

# SETUP INSTRUCTIONS 2009

**450 SX-F EU**  
**450 SX-F USA**  
**450 XC-F USA**  
**505 XC-F USA**

ART. NO. 3211420en



**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.



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).

## Formats used

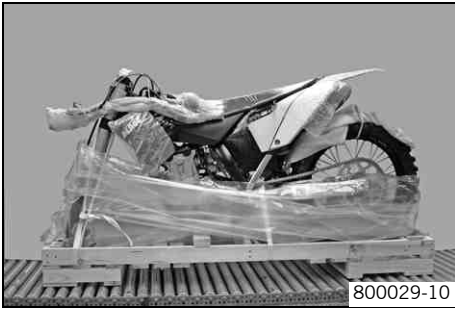
The typographical and other formats used are explained in the following.

**Name** Indicates a proprietary name.

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

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

## Unpacking and setting up the vehicle

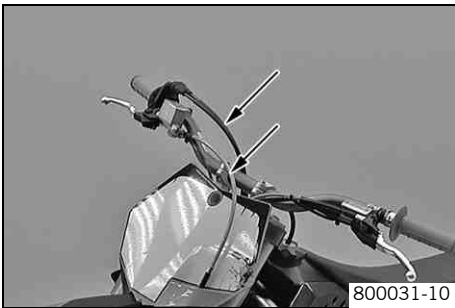


- Remove the box and the plastic packaging.

**i Info**

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

- Check the vehicle for transport damage.
- Unpack the separate enclosure and check its contents on the basis of the enclosure list.

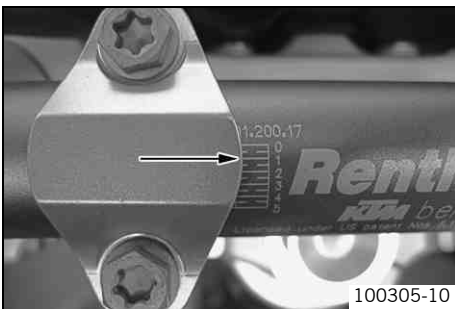


- Position the operating elements on the right half of the handlebar.

**i Info**

The routing of cables and Bowden cables can be seen in the figure.

- Mount the handlebar.

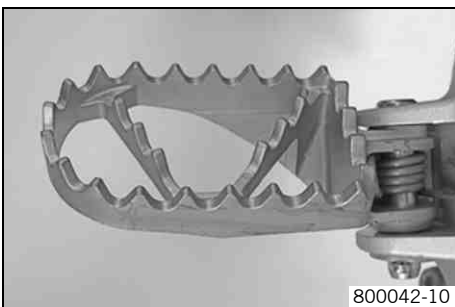


- Position the handlebar.
  - ✓ The mark **1** of the scale on the handlebar should be in the center of the handlebar clamp.
- Position the handlebar clamps. Fit and evenly tighten the four screws.

Guideline

|                        |    |                        |
|------------------------|----|------------------------|
| Screw, handlebar clamp | M8 | 20 Nm<br>(14.8 lbf ft) |
|------------------------|----|------------------------|

- Install the start number plate. (☛ p. 5)



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

Plier for footrest spring (58429083000)

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

**i Info**

An assistant prevents the motorcycle from falling over.

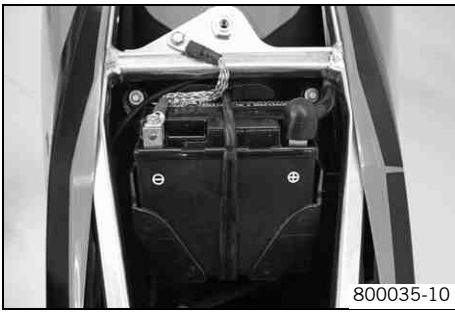
- Carefully loosen and remove the tensioning belts around the lower triple clamp.

✓ The vehicle is released at the front.

- Prepare the mounting stand.

Work stand (54829055000)

- Together with an assistant, take the vehicle off of the palette.
- Install the front wheel. (☛ p. 5)



800035-10



**Warning**

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

- 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 physician.

- Fill the battery.



**Info**

Adhere to the instructions in the separate battery enclosure.

- Recharge the battery. (☛ p. 6)
- Install the battery. (☛ p. 7)

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

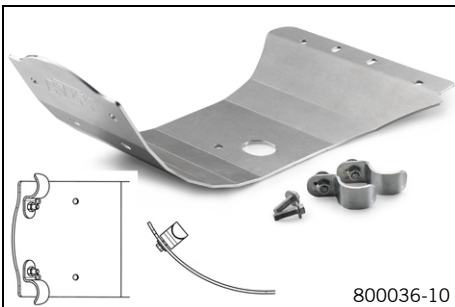
Install the front fender. (☛ p. 7)

**(450 SX-F EU)**

- Apply the label.



800038-10



800036-10

- Mount the engine guard.

Guideline

|                           |    |                       |
|---------------------------|----|-----------------------|
| Remaining screws, chassis | M6 | 10 Nm<br>(7.4 lbf ft) |
|---------------------------|----|-----------------------|

- Mount the frame guard.



**Info**

Adhere to the **KTM PowerParts** installation instructions included.

- Mount the hand guard.



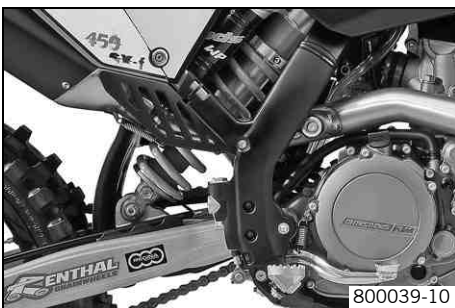
**Info**

Adhere to the **KTM PowerParts** installation instructions included.

- Mount the handlebar protection.

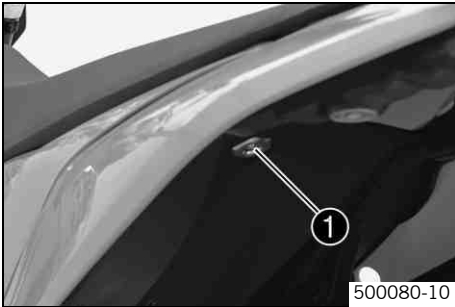
- Fill up with fuel. (☛ p. 8)

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



800039-10

**Removing the seat**



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

**Mounting the seat**

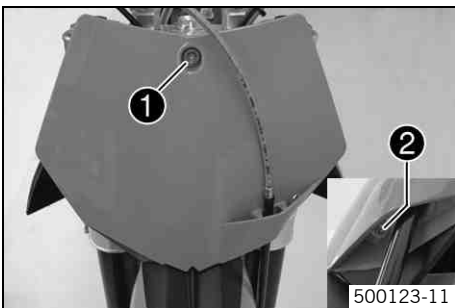


- Hook in the front of the seat at the collar sleeve of the fuel tank, lower it at the rear and simultaneously push it forward.
- Make sure that the seat is correctly locked in.
- Mount and tighten the screw of the seat fixing.

Guideline

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

**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) |
|---------------------------|----|--------------------|



**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.

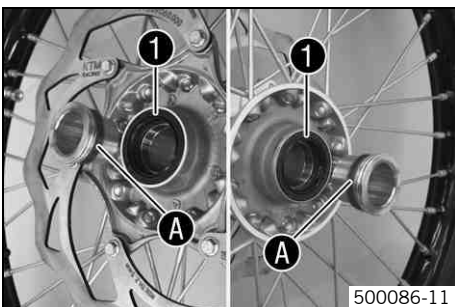
**Installing the front wheel**



**Warning**

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

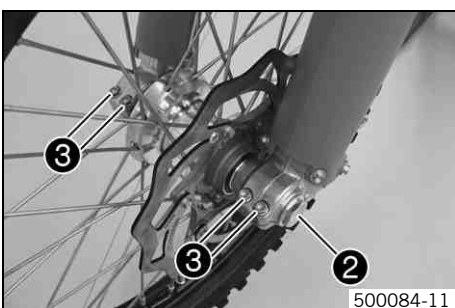
- Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.



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

|                            |
|----------------------------|
| Long-life grease (☛ p. 11) |
|----------------------------|

- Insert the spacing sleeves.



- 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) |
|----------------------------|---------|---------------------|

- Operate the hand brake lever several times until the brake pads 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 ③.

Guideline

|                  |    |                        |
|------------------|----|------------------------|
| Screw, fork stub | M8 | 15 Nm<br>(11.1 lbf ft) |
|------------------|----|------------------------|

**Recharging the battery**



**Warning**

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

- 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 physician.



**Warning**

**Environmental hazard** Components and battery acid are a danger to the environment.

- Do not dispose of batteries in normal household waste. Take defective or used batteries to a battery recycling operator.



**Warning**

**Environmental hazard** Problem materials cause environmental damage.

- Dispose of oil, grease, filters, fuel, cleaning substances, brake fluid, batteries, etc. according to regulations.



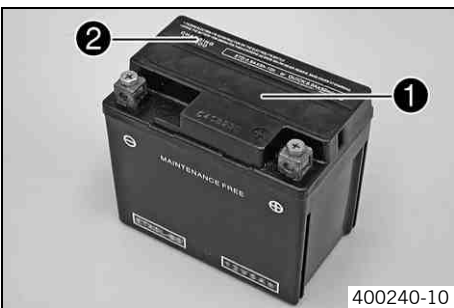
**Info**

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 power consumers and switch off the engine.
- Remove the seat. (☛ p. 5)
- 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 rest potential and start potential of the battery, and to test the generator. With this device, you cannot overcharge the battery.



**Info**

Never remove the lid ①. Charge the battery with at most 10% of the capacity specified on the battery ②.

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

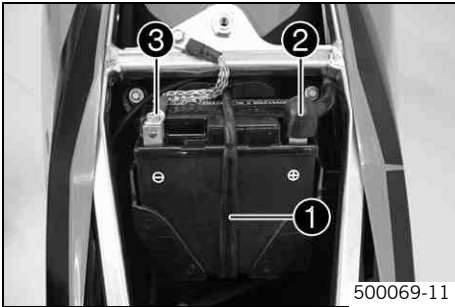
Guideline

|  |          |
|--|----------|
| 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 |

- Mount the seat. (☛ p. 5)



**Installing the battery**



- Place the battery in the battery holder.

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

**Condition**

External temperature:  $\geq 10\text{ }^{\circ}\text{C}$  ( $\geq 50\text{ }^{\circ}\text{F}$ )

3Ah battery (YTX4L-BS)

**Condition**

External temperature:  $\leq 10\text{ }^{\circ}\text{C}$  ( $\leq 50\text{ }^{\circ}\text{F}$ )

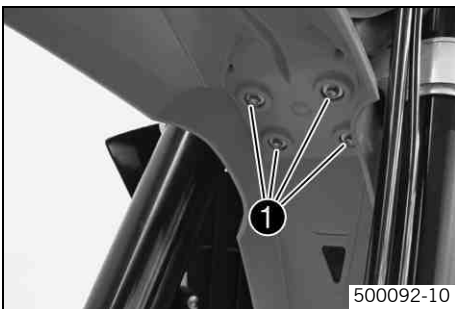
4Ah battery (YTX5L-BS)

**(450 XC-F USA, 505 XC-F USA)**

4Ah battery (YTX5L-BS)

- Reconnect the rubber band ❶.
- Attach the plus cable and replace the plus pole cover ❷.
- Attach the minus cable ❸.
- Mount the seat. (☛ p. 5)

**Installing the front fender**



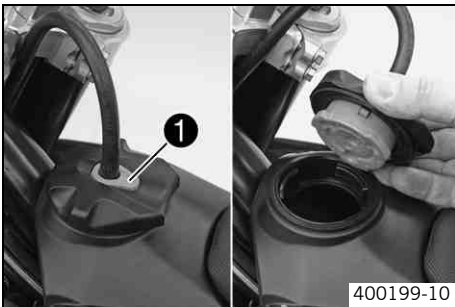
- Ensure that the spacing sleeves are mounted in the fender.
- Position the front fender. Mount and tighten screws ❶.

**Guideline**

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

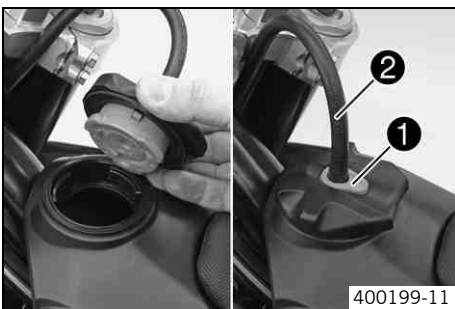
**i Info**  
Take care with the contact between the holding lugs and the start number plate.

**Opening filler cap**



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

**Closing filler cap**



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

**i Info**  
Run the fuel tank breather hose ❷ without kinks.

**Refueling**

**Danger**  
**Fire hazard** Fuel can easily catch fire.

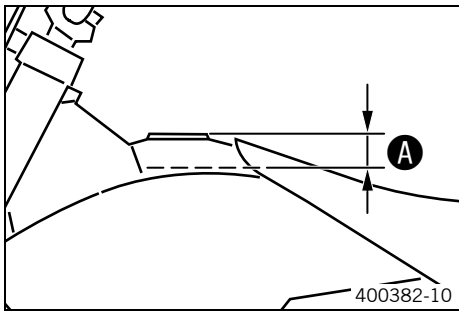
- Never fill up the vehicle near open flames or burning cigarettes, and always switch off the engine first. Be careful that no fuel is spilt, especially on hot vehicle components. Clean up spilt fuel immediately.
- Fuel in the fuel tank expands when warm and can escape if the tank is overfilled. See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

**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.

**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. 7)
- Fill the fuel tank with fuel up to measurement **A**.

Guideline

|  |                  |   |
|--|------------------|---|
| Measurement of <b>A</b>  | 35 mm (1.38 in)  |   |
| Total fuel tank capacity, approx. (450 SX-F EU, 450 SX-F USA)  | 8 l (2.1 US gal) | Super unleaded (ROZ 95 / RON 95 / PON 91) (☛ p. 10) |
| Total fuel tank capacity, approx. (450 XC-F USA, 505 XC-F USA) | 9 l (2.4 US gal) | Super unleaded (ROZ 95 / RON 95 / PON 91) (☛ p. 10) |

- Close the filler cap. (☛ p. 7)

|  |         |                      |                      |
|--|---------|----------------------|----------------------|
| Spoke nipple, front wheel                            | M4.5    | 5 Nm (3.7 lbf ft)    | –                    |
| Spoke nipple, rear wheel                             | M5      | 5 Nm (3.7 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                               | M8      | 20 Nm (14.8 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 carrying screw                                | 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

### Specification

- KTM recommends **Motorex®** products.

### Supplier

#### **Motorex®**

- **Fett 2000**



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07/2008 Photo: Mitterbauer



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