OWNER'S MANUAL 2009

690 Rally Factory Replica

ART. NO. 3211361en

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 accordingly.

We wish you great pleasure riding the vehicle!

Enter the serial numbers of your vehicle below.

Chassis number (☛ p. 7)	Dealer's stamp
Engine number (☛ p. 7)	
Key number (☛ p. 7)	

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

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

ISO 9001(12 100 6061)
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Issued by: TÜV Management Service

KTM-Sportmotorcycle AG
5230 Mattighofen, Austria

CONTENTS

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 done in an authorized KTM workshop! There, your motorcycle will be serviced optimally by specially trained experts using the specialist tools required.

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

Formats used

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

Specific name	Identifies a proprietary name.
Name®	Identifies a protected name.
Brand™	Identifies a trademark.

Use definition

KTM sport motorcycles are designed and built to withstand the normal stresses and strains of competitive use. The motorcycles comply with currently valid regulations and categories of the top international motorsport organizations.

Info

The motorcycle is authorized for public road traffic in the homologous (reduced) version only.
In the derestricted version, the motorcycle must be used only on closed off properties remote from public road traffic.

Maintenance

A prerequisite for perfect operation and prevention of wear is that the engine and chassis maintenance and adjustment work described in the owner's manual are properly carried out. Poor adjustment and tuning of the engine and chassis can lead to damage and breakage of components.
Using the motorcycle in extreme conditions such as very muddy or wet terrain can lead to above-average wear of components such as the transmission train or the brakes. For this reason, it may be necessary to service or replace worn parts before the limit specified in the service schedule is reached.
Pay careful attention to the prescribed running-in period, inspection and maintenance intervals. If you observe these exactly, you will ensure a much longer service life for your motorcycle.

Warranty

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

Fuel, oils, etc.

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

Spare parts, accessories

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

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

Work rules

During assembly, non-reusable parts (e.g. self-locking screws and nuts, seals, seal rings, O-rings, pins, lock washers) must be replaced by new parts.
If a thread locker is used on screw connections (e.g. **Loctite®**), the specific manufacturer instructions on its application must be observed.
Parts that are to be reused after disassembly should be cleaned and checked for damage and wear. Change damaged and worn parts.
Ensure that the vehicle is roadworthy after completing repair and maintenance work.

Transport

Note

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

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

Note

Fire hazard Some vehicle components get very hot when the machine is driven.

– Do not place the vehicle where there are flammable or explosive substances. Do not place objects over the vehicle while it is still warm from being run. Always let the vehicle cool first.

– Switch off engine.
– Use straps or other suitable devices to secure the motorcycle against accidents or falling over.

Environment

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

Notes/warnings

Pay close attention to the notes/warning.

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

Grades of risks

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

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

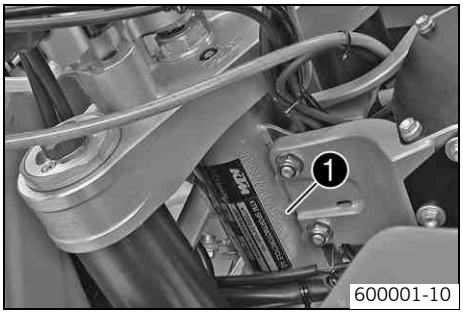
Note
Identifies a danger that will lead to considerable machine and material damage if the appropriate measures are not taken.

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

Owner's manual

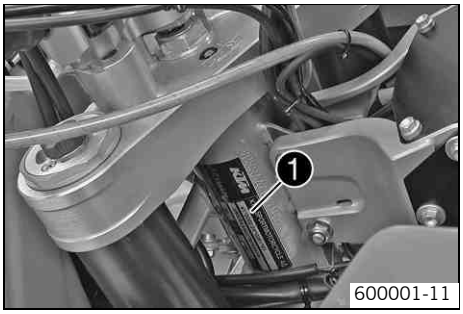
- It is important that you read this owner's manual carefully and completely before making your first trip. It contains useful information and tips to help you operate and handle your motorcycle. Only then will you find out how to customize the motorcycle ideally for your own use and how you can protect yourself from injury. The owner's manual also contains important information on servicing the motorcycle.
- The owner's manual is an important component of the motorcycle and should be handed over to the new owner if the vehicle is sold.

Chassis number



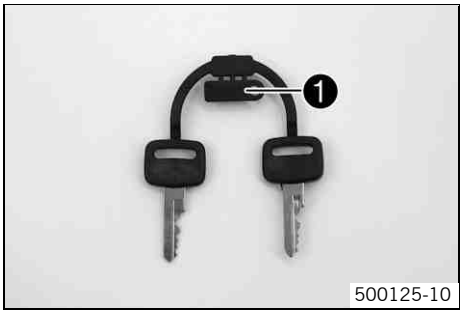
Chassis number ❶ is embossed in the steering head at the right.

Type label



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

Key number

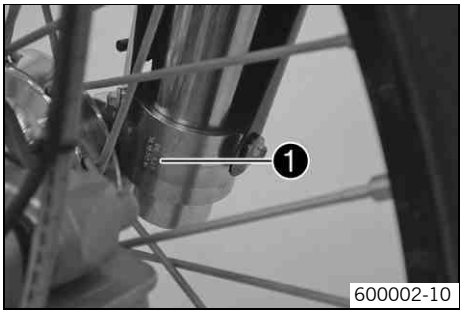


The key number ❶ is stamped on the key strap.

Engine number

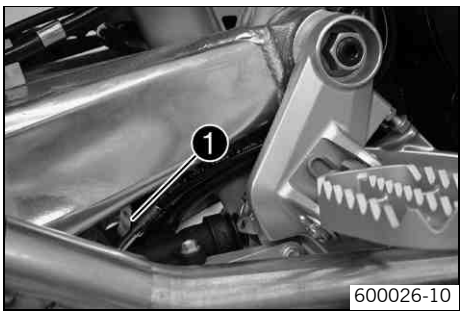
The engine number ❶ is stamped on the left side of the engine under the engine sprocket.

Fork part number



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

Shock absorber part number

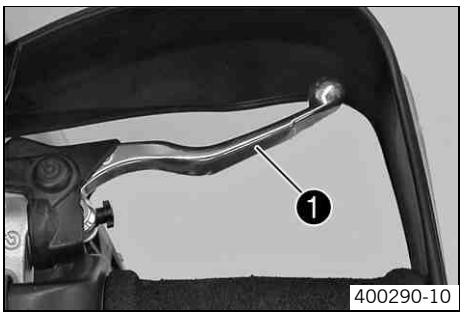


Shock absorber part number ❶ is attached at the shock absorber unit, to the rear of the direction of travel.

Clutch lever

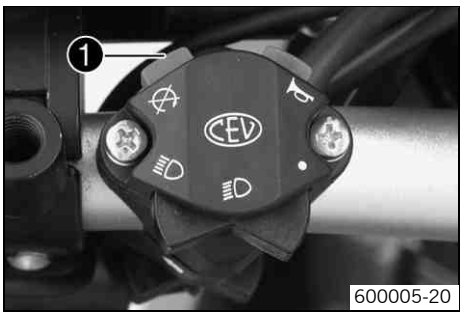
The clutch lever ❶ is fitted on the left side of the handlebar.
The clutch is hydraulically operated and self-adjusting.

Hand brake lever



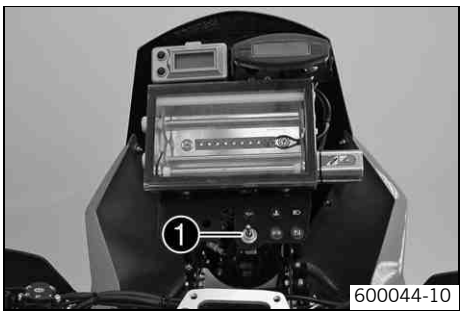
The hand brake lever ❶ is fitted on the right side of the handlebar.
The front brake is engaged using the hand brake lever.

Short circuit button



The short circuit button ❶ is fitted on the left side of the handlebar and has no function upon delivery.

Ignition switch

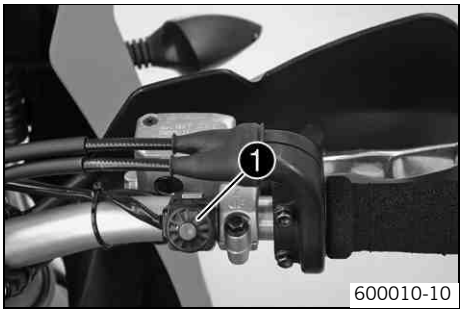


The ignition switch ❶ is located to the left of the indicator lamp on the instrument support.

Possible states

- Ignition off – Ignition switch flipped up. In this position, the ignition circuit is interrupted, a running engine stops, and a non-running engine will not start.
- Ignition on – Ignition switch flipped down. In this position, the ignition circuit is closed, and the engine can be started.

Electric starter button

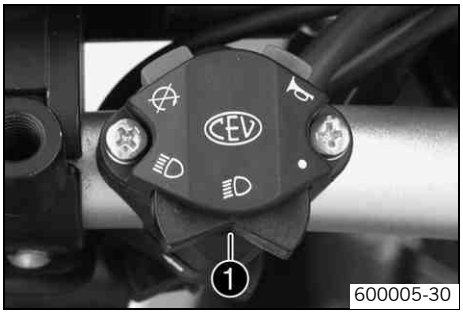


The electric starter button ❶ is fitted on the right side of the handlebar.

Possible states

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

Light switch

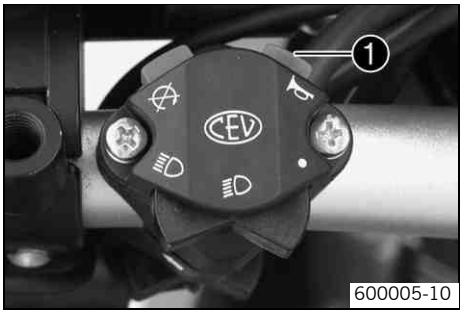


The light switch ❶ is fitted on the left side of the handlebar.

Possible states

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

Horn button

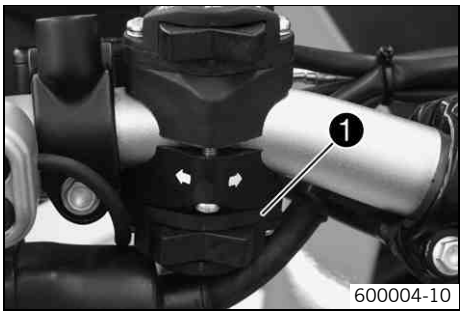


The horn button ❶ is fitted on the left side of the handlebar.

Possible states

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

Flasher switch

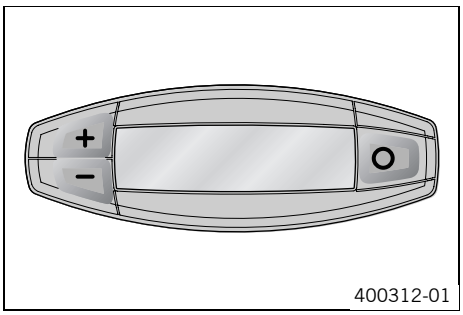


The flasher switch ❶ is fitted on the left side of the handlebar.

Possible states

	Flasher light off – Flasher switch is in the central position.
◀	Flasher light, left, on – Flasher switch turned to the left.
▶	Flasher light, right, on – Flasher switch turned to the right.

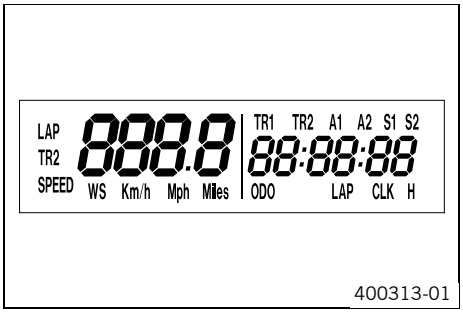
Speedometer



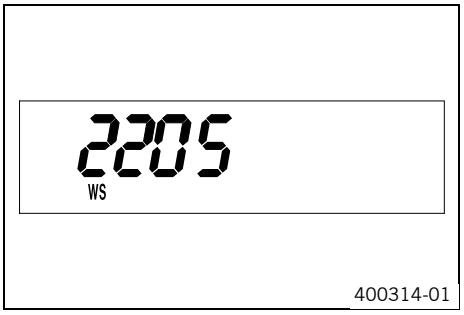
– Press the key O to change the display mode or change to one of the setup menus.
– Press the button + to control different functions.
– Press the button – to control different functions.

Info
In its condition at delivery, the display mode **SPEED/H** and **SPEED/ODO** is activated.

Speedometer activation and test



Activating the speedometer:
The speedometer is activated when one of the keys is pressed or an impulse comes from the wheel speed sensor.
Display test
For the function test of the display, all display segments light up briefly.



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

Info
2205 mm corresponds to the size of the 21" front wheel with a series production tire.

The display then changes to the last selected mode.

Tripmaster switch

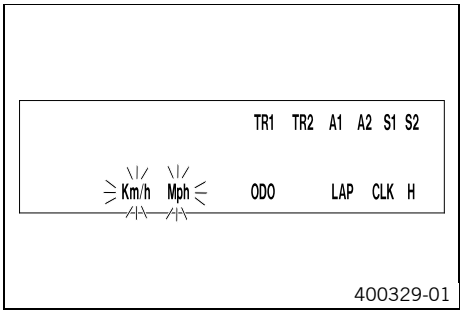
(Option: Tripmaster switch)

You can use the trip master switch to control the functions of the speedometer from the handlebar.

Info
The trip master is an optional accessory.

Setting 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 standing.

– Press the button briefly and repeatedly until **H** appears at the bottom right of the display.
– Press the button for 3 - 5 seconds.
  ✓ The Setup menu opens and the active functions are displayed.
– Press the button repeatedly until the **Km/h**/**Mph** display flashes.

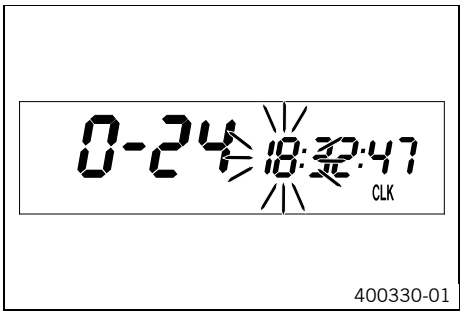
Km/h adjusting
– Press the button +.

Mph adjusting
– Press the button –.

– Press the button for 3 - 5 seconds.
  ✓ The settings are saved and the Setup menu closed.

Info
If no button is pressed for 20 seconds, or if no impulse comes from the wheel speed sensor, the settings are automatically saved and the Setup menu closed.

Setting the clock



Condition
The motorcycle is standing.

– Press the button briefly and repeatedly until **CLK** appears at the bottom right of the display.
– Press the button for 3 - 5 seconds.
  ✓ The hour display flashes.
– Set the hour display with the button + and/or button –.
– Press the button briefly.
  ✓ 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.

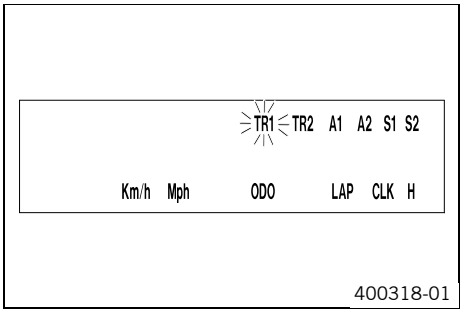
– Press the button O for 3 - 5 seconds.

✓ The settings are saved and the Setup menu closed.

Info
If no button is pressed for 20 seconds, or if no impulse comes from the wheel speed sensor, the settings are automatically saved and the Setup menu closed.

Adjusting the speedometer functions

Info
Upon delivery, only the **SPEED/H** and **SPEED/ODO** display modes are activated.



Condition
The motorcycle is standing.

– Press the button O briefly and repeatedly until **H** appears at the bottom right of the display.
– Press the button O for 3 - 5 seconds.

✓ The Setup menu opens and the active functions are displayed.

– Switch to the function you require by briefly pressing the button O.

✓ The selected function flashes.

Activating a function

– Press the button +.

✓ The icon remains in the display and the display changes to the next function.

Deactivating a function

– Press the button −.

✓ The icon disappears from the display and the display changes to the next function.

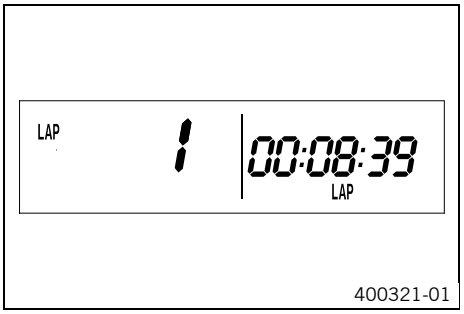
– Activate or deactivate all functions accordingly.
– Press the button O for 3 - 5 seconds.

✓ The settings are saved and the Setup menu closed.

Info
If no button is pressed for 20 seconds, or if no impulse comes from the wheel speed sensor, the settings are automatically saved and the Setup menu is closed.

Querying the lap time

Info
This function can be called only if lap times are measured.



Condition
The motorcycle is standing.

– Press the button O briefly and repeatedly until **LAP** appears at the bottom right of the display.
– Press the button O briefly.

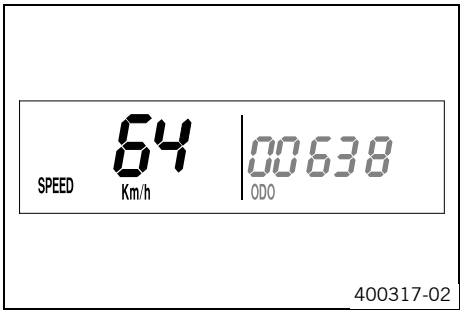
✓ **LAP 1** appears on the left side of the display.

– Laps 1-10 can be displayed by pressing the button +.
– The − button has no function
– Press the button O briefly.

✓ Next display mode

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

SPEED display mode (speed)



– Press the button briefly and repeatedly 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
Making the setting according to the country.
When an impulse comes from the front wheel, the left side of the speedometer display changes to the **SPEED** mode and the current speed is shown.

Display mode SPEED/H (service hours)

Condition
- The motorcycle is standing

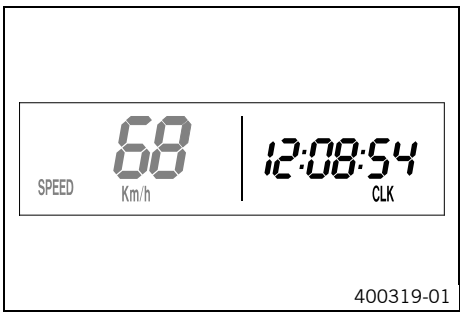
– Press the button briefly and repeatedly until **H** appears at the bottom right of the display.

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 maintenance work is carried out at the right intervals.
If the speedometer is in **H** display mode at the start of the journey, it automatically changes to the **ODO** display mode.
The **H** display mode is suppressed during the journey.

Press the button +.	No function
Press the button –.	No function
Press the button for 3 - 5 seconds.	The display changes to the Setup menu of the speedometer functions.
Press the button briefly.	Next display mode

Display mode SPEED/CLK (clock)



– Press the button briefly and repeatedly until **CLK** appears at the bottom right of the display.

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

Press the button +.	No function
Press the button –.	No function
Press the button for 3 - 5 seconds.	The display changes to the Setup menu of the clock.
Press the button briefly.	Next display mode

Display mode SPEED/LAP (lap time)

– Press the button briefly and repeatedly until **LAP** appears at the bottom right of the display.

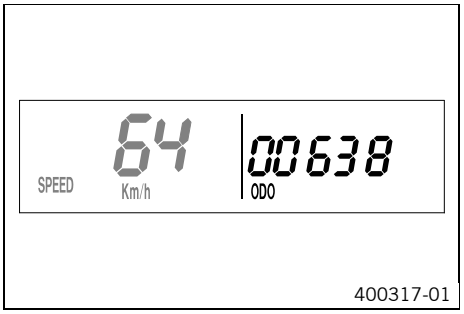
In the **LAP** display mode, up to 10 lap times can be timed with the stop watch.

Info
If the lap time continues after you press the button –, 9 memory locations are already occupied.
Lap 10 must be timed with the button +.

Press the button +.	Starts or stops the clock.
Press the button –.	Stops the current lap time and saves it, and the stop watch starts the next lap.

Press the button O for 3 - 5 seconds.	The stop watch and the lap time are reset.
Press the button O briefly.	Next display mode

Display mode SPEED/ODO (odometer)

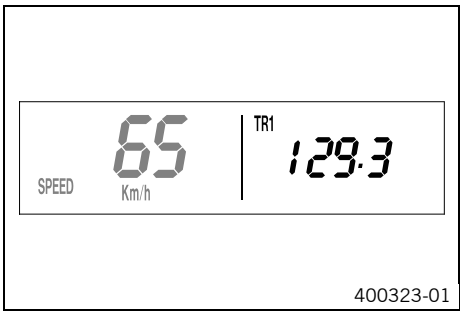


– Press the button O briefly and repeatedly until **ODO** appears at the bottom right of the display.

In **ODO** display mode, the total number of kilometers ridden is displayed.

Press the button +.	No function
Press the button –.	No function
Press the button O for 3 - 5 seconds.	–
Press the button O briefly.	Next display mode

Display mode SPEED/TR1 (trip master 1)



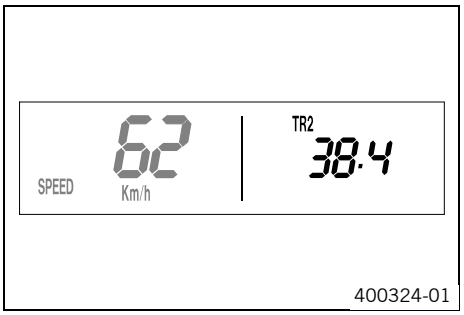
– Press the button O briefly and repeatedly until **TR1** appears at the top right of the display.

TR1 (trip master 1) runs constantly and counts up to 999.9.
It can be used to measure the distance covered during trips or between two 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 automaticallt reset to 0.0.

Press the button +.	No function
Press the button –.	No function
Press the button O for 3 - 5 seconds.	Displays of **TR1**, **A1** and **S1** are reset to 0,0.
Press the button O briefly.	Next display mode

Display mode SPEED/TR2 (trip master 2)



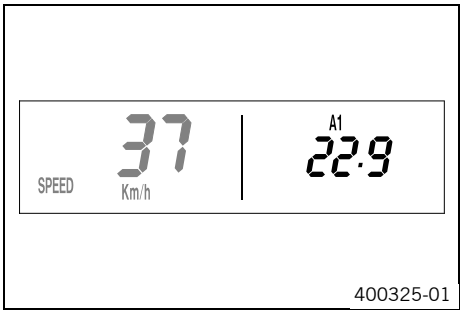
– Press the button O briefly and repeatedly until **TR2** appears at the top right of the display.

TR2 (trip master 2) runs constantly and counts up to 999.9.
The displayed value can be set manually with the button + and the button –. A very practical function for rides by 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 +.	Increases value of **TR2**.
Press the button –.	Reduces value of **TR2**.
Press the button O for 3 - 5 seconds.	Deletes value of **TR2**.
Press the button O briefly.	Next display mode

Disply mode SPEED/A1 (average speed 1)

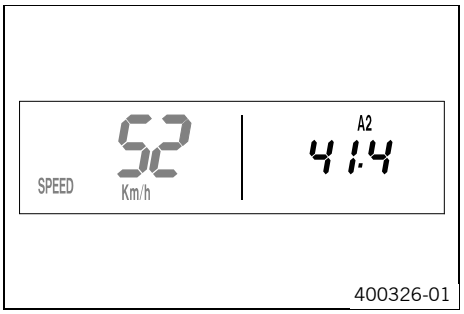


– Press the button ○ briefly and repeatedly until **A1** appears at the top right of the display.

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 +.	No function
Press the button −.	No function
Press the button ○ for 3 - 5 seconds.	Displays of **TR1**, **A1** and **S1** are reset to 0,0.
Press the button ○ briefly.	Next display mode

Display mode SPEED/A2 (average speed 2)



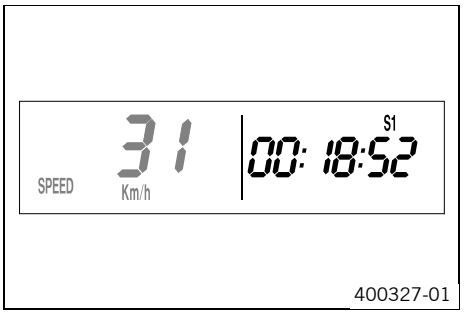
– Press the button ○ briefly and repeatedly until **A2** appears at the top right of the display.

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 timed after the ride.

Press the button +.	No function
Press the button −.	No function
Press the button ○ for 3 - 5 seconds.	–
Press the button ○ briefly.	Next display mode

Display mode SPEED/S1 (stop watch 1)



– Press the button ○ briefly and repeatedly until **S1** appears at the top right of the display.

S1 (stop watch 1) displays the journey time on the basis of **TR1** and continues when an impulse is received from the wheel speed sensor.
The calculation of this value starts with the first impulse of the wheel speed sensor and ends 3 seconds after the last impulse.

Press the button +.	No function
Press the button −.	No function
Press the button ○ for 3 - 5 seconds.	Displays of **TR1**, **A1** and **S1** are reset to 0,0.
Press the button ○ briefly.	Next display mode

Display mode SPEED/S2 (stop watch 2)

– Press the button ○ briefly and repeatedly until **S2** appears at the top right of the display.

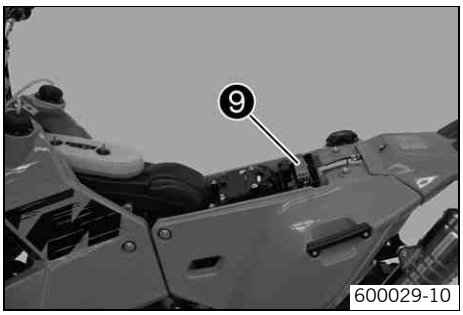
S2 (stop watch 2) is a manual stop watch.
If **S2** is running in the background, the **S2** display flashes in the speedometer display.

Press the button +.	Starts or stops **S2**.
Press the button −.	No function
Press the button ○ for 3 - 5 seconds.	Displays of **S2** and **A2** are reset to 0.0.
Press the button ○ briefly.	Next display mode

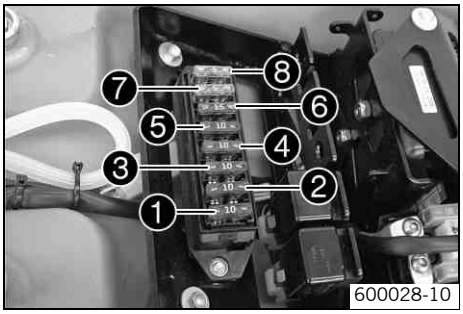
Table of functions				
Display	**Press the button +.**	**Press the button −.**	**Press the button ○ for 3 - 5 seconds.**	**Press the button ○ briefly.**
Display mode **SPEED/H** (service hours)	No function	No function	The display changes to the Setup menu of the speedometer functions.	Next display mode
Display mode **SPEED/CLK** (clock)	No function	No function	The display changes to the Setup menu of the clock.	Next display mode
Display mode **SPEED/LAP** (lap time)	Starts or stops the clock.	Stops the current lap time and saves it, and the stop watch starts the next lap.	The stop watch and the lap time are reset.	Next display mode
Display mode **SPEED/ODO** (odometer)	No function	No function	–	Next display mode
Display mode **SPEED/TR1** (trip master 1)	No function	No function	Displays of **TR1**, **A1** and **S1** are reset to 0,0.	Next display mode
Display mode **SPEED/TR2** (trip master 2)	Increases value of **TR2**.	Reduces value of **TR2**.	Deletes value of **TR2**.	Next display mode
Disply mode **SPEED/A1** (average speed 1)	No function	No function	Displays of **TR1**, **A1** and **S1** are reset to 0,0.	Next display mode
Display mode **SPEED/A2** (average speed 2)	No function	No function	–	Next display mode
Display mode **SPEED/S1** (stop watch 1)	No function	No function	Displays of **TR1**, **A1** and **S1** are reset to 0,0.	Next display mode
Display mode **SPEED/S2** (stop watch 2)	Starts or stops **S2**.	No function	Displays of **S2** and **A2** are reset to 0.0.	Next display mode

Table of conditions and activability		
Display	**The motorcycle is standing**	**Menu can be activated**
Display mode **SPEED/H** (service hours)	•	
Display mode **SPEED/CLK** (clock)		•
Display mode **SPEED/LAP** (lap time)		•
Display mode **SPEED/TR1** (trip master 1)		•
Display mode **SPEED/TR2** (trip master 2)		•
Disply 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)		•

Fuses



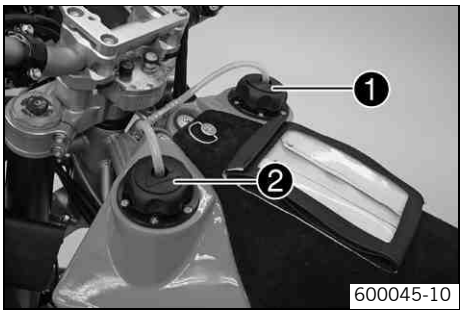
The fuse box ❾ is located under the seat.



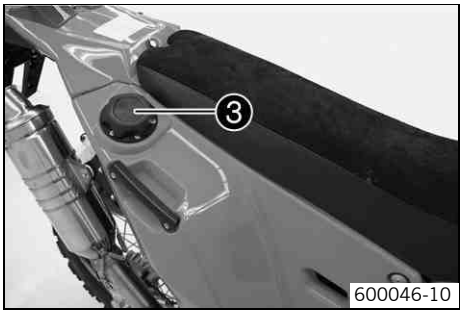
Fuse ❶ - Electric starter system
Fuse ❷ - Radiator fan
Fuse ❸ - lighting **Sentinel** (optional)
Fuse ❹ - Roadbook
Fuse ❺ - Not assigned
Fuse ❻ - Lighting
Fuse ❼ - **GPS** (optional)
Fuse ❽ - **Iritrac** (optional)

Fuel tank

This model has three separate fuel tanks controlled by a fuel tap. Two fuel tanks are located in front of the seat and one fuel tank is located beneath the seat.

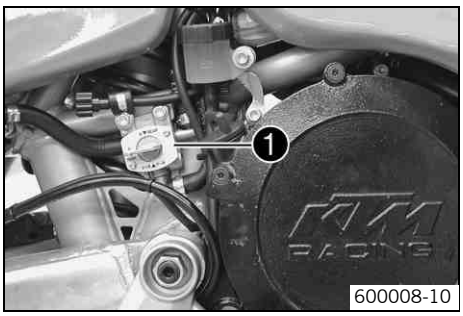


The right fuel tank is filled via filler cap ❶ and the left fuel tank is filled via filler cap ❷.



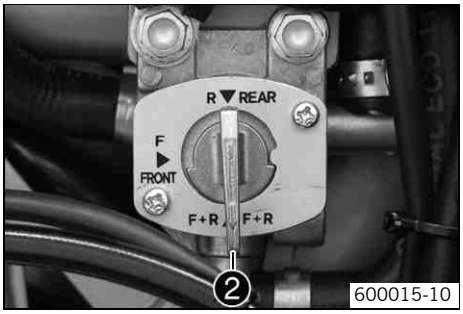
The rear fuel tank is filled via filler cap ❸.

Fuel tap

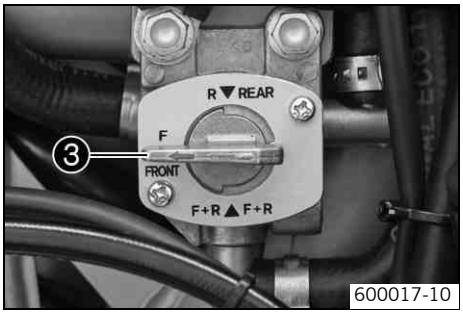


Fuel tap ❶ is located on the right over the fork pivot.
The fuel tap can be used to control the individual fuel tanks. The fuel tap does not have an **OFF** position since the fuel pump does not let fuel pass when the engine is stopped.

Possible states

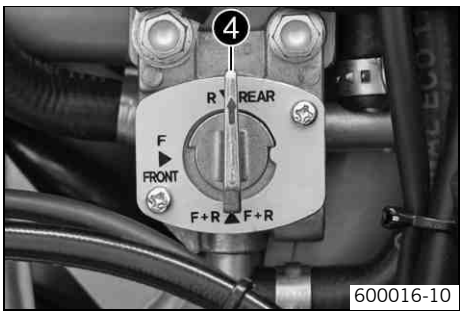


- **F+R** – If tap handle ❷ of the fuel tap points down, fuel is taken from all three fuel tanks. All fuel tanks empty out completely.



600017-10

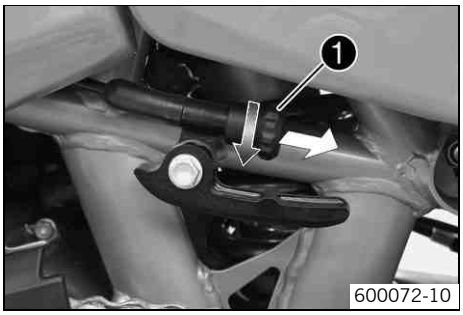
- **F FRONT** – If tap handle ❸ of the fuel tap points toward the rear, fuel is taken from the two front fuel tanks. Only the front fuel tanks empty out completely.



600016-10

- **R REAR** – If tap handle ❹ of the fuel tap points up, fuel is taken from the rear fuel tank. Only the rear fuel tank empties out completely.

Choke



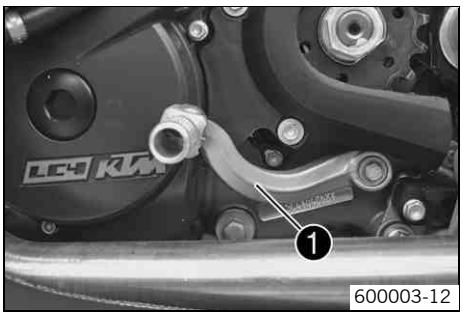
600072-10

The choke knob ❶ is fitted on the left side of the frame.
Activating the choke function frees an opening through which the engine can draw extra fuel. This gives a richer fuel-air mixture, which is needed for a cold start.

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

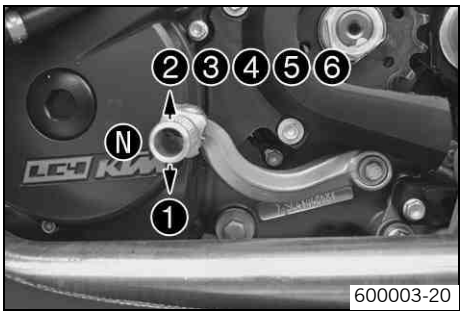
Possible states
- Choke function activated – The choke knob has been pulled out slightly and turned.
- Choke function deactivated – The choke knob is engaged in the guide.

Shift lever



600003-12

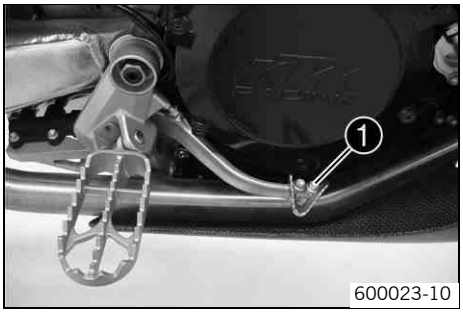
The shift lever ❶ is mounted on the left side of the engine.



600003-20

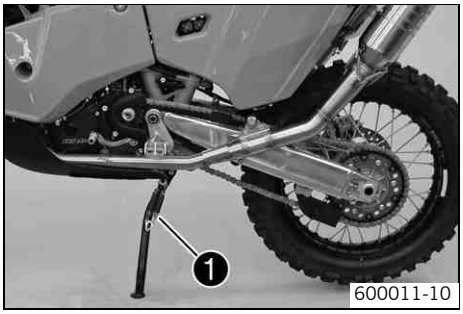
The gear positions can be seen in the photograph.
The neutral or idle position is between the first and second gears.

Foot brake pedal



Foot brake pedal ❶ is located in front of the right footrest.
The rear brake is engaged with the foot brake pedal.

Side stand



Note

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

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

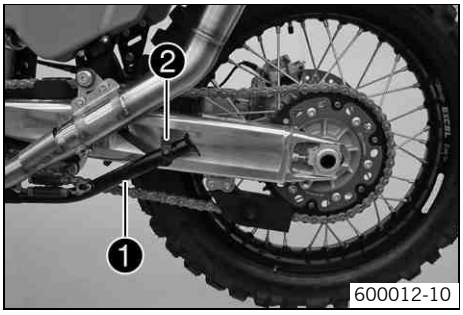
Note

Material damage Damage and destruction of components by excessive load.

– The side stand is designed for the weight of the motorcycle only. Do not sit on the motorcycle when it is supported by the side stand only. The side stand and/or the frame could be damaged and the motorcycle could fall over.

To park the motorcycle, remove the rubber band ❷, fold down the side stand ❶ with your foot and rest the motorcycle against it.

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



Steering lock

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

Locking the steering

Note

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

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

– Park the motorcycle.
– 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.

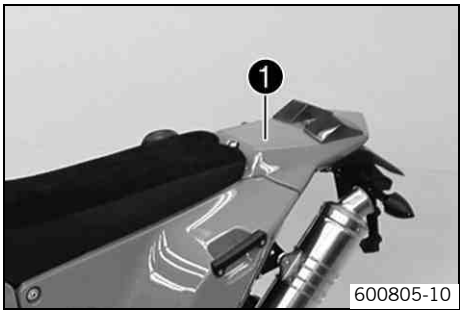
Unlocking the steering

– 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.

Tool set



The tool set is contained in the accessories box and can be stored in compartment ❶ beneath the additional lamps.

Handrail

There is one handrail ❶ attached at the left and one at the right (at the rear tank). The handrail is used for shunting the motorcycle.

Advice on first use

Danger
Danger of accidents Danger from insufficient traffic competence.

– Do not use the vehicle if you are not fit to deal with traffic or if you have consumed alcohol and/or medicaments or drugs.

Warning
Risk of injury Missing or insufficient protective clothing increases the risk of injury.

– Wear protective clothing (helmet, boots, gloves, pants and jacket with protectors) every time you ride the vehicle. Always wear protective clothing, which must be in perfect condition and meet legal requirements.

Warning
Danger of crashing Impairment of riding behavior due to different tire tread patterns on front and rear wheels.

– The front and rear wheels must be fitted with tires with similar tread patterns to prevent loss of control over the vehicle.

Warning
Danger of accidents Critical riding behavior due to inappropriate riding.

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

Warning
Danger of accidents Accident risk caused by presence of a passenger.

– Your vehicle is not designed to carry passengers. Do not ride with a passenger.

Warning
Danger of accidents Brake system failure.

– If the foot brake pedal is not released, the brake linings drag permanently. The rear brake can fail due to overheating. Take your foot off the foot brake pedal if you do not want to brake.

Warning
Danger of accidents Unstable riding behavior.

– Do not exceed the maximum permitted weight and axle loads.

Warning
Risk of misappropriation Usage by unauthorized persons.

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

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

– Make sure that the pre-delivery inspection work has been carried out by an authorized KTM workshop.
  You receive a delivery certificate and the service record at vehicle handover.
– Before your first trip, read the entire operating instructions carefully.
– Get to know the controls.
– Adjust the basic setting of the clutch lever. (☛ p. 42)
– Adjust the free travel of the handbrake lever. (☛ p. 43)
– Adjust the free travel of the foot brake pedal. 🔧 (☛ p. 47)
– Get used to handling the motorcycle on a suitable piece of land before making a longer trip.

Info
Offroad, you should be accompanied by another person on another machine 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 vehicle.
– Do not make any offroad trips that over-stress your ability and experience.
– Hold the handlebar firmly with both hands and keep your feet on the footrests when riding.
– If you carry any baggage, make sure it is fixed 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.

– Do not exceed the overall maximum permitted weight and the axle loads.
  Guideline

Maximum permissible overall weight	400 kg (882 lb.)
Maximum permissible front axle load	190 kg (419 lb.)
Maximum permissible rear axle load	250 kg (551 lb.)

– Run the engine in.

Running in the engine

– During the run-in phase, do not exceed the specified speed in the respective gear.
  Guideline

Run-in time	2 h
1st gear	45 km/h (28 mph)
2nd gear	60 km/h (37.3 mph)
3rd gear	80 km/h (49.7 mph)
4th gear	95 km/h (59 mph)
5th gear	105 km/h (65.2 mph)
6th gear	110 km/h (68.4 mph)

Checks before putting into operation

Info
Make sure that the motorcycle is in a perfect technical condition before use.

Info
In the interests of riding safety, make a habit of making a general check before you ride.

- Check the engine oil level. (☛ p. 67)
- Check the chain tension. (☛ p. 40)
- Check the chain dirt accumulation. (☛ p. 40)
- Check the tire condition. (☛ p. 53)
- Check the tire air pressure. (☛ p. 54)
- Check the front brake fluid level. (☛ p. 43)
- Check the rear brake fluid level. (☛ p. 47)
- Check the front brake linings. (☛ p. 44)
- Check the rear brake linings. (☛ p. 48)
- Check brake system function.
- Check the coolant level. (☛ p. 63)
- Check that all operating elements are correctly adjusted and free to move.
- Check that the electrical equipment is functioning properly.

Starting

Danger
Danger of poisoning Exhaust gases are poisonous and can result in unconsciousness and/or death.

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

Note
Engine failure High engine speeds in cold engines have a negative effect on the service life of the engine.

- Always warm up the engine at low engine speeds.

Info
If the motorcycle is unwilling to start, the cause can be old fuel in the float chamber. The flammable elements of the fuel evaporate after a long time of standing.
If the float chamber is filled with fresh fuel, the engine starts immediately.
Press the starter for a maximum of 5 seconds. Wait for a least 5 seconds until trying again.

Condition
Motorcycle standing still: ≥ 1 week

- Empty the carburetor float chamber.

- Remove the motorcycle from the stand.
- Shift gear to neutral.
- Flip the ignition switch down.

Condition
Engine cold

- Pull the choke knob out slightly and turn it.

- Press the electric starter button.

Info
Don't open the throttle.

Starting up

Info
Switch on the light before riding the motorcycle. You will then be seen earlier by other motorists.
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.

Shifting, riding

Warning
Danger of accidents If you change down at high engine speed, the rear wheel can lock up.

– Do not change into a low gear at high engine speed. The engine races and the rear wheel can block.

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

– When conditions allow (incline, road situation, etc.), you can shift into a higher gear. To do so, release the throttle while simultaneously pulling the clutch lever, shift into the next gear, release the clutch and open the throttle.
– If the choke function was activated, deactivate it 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, brake if necessary and close the throttle at the same time.
– Pull the clutch lever and shift into a lower gear, release the clutch lever slowly and open the throttle or shift again.
– Switch off the engine if you expect to be standing for a long time.

Guideline

≥ 2 min

– Avoid frequent and longer slipping of the clutch. This heats the engine oil, the engine and the cooling system.
– Ride with a lower engine speed instead of with a high engine speed and a slipping clutch.

Braking

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

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

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

– Have the brake system checked in an authorized KTM workshop, and do not ride any further.

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

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

– On sandy, wet or slippery surfaces, use the rear brake.
– Braking should always be completed before you go into a bend. Change down to a lower gear appropriate to your road speed.
– On long downhill stretches, use the braking effect of the engine. Change down one or two gears, but do not overstress the engine. In this way, you have to brake far less and the brakes do not overheat.

Stopping, parking

Warning
Risk of misappropriation Usage by unauthorized persons.

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

Warning
Danger of burns Some vehicle components get very hot when the machine is driven.

– Do not touch hot components such as exhaust system, radiator, engine, shock absorber and brakes. Allow these components to cool down before starting work on them.

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

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

Note
Fire hazard Some vehicle components get very hot when the machine is driven.

– Do not place the vehicle where there are flammable or explosive substances. Do not place objects over the vehicle while it is still warm from being run. Always let the vehicle cool first.

Note
Material damage Damage and destruction of components by excessive load.

– The side stand is designed for the weight of the motorcycle only. Do not sit on the motorcycle when it is supported by the side stand only. The side stand and/or the frame could be damaged and the motorcycle could fall over.

– Apply the brakes and shift into neutral.
– With the engine idling, flip the ignition switch up until the engine stops.
– Park the motorcycle on a firm surface.

Refueling

Danger
Fire hazard Fuel can easily catch fire.

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

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

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

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

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

– Switch off engine.
– Unscrew the filler cap.

– Fill the fuel tank with fuel no higher than mark Ⓐ.

Fuel tank capacity		
Fuel tank half, front left, approx.	9.0 l (2.38 US gal)	Super unleaded (ROZ 95 / RON 95 / PON 91) (☛ p. 97)
Fuel tank half, front right, approx.	9.0 l (2.38 US gal)	Super unleaded (ROZ 95 / RON 95 / PON 91) (☛ p. 97)
Rear fuel tank, approx.	18.0 l (4.76 US gal)	Super unleaded (ROZ 95 / RON 95 / PON 91) (☛ p. 97)
Total fuel capacity, approx.	36.0 l (9.51 US gal)	Super unleaded (ROZ 95 / RON 95 / PON 91) (☛ p. 97)

– Replace the filler cap and turn clockwise until the tank is tightly closed.

Info
Run the fuel tank breather hoses without kinks.

Important maintenance work to be carried out by an authorized KTM workshop.

		K05N	K15A	K45A	T1A
Engine	Change the engine oil and filter, clean the oil screens. 🔧 (☛ p. 67)	•	•	•	
	Check and adjust valve clearance. 🔧	•		•	
	Check engine mounting screws for tightness.	•	•	•	•
	Replace spark plug.			•	
	Clean spark plug connectors and check for tightness.		•	•	
Carburetor	Clean and adjust carburetor. 🔧			•	
	Check carburetor connection boots for cracks and leakage.		•	•	
	Check vent hoses for damage and routing without sharp bends.	•	•	•	
	Check idle.	•	•	•	
	Check the carburetor components. 🔧			•	
	Change the fuel filter. 🔧		•	•	
Attachments	Check that all operating elements for smooth operation.	•	•	•	
	Check the cooling system for leakage.	•	•	•	•
	Check the coolant level and antifreeze. (☛ p. 64)	•	•	•	•
	Check the exhaust system for leakage and looseness.	•	•	•	•
	Check Bowden cables for damage, smooth operation and routing without sharp bends.	•	•	•	
	Check the fluid level of the hydraulic clutch. (☛ p. 42)	•	•	•	
	Clean the air filter. 🔧	•	•	•	•
	Check that the electrical equipment is functioning properly.	•	•	•	
	Check cables for damage and routing without sharp bends.	•	•	•	
	Clean the fuel tank breather hoses, checking for damage and routing without sharp bends.	•	•	•	
	Check the headlamp setting.			•	
	Treat electric contacts with contact spray.			•	
Brakes	Check the front brake linings. (☛ p. 44)	•	•	•	•
	Check the rear brake linings. (☛ p. 48)	•	•	•	•
	Check the brake discs. (☛ p. 42)	•	•	•	•
	Check the front brake fluid level. (☛ p. 43)	•	•	•	•
	Check the rear brake fluid level. (☛ p. 47)	•	•	•	•
	Change the brake fluid. 🔧		•	•	
	Check brake lines for damage and leakage.	•	•	•	•
	Check the free play of the hand brake lever. (☛ p. 43)	•	•	•	
	Check the free play of the foot brake lever. (☛ p. 47)	•	•	•	
	Check brake system function.	•	•	•	•
	Check screws and guide bolts of brake system for tightness.		•	•	
Chassis	Check the shock absorber and fork for leakage and functioning. 🔧	•	•	•	
	Clean dust boots of fork legs. (☛ p. 35)		•	•	
	Bleed fork legs. (☛ p. 35)	•	•	•	
	Check the swingarm bearing. 🔧			•	
	For each lever, remove the linkage, lubricate the bearing and check the seals and bearing for wear. 🔧		•	•	
	Check the frame and link fork for cracks.		•	•	
	Check play of steering head bearing. (☛ p. 36)		•	•	
	Check all screws to see if they are tight.	•	•	•	•
Wheels	Check the spoke tension. (☛ p. 54)		•	•	
	Check rim run-out.	•	•	•	
	Check the tire condition. (☛ p. 53)		•	•	
	Check the tire air pressure. (☛ p. 54)		•	•	
	Check the rear sprocket/engine sprocket for wear. (☛ p. 41)		•	•	

		K05N	K15A	K45A	T1A
Wheels	Check the chain tension. (☛ p. 40)	•	•	•	
	Clean the chain. (☛ p. 40)	•	•	•	
	Check the wheel bearing for play. 🔧		•	•	
	Clean and grease adjusting screws of chain adjuster.	•	•	•	

K05N: after 500 km (310.7 mi)
K15A: every 1,500 km (932 mi)
K45A: every 4,500 km (2,796 mi)
T1A: daily

Important maintenance work to be carried out by an authorized KTM workshop. (as additional order)

	K100A	J1A	J2A
Carry out a complete fork service. 🔧		•	•
Carry out a complete shock absorber service. 🔧			•
Grease the steering head bearing. 🔧		•	•
Change the hydraulic clutch fluid. 🔧		•	•
Change the crankshaft main bearing. 🔧	•		
Change the transmission bearing. 🔧	•		
Change the balancer bearing. 🔧	•		
Change the timing chain. 🔧	•		
Change the shaft seal rings and gaskets. 🔧	•		
Check wear of all transmission components including shafts. 🔧	•		
Check the crankshaft, connecting rod and cylinder. 🔧	•		
Check the clutch. 🔧	•		
Check the camshaft, rocker arm and valves. 🔧	•		

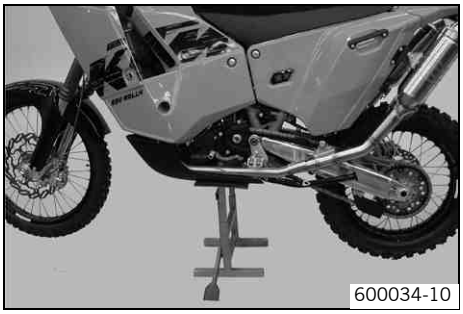
K100A: every 10,000 km (6,214 mi)
J1A: annually
J2A: every 2 years

Important checks and maintenance work to be carried out by the rider.

	NB1A
Check the engine oil level. (☛ p. 67)	•
Check the front brake fluid level. (☛ p. 43)	•
Check the rear brake fluid level. (☛ p. 47)	•
Check the front brake linings. (☛ p. 44)	•
Check the rear brake linings. (☛ p. 48)	•
Check and adjust Bowden cables.	•
Bleed fork legs. (☛ p. 35)	•
Clean the chain. (☛ p. 40)	•
Check the chain tension. (☛ p. 40)	•
Check the rear sprocket/engine sprocket for wear. (☛ p. 41)	•
Clean the air filter. 🔧	•
Check the tire air pressure. (☛ p. 54)	•
Check the tire condition. (☛ p. 53)	•
Check the coolant level. (☛ p. 63)	•
Empty the carburetor float chamber.	•
Check that all operating elements for smooth operation.	•
Check braking.	•
Check all screws to see if they are tight.	•

NB1A: Depending on conditions of use according to requirements.

Jacking up the motorcycle


600034-10

Note

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

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

– Jack up the motorcycle at the motor protection device near the swinging fork. The wheels must no longer touch the ground.

Work stand (54829055000)

– Secure the motorcycle against falling over.

Removing the motorcycle from the work stand

Note

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

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

– Remove the motorcycle from the work stand.
– Remove the work stand.

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, swing arm and frame, the basic settings of the suspension components must match your body 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 your weight is above or below the standard range, you have to adjust the basic setting of the suspension components 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.

Compression damping of shock absorber

600013-10

The compression damping can be adjusted via opening ❶ on the left side of the rear tank.
The shock absorber can regulate compression damping separately in the low-speed and high-speed ranges (Dual Compression Control).
The terms low-speed and high-speed refers to the movement of the shock absorber during compression and not to the riding speed of the motorcycle.
Changes in the settings in the low-speed range have an impact on the high-speed range and vice versa.

Adjusting the compression damping of the shock absorber

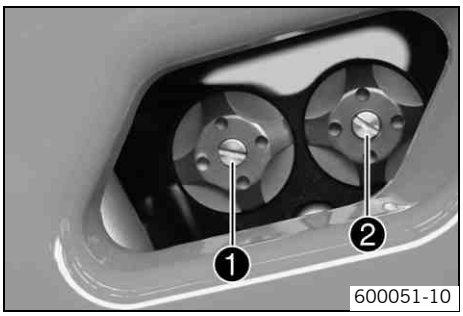
Danger

Danger of accidents The shock absorber is under high pressure.

– The shock absorber is filled with highly compressed nitrogen, so never dismantle the shock absorber or carry out any maintenance on it yourself.

Info

The compression damping is differentiated into a low speed and high speed setting.
The low-speed setting can be seen during the slow to normal compression of the shock absorber.
The high-speed setting can be seen during the fast compression of the shock absorber.



– Turn the adjusting screw of the low-speed damping ❶ and the high-speed damping ❷ clockwise to the last perceptible click.
– Turn back counterclockwise the number of clicks or turns corresponding to the shock absorber type.

Guideline

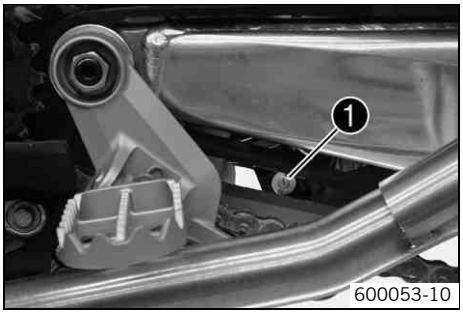
Compression damping, low-speed	
Standard	15 clicks
Compression damping, high-speed	
Standard	20 turns

Info
Turn clockwise to increase damping, turn counterclockwise to reduce suspension damping.

Adjusting the rebound damping of the shock absorber

Danger
Danger of accidents The shock absorber is under high pressure.

– The shock absorber is filled with highly compressed nitrogen, so never dismantle the shock absorber or carry out any maintenance on it yourself.



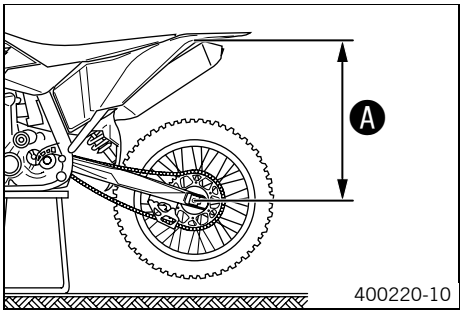
– Turn adjusting screw ❶ clockwise to the last perceptible click.
– Turn back counterclockwise the number of clicks corresponding to the shock absorber type.

Guideline

Rebound damping	
Standard	20 clicks

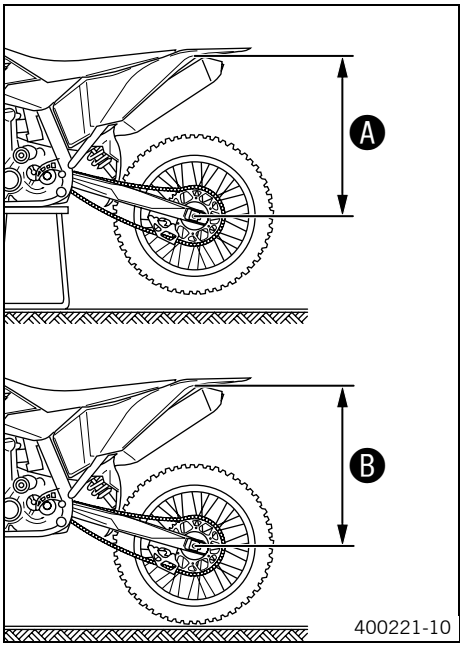
Info
Turn clockwise to increase damping, turn counterclockwise to reduce suspension damping.

Measuring the unloaded rear wheel sag



– Jack up the motorcycle. (☛ p. 29)
– Measure the distance – as vertical as possible – between the rear axle and a fixed point, for example, a mark on the side cover.
– Make a note of the value as measurement Ⓐ.
– Remove the motorcycle from the work stand. (☛ p. 29)

Checking the static sag of the shock absorber



– Measure distance Ⓐ of rear wheel unloaded. (☛ p. 30)
– Ask someone to help you by holding the motorcycle upright.
– Measure the distance between the rear axle and the fixed point again.
– Make a note of the value as measurement Ⓑ.

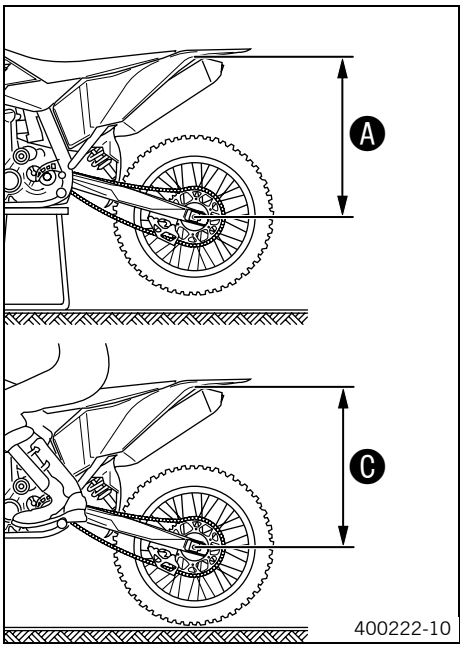
Info
The static sag is the difference between measurements Ⓐ and Ⓑ.

– Check the static sag.

Static sag	33 mm (1.3 in)

» If the static sag is less or more than the specified value:
– Adjust the spring preload of the shock absorber. 🔧 (☛ p. 31)

Checking the riding sag of the shock absorber



– Measure distance Ⓐ of rear wheel unloaded. (☛ p. 30)
– With another person holding the motorcycle, sit on the saddle with full protective clothing in a normal sitting position (feet on footrests) and bounce up and down a few times until the rear suspension levels out.
– The other person now has to measure the distance between the rear axle and a fixed point.
– Make a note of the value as measurement Ⓒ.

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

– Check the riding sag.

Riding sag	107 mm (4.21 in)

» If the riding sag differs from the specified measurement:
– Adjust the riding sag. 🔧 (☛ p. 32)

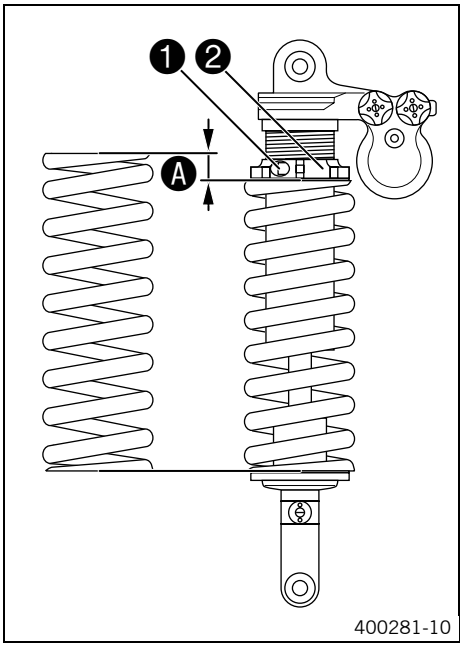
Adjusting the spring preload of the shock absorber 🔧

Danger
Danger of accidents The shock absorber is under high pressure.

– The shock absorber is filled with highly compressed nitrogen, so never dismantle the shock absorber or carry out any maintenance on it yourself.

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

– Remove shock absorber. (☛ p. 33)
– After removing the shock absorber, clean it thoroughly.



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

Combination wrench (50329080000)
Hook wrench (T106S)

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

Guideline

Spring preload	
Standard	14 mm

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

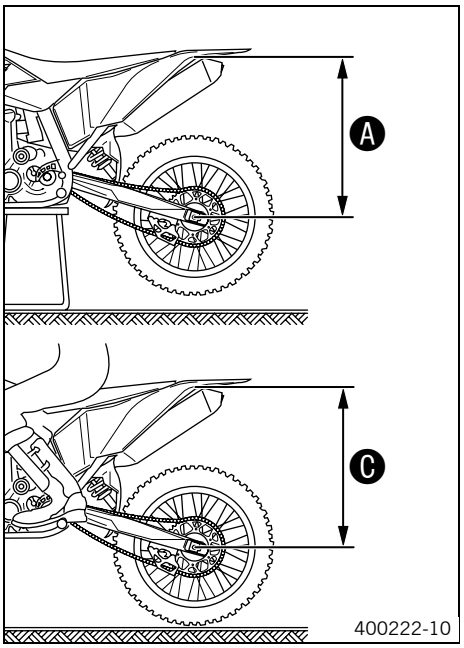
– Tighten screw ❶.

Guideline

Screw, shock absorber adjusting ring	M6	5 Nm (3.7 lbf ft)

– Install the shock absorber. (☛ p. 33)

Checking the riding sag of the shock absorber



– Measure distance Ⓐ of rear wheel unloaded. (☛ p. 30)
– With another person holding the motorcycle, sit on the saddle with full protective clothing in a normal sitting position (feet on footrests) and bounce up and down a few times until the rear suspension levels out.
– The other person now has to measure the distance between the rear axle and a fixed point.
– Make a note of the value as measurement Ⓒ.

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

– Check the riding sag.

Riding sag	107 mm (4.21 in)

» If the riding sag differs from the specified measurement:
– Adjust the riding sag. 🔧 (☛ p. 32)

Adjusting the riding sag 🔧

– Remove shock absorber. (☛ p. 33)
– After removing the shock absorber, clean it thoroughly.
– Choose and mount a suitable spring.

Guideline

Spring rate	
Weight of rider: 65... 75 kg (143... 165 lb.)	88 N/mm (502 lb/in)
Weight of rider: 75... 85 kg (165... 187 lb.)	92 N/mm (525 lb/in)
Weight of rider: 85... 95 kg (187... 209 lb.)	97 N/mm (554 lb/in)

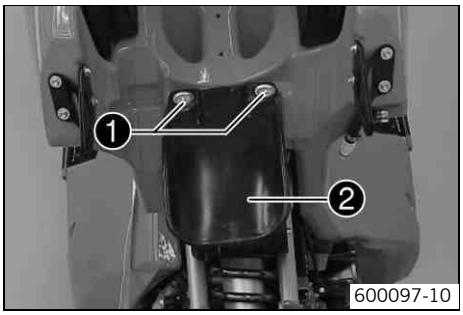
Info
The spring rate is shown on the outside of the spring.
Smaller weight differences can be compensated by changing the spring preload.

– Install the shock absorber. (☛ p. 33)
– Check the static sag of the shock absorber. (☛ p. 31)
– Check the riding sag of the shock absorber. (☛ p. 32)

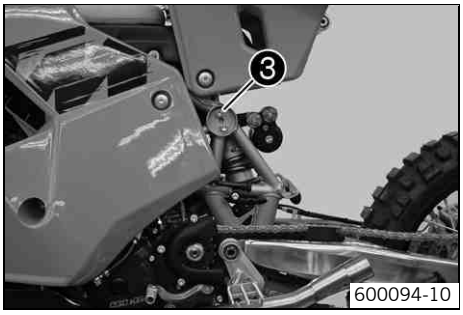
– Adjust the rebound damping of the shock absorber. (☛ p. 30)

Removing the shock absorber

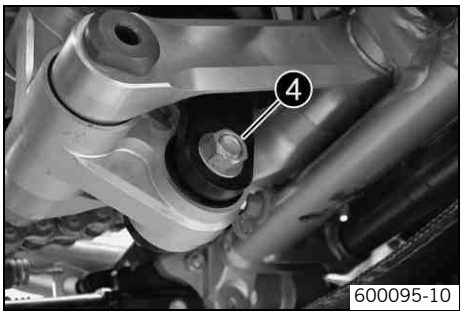
– Jack up the motorcycle. (☛ p. 29)
– Fold up the fuel tank at the rear. (☛ p. 57)



– Remove screws ❶ and splash protector ❷.

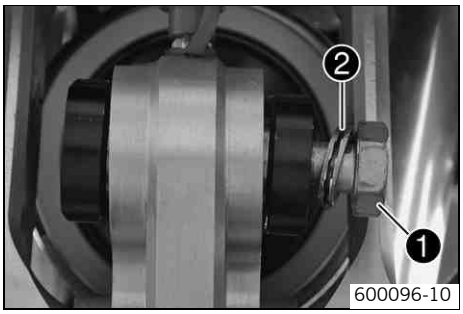


– Remove screw ❸.



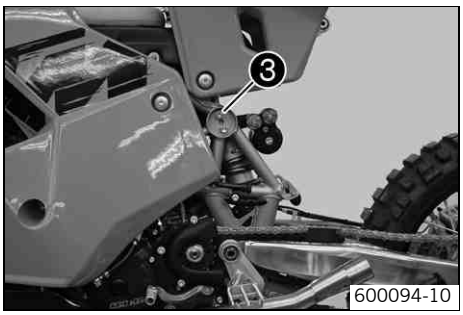
– Remove screw ❹.
– Remove shock absorber.

Installing the shock absorber



– Position the shock absorber.
– Mount the screw ❶ with the washers ❷ at the bottom of the shock absorber but do not tighten it yet.

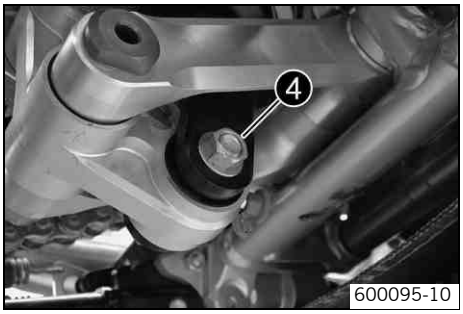
Info
Ensure that the washers ❷ are properly positioned.



– Mount and tighten screw ❸.

Guideline

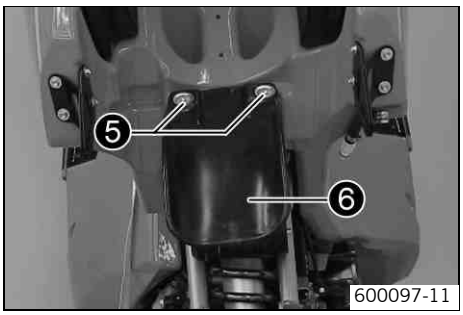
Screw, top shock absorber	M10	45 Nm (33.2 lbf ft)	**Loctite® 243™**



– Tighten screw ❹.

Guideline

Screw, bottom shock absorber	M10	45 Nm (33.2 lbf ft)	**Loctite® 243™**



– Position the splash protector ❻. Mount and tighten screws ❺.

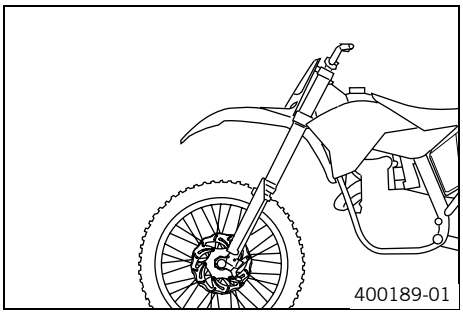
Guideline

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

– Remove the motorcycle from the work stand. (☛ p. 29)

Checking basic setting of fork

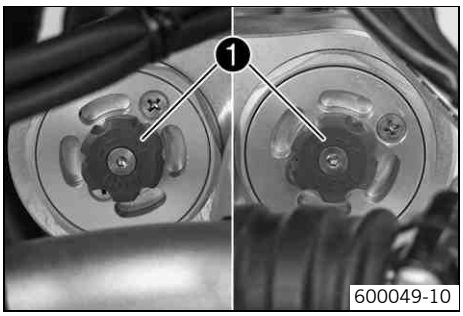
Info
For various reasons, no exact riding sag can be determined for the forks.



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

Adjusting the compression damping of the fork

Info
The hydraulic compression damping determines the fork suspension behavior.



– Turn adjusting screws ❶ clockwise until they stop.

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

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

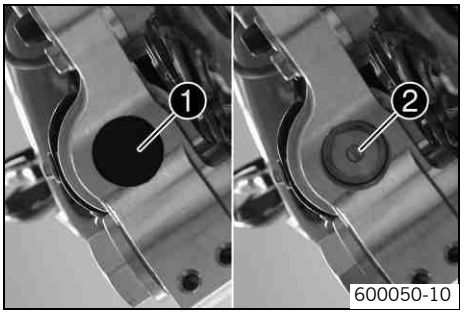
Guideline

Compression damping	
Standard	12 clicks

Info
Turn clockwise to increase damping, turn counterclockwise to reduce suspension damping.

Adjusting the rebound damping of the fork

Info
The hydraulic rebound damping determines the fork suspension behavior.



– Remove protection covers ❶.
– Turn adjusting screws ❷ clockwise until they stop.

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

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

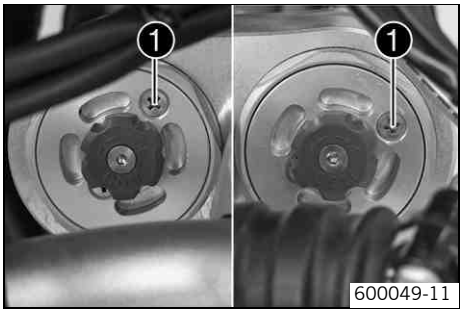
Guideline

Rebound damping	
Standard	20 clicks

Info
Turn clockwise to increase damping, turn counterclockwise to reduce suspension damping.

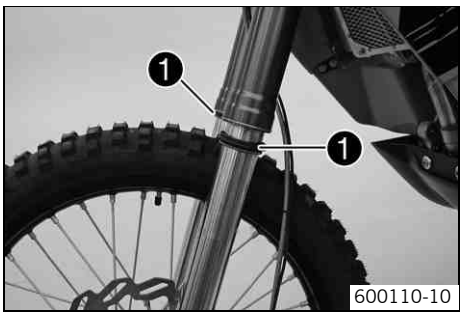
– Mount protection covers ❶.

Bleeding fork legs



– Jack up the motorcycle. (☛ p. 29)
– Remove bleeder screws ❶ briefly.
✓ Any excess pressure escapes from the interior of the fork.
– Mount and tighten bleeder screws.
– Remove the motorcycle from the work stand. (☛ p. 29)

Cleaning dust boots of fork legs



– Dismount the front fender (☛ p. 36)
– Push dust boots ❶ of both fork legs downwards.

Info
The dust boots should remove dust and coarse dirt particles from the fork tubes. Over time, dirt can penetrate behind the dust boots. If this dirt is not removed, the oil seals behind can start to leak.

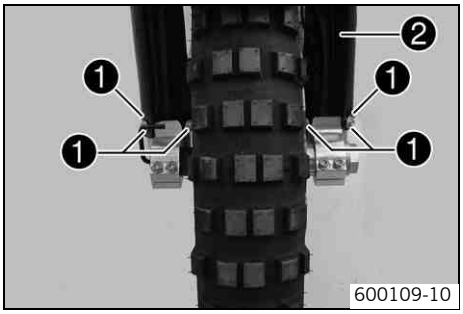
Warning
Danger of accidents Reduced braking due to oil or grease on the brake discs.
– Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.

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

Universal oil spray (☛ p. 98)

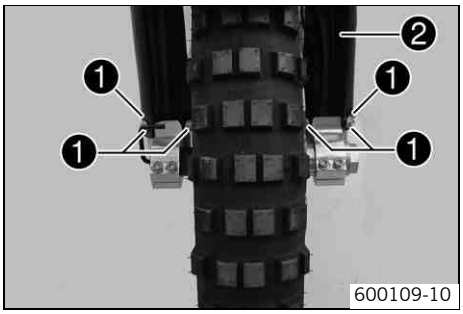
– Press the dust boots back into their normal position.
– Remove excess oil.
– Install front fender. (☛ p. 36)

Dismounting the front fender



– Remove screws ❶. Remove front fender ❷.

Installing the front fender



– Position the front fender ❷. Mount and tighten screws ❶.

Guideline

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

Checking play of steering head bearing

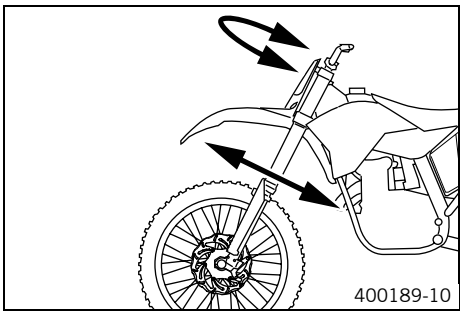
Warning

Danger of accidents Unsafe riding behavior due to incorrect steering head bearing play.

– The steering head bearing play should be adjusted immediately in an authorized KTM workshop.

Info

If the bike is driven for a longer time with play in the steering head bearing, the bearing and the bearing seats in the frame can be damaged after time.



– Jack up the motorcycle. (☛ p. 29)
– Remove the steering damper.
– Move the handlebar to the straight-ahead position. Move the fork legs to and fro in the direction of travel.

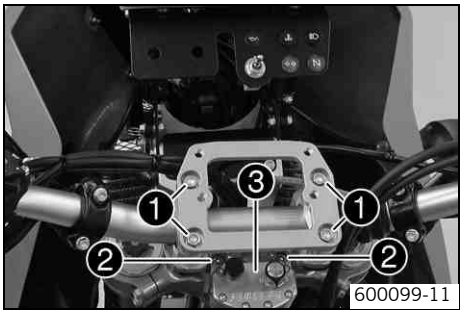
No play should be noticeable in the steering head bearing.

» If there is noticeable play present:
  – Adjust play of the steering head bearing 🔧 (☛ p. 37)
– Move the handlebar to and fro over the entire steering range.

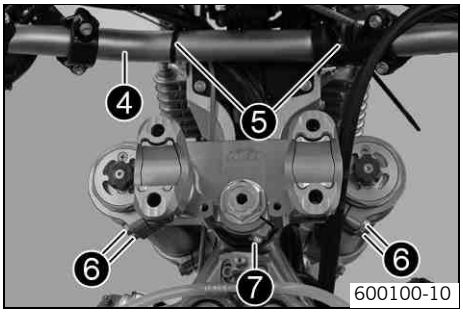
The handlebar must be able to move easily over the entire steering range. No resting locations should be noticeable.

» If click positions are noticeable:
  – Adjust play of the steering head bearing 🔧 (☛ p. 37)
  – Check the steering head bearing and replace if required.
– Install the steering damper.
– Remove the motorcycle from the work stand. (☛ p. 29)

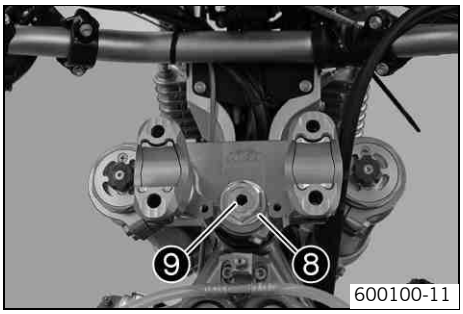
Adjusting play of steering head bearing



– Remove screws ❶. Remove the holding plate with handlebar clamps.
– Remove screws ❷. Remove the steering damper ❸.
– Remove the trim. (☛ p. 54)



– Fix the handlebar ❹ onto the instrument support with cable ties ❺.
– Loosen screws ❻ and ❼.



– Loosen the nut ❽ and screw ❾.
– Retighten the scew ❾.

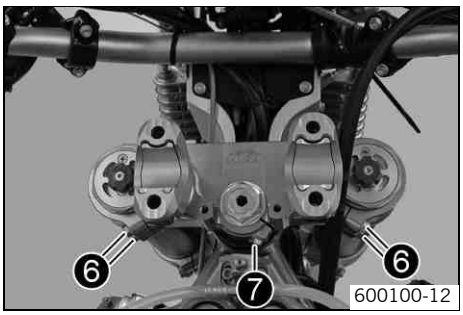
Guideline

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

– Lock the screw ❾ and nut❽.

Guideline

Lock nut, top steering head	M20x1.5	25 Nm (18.4 lbf ft)



– Tighten screw ❼.

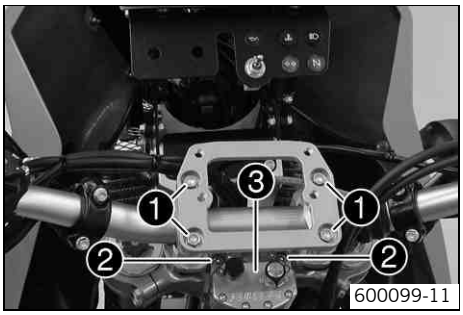
Guideline

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

– Fully tighten screw ❻.

Guideline

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



– Position the steering damper ❸. Mount and tighten screws ❷.

Guideline

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

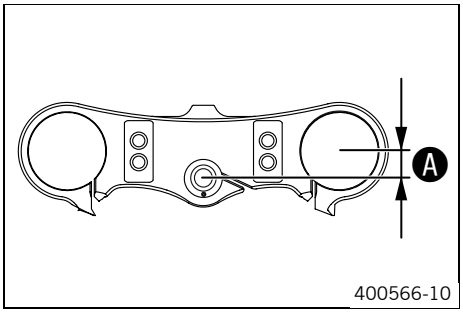
– Open the cable binders and position the handlebar.
– Position the holding plate with handlebar clamps. Mount and tighten screws ❶.

Guideline

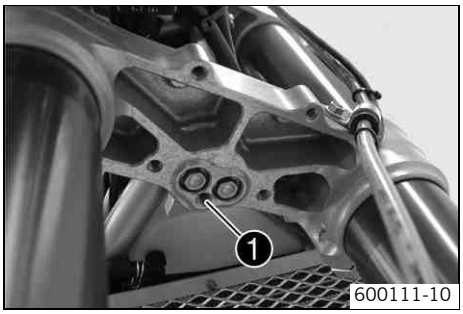
Screw, handlebar clamp	M8	16 Nm (11.8 lbf ft)

– Mount the trim. (☛ p. 55)

Fork offset



The fork offset ❹ has an impact on the handling of the vehicle. It is calculated from the center of the fork leg to the center of the steering head bearing.
The fork offset can optionally be adjusted.



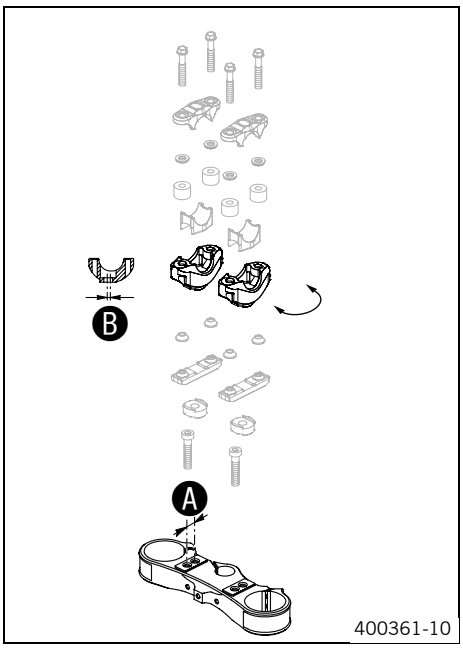
When mark **1** is visible in drill hole ❶ (as delivered), you will achieve better handling in bends.

Fork offset	
Mark **1** visible	20 mm (0.79 in)

If mark **1** is not visible in drill hole ❶, you will achieve better riding stability on fast stretches.

Fork offset	
No mark	22 mm (0.87 in)

Handlebar position



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

Distance ❹ between holes	15 mm (0.59 in)

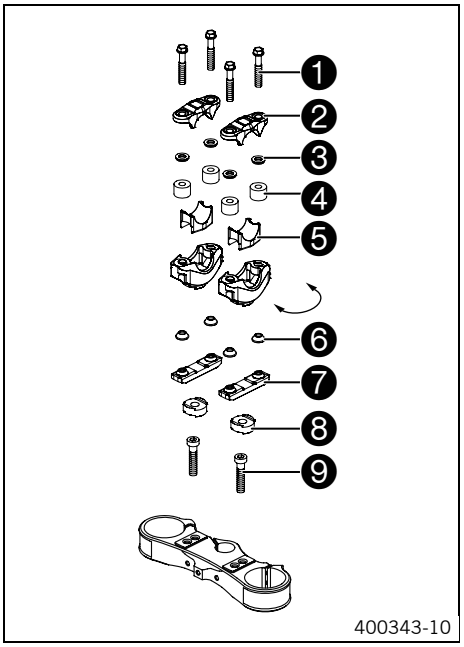
The holes on the handlebar support are placed at a distance of ❺ from the center.

Distance ❺ between holes	3.5 mm (0.138 in)

The handlebar can be mounted in 4 different positions. This enables you to mount the handlebar in the position most suitable for the rider.
The handlebar supports can also be mounted at 2 different heights (with and without spacer).

Thick spacer	9 mm (0.35 in)

Adjusting the handlebar position



– Remove the four screws ❶. Remove the holding plate with handlebar clamps ❷ with intermediate rubber pieces ❸ and elastomers ❹.
– Remove the handlebar and lay it to one side.

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

– Remove the lower shells ❺.
– Remove the clamp bar ❼ with the rubber cones ❻.
– Remove the two screws ❾. Remove the handlebar support.
– Place the handlebar support in the required position. Mount and tighten the two screws ❾.

Guideline

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

Condition
Spacer ❽ mounted:

Use a M10x35 screw

Condition
Without a spacer ❽:

Use a M10x25 screw

Info
Position the left and right handlebar supports evenly.

– Insert rubber cones ❻ and clamp bar ❼.
– Insert lower shells ❺.
– Position the handlebar.

Info
Make sure cables and wiring are positioned correctly.

– Position the holding plate with handlebar clamp ❷ with intermediate rubber pieces ❸ and elastomers ❹.

Elastomer kit green - soft quality (SXS05125203)
Elastomer kit yellow - medium quality (standard) (SXS05125204)
Elastomer kit red - hard quality (SXS05125205)

Info
The elastomers are available in different versions.

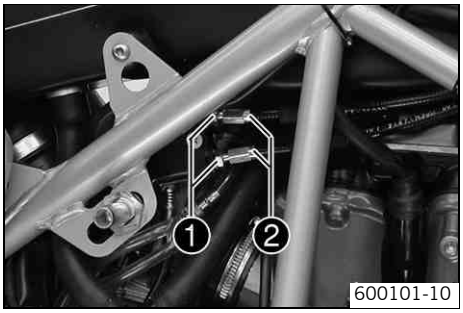
– Mount and evenly tighten the four screws ❶.

Guideline

Screw, handlebar clamp	M8	16 Nm (11.8 lbf ft)

Info
Make sure the gap width is even.

Adjusting the Bowden cable



– Remove the front fuel tank. (☛ p. 56)
– Check the gas Bowden cable route.
– Move the handlebar to the straight-ahead position.
– To adjust, loosen lock nut ❶, turn adjusting screw ❷ accordingly and retighten the lock nut.

Info
Ensure that the throttle grip automatically returns to the idle position after it is released.

– Install the fuel tank. (☛ p. 56)

Checking chain dirt

– Check the chain for coarse dirt accumulation.
  » If the chain is very dirty:
    – Clean the chain. (☛ p. 40)

Cleaning the chain

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

– Remove oil and grease with a suitable cleaning material.

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

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

Warning
Environmental hazard Problem materials cause environmental damage.

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

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

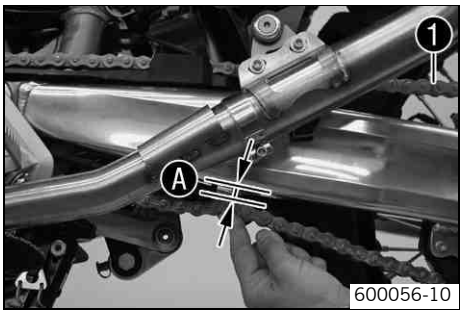
– Clean the chain regularly and then treat with chain spray.

Chain cleaner (☛ p. 98)
Offroad chain spray (☛ p. 98)

Checking the chain tension

Warning
Danger of accidents Danger caused by incorrect chain tension.

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



– Rest the motorcycle on its side stand on a horizontal surface.
– Make sure that the chain adjusters are mounted correctly on the adjusting screws.

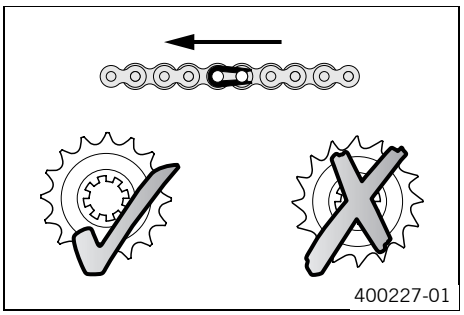
– Push the chain at the end of the chain sliding piece up and determine the chain tension Ⓐ between the swingarm and the top edge of the chain.

Info
The upper chain section ❶ must be taut.
Chain wear is not always even, so you should repeat this measurement at different chain positions.

Chain tension	
The chain tension is measured while the vehicle is resting on the side stand.	5 mm

» If the chain tension does not meet specifications:
– Adjust the chain tension. (☛ p. 41)

Checking the rear sprocket/engine sprocket for wear

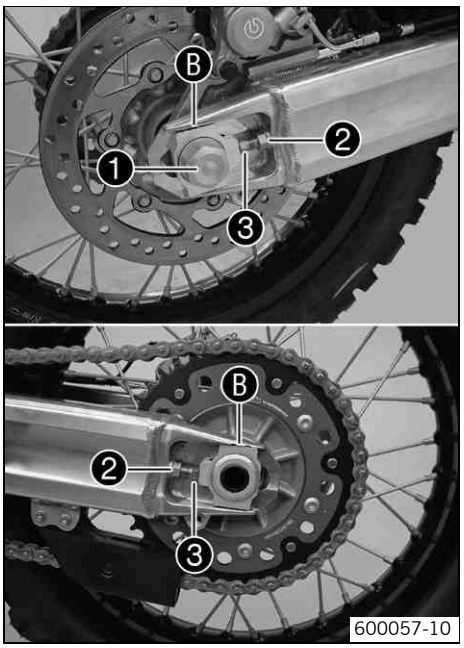

400227-01

– Check the rear sprocket/engine sprocket for wear.
» If the rear sprocket/engine sprocket are worn:
– Replace rear sprocket/engine sprocket.

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

– Check the chain guides for firm seating and wear.

Adjusting chain tension



600057-10

– Rest the motorcycle on its side stand on a horizontal surface.
– Loosen nut ❶.
– Loosen nuts ❷.
– Adjust the chain tension by turning the left and right adjusting screws ❸ so that the markings on the left and right chain adjusters are in the same position relative to the reference marks Ⓑ. The rear wheel is then correctly aligned.

Guideline

Chain tension	
The chain tension is measured while the vehicle is resting on the side stand.	5 mm

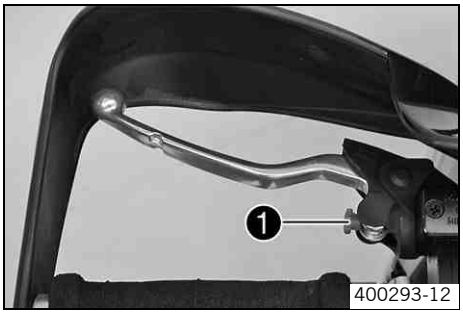
– Tighten nuts ❷.
– Make sure that the chain adjusters are fitted correctly on the adjusting screws ❸.
– Tighten nut ❶.

Guideline

Nut, rear wheel spindle	M25x1.5	90 Nm (66.4 lbf ft)

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

Adjusting basic setting of clutch lever



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

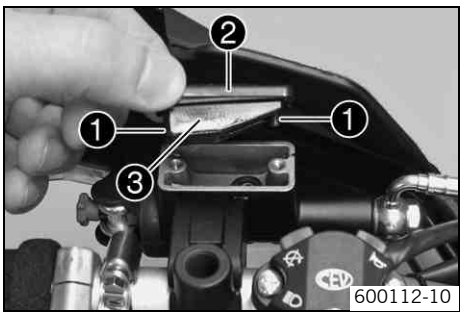
Info

Turn the adjusting screw clockwise to increase the distance between the clutch lever and the handlebar.
Turn the adjusting screw counterclockwise to decrease 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!

Checking the fluid level of the hydraulic clutch

Info

The fluid level rises with increasing wear of the clutch lining disc.
Do not use brake fluid.



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

Fluid level under top level of container	4 mm (0.16 in)

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

Hydraulic fluid (15) (☛ p. 97)

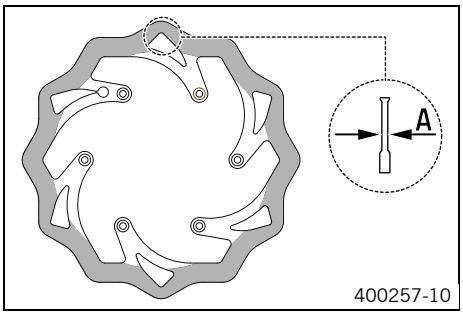
– Position the cover with the membrane. Mount and tighten the screws.

Checking the brake discs

Warning

Danger of accidents Reduced braking due to worn brake discs.

– Worn brake discs should be replaced immediately in an authorized KTM workshop.



– Check the thickness of the front and rear brake discs at several places on the disc to see if it conforms to measurement Ⓐ.

Info

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

Brake discs - wear limit	
Front	4.5 mm (0.177 in)
Rear	3.5 mm (0.138 in)

» If the brake disc thickness is less than the specified value.
– Change the brake disc.

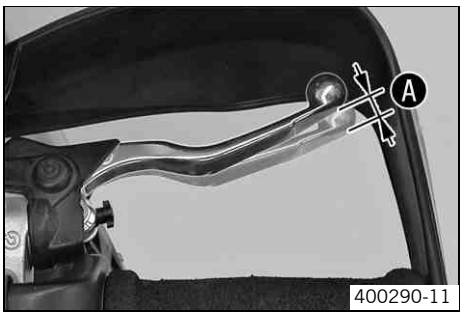
– Check the front and rear brake discs for damage, cracking and deformation.

» If the brake disc exhibits damage, cracking or deformation:
– Change the brake disc.

Checking free play of hand brake lever

Warning
Danger of accidents Brake system failure.

– If there is no free travel on the hand brake lever, pressure builds up on the front brake in the brake system. The front brake can fail due to overheating. Adjust free travel on hand brake lever according to specifications.

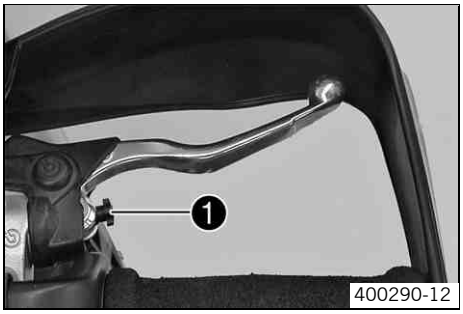


– Pull the hand brake lever and check the free travel Ⓐ.

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

» If the free travel does not meet specifications:
– Adjust the free travel of the handbrake lever. (☛ p. 43)

Adjusting free travel of handbrake lever



– Adjust the free travel of the handbrake lever with the adjustment screw ❶.

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

– Check the free play of the hand brake lever. (☛ p. 43)

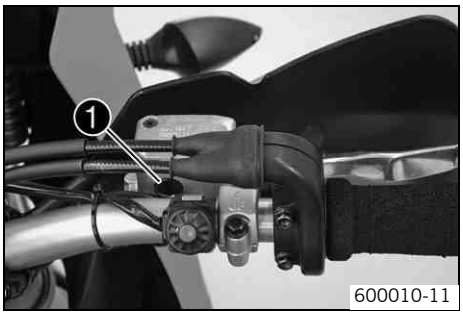
Checking the front brake fluid level

Warning
Danger of accidents Brake system failure.

– If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Have the brake system checked in an authorized KTM workshop, and do not ride any further.

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

– Have the front and rear brake fluid replaced according to the service plan in an authorized KTM workshop.



– Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
– Check the brake fluid level in the viewer ❶.
» If the brake fluid level is below the **MIN** mark:
– Add front brake fluid. 🔧 (☛ p. 44)

Adding front brake fluid

Warning
Danger of accidents Brake system failure.

– If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Have the brake system checked in an authorized KTM workshop, and do not ride any further.

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

– Avoid contact with skin and eyes, and keep out of the reach of children.
– If brake fluid gets into your eyes, rinse thoroughly with water and contact a doctor immediately.

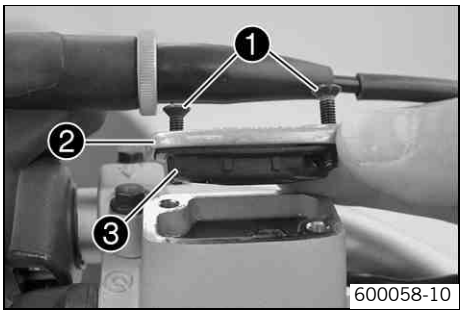
Warning
Danger of accidents Reduced braking due to old brake fluid.

– Have the front and rear brake fluid replaced according to the service plan in an authorized KTM workshop.

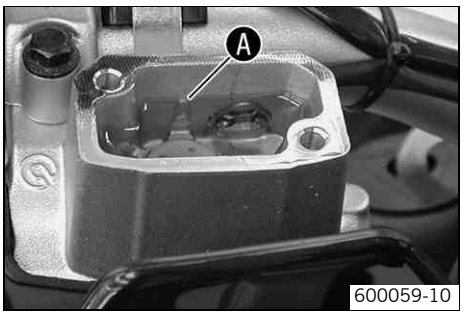
Warning
Environmental hazard Problem materials cause environmental damage.

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

Info
Never user DOT 5 brake fluid! This is based on silicone oil and is colored purple. Oil seals and brake lines are not designed for DOT 5 brake fluid.
Avoid contact between brake fluid and painted parts. Brake fluid attacks paint!
Use only clean brake fluid from a sealed container!



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



– Add brake fluid to level Ⓐ.

Brake fluid DOT 4 / DOT 5.1 (☛ p. 96)

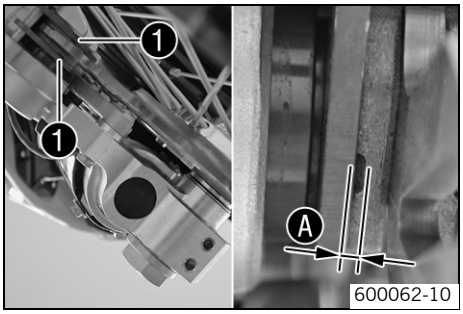
– Position the cover with the membrane. Mount and tighten the screws.

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

Checking the front brake linings

Warning
Danger of accidents Reduced braking due to worn brake linings.

– Worn brake linings should be replaced immediately in an authorized KTM workshop.



– Check the brake linings for minimum thickness Ⓐ.

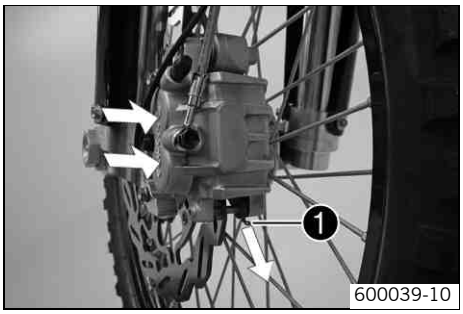
Info
The brake lining wear marks ❶ must be clearly visible.

Minimum thickness Ⓐ	≥ 1 mm (≥ 0.04 in)

» If the minimum thickness is less than specified:
– Change the front brake linings. 🔧 (☛ p. 46)

Removing front brake linings 🔧

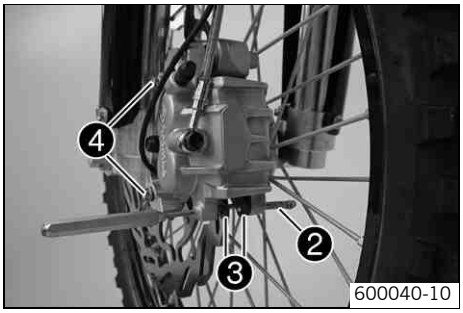
Warning
Danger of accidents Improper brake maintenance and repair.
– Always have your brake system maintained and repaired in an authorized KTM workshop.



– Press the brake caliper by hand on to the brake disc in order to press back the brake pistons.

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

– Remove the lock pin ❶.

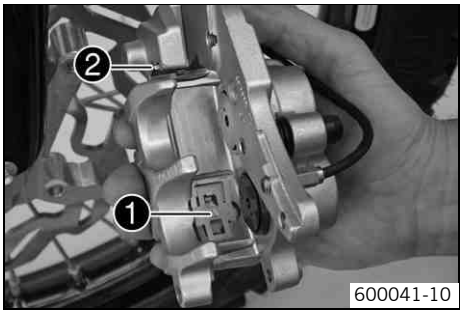


– Remove the bolt ❷ with a suitable tool and disassemble the brake linings ❸.
– Remove screws ❹ and take off brake caliper.
– Clean brake caliper and brake caliper support.

Installing the front brake linings 🔧

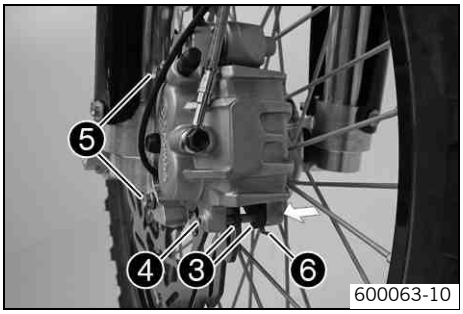
Warning
Danger of accidents Reduced braking due to oil or grease on the brake discs.
– Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.

Warning
Danger of accidents Reduced braking due to use of non-approved brake linings.
– Brake linings available from accessory suppliers are often not tested and approved for use on KTM vehicles. The construction and friction factor of the brake linings and therefore the brake power can differ considerably from the original KTM brake linings. If brake linings are used that differ from the originals, there is no guarantee that they comply with the original license. The vehicle no longer corresponds to the condition at delivery, and the warranty is no longer valid.



– Check the brake discs. (☛ p. 42)
– Check that leaf spring ❶ in the brake caliper and sliding plate ❷ in the brake caliper support are seated correctly.

Info
The arrow on the leaf spring points in the rotation direction of the brake disc.



– Position brake linings ❸ and insert bolts ❹ by hand.
– Position brake caliper, mount and tighten screws ❺.

Guideline

Screw, front brake caliper	M8	30 Nm (22.1 lbf ft)	**Loctite® 243™**

– Mount the bolt ❹ with a suitable tool and insert the lock pin ❻.
– Operate the hand brake lever repeatedly until the brake linings lie on the brake disc and there is a tight spot.

Changing the front brake linings

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

– Avoid contact with skin and eyes, and keep out of the reach of children.
– If brake fluid gets into your eyes, rinse thoroughly with water and contact a doctor immediately.

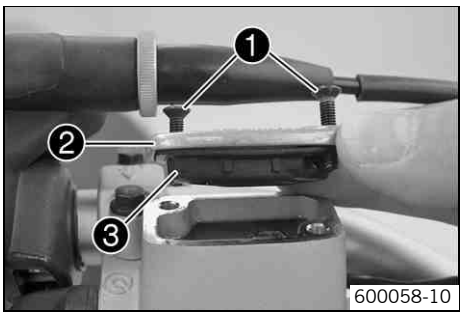
Warning
Danger of accidents Reduced braking due to old brake fluid.

– Have the front and rear brake fluid replaced according to the service plan in an authorized KTM workshop.

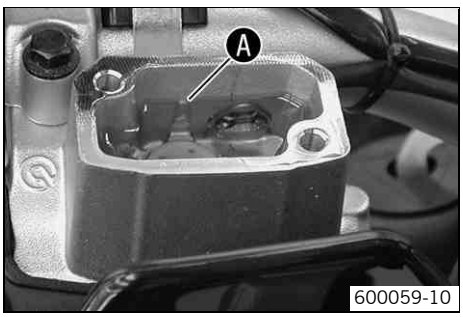
Warning
Environmental hazard Problem materials cause environmental damage.

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

Info
Never user DOT 5 brake fluid! This is based on silicone oil and is colored purple. Oil seals and brake lines are not designed for DOT 5 brake fluid.
Avoid contact between brake fluid and painted parts. Brake fluid attacks paint!
Use only clean brake fluid from a sealed container!



– Remove the front brake linings. (☛ p. 45)
– Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
– Remove screws ❶.
– Remove cover ❷ with membrane ❸.
– Press the brake piston back to its basic position and make sure that no brake fluid overflows from the brake fluid reservoir.
– Install the front brake linings. (☛ p. 45)



– Add brake fluid to level Ⓐ.

Brake fluid DOT 4 / DOT 5.1 (☛ p. 96)

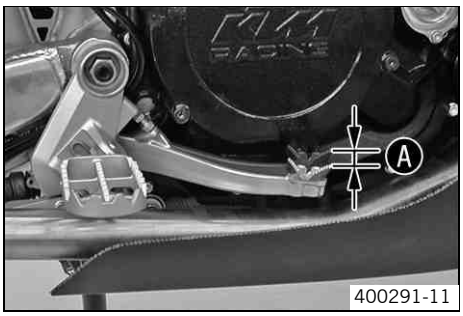
– Position the cover with the membrane. Mount and tighten the screws.

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

Checking free play of foot brake lever

Warning
Danger of accidents Brake system failure.

– If there is no free travel on the foot brake pedal, pressure builds up on the rear brake in the brake system. The rear brake can fail due to overheating. Adjust free travel on foot brake pedal according to specifications.



– Move the foot brake lever backwards and forwards between the end stop and the foot brake cylinder piston bracket and check free play Ⓐ.

Guideline

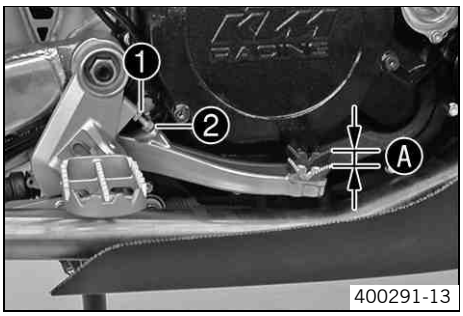
Free play at foot brake lever	3... 5 mm (0.12... 0.2 in)

» If the free travel does not meet specifications:
– Adjust the free travel of the foot brake pedal. 🔧 (☛ p. 47)

Adjusting free travel of foot brake pedal 🔧

Warning
Danger of accidents Brake system failure.

– If there is no free travel on the foot brake pedal, pressure builds up on the rear brake in the brake system. The rear brake can fail due to overheating. Adjust free travel on foot brake pedal according to specifications.



– Loosen the nut ❶ and use the screw ❷ to adjust the free travel Ⓐ.

Guideline

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

– Hold screw ❷ and tighten nut ❶.

Guideline

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

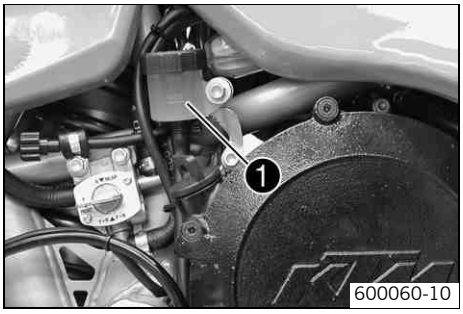
Checking rear brake fluid level

Warning
Danger of accidents Brake system failure.

– If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Have the brake system checked in an authorized KTM workshop, and do not ride any further.

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

– Have the front and rear brake fluid replaced according to the service plan in an authorized KTM workshop.



– Stand the vehicle upright.
– Check the brake fluid level in the brake fluid reservoir ❶.
» When the fluid level reaches the **MIN** mark ❶:
– Add rear brake fluid. 🔧 (☛ p. 48)

Adding rear brake fluid

Warning
Danger of accidents Brake system failure.

– If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Have the brake system checked in an authorized KTM workshop, and do not ride any further.

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

– Avoid contact with skin and eyes, and keep out of the reach of children.
– If brake fluid gets into your eyes, rinse thoroughly with water and contact a doctor immediately.

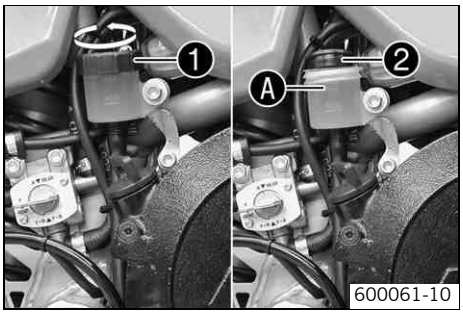
Warning
Danger of accidents Reduced braking due to old brake fluid.

– Have the front and rear brake fluid replaced according to the service plan in an authorized KTM workshop.

Warning
Environmental hazard Problem materials cause environmental damage.

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

Info
Never user DOT 5 brake fluid! This is based on silicone oil and is colored purple. Oil seals and brake lines are not designed for DOT 5 brake fluid.
Avoid contact between brake fluid and painted parts. Brake fluid attacks paint!
Use only clean brake fluid from a sealed container!



– Stand the vehicle upright.
– Turn screw cap ❶ in the direction of the arrow and remove it with membrane ❷.
– Add brake fluid to level Ⓐ.

Brake fluid DOT 4 / DOT 5.1 (☛ p. 96)

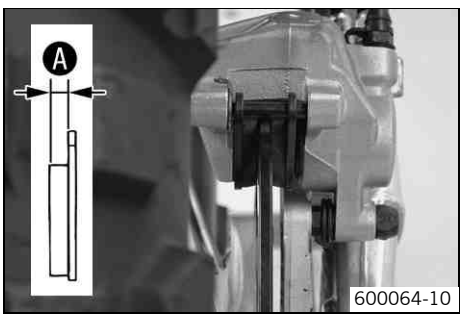
– Mount the screw cap with the membrane.

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

Checking the rear brake linings

Warning
Danger of accidents Reduced braking due to worn brake linings.

– Worn brake linings should be replaced immediately in an authorized KTM workshop.



– Check the brake linings for minimum thickness Ⓐ.

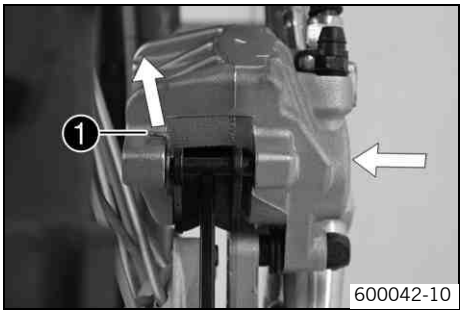
Minimum thickness Ⓐ	≥ 1 mm (≥ 0.04 in)

» If the minimum thickness is less than specified:
– Change the rear brake linings. (☛ p. 50)

Removing rear brake linings

Warning
Danger of accidents Improper brake maintenance and repair.

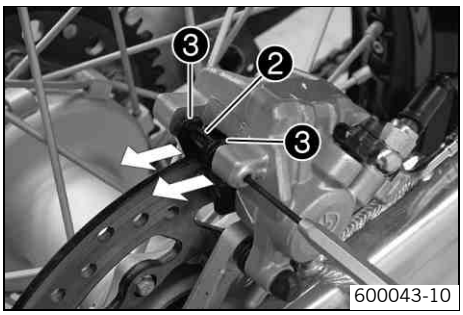
– Always have your brake system maintained and repaired in an authorized KTM workshop.



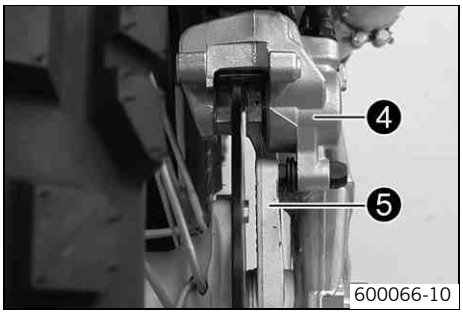
– Press the brake caliper by hand on to the brake disc in order to press back the brake piston.

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

– Remove the lock pin ❶.



– Remove the bolt ❷ with a suitable tool and disassemble the brake linings ❸.



– Clean brake caliper ❹ and brake caliper support ❺.

Installing the rear brake linings

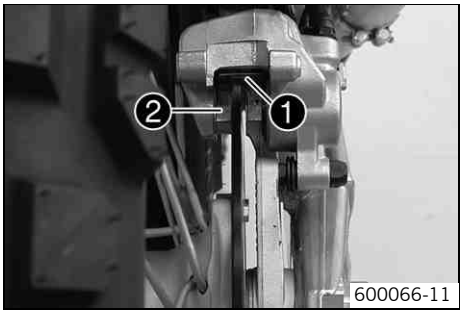
Warning
Danger of accidents Reduced braking due to oil or grease on the brake discs.

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

Warning
Danger of accidents Reduced braking due to use of non-approved brake linings.

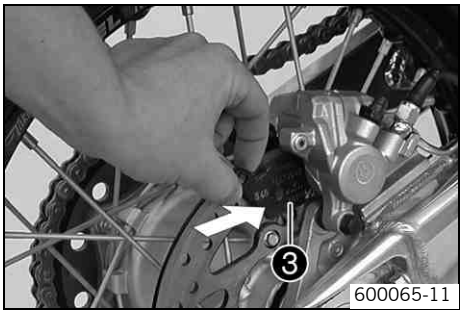
– Brake linings available from accessory suppliers are often not tested and approved for use on KTM vehicles. The construction and friction factor of the brake linings and therefore the brake power can differ considerably from the original KTM brake linings. If brake linings are used that differ from the originals, there is no guarantee that they comply with the original license. The vehicle no longer corresponds to the condition at delivery, and the warranty is no longer valid.

– Check the brake discs. (☛ p. 42)

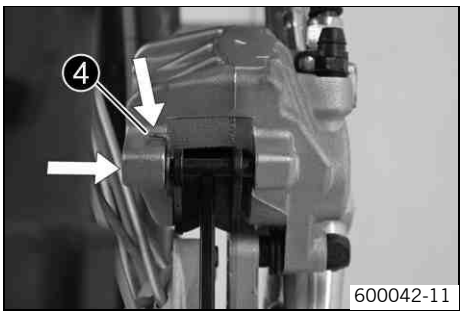


– Check that leaf spring ❶ in the brake caliper and sliding plate ❷ in the brake caliper support are seated correctly.

Info
The arrow on the leaf spring points in the rotation direction of the brake disc.



– Insert brake linings ❸.



– Mount the bolt with a suitable tool and insert the lock pin ❹.
– Operate the foot brake lever repeatedly until the brake linings lie on the brake disc and there is a tight spot.

Changing the rear brake linings

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

– Avoid contact with skin and eyes, and keep out of the reach of children.
– If brake fluid gets into your eyes, rinse thoroughly with water and contact a doctor immediately.

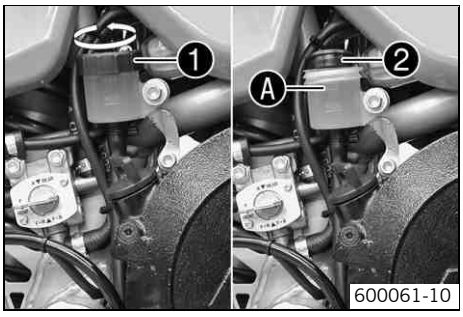
Warning
Danger of accidents Reduced braking due to old brake fluid.

– Have the front and rear brake fluid replaced according to the service plan in an authorized KTM workshop.

Warning
Environmental hazard Problem materials cause environmental damage.

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

Info
Never user DOT 5 brake fluid! This is based on silicone oil and is colored purple. Oil seals and brake lines are not designed for DOT 5 brake fluid.
Avoid contact between brake fluid and painted parts. Brake fluid attacks paint!
Use only clean brake fluid from a sealed container!



– Remove the rear brake linings. (☛ p. 49)
– Stand the vehicle upright.
– Turn screw cap ❶ in the direction of the arrow and remove it with membrane ❷.
– Press the brake piston back to its basic position and make sure that no brake fluid overflows from the brake fluid reservoir.
– Install the rear brake linings. (☛ p. 49)
– Add brake fluid to level Ⓐ.

Brake fluid DOT 4 / DOT 5.1 (☛ p. 96)

– Mount the screw cap with the membrane.

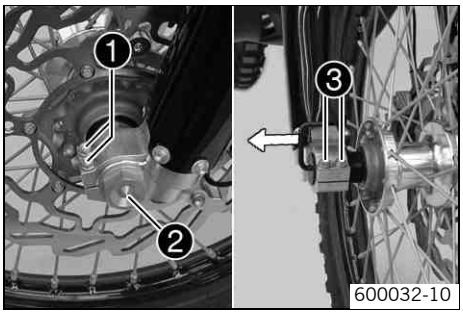
Info
Clean up overflowed or spilt brake fluid immediately with water.

Removing front wheel


600031-10

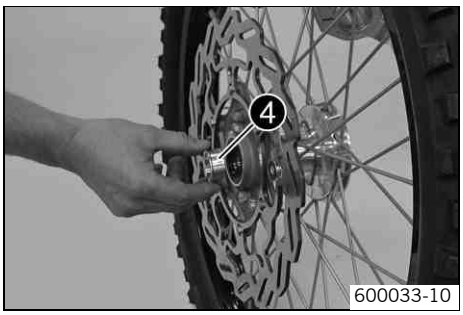
– Jack up the motorcycle. (☛ p. 29)
– Press the brake caliper by hand on to the brake disc in order to press back the brake pistons.

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


600032-10

– Loosen screw ❶.
– Remove screw ❷.
– Loosen screw ❸.
– Holding the front wheel, withdraw the wheel spindle. Take the front wheel out of the fork.

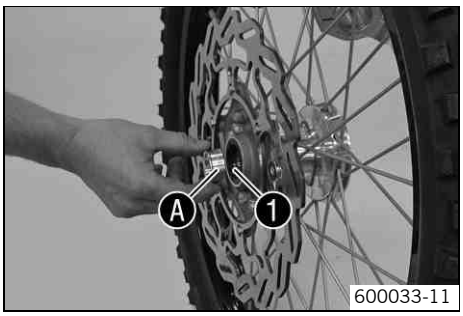
Info
Do not pull the hand brake lever when the front wheel is removed.
Always lay the wheel down in such a way that the brake disc is not damaged.


600033-10

– Remove the distance bushing ❹.

Mounting the front wheel

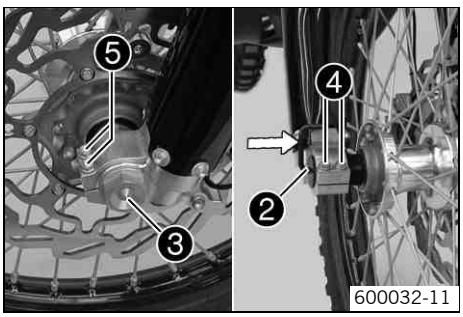
Warning
Danger of accidents Reduced braking due to oil or grease on the brake discs.
– Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.


600033-11

– Clean and grease shaft seal ring ❶ and bearing surface Ⓐ of the distance bushing. Clean and grease the shaft seal ring on the right and the running surface of the wheel spindle.

Long-life grease (☛ p. 98)

– Insert the distance bushing.


600032-11

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

Guideline

Screw, front wheel spindle	M24x1.5	40 Nm (29.5 lbf ft)

Info
Ensure that the grip of the wheel spindle does not contact with the right fork leg.

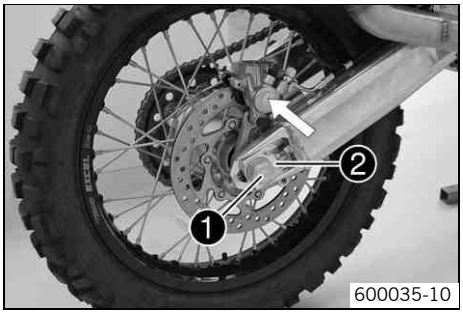
– Operate the hand brake lever several times until the brake pads are lying correctly on the brake disc.

– Remove the motorcycle from the work stand. (☛ p. 29)
– Pull the front wheel brake and push down hard on the fork several times to align the fork legs.
– Tighten screws ❹ and ❺.

Guideline

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

Removing rear wheel



– Jack up the motorcycle. (☛ p. 29)
– Press the brake caliper by hand on to the brake disc in order to press back the brake piston.

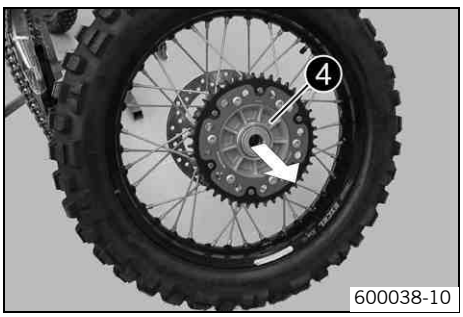
Info
Make sure when pushing back the brake piston that you do not press the brake caliper against the spokes.

– Remove nut ❶.
– Remove chain adjuster ❷.

– Withdraw the wheel spindle only enough to allow the rear wheel to be pushed forward.
– Push the rear wheel forward as far as possible. Remove the chain from the rear sprocket.
– Holding the rear wheel, withdraw the wheel spindle. Take the rear wheel out of the swing arm.

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

– Remove the distance bushing ❸.



– Remove the rear sprocket carrier ❹.

Mounting the rear wheel

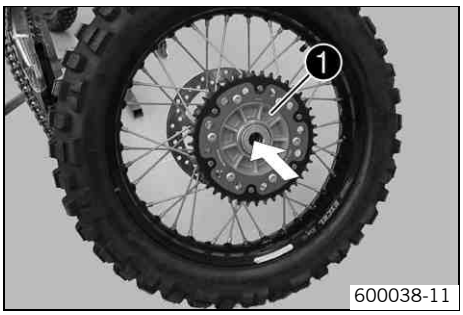
Warning
Danger of accidents Reduced braking due to oil or grease on the brake discs.
– Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.


600037-11

– Clean and grease the shaft seal rings and bearing surface of the distance bushing.

Long-life grease (☛ p. 98)

– Insert the distance bushings.

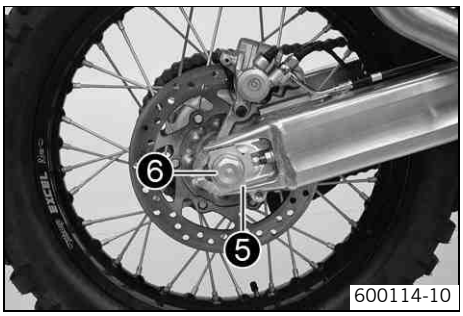


600038-11

– Clean and grease the shaft seal rings and bearing surface of the distance bushing in the rear sprocket carrier.
– Insert the rear sprocket carrier ❶ into the rear hub.

600036-11

– Lift the rear wheel into the swing arm, position it, and insert the wheel spindle ❸.
– Attach the chain ❹.



600114-10

– Position the chain adjuster ❺. Mount nut ❻, but do not tighten it yet.
– Adjust the chain tension. (☛ p. 41)
– Operate the foot brake lever repeatedly until the brake linings lie on the brake disc and there is a tight spot.
– Remove the motorcycle from the work stand. (☛ p. 29)

Checking the tire condition

Info
Only mount tires that have been approved and/or recommended by KTM.
Other tires could have a negative effect on riding behavior.
The type, condition and air pressure of the tires all have an important impact on the riding behavior of the motorcycle.
The front and rear wheels must be mounted with tires with similar profiles.
Worn tires have a negative effect on riding behavior, especially on wet surfaces.

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

– Check the depth of the tread.

Info
Note local national regulations concerning the minimum tread depth.

Minimum tread depth	≥ 2 mm (≥ 0.08 in)

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

Checking tire air pressure

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

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

Tire air pressure off road	
Front	1.0... 1.5 bar (15... 22 psi)
Rear	1.0... 1.5 bar (15... 22 psi)
Tire air pressure on road	
Front	1.5 bar (22 psi)
Rear	1.5 bar (22 psi)

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

Checking spoke tension

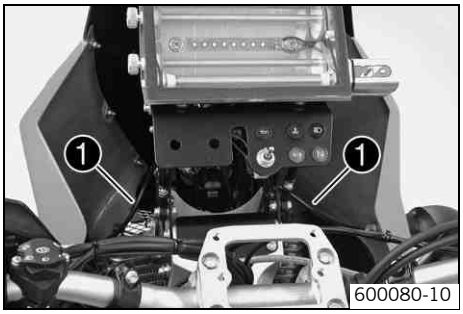
Warning
Danger of accidents Unstable riding behavior due to loose spokes.
– If you ride with loose spokes, the spokes can break. Have the spoke tension corrected in an authorized KTM workshop.

Info
A loose spoke can cause wheel imbalance, which leads to more loose spokes in a short time.
If the spokes are too tight, they can break due to local overload.
Check the spoke tension regularly, especially on a new motorcycle.

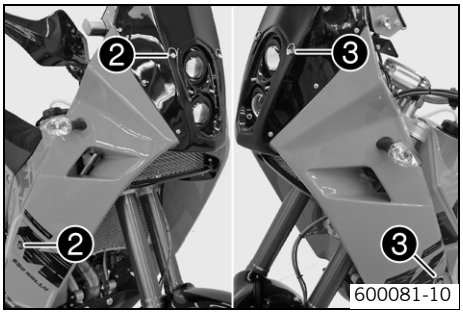
– Check spokes for tightness.
Guideline

Spoke nipple, front wheel	M5	5 Nm (3.7 lbf ft)
Spoke nipple, rear wheel	M5	5 Nm (3.7 lbf ft)

Removing the trim

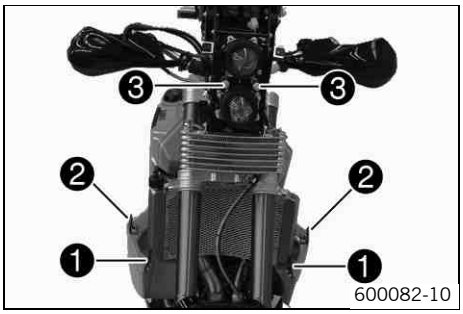


– Loosen the plug-in connectors on the flasher cables ❶.



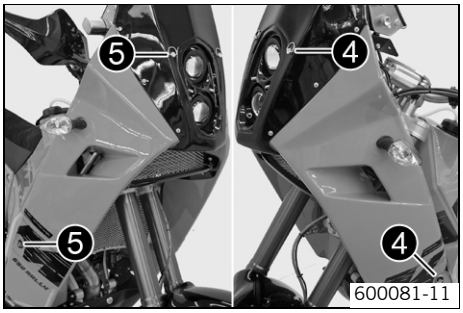
– Open the quick release brackets ❷ and ❸.
– Remove the trim toward the front.

Mounting the trim



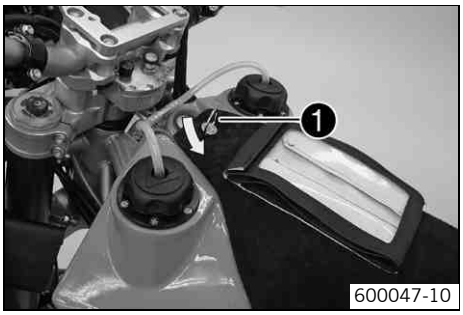
– Insert the trim at the guides ❶ and ❸.

Info
When positioning the trim, exercise caution with the quick releases ❷ to ensure that you do not damage the trim.



– Align the trim and attach it with the quick releases ❹ and ❺.

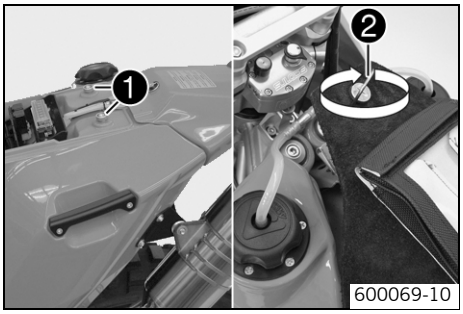
Removing the seat



– Lift the quick-locking clip ❶ and rotate in the direction of the arrow.

– Carefully push the seat to the rear and remove it.

Mounting the seat



– Put down the seat and fit it into collar sleeves ❶ of the fuel tank at the rear. Push the seat forward at the same time.
– Push the seat down at the front, lift the quick release bracket ❷ and turn it in the direction of the arrow until it engages.
– Make sure that the seat is correctly locked in.

Removing the front fuel tank

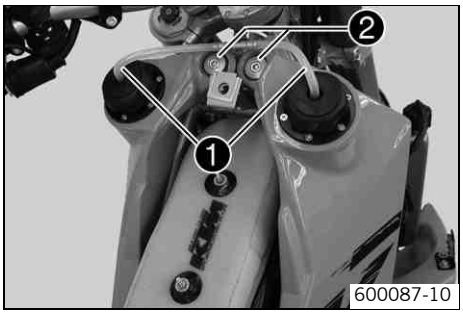
Danger
Fire hazard Fuel can easily catch fire.

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

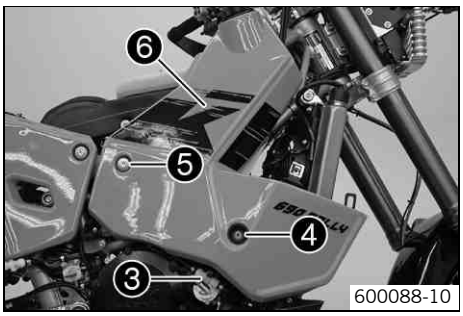
Warning
Danger of poisoning Fuel is poisonous and a health hazard.

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

– Remove the trim. (☛ p. 54)
– Remove the seat. (☛ p. 55)



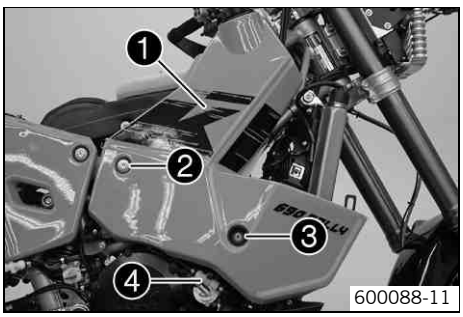
– Pull off the fuel tank breathers ❶.
– Remove screws ❷.



– Open the quick release of the fuel line ❸ on the left and right.
– Remove screws ❹ and ❺ of the left and right halves of the fuel tank.
– Remove the fuel tank ❻ on the left and right.

Info
Set the fuel tank halves down in an upright position as otherwise fuel can escape from the fuel tank breathers.

Installing the fuel tank

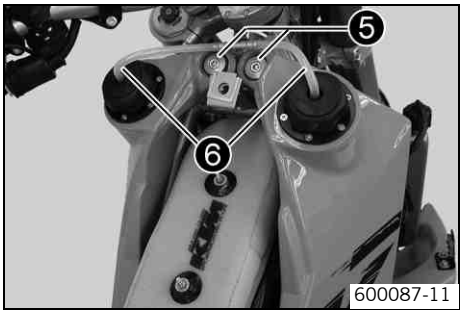


– Position the fuel tank ❶ on the left and right. Mount and tighten screws ❷ and ❸ on the left and right.

Guideline

Remaining screws, chassis	M8	25 Nm (18.4 lbf ft)

– Clean and connect the left and right quick releases of the fuel line ❹ with each other.



– Mount and tighten screws ❺.

Guideline

Remaining screws, chassis	M8	25 Nm (18.4 lbf ft)

– Connect the hoses ❻ of the fuel tank breather without kinking.
– Mount the seat. (☛ p. 56)
– Mount the trim. (☛ p. 55)

Folding up the fuel tank at the rear

Danger

Fire hazard Fuel can easily catch fire.

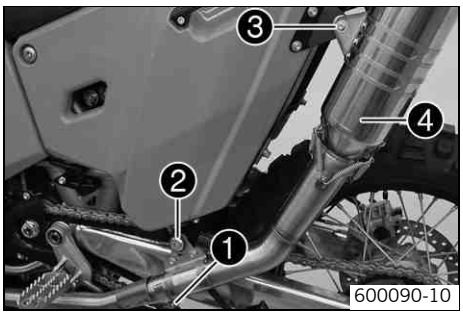
– Never fill up the vehicle near open flames or burning cigarettes, and always switch off the engine first. Be careful that no fuel is spilt, especially on hot vehicle components. Clean up spilt fuel immediately.
– Fuel in the fuel tank expands when warm and can escape if the tank is overfilled. See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

Warning

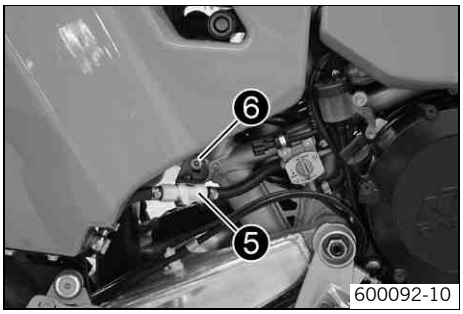
Danger of poisoning Fuel is poisonous and a health hazard.

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

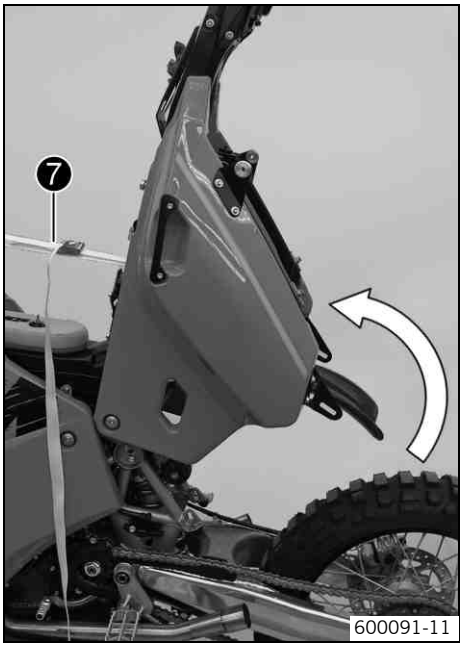
– Remove the seat. (☛ p. 55)



– Loosen the screw ❶ on both sides.
– Remove screws ❷ and ❸ on both sides.
– Remove the main silencer ❹ on both sides.



– Open the quick release of the fuel line ❺.
– Remove screw ❻.



– Fold the rear tank upward in the direction of the arrow and use a belt ❼ to secure it to the handlebar.

Lowering the fuel tank at the rear

Danger

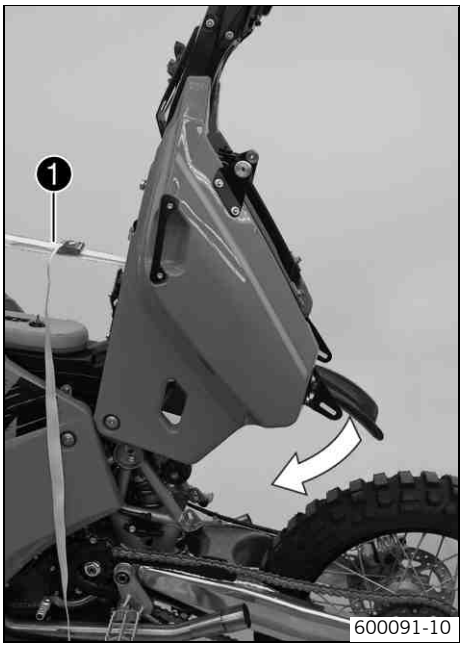
Fire hazard Fuel can easily catch fire.

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

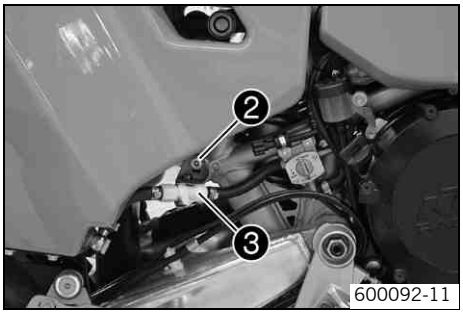
Warning

Danger of poisoning Fuel is poisonous and a health hazard.

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



– Detach the belt ❶ and carefully position the rear tank.

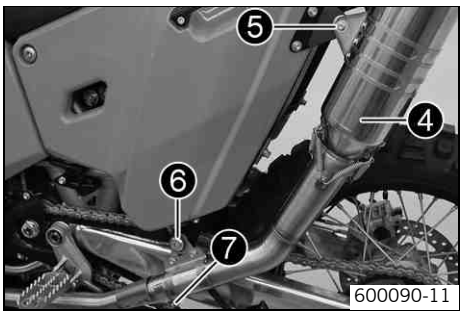


– Mount and tighten screw ❷.

Guideline

Screw, rear tank fixing bracket	M8	20 Nm (14.8 lbf ft)	**Loctite® 243™**

– Clean and connect the quick releases of the fuel line ❸ with each other.



– Connect the main silencers ❹ with the manifolds on both sides. Mount the screw ❺ on both sides but do not tighten it yet.
– Align the main silencer. Mount and tighten screws ❻ and ❼ on both sides.

Guideline

Remaining screws, chassis	M8	25 Nm (18.4 lbf ft)

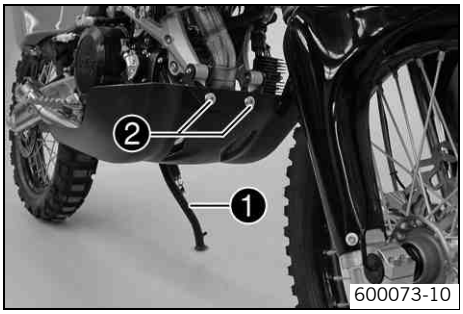
– Tighten screw ❺ on both sides.

Guideline

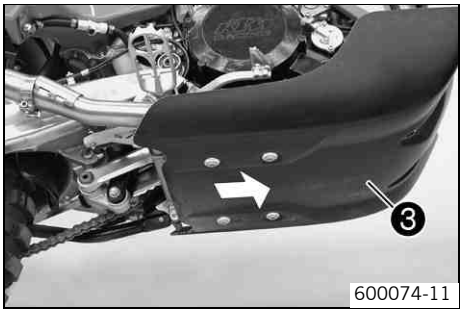
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)

– Mount the seat. (☛ p. 56)

Removing the motor guard

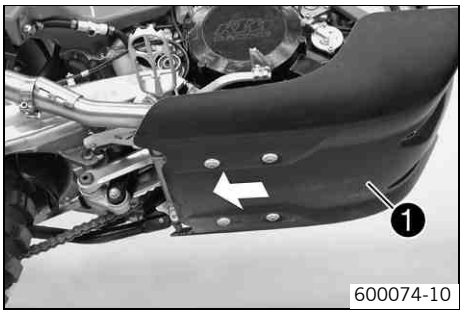


– Park the motorcycle on its side stand ❶ on a horizontal surface.
– Remove screws ❷.

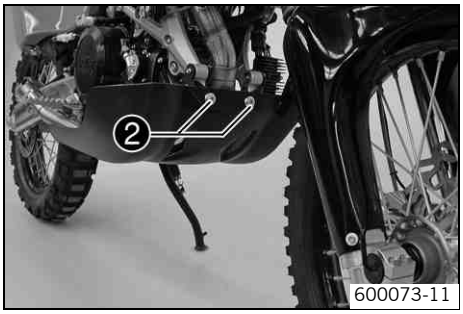


– Pull the motor guard ❸ forward out of the frame.

Mounting the motor guard



– Insert the motor guard ❶ into the frame.

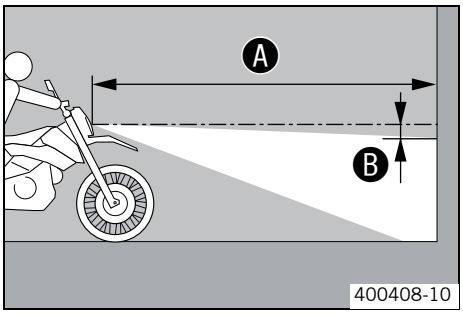


– Mount and tighten screws ❷.

Guideline

Screw, motor guard	M8	25 Nm (18.4 lbf ft)

Checking the headlamp setting



– On a light-colored wall in front of which there is a horizontal surface, make a mark at the height of the center of the low beam headlamp.
– Make another mark at a distance ❽ below the first mark.

Guideline

Distance ❽	5 cm (2 in)

– Position yourself with the motorcycle at a distance ❹ in front of the wall and switch the low beam on.

Guideline

Distance ❹	5 m (16 ft)

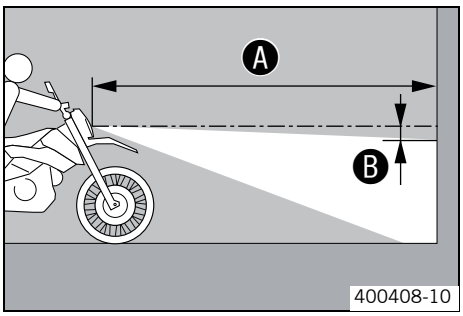
– Check the headlamp setting.

For a ready-to-operate motorcycle with a rider, the light-dark boundary must lie exactly on the lower mark.

» If the light-dark boundary does not meet specifications:
  – Adjust the headlamp. (☛ p. 60)

Adjusting the headlamp

– Remove the trim. (☛ p. 54)



– On a light-colored wall in front of which there is a horizontal surface, make a mark at the height of the center of the low beam headlamp.
– Make another mark at a distance ❽ below the first mark.

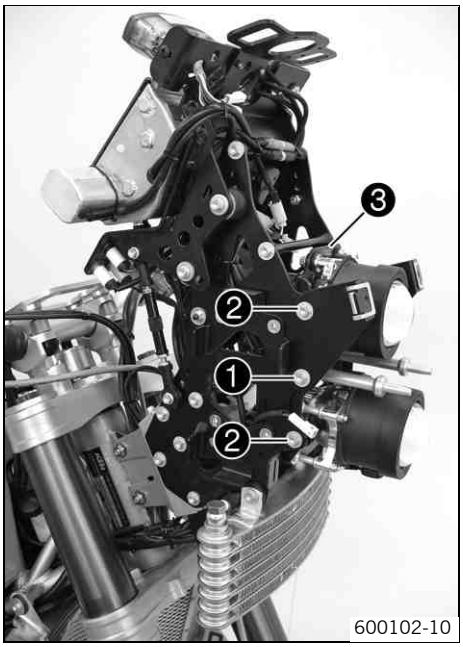
Guideline

Distance ❽	5 cm (2 in)

– Position yourself with the motorcycle at a distance ❹ in front of the wall and switch the low beam on.

Guideline

Distance ❹	5 m (16 ft)

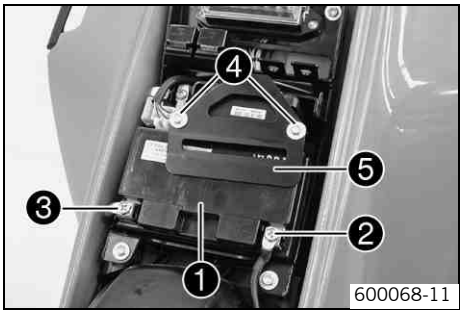


– Loosen screws ❶ and ❷. Swivel the headlamp bracket ❸ and headlamp of the ready-to-operate motorcycle with a rider until the light-dark boundary lies exactly on the lower mark.
– Tighten screws ❶ and ❷.
– Mount the trim. (☛ p. 55)

Removing the battery

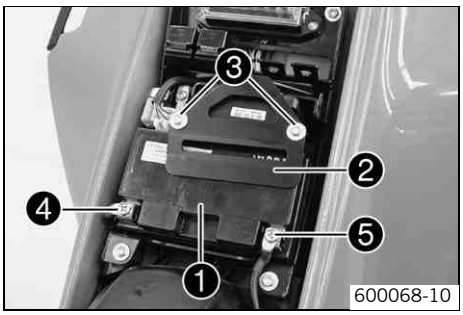
Warning
Risk of injury Battery acid and battery gases cause serious chemical burns.

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



- Switch off all power-consuming components and switch off the engine.
- Remove the seat. (☛ p. 55)
- Disconnect the negative (minus) cable ❷ of the battery ❶.
- Pull back the plus pole cover and disconnect the positive (plus) cable ❸ of the battery.
- Remove screws ❹. Remove the retaining bracket ❺.
- Lift the battery ❶ up and remove it.

Installing the battery



- Place the battery ❶ in the battery holder.

Battery (YTZ10S) (☛ p. 80)

- Position the retaining bracket ❷. Mount and tighten screws ❸.

  Guideline

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

- Attach the plus cable ❹ and replace the plus pole cover.

  Guideline

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

- Attach the minus cable ❺ as shown in the diagram.

  Guideline

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

- Mount the seat. (☛ p. 56)

Recharging the battery

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

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

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

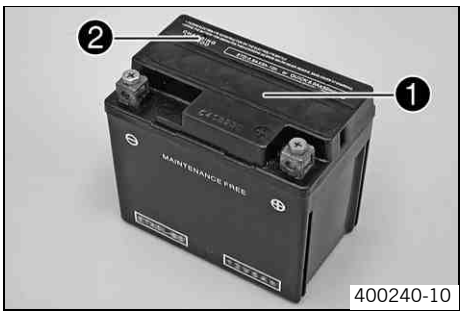
- Do not dispose of batteries in normal household waste. Take defective or used batteries to a battery recycling operator.

Warning
Environmental hazard Problem materials cause environmental damage.

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

Info

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



400240-10

- Switch off all power consumers and switch off the engine.
- Remove the seat. (☛ p. 55)
- Disconnect the minus (negative) cable of the battery to avoid damage to the motorcycle's electronics.
- Connect the battery charger to the battery. Switch on the battery charger.

Battery charger (58429074000)

You can also use the battery charger to test rest potential and start potential of the battery, and to test the generator. With this device, you cannot overcharge the battery.

Info

Never remove the lid ❶.
Charge the battery with a maximum of 10% of the capacity specified on the battery housing ❷.

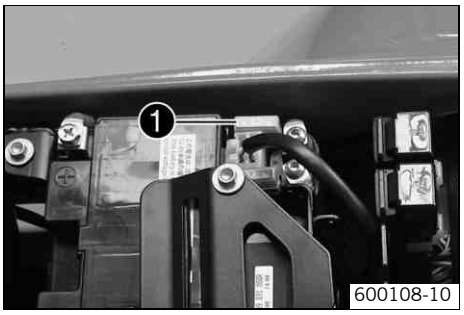
- Switch off the charger after charging. Disconnect the battery.

Guideline

The charge current, charge voltage and charge time must not be exceeded.	
Charge the battery regularly when the motorcycle is not in use	3 months

- Mount the seat. (☛ p. 56)

Removing the main fuse



600108-10

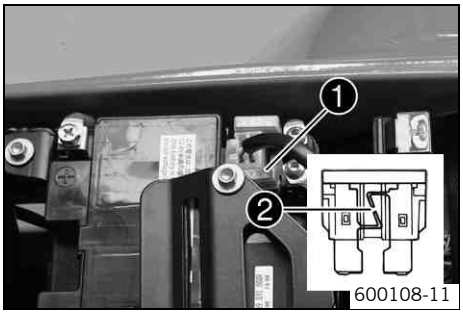
- Switch off all power-consuming components and switch off the engine.
- Remove the seat. (☛ p. 55)
- Remove the protection cover ❶.
- Remove the main fuse.

Installing the main fuse

Warning

Fire hazard The electrical system can be overloaded by the use of incorrect fuses.

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



– Install the fuse.

Fuse (58011109110)

Info
A reserve fuse ❶ is located in the starter relay.
Replace a burned-out fuse ❷ by an equivalent fuse only.
If the new fuse burns out, contact an authorized KTM workshop.

– Replace the protection cover.
– Replace the protection cover.
– Mount the seat. (☛ p. 56)

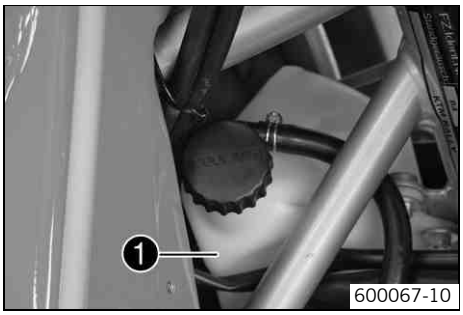
Checking the coolant level

Warning
Scalding hazard During motorcycle operation, the coolant gets very hot and is under pressure.

– Do not open the radiator, the radiator hoses or other components of the cooling system when the engine is hot. Allow the engine and radiator to cool down. If you are scalded, hold the affected part under cold water immediately.

Warning
Danger of poisoning Coolants are poisonous and a health hazard.

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



Condition
Engine is cold.

– Stand the motorcycle upright on a horizontal surface.
– Check the coolant level in the compensating tank ❶.

The compensating tank must be half full.

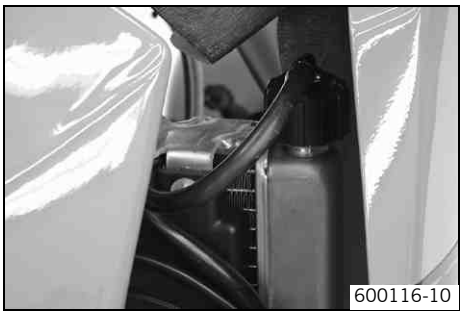
» If the level of the cooling liquid does not meet specifications:
– Correct the coolant level.

Alternative 1

Coolant (☛ p. 96)

Alternative 2

Coolant (mixed ready to use) (☛ p. 96)



– Remove the radiator cap. Check the coolant level in the radiator.

The radiator must be completely full.

» If the level of the cooling liquid does not meet specifications:
– Correct the coolant level and determine the cause of the loss in coolant.

Alternative 1

Coolant (☛ p. 96)

Alternative 2

Coolant (mixed ready to use) (☛ p. 96)

– Refit the radiator cap.

Checking the coolant level and antifreeze

Warning

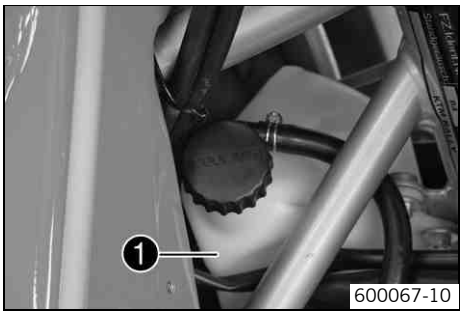
Scalding hazard During motorcycle operation, the coolant gets very hot and is under pressure.

– Do not open the radiator, the radiator hoses or other components of the cooling system when the engine is hot. Allow the engine and radiator to cool down. If you are scalded, hold the affected part under cold water immediately.

Warning

Danger of poisoning Coolants are poisonous and a health hazard.

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



Condition

Engine is cold.

– Stand the motorcycle upright on a horizontal surface.
– Remove compensating tank cap ❶ and the radiator cap.
– Check antifreeze of coolant.

−25... −45 °C (−13... −49 °F)

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

– Check the coolant level in compensating tank ❶.

The compensating tank must be half full.

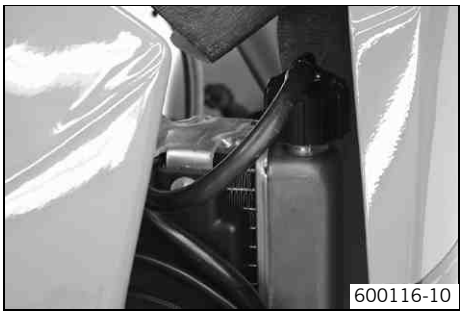
» If the level of the coolant does not meet specifications:
– Correct the coolant level.

Alternative 1

Coolant (☛ p. 96)

Alternative 2

Coolant (mixed ready to use) (☛ p. 96)



– Check the coolant level in the radiator.

The radiator must be completely full.

» If the coolant level does not meet specifications:
– Correct the coolant level and determine the cause of the loss in coolant.

Alternative 1

Coolant (☛ p. 96)

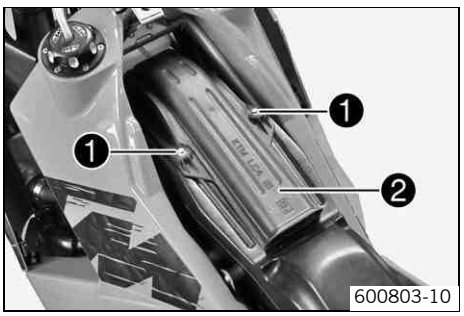
Alternative 2

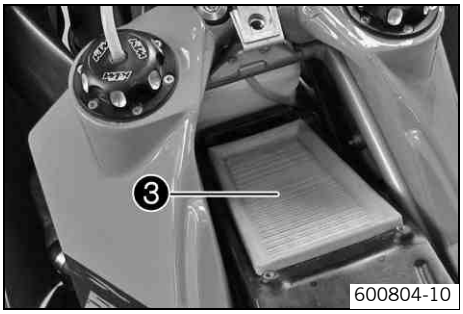
Coolant (mixed ready to use) (☛ p. 96)

– Replace the compensating tank cap and the radiator cap.

Removing the air filter

– Remove the seat. (☛ p. 55)
– Remove screws ❶. Remove filter box top ❷.





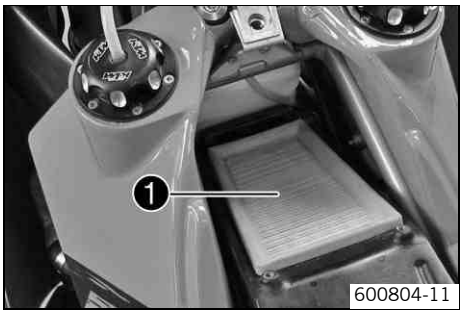
Note

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

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

– Remove air filter ❸.

Installing the air filter

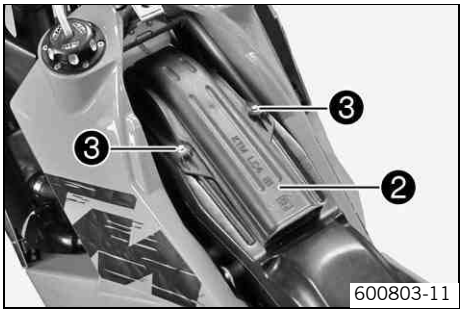


– Clean the air filter box.
– Mount air filter ❶.

Info

The air filter must lie flush against the air filter box along the entire sealing surface.

– Hook filter box top ❷ into the front of the air filter box and swing down.



– Mount and tighten screws ❸.

Guideline

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

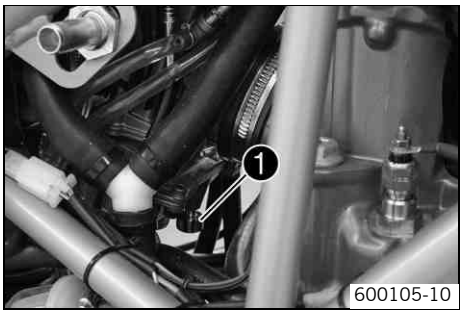
– Mount the seat. (☛ p. 56)

Carburetor - idle

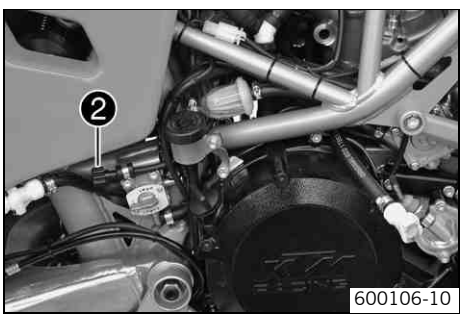
The idle setting of the carburetor has a big influence on the starting behavior, stable idling and the response to throttle opening. That means that an engine with a correctly set idle speed is easier to start than if the idle is set wrongly.

Info

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

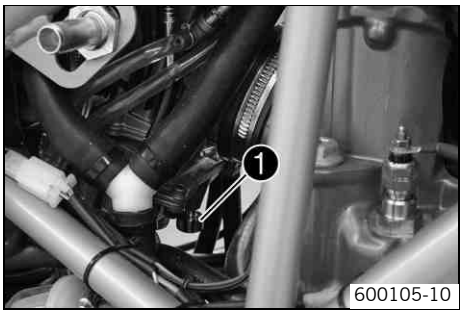


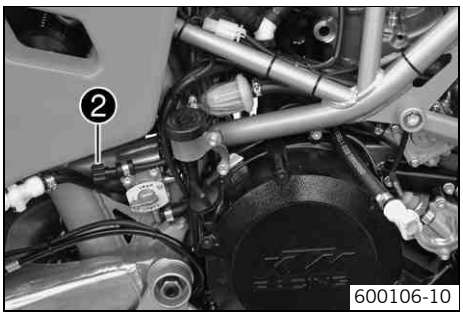
The idle mixture is adjusted with the idle mixture adjustment screw ❶.

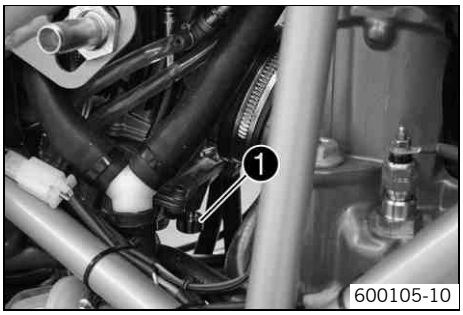


The idle speed is adjusted with the adjustment screw ❷.

Carburetor - adjusting the idle speed







– Turn handle ❹ of the fuel tap to the **R REAR** position. (Figure 600016-10☛ p. 18)
– Remove the front fuel tank. (☛ p. 56)
– Screw in idle adjusting screw ❶ until it stops and then to the prescribed basic setting.

Guideline

Idle mixture adjusting screw	
Open	2 turns

– Let the engine run until it is warm.

Guideline

Warm-up time	≥ 5 min

– Adjust the idle speed with adjusting screw ❷.

Guideline

Choke function deactivated – The choke knob is engaged in the guide. (☛ p. 18)	
Idle speed	1,600… 1,700 rpm

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

Info

If there is a big engine speed rise, reduce the idle speed to a normal level and repeat the above steps.
The extreme sport motorcyclist will set the mixture about 1/4 of a turn back from this ideal value (leaner, in a clockwise direction) since the engine becomes hotter in sporting use.
If the procedure described here does not lead to satisfactory results, the cause may be a wrongly dimensioned idling jet.
If you can turn the idle adjusting screw to the end without any change of engine speed, you have to insert a smaller idling jet.
The idle adjusting screw must not be opened more than two turns. If more than two turns are necessary (rich mixture), use a larger idling jet.
After changing the idling jet, start from the beginning with the adjusting steps.

– Adjust the idle speed with adjusting screw ❷.

Guideline

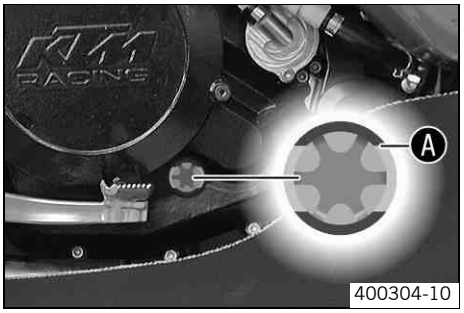
Choke function deactivated – The choke knob is engaged in the guide. (☛ p. 18)	
Idle speed	1,600… 1,700 rpm

Info

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

Checking the engine oil level

Info
The engine oil level must be checked when the engine is warm.



– Stand the motorcycle upright on a horizontal surface.

Condition
The engine is at operating temperature.

– Check the engine oil level.

Info
After switching off the engine, wait one minute before checking the level.

The engine oil reaches the top of the viewer Ⓐ.

» When the engine oil does not reach the top of the viewer:
– Add engine oil. (☛ p. 71)

Changing engine oil and filter, cleaning oil screens

– Remove the motor guard. (☛ p. 59)
– Drain the engine oil. (☛ p. 67)
– Remove the oil filter. (☛ p. 68)
– Clean the oil screens. (☛ p. 69)
– Install the oil filter. (☛ p. 70)
– Fill up with engine oil. (☛ p. 70)
– Mount the motor guard. (☛ p. 59)

Draining the engine oil

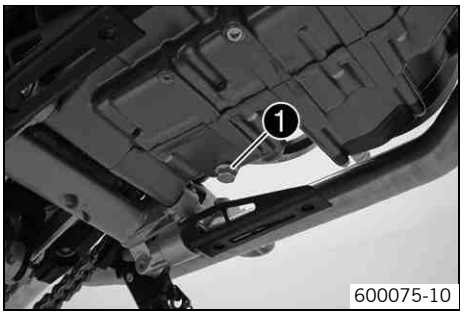
Warning
Danger of scalding Engine oil and gear oil get very hot when the motocycle is driven.

– Wear suitable protective clothing and gloves. If you scald yourself, hold the affected area under cold water immediately.

Warning
Environmental hazard Problem materials cause environmental damage.

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

Info
Drain the engine oil only when the engine is warm.



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

Oil drain plug with magnet	M12x1.5	20 Nm (14.8 lbf ft)

Removing the oil filter

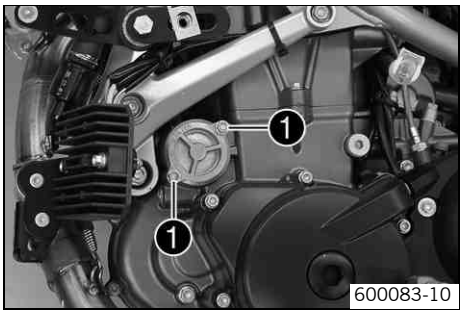
Warning
Danger of scalding Engine oil and gear oil get very hot when the motocycle is driven.

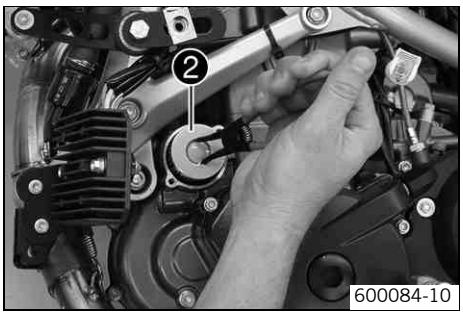
– Wear suitable protective clothing and gloves. If you scald yourself, hold the affected area under cold water immediately.

Warning
Environmental hazard Problem materials cause environmental damage.

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

– Remove the front fuel tank. (☛ p. 56)
– Place a suitable container under the engine.
– Remove screws ❶. Take off the oil filter cover with the O-ring.

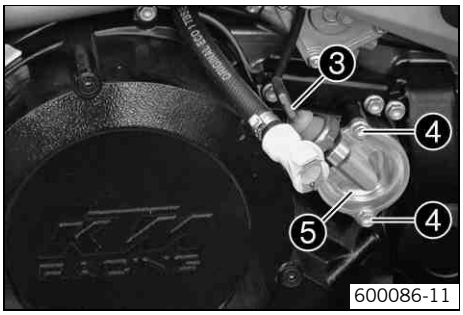




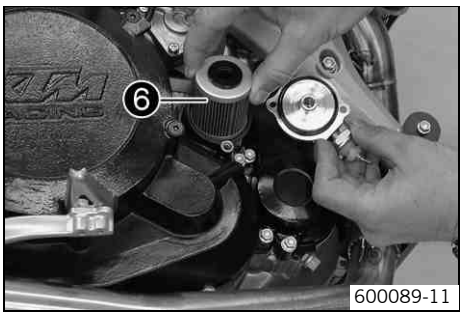
– Pull the oil filter ❷ out of the engine housing.

Circlip pliers reverse (51012011000)

– Completely drain the engine oil.
– Thoroughly clean parts and sealing area.



– Disconnect the plug ❸. Remove screws ❹.
– Remove the oil filter cover ❺ with the O-ring.



– Pull the oil filter ❻ out of the engine housing.
– Completely drain the engine oil.
– Thoroughly clean parts and sealing area.

Cleaning the oil screens

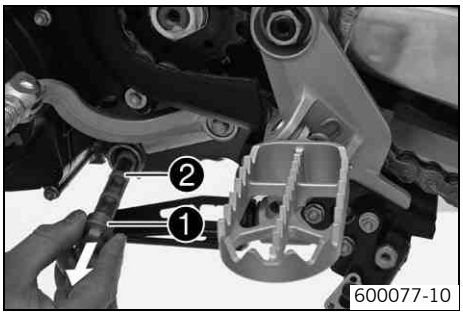
Warning
Danger of scalding Engine oil and gear oil get very hot when the motocycle is driven.

– Wear suitable protective clothing and gloves. If you scald yourself, hold the affected area under cold water immediately.

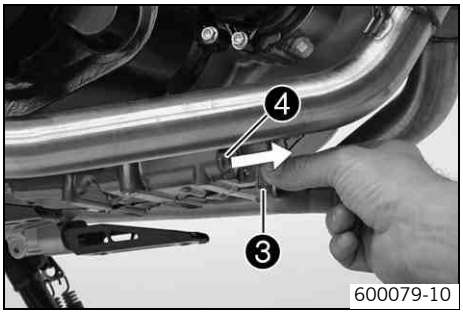
Warning
Environmental hazard Problem materials cause environmental damage.

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

– Place a suitable container under the engine.
– Remove plug ❶ with oil screen ❷ and O-ring.

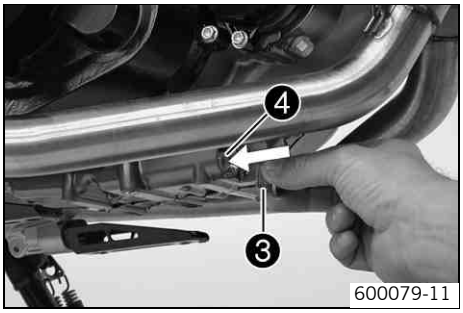


– Remove plug ❸ with oil screen ❹ and O-ring.
– Completely drain the remaining engine oil.
– Thoroughly clean parts and sealing areas.



– Fit and tighten plug ❸ with oil screen ❹ and O-ring.
Guideline

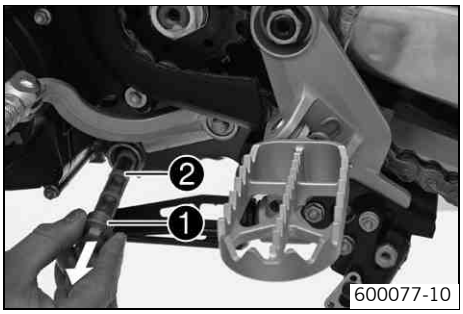
Plug, oil screen	M20x1.5	15 Nm (11.1 lbf ft)



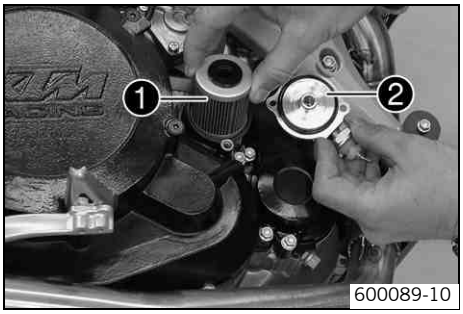
Info
Plugs ❶ and ❸ and oil screens ❷ and ❹ are identical.

– Fit and tighten plug ❶ with oil screen ❷ and O-ring.
Guideline

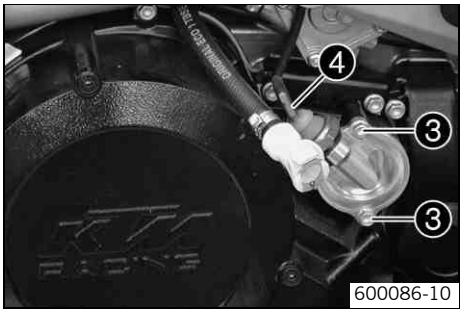
Plug, oil screen	M20x1.5	15 Nm (11.1 lbf ft)



Installing the oil filter



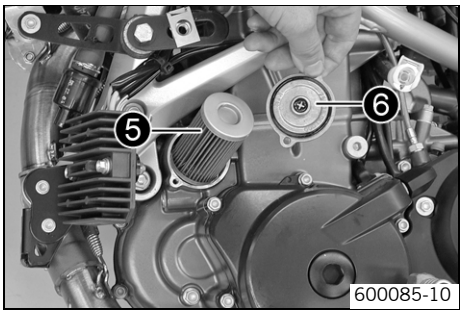
– Insert the oil filter ❶.
– Oil the O-ring of the oil filter cover and mount it with the oil filter cover ❷.



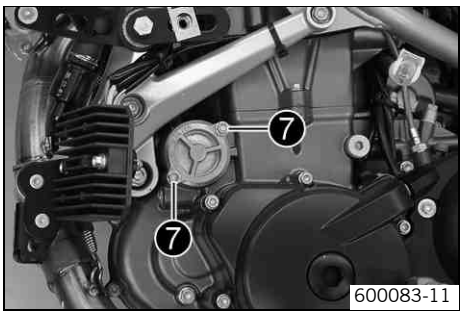
– Mount and tighten screws ❸.
Guideline

Screw, oil filter cover	M5	6 Nm (4.4 lbf ft)

– Connect the plug ❹.



– Insert the oil filter ❺.
– Oil the O-ring of the oil filter cover and mount it with the oil filter cover ❻.



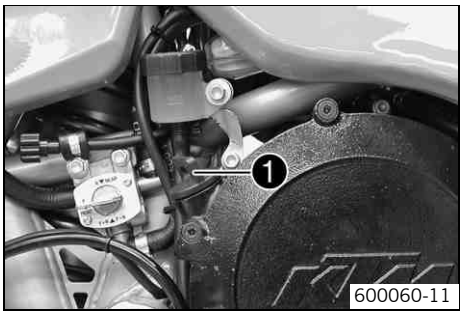
– Mount and tighten screws ❼.
Guideline

Screw, oil filter cover	M5	6 Nm (4.4 lbf ft)

– Install the fuel tank. (☛ p. 56)

Filling up with engine oil

Info
Too little engine oil or poor-quality engine oil results in premature wear to the engine.



– Remove the screw cap ❶ on the clutch cover and fill up with engine oil.

Engine oil	2.20 l (2.32 qt.)	Engine oil (SAE 10W/60) (00062010035) (☛ p. 96)
		Engine oil (SAE 20W/60) (☛ p. 96)

– Mount and tighten screw cap ❶.

Danger
Danger of poisoning Exhaust gases are poisonous and can result in unconsciousness and/or death.

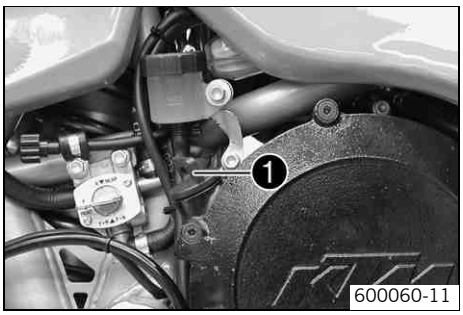
– When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in a closed space without an effective exhaust extraction system.

– Start the engine and check that it is oil-tight.

– Check the engine oil level. (☛ p. 67)

Adding engine oil

Info
Too little engine oil or poor-quality engine oil results in premature wear to the engine.



– Remove screw connection ❶ on the clutch cover and fill up with engine oil.

Engine oil (SAE 10W/60) (00062010035) (☛ p. 96)
Engine oil (SAE 20W/60) (☛ p. 96)

Info
For optimal performance of the engine oil, do not mix different types of engine oil.
We recommend making an oil change in this case.

– Mount and tighten screw cap ❶.

Danger
Danger of poisoning Exhaust gases are poisonous and can result in unconsciousness and/or death.

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

– Start the engine and check that it is oil-tight.

Faults	Possible cause	Action
Battery discharged	Battery is not charged by generator	– Check the charging voltage. – Check the charging current. – Check the generator.
	Unwanted power consumer	– Check the closed current.
Engine turns but does not start	Operating error	– Carry out work steps for the start procedure. (☛ p. 23)
	Motorcycle was out of use for a long time and there is old fuel in the float chamber	– Drain the fuel from the carburetor into a suitable container.
	Fuel feed interrupted	– Check the fuel tank breathers. – Check the fuel filter. – Check the fuel sieve of the fuel tanks. – Clean the fuel tap. – Check/adjust the carburetor components. – Check the fuel pump.
	Engine flooded	– Clean and dry the spark plug or change it.
	Spark plug oily or wet	– Clean and dry the spark plug or change it.
	Electrode distance (plug gap) of spark plug too wide	– Adjust plug gap. Guideline Spark plug electrode gap 0.9 mm (0.035 in)
	Ignition system defective	– Check the ignition coil. – Check the CDI unit. – Check the spark plug connector. – Check the pulse generator. – Check the generator.
	Socket connector of CDI control device, pulse generator or ignition coil oxidized	– Clean the socket connector and treat it with contact spray.
	Water in carburetor or jets blocked	– Check/adjust the carburetor components.
The engine cannot be cranked (electric starter)	Operating error	– Carry out work steps for the start procedure. (☛ p. 23)
	Battery discharged	– Check the charging voltage. – Check the charging current. – Check the generator.
	Main fuse burned out	– Remove the main fuse. (☛ p. 62) – Install the main fuse. (☛ p. 62)
Engine does not speed up	Carburetor running over because float needle dirty or worn.	– Check/adjust the carburetor components.
	Loose carburetor jets	– Check/adjust the carburetor components.
	Ignition system defective	– Check the ignition coil. – Check the CDI unit. – Check the spark plug connector. – Check the pulse generator. – Check the generator.
Engine has no idle.	Idling jet blocked	– Check/adjust the carburetor components.
	Adjusting screws on carburetor distorted	– Carburetor - adjust the idle speed. (☛ p. 66)
	Spark plug defective	– Change spark plug.
	Ignition system defective	– Check the ignition coil. – Check the CDI unit. – Check the spark plug connector. – Check the pulse generator. – Check the generator.

Faults	Possible cause	Action
Engine stalls or is popping into the carburetor.	Lack of fuel	– Refuel. (☛ p. 25)
	Engine takes in bad air	– Check rubber sleeves and carburetor for tightness.
Engine overheats.	Too little coolant in cooling system	– Check the cooling system for leakage. – Check the coolant level. (☛ p. 63)
	Too little air stream	– Switch off engine when standing.
	Radiator fins very dirty	– Clean radiator fins.
	Bent radiator hose	– Change the radiator hose. 🔧
	Thermostat defective	– Check the thermostat. 🔧 Guideline Opening temperature: 70 °C (158 °F)
	Defect in radiator fan system	– Check the radiator fan fuse. – Check the radiator fan. 🔧 – Check the thermostat. 🔧
Engine has too little power	Fuel feed interrupted	– Check the fuel tank breathers. – Check the fuel filter. – Check the fuel sieve of the fuel tanks. – Clean the fuel tap. – Check/adjust the carburetor components. 🔧 – Check the fuel pump. 🔧
	Air filter very dirty	– Clean the air filter. 🔧
	Exhaust system leaky, deformed or too little glass fiber yarn filling in main silencer.	– Check exhaust system for damage. – Change the glass fiber yarn filling of the main silencer. 🔧
	Valve clearance too little	– Adjust the valve clearance. 🔧
	Ignition system defective	– Check the ignition coil. 🔧 – Check the CDI unit. 🔧 – Check the spark plug connector. 🔧 – Check the pulse generator. 🔧 – Check the generator. 🔧
High oil consumption	Engine vent hose bent	– Route the vent hose without bends or replace it if necessary.
	Engine oil level too high	– Check the engine oil level. (☛ p. 67)
	Engine oil too thin (low viscosity)	– Change the engine oil and filter, clean the oil screens. 🔧 (☛ p. 67)
	Piston or cylinder is worn	– Check the piston/cylinder mounting clearance. 🔧

Cleaning motorcycle

Note

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

– Never clean the vehicle with high-pressure cleaning equipment or a strong water-jet. The excessive pressure can penetrate electrical components, plug connectors, Bowden cables and bearings, etc., and can damage or destroy these parts.

Warning

Environmental hazard Problem materials cause environmental damage.

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

Info

If you clean the motorcycle regularly, its value and appearance are maintained over a long period.
Avoid direct sunshine on the motorcycle during cleaning.

– Before you clean the motorcycle, seal the exhaust system to prevent penetration by water.
– First remove coarse dirt particles with a gentle water spray.
– Spray very dirty areas with a normal motorcycle cleaner and then clean with a paintbrush.

Motorcycle cleaner (☛ p. 98)

Info

Use warm water containing normal motorcycle cleaner and a soft sponge.
If the vehicle was operated in road salt, clean it with cold water. Warm water would enhance the corrosive effects of salt.

– After the motorcycle has been thoroughly cleaned with a gentle jet of water, it should be dried with compressed air and a cloth.

Warning

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

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

– After cleaning, ride the vehicle a short distance until the engine warms up, and then apply the brakes.

Info

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

– Push back the protection covers on the handlebar instruments to allow water to evaporate.
– After the motorcycle has cooled off, oil or grease all moving parts and bearings.
– Clean the chain. (☛ p. 40)
– Treat bare metal parts (except for brake discs and exhaust system) with anti-corrosion materials.

Cleaning and polishing materials for metal, rubber and plastic (☛ p. 98)

– Treat all painted parts with a mild paint polish.

High-luster polish for paint (☛ p. 98)

– To prevent electrical problems, treat electric contacts and switches with contact spray.

Contact spray (☛ p. 98)

– Lubricate the steering lock.

Universal oil spray (☛ p. 98)

Storage

Warning

Danger of poisoning Fuel is poisonous and a health hazard.

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

Info

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

– Clean the motorcycle. (☛ p. 74)
– Change the engine oil and filter, clean the oil screens. 🔧 (☛ p. 67)
– Check the coolant level and antifreeze. (☛ p. 64)
– Drain the fuel from the tanks into a suitable container.
– Drain the fuel from the carburetor into a suitable container.
– Check the tire air pressure. (☛ p. 54)
– Remove the battery. 🔧 (☛ p. 61)
– Recharge the battery. 🔧 (☛ p. 61)

Guideline

Storage temperature of battery without direct sunshine	0... 35 °C (32... 95 °F)

– The storage place should be dry and not subject to large temperature differences.

Info

KTM recommends jacking up the motorcycle.

– Jack up the motorcycle. (☛ p. 29)
– Cover the motorcycle with a tarp or cover that is permeable to air.

Info

Do not use non-porous materials since they prevent humidity from escaping, thus causing corrosion.
Avoid running the engine for a short time only. Since the engine cannot warm up properly, the water vapor produced during combustion condenses and causes valves and exhaust system to rust.

Putting the motorcycle into operation after storage

– Remove the motorcycle from the work stand. (☛ p. 29)
– Install the battery. 🔧 (☛ p. 61)
– Refuel. (☛ p. 25)
– Checks before putting into operation. (☛ p. 23)
– Take a test ride.

Design	1-cyliner 4-stroke engine, water-cooled
Displacement	654 cm³ (39.91 cu in)
Stroke	80 mm (3.15 in)
Bore	102 mm (4.02 in)
Compression ratio	11,8:1
Idle speed	1,600... 1,700 rpm
Control	OHC, 4 valves controlled via rocker arm, chain drive
Valve diameter, intake	40 mm (1.57 in)
Valve diameter, exhaust	34 mm (1.34 in)
Valve play, cold	0.07... 0.13 mm (0.0028... 0.0051 in)
Crankshaft bearing	2 roller bearings
Engine lubrication	Semi-dry sump lubrication with two rotor pumps
Primary transmission	36:79
Clutch	Multidisc clutch in oil bath/hydraulically activated
Transmission ratio	
1st gear	14:35
2nd gear	16:28
3rd gear	21:28
4th gear	23:26
5th gear	24:25
6th gear	25:24
Generator	12 V, 224 W
Ignition	Contactless controlled fully electronic ignition with digital ignition adjustment
Spark plug	NGK LKAR 8AI - 9
Spark plug electrode gap	0.9 mm (0.035 in)
Cooling	Water cooling, permanent circulation of coolant by water pump

Capacity- engine oil

Engine oil	2.20 l (2.32 qt.)	Engine oil (SAE 10W/60) (00062010035) (☛ p. 96)
		Engine oil (SAE 20W/60) (☛ p. 96)

Capacity - coolant

Coolant	1.20 l (1.27 qt.)	Coolant (☛ p. 96)
		Coolant (mixed ready to use) (☛ p. 96)

Oil hole plug	self-tapping	9 Nm (6.6 lbf ft)	**Loctite® 243™**
Screw, membrane fixation	M3	2.5 Nm (1.84 lbf ft)	**Loctite® 243™**
Hose clamp, intake flange	M4	1.5 Nm (1.11 lbf ft)	–
Oil jet, conrod lubrication	M4	2 Nm (1.5 lbf ft)	**Loctite® 243™**
Locking screw for bearing	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Screw, breather cover on valve cover	M5	3 Nm (2.2 lbf ft)	**Loctite® 243™**
Screw, cover plate for oil return line	M5	6 Nm (4.4 lbf ft)	–
Screw, gear sensor	M5	5 Nm (3.7 lbf ft)	**Loctite® 243™**
Screw, oil filter cover	M5	6 Nm (4.4 lbf ft)	–
Screw, oil pump cover	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Plug, vacuum connection	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, Autodecompression	M6	3... 4 Nm (2.2... 3 lbf ft)	**Loctite® 243™**
Screw, axial lock of camshaft	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, clutch slave cylinder	M6x20	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, clutch slave cylinder	M6x35	10 Nm (7.4 lbf ft)	–
Screw, clutch spring	M6	10 Nm (7.4 lbf ft)	–
Screw, cylinder	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, cylinder head	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, engine housing	M6	10 Nm (7.4 lbf ft)	–
Screw, generator cover	M6	10 Nm (7.4 lbf ft)	–
Screw, generator cover (chain shaft through-hole)	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, ignition pulse generator	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, large clutch cover	M6	10 Nm (7.4 lbf ft)	–
Screw, locking lever	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, rocker arm shaft	M6	12 Nm (8.9 lbf ft)	–
Screw, shift drum locating	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, shift lever	M6	10 Nm (7.4 lbf ft)	**Loctite® 222**
Screw, small clutch cover	M6	6 Nm (4.4 lbf ft)	–
Screw, starter motor	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, stator bracket	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, thermostat housing	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, timing chain guide rail	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, timing chain tensioning rail	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, valve cover	M6	10 Nm (7.4 lbf ft)	–
Screw, water pump wheel	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Oil jet, piston cooling	M6x0.75	4 Nm (3 lbf ft)	**Loctite® 243™**
Fixation of exhaust flange	M8	Tightening sequence: Replace the nuts. Tighten both nuts simultaneously. 20 Nm (14.8 lbf ft)	Copper paste
Plug, crankshaft location	M8	20 Nm (14.8 lbf ft)	–
Stud, exhaust flange	M8	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, cylinder head	M10	Tightening sequence: Tighten diagonally, beginning with the rear screw on the chain shaft. Step 1 15 Nm (11.1 lbf ft) Step 2 30 Nm (22.1 lbf ft) Step 3 45 Nm (33.2 lbf ft) Step 4 60 Nm (44.3 lbf ft)	lubricated with engine oil

Oil hole plug	M10x1	15 Nm (11.1 lbf ft)	**Loctite® 243™**
Oil pressure sensor in the oil filter cover	M10x1	5 Nm (3.7 lbf ft)	**Loctite® 243™**
Plug, drain hole of water pump	M10x1	15 Nm (11.1 lbf ft)	–
Plug, oil bore for oil radiator	M10x1	15 Nm (11.1 lbf ft)	–
Screw, unlocking of timing chain tensioner	M10x1	10 Nm (7.4 lbf ft)	–
Temperature switch VDO	M10x1	4 Nm (3 lbf ft)	**Loctite® 243™**
Spark plug	M12x1.25	17 Nm (12.5 lbf ft)	–
Adapter for temperature switch on cylinder head	M12x1.5	12 Nm (8.9 lbf ft)	**Loctite® 243™**
Oil drain plug with magnet	M12x1.5	20 Nm (14.8 lbf ft)	–
Oil pressure regulator valve plug	M12x1.5	20 Nm (14.8 lbf ft)	–
Plug, oil bore	M14x1.5	15 Nm (11.1 lbf ft)	**Loctite® 243™**
Rotor nut	M18x1.5	100 Nm (73.8 lbf ft)	–
Nut, engine sprocket	M20x1.5	60 Nm (44.3 lbf ft)	**Loctite® 243™**
Nut, inner clutch hub	M20x1.5	100 Nm (73.8 lbf ft)	**Loctite® 243™**
Nut, primary gear	M20LHx1.5	90 Nm (66.4 lbf ft)	**Loctite® 243™**
Plug, oil screen	M20x1.5	15 Nm (11.1 lbf ft)	–
Plug, timing chain tensioner	M20x1.5	25 Nm (18.4 lbf ft)	–
Plug, oil thermostat	M24x1.5	15 Nm (11.1 lbf ft)	–
Screw in generator cover	M24x1.5	8 Nm (5.9 lbf ft)	–

690 Rally Factory Replica

Carburetor type	KEIHIN FCR-MX 41
Carburetor identification number	4100C
Needle position	5 th position from top
Idle mixture adjusting screw	
Open	2 turns
Main jet	160
Jet needle	OBDYU (OBEKR)
Idling jet	45
Idle air jet	100
Cold start jet	85

Frame	Trellis frame of chromium-molybdenum steel tubes, powder-coated
Suspension travel	
Front	300 mm (11.81 in)
Rear	310 mm (12.2 in)
Fork offset	
Mark **1** visible	20 mm (0.79 in)
No mark	22 mm (0.87 in)
Brake system	Disc brakes, brake calipers on floating bearings
Brake discs - diameter	
Front	300 mm (11.81 in)
Rear	240 mm (9.45 in)
Brake discs - wear limit	
Front	4.5 mm (0.177 in)
Rear	3.5 mm (0.138 in)
Tire air pressure on road	
Front	1.5 bar (22 psi)
Rear	1.5 bar (22 psi)
Tire air pressure off road	
Front	1.0... 1.5 bar (15... 22 psi)
Rear	1.0... 1.5 bar (15... 22 psi)
Secondary drive ratio	16:44
Rear sprockets available	43, 44, 45
Chain	5/8 x 1/4"
Wheelbase	1,535±10 mm (60.43±0.39 in)
Steering head angle	62.5°
Seat height unloaded	980 mm (38.58 in)
Ground clearance unloaded	320 mm (12.6 in)
Weight without fuel, approx.	162 kg (357 lb.)
Maximum permissible front axle load	190 kg (419 lb.)
Maximum permissible rear axle load	250 kg (551 lb.)
Maximum permissible overall weight	400 kg (882 lb.)
Standard rider weight	75... 85 kg (165... 187 lb.)

Lighting equipment

High beam	P20d	12 V 60 W
Low beam	P20d	12 V 60 W
Parking light	W2,1x9,5d	12 V 5 W
Indicator lights	W2x4,6d	12 V 1.2 W
Flasher light	BAU15s	12 V 10 W
Brake / tail light	LED	
License plate lamp	W2,1x9,5d	12 V 5 W

Battery	YTZ10S	Battery voltage: 12 V Nominal capacity: 8.6 Ah maintenance-free

Tires

Front tire	Rear tire
90/90 - 21 54S TT Michelin T63	**130/80 - 18 66S TT** Michelin T63
Additional information is available in the Service section under: http://www.ktm.com	

Capacity - fuel

Fuel tank capacity		
Fuel tank half, front left, approx.	9.0 l (2.38 US gal)	Super unleaded (ROZ 95 / RON 95 / PON 91) (☛ p. 97)
Fuel tank half, front right, approx.	9.0 l (2.38 US gal)	Super unleaded (ROZ 95 / RON 95 / PON 91) (☛ p. 97)
Rear fuel tank, approx.	18.0 l (4.76 US gal)	Super unleaded (ROZ 95 / RON 95 / PON 91) (☛ p. 97)
Total fuel capacity, approx.	36.0 l (9.51 US gal)	Super unleaded (ROZ 95 / RON 95 / PON 91) (☛ p. 97)

Fork part number	14.18.7E.10
Fork	**WP Suspension** 4860 MXMA CC
Compression damping	
Standard	12 clicks
Rebound damping	
Standard	20 clicks
Spring length with preload spacer(s)	502 mm (19.76 in)
Spring rate	
Weight of rider: 65... 75 kg (143... 165 lb.)	4.8 N/mm (27.4 lb/in)
Weight of rider: 75... 85 kg (165... 187 lb.)	5.0 N/mm (28.6 lb/in)
Gas pressure	1.8 bar (26 psi)
Fork length	950 mm (37.4 in)

Capacity - fork oil

Oil capacity / cartridge	195 ml (6.59 fl. oz.)	Fork oil (SAE 5) (☛ p. 97)
Oil capacity / fork tube without cartridge	420 ml (14.2 fl. oz.)	Fork oil (SAE 5) (☛ p. 97)

Shock absorber part number	12.18.7E.17
Shock absorber	**WP Suspensione** 5018 DACC
Compression damping, high-speed	
Standard	20 turns
Compression damping, low-speed	
Standard	15 clicks
Rebound damping	
Standard	20 clicks
Spring preload	
Standard	14 mm
Spring rate	
Weight of rider: 65... 75 kg (143... 165 lb.)	88 N/mm (502 lb/in)
Weight of rider: 75... 85 kg (165... 187 lb.)	92 N/mm (525 lb/in)
Weight of rider: 85... 95 kg (187... 209 lb.)	97 N/mm (554 lb/in)
Spring length	250 mm (9.84 in)
Gas pressure	10 bar (145 psi)
Static sag	33 mm (1.3 in)
Riding sag	107 mm (4.21 in)
Fitted length	431 mm (16.97 in)

Shock absorber oil	Shock absorber oil (SAE 2.5) (50180342S1) (☛ p. 97)

Remaining screws, chassis	M5	4 Nm (3 lbf ft)	–
Screw, brake line on bottom triple clamp	M5	2 Nm (1.5 lbf ft)	–
Screw, foot brake pedal surface	M5	6 Nm (4.4 lbf ft)	**Loctite® 243™**
Screw, fuel tap on frame	M5	5 Nm (3.7 lbf ft)	–
Spoke nipple, front wheel	M5	5 Nm (3.7 lbf ft)	–
Spoke nipple, rear wheel	M5	5 Nm (3.7 lbf ft)	–
Remaining nuts, chassis	M6	10 Nm (7.4 lbf ft)	–
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)	–
Screw, battery holder on rear tank	M6	3 Nm (2.2 lbf ft)	–
Screw, bottom radiator bracket	M6	5 Nm (3.7 lbf ft)	–
Screw, compensating tank of rear brake	M6	5 Nm (3.7 lbf ft)	–
Screw, front brake disc	M6	14 Nm (10.3 lbf ft)	**Loctite® 243™**
Screw, rear brake disc	M6	14 Nm (10.3 lbf ft)	**Loctite® 243™**
Screw, rear foot brake cylinder	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, regulator-rectifier	M6	8 Nm (5.9 lbf ft)	**Loctite® 243™**
Screw, shock absorber adjusting ring	M6	5 Nm (3.7 lbf ft)	–
Screw, spring retainer for side stand	M6	10 Nm (7.4 lbf ft)	**Loctite® 243™**
Screw, starter cable on starter	M6	10 Nm (7.4 lbf ft)	–
Engine carrying screw	M8	30 Nm (22.1 lbf ft)	**Loctite® 243™**
Nut, rear sprocket screw	M8	35 Nm (25.8 lbf ft)	**Loctite® 243™**
Remaining nuts, chassis	M8	25 Nm (18.4 lbf ft)	–
Remaining screws, chassis	M8	25 Nm (18.4 lbf ft)	–
Screw, beam, engine support bracket	M8	25 Nm (18.4 lbf ft)	**Loctite® 243™**
Screw, bottom triple clamp	M8	12 Nm (8.9 lbf ft)	–
Screw, foot brake pedal	M8	25 Nm (18.4 lbf ft)	**Loctite® 243™**
Screw, fork stub	M8	15 Nm (11.1 lbf ft)	–
Screw, front brake caliper	M8	30 Nm (22.1 lbf ft)	**Loctite® 243™**
Screw, handlebar clamp	M8	16 Nm (11.8 lbf ft)	–
Screw, motor guard	M8	25 Nm (18.4 lbf ft)	–
Screw, rear tank fixing bracket	M8	20 Nm (14.8 lbf ft)	**Loctite® 243™**
Screw, reinforcement plate on rear tank, right and left	M8	25 Nm (18.4 lbf ft)	–
Screw, side stand bracket	M8	25 Nm (18.4 lbf ft)	**Loctite® 243™**
Screw, steer tube	M8	25 Nm (18.4 lbf ft)	**Loctite® 243™**
Screw, tension strut bearing	M8	25 Nm (18.4 lbf ft)	**Loctite® 243™**
Screw, top steering stem	M8	20 Nm (14.8 lbf ft)	–
Screw, top triple clamp	M8	17 Nm (12.5 lbf ft)	–
Remaining nuts, chassis	M10	45 Nm (33.2 lbf ft)	–
Remaining screws, chassis	M10	45 Nm (33.2 lbf ft)	–
Screw, bottom shock absorber	M10	45 Nm (33.2 lbf ft)	**Loctite® 243™**
Screw, handlebar support	M10	40 Nm (29.5 lbf ft)	**Loctite® 243™**
Screw, side stand	M10	35 Nm (25.8 lbf ft)	**Loctite® 243™**
Screw, top shock absorber	M10	45 Nm (33.2 lbf ft)	**Loctite® 243™**
Nut, swingarm pivot	M14x1.5	100 Nm (73.8 lbf ft)	–
Nut, triangular lever arm	M14x1.5	100 Nm (73.8 lbf ft)	–
Screw, top steering head	M20x1.5	12 Nm (8.9 lbf ft)	–
Screw, front wheel spindle	M24x1.5	40 Nm (29.5 lbf ft)	–
Nut, rear wheel spindle	M25x1.5	90 Nm (66.4 lbf ft)	–

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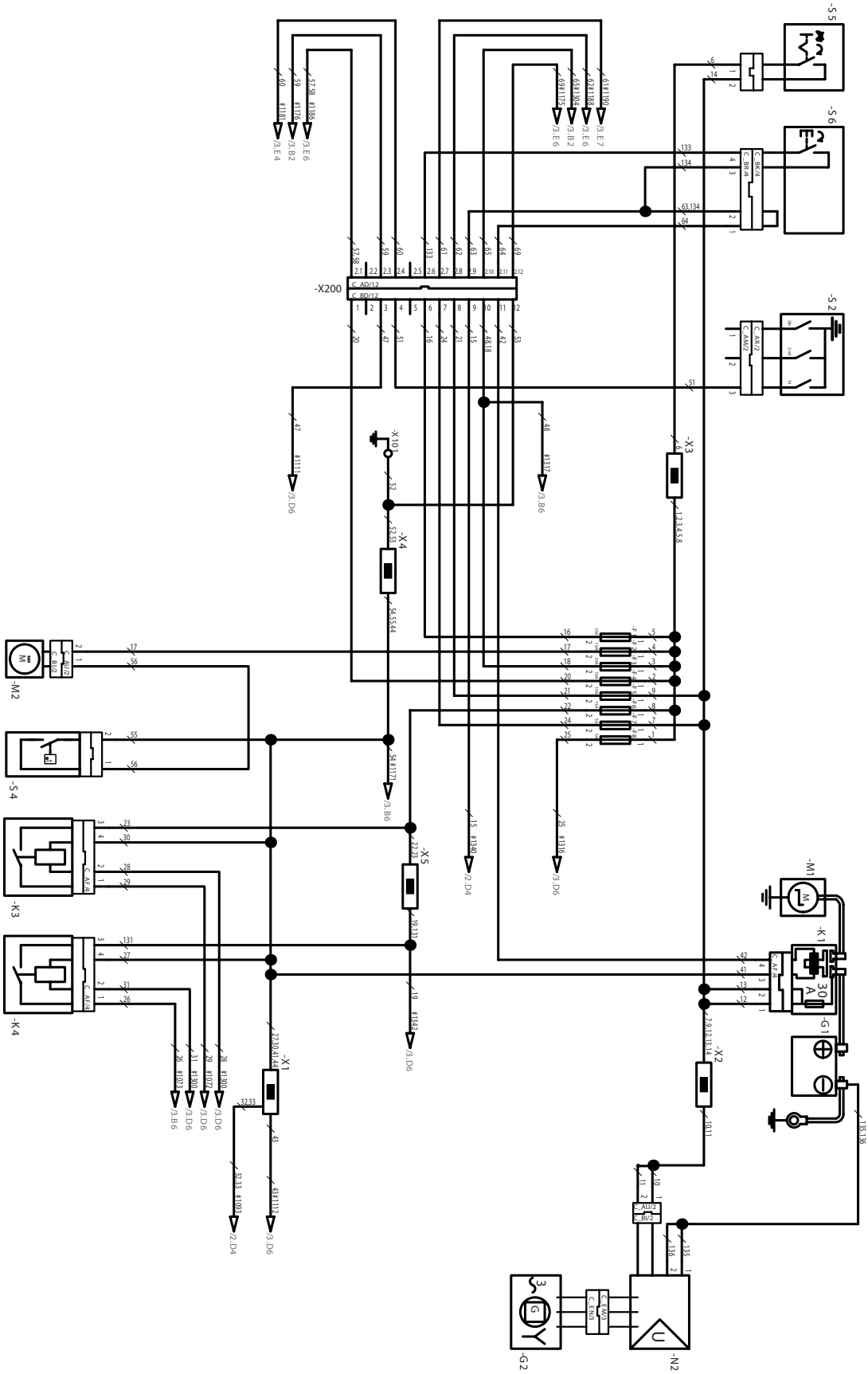

400349-10

Components:

G1	Battery
G2	Generator
K1	Starter relay with main fuse
K3	High beam relay
K4	Low beam relay
M1	Starter motor
M2	Radiator fan
N1	Voltage regulator/rectifier
S2	Gear sensor switch
S4	Thermoswitch
S5	Ignition lock
S6	Electric starter button

Cable colors:

1	Green
2	Green
3	Green
4	Green
5	Green
6	Green
7	Yellow-red
8	Green
9	Yellow-red
10	Yellow-red
11	Yellow-red
12	Yellow-red
13	Yellow-red
14	Yellow-red
15	Orange
16	Black-orange
17	White-black
18	yellow-blue
19	Yellow
20	Black-red
21	Gray
22	Yellow
23	Yellow
24	Green-red
25	White-yellow
26	Blue
27	Brown
28	Green-orange
29	Orange
30	Brown
31	Blue-orange
32	Brown
33	Brown
41	Brown
42	White-red
43	Brown
44	Brown
47	White-green

48	Yellow-blue
51	Black-yellow
52	Brown
53	Brown
54	Brown
55	Brown
56	Black
57	Black-red
58	Black-red
59	White-green
60	Black-green
61	Green-red
62	Pink
63	Orange
64	White-red
65	Yellow-blue
69	Brown
131	Yellow
133	Black-orange
134	Orange
135	Green
136	Green

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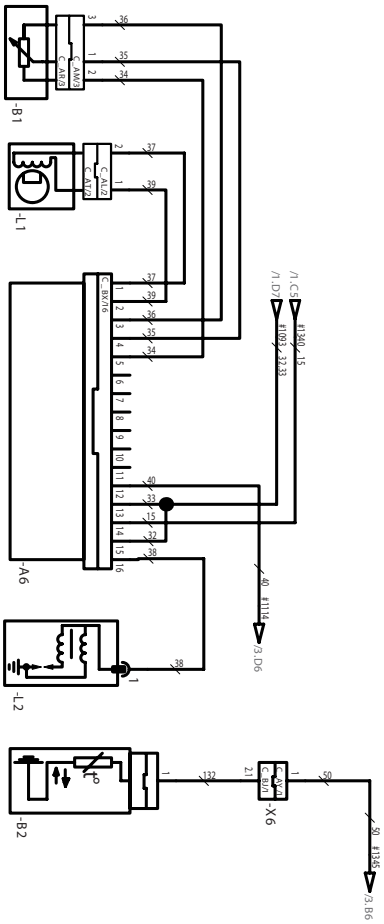

Components:	
A6	CDI controller
B1	Throttle position sensor
B2	Temperature switch for indicator lamp
L1	Pulse generator
L2	Ignition coil
Cable colors:	
15	Orange
32	Brown
33	Brown
34	Blue
35	Yellow
36	Black
37	Gray
38	black-blue
39	Gray
40	Black-brown
50	Black-yellow
132	Black-yellow

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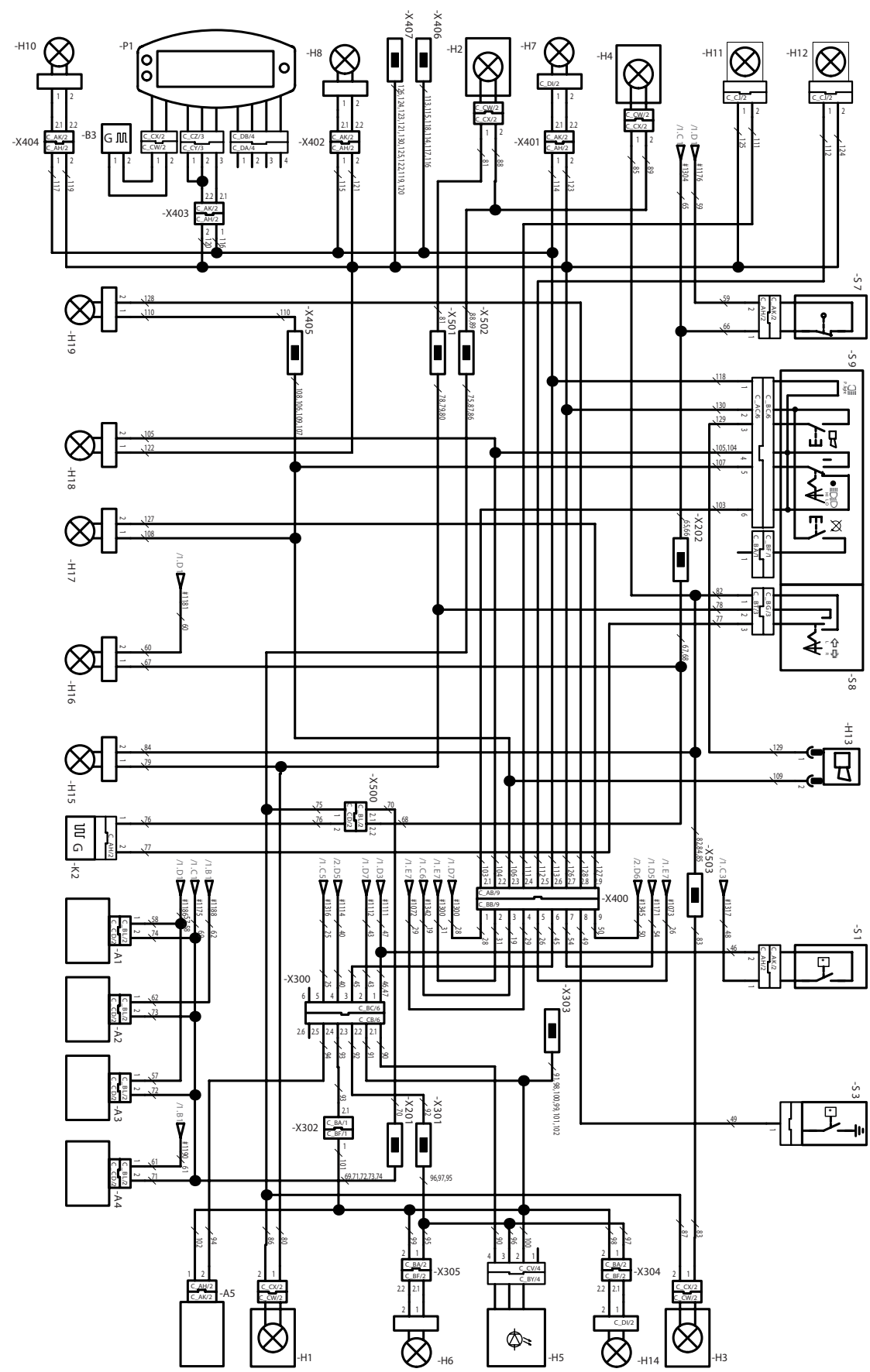

400351-10

Components:

A1	**Roadbook**
A2	Not assigned
A3	Not assigned
A4	**GPS** (optional)
A5	**Iritrac** (optional)
B3	Wheel speed sensor
H1	Right rear flasher
H2	Left front flasher
H3	Left rear flasher
H4	Right front flasher
H5	Brake/tail light
H6	Additional rear light (optional)
H7	Parking light
H8	**ICO** Light (optional)
H10	**Roadbook** Light
H11	Low beam
H12	High beam
H13	Horn
H14	Additional rear light (optional)
H15	Flasher indicator light
H16	Idling speed indicator lamp
H17	Indicator lamp for the coolant temperature
H18	High beam indicator light
H19	Oil pressure indicator lamp
K2	Flasher relay
P1	Speedometer
S1	Rear brake light switch
S3	Oil pressure sensor
S7	Front brake light switch
S8	Flasher switch

Cable colors:

19	Yellow
25	White-yellow
26	Blue
28	Green-orange
29	Green
31	Blue-orange
40	Black-brown
43	Brown
45	White
46	White-green
47	White-green
48	Yellow-blue
49	Green-gray
50	Black-yellow
54	Brown
57	Black-red
58	Black-red
59	White-green
60	Black-green
61	Green-red

62	Pink
65	Yellow-blue
66	Yellow-blue
67	Yellow-blue
68	Yellow-blue
69	Brown
70	Brown
71	Brown
72	Brown
73	Brown
74	Brown
75	Brown
76	Yellow-blue
77	Orange
78	Violet
79	Violet
80	Violet
81	Violet
82	Black
83	Black
84	Black
85	Black
86	Black
87	Black
88	Black
89	Black
90	Green-white
91	Brown
92	White
93	Black-brown
94	White-yellow
95	White
96	White
97	White
98	Brown
99	Brown
100	Brown
101	Brown
102	Brown
103	Green-gray
104	Blue-gray
105	Yellow-blue
106	Yellow-blue
107	Yellow-blue
108	Yellow-blue
109	Yellow-blue
110	Yellow-blue
111	Green
112	Blue
113	White
114	White
115	White

116	White
117	White
118	White
119	Brown
120	Brown
121	Brown
122	Brown
123	Brown
124	Brown
125	Brown
126	Brown
127	Black-yellow
128	Black-green
129	Red
130	Brown

Brake fluid DOT 4 / DOT 5.1

According to
– DOT

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

Supplier
Castrol
– **RESPONSE BRAKE FLUID SUPER DOT 4**

Motorex®
– **Brake Fluid DOT 5.1**

Coolant

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

Mixture ratio

Antifreeze protection: −25... −45 °C (−13... −49 °F)	50 % Corrosion/antifreeze 50 % Distilled water

Coolant (mixed ready to use)

Antifreeze	−40 °C (−40 °F)

Supplier
Motorex®
– **Anti Freeze**

Engine oil (SAE 10W/60) (00062010035)

According to
– JASO T903 MA (☛ p. 99)
– SAE (☛ p. 99) (SAE 10W/60)
– KTM LC4 2007+

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

Synthetic engine oil

Supplier
Motorex®
– **Motorex® KTM Cross Power 4T**

Engine oil (SAE 20W/60)

According to
– JASO T903 MA (☛ p. 99)
– SAE (☛ p. 99) (SAE 20W/60)

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

Synthetic engine oil

Supplier
Motorex®
– **KTM Racing 4T**

Fork oil (SAE 5)

According to
– SAE (☛ p. 99) (SAE 5)

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

Supplier
Motorex®
– **Racing Fork Oil**

Hydraulic fluid (15)

According to
– ISO VG (15)

Guideline
– Use only hydraulic fluid that complies with the specified standards (see specifications on the container) and that possesses the corresponding properties. KTM recommends **Motorex®** products.

Supplier
Motorex®
– **Hydraulic Fluid 75**

Shock absorber oil (SAE 2.5) (50180342S1)

According to
– SAE (☛ p. 99) (SAE 2.5)

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

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

According to
– DIN EN 228 (ROZ 95 / RON 95 / PON 91)

Chain cleaner

Specification

– KTM recommends **Motorex®** products.

Supplier
Motorex®

– **Chain Clean 611**

Cleaning and polishing materials for metal, rubber and plastic

Specification

– KTM recommends **Motorex®** products.

Supplier
Motorex®

– **Protect & Shine 645**

Contact spray

Specification

– KTM recommends **Motorex®** products.

Supplier
Motorex®

– **Accu Contact**

High-luster polish for paint

Specification

– KTM recommends **Motorex®** products.

Supplier
Motorex®

– **Moto Polish**

Long-life grease

Specification

– KTM recommends **Motorex®** products.

Supplier
Motorex®

– **Fett 2000**

Motorcycle cleaner

Specification

– KTM recommends **Motorex®** products.

Supplier
Motorex®

– **Moto Clean 900**

Offroad chain spray

Specification

– KTM recommends **Motorex®** products.

Supplier
Motorex®

– **Chain Lube 622**

Universal oil spray

Specification

– KTM recommends **Motorex®** products.

Supplier
Motorex®

– **Joker 440 Universal**

JASO T903 MA

Different technical development directions required a new 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, high performance at high engine speeds are in the foreground for motorcycle engines. With most motorcycles, the gearbox and the clutch are lubricated with the same oil as the engine. 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.

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08/2008 Photo: Mitterbauer

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