OWNER'S MANUAL 2018

READY TO RACE
»www.ktm.com

125 XC-W
150 XC-W

Art. no. 3213643en

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. 14)	Dealer's stamp
Engine number (📖 p. 14)	
Key number (125 XC-W EU) (📖 p. 14)	

The Owner's Manual contained the latest information for this model series at the time of going to print. However, minor differences due to further developments in design cannot be ruled out completely.

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

ISO 9001(12 100 6061)
According to the international quality management standard ISO 9001, KTM uses quality assurance processes that lead to the maximum possible quality of the products.
Issued by: TÜV Management Service

REG.NO. 12 100 6061

KTM Sportmotorcycle GmbH
Stallhofnerstraße 3
5230 Mattighofen, Austria

This document is valid for the following models:

125 XC-W EU (F7103R3)

150 XC-W US (F7175R3)

3213643en

04/2017

TABLE OF CONTENTS

TABLE OF CONTENTS

1 MEANS OF REPRESENTATION

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! Your motorcycle will be optimally cared for there by specially trained experts using the auxiliary 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.
	Indicates the end of an activity including potential reworking.

1.2 Formats used

The typographical formats used in this document are explained below.

Proprietary name	Indicates a proprietary name.
Name®	Indicates a protected name.
Brand™	Indicates a brand available on the open market.
Underlined terms	Refer to technical details of the vehicle or indicate technical terms, which are explained in the glossary.

2.1 Use definition – intended use

This vehicle is designed and built to withstand the normal stresses and strains of competitive use. This vehicle complies with the currently valid regulations and categories of the top international motorsport organizations.

Info
This vehicle is not approved for use on public roads.
This vehicle is designed for use in offroad endurance competition, and not primarily for use in motocross.

2.2 Misuse

The vehicle must only be used as intended.
Dangers can arise for people, property and the environment through use not as intended.
Any use of the vehicle beyond the intended and defined use constitutes misuse.
Misuse also includes the use of operating and auxiliary fluids which do not meet the required specification for the respective use.

2.3 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.

2.4 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.

2.5 Tampering warning

Tampering with the noise control system is prohibited. Federal law prohibits the following acts or the causing thereof:

1 The removal or rendering inoperative by any person other than for purposes of maintenance, repair, or replacement, of any device or element of design incorporated into any new vehicle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use, or
2 the use of the vehicle after such device or element of design has been removed or rendered inoperative by any person.

Among those acts presumed to constitute tampering are the acts listed below:

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

2.6 Safe operation

Danger

Danger of accidents A rider who is not fit to ride poses a danger to him or herself and others.

– Do not operate the vehicle if you are not fit to ride due to alcohol, drugs or medication.
– Do not operate the vehicle if you are physically or mentally impaired.

Danger

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

– Always make sure there is sufficient ventilation when running the engine.
– Use an effective exhaust extraction system when starting or running the engine in an enclosed space.

Warning

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

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

Only operate the vehicle when it is in perfect technical condition, in accordance with its intended use, and in a safe and environmentally compatible manner.
The vehicle should only be used by trained persons. An appropriate driver's license is needed to ride the vehicle on public roads.
Have malfunctions that impair safety promptly eliminated by an authorized KTM workshop.
Adhere to the information and warning labels on the vehicle.

2.7 Protective clothing

Warning

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

– Wear appropriate protective clothing such as helmet, boots, gloves as well as trousers and a jacket with protectors on all rides.
– Always wear protective clothing that is in good condition and meets the legal regulations.

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

2.8 Work rules

Special tools are necessary for certain tasks. The tools are not a component of the vehicle, but can be ordered using the number in parentheses. Example: bearing puller (15112017000)
During assembly, use new parts to replace parts which cannot be reused (e.g. self-locking screws and nuts, seals, sealing rings, O-rings, pins, and lock washers).
In the case of certain screws, a thread locker (e.g. **Loctite®**) is required. Apply according to the manufacturer's instructions.
After disassembly, clean the parts that are to be reused and check them for damage and wear. Change damaged or worn parts.
After completing a repair or service work, check the operating safety of the vehicle.

2.9 Environment

If you use your motorcycle responsibly, you can ensure that problems and conflicts do not occur. To protect the future of the motorcycle sport, make sure that you use your motorcycle legally, display environmental consciousness, and respect the rights of others.
When disposing of used oil, other operating and auxiliary fluids, and used components, comply with the laws and regulations of the respective country.
Because motorcycles are not subject to the EU regulations governing the disposal of used vehicles, there are no legal regulations that pertain to the disposal of an end-of-life motorcycle. Your authorized KTM dealer will be glad to advise you.

2.10 Owner's Manual

It is important that you read this Owner's Manual carefully and completely before making your first trip. The Owner's Manual contains useful information and many tips on how to operate, handle, and maintain your motorcycle. Only then will you find out how to customize the vehicle ideally for your own use and how you can protect yourself from injury.
Keep the Owner's Manual in an accessible place to enable you to refer to it as needed.
If you would like to know more about the vehicle or have questions on the material you read, please contact an authorized KTM dealer.
The Owner's Manual is an important component of the vehicle and must be handed over to the new owner if the vehicle is sold.

3 IMPORTANT NOTES

3.1 Manufacturer and implied 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. Damage or secondary damage caused by tampering with and/or conversions on the vehicle are not covered by the warranty.
Additional information on the manufacturer or implied warranty and the procedures involved can be found in the Service & Warranty Booklet.

3.2 Operating and auxiliary substances

Warning
Environmental hazard Improper handling of fuel is a danger to the environment.
– Do not allow fuel to enter the groundwater, the soil, or the sewage system.

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

3.3 Spare parts, accessories

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

The current **KTM PowerParts** for your vehicle can be found on the KTM website.
International KTM Website: http://www.ktm.com

3.4 Service

A prerequisite for perfect operation and prevention of premature wear is that the service, care, and tuning work on the engine and chassis is properly carried out as described in the Owner's Manual. Incorrect adjustment and tuning of the engine and chassis can lead to damage and breakage of components.
Use of the vehicle under difficult conditions, such as on sand or on wet and muddy surfaces, can lead to considerably more rapid wear of components such as the drive train, brake system, or suspension components. For this reason, it may be necessary to inspect or replace parts before the next scheduled service.
It is imperative that you adhere to the stipulated run-in times and service intervals. If you observe these exactly, you will ensure a much longer service life for your motorcycle.

3.5 Figures

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

3.6 Customer service

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

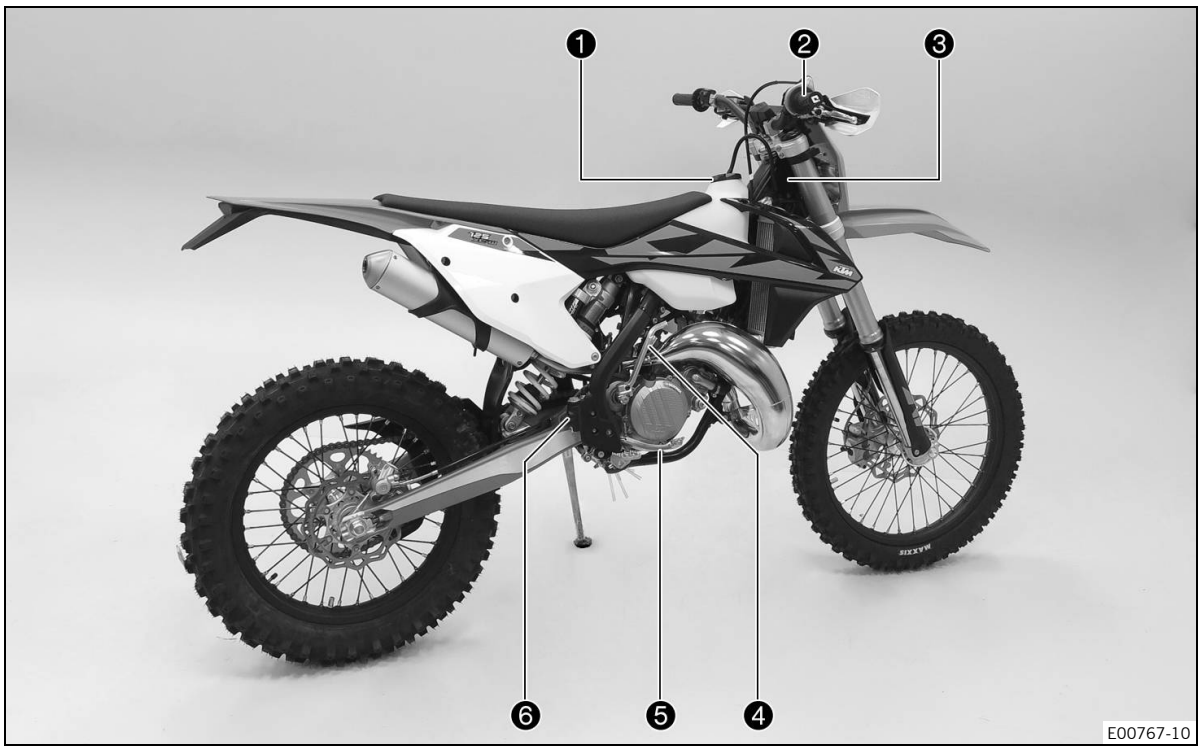
A list of authorized KTM dealers can be found on the KTM website.
International KTM Website: http://www.ktm.com

4 VIEW OF VEHICLE

4.1 View of vehicle, front left (example)

1. Hand brake lever (p. 16)
2. Light switch (p. 17) **(125 XC-W EU)**
2. Kill switch (p. 16) **(125 XC-W EU)**
2. Horn button (p. 17) **(125 XC-W EU)**
3. Clutch lever (p. 16)
4. Chain guide
5. Air filter box cover
6. Side stand (p. 21)
7. Shift lever (p. 20)
8. Fuel tap (p. 19)

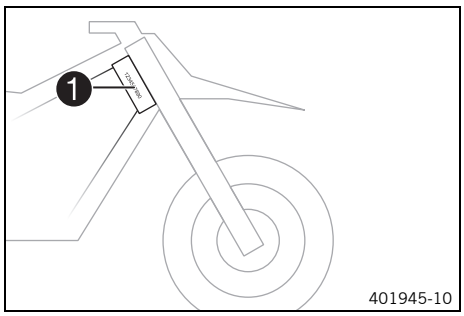
4.2 View of vehicle, rear right (example)



1. Filler cap
2. Throttle grip (📖 p. 16)
3. Chassis number (📖 p. 14)
4. Kick starter (📖 p. 20)
5. Foot brake lever (📖 p. 21)
6. Level viewer for brake fluid, rear

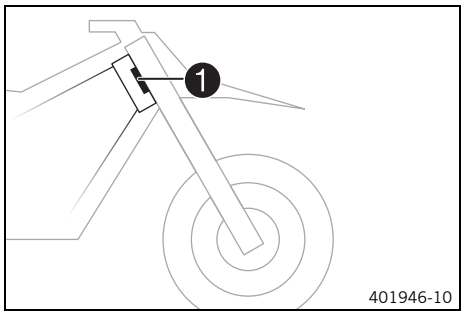
5 SERIAL NUMBERS

5.1 Chassis number



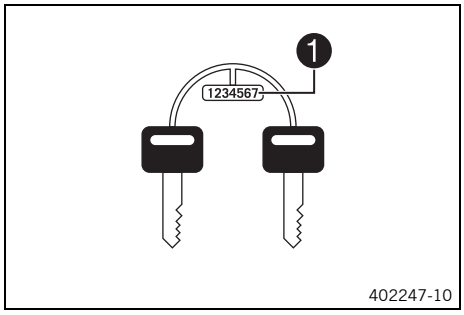
The chassis number ❶ is stamped on the right side of the steering head.

5.2 Type label



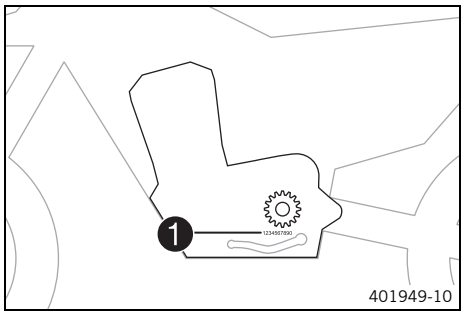
Type label ❶ is fixed to the front of the steering head.

5.3 Key number (125 XC-W EU)



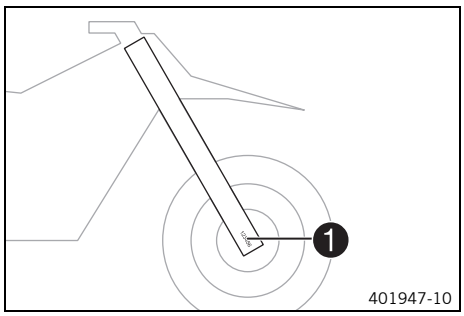
The key number ❶ for the steering lock is stamped onto the key connector.

5.4 Engine number



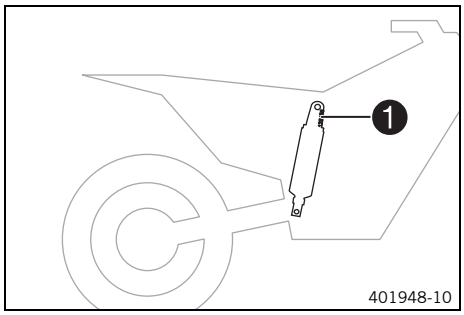
The engine number ❶ is located on the left side of the engine under the engine sprocket.

5.5 Fork part number



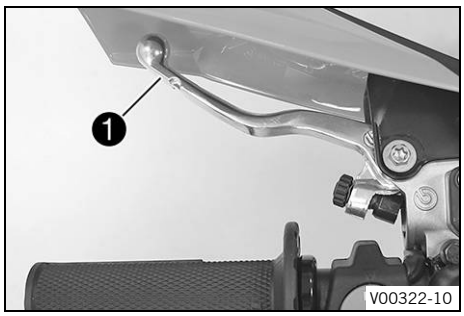
The fork part number ❶ is stamped on the inside of the axle clamp.

5.6 Shock absorber article number



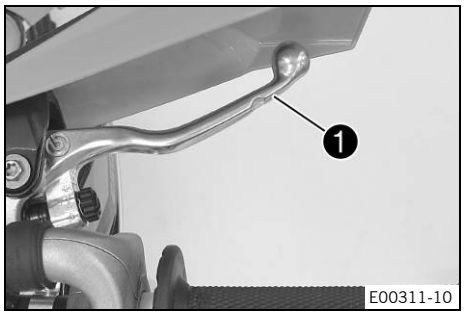
Shock absorber article number ❶ is stamped on the top of the shock absorber above the adjusting ring towards the engine side.

6.1 Clutch lever



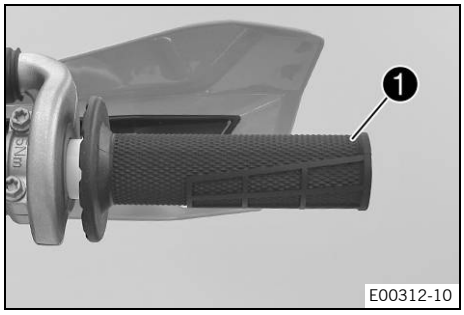
Clutch lever ❶ is fitted on the handlebar on the left.
The clutch is activated hydraulically and adjusts itself automatically.

6.2 Hand brake lever



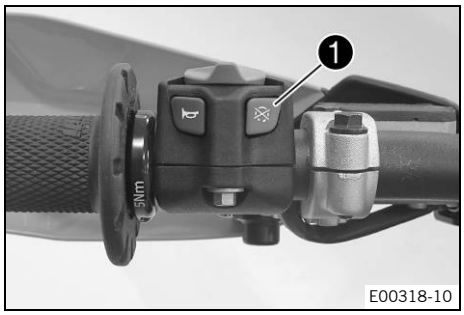
Hand brake lever ❶ is fitted on the right side of the handlebar.
The front brake is engaged using the hand brake lever.

6.3 Throttle grip



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

6.4 Kill switch (125 XC-W EU)

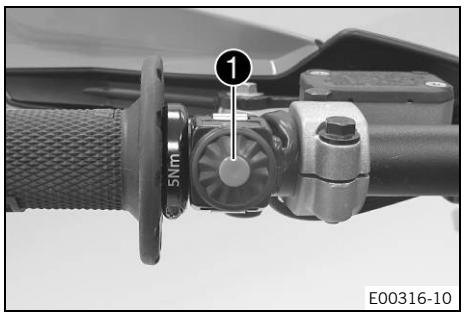


The kill switch ❶ is fitted on the left side of the handlebar.

Possible states

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

6.5 Kill switch (150 XC-W US)



The kill switch ❶ is fitted on the left side of the handlebar.

Possible states

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

6.6 Horn button (125 XC-W EU)

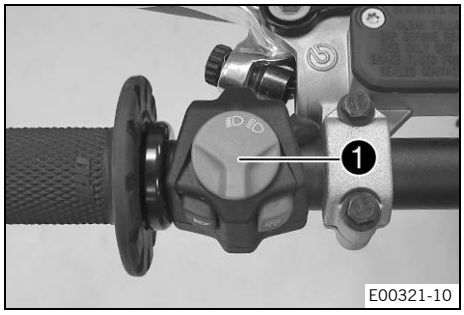
The horn button ❶ is fitted on the left side of the handlebar.

Info
The horn button has no function when the vehicle is delivered.

Possible states

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

6.7 Light switch (125 XC-W EU)



Light switch ❶ 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.

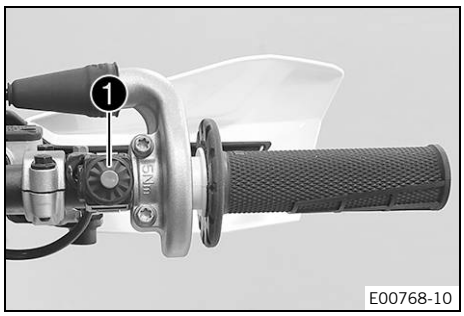
6.8 Light switch (150 XC-W US)

The light switch ❶ is located to the left of the combination instrument.

Possible states

- Light off – Light switch is pressed in up to the stop. In this position, the light is switched off.
- Light on – Light switch is pulled out to the stop. In this position, the low beam and tail light are switched on.

6.9 Electric starter button (150 XC-W US)

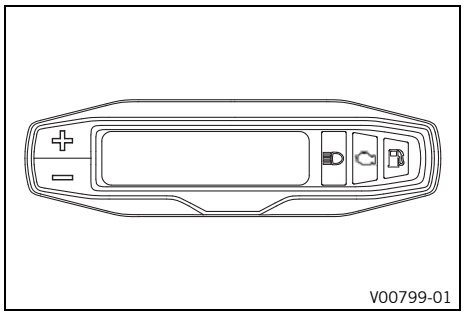


The electric starter button ❶ is fitted on the right side of the handlebar.

Possible states

- Electric starter button ⓢ in basic position
- Electric starter button ⓢ pressed – In this position, the electric starter is actuated.

6.10 Indicator lamps overview



Possible states

	High beam indicator lamp – inoperative
	Malfunction indicator lamp – inoperative
	Fuel level warning lamp – inoperative

6.11 Opening the filler cap

Danger

Fire hazard Fuel is highly flammable.

The fuel in the fuel tank expands when warm and can escape if overfilled.

– Do not refuel the vehicle in the vicinity of open flames or lit cigarettes.
– Switch off the engine for refueling.
– Make sure that no fuel is spilled; particularly not on hot parts of the vehicle.
– If any fuel is spilled, wipe it off immediately.
– Observe the specifications for refueling.

Warning

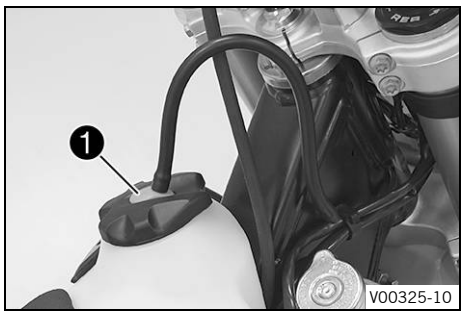
Danger of poisoning Fuel is poisonous and a health hazard.

– Avoid skin, eye and clothing contact with fuel.
– Immediately consult a doctor if you swallow fuel.
– Do not inhale fuel vapors.
– In case of skin contact, rinse the affected area with plenty of water.
– Rinse the eyes thoroughly with water, and consult a doctor in case of fuel contact with the eyes.
– Change your clothing in case of fuel spills on them.
– Keep fuels correctly in a suitable canister, and out of the reach of children.

Warning

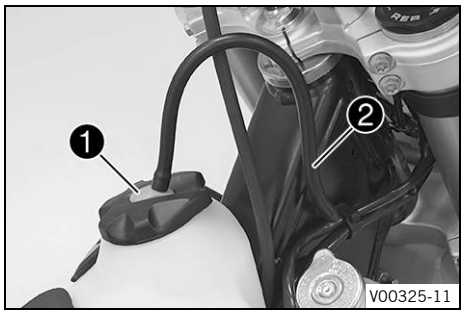
Environmental hazard Improper handling of fuel is a danger to the environment.

– Do not allow fuel to enter the groundwater, the soil, or the sewage system.



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

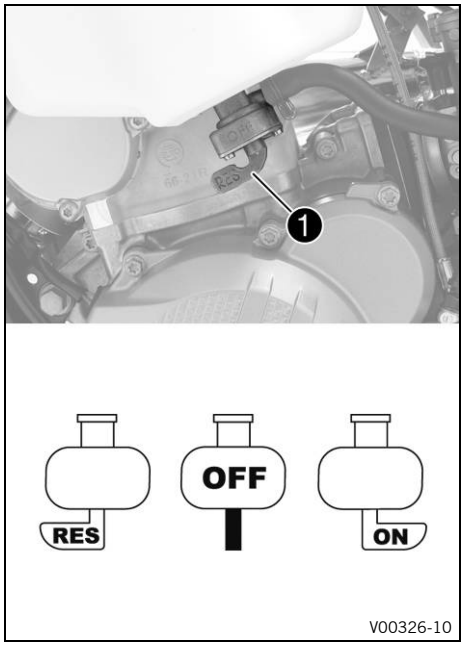
6.12 Closing the filler cap



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

Info
Run the fuel tank breather hose ❷ without kinks.

6.13 Fuel tap

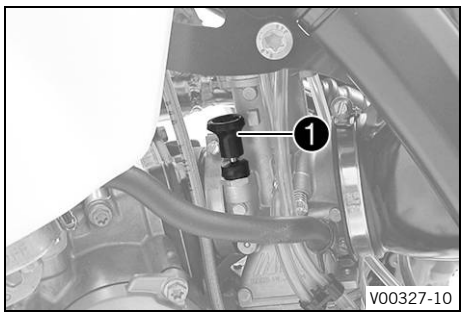


The fuel tap is on the left side of the fuel tank.
Open or close the supply of fuel to the carburetor using tap handle ❶ on the fuel tap.

Possible states

- Fuel supply closed **OFF** – Fuel cannot flow from the fuel tank to the carburetor.
- Fuel supply open **ON** – Fuel can flow from the fuel tank to the carburetor. The fuel tank empties down to the reserve level.
- Fuel reserve supply open **RES** – Fuel can flow from the fuel tank to the carburetor. The fuel tank empties completely.

6.14 Choke

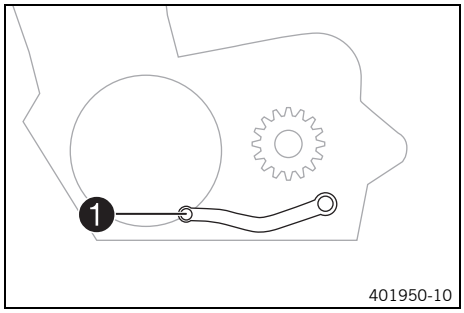


Choke ❶ is fitted on the left side of the carburetor.
Activating the choke function frees a drill hole in the carburetor through which the engine can draw extra fuel. This results in a richer fuel-air mixture, which is needed for a cold start.

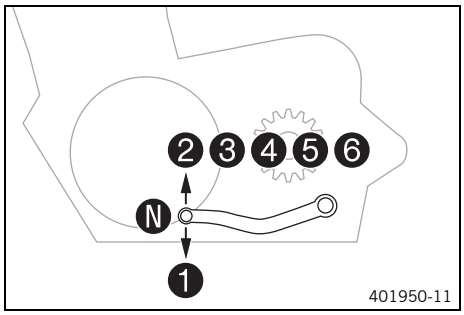
Info
If the engine is warm, the choke function must be deactivated.

Possible states
- Choke function activated – The choke lever is pulled out to the stop.
- Choke function deactivated – The choke lever is pushed in to the stop.

6.15 Shift lever

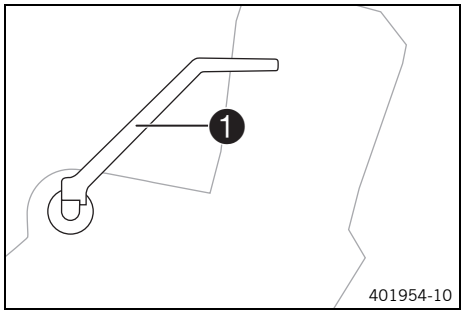


Shift lever ❶ is mounted on the left side of the engine.



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

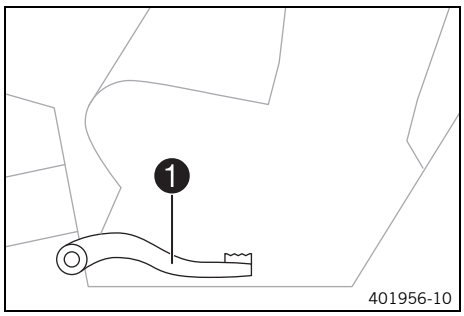
6.16 Kick starter



Kick starter ❶ is fitted on the right side of the engine.
The top part of the kick starter pivots.

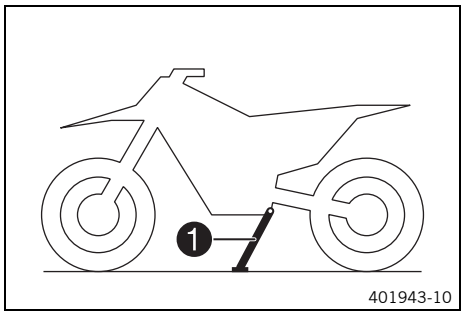
Info
Before riding, swing the top part of the kick starter inward toward the engine.

6.17 Foot brake lever

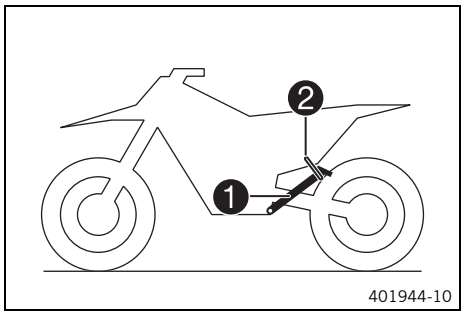


Foot brake lever ❶ is located in front of the right footrest.
The foot brake lever is used to activate the rear brake.

6.18 Side stand



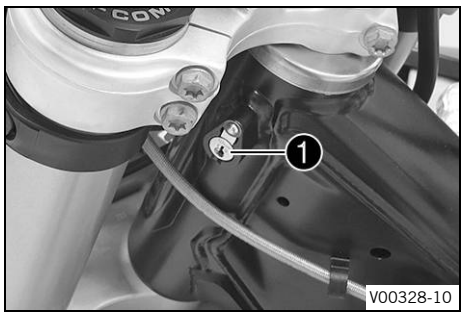
Side stand ❶ is located on the left side of the vehicle.



The side stand is used for parking the motorcycle.

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

6.19 Steering lock (125 XC-W EU)



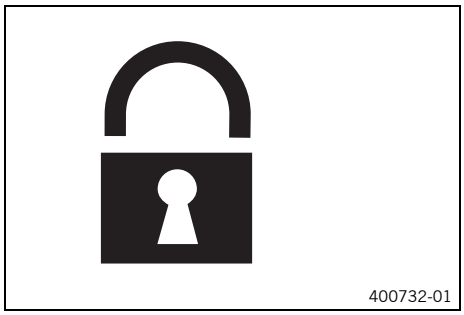
Steering lock ❶ is fitted on the left side of the steering head.
The steering lock is used to lock the steering. Steering, and therefore riding, is no longer possible.

6.20 Locking the steering (125 XC-W EU)

Note

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

– Park the vehicle on a firm and level surface.

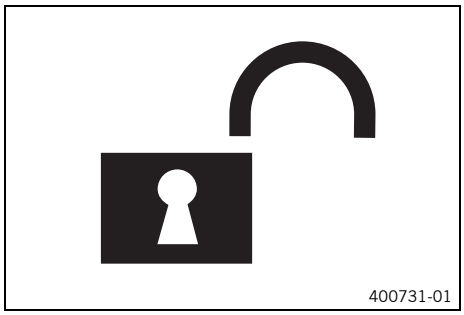


– Park the vehicle.
– Turn the handlebar as far as possible to the right.
– Insert the key in the steering lock, turn it to the left, press it in and turn it to the right. Remove the key.

✔ Steering is no longer possible.

Info
Never leave the key in the steering lock.

6.21 Unlocking the steering (125 XC-W EU)

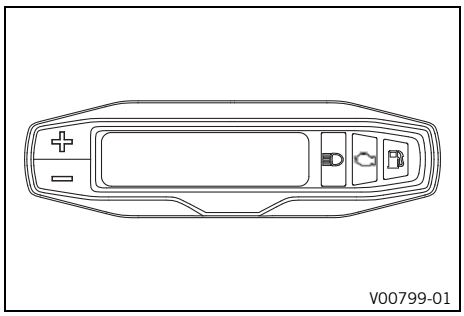


– Insert the key in the steering lock, turn it to the left, pull it out and turn it to the right. Remove the key.

✔ You can now steer the bike again.

Info
Never leave the key in the steering lock.

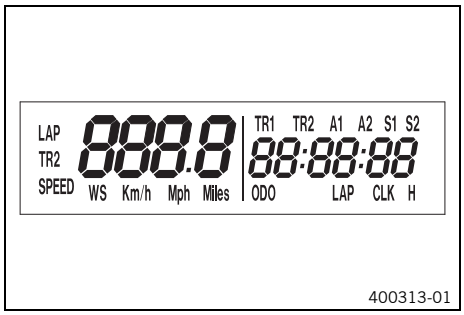
7.1 Combination instrument overview



– Press the button + to control different functions.
– Press the button − to control different functions.

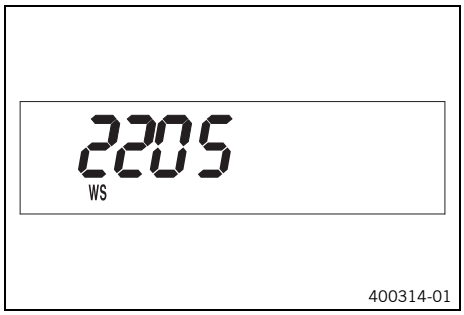
Info
When the vehicle is delivered, only the **SPEED/H** and **SPEED/ODO** display modes are activated.

7.2 Activation and test



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

Display test
To enable you to check that the display is functioning properly, all display segments light up briefly.



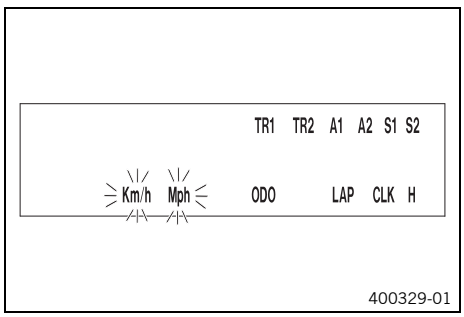
WS (wheel size)
After the display function check, the wheel circumference **WS** is displayed briefly.

Info
The number 2205 equals the circumference of the 21" front wheel with standard tires.

The display then changes to the last selected mode.

7.3 Setting the kilometers or miles

Info
If you change the unit, the value **ODO** is retained and converted accordingly.
The values **TR1**, **TR2**, **A1**, **A2** and **S1** are cleared when the unit of measure is changed.



Condition
The motorcycle is stationary.

– Repeatedly press the button + briefly until **H** appears at the bottom right of the display.
– Press the button + for 2–3 seconds.
  ✓ The Setup menu is displayed and the active functions are shown.
– Repeatedly press the button + briefly until **Km/h**/**Mph** flashes.

Setting the Km/h
– Press the button +.

Setting the Mph

– Press the button −.

– Wait 3 - 5 seconds.

✔ The settings are stored.

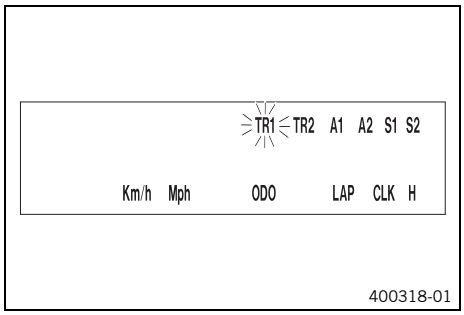
Info

If no button is pressed for 10 -12 seconds, or if an impulse comes from the wheel speed sensor, the settings are automatically saved and the setup menu is closed.

7.4 Adjusting the combination instrument function

Info

When the vehicle is delivered, only the **SPEED/H** and **SPEED/ODO** display modes are activated.



Condition

The motorcycle is stationary.

– Repeatedly press the button + briefly until **H** appears at the bottom right of the display.

– Press the button + for 2–3 seconds.

✔ The Setup menu is displayed and the active functions are shown.

Info

If no button is pressed for 10–12 seconds, the settings are automatically saved.
If no button is pressed for 20 seconds, or if an impulse comes from the wheel speed sensor, the settings are automatically saved and the setup menu is closed.

– Repeatedly press the button + briefly until the desired function flashes.

✔ The selected function flashes.

Activating the function

– Press the button +.

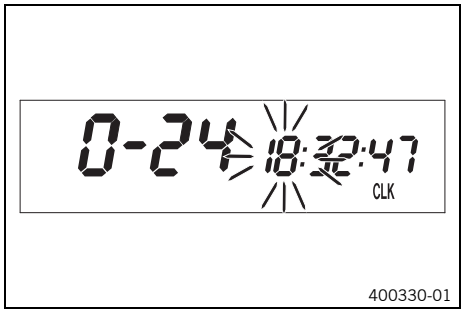
✔ The symbol continues to appear in the display and the next function appears.

Deactivating a function

– Press the button −.

✔ The symbol disappears in the display and the next function appears.

7.5 Setting the clock



400330-01

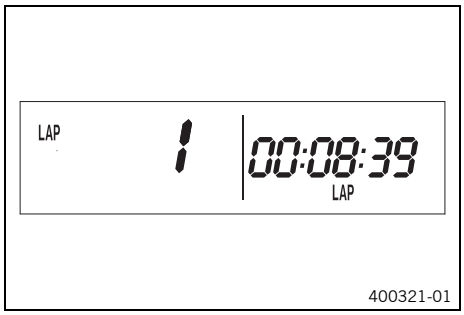
Condition
The motorcycle is stationary.

– Repeatedly press the button + briefly until **CLK** appears at the bottom right of the display.
– Press the button + for 2–3 seconds.
  ✓ The hour display flashes.
– Set the hour display with the button + and/or button −.
– Wait 3 - 5 seconds.
  ✓ The next segment of the display flashes and can be set.
– You can set the following segments in the same way as the hours by pressing the button + and the button −.

Info
The seconds can only be set to zero.
If no button is pressed for 15 - 20 seconds, or if an impulse comes from the wheel speed sensor, the settings are automatically saved and the setup menu is closed.

7.6 Viewing the lap time

Info
This function can only be opened if lap times have actually been timed.



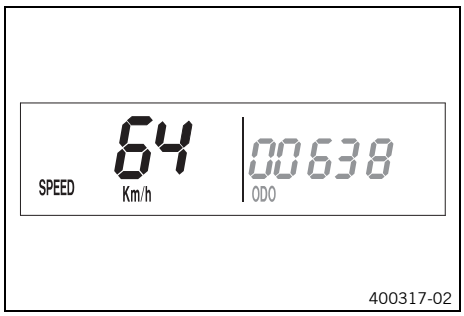
400321-01

Condition
The motorcycle is stationary.

– Repeatedly press the button + briefly until **LAP** appears at the bottom right of the display.
– Briefly press the button +.
  ✓ **LAP 1** appears on the left side of the display.
– The laps 1–10 can be viewed with the button −.
– Press and hold the button + for 3-5 seconds.
  ✓ The lap times are deleted.
– Briefly press the button +.
  ✓ Next display mode

Info
When an impulse is received from the wheel speed sensor, the left side of the display changes back to the **SPEED** mode.

7.7 Display mode SPEED (speed)



– Repeatedly press the button + briefly until **SPEED** appears on the left side of the display.

The current speed is displayed in the **SPEED** display mode.
The current speed can be displayed in **Km/h** or **Mph**.

Info
Make the setting according to the country.
When an impulse comes from the front wheel, the left side of the combination instrument display changes to the **SPEED** mode and the current speed is shown.

7.8 Display mode SPEED/H (operating hours)

Condition

- The motorcycle is stationary.

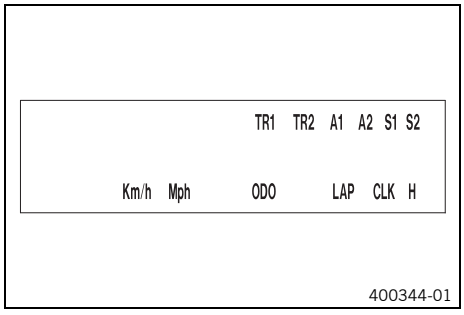
– Repeatedly press the button + briefly until **H** appears at the bottom right of the display.

In display mode **H**, the service hours of the engine are displayed.
The service hour counter stores the total traveling time.

Info
The service hour counter is necessary for ensuring that service work is carried out at the right intervals.
If the combination instrument is in **H**display mode when starting off, it automatically changes to the **ODO** display mode.
The **H** display mode is suppressed during the journey.

Press the button + for 2–3 seconds.	The display changes to the setup menu for the combination instrument functions.
Briefly press the button +.	Next display mode
Press the button − for 2–3 seconds.	No function
Briefly press the button −.	No function

7.9 Setup menu



Condition

- The motorcycle is stationary.

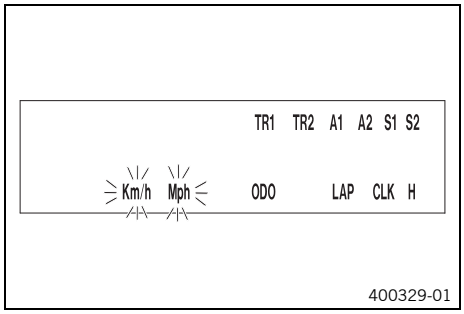
– Repeatedly press the button + briefly until **H** appears at the bottom right of the display.
– Press the button + for 2–3 seconds.

The Setup menu displays the active functions.

Info
Repeatedly press the button + briefly until the desired function is reached.
If no button is pressed for 20 seconds, the settings are automatically saved.

Briefly press the button +.	Activates the flashing display and changes to the next display
Press the button + for 2–3 seconds.	No function
Briefly press the button −.	Deactivates the flashing display and changes to the next display
Press the button − for 2–3 seconds.	No function
Wait 3 - 5 seconds.	Changes to the next display without changes
Wait 10 - 12 seconds.	Setup menu starts, stores the settings, and changes to **H** or **ODO**.

7.10 Setting the unit of measurement



Condition
- The motorcycle is stationary.

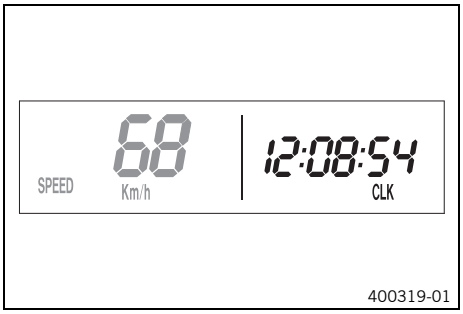
– Repeatedly press the button + briefly until **H** appears at the bottom right of the display.
– Press the button + for 2–3 seconds.
– Repeatedly press the button + briefly until **Km/h**/**Mph** flashes.

In measurement unit mode, you can change the unit of measurement.

Info
If no button is pressed for 5 seconds, the settings are automatically saved.

Briefly press the button +.	Starts selection, activates **Km/h** display
Press the button + for 2–3 seconds.	No function
Briefly press the button −.	Activates **Mph** display
Press the button − for 2–3 seconds.	No function
Wait 3 - 5 seconds.	Changes to the next display, changes from selection to the Setup menu
Wait 10 - 12 seconds.	Stores and closes the Setup menu

7.11 Display mode SPEED/CLK (time)

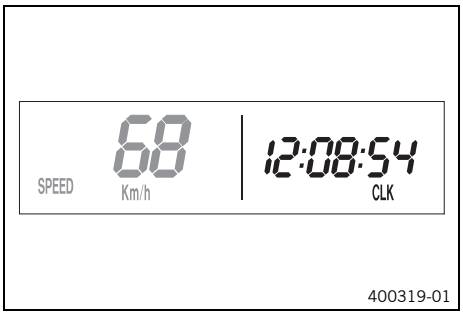


– Repeatedly press the button + briefly until **CLK** appears at the bottom right of the display.

The time is shown in display mode **CLK**.

Press the button + for 2–3 seconds.	The display changes to the Setup menu of the clock.
Briefly press the button +.	Next display mode
Press the button – for 2–3 seconds.	No function
Briefly press the button –.	No function

7.12 Setting the clock



Condition

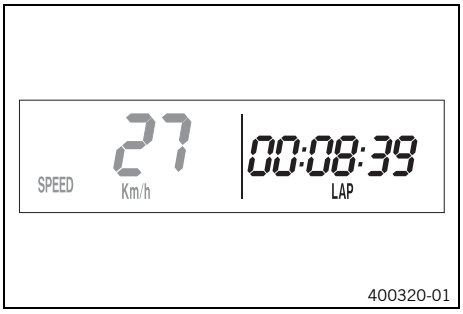
- The motorcycle is stationary.

– Repeatedly press the button + briefly until **CLK** appears at the bottom right of the display.

– Press the button + for 2–3 seconds.

Press the button + for 2–3 seconds.	Increases the value
Briefly press the button +.	Increases the value
Press the button – for 2–3 seconds.	Reduces the value
Briefly press the button –.	Reduces the value
Wait 3 - 5 seconds.	Changes to the next value
Wait 10 - 12 seconds.	Closes the SETUP menu

7.13 Display mode SPEED/LAP (lap time)



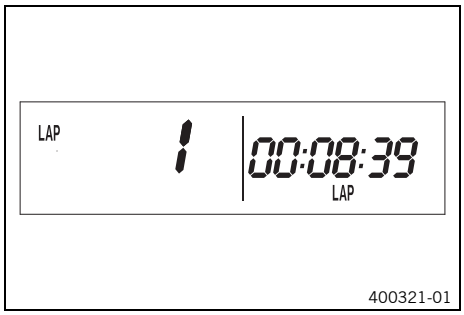
– Repeatedly press the button + briefly until **LAP** appears at the bottom right of the display.

In the **LAP** display mode, up to 10 lap times can be timed with the stop watch.

Info
If the lap time continues running after the button – is pressed, 9 memory locations are occupied.
Lap 10 must be timed using the button +.

Press the button + for 2–3 seconds.	The stop watch and the lap time are reset.
Briefly press the button +.	Next display mode
Press the button − for 2–3 seconds.	Stops the clock.
Briefly press the button −.	Starts the stop watch or stop the current lap time measurement, stores it and the stop watch starts the next lap.

7.14 Viewing the lap time



Condition

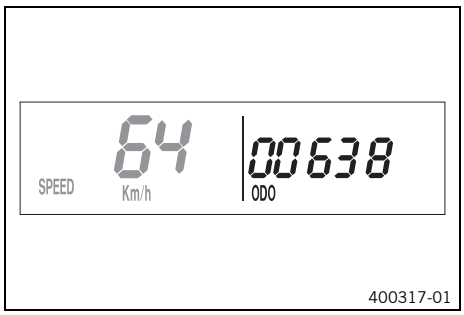
- The motorcycle is stationary.

– Repeatedly press the button + briefly until **LAP** appears at the bottom right of the display.

– Briefly press the button +.

Press the button + for 2–3 seconds.	The stop watch and the lap time are reset.
Briefly press the button +.	Select a lap from 1–10
Press the button − for 2–3 seconds.	No function
Briefly press the button −.	View the next lap time.

7.15 Display mode SPEED/ODO (odometer)

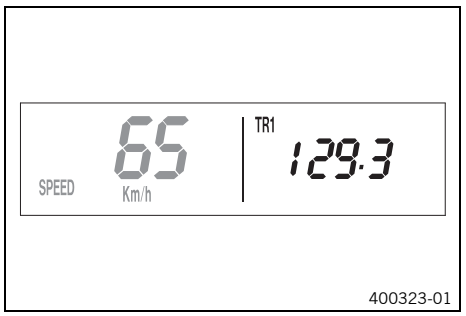


– Repeatedly press the button + briefly until **ODO** appears at the bottom right of the display.

The total traveled distance is shown in display mode **ODO**.

Press the button + for 2–3 seconds.	No function
Briefly press the button +.	Next display mode
Press the button − for 2–3 seconds.	No function
Briefly press the button −.	No function

7.16 Display mode SPEED/TR1 (trip master 1)



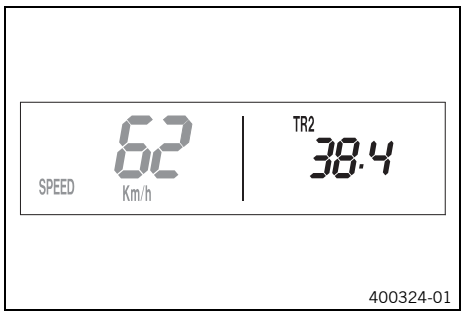
– Repeatedly press the button + briefly until **TR1** appears at the top right of the display.

TR1 (trip master 1) runs constantly and counts up to 999.9.
You can use it to measure trips or the distance between refueling stops.
TR1 is coupled with **A1** (average speed 1) and **S1** (stop watch 1).

Info
If 999.9 is exceeded, the values of **TR1**, **A1** and **S1** are automatically reset to 0.0.

Press the button + for 2–3 seconds.	Displays of **TR1**, **A1** and **S1** are reset to 0,0.
Briefly press the button +.	Next display mode
Press the button − for 2–3 seconds.	No function
Briefly press the button −.	No function

7.17 Display mode SPEED/TR2 (trip master 2)

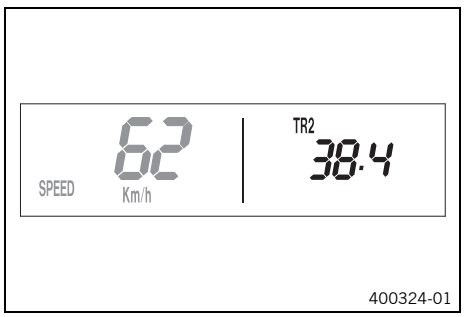


– Repeatedly press the button + briefly until **TR2** appears at the top right of the display.

TR2 (trip master 2) runs constantly and counts up to 999.9.

Press the button + for 2–3 seconds.	Clears the values **TR2** and **A2**.
Briefly press the button +.	Next display mode
Press the button − for 2–3 seconds.	Reduces value of **TR2**.
Briefly press the button −.	Reduces value of **TR2**.

7.18 Setting TR2 (trip master 2)



Condition
- The motorcycle is stationary.

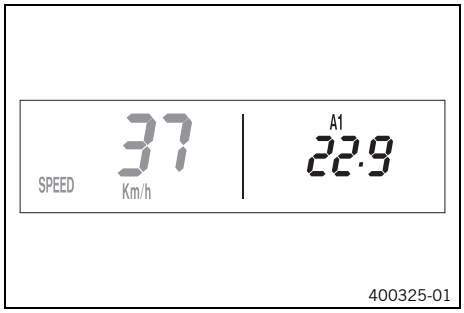
– Repeatedly press the button + briefly until **TR2** appears at the top right of the display.
– Press the button − for 2–3 seconds until **TR2** flashes.

The displayed value can be set manually with the button + and the button −. This is a very practical function when riding using the road book.

Info
The **TR2** value can also be corrected manually during the journey with the button + and the button −.
If 999.9 is exceeded, the value of **TR2** is automatically reset to 0.0.

Press the button + for 2–3 seconds.	Increases value of **TR2**.
Briefly press the button +.	Increases value of **TR2**.
Press the button − for 2–3 seconds.	Reduces value of **TR2**.
Briefly press the button −.	Reduces value of **TR2**.
Wait 10 - 12 seconds.	Stores and closes the Setup menu.

7.19 Display mode SPEED/A1 (average speed 1)

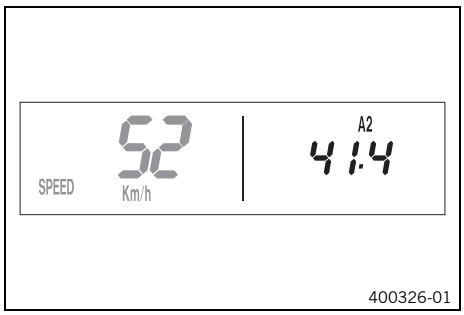


– Repeatedly press the button + briefly until **A1** appears at the top right of the display.

A1 (average speed 1) shows the average speed calculated using **TR1** (trip master 1) and **S1** (stop watch 1).
The calculation of this value is activated by the first impulse of the wheel speed sensor and ends 3 seconds after the last impulse.

Press the button + for 2–3 seconds.	Displays of **TR1**, **A1** and **S1** are reset to 0,0.
Briefly press the button +.	Next display mode
Press the button − for 2–3 seconds.	No function
Briefly press the button −.	No function

7.20 Display mode SPEED/A2 (average speed 2)



– Repeatedly press the button + briefly until **A2** appears at the top right of the display.

A2 (average speed 2) shows the average speed on the basis of the current speed if the stop watch **S2** (stop watch 2) is running.

Info
The displayed value can differ from the actual average speed if **S2** was not stopped after the ride.

Briefly press the button +.	Next display mode
Press the button + for 2–3 seconds.	No function
Press the button − for 2–3 seconds.	No function
Briefly press the button −.	No function

7.21 Display mode SPEED/S1 (stop watch 1)

400327-01

– Repeatedly press the button + briefly until **S1** appears at the top right of the display.

S1 (Stop watch 1) shows the riding time based on **TR1** and continues running as soon as an impulse arrives from the wheel speed sensor.
The calculation of this value starts with the first impulse from the wheel speed sensor and ends 3 seconds after the last impulse.

Press the button + for 2–3 seconds.	Displays of **TR1**, **A1** and **S1** are reset to 0,0.
Briefly press the button +.	Next display mode
Press the button − for 2–3 seconds.	No function
Briefly press the button −.	No function

7.22 Display mode SPEED/S2 (stop watch 2)

400328-01

– Repeatedly press the button + briefly until **S2** appears at the top right of the display.

S2 (Stop watch 2) is a manual stop watch.
If **S2** is running in the background, the display **S2** flashes on the combination instrument.

Press the button + for 2–3 seconds.	The displays of **S2** and **A2** are set to 0,0.
Briefly press the button +.	Next display mode
Press the button − for 2–3 seconds.	No function
Briefly press the button −.	Starts or stops **S2**.

7.23 Table of functions

Display	**Press the button + for 2–3 seconds.**	**Briefly press the button +.**	**Press the button − for 2–3 seconds.**	**Briefly press the button −.**	**Wait 3 - 5 seconds.**	**Wait 10 - 12 seconds.**
Display mode **SPEED/H** (operating hours)	The display changes to the setup menu for the combination instrument functions.	Next display mode	No function	No function		
Setup menu	No function	Activates the flashing display and changes to the next display	No function	Deactivates the flashing display and changes to the next display	Changes to the next display without changes	Setup menu starts, stores the settings, and changes to **H** or **ODO**.
Setting the unit of measurement	No function	Starts selection, activates **Km/h** display	No function	Activates **Mph** display	Changes to the next display, changes from selection to the Setup menu	Stores and closes the Setup menu
Display mode **SPEED/CLK** (time)	The display changes to the Setup menu of the clock.	Next display mode	No function	No function		
Setting the clock	Increases the value	Increases the value	Reduces the value	Reduces the value	Changes to the next value	Closes the SETUP menu
Display mode **SPEED/LAP** (lap time)	The stop watch and the lap time are reset.	Next display mode	Stops the clock.	Starts the stop watch or stop the current lap time measurement, stores it and the stop watch starts the next lap.		
Viewing the lap time	The stop watch and the lap time are reset.	Select a lap from 1–10	No function	View the next lap time.		
Display mode **SPEED/ODO** (odometer)	No function	Next display mode	No function	No function		

Display	Press the button + for 2–3 seconds.	Briefly press the button +.	Press the button − for 2–3 seconds.	Briefly press the button −.	Wait 3 - 5 seconds.	Wait 10 - 12 seconds.
Display mode **SPEED/TR1** (trip master 1)	Displays of **TR1**, **A1** and **S1** are reset to 0,0.	Next display mode	No function	No function		
Display mode **SPEED/TR2** (trip master 2)	Clears the values **TR2** and **A2**.	Next display mode	Reduces value of **TR2**.	Reduces value of **TR2**.		
Setting **TR2** (trip master 2)	Increases value of **TR2**.	Increases value of **TR2**.	Reduces value of **TR2**.	Reduces value of **TR2**.		Stores and closes the Setup menu.
Display mode **SPEED/A1** (average speed 1)	Displays of **TR1**, **A1** and **S1** are reset to 0,0.	Next display mode	No function	No function		
Display mode **SPEED/A2** (average speed 2)	No function	Next display mode	No function	No function		
Display mode **SPEED/S1** (stop watch 1)	Displays of **TR1**, **A1** and **S1** are reset to 0,0.	Next display mode	No function	No function		
Display mode **SPEED/S2** (stop watch 2)	The displays of **S2** and **A2** are set to 0,0.	Next display mode	No function	Starts or stops **S2**.		

7.24 Table of conditions and menu activation

Display	The motorcycle is stationary.	Menu can be activated
Display mode **SPEED/H** (operating hours)	•	
Setup menu	•	
Setting the unit of measurement	•	
Setting the clock	•	
Display mode **SPEED/LAP** (lap time)		•
Viewing the lap time	•	
Display mode **SPEED/TR1** (trip master 1)		•
Display mode **SPEED/TR2** (trip master 2)		•
Setting **TR2** (trip master 2)	•	
Display mode **SPEED/A1** (average speed 1)		•
Display mode **SPEED/A2** (average speed 2)		•
Display mode **SPEED/S1** (stop watch 1)		•
Display mode **SPEED/S2** (stop watch 2)		•

8.1 Advice on first use

Danger

Danger of accidents A rider who is not fit to ride poses a danger to him or herself and others.

– Do not operate the vehicle if you are not fit to ride due to alcohol, drugs or medication.
– Do not operate the vehicle if you are physically or mentally impaired.

Warning

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

– Wear appropriate protective clothing such as helmet, boots, gloves as well as trousers and a jacket with protectors on all rides.
– Always wear protective clothing that is in good condition and meets the legal regulations.

Warning

Danger of crashing Different tire tread patterns on the front and rear wheel impair the handling characteristic.

Different tire tread patterns can make the vehicle significantly more difficult to control.

– Make sure that only tires with a similar tire tread pattern are fitted to the front and rear wheel.

Warning

Danger of accidents An unadapted riding style impairs the handling characteristic.

– Adapt your riding speed to the road conditions and your riding ability.

Warning

Danger of accidents The vehicle is not designed to carry passengers.

– Do not ride with a passenger.

Warning

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

If the foot brake lever is not released, the brake linings drag continuously.

– Take your foot off the foot brake lever when you are not braking.

Warning

Danger of accidents Total weight and axle loads influence the handling characteristic.

– Do not exceed the maximum permissible overall weight or the axle loads.

Warning

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

– Do not leave the vehicle unattended if the engine is running.
– Protect the vehicle against access by unauthorized persons.

Info

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

– Make sure that the pre-delivery inspection work has been carried out by an authorized KTM workshop.
  ✓ You receive a delivery certificate and the Service and Warranty Booklet at vehicle handover.
– Before your first trip, read the entire Owner's Manual carefully.
– Get to know the controls.
– Adjust the basic position of the clutch lever. (📖 p. 83)

(125 XC-W EU)

– Adjust the free travel of the hand brake lever. (📖 p. 86)

(150 XC-W US)

– Adjust the basic position of the hand brake lever. (📖 p. 87)

– Adjust the basic position of the foot brake lever. 🔧 (📖 p. 92)

– Adjust the basic position of the shift lever. 🔧 (📖 p. 123)

– Get used to handling the motorcycle on a suitable surface before undertaking a more challenging trip.

Info
When off road, it is recommended that you are accompanied by another person on another vehicle so that you can help each other.

– Try also to ride as slowly as possible and in a standing position to get a better feeling for the motorcycle.

– Do not make any off-road trips that exceed your ability and experience.

– Hold the handlebar firmly with both hands and keep your feet on the footrests when riding.

– If you carry luggage, make sure you secure it firmly as close as possible to the center of the vehicle and ensure even weight distribution between the front and rear wheels.

Info
Motorcycles react sensitively to any changes of weight distribution.

– The maximum permissible overall weight and the maximum permissible axle loads must not be exceeded.
Guideline

Maximum permissible overall weight	335 kg (739 lb.)
Maximum permissible front axle load	145 kg (320 lb.)
Maximum permissible rear axle load	190 kg (419 lb.)

– Check the spoke tension. (📖 p. 103)

Info
The spoke tension must be checked after half an hour of operation.

– Run in the engine. (📖 p. 36)

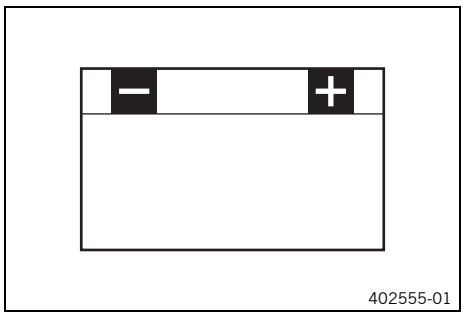
8.2 Running in the engine

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

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

– Avoid fully opening the throttle!

8.3 Starting power of lithium-ion batteries at low temperatures (150 XC-W US)



Lithium-ion batteries are far lighter than lead batteries, have a low self-discharge rate, and have more starting power at temperatures over 15 °C (60 °F). At low temperatures, however, the starting power of lithium-ion batteries drops to below that of lead batteries.
Multiple starting attempts may be needed. Press the electric starter button for 5 seconds, and wait 30 seconds between attempts. The pauses are necessary so that the created heat can distribute through the lithium-ion battery and the battery is not damaged.
If the charged lithium-ion battery does not or only weakly turns over the electric starter when temperatures are below 15 °C (60 °F), then the battery is not faulty, but needs to be warmed up internally to increase its starting power (current output).
The starting power increases as the battery warms up.

8.4 Preparing the vehicle for difficult riding conditions

Info
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.

- Seal the air filter box. (p. 71)
- Clean the air filter and air filter box. (p. 70)

Info
Check the air filter approx. every 30 minutes.

- Check the electrical connector for humidity and corrosion and to ensure it is firmly seated.
  - » If humidity, corrosion, or damage is found:
    - Clean and dry the connector, or change it if necessary.

Difficult riding conditions are:
- Rides on dry sand. (p. 38)
- Rides on wet sand. (p. 39)
- Riding on wet and muddy surfaces. (p. 40)
- Rides at high temperature and slow speed. (p. 40)
- Riding at low temperatures or in snow. (p. 41)

8.5 Preparing for rides on dry sand

M01129-01

– Check the radiator cap.

Value on the radiator cap	1.8 bar (26 psi)

» If the indicated value does not correspond to the required value:

Warning
Danger of scalding During motorcycle operation, the coolant gets very hot and is under pressure.
– Do not open the radiator, the radiator hoses or other cooling system components if the engine or the cooling system are at operating temperature.
– Allow the cooling system and the engine to cool down before you open the radiator, the radiator hoses or other components of the cooling system.
– In the event of scalding, rinse the area affected immediately with lukewarm water.

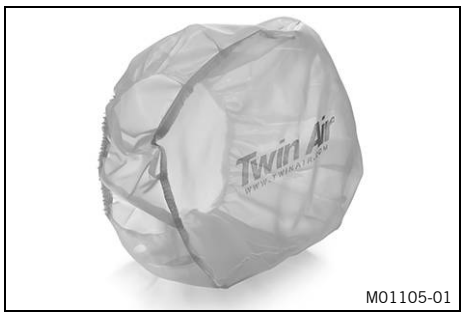
– Change the radiator cap.

M01104-01

– Fit a dust cover on the air filter.

Dust cover for air filter (79006920000)

Info
See the **KTM PowerParts** fitting instructions.



M01105-01

– Fit a sand cover on the air filter.

Sand cover for air filter (79006922000)

Info
See the **KTM PowerParts** fitting instructions.

– Adjust the carburetor jetting and setting.

Info
Your authorized KTM workshop can recommend the right carburetor tuning.


600868-01

– Clean the chain.

Chain cleaner (📖 p. 153)

– Fit the steel sprocket.

Tip
Do not grease the chain.

– Clean the radiator fins.
– Straighten bent radiator fins carefully.

Condition
Regular use in sand

– Change the piston every 10 operating hours.

8.6 Preparing for rides on wet sand

M01129-01

– Check the radiator cap.

Value on the radiator cap	1.8 bar (26 psi)

» If the indicated value does not correspond to the required value:

Warning
Danger of scalding During motorcycle operation, the coolant gets very hot and is under pressure.
– Do not open the radiator, the radiator hoses or other cooling system components if the engine or the cooling system are at operating temperature.
– Allow the cooling system and the engine to cool down before you open the radiator, the radiator hoses or other components of the cooling system.
– In the event of scalding, rinse the area affected immediately with lukewarm water.

– Change the radiator cap.

M01106-01

– Fit a waterproofing device on the air filter.

Waterproofing device for air filter (79006921000)

Info
See the **KTM PowerParts** fitting instructions.

– Adjust the carburetor jetting and setting.

Info
Your authorized KTM workshop can recommend the right carburetor tuning.


600868-01

– Clean the chain.

Chain cleaner (📖 p. 153)

– Fit the steel sprocket.

Tip
Do not grease the chain.

– Clean the radiator fins.
– Straighten bent radiator fins carefully.

Condition
Regular use in sand
– Change the piston every 10 operating hours.

8.7 Preparations for riding on wet and muddy surfaces

M01106-01

– Mount the rain cover for the air filter.

Waterproofing device for air filter (79006921000)

Info
Follow the **KTM PowerParts** mounting instructions.

– Adjust the carburetor jetting and setting.

Info
Your authorized KTM workshop can recommend the right carburetor tuning.


600868-01

– Mount the steel sprocket.
– Clean the motorcycle. (📖 p. 132)
– Carefully align bent radiator fins.

8.8 Preparing for rides at high temperature and slow speed

M01129-01

– Check the radiator cap.

Value on the radiator cap	1.8 bar (26 psi)

» If the displayed value does not correspond to the setpoint value:

Warning

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

– Do not open the radiator, the radiator hoses or other cooling system components if the engine or the cooling system are at operating temperature.
– Allow the cooling system and the engine to cool down before you open the radiator, the radiator hoses or other components of the cooling system.
– In the event of scalding, rinse the area affected immediately with lukewarm water.

– Change the radiator cap.


600868-01

– Adjust the secondary drive to the road conditions.

Info

The transmission oil heats up quickly when the clutch is operated frequently due to an excessively high secondary drive.

– Clean the chain.

Chain cleaner (📖 p. 153)

– Clean the radiator fins.
– Straighten bent radiator fins carefully.
– Check the coolant level. (📖 p. 114)

8.9 Preparing for riding at low temperatures or in snow

M01106-01

– Mount the rain cover for the air filter.

Waterproofing device for air filter (79006921000)

Info

Follow the **KTM PowerParts** mounting instructions.

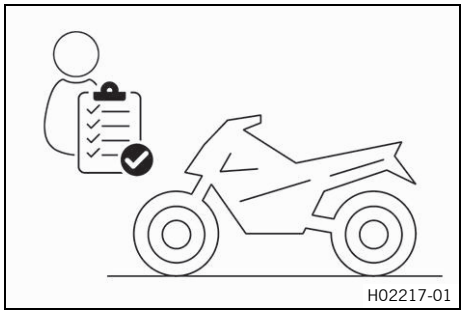
– Adjust the carburetor jetting and setting.

Info

Your authorized KTM workshop can recommend the right carburetor tuning.

9.1 Checks and maintenance measures 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 it is being operated.


H02217-01

- Check the gear oil level. (📖 p. 128)
- Check the electrical system.
- Check the front brake fluid level. (📖 p. 88)
- Check the rear brake fluid level. (📖 p. 93)
- Check the front brake linings. (📖 p. 89)
- Check the brake linings of the rear brake. (📖 p. 95)
- Check that the brake system is functioning properly.
- Check the coolant level. (📖 p. 114)
- Check the chain for dirt. (📖 p. 75)
- Check the chain, rear sprocket, motor sprocket, and chain guide. (📖 p. 78)
- Check the chain tension. (📖 p. 76)
- Check the tire condition. (📖 p. 102)
- Check the tire air pressure. (📖 p. 102)
- Check the spoke tension. (📖 p. 103)

Info
The spoke tension must be checked regularly as incorrect spoke tension will strongly impair riding safety.

- Clean the dust boots of the fork legs. (📖 p. 59)
- Bleed the fork legs. (📖 p. 58)
- Check the air filter.
- Check the settings of all controls and ensure that they can be operated smoothly.
- Check all screws, nuts, and hose clamps regularly for tightness.
- Check the fuel level.

9.2 Starting the vehicle

Danger
Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and death.
- Always make sure there is sufficient ventilation when running the engine.
- Use an effective exhaust extraction system when starting or running the engine in an enclosed space.

Note
Engine damage High revving speed with a cold engine negatively impacts the lifespan of the engine.
- Always run the engine warm at a low speed.

Info
If the motorcycle is unwilling to start, the cause can be old fuel in the float chamber. The flammable elements of the fuel evaporate after a long time of standing.
If the float chamber is filled with fresh fuel, the engine starts immediately.

Condition
The motorcycle was stationary for more than 1 week.
– Empty the carburetor float chamber. 🔧 (📖 p. 127)
– Turn handle ❶ of the fuel tap to the **ON** position. (Figure V00326-10 📖 p. 19)
✓ Fuel can flow from the fuel tank to the carburetor.
– Remove the motorcycle from the stand.
– Shift gear to neutral.

Condition
The engine is cold.
– Pull the choke lever out as far as possible.

(150 XC-W US)
– Press the electric starter button or press the kick starter robustly through its full range.

Info
Do not open the throttle.

(125 XC-W EU)
– Press the kick starter robustly through its full range.

Info
Do not open the throttle.

9.3 Start off

Info
Before riding, switch on the lights if your vehicle is equipped with a lighting system. This will make it easier for other road users to see you.
When you are riding, the side stand must be folded up and secured with the rubber band.

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

9.4 Shifting, riding

Warning
Danger of accidents If you change down at high engine speed, the rear wheel blocks and the engine races.
– Do not change into a low gear at high engine speed.

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

- Shift into a higher gear when conditions allow (incline, road situation, etc.). To do so, release the throttle while simultaneously pulling the clutch lever, shift into the next gear, release the clutch lever and open the throttle.
- If the choke function was activated, deactivate the choke function after the engine has warmed up.
- After reaching maximum speed by fully opening the throttle grip, turn the throttle back so it is ¾ open. This will barely reduce the speed but fuel consumption will be considerably lower.
- Always open the throttle only as much as the engine can handle – abrupt throttle opening increases fuel consumption.
- To shift down, apply the brakes and close the throttle at the same time.
- Pull the clutch lever and shift into a lower gear, release the clutch lever slowly, and either open the throttle or shift again.
- Switch off the engine if running at idle or standing for a long time.

  Guideline

≥ 2 min

- Avoid frequent and longer slipping of the clutch. As a result the gear oil, engine and cooling system heat up.
- Ride at a low engine speed instead of at a high engine speed with a slipping clutch.

9.5 Braking

Warning
Danger of accidents Excessively forceful application of the brakes blocks the wheels.
- Adjust application of the brakes to the respective riding situation and riding surface conditions.

Warning
Danger of accidents A spongy pressure point on the front or rear brake reduces braking efficiency.
- Check the brake system and do not continue riding until the problem is eliminated. (Your authorized KTM workshop will be glad to help.)

Warning
Danger of accidents Moisture and dirt impair the brake system.
- Brake carefully several times to dry out and remove dirt from the brake linings and the brake discs.

- On sandy, wet or slippery surfaces, use the rear brake.
- Braking should always be completed before you go into a bend. Change down to a lower gear appropriate to your road speed.

9.6 Stopping, parking

Warning

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

– Do not leave the vehicle unattended if the engine is running.
– 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 exhaust system, radiator, engine, shock absorber, or brake system before the vehicle parts have cooled down.
– Let the vehicle parts cool down before you perform any work on the vehicle.

Note

Material damage The vehicle may be damaged by incorrect procedure when parking.

Significant damage may be caused if the vehicle rolls away or falls over.
The components for parking the vehicle are designed only for the weight of the vehicle.

– Park the vehicle on a firm and level surface.
– Ensure that nobody sits on the vehicle when the vehicle is parked on a stand.

Note

Fire hazard Hot vehicle components pose a fire hazard and explosion risk.

– Do not park the vehicle near to materials which are highly flammable or explosive.
– Allow the vehicle to cool down before covering it.

– Apply the brakes on the motorcycle.
– Shift gear to neutral.

(125 XC-W EU)

– Press and hold the kill switch ⊠ while the engine is idling until the engine stops.

(150 XC-W US)

– Press and hold the kill switch ⊠ while the engine is idling until the engine stops.

– Turn handle ❶ of the fuel tap to the **OFF** position. (Figure V00326-10 📖 p. 19)
– Park the motorcycle on firm ground.

9.7 Transporting

Note

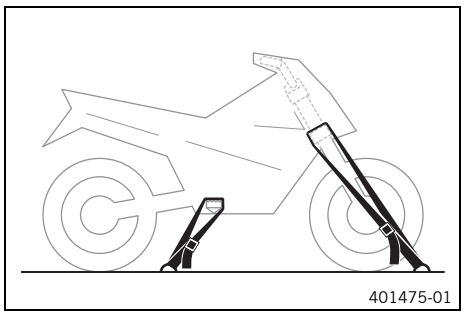
Danger of damage The parked vehicle can roll away or fall over.

– Park the vehicle on a firm and level surface.

Note

Fire hazard Hot vehicle components pose a fire hazard and explosion risk.

– Do not park the vehicle near to materials which are highly flammable or explosive.
– Allow the vehicle to cool down before covering it.



– Switch off the engine.
– Use tension belts or other suitable devices to secure the motorcycle against falling over or rolling away.

9.8 Refueling

Danger

Fire hazard Fuel is highly flammable.

The fuel in the fuel tank expands when warm and can escape if overfilled.

– Do not refuel the vehicle in the vicinity of open flames or lit cigarettes.
– Switch off the engine for refueling.
– Make sure that no fuel is spilled; particularly not on hot parts of the vehicle.
– If any fuel is spilled, wipe it off immediately.
– Observe the specifications for refueling.

Warning

Danger of poisoning Fuel is poisonous and a health hazard.

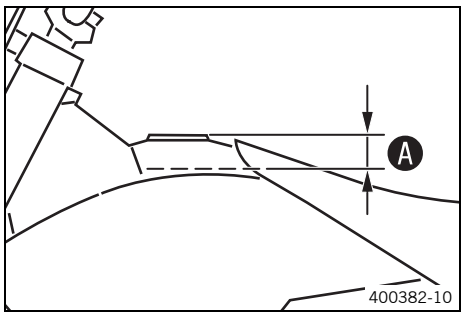
– Avoid skin, eye and clothing contact with fuel.
– Immediately consult a doctor if you swallow fuel.
– Do not inhale fuel vapors.
– In case of skin contact, rinse the affected area with plenty of water.
– Rinse the eyes thoroughly with water, and consult a doctor in case of fuel contact with the eyes.
– Change your clothing in case of fuel spills on them.

Warning

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

– Do not allow fuel to enter the groundwater, the soil, or the sewage system.

– Switch off the engine.
– Open the filler cap. (📖 p. 18)



– Fill the fuel tank with fuel up to measurement Ⓐ.

Guideline

Measurement of Ⓐ	35 mm (1.38 in)

Total fuel tank capacity, approx.	9.5 l (2.51 US gal)	Super unleaded (95 octane) mixed with 2-stroke engine oil (1:60) (📖 p. 152)

Engine oil, 2-stroke (📖 p. 152)

– Close the filler cap. (📖 p. 19)

10.1 Additional information

Any further work that results from the required work or from the recommended work must be ordered separately and can be invoiced separately.
Different service intervals may apply in your country, depending on the local operating conditions.

10.2 Required work

	Once after 1 operating hour	Once after 5 operating hours	Every 20 operating hours	Every 40 operating hours	Every 10 operating hours when used for motorsports
Check that the electrical system is functioning properly.	○		●	●	●
Check and charge the battery. 🔧 (150 XC-W US)			●	●	●
Check the front brake linings. (📖 p. 89)			●	●	●
Check the brake linings of the rear brake. (📖 p. 95)			●	●	●
Check the brake discs. (📖 p. 87)			●	●	●
Check the brake lines for damage and leakage.			●	●	●
Check the rear brake fluid level. (📖 p. 93)			●	●	●
Check the free travel of the foot brake lever. (📖 p. 92)			●	●	●
Check the frame. 🔧 (📖 p. 81)			●	●	●
Check the swingarm. 🔧 (📖 p. 81)			●	●	●
Check the swingarm bearing for play. 🔧			●	●	
Check the heim joint for play. 🔧			●	●	
Check the tire condition. (📖 p. 102)	○		●	●	●
Check the tire air pressure. (📖 p. 102)	○		●	●	●
Check the wheel bearing for play. 🔧			●	●	●
Check the wheel hubs. 🔧			●	●	●
Check the rim run-out. 🔧	○		●	●	
Check the spoke tension. (📖 p. 103)	○		●	●	●
Check the chain, rear sprocket, motor sprocket, and chain guide. (📖 p. 78)			●	●	●
Check the chain tension. (📖 p. 76)	○		●	●	●
Grease all moving parts (e.g. side stand, hand lever, chain, etc.) and check for smooth operation. 🔧			●	●	●
Check/correct the fluid level of the hydraulic clutch. (📖 p. 83)			●	●	●
Check the front brake fluid level. (📖 p. 88)			●	●	●
Check the free travel of the hand brake lever. (📖 p. 86)			●	●	●
Check the play of the steering head bearing. (📖 p. 64)	○		●	●	
Change the spark plug and spark plug connector. 🔧				●	●
Check the reed valve housing, reed valve, and intake flange. 🔧			●	●	
Change the gear oil. 🔧 (📖 p. 128)		○		●	●
Check all hoses (e.g. fuel, cooling, bleeder, drainage, etc.) and sleeves for cracking, leaks, and incorrect routing. 🔧	○		●	●	●
Check the antifreeze and coolant level. (📖 p. 113)	○		●	●	●
Check the cables for damage and for routing without kinks. 🔧			●	●	●

	Every 10 operating hours when used for motorsports				
			Every 40 operating hours		
				Every 20 operating hours	
			Once after 5 operating hours		
	Once after 1 operating hour				
Check that the throttle cables are undamaged, routed without sharp bends, and set correctly.	○		●	●	●
Clean the air filter and air filter box. 🔧 (📖 p. 70)			●	●	●
Change glass fiber yarn filling in the main silencer. 🔧 (📖 p. 72)			●	●	
Service the fork. 🔧				●	
Service the shock absorber. 🔧				●	
Check the screws and nuts for tightness. 🔧	○		●	●	●
Check the headlight setting. (📖 p. 110)	○		●	●	●
Check idle. 🔧	○		●	●	●
Final check: Check the vehicle for operating safety and take a test ride. 🔧	○	○	●	●	●
Make the service entry in the **KTM Dealer.net** and in the Service and Warranty Booklet. 🔧	○	○	●	●	●

○ One-time interval

● Periodic interval

10.3 Recommended work

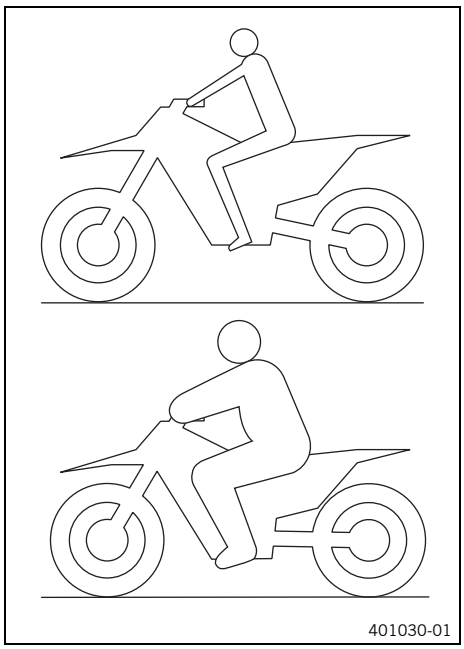
		Every 40 operating hours when used for motorsports					
			Every 10 operating hours when used for motorsports				
					Annually		
						Every 80 operating hours	
				Every 40 operating hours			
			Once after 20 operating hours				
	Once after 10 operating hours						
Change the front brake fluid. 🔧					●		
Change the rear brake fluid. 🔧					●		
Change the hydraulic clutch fluid. 🔧 (📖 p. 84)					●		
Lubricate the steering head bearing. 🔧 (📖 p. 65)					●		
Service the fork. 🔧	○						
Service the shock absorber. 🔧		○					
Check the electric starter drive. 🔧 (150 XC-W US)			●	●		●	●
Check/adjust the carburetor components. 🔧				●	●		●
Change the piston and check the cylinder and Z dimension. 🔧 (125 XC-W EU)			●	●		●	●
Change the piston and check the cylinder and Z dimension. 🔧 (150 XC-W US)				●			●
Perform minor engine service. (Check the reed valve housing, reed valve, and intake flange. Check the exhaust control for functioning and smooth operation. Check the clutch.) 🔧			●	●		●	●
Perform major engine service including removing and installing engine. (Change the connecting rod, conrod bearing, and crank pin. Check the transmission and shift mechanism. Change all engine bearings.) 🔧				●			●

○ One-time interval

● Periodic interval

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

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 standard rider weight (with full protective clothing).

  Guideline

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

- If the rider's weight is above or below the standard 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

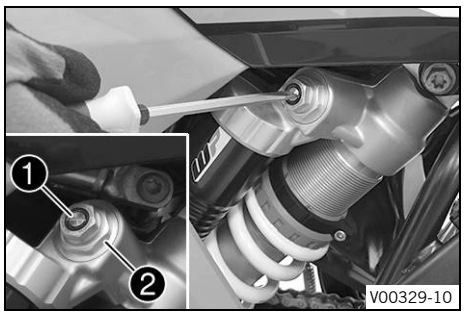
The compression damping of the shock absorber is divided into two ranges: high-speed and low-speed.
High-speed and low-speed refer to the compression speed of the rear wheel suspension and not to the vehicle speed.
The high-speed setting, for example, has an effect on the landing after a jump: the rear wheel suspension compresses quickly.
The low-speed setting, for example, has an effect when riding over long ground swells: the rear wheel suspension compresses 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
Risk of injury Parts of the shock absorber will fly off if the shock absorber is disassembled incorrectly.
The shock absorber is filled with highly compressed nitrogen.

- Please follow the description provided. (Your authorized KTM workshop will be glad to help.)

Info
The effect of the low-speed setting can be seen in slow to normal compression of the shock absorber.



– Turn adjusting screw ❶ clockwise with a screwdriver as far as the last perceptible click.

Info
Do not loosen fitting ❷!

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

Guideline

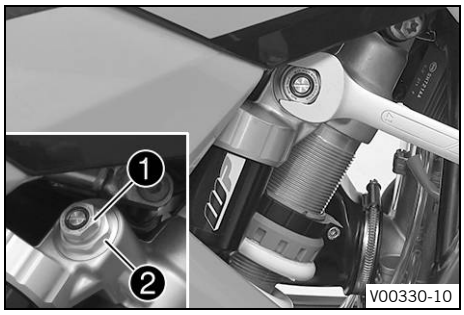
Compression damping, low-speed	
Comfort	18 clicks
Standard	15 clicks
Sport	12 clicks

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

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

Caution
Risk of injury Parts of the shock absorber will fly off if the shock absorber is disassembled incorrectly.
The shock absorber is filled with highly compressed nitrogen.
– Please follow the description provided. (Your authorized KTM workshop will be glad to help.)

Info
The effect of the high-speed setting can be seen in fast compression of the shock absorber.



– Using an open end wrench, turn adjusting screw ❶ clockwise all the way.

Info
Do not loosen fitting ❷!

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

Guideline

Compression damping, high-speed	
Comfort	2.5 turns
Standard	2 turns
Sport	1 turn

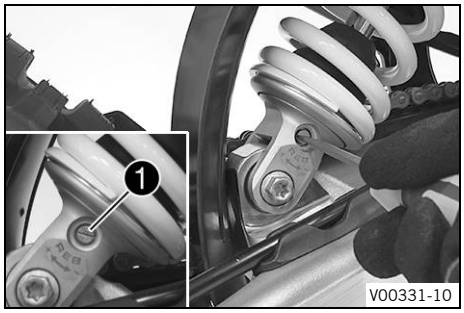
Info
Turn clockwise to increase damping; turn counterclockwise to reduce damping.

11.5 Adjusting the rebound damping of the shock absorber

Caution

Risk of injury Parts of the shock absorber will fly off if the shock absorber is disassembled incorrectly. The shock absorber is filled with highly compressed nitrogen.

– Please follow the description provided. (Your authorized KTM workshop will be glad to help.)



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

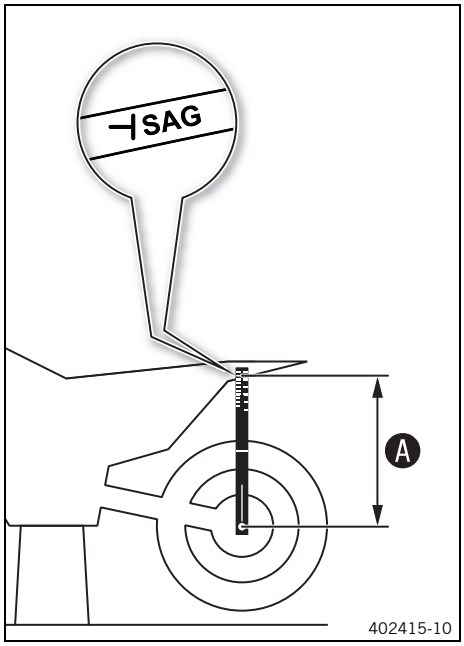
Guideline

Rebound damping	
Comfort	18 clicks
Standard	15 clicks
Sport	12 clicks

Info

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

11.6 Measuring the rear wheel dimension unloaded



Preparatory work

– Raise the motorcycle with a lift stand. (📖 p. 58)

Main work

– Position the sag gauge in the rear axle and measure the distance to marking **SAG** on the rear fender.

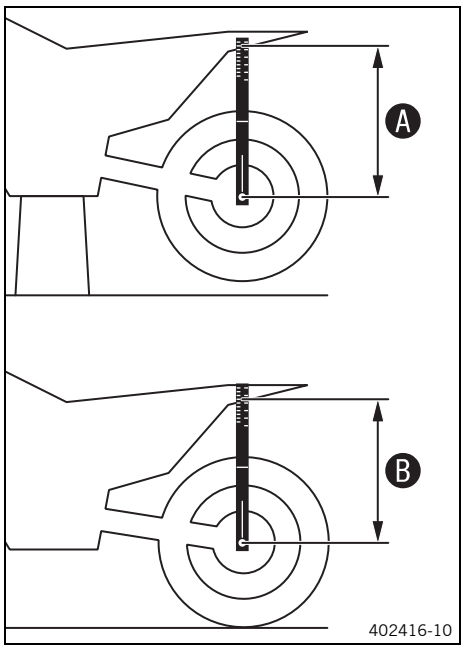
Sag gauge (00029090100)
Pin for sag gauge (00029990010)

– Note down the value as dimension Ⓐ.

Finishing work

– Remove the motorcycle from the lift stand. (📖 p. 58)

11.7 Checking the static sag of the shock absorber



– Measure dimension A of rear wheel unloaded. (📖 p. 51)
– Hold the motorcycle upright with the aid of an assistant.
– Again measure the distance between the rear axle and marking **SAG** on the rear fender using the sag gauge.
– Note down the value as dimension B.

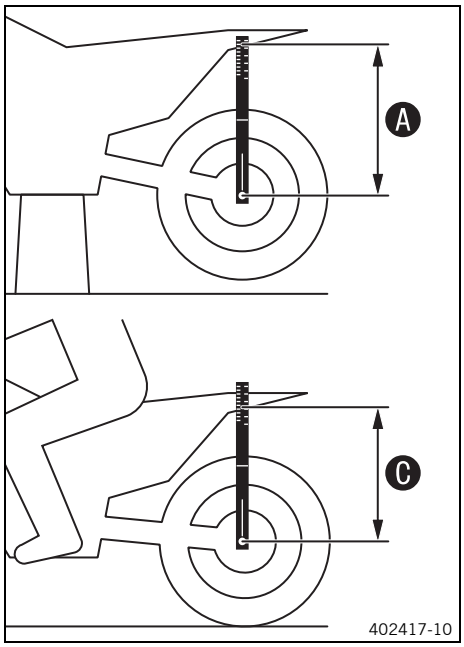
Info
The static sag is the difference between measurements A and B.

– Check the static sag.

Static sag	35 mm (1.38 in)

» If the static sag is less or more than the specified value:
– Adjust the spring pretension of the shock absorber. 🔧 (📖 p. 53)

11.8 Checking the riding sag of the shock absorber



– Measure dimension A of rear wheel unloaded. (📖 p. 51)
– 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 again measures the distance between the rear axle and marking **SAG** on the rear fender using the sag gauge.
– Note down the value as dimension C.

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

– Check the riding sag.

Riding sag	110 mm (4.33 in)

» If the riding sag differs from the specified measurement:
– Adjust the riding sag. 🔧 (📖 p. 54)

11.9 Adjusting the spring pretension of the shock absorber

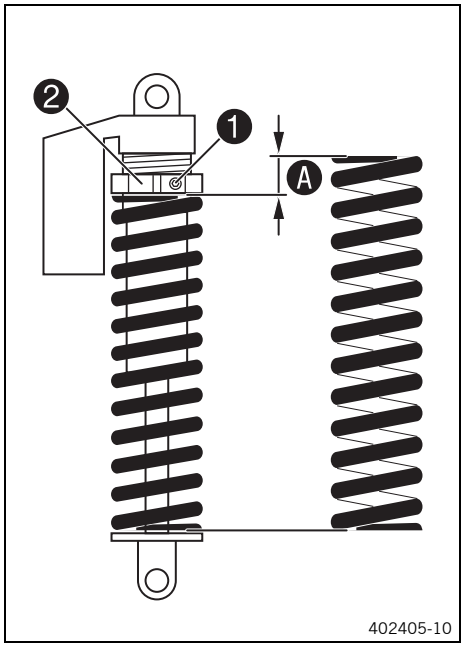
Caution

Risk of injury Parts of the shock absorber will fly off if the shock absorber is disassembled incorrectly. The shock absorber is filled with highly compressed nitrogen.

– Please follow the description provided. (Your authorized KTM workshop will be glad to help.)

Info

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



Preparatory work

– Raise the motorcycle with a lift stand. (📖 p. 58)
– Remove the shock absorber. 🔧 (📖 p. 67)
– After removing the shock absorber, clean it thoroughly.

Main work

– Loosen screw ❶.
– Turn adjusting ring ❷ until the spring is no longer under tension.

Hook wrench (90129051000)

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

Guideline

Spring preload	6 mm (0.24 in)

Info

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

– Tighten screw ❶.

Guideline

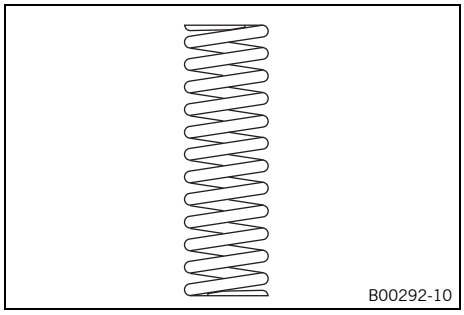
Screw, shock absorber adjusting ring	M5	5 Nm (3.7 lbf ft)

Finishing work

– Install the shock absorber. 🔧 (📖 p. 67)
– Remove the motorcycle from the lift stand. (📖 p. 58)

◀

11.10 Adjusting the riding sag



Preparatory work

– Raise the motorcycle with a lift stand. (📖 p. 58)
– Remove the shock absorber. (📖 p. 67)
– After removing the shock absorber, clean it thoroughly.

Main work

– Choose and mount a suitable spring.

Guideline

Spring rate	
Weight of rider: 65 ... 75 kg (143 ... 165 lb.)	57 N/mm (325 lb/in)
Weight of rider: 75 ... 85 kg (165 ... 187 lb.)	60 N/mm (343 lb/in)
Weight of rider: 85 ... 95 kg (187 ... 209 lb.)	63 N/mm (360 lb/in)

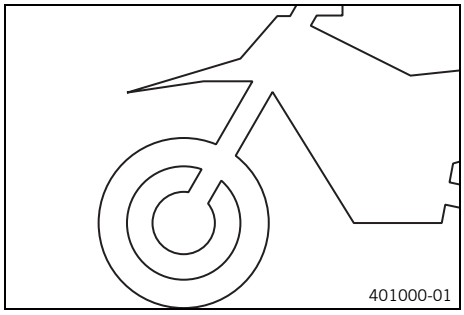
Info
The spring rate is shown on the outside of the spring.

Finishing work

– Install the shock absorber. (📖 p. 67)
– Remove the motorcycle from the lift stand. (📖 p. 58)
– Check the static sag of the shock absorber. (📖 p. 52)
– Check the riding sag of the shock absorber. (📖 p. 52)
– Adjust the rebound damping of the shock absorber. (📖 p. 51)

11.11 Checking the basic setting of the fork

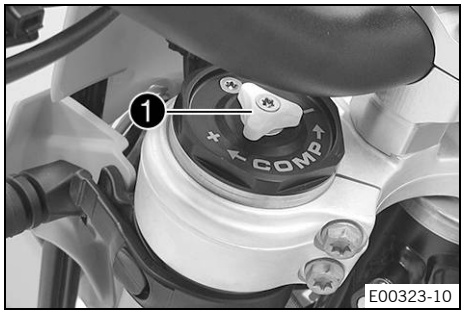
Info
For various reasons, no exact riding sag can be determined for the fork.



– As with the shock absorber, smaller differences in the rider's weight can be compensated by the spring preload.
– However, if the fork frequently bottoms out (hard end stop on compression), harder springs must be fitted to avoid damage to the fork and frame.
– If the fork feels unusually hard after extended periods of operation, the fork legs need to be bled.

11.12 Adjusting the compression damping of the fork

Info
The hydraulic compression damping determines the fork suspension behavior.



– Turn white adjusting screw ❶ clockwise as far as it will go.

Info
Adjusting screw ❶ is located at the upper end of the left fork leg.
The compression damping is located in left fork leg **COMP** (white adjusting screw). The rebound damping is located in right fork leg **REB** (red adjusting screw).

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

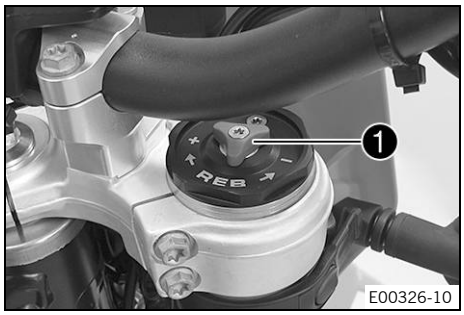
Guideline

Compression damping	
Comfort	18 clicks
Standard	15 clicks
Sport	12 clicks

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

11.13 Adjusting the rebound damping of the fork

Info
The hydraulic rebound damping determines the fork suspension behavior.



– Turn red adjusting screw ❶ clockwise as far as it will go.

Info
Adjusting screw ❶ is located at the upper end of the right fork leg.
The rebound damping is located in right fork leg **REB** (red adjusting screw). The compression damping is located in left fork leg **COMP** (white adjusting screw).

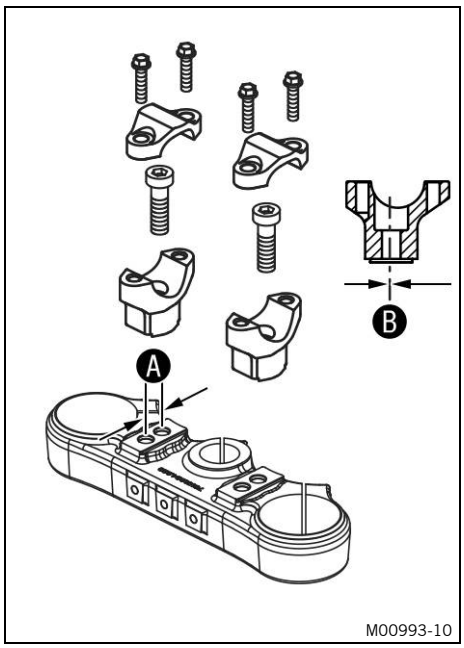
– Turn counterclockwise by the number of clicks corresponding to the fork type.

Guideline

Rebound damping	
Comfort	18 clicks
Standard	15 clicks
Sport	12 clicks

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

11.14 Handlebar position



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

Hole distance A	15 mm (0.59 in)

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

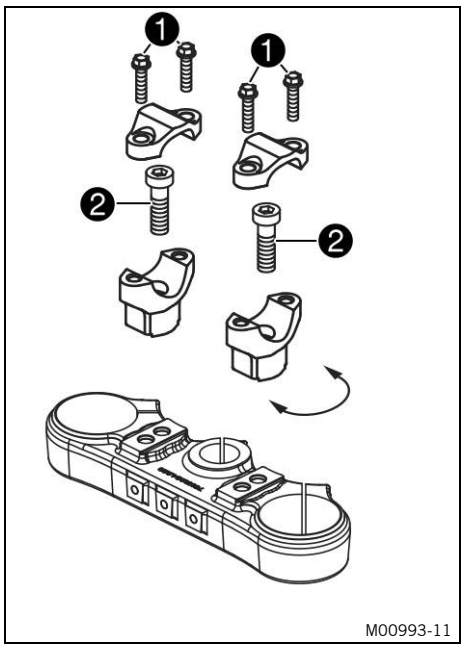
Hole distance B	3.5 mm (0.138 in)

The handlebar can be mounted in four different positions. This allows the handlebar to be mounted in the most comfortable position for the rider.

11.15 Adjusting the handlebar position

Warning
Danger of accidents A repaired handlebar poses a safety risk.
If the handlebar is bent or straightened, the material becomes fatigued. The handlebar may break as a result.

– Change the handlebar if the handlebar is damaged or bent.



– Remove screws 1. Take off the handlebar clamps. Remove the handlebar and lay it to one 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.

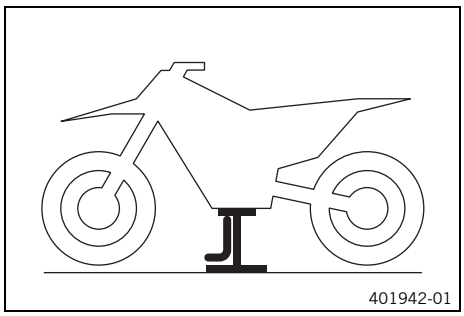
– Position the handlebar clamps. Mount screws 1 and tighten evenly.

Guideline

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

Info
Make sure the gap widths are even.

12.1 Raising the motorcycle with a lift stand


401942-01

Note

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

– Park the vehicle on a firm and level surface.

– Raise the motorcycle at the frame underneath the engine.

Lift stand (78129955100)

✔ Neither wheel is in contact with the ground.

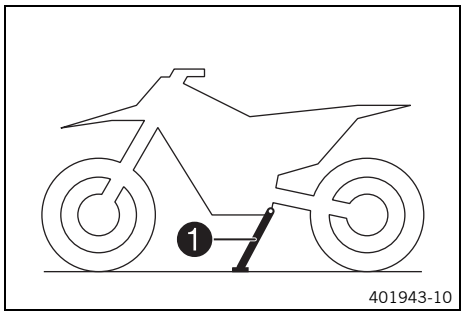
– Secure the motorcycle against falling over.

12.2 Removing the motorcycle from the lift stand

Note

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

– Park the vehicle on a firm and level surface.



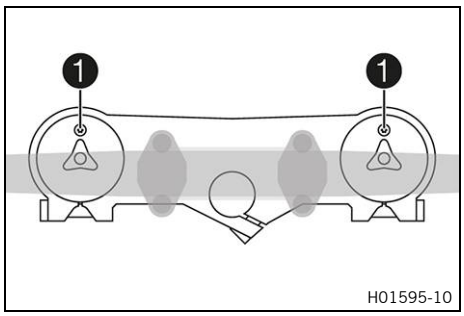
401943-10

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

Info

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

12.3 Bleeding the fork legs



H01595-10

Preparatory work

– Raise the motorcycle with a lift stand. (📖 p. 58)

Main work

– 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. 58)

12.4 Cleaning the dust boots of the fork legs

Preparatory work

– Raise the motorcycle with a lift stand. (📖 p. 58)
– Remove the fork protector. (📖 p. 59)

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 can start to leak.

Warning

Danger of accidents Oil or grease on the brake discs reduces the braking effect.

– Always keep the brake discs free of oil and grease.
– Clean the brake discs with brake cleaner when necessary.

– Clean and oil the dust boots and inner fork tubes of both fork legs.

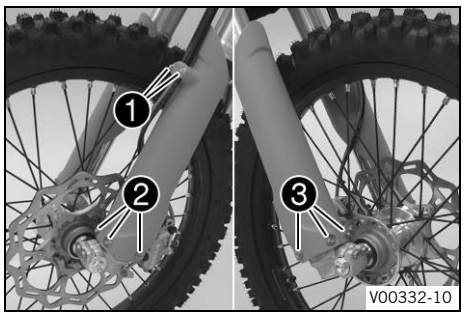
Universal oil spray (📖 p. 154)

– Press the dust boots back into their installation position.
– Remove excess oil.

Finishing work

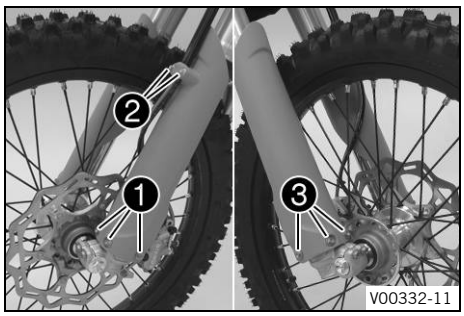
– Install the fork protector. (📖 p. 60)
– Remove the motorcycle from the lift stand. (📖 p. 58)

12.5 Removing the fork protector



– Remove screws ❶ and take off the clamp.
– Remove screws ❷ and take off the left fork protector.
– Remove screws ❸ and take off the right fork protector.

12.6 Installing the fork protector



– Position the fork protector on the left fork leg. Mount and tighten screws ❶.

Guideline

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

– Position the brake line, wiring harness, and clamp. Mount and tighten screws ❷.
– Position the fork protector on the right fork leg. Mount and tighten screws ❸.

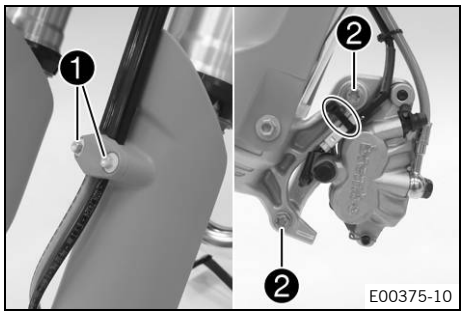
Guideline

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

12.7 Removing the fork legs

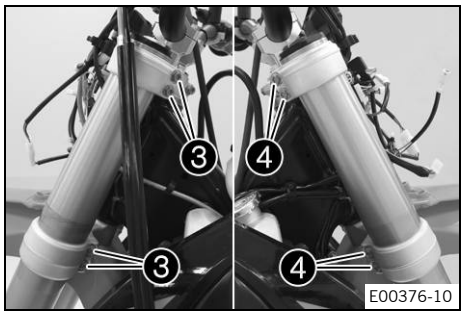
Preparatory work

– Raise the motorcycle with a lift stand. (📖 p. 58)
– Remove the front wheel. (📖 p. 98)
– Remove the headlight mask with the headlight. (📖 p. 108)



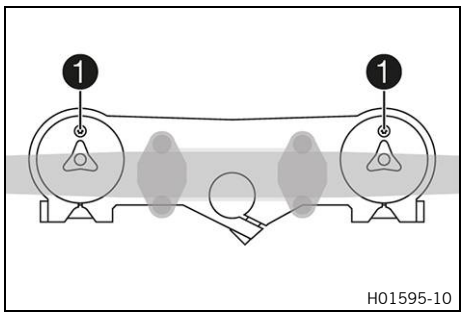
Main work

– Remove screws ❶ and take off the clamp.
– Remove the cable tie(s).
– Remove screws ❷ and take off the brake caliper.
– Allow the brake caliper and brake line to hang loosely to the side.



– Loosen screws ❸. Take out the left fork leg.
– Loosen screws ❹. Take out the right fork leg.

12.8 Installing the fork legs



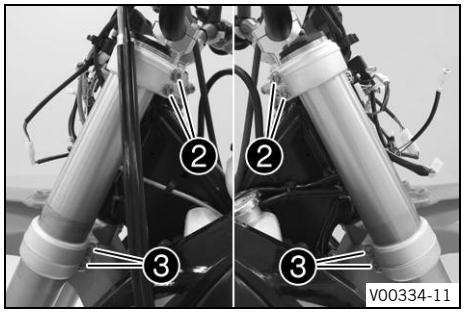
Main work

– Position the fork legs.

✓ Bleeder screws ❶ are positioned toward the front.

Info

The rebound damping is located in right fork leg **REB** (red adjusting screw). The compression damping is located in left fork leg **COM** (white adjusting screw). Grooves are milled into the side of the upper end of the fork legs. The second milled groove (from the top) must be flush with the top edge of the upper triple clamp.



– Tighten screws ❷.

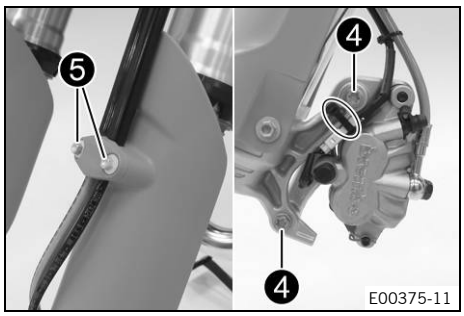
Guideline

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

– Tighten screws ❸.

Guideline

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



– Position the brake caliper, and mount and tighten screws ❹.

Guideline

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

– Mount the cable tie(s).
– Position the brake line, wiring harness, and clamp. Mount and tighten screws ❺.

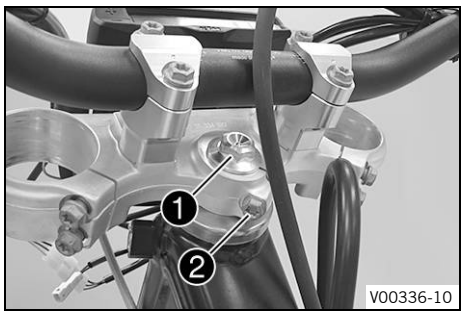
Finishing work

– Install the front wheel. (📖 p. 99)
– Install the headlight mask with the headlight. (📖 p. 109)
– Check the headlight setting. (📖 p. 110)

12.9 Removing the lower triple clamp

Preparatory work

– Raise the motorcycle with a lift stand. (📖 p. 58)
– Remove the front wheel. (📖 p. 98)
– Remove the headlight mask with the headlight. (📖 p. 108)
– Remove the fork legs. (📖 p. 60)
– Remove front fender. (📖 p. 66)
– Remove the handlebar cushion.

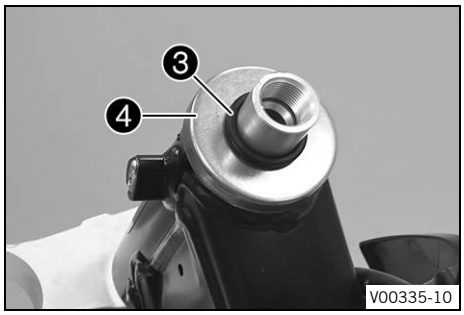


Main work

– Remove screw ❶. Loosen screw ❷. Pull off the upper triple clamp with the handlebar and hang it to one side.

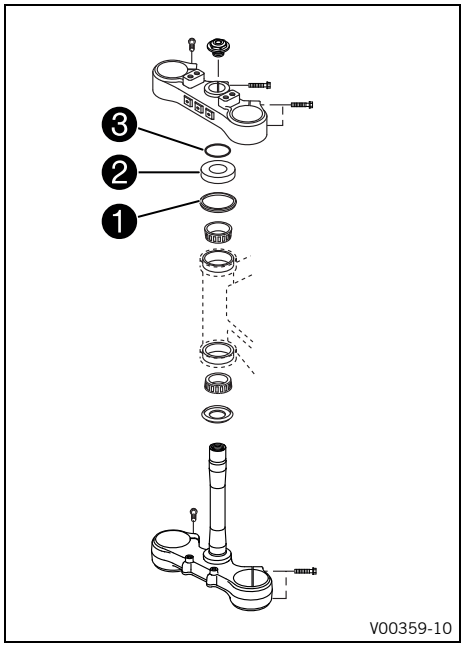
Info

Protect the components against damage by covering them.
Do not bend the cables and lines.



– Remove O-ring ❸. Remove protective ring ❹.
– Take off the lower triple clamp with the steering stem.
– Remove the upper steering head bearing.

12.10 Installing the lower triple clamp

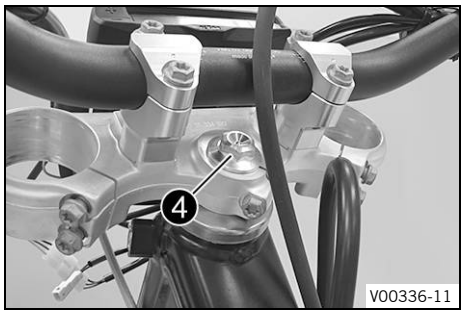


Main work

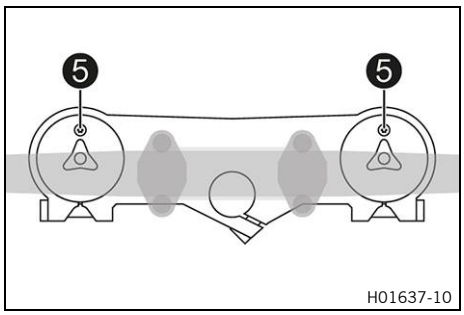
– Clean the bearing and sealing elements, check for damage, and grease.

High viscosity grease (📖 p. 153)

– Insert the lower triple clamp with the steering stem. Mount the upper steering head bearing.
– Check whether upper steering head seal ❶ is correctly positioned.
– Mount protective ring ❷ and O-ring ❸.



– Position the upper triple clamp with the handlebar.
– Position the clutch line and wiring harness.
– Mount screw ❹ but do not tighten yet.

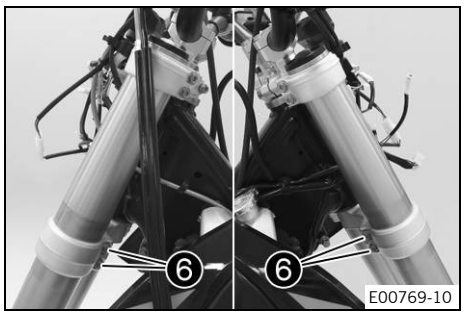


– Position the fork legs.

✓ Bleeder screws ❺ are positioned toward the front.

Info

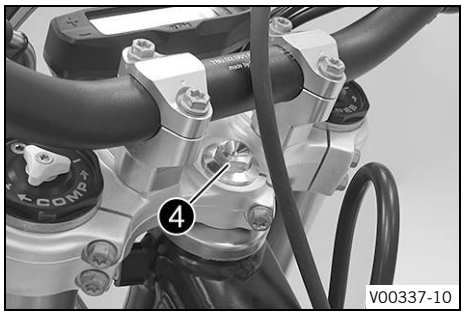
The rebound damping is located in right fork leg **REB** (red adjusting screw). The compression damping is located in left fork leg **COMP** (white adjusting screw). Grooves are milled into the side of the upper end of the fork legs. The second milled groove (from the top) must be flush with the top edge of the upper triple clamp.



– Tighten screws ❻.

Guideline

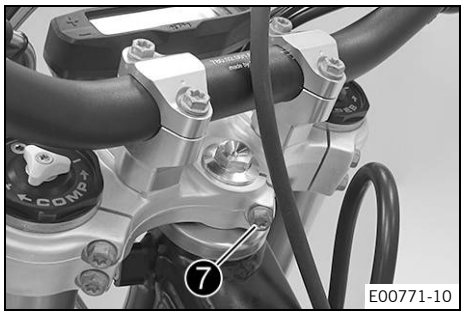
Screw, bottom triple clamp	M8	15 Nm (11.1 lbf ft)



– Tighten screw ❹.

Guideline

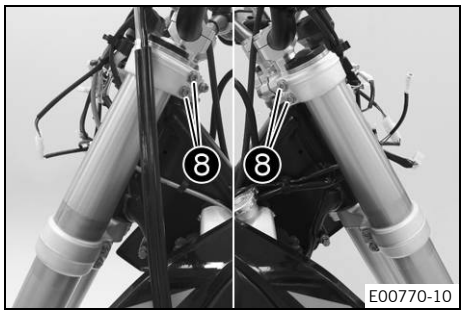
Screw, top steering head	M20x1.5	12 Nm (8.9 lbf ft)



– Tighten screw ❼.

Guideline

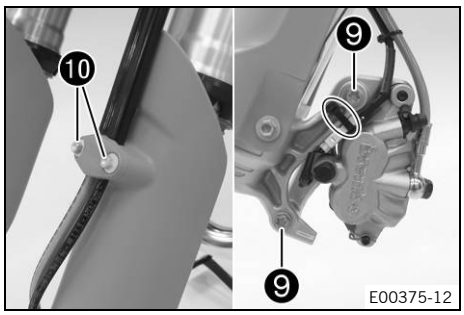
Screw, top steering stem	M8	20 Nm (14.8 lbf ft)



– Tighten screws ❽.

Guideline

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



– Position the brake caliper, and mount and tighten screws 9.

Guideline

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

– Mount the cable tie(s).
– Position the brake line, wiring harness, and clamp. Mount and tighten screws 10.

Finishing work

– Mount the handlebar cushion.
– Install front fender. (📖 p. 66)
– Install the front wheel. 🔧 (📖 p. 99)
– Install the headlight mask with the headlight. (📖 p. 109)
– Check that the wiring harness, throttle cables, and brake and clutch lines can move freely and are routed correctly.
– Check the play of the steering head bearing. (📖 p. 64)
– Remove the motorcycle from the lift stand. (📖 p. 58)
– Check the headlight setting. (📖 p. 110)

12.11 Checking the play of the steering head bearing

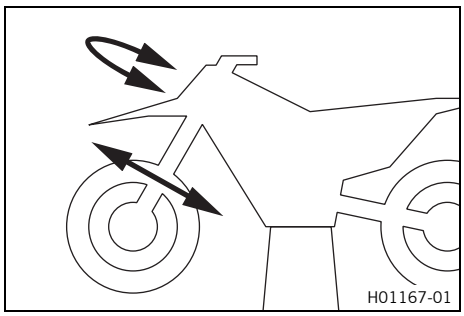
Warning

Danger of accidents Incorrect steering head bearing play impairs the handling characteristic and damages components.

– Correct incorrect steering head bearing play immediately. (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

– Raise the motorcycle with a lift stand. (📖 p. 58)

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. 65)
– 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. 65)

– Check the steering head bearing and change if necessary.

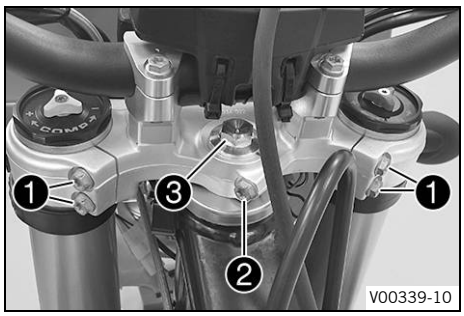
Finishing work

– Remove the motorcycle from the lift stand. (📖 p. 58)

12.12 Adjusting the steering head bearing play

Preparatory work

– Raise the motorcycle with a lift stand. (📖 p. 58)



Main work

– Loosen screws ❶ and 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 stresses.
– Tighten screws ❶.

Guideline

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

– Tighten screw ❷.

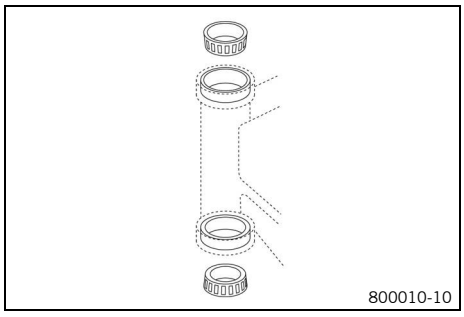
Guideline

Screw, top steering stem	M8	20 Nm (14.8 lbf ft)

Finishing work

– Check the play of the steering head bearing. (📖 p. 64)
– Remove the motorcycle from the lift stand. (📖 p. 58)

12.13 Lubricating the steering head bearing

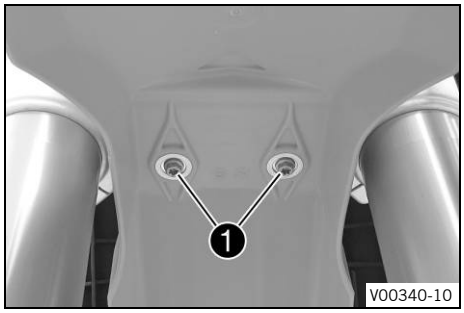


– Remove the lower triple clamp. (📖 p. 61)
– Install the lower triple clamp. (📖 p. 62)

12.14 Removing front fender

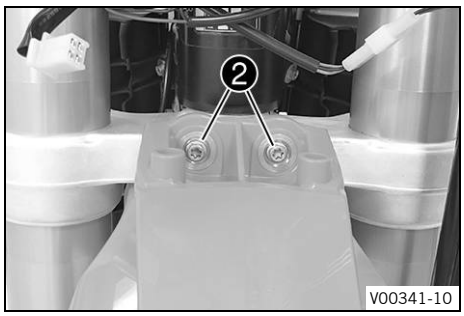
Preparatory work

– Remove the headlight mask with the headlight. (📖 p. 108)



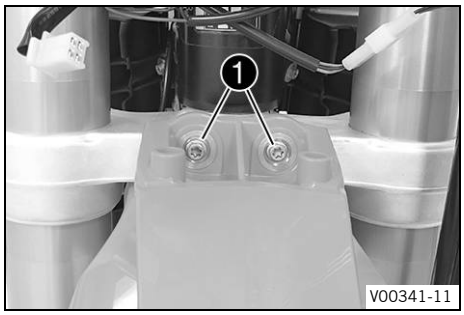
Main work

– Remove screws ❶.



– Remove screws ❷. Take off front fender.

12.15 Installing front fender

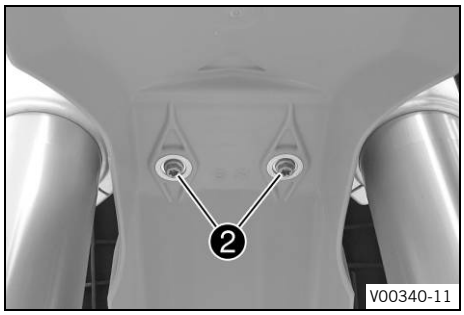


Main work

– Position front fender. Mount and tighten screws ❶.

Guideline

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



– Mount and tighten screws ❷.

Guideline

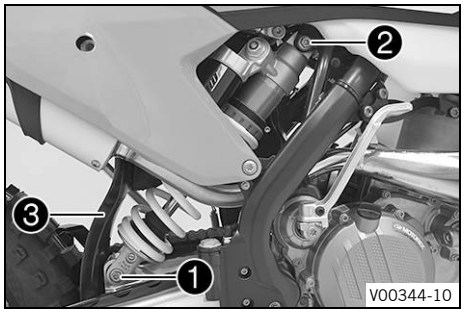
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)

Finishing work

– Install the headlight mask with the headlight. (📖 p. 109)

– Check the headlight setting. (📖 p. 110)

12.16 Removing the shock absorber



Preparatory work

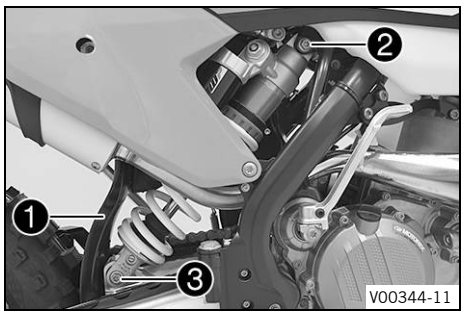
– Raise the motorcycle with a lift stand. (📖 p. 58)

Main work

– Remove screw ❶ and lower the rear wheel with the swingarm as far as possible without blocking the rear wheel. Secure the rear wheel in this position.

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

12.17 Installing the shock absorber



Main work

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

Guideline

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

– Mount and tighten screw ❸.

Guideline

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

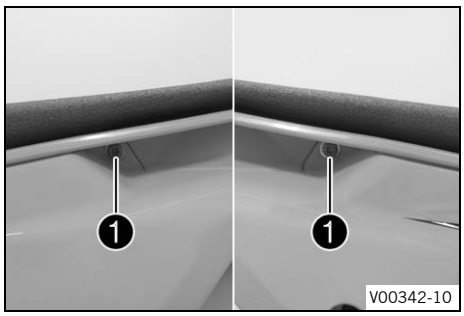
Info

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

Finishing work

– Remove the motorcycle from the lift stand. (📖 p. 58)

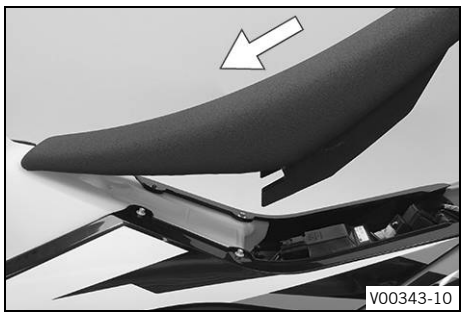
12.18 Removing the seat



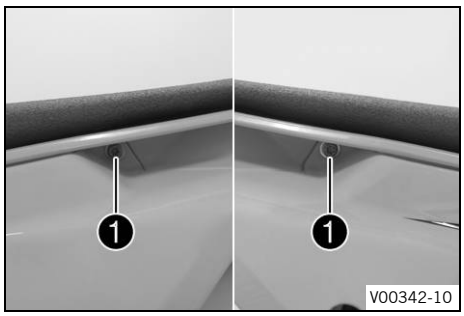
– Remove screws ❶.

– Raise the rear of the seat, pull the seat back, and lift it off.

12.19 Mounting the seat



– Hook in the front of the seat on the collar bushing of the fuel tank, lower it at the rear and push it forward.
– Make sure that the seat is correctly locked in.



– Mount and tighten screws 1.

Guideline

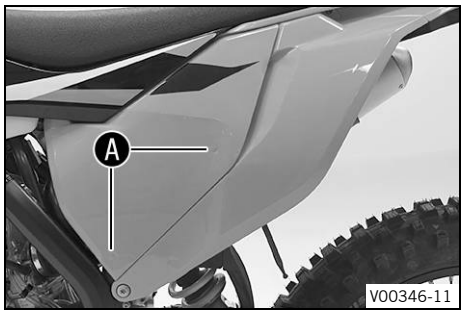
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)

12.20 Removing the air filter box cover

Condition

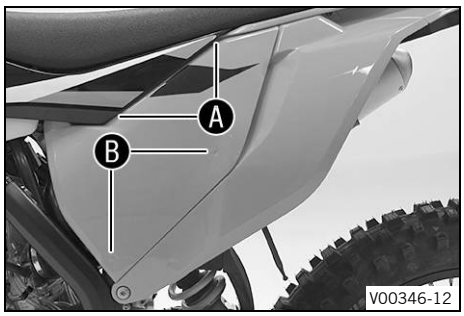
The air filter box cover is secured.

– Remove screw 1.



– Pull off the air filter box cover in area A sideways and take off toward the front.

12.21 Installing the air filter box cover



– Insert the air filter box cover in area Ⓐ and clip it into area Ⓑ.

Condition

The air filter box cover is secured.

– Mount and tighten screw ❶.

Guideline

Screw, air filter box cover	**EJOT PT®** K60x20-Z	3 Nm (2.2 lbf ft)

12.22 Removing the air filter

Note

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

Dust and dirt will enter the engine without an air filter.

– Never start to use the vehicle without an air filter.

Warning

Environmental hazard Hazardous substances cause environmental damage.

– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc., correctly and in compliance with the applicable regulations.

Preparatory work

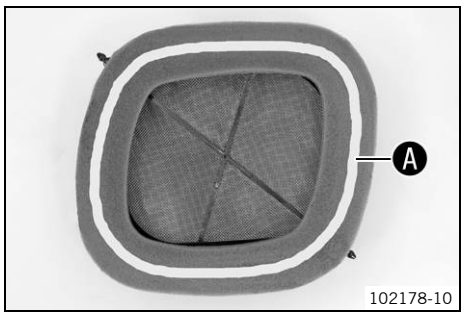
– Remove the air filter box cover. (📖 p. 68)

Main work

– Detach retaining tab ❶. Remove air filter with air filter support.

– Remove air filter from air filter support.

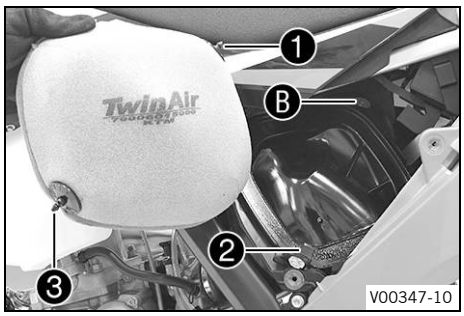
12.23 Installing the air filter



Main work

– Mount the clean air filter on the air filter support.
– Grease the air filter in area A.

Long-life grease (📖 p. 153)



– Insert air filter and position retaining pin 1 in bushing B.
  ✔ The air filter is correctly positioned.
– Insert retaining tab 2.
  ✔ Retaining pin 3 is secured by retaining tab 2.

Info
If the air filter is not mounted correctly, dust and dirt may enter the engine and result in damage.

Finishing work

– Install the air filter box cover. (📖 p. 69)

12.24 Cleaning the air filter and air filter box

Warning
Environmental hazard Hazardous substances cause environmental damage.
– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc., correctly and in compliance with the applicable regulations.

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

Preparatory work

– Remove the air filter box cover. (📖 p. 68)
– Remove the air filter. (📖 p. 69)

Main work

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

Air filter cleaner (📖 p. 153)

Info
Only squeeze the air filter to dry it; never wring it out.

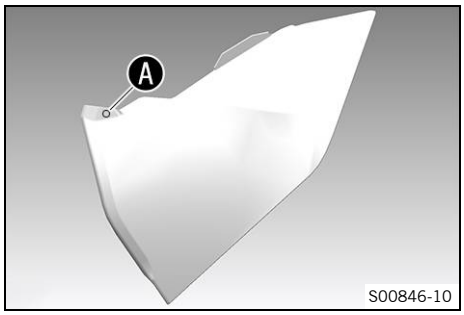
– Oil the dry air filter with a high quality filter oil.

Oil for foam air filter (📖 p. 153)

– Clean the air filter box.
– Clean the intake flange and check it for damage and tightness.

Finishing work
– Install the air filter. (🕮 p. 70)
– Install the air filter box cover. (🕮 p. 69)

12.25 Securing the air filter box cover



Preparatory work
– Remove the air filter box cover. (🕮 p. 68)

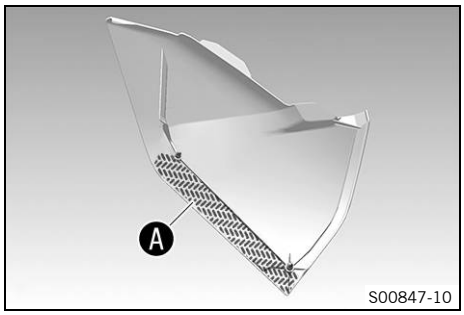
Main work
– Drill a hole at marking A.

Guideline

Diameter	6 mm (0.24 in)

Finishing work
– Install the air filter box cover. (🕮 p. 69)

12.26 Sealing the air filter box



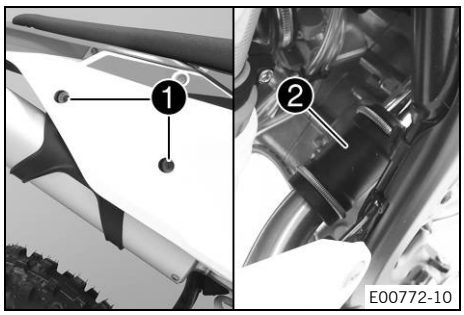
Preparatory work
– Remove the air filter box cover. (🕮 p. 68)

Main work
– Seal the air filter box in the marked area A.

Finishing work
– Install the air filter box cover. (🕮 p. 69)

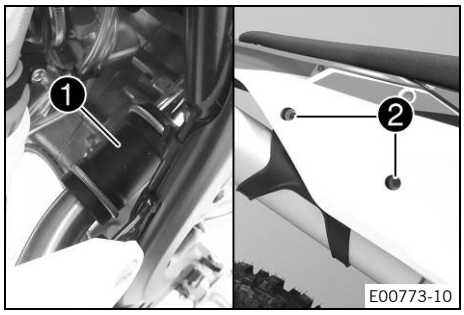
12.27 Removing the main silencer

Warning
Danger of burns The exhaust system gets very hot when the vehicle is driven.
– Allow the exhaust system to cool down before performing any work on the vehicle.



– Remove screws ❶.
– Pull off the main silencer at the rubber sleeve ❷ and the spring ring from the manifold.

12.28 Installing the main silencer



– Mount the main silencer with the rubber sleeve ❶ and spring ring.
– Mount and tighten screws ❷.

Guideline

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

12.29 Changing the glass fiber yarn filling in the main silencer

Warning

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

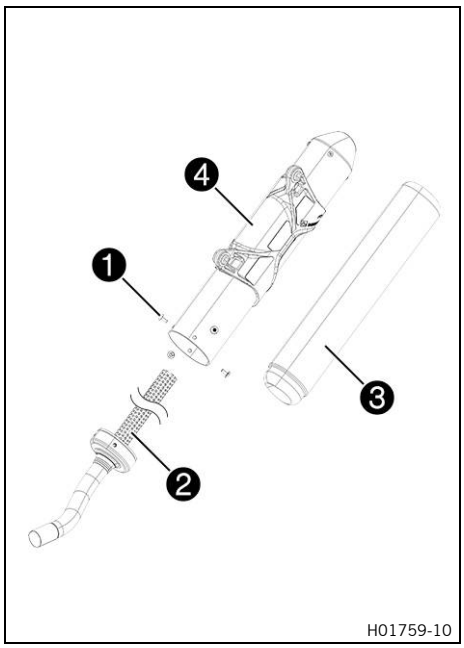
– Allow the exhaust system to cool down before performing any work on the vehicle.

Info

Over time, the fibers of the glass fiber yarn escape and the damper "burns" out.
Not only is the noise level higher, the performance characteristic changes.

Preparatory work

– Remove the main silencer. (📖 p. 71)



Main work

- Remove screws ❶.
- Pull out inner tube ❷.
- Remove the glass fiber yarn filling ❸ from the inner tube.
- Clean the parts that need to be reinstalled and check for damage.
- Fit the new glass fiber yarn filling ❸ into the inner tube.
- Position outer tube ❹ over the inner tube with the new glass fiber yarn filling.
- Mount and tighten screws ❶.

  Guideline

Screws on the main silencer	M5	7 Nm (5.2 lbf ft)

Finishing work

- Install the main silencer. (📖 p. 72)

12.30 Removing the fuel tank

Danger

Fire hazard Fuel is highly flammable.

The fuel in the fuel tank expands when warm and can escape if overfilled.

- Do not refuel the vehicle in the vicinity of open flames or lit cigarettes.
- Switch off the engine for refueling.
- Make sure that no fuel is spilled; particularly not on hot parts of the vehicle.
- If any fuel is spilled, wipe it off immediately.
- Observe the specifications for refueling.

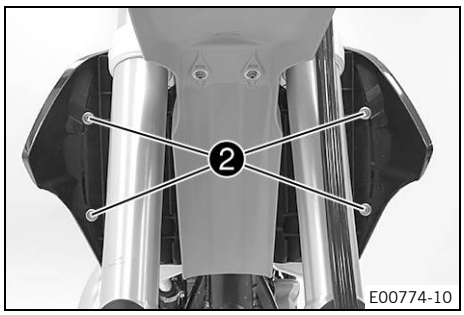
Warning

Danger of poisoning Fuel is poisonous and a health hazard.

- Avoid skin, eye and clothing contact with fuel.
- Immediately consult a doctor if you swallow fuel.
- Do not inhale fuel vapors.
- In case of skin contact, rinse the affected area with plenty of water.
- Rinse the eyes thoroughly with water, and consult a doctor in case of fuel contact with the eyes.
- Change your clothing in case of fuel spills on them.
- Keep fuels correctly in a suitable canister, and out of the reach of children.

Preparatory work

- Remove the seat. (📖 p. 67)

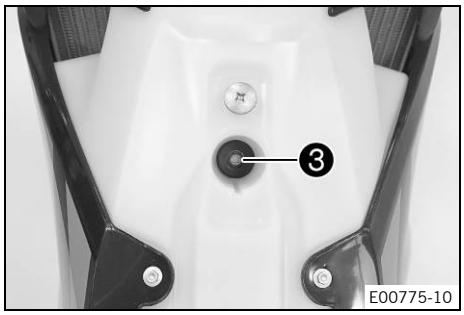


Main work

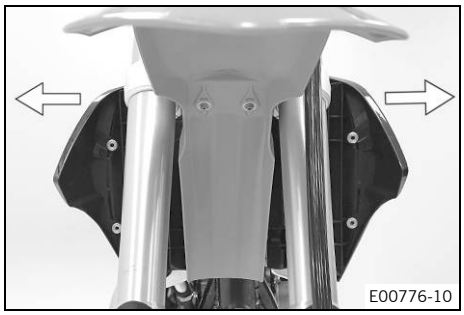
– Turn handle ❶ of the fuel tap to the **OFF** position. (Figure V00326-10 📖 p. 19)
– Pull off the fuel hose.

Info
Remaining fuel may flow out of the fuel hose.

– Remove screws ❷ with the collar bushings.



– Remove screw ❸ with the rubber bushing.
– Remove the tube from the fuel tank breather.

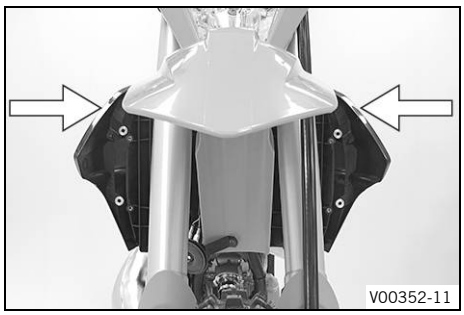


– Pull both spoilers off the sides of the radiator bracket and lift off the fuel tank.

12.31 Installing the fuel tank

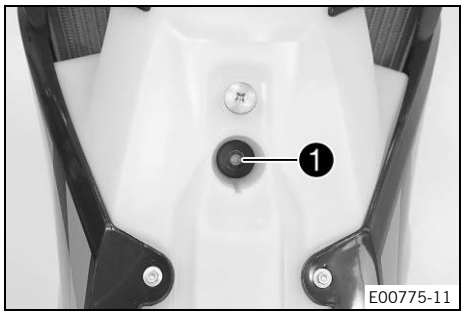
Danger
Fire hazard Fuel is highly flammable.
The fuel in the fuel tank expands when warm and can escape if overfilled.
– Do not refuel the vehicle in the vicinity of open flames or lit cigarettes.
– Switch off the engine for refueling.
– Make sure that no fuel is spilled; particularly not on hot parts of the vehicle.
– If any fuel is spilled, wipe it off immediately.
– Observe the specifications for refueling.

Warning
Danger of poisoning Fuel is poisonous and a health hazard.
– Avoid skin, eye and clothing contact with fuel.
– Immediately consult a doctor if you swallow fuel.
– Do not inhale fuel vapors.
– In case of skin contact, rinse the affected area with plenty of water.
– Rinse the eyes thoroughly with water, and consult a doctor in case of fuel contact with the eyes.
– Change your clothing in case of fuel spills on them.



Main work

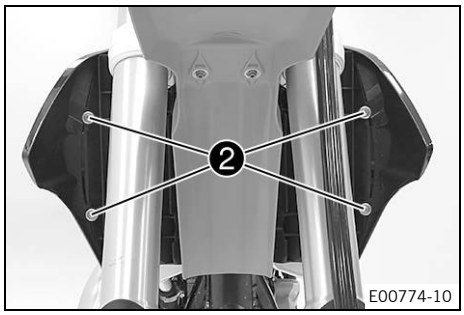
– Check throttle cable routing. (📖 p. 81)
– Position the fuel tank and fit the two spoilers to the sides of the radiator bracket.
– Make sure that no cables or throttle cables are trapped or damaged.



– Attach the fuel tank breather hose.
– Mount and tighten screw ❶ with the rubber bushing.

Guideline

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



– Mount and tighten screws ❷ with the collar bushings.

Guideline

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

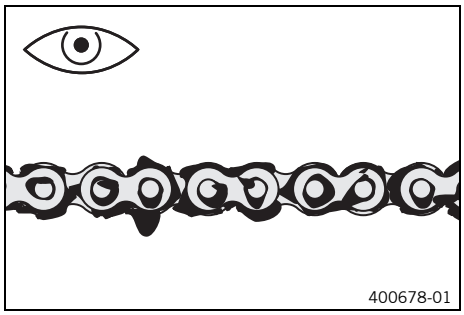
– Connect the fuel hose.

Finishing work

– Mount the seat. (📖 p. 68)

◀

12.32 Checking the chain for dirt



– Check the chain for heavy soiling.
  » If the chain is very dirty:
    – Clean the chain. (📖 p. 76)

◀

12.33 Cleaning the chain

Warning

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

– Remove the lubricant from the tires using a suitable cleaning agent.

Warning

Danger of accidents Oil or grease on the brake discs reduces the braking effect.

– Always keep the brake discs free of oil and grease.
– Clean the brake discs with brake cleaner when necessary.

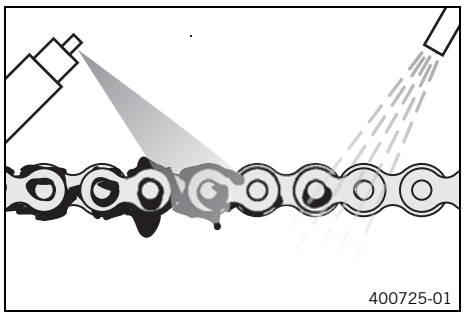
Warning

Environmental hazard Hazardous substances cause environmental damage.

– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc., correctly and in compliance with the applicable regulations.

Info

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



Preparatory work

– Raise the motorcycle with a lift stand. (📖 p. 58)

Main work

– Rinse off loose dirt with a soft jet of water.
– Remove old grease residue with chain cleaner.

Chain cleaner (📖 p. 153)

– After drying, apply chain spray.

Off-road chain spray (📖 p. 153)

Finishing work

– Remove the motorcycle from the lift stand. (📖 p. 58)

12.34 Checking the chain tension

Warning

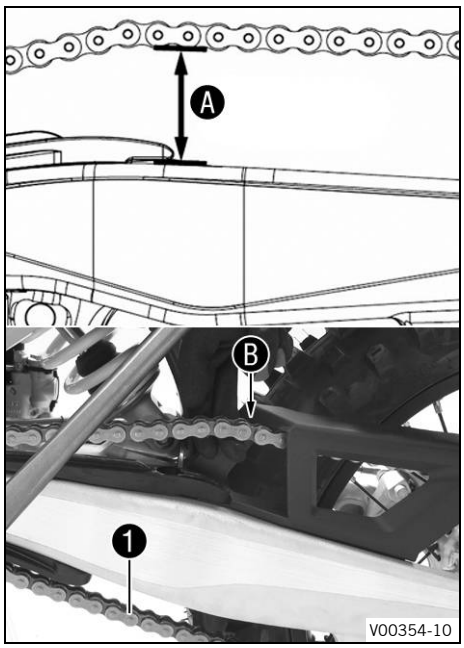
Danger of accidents Incorrect chain tension damages components and results in accidents.

If the chain is tensioned too much, the chain, engine sprocket, rear sprocket, transmission and rear wheel bearings wear more quickly. Some components may break if overloaded.
If the chain is too loose, the chain may fall off the engine sprocket or the rear sprocket. As a result, the rear wheel locks or the engine will be damaged.

– Check the chain tension regularly.
– Set the chain tension in accordance with the specification.

Preparatory work

– Raise the motorcycle with a lift stand. (📖 p. 58)



Main work

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

Info

The bottom chain section ❶ must be taut.
When the chain guard is mounted, it must be possible to pull up the chain at least to the point where it makes contact with chain guard Ⓑ.
Chain wear is not always even, so you should repeat this measurement at different chain positions.

Chain tension	55 … 58 mm (2.17 … 2.28 in)

» If the chain tension does not meet specifications:
– Adjust the chain tension. (📖 p. 77)

Finishing work

– Remove the motorcycle from the lift stand. (📖 p. 58)

12.35 Adjusting the chain tension

Warning

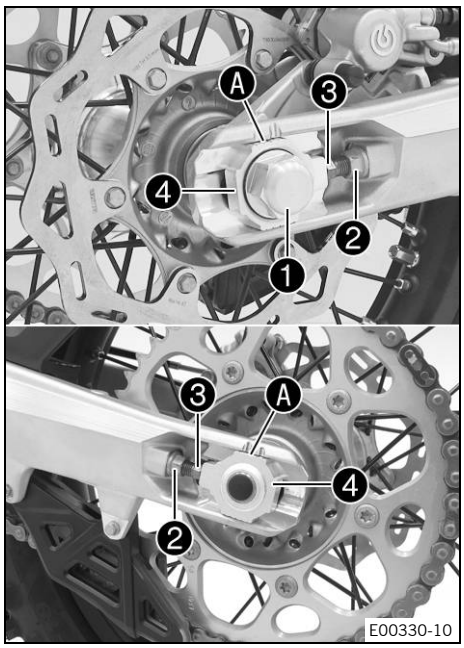
Danger of accidents Incorrect chain tension damages components and results in accidents.

If the chain is tensioned too much, the chain, engine sprocket, rear sprocket, transmission and rear wheel bearings wear more quickly. Some components may break if overloaded.
If the chain is too loose, the chain may fall off the engine sprocket or the rear sprocket. As a result, the rear wheel locks or the engine will be damaged.

– Check the chain tension regularly.
– Set the chain tension in accordance with the specification.

Preparatory work

– Raise the motorcycle with a lift stand. (📖 p. 58)
– Check the chain tension. (📖 p. 76)



Main work

– Loosen nut ❶.
– Loosen nuts ❷.
– Adjust the chain tension by turning adjusting screws ❸ left and right.

Guideline

Chain tension	55 … 58 mm (2.17 … 2.28 in)
Turn adjusting screws ❸ on the left and right so that the markings on the left and right chain adjusters are in the same position relative to reference marks Ⓐ. The rear wheel is then correctly aligned.	

– Tighten nuts ❷.
– Make sure that chain adjusters ❹ are fitted correctly on adjusting screws ❸.
– Tighten nut ❶.

Guideline

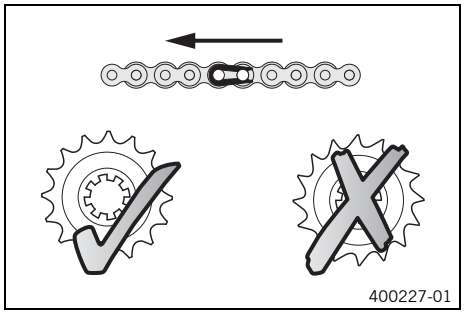
Nut, rear wheel spindle	M20x1.5	80 Nm (59 lbf ft)

Info
The wide adjustment range of the chain adjusters (32 mm (1.18 in)) enables different secondary ratios with the same chain length.
Chain adjusters ❹ can be turned by 180°.

Finishing work

– Remove the motorcycle from the lift stand. (📖 p. 58)

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



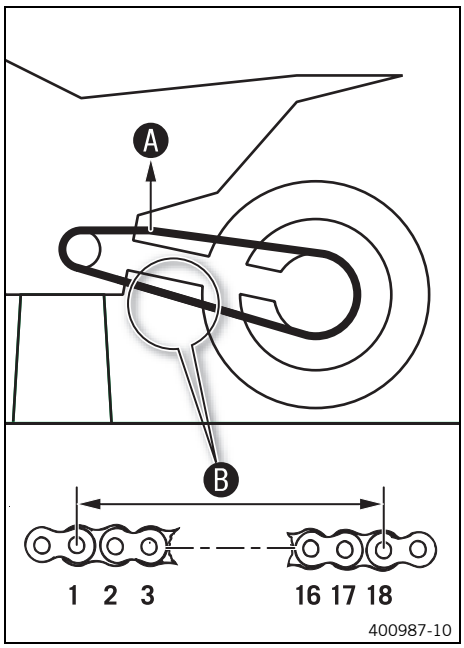
Preparatory work

– Raise the motorcycle with a lift stand. (📖 p. 58)

Main work

– Shift the transmission to idle.
– Check the rear sprocket and motor sprocket for wear.
  » If the rear sprocket and motor sprocket are worn:
    – Change the drivetrain kit.

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 Ⓐ.

Guideline

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

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

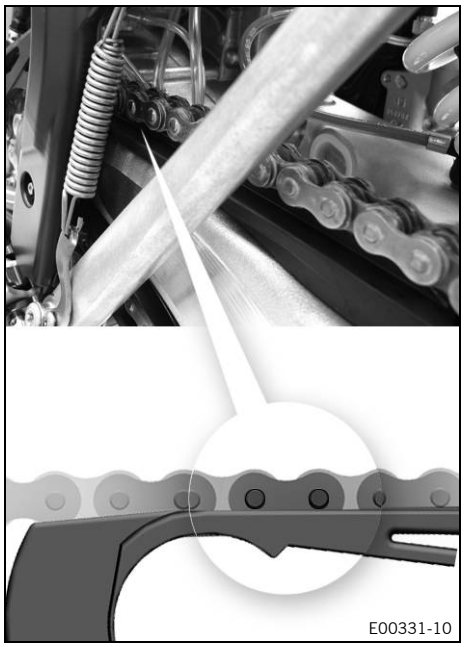
Info
Chain wear is not always even, so you should repeat this measurement at different chain positions.

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

» If distance Ⓑ is greater than the specified measurement:

– Change the drivetrain kit.

Info
When the chain is replaced, the rear sprocket and engine sprocket should also be changed. New chains wear out faster on old, worn sprockets.



– 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.

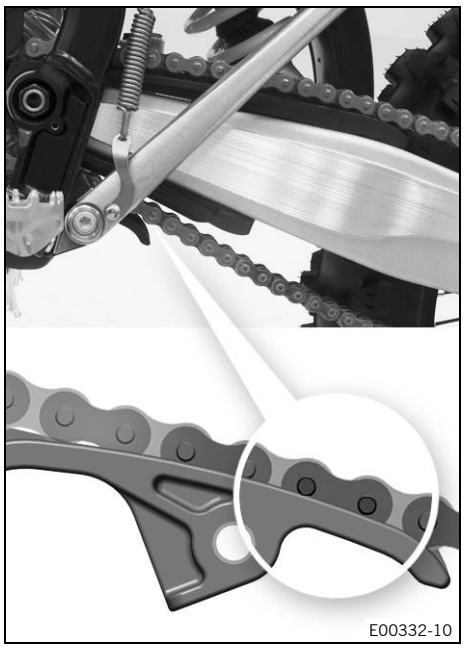
– Check that the chain sliding guard is firmly seated.

» If the chain sliding guard is loose:

– Tighten the screws on the chain sliding guard.

Guideline

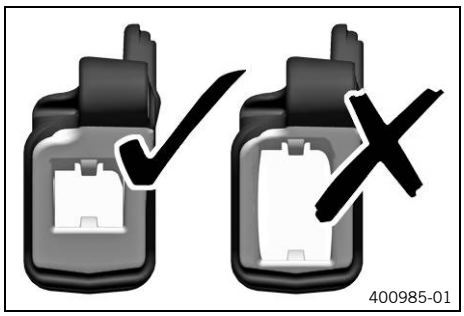
Screw, chain sliding guard	M6	14 Nm (10.3 lbf ft) **Loctite®243™**


E00332-10

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

    Guideline

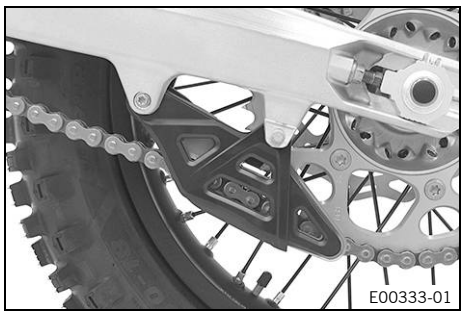
Screw, chain sliding piece	M8	15 Nm (11.1 lbf ft)


400985-01

– 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.


E00333-01

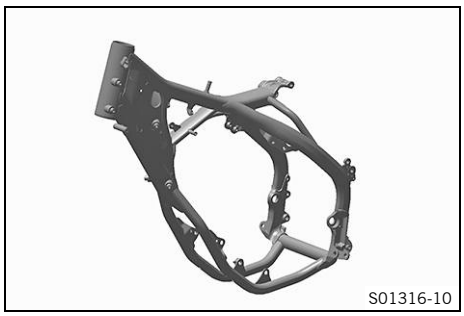
– Check that the chain guide is firmly seated.
  » If the chain guide is loose:
    – Tighten the screws on the chain guide.

    Guideline

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

Finishing work
– Remove the motorcycle from the lift stand. (p. 58)

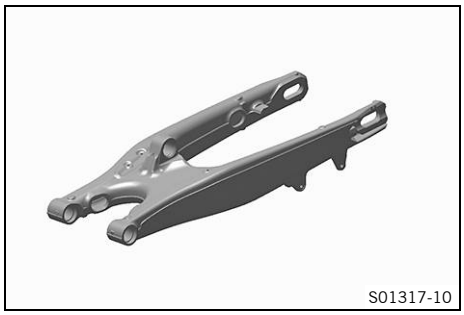
12.37 Checking the frame


S01316-10

– Check the frame for cracks and deformation.
  » If the frame exhibits cracks or deformation due to a mechanical impact:
    – Change the frame.

Info
Always replace a frame that has been damaged due to a mechanical impact. Repair of the frame is not authorized by KTM.

12.38 Checking the swingarm


S01317-10

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

Info
Always change a damaged swingarm. Repair of the swingarm is not authorized by KTM.

12.39 Checking throttle cable routing

Warning
Danger of accidents The throttle cable may slip out of the guide if routed incorrectly.
The throttle slide will then no longer be closed and the speed can no longer be controlled.
– Make sure that the throttle cable routing and the play in throttle cable complies with the specification.

Preparatory work
– Remove the seat. (p. 67)
– Remove the fuel tank. (p. 73)

Main work

– Check throttle cable routing.

The throttle cable must be routed behind the handlebar, on the right of the frame, and to the carburetor. The throttle cable must be secured behind the fuel tank contact area rubber band.

» If the throttle cable routing is not as specified:

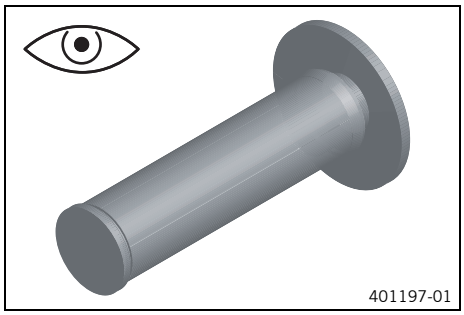
– Correct throttle cable routing.

Finishing work

– Install the fuel tank. (🔧 (📖 p. 74)

– Mount the seat. (📖 p. 68)

12.40 Checking the rubber grip



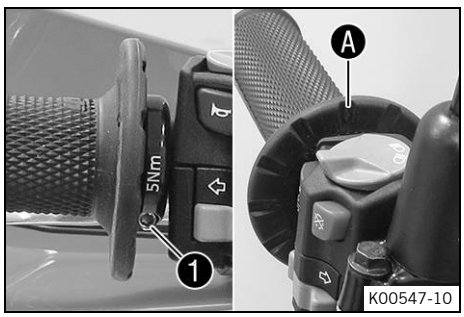
– Check the rubber grips on the handlebar for damage, wear, and looseness.

Info

The rubber grips are vulcanized onto a sleeve on the left and onto the handle tube of the throttle grip on the right. The left sleeve is clamped onto the handlebar. The rubber grip can only be replaced with the sleeve or the throttle tube.

» If a rubber grip is damaged or worn:

– Change the rubber grip.



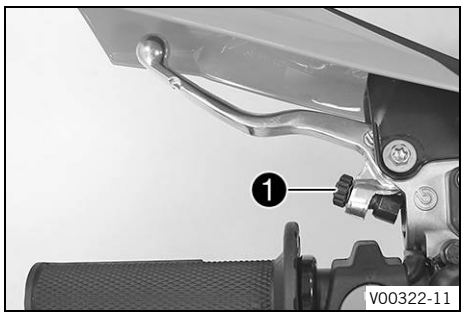
– Check that screw ❶ is firmly seated.

Guideline

Screw, fixed grip	M4	5 Nm (3.7 lbf ft) **Loctite®243™**

Diamond Ⓐ must be located at the top.

12.41 Adjusting the basic position of the clutch lever



– Adjust the basic position of the clutch lever to your hand size by turning adjusting screw ❶.

Info

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

12.42 Checking/correcting the fluid level of the hydraulic clutch

Warning

Skin irritation Brake fluid causes skin irritation.

– Keep brake fluid out of the reach of children.
– Wear suitable protective clothing and safety glasses.
– Do not allow brake fluid to come into contact with the skin, the eyes or clothing.
– Consult a doctor immediately if brake fluid has been swallowed.
– Rinse the affected area with plenty of water in the event of contact with the skin.
– Rinse eyes thoroughly with water immediately and consult a doctor if brake fluid comes into contact with the eyes.
– If brake fluid spills on to your clothing, change the clothing.

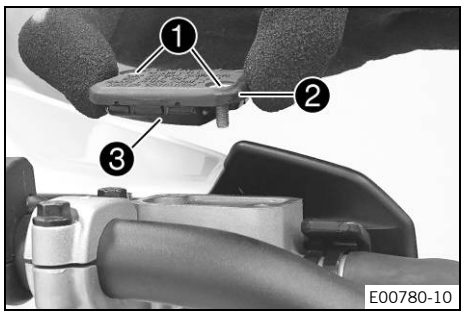
Warning

Environmental hazard Hazardous substances cause environmental damage.

– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc., correctly and in compliance with the applicable regulations.

Info

The fluid level rises with increasing wear of the clutch facing discs.
Never use DOT 5 brake fluid. It is silicone-based and purple in color. Oil seals and clutch lines are not designed for DOT 5 brake fluid.
Avoid contact between brake fluid and painted parts. Brake fluid attacks paint.
Only use clean brake fluid from a sealed container.



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

Fluid level below container rim	4 mm (0.16 in)

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

Brake fluid DOT 4 / DOT 5.1 (📖 p. 151)

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

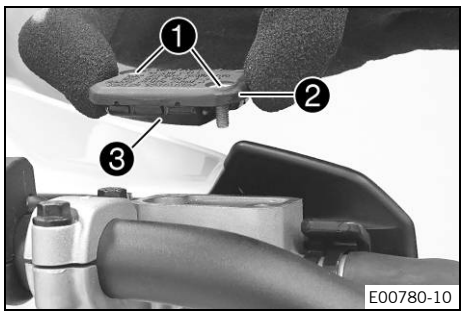
Info
Clean up overflowed or spilled brake fluid immediately with water.

12.43 Changing the hydraulic clutch fluid

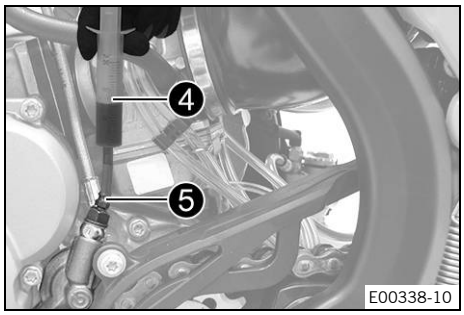
Warning
Skin irritation Brake fluid causes skin irritation.
– Keep brake fluid out of the reach of children.
– Wear suitable protective clothing and safety glasses.
– Do not allow brake fluid to come into contact with the skin, the eyes or clothing.
– Consult a doctor immediately if brake fluid has been swallowed.
– Rinse the affected area with plenty of water in the event of contact with the skin.
– Rinse eyes thoroughly with water immediately and consult a doctor if brake fluid comes into contact with the eyes.
– If brake fluid spills on to your clothing, change the clothing.

Warning
Environmental hazard Hazardous substances cause environmental damage.
– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc., correctly and in compliance with the applicable regulations.

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



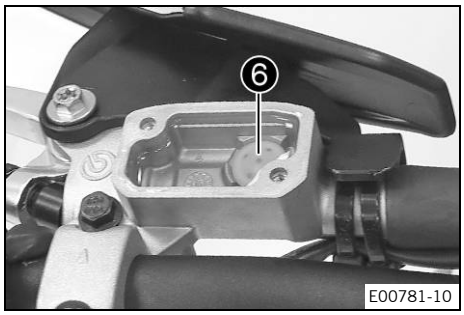
– Move the clutch fluid reservoir mounted on the handlebar to a horizontal position.
– Remove screws ❶.
– Remove cover ❷ with membrane ❸.



– Fill bleeding syringe ❹ with the appropriate hydraulic fluid.

Bleed syringe (50329050000)
Brake fluid DOT 4 / DOT 5.1 (📖 p. 151)

– On the clutch slave cylinder, remove bleeder screw ❺ and mount bleeding syringe ❹.



– Now inject the fluid into the system until it emerges from drill hole ❻ of the master cylinder without bubbles.
– Now and then, extract fluid from the master cylinder reservoir to prevent overflow.
– Remove the bleeding syringe. Mount and tighten screws bleeder screw.
– Correct the fluid level of the hydraulic clutch.

  Guideline

Fluid level below container rim	4 mm (0.16 in)

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

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

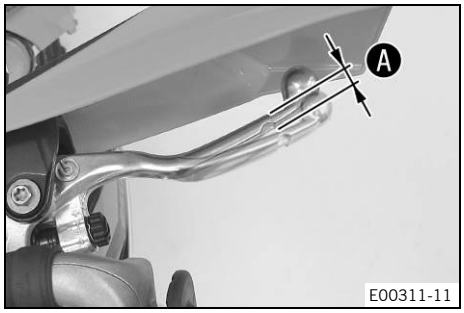
13.1 Checking the free travel of the hand brake lever

Warning

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

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

– Set the free travel on the hand brake lever in accordance with the specification.



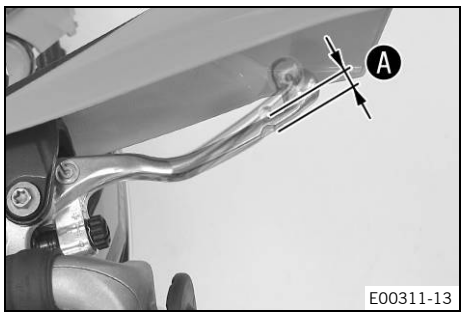
(125 XC-W EU)

– Push the hand brake lever to the handlebar and check free travel A.

Free travel of hand brake lever	≥ 3 mm (≥ 0.12 in)

» If the free travel does not match the specification:

– Adjust the free travel of the hand brake lever. (📖 p. 86)



(150 XC-W US)

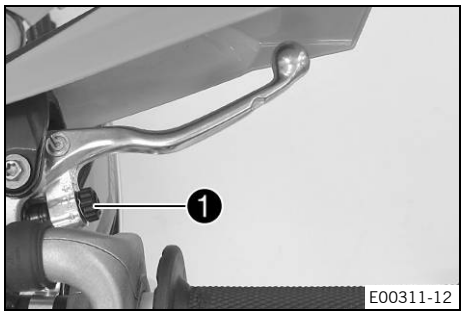
– Push the hand brake lever forward and check free travel A.

Free travel of hand brake lever	≥ 3 mm (≥ 0.12 in)

» If the free travel does not match the specification:

– Adjust the basic position of the hand brake lever. (📖 p. 87)

13.2 Adjusting free travel of hand brake lever (125 XC-W EU)



– Check the free travel of the hand brake lever. (📖 p. 86)

– Adjust the free travel of the hand brake lever with the adjustment screw 1.

Info

Turn the adjusting screw clockwise to reduce free travel. The pressure point moves away from the handlebar.

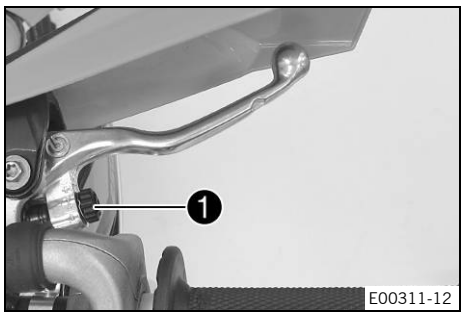
Turn the adjusting screw counterclockwise to increase free travel. The pressure point moves towards the handlebar.

The range of adjustment is limited.

Turn the adjusting screw by hand only, and do not apply any force.

Do not make any adjustments while riding!

13.3 Adjusting the basic position of the hand brake lever (150 XC-W US)

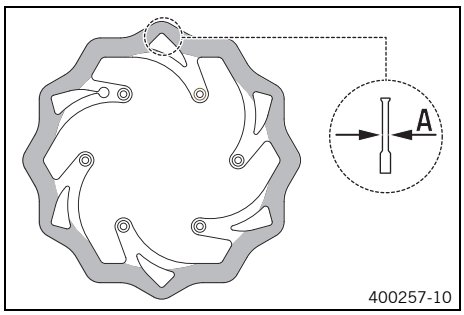


– Check the free travel of the hand brake lever. (📖 p. 86)
– Adjust the basic setting of the hand brake lever to your hand size by turning adjusting screw 1.

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

13.4 Checking the brake discs

Warning
Danger of accidents Worn-out brake discs reduce the braking effect.
– Make sure that worn-out brake discs are replaced immediately. (Your authorized KTM workshop will be glad to help.)



– Check the front and rear brake disc thickness at multiple points for the dimension A.

Info
Wear reduces the thickness of the brake disc around the contact surface of 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 front brake disc. 🔧
  – Change the rear brake disc. 🔧
– Check the front and rear brake discs for damage, cracking, and deformation.
» If the brake disc exhibits damage, cracking, or deformation:
  – Change the front brake disc. 🔧
  – Change the rear brake disc. 🔧

13.5 Checking the front brake fluid level

Warning

Danger of accidents An insufficient brake fluid level will cause the brake system to fail.

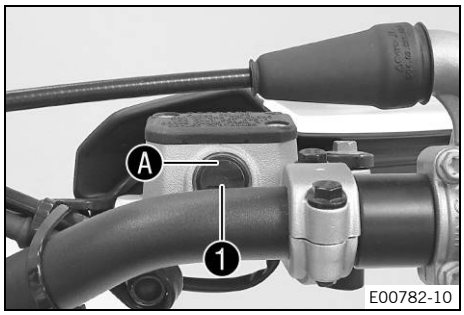
If the brake fluid level drops below the specified marking or the specified value, the brake system is leaking or the brake linings are worn down.

– Check the brake system and do not continue riding until the problem is eliminated. (Your authorized KTM workshop will be glad to help.)

Warning

Danger of accidents Old brake fluid reduces the braking effect.

– Make sure that brake fluid for the front and rear brake is changed in accordance with the service schedule. (Your authorized KTM workshop will be glad to help.)



– Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
– Check the brake fluid level in level viewer 1.
  » If an air bubble is visible in upper range of the level viewer A:
    – Add front brake fluid. (📖 p. 88)

13.6 Adding front brake fluid

Warning

Danger of accidents An insufficient brake fluid level will cause the brake system to fail.

If the brake fluid level drops below the specified marking or the specified value, the brake system is leaking or the brake linings are worn down.

– Check the brake system and do not continue riding until the problem is eliminated. (Your authorized KTM workshop will be glad to help.)

Warning

Skin irritation Brake fluid causes skin irritation.

– Keep brake fluid out of the reach of children.
– Wear suitable protective clothing and safety glasses.
– Do not allow brake fluid to come into contact with the skin, the eyes or clothing.
– Consult a doctor immediately if brake fluid has been swallowed.
– Rinse the affected area with plenty of water in the event of contact with the skin.
– Rinse eyes thoroughly with water immediately and consult a doctor if brake fluid comes into contact with the eyes.
– If brake fluid spills on to your clothing, change the clothing.

Warning

Danger of accidents Old brake fluid reduces the braking effect.

– Make sure that brake fluid for the front and rear brake is changed in accordance with the service schedule. (Your authorized KTM workshop will be glad to help.)

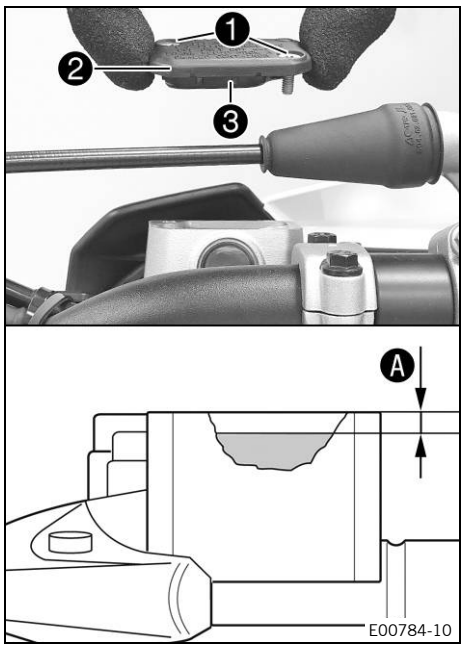
Warning

Environmental hazard Hazardous substances cause environmental damage.

– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc., correctly and in compliance with the applicable regulations.

Info

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



– Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
– Remove screws 1.
– Remove cover 2 with membrane 3.
– 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. 151)

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

Info

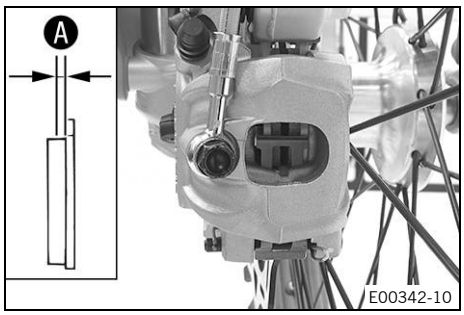
Clean up overflowed or spilled brake fluid immediately with water.

13.7 Checking the front brake linings

Warning

Danger of accidents Worn-out brake linings reduce the braking effect.

– Ensure that worn-out brake linings are replaced immediately. (Your authorized KTM workshop will be glad to help.)



– Check the brake linings for minimum thickness A.

Minimum thickness A	≥ 1 mm (≥ 0.04 in)

» If the minimum thickness is less than specified:
– Change the front brake linings. 🔧 (📖 p. 90)

– Check the brake linings for damage and cracking.

» If damage or wear is encountered:
– Change the front brake linings. 🔧 (📖 p. 90)

13.8 Changing the front brake linings

Warning

Danger of accidents Incorrect maintenance will cause the brake system to fail.

– Ensure that service work and repairs are performed professionally. (Your authorized KTM workshop will be glad to help.)

Warning

Skin irritation Brake fluid causes skin irritation.

– Keep brake fluid out of the reach of children.
– Wear suitable protective clothing and safety glasses.
– Do not allow brake fluid to come into contact with the skin, the eyes or clothing.
– Consult a doctor immediately if brake fluid has been swallowed.
– Rinse the affected area with plenty of water in the event of contact with the skin.
– Rinse eyes thoroughly with water immediately and consult a doctor if brake fluid comes into contact with the eyes.
– If brake fluid spills on to your clothing, change the clothing.

Warning

Danger of accidents Old brake fluid reduces the braking effect.

– Make sure that brake fluid for the front and rear brake is changed in accordance with the service schedule. (Your authorized KTM workshop will be glad to help.)

Warning

Danger of accidents Oil or grease on the brake discs reduces the braking effect.

– Always keep the brake discs free of oil and grease.
– Clean the brake discs with brake cleaner when necessary.

Warning

Danger of accidents Brake linings which have not been approved alter the braking efficiency.

Not all brake linings are tested and approved for KTM motorcycles. The structure and friction coefficient of the brake linings, and thus their brake power, may vary greatly from that of original brake linings.
If brake linings are used that differ from the original equipment, compliance with the original homologation is not guaranteed. In this case, the vehicle no longer corresponds to its condition at delivery and the warranty shall be void.

– Only use brake linings approved and recommended by KTM.

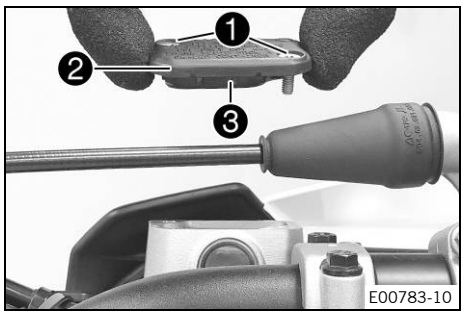
Warning

Environmental hazard Hazardous substances cause environmental damage.

– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc., correctly and in compliance with the applicable regulations.

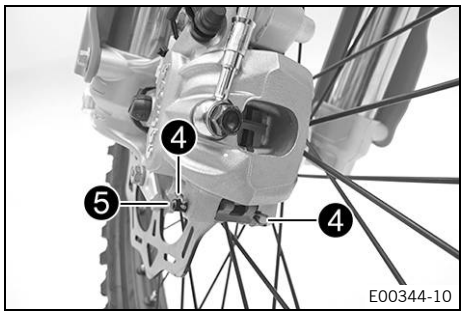
Info

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

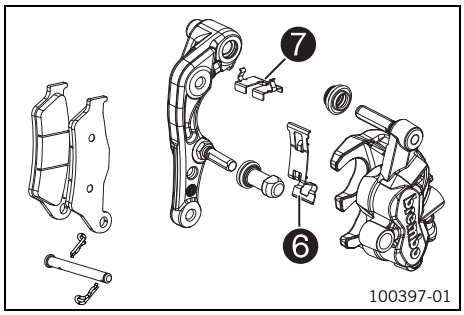


– Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
– Remove screws 1.
– Remove cover 2 with membrane 3.
– Manually press the brake caliper toward the brake disc to push back the brake pistons. Ensure that brake fluid does not flow out of the brake fluid reservoir, if necessary extract excess.

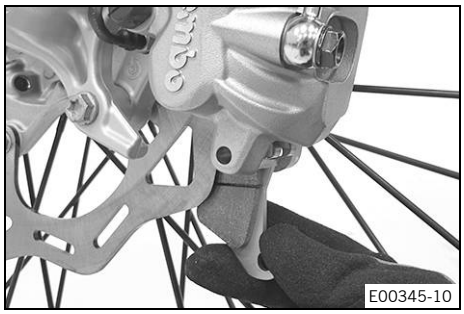
Info
Make sure that you do not press the brake caliper against the spokes when pushing back the brake pistons.



– Remove cotter pins 4, pull out pin 5, and remove the brake linings.
– Clean the brake caliper and brake caliper support.



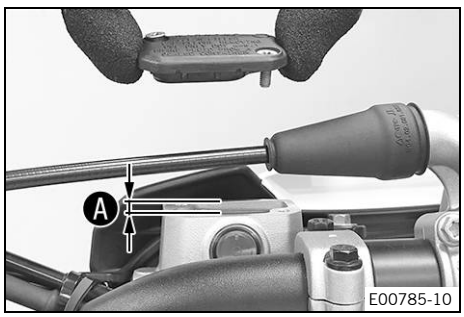
– Check that leaf spring 6 in the brake caliper and sliding plate 7 in the brake caliper support are seated correctly.



– Insert the new brake linings, insert the pin, and mount the cotter pins.

Info
Always change the brake linings in pairs.

– Operate the hand brake lever repeatedly until the brake linings are in contact with the brake disc and there is a pressure point.



– Correct the brake fluid quantity to level A.

Guideline

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

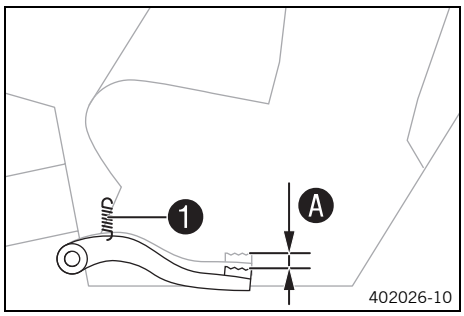
Brake fluid DOT 4 / DOT 5.1 (📖 p. 151)

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

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

13.9 Checking the free travel of foot brake lever

Warning
Danger of accidents The brake system fails in the event of overheating.
If there is no free travel on the foot brake lever, pressure builds up in the brake system on the rear brake.
– Set the free travel on the foot brake lever in accordance with the specification.



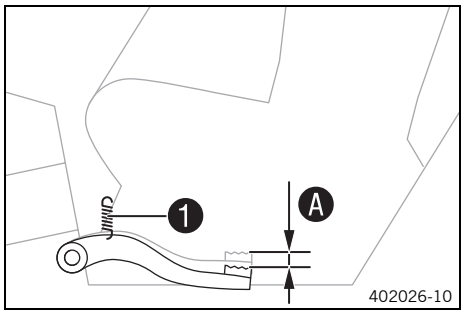
– Disconnect spring 1.
– Move the foot brake lever back and forth between the end stop and the contact to the foot brake cylinder piston and check free travel A.
Guideline

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

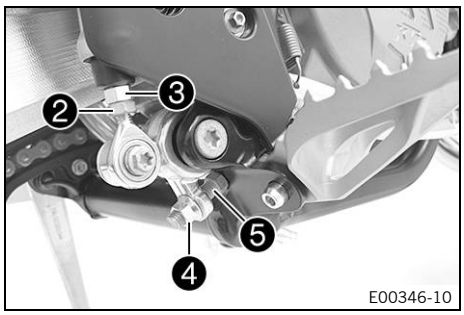
» If the free travel does not meet specifications:
– Adjust the basic position of the foot brake lever. (p. 92)
– Reconnect spring 1.

13.10 Adjusting the basic position of the foot brake lever

Warning
Danger of accidents The brake system fails in the event of overheating.
If there is no free travel on the foot brake lever, pressure builds up in the brake system on the rear brake.
– Set the free travel on the foot brake lever in accordance with the specification.



– Disconnect spring 1.



– Loosen nut ❷ and, with push rod ❸, turn it back until you have maximum free travel.
– To adjust the basic position of the foot brake lever to individual requirements, loosen nut ❹ and turn screw ❺ accordingly.

Info
The range of adjustment is limited.

– Turn push rod ❸ accordingly until you have free travel Ⓐ. If necessary, adjust the basic position of the foot brake lever.

Guideline

Free travel at foot brake lever	3 … 5 mm (0.12 … 0.2 in)

– Hold screw ❺ and tighten nut ❹.

Guideline

Nut, foot brake lever stop	M8	20 Nm (14.8 lbf ft)

– Hold push rod ❸ and tighten nut ❷.

Guideline

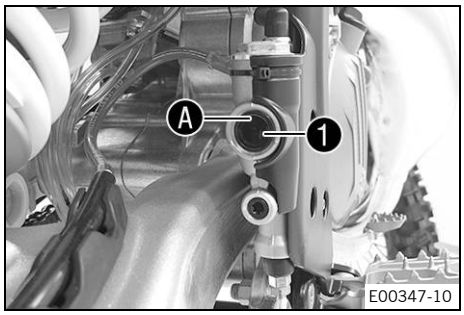
Remaining nuts, chassis	M6	10 Nm (7.4 lbf ft)

– Reconnect spring ❶.

13.11 Checking the rear brake fluid level

Warning
Danger of accidents An insufficient brake fluid level will cause the brake system to fail.
If the brake fluid level drops below the specified marking or the specified value, the brake system is leaking or the brake linings are worn down.
– Check the brake system and do not continue riding until the problem is eliminated. (Your authorized KTM workshop will be glad to help.)

Warning
Danger of accidents Old brake fluid reduces the braking effect.
– Make sure that brake fluid for the front and rear brake is changed in accordance with the service schedule. (Your authorized KTM workshop will be glad to help.)



– Stand the vehicle upright.
– Check the brake fluid level in the viewer ❶.
  » If the fluid has dropped below marking Ⓐ in the level viewer:
    – Add rear brake fluid. (📖 p. 94)

13.12 Adding rear brake fluid

Warning

Danger of accidents An insufficient brake fluid level will cause the brake system to fail.

If the brake fluid level drops below the specified marking or the specified value, the brake system is leaking or the brake linings are worn down.

– Check the brake system and do not continue riding until the problem is eliminated. (Your authorized KTM workshop will be glad to help.)

Warning

Skin irritation Brake fluid causes skin irritation.

– Keep brake fluid out of the reach of children.
– Wear suitable protective clothing and safety glasses.
– Do not allow brake fluid to come into contact with the skin, the eyes or clothing.
– Consult a doctor immediately if brake fluid has been swallowed.
– Rinse the affected area with plenty of water in the event of contact with the skin.
– Rinse eyes thoroughly with water immediately and consult a doctor if brake fluid comes into contact with the eyes.
– If brake fluid spills on to your clothing, change the clothing.

Warning

Danger of accidents Old brake fluid reduces the braking effect.

– Make sure that brake fluid for the front and rear brake is changed in accordance with the service schedule. (Your authorized KTM workshop will be glad to help.)

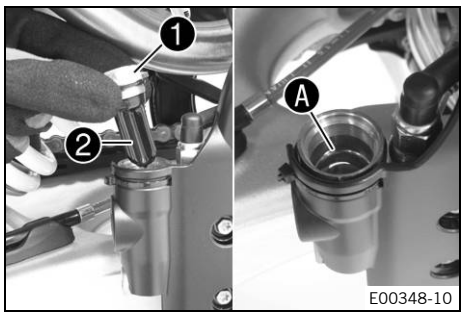
Warning

Environmental hazard Hazardous substances cause environmental damage.

– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc., correctly and in compliance with the applicable regulations.

Info

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



Preparatory work

– Check the brake linings of the rear brake. (📖 p. 95)

Main work

– Stand the vehicle upright.
– Remove screw cap ❶ with membrane ❷ and the O-ring.
– Add brake fluid to level Ⓐ.

Brake fluid DOT 4 / DOT 5.1 (📖 p. 151)

– Mount the screw cap with the membrane and the O-ring.

Info

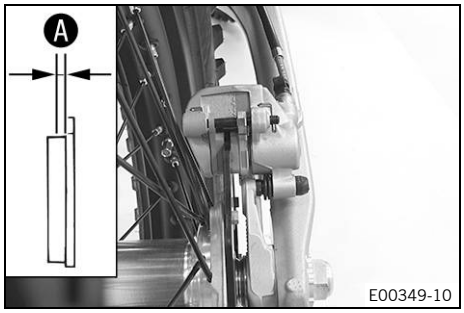
Clean up overflowed or spilled brake fluid immediately with water.

13.13 Checking the brake linings of the rear brake

Warning

Danger of accidents Worn-out brake linings reduce the braking effect.

– Ensure that worn-out brake linings are replaced immediately. (Your authorized KTM workshop will be glad to help.)



– Check the brake linings for minimum thickness Ⓐ.

Minimum thickness Ⓐ	≥ 1 mm (≥ 0.04 in)

» If the minimum thickness is less than specified:

– Change the rear brake linings. 🔧 (📖 p. 95)

– Check the brake linings for damage and cracking.

» If damage or wear is encountered:

– Change the rear brake linings. 🔧 (📖 p. 95)

13.14 Changing the rear brake linings 🔧

Warning

Danger of accidents Incorrect maintenance will cause the brake system to fail.

– Ensure that service work and repairs are performed professionally. (Your authorized KTM workshop will be glad to help.)

Warning

Skin irritation Brake fluid causes skin irritation.

– Keep brake fluid out of the reach of children.
– Wear suitable protective clothing and safety glasses.
– Do not allow brake fluid to come into contact with the skin, the eyes or clothing.
– Consult a doctor immediately if brake fluid has been swallowed.
– Rinse the affected area with plenty of water in the event of contact with the skin.
– Rinse eyes thoroughly with water immediately and consult a doctor if brake fluid comes into contact with the eyes.
– If brake fluid spills on to your clothing, change the clothing.

Warning

Danger of accidents Old brake fluid reduces the braking effect.

– Make sure that brake fluid for the front and rear brake is changed in accordance with the service schedule. (Your authorized KTM workshop will be glad to help.)

Warning

Danger of accidents Brake linings which have not been approved alter the braking efficiency.

Not all brake linings are tested and approved for KTM motorcycles. The structure and friction coefficient of the brake linings, and thus their brake power, may vary greatly from that of original brake linings.
If brake linings are used that differ from the original equipment, compliance with the original homologation is not guaranteed. In this case, the vehicle no longer corresponds to its condition at delivery and the warranty shall be void.

– Only use brake linings approved and recommended by KTM.

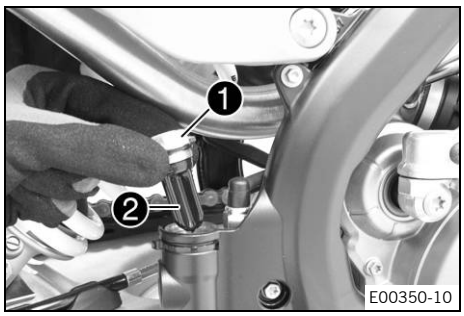
Warning

Environmental hazard Hazardous substances cause environmental damage.

– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc., correctly and in compliance with the applicable regulations.

Info

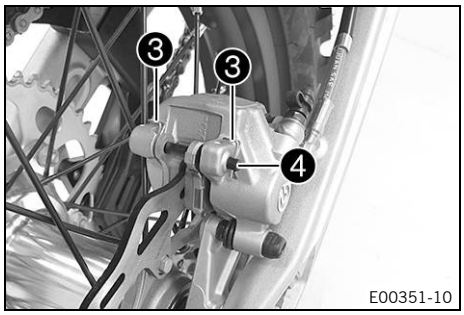
Never use DOT 5 brake fluid. It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.
Avoid contact between brake fluid and painted parts. Brake fluid attacks paint.
Only use clean brake fluid from a sealed container.



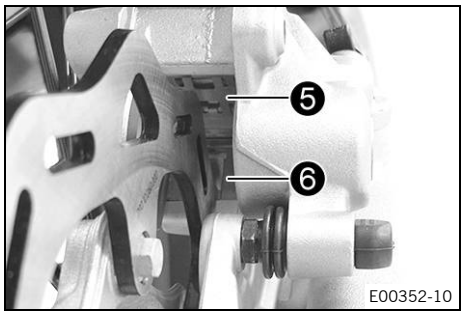
– Stand the vehicle upright.
– Remove screw cap ❶ with membrane ❷ and the O-ring.
– Press the brake piston back into the basic position and ensure that brake fluid does not flow out of the brake fluid reservoir, if necessary extract excess.

Info

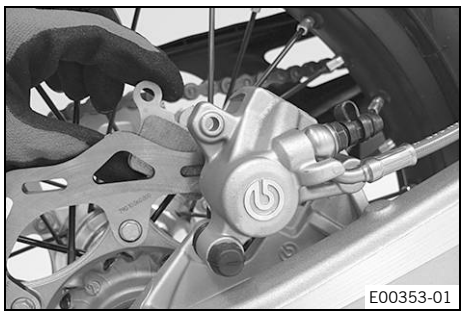
Make sure when pushing back the brake piston that you do not press the brake caliper against the spokes.



– Remove cotter pins ❸, pull out pin ❹, and remove the brake linings.
– Clean the brake caliper and brake caliper support.



– Check that leaf spring ❺ in the brake caliper and sliding plate ❻ in the brake caliper support are seated correctly.

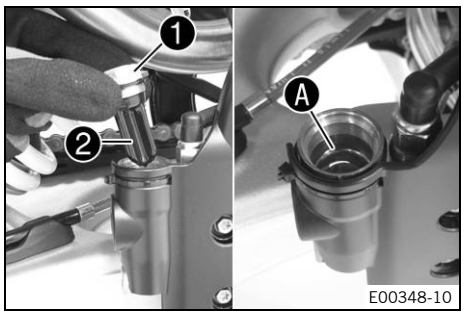


– Insert the new brake linings, insert the pin, and mount the cotter pins.

Info

Always change the brake linings in pairs.

– Operate the foot brake lever repeatedly until the brake linings are in contact with the brake disc and there is a pressure point.



– Add brake fluid to level Ⓐ.

Brake fluid DOT 4 / DOT 5.1 (📖 p. 151)

– Mount screw cap ❶ with membrane ❷ and O-ring.

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

14.1 Removing the front wheel

Preparatory work

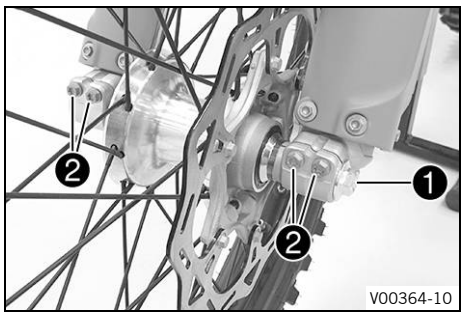
– Raise the motorcycle with a lift stand. (📖 p. 58)


V00363-10

Main work

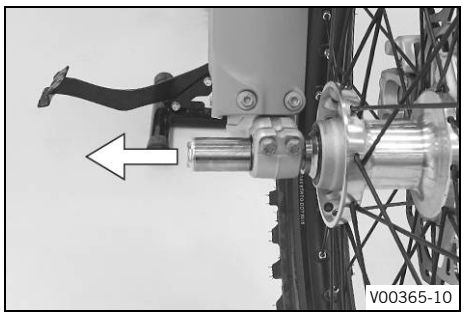
– Press the brake caliper onto the brake disc by hand in order to push back the brake pistons.

Info
Make sure that you do not press the brake caliper against the spokes when pushing back the brake pistons.



V00364-10

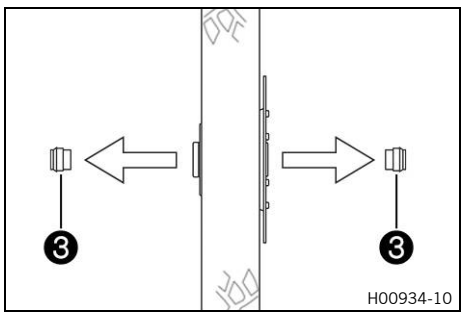
– Loosen screw ❶ by several rotations.
– Loosen screws ❷.
– Press on screw ❶ to push the wheel spindle out of the axle clamp.
– Remove screw ❶.


V00365-10

Warning
Danger of accidents Damaged brake discs reduce the braking effect.
– Always lay the wheel down in such a way that the brake disc is not damaged.

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

Info
Do not pull the hand brake lever when the front wheel is removed.



H00934-10

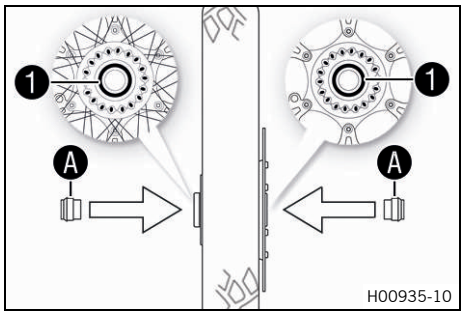
– Remove spacers ❸.

14.2 Installing the front wheel

Warning

Danger of accidents Oil or grease on the brake discs reduces the braking effect.

– Always keep the brake discs free of oil and grease.
– Clean the brake discs with brake cleaner when necessary.



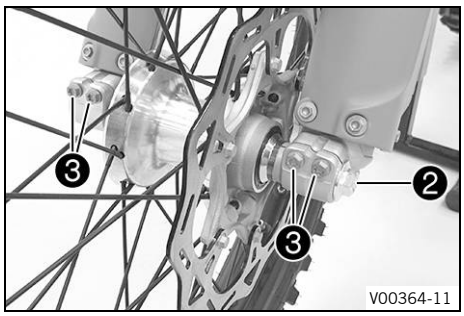
– Check the wheel bearing for damage and wear.
  » If the wheel bearing is damaged or worn:
    – Change front wheel bearing.
– Clean and grease shaft seal rings 1 and contact surface A of the spacers.

Long-life grease (📖 p. 153)

– Insert the spacers.
– Clean and grease the wheel spindle.

Long-life grease (📖 p. 153)

– Lift the front wheel into the fork, position it, 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 hand brake lever several times until the brake linings are seated correctly against the brake disc.
– Remove the motorcycle from the lift stand. (📖 p. 58)
– Operate the front brake and compress the fork a few times firmly.
  ✓ The fork legs straighten.
– Tighten screws 3.

  Guideline

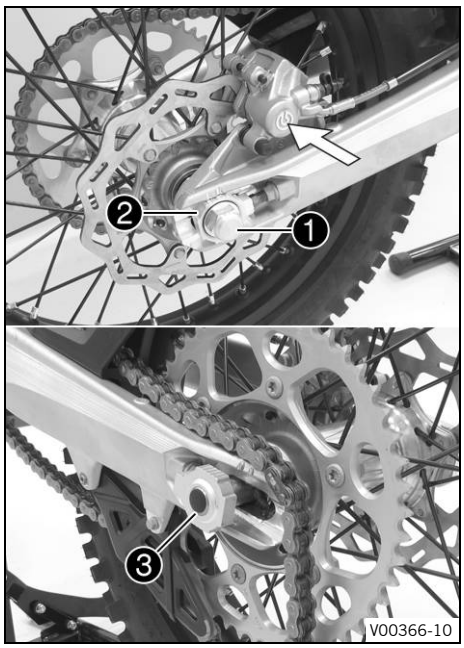
Screw, fork stub	M8	15 Nm (11.1 lbf ft)

◀

14.3 Removing the rear wheel

Preparatory work

– Raise the motorcycle with a lift stand. (📖 p. 58)



Main work

– Press the brake caliper onto the brake disc by hand in order to push back the brake piston.

Info
Make sure when pushing back the brake piston that you do not press the brake caliper against the spokes.

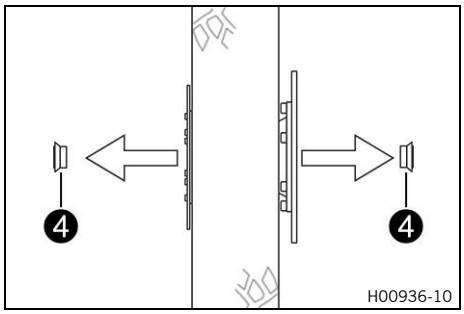
– Remove nut ❶.
– Remove chain adjuster ❷. Pull out wheel spindle ❸ far enough to allow the rear wheel to be pushed forward.
– Push the rear wheel forward as far as possible. Remove the chain from the rear sprocket.

Info
Cover the components to protect them against damage.

Warning
Danger of accidents Damaged brake discs reduce the braking effect.
– Always lay the wheel down in such a way that the brake disc is not damaged.

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

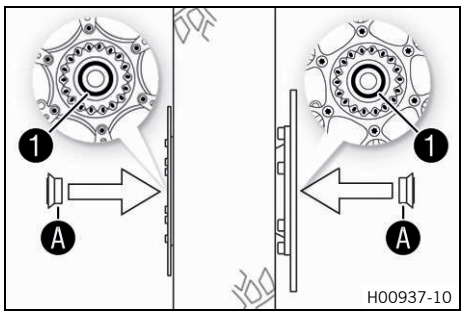
Info
Do not operate the foot brake lever when the rear wheel is removed.



– Remove spacers ❹.

14.4 Installing the rear wheel

Warning
Danger of accidents Oil or grease on the brake discs reduces the braking effect.
– Always keep the brake discs free of oil and grease.
– Clean the brake discs with brake cleaner when necessary.



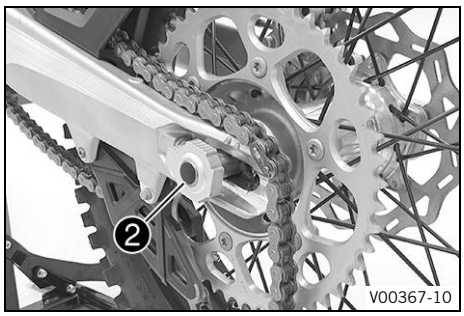
Main work

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

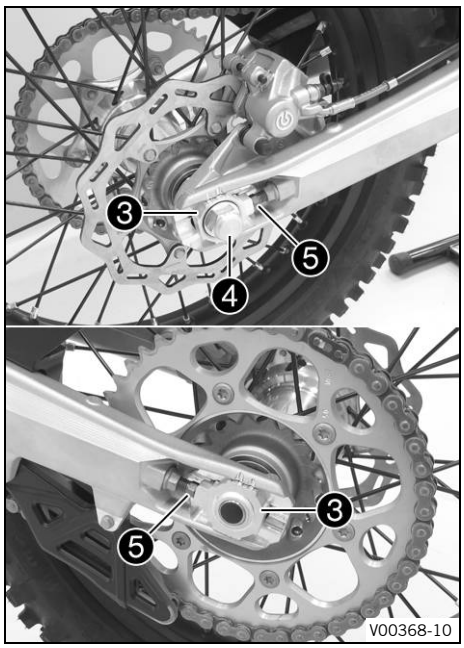
Long-life grease (📖 p. 153)

– Insert the spacers.
– Clean and grease the wheel spindle.

Long-life grease (📖 p. 153)



– Lift the rear wheel into the swingarm, position it, and insert wheel spindle ❷.
– Mount the chain.
  ✔ The brake linings are correctly positioned.



– Position chain adjuster ❸. Mount nut ❹, but do not tighten it yet.
– Make sure that chain adjusters ❸ are fitted correctly on adjusting screws ❺.
– Check the chain tension. (📖 p. 76)
– Tighten nut ❹.

  Guideline

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

Info
The wide adjustment range of the chain adjusters (32 mm (1.26 in)) enables different secondary ratios with the same chain length.
Chain adjusters ❸ can be turned by 180°.

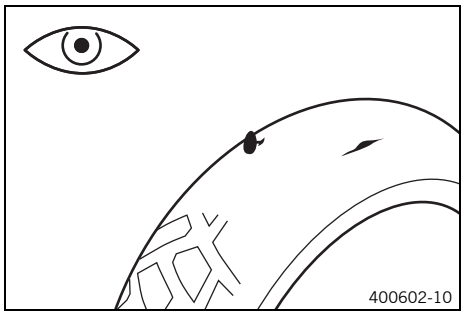
– Operate the foot brake lever repeatedly until the brake linings are in contact with the brake disc and there is a pressure point.

Finishing work

– Remove the motorcycle from the lift stand. (📖 p. 58)

14.5 Checking the tire condition

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 of the motorcycle.
Worn tires have a negative effect on handling characteristics, especially on wet surfaces.

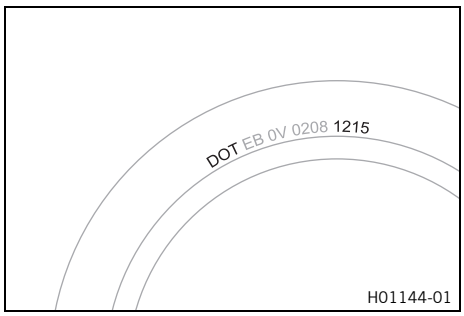


– Check the front and rear tires for cuts, run-in objects, and other damage.
  » If the tires have cuts, run-in objects, or other damage:
    – Change the tires.
– Check the tread depth.

Info
Adhere to the legally required minimum tread depth.

Minimum tread depth	≥ 2 mm (≥ 0.08 in)

  » If the tread depth is less than the minimum tread depth:
    – Change the tires.



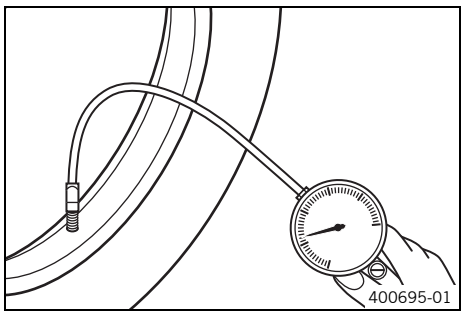
– Check the tire age.

Info
The tire date of manufacture is usually contained in the tire label and is indicated by the last four digits of the **DOT** number. The first two digits indicate the week of manufacture and the last two digits 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 the tires are more than 5 years old:
    – Change the tires.

14.6 Checking the tire air pressure

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



– Remove the dust cap.
– Check the tire air pressure when the tires are cold.

Tire air pressure off road	
front	1.0 bar (15 psi)
rear	1.0 bar (15 psi)

» If the tire pressure does not meet specifications:
  – Correct the tire pressure.
– Mount the dust cap.

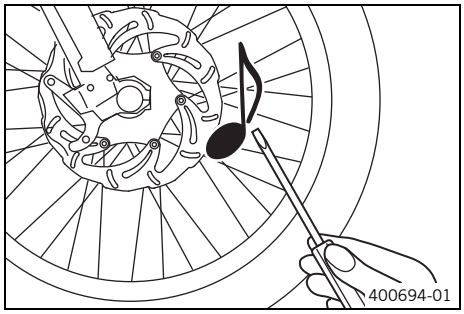
14.7 Checking spoke tension

Warning

Danger of accidents Incorrectly tensioned spokes impair the handling characteristic and result in secondary damage.

The spokes break due to being overloaded if they are too tightly tensioned. If the tension in the spokes is too low, then lateral and radial run-out will form in the wheel. Other spokes will become looser as a result.

– Check spoke tension regularly, and in particular on a new vehicle. (Your authorized KTM workshop will be glad to help.)



– Strike each spoke briefly using a screwdriver blade.

Info

The frequency of the sound depends on the spoke length and spoke diameter.
If you hear different tone frequencies from different spokes of equal length and diameter, this is an indication of different spoke tensions.

You should hear a high note.

» If the spoke tension differs:
  – Correct the spoke tension.
– Check the spoke torque.

Guideline

Spoke nipple, front wheel	M4.5	6 Nm (4.4 lbf ft)
Spoke nipple, rear wheel	M4.5	6 Nm (4.4 lbf ft)

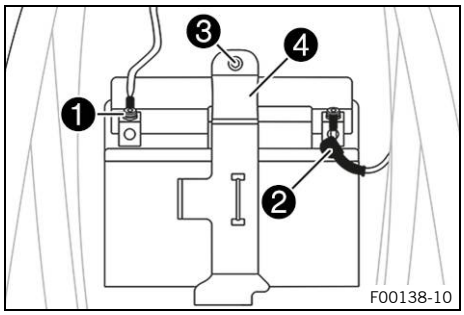
Torque wrench with various accessories in set (58429094000)

15.1 Removing the battery (150 XC-W US)

Warning
Environmental hazard Batteries contain environmentally-hazardous materials.
– Do not dispose of batteries as household waste.
– Dispose of batteries at a collection point for used batteries.

Warning
Environmental hazard Hazardous substances cause environmental damage.
– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc., correctly and in compliance with the applicable regulations.

Preparatory work
– Press and hold the kill switch ⊠ while the engine is idling until the engine stops.
– Remove the seat. (📖 p. 67)

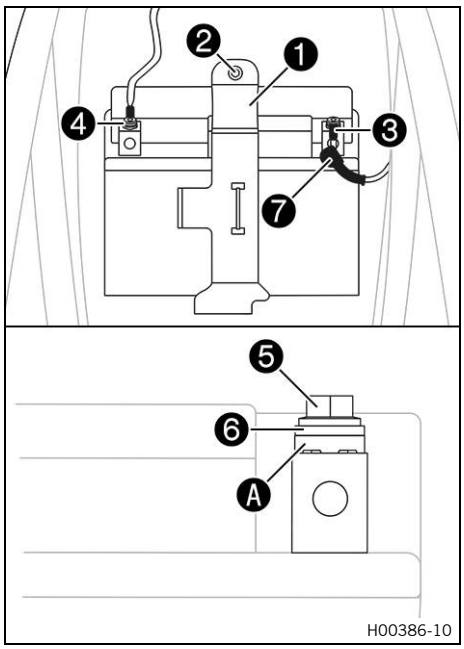


Main work

Warning
Risk of injury Batteries contain harmful substances.
– Keep batteries out of the reach of children.
– Keep sparks and open flames away from the batteries.
– Only charge batteries in well-ventilated rooms.
– Maintain a minimum clearance from inflammable materials when charging batteries.
  Minimum clearance 1 m (3 ft)
– Do not charge deeply discharged batteries if charge is already below the minimum voltage.
  Minimum voltage before the start of the charge 9 V
– Dispose of batteries with less than the minimum voltage correctly.

– Disconnect negative cable ❶ from the battery.
– Pull back positive terminal cover ❷ and disconnect the positive cable from the battery.
– Remove screw ❸.
– Pull holding bracket ❹ forward and remove battery toward the top.

15.2 Installing the battery (150 XC-W US)



Main work

– Insert the battery into the battery compartment with the terminals facing forward and secure with holding bracket ❶.

Battery (HJTZ5S-FP) (📖 p. 147)

– Mount and tighten screw ❷.

Guideline

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

– Connect positive cable ❸ to the battery.

Guideline

Screw, battery terminal	M5	2.5 Nm (1.84 lbf ft)

– Slide positive terminal cover ❼ over the positive terminal.

– Connect negative cable ❹ to the battery.

Guideline

Screw, battery terminal	M5	2.5 Nm (1.84 lbf ft)

Contact disks Ⓐ must be mounted under screws ❺ and cable sockets ❻ with the claws toward the battery terminal.

Finishing work

– Mount the seat. (📖 p. 68)

15.3 Recharging the battery (150 XC-W US)

Warning

Environmental hazard Batteries contain environmentally-hazardous materials.

– Do not dispose of batteries as household waste.

– Dispose of batteries at a collection point for used batteries.

Warning

Environmental hazard Hazardous substances cause environmental damage.

– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc., correctly and in compliance with the applicable regulations.

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 battery is depleted by repeated starting, the battery must be charged immediately.

Preparatory work

– Press and hold the kill switch ⊠ while the engine is idling until the engine stops.

– Remove the seat. (📖 p. 67)

– Remove the battery. (📖 p. 104)

Main work

Warning

Risk of injury Batteries contain harmful substances.

- Keep batteries out of the reach of children.
- Keep sparks and open flames away from the batteries.
- Only charge batteries in well-ventilated rooms.
- Maintain a minimum clearance from inflammable materials when charging batteries.
  Minimum clearance 1 m (3 ft)
- Do not charge deeply discharged batteries if charge is already below the minimum voltage.
  Minimum voltage before the start of the charge 9 V
- Dispose of batteries with less than the minimum voltage correctly.

– Check the battery voltage.
  » Battery voltage: < 9 V
    – Do not charge the battery.
    – Replace the battery and dispose of the old battery properly.
  » If the specifications have been met:
  Battery voltage: ≥ 9 V
    – Recharge the battery.
      Guideline

Maximum charging voltage	14.4 V
Maximum charging current	3.0 A
Maximum charging time	12 h
Charge the battery regularly when the motorcycle is not in use	6 months
Ideal charging and storage temperature of the lithium-ion battery	10 ... 20 °C (50 ... 68 °F)

Info

If the charging current, charging voltage, or charging time are exceeded, the battery will be destroyed.
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.
Never remove cover 1.

– Connect the battery charger to the battery. Switch on the battery charger.

Battery charger (58429074000)

The charging time may be longer at low temperatures.

This battery charger is not suitable for the trickle charging of lithium-ion batteries.

– Switch off the battery charger after charging and disconnect from the battery.

Finishing work

– Install the battery. (🕮 p. 105)
– Mount the seat. (🕮 p. 68)

15.4 Changing the main fuse (150 XC-W US)

Warning

Fire hazard Incorrect fuses overload the electrical system.

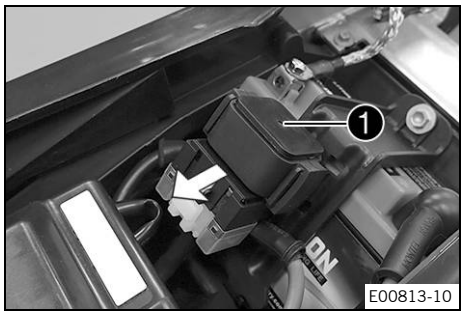
– Only use fuses with the required ampere value.
– Do not bypass or repair fuses.

Info

The main fuse protects all power consumers of the vehicle.

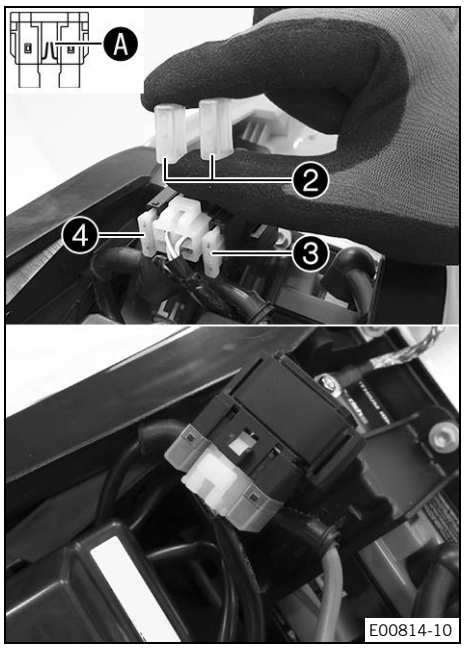
Preparatory work

– Press and hold the kill switch ⊠ while the engine is idling until the engine stops.
– Remove the seat. (🕮 p. 67)



Main work

– Pull starter relay ❶ from the holder.



– Take off protection caps ❷.
– Remove faulty main fuse ❸.

Info
You can recognize a faulty fuse by a burned-out fuse wire Ⓐ.
A spare fuse ❹ is located in the starter relay.

– Install a new main fuse.

Fuse (58011109110) (📖 p. 147)

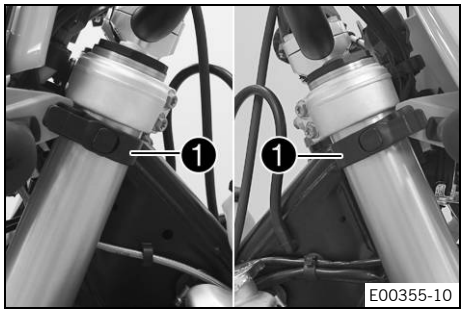
– Check that the electrical system is functioning properly.

Tip
Insert a spare fuse so that it is available if needed.

– Mount the protection caps.
– Mount the starter relay onto the holder and route the cable.

Finishing work
– Mount the seat. (📖 p. 68)

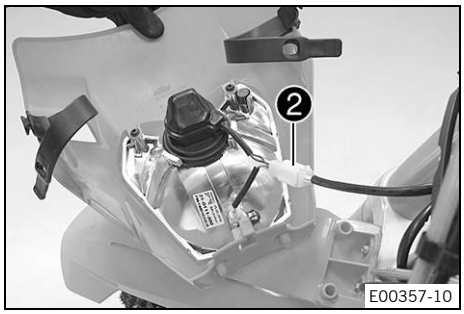
15.5 Removing the headlight mask with the headlight



(125 XC-W EU)
– Press and hold the kill switch ⊠ while the engine is idling until the engine stops.

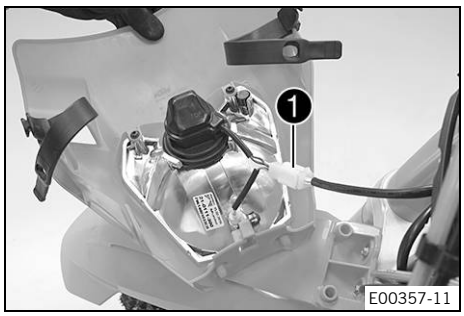
(150 XC-W US)
– Press and hold the kill switch ⊠ while the engine is idling until the engine stops.

– Detach the brake line and wiring harness from the headlight mask.
– Release rubber bands ❶. Slide the headlight mask up and swing it forward.



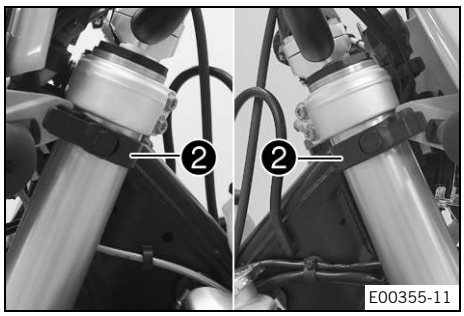
– Detach plug-in connector ❷ and take off the headlight mask with the headlight.

15.6 Installing the headlight mask with the headlight



Main work

– Connect plug-in connector ❶.



– Position the headlight mask and fix it with rubber bands ❷.
  ✔ The holding lugs engage in the fender.
– Position the brake line and wiring harness in the brake line guide.

Finishing work

– Check the headlight setting. (📖 p. 110)

◀

15.7 Changing the headlight bulb

Note

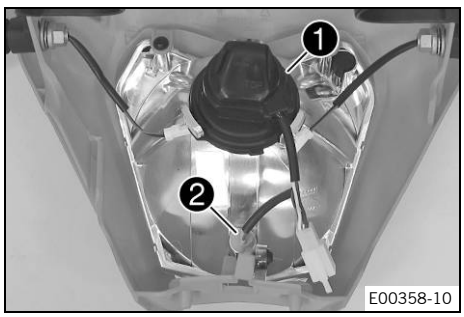
Damage to reflector Grease on the reflector reduces the brightness.

Grease on the bulb will evaporate due to the heat and be deposited on the reflector.

– Clean and degrease the bulbs before mounting.
– Do not touch the bulbs with your bare hands.

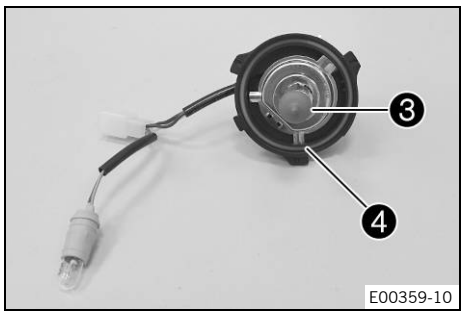
Preparatory work

– Remove the headlight mask with the headlight. (📖 p. 108)



Main work

– Turn protection cap ❶ together with the underlying bulb socket counterclockwise all the way and remove it.
– Pull bulb socket ❷ of the parking light out of the reflector.



– Pull out headlight bulb ❸.
– Insert the new headlight bulb.

Headlight (HS1/socket BX43t) (📖 p. 147)

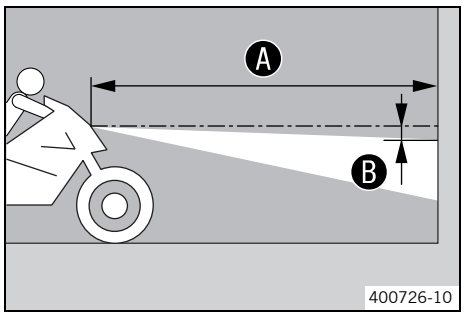
– Insert the protection cap with the bulb socket into the reflector and turn it clockwise all the way.

Info
Ensure that O-ring ❹ is seated properly.

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

Finishing work
– Install the headlight mask with the headlight. (📖 p. 109)
– Check the headlight setting. (📖 p. 110)

15.8 Checking the headlight setting



– 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 Ⓑ under the first mark.
Guideline

Distance Ⓑ	5 cm (2 in)

– Position the vehicle vertically a distance Ⓐ away from the wall.
Guideline

Distance Ⓐ	5 m (16 ft)

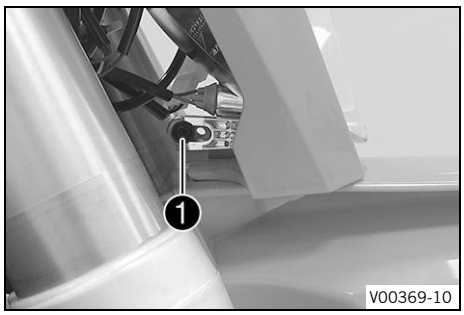
– The rider now sits down on the motorcycle.
– Switch on the low beam.
– Check the headlight setting.

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

» If the light-dark border does not meet specifications:
– Adjust the headlight range. (📖 p. 110)

15.9 Adjusting the headlight range

Preparatory work
– Check the headlight setting. (📖 p. 110)



Main work

– Loosen screw 1.
– Adjust the headlight range by pivoting the headlight.

Guideline

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

Info

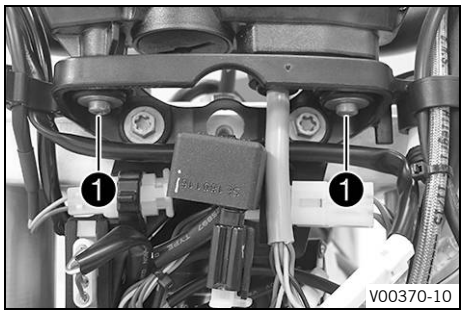
If you have a payload, you may have to correct the headlight range.

– Tighten screw 1.

15.10 Changing the combination instrument

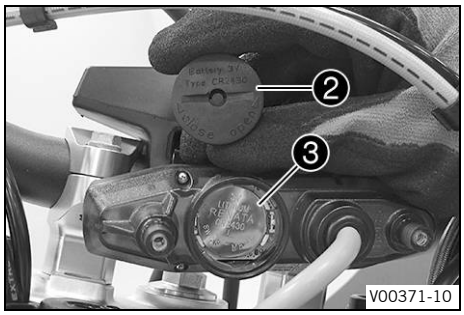
Preparatory work

– Remove the headlight mask with the headlight. (📖 p. 108)



Main work

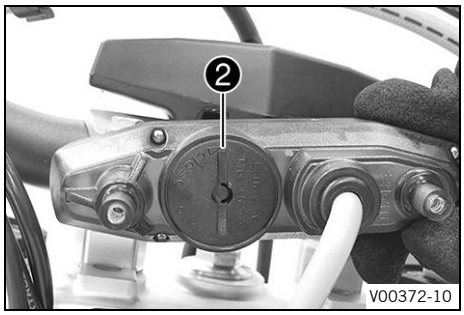
– Remove screws 1.
– Pull the combination instrument upward out of the holder.



– Using a coin, turn protection cap 2 all the way counterclockwise and remove it.
– Remove combination instrument 3.
– Insert the new battery with the label facing upward.

Combination instrument battery (CR 2430) (📖 p. 147)

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



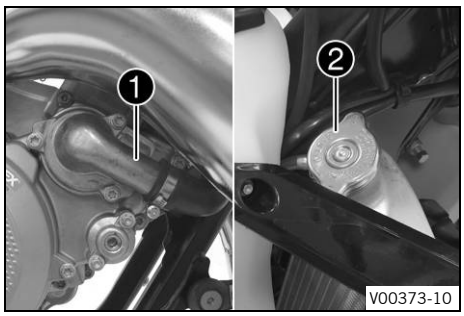
– Position protection cap 2 and turn all the way clockwise using a coin.
– Press any button on the combination instrument.
  ✓ The combination instrument is activated.
– Position the combination instrument in the holder.
– Mount and tighten the screws with washers.

Finishing work

– Install the headlight mask with the headlight. (📖 p. 109)
– Check the headlight setting. (📖 p. 110)
– Set kilometers or miles. (📖 p. 23)
– Adjust the combination instrument function. (📖 p. 24)

– Set the clock. (📖 p. 25)

16.1 Cooling system



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

120 °C (248 °F)

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

16.2 Checking the antifreeze and coolant level

Warning

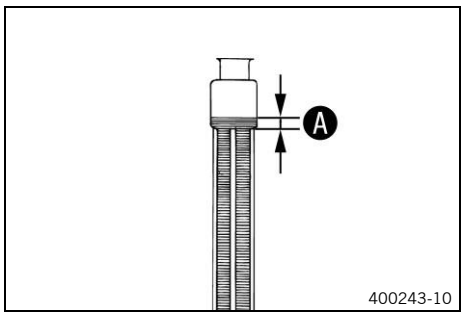
Danger of scalding During motorcycle operation, the coolant gets very hot and is under pressure.

- Do not open the radiator, the radiator hoses or other cooling system components if the engine or the cooling system are at operating temperature.
- Allow the cooling system and the engine to cool down before you open the radiator, the radiator hoses or other components of the cooling system.
- In the event of scalding, rinse the area affected immediately with lukewarm water.

Warning

Danger of poisoning Coolant is toxic and a health hazard.

- Keep coolant out of the reach of children.
- Do not allow coolant to come into contact with the skin, the eyes and clothing.
- Consult a doctor immediately if coolant is swallowed.
- Rinse the affected area immediately with plenty of water in the event of contact with the skin.
- Rinse eyes thoroughly with water and consult a doctor immediately if coolant gets into the eyes.
- Change clothing if coolant spills onto your clothing.



Condition
The engine is cold.

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

−25 ... −45 °C (−13 ... −49 °F)

  » If the antifreeze in the coolant does not match the specified value:
  - Correct the coolant antifreeze.
- Check the coolant level in the radiator.

Coolant level Ⓐ 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. 151)
- Mount the radiator cap.

◀

16.3 Checking the coolant level

Warning

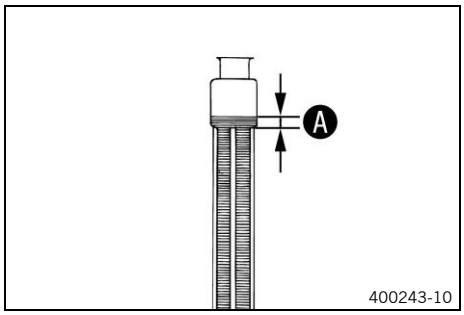
Danger of scalding During motorcycle operation, the coolant gets very hot and is under pressure.

– Do not open the radiator, the radiator hoses or other cooling system components if the engine or the cooling system are at operating temperature.
– Allow the cooling system and the engine to cool down before you open the radiator, the radiator hoses or other components of the cooling system.
– In the event of scalding, rinse the area affected immediately with lukewarm water.

Warning

Danger of poisoning Coolant is toxic and a health hazard.

– Keep coolant out of the reach of children.
– Do not allow coolant to come into contact with the skin, the eyes and clothing.
– Consult a doctor immediately if coolant is swallowed.
– Rinse the affected area immediately with plenty of water in the event of contact with the skin.
– Rinse eyes thoroughly with water and consult a doctor immediately if coolant gets into the eyes.
– Change clothing if coolant spills onto your clothing.



Condition

The engine is cold.

– Stand the motorcycle upright on a horizontal surface.
– Remove the radiator cap.
– Check the coolant level in the radiator.

Coolant level Ⓐ 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. 151)

– Mount the radiator cap.

16.4 Draining the coolant

Warning

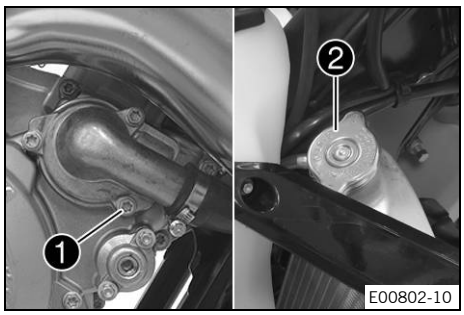
Danger of scalding During motorcycle operation, the coolant gets very hot and is under pressure.

– Do not open the radiator, the radiator hoses or other cooling system components if the engine or the cooling system are at operating temperature.
– Allow the cooling system and the engine to cool down before you open the radiator, the radiator hoses or other components of the cooling system.
– In the event of scalding, rinse the area affected immediately with lukewarm water.

Warning

Danger of poisoning Coolant is toxic and a health hazard.

- Keep coolant out of the reach of children.
- Do not allow coolant to come into contact with the skin, the eyes and clothing.
- Consult a doctor immediately if coolant is swallowed.
- Rinse the affected area immediately with plenty of water in the event of contact with the skin.
- Rinse eyes thoroughly with water and consult a doctor immediately if coolant gets into the eyes.
- Change clothing if coolant spills onto your clothing.



Condition

The engine is cold.

- Position the motorcycle upright.
- Place a suitable container under the water pump cover.
- Remove screw ❶. Take off radiator cap ❷.
- Completely drain the coolant.
- Mount and tighten screw ❶ with a new seal ring.

Guideline

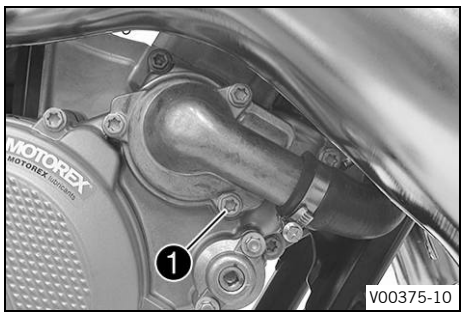
Drain plug, water pump cover (125 XC-W EU)	M6	8 Nm (5.9 lbf ft)
Drain plug, water pump cover (150 XC-W US)	M6	8 Nm (5.9 lbf ft)

16.5 Refilling with coolant

Warning

Danger of poisoning Coolant is toxic and a health hazard.

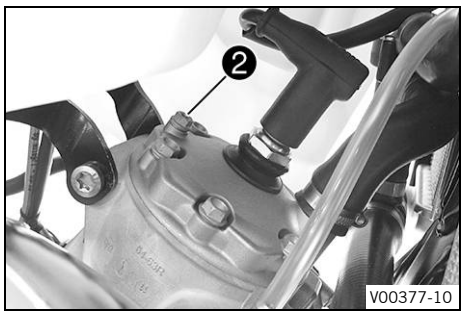
- Keep coolant out of the reach of children.
- Do not allow coolant to come into contact with the skin, the eyes and clothing.
- Consult a doctor immediately if coolant is swallowed.
- Rinse the affected area immediately with plenty of water in the event of contact with the skin.
- Rinse eyes thoroughly with water and consult a doctor immediately if coolant gets into the eyes.
- Change clothing if coolant spills onto your clothing.



Main work

- Make sure that screw ❶ is tightened.
- Position the motorcycle upright.
- Completely fill the radiator with coolant.

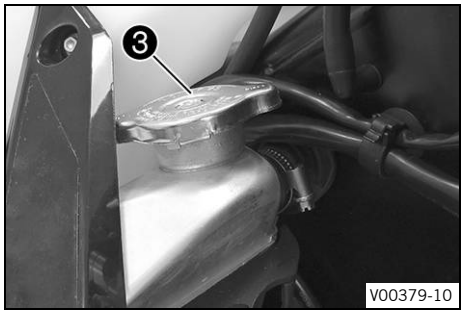
Coolant (📖 p. 151)



– Loosen screw ❷ and wait until coolant escapes without bubbles.
– Mount and tighten screw ❷.

Guideline

Bleeder screw, cylinder head (125 XC-W EU)	M6	8 Nm (5.9 lbf ft)
Bleeder screw, cylinder head (150 XC-W US)	M6	8 Nm (5.9 lbf ft)



– Completely fill the radiator with coolant.

Coolant (📖 p. 151)

– Mount radiator cap ❸.

Danger

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

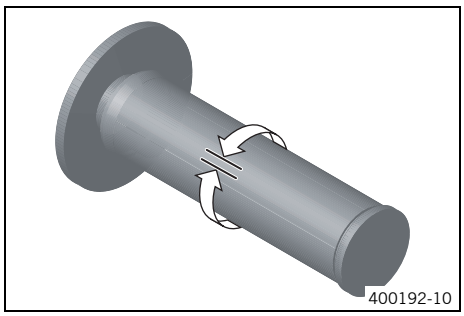
– Always make sure there is sufficient ventilation when running the engine.
– Use an effective exhaust extraction system when starting or running the engine in an enclosed space.

– Allow the engine to warm up and cool down again.

Finishing work

– Check the coolant level. (📖 p. 114)

17.1 Checking the play in the throttle cable



– Check the throttle grip for smooth operation.
– Turn the handlebar as far as possible to the right. Move the throttle grip backwards and forwards to ascertain the play in the throttle cable.

Play in throttle cable	3 … 5 mm (0.12 … 0.2 in)

» If the throttle cable play does not meet the specified value:
– Adjust the play in the throttle cable. 🔧 (📖 p. 117)

Danger

Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and death.
– Always make sure there is sufficient ventilation when running the engine.
– Use an effective exhaust extraction system when starting or running the engine in an enclosed space.

– Start the engine and let it run idle. Move the handlebar to and fro over the entire steering range.

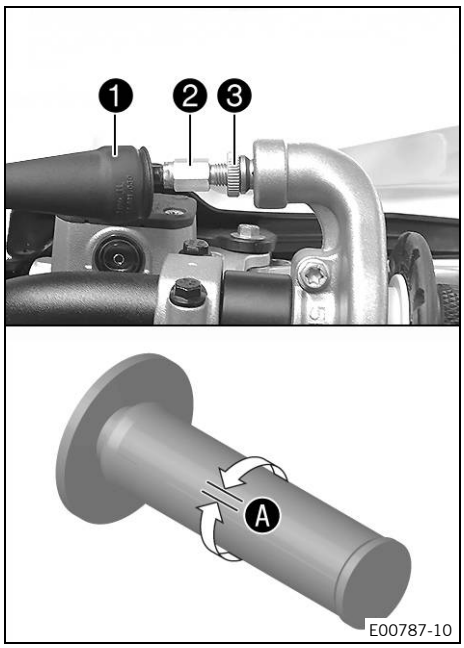
The idle speed must not change.

» If the idle speed changes:
– Adjust the play in the throttle cable. 🔧 (📖 p. 117)

17.2 Adjusting the play in the throttle cable 🔧

Info
If the correct routing of the throttle cable has already been secured, the fuel tank does not need to be removed.

Preparatory work
– Remove the seat. (📖 p. 67)
– Remove the fuel tank. 🔧 (📖 p. 73)
– Check throttle cable routing. (📖 p. 81)



Main work

– Turn the handlebar as far as possible to the right.
– Push back sleeve ❶.
– Ensure that the throttle cable sleeve is pushed all the way into barrel adjuster ❷.
– Loosen nut ❸.
– Turn barrel adjuster ❷ so that there is play Ⓐ in the throttle cable at the throttle grip.

  Guideline

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

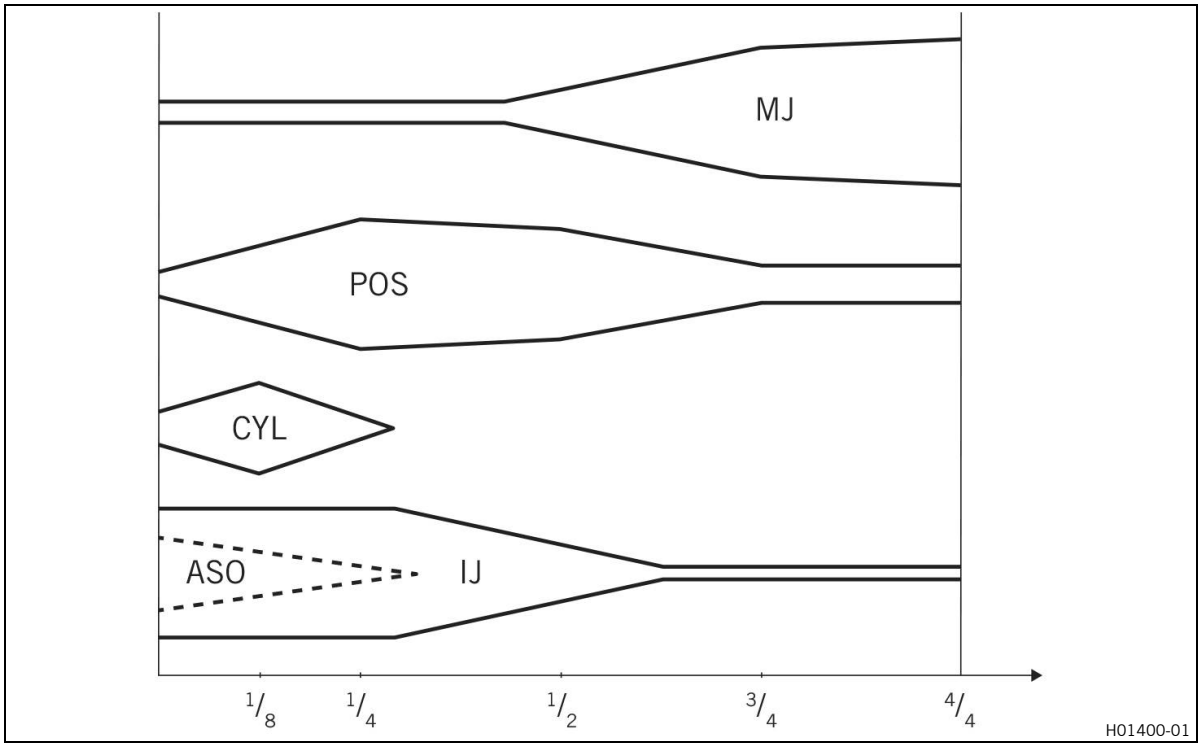
– Tighten nut ❸.
– Slide on sleeve ❶.

Finishing work

– Check the throttle grip for smooth operation.
– Install the fuel tank. (🕮 p. 74)
– Mount the seat. (🕮 p. 68)
– Check the play in the throttle cable. (🕮 p. 117)

17.3 Carburetor setting

Effects of the carburetor setting



The different carburetor components must be tuned both to one another and for the use intended.

Main jet MJ
The main jet MJ has the greatest influence with the throttle slide open (full throttle).
If the insulator of a new spark plug is very light or white after a brief ride at full throttle, or if the engine knocks, a larger main jet needs to be used. If the insulator is dark brown or sooty, a smaller main jet needs to be used.

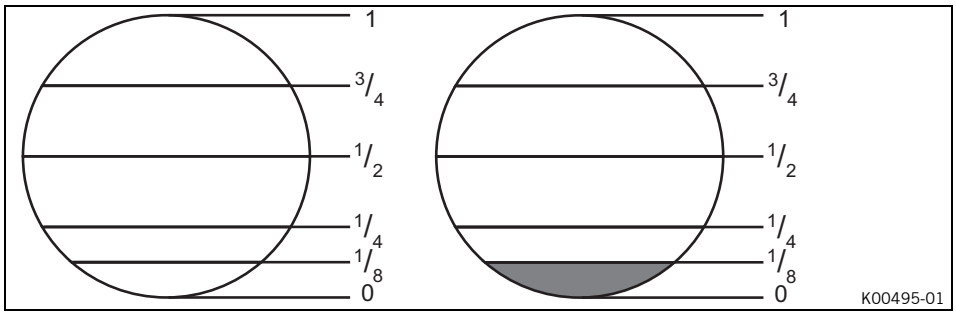
Needle position POS
The needle position has the greatest influence in the mid throttle slide range.
If the engine stutters when accelerating with a partially open throttle slide, the jet needle must be lowered. If the engine knocks when accelerating at the full power rpm range, the jet needle must be raised.

Cylindrical part of the needle CYL
The cylindrical part of the needle has the greatest influence when the throttle slide is almost closed.

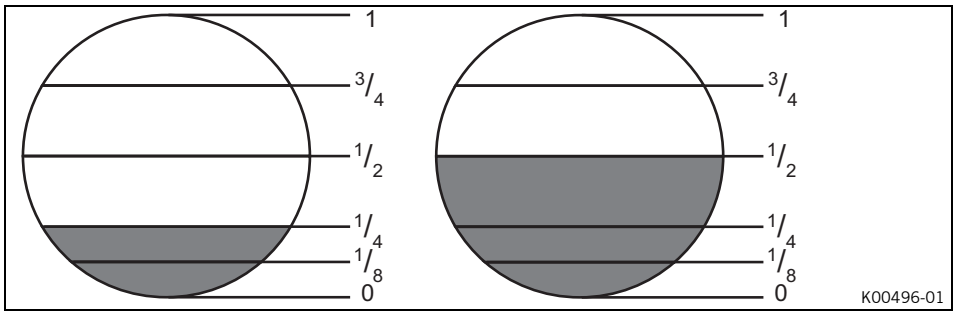
Idling jet IJ
The idling jet has the greatest influence in the low to mid throttle slide range.
If the engine stutters when idling or accelerating with a partially open throttle slide, a smaller idling jet must be used. If the engine knocks in this power range, then a larger idling jet must be used.

Idle air adjusting screw open ASO
The idle air adjusting screw has the greatest influence during idling.

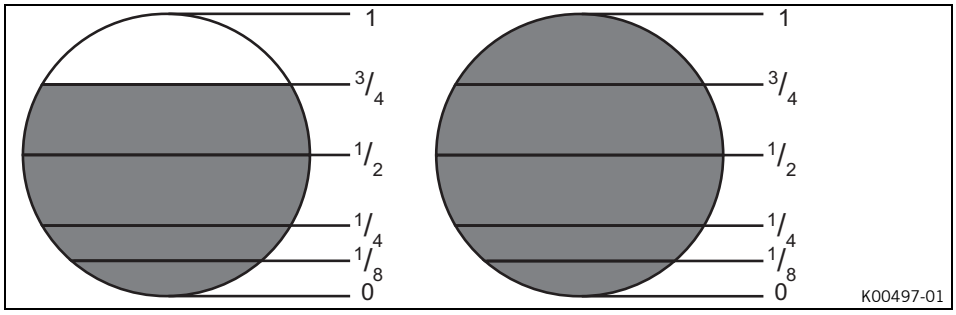
Influence of throttle slide adjustment



The idling jet has the greatest influence when the throttle slide is closed. The first cylindrical part of the needle and the clip position have only minimal influence.
When the throttle slide is 1/8 open, the first cylindrical part of the needle, the idling jet and the clip position have the greatest influence.



When the throttle slide is 1/4 open, the idling jet and the clip position have the greatest influence. The influence of the first cylindrical part of the needle is less.
When the throttle slide is 1/2 open, the position of the needle has the greatest influence. The influence of the main jet and the idling jet is only minimal.



When the throttle slide is 3/4 open, the influence of the main jet is greatest. The clip position and the idling jet have only minimal influence.
When the throttle slide is fully open, the influence of the main jet is greatest. The clip position and the idling jet have only minimal influence.

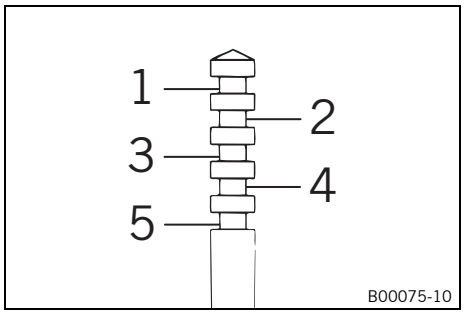
Needle overview
The jet needles available are shown in the following table.

	1	2	3	4
A	6BFY42-71	6BFY43-71	6BFY44-71	2,71 mm
B	6BFY42-72	6BFY43-72	6BFY44-72	2.72 mm
C	6BFY42-73	6BFY43-73	6BFY44-73	2.73 mm
D	6BFY42-74	6BFY43-74	6BFY44-74	2.74 mm
E	6BFY42-75	6BFY43-75	6BFY44-75	2.75 mm
F	6BFY42-76	6BFY43-76	6BFY44-76	2.76 mm

402674-01

Column **2** corresponds to a needle in the standard position.
Column **1** corresponds to a needle which is half a clip leaner.
Column **3** corresponds to a needle which is half a clip richer.
Column **4** specifies the diameter of the first cylindrical part of the needle. The smaller the diameter of the first cylindrical part of the needle, the richer the carburation. The larger the diameter of the first cylindrical part of the needle, the leaner the carburation. The first cylindrical part of the needle has the greatest influence in the lowest load adjustment.

Info
The top right jet needle **A3** corresponds to the richest setting of the carburetor, and the bottom left jet needle **F1** corresponds to the leanest. The optimal carburetor tuning is shown under the respective model.

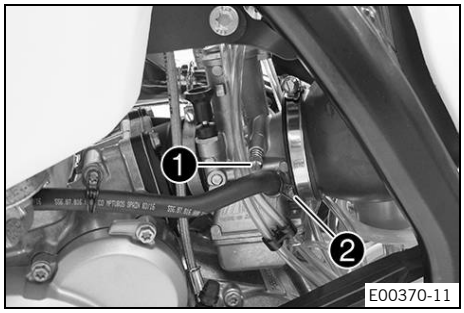


Clip position

1... 5	Clip position from above

The five possible clip positions are shown here.
The carburetor tuning depends on the defined ambient and operating conditions.

17.4 Carburetor - idle



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

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

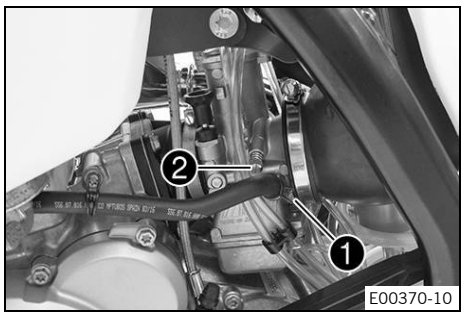
The factory setting for the carburetor is set for the following values.

Height above sea level	0 ... 300 m (0 ... 984 ft)
Ambient temperature	16 ... 24 °C (61 ... 75 °F)

Super unleaded (95 octane) mixed with 2-stroke engine oil (1:60) (📖 p. 152)

The idle speed is adjusted with adjusting screw ❶.
The idle mixture is adjusted using the idle air adjusting screw ❷.

17.5 Carburetor – adjusting the idle speed



– Screw idle air adjusting screw ❶ all the way in.
– Turn the idle air adjusting screw to the specified basic setting.

Info
The basic setting of the carburetor is specified in the technical data.

– Run the engine until warm.

Guideline

Warm-up time	≥ 5 min

– Connect special tool.

Tachometer (45129075000)

Danger
Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and death.
– Always make sure there is sufficient ventilation when running the engine.
– Use an effective exhaust extraction system when starting or running the engine in an enclosed space.

– Adjust the idle speed with adjusting screw ❷.

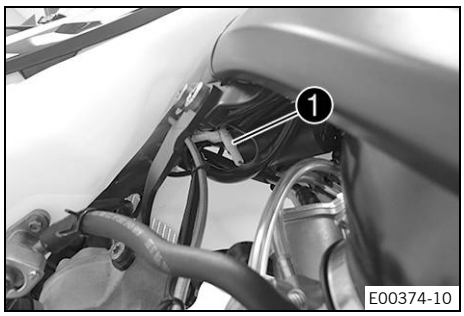
Guideline

Choke function deactivated – The choke lever is pushed in to the stop. (📖 p. 20)	
Idle speed	1,400 ... 1,500 rpm

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

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

17.6 Ignition curve plug-in connector



Plug-in connector ❶ of the ignition timing map adjustment is located on the frame under the fuel tank.

Possible states

- Soft – The plug-in connector of the ignition timing map adjustment is disconnected to achieve better rideability.
- Performance – The plug-in connector of the ignition timing map adjustment is joined to achieve higher performance.

17.7 Changing the ignition curve

Change the ignition curve from Performance to Soft.

– Disconnect plug-in connector ❶ of the ignition timing map adjustment. (Figure E00374-10 📖 p. 123)

✓ Soft – better rideability

Change the ignition curve from Soft to Performance.

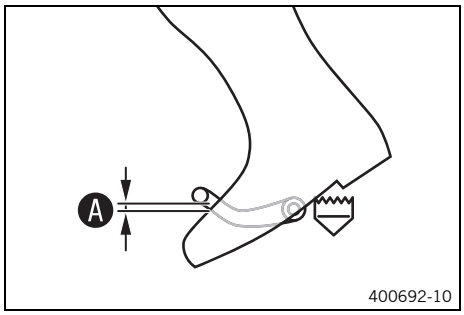
– Join plug-in connector ❶ of the ignition timing map adjustment. (Figure E00374-10 📖 p. 123)

✓ Performance – better performance

17.8 Checking the basic position of the shift lever

Info

When driving, the shift lever must not touch the rider's boot when in the basic position.
When the shift lever keeps touching the boot, the transmission will be subject to an excessive load.



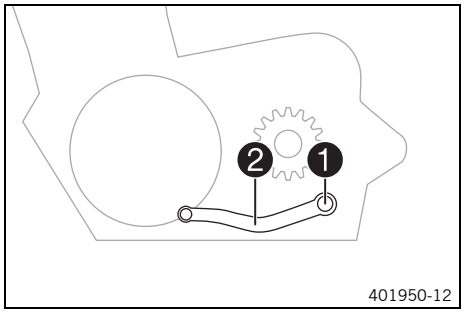
– Sit on the vehicle in the riding position and determine distance Ⓐ between the upper edge of your boot and the shift lever.

Distance between shift lever and upper edge of boot	10 … 20 mm (0.39 … 0.79 in)

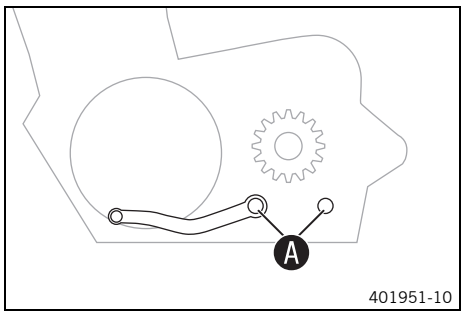
» If the distance does not meet specifications:

– Adjust the basic position of the shift lever. 🔧 (📖 p. 123)

17.9 Adjusting the basic position of the shift lever 🔧



– Remove screw ❶ with the washers and take off shift lever ❷.



– Clean gear teeth Ⓐ of the shift lever and shift shaft.
– Mount the shift lever on the shift shaft in the required position and engage the gearing.

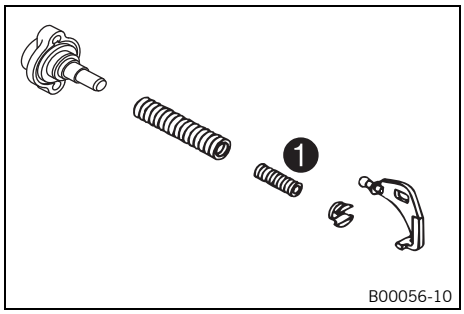
Info
The range of adjustment is limited.
The shift lever must not come into contact with any other vehicle components during the shift procedure.

– Mount and tighten screw ❶ with washers.

Guideline

Screw, shift lever (125 XC-W EU)	M6	14 Nm (10.3 lbf ft) **Loctite®243™**
Screw, shift lever (150 XC-W US)	M6	14 Nm (10.3 lbf ft) **Loctite®243™**

17.10 Engine characteristic – auxiliary spring



The auxiliary spring is located on the right side of the engine below the water pump cover.

Possible states

- Auxiliary spring with green color coding – Auxiliary spring for soft performance.
- Auxiliary spring with yellow color coding – Auxiliary spring for more aggressive performance than with a green spring.
- Auxiliary spring with blue color coding – Auxiliary spring for more aggressive performance than with a yellow spring.
- Auxiliary spring with red color coding – Auxiliary spring for more aggressive performance than with a blue spring.
- Auxiliary spring without color coding – Auxiliary spring for progressive performance (at first more aggressive than with the red spring, then softer than with the red spring).

The engine characteristic can be influenced by different spring strengths of auxiliary spring ❶.

Info
The auxiliary spring mounted in the as-delivered state as well as the additionally available auxiliary springs can differ depending on model.

17.11 Engine characteristic – setting the auxiliary spring

Warning

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

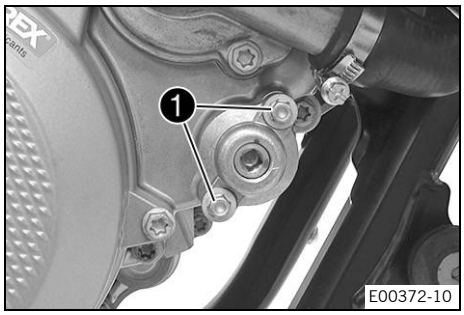
– Do not touch any parts such as the exhaust system, radiator, engine, shock absorber, or brake system before the vehicle parts have cooled down.
– Let the vehicle parts cool down before you perform any work on the vehicle.

Preparatory work

– Tilt the motorcycle to the left and secure against falling in this position.

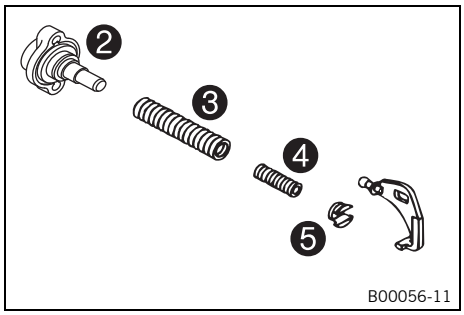
Guideline

Angle of title approx.	45°

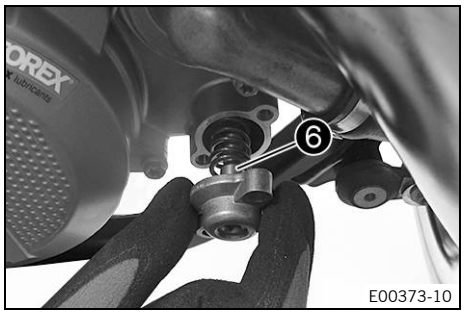


Main work

– Remove screws ❶.



– Remove cap ❷, adjusting spring ❸, auxiliary spring ❹, and spring insert ❺ from the clutch cover.
– Pull both springs off of the spring insert.



– Mount the required auxiliary spring (📖 p. 124) ❹ and adjusting spring ❸ and position them together in the clutch cover.

(125 XC-W EU)

Auxiliary spring with yellow marking (54637072300)
Auxiliary spring with green marking (54837072100)
Auxiliary spring with blue color coding (54637072500)

(150 XC-W US)

Auxiliary spring without color coding (50437069050)
Auxiliary spring with yellow marking (54637072300)

✓ The recess in spring insert ❺ engages in the angle lever.

Info

Screw ❻ must not be turned as this would worsen the engine characteristic.

– Check the O-ring in the cap.
– Position the cap.

– Mount and tighten the screws.
Guideline

Screw, exhaust control cover (125 XC-W EU)	M5	5 Nm (3.7 lbf ft)
Screw, exhaust control cover (150 XC-W US)	M5	5 Nm (3.7 lbf ft)

18.1 Emptying the carburetor float chamber

Danger

Fire hazard Fuel is highly flammable.

The fuel in the fuel tank expands when warm and can escape if overfilled.

- Do not refuel the vehicle in the vicinity of open flames or lit cigarettes.
- Switch off the engine for refueling.
- Make sure that no fuel is spilled; particularly not on hot parts of the vehicle.
- If any fuel is spilled, wipe it off immediately.
- Observe the specifications for refueling.

Warning

Danger of poisoning Fuel is poisonous and a health hazard.

- Avoid skin, eye and clothing contact with fuel.
- Immediately consult a doctor if you swallow fuel.
- Do not inhale fuel vapors.
- In case of skin contact, rinse the affected area with plenty of water.
- Rinse the eyes thoroughly with water, and consult a doctor in case of fuel contact with the eyes.
- Change your clothing in case of fuel spills on them.
- Keep fuels correctly in a suitable canister, and out of the reach of children.

Warning

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

- Do not allow fuel to enter the groundwater, the soil, or the sewage system.

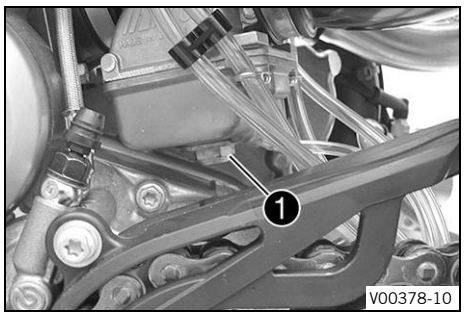
Info

Carry out this work with a cold engine.
Water in the float chamber results in malfunctioning.

Preparatory work

- Turn handle ❶ of the fuel tap to the **OFF** position. (Figure V00326-10 📖 p. 19)

  ✓ Fuel no longer flows from the fuel tank to the carburetor.



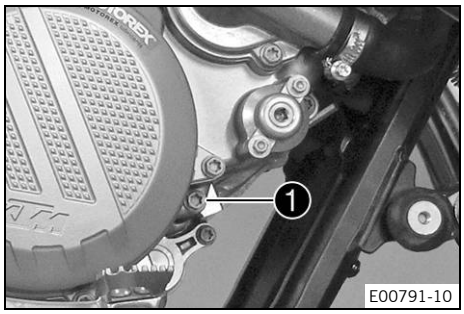
Main work

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

18.2 Checking the gear oil level

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

Preparatory work
– Stand the motorcycle upright on a horizontal surface.



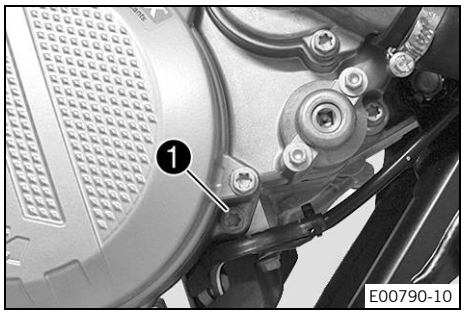
Main work
(125 XC-W EU)
– Remove screw for checking gear oil level ❶.
– Check the gear oil level.

A small quantity of gear oil must run out of the drilled hole.

» If no gear oil runs out:
– Add gear oil. 🔧 (📖 p. 130)
– Mount and tighten screw for checking gear oil level ❶.

Guideline

Screw, gear oil level check	M6	8 Nm (5.9 lbf ft)



(150 XC-W US)
– Remove screw for checking gear oil level ❶.
– Check the gear oil level.

A small quantity of gear oil must run out of the drilled hole.

» If no gear oil runs out:
– Add gear oil. 🔧 (📖 p. 130)
– Mount and tighten screw ❶ in the opening used to check the gear oil level.

Guideline

Screw, gear oil level check	M6	8 Nm (5.9 lbf ft)

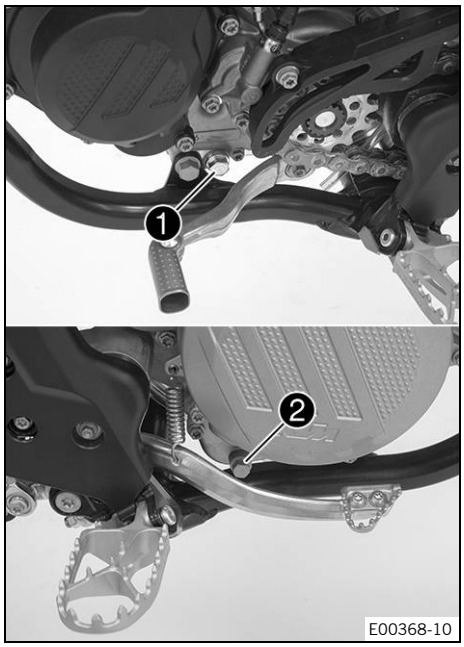
18.3 Changing the gear oil 🔧

Warning
Danger of scalding Engine and gear oil get very hot when the motorcycle is ridden.
– Wear suitable protective clothing and safety gloves.
– In the event of scalding, rinse the area affected immediately with lukewarm water.

Warning
Environmental hazard Hazardous substances cause environmental damage.
– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc., correctly and in compliance with the applicable regulations.

Info
Drain the gear oil while the engine is at operating temperature.

Preparatory work
- Park the motorcycle on a level surface.
- Place a suitable container under the engine.



Main work
- Remove gear oil drain plug ❶ with magnet.
- Remove gear oil drain plug ❷.
- Let the gear oil drain fully.
- Thoroughly clean the gear oil drain plug.
- Clean the sealing surface on the engine.
- Mount and tighten gear oil drain plug ❶ with the magnet and a new seal ring.

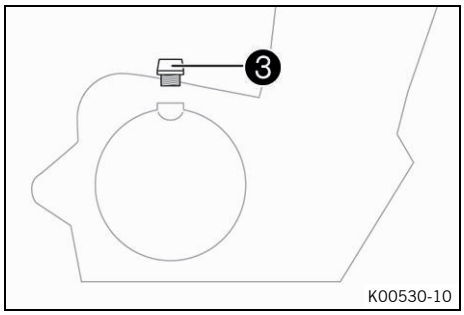
  Guideline

Gear oil drain plug with magnet (125 XC-W EU)	M12x1.5	20 Nm (14.8 lbf ft)
Gear oil drain plug with magnet (150 XC-W US)	M12x1.5	20 Nm (14.8 lbf ft)

- Mount and tighten gear oil drain plug ❷ with a new seal ring.

  Guideline

Gear oil drain plug (125 XC-W EU)	M10x1	15 Nm (11.1 lbf ft)
Gear oil drain plug (150 XC-W US)	M10x1	15 Nm (11.1 lbf ft)



- Remove filler plug ❸ and fill up with gear oil.

Gear oil	0.80 l (0.85 qt.)	Engine oil (15W/50) (📖 p. 151)

- Mount and tighten the oil filler plug.

Danger
Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and death.
- Always make sure there is sufficient ventilation when running the engine.
- Use an effective exhaust extraction system when starting or running the engine in an enclosed space.

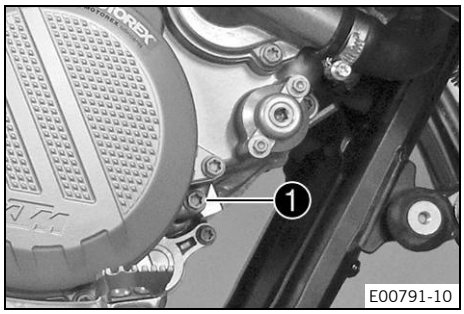
- Start the engine and check that it is oil-tight.

Finishing work
- Check the gear oil level. (📖 p. 128)

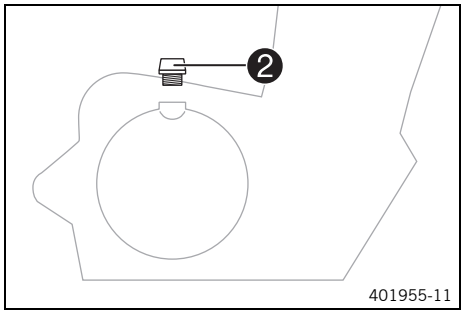
18.4 Adding gear oil

Info
Too little gear oil or poor-quality gear oil results in premature wear to the transmission.
Gear oil must only be topped up when the engine is cold.

Preparatory work
– Park the motorcycle on a level surface.



Main work
(125 XC-W EU)
– Remove screw for checking gear oil level ❶.



– Remove filler plug ❷.
– Add gear oil until it emerges from the drill hole of the gear oil monitoring screw.

Engine oil (15W/50) (📖 p. 151)

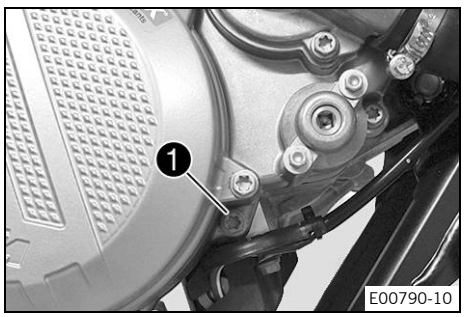
– Mount and tighten the gear oil monitoring screw.
Guideline

Screw, gear oil level check	M6	8 Nm (5.9 lbf ft)

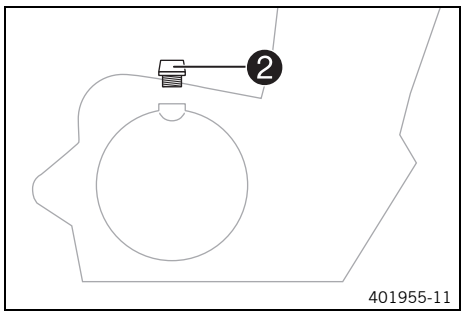
– Mount and tighten filler plug ❷.

Danger
Danger of poisoning Exhaust gases are toxic and inhaling them may result in unconsciousness and death.
– Always make sure there is sufficient ventilation when running the engine.
– Use an effective exhaust extraction system when starting or running the engine in an enclosed space.

– Start the engine and check that it is oil-tight.



(150 XC-W US)
– Remove screw for checking gear oil level ❶.



– Remove filler plug ❷.
– Add gear oil until it emerges from the drill hole of the gear oil monitoring screw.

Engine oil (15W/50) (📖 p. 151)

– Mount and tighten the gear oil monitoring screw.

Guideline

Screw, gear oil level check	M6	8 Nm (5.9 lbf ft)

– Mount and tighten filler plug ❷.

Danger

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

– Always make sure there is sufficient ventilation when running the engine.
– Use an effective exhaust extraction system when starting or running the engine in an enclosed space.

– Start the engine and check that it is oil-tight.

Finishing work

– Check the gear oil level. (📖 p. 128)

19.1 Cleaning the motorcycle

Note

Material damage Components become damaged or destroyed if a pressure cleaner is used incorrectly.

The high pressure forces water into the electrical components, connectors, throttle cables, and bearings, etc. Pressure which is too high causes malfunctions and destroys components.

– Do not direct the water jet directly on to electrical components, connectors, throttle cables or bearings.
– Maintain a minimum distance between the nozzle of the pressure cleaner and the component.

Minimum clearance	60 cm (23.6 in)

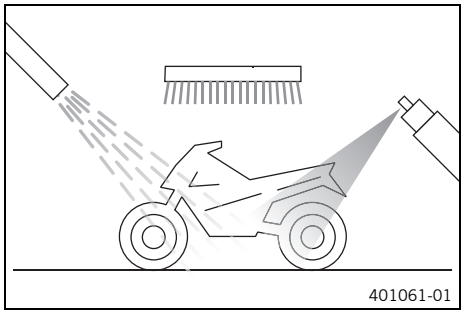
Warning

Environmental hazard Hazardous substances cause environmental damage.

– Dispose of oils, grease, filters, fuel, cleaning agents, brake fluid, etc., correctly 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 sunlight on the motorcycle during cleaning.



– Close off the exhaust system to prevent water from entering.
– Remove coarse dirt particles by spraying gently with water.
– Spray very dirty areas with a normal motorcycle cleaner and then clean with a soft brush.

Motorcycle cleaner (📖 p. 153)

Info

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

– After rinsing the motorcycle with a gentle water spray, allow it to dry thoroughly.
– Empty the carburetor float chamber. 🔧 (📖 p. 127)
– Remove the plug from the exhaust system.

Warning

Danger of accidents Moisture and dirt impair the brake system.

– Brake carefully several times to dry out and remove dirt from the brake linings and the brake discs.

– After cleaning, take a short ride until the engine reaches operating temperature.

Info

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

– After the motorcycle has cooled off, lubricate all moving parts and bearings.
– Clean the chain. (📖 p. 76)
– Treat bare metal parts (except for brake discs and exhaust system) with anti-corrosion materials.

Preserving materials for paints, metal and rubber (📖 p. 153)

– 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. 154)

(125 XC-W EU)

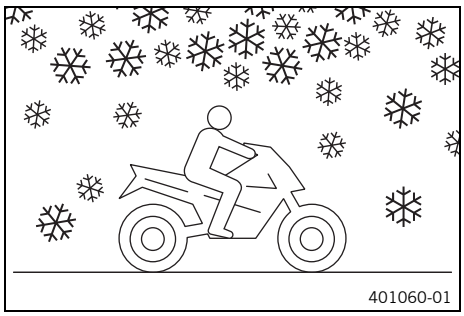
– Oil the steering lock.

Universal oil spray (📖 p. 154)

19.2 Checks and maintenance steps for winter operation

Info

If you use the motorcycle in winter, salt can be expected on the roads. You should therefore take precautions against aggressive road salt.
If the vehicle has been used on salted roads, use cold water for cleaning after riding. Warm water enhances the corrosive effects of salt.


401060-01

– Clean the motorcycle. (📖 p. 132)
– Clean the brakes.

Info

After **EVERY** trip on salted roads, thoroughly wash the cool and installed brake calipers and brake linings with cold water and dry carefully.
After riding on salted roads, thoroughly wash the vehicle with cold water and dry it well.

– Treat the engine, the swingarm, and all other bare or galvanized parts (except brake discs) with a wax-based corrosion inhibitor.

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. 76)

20.1 Storage

Warning

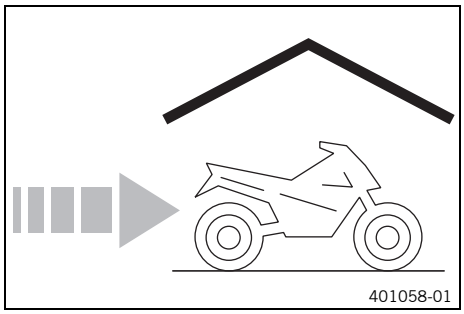
Danger of poisoning Fuel is poisonous and a health hazard.

- Avoid skin, eye and clothing contact with fuel.
- Immediately consult a doctor if you swallow fuel.
- Do not inhale fuel vapors.
- In case of skin contact, rinse the affected area with plenty of water.
- Rinse the eyes thoroughly with water, and consult a doctor in case of fuel contact with the eyes.
- Change your clothing in case of fuel spills on them.
- Keep fuels correctly in a suitable canister, and out of the reach of children.

Info

If you plan to garage the motorcycle for a longer period, perform the following steps or have them performed.

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



- Clean the motorcycle. (p. 132)
- Change the gear oil. (p. 128)
- Check the antifreeze and coolant level. (p. 113)
- When refueling for the last time before taking the motorcycle out of service, add fuel additive.

Fuel additive (p. 153)

- Refuel. (p. 46)
- Empty the carburetor float chamber. (p. 127)
- Check the tire air pressure. (p. 102)

(150 XC-W US)

- Remove the battery. (p. 104)
- Recharge the battery. (p. 105)

  Guideline

Storage temperature of battery without direct sunshine	0 … 35 °C (32 … 95 °F)

- Store the vehicle in a dry location that is not subject to large fluctuations in temperature.

Info

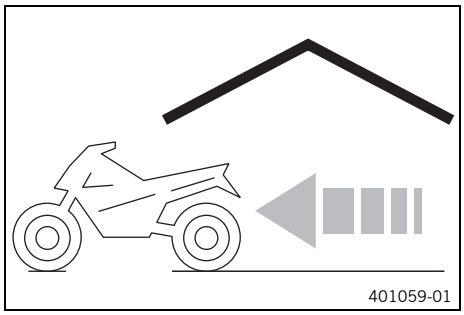
KTM recommends jacking up the motorcycle.

- Raise the motorcycle with a lift stand. (p. 58)
- Cover the vehicle with a tarp or similar cover that is permeable to air.

Info

Do not use non-porous materials since they prevent humidity from escaping, thus causing corrosion.
Avoid running the engine for a short time only. Because the engine will not warm up sufficiently, the water vapor produced during combustion will condense, causing engine parts and the exhaust system to rust.

20.2 Preparing for use after storage



– Remove the motorcycle from the lift stand. (p. 58)

(150 XC-W US)

– Install the battery. (p. 105)

– Perform checks and maintenance measures when preparing for use. (p. 42)

– Make a test ride.

Faults	Possible cause	Action
The engine cannot be cranked (electric starter) (150 XC-W US)	Operating error	– Carry out the start procedure. (📖 p. 42)
	Battery discharged	– Recharge the battery. 🔧 (📖 p. 105) – Check the charging voltage. 🔧 – Check the closed current. 🔧 – Check the alternator. 🔧
	Main fuse is blown	– Change the main fuse. (📖 p. 107)
	Starter relay faulty	– Check the starter relay. 🔧
	Starter motor faulty	– Check the starter motor. 🔧
Engine turns but does not start	Operating error	– Carry out the start procedure. (📖 p. 42)
	Motorcycle was out of use for a long time and there is old fuel in the float chamber	– Empty the carburetor float chamber. 🔧 (📖 p. 127)
	Fuel feed interrupted	– Check the fuel tank breather. – Clean the fuel tap. – Check/set the carburetor components.
	Spark plug oily or wet	– Clean and dry the spark plug, or change it if necessary.
	Electrode distance (plug gap) of spark plug too wide	– Adjust the plug gap. Guideline Spark plug electrode gap (125 XC-W EU) 0.60 mm (0.0236 in) Spark plug electrode gap (150 XC-W US) 0.60 mm (0.0236 in)
	Fault in ignition system	– Check the ignition system. 🔧
	Kill switch cable in wiring harness frayed, kill switch defective	– Check the kill switch. 🔧
	The connector or ignition coil is loose or oxidized	– Clean the connector and treat it with contact spray.
	Water in carburetor or jets blocked	– Check/set the carburetor components.
Engine has no idle	Idling jet blocked	– Check/set the carburetor components.
	Adjusting screws on carburetor distorted	– Carburetor – adjust the idle speed. 🔧 (📖 p. 122)
	Spark plug defective	– Change the spark plug.
	Ignition system defective	– Check the ignition coil. 🔧 – Check the spark plug connector. 🔧
Engine does not speed up	Carburetor running over because float needle dirty or worn	– Check/set the carburetor components.
	Loose carburetor jets	– Check/set the carburetor components.
	Fault in ignition system	– Check the ignition system. 🔧

Faults	Possible cause	Action
Engine has too little power	Fuel feed interrupted	– Check the fuel tank breather. – Clean the fuel tap. – Check/set the carburetor components.
	Air filter very dirty	– Clean the air filter and air filter box. 🔧 (📖 p. 70)
	Exhaust system leaky, deformed or too little glass fiber yarn filling in main silencer	– Check exhaust system for damage. – Change glass fiber yarn filling in the main silencer. 🔧 (📖 p. 72)
	Fault in ignition system	– Check the ignition system. 🔧
	Diaphragm or reed valve housing damaged	– Check the diaphragm and reed valve housing.
Engine stalls or is popping into the carburetor	Lack of fuel	– Turn handle ❶ of the fuel tap to the **ON** position. (Figure V00326-10 📖 p. 19) – Refuel. (📖 p. 46)
	Engine takes in bad air	– Check the intake flange and carburetor for tightness.
	The connector or ignition coil is loose or oxidized	– Clean the connector and treat it with contact spray.
Engine overheats	Too little coolant in cooling system	– Check the cooling system for leakage. – Check the coolant level. (📖 p. 114)
	Too little air stream	– Switch off engine when stationary.
	Radiator fins very dirty	– Clean the radiator fins.
	Foam formation in cooling system	– Drain the coolant. 🔧 (📖 p. 114) – Refill with coolant. 🔧 (📖 p. 115)
	Damaged cylinder head or cylinder head gasket	– Check the cylinder head and cylinder head gasket.
	Bent radiator hose	– Change the radiator hose. 🔧
	Incorrect ignition point due to loose stator	– Adjust the ignition. 🔧
White smoke emission (steam in exhaust gas)	Damaged cylinder head or cylinder head gasket	– Check the cylinder head and cylinder head gasket.
Gear oil exits at the vent hose	Too much gear oil added	– Check the gear oil level. (📖 p. 128)
Water in the gear oil	Damaged shaft seal ring or water pump	– Check the shaft seal ring and water pump.

22.1 Engine

22.1.1 125 XC-W EU

Design	1-cylinder 2-stroke engine, water-cooled, with reed intake and exhaust control
Displacement	124.8 cm³ (7.616 cu in)
Stroke	54.5 mm (2.146 in)
Bore	54 mm (2.13 in)
Idle speed	1,400 ... 1,500 rpm
Crankshaft bearing	1 grooved ball bearing/1 roller bearing
Conrod bearing	Needle bearing
Piston pin bearing	Needle bearing
Pistons	Cast aluminum
Piston rings	2 half keystone rings
X (upper edge of piston to upper edge of cylinder)	0 ... 0.10 mm (0 ... 0.0039 in)
Z (height of control flap)	36.5 mm (1.437 in)
Primary transmission	23:73
Clutch	Multidisc clutch in oil bath/hydraulically activated
Gearbox	6-gear, claw shifted
Transmission ratio	
First gear	12:33
Second gear	15:31
Third gear	17:28
Fourth gear	19:26
Fifth gear	21:25
Sixth gear	20:20
Alternator	12 V, 75 W
Ignition	Contactless controlled fully electronic ignition with digital ignition adjustment, type Kokusan
Spark plug	NGK BR9 ECMVX
Spark plug electrode gap	0.60 mm (0.0236 in)
Cooling	Water cooling, permanent circulation of coolant by water pump
Starting aid	Kick starter

22.1.2 150 XC-W US

Design	1-cylinder 2-stroke engine, water-cooled, with reed intake and exhaust control
Displacement	144 cm³ (8.79 cu in)
Stroke	54.5 mm (2.146 in)
Bore	58 mm (2.28 in)
Idle speed	1,400 ... 1,500 rpm
Crankshaft bearing	1 grooved ball bearing/1 roller bearing
Conrod bearing	Needle bearing
Piston pin bearing	Needle bearing

Pistons	Forged aluminum
Piston rings	1 rectangular ring, 1 half keystone ring
X (upper edge of piston to upper edge of cylinder)	0 ... 0.10 mm (0 ... 0.0039 in)
Z (height of control flap)	36.5 mm (1.437 in)
Primary transmission	23:73
Clutch	Multidisc clutch in oil bath/hydraulically activated
Gearbox	6-gear, claw shifted
Transmission ratio	
First gear	12:33
Second gear	15:31
Third gear	17:28
Fourth gear	19:26
Fifth gear	21:25
Sixth gear	20:20
Alternator	12 V, 75 W
Ignition	Contactless controlled fully electronic ignition with digital ignition adjustment, type Kokusan
Spark plug	NGK BR9 ECMVX
Spark plug electrode gap	0.60 mm (0.0236 in)
Cooling	Water cooling, permanent circulation of coolant by water pump
Starting aid	Electric starter and kick starter

22.2 Engine tightening torques

22.2.1 125 XC-W EU

Screw, inner membrane sheets	**EJOTDELTA PT®** 35x25	1 Nm (0.7 lbf ft)
Screw, membrane support plate	**EJOTDELTA PT®** 30x12	1 Nm (0.7 lbf ft)
Screw, outer membrane sheets	**EJOTDELTA PT®** 30x6	1 Nm (0.7 lbf ft)
Screw, control lever, exhaust control	M5	6 Nm (4.4 lbf ft) **Loctite®243™**
Screw, crankshaft position sensor	M5	6 Nm (4.4 lbf ft) **Loctite®243™**
Screw, exhaust control cover	M5	5 Nm (3.7 lbf ft)
Screw, locking lever	M5	6 Nm (4.4 lbf ft) **Loctite®243™**
Screw, retaining bracket, rotary valve	M5	6 Nm (4.4 lbf ft)
Screw, water pump wheel	M5	6 Nm (4.4 lbf ft) **Loctite®243™**
Bleeder screw, cylinder head	M6	8 Nm (5.9 lbf ft)
Drain plug, water pump cover	M6	8 Nm (5.9 lbf ft)
Nut, adjusting screw, power valve	M6	8 Nm (5.9 lbf ft)
Screw plug, starter motor mounting	M6	8 Nm (5.9 lbf ft)
Screw, alternator cover	M6	8 Nm (5.9 lbf ft)

Screw, bearing retainer	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, clutch slave cylinder	M6	10 Nm (7.4 lbf ft)
Screw, clutch spring retainer	M6	10 Nm (7.4 lbf ft)
Screw, control lever, exhaust control	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, engine case	M6	10 Nm (7.4 lbf ft)
Screw, exhaust flange	M6	10 Nm (7.4 lbf ft)
Screw, gear oil level check	M6	8 Nm (5.9 lbf ft)
Screw, intake flange/reed valve housing	M6	6 Nm (4.4 lbf ft)
Screw, intermediate clutch cover	M6x20	10 Nm (7.4 lbf ft)
Screw, intermediate clutch cover	M6x25	10 Nm (7.4 lbf ft)
Screw, intermediate clutch cover	M6x30	10 Nm (7.4 lbf ft)
Screw, kick starter stop plate	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, outer clutch cover	M6x20	8 Nm (5.9 lbf ft)
Screw, outer clutch cover	M6x50	8 Nm (5.9 lbf ft)
Screw, shift drum locating	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, shift lever	M6	14 Nm (10.3 lbf ft) **Loctite®243™**
Screw, stator	M6	8 Nm (5.9 lbf ft) **Loctite®243™**
Screw, stop plate of exhaust control	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, water pump cover	M6	10 Nm (7.4 lbf ft)
Screw, cylinder head	M7	18 Nm (13.3 lbf ft)
Nut, cylinder base	M8	23 Nm (17 lbf ft)
Screw, cylinder base	M8	20 Nm (14.8 lbf ft)
Screw, kick starter	M8	25 Nm (18.4 lbf ft) **Loctite®243™**
Gear oil drain plug	M10x1	15 Nm (11.1 lbf ft)
Nut, rotor	M12x1	50 Nm (36.9 lbf ft)
Gear oil drain plug with magnet	M12x1.5	20 Nm (14.8 lbf ft)
Spark plug	M14x1.25	25 Nm (18.4 lbf ft)
Nut, primary gear	M16LHx1.5	130 Nm (95.9 lbf ft) **Loctite®243™**
Nut, inner clutch hub	M18x1.5	100 Nm (73.8 lbf ft) **Loctite®243™**

22.2.2 150 XC-W US

Screw, inner membrane sheets	**EJOTDELTA PT®** 35x25	1 Nm (0.7 lbf ft)
Screw, membrane support plate	**EJOTDELTA PT®** 30x12	1 Nm (0.7 lbf ft)
Screw, outer membrane sheets	**EJOTDELTA PT®** 30x6	1 Nm (0.7 lbf ft)
Screw, control lever, exhaust control	M5	6 Nm (4.4 lbf ft) **Loctite®243™**

Screw, crankshaft position sensor	M5	6 Nm (4.4 lbf ft) **Loctite®243™**
Screw, exhaust control cover	M5	5 Nm (3.7 lbf ft)
Screw, locking lever	M5	6 Nm (4.4 lbf ft) **Loctite®243™**
Screw, retaining bracket, rotary valve	M5	6 Nm (4.4 lbf ft)
Screw, water pump wheel	M5	6 Nm (4.4 lbf ft) **Loctite®243™**
Bleeder screw, cylinder head	M6	8 Nm (5.9 lbf ft)
Drain plug, water pump cover	M6	8 Nm (5.9 lbf ft)
Nut, adjusting screw, power valve	M6	8 Nm (5.9 lbf ft)
Screw, alternator cover	M6	8 Nm (5.9 lbf ft)
Screw, bearing retainer	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, clutch slave cylinder	M6	10 Nm (7.4 lbf ft)
Screw, clutch spring retainer	M6	10 Nm (7.4 lbf ft)
Screw, control lever, exhaust control	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, engine case	M6	10 Nm (7.4 lbf ft)
Screw, exhaust flange	M6	10 Nm (7.4 lbf ft)
Screw, gear oil level check	M6	8 Nm (5.9 lbf ft)
Screw, intake flange/reed valve housing	M6	6 Nm (4.4 lbf ft)
Screw, intermediate clutch cover	M6x20	10 Nm (7.4 lbf ft)
Screw, intermediate clutch cover	M6x25	10 Nm (7.4 lbf ft)
Screw, intermediate clutch cover	M6x30	10 Nm (7.4 lbf ft)
Screw, kick starter stop plate	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, outer clutch cover	M6x20	8 Nm (5.9 lbf ft)
Screw, outer clutch cover	M6x50	8 Nm (5.9 lbf ft)
Screw, shift drum locating	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, shift lever	M6	14 Nm (10.3 lbf ft) **Loctite®243™**
Screw, starter motor	M6	8 Nm (5.9 lbf ft)
Screw, starter motor guard	M6	8 Nm (5.9 lbf ft)
Screw, stator	M6	8 Nm (5.9 lbf ft) **Loctite®243™**
Screw, stop plate of exhaust control	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, water pump cover	M6	10 Nm (7.4 lbf ft)
Screw, cylinder head	M7	18 Nm (13.3 lbf ft)
Nut, cylinder base	M8	23 Nm (17 lbf ft)
Screw, cylinder base	M8	20 Nm (14.8 lbf ft)
Screw, kick starter	M8	25 Nm (18.4 lbf ft) **Loctite®243™**

Gear oil drain plug	M10x1	15 Nm (11.1 lbf ft)
Nut, rotor	M12x1	50 Nm (36.9 lbf ft)
Gear oil drain plug with magnet	M12x1.5	20 Nm (14.8 lbf ft)
Spark plug	M14x1.25	25 Nm (18.4 lbf ft)
Nut, primary gear	M16LHx1.5	130 Nm (95.9 lbf ft) **Loctite®243™**
Nut, inner clutch hub	M18x1.5	100 Nm (73.8 lbf ft) **Loctite®243™**

22.3 Carburetor

22.3.1 125 XC-W EU

Carburetor type	MIKUNI TMX 38
Carburetor identification number	TMX 38 77
Needle position	2nd position from top
Jet needle	6BFY43-75 (6BFY42-75)
Main jet	470 (460, 480, 490, 500)
Idling jet	32.5 (30/35)
Starting jet	80
Needle jet	S-7
Idle air adjusting screw	
Open	2 turns
Throttle slide	4

22.3.2 150 XC-W US

Carburetor type	MIKUNI TMX 38
Carburetor identification number	TMX 38 79
Needle position	2nd position from top
Jet needle	6BFY43-74 (6BFY42-74)
Main jet	470 (460, 480, 490)
Idling jet	30 (32.5/35)
Starting jet	80
Needle jet	S-4
Idle air adjusting screw	
Open	1.5 turns
Throttle slide	4

22.4 Carburetor tuning

22.4.1 Carburetor tuning (125 XC-W EU)

MIKUNI TMX 38							
M/FT ASL ↓	TEMP →	-20°C ... -7°C *-2°F ... 20°F*	-6°C ... 5°C *19°F ... 41°F*	6°C ... 15°C *42°F ... 60°F*	16°C ... 24°C *61°F ... 78°F*	25°C ... 36°C *79°F ... 98°F*	37°C ... 49°C *99°F ... 120°F*
3.000 m *10,000 ft* ↑ 2.301 m *7,501 ft*	ASO IJ NDL POS MJ	2 32,5 43-75 2 470	2 30 43-75 2 460	2 32,5 42-75 2 470	2 32,5 42-75 2 460	2 30 42-75 2 450	
2.300 m *7,500 ft* ↑ 1.501 m *5,001 ft*	ASO IJ NDL POS MJ	2 35 43-75 2 480	2 32,5 43-75 2 470	2 30 43-75 2 460	2 32,5 42-75 2 470	1,5 30 42-75 2 460	2 30 42-75 2 450
1.500 m *5,000 ft* ↑ 751 m *2,501 ft*	ASO IJ NDL POS MJ	2 32,5 42-75 3 480	2 35 43-75 2 480	2 32,5 43-75 2 470	2 30 43-75 2 470	2 30 43-75 2 460	1,5 30 42-75 2 460
750 m *2,500 ft* ↑ 301 m *1,001 ft*	ASO IJ NDL POS MJ	2 32,5 42-75 3 490	2 35 43-75 2 490	2 32,5 43-75 2 470	2 32,5 43-75 2 470	2 30 43-75 2 470	2 30 43-75 2 460
300 m *1,000 ft* ↑ 0 m *0 ft*	ASO IJ NDL POS MJ	2 32,5 42-75 3 490	2 35 43-75 2 490	2 32,5 43-75 2 480	**2** **32,5** **43-75** **2** **470**	2 30 43-75 2 470	2 30 43-75 2 460

402816-01

M/FT ASL	Sea level
TEMP	Temperature
ASO	Idle air adjusting screw open
IJ	Idling jet
NDL	Needle
POS	Needle position from top
MJ	Main jet

Info
Do not use on sandy terrain.

22.4.2 Carburetor tuning (150 XC-W US)

MIKUNI TMX 38

M/FT ASL ↓	TEMP →	-20°C ... -7°C *-2°F ... 20°F*	-6°C ... 5°C *19°F ... 41°F*	6°C ... 15°C *42°F ... 60°F*	16°C ... 24°C *61°F ... 78°F*	25°C ... 36°C *79°F ... 98°F*	37°C ... 49°C *99°F ... 120°F*
3.000 m *10,000 ft* ↑ 2.301 m *7,501 ft*	ASO IJ NDL POS MJ	2 32,5 43-74 2 470	2,5 30 43-74 2 460	2 32,5 42-74 2 460	2 30 42-74 2 460	2,5 30 42-74 2 450	
2.300 m *7,500 ft* ↑ 1.501 m *5,001 ft*	ASO IJ NDL POS MJ	1,5 32,5 43-74 2 480	2 30 43-74 2 470	2,5 30 43-74 2 460	2 32,5 42-74 2 460	2 30 42-74 2 460	2,5 30 42-74 2 450
1.500 m *5,000 ft* ↑ 751 m *2,501 ft*	ASO IJ NDL POS MJ	1,5 30 42-74 3 480	2 32,5 43-74 2 470	2 30 43-74 2 470	2,5 30 43-74 2 460	2 32,5 42-74 2 460	2 30 42-74 2 460
750 m *2,500 ft* ↑ 301 m *1,001 ft*	ASO IJ NDL POS MJ	1,5 30 42-74 3 490	1,5 32,5 43-74 2 480	1,5 30 43-74 2 470	2 30 43-74 2 470	2,5 30 43-74 2 460	2 32,5 42-74 2 460
300 m *1,000 ft* ↑ 0 m *0 ft*	ASO IJ NDL POS MJ	1,5 30 42-74 3 490	1,5 32,5 43-74 2 490	1,5 30 43-74 2 480	**1,5** **30** **43-74** **2** **470**	2 30 43-74 2 470	2,5 30 43-74 2 460

402818-01

M/FT ASL	Sea level
TEMP	Temperature
ASO	Idle air adjusting screw open
IJ	Idling jet
NDL	Needle
POS	Needle position from top
MJ	Main jet

Info
Do not use on sandy terrain.

22.5 Capacities

22.5.1 Gear oil

Gear oil	0.80 l (0.85 qt.)	Engine oil (15W/50) (📖 p. 151)

22.5.2 Coolant

Coolant	1.2 l (1.3 qt.)	Coolant (📖 p. 151)

22.5.3 Fuel

Total fuel tank capacity, approx.	9.5 l (2.51 US gal)	Super unleaded (95 octane) mixed with 2-stroke engine oil (1:60) (📖 p. 152)

Fuel reserve, approx.	1.5 l (1.6 qt.)

22.6 Chassis

Frame	Central tube frame made of chrome molybdenum steel tubing
Fork	**WP Performance SystemsXplor 48**
Suspension travel	
front	300 mm (11.81 in)
Suspension travel	
rear	310 mm (12.2 in)
Fork offset	22 mm (0.87 in)
Shock absorber	**WP Performance SystemsXplor PDS**
Brake system	Disc brakes, brake calipers on floating bearings
Brake discs - diameter	
front	260 mm (10.24 in)
rear	220 mm (8.66 in)
Brake discs - wear limit	
front	2.5 mm (0.098 in)
rear	3.5 mm (0.138 in)
Tire air pressure off road	
front	1.0 bar (15 psi)
rear	1.0 bar (15 psi)
Secondary ratio	13:50
Chain	5/8 x 1/4"
Rear sprockets available	38, 40, 42, 45, 48, 49, 50, 51, 52
Steering head angle	63.5°
Wheelbase	1,471±10 mm (57.91±0.39 in)
Seat height unloaded	960 mm (37.8 in)
Ground clearance unloaded	370 mm (14.57 in)
Weight without fuel, approx. (125 XC-W EU)	91 kg (201 lb.)
Weight without fuel, approx. (150 XC-W US)	91.5 kg (201.7 lb.)

Maximum permissible front axle load	145 kg (320 lb.)
Maximum permissible rear axle load	190 kg (419 lb.)
Maximum permissible overall weight	335 kg (739 lb.)

22.7 Electrical system

Battery (150 XC-W US)	HJTZ5S-FP	Lithium-ion battery Battery voltage: 12 V Nominal capacity: 2.0 Ah maintenance-free
Combination instrument battery	CR 2430	Battery voltage: 3 V
Fuse (150 XC-W US)	58011109110	10 A
Headlight	HS1/socket BX43t	12 V 35/35 W

22.8 Tires

Validity	Front tire	Rear tire
(125 XC-W EU)	**80/100 - 21 M/C 51M TT** MAXXIS Maxx EnduPro	**120/90 - 18 M/C 65R TT** MAXXIS Maxx EnduPro
(150 XC-W US)	**90/90 - 21 54M TT** Dunlop GEOMAX AT 81 F	**110/100 - 18 64M TT** Dunlop GEOMAX AT 81
The tires specified represent one of the possible series production tires. Additional information is available in the Service section under: http://www.ktm.com		

22.9 Fork

Fork article number	14.18.8R.61
Fork	**WP Performance SystemsXplor 48**
Compression damping	
Comfort	18 clicks
Standard	15 clicks
Sport	12 clicks
Rebound damping	
Comfort	18 clicks
Standard	15 clicks
Sport	12 clicks
Spring length with preload spacer(s)	477 mm (18.78 in)
Spring rate	
Weight of rider: 65 ... 75 kg (143 ... 165 lb.)	3.8 N/mm (21.7 lb/in)
Weight of rider: 75 ... 85 kg (165 ... 187 lb.)	4.0 N/mm (22.8 lb/in)
Weight of rider: 85 ... 95 kg (187 ... 209 lb.)	4.2 N/mm (24 lb/in)
Fork length	928 mm (36.54 in)

Fork oil per fork leg	$635_{\pm 10}$ ml ($21.47_{\pm 0.34}$ fl. oz.)	Fork oil (SAE 4) (48601166S1) (📖 p. 152)

22.10 Shock absorber

Shock absorber article number	12.18.7Q.61
Shock absorber	**WP Performance SystemsXplor PDS**
Compression damping, low-speed	
Comfort	18 clicks
Standard	15 clicks
Sport	12 clicks
Compression damping, high-speed	
Comfort	2.5 turns
Standard	2 turns
Sport	1 turn
Rebound damping	
Comfort	18 clicks
Standard	15 clicks
Sport	12 clicks
Spring preload	6 mm (0.24 in)
Spring rate	
Weight of rider: 65 ... 75 kg (143 ... 165 lb.)	57 N/mm (325 lb/in)
Weight of rider: 75 ... 85 kg (165 ... 187 lb.)	60 N/mm (343 lb/in)
Weight of rider: 85 ... 95 kg (187 ... 209 lb.)	63 N/mm (360 lb/in)
Spring length	225 mm (8.86 in)
Gas pressure	10 bar (145 psi)
Static sag	35 mm (1.38 in)
Riding sag	110 mm (4.33 in)
Fitted length	415 mm (16.34 in)
Shock absorber fluid (📖 p. 152)	SAE 2.5

22.11 Chassis tightening torques

Remaining screws, chassis	**EJOT PT®** K60x25-Z	2 Nm (1.5 lbf ft)
Screw, seat fixing	**EJOT EJOFORM PT®** K60x23/18	2.5 Nm (1.84 lbf ft)
Screw, fixed grip	M4	5 Nm (3.7 lbf ft) **Loctite®243™**
Spoke nipple, front wheel	M4.5	6 Nm (4.4 lbf ft)
Spoke nipple, rear wheel	M4.5	6 Nm (4.4 lbf ft)
Remaining nuts, chassis	M5	5 Nm (3.7 lbf ft)
Remaining screws, chassis	M5	5 Nm (3.7 lbf ft)
Screw, battery terminal (150 XC-W US)	M5	2.5 Nm (1.84 lbf ft)
Screw, light switch (125 XC-W EU)	M5	1 Nm (0.7 lbf ft)
Screw, shock absorber adjusting ring	M5	5 Nm (3.7 lbf ft)
Nut, cable on starter motor (150 XC-W US)	M6	4 Nm (3 lbf ft)
Remaining nuts, chassis	M6	10 Nm (7.4 lbf ft)

Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)
Screw, ball joint of push rod on foot brake cylinder	M6	10 Nm (7.4 lbf ft) **Loctite®243™**
Screw, chain sliding guard	M6	14 Nm (10.3 lbf ft) **Loctite®243™**
Screw, front brake disc	M6	14 Nm (10.3 lbf ft) **Loctite®243™**
Screw, manifold on silent block	M6	6 Nm (4.4 lbf ft)
Screw, rear brake disc	M6	14 Nm (10.3 lbf ft) **Loctite®243™**
Screw, silent block on frame	M6	6 Nm (4.4 lbf ft)
Screw, throttle grip	M6	5 Nm (3.7 lbf ft)
Nut, foot brake lever	M8	15 Nm (11.1 lbf ft)
Nut, foot brake lever stop	M8	20 Nm (14.8 lbf ft)
Nut, pull switch	M8	0.4 Nm (0.3 lbf ft)
Nut, rear sprocket screw	M8	35 Nm (25.8 lbf ft) **Loctite®2701™**
Nut, rim lock	M8	12 Nm (8.9 lbf ft)
Remaining nuts, chassis	M8	25 Nm (18.4 lbf ft)
Remaining screws, chassis	M8	25 Nm (18.4 lbf ft)
Screw, bottom triple clamp	M8	15 Nm (11.1 lbf ft)
Screw, chain sliding piece	M8	15 Nm (11.1 lbf ft)
Screw, engine brace	M8	25 Nm (18.4 lbf ft) **Loctite®2701™**
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	35 Nm (25.8 lbf ft) **Loctite®2701™**
Screw, subframe	M8	35 Nm (25.8 lbf ft) **Loctite®2701™**
Screw, top steering stem	M8	20 Nm (14.8 lbf ft)
Screw, top triple clamp	M8	20 Nm (14.8 lbf ft)
Engine 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, handlebar support	M10	40 Nm (29.5 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	M16x1.5	100 Nm (73.8 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)

Screw-in nozzles, cooling system	M20x1.5	12 Nm (8.9 lbf ft) **Loctite®243™**

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

– **REACT PERFORMANCE DOT 4**

Motorex®

– **Brake Fluid DOT 5.1**

Coolant

Guideline

– Only use high-grade, silicate-free coolant with corrosion inhibitor additive for aluminum motors. Low grade and unsuitable antifreeze causes corrosion, deposits and frothing.

– Do not use pure water as only coolant is able to meet the requirements needed in terms of corrosion protection and lubrication properties.

– Only use coolant that complies with the requirements stated (see specifications on the container) and that has the relevant properties.

Antifreeze protection to at least	−25 °C (−13 °F)

The mixture ratio must be adjusted to the necessary antifreeze protection. Use distilled water if the coolant needs to be diluted.

The use of premixed coolant is recommended.

Observe the coolant manufacturer specifications for antifreeze protection, dilution and miscibility (compatibility) with other coolants.

Recommended supplier

Motorex®

– **COOLANT M3.0**

Engine oil (15W/50)

Standard/classification

– JASO T903 MA (📖 p. 155)

– SAE (📖 p. 155) (15W/50)

Guideline

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

Recommended supplier

Motorex®

– **Top Speed 4T**

Engine oil, 2-stroke

Standard/classification
– JASO FD (📖 p. 155)

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

Fully synthetic

Recommended supplier
Motorex®
– **Cross Power 2T**

Fork oil (SAE 4) (48601166S1)

Standard/classification
– SAE (📖 p. 155) (SAE 4)

Guideline
– Use only oils that comply with the specified standards (see specifications on the container) and that exhibit the corresponding properties.

Shock absorber fluid (SAE 2.5) (50180751S1)

Standard/classification
– SAE (📖 p. 155) (SAE 2.5)

Guideline
– Use only oils that comply with the specified standards (see specifications on the container) and that exhibit the corresponding properties.

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

Standard/classification
– DIN EN 228 (ROZ 95/RON 95/PON 91)

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

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

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

Standard/classification
– DIN EN 228
– JASO FD (📖 p. 155) (1:60)

Mixture ratio

1:60	Engine oil, 2-stroke (📖 p. 152) Super unleaded (ROZ 95/RON 95/PON 91) (📖 p. 152)

Recommended supplier
Motorex®
– **Cross Power 2T**

Air filter cleaner

Recommended supplier
Motorex®
– **Racing Bio Dirt Remover**

Chain cleaner

Recommended supplier
Motorex®
– **Chain Clean**

Fuel additive

Recommended supplier
Motorex®
– **Fuel Stabilizer**

High viscosity grease

Recommended supplier
SKF®
– **LGHB 2**

Long-life grease

Recommended supplier
Motorex®
– **Bike Grease 2000**

Motorcycle cleaner

Recommended supplier
Motorex®
– **Moto Clean**

Off-road chain spray

Recommended supplier
Motorex®
– **Chainlube Offroad**

Oil for foam air filter

Recommended supplier
Motorex®
– **Racing Bio Liquid Power**

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**

JASO T903 MA

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

SAE

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

JASO FD

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

26 LIST OF ABBREVIATIONS

Art. no.	Article number
ca.	circa
cf.	compare
e.g.	for example
etc.	et cetera
i.a.	inter alia
no.	number
poss.	possibly

READY TO RACE
»www.ktm.com

3213643en

04/2017

KTM Sportmotorcycle GmbH
5230 Mattighofen/Austria
http://www.ktm.com

KTM Group Partner

Photo: Mitterbauer/KTM