

# SETUP INSTRUCTIONS 2010

**450 SX-F EU**

**450 SX-F NAGL EDITION EU**

**450 SX-F USA**

Art. no. 3211581en



**KTM**



The work described in these setup instructions must be performed before the vehicle is delivered to the customer.

Read the setup instructions in their entirety before beginning work.

Print out the current **PDI** form found on the **KTM DEALER.NET**.

These setup instructions were written to correspond to the latest state of this series. We reserve the right to make changes in the interest of technical advancement without at the same time updating this manual.

We shall not provide a description of general workshop methods. Likewise, safety rules that apply in a workshop are not specified here. It is assumed that the work will be performed by a fully trained mechanic.

All specifications are non-binding. KTM Sportmotorcycle AG specifically reserves the right to modify or delete technical specifications, prices, colors, forms, materials, services, designs, equipment, etc., without prior notice and without specifying reasons, to adapt these to local conditions, as well as to stop production of a particular model without prior notice. KTM accepts no liability for delivery options, deviations from illustrations and descriptions, as well as misprints and other errors. The models portrayed partly contain special equipment that does not belong to the regular scope of delivery.

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REG.NO. 12 100 6061

ISO 9001(12 100 6061)

According to the international quality management standard ISO 9001, KTM uses quality assurance processes that lead to the maximum possible quality of the products.

Issued by: TÜV Management Service

KTM-Sportmotorcycle AG  
5230 Mattighofen, Austria

## Symbols used

The symbols used are explained in the following.

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Indicates an expected reaction (e.g. of a work step or a function).



Indicates an unexpected reaction (e.g. of a work step or a function).



Identifies a page reference (more information is provided on the specified page).

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## Formats used

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

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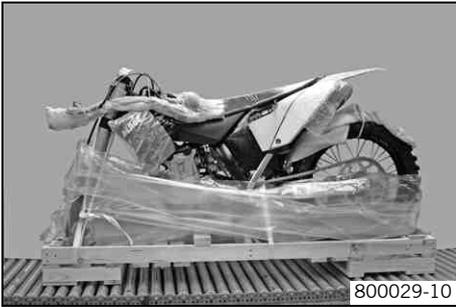
**Specific name** Indicates a proprietary name.

**Name<sup>®</sup>** Identifies a protected name.

**Brand<sup>™</sup>** Identifies a brand in merchandise traffic.

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## Unpacking and setting up the vehicle



### Packaging 2

- Remove the box and the plastic packaging.



#### Info

To avoid damaging the motorcycle during assembly, leave the protective film on the vehicle until you have finished.

- Take out the separate enclosure and unpack it. Check its contents on the basis of the enclosure list.
- Set up the work stand.

Work stand (54829055000)

- Carefully loosen and remove the tensioning belt over the link fork.



#### Info

An assistant prevents the motorcycle from falling over.

- Carefully loosen and remove the tensioning belts around the lower triple clamp.
  - ✓ The vehicle is released at the front.
- Together with an assistant, take the vehicle off the palette.
- Position the vehicle on a work stand.
- Check the vehicle for transport damage.

### Packaging 12

- Remove the box and the plastic packaging.



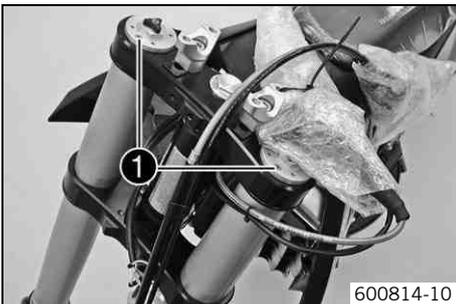
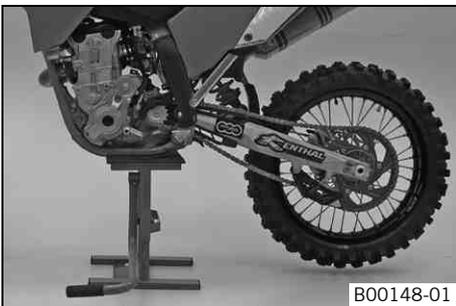
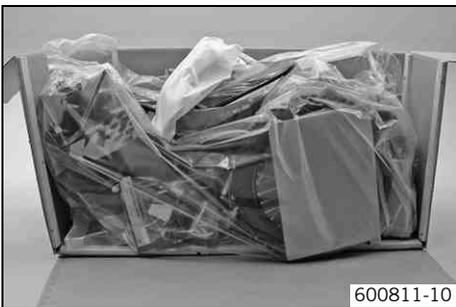
#### Info

An assistant prevents the motorcycle from falling over.  
To avoid damaging the motorcycle during assembly, leave the protective film on the vehicle until you have finished.

- Take out the separate enclosure and unpack it. Check its contents on the basis of the enclosure list.
- Set up the work stand.

Work stand (54829055000)

- Together with an assistant, take the vehicle off the palette.
- Position the vehicle on a work stand.
- Check the vehicle for transport damage.
- Install the shock absorber. (🔧 p. 9)



- Route the clutch line with the clutch master cylinder toward the front between the upper and lower triple clamps.
- Position the fork legs and tighten the screws of the triple clamp.

#### Guideline

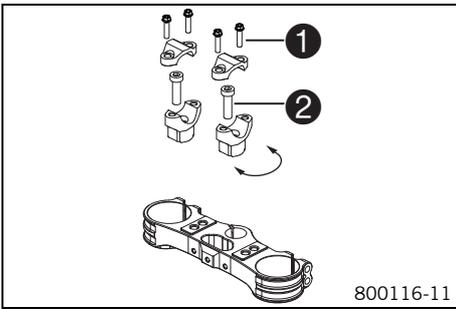
Screw, top triple clamp	M8	17 Nm (12.5 lbf ft)
Screw, bottom triple clamp	M8	12 Nm (8.9 lbf ft)



#### Info

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

Position bleeder screws ❶ toward the front.



**(450 SX-F EU, 450 SX-F USA)**

- Remove screws ①. Take off the handlebar clamps.
- Remove screws ②. Take off the handlebar holders.
- Move the handle bar holders to the desired position. Mount and tighten screws ②.

Guideline

Screw, handlebar support	M10	40 Nm (29.5 lbf ft)	Loctite® 243™
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**i Info**  
Position the handlebar holders evenly on the left and right.

- Position the handlebar.

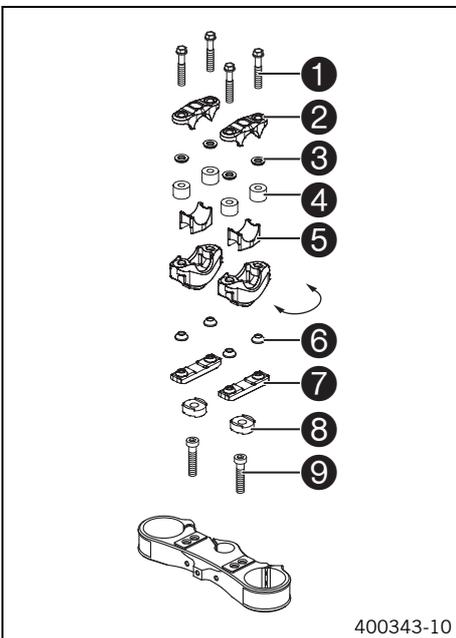
**i Info**  
Ensure that the cables and lines are routed correctly.

- Position the handlebar clamps. Mount screws ① and tighten evenly.

Guideline

Screw, handlebar clamp	M8	20 Nm (14.8 lbf ft)	
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**i Info**  
Ensure that the gaps are of equal width.



**(450 SX-F NAGL EDITION EU)**

- Remove screws ①. Take off handlebar clamps ② with intermediate rubbers ③ and elastomers ④.
- Take out lower shells ⑤.
- Take out clamping bars ⑦ with cone-shaped rubber pieces ⑥.
- Remove screws ⑨. Take off the handlebar holders.
- Move the handle bar holders to the desired position. Mount and tighten screws ⑨.

Guideline

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

With spacer ⑧ (optional):

Use screw M10x35

**Condition**

Without spacer ⑧:

Use screw M10x25

**i Info**  
Position the handlebar holders evenly on the left and right.

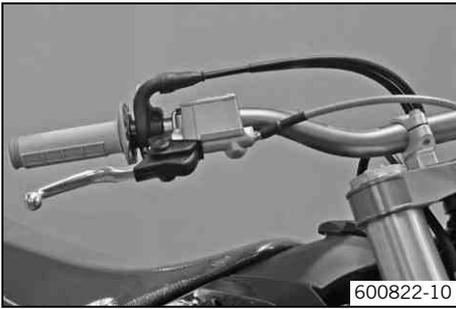
- Insert cone-shaped rubber pieces ⑥ and clamping bars ⑦.
- Insert lower shells ⑤.
- Position the handlebar.

**i Info**  
Ensure that the cables and lines are routed correctly.

- Position handlebar clamps ② with intermediate rubbers ③ and elastomers ④.
- Mount screws ① and tighten evenly.

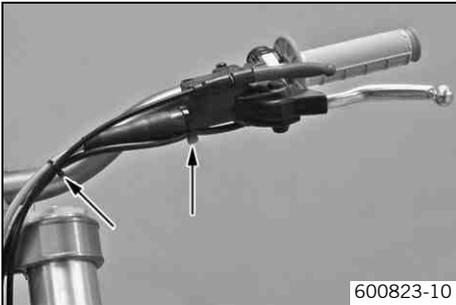
Guideline

Screw, handlebar clamp	M8	16 Nm (11.8 lbf ft)	
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**i Info**  
Ensure that the gaps are of equal width.

- Position the controls on the right half of the handlebar.

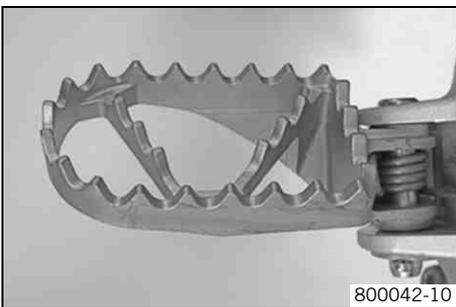


**i Info**  
The routing of the cables can be seen in the figure.

- Position the controls on the left half of the handlebar.

**i Info**  
The routing of the clutch line and wiring harness can be seen in the figure.

- Install the front fender. (☛ p. 9)
- Install the front wheel. (☛ p. 7)
- Correctly mount the fuel tank breather.
- Install the start number plate. (☛ p. 7)



- Mount the footrests with the springs and bolts. Secure the bolts using the washers and pins.

Plier for footrest spring (58429083000)



**! Warning**  
**Risk of injury** Battery acid and battery gases cause serious cauterization.

- Keep batteries out of the reach of children.
- Wear suitable protective clothing and goggles.
- Avoid contact with battery acid and battery gases.
- Keep the battery away from sparks or open fire. Charge only in well ventilated rooms.
- In the event of skin contact, rinse with large amounts of water. If battery acid gets in the eyes, rinse with water for at least 15 minutes and contact a doctor.

- Fill the battery.

**i Info**  
Read the notes in the battery package.

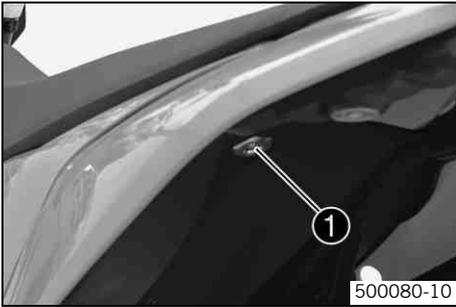
- Recharge the battery. (☛ p. 8)
- Install the battery. (☛ p. 9)
- Unpack the **KTM PowerParts** (optional) contained in the delivery and install them.

**i Info**  
Read the accompanying **KTM PowerParts** installation instructions.

- Attach the stickers contained in the delivery (optional).
- Refuel. (☛ p. 10)
- Exactly position all controls on the handlebar. Tighten all screws.

- Print out the current **PDI** form found on **KTM DEALER.NET** and perform the delivery inspection.

**Removing the seat**



- Remove screw ❶. Lift up the seat at the rear, pull it back and then remove from above.

**Mounting the seat**

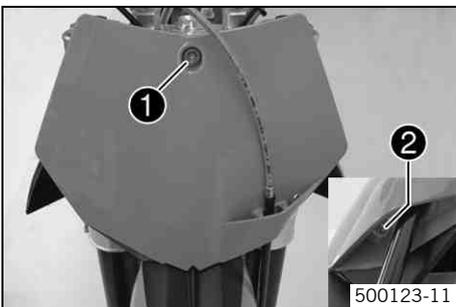


- Hook in the front of the seat at the collar sleeve of the fuel tank, lower it at the rear and simultaneously push it forward.
- Make sure that the seat is correctly locked in.
- Mount and tighten the screw of the seat fixing.

Guideline

Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)
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**Installing the start number plate**



- Position the start number plate. Mount and tighten screw ❶.

Guideline

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

Take care with the contact of the holding lug at the fender.

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

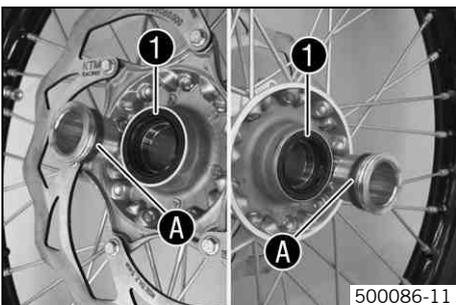
**Installing the front wheel**



**Warning**

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

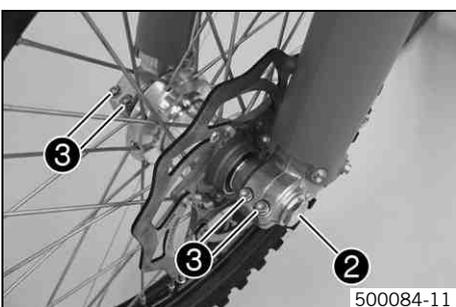
- Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.



- Clean and grease shaft seal rings ❶ and bearing surface A of the spacers.

Long-life grease (☛ p. 13)

- Insert the spacers.



- Lift the front wheel into the fork, position it, and insert the wheel spindle.
- Mount and tighten screw ❷.

Guideline

Screw, front wheel spindle	M24x1.5	45 Nm (33.2 lbf ft)
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- Operate the hand brake lever several times until the brake linings are lying correctly on the brake disc.

- Remove the motorcycle from the work stand.
- Pull the front wheel brake and push down hard on the fork several times to align the fork legs.
- Fully tighten screw ❸.

Guideline

Screw, fork stub	M8	15 Nm (11.1 lbf ft)
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**Recharging the battery**



**Warning**

**Risk of injury** Battery acid and battery gases cause serious cauterization.

- Keep batteries out of the reach of children.
- Wear suitable protective clothing and goggles.
- Avoid contact with battery acid and battery gases.
- Keep the battery away from sparks or open fire. Charge only in well ventilated rooms.
- In the event of skin contact, rinse with large amounts of water. If battery acid gets in the eyes, rinse with water for at least 15 minutes and contact a doctor.



**Warning**

**Environmental hazard** Battery parts and acid are harmful to the environment.

- Do not discard batteries with the household trash. Dispose of a defective battery in an environmentally compatible manner. Give the battery to your KTM dealer or to a recycling center that accepts used batteries.



**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**

Even if there is no load on the battery, it loses power every day. The charge state and the type of charge are very important for the service life of the battery. Fast recharging with a high charge current shortens the battery's service life. If the charge current, the charge voltage and the charge time are exceeded, electrolyte escapes through the breathing holes. The battery capacity is then reduced. If the battery is discharged from starting, it must be recharged immediately. If it stands for a long time in a discharged state, the battery becomes over-discharged and sulfated, and then it is destroyed. The battery is maintenance-free, i.e., the acid level does not have to be checked.

- Switch off all consumers and the engine.
- Remove the seat. (☛ p. 7)
- Disconnect the minus (negative) cable of the battery to avoid damage to the motorcycle's electronics.
- Connect the battery charger to the battery. Switch on the battery charger.

Battery charger (58429074000)

You can also use the battery charger to test the open-circuit voltage and cranking power of the battery, and to test the generator. With this device, you cannot over-charge the battery.



**Info**

Never remove the lid ❶. Charge the battery with at most 10% of the capacity specified on the battery ❷.

- Switch off the charger after charging. Disconnect the battery.

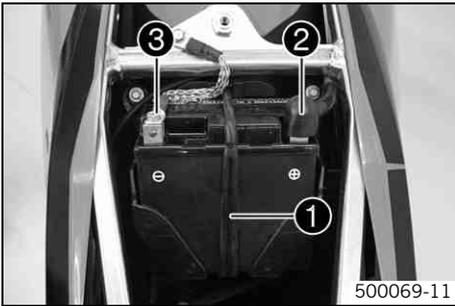
Guideline

The charge current, charge voltage and charge time must not be exceeded.

Charge the battery regularly when the motorcycle is not in use	3 months
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- Mount the seat. (☛ p. 7)

**Installing the battery**

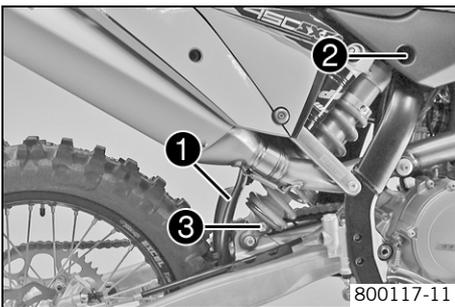


- Place the battery in the battery holder.

External temperature	≥ 10 °C (≥ 50 °F)
Battery (YTX4L-BS)	
External temperature	≤ 10 °C (≤ 50 °F)
Battery (YTX5L-BS)	

- Reconnect the rubber band **1**.
- Attach the plus cable and replace the plus pole cover **2**.
- Attach the minus cable **3**.
- Mount the seat. (☛ p. 7)

**Installing the shock absorber**



- Push splash protector **1** to the side and position the shock absorber. Mount and tighten screw **2**.

Guideline

Screw, top shock absorber	M12	80 Nm (59 lbf ft)	Loctite® 243™
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- Mount and tighten screw **3**.

Guideline

Screw, bottom shock absorber	M12	80 Nm (59 lbf ft)	Loctite® 243™
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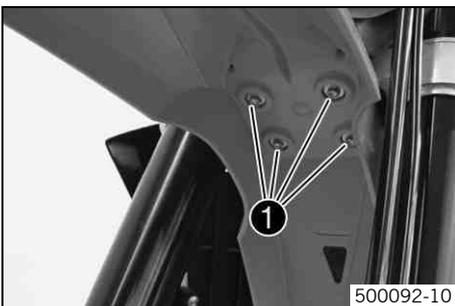


**Info**

The heim joint for the shock absorber at the swing arm is Teflon coated. It must not be greased with grease or with other lubricants. Lubricants dissolve the Teflon coating, thereby drastically reducing the service life.

- Remove the motorcycle from the work stand.

**Installing the front fender**



- Ensure that the spacing sleeves are mounted in the fender.
- Position the front fender. Mount and tighten screws **1**.

Guideline

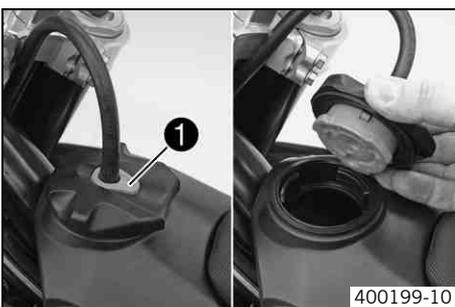
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)
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**Info**

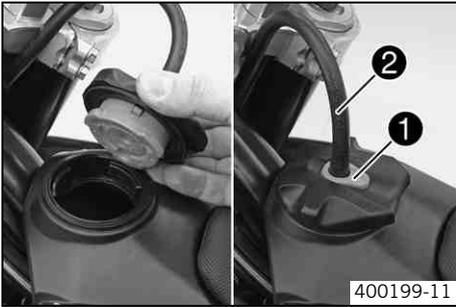
Make sure the holding lugs engage in the start number plate.

**Opening filler cap**



- Press release button **1**, turn filler cap counterclockwise and lift it upwards and remove.

**Closing filler cap**



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



**Info**

Route the fuel tank breather hose ❷ without kinking.

**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.

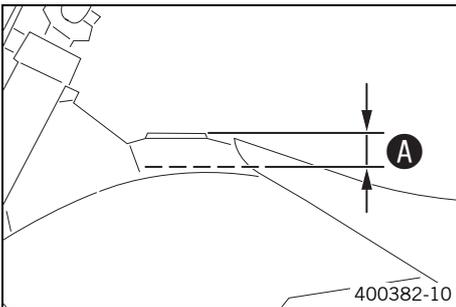
- Avoid contact of the fuel with skin, eyes and clothing. Do not inhale fuel vapors. If fuel gets into your eyes, rinse immediately with water and contact a doctor. Wash affected skin areas immediately with soap and water. If fuel is swallowed, contact a doctor immediately. Change clothing that has come 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 engine.
- Open the filler cap. (☛ p. 9)
- Fill the fuel tank with fuel up to measurement A.

Guideline

Measurement of A	35 mm (1.38 in)	
Total fuel tank capacity, approx.	8 l (2.1 US gal)	Super unleaded (ROZ 95 / RON 95 / PON 91) (☛ p. 12)

- Close the filler cap. (☛ p. 10)

Spoke nipple, front wheel	M4.5	5... 6 Nm (3.7... 4.4 lbf ft)	–
Spoke nipple, rear wheel	M5	5... 6 Nm (3.7... 4.4 lbf ft)	–
Remaining nuts, chassis	M6	15 Nm (11.1 lbf ft)	–
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)	–
Screw, ball joint of push rod on foot brake cylinder	M6	10 Nm (7.4 lbf ft)	–
Screw, front brake disc	M6	14 Nm (10.3 lbf ft)	–
Screw, rear brake disc	M6	14 Nm (10.3 lbf ft)	–
Screw, shock absorber adjusting ring	M6	5 Nm (3.7 lbf ft)	–
Nut, rear sprocket screw	M8	35 Nm (25.8 lbf ft)	<b>Loctite® 243™</b>
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, bottom triple clamp	M8	12 Nm (8.9 lbf ft)	–
Screw, engine brace	M8	33 Nm (24.3 lbf ft)	–
Screw, fork stub	M8	15 Nm (11.1 lbf ft)	–
Screw, front brake caliper	M8	25 Nm (18.4 lbf ft)	<b>Loctite® 243™</b>
Screw, handlebar clamp (450 SX-F EU, 450 SX-F USA)	M8	20 Nm (14.8 lbf ft)	–
Screw, handlebar clamp (450 SX-F NAGL EDITION EU)	M8	16 Nm (11.8 lbf ft)	–
Screw, side stand fixing	M8	40 Nm (29.5 lbf ft)	<b>Loctite® 243™</b>
Screw, subframe	M8	35 Nm (25.8 lbf ft)	<b>Loctite® 243™</b>
Screw, top steering stem	M8	17 Nm (12.5 lbf ft)	<b>Loctite® 243™</b>
Screw, top triple clamp	M8	17 Nm (12.5 lbf ft)	–
Engine attachment bolt	M10	60 Nm (44.3 lbf ft)	–
Remaining nuts, chassis	M10	50 Nm (36.9 lbf ft)	–
Remaining screws, chassis	M10	45 Nm (33.2 lbf ft)	–
Screw, handlebar support	M10	40 Nm (29.5 lbf ft)	<b>Loctite® 243™</b>
Screw, bottom shock absorber	M12	80 Nm (59 lbf ft)	<b>Loctite® 243™</b>
Screw, top shock absorber	M12	80 Nm (59 lbf ft)	<b>Loctite® 243™</b>
Nut, seat fixing	M12x1	20 Nm (14.8 lbf ft)	–
Nut, swingarm pivot	M16x1.5	100 Nm (73.8 lbf ft)	–
Nut, rear wheel spindle	M20x1.5	80 Nm (59 lbf ft)	–
Screw, bottom steering head	M20x1.5	60 Nm (44.3 lbf ft)	<b>Loctite® 243™</b>
Screw, top steering head	M20x1.5	10 Nm (7.4 lbf ft)	–
Screw-in nozzles, cooling system	M20x1.5	12 Nm (8.9 lbf ft)	<b>Loctite® 243™</b>
Screw, front wheel spindle	M24x1.5	45 Nm (33.2 lbf ft)	–

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

### According to

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

## Long-life grease

### Guideline

- KTM recommends **Motorex**<sup>®</sup> products.

### Supplier

#### **Motorex**<sup>®</sup>

- **Fett 2000**



3211581en



01/2010 Photo: Mitterbauer



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