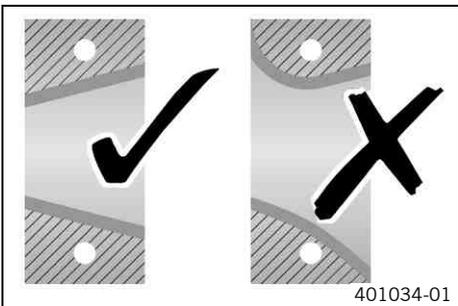


401036-01

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

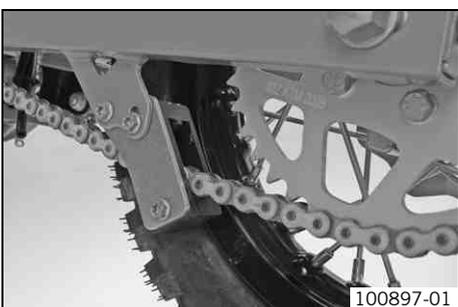
Guideline

Screw, chain sliding piece	M8	15 Nm (11.1 lbf ft)
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401034-01

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



100897-01

- 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)
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- Install the engine sprocket cover. 🛠️ (👉 p. 37)

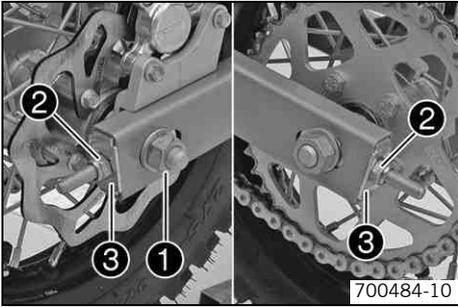
(50 SX)

- Install the chain guard. (👉 p. 36)
- Remove the motorcycle from the lift stand. (👉 p. 25)

Adjusting chain tension

Warning
Danger of accidents Danger caused by incorrect chain tension.

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



- Check the chain tension. (☛ p. 38)
- Loosen nut ①.
- Adjust the chain tension by turning adjusting screws ② left and right.

Guideline

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

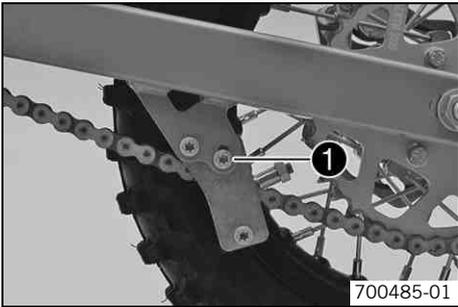
- Make sure that the chain adjuster support plates ③ are in contact with adjusting screws ②.
- Tighten nut ①.

Guideline

Nut, rear wheel spindle	M12x1	40 Nm (29.5 lbf ft)
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Adjusting the chain guide

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



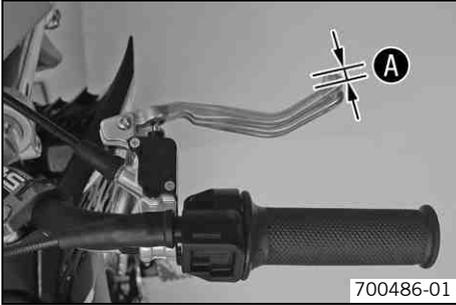
- (50 SX)
- Remove the chain guard. (☛ p. 36)
 - Loosen screw ①.
 - Position the chain guide.
 - Tighten screw.

Guideline

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

- (50 SX)
- Install the chain guard. (☛ p. 36)

Checking the play of the hand brake lever



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

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

- » If the play does not meet specifications:
 - Adjust the play of the hand brake lever. (☛ p. 41)

Adjusting the play of the hand brake lever

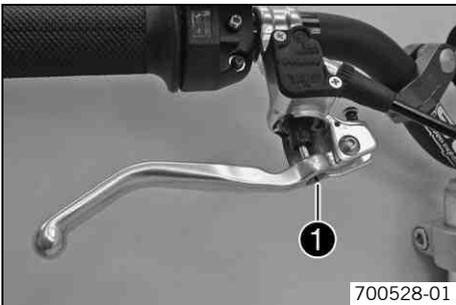


- Check the play of the hand brake lever. (☛ p. 41)
- Adjust the play of the hand brake lever with the adjusting screw **1**.

Guideline

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

Adjusting the basic position of the hand brake lever



- Check the play of the hand brake lever. (☛ p. 41)
- 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.

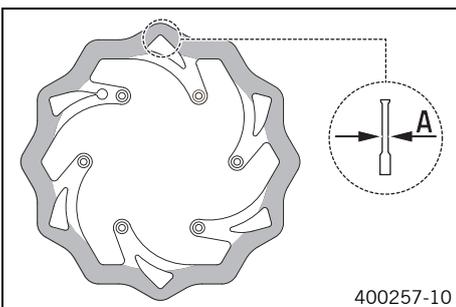
Checking brake discs



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	2.2 mm (0.087 in)
Rear	2.2 mm (0.087 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.

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 effect caused by old brake fluid.

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



Warning

Environmental hazard Hazardous substances cause environmental damage.

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

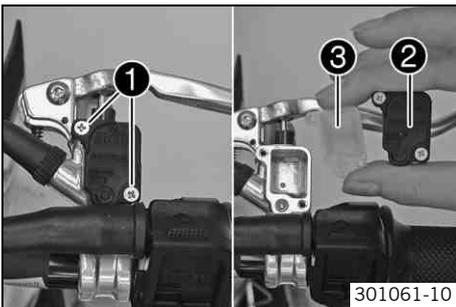


Info

Never use DOT 5 brake fluid! It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.

Avoid contact between brake fluid and painted parts. Brake fluid attacks paint!

Use only clean brake fluid from a sealed container.



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

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

» If the brake fluid level does not meet specifications:

- Add front brake fluid. ↗ (☞ p. 42)
- Position the cover with the membrane. Mount and tighten the screws.



Info

Clean up overflowed or spilt brake fluid immediately with water.

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

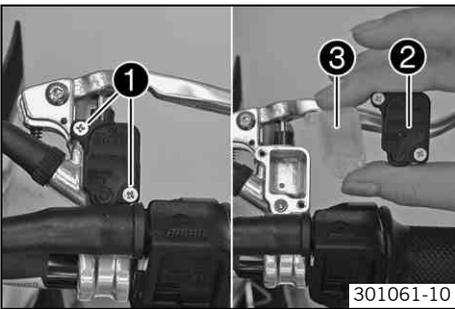
Skin irritation Brake fluid can cause skin irritation on contact.

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

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

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



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

Guideline

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

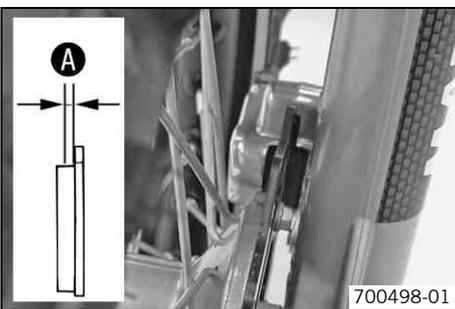
Brake fluid DOT 4 / DOT 5.1 (☞ p. 80)

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

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

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.)

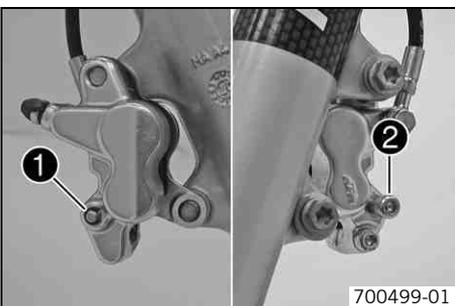


- Check the brake linings for minimum thickness **A**.

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

- » If the minimum thickness is less than specified:
 - Change the front brake linings. ☞ (☞ p. 44)
- Check the brake linings for damage and cracking.
 - » If damage or wear is encountered:
 - Change the front brake linings. ☞ (☞ p. 44)

Removing front brake linings ☞



- Remove front wheel. ☞ (☞ p. 51)
- Remove the lock washer ❶.
- Remove screw ❷.



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

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.

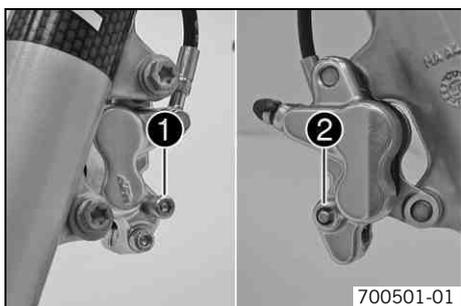


- Check the brake discs. (🔧 p. 41)
- Insert the brake linings.



Info

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



- Mount screw ❶.
- Fit the lock washer ❷.
- Install the front wheel. 🛠️ (🔧 p. 51)

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 effect caused by 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.)



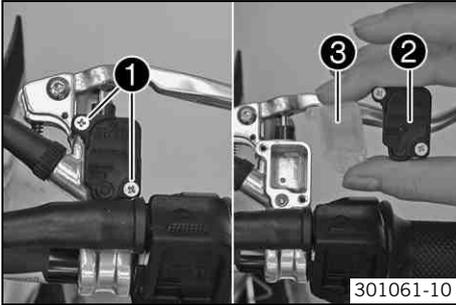
Warning

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.



- Remove the front brake linings. (p. 43)
- Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
- Remove screws ①.
- Remove cover ② with membrane ③.
- 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. 44)
- 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. 80)

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

i Info

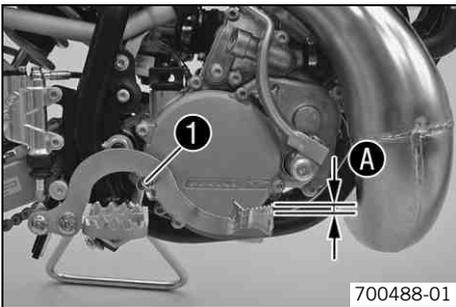
Clean up overflowed or spilt brake fluid immediately with water.

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 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 A.

Guideline

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

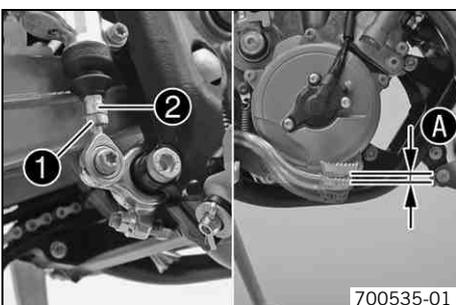
- » If the free travel does not meet specifications:
 - Adjust the free travel of the foot brake lever. (p. 45)
- Attach spring ①.

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 free travel on foot brake lever according to specifications.



- Detach the spring.
- Loosen nut ①.
- Turn push rod ② until clearance A 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.
 - » If the basic position of the foot brake lever needs to be adjusted:
 - Adjust the basic position of the foot brake lever. 🛠️ (📄 p. 46)

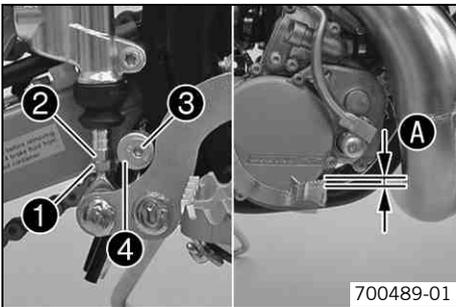
Adjusting the basic position of the foot brake lever 🛠️



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 free travel on foot brake lever according to specifications.



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

Guideline

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

- Turn push rod ❷ until clearance A is created.

Guideline

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

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

Checking rear brake fluid level



Warning

Danger of accidents Failure of the brake system.

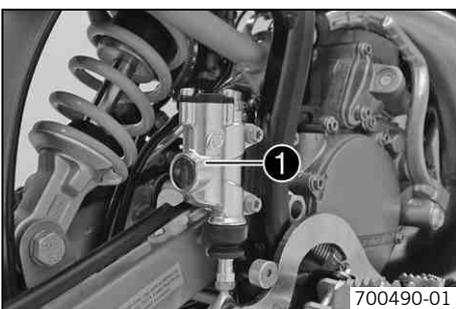
- If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)



Warning

Danger of accidents Reduced braking effect caused by 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.)

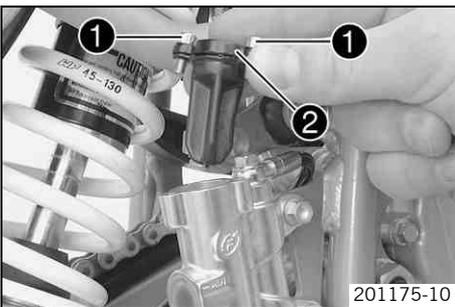


- Stand the vehicle upright.
- Check the brake fluid level in the viewer ❶.
 - » When an air bubble is visible in the viewer ❶:
 - Add rear brake fluid. 🛠️ (📄 p. 47)

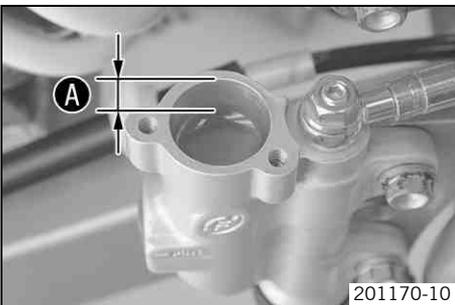
Adding rear brake fluid 🛠️

- 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 effect caused by old brake fluid.
 - Change the brake fluid of the front and rear brake according to the service schedule. (Your authorized KTM workshop will be glad to help.)
- Warning**
Environmental hazard Hazardous substances cause environmental damage.
 - Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

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



- Raise the motorcycle with a lift stand. (🔧 p. 25)
- Remove screws ①.
- Take off cover ② with washer ③ and membrane ④.



- Add brake fluid to level ①.

Guideline

Dimension ① (brake fluid level below top edge of container)	10 mm (0.39 in)
---	-----------------

Brake fluid DOT 4 / DOT 5.1 (🔧 p. 80)

- 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.

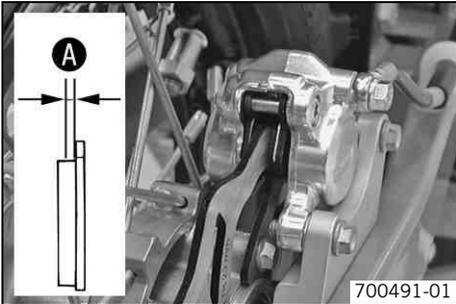
Checking the rear brake linings



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.)

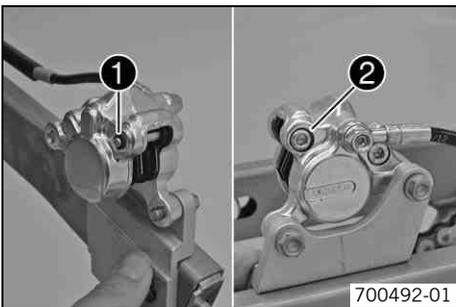


- Check the brake linings for minimum thickness **A**.

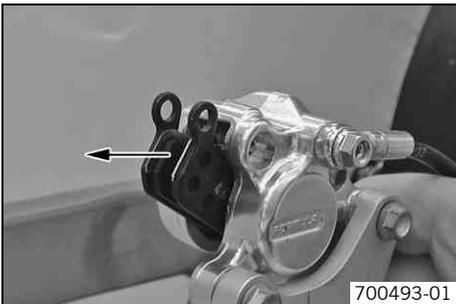
Minimum thickness A	$\geq 1 \text{ mm } (\geq 0.04 \text{ in})$
----------------------------	---

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

Removing rear brake linings



- Remove the rear wheel. (p. 51)
- Remove the lock washer **1**.
- Remove screw **2**.



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

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.

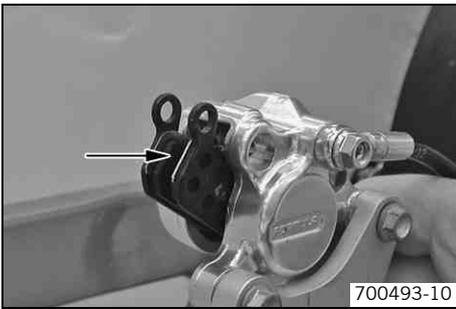


Warning

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.

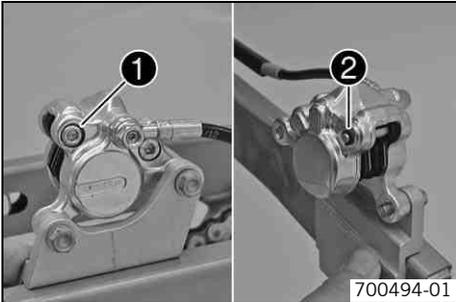
- Check the brake discs. (p. 41)



- Insert the brake linings.

**Info**

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



- Mount screw ❶.
- Fit the lock washer ❷.
- Install the rear wheel. 🛠️ (📄 p. 52)

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 effect caused by 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.

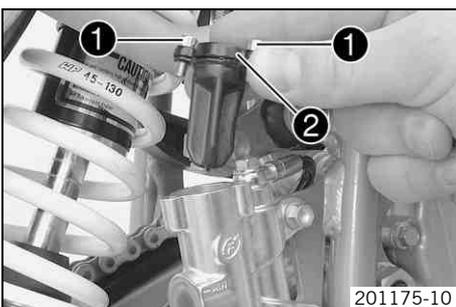
- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

**Info**

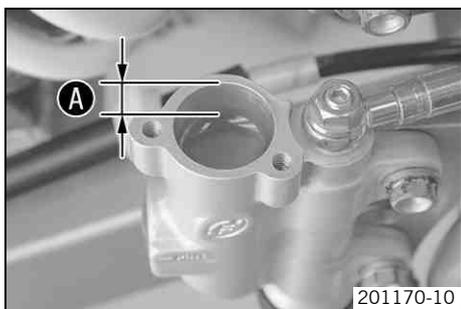
Never use DOT 5 brake fluid! It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.

Avoid contact between brake fluid and painted parts. Brake fluid attacks paint!

Use only clean brake fluid from a sealed container.



- Remove the rear brake linings. 🛠️ (📄 p. 48)
- 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. 48)



- 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. 80)

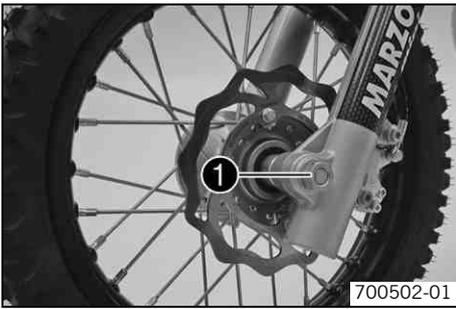
- Position the membrane and the cover with the washer. Mount and tighten the screws.



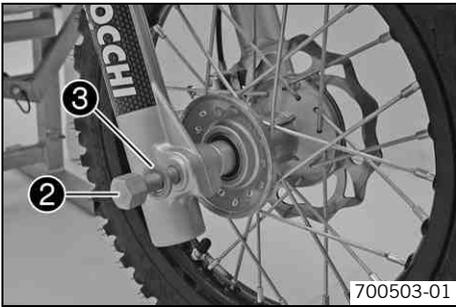
Info

Clean up overflowed or spilt brake fluid immediately with water.

Removing front wheel



- Raise the motorcycle with a lift stand. (☛ p. 25)
- Remove nut ❶ with washer.



- Hold the front wheel and pull out the wheel spindle ❷ with the washer ❸. Take the front wheel out of the fork.

i 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.

Installing the front wheel



Warning

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

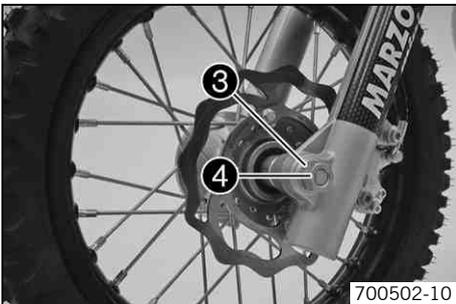
- Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.



- 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. 82)

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



- Position washer ❸.
- Mount and tighten nut ❹.

Guideline

Front wheel spindle nut	M12x1	40 Nm (29.5 lbf ft)
-------------------------	-------	------------------------

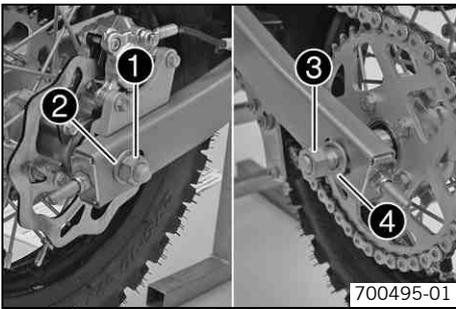
- Remove the motorcycle from the lift stand. (☛ p. 25)
- Operate the hand brake lever several times until the brake linings are in contact with the brake disc.

Removing rear wheel

- Raise the motorcycle with a lift stand. (☛ p. 25)

(50 SX)

- Remove the chain guard. (☛ p. 36)



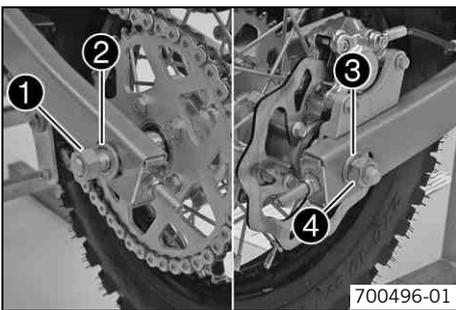
- Remove nut ❶.
- Remove the washer ❷.
- Pull out the wheel spindle ❸ with the washer ❹.
- Remove the chain from the rear sprocket.
- Take the rear wheel out of the swing arm.

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.

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.



- 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. 82)

- Lift the rear wheel into the swingarm and place the chain on the rear sprocket.
- Insert the wheel spindle ❶ with the washer ❷.
- Position washer ❸. Mount nut ❹, but do not tighten it yet.
- Make sure that the chain adjuster supports are fitted correctly on the adjusting screws.
- Check the chain tension. (↩ p. 38)
- Tighten nut ❹.

Guideline

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

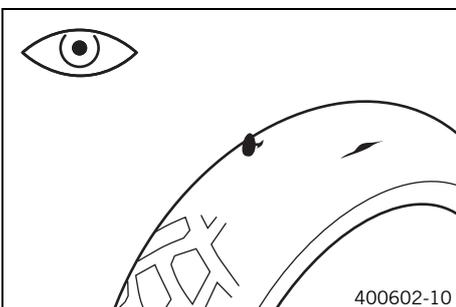
- Operate the foot brake lever repeatedly until the brake linings lie on the brake disc and there is a pressure point.

(50 SX)

- Install the chain guard. (↩ p. 36)
- Remove the motorcycle from the lift stand. (↩ p. 25)

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 vehicle handling.
The type, condition and air pressure of the tires all have an important impact on the handling characteristics of the motorcycle.
The tires mounted on the front and rear wheels must have the same profile.
Worn tires have a negative effect on vehicle handling, 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.



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 regardless of the actual wear, at the latest after 5 years.

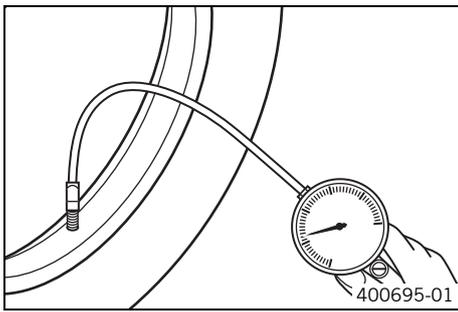
- » If a tire is more than 5 years old:
 - Change the tires.

Checking tire air pressure



Info

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



- Remove the dust 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 dust cap.

Checking spoke tension



Warning

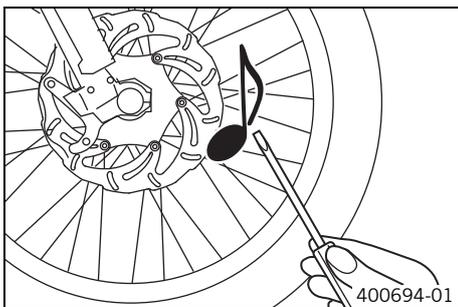
Danger of accidents Instable handling due to incorrect spoke tension.

- 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.

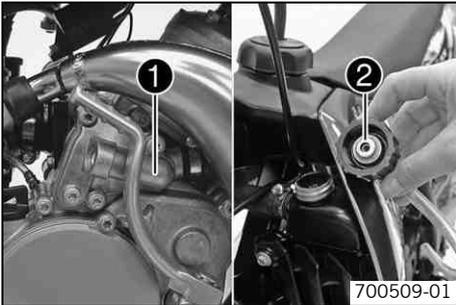
- » If the spoke tension differs:
 - Correct the spoke tension. 🛠️
- Check the spoke torque.

Guideline

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

Torque wrench with various accessories in set (58429094000)

Cooling system



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

120 °C (248 °F)

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

Checking the antifreeze and coolant level



Warning

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

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



Warning

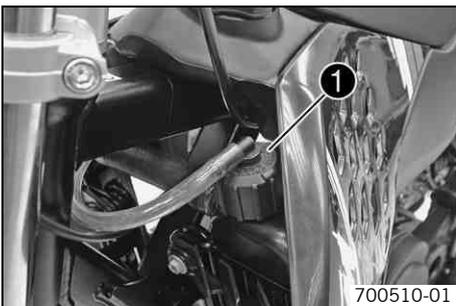
Danger of poisoning Coolant is poisonous and a health hazard.

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



Info

Carry out this work with a cold engine.



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

-25... -45 °C (-13... -49 °F)

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

- Check the coolant level in the radiator.

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

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

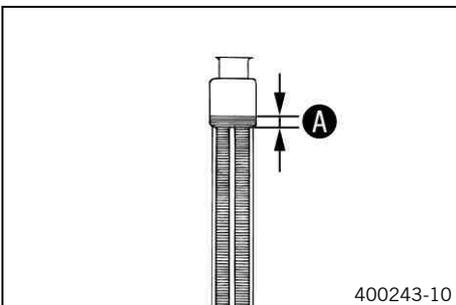
Alternative 1

Coolant (☞ p. 80)

Alternative 2

Coolant (mixed ready to use) (☞ p. 80)

- Mount the radiator cap.



Checking the coolant level



Warning

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

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



Warning

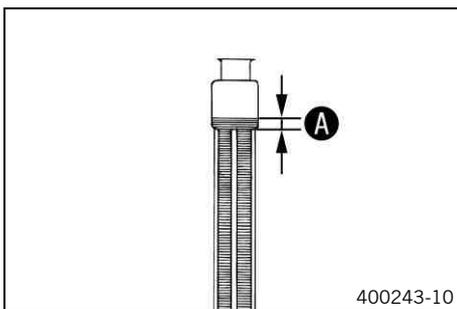
Danger of poisoning Coolant is poisonous and a health hazard.

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



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 A 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. 80)

Alternative 2

Coolant (mixed ready to use) (☛ p. 80)
--

- Mount the radiator cap.

Draining the coolant ☛



Warning

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

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



Warning

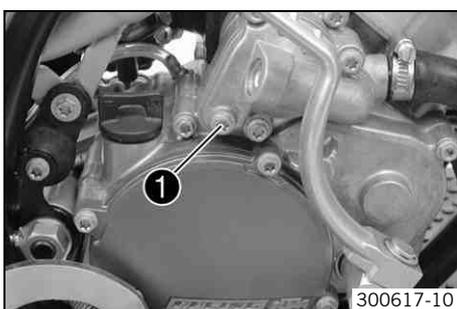
Danger of poisoning Coolant is poisonous and a health hazard.

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



Info

Carry out this work with a cold engine.



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

Guideline

Screw, water pump cover	M6	10 Nm (7.4 lbf ft)
-------------------------	----	--------------------

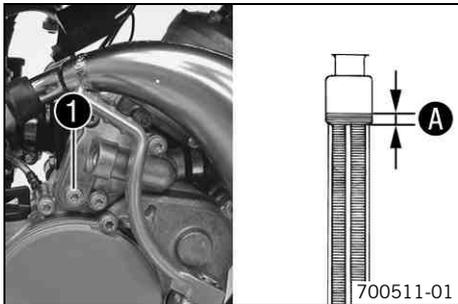
Refilling coolant



Warning

Danger of poisoning Coolant is poisonous and a health hazard.

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

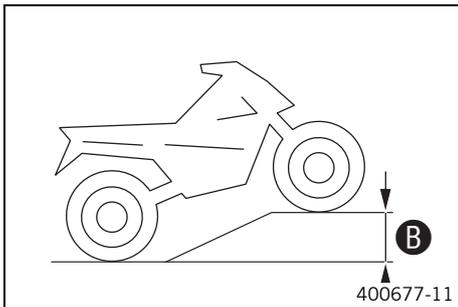


- Make sure that the screw ❶ is tightened.
- Stand the vehicle upright.
- Add coolant to level ❶.

Guideline

Level ❶ above the radiator fins	10 mm (0.39 in)
---------------------------------	-----------------

Coolant	0.5 l (0.5 qt.)	Coolant ( p. 80)
		Coolant (mixed ready to use) ( p. 80)



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

Guideline

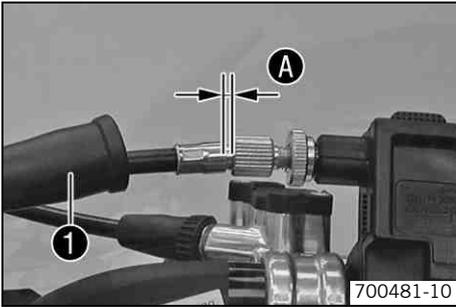
Height difference ❷	100 cm (39.4 in)
---------------------	------------------

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 ❶.
- Mount the radiator cap.
- Make a short test ride.
- Check the coolant level. ( p. 55)

Checking the play in the throttle cable

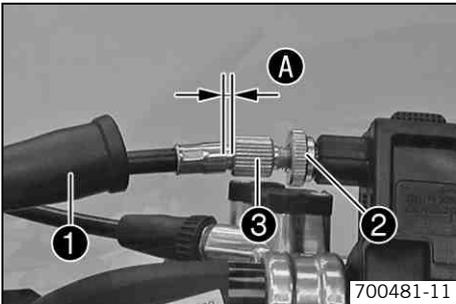


- Move the handlebar to the straight-ahead position.
- Push back bellows ❶.
- Pull back the throttle cable casing until you sense a resistance.
- Now check throttle cable play ❷.

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. 57)
- Slide on sleeve ❶. Check the throttle grip for smooth operation.

Adjusting the play in the throttle cable 🛠️



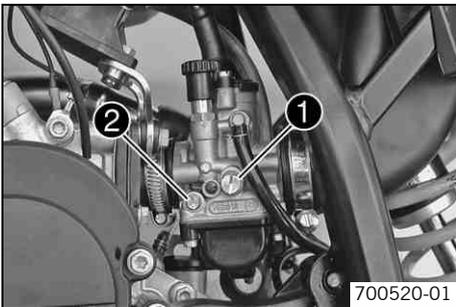
- Move the handlebar to the straight-ahead position.
- Push back bellows ❶.
- Loosen nut ❷. Turn adjusting screw ❸ in as far as possible.
- Turn the adjusting screw so that there is play ❷ at the outer casing of the throttle cable.

Guideline

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

- Tighten the nut.
- Slide on sleeve ❶. Check the throttle grip for smooth operation.

Carburetor - idle (50 SX)

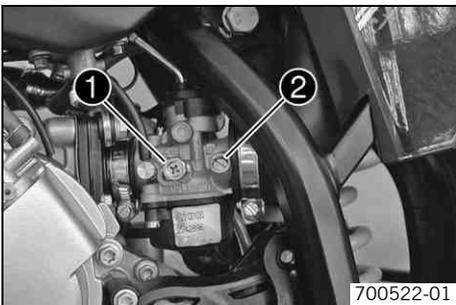


The idle setting of the carburetor has a big influence on the starting behavior, stable idling and the response to throttle opening. That means that an engine with a correctly set idle speed is easier to start than if the idle is set wrongly.

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

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

Carburetor - idle (50 SX Mini)

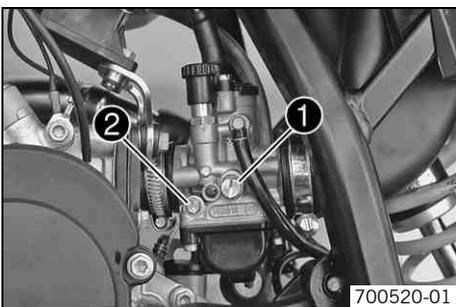


The idle setting of the carburetor has a big influence on the starting behavior, stable idling and the response to throttle opening. That means that an engine with a correctly set idle speed is easier to start than if the idle is set wrongly.

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

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

Carburetor - adjusting idle speed 🛠️ (50 SX)



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

Guideline

Idle mixture adjusting screw	
Open	3 turns

- Run the engine until warm.

Guideline

Warm-up time	≥ 5 min
--------------	---------



Danger

Danger of poisoning Exhaust gases are poisonous 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 ❶.

Guideline

Choke function deactivated – Choke knob is in lower position. No O-ring is visible. (☛ p. 11)

Idle speed	1,400... 1,500 rpm
------------	--------------------

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



Info

If the speed rise is too high, reduce the idle speed to a normal level and repeat the preceding steps.

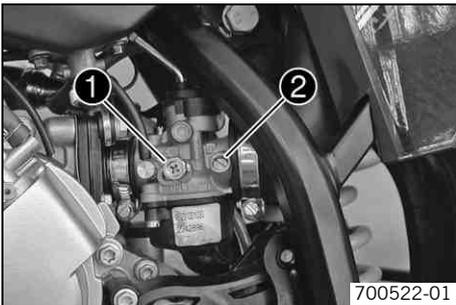
If the procedure described here does not lead to satisfactory results, the cause may be a wrongly dimensioned idling jet.

If you can turn the idle adjusting screw to the end without any change of engine speed, you have to install a smaller idling jet.

After changing the idling jet, start from the beginning with the adjusting steps.

Following extreme air temperature or altitude changes, adjust the idle speed again.

Carburetor - adjusting idle ☞ (50 SX Mini)



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

Guideline

Idle air adjusting screw	
Open	1 turn

- Run the engine until warm.

Guideline

Warm-up time	≥ 5 min
--------------	---------



Danger

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

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

- Adjust the idle speed with adjusting screw ❶.

Guideline

Choke function deactivated – The choke lever is pushed down all the way. (☛ p. 11)

Idle speed	1,400... 1,500 rpm
------------	--------------------

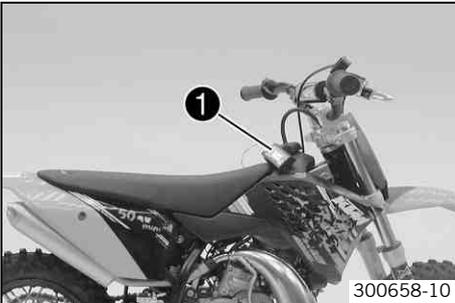
- Turn idle air adjusting screw ❷ slowly in a clockwise direction until the idle speed begins to fall.
- Note the position and turn the idle air adjusting screw slowly counterclockwise until the idle speed falls again.
- Adjust to the point between these two positions with the highest idle speed.



Info

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

Checking clutch engagement speed



- Connect special tool ❶.

Tachometer (45129075000)



Danger

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

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

- Start the motorcycle.
- Slowly increase engine speed until the clutch begins to engage.
- Measure the engine speed.

Clutch engagement speed	7,200... 7,500 rpm
-------------------------	--------------------

- » If the specified value is not reached:
 - Adjust the clutch engagement speed. (p. 59)

Adjusting the clutch engagement speed



Info

All clutch springs on a vehicle must be marked with the same color.

- Check the clutch engagement speed. (p. 59)
- Remove the centrifugal force clutch. (p. 60)
- Dismantle the centrifugal clutch. (p. 62)

Clutch spring with green mark

- Correct washer ❷ according to the measured value.

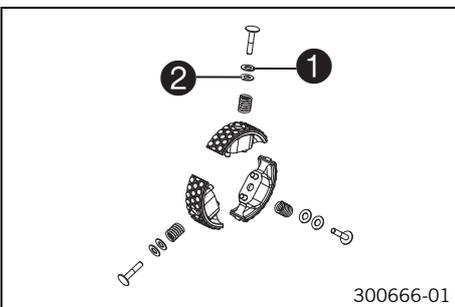
Guideline

A washer of 0.2 mm (0.008 in) changes the clutch engagement speed by about:	100 rpm
---	---------



Info

Spacer washer ❶ of 1.2 mm (0.047 in) must always be fitted.
 If you fit washer ❷, the clutch engagement speed is increased.
 If you remove washer ❷, the clutch engagement speed is reduced.

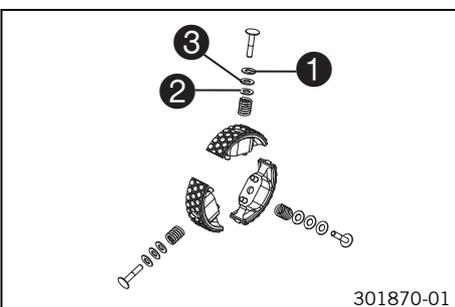


Clutch spring with yellow mark

- Correct washer ❸ according to the measured value.

Guideline

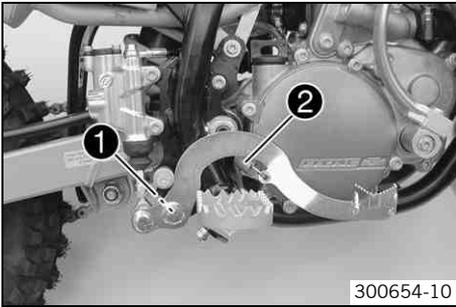
A washer of 0.2 mm (0.008 in) changes the clutch engagement speed by about:	100 rpm
---	---------



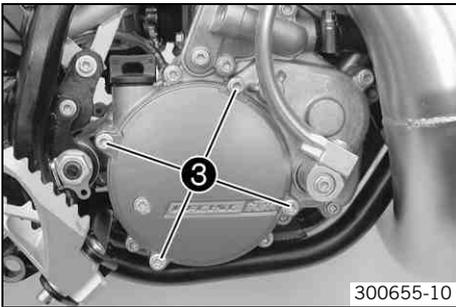
i Info
 Spacer washer ❶ of 1.7 mm (0.067 in) and spacer washer ❸ of 0.5 mm (0.02 in) must always be fitted.
 If you fit washer ❷, the clutch engagement speed is increased.
 If you remove washer ❷, the clutch engagement speed is reduced.

- Assemble the centrifugal clutch. 🛠️ (📖 p. 62)
- Install the centrifugal force clutch. 🛠️ (📖 p. 61)
- Check the clutch engagement speed. 🛠️ (📖 p. 59)

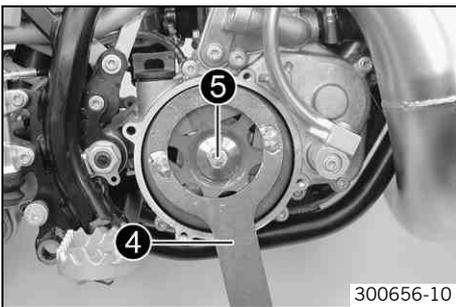
Removing the centrifugal force clutch 🛠️



- Remove nut ❶.
- Disconnect spring ❷.
- Take off the foot brake lever.



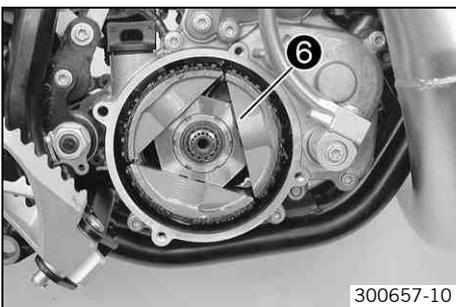
- Lay the motorcycle on its side.
- Remove screws ❸.
- Take off the clutch cover.



- Hold the clutch drum with the special tool ❹.

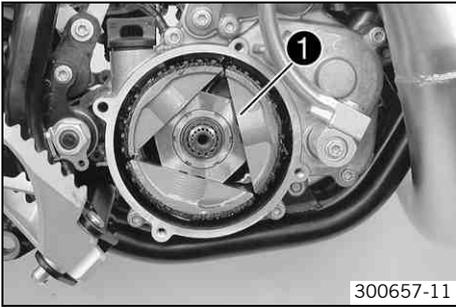
Holding spanner (54629012100)

- Remove screw ❺.
- Take off the clutch cover.

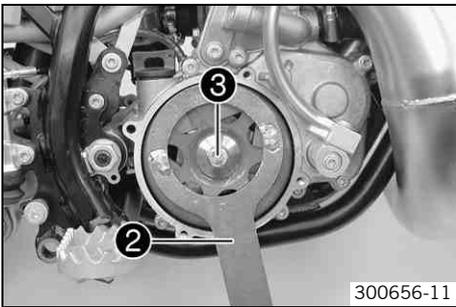


- Take off the centrifugal clutch ❻.

Installing the centrifugal force clutch



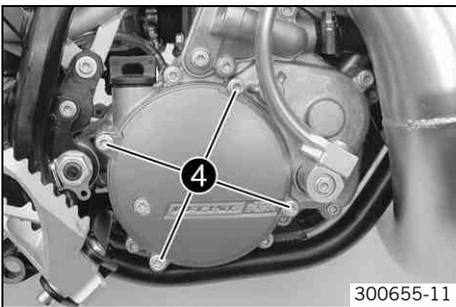
- Position the centrifugal force clutch ❶.



- Position the clutch drum.
- Hold the clutch drum with special tool ❷.
- Mount and tighten screw ❸.

Guideline

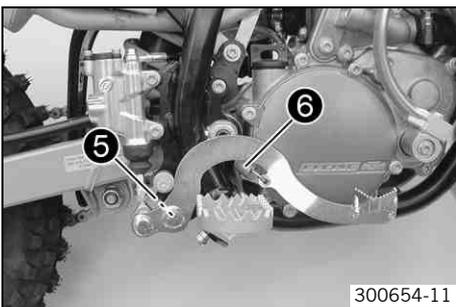
Screw, clutch drum	M8	30 Nm (22.1 lbf ft)	Loctite® 243™
--------------------	----	------------------------	---------------



- Position the clutch cover with the gasket.
- Mount and tighten screws ❹.

Guideline

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



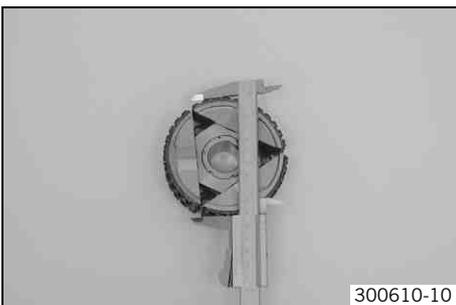
- Position the foot brake lever.
- Mount and tighten nut ❺.

Guideline

Remaining nuts, chassis	M8	30 Nm (22.1 lbf ft)	
-------------------------	----	------------------------	--

- Mount spring ❻.
- Check the gear oil level. (☞ p. 65)
- Check the clutch engagement speed. ☞ (☞ p. 59)

Checking the centrifugal force clutch



Condition

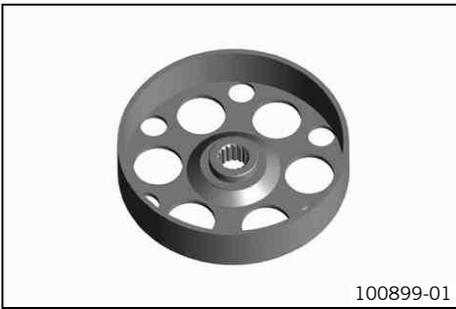
The centrifugal clutch has been removed.

- Measure the centrifugal force clutch.

Guideline

Clutch shoe height	≥ 98.00 mm (≥ 3.8583 in)
--------------------	--------------------------

- » If the specified value is not reached:
 - Replace the clutch linings.
- Dismantle the centrifugal clutch. ☞ (☞ p. 62)
- Check clutch linings for damage.
 - » If the clutch linings are damaged:
 - Replace the clutch linings.
- Assemble the centrifugal clutch. ☞ (☞ p. 62)



- Check the clutch drum for damage and wear.
 - » If the clutch drum is damaged or worn:
 - Change the clutch drum.

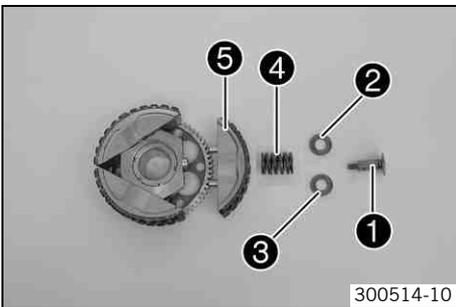
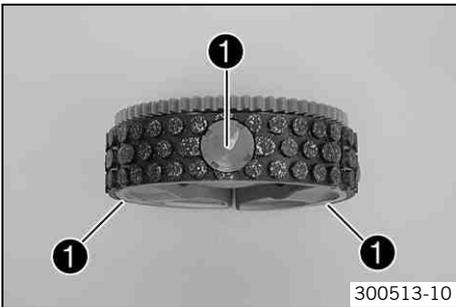
Dismantling centrifugal clutch

Condition

Centrifugal clutch removed.

- Loosen screws ❶ with special tool.

Mortise key (45229021000)



Clutch spring with green mark

- Remove screw ❶ with spacing washer ❷ and spring ❹.

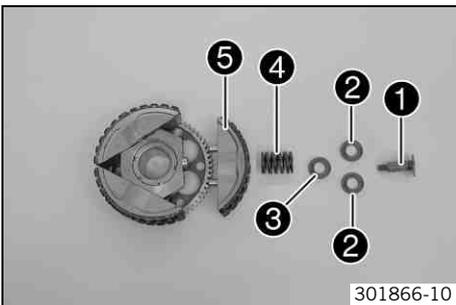


Info

Washer ❸ is used for adjusting the clutch engagement speed and does not have to be fitted.

All clutch springs must be marked with the same color.

- Remove clutch shoe ❶.
- Repeat these steps on the other clutch shoes.



Clutch spring with yellow mark

- Remove screw ❶ with spacing washers ❷ and spring ❹.



Info

Washer ❸ is used for adjusting the clutch engagement speed and does not have to be fitted.

All clutch springs must be marked with the same color.

- Remove clutch shoe ❶.
- Repeat these steps on the other clutch shoes.

Assembling centrifugal clutch

Condition

Centrifugal clutch removed.

Clutch spring with green mark

- Position the clutch shoe ❶.
- Fit screw ❷ with spacing washer ❸ and spring ❹.

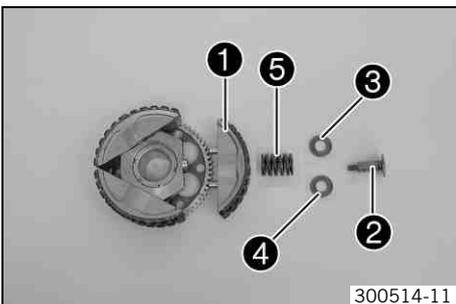


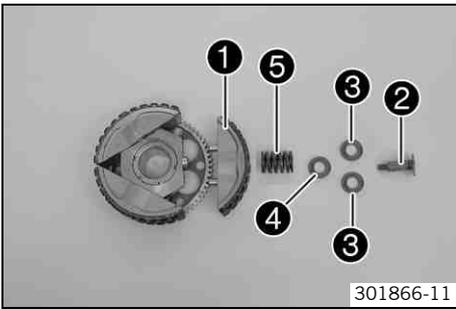
Info

Washer ❹ is used for adjusting the clutch engagement speed and must be fitted consistently on all clutch shoes depending on the clutch engagement speed.

All clutch springs must be marked with the same color.

- Repeat these steps on the other clutch shoes.





Clutch spring with yellow mark

- Position the clutch shoe ①.
- Fit screw ② with spacing washers ③ and spring ⑤.



Info

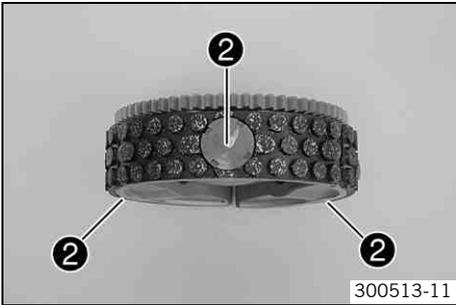
Washer ④ is used for adjusting the clutch engagement speed and must be fitted consistently on all clutch shoes depending on the clutch engagement speed.
All clutch springs must be marked with the same color.

- Repeat these steps on the other clutch shoes.
- Tighten screws ② with special tool.

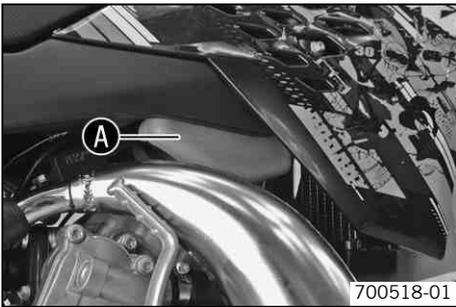
Guideline

Screw, clutch spring	M6	7 Nm (5.2 lbf ft)
----------------------	----	-------------------

Mortise key (45229021000)



Checking oil level (50 SX Mini)



- Stand the motorcycle upright on a horizontal surface.
- Check the oil level in the oil tank.

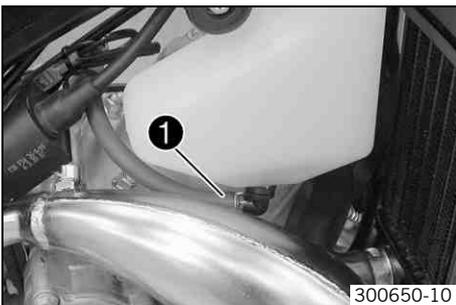
For a full fuel tank, the oil tank must be filled up to **MIN** mark **A** at a minimum.

- » If the oil level does not meet specifications:
 - Fill up with oil. (☛ p. 17)

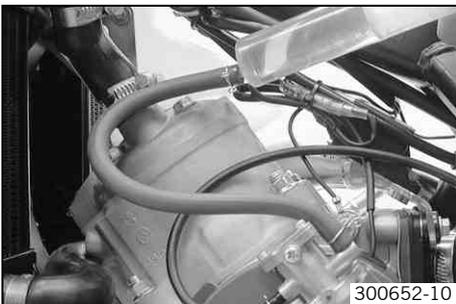
Bleeding the oil pump (50 SX Mini)

Condition

The fuel tank has been removed.

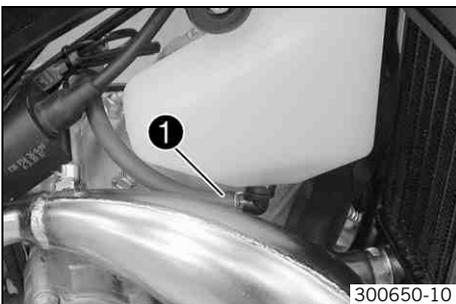


- Pull off oil line **1**.

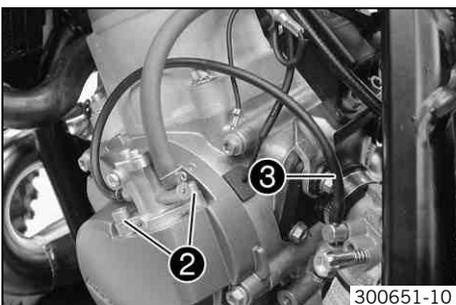


- Fill the oil line with a syringe.

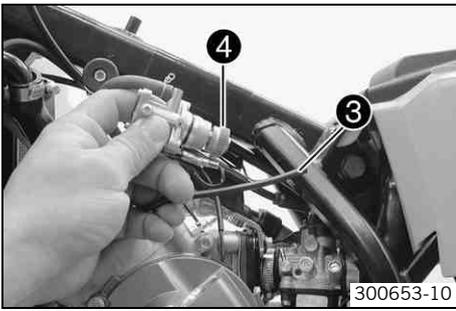
2-stroke engine oil (☛ p. 80)



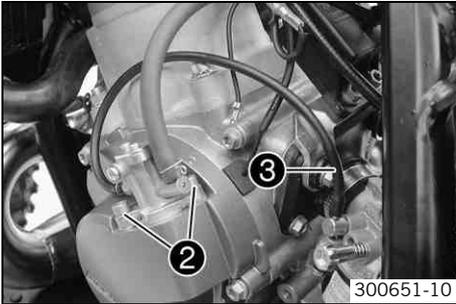
- Connect oil line **1**.



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



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



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

Guideline

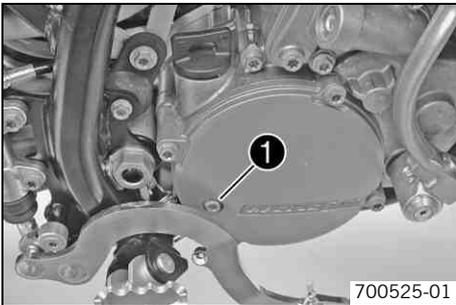
Screw, oil pump	M5	6 Nm (4.4 lbf ft)
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Checking the gear oil level

Condition

The engine is cold.

- Stand the motorcycle upright on a horizontal surface.
- Remove gear oil level check screw ①.
- Check the gear oil level.



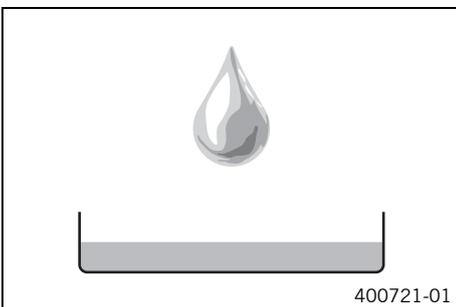
A small amount of gear oil should flow out.

- » If no gear oil flows out:
 - Add gear oil. 🛠️ (📄 p. 66)
- Mount and tighten the gear oil level check screw.

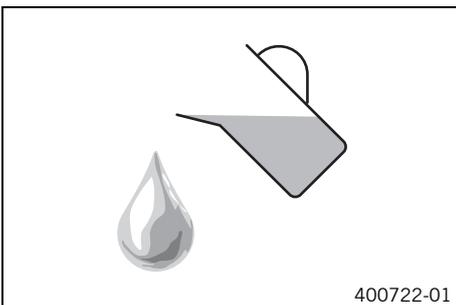
Guideline

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



- Drain the gear oil. 🛠️ (📄 p. 66)



- Fill up with gear oil. 🛠️ (📄 p. 66)

Draining the gear oil

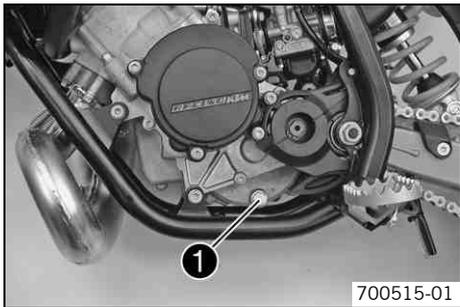
Warning
Danger of scalding Engine oil and gear oil get very hot when the motorcycle is ridden.

- 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
 Drain the gear oil only when the engine is warm.



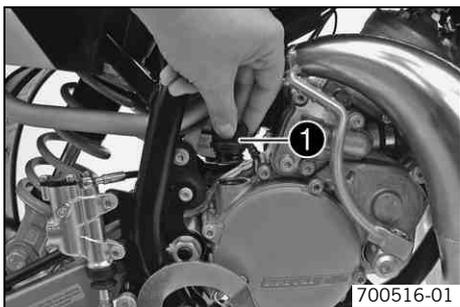
- Stand the motorcycle on its side stand on a horizontal surface.
- Place a suitable container under the engine.
- Remove the oil drain plug with magnet ❶.
- Completely drain the gear oil.
- Thoroughly clean the oil drain plug with magnet.
- Clean the sealing area on the engine.
- Mount and tighten the oil drain plug with magnet and seal ring.

Guideline

Oil drain plug with magnet	M12x1.5	20 Nm (14.8 lbf ft)
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Filling up with gear oil

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



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

Gear oil	0.20 l (0.21 qt.)	Gear oil (ATF Dexron 3) ( p. 80)
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- Mount and tighten screw cap.

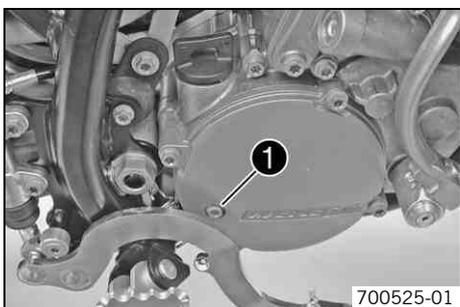
Danger
Danger of poisoning Exhaust gases are poisonous and inhaling them may result in unconsciousness and/or death.

- 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.

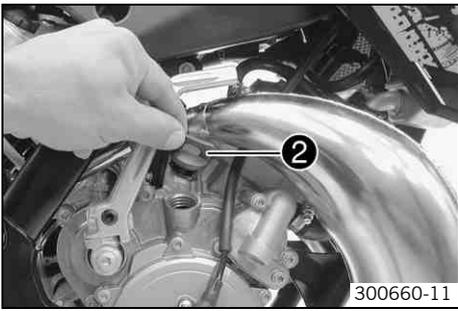
- Start the engine and check that it is oil-tight.
- Check the gear oil level. ( p. 65)

Adding gear oil

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



- Remove gear oil level check screw ❶.



- Remove screw cap ②. Position the motorcycle upright.
- Add gear oil until it flows out of the bore of the gear oil level screw.

Gear oil (ATF Dexron 3) (☛ p. 80)

- Mount and tighten the gear oil level check screw.

Guideline

Screw, gear oil level check	M6	6 Nm (4.4 lbf ft)
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- Mount and tighten screw cap ②.



Danger

Danger of poisoning Exhaust gases are poisonous 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.

Cleaning motorcycle

Note

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

- Never clean the vehicle with high-pressure cleaning equipment or a strong water-jet. The excessive pressure can penetrate electrical components, socket connects, throttle cables, and bearings, etc., and can damage 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. 82)

Info

Use warm water containing normal motorcycle cleaner and a soft sponge.

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

Warning

Danger of accidents Reduced braking efficiency due to wet or dirty brakes.

- Clean or dry dirty or wet brakes by riding and braking gently.

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

Info

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

- Push back the protection covers on the handlebar controls to allow water to evaporate.
- After the motorcycle has cooled off, lubricate all moving parts and bearings.
- Clean the chain. (☛ p. 37)
- Treat bare metal parts (except for brake discs and exhaust system) with anti-corrosion materials.

Cleaning and preserving materials for metal, rubber and plastic (☛ p. 82)

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

Cleaning and preserving materials for metal, rubber and plastic (☛ p. 82)

Storage



Warning

Danger of poisoning Fuel is poisonous and a health hazard.

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



Info

If you want to put the motorcycle into storage for a longer period, take the following actions.

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

- Clean the motorcycle. (🔧 p. 68)
- Change the gear oil. 🛢️ (🔧 p. 65)
- Check the antifreeze and coolant level. (🔧 p. 54)
- Drain the fuel from the tank into a suitable container.
- Check the tire air pressure. (🔧 p. 53)
- 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. 25)
- 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.

Putting into operation after storage

- Remove the motorcycle from the lift stand. (🔧 p. 25)
- Fill up with fuel. (🔧 p. 17)
- Perform checks and maintenance measures when preparing the motorcycle for use. (🔧 p. 15)
- Take a test ride.

Faults	Possible cause	Action
Engine turns but does not start	Operating error	<ul style="list-style-type: none"> Go through the steps of starting the engine. (☛ p. 15)
	Motorcycle was out of use for a long time and there is old fuel in the float chamber	<ul style="list-style-type: none"> Empty the carburetor float chamber. ☛
	Fuel feed interrupted	<ul style="list-style-type: none"> Check the fuel tank breather. Clean the fuel tap. <p>(50 SX Mini)</p> <ul style="list-style-type: none"> Check/set the carburetor components. ☛ <p>(50 SX)</p> <ul style="list-style-type: none"> Check/set the carburetor components. ☛
	Spark plug oily or wet	<ul style="list-style-type: none"> Clean and dry the spark plug, or change it if necessary.
	Electrode distance (plug gap) of spark plug too wide	<ul style="list-style-type: none"> Adjust the plug gap. <p>Guideline Spark plug electrode gap 0.60 mm (0.0236 in)</p>
	Fault in ignition system	<ul style="list-style-type: none"> Check the ignition system. ☛
	Short circuit cable in wiring harness frayed, kill switch defective	<ul style="list-style-type: none"> Check the kill switch. ☛
	Socket connector or ignition coil is loose or oxidized	<ul style="list-style-type: none"> Clean the socket connector and treat it with contact spray.
Engine has no idle	Water in carburetor or jets blocked	<p>(50 SX Mini)</p> <ul style="list-style-type: none"> Check/set the carburetor components. ☛ <p>(50 SX)</p> <ul style="list-style-type: none"> Check/set the carburetor components. ☛
	Idling jet blocked	<p>(50 SX Mini)</p> <ul style="list-style-type: none"> Check/set the carburetor components. ☛ <p>(50 SX)</p> <ul style="list-style-type: none"> Check/set the carburetor components. ☛
	Adjusting screws on carburetor distorted	<p>(50 SX Mini)</p> <ul style="list-style-type: none"> Carburetor - adjust the idle speed. ☛ (☛ p. 58) <p>(50 SX)</p> <ul style="list-style-type: none"> Carburetor - adjust the idle speed. ☛ (☛ p. 57)
	Spark plug defective	<ul style="list-style-type: none"> Change spark plug.
Engine does not speed up	Ignition system defective	<ul style="list-style-type: none"> Check the ignition coil. ☛ Check the spark plug connector. ☛
	Carburetor running over because float needle dirty or worn	<p>(50 SX Mini)</p> <ul style="list-style-type: none"> Check/set the carburetor components. ☛ <p>(50 SX)</p> <ul style="list-style-type: none"> Check/set the carburetor components. ☛
	Loose carburetor jets	<p>(50 SX Mini)</p> <ul style="list-style-type: none"> Check/set the carburetor components. ☛ <p>(50 SX)</p> <ul style="list-style-type: none"> Check/set the carburetor components. ☛
Engine has too little power	Fault in ignition system	<ul style="list-style-type: none"> Check the ignition system. ☛
	Fuel feed interrupted	<ul style="list-style-type: none"> Check the fuel tank breather. Clean the fuel tap. <p>(50 SX Mini)</p> <ul style="list-style-type: none"> Check/set the carburetor components. ☛ <p>(50 SX)</p> <ul style="list-style-type: none"> Check/set the carburetor components. ☛
	Air filter very dirty	<ul style="list-style-type: none"> Clean the air filter and air filter box. ☛ (☛ p. 34)

Faults	Possible cause	Action
Engine has too little power	Exhaust system leaky, deformed or too little glass fiber yarn filling in main silencer	<ul style="list-style-type: none"> - Check exhaust system for damage. - Change the glass fiber yarn filling of the main silencer. 🛠️ (📖 p. 35)
	Ignition system defective	<ul style="list-style-type: none"> - Check the ignition coil. 🛠️ - Check the spark plug connector. 🛠️
	Diaphragm or reed valve housing damaged	<ul style="list-style-type: none"> - Check the diaphragm and reed valve housing.
	Noticeable wear	<ul style="list-style-type: none"> - Overhaul the engine.
	Clutch engagement speed too low or too high	<ul style="list-style-type: none"> - Check the clutch engagement speed. 🛠️ (📖 p. 59)
Engine stalls or is popping into the carburetor	Lack of fuel	<ul style="list-style-type: none"> - Turn the knurled screw on the fuel tap all the way counterclockwise. - Fill up with fuel. (📖 p. 17)
	Engine takes in bad air	<ul style="list-style-type: none"> - Check the intake flange and carburetor for tightness.
	Socket connector or ignition coil is loose or oxidized	<ul style="list-style-type: none"> - Clean the socket connector and treat it with contact spray.
Engine overheats	Too little coolant in cooling system	<ul style="list-style-type: none"> - Check the cooling system for leakage. - Check the coolant level. (📖 p. 55)
	Too little air stream	<ul style="list-style-type: none"> - Switch off engine when standing.
	Radiator fins very dirty	<ul style="list-style-type: none"> - Clean radiator fins.
	Foam formation in cooling system	<ul style="list-style-type: none"> - Drain the coolant. 🛠️ (📖 p. 55) - Refill the coolant. 🛠️ (📖 p. 56)
	Damaged cylinder head or cylinder head gasket	<ul style="list-style-type: none"> - Check the cylinder head or cylinder head gasket.
	Bent radiator hose	<ul style="list-style-type: none"> - Change the radiator hose. 🛠️
White smoke emission (steam in exhaust gas)	Damaged cylinder head or cylinder head gasket	<ul style="list-style-type: none"> - Check the cylinder head or cylinder head gasket.
Gear oil exits at the vent hose	Too much gear oil added	<ul style="list-style-type: none"> - Check the gear oil level. (📖 p. 65)
Water in the gear oil	Damaged shaft seal ring or water pump	<ul style="list-style-type: none"> - Check the shaft seal ring and water pump.

Design	1-cylinder 2-stroke engine, water-cooled, with reed intake
Displacement	49.0 cm ³ (2.99 cu in)
Stroke	40 mm (1.57 in)
Bore	39.5 mm (1.555 in)
Crankshaft bearing	2 grooved ball bearings
Conrod bearing	Needle bearing
Piston pin bearing	Needle bearing
Pistons	Aluminum cast
Piston rings	1 rectangular ring
Engine lubrication (50 SX)	Mixture oil lubrication
Engine lubrication (50 SX Mini)	Separate lubrication
Primary transmission	61:33 straight cut spur gear
Clutch	3-lining automatic clutch on the main shaft / centrifugal force
Gearbox	Rigid 1-stage reduction gear
Transmission ratio	14:31
Ignition	SELETTRA 2p D36
Spark plug	NGK LR 8 B
Spark plug electrode gap	0.60 mm (0.0236 in)
Cooling	Water-cooled
Starting aid	Kickstarter

Capacity - gear oil

Gear oil	0.20 l (0.21 qt.)	Gear oil (ATF Dexron 3) (☛ p. 80)
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Capacity - coolant

Coolant	0.5 l (0.5 qt.)	Coolant (☛ p. 80)
		Coolant (mixed ready to use) (☛ p. 80)

Screw, bearing retainer	M5	5 Nm (3.7 lbf ft)	–
Screw, kickstarter	M5	6 Nm (4.4 lbf ft)	Loctite® 243™
Screw, oil pump (50 SX Mini)	M5	6 Nm (4.4 lbf ft)	–
Screw, stator clamp	M5	6 Nm (4.4 lbf ft)	Loctite® 243™
Screw, water pump wheel	M5	5 Nm (3.7 lbf ft)	Loctite® 243™
Bleeder flange of engine case	M6	4 Nm (3 lbf ft)	Loctite® 243™
Screw, alternator cover	M6	6 Nm (4.4 lbf ft)	–
Screw, clutch cover	M6	10 Nm (7.4 lbf ft)	–
Screw, clutch spring	M6	7 Nm (5.2 lbf ft)	–
Screw, engine case	M6	10 Nm (7.4 lbf ft)	–
Screw, engine sprocket cover	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, ignition coil	M6	5 Nm (3.7 lbf ft)	Loctite® 243™
Screw, intake flange	M6	5 Nm (3.7 lbf ft)	Loctite® 243™
Screw, water pump cover	M6	10 Nm (7.4 lbf ft)	–
Screw, cylinder head	M7	18 Nm (13.3 lbf ft)	–
Nuts, cylinder base	M8	20 Nm (14.8 lbf ft)	–
Screw, clutch drum	M8	30 Nm (22.1 lbf ft)	Loctite® 243™
Stud bolt, cylinder base	M8	10 Nm (7.4 lbf ft)	–
Spark plug	M10x1	10... 12 Nm (7.4... 8.9 lbf ft)	–
Nut, primary gear	M10x1.25	40 Nm (29.5 lbf ft)	Loctite® 243™
Nut, rotor	M10x1.25	15 Nm (11.1 lbf ft)	Loctite® 243™
Oil drain plug with magnet	M12x1.5	20 Nm (14.8 lbf ft)	–

50 SX

Carburetor type	Dell'Orto PHBG 19BS
Needle position	3rd position from top
Idle mixture adjusting screw	
Open	3 turns
Main jet	85
Jet needle	W9
Idling jet	58
Needle jet	260AU
Throttle slide	60
Cold start jet	60

50 SX Mini

Carburetor type	Dell'Orto PHVA 12XS
Needle position	4th position from top
Idle air adjusting screw	
Open	1 turn
Main jet	60
Jet needle	A10
Idling jet	35
Needle jet	211FA
Throttle slide	40
Cold start jet	60

Frame	Central tube frame of chrome molybdenum steel tubing, powder-coated
Fork	Marzocchi
Shock absorber	WP Suspension 3614 BAEM
Suspension travel (50 SX)	
Front	185 mm (7.28 in)
Rear	185 mm (7.28 in)
Suspension travel (50 SX Mini)	
Front	110 mm (4.33 in)
Rear	171 mm (6.73 in)
Fork offset	14 mm (0.55 in)
Brake system	
Front	Disc brake, brake caliper, fixed
Rear	Disc brake, brake caliper, fixed
Brake disc diameters	
Front	160 mm (6.3 in)
Rear	140 mm (5.51 in)
Brake discs - wear limits	
Front	2.2 mm (0.087 in)
Rear	2.2 mm (0.087 in)
Tire air pressure off road	
Front	1.0 bar (15 psi)
Rear	1.0 bar (15 psi)
Secondary drive ratio (50 SX)	11:40
Secondary drive ratio (50 SX Mini)	10:42
Chain	1/2 x 3/16"
Rear sprockets available	38, 39, 40, 41, 42
Steering head angle (50 SX)	66°
Steering head angle (50 SX Mini)	67.4°
Wheelbase (50 SX)	1,032 mm (40.63 in)
Wheelbase (50 SX Mini)	914 mm (35.98 in)
Seat height unloaded (50 SX)	684 mm (26.93 in)
Seat height unloaded (50 SX Mini)	558 mm (21.97 in)
Ground clearance unloaded (50 SX)	252 mm (9.92 in)
Ground clearance unloaded (50 SX Mini)	184 mm (7.24 in)
Weight without fuel, approx. (50 SX)	39.8 kg (87.7 lb.)
Weight without fuel, approx. (50 SX Mini)	39.0 kg (86 lb.)

Tires

Validity	Front tire	Rear tire
(50 SX)	60/100 - 12 36M TT Pirelli SCORPION MX Mid Soft 32 NHS	2.75 - 10 37J TT Pirelli SCORPION MX Mid Soft 32 NHS
(50 SX Mini)	2.50 - 10 33J TT Pirelli SCORPION MX Mid Soft 32 NHS	2.75 - 10 37J TT Pirelli SCORPION MX Mid Soft 32 NHS

Additional information is available in the Service section under:
<http://www.ktm.com>

Capacity - fuel

Fuel tank capacity, approx. (50 SX)	2.3 l (2.4 qt.)	Super unleaded gasoline, mixed with 2-stroke engine oil (1:60) (☛ p. 81)
Fuel tank capacity, approx. (50 SX Mini)	2.0 l (2.1 qt.)	Super unleaded (ROZ 95 / RON 95 / PON 91) (☛ p. 81)

50 SX

Fork part number	45101000644	
Fork	Marzocchi	
Spring rate		
Weight of rider: 25... 35 kg (55... 77 lb.)	2 N/mm (11 lb/in)	
Air chamber length	100±2.5 mm (3.94±0.098 in)	
Fork length	692 mm (27.24 in)	
Fork oil	210 ml (7.1 fl. oz.)	Fork oil (SAE 7.5) (☛ p. 80)

50 SX Mini

Fork part number	45201000233	
Fork	Marzocchi	
Spring rate		
Weight of rider: 25... 35 kg (55... 77 lb.)	2 N/mm (11 lb/in)	
Air chamber length	100±2.5 mm (3.94±0.098 in)	
Fork length	578 mm (22.76 in)	
Fork oil	210 ml (7.1 fl. oz.)	Fork oil (SAE 7.5) (☛ p. 80)

50 SX

Shock absorber part number	03.18.9E.02
Shock absorber	WP Suspension 3614 BAEM
Rebound damping	
Standard	10 clicks
Spring preload	
Standard	3 mm (0.12 in)
Spring rate	
Weight of rider: < 25 kg (< 55 lb.)	30 N/mm (171 lb/in)
Weight of rider: 25... 35 kg (55... 77 lb.)	35 N/mm (200 lb/in)
Spring length	130 mm (5.12 in)
Gas pressure	10 bar (145 psi)
Static sag	20 mm (0.79 in)
Riding sag	45... 55 mm (1.77... 2.17 in)
Fitted length	275 mm (10.83 in)
Shock absorber oil	Shock absorber oil (SAE 2,5) (50180342S1) (☛ p. 81)

50 SX Mini

Shock absorber part number	03.18.9E.04
Shock absorber	WP Suspension 3614 BAEM
Rebound damping	
Standard	12 clicks
Spring preload	
Standard	5 mm (0.2 in)
Spring rate	
Weight of rider: < 25 kg (< 55 lb.)	65 N/mm (371 lb/in)
Weight of rider: 25... 35 kg (55... 77 lb.)	75 N/mm (428 lb/in)
Spring length	120 mm (4.72 in)
Gas pressure	10 bar (145 psi)
Static sag	15 mm (0.59 in)
Riding sag	40... 50 mm (1.57... 1.97 in)
Fitted length	245 mm (9.65 in)
Shock absorber oil	Shock absorber oil (SAE 2,5) (50180342S1) (☛ p. 81)

Spoke nipple	M3.5	3 Nm (2.2 lbf ft)	–
Rear brake caliper screw	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Remaining nuts, chassis	M6	15 Nm (11.1 lbf ft)	–
Screw, ball joint of push rod on foot brake cylinder	M6	10 Nm (7.4 lbf ft)	–
Screw, bottom triple clamp	M6	10 Nm (7.4 lbf ft)	–
Screw, chain sliding piece	M6	3 Nm (2.2 lbf ft)	–
Screw, front brake disc	M6	15 Nm (11.1 lbf ft)	Loctite® 243™
Screw, rear brake disc	M6	15 Nm (11.1 lbf ft)	Loctite® 243™
Screw, rear sprocket	M7	15 Nm (11.1 lbf ft)	Loctite® 243™
Engine carrying screw	M8	25 Nm (18.4 lbf ft)	–
Nut, rim lock	M8	10 Nm (7.4 lbf ft)	–
Remaining nuts, chassis	M8	30 Nm (22.1 lbf ft)	–
Remaining screws, chassis	M8	25 Nm (18.4 lbf ft)	–
Screw, chain sliding piece	M8	15 Nm (11.1 lbf ft)	–
Screw, engine sprocket cover	M8	10 Nm (7.4 lbf ft)	–
Screw, front brake caliper	M8	20 Nm (14.8 lbf ft)	Loctite® 243™
Screw, handlebar clamp	M8	20 Nm (14.8 lbf ft)	–
Screw, top triple clamp	M8	25 Nm (18.4 lbf ft)	–
Nut, swingarm pivot	M10	45 Nm (33.2 lbf ft)	–
Remaining nuts, chassis	M10	50 Nm (36.9 lbf ft)	–
Remaining screws, chassis	M10	45 Nm (33.2 lbf ft)	–
Screw, bottom shock absorber	M10	45 Nm (33.2 lbf ft)	–
Screw, handlebar support	M10	40 Nm (29.5 lbf ft)	Loctite® 243™
Screw, top shock absorber	M10	45 Nm (33.2 lbf ft)	–
Front wheel spindle nut	M12x1	40 Nm (29.5 lbf ft)	–
Nut, rear wheel spindle	M12x1	40 Nm (29.5 lbf ft)	–
Nut, steering head	M20x1.5	No play ≤ 10 Nm (≤ 7.4 lbf ft)	–
Nut, steering stem	M20x1.5	30 Nm (22.1 lbf ft)	–

2-stroke engine oil

According to

- JASO FC (☛ p. 84)

Guideline

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

Fully synthetic

Supplier

Motorex®

- **Cross Power 2T**

Brake fluid DOT 4 / DOT 5.1

According to

- DOT

Guideline

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

Supplier

Castrol

- **RESPONSE BRAKE FLUID SUPER DOT 4**

Motorex®

- **Brake Fluid DOT 5.1**

Coolant

Guideline

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

Mixture ratio

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

Antifreeze	-40 °C (-40 °F)
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Supplier

Motorex®

- **Anti Freeze**

Fork oil (SAE 7.5)

According to

- SAE (☛ p. 84) (SAE 7.5)

Guideline

- Use only oils that comply with the specified standards (see specifications on the container) and that possess the corresponding properties. KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Racing Fork Oil**

Gear oil (ATF Dexron 3)

According to

- Dexron III (ATF Dexron 3)

Guideline

- Use only ATF gear oils that comply with the specified standards (see specifications on the container) and that possess the corresponding properties. KTM recommends **Motorex®** products.

Supplier

Motorex®

- **ATF Dexron 3**

Shock absorber oil (SAE 2,5) (50180342S1)

According to

- SAE (☛ p. 84) (SAE 2,5)

Guideline

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

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

According to

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

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

According to

- DIN EN 228
- JASO FC (☛ p. 84) (1:60)

Mixture ratio

1:60	2-stroke engine oil (☛ p. 80) Super unleaded (ROZ 95 / RON 95 / PON 91) (☛ p. 81)
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Air filter cleaner

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Twin Air Dirt Bio Remover**

Chain cleaner

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Chain Clean**

Cleaning and preserving materials for metal, rubber and plastic

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Protect & Shine**

High viscosity grease

Guideline

- KTM recommends **SKF®** products.

Supplier

SKF®

- **LGHB 2**

Long-life grease

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Bike Grease 2000**

Motorcycle cleaner

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Moto Clean 900**

Off-road chain spray

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Chainlube Offroad**

Oil for foam air filter

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Twin Air Liquid Bio Power**

Universal oil spray

Guideline

- KTM recommends **Motorex**[®] products.

Supplier

Motorex[®]

- **Joker 440 Synthetic**

JASO FC

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

SAE

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

A

Air filter
 cleaning 34
 installing 34
 removing 33

Air filter box
 cleaning 34

Antifreeze
 checking 54

B

Brake discs
 checking 41

Brake fluid
 front brake, adding 42
 rear brake, adding 47

Brake fluid level
 front brake, checking 42
 rear brake, checking 46

Brake linings
 front brake, changing 44
 front brake, checking 43
 front brake, installing 44
 front brake, removing 43
 rear brake, changing 49
 rear brake, checking 48
 rear brake, installing 48
 rear brake, removing 48

C

Carburetor
 idle 57
 idle speed, adjusting 57-58

Centrifugal force clutch
 centrifugal force clutch, installing 61
 centrifugal force clutch, removing 60
 clutch engagement speed, adjusting 59
 clutch engagement speed, checking 59

Chain
 checking 38
 cleaning 37

Chain guard
 installing 36
 removing 36

Chain guide
 adjusting 40
 checking 38

Chain tension
 adjusting 40
 checking 38

Chassis number 9

Choke 11

Cleaning 68

Coolant
 draining 55
 refilling 56

Coolant level
 checking 54-55

Cooling system 54

D

Dust boots
 cleaning 25

E

Engine
 running in 14

Engine - Work on individual parts
 assembling centrifugal clutch 62
 centrifugal force clutch, checking 61
 dismantling centrifugal clutch 62

Engine number 9

Engine sprocket
 checking 38

Engine sprocket cover
 installing 37
 removing 36

Environment 6

F

Filler cap
 closing 10
 opening 10

Filling up
 fuel 17
 oil 17

Foot brake lever 12
 basic position, adjusting 46
 free travel, adjusting 45
 free travel, checking 45

Fork legs
 installing 26
 removing 26

Fork overhang
 adjusting 22

Front fender
 installing 32
 removing 32

Front wheel
 installing 51
 removing 51

Fuel tap 11

Fuel, oils, etc. 5

G

Gear oil
 adding 66
 changing 65
 draining 66
 refilling 66

Gear oil level
 checking 65

H

Hand brake lever 10
 basic position, adjusting 41
 play, adjusting 41

play, checking 41

Handlebar position 23

 adjusting 24

K

Kickstarter 12

Kill switch 10

L

Lower triple clamp

 installing 29

 removing 28

M

Main silencer

 glass fiber yarn filling, changing 35

 installing 35

 removing 34

Motorcycle

 cleaning 68

 raising with lift stand 25

 removing from the lift stand 25

O

Oil level

 checking 64

Oil pump

 bleeding 64

Oil tank cap

 closing 11

 opening 11

Owner's manual 6

P

Play in throttle cable

 adjusting 57

 checking 57

Plug-in stand 12

Putting into operation

 advice on first use 13

 after storage 69

 checks and maintenance measures when preparing for use 15

R

Rear sprocket

 checking 38

Rear wheel

 installing 52

 removing 51

Rebound damping

 shock absorber, adjusting 20

Riding sag

 adjusting 22

S

Seat

 mounting 33

 removing 33

Seat height

 adjusting 23

Service 5

Service schedule 18-19

Shock absorber

 installing 31

 removing 31

 riding sag, checking 21

 spring preload, adjusting 21

 static sag, checking 20

Shock absorber part number 9

Spare parts, accessories 5

Spoke tension

 checking 53

Start number plate

 installing 32

 removing 32

Starting 15

Steering head bearing

 greasing 28

Steering head bearing play

 adjusting 27

 checking 27

Storage 69

T

Technical data

 carburetor 74

 chassis 75-76

 chassis tightening torques 79

 engine 72

 engine tightening torques 73

 fork 77

 shock absorber 78

Throttle grip 10

Tire air pressure

 checking 53

Tire condition

 checking 52

Transport 5

Troubleshooting 70-71

U

Use definition 5

V

Vehicle level 22

View of vehicle

 left front 7

 right rear 8

W

Warranty 5

Work rules 5



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KTM-Sportmotorcycle AG
5230 Mattighofen/Austria
<http://www.ktm.com>