

Freeride E-SX
Freeride E-XC

Art. no.3213342en



KTM

DEAR KTM CUSTOMER

Congratulations on your decision to purchase a KTM motorcycle. You are now the owner of a state-of-the-art sports motorcycle that will give you enormous pleasure if you service and maintain it properly.

We hope you enjoy your new vehicle!

Enter the serial numbers of your vehicle below.

Chassis number (☛ p. 21)	Dealer's stamp
Motor number (☛ p. 21)	

Please read through this Owner's Manual carefully, exercise caution when using the vehicle, and contact an authorized KTM workshop if you have any questions.

This Owner's Manual serves as a technical instruction manual, explains important safety matters, and provides an overview of the main functions. This Owner's Manual is only intended for personal use. This Owner's Manual is not intended for commercial use.

The Owner's Manual contained the latest information for this model series at the time of going to print. Slight deviations resulting from continuing development and design of the motorcycles can, however, not be completely excluded.

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Issued by: TÜV Management Service

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KTM Sportmotorcycle GmbH
5230 Mattighofen, Austria

This document is valid for the following models:

Freeride E-SX EU(F3001P0)

Freeride E-XC EU(F3001P1)



3213342en

06/2015

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1.1 Symbols used

The meaning of specific symbols is described below.

	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).
	All work marked with this symbol requires specialist knowledge and technical understanding. In the interest of your own safety, have these jobs performed by an authorized KTM workshop. There, your motorcycle will be optimally cared for by specially trained experts using the specialist tools required.
	Indicates a page reference (more information is provided on the specified page).
	Indicates information with more details or tips.
	Indicates the result of a testing step.

1.2 Formats used

The typographical formats used in this document are explained below.

Specific name	Identifies a proprietary name.
Name[®]	Identifies a protected name.
Brand[™]	Identifies a brand available on the open market.
<u>Underlined terms</u>	Refer to technical details of the vehicle or indicate technical terms that are explained in the glossary.

2.1 Use definition - intended use

(Freeride E-SX)

KTM sport motorcycles are designed and built to withstand the normal stresses and strains of offroad use.



Info

Only operate the vehicle in closed-off areas remote from public road traffic.
Only use the lithium-ion battery while it is inside the vehicle.

(Freeride E-XC)

KTM sport motorcycles are designed and built to withstand the normal stresses and strains of offroad use.



Info

The vehicle is only authorized for operation on public roads in the homologated version.
Only use the lithium-ion battery while it is inside the vehicle.

2.2 Safety advice


A number of safety instructions need to be followed to operate the vehicle safely. Therefore, read this manual carefully. The safety instructions are highlighted in the text and are referred to at the relevant passages.





Info

The vehicle has various information and warning labels at prominent locations. Do not remove information/warning labels. If they are missing, you or others may not recognize dangers and may therefore be injured.

2.3 Degrees of risk and symbols

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

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

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

Note

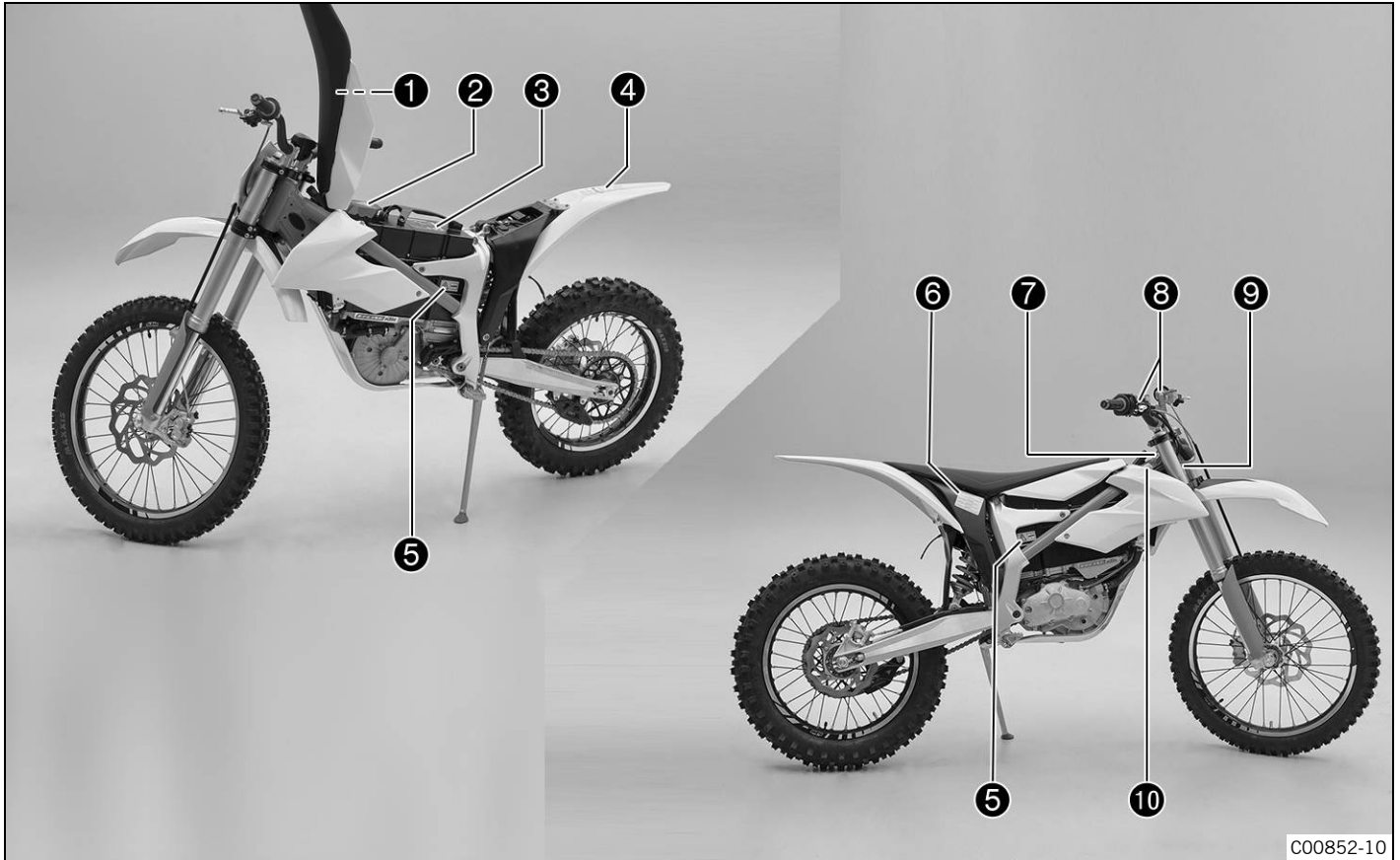
Indicates a danger that will lead to considerable machine and material damage if the appropriate measures are not taken.



Warning

Indicates a danger that will lead to environmental damage if the appropriate measures are not taken.

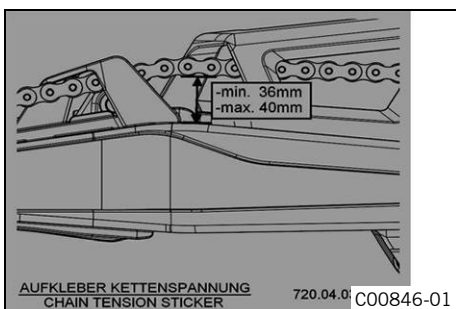
2.4 Safety instructions and warning labels(Freeride E-SX)



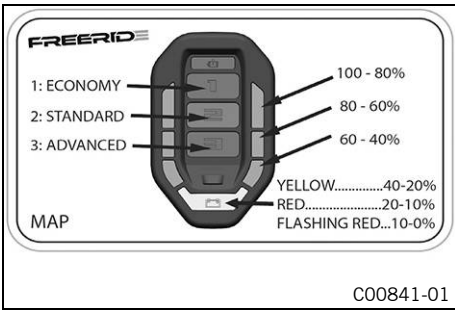
C00852-10

i Info The safety instructions are highlighted in the text. The vehicle has warning labels in prominent locations. Do not remove any warning labels, or else you or others may fail to recognize sources of danger and become injured.

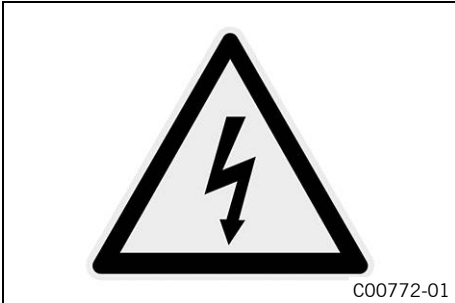
1	Chain tension
1	Multifunction display
2	High-voltage components
3	Rechargeable lithium-ion battery
4	Use guidelines 1
4	Use guidelines 2
4	Use guidelines 3
5	High-voltage components, see the Repair Manual
6	Initial start-up
7	High-voltage components and electric shock, see the Owner's Manual
8	Suitable brake fluid
9	Use definition
10	Vehicle without approval for use on public roads



Chain tension



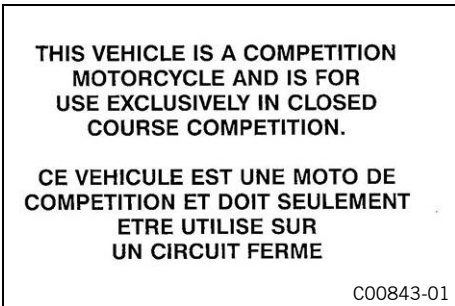
Multifunction display



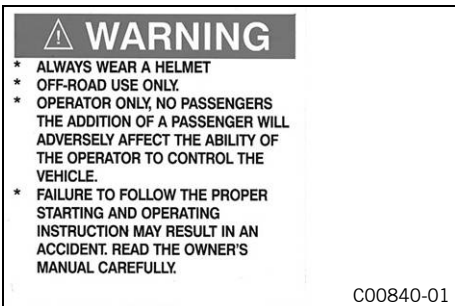
High-voltage components



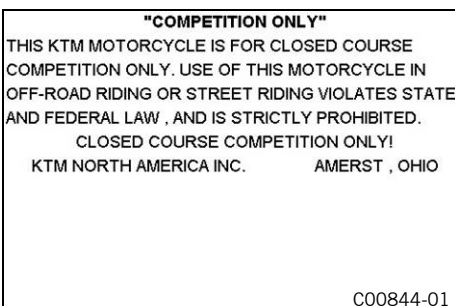
Rechargeable lithium-ion battery



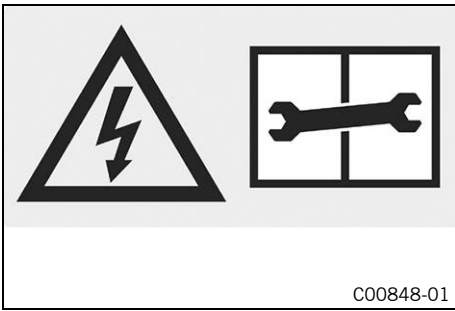
Use guidelines 1



Use guidelines 2



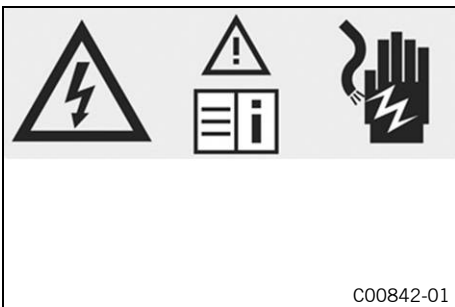
Use guidelines 3



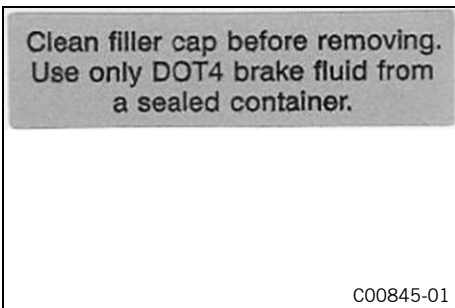
High-voltage components, see the Repair Manual



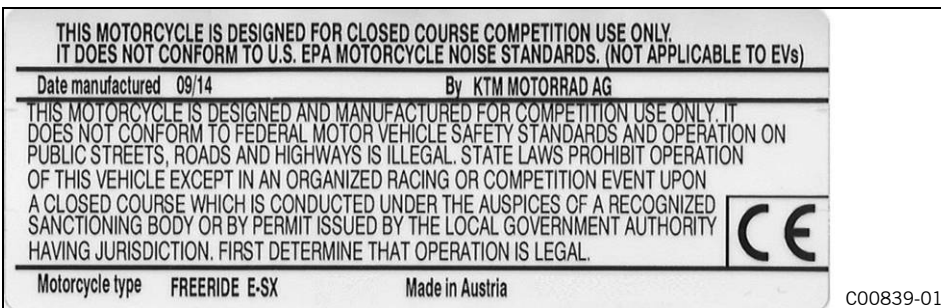
Initial start-up



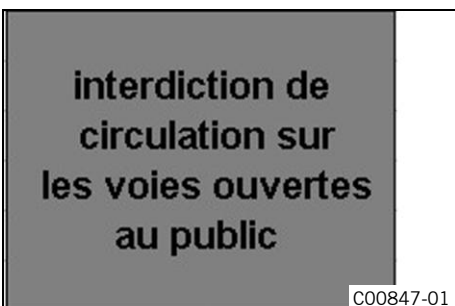
High-voltage components and electric shock, see the Owner's Manual



Suitable brake fluid

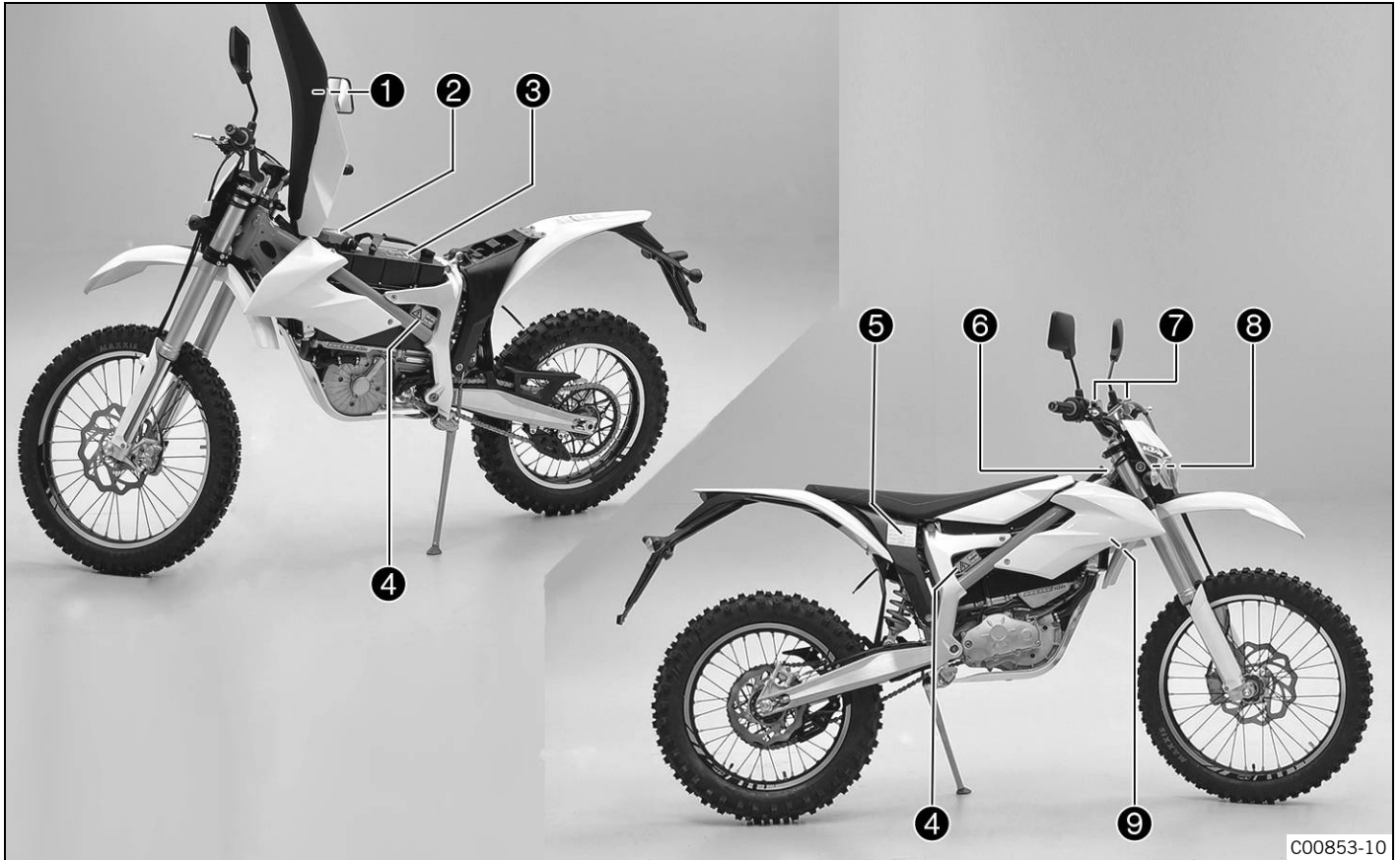


Use definition



Vehicle without approval for use on public roads

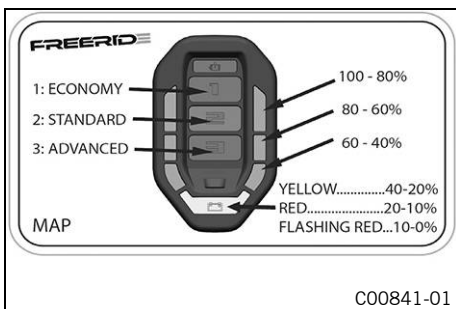
2.5 Safety instructions and warning labels(Freeride E-XC)



C00853-10

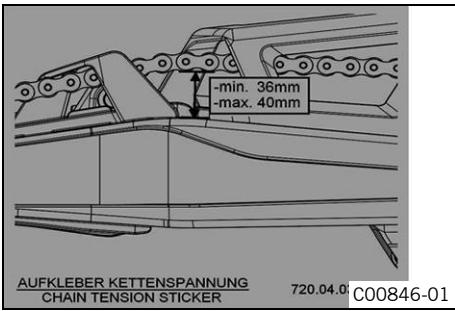
i Info
 The safety instructions are highlighted in the text. The vehicle has warning labels in prominent locations. Do not remove any warning labels, or else you or others may fail to recognize sources of danger and become injured.

1	Multifunction display
1	Chain tension
2	High-voltage components
3	Rechargeable lithium-ion battery
4	High-voltage components, see the Repair Manual
5	Initial start-up
6	High-voltage components and electric shock, see the Owner's Manual
7	Suitable brake fluid
8	Type label for EU
9	Anti-manipulation label

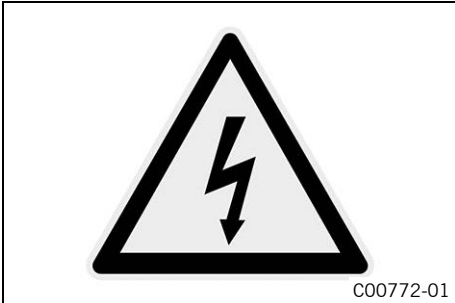


C00841-01

Multifunction display



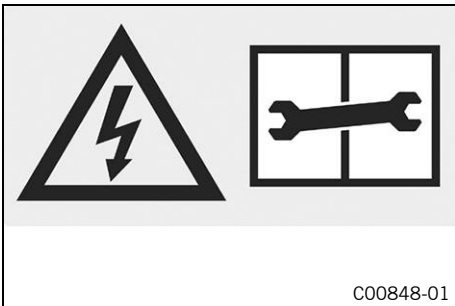
Chain tension



High-voltage components



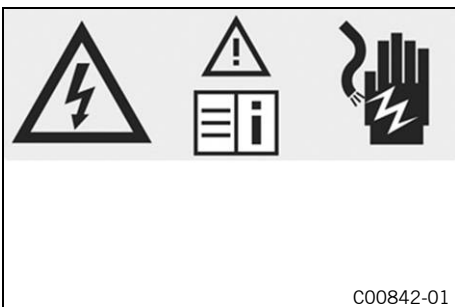
Rechargeable lithium-ion battery



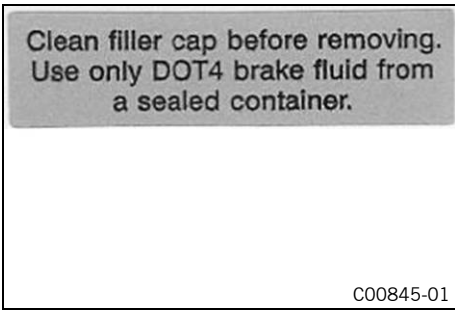
High-voltage components, see the Repair Manual



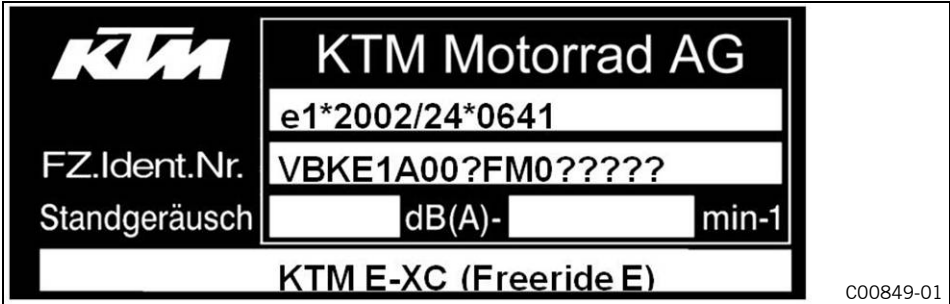
Initial start-up



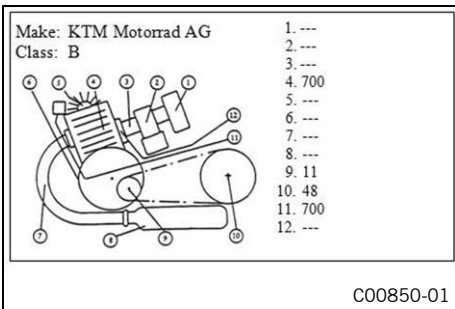
High-voltage components and electric shock, see the Owner's Manual



Suitable brake fluid



Type label for EU



Anti-manipulation label

2.6 Tampering warning

Modifying the vehicle is prohibited, as otherwise safe operation cannot be guaranteed. Examples of unlawful manipulation and modifications:

- 1 Opening the rechargeable lithium-ion battery or the motor.
- 2 Using the vehicle or the rechargeable lithium-ion battery in the event of a lack of proper maintenance.
- 3 Using the vehicle or the rechargeable lithium-ion battery outside its defined use.
- 4 Using a damaged lithium-ion battery.

2.7 Safe operation

- Danger**
Danger of accidents Danger arising from the rider's judgement being impaired.
 - Do not operate the vehicle while under the influence of alcohol, drugs and certain medications or physically or mentally impaired.
- Warning**
Danger of burns Some vehicle components become very hot when the vehicle is operated.
 - Do not touch any parts such as the radiator, motor, shock absorber, or brake system before these parts have cooled down.
 - Let the vehicle parts cool down before you perform any work on the vehicle.

This vehicle is a high voltage electric motorcycle. For this reason, follow the safety and care instructions that apply when using an electric motor.
 Because this vehicle does not have an engine brake, the vehicle handles similar to a bicycle with a freewheel. When the throttle grip is closed, the vehicle continues rolling without significant deceleration. The vehicle speed decreases on account of rolling resistance and air resistance.
 The rear brake lever is located on the left side of the handlebar. Because this vehicle does not have a manual transmission, there is no clutch.

As with all water-cooled vehicles, the operating temperature rises according to use, outside temperature, and cleanliness of the cooling surfaces. If the temperature of the motor, the lithium-ion battery, or the electronics rises above the permissible operating temperature, the power of the vehicle is reduced markedly. This protects the system against damage from overheating. When power reduction is imminent, the active driving mode indicator flashes. When power reduction is active, all three driving mode indicators light up. When all components have returned to their normal operating temperature, full system power is restored after restarting.

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

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

Adhere to the information and warning labels on the vehicle.

2.8 Fall or accident



Warning

Risk of injury The outside of a damaged vehicle may be conducting live current.

- Contact KTM customer service immediately if the lithium-ion battery or the motor is severely damaged.

If the vehicle is lying on its side, it switches from ready mode to standby mode after seven seconds. To switch the vehicle back into ready mode, place it in an upright position and press the start button.

After a fall or accident, check the vehicle as usual when preparing for use.

2.9 Protective clothing



Warning

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

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

2.10 Work on the vehicle, motor, and lithium-ion battery (KTM PowerPack)



Warning

Risk of injury There is a risk of electric shock when working on high-voltage components.

Work on high-voltage components requires special training, qualifications and tools.

- Have all work that is not described and explained performed by trained KTM mechanics only.
- Do not open the electric motor or the lithium-ion battery (KTM PowerPack).



Warning

Risk of injury The vehicle runs very quietly, even when it is ready to operate.

The vehicle starts moving in an uncontrolled manner if the throttle grip is accidentally touched while work is being performed on the vehicle.

The high-voltage components of the vehicle are only deactivated if the vehicle is switched off at the main switch.

- Ensure that the vehicle is switched off at the main switch and remains switched off while any work is being performed on the vehicle.
- Remove the power pack from the vehicle before you start any work on the vehicle.
- Protect the vehicle against access from unauthorized persons while you are performing work on the vehicle.

2.11 Environment

When you respect the rights of others and use your motorcycle legally, you will help protect the future of motorcycle sport and avoid most conflicts and problems.

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

When disposing of the lithium-ion battery (KTM PowerPack) and the 12 V battery, comply with the laws and regulations of the respective country.

Your authorized KTM dealer can dispose of the KTM PowerPack free of charge and in an environmentally compatible manner.

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

Electrical devices like the charger may not be disposed of with household waste. Electrical devices must be disposed of through the appropriate recycling centers. Contact your municipality or your authorized KTM dealer.

2.12 Owner's Manual

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

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

If you would like to know more about the vehicle or have questions on the material you read, please contact an authorized KTM dealer. The Owner's Manual is an important component of the vehicle and must be handed over to the new owner if the vehicle is sold.

2.13 Fire hazard



Warning

Fire hazard Damaged rechargeable lithium-ion batteries present a fire hazard.

Massive mechanical damage may cause an internal cell short circuit and cause the battery to self-ignite.

- Contact the KTM customer service as soon as possible if major damage to the rechargeable lithium-ion battery has occurred.

There is no particular fire hazard for this vehicle when the rechargeable lithium-ion battery (KTM PowerPack) is intact. However, should the vehicle catch fire, inform the fire brigade responsible that an electric vehicle with a rechargeable lithium-ion battery is on fire.

3.1 Guarantee, warranty

The work specified in the service schedule may only be performed in an authorized KTM workshop and must be recorded in both the Service & Warranty Booklet and in **KTM Dealer.net**, otherwise any warranty coverage will become void. No warranty claims can be considered for damage resulting from manipulations and/or alterations to the vehicle.

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

3.2 Operating and auxiliary substances

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

3.3 Spare parts, accessories

For your own safety, only use spare parts and accessory products that are approved and/or recommended by KTM and have them installed by an authorized KTM workshop. KTM accepts no liability for other products and any resulting damage or loss.

Certain spare parts and accessory products are specified in parentheses in the descriptions. Your authorized KTM dealer will be glad to advise you.

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

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

3.4 Service

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

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

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

3.5 Figures

The figures contained in the manual may depict special equipment.

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

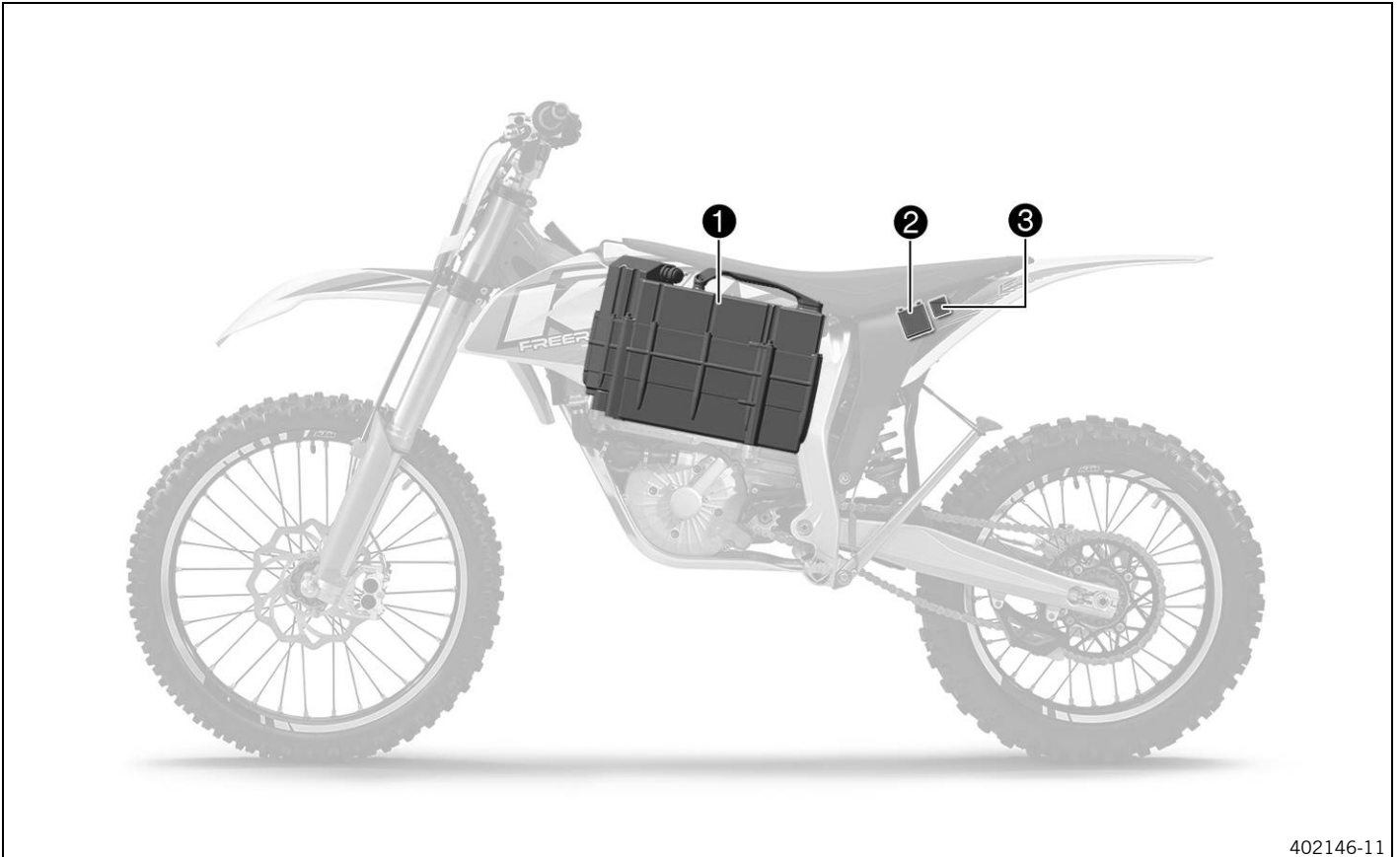
3.6 Customer service

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

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

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

3.7 System voltage



402146-11

A rechargeable lithium-ion battery ❶ (KTM PowerPack, 260 V) and a 12 V battery ❷ are installed in the vehicle. The 12 V battery is located at the rear, under the seat. The fuse box ❸ is located next to the 12 V battery.

The KTM PowerPack is located under the seat and is bolted to the electric motor. The KTM PowerPack can be removed with just a few simple steps.

The KTM PowerPack can be charged in the vehicle or following removal from the vehicle.

Check the KTM PowerPack for damage to the housing or the plug every time it is removed and installed.

The 12 V battery is required for vehicle operation. The vehicle control unit requires the 12 V battery to start the system. If the 12 V battery is defective, discharged or not connected, the vehicle will not start.

3.8 New KTM PowerPack

The KTM PowerPack in the vehicle must be discharged completely the first time it is used. The vehicle initially reduces the drive power. When operating in power-reduced mode, the vehicle can still be driven for a few more minutes before the vehicle switches off with blink code 11.

Then recharge the KTM PowerPack until the battery charger ends the process at 100%. The charge level indicator on the battery charger shows the progress made.

This charging process generally takes less than 90 minutes, but may take up to four hours. Do not skip this procedure as it has a significant influence on the performance of the KTM PowerPack.

3.9 Operation at low temperatures

To spare the KTM PowerPack, the motor control reduces the power at low temperatures.

When the temperature of the KTM PowerPack falls below 9 °C, the motor control reduces power to 80%. 50% of power is available at temperatures below 0 °C. In both cases, the active driving mode display flashes slowly. The vehicle can be operated without problems. The KTM PowerPack is not damaged by the power reduction.

The KTM PowerPack warms up when the vehicle is operating. When the temperature of the KTM PowerPack rises above 0 °C, 80% of power is available once the vehicle has been started again. When the temperature of the KTM PowerPack rises above 8 °C, full power is available once the vehicle has been started again.

4.1 View of vehicle, front left (example)(Freeride E-SX)



- | | |
|---|---------------------------------------|
| 1 | Front brake lever (☛ p. 23) |
| 2 | Rear brake lever (☛ p. 23) |
| 3 | Seat |
| 4 | Seat release |
| 5 | Shock absorber compression adjustment |
| 6 | Shock absorber rebound adjustment |
| 7 | Side stand (☛ p. 25) |

4.2 View of vehicle, rear right (example)(Freeride E-SX)



C00672-10

1	Multifunction display (☛ p. 27)
2	Main switch (☛ p. 23)
2	Start button (☛ p. 24)
3	Throttle grip (☛ p. 23)
4	Fork rebound adjustment
5	Fork compression adjustment
6	KTM PowerPack

4.3 View of vehicle, front left (example)(Freeride E-XC)



C00789-10

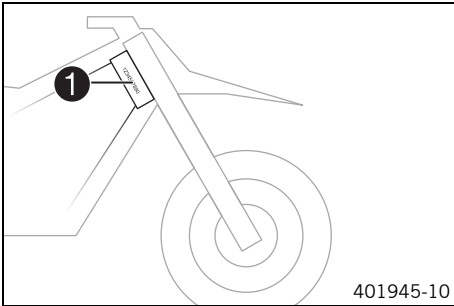
- | | |
|---|---------------------------------------|
| 1 | Front brake lever (☛ p. 23) |
| 2 | Rear brake lever (☛ p. 23) |
| 3 | Seat |
| 4 | Seat release |
| 5 | Shock absorber compression adjustment |
| 6 | Shock absorber rebound adjustment |
| 7 | Side stand (☛ p. 25) |

4.4 View of vehicle, rear right (example)(Freeride E-XC)



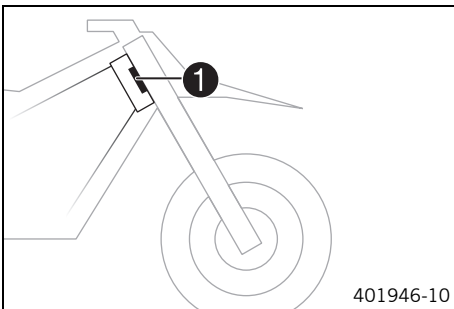
- | | |
|---|---------------------------------|
| 1 | Multifunction display (☛ p. 27) |
| 2 | Horn button (☛ p. 24) |
| 2 | Light switch (☛ p. 24) |
| 2 | Turn signal switch (☛ p. 24) |
| 3 | Main switch (☛ p. 23) |
| 3 | Start button (☛ p. 24) |
| 4 | Throttle grip (☛ p. 23) |
| 5 | Fork rebound adjustment |
| 6 | Fork compression adjustment |
| 7 | KTM PowerPack |

5.1 Chassis number



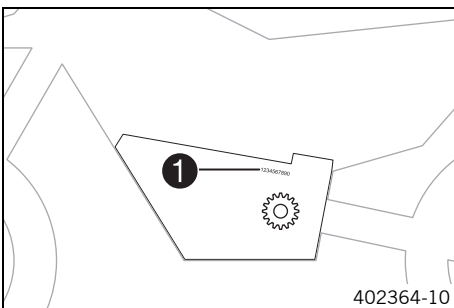
The chassis number ❶ is stamped on the right side of the steering head.

5.2 Type label



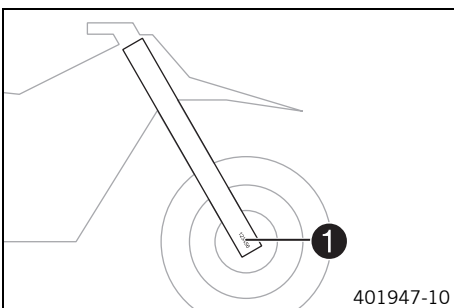
The type label ❶ is located on the front steering head.

5.3 Motor number



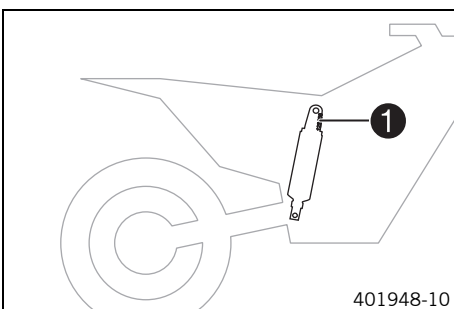
The motor number ❶ is located on the left side of the motor over the motor sprocket.

5.4 Fork part number



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

5.5 Shock absorber article number



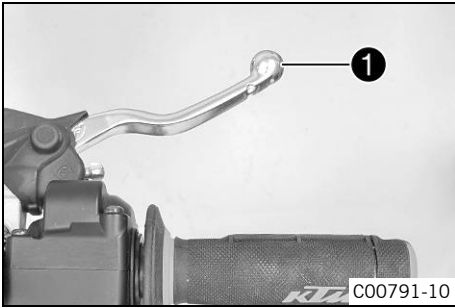
The shock absorber part number ❶ is stamped on the top of the shock absorber above the adjusting ring towards the engine side.

5.6 Battery identification number



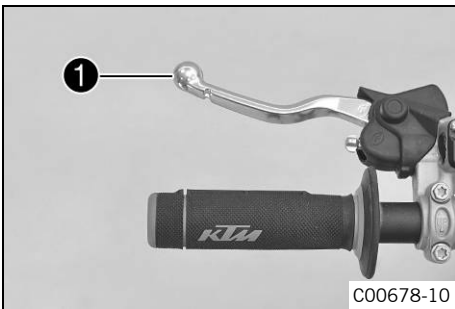
The battery identification number (**BIN**) ❶ is stamped under the handle of the KTM PowerPack.

6.1 Front brake lever



The front brake handle ① is fitted on the right side of the handlebar.

6.2 Rear brake lever



(Freeride E-SX)

The rear brake lever ① is fitted on the left side of the handlebar.



(Freeride E-XC)

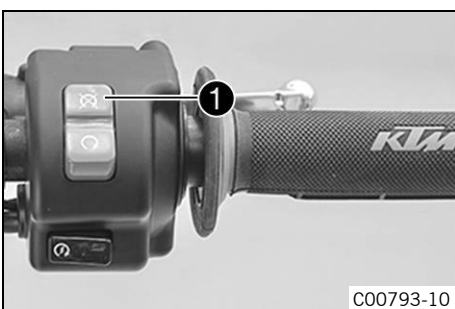
The rear brake lever ① is fitted on the left side of the handlebar.

6.3 Throttle grip



The throttle grip ① is fitted on the right side of the handlebar.

6.4 Main switch

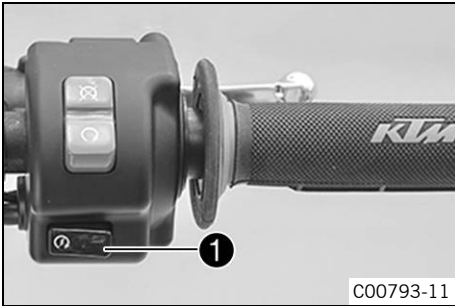


The main switch ① is attached to the right side of the handlebar. The main switch is also used as an emergency OFF switch.

Possible states

	Vehicle switched off.– The vehicle is switched off in this position.
	Vehicle ready for operation.– The vehicle is ready for operation in this position. The start button is active.

6.5 Start button



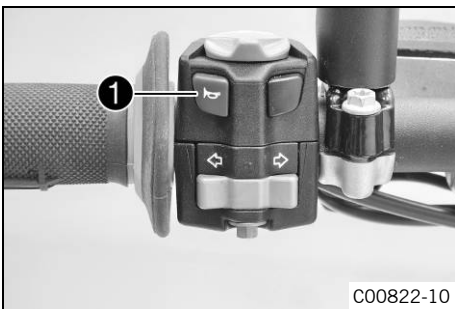
The start button ① is fitted on the right side of the handlebar. The start button is only enabled when the main switch is switched on. When the start button is pushed, the vehicle switches from standby to ready mode. The driving mode indicator and an acoustic signal indicate operating readiness. When the start button is pushed again, the vehicle switches back to standby mode. The driving mode indicator goes out.

i Info
Standby mode can only be switched to ready mode if the throttle grip is fully closed and the vehicle speed is less than 5 km/h. If the vehicle is not moved for 90 seconds after ready mode is activated and the throttle grip is not twisted open, the vehicle automatically switches back to standby mode.

Possible states

- The start button is in the neutral position– The state of the vehicle is retained.
- The start button is pressed– The state of the vehicle changes between ready mode and standby mode.

6.6 Horn button(Freeride E-XC)



The horn button ① is fitted on the left side of the handlebar.

Possible states

- Horn button in neutral position
- Horn button pressed– The horn is operated in this position.

6.7 Light switch(Freeride E-XC)

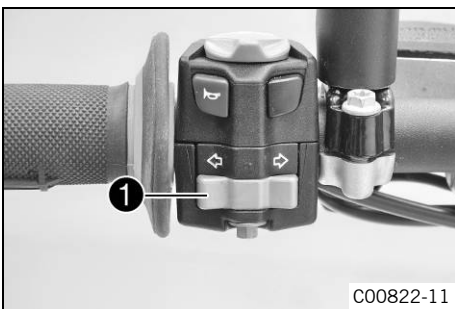


The light switch ① is fitted on the left side of the handlebar.

Possible states

	Low beam on– Light switch is in the central position. In this position, the low beam and tail light are switched on.
	High beam on– Light switch is turned to the left. In this position, the high beam and the tail light are switched on.

6.8 Turn signal switch(Freeride E-XC)

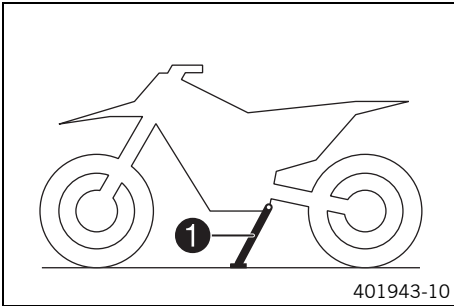


Turn signal switch ① is fitted on the left side of the handlebar.

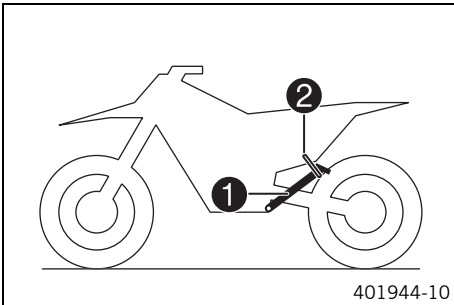
Possible states

	Turn signal light off– Turn signal switch is in the central position.
	Turn signal light, left, on– Turn signal switch is turned to the left.
	Turn signal light, right, on– Turn signal switch is turned to the right.

6.9 Side stand



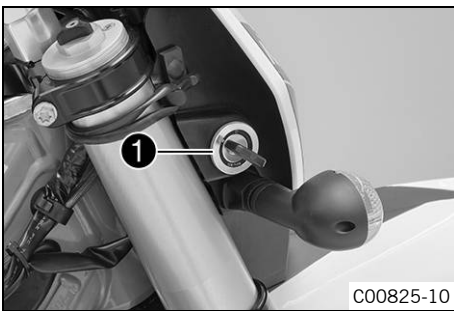
The side stand **1** is on the left side of the vehicle.



The side stand is used to park the motorcycle.

i Info
When you are riding, side stand **1** must be folded up and secured with rubber band **2**.

6.10 Ignition lock(Freeride E-XC)



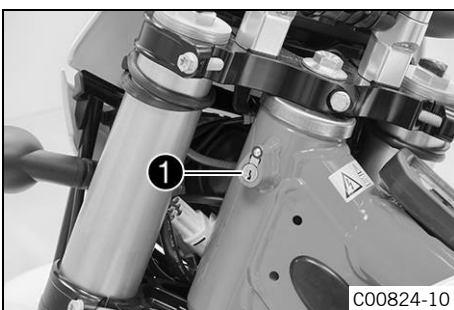
The ignition lock **1** is on the right behind the headlight mask.

i Info
When the ignition is switched on at the ignition lock, quickly activate the vehicle with the main switch.
When the ignition is switched on and the main switch is switched off, the 12 V battery discharges very quickly because in this case the lighting is powered by the 12 V battery instead of the KTM PowerPack.

Possible states

	Ignition off– In this position, the circuit of the 12 V battery is interrupted and the vehicle cannot be activated.
	Ignition on– In this position, the circuit of the 12 V battery is closed and the vehicle can be started.

6.11 Steering lock(Freeride E-XC)



Steering lock **1** is fitted on the left side of the steering head.
The steering lock is used to lock the steering. Steering, and therefore riding, is no longer possible.

6.12 Locking the steering(Freeride E-XC)

Note

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

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



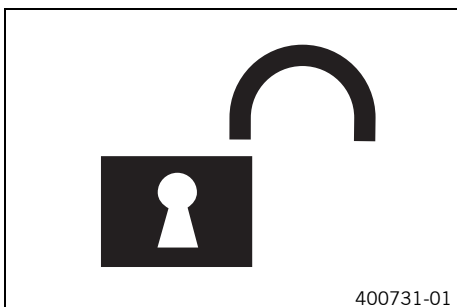
- Park the vehicle.
- Push the main switch into the position ☒.
- Turn the handlebar as far as possible to the right.
- Insert the key in the steering lock, turn it to the left, press it in, and turn it to the right. Remove the key.
- ✓ Steering is no longer possible.



Info

Never leave the key in the steering lock.

6.13 Unlocking the steering(Freeride E-XC)



- Insert the key in the steering lock, turn it to the left, pull it out, and turn it to the right. Remove the key.
- ✓ The handlebar can now be moved again.



Info

Never leave the key in the steering lock.

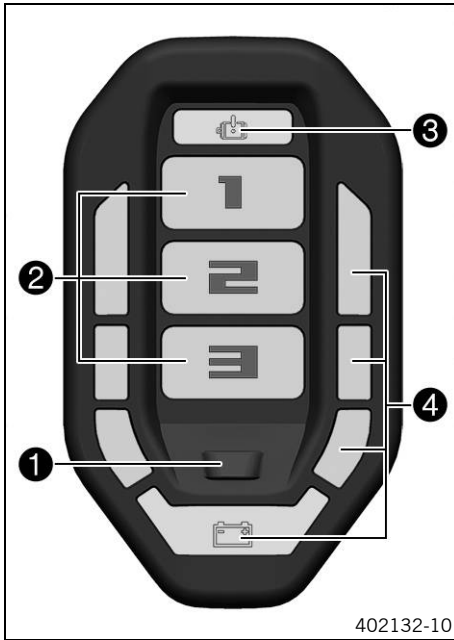
7.1 Multifunction display

7.1.1 Multifunction display

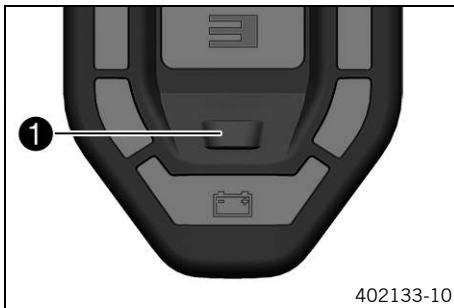
The multifunction display is attached in front of the seat.

Overview of the multifunction display

1	Map-select tip switch (☛ p. 27)
2	Driving mode display (☛ p. 27)
3	Electric motor indicator lamp (☛ p. 28)
4	Charge level indicator (☛ p. 28)



7.1.2 Map-select tip switch

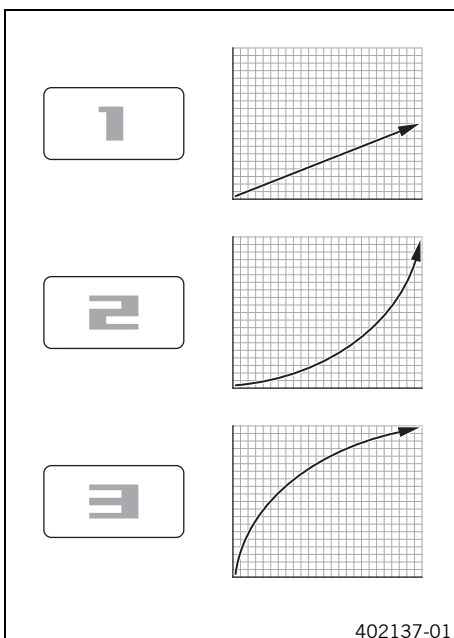


The map-select tip switch **1** determines the driving mode.

Possible states

- The vehicle is in standby mode– the map-select tip switch is active.
- The vehicle is in ready mode– the map-select tip switch is active.
- All other vehicle conditions– the map-select tip switch is inactive.

7.1.3 Driving mode display



Red driving mode displays with the numbers **1**, **2** or **3** show the driving mode selected. Three different driving modes are available. The driving modes determine how the vehicle reacts to throttle grip operation.

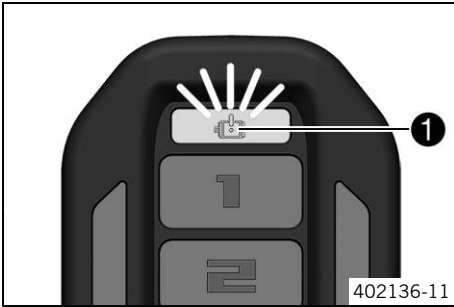
The figures only show approximate values for illustrative purposes, and do not describe the actual reaction.

Driving mode **1** is Economy: the motor torque is reduced by half.

Driving mode **2** is Standard: the further the throttle grip is twisted open, the more the motor power increases.

Driving mode **3** is Advanced: the greatest increase in power occurs immediately, after which the motor power increases more slowly.

7.1.4 Electric motor indicator lamp (MIL)

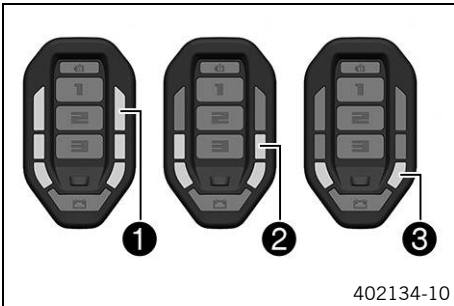


The warning tones **MIL 1** emitted by the multifunction display are synchronized with the flash rhythm.

Possible states

	Electric motor indicator lamp flashes– A error is present in the vehicle electronic system.
	Electric motor indicator lamp lights up– The system is carrying out a self-check or has been disabled during driving.

7.1.5 Charge level indicator



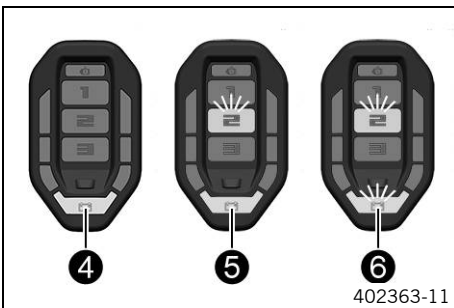
Info

The charge level indicator is only visible when the vehicle is ready to drive.

All segments **1** light up: charging level 80% - 100%.

Four segments **2** light up: charging level 60% - 80%.

Two segments **3** light up: charging level 40% - 60%.

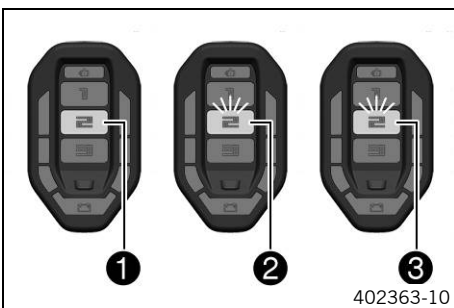


The last segment **4** lights up in yellow: charging level 20% - 40%.

The last segment **5** lights up in red and the driving mode indicator flashes red: charging level 10%–20%.

The last segment **6** and the driving mode indicator light up in red: charging level 0%–10%.

7.1.6 Power reduction



Info

Before the power reduction is activated, a warning signal sounds for 3 seconds.

The selected driving mode **1** lights up:

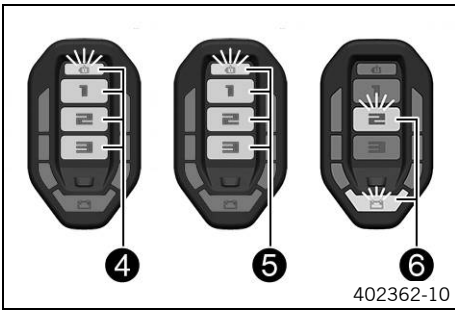
- The vehicle is ready to operate and provides full power.

The selected driving mode **2** flashes slowly:

- The charge level of the KTM PowerPack is low. The system is still fully operable.
- High temperature; the system is still fully operable. The driving style must be adapted.
- Low temperature; the system provides 80% of power at temperatures of less than 9 °C and 50% of power at temperatures of less than 0 °C. When the KTM PowerPack has warmed up sufficiently, 80% of power or full power is available, depending on the temperature, once the vehicle has been started again.

The selected driving mode **3** alternately flashes slow and fast:

- Power is further reduced considerably due to temperature monitoring, but 100% power is restored after the vehicle is restarted.



All three driving mode indicators light up and the yellow electric motor indicator lamp (MIL) ④ flashes (blink code 22, 23, or 24):

- The system has exceeded the operating temperature. To protect the system from damage, the power is reduced considerably. Park the vehicle, if possible, and allow it to cool down. Full power is only enabled when the component concerned has cooled down and the vehicle has been started again.

All three driving mode indicators light up and the yellow electric motor indicator lamp (MIL) ⑤ flashes with another rhythm:

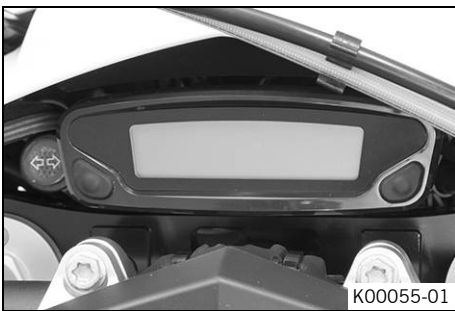
- The system provides 50% of power as an emergency operation program.

The selected driving mode ⑥ flashes slowly and the charge level indicator lights up red or flashes red:

- The charge state of the KTM PowerPack is below 20%. Vehicle power is reduced. Switch off the vehicle and charge the KTM PowerPack.

7.2 Overview

7.2.1 Indicator lamps overview(Freeride E-XC)

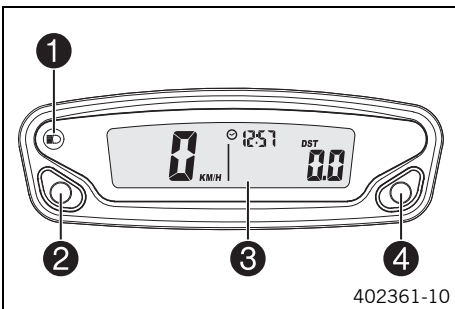


Possible states

	The high beam indicator lamp lights up blue– The high beam is switched on.
	Turn signal indicator light flashes green– The turn signal is switched on.

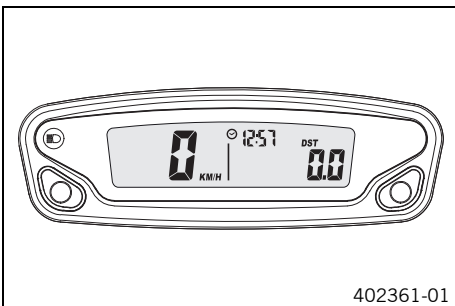
7.3 Speedometer (Freeride E-XC)

7.3.1 Overview



- | | |
|---|--------------------------|
| 1 | High beam indicator lamp |
| 2 | Left button |
| 3 | Display |
| 4 | Right button |

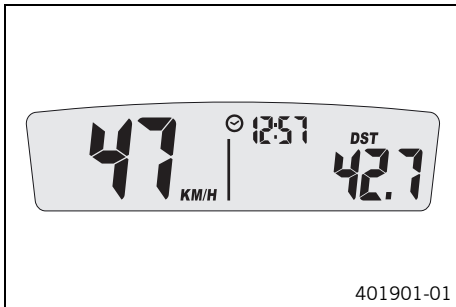
7.3.2 Activation



Activating the speedometer

The speedometer is activated when one of the buttons is pressed or an impulse comes from the wheel speed sensor.

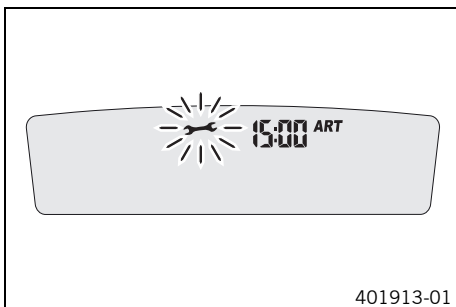
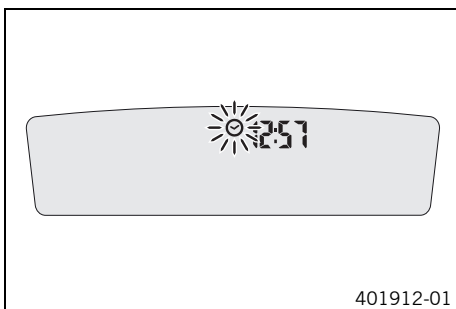
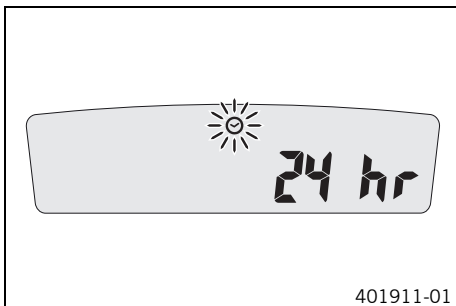
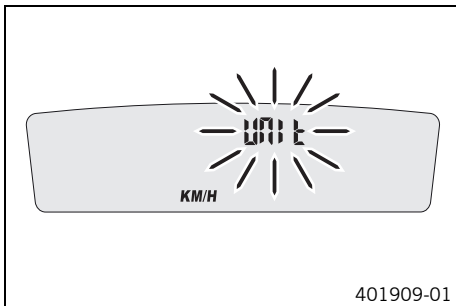
7.3.3 Message on the speedometer



Possible states

	Battery voltage of the speedometer– Battery voltage of the speedometer is too low. Change the battery.
	Service– A service is due. Contact an authorized KTM workshop.

7.3.4 Setting the speedometer



Condition

The motorcycle is stationary.

- Press both buttons for 3–5 seconds.
 - ✓ The Setup menu is displayed. The **UNIT** display flashes.
- Press one of the buttons to select **UNIT** for the speed in kilometers **KM/H** or miles **M/H**.
- Wait for 5 seconds.
 - ✓ The speedometer changes to the next menu item. The ☀ symbol flashes.
- Press one of the buttons to select the 24h or 12h display of the clock.

- Wait for 5 seconds.
 - ✓ The speedometer changes to the next menu item. The ☀ symbol flashes.

Resetting the time

- Press the left button.
 - ✓ The value decreases.

Advancing the time

- Press the right button.
 - ✓ The value increases.

- Wait for 5 seconds.
 - ✓ The speedometer changes to the next menu item. The ⚙ symbol flashes.
- Set the service.

Guideline

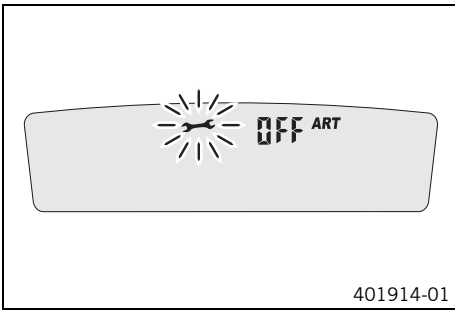
One-time service after	1 h
Service every	20 h

Shortening the service interval

- Press the left button.
 - ✓ The value decreases.

Extending the service interval

- Press the right button.
 - ✓ The value increases.

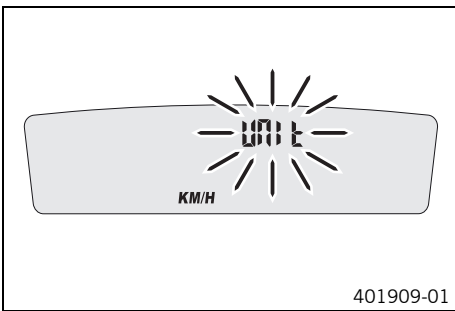


Switching off the service interval display

- Press and hold the left button.
- ✓ The value decreases rapidly until **off** appears in the display.

7.3.5 Setting the kilometers or miles

i Info
If the unit is changed, the value **ODO** is retained and converted accordingly.

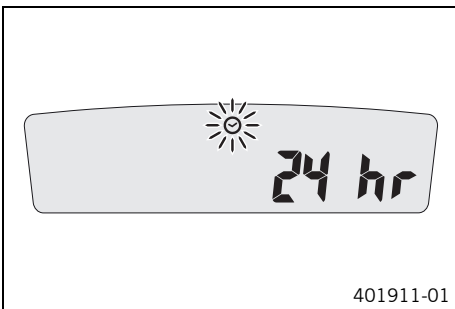


Condition

The motorcycle is stationary.

- Press both buttons for 3–5 seconds.
- ✓ The Setup menu is displayed. The **UNIT** display flashes.
- Press one of the buttons to select **UNIT** for the speed in kilometers **KM/H** or miles **M/H**.

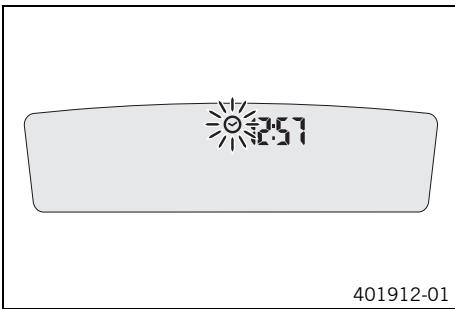
7.3.6 Setting the clock



Condition

The motorcycle is stationary.

- Press both buttons for 3–5 seconds.
- ✓ The Setup menu is displayed. The **UNIT** display flashes.
- Wait for the menu of the clock ☉ to flash.
- Press one of the buttons to select the 24h or 12h display of the clock.



- Wait for 5 seconds.
- ✓ The speedometer changes to the next menu item. The ☉ symbol flashes.

Resetting the time

- Press the left button.
- ✓ The value decreases.

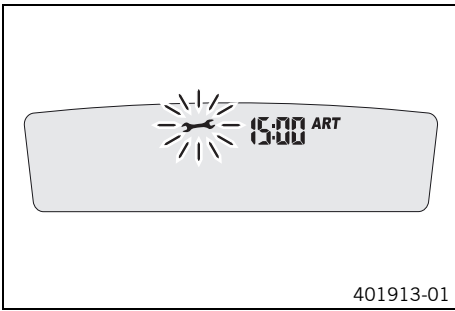
Advancing the time

- Press the right button.
- ✓ The value increases.

7.3.7 Setting the service display

Condition

The motorcycle is stationary.



- Press both buttons for 3–5 seconds.
 - ✓ The Setup menu is displayed. The **UNIT** display flashes.
- Wait for the menu of the service display → to flash.
- Set the service.

Guideline

One-time service after	1 h
Service every	20 h

Shortening the service interval

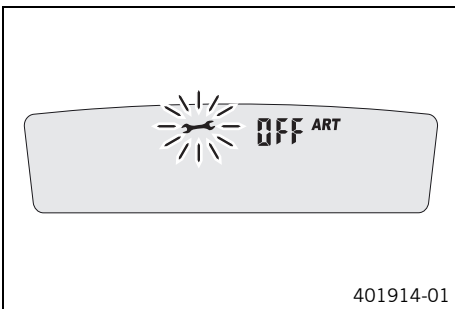
- Press the left button.
 - ✓ The value decreases.

Extending the service interval

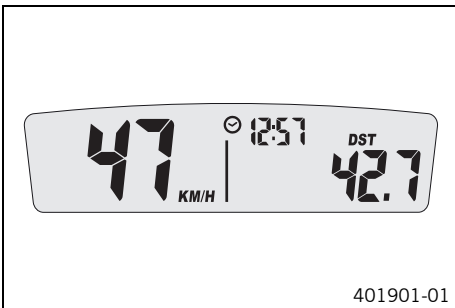
- Press the right button.
 - ✓ The value increases.

Switching off the service interval display

- Press and hold the left button.
 - ✓ The value decreases rapidly until **off** appears in the display.



7.3.8 Speed, time, and DST distance 1

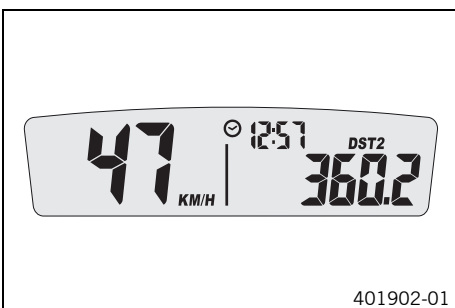


- Press one of the buttons until **DST** appears on the speedometer.
- KM/H** or **M/H** shows the speed.
 ☉ shows the time.
DST shows the distance since the last reset, such as between two recharging cycles.

i Info
 If the value of 39999.9 is exceeded, **DST** is automatically reset to 0.0.

Press the left button briefly.	Next display mode
Press the left button for 3 – 5 seconds.	DST can be preset to a value between 0.0 and 39999.9 by pressing the buttons.
Press the right button briefly.	Next display mode
Press the right button for 3 – 5 seconds.	DST is reset to 0.0.

7.3.9 Speed, time, and DST2 distance 2



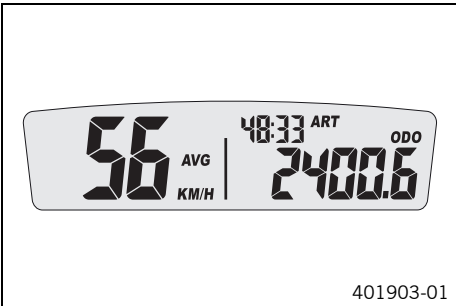
- Press one of the buttons until **DST2** appears on the speedometer.
- KM/H** or **M/H** shows the speed.
 ☉ shows the time.
DST2 shows the distance 2 since the last reset, such as between two recharging cycles.

i Info
 If the value of 39999.9 is exceeded, **DST2** is automatically reset to 0.0.

Press the left button briefly.	Next display mode
Press the left button for 3 – 5 seconds.	DST2 can be preset to a value between 0.0 and 39999.9 by pressing the buttons.
Press the right button briefly.	Next display mode

Press the right button for 3 – 5 seconds.	DST2 is reset to 0.0.
---	------------------------------







7.3.10 AVG average speed, ART operating hours, and ODO total distance covered



- Press one of the buttons until **AVG**, **ART** and **ODO** appear in the speedometer.
- AVG** shows the average speed since the last reset.
ART shows the operating hours.
ODO shows the total distance covered.

Press the left button briefly.	Next display mode
Press the left button for 3 – 5 seconds.	The OPEN END WRENCH SYMBOL shows the remaining operating hours until the next service is due.
Press the right button briefly.	Next display mode
Press the right button for 3 – 5 seconds.	AVG is reset to 0.0.

8.1 Advice on first use

-  **Danger**
Danger of accidents Danger arising from the rider's judgement being impaired.
 - Do not operate the vehicle while under the influence of alcohol, drugs and certain medications or physically or mentally impaired.
-  **Warning**
Risk of injury Missing or poor protective clothing presents an increased safety risk.
 - Wear protective clothing (helmet, boots, gloves, pants and jacket with protectors) every time you ride the vehicle. Always wear protective clothing that is in good condition and meets the legal requirements.
-  **Warning**
Danger of accidents Critical riding behavior due to inappropriate riding.
 - Adapt your riding speed to the road conditions and your riding ability.
-  **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 Unstable riding behavior.
 - Do not exceed the maximum permissible weight and axle loads.
-  **Warning**
Risk of misappropriation People who act without authorization endanger themselves and others.
 - Never leave the vehicle unattended.
 - Protect the vehicle against access by unauthorized persons.

- Make sure that the pre-delivery inspection work has been carried out by an authorized KTM workshop.
 - ✓ You will receive the delivery documents and the Service and Warranty Booklet at vehicle handover.
- Before your first trip, read the entire Owner's Manual carefully.
- Get to know the controls.


(Freeride E-SX)
- Adjust the basic position of the front brake lever. (👉 p. 71)

(Freeride E-SX)
- Adjust the basic position of the rear brake lever. (👉 p. 77)

(Freeride E-XC)
- Adjust the free travel of the front brake lever. (👉 p. 71)

(Freeride E-XC)
- Adjust the free travel of the rear brake lever. (👉 p. 77)

- Get used to handling the motorcycle on a suitable piece of land before taking a longer trip.

 **Info** When offroad, being accompanied by another person on another vehicle so that you can help each other is recommended.

- Try also to ride as slowly as possible and in a standing position to get a better feeling for the motorcycle.
- Do not take any offroad trips that exceed your ability and experience.
- Hold the handlebar firmly with both hands and keep your feet on the footrests when riding.
- Do not exceed the maximum permissible weight and the maximum permissible axle loads.

Guideline

Maximum permissible overall weight	280 kg (617 lb.)
Maximum permissible front axle load	135 kg (298 lb.)
Maximum permissible rear axle load	175 kg (386 lb.)

9.1 Checks and maintenance work when preparing for use



Info

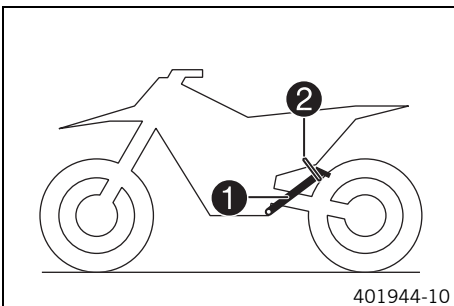
Before every trip, check the condition of the vehicle and ensure that it is safe to operate. The vehicle must be in perfect technical condition when used.

- Check the throttle grip, main switch, KTM PowerPack, multifunction display and electric motor for external damage.

(Freeride E-XC)

- Check the electrical system.
- Check the front brake fluid level. (☛ p. 72)
- Check the rear brake fluid level. (☛ p. 78)
- Check the front brake linings. (☛ p. 74)
- Check the rear brake linings. (☛ p. 79)
- Check that the brake system is functioning properly.
- Check the coolant level. (☛ p. 105)
- Check for chain dirt accumulation. (☛ p. 65)
- Check the chain, rear sprocket, motor sprocket, and chain guide. (☛ p. 68)
- Check the chain tension. (☛ p. 66)
- Check the tire condition. (☛ p. 86)
- Check the tire air pressure. (☛ p. 86)
- Check the spoke tension. (☛ p. 87)
- Clean the dust boots of the fork legs. (☛ p. 50)
- Bleed the fork legs. (☛ p. 49)
- Check the settings of all controls and ensure that they can be operated smoothly.
- Check all screws, nuts, and hose clamps for a tight fit.
- Check the charge level of the KTM PowerPack.

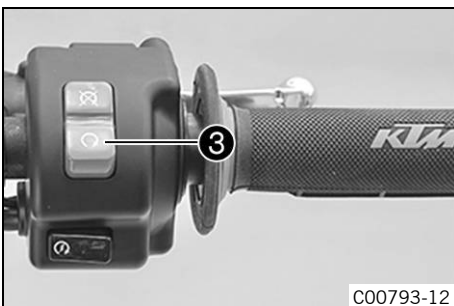
9.2 Starting



- Take the motorcycle off the side stand **1** and secure the side stand with the rubber band **2**.

(Freeride E-XC)

- Turn the key in the ignition lock to the position \circ .

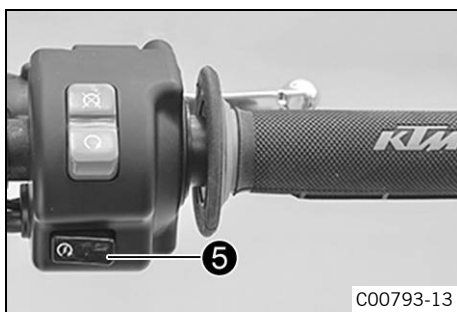
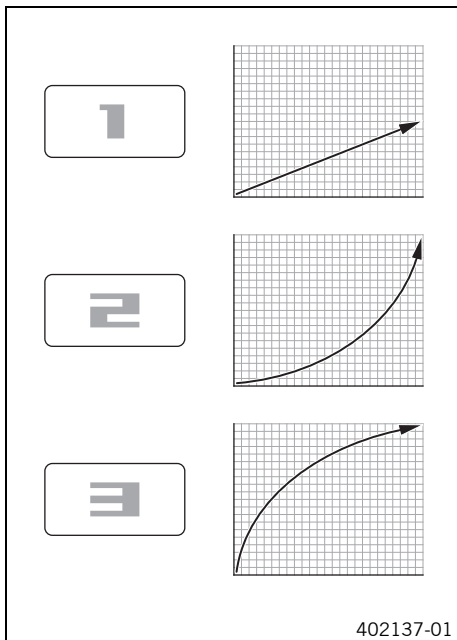


- Push the main switch **3** into position \circ .
✓ The vehicle is ready for operation.



Optional:

- Press and hold the map-select tip switch **4** for at least one second.
✓ Driving mode is activated when the switch is let go.



- Select one of the driving modes.
The driving mode **1** is Economy: the motor torque is reduced by half.
The driving mode **2** is Standard: the further the throttle grip is open, the more the motor power increases.
The driving mode **3** is Advanced: the greatest increase in power occurs immediately, after which the motor power increases more slowly.

i Info
A red driving mode display with the number **1**, **2** or **3** shows the driving mode selected.
Three different driving modes are available. The driving modes determine how the vehicle reacts to throttle grip operation.
The figures only show approximate values for illustrative purposes, and do not describe the actual reaction.

- Press start button **5**.
✓ The vehicle is ready to drive and reacts to the throttle grip.

9.3 Starting off

i Info
When you are riding, the side stand must be folded up and secured with the rubber band.

- First familiarize yourself with the new riding and handling behavior of this vehicle.
- Turn the throttle grip carefully. The absence of engine noise belies the actual power of the vehicle.

9.4 Applying the brakes

! Warning
Danger of accidents If you brake too hard, the wheels can lock.

- Adapt your braking to the traffic situation and the road conditions.

! Warning
Danger of accidents Reduced braking efficiency caused by spongy pressure point of front or rear brake.

- Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)

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

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

i Info
The rear brake lever is located on the left side of the handlebar.

- When braking, release the throttle and apply the front and rear brakes at the same time.
- On sandy, wet, or slippery surfaces, use mostly the rear brake if possible.

- Try to complete the braking procedure before riding into a curve.

9.5 Stopping, parking



Warning

Risk of misappropriation People who act without authorization endanger themselves and others.

- Never leave the vehicle unattended.
- Protect the vehicle against access by unauthorized persons.



Warning

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

- Do not touch any parts such as the radiator, motor, shock absorber, or brake system before these parts have cooled down.
- Let the vehicle parts cool down before you perform any work on the vehicle.

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.

- Apply the brakes on the motorcycle.
- Deactivate the vehicle. (☛ p. 37)
- Park the motorcycle on its side stand on a firm surface.

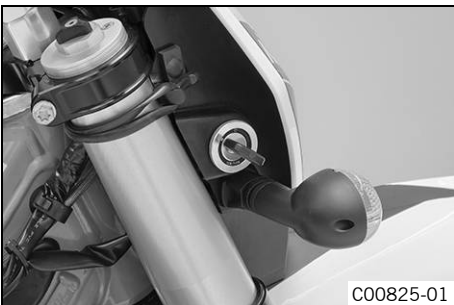
(Freeride E-XC)

- Lock the steering. (☛ p. 26)

9.6 Deactivating the vehicle



- Push the main switch into the position ☒.



(Freeride E-XC)

- Turn the key in the ignition lock to the position ☒ while the vehicle is deactivated. Remove the key.

9.7 Transporting the vehicle

Note

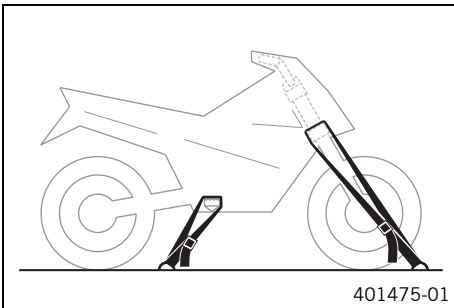
Danger of damage The parked vehicle may roll away or fall over.

- 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.



- Use tension belts or other suitable devices to secure the motorcycle against falling over or rolling away.

9.8 Transporting the KTM PowerPack



Warning

Risk of injury The KTM PowerPack is very heavy.

Serious injury may result if the KTM PowerPack is not properly secured during transport. The transport vehicle may be damaged if the KTM PowerPack is not properly secured.

- Secure the KTM PowerPack with tension belts or other suitable fixing materials.
- To ensure rapid access in the event of an emergency, always transport the KTM PowerPack close to the cargo door.
- Transport the KTM PowerPack separately from flammable liquids or ignition sources such as fuel, gas, or oil.
- Keep suitable fire extinguishers ready.

10.1 Service schedule

	Every 50 operating hours	Every 20 operating hours after sporting use	Once after 1 operating hour
Read out the fault memory using the KTM diagnostics tool. 🛠️	○	●	●
Check that the electrical equipment is functioning properly. 🛠️(Freeride E-XC)	○	●	●
Check and charge the 12 V battery. 🛠️		●	●
Check and recharge the KTM PowerPack. 🛠️	○	●	●
Check the front brake linings. (🛠️ p. 74)		●	●
Check the rear brake linings. (🛠️ p. 79)		●	●
Check the brake discs. (🛠️ p. 72)		●	●
Check the brake lines for damage and leakage. 🛠️		●	●
Check the frame and swingarm. 🛠️		●	●
Check the heim joints at the top and bottom of the shock absorber. 🛠️		●	●
Check the tire condition. (🛠️ p. 86)	○	●	●
Check the tire air pressure. (🛠️ p. 86)	○	●	●
Check the wheel bearing for play. 🛠️		●	●
Check the wheel hubs. 🛠️		●	●
Check the rim run-out. 🛠️	○	●	●
Check the spoke tension. (🛠️ p. 87)	○	●	●
Check the chain, rear sprocket, motor sprocket, and chain guide. (🛠️ p. 68)		●	●
Check the chain tension. (🛠️ p. 66)	○	●	●
Grease all moving parts (e.g., side stand, hand lever, chain, ...) and check for smooth operation. 🛠️	○	●	●
Check the front brake fluid level. (🛠️ p. 72)		●	●
Check the rear brake fluid level. (🛠️ p. 78)		●	●
Check the travel of the brake levers. 🛠️		●	●
Check the play of the steering head. 🛠️ (🛠️ p. 59)	○	●	●
Check all hoses and bellows for cracking, leaks and incorrect routing. 🛠️	○	●	●
Check the antifreeze and coolant level. (🛠️ p. 104)	○	●	●
Check the cables for damage and routing without sharp bends. 🛠️		●	●
Check the battery discharge plug form ring for damage. 🛠️	○	●	●
Check the screws and nuts for tightness. 🛠️	○	●	●
Check the screw connections on the KTM PowerPack for the specified tightening torque. 🛠️	○	●	●
Check the headlight setting.(Freeride E-XC) (🛠️ p. 94)	○	●	●
Final check: Check the vehicle for safe operation and take a test ride. 🛠️(Freeride E-SX)	○	●	●
Final check: Check the vehicle for roadworthiness and take a test ride. 🛠️(Freeride E-XC)	○	●	●
Read out the error memory after the test ride using the KTM diagnostics tool. 🛠️	○	●	●
Make the service entry in the KTM Dealer.net and in the Service and Warranty Booklet. 🛠️	○	●	●

- One-time interval
- Periodic interval

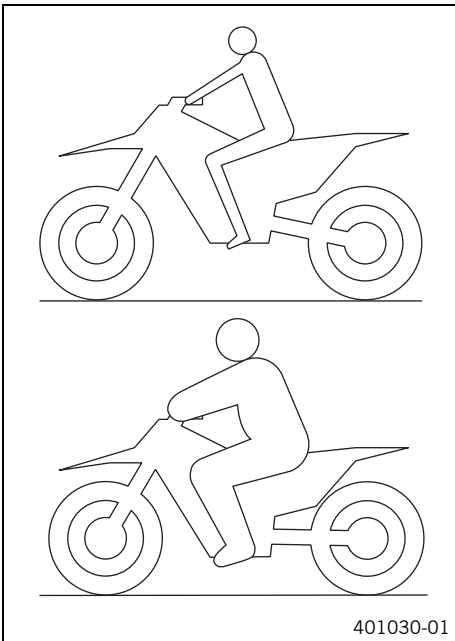
10.2 Service work (as additional order)

	Every 20 operating hours after sporting use	Every 50 operating hours	Every 100 operating hours	Annually
Change the front brake fluid. 🛠️				•
Change the rear brake fluid. 🛠️				•
Grease the steering head bearing. 🛠️ (🔧 p. 60)				•
Change the battery discharge plug form ring. 🛠️	•	•	•	
Service the fork. 🛠️	•	•	•	
Service the shock absorber. 🛠️	•	•	•	
Check the swingarm bearing. 🛠️	•	•	•	
Change the gear oil. 🛠️ (🔧 p. 108)	•	•	•	
Change all motor bearings, shaft seal rings and bearing seals. 🛠️				•

- Periodic interval

11.1 Checking the basic chassis setting with the rider's weight

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



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

Guideline

Standard rider weight	75... 85 kg (165... 187 lb.)
-----------------------	------------------------------

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

11.2 Compression damping of the shock absorber

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

11.3 Adjusting the low-speed compression damping of the shock absorber

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

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

i Info
The low-speed setting takes effect during slow to normal compression of the shock absorber.

Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)

Main work

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

i Info
Do not loosen nut ❷!

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



Guideline

Compression damping, low-speed	
Comfort	20 clicks
Standard	15 clicks
Sport	10 clicks

i Info
Turn clockwise to increase damping; turn counterclockwise to reduce damping during slow to normal compression of the shock absorber.

Finishing work

- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

11.4 Adjusting the high-speed compression damping of the shock absorber ↘

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

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

i Info
The high-speed setting takes effect during fast compression of the shock absorber.

Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)
- Raise the motorcycle with a lift stand. (☛ p. 49)
- Remove the shock absorber. ↘ (☛ p. 62)

Main work

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

i Info
Do not loosen nut **2**!

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

Guideline

Compression damping, high-speed	
Comfort	2 turns
Standard	1 turn
Sport	1 turn

i Info
Turn clockwise to increase damping; turn counterclockwise to reduce damping during fast compression of the shock absorber.

Finishing work

- Install the shock absorber. ↘ (☛ p. 62)
- Remove the motorcycle from the lift stand. (☛ p. 49)
- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)



11.5 Adjusting the rebound damping of the shock absorber

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

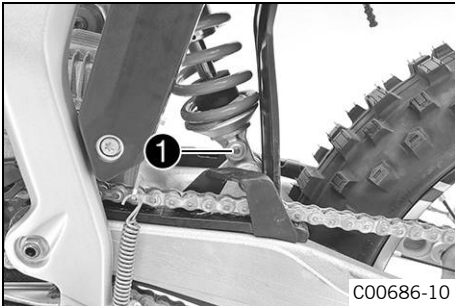
- The shock absorber is filled with high density nitrogen. Adhere to the description provided. (Your authorized KTM workshop will be glad to help.)

Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)

Main work (Freeride E-SX)

- Turn adjusting screw ❶ clockwise up to the last perceptible click.



(Freeride E-XC)

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

Guideline

Rebound damping	
Comfort	20 clicks
Standard	15 clicks
Sport	10 clicks

i Info

Turn clockwise to increase damping; turn counterclockwise to reduce damping during rebound of the shock absorber.

Finishing work

- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

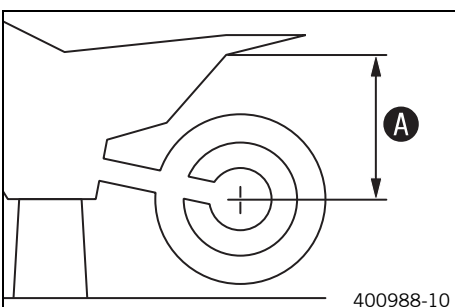
11.6 Measuring rear wheel sag unloaded

Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)
- Raise the motorcycle with a lift stand. (☛ p. 49)

Main work

- Measure the distance – as vertical as possible – between the rear axle and another fixed point, for example, a mark on the rear fairing.
- Note down the value as dimension A.

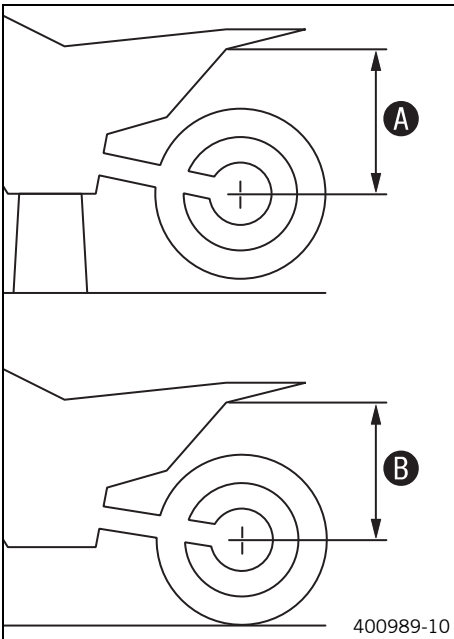


Finishing work

- Remove the motorcycle from the lift stand. (☛ p. 49)

- Install the KTM PowerPack. (🔧 p. 96)
- Lock the seat. (🔧 p. 63)

11.7 Checking the static sag of the shock absorber



- Measure distance **A** of rear wheel unloaded. (🔧 p. 43)
- Hold the motorcycle upright with the aid of an assistant.
- Measure the distance between the rear axle and the fixed point again.
- Note down the value as dimension **B**.

i Info

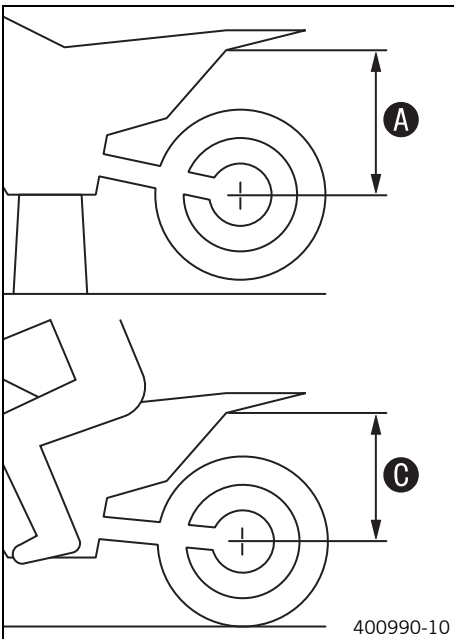
The static sag is the difference between measurements **A** and **B**.

- Check the static sag.

Static sag	20 mm (0.79 in)
------------	-----------------

- » If the static sag is less or more than the specified value:
 - Adjust the spring preload of the shock absorber. 🛠️ (🔧 p. 44)

11.8 Checking the riding sag of the shock absorber



- Measure distance **A** of rear wheel unloaded. (🔧 p. 43)
- With another person holding the motorcycle, the rider, wearing full protective clothing, sits on the seat 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.
- Note down the value as dimension **C**.

i Info

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

- Check the riding sag.

Riding sag	100 mm (3.94 in)
------------	------------------

- » If the riding sag differs from the specified measurement:
 - Adjust the riding sag. 🛠️ (🔧 p. 45)

11.9 Adjusting the spring preload of the shock absorber 🛠️

⚠️ Caution

Danger of accidents Disassembly of pressurized parts can lead to injury.

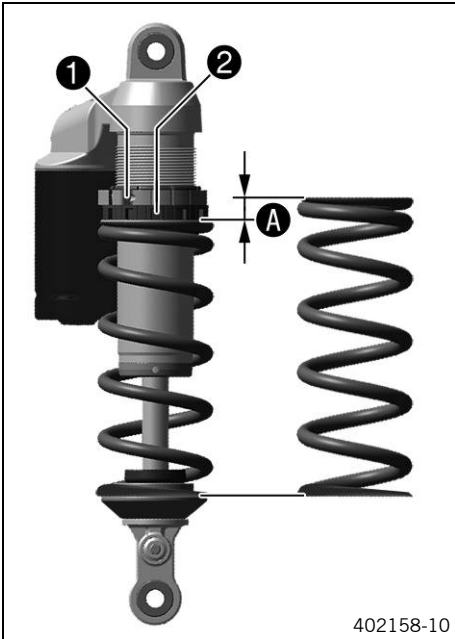
- The shock absorber is filled with high density nitrogen. Adhere to the description provided. (Your authorized KTM workshop will be glad to help.)

i Info

Before changing the spring preload, make a note of the present setting, e.g., by measuring the length of the spring.

Preparatory work

- Deactivate the vehicle. (🔧 p. 37)
- Fold the seat up. (🔧 p. 63)



- Remove the KTM PowerPack. (☞ p. 96)
- Mount the covering cap. (☞ p. 64)
- Raise the motorcycle with a lift stand. (☞ p. 49)
- Remove the shock absorber. ☞ (☞ p. 62)
- After removing the shock absorber, clean it thoroughly.

Main work

- Loosen screw ①.
- Turn adjusting ring ② until the spring is no longer under tension.

Hook wrench(T106S)

- Measure the overall spring length while the spring is not under tension.
- Tighten the spring by turning adjusting ring ② to measurement A.

Guideline

Spring preload	
Comfort	9 mm (0.35 in)
Standard	7 mm (0.28 in)
Sport	9 mm (0.35 in)

i Info

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

- Tighten screw ①.

Guideline

Screw, shock absorber adjusting ring	M5	5 Nm (3.7 lbf ft)
--------------------------------------	----	-------------------

Finishing work

- Install the shock absorber. ☞ (☞ p. 62)
- Remove the motorcycle from the lift stand. (☞ p. 49)
- Install the KTM PowerPack. (☞ p. 96)
- Lock the seat. (☞ p. 63)

11.10 Adjusting the riding sag ☞

Preparatory work

- Deactivate the vehicle. (☞ p. 37)
- Fold the seat up. (☞ p. 63)
- Remove the KTM PowerPack. (☞ p. 96)
- Mount the covering cap. (☞ p. 64)
- Raise the motorcycle with a lift stand. (☞ p. 49)
- Remove the shock absorber. ☞ (☞ p. 62)
- After removing the shock absorber, clean it thoroughly.

Main work

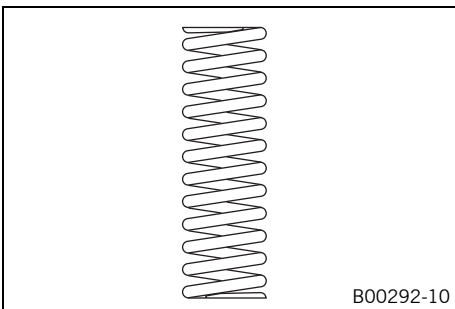
- Choose and mount a suitable spring.

Guideline

Spring designation	
Weight of rider:65... 75 kg (143... 165 lb.)	62 N/mm (354 lb/in)
Weight of rider:75... 85 kg (165... 187 lb.)	63±8 N/mm (360±46 lb/in)
Weight of rider:85... 95 kg (187... 209 lb.)	70 N/mm (400 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.



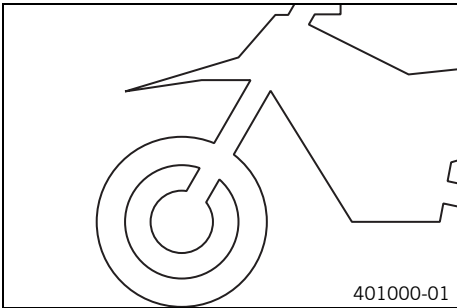
Finishing work

- Install the shock absorber. ☞ (☞ p. 62)

- Remove the motorcycle from the lift stand. (☛ p. 49)
- Adjust the rebound damping of the shock absorber. (☛ p. 43)
- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)
- Check the static sag of the shock absorber. (☛ p. 44)
- Check the riding sag of the shock absorber. (☛ p. 44)

11.11 Checking the basic setting of the fork

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



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

11.12 Adjusting the compression damping of the fork

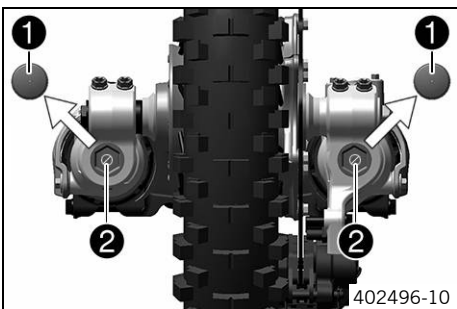
i Info
The hydraulic compression damping determines the fork suspension behavior.

Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)

Main work

- Remove protection caps ❶.
- Turn adjusting screws ❷ clockwise all the way.



i Info
Adjusting screws ❷ are located at the bottom end of the fork legs. Make the same adjustment on both fork legs.

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

Guideline

Compression damping	
Comfort	20 clicks
Standard	15 clicks
Sport	10 clicks

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

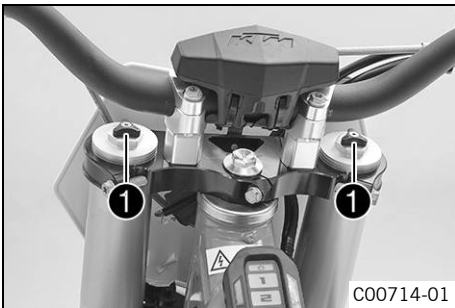
- Mount protection covers ❶.

Finishing work

- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

11.13 Adjusting the rebound damping of the fork

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



(Freeride E-SX)

- Turn adjusting screws **1** clockwise all the way.

i Info
Adjusting screws **1** are located at the top end of the fork legs. Make the same adjustment on both fork legs.



(Freeride E-XC)

- Turn adjusting screws **1** clockwise all the way.

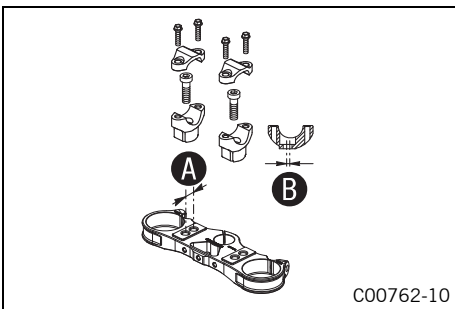
i Info
Adjusting screws **1** are located at the top end of the fork legs. Make the same adjustment on both fork legs.

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

Rebound damping	
Comfort	20 clicks
Standard	15 clicks
Sport	10 clicks

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

11.14 Handlebar position



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

Hole distance A	15 mm (0.59 in)
------------------------	-----------------

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

Hole distance B	3.5 mm (0.138 in)
------------------------	-------------------

The handlebar supports can be mounted in four different positions.

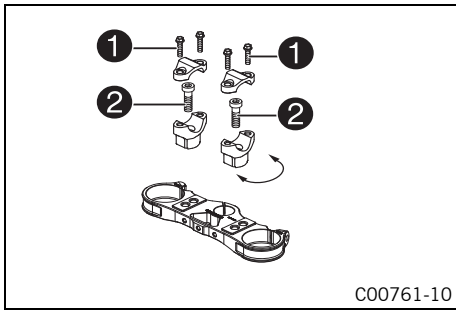
11.15 Adjusting the handlebar position

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.

Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)



Main work

- Remove screws ①. Take off the handlebar clamps.
- Take off the handlebar and hang to the side.



Info

Cover the components to protect them against damage.
Do not kink the cables and lines.

- Remove screws ②. Take off the handlebar supports.
- Place the handlebar supports in the required position. Mount and tighten screws ②.

Guideline

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



Info

Position the left and right handlebar supports evenly.

- Position the handlebar.



Info

Make sure the cables and wiring are positioned correctly.

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

Guideline

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



Info

Make sure the gap widths are even.

Finishing work

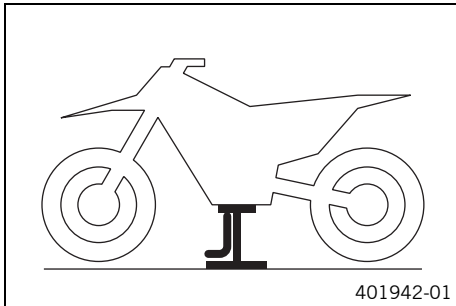
- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

12.1 Raising the motorcycle with a lift stand

Note

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

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



Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)

Main work

- Use the motor guard underneath the motor to raise the vehicle.

Lift stand(78129955100)

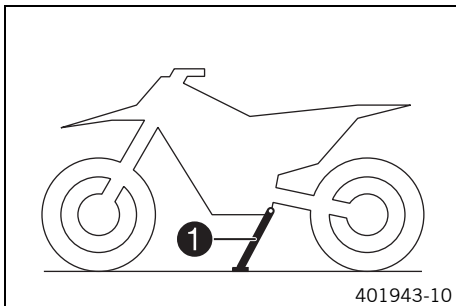
- ✓ The wheels are no longer in contact with the ground.
- Secure the motorcycle against falling over.

12.2 Removing the motorcycle from the lift stand

Note

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

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



Main work

- Remove the motorcycle from the lift stand.
- Remove the lift stand.
- To park the motorcycle, press side stand ① to the ground with your foot and lean the motorcycle on it.

Finishing work

- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

12.3 Bleeding the fork legs

Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)
- Raise the motorcycle with a lift stand. (☛ p. 49)

Main work

(Freeride E-SX)

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





(Freeride E-XC)

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

Finishing work

- Remove the motorcycle from the lift stand. (☛ p. 49)
- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

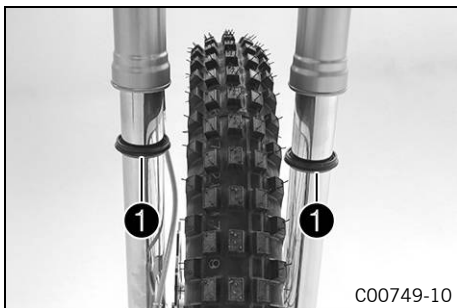
12.4 Cleaning the dust boots of the fork legs

Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)
- Raise the motorcycle with a lift stand. (☛ p. 49)
- Remove the fork protector. (☛ p. 53)

Main work

- Push dust boots ❶ of both fork legs downward.



Info

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

Universal oil spray (☛ p. 122)

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

Finishing work

- Install the fork protector. (☛ p. 53)
- Remove the motorcycle from the lift stand. (☛ p. 49)
- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

12.5 Removing the fork legs ☛

Preparatory work

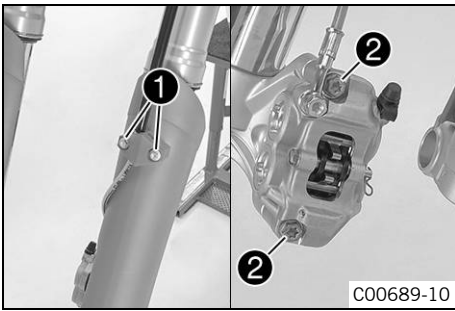
- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)
- Raise the motorcycle with a lift stand. (☛ p. 49)
- Remove the front wheel. ☛ (☛ p. 83)

(Freeride E-SX)

- Remove the start number plate. (☛ p. 60)

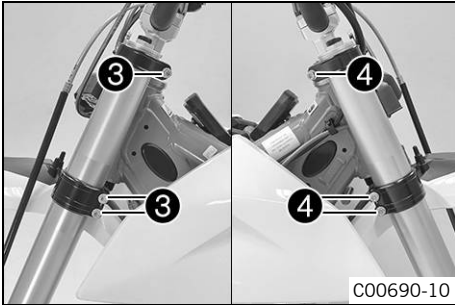
(Freeride E-XC)

- Remove the headlight mask with the headlight. (☛ p. 91)

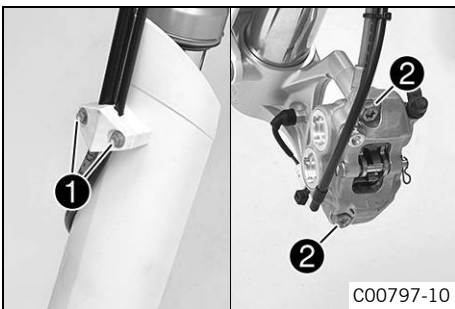


**Main work
(Freeride E-SX)**

- Remove screws ① and take off the clamp.
- Remove screws ② and the spacers and take off the brake caliper.
- Allow the brake caliper and brake line to hang tension-free to the side.

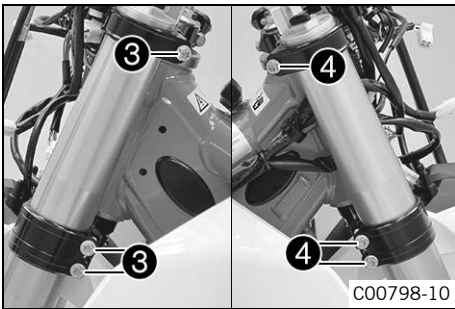


- Release screws ③. Take out the left fork leg.
- Release screws ④. Take out the right fork leg.



(Freeride E-XC)

- Remove screws ① and take off the clamp.
- Remove the cable tie(s) and detach the plug-in connector of the speedometer sensor.
- Remove screws ② and the spacers and take off the brake caliper.
- Allow the brake caliper and brake line to hang tension-free to the side.



- Release screws ③. Take out the left fork leg.
- Release screws ④. Take out the right fork leg.

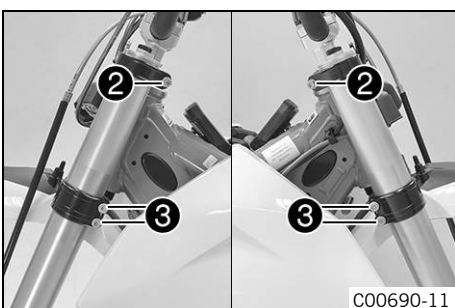
12.6 Installing the fork legs



**Main work
(Freeride E-SX)**

- Position the fork legs.
- ✓ Bleeder screws ① face forward.

i Info
The lowest milled groove in the fork leg must be flush with the top edge of the upper triple clamp.
The support for the brake caliper is attached to the left fork leg.



- Tighten screws ②.

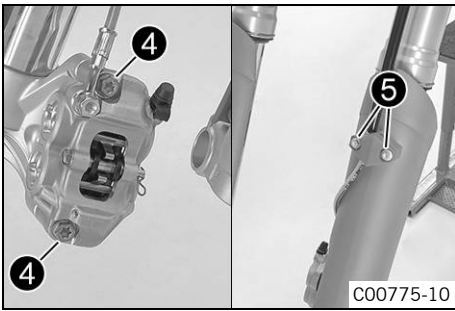
Guideline

Screw, top triple clamp	M8	22 Nm (16.2 lbf ft)
-------------------------	----	------------------------

- Tighten screws ③.

Guideline

Screw, bottom triple clamp	M8	18 Nm (13.3 lbf ft)
----------------------------	----	------------------------



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

Guideline

Screw, front brake caliper	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
----------------------------	----	------------------------	---------------

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

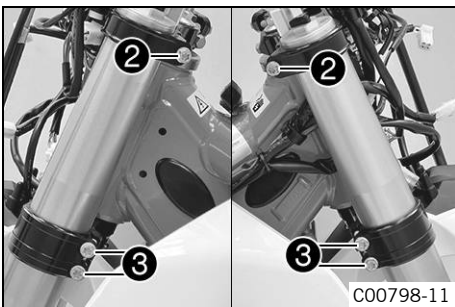


(Freeride E-XC)

- Position the fork legs.
- ✓ Bleeder screws 1 face forward.

i Info

The lowest milled groove in the fork leg must be flush with the top edge of the upper triple clamp.
The support for the brake caliper is attached to the left fork leg.



- Tighten screws 2.

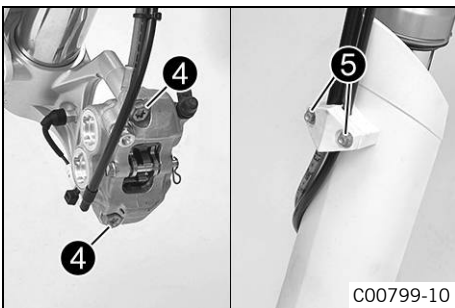
Guideline

Screw, top triple clamp	M8	22 Nm (16.2 lbf ft)	
-------------------------	----	------------------------	--

- Tighten screws 3.

Guideline

Screw, bottom triple clamp	M8	18 Nm (13.3 lbf ft)	
----------------------------	----	------------------------	--



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

Guideline

Screw, front brake caliper	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
----------------------------	----	------------------------	---------------

- Position the brake line, wiring harness, and clamp. Mount and tighten screws 5.
- Connect the plug-in connector of the speedometer sensor and mount the cable tie(s).

Finishing work

- Install the front wheel. (☛ p. 83)

(Freeride E-SX)

- Install the start number plate. (☛ p. 61)

(Freeride E-XC)

- Refit the headlight mask with the headlight. (☛ p. 92)
- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

(Freeride E-XC)

- Check the headlight setting. (☛ p. 94)

12.7 Removing the fork protector

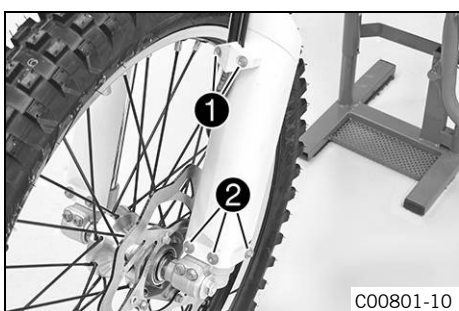
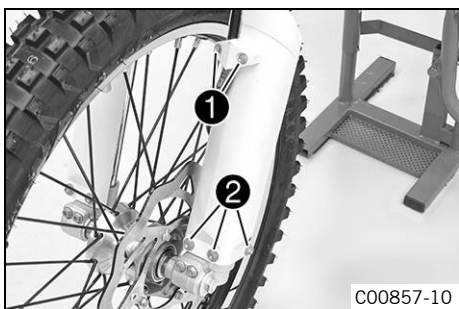
Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)

Main work

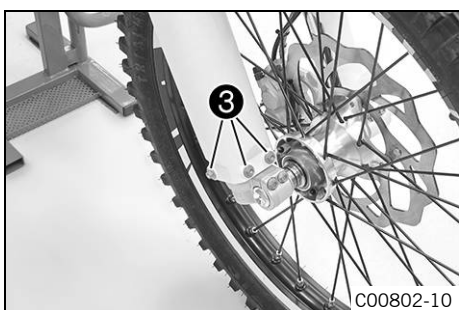
(Freeride E-SX)

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



(Freeride E-XC)

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



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

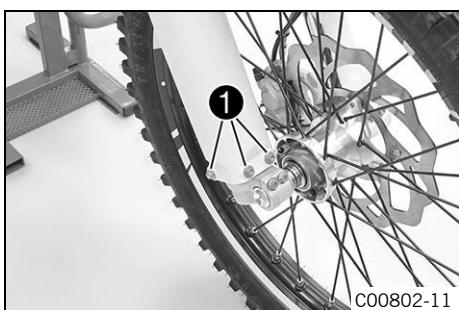
12.8 Installing the fork protector

Main work

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

Guideline

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



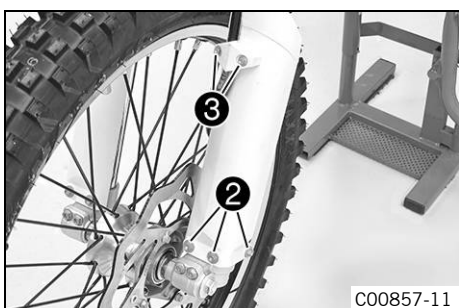
(Freeride E-SX)

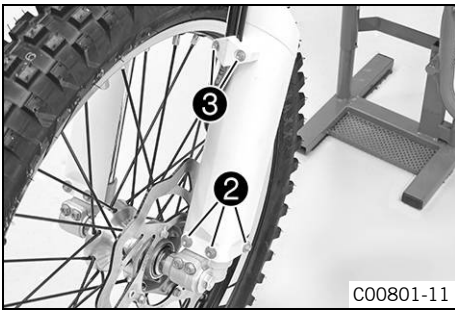
- Position the fork protector on the left fork leg. Mount and tighten screws ❷.

Guideline

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

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





C00801-11

(Freeride E-XC)

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

Guideline

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

- Position the brake line, wiring harness, and clamp. Mount and tighten screws ③.

Finishing work

- Install the KTM PowerPack. (☞ p. 96)
- Lock the seat. (☞ p. 63)

12.9 Removing the lower triple clamp

Preparatory work

- Deactivate the vehicle. (☞ p. 37)
- Fold the seat up. (☞ p. 63)
- Remove the KTM PowerPack. (☞ p. 96)
- Mount the covering cap. (☞ p. 64)
- Raise the motorcycle with a lift stand. (☞ p. 49)
- Remove the front wheel. (☞ p. 83)

(Freeride E-SX)

- Remove the start number plate. (☞ p. 60)

(Freeride E-XC)

- Remove the headlight mask with the headlight. (☞ p. 91)
- Remove the front fender. (☞ p. 61)
- Remove the fork legs. (☞ p. 50)

Main work

(Freeride E-SX)

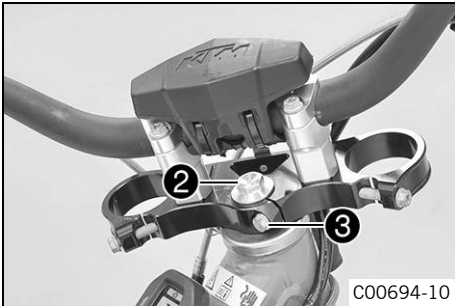
- Open holder ① and detach the wiring harness and brake line.



C00715-10

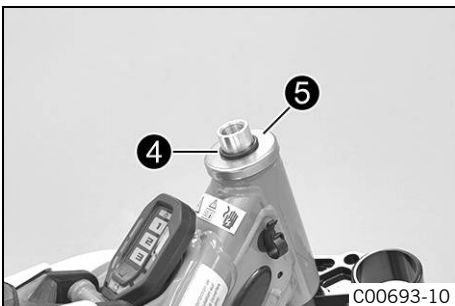
- Remove screw ②.
- Remove screw ③.
- Take off the upper triple clamp with the handlebar and set it aside.

i Info
Cover the components to protect them against damage.
Do not kink the cables and lines.



C00694-10

- Remove O-ring ④ and protective ring ⑤.
- Take off the lower triple clamp with the steering stem.
- Remove the upper steering head bearing.

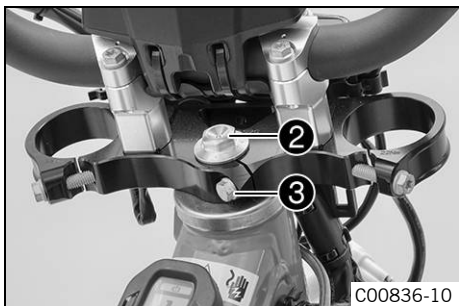


C00693-10



(Freeride E-XC)

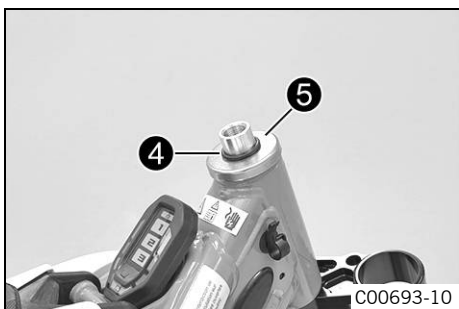
- Open holder ① and detach the wiring harness and brake line.



- Remove screw ②.
- Remove screw ③.
- Take off the upper triple clamp with the handlebar and set it aside.

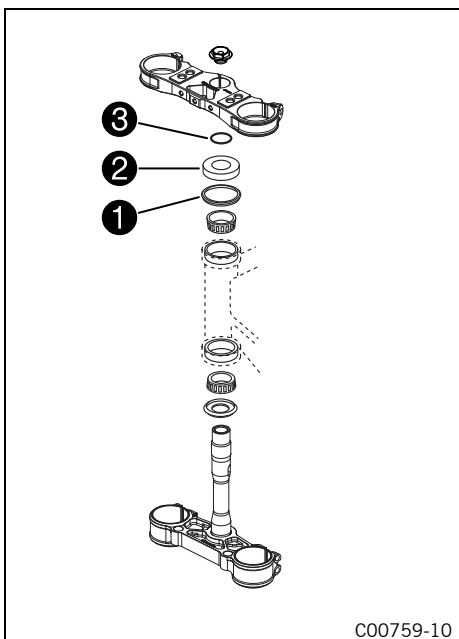
i Info

Cover the components to protect them against damage.
Do not kink the cables and lines.



- Remove O-ring ④ and protective ring ⑤.
- Take off the lower triple clamp with the steering stem.
- Remove the upper steering head bearing.

12.10 Installing the lower triple clamp

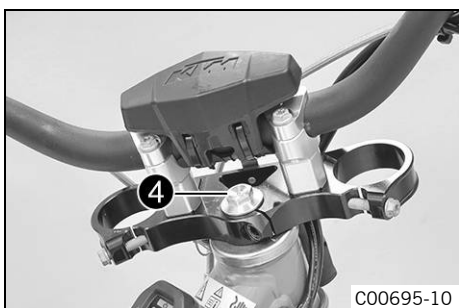


**Main work
(Freeride E-SX)**

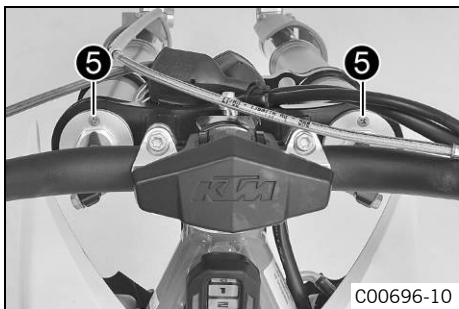
- Clean the bearing and sealing elements, check for damage, and grease.

High viscosity grease (☛ p. 122)

- Insert the lower triple clamp with the steering stem. Mount the upper steering head bearing.
- Check whether the upper steering head seal ① is correctly positioned.
- Push the protective ring ② and O-ring ③ onto the steering stem.



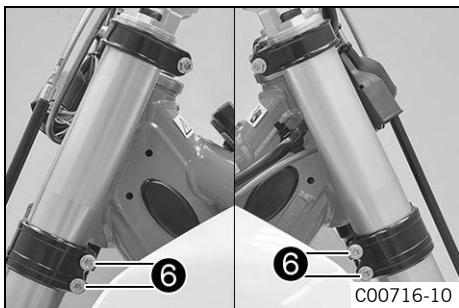
- Position the upper triple clamp with the handlebar.
- Mount screw ④ but do not tighten yet.
- Position the rear wheel brake line and wiring harness.



C00696-10

- Position the fork legs.
- ✓ Bleeder screws **5** face forward.

i Info
 The lowest milled groove in the fork leg must be flush with the top edge of the upper triple clamp.
 The support for the brake caliper is attached to the left fork leg.

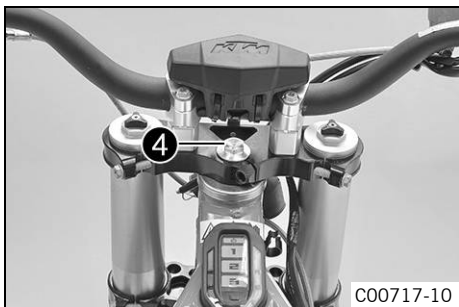


C00716-10

- Tighten screws **6**.

Guideline

Screw, bottom triple clamp	M8	18 Nm (13.3 lbf ft)
----------------------------	----	------------------------

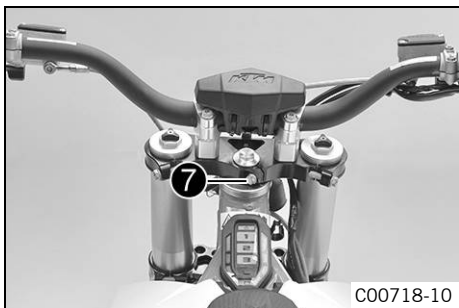


C00717-10

- Tighten screw **4**.

Guideline

Screw, top steering head	M20x1.5	12 Nm (8.9 lbf ft)
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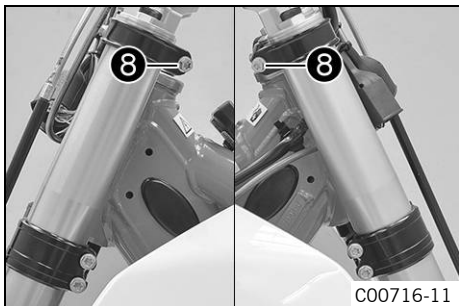


C00718-10

- Mount and tighten screw **7**.

Guideline

Screw, top steering stem	M8	17 Nm (12.5 lbf ft)	Loctite® 243™
--------------------------	----	------------------------	----------------------

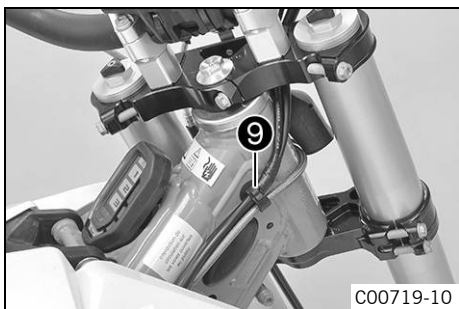


C00716-11

- Tighten screws **8**.

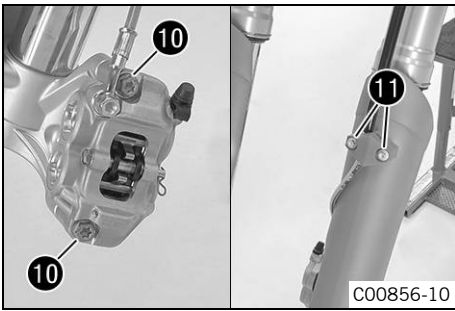
Guideline

Screw, top triple clamp	M8	22 Nm (16.2 lbf ft)
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C00719-10

- Attach the brake line and wiring harness. Close holder **9**.

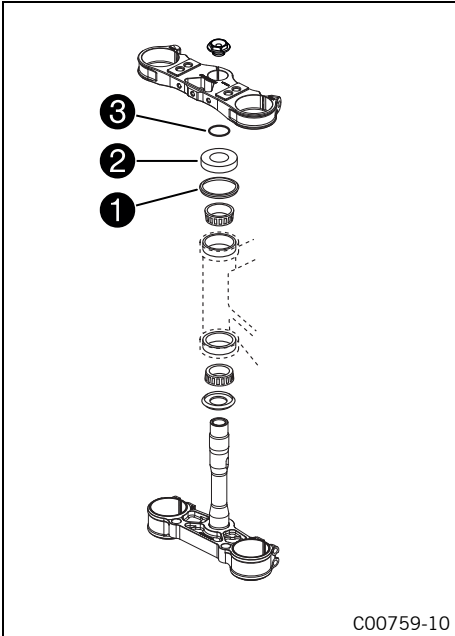


- Position the brake caliper. Mount and tighten screws **10** with the spacers.

Guideline

Screw, front brake caliper	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
----------------------------	----	------------------------	---------------

- Position the brake line and clamp. Mount and tighten screws **11**.



(Freeride E-XC)

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

High viscosity grease (☛ p. 122)

- Insert the lower triple clamp with the steering stem. Mount the upper steering head bearing.
- Check whether the upper steering head seal **1** is correctly positioned.
- Push the protective ring **2** and O-ring **3** onto the steering stem.

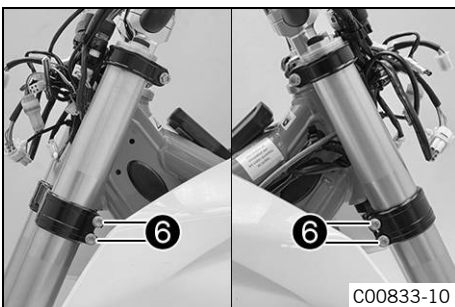


- Position the upper triple clamp with the handlebar.
- Mount screw **4** but do not tighten yet.
- Position the rear wheel brake line and wiring harness.



- Position the fork legs.
- ✓ Bleeder screws **5** face forward.

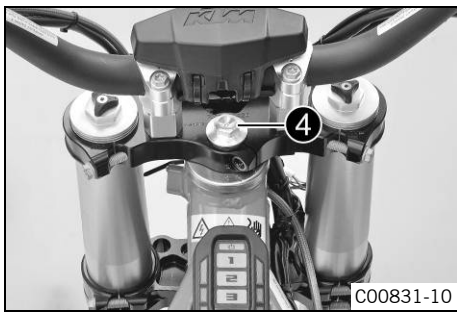
i Info
 The lowest milled groove in the fork leg must be flush with the top edge of the upper triple clamp.
 The support for the brake caliper is attached to the left fork leg.



- Tighten screws **6**.

Guideline

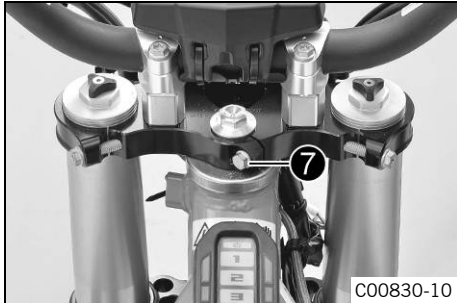
Screw, bottom triple clamp	M8	18 Nm (13.3 lbf ft)
----------------------------	----	------------------------



- Tighten screw 4.

Guideline

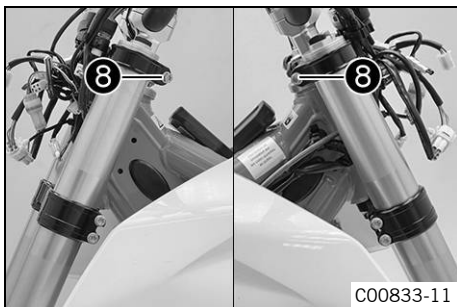
Screw, top steering head	M20x1.5	12 Nm (8.9 lbf ft)
--------------------------	---------	-----------------------



- Mount and tighten screw 7.

Guideline

Screw, top steering stem	M8	17 Nm (12.5 lbf ft)	Loctite® 243™
--------------------------	----	------------------------	---------------



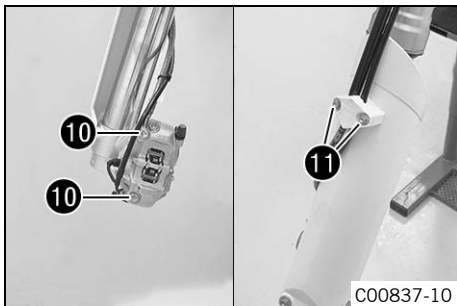
- Tighten screws 8.

Guideline

Screw, top triple clamp	M8	22 Nm (16.2 lbf ft)
-------------------------	----	------------------------



- Attach the brake line and wiring harness. Close holder 9.



- Position the brake caliper. Mount and tighten screws 10 with the spacers.

Guideline

Screw, front brake caliper	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
----------------------------	----	------------------------	---------------

- Position the brake line, wiring harness, and clamp. Mount and tighten screws 11.
- Connect the plug-in connector of the speedometer sensor and mount the cable tie(s).

Finishing work

- Install the front fender. (☛ p. 61)

(Freeride E-SX)

- Install the start number plate. (☛ p. 61)

(Freeride E-XC)

- Refit the headlight mask with the headlight. (☛ p. 92)
- Install the front wheel. ☛ (☛ p. 83)
- Check that the cable and brake lines are routed correctly.
- Check the play of the steering head. ☛ (☛ p. 59)
- Remove the motorcycle from the lift stand. (☛ p. 49)
- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

(Freeride E-XC)

- Check the headlight setting. (☞ p. 94)

12.11 Checking the play of the steering head ☞

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 vehicle is operated for a lengthy period with play in the steering head bearing, the bearings and the bearing seats in the frame can become damaged over time.

Preparatory work

- Deactivate the vehicle. (☞ p. 37)
- Fold the seat up. (☞ p. 63)
- Remove the KTM PowerPack. (☞ p. 96)
- Mount the covering cap. (☞ p. 64)
- Raise the motorcycle with a lift stand. (☞ p. 49)

Main work

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

Play should not be detectable on the steering head bearing.

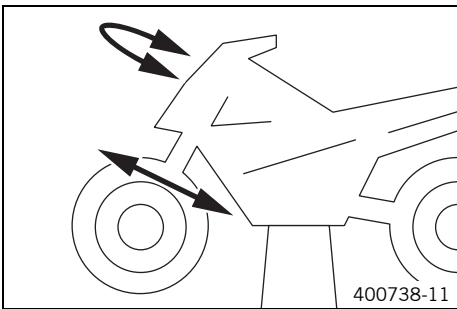
- » If there is detectable play:
 - Adjust the steering head bearing play. ☞ (☞ p. 59)
- Move the handlebar to and fro over the entire steering range.

It must be possible to move the handlebar easily over the entire steering range. There should be no detectable detent positions.

- » If detent positions are detected:
 - Adjust the steering head bearing play. ☞ (☞ p. 59)
- » If detent positions can still be detected:
 - Change the steering head bearing. ☞

Finishing work

- Remove the motorcycle from the lift stand. (☞ p. 49)
- Install the KTM PowerPack. (☞ p. 96)
- Lock the seat. (☞ p. 63)



12.12 Adjusting the steering head bearing play ☞

Preparatory work

- Deactivate the vehicle. (☞ p. 37)
- Fold the seat up. (☞ p. 63)
- Remove the KTM PowerPack. (☞ p. 96)
- Mount the covering cap. (☞ p. 64)
- Raise the motorcycle with a lift stand. (☞ p. 49)

Main work

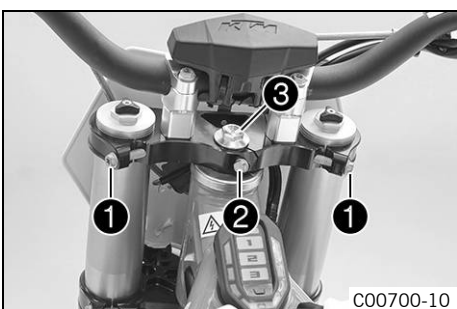
(Freeride E-SX)

- Loosen screws ❶. Remove screw ❷.
- Loosen and retighten screw ❸.

Guideline

Screw, top steering head	M20x1.5	12 Nm (8.9 lbf ft)
--------------------------	---------	-----------------------

- Using a plastic hammer, tap lightly on the upper triple clamp to avoid strains.
- Tighten screws ❶.



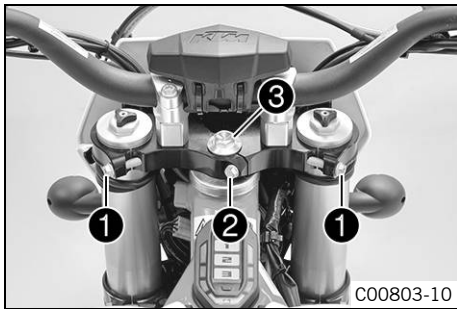
Guideline

Screw, top triple clamp	M8	22 Nm (16.2 lbf ft)
-------------------------	----	------------------------

- Locate and tighten screw ②.

Guideline

Screw, top steering stem	M8	17 Nm (12.5 lbf ft)	Loctite® 243™
--------------------------	----	------------------------	----------------------



(Freeride E-XC)

- Loosen screws ①. Remove screw ②.
- Loosen and retighten screw ③.

Guideline

Screw, top steering head	M20x1.5	12 Nm (8.9 lbf ft)
--------------------------	---------	-----------------------

- Using a plastic hammer, tap lightly on the upper triple clamp to avoid strains.
- Tighten screws ①.

Guideline

Screw, top triple clamp	M8	22 Nm (16.2 lbf ft)
-------------------------	----	------------------------

- Locate and tighten screw ②.

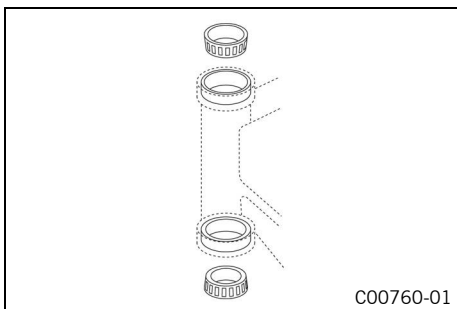
Guideline

Screw, top steering stem	M8	17 Nm (12.5 lbf ft)	Loctite® 243™
--------------------------	----	------------------------	----------------------

Finishing work

- Check the play of the steering head. (☞ p. 59)
- Remove the motorcycle from the lift stand. (☞ p. 49)
- Install the KTM PowerPack. (☞ p. 96)
- Lock the seat. (☞ p. 63)

12.13 Greasing the steering head bearing ☞



- Remove the lower triple clamp. (☞ p. 54)
- Install the lower triple clamp. (☞ p. 55)

12.14 Removing the start number plate(Freeride E-SX)

Preparatory work

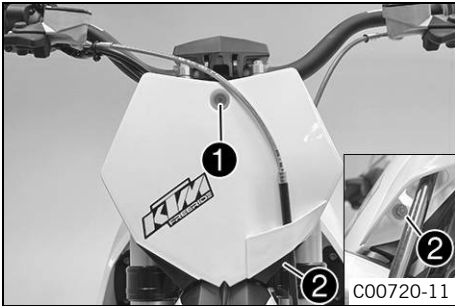
- Deactivate the vehicle. (☞ p. 37)
- Fold the seat up. (☞ p. 63)
- Remove the KTM PowerPack. (☞ p. 96)
- Mount the covering cap. (☞ p. 64)

Main work

- Remove screw ① and take off the clamp.
- Remove screw ②.
- Take off the start number plate.



12.15 Installing the start number plate(Freeride E-SX)



Main work

- Position the start number plate.
- ✓ The holding lugs on the fender engage in the start number plate.
- Mount and tighten screw ①.

Guideline

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

- Position the brake line and clamp.
- Mount and tighten screw ②.

Finishing work

- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

12.16 Removing the front fender

Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)

(Freeride E-SX)

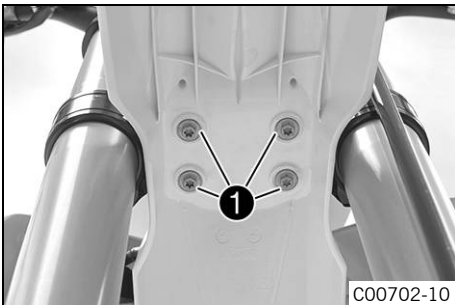
- Remove the start number plate. (☛ p. 60)

(Freeride E-XC)

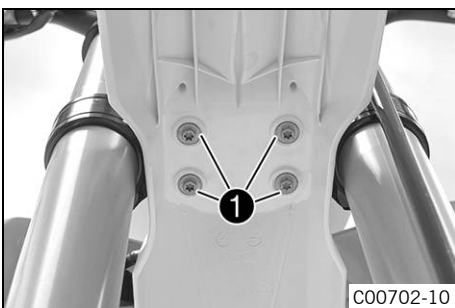
- Remove the headlight mask with the headlight. (☛ p. 91)

Main work

- Remove screws ①.
- Remove the front fender.
- Ensure that the spacers remain in place.



12.17 Installing the front fender



Main work

- Position the front fender.
- Mount and tighten screws ①.

Guideline

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

Finishing work

(Freeride E-SX)

- Install the start number plate. (☛ p. 61)

(Freeride E-XC)

- Refit the headlight mask with the headlight. (☛ p. 92)
- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

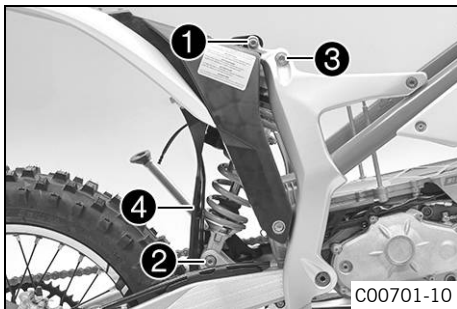
(Freeride E-XC)

- Check the headlight setting. (☛ p. 94)

12.18 Removing the shock absorber ↗

Preparatory work

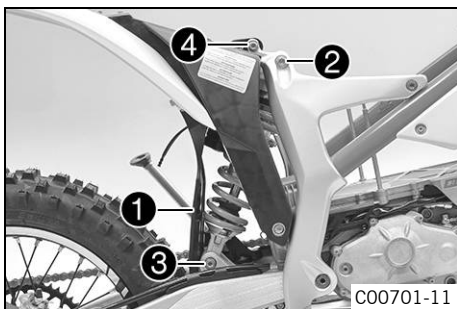
- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)
- Raise the motorcycle with a lift stand. (☛ p. 49)



Main work

- Remove screw ①.
- Remove screw ② and lower the rear wheel with the swing arm as far as possible without blocking the rear wheel. Fix the rear wheel in this position.
- Remove screw ③.
- Push the splash protector ④ to the side and remove the shock absorber.

12.19 Installing the shock absorber ↗



Main work

- 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® 2701™
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- Mount and tighten screw ③.

Guideline

Screw, bottom shock absorber	M12	80 Nm (59 lbf ft)	Loctite® 2701™
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Info

The heim joint for the shock absorber at the swingarm is Teflon-coated. It must not be greased with grease, nor with any other lubricants. Lubricants dissolve the Teflon coating, thereby drastically reducing the service life.

- Mount and tighten screw ④.

Guideline

Screw, upper subframe	M10	45 Nm (33.2 lbf ft)	Loctite® 243™
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Finishing work

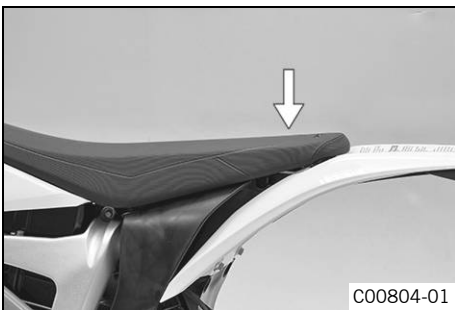
- Remove the motorcycle from the lift stand. (☛ p. 49)
- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

12.20 Folding the seat up



- Push the release lever **1** in the direction of the arrow.
- Lift the seat and fold it up.

12.21 Locking the seat



- Fold down the seat and push it down.
- ✓ The seat engages with an audible click.
- Finally, check that the seat is correctly locked.

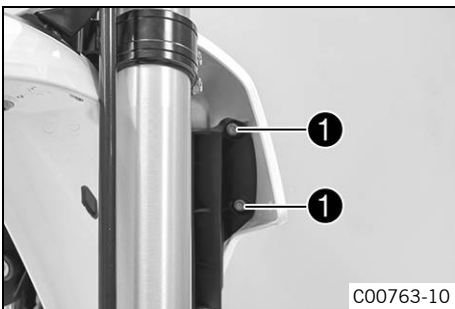
12.22 Removing the spoiler

Preparatory work

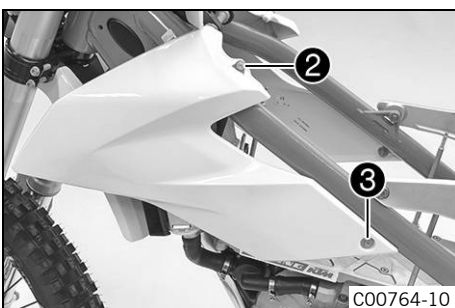
- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)

Main work

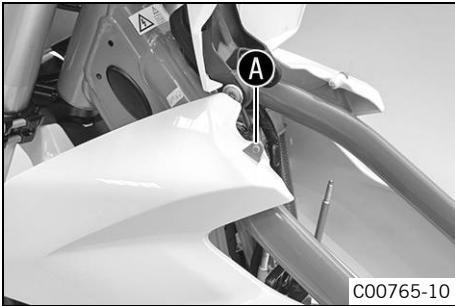
- Remove screws **1**.



- Remove screw **2**.
- Remove screw **3**.
- Take off the spoiler.
- Repeat the operation on the opposite side.

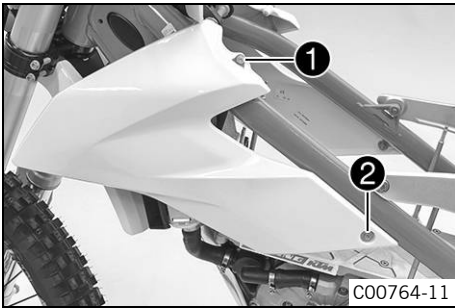


12.23 Installing the spoiler

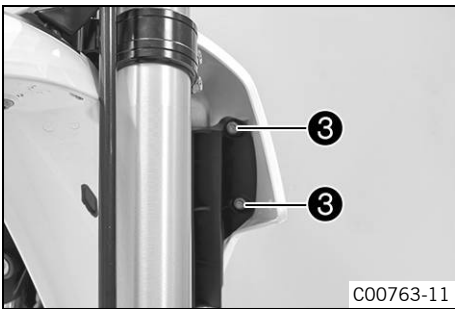


Main work

- Position the spoiler and hook it in at area **A**.



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



- Mount and tighten screws **3**.
- Repeat the operation on the opposite side.

Finishing work

- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

12.24 Mounting the covering cap

Note

Material damage Components damaged or destroyed by water or dirt.

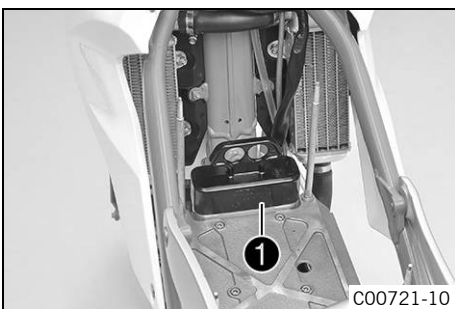
- Mount the covering cap if you have removed the KTM PowerPack.

Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)

Main work

- Check the battery discharge plug form ring. (☛ p. 65)
- Mount the covering cap **1** with one hand.

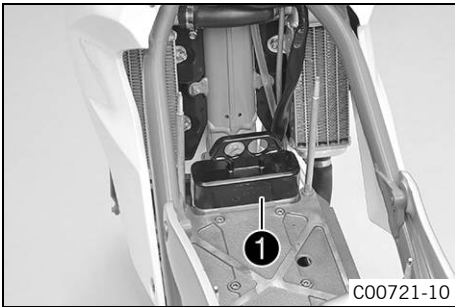


12.25 Removing the covering cap

Note

Material damage Components damaged or destroyed by water or dirt.

- Mount the covering cap if you have removed the KTM PowerPack.



Main work

- Remove the covering cap ① with one hand.

Finishing work

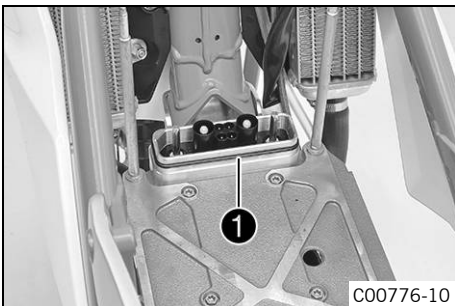
- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

12.26 Checking the battery discharge plug form ring

Condition

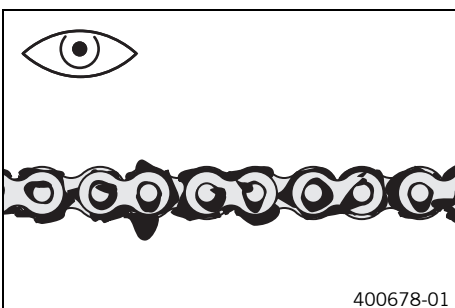
The KTM PowerPack has been removed.

The covering cap has been removed.



- Check the battery discharge plug form ring ① on the electric motor.
 - » If the battery discharge plug form ring is dirty:
 - Ascertain that the discharge plug is de-energized. ☛
 - Clean the form ring without using water or compressed air.
 - Cover the contacts and spray silicone spray onto the form ring.
 - » If the battery discharge plug form ring is damaged:
 - Change the battery discharge plug form ring. ☛

12.27 Checking for chain dirt accumulation



- Check the chain for coarse dirt accumulation.
 - » If the chain is very dirty:
 - Clean the chain. (☛ p. 65)

12.28 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

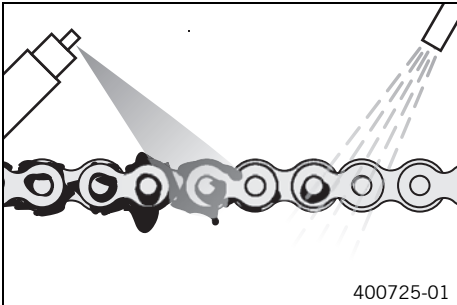
Environmental hazard Hazardous substances cause environmental damage.

- Dispose of oils, grease, cleaning agents, brake fluid etc. properly and in compliance with the applicable regulations.



Info

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



Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)
- Raise the motorcycle with a lift stand. (☛ p. 49)

Main work

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

Chain cleaner (☛ p. 122)
Off-road chain spray (☛ p. 122)

Finishing work

- Remove the motorcycle from the lift stand. (☛ p. 49)
- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

12.29 Checking the chain tension



Warning

Danger of accidents Danger caused by incorrect chain tension.

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

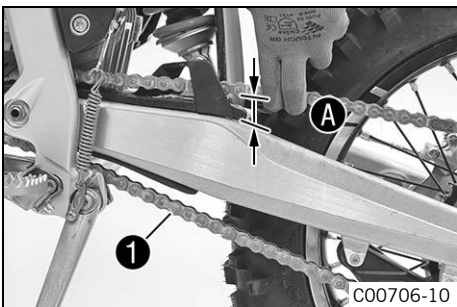
Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)
- Raise the motorcycle with a lift stand. (☛ p. 49)

Main work

(Freeride E-SX)

- Pull the chain at the end of the chain sliding piece upward to measure chain tension **A**.

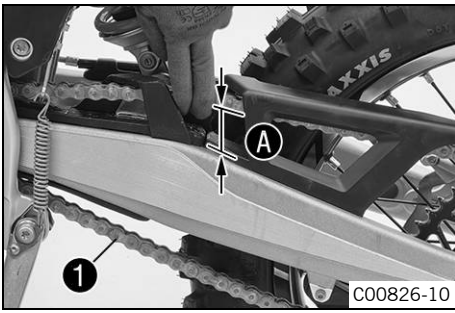


Info

The lower chain section **1** must be taut. Chain wear is not always even, so you should repeat this measurement at different chain positions.

Chain tension	36... 40 mm (1.42... 1.57 in)
---------------	-------------------------------

- » If the chain tension does not meet the specification:
 - Adjust the chain tension. ☛ (☛ p. 67)



(Freeride E-XC)

- Pull the chain at the end of the chain sliding piece upward to measure chain tension **A**.

i Info

The lower chain section **1** must be taut. Chain wear is not always even, so you should repeat this measurement at different chain positions.

Chain tension	36... 40 mm (1.42... 1.57 in)
---------------	-------------------------------

- » If the chain tension does not meet the specification:
 - Adjust the chain tension. (☞ p. 67)

Finishing work

- Remove the motorcycle from the lift stand. (☞ p. 49)
- Install the KTM PowerPack. (☞ p. 96)
- Lock the seat. (☞ p. 63)

12.30 Adjusting the chain tension ☞

Warning
Danger of accidents Danger caused by incorrect chain tension.

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

Preparatory work

- Deactivate the vehicle. (☞ p. 37)
- Fold the seat up. (☞ p. 63)
- Remove the KTM PowerPack. (☞ p. 96)
- Mount the covering cap. (☞ p. 64)
- Raise the motorcycle with a lift stand. (☞ p. 49)
- Check the chain tension. (☞ p. 66)

Main work

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

Guideline

Chain tension	36... 40 mm (1.42... 1.57 in)
Turn adjusting screws 3 on the left and right so that the markings on the left and right chain adjusters are in the same position relative to the reference marks A . The rear wheel is then correctly aligned.	

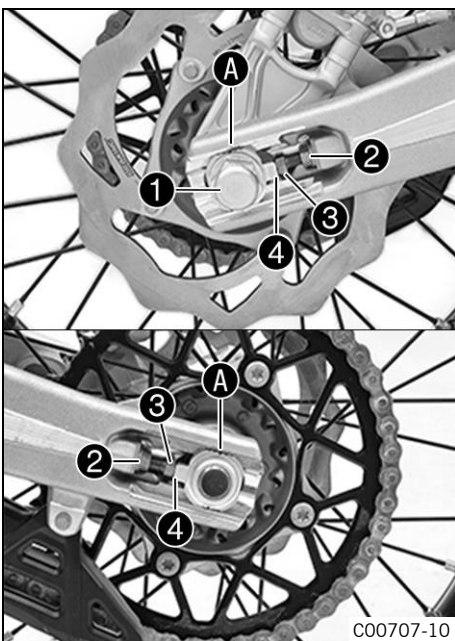
- Tighten nuts **2**.
- Make sure that chain adjusters **4** are fitted correctly on adjusting screws **3**.
- Tighten nut **1**.

Guideline

Nut, rear wheel spindle	M20x1.5	80 Nm (59 lbf ft)
-------------------------	---------	-------------------

i Info

The wide adjustment range of the chain adjusters enables different secondary ratios with the same chain length. Chain adjusters **4** can be turned by 180°.



Finishing work

- Remove the motorcycle from the lift stand. (☞ p. 49)
- Install the KTM PowerPack. (☞ p. 96)
- Lock the seat. (☞ p. 63)

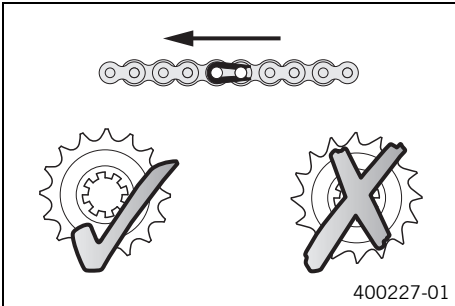
12.31 Checking the chain, rear sprocket, motor sprocket, and chain guide

Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)
- Raise the motorcycle with a lift stand. (☛ p. 49)

Main work

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



i Info
The motor sprocket, rear sprocket, and chain should always be replaced together.

- Pull at the top part of the chain with the specified weight **A**.

Guideline

Weight, chain wear measurement	10... 15 kg (22... 33 lb.)
--------------------------------	----------------------------

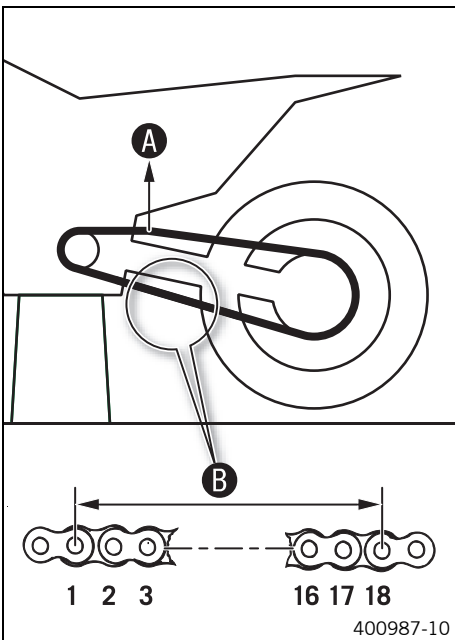
- Measure the distance **B** of 18 chain links in the lower chain section.

i Info
Chain wear is not always even, so you should repeat this measurement at different chain positions.

Maximum distance B at the longest chain section	272 mm (10.71 in)
--	-------------------

- » If distance **B** is greater than the specified measurement:
 - Change the power set. 🛠️

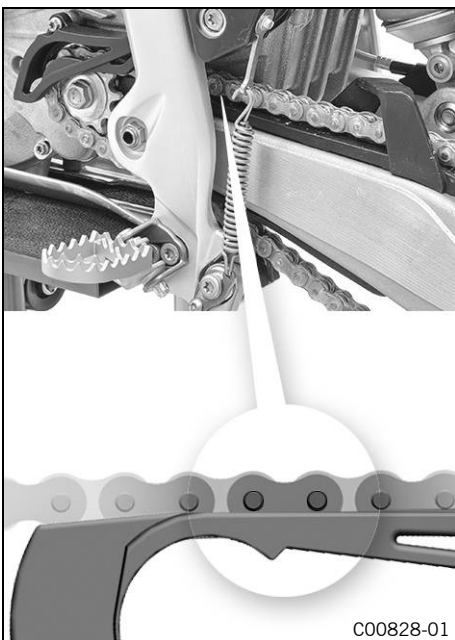
i Info
The motor sprocket, rear sprocket, and chain should always be replaced together.



- Check the chain sliding guard for wear.
 - » If the lower edge of the chain pin is at the level of or below the chain sliding guard:
 - Change the chain sliding guard. 🛠️
- Check that the chain sliding guard is firmly seated.
 - » If the chain sliding guard is loose:
 - Tighten the screws on the chain sliding guard.

Guideline

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

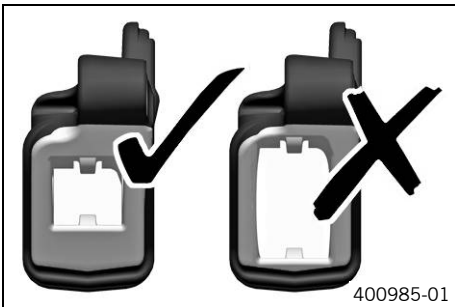




- Check the chain sliding piece for wear.
 - » If the lower edge of the chain pins is in line with or below the chain sliding piece:
 - Change the chain sliding piece. 🛠️
- Check that the chain sliding piece is firmly seated.
 - » If the chain sliding piece is loose:
 - Tighten the screw on the chain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

Guideline

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



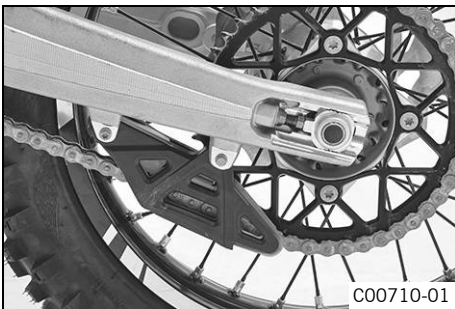
- Check the chain guide for wear.



Info

Wear can be seen on the front of the chain guide.

- » If the light part of the chain guide is worn:
 - Change the chain guide. 🛠️



- Check that the chain guide is firmly seated.
 - » If the chain guide is loose:
 - Tighten the screws on the chain guide.

Guideline

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

Finishing work

- Remove the motorcycle from the lift stand. (🔧 p. 49)
- Install the KTM PowerPack. (🔧 p. 96)
- Lock the seat. (🔧 p. 63)

12.32 Checking the frame 🛠️

Preparatory work

- Deactivate the vehicle. (🔧 p. 37)
- Fold the seat up. (🔧 p. 63)
- Remove the KTM PowerPack. (🔧 p. 96)
- Mount the covering cap. (🔧 p. 64)

Main work

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



Info

A frame that has been damaged due to a mechanical impact must be replaced. Repair of the frame is not authorized by KTM.



Finishing work

- Install the KTM PowerPack. (🔧 p. 96)
- Lock the seat. (🔧 p. 63)

12.33 Checking the swingarm 🛠️



Preparatory work

- Deactivate the vehicle. (🔧 p. 37)
- Fold the seat up. (🔧 p. 63)
- Remove the KTM PowerPack. (🔧 p. 96)
- Mount the covering cap. (🔧 p. 64)

Main work

- Check the swingarm for damage, cracking, and deformation.
 - » If the swingarm shows signs of damage, cracking, or deformation:
 - Change the swingarm. 🛠️



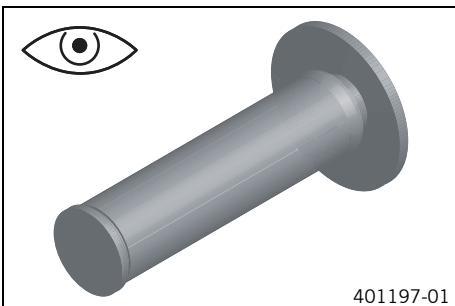
Info

A damaged swingarm must always be changed. Repair of the swingarm is not authorized by KTM.

Finishing work

- Install the KTM PowerPack. (🔧 p. 96)
- Lock the seat. (🔧 p. 63)

12.34 Checking the rubber grip

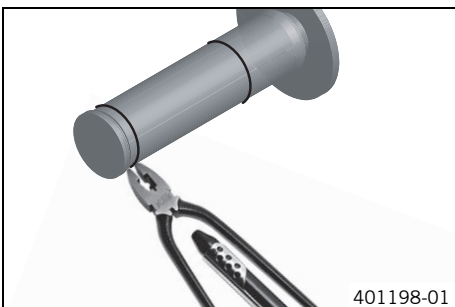


- Check the rubber grips on the handlebar for damage and wear and to ensure they are firmly seated.
 - » If a rubber grip is damaged, worn, or loose:
 - Change the rubber grip.

Grip adhesive(00062030051) (🔧 p. 122)

- Additionally secure the rubber grip. (🔧 p. 70)

12.35 Additionally securing the rubber grip



Preparatory work

- Deactivate the vehicle. (🔧 p. 37)
- Fold the seat up. (🔧 p. 63)
- Remove the KTM PowerPack. (🔧 p. 96)
- Mount the covering cap. (🔧 p. 64)
- Check the rubber grip. (🔧 p. 70)

Main work

- Secure the rubber grip at two points using the securing wire.

Securing wire (54812016000)

Wire twister forceps(U6907854)

- ✓ The twisted wire ends face away from the hands and are bent toward the rubber grip.

Finishing work

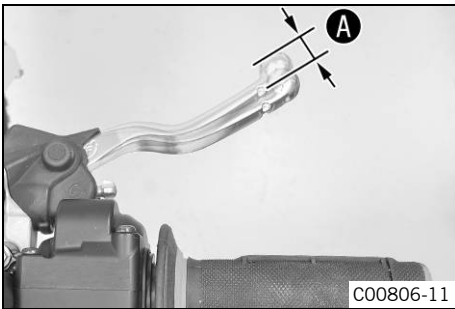
- Install the KTM PowerPack. (🔧 p. 96)
- Lock the seat. (🔧 p. 63)

13.1 Checking the free travel of the front brake lever

Warning
Danger of accidents The brake system fails in the event of overheating.

If there is no free travel on the front brake lever, pressure builds up on the front brake circuit.

- Set the free travel on the front brake lever in accordance with the specification.

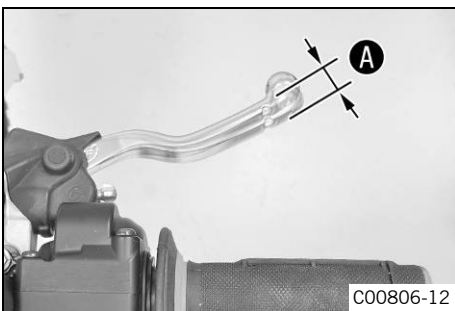


(Freeride E-SX)

- Push the front brake lever forward and check free travel **A**.

Free travel on the front brake lever	$\geq 3 \text{ mm } (\geq 0.12 \text{ in})$
--------------------------------------	---

- » If the free travel does not match the specification:
 - Adjust the basic position of the front brake lever. (☛ p. 71)



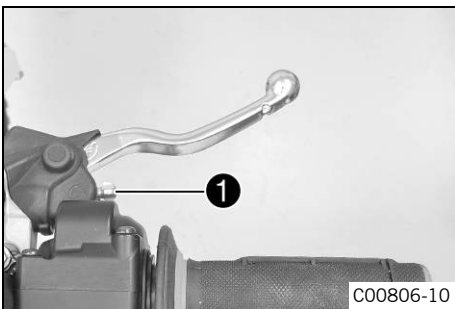
(Freeride E-XC)

- Push the front brake lever to the handlebar and check free travel **A**.

Free travel on the front brake lever	$\geq 3 \text{ mm } (\geq 0.12 \text{ in})$
--------------------------------------	---

- » If the free travel does not match the specification:
 - Adjust the free travel of the front brake lever. (☛ p. 71)

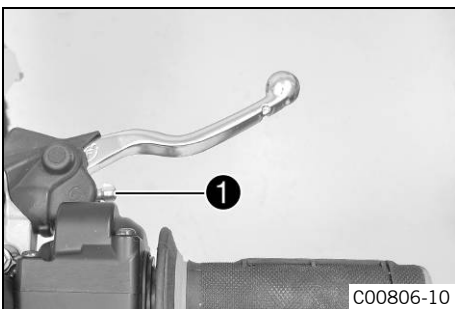
13.2 Adjusting the basic position of the front brake lever(Freeride E-SX)



- Adjust the basic position of the front brake lever using adjusting screw **1**.

i Info
 Turn the adjusting screw clockwise to increase the distance between the front brake lever and the handlebar.
 Turn the adjusting screw counterclockwise to decrease the distance between the front brake lever and the handlebar.
 The range of adjustment is limited.
 Only turn the adjusting screw by hand, and do not use force.
 Do not make any adjustments while riding.

13.3 Adjusting the free travel of the front brake lever(Freeride E-XC)

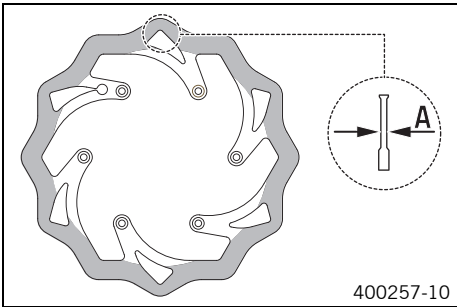


- Adjust the free travel of the front brake lever with adjusting screw **1**.

i Info
 Turn the adjusting screw clockwise to reduce free travel. The pressure point moves away from the handlebar.
 Turn the adjusting screw counterclockwise to increase free travel. The pressure point moves towards the handlebar.
 The range of adjustment is limited.
 Only turn the adjusting screw by hand, and do not use force.
 Do not make any adjustments while riding.

13.4 Checking the 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 disk to see if it conforms to measurement **A**.

Info
 Wear reduces the thickness of the brake disc around the area used by the brake linings.

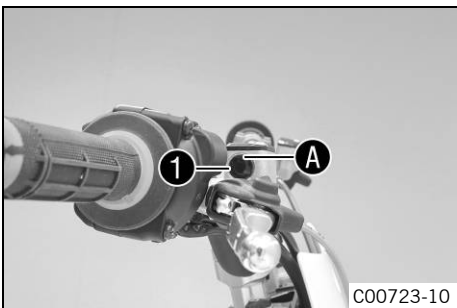
Brake discs - wear limit	
Front	2.5 mm (0.098 in)
Rear	3.5 mm (0.138 in)

- » 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 disc shows signs of damage, cracking, or deformation:
 - Change the brake disc. 🛠️

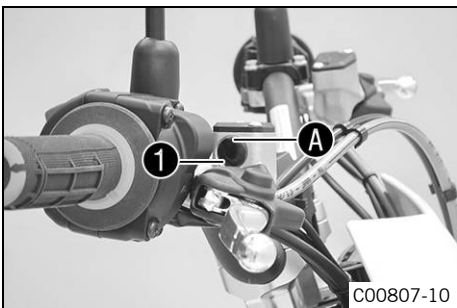
13.5 Checking the brake fluid level of the front brake

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
Danger of accidents Reduced braking efficiency due to old brake fluid.
 - Change the brake fluid of the front and rear brake according to the service schedule.(Your authorized KTM workshop will be glad to help.)



- (Freeride E-SX)**
- Move the brake fluid reservoir attached to the right of the handlebar to a horizontal position.
 - Check the brake fluid level in level viewer **1**.
 - » If the brake fluid has dropped below marking **A**:
 - Add front brake fluid. 🛠️ (📄 p. 73)



- (Freeride E-XC)**
- Move the brake fluid reservoir attached to the right of the handlebar to a horizontal position.
 - Check the brake fluid level in level viewer **1**.
 - » If the brake fluid has dropped below marking **A**:
 - Add front brake fluid. 🛠️ (📄 p. 73)

13.6 Adding front brake fluid

Warning
Danger of accidents Brake system failure.

- If the brake fluid level drops below the specified marking or the specified value, this is an indication that the brake system is leaking or that the brake linings are completely worn down. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)

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

- Avoid contact with skin and eyes, and keep out of the reach of children.
- Wear suitable protective clothing and goggles.
- If brake fluid comes into contact with the eyes, flush the eyes thoroughly with water and consult a physician immediately.

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

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

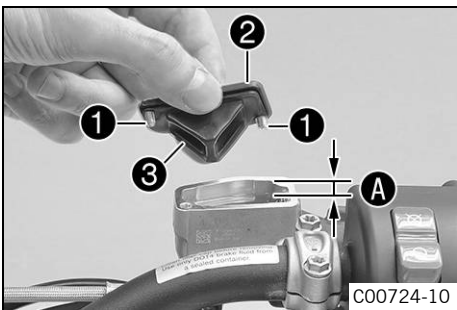
Warning
Danger of accidents Unsuitable brake fluid damages the brake system.
 DOT 5 brake fluid attacks seals and brake lines. DOT 5 brake fluid is silicone-based and purple in color.

- Do not use DOT 5 brake fluid.






Warning
Environmental hazard Hazardous substances cause environmental damage.

- Dispose of oils, grease, cleaning agents, brake fluid etc. properly and in compliance with the applicable regulations.

Info
 Avoid contact between brake fluid and painted parts. Brake fluid attacks paint. Only use clean brake fluid from a sealed container.



Preparatory work


- Deactivate the vehicle. ( p. 37)
- Fold the seat up. ( p. 63)
- Remove the KTM PowerPack. ( p. 96)
- Mount the covering cap. ( p. 64)
- Check the front brake linings. ( p. 74)

Main work (Freeride E-SX)

- Move the brake fluid reservoir attached to the right of the handlebar to a horizontal position.
- Remove screws **1**.
- Remove cover **2** with membrane **3**.
- Add brake fluid to level **A**.

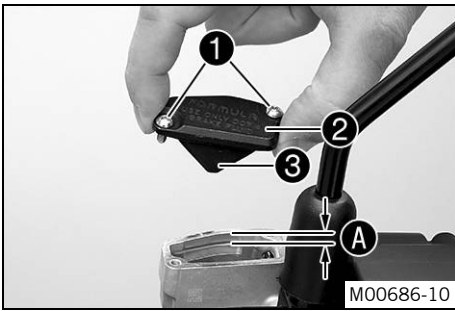
Guideline

Level A (brake fluid level below reservoir rim)	5 mm (0.2 in)
--	---------------

Brake fluid DOT 4 / DOT 5.1 ( p. 121)

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

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



(Freeride E-XC)

- Move the brake fluid reservoir attached to the right of the handlebar to a horizontal position.
- Remove screws ①.
- Remove cover ② with membrane ③.
- Add brake fluid to level A.

Guideline

Level A (brake fluid level below reservoir rim)	5 mm (0.2 in)
---	---------------

Brake fluid DOT 4 / DOT 5.1 (☞ p. 121)

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

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

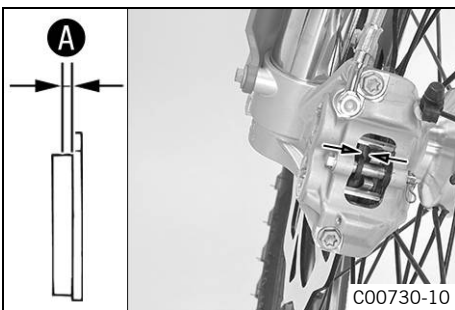
Finishing work

- Install the KTM PowerPack. (☞ p. 96)
- Lock the seat. (☞ p. 63)

13.7 Checking the front brake linings

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

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



- Check the brake linings for lining thickness A.

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

- » If the minimum thickness is less than specified:
 - Change the front brake linings. ☞ (☞ p. 74)
- Check the brake linings for damage and cracking.
 - » If damage or cracking is visible:
 - Change the front brake linings. ☞ (☞ p. 74)

13.8 Changing the front brake linings ☞

Warning
Danger of accident Brake system failure.

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

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

- Avoid contact with skin and eyes, and keep out of the reach of children.
- Wear suitable protective clothing and goggles.
- If brake fluid comes into contact with the eyes, flush the eyes thoroughly with water and consult a physician immediately.

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

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

Warning
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.



Warning

Danger of accidents Unsuitable brake fluid damages the brake system.

DOT 5 brake fluid attacks seals and brake lines. DOT 5 brake fluid is silicone-based and purple in color.

- Do not use DOT 5 brake fluid.



Warning

Environmental hazard Hazardous substances cause environmental damage.

- Dispose of oils, grease, cleaning agents, brake fluid etc. properly and in compliance with the applicable regulations.



Info

Avoid contact between brake fluid and painted parts. Brake fluid attacks paint. Only use clean brake fluid from a sealed container.

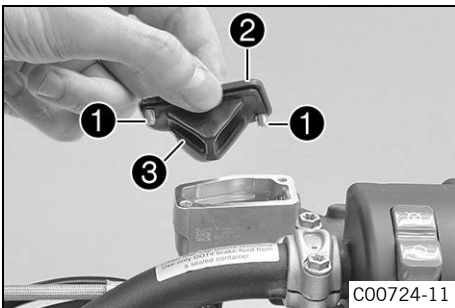
Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)

Main work

(Freeride E-SX)

- Move the brake fluid reservoir attached to the right of the handlebar to a horizontal position.
- Remove screws ①.
- Remove cover ② with membrane ③.



(Freeride E-XC)

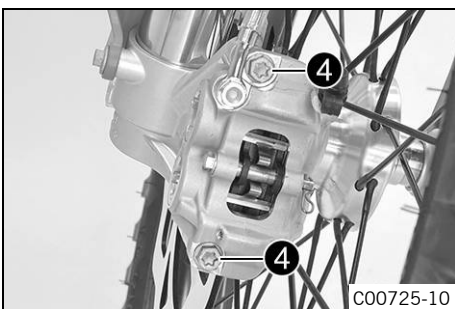
- Move the brake fluid reservoir attached to the right of the handlebar to a horizontal position.
- Remove screws ①.
- Remove cover ② with membrane ③.

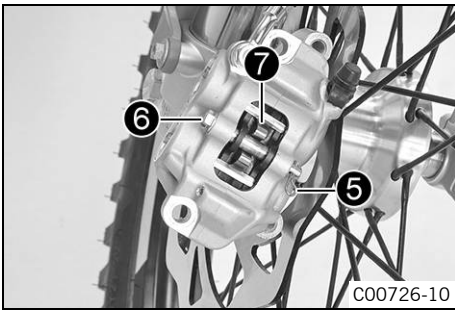


- Remove screws ④ and spacers.

(Freeride E-XC)

- Remove the cable tie(s).
- Press back the brake linings with a light lateral tilting of the brake caliper on the brake disc.
- Carefully pull the brake caliper backward from the brake disc.
- Press the brake piston back to its basic position and make sure that no brake fluid overflows from the brake fluid reservoir, extracting brake fluid if necessary.





- Remove cotter pins ⑤.
- Remove pins ⑥.
- Take off retaining spring ⑦ and remove the brake linings.
- Clean the brake caliper.
- Position the new brake linings.



Info

Always change the brake linings in pairs.

- Position retaining spring ⑦.
- Mount pin ⑥.



Info

To make it easier to mount the pin, push the retainer spring down. Make sure the retaining spring is seated correctly.

- Mount cotter pins ⑤.
- Position the brake caliper. Mount screws ④ with the spacers but do not tighten yet.
- Operate the front brake lever several times until the brake linings are in contact with the brake disc and there is a pressure point. Secure the front brake lever in the activated position.
- ✓ The brake caliper straightens.

- Tighten screws ④.

Guideline

Screw, front brake caliper	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
----------------------------	----	------------------------	---------------

- Remove the fixation for the front brake lever.

(Freeride E-XC)

- Mount the cable tie(s).

(Freeride E-SX)

- Add brake fluid to level A.

Guideline

Level A (brake fluid level below reservoir rim)	5 mm (0.2 in)
---	---------------

Brake fluid DOT 4 / DOT 5.1 (☛ p. 121)

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



Info

Clean up overflowed or spilled brake fluid immediately with water.

(Freeride E-XC)

- Add brake fluid to level A.

Guideline

Level A (brake fluid level below reservoir rim)	5 mm (0.2 in)
---	---------------

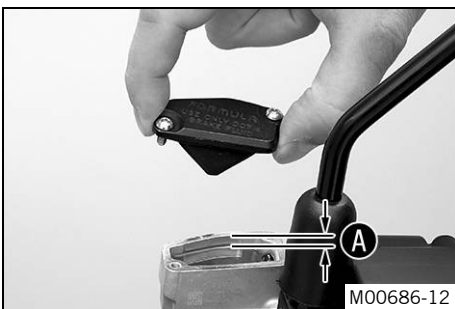
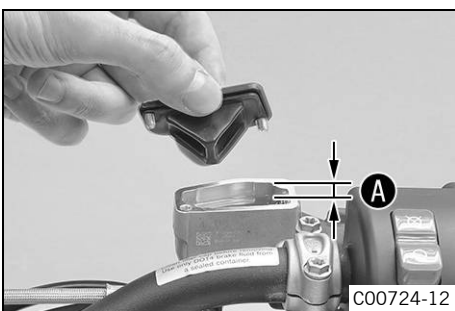
Brake fluid DOT 4 / DOT 5.1 (☛ p. 121)

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



Info

Clean up overflowed or spilled brake fluid immediately with water.



Finishing work

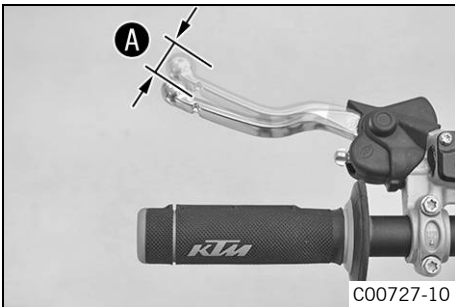
- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

13.9 Checking the free travel of the rear brake lever

Warning
Danger of accidents The brake system fails in the event of overheating.

If there is no free travel on the rear brake lever, pressure builds up on the rear brake circuit.

- Set the free travel on the rear brake lever in accordance with the specification.



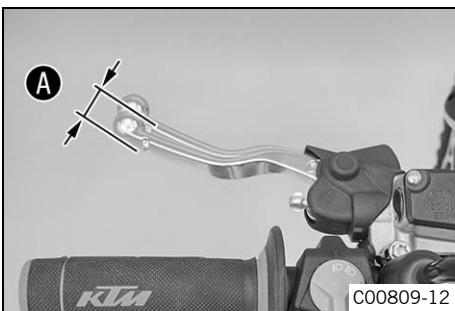
(Freeride E-SX)

- Push the rear brake lever forward and check free travel **A**.

Guideline

Free travel on the rear brake lever	≥ 3 mm (≥ 0.12 in)
-------------------------------------	--------------------

- » If the free travel does not match the specification:
 - Adjust the basic position of the rear brake lever. (☛ p. 77)



(Freeride E-XC)

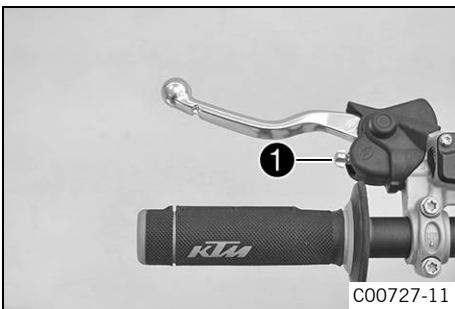
- Push the rear brake lever to the handlebar and check free travel **A**.

Guideline

Free travel on the rear brake lever	≥ 3 mm (≥ 0.12 in)
-------------------------------------	--------------------

- » If the free travel does not match the specification:
 - Adjust the free travel of the rear brake lever. (☛ p. 77)

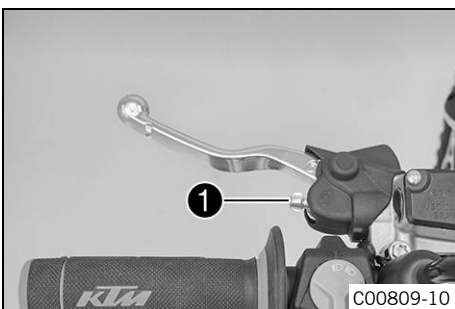
13.10 Adjusting the basic position of the rear brake lever(Freeride E-SX)



- Adjust the basic position of the rear brake lever to your hand size by using adjusting screw **1**.

i Info
 Turn the adjusting screw clockwise to increase the distance between the rear brake lever and the handlebar.
 Turn the adjusting screw counterclockwise to decrease the distance between the rear brake lever and the handlebar.
 The range of adjustment is limited.
 Only turn the adjusting screw by hand, and do not use force.
 Do not make any adjustments while riding.

13.11 Adjusting the free travel of the rear brake lever(Freeride E-XC)



- Adjust the free travel of the rear brake lever with adjusting screw **1**.

i Info
 Turn the adjusting screw clockwise to reduce free travel. The pressure point moves away from the handlebar.
 Turn the adjusting screw counterclockwise to increase free travel. The pressure point moves towards the handlebar.
 The range of adjustment is limited.
 Only turn the adjusting screw by hand, and do not use force.
 Do not make any adjustments while riding.

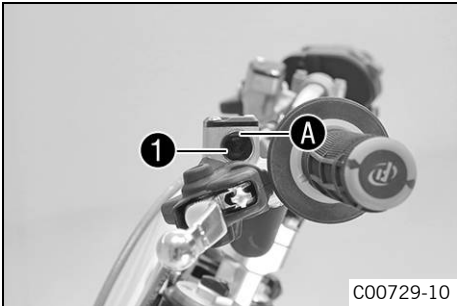
13.12 Checking the rear brake fluid level

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.)

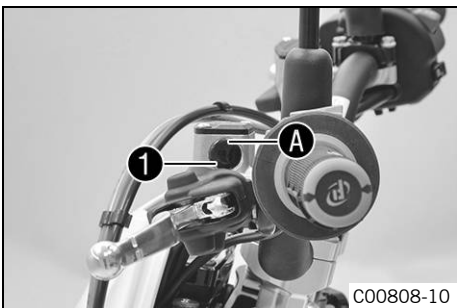
Warning
Danger of accidents Reduced braking efficiency due to old brake fluid.

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



(Freeride E-SX)

- Move the brake fluid reservoir attached to the left of the handlebar to a horizontal position.
- Check the brake fluid level in level viewer **1**.
 - » If the brake fluid has dropped below marking **A**:
 - Add rear brake fluid. (p. 78)



(Freeride E-XC)

- Move the brake fluid reservoir attached to the left of the handlebar to a horizontal position.
- Check the brake fluid level in level viewer **1**.
 - » If the brake fluid has dropped below marking **A**:
 - Add rear brake fluid. (p. 78)

13.13 Adding rear brake fluid

Warning
Danger of accidents Brake system failure.

- If the brake fluid level drops below the specified marking or the specified value, this is an indication that the brake system is leaking or that the brake linings are completely worn down. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)

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

- Avoid contact with skin and eyes, and keep out of the reach of children.
- Wear suitable protective clothing and goggles.
- If brake fluid comes into contact with the eyes, flush the eyes thoroughly with water and consult a physician immediately.

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

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

Warning
Danger of accidents Unsuitable brake fluid damages the brake system.
 DOT 5 brake fluid attacks seals and brake lines. DOT 5 brake fluid is silicone-based and purple in color.

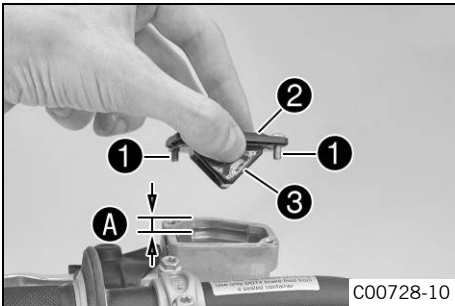
- Do not use DOT 5 brake fluid.

Warning
Environmental hazard Hazardous substances cause environmental damage.

- Dispose of oils, grease, cleaning agents, brake fluid etc. properly and in compliance with the applicable regulations.

i Info

Avoid contact between brake fluid and painted parts. Brake fluid attacks paint. Only use clean brake fluid from a sealed container.



Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)
- Check the rear brake linings. (☛ p. 79)

**Main work
(Freeride E-SX)**

- Move the brake fluid reservoir attached to the left of the handlebar to a horizontal position.
- Remove screws ①.
- Remove cover ② with membrane ③.
- Add brake fluid to level A.

Guideline

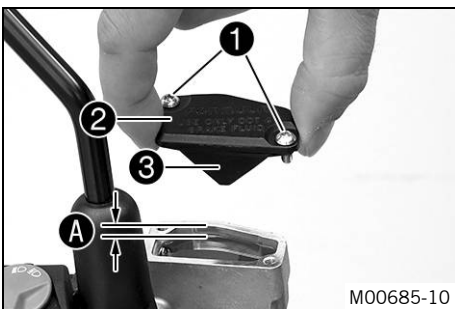
Level A (brake fluid level below reservoir rim)	5 mm (0.2 in)
---	---------------

Brake fluid DOT 4 / DOT 5.1 (☛ p. 121)

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

i Info

Clean up overflowed or spilled brake fluid immediately with water.



(Freeride E-XC)

- Move the brake fluid reservoir attached to the left of the handlebar to a horizontal position.
- Remove screws ①.
- Remove cover ② with membrane ③.
- Add brake fluid to level A.

Guideline

Level A (brake fluid level below reservoir rim)	5 mm (0.2 in)
---	---------------

Brake fluid DOT 4 / DOT 5.1 (☛ p. 121)

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

i Info

Clean up overflowed or spilled brake fluid immediately with water.

Finishing work

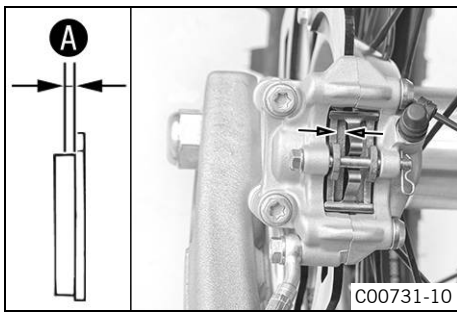
- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

13.14 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 lining thickness **A**.

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

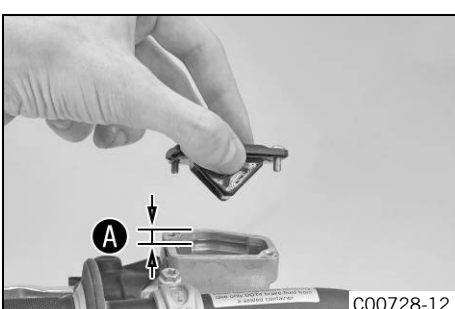
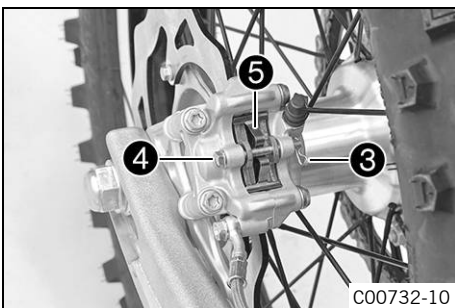
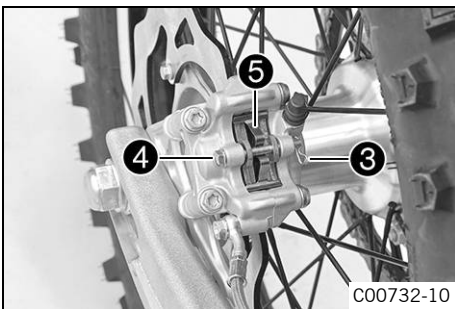
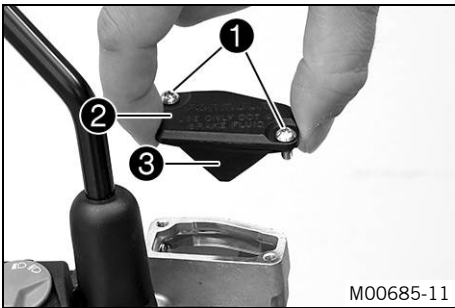
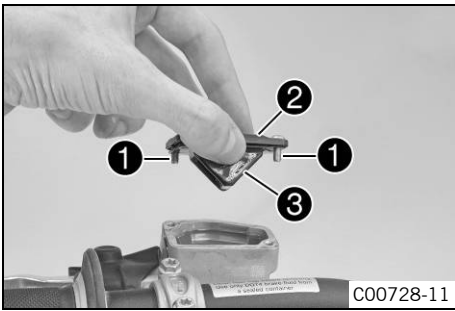
- » If the minimum thickness is less than specified:
 - Change the rear brake linings. (🔧 p. 80)
- Check the brake linings for damage and cracking.
 - » If damage or wear is encountered:
 - Change the rear brake linings. (🔧 p. 80)

13.15 Changing the rear brake linings 🛠️

- Warning**
Danger of accident Brake system failure.
 - Maintenance work and repairs must be carried out professionally.(Your authorized KTM workshop will be glad to help.)
- Warning**
Skin irritation Brake fluid can cause skin irritation on contact.
 - Avoid contact with skin and eyes, and keep out of the reach of children.
 - Wear suitable protective clothing and goggles.
 - If brake fluid comes into contact with the eyes, flush the eyes thoroughly with water and consult a physician immediately.
- Warning**
Danger of accidents Reduced braking efficiency due to old brake fluid.
 - Change the brake fluid of the front and rear brake according to the service schedule.(Your authorized KTM workshop will be glad to help.)
- Warning**
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.
- Warning**
Danger of accidents Unsuitable brake fluid damages the brake system.
DOT 5 brake fluid attacks seals and brake lines. DOT 5 brake fluid is silicone-based and purple in color.
 - Do not use DOT 5 brake fluid.
- Warning**
Environmental hazard Hazardous substances cause environmental damage.
 - Dispose of oils, grease, cleaning agents, brake fluid etc. properly and in compliance with the applicable regulations.
- Info**
Avoid contact between brake fluid and painted parts. Brake fluid attacks paint.
Only use clean brake fluid from a sealed container.

Preparatory work

- Deactivate the vehicle. (🔧 p. 37)
- Fold the seat up. (🔧 p. 63)
- Remove the KTM PowerPack. (🔧 p. 96)
- Mount the covering cap. (🔧 p. 64)



Main work
(Freeride E-SX)

- Move the brake fluid reservoir attached to the left of 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, extracting brake fluid if necessary.

(Freeride E-XC)

- Move the brake fluid reservoir attached to the left of 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, extracting brake fluid if necessary.

- Remove cotter pins ③.
- Remove pins ④.
- Take off retaining spring ⑤ and remove the brake linings.
- Clean the brake caliper.

- Position the new brake linings.



Info

Always change the full set of brake linings.

- Position retaining spring ⑤.
- Mount bolt ④.



Info

To make it easier to mount the pin, push the retainer spring down. Make sure the retaining spring is seated correctly.

- Mount cotter pin ③.
- Operate the rear brake lever several times until the brake linings are in contact with the brake disc and there is a pressure point.

(Freeride E-SX)

- Fill up the brake fluid to the level A.

Guideline

Level A (brake fluid level below reservoir rim)	5 mm (0.2 in)
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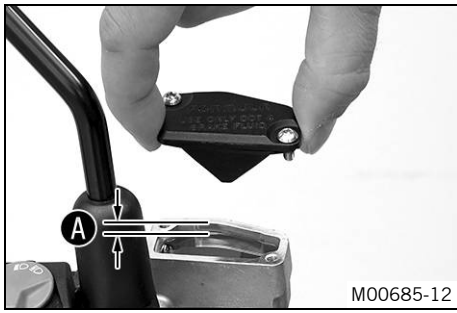
Brake fluid DOT 4 / DOT 5.1 (☛ p. 121)

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



Info

Clean up overflowed or spilled brake fluid immediately with water.



(Freeride E-XC)

- Fill up the brake fluid to the level **A**.

Guideline

Level A (brake fluid level below reservoir rim)	5 mm (0.2 in)
--	---------------

Brake fluid DOT 4 / DOT 5.1 (☞ p. 121)
--

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

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

Finishing work

- Install the KTM PowerPack. (☞ p. 96)
- Lock the seat. (☞ p. 63)

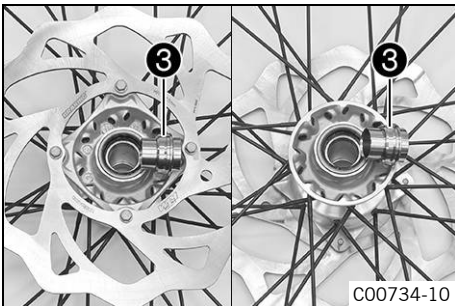
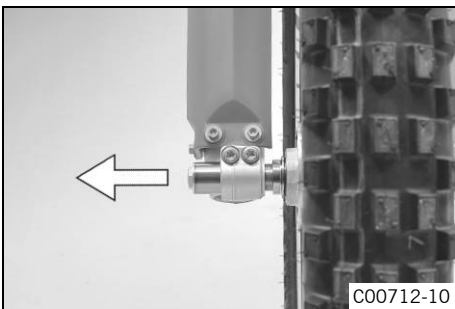
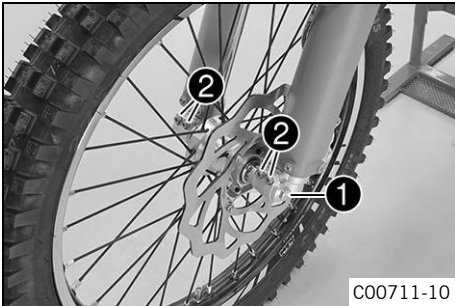
14.1 Removing the front wheel

Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)
- Raise the motorcycle with a lift stand. (☛ p. 49)

Main work

- Loosen screw ❶ by several rotations.
- Release screws ❷.
- Press on screw ❶ to push the wheel spindle out of the axle clamp.
- Remove screw ❶.



- Holding the front wheel, withdraw the wheel spindle. Take the front wheel out of the fork.

Info

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

- Remove spacers ❸.

14.2 Installing the front wheel



Warning

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

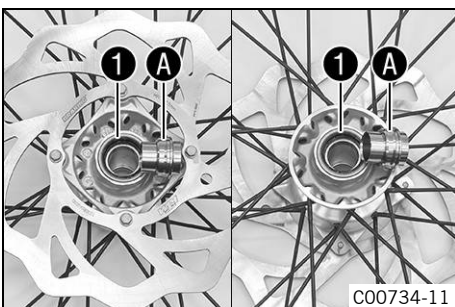
- Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.

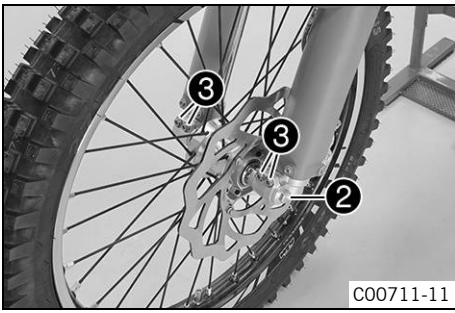
Main work

- Check the wheel bearing for damage and wear.
 - » If the wheel bearing is damaged or worn:
 - Change the front wheel bearing. ☛
- Clean and grease the shaft seal rings ❶ and contact surface A of the spacers.

Long-life grease (☛ p. 122)

- Insert the spacers.





- Position the front wheel and insert the wheel spindle.
- ✓ The brake linings are correctly positioned.
- Mount and tighten screw 2.

Guideline

Screw, front wheel spindle	M20x1.5	35 Nm (25.8 lbf ft)
----------------------------	---------	------------------------

- Operate the front brake lever several times until the brake linings are in contact with the brake disc.
- Remove the motorcycle from the lift stand. (☛ p. 49)
- Operate the front brake and compress the fork a few times firmly.
- ✓ The fork legs straighten.
- Tighten screws 3.

Guideline

Screw, fork stub	M8	15 Nm (11.1 lbf ft)
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Finishing work

- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

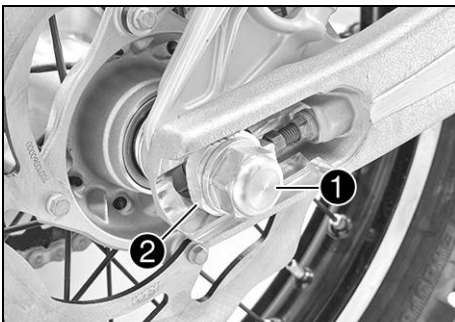
14.3 Removing the rear wheel 🗑️

Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)
- Raise the motorcycle with a lift stand. (☛ p. 49)

Main work

- Remove nut 1.
- Remove chain adjuster 2.



i Info

Withdraw wheel spindle 3 only enough to allow the rear wheel to be pushed forward.

- Push the rear wheel forward as far as possible. Remove the chain from the rear sprocket.

i Info

Cover the components to protect them against damage.

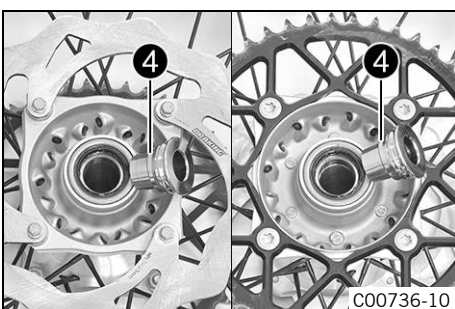
- Holding the rear wheel, withdraw the wheel spindle. Take the rear wheel out of the swing arm.

i Info

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

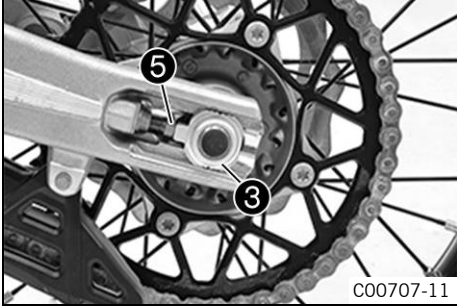
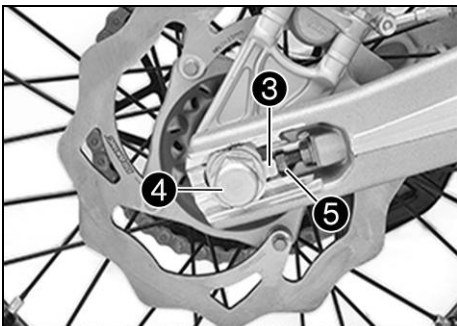
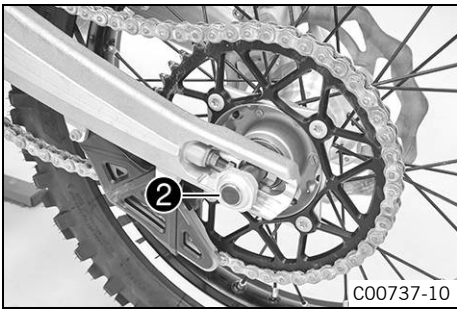
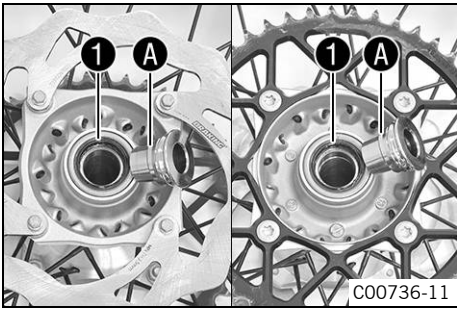


- Remove spacers 4.



14.4 Installing the rear wheel

Warning
Danger of accidents Reduced braking efficiency due to oil or grease on the brake discs.
 – Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.



Main work

- Check the wheel bearing for damage and wear.
 - » If the wheel bearing is damaged or worn:
 - Change the rear wheel bearing.
 - Clean and grease the shaft seal rings **1** and contact surface **A** of the spacers.
- Long-life grease (☛ p. 122)
- Insert the spacers.
 - Position the rear wheel.
 - ✓ The brake linings are correctly positioned.
 - Insert wheel spindle **2**.
 - Put the chain on.

- Position chain adjuster **3**. Mount nut **4**, but do not tighten it yet.
- Make sure that chain adjusters **3** are fitted correctly on adjusting screws **5**.
- Check the chain tension. (☛ p. 66)
- Tighten nut **4**.

Guideline

Nut, rear wheel spindle	M20x1.5	80 Nm (59 lbf ft)
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i Info
 The wide adjustment range of the chain adjusters enables different secondary ratios with the same chain length.
 Chain adjusters **3** can be turned by 180°.

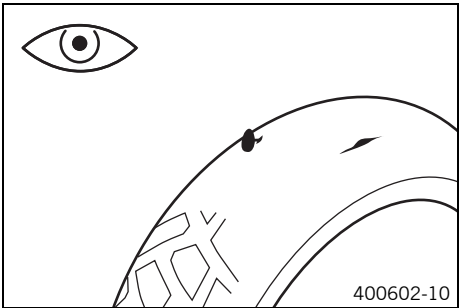
- Operate the rear brake lever several times until the brake linings are in contact with the brake disc and there is a pressure point.

Finishing work

- Remove the motorcycle from the lift stand. (☛ p. 49)
- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

14.5 Checking the tire condition

i Info
 Only mount tires approved and/or recommended by KTM.
 Other tires could have a negative effect on handling characteristics.
 The type, condition, and air pressure of the tires all have a major impact on the handling characteristics of the motorcycle.
 The tires mounted on the front and rear wheels must have a similar profile.
 Worn tires have a negative effect on riding behavior, especially on wet surfaces.



- Check the front and rear tires for cuts, run-in objects, and other damage.
 - » If the tires exhibit cuts, run-in objects, or other damage:
 - Change the tires.
- Check the depth of the tread.

i Info
 Observe the minimum profile depth required by national law.

Minimum tread depth	≥ 2 mm (≥ 0.08 in)
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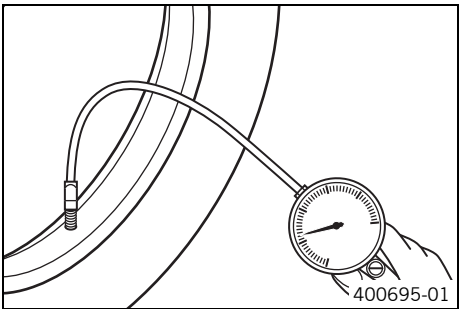
- » If the tread depth is less than the minimum permissible depth:
 - Change the tires.
- Check the age of the tires.

i Info
 The tire's date of manufacture is usually part of the tire markings and is indicated by four digits. The first two digits refer to the week of manufacture and last two digits refer to the year of manufacture.
 KTM recommends that the tires be changed after 5 years at the latest, regardless of the actual state of wear.

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

14.6 Checking the tire air pressure

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



- Preparatory work**
- Deactivate the vehicle. (☛ p. 37)
 - Fold the seat up. (☛ p. 63)
 - Remove the KTM PowerPack. (☛ p. 96)
 - Mount the covering cap. (☛ p. 64)

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

Tire air pressure, offroad	
Front	0.9 bar (13 psi)
Rear	0.7 bar (10 psi)

Tire air pressure, road(Freeride E-XC)	
Front	1.5 bar (22 psi)
Rear	1.5 bar (22 psi)

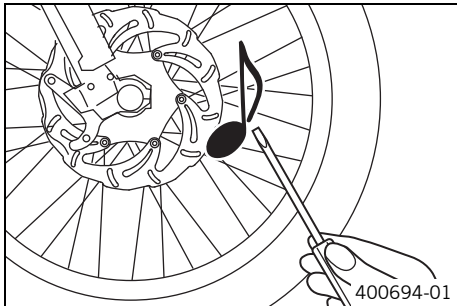
- » If the tire pressure does not meet specifications:
 - Correct the tire pressure.
- Mount protection cap.

- Finishing work**
- Install the KTM PowerPack. (☛ p. 96)
 - Lock the seat. (☛ p. 63)

14.7 Checking the 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.)



Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)

Main work

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

Info

The tone frequency depends on the length of the spoke and the spoke diameter.

If spokes of equal length and diameter vibrate with a different tone, this is an indication that the spoke tensions differ.

You should hear a high note.

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

Guideline

Spoke nipple	M4.5	5 Nm (3.7 lbf ft)
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Torque wrench with various accessories in set(58429094000)

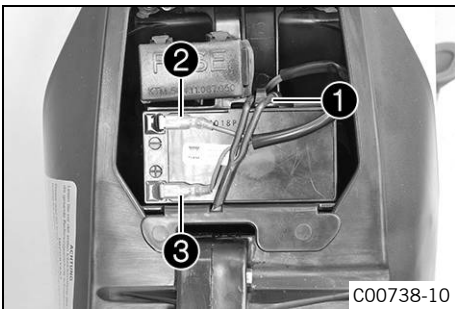
Finishing work

- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

15.1 Removing the 12 V battery ↩

- Warning**
Risk of injury Battery gases cause serious chemical burns.
- Keep batteries out of the reach of children.
 - Wear suitable protective clothing and goggles.
 - Avoid contact with battery gases.
 - Keep sparks or open flames away from the battery.
 - Only charge batteries in well-ventilated rooms.
 - With skin contact rinse the affected area with plenty of water.
 - Flush eyes with water for at least 15 minutes and consult a physician if battery gases have come into contact with the eyes.

- Warning**
Environmental hazard The battery contains elements that are harmful to the environment.
- Do not dispose of batteries with the household waste. Dispose of a defective battery in an environmentally friendly manner. Give the battery to your authorized KTM dealer or dispose of it at a collection point for used batteries.

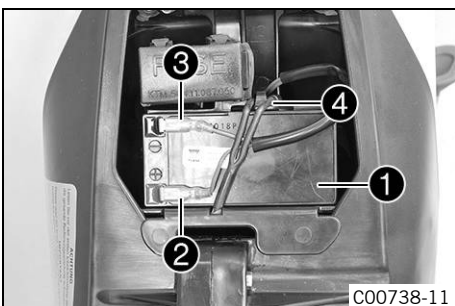


- Preparatory work**
- Fold the seat up. (↩ p. 63)

- Main work**
- Detach rubber strap ①.
 - Disconnect negative cable ② from the 12 V battery.
 - Disconnect positive cable ③ from the 12 V battery.
 - Remove the 12 V battery.

15.2 Installing the 12 V battery ↩

- Warning**
Risk of injury Battery gases cause serious chemical burns.
- Keep batteries out of the reach of children.
 - Wear suitable protective clothing and goggles.
 - Avoid contact with battery gases.
 - Keep sparks or open flames away from the battery.
 - Only charge batteries in well-ventilated rooms.
 - With skin contact rinse the affected area with plenty of water.
 - Flush eyes with water for at least 15 minutes and consult a physician if battery gases have come into contact with the eyes.



- Main work**
- Position the 12 V battery ① in the battery compartment.
 - Connect the positive cable ② to the 12 V battery.
 - Connect the negative cable ③ to the 12 V battery.
 - Reconnect rubber band ④.

- Finishing work**
- Lock the seat. (↩ p. 63)

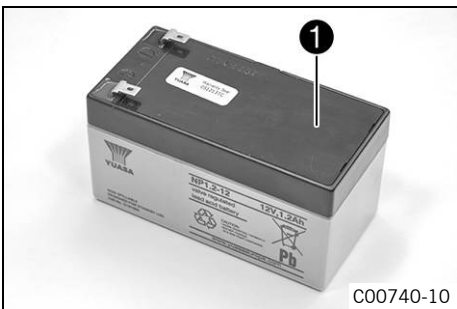
15.3 Recharging the 12 V battery ↘

- Warning**
Risk of injury Battery gases cause serious chemical burns.
- Keep batteries out of the reach of children.
 - Wear suitable protective clothing and goggles.
 - Avoid contact with battery gases.
 - Keep sparks or open flames away from the battery.
 - Only charge batteries in well-ventilated rooms.
 - With skin contact rinse the affected area with plenty of water.
 - Flush eyes with water for at least 15 minutes and consult a physician if battery gases have come into contact with the eyes.

- Warning**
Environmental hazard The battery contains elements that are harmful to the environment.
- Do not dispose of batteries with the household waste. Dispose of a defective battery in an environmentally friendly manner. Give the battery to your authorized KTM dealer or dispose of it at a collection point for used batteries.

i Info
 Even when there is no load on the battery, it discharges steadily. The charging level and the method of charging are very important for the service life of the battery. Rapid recharging with a high charging current shortens the service life of the battery. If the charging current, charging voltage or charging time is exceeded, electrolyte escapes through the safety valves. This reduces the battery capacity. When the 12 V battery has been discharged (blink code 44 on the vehicle), recharge the 12 V battery with immediate effect. If the battery is left in a discharged state for an extended period, it will become over-discharged and sulfated, destroying the battery. The battery is maintenance-free. The acid level does not have to be checked.

i Info
 The 12 V battery is recharged by the KTM PowerPack when operating the vehicle. When the KTM PowerPack is recharged in the vehicle, then the 12 V battery is also recharged.



- Preparatory work**
- Fold the seat up. (☛ p. 63)
 - Remove the 12 V battery. ↘ (☛ p. 88)

- Main work**
- Connect the battery charger to the battery. Switch on the battery charger.

Battery charger (58429074000)

i Info
 Never remove lid ①. In addition, this battery charger can be used to test the open-circuit voltage. This battery charger also makes overcharging the battery impossible.

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

Guideline

The charging current, charging voltage or charging time must not be exceeded.	
Recharge the battery regularly when the motorcycle is not being used:	3 months

- Finishing work**
- Install the 12 V battery. ↘ (☛ p. 88)
 - Lock the seat. (☛ p. 63)

15.4 Changing the fuses of individual power consumers

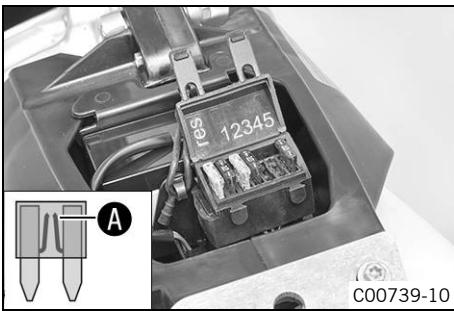
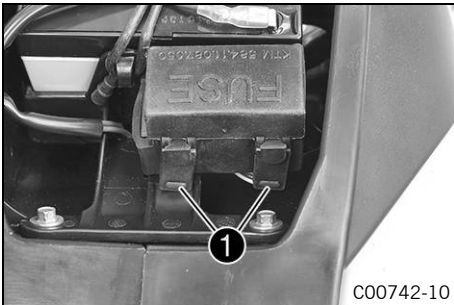
i Info The fuse box containing the fuses for the individual power consumers is located under the seat, behind the 12 V battery.

Preparatory work

- Deactivate the vehicle. (☞ p. 37)
- Fold the seat up. (☞ p. 63)
- Remove the KTM PowerPack. (☞ p. 96)
- Mount the covering cap. (☞ p. 64)

Main work

- Detach the catches **1** and open the fuse box cover.



(Freeride E-SX)

- Remove the defective fuse.

Guideline

Fuses res - 10 A and 20 A - spare fuses
Fuse 1 - 20 A - main fuse
Fuse 2 - 10 A - water pump
Fuse 3 - not used
Fuse 4 - not used
Fuse 5 - 10 A - controls

i Info A defective fuse is indicated by a burned-out fuse wire **A**.

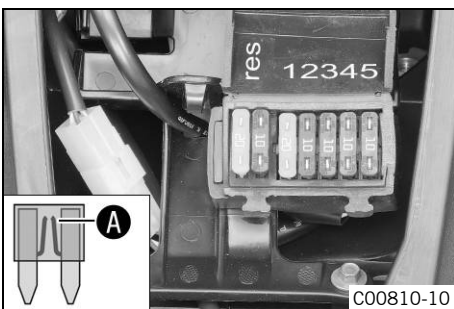
Warning **Fire hazard** The electrical system can be overloaded if the wrong fuses are used.

- Use only fuses with the prescribed amperage. Never bypass or repair fuses.

- Use spare fuses with the correct rating only.

Fuse (58011109110) (☞ p. 118)
Fuse (58011109120) (☞ p. 118)

i Tip Replace the spare fuse in the fuse box so that it is available if needed.



(Freeride E-XC)

- Remove the defective fuse.

Guideline

Fuses res - 10 A and 20 A - spare fuses
Fuse 1 - 20 A - main fuse, MCU, ignition lock
Fuse 2 - 10 A - ignition lock, main switch, start button
Fuse 3 - high beam, low beam
Fuse 4 - horn, brake light, turn signal
Fuse 5 - 10 A - water pump

i Info A defective fuse is indicated by a burned-out fuse wire **A**.



Warning

Fire hazard The electrical system can be overloaded if the wrong fuses are used.

- Use only fuses with the prescribed amperage. Never bypass or repair fuses.

- Use spare fuses with the correct rating only.

Fuse (58011109110) (☞ p. 118)
Fuse (58011109120) (☞ p. 118)



Tip

Replace the spare fuse in the fuse box so that it is available if needed.

- Check that the power consumer is functioning properly.
- Close the fuse box cover and allow the catches to engage.

Finishing work

- Install the KTM PowerPack. (☞ p. 96)
- Lock the seat. (☞ p. 63)

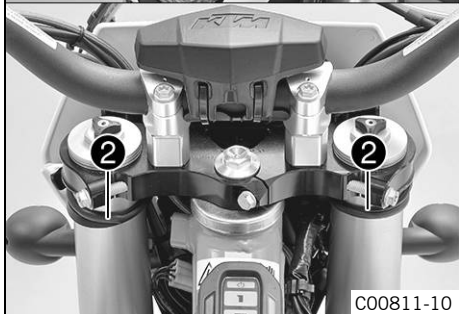
15.5 Removing the headlight mask with the headlight(Freeride E-XC)

Preparatory work

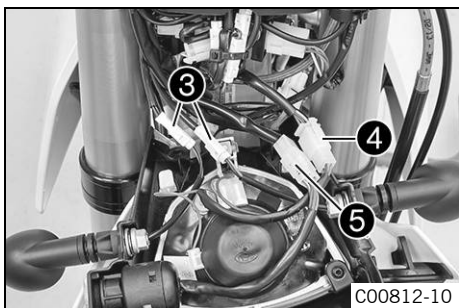
- Deactivate the vehicle. (☞ p. 37)
- Fold the seat up. (☞ p. 63)
- Remove the KTM PowerPack. (☞ p. 96)
- Mount the covering cap. (☞ p. 64)

Main work

- Switch off all power consumers.
- Detach the brake line and wiring harness **1**.
- Release rubber band **2**. Slide the headlight mask up and swing it forward.



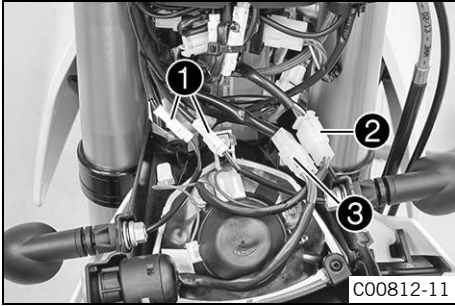
C00811-10



C00812-10

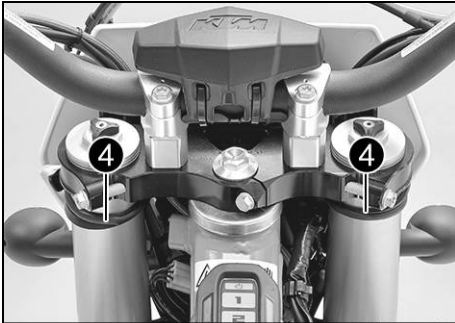
- Disconnect plug-in connectors of turn signals **3**, head light **4**, and ignition lock **5**.

15.6 Refitting the headlight mask with the headlight(Freeride E-XC)



Main work

- Connect plug-in connectors of turn signals ①, head light ②, and ignition lock ③.



- Position the headlight mask and fix it with rubber straps ④.
✓ The holding lugs engage.
- Position the brake line and wiring harness ⑤.



Finishing work

- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)
- Check the headlight setting. (☛ p. 94)

15.7 Changing the headlight bulb(Freeride E-XC)

Note

Damage to reflector Reduced brightness.

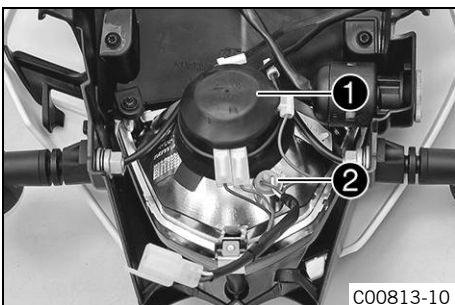
- Grease on the lamp will evaporate due to the heat and be deposited on the reflector. Clean the lamp and keep it free of grease before mounting.

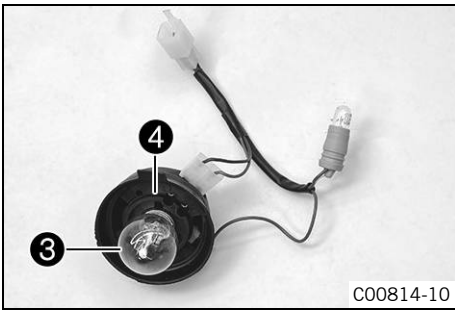
Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)
- Remove the headlight mask with the headlight. (☛ p. 91)

Main work

- Turn rubber cap ① together with the underlying bulb socket counterclockwise all the way and remove it.
- Pull bulb socket ② of the parking light out of the reflector.





- Press headlight bulb ③ lightly into the bulb socket, turn it counterclockwise, and pull it out.
- Insert the new headlight bulb.

Headlight (S2/socket BA20d) (☞ p. 118)

- Insert the rubber cap with the bulb socket into the reflector and turn it clockwise all the way.



Info

Ensure that O-ring ④ is seated properly.

- Insert the bulb socket of the parking light into the reflector.

Finishing work

- Refit the headlight mask with the headlight. (☞ p. 92)
- Install the KTM PowerPack. (☞ p. 96)
- Lock the seat. (☞ p. 63)
- Check the headlight setting. (☞ p. 94)

15.8 Changing the turn signal bulb(Freeride E-XC)

Note

Damage to reflector Reduced brightness.

- Grease on the lamp will evaporate due to the heat and be deposited on the reflector. Clean the lamp and keep it free of grease before mounting.

Preparatory work

- Deactivate the vehicle. (☞ p. 37)
- Fold the seat up. (☞ p. 63)
- Remove the KTM PowerPack. (☞ p. 96)
- Mount the covering cap. (☞ p. 64)

Main work

- Remove the screw on the rear of the turn signal housing.
- Carefully remove diffuser ①.



- Lightly squeeze together the orange cap ② in the area of the holding lugs and take it off.
- Press the turn signal bulb carefully into the socket, turn it counterclockwise by about 30°, and take it out of the socket.



Info

Do not touch the reflector with your fingers, and keep it free from grease.

- Press the new turn signal bulb carefully into the socket and turn it clockwise until it stops.

Turn signal (R10W/socket BA15s) (☞ p. 118)

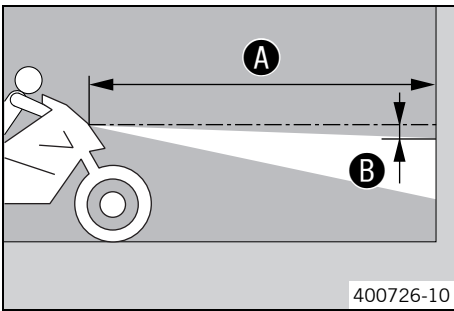
- Mount the orange cap.
- Position the diffuser.
- Insert the screw and first turn it counterclockwise until it engages in the thread. Tighten the screw slightly.

Finishing work

- Install the KTM PowerPack. (☞ p. 96)
- Lock the seat. (☞ p. 63)

- Check that the turn signal system is functioning properly.

15.9 Checking the headlight setting(Freeride E-XC)



- Position the vehicle upright on a horizontal surface in front of a light wall and make a mark at the height of the center of the low beam headlight.
- Make another mark at a distance **B** under the first mark.

Guideline

Distance B	5 cm (2 in)
-------------------	-------------

- Position the vehicle vertically a distance **A** away from the wall.

Guideline

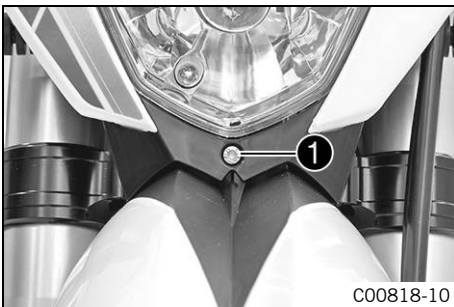
Distance A	5 m (16 ft)
-------------------	-------------

- The rider now sits down on the motorcycle with a full set of protective clothing.
- Turn the key in the ignition lock to the position \odot .
- Push the main switch into the position \odot .
- Switch on the low beam.
- Check the headlight setting.

The boundary between light and dark must be exactly on the lower mark for a motorcycle with a rider.

- » If the light-dark border does not meet specifications:
 - Adjust the headlight range. (☛ p. 94)

15.10 Adjusting the headlight range(Freeride E-XC)



Preparatory work

- Check the headlight setting. (☛ p. 94)

Main work

- Adjust the beam distance of the headlight by turning screw **1**.

Guideline

The boundary between light and dark must be exactly on the lower mark for a motorcycle with a rider (instructions on how to apply the mark: Checking the headlight setting).



Info

Turn clockwise to increase the headlight range, turn counterclockwise to reduce the headlight range.
A change in weight on the vehicle may require a correction of the headlight range.

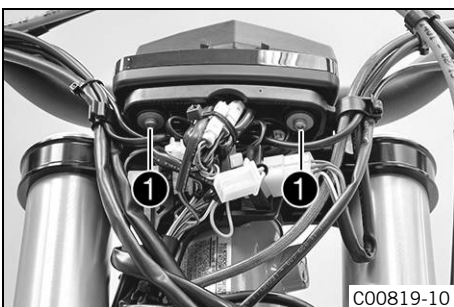
15.11 Changing the speedometer battery(Freeride E-XC)

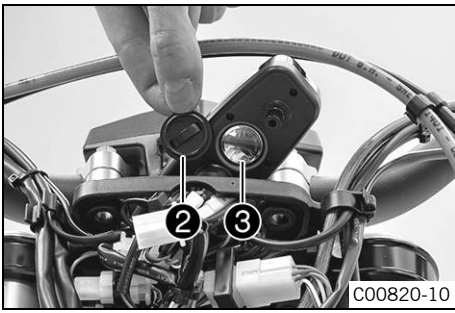
Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)
- Remove the headlight mask with the headlight. (☛ p. 91)

Main work

- Remove screws **1**.
- Pull the speedometer upward out of the holder.

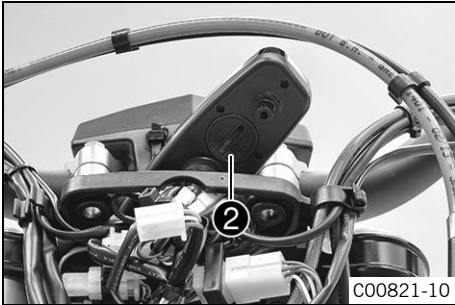




- Using a coin, turn protection cap ② all the way counterclockwise and remove it.
- Remove speedometer battery ③.
- Insert the new battery with the label facing outward.

Speedometer battery (CR 2032) (☛ p. 118)

- Check the O-ring of the protection cap for correct seating.



- Position protection cap ② and turn all the way clockwise using a coin.
- Press any button on the speedometer.
- ✓ The speedometer is activated.
- Position the speedometer in the holder.
- Mount and tighten the screws with washers.

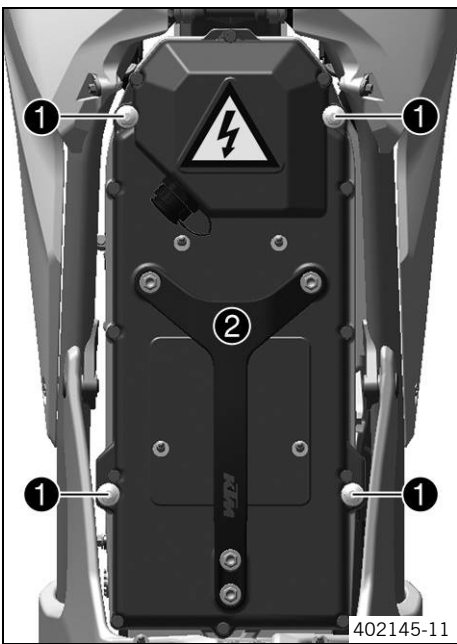
Finishing work

- Refit the headlight mask with the headlight. (☛ p. 92)
- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)
- Check the headlight setting. (☛ p. 94)
- Set the speedometer. (☛ p. 30)

16.1 Removing the KTM PowerPack

- Warning**
Risk of injury There is a risk of electric shock when working on high-voltage components.
 Work on high-voltage components require special training, qualifications and tools.
- Work which has not been described and explained may only be performed by correspondingly trained KTM specialists.(Your authorized KTM workshop will be glad to help.)
 - Do not open the electric motor or the KTM PowerPack.(Your authorized KTM workshop will be glad to help.)

- Warning**
Environmental hazard Lithium-ion batteries contain components and elements that are harmful to the environment.
- Never throw a KTM PowerPack into the household trash.
 - Dispose of the KTM PowerPack properly and in compliance with the applicable regulations.(Your authorized KTM workshop will be glad to help.)



- Preparatory work**
- Deactivate the vehicle. (☛ p. 37)
 - Fold the seat up. (☛ p. 63)

- Main work**
- Release screws ①.

- Note**
Material damage Components damaged or destroyed by water or dirt.
- Mount the covering cap if you have removed the KTM PowerPack.
 - Place the KTM PowerPack on a clean and dry surface.

- Remove the KTM PowerPack ②.

- Info**
 The KTM PowerPack is very heavy. A second person can help with removal.

- Finishing work**
- Mount the covering cap. (☛ p. 64)

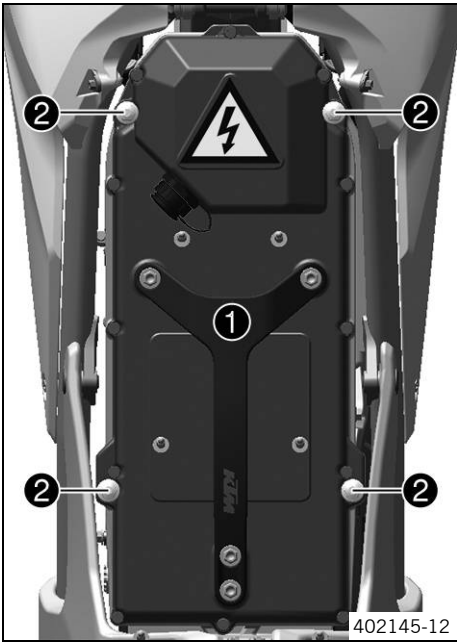
16.2 Installing the KTM PowerPack

- Caution**
Risk of injury The KTM PowerPack is very heavy.
 The KTM PowerPack must rest flush on the electric motor after installation.
- Only lift the KTM PowerPack using the carry handle.
 - Make sure that nobody is pinched when the KTM PowerPack is removed or installed.

- Note**
Material damage Components damaged or destroyed by water or dirt.
- Before installing the KTM PowerPack, check that the battery discharge plug on the electric motor and the battery discharge socket on the KTM PowerPack are clean.
 - Check the battery discharge plug form ring.
 - Clean the battery discharge plug and the battery discharge socket without using water or compressed air if the battery discharge plug or the battery discharge socket is dirty.
 - After cleaning, spray silicone spray onto the battery discharge plug form ring.

Main work

- Remove the covering cap. (☛ p. 65)
- Check the battery discharge plug form ring. (☛ p. 65)
- Position the KTM PowerPack **1** in the vehicle.
- ✓ The KTM PowerPack is resting flush on the electric motor.



Info

The KTM PowerPack is very heavy. A second person can help with installation.

- Tighten screws **2**.

Guideline

KTM PowerPack attachment	M6	10 Nm (7.4 lbf ft)
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Finishing work

- Lock the seat. (☛ p. 63)

16.3 Overview of the KTM PowerPack battery charger



- 1 Residual current protection switch
- 2 "On" charger switch
- 3 "Off" charger switch
- 4 Battery charger
- 5 Charging mode switch
- 6 Charge level indicator

7	Status indicator
8	LED for KTM PowerPack fault
9	LED for charger fault

16.4 Positioning the battery charger

Warning
Risk of injury There is a risk of electric shock in a moist environment.
 The battery charger is not waterproof.

- Only use the battery charger in dry conditions.
- Ensure that no fluids flow or drip onto the battery charger.

Warning
Risk of injury If the battery charger is used incorrectly, its intrinsic safety cannot be guaranteed.
 The battery charger is only suitable for use with a KTM PowerPack.

- Only use the battery charger with a KTM PowerPack.
- Only operate the battery charger using household sockets with an earth conductor.
- Do not use any additional adapters or extensions.
- Follow the applicable safety instructions of the power connection.

Warning
Risk of injury There is a risk of electric shock if the battery charger or the cables have been manipulated or damaged.
 The battery charger does not contain any parts which require maintenance.

- Do not modify the battery charger or the cables.
- Under no circumstances open the battery charger housing.
- Do not insert any objects into the battery charger housing from the outside.
- Do not use the battery charger if cables, plug or parts of the battery charger have been damaged or are soiled.



- Place the battery charger on a firm, level and horizontal surface.
- Ensure the battery charger is adequately ventilated.

Guideline

Free space at the front and rear side of the battery charger	20 cm (7.9 in)
--	----------------

- Use the battery charger in the temperature range permitted.

Guideline

Ambient temperature	-15... 50 °C (5... 122 °F)
---------------------	----------------------------

- Ensure that the power plug for the battery charger always remains easily accessible.

16.5 Checking residual current protection switch



Warning
Risk of injury There is a risk of electric shock with a faulty residual current protection switch.

- Before each use of the charger check the residual current protection switch.
- Do not use the residual current protection switch if the test procedure was not successful.

- Connect the mains plug to the mains connection.
- Press the ① button.
 - ✓ The operating display lights up red.
- Press the ② button.
 - ✓ The operating display goes out.
- Press the ① button.
 - ✓ The residual current protection switch can be used.

- Disconnect the residual current protection switch from the mains connection.

16.6 Recharging the KTM PowerPack

Note

Material damage The power supply will be damaged in the event of an overload.

In charge mode **Fast**, a steady current of at least 13 A is required.

In charge mode **Normal**, a steady current of at least 10 A is required.

- Ensure that the power outlet can supply the steady current required and is protected by a suitable fuse.

Warning

Environmental hazard Lithium-ion batteries contain components and elements that are harmful to the environment.

- Never throw a KTM PowerPack into the household trash.
- Dispose of the KTM PowerPack properly and in compliance with the applicable regulations. (Your authorized KTM workshop will be glad to help.)

Info

The procedure used for recharging is identical both when the battery is installed and when it is not installed. However, the 12 V battery is only recharged when the KTM PowerPack is being recharged in the vehicle.

Recharge the KTM PowerPack regularly while it is inside the vehicle to also charge the 12 V battery.

When the battery charger is connected to the KTM PowerPack, do not activate the vehicle.

If the vehicle is activated while recharging with the KTM PowerPack installed in the vehicle, the vehicle will switch to error mode. The KTM PowerPack will continue to be recharged, however the 12 V battery will stop recharging.

Info

When the left LED in the charge level indicator on the battery charger flashes, then the KTM PowerPack is ready for use. However, its full capacity will not yet be available.

To guarantee the maximum capacity of the KTM PowerPack, discharge the KTM PowerPack completely every 20 charging cycles and then recharge it completely. If this process is not carried out, then the vehicle may switch off due to a charging level which is too low without reducing power beforehand.

The KTM PowerPack is completely discharged when the vehicle switches off with blink code 11.

Info

When the temperature of the KTM PowerPack exceeds the permitted value during charging, the battery charger will stop the charging process. All LEDs and the LEDs for the current charge level light up alternately every second.

As soon the temperature of the KTM PowerPack returns to the permitted range, the charging process continues automatically.

Preparatory work

- Position the battery charger. (☛ p. 98)
- Check residual current protection switch. (☛ p. 98)
- Push the main switch into the position ☒.
- Fold the seat up. (☛ p. 63)

Main work

- Remove the charging socket protection cap **1**.



Warning

Risk of injury The intrinsic safety of the KTM PowerPack can only be guaranteed if the original battery charger is used.

The KTM PowerPack may only be charged with the original battery charger.

- Only use the original battery charger to charge the KTM PowerPack.

- Connect the battery charger to the KTM PowerPack. Observe the plug markings **A**.



C00815-10

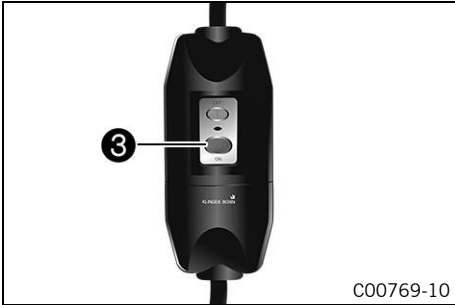


- Connect the power plug for the battery charger to the power supply socket.
- Set the charging mode switch **2** to the **Fast** position or **Normal** position.

i Info

In charging mode **Fast**, the KTM PowerPack is completely charged after approx. 80 minutes. The power consumption is higher than in charging mode **Normal**.

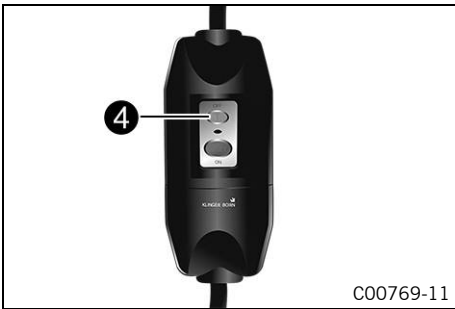
In charging mode **Normal**, the KTM PowerPack is completely charged after approx. 90 minutes.



- Switch on the battery charger using the switch **3**.
- ✓ The charging process starts automatically. The status indicator flashes during the charging process.



- Monitor the charging level of the KTM PowerPack using the LEDs.
- LED 1: 20%
- LED 2: 40%
- LED 3: 60%
- LED 4: 80%
- LED 5 flashes beginning with approx. 95 % until 100 % is reached.
- Once the charging process is complete, all five LEDs light up and the status indicator goes out.



- Switch off the battery charger using the switch **4**.
- ✓ After several seconds, all LEDs on the battery charger go out.
- Disconnect the power plug for the battery charger from the power supply socket.
- Disconnect the charging cable from the KTM PowerPack.

Guideline

Pull on the structured part of the connector. Do not pull on the cable.

- Check the seal on the charging socket protection cap.
 - » If the seal is dirty:
 - Clean the seal without using water or compressed air.
 - » If the seal is damaged or worn:
 - Change the seal.
- Mount the charging socket protection cap.

Finishing work

- Lock the seat. (☛ p. 63)

16.7 Charging the KTM PowerPack in the Storage charging mode

Note

Material damage The power supply will be damaged in the event of an overload.

In the **Storage** charging mode, a steady current of at least 10 A is required.

- Ensure that the power outlet can supply the steady current required and is protected by a suitable fuse.

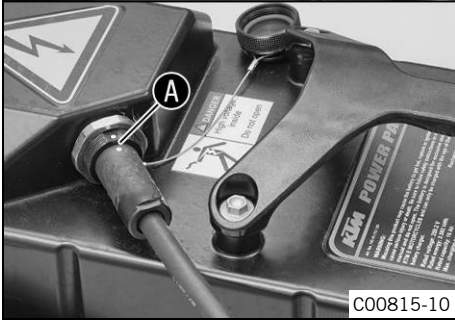
Warning

Environmental hazard Lithium-ion batteries contain components and elements that are harmful to the environment.

- Never throw a KTM PowerPack into the household trash.
- Dispose of the KTM PowerPack properly and in compliance with the applicable regulations. (Your authorized KTM workshop will be glad to help.)

i Info

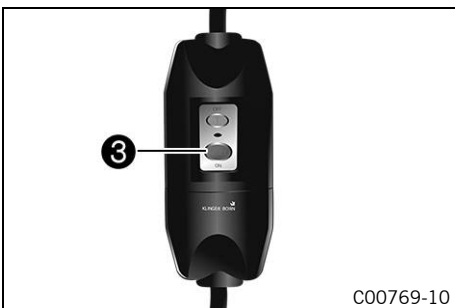
The charge level of the KTM PowerPack must be below 50% before the **Storage** charging mode can be used. If the temperature of the KTM PowerPack exceeds the permissible value while it is being charged, the charger stops charging. All LEDs and the LEDs for the current charge level alternately light up every second. After the temperature of the KTM PowerPack returns to the permissible range, charging is resumed automatically.



C00815-10



C00768-10



C00769-10



C00854-01

Preparatory work

- Position the battery charger. (☛ p. 98)

Main work

- Remove the charging socket protection cap **1**.



Warning

Risk of injury The intrinsic safety of the KTM PowerPack can only be guaranteed if the original battery charger is used.

The KTM PowerPack may only be charged with the original battery charger.

- Only use the original battery charger to charge the KTM PowerPack.

- Connect the battery charger to the KTM PowerPack. Observe plug markings **A**.

- Connect the power plug for the battery charger to the power supply socket.
- Set the charging mode switch **2** to the **Storage** position.

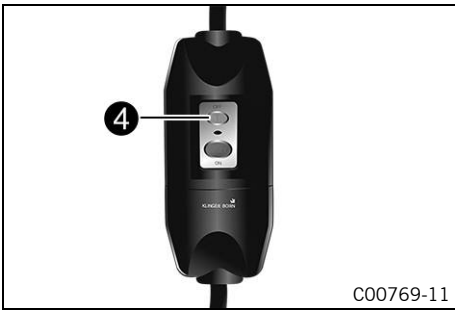
- Switch on the battery charger using switch **3**.
 ✓ The charging process starts automatically. The status indicator flashes during the charging process.

- Monitor the charging level of the KTM PowerPack using the LEDs.

LED 1: 20%

LED 2: 40%

After the charging process is completed to a level of 50%, LEDs 1 and 2 light up and the status indicator goes out.



- Switch off the battery charger using switch **4**.
- ✓ After several seconds, all LEDs on the battery charger go out.
- Disconnect the battery charger power plug from the power supply socket.
- Disconnect the charging cable from the KTM PowerPack.

Guideline

Pull on the structured part of the connector. Do not pull on the cable.

- Check the seal on the charging socket protection cap.
 - » If the seal is dirty:
 - Clean the seal without using water or compressed air.
 - » If the seal is damaged or worn:
 - Change the seal.
- Mount the charging socket protection cap.

16.8 Changing charging socket protection cap

Warning
Risk of injury There is a risk of electric shock when working on high-voltage components.
 Work on high-voltage components requires special training, qualifications and tools.

- Have all work that is not described and explained performed by trained KTM mechanics only.
- Do not open the electric motor or the lithium-ion battery (KTM PowerPack).

Info
 If the safety cord or seal ring is damaged or torn off, the charging socket protection cap must be replaced.

Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)

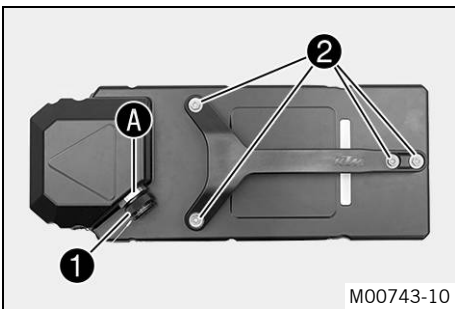
Main work

- Remove **1** charging socket protection cap.

Guideline

Do not loosen **A** nut.

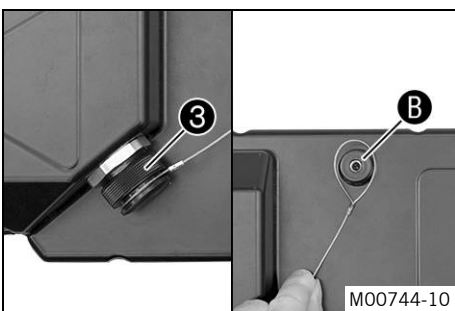
- Remove residual safety cord.
- Remove screws **2**.
- Take off the carry handle.

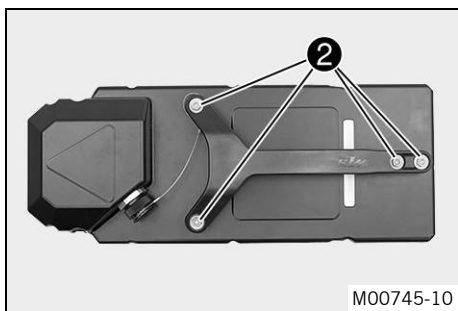


- Install new charging socket **3** protection cap.

Charging socket protection cap (000700000FX01)

- Position loop around the right **B** carry handle attachment.





- Position carry handle.

Guideline

Do not pinch the loop between the KTM PowerPack and the carry handle.

- Mount and tighten screws ②.

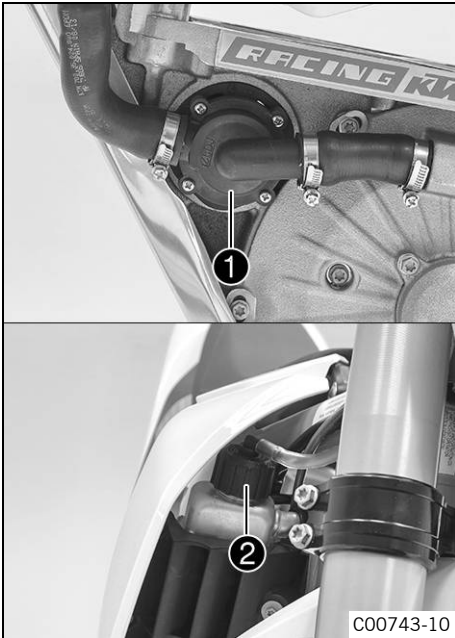
Guideline

Screws, carry handle	M6	5 Nm (3.7 lbf ft)
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Finishing work

- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

17.1 Cooling system



When the vehicle is in standby mode, the water pump ❶ pumps the coolant through the cooling circuit. The pressure in the cooling system increases with the temperature of the coolant. A safety valve is contained in radiator cap ❷. This ensures that operating the vehicle at the specified coolant temperature will not result in a risk of malfunctions.

65 °C (149 °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.

17.2 Checking the antifreeze and coolant level



Warning

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

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



Warning

Danger of poisoning Coolant is poisonous and a health hazard.

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

Condition

The motor is cold.

Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)
- Raise the motorcycle with a lift stand. (☛ p. 49)

Main work

- Remove the radiator cap.
- Check the antifreeze in the coolant.

-25... -45 °C (-13... -49 °F)

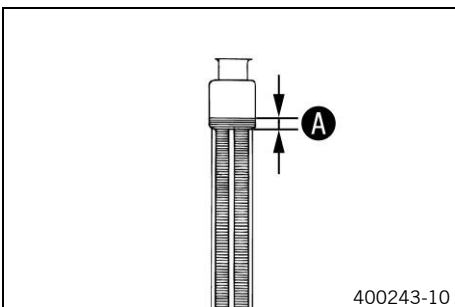
- » If the antifreeze in the coolant does not match the specified value:
 - Correct the antifreeze in the coolant.

- Check the coolant level in the radiator.

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

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

Coolant (☛ p. 121)



- Mount the radiator cap.

Finishing work

- Remove the motorcycle from the lift stand. (☛ p. 49)
- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

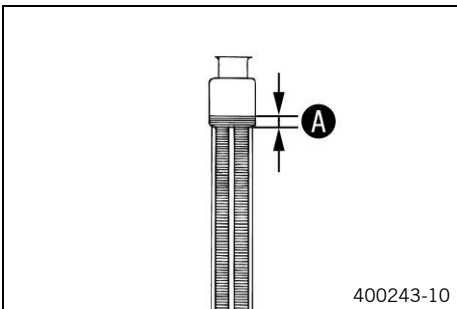
17.3 Checking the coolant level

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

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

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

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



Condition

The motor is cold.

- Position the vehicle vertically on a level surface with the aid of another person.
- 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 match the specified value:

- Correct the coolant level.

Coolant (☛ p. 121)

- Mount the radiator cap.

17.4 Draining the coolant ☞

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

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

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

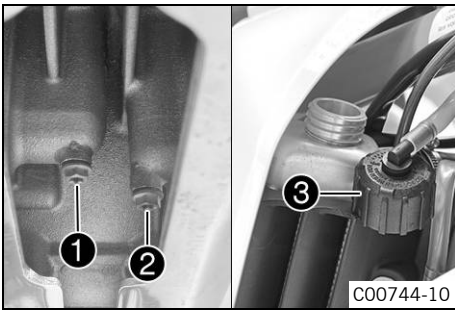
- Coolant must not come into contact with the skin, eyes, or clothing. If contact occurs with the eyes, rinse with water immediately and contact a physician. Immediately clean contaminated areas on the skin with soap and water. If fuel is swallowed, contact a physician immediately. Change clothing that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

Condition

The motor is cold.

Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)



Main work

- Position the motorcycle upright.
- Place a suitable container under the motorcycle.
- Remove screws ① and ②.



Info

The screws are located under the electric motor and can be accessed through a recess in the motor guard.

- Remove radiator cap ③.
- Completely drain the coolant.
- Mount screws ① and ② with a new seal ring and tighten.

Guideline

Coolant drain plug	M6	10 Nm (7.4 lbf ft)
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17.5 Refilling with coolant



Warning

Danger of poisoning Coolant is poisonous and a health hazard.

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

Condition

The motor is cold.

Preparatory work

- Deactivate the vehicle. (☞ p. 37)
- Fold the seat up. (☞ p. 63)
- Remove the KTM PowerPack. (☞ p. 96)
- Mount the covering cap. (☞ p. 64)

Main work

- Ensure that the screws ① and ② are tightened.



Info

The screws are located under the electric motor and can be accessed through a recess in the motor guard.

- Position the motorcycle upright.
- Pour coolant in up to measurement A above the radiator fins.

Guideline

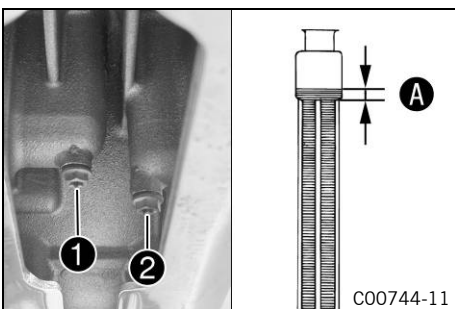
10 mm (0.39 in)

Coolant	0.7 l (0.7 qt.)	Coolant (☞ p. 121)
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- Mount the radiator cap.

Finishing work

- Remove the covering cap. (☞ p. 65)
- Install the KTM PowerPack. (☞ p. 96)
- Lock the seat. (☞ p. 63)
- Go for a short test ride.
- Check the cooling system for leaks.
- Check the coolant level. (☞ p. 105)



18.1 Selecting the driving mode

Condition

Alternative1

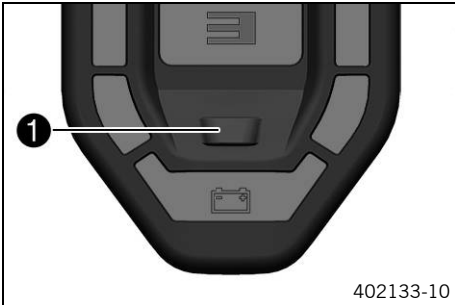
The motorcycle is stationary.
The motorcycle is ready for operation.

Alternative2

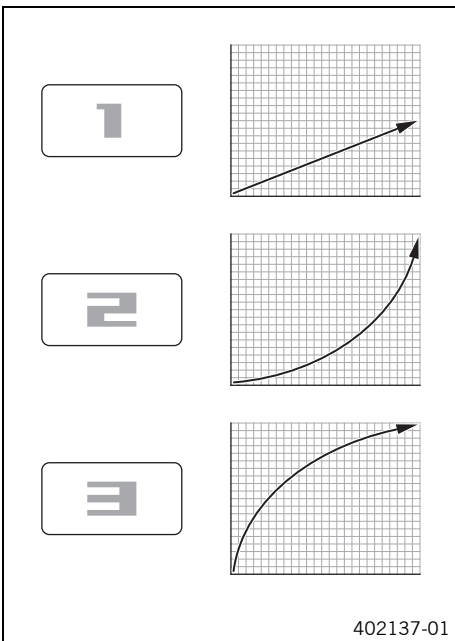
The motorcycle is stationary.
The motorcycle is ready to drive.

Alternative3

The motorcycle is moving.
≤ 5 km/h (≤ 3.1 mph)
The throttle grip is in the basic position.



- Press and hold the map-select tip switch **1** for at least one second.
 - ✓ Driving mode is activated when the switch is let go.



- Select one of the driving modes.
 - Driving mode **1** is Economy: the motor torque is reduced by half.
 - Driving mode **2** is Standard: the further the throttle grip is open, the more the motor power increases.
 - Driving mode **3** is Advanced: the greatest increase in power occurs immediately, after which the motor power increases more slowly.

i Info

A red indicator lamp with the number **1**, **2** or **3** shows the driving mode selected.
Three different driving modes are available. The driving modes determine how the vehicle reacts to throttle grip operation.
The figures only show approximate values for illustrative purposes, and do not describe the actual reaction.





19.1 Changing the gear oil

- Warning**
Danger of scalding Gear oil becomes very hot when the motorcycle is operating.
- Wear suitable protective clothing and safety gloves.
 - If you have been scalded, hold the burn under lukewarm water immediately.

- Warning**
Environmental hazard Hazardous substances cause environmental damage.
- Dispose of oils, grease, cleaning agents, brake fluid etc. properly and in compliance with the applicable regulations.

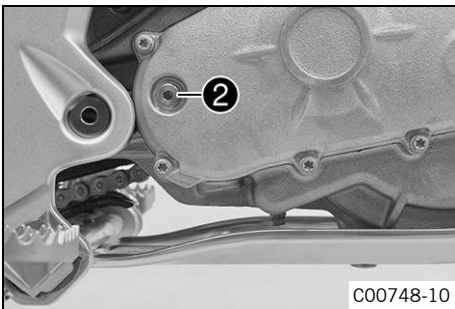
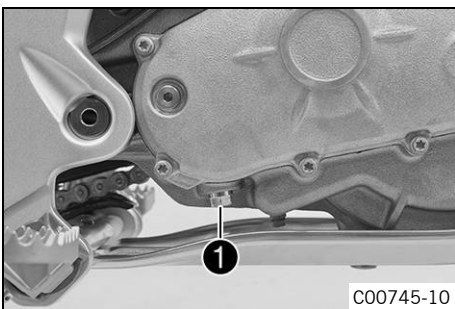
i Info
 Drain the gear oil while the motor is warm.

Preparatory work

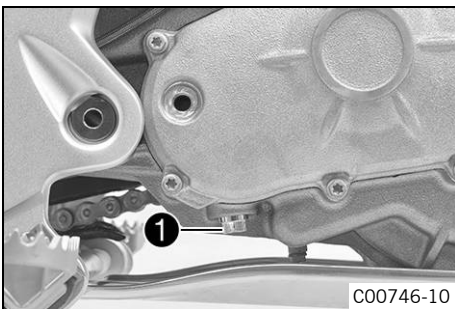
- Stand the motorcycle on its side stand on a horizontal surface.
- Deactivate the vehicle. ( p. 37)
- Fold the seat up. ( p. 63)
- Remove the KTM PowerPack. ( p. 96)
- Mount the covering cap. ( p. 64)

Main work

- Place a suitable container under the motor.
- Remove oil drain plug **1**.



- Remove screw plug **2**.
- Let the gear oil drain fully.

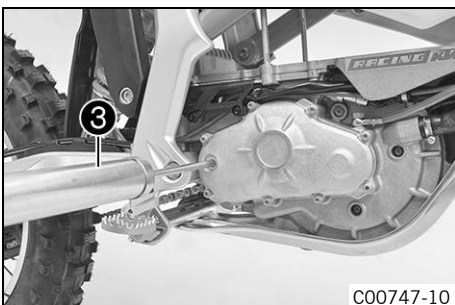


- Mount and tighten the oil drain plug **1**.


Guideline

Oil drain plug with magnet	M12x1.5x12	20 Nm (14.8 lbf ft)
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- Place the motorcycle on its left side with the aid of an assistant.

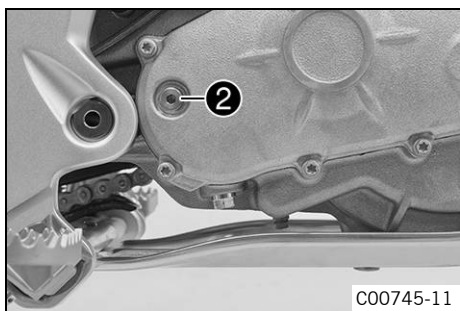


- Fill the special tool **3** with the specified quantity of gear oil.

Oil filler syringe(58429048000)		
Gear oil	0.2 l (0.2 qt.)	Gear oil(SAE 80W/90) ( p. 121)

- Fill the gear oil using the special tool.
- Wipe away any excess gear oil.

i Info
 The screw plug is not used for checking the oil level!



- Mount and tighten screw plug ②.

Guideline

Oil seal plug	M10	8 Nm (5.9 lbf ft)
---------------	-----	-------------------

- Stand the motorcycle upright.

Finishing work

- Install the KTM PowerPack. (👉 p. 96)
- Lock the seat. (👉 p. 63)
- Go for a short test ride and check the motor has no leaks.

20.1 Cleaning the motorcycle

Note

Material damage The vehicle and the KTM PowerPack are not suitable for high-pressure cleaning.

The high pressure allows water to penetrate electrical components, plugs, bearings, etc. This results in components being damaged or destroyed.

- Never clean the vehicle and the KTM PowerPack with high-pressure cleaning equipment or a strong jet of water.

Note

Material damage Water or dirt damage or destroy components.

- Always mount the covering cap if you have removed the KTM PowerPack.
- Do not point the jet of water toward the battery discharge plug, even if the covering cap has been mounted.



Warning

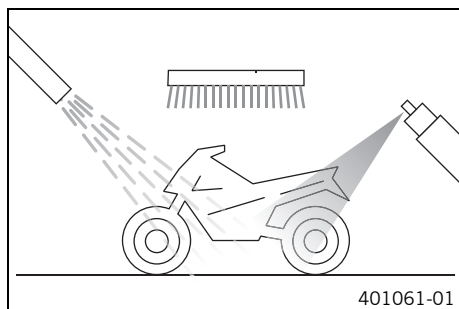
Environmental hazard Hazardous substances cause environmental damage.

- Dispose of oils, grease, cleaning agents, brake fluid etc. properly and in compliance with the applicable regulations.



Info

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



Preparatory work

- Deactivate the vehicle. (☛ p. 37)
- Fold the seat up. (☛ p. 63)
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)

Main work

- Remove coarse dirt particles with a gentle spray of water.
- Spray very dirty areas with a normal motorcycle cleaner and then clean with a paintbrush.

Motorcycle cleaner (☛ p. 122)



Info

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

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



Warning

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

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

- Lubricate all sliding points and pivot points.
- Clean the chain. (☛ p. 65)
- Treat bare metal (except for brake discs) with a corrosion inhibitor.

Preserving materials for paints, metal and rubber (☛ p. 122)

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

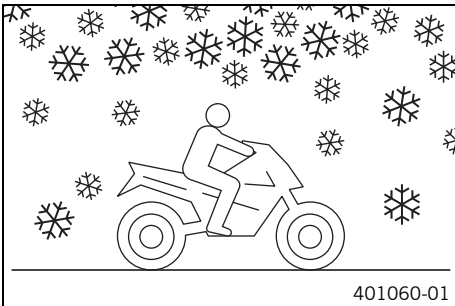
Special cleaner for glossy and matte paint finishes, metal and plastic surfaces (☛ p. 122)

Finishing work

- Install the KTM PowerPack. (☛ p. 96)
- Lock the seat. (☛ p. 63)

20.2 Checks and maintenance steps for winter operation(Freeride E-XC)

- i Info**
If the motorcycle is used in the winter, salt can be expected on the roads. Precautions need to be taken against road salt corrosion.
If the vehicle was operated in road salt, clean it with cold water after riding. Warm water would enhance the corrosive effects of salt.



- Clean the motorcycle. (☛ p. 110)
- Clean the brake system.

- i Info**
After **EVERY** trip on salted roads, thoroughly wash the brake calipers and brake linings with cold water and dry carefully. This should be done after the parts are cooled down and while they are installed.
After riding on salted roads, thoroughly wash the motorcycle with cold water and dry it well.

- Treat the engine, swingarm, and all other bright and zinc-plated parts (except for the brake discs) with a wax-based corrosion inhibitor.

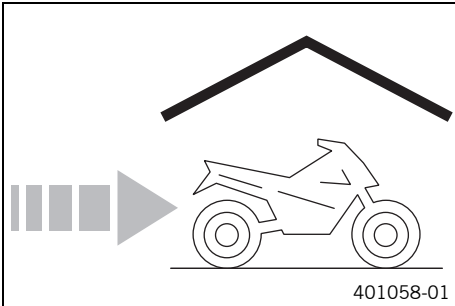
- i Info**
Corrosion inhibitor is not permitted to come in contact with the brake discs as this would greatly reduce the braking force.

- Clean the chain. (☛ p. 65)

21.1 Storage

i **Info**

If the motorcycle is not being used for an extended period, additional measures are recommended. Have maintenance work, repairs or conversions performed outside the motorcycling season, if possible. This allows you to avoid long waiting periods when the next season starts.



- Discharge the KTM PowerPack to a charging level of 50%.
- Check all motorcycle parts for function and wear.
- Remove the KTM PowerPack. (☛ p. 96)
- Mount the covering cap. (☛ p. 64)
- Remove the 12 V battery. ☛ (☛ p. 88)
- Charge the KTM PowerPack in the **Storage** charging mode. (☛ p. 100)

Guideline

The maximum period of inactivity of the KTM PowerPack is 1 year.

Ideal storage temperature of the KTM PowerPack without direct sunlight	10... 20 °C (50... 68 °F)
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i **Info**

Never store the KTM PowerPack at higher temperatures as this would greatly accelerate the aging process.

- Recharge the 12 V battery. ☛ (☛ p. 89)

Guideline

Storage temperature of 12 V battery without direct sunlight	0... 35 °C (32... 95 °F)
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- Clean the motorcycle. (☛ p. 110)
- Check the antifreeze and coolant level. (☛ p. 104)
- Check the tire air pressure. (☛ p. 86)
- Store the vehicle in a dry location that is not subject to large fluctuations in temperature.

i **Info**

When the vehicle is on a lift stand, the load is taken off the tires and the suspension elements.

- Raise the motorcycle with a lift stand. (☛ p. 49)
- Cover the vehicle with a tarp or similar cover that is permeable to air.

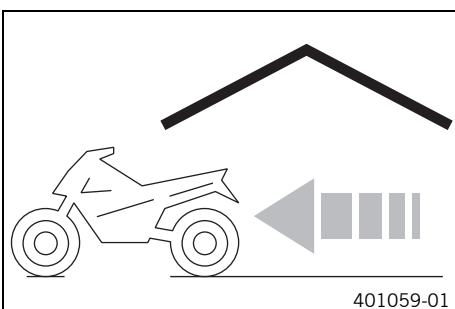
i **Info**

Do not use any non-porous materials, as moisture cannot escape and corrosion can occur.

21.2 Preparing for use after storage

i **Info**

If the KTM PowerPack has not been used for more than six months, start by discharging the KTM PowerPack until the vehicle switches off with blink code 11. Then recharge the KTM PowerPack completely.



- Remove the motorcycle from the lift stand. (☛ p. 49)
- Install the 12 V battery. ☛ (☛ p. 88)
- Install the KTM PowerPack. (☛ p. 96)
- Perform checks and maintenance work when preparing the vehicle for use. (☛ p. 35)
- Take a test ride.

22.1 Vehicle troubleshooting



The faults are indicated by the yellow electric motor indicator lamp **1** and by acoustic signals that sound at the same time.

i Tip

The first step to take in case of any fault is to switch off the vehicle at the main switch, wait for 15 seconds, and then switch the vehicle back on. If a fault is not eliminated by the measures specified here, or a blink code is not listed, an authorized KTM workshop will be happy to help you.

i Info

The pause between the signals of the 1st digit is 0.25 seconds.
The pause between the 1st and 2nd digits is 1 second.
The pause between the signals of the 2nd digit is also 0.25 seconds.
The pause until the blink code repeats is 3 seconds.

Faults	Possible cause	Action
Blink code 11 on the vehicle	KTM PowerPack is discharged	<ul style="list-style-type: none"> Recharge the KTM PowerPack. (☛ p. 99) Use the charged KTM PowerPack.
Blink code 13 on the vehicle	Fault during charging	<ul style="list-style-type: none"> Stop charging, switch off the main switch, and restart charging.
Blink code 22 on the vehicle	Overtemperature of the control unit	<ul style="list-style-type: none"> Check the coolant level. (☛ p. 105) Check the radiator for dirt.
Blink code 23 on the vehicle	Overtemperature of the electric motor	<ul style="list-style-type: none"> Check the coolant level. (☛ p. 105) Check the radiator for dirt.
Blink code 24 on the vehicle	Overtemperature of the KTM PowerPack	<ul style="list-style-type: none"> Let the KTM PowerPack cool down.
Blink code 31 on the vehicle	Fault in the CAN communication	<ul style="list-style-type: none"> Switch the main switch off and on. Check the KTM PowerPack for correct positioning. Check the connection of the multifunction display for loose connectors.
Blink code 33 on the vehicle	Fault in the communication with the KTM PowerPack	<ul style="list-style-type: none"> Switch the main switch off and on. Check the KTM PowerPack for correct positioning.
Blink code 34 on the vehicle	Fault in the communication with the multifunction display	<ul style="list-style-type: none"> Switch the main switch off and on. Check the connection of the multifunction display for loose connectors.
Blink code 41 on the vehicle	Fault in the throttle grip	<ul style="list-style-type: none"> Switch the main switch off and on. Check the throttle grip for external damage.
Blink code 42 on the vehicle	Fault in the rotor position sensor	<ul style="list-style-type: none"> Switch the main switch off and on.
Blink code 43 on the vehicle	Fault in the KTM PowerPack	<ul style="list-style-type: none"> Switch the main switch off and on.
Blink code 44 on the vehicle	Fault in the 12 V supply	<ul style="list-style-type: none"> Recharge the 12 V battery. ☛ (☛ p. 89) Install a new 12 V battery.
Blink code 45 on the vehicle	Fault in the electric motor	<ul style="list-style-type: none"> Switch the main switch off and on.
Blink code 46 on the vehicle	Fault in the onboard network wiring harness or in a switch	<ul style="list-style-type: none"> Switch the main switch off and on. Check the onboard network wiring harness and plug-in connections for external damage.
Blink code 51 on the vehicle	Fault in the ECU	<ul style="list-style-type: none"> Switch the main switch off and on.
Blink code 52 on the vehicle	Fault in the moisture monitor	<ul style="list-style-type: none"> Switch the main switch off and on.
Blink code 53 on the vehicle	Fault in the KTM PowerPack relay	<ul style="list-style-type: none"> Switch the main switch off and on.
Blink code 54 on the vehicle	Fault in the insulation monitor	<ul style="list-style-type: none"> Clean and dry the discharge plug and discharge socket without compressed air.
Speedometer values deleted (time, stop watch, lap times) (Freeride E-XC)	The battery in the speedometer is discharged	<ul style="list-style-type: none"> Change the speedometer battery. (☛ p. 94)

Faults	Possible cause	Action
The high beam, low beam, parking light, tail light, and license plate lamp are not working (Freeride E-XC)	Fuse 3 blown	– Change the fuses of individual power consumers. (☛ p. 90)
The speedometer, horn, brake light, and turn signal are not working (Freeride E-XC)	Fuse 4 blown	– Change the fuses of individual power consumers. (☛ p. 90)

22.2 Troubleshooting of the battery charger



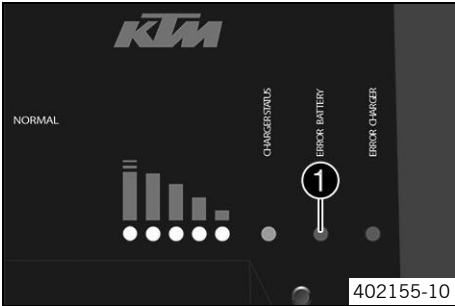
The faults are indicated by LED ❶ on the battery charger. All of the following blink codes are displayed on the charger and refer to the charger itself.

i Tip
The first step to take in case of any fault is to switch off the battery charger, wait for 15 seconds, and then switch it back on.
If a fault is not eliminated by the measures specified here, or a blink code is not listed, an authorized KTM workshop will be happy to help you.

i Info
The pause between the signals of the 1st digit is 0.25 seconds.
The pause between the 1st and 2nd digits is 1 second.
The pause between the signals of the 2nd digit is also 0.25 seconds.
The pause until the blink code repeats is 3 seconds.

Faults	Possible cause	Action
Blink code 11 on battery charger	Fault in the charging cable	– Check the charging plug and charging cable for external damage and dirt and reconnect.
Blink code 12 on battery charger	Fault in the charging cable	– Check the charging plug and charging cable for external damage and dirt and reconnect.
Blink code 13 on battery charger	Fault in the charging cable	– Check the charging plug and charging cable for external damage and dirt and reconnect.
Blink code 51 on battery charger	Overtemperature of the battery charger	– Let the charger cool down. – Continue charging in a cooler location.
Blink code 63 on battery charger	Fault in the supply voltage	– Use the Normal charging mode. – Choose a socket closer to the central supply.
Blink code 65 on battery charger	Fault in the supply voltage	– Use the Normal charging mode. – Choose a socket closer to the central supply.

22.3 Troubleshooting of the KTM PowerPack when connected to the battery charger



The faults are indicated by LED ❶ on the battery charger. All of the following blink codes are displayed on the charger and refer to the KTM PowerPack.

i Tip
 The first step to take in case of any fault is to switch off the battery charger, wait for 15 seconds, and then switch it back on.
 If a fault is not eliminated by the measures specified here, an authorized KTM workshop will be happy to help you.

i Info
 The pause between the signals of the 1st digit is 0.25 seconds.
 The pause between the 1st and 2nd digits is 1 second.
 The pause between the signals of the 2nd digit is also 0.25 seconds.
 The pause until the blink code repeats is 3 seconds.

Faults	Possible cause	Action
Blink code 11 on battery charger	Charging fault	– Check the charging plug and charging cable for external damage and dirt and reconnect.
Blink code 33 on battery charger	Overtemperature of the KTM PowerPack	– Let the KTM PowerPack cool down.
Blink code 34 on battery charger	Undertemperature of the KTM PowerPack	– Place the KTM PowerPack in a warmer location and let it warm up. – Continue charging in a warmer location.
Blink code 36 on battery charger	Undertemperature of the KTM PowerPack	– Place the KTM PowerPack in a warmer location and let it warm up. – Continue charging in a warmer location.
Blink code 64 on battery charger	Charging cable detected in activated vehicle	– Switch off the main switch on the vehicle and restart charging.
Blink code 65 on battery charger	Fault in the charging cable	– Check the charging plug and charging cable for external damage and dirt and reconnect.
Blink code 66 on battery charger	The KTM PowerPack charge level is too high for the Storage charging mode	– Ride the vehicle until the KTM PowerPack is depleted to below 50%.
Blink code 73 on battery charger	The KTM PowerPack is not enabled	– Contact an authorized KTM workshop.

23.1 Motor

Design	Permanent magnet synchronous motor with a disc motor design
Primary transmission	1:2.4
Cooling	Water cooling, permanent circulation of coolant by electric water pump
Nominal power	11 kW (15 hp)
Electric peak performance	16 kW (21 hp)
Maximum torque	42 Nm (31 lbf ft)
Maximum motor speed	6,600 rpm

23.2 Motor tightening torques

Coolant drain plug	M6	10 Nm (7.4 lbf ft)
Oil seal plug	M10	8 Nm (5.9 lbf ft)
Oil drain plug with magnet	M12x1.5x12	20 Nm (14.8 lbf ft)

23.3 Capacities**23.3.1 Gear oil**

Gear oil	0.2 l (0.2 qt.)	Gear oil(SAE 80W/90) (☛ p. 121)
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23.3.2 Coolant

Coolant	0.7 l (0.7 qt.)	Coolant (☛ p. 121)
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23.4 Chassis

Frame	Perimeter, steel-aluminum composite frame
Fork	WP Performance Systems 4357 MXMA
Suspension travel	
Front	250 mm (9.84 in)
Rear	280 mm (11.02 in)
Fork offset	20 mm (0.79 in)
Shock absorber	WP Suspension 4618 PDS DCC
Brake system	
Front	Disc brake with radially mounted four-piston brake caliper
Rear	Disc brake with radially mounted dual-piston brake caliper
Brake discs - diameter	
Front	260 mm (10.24 in)
Rear	230 mm (9.06 in)
Brake discs - wear limit	
Front	2.5 mm (0.098 in)
Rear	3.5 mm (0.138 in)
Tire air pressure, offroad	
Front	0.9 bar (13 psi)
Rear	0.7 bar (10 psi)
Tire air pressure, road(Freeride E-XC)	
Front	1.5 bar (22 psi)
Rear	1.5 bar (22 psi)
Secondary ratio	11:48
Chain	5/8 x 1/4" X-ring
Rear sprockets available	46,48
Steering head angle	67°
Wheelbase	1,418±10 mm (55.83±0.39 in)

Ground clearance, unloaded	340 mm (13.39 in)
Seat height, unloaded	910 mm (35.83 in)
Weight with KTM PowerPack approx.(Freeride E-SX)	106 kg (234 lb.)
Homologated weight with KTM PowerPack approx.(Freeride E-XC)	110 kg (243 lb.)
Maximum permissible front axle load	135 kg (298 lb.)
Maximum permissible rear axle load	175 kg (386 lb.)
Maximum permissible overall weight	280 kg (617 lb.)

23.5 Electrical system

12 V battery	70011053000	Battery voltage:12 V Nominal capacity:1.2 Ah Maintenance-free
Speedometer battery(Freeride E-XC)	CR 2032	Battery voltage:3 V
Air-cooled lithium-ion battery (KTM PowerPack)	70045153100	End of charging voltage:300 V Voltage (nominal):260 V Capacity:2.6 kWh Weight:28.5 kg (62.8 lb.) Approx. charging time in charging mode Fast , 0% to 80%:50 min Approx. charging time in charging mode Fast , 0% to 100%:80 min Approx. charging time in charging mode Normal , 0% to 80%:60 min Approx. charging time in charging mode Normal , 0% to 100%:90 min Maintenance-free
Battery charger for KTM PowerPack	70029074000	Nominal voltage:230 V Grid frequency:50 Hz Power:3,000 W
Fuse	58011109110	10 A
Fuse	58011109120	20 A
Headlight(Freeride E-XC)	S2/socket BA20d	12 V 35/35 W
Parking light(Freeride E-XC)	W5W/socket W2.1x9.5d	12 V 5 W
Indicator lamps(Freeride E-XC)	W2.3W/socket W2x4.6d	12 V 2.3 W
Turn signal(Freeride E-XC)	R10W/socket BA15s	12 V 10 W
Brake/tail light(Freeride E-XC)	LED	
License plate lamp(Freeride E-XC)	W5W/socket W2.1x9.5d	12 V 5 W

23.6 Tires

Front tires	Rear tires
2.75 - 21 M/C 45M TT MAXXISTRIALMAXX	120/90 - 18 M/C 65R TT MAXXISMAXX ENDURO
Additional information is available in the Service section under: http://www.ktm.com	

23.7 Fork

Fork part number	05.18.7N.41	
Fork	WP Performance Systems 4357 MXMA	
Compression damping		
Comfort	20 clicks	
Standard	15 clicks	
Sport	10 clicks	
Rebound damping		
Comfort	20 clicks	
Standard	15 clicks	
Sport	10 clicks	
Spring length with preload spacer(s)		
Weight of rider:65... 75 kg (143... 165 lb.)	443 mm (17.44 in)	
Weight of rider:75... 85 kg (165... 187 lb.)	443 mm (17.44 in)	
Weight of rider:85... 95 kg (187... 209 lb.)	443 mm (17.44 in)	
Spring rate		
Weight of rider:65... 75 kg (143... 165 lb.)	4.4 N/mm (25.1 lb/in)	
Weight of rider:75... 85 kg (165... 187 lb.)	4.6 N/mm (26.3 lb/in)	
Weight of rider:85... 95 kg (187... 209 lb.)	4.8 N/mm (27.4 lb/in)	
Fork length	835 mm (32.87 in)	
Air chamber length	100 \pm ³⁰ / ₂₀ mm (3.94 \pm ^{1.18} / _{0.79} in)	
Fork oil per fork leg	390 ml (13.19 fl. oz.)	Fork oil(SAE 4)(48601166S1) (☛ p. 121)

23.8 Shock absorber

Shock absorber part number	15.18.7N.41	
Shock absorber	WP Suspension 4618 PDS DCC	
Compression damping, low-speed		
Comfort	20 clicks	
Standard	15 clicks	
Sport	10 clicks	
Compression damping, high-speed		
Comfort	2 turns	
Standard	1 turn	
Sport	1 turn	
Rebound damping		
Comfort	20 clicks	
Standard	15 clicks	
Sport	10 clicks	
Spring preload		
Comfort	9 mm (0.35 in)	
Standard	7 mm (0.28 in)	
Sport	9 mm (0.35 in)	
Spring designation		
Weight of rider:65... 75 kg (143... 165 lb.)	62 N/mm (354 lb/in)	
Weight of rider:75... 85 kg (165... 187 lb.)	63 \pm ⁸ N/mm (360 \pm ⁴⁶ lb/in)	
Weight of rider:85... 95 kg (187... 209 lb.)	70 N/mm (400 lb/in)	
Spring length	215 mm (8.46 in)	
Gas pressure	10 bar (145 psi)	
Static sag	20 mm (0.79 in)	
Riding sag	100 mm (3.94 in)	
Fitted length	367 mm (14.45 in)	

Shock absorber oil	Shock absorber fluid(SAE 2.5)(50180751S1) (☛ p. 121)
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23.9 Chassis tightening torques

Spoke nipple	M4.5	5 Nm (3.7 lbf ft)	–
Screw, shock absorber adjusting ring	M5	5 Nm (3.7 lbf ft)	–
Screws, throttle grip	M5	3 Nm (2.2 lbf ft)	–
KTM PowerPack attachment	M6	10 Nm (7.4 lbf ft)	–
Remaining nuts, chassis	M6	10 Nm (7.4 lbf ft)	–
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)	–
Screw, front brake disc	M6	14 Nm (10.3 lbf ft)	Loctite® 243™
Screw, radiator bracket	M6	7 Nm (5.2 lbf ft)	–
Screw, rear brake disc	M6	14 Nm (10.3 lbf ft)	Loctite® 243™
KTM PowerPack attachment	M8	15 Nm (11.1 lbf ft)	Loctite® 243™
Nut, rear sprocket screw	M8	35 Nm (25.8 lbf ft)	Loctite® 2701™
Nut, rim lock	M8	10 Nm (7.4 lbf ft)	–
Remaining nuts, chassis	M8	25 Nm (18.4 lbf ft)	–
Remaining screws, chassis	M8	25 Nm (18.4 lbf ft)	–
Screw of rear brake caliper	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
Screw, bottom triple clamp	M8	18 Nm (13.3 lbf ft)	–
Screw, chain sliding piece	M8	15 Nm (11.1 lbf ft)	–
Screw, fork stub	M8	15 Nm (11.1 lbf ft)	–
Screw, front brake caliper	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
Screw, handlebar clamp	M8	20 Nm (14.8 lbf ft)	–
Screw, side stand attachment	M8	25 Nm (18.4 lbf ft)	Loctite® 2701™
Screw, subframe	M8	30 Nm (22.1 lbf ft)	Loctite® 243™
Screw, top steering stem	M8	17 Nm (12.5 lbf ft)	Loctite® 243™
Screw, top triple clamp	M8	22 Nm (16.2 lbf ft)	–
Motor bracket screw	M10	60 Nm (44.3 lbf ft)	–
Remaining nuts, chassis	M10	45 Nm (33.2 lbf ft)	–
Remaining screws, chassis	M10	45 Nm (33.2 lbf ft)	–
Screw, cross bar	M10	45 Nm (33.2 lbf ft)	–
Screw, footrest bracket	M10	45 Nm (33.2 lbf ft)	Loctite® 243™
Screw, handlebar support	M10	40 Nm (29.5 lbf ft)	Loctite® 243™
Screw, motor guard	M10	30 Nm (22.1 lbf ft)	–
Screw, upper subframe	M10	45 Nm (33.2 lbf ft)	Loctite® 243™
Screw, bottom shock absorber	M12	80 Nm (59 lbf ft)	Loctite® 2701™
Screw, top shock absorber	M12	80 Nm (59 lbf ft)	Loctite® 2701™
Nut, swingarm pivot	M14x1.5	75 Nm (55.3 lbf ft)	–
Nut, rear wheel spindle	M20x1.5	80 Nm (59 lbf ft)	–
Screw, front wheel spindle	M20x1.5	35 Nm (25.8 lbf ft)	–
Screw, top steering head	M20x1.5	12 Nm (8.9 lbf ft)	–

Brake fluid DOT 4 / DOT 5.1

Standard/classification

- DOT

Guideline

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

Recommended supplier

Castrol

- **RESPONSE BRAKE FLUID SUPER DOT 4**

Motorex®

- **Brake Fluid DOT 5.1**

Coolant

Guideline

- Only use high quality coolant with corrosion inhibitor for aluminum motors (even in countries with high temperatures). Using inferior antifreeze can result in corrosion and foaming.

Mixture ratio

Antifreeze protection: -25... -45 °C (-13... -49 °F)	anti-corrosion/antifreeze distilled water
--	---

Recommended supplier

Motorex®

- **COOLANT M3.0**

Fork oil(SAE 4)(48601166S1)

Standard/classification

- SAE (☛ p. 123)(SAE 4)

Guideline

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

Gear oil(SAE 80W/90)

Standard/classification

- SAE (☛ p. 123)(SAE 80W/90)

Guideline

- Use only gear oils that comply with the specified standards (see specifications on the container) and that exhibit the required properties.

Semi-synthetic gear oil

Recommended supplier

Motorex®

- **Gear Oil**

Shock absorber fluid(SAE 2.5)(50180751S1)

Standard/classification

- SAE (☛ p. 123)(SAE 2.5)

Guideline

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

Chain cleaner

Recommended supplier

Motorex®

- Chain Clean

Grip adhesive(00062030051)

Recommended supplier

KTM AG

- GRIP GLUE

High viscosity grease

Recommended supplier

SKF®

- LGHB 2

Long-life grease

Recommended supplier

Motorex®

- Bike Grease 2000

Motorcycle cleaner

Recommended supplier

Motorex®

- Moto Clean

Off-road chain spray

Recommended supplier

Motorex®

- Chainlube Offroad

Preserving materials for paints, metal and rubber

Recommended supplier

Motorex®

- Moto Protect

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

Recommended supplier

Motorex®

- Quick Cleaner

Universal oil spray

Recommended supplier

Motorex®

- Joker 440 Synthetic

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.

MIL	Electric motor control lamp (Malfunction Indicator Lamp)	Error indicator light that allows vehicle diagnostics through blink codes
-----	--	---

Art. no.	Article number
ca.	circa
cf.	compare
e.g.	for example
etc.	et cetera
i.a.	inter alia
no.	number
poss.	possibly



29.1 Yellow and orange symbols

Yellow and orange symbols indicate an error condition that requires prompt intervention. Active driving aids are also represented by yellow or orange symbols.

	Electric motor indicator lamp flashes– A error is present in the vehicle electronic system.
---	---

29.2 Green and blue symbols

Green and blue symbols reflect information.

	The high beam indicator lamp lights up blue– The high beam is switched on.
	Turn signal indicator light flashes green– The turn signal is switched on.

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