

# OWNER'S MANUAL 2010

## 250 EXC E-Starter EU

Art. no. 3211469en



**KTM**



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 a lot of enjoyment in riding this vehicle.

Enter the serial numbers of your vehicle below.

Chassis number (☛ p. 9)	Dealer's stamp
Engine number (☛ p. 9)	
Key number (☛ p. 9)	

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 can, however, not be completely excluded.

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

© 2010 KTM-Sportmotorcycle AG, Mattighofen Austria

All rights reserved

Reproduction, even in part, as well as copying of all kinds, is permitted only with the express written permission of the copyright owner.



ISO 9001(12 100 6061)

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

Issued by: TÜV Management Service

KTM-Sportmotorcycle AG  
5230 Mattighofen, Austria

MEANS OF REPRESENTATION .....	4	Preparations for riding at high temperatures and low speeds.....	27
IMPORTANT INFORMATION .....	5	Preparations for riding at low temperatures and in snow ....	27
VIEW OF VEHICLE.....	7	RIDING INSTRUCTIONS .....	28
View of the vehicle from the left front (example) .....	7	Checks before putting into operation .....	28
View of the vehicle from the right rear (example) .....	8	Starting .....	28
LOCATION OF SERIAL NUMBERS .....	9	Starting up .....	29
Chassis number.....	9	Shifting, riding.....	29
Type label.....	9	Braking .....	29
Key number .....	9	Stopping, parking.....	30
Engine number.....	9	Refueling.....	30
Fork part number.....	9	SERVICE SCHEDULE.....	31
Shock absorber part number .....	10	Important maintenance work to be carried out by an authorized KTM workshop .....	31
CONTROLS .....	11	Important maintenance work to be carried out by an authorized KTM workshop (as additional order).....	32
Clutch lever .....	11	Important checks and maintenance work to be carried out by the rider .....	32
Hand brake lever .....	11	MAINTENANCE WORK ON CHASSIS AND ENGINE.....	34
Throttle grip.....	11	Jacking up the motorcycle.....	34
Short circuit button .....	11	Removing the motorcycle from the work stand.....	34
Electric starter button .....	11	Checking the basic chassis setting with the rider's weight .....	34
Light switch.....	12	Compression damping of shock absorber.....	34
Horn button .....	12	Adjusting the high-speed compression damping of the shock absorber .....	34
Turn signal switch .....	12	Adjusting the low-speed compression damping of the shock absorber .....	35
Overview of indicator lamps.....	12	Adjusting the rebound damping of the shock absorber.....	35
CONTROLS .....	13	Measuring the sag of the unloaded rear wheel .....	36
Speedometer.....	13	Checking the static sag of the shock absorber .....	36
Speedometer activation and test .....	13	Checking the riding sag of the shock absorber .....	37
Tripmaster switch .....	13	Adjusting the spring preload of the shock absorber 🖐.....	37
Setting kilometers or miles .....	13	Adjusting the riding sag 🖐.....	38
Setting the clock .....	14	Removing the shock absorber 🖐.....	38
Adjusting the speedometer functions.....	14	Installing the shock absorber 🖐.....	38
Querying the lap time .....	15	Checking the basic setting of the fork.....	39
Display mode SPEED (speed) .....	15	Adjusting the compression damping of the fork .....	39
Display mode SPEED/H (service hours).....	15	Adjusting the rebound damping of the fork.....	39
Display mode SPEED/CLK (clock) .....	16	Adjusting the spring preload of the fork .....	40
Display mode SPEED/LAP (lap time) .....	16	Bleeding the fork legs .....	40
Display mode SPEED/ODO (odometer).....	16	Cleaning the dust boots of the fork legs .....	40
Display mode SPEED/TR1 (trip master 1) .....	16	Loosening the fork protection.....	41
Display mode SPEED/TR2 (trip master 2) .....	17	Positioning the fork protection .....	41
Display mode SPEED/A1 (average speed 1).....	17	Checking the play of the steering head bearing.....	41
Display mode SPEED/A2 (average speed 2).....	17	Adjusting the play of the steering head bearing 🖐.....	42
Display mode SPEED/S1 (stop watch 1) .....	18	Removing the fork legs 🖐.....	42
Display mode SPEED/S2 (stop watch 2) .....	18	Installing the fork legs 🖐.....	42
CONTROLS .....	20	Removing the fork protector 🖐.....	43
Fuel tap.....	20	Installing the fork protector 🖐.....	43
Opening the filler cap .....	20	Removing the front fender.....	43
Closing the filler cap.....	20	Installing the front fender.....	44
Choke.....	20	Removing the headlight mask with the headlight .....	44
Shift lever.....	21	Refitting the headlight mask with the headlight.....	44
Kickstarter .....	21	Handlebar position .....	45
Foot brake lever.....	21	Adjusting the handlebar position 🖐.....	45
Side stand .....	21	Checking the play in the throttle cable.....	45
Steering lock.....	22	Adjusting the play in the throttle cable 🖐.....	46
Locking the steering .....	22	Checking the chain for dirt .....	46
Unlocking the steering .....	22	Cleaning the chain.....	46
GENERAL TIPS AND HINTS ON PUTTING INTO OPERATION.....	23	Checking the chain tension .....	47
Advice on first use.....	23	Checking the rear sprocket/engine sprocket for wear .....	47
Running in the engine.....	24		
Preparing the vehicle for difficult operating conditions .....	24		
Preparations for riding on dry sand .....	24		
Preparations for riding on wet sand .....	25		
Preparations for riding on wet and muddy surfaces .....	26		

Checking chain wear .....	47	Adjusting the basic position of the shift lever 🛠️ .....	74
Adjusting the chain tension .....	48	Carburetor .....	74
Adjusting the chain guide 🛠️ .....	49	Carburetor - adjusting the idle speed 🛠️ .....	75
Checking the brake discs.....	49	Emptying the carburetor float chamber 🛠️ .....	76
Checking the free travel of the hand brake lever .....	49	Checking the gear oil level.....	76
Adjusting free travel of hand brake lever .....	50	Changing the gear oil 🛠️ .....	77
Checking the front brake fluid level .....	50	Draining the gear oil 🛠️ .....	77
Adding front brake fluid 🛠️ .....	50	Refilling with gear oil 🛠️ .....	78
Checking the front brake linings.....	51	Adding gear oil 🛠️ .....	78
Changing the front brake linings 🛠️ .....	52	TROUBLESHOOTING.....	79
Checking the free travel of the foot brake lever .....	53	CLEANING.....	81
Adjusting the basic position of the foot brake lever 🛠️ .....	53	Cleaning the motorcycle.....	81
Checking the rear brake fluid level .....	54	STORAGE .....	82
Adding rear brake fluid 🛠️ .....	54	Storage.....	82
Checking the rear brake linings.....	55	Putting into operation after storage .....	82
Removing the rear brake linings 🛠️ .....	55	TECHNICAL DATA - ENGINE.....	83
Installing the rear brake linings 🛠️ .....	56	Capacity - transmission oil.....	83
Changing the rear brake linings 🛠️ .....	56	Capacity - coolant.....	83
Removing the front wheel 🛠️ .....	57	TECHNICAL DATA - ENGINE TIGHTENING TORQUES.....	84
Installing the front wheel 🛠️ .....	58	TECHNICAL DATA - CARBURETOR.....	85
Removing the rear wheel 🛠️ .....	58	Carburetor configuration 🛠️ .....	85
Installing the rear wheel 🛠️ .....	59	General carburetor configuration 🛠️ .....	87
Checking the tire condition.....	60	TECHNICAL DATA - CHASSIS .....	88
Checking the tire air pressure .....	60	Lighting equipment .....	88
Checking the spoke tension .....	60	Tires .....	89
Engine characteristic - auxiliary spring.....	61	Capacity - fuel.....	89
Engine characteristic - adjusting the auxiliary spring 🛠️ .....	61	TECHNICAL DATA - FORK.....	90
Removing the battery 🛠️ .....	62	TECHNICAL DATA - SHOCK ABSORBER .....	91
Installing the battery 🛠️ .....	62	TECHNICAL DATA - CHASSIS TIGHTENING TORQUES .....	92
Recharging the battery 🛠️ .....	63	WIRING DIAGRAM .....	94
Removing a fuse.....	64	Wiring diagram.....	94
Replacing the fuse.....	64	SUBSTANCES.....	96
Checking the headlight setting.....	64	AUXILIARY SUBSTANCES.....	98
Adjusting the headlight range .....	65	STANDARDS.....	100
Removing the seat .....	65	INDEX .....	101
Mounting the seat .....	65		
Removing the fuel tank 🛠️ .....	65		
Installing the fuel tank 🛠️ .....	66		
Cooling system.....	67		
Checking the antifreeze and coolant level .....	67		
Checking the coolant level.....	68		
Draining the coolant 🛠️.....	68		
Refilling with coolant 🛠️ .....	69		
Removing the main silencer.....	69		
Installing the main silencer .....	70		
Glass fiber yarn filling of main silencer .....	70		
Removing the glass fiber yarn filling of the main silencer 🛠️ .....	70		
Installing the glass fiber yarn filling of the main silencer 🛠️ .....	71		
Changing the glass fiber yarn filling of the main silencer 🛠️ .....	71		
Removing the air filter box lid.....	71		
Installing the air filter box lid.....	71		
Removing the air filter 🛠️.....	71		
Installing the air filter 🛠️ .....	72		
Cleaning the air filter 🛠️ .....	72		
Adjusting the basic position of the clutch lever.....	73		
Checking the fluid level of the hydraulic clutch .....	73		
Changing the hydraulic clutch fluid 🛠️ .....	73		
Checking the basic position of the shift lever.....	74		

## Symbols used

The symbols used are explained 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 below.

---

<b>Specific name</b>	Identifies a specific name.
<b>Name<sup>®</sup></b>	Identifies a protected name.
<b>Brand<sup>™</sup></b>	Identifies a brand available on the open market.

---

## 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.

### **i** 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 property remote from public road traffic. The motorcycle is designed for offroad sport endurance competition (Enduro) and not for predominant motocross use.

## 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 difficult conditions such as on sand or 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 honored. No warranty claims can be considered 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. Certain spare parts and accessories are specified in parentheses in the descriptions. Your KTM dealer will be glad to advise you.

You will find the current **KTM PowerParts** for your vehicle on the KTM website.  
International KTM Website: <http://www.ktm.com>

## Work rules

Special tools are needed for certain tasks. They are not included with the vehicle but can be ordered under the number in parentheses. E.g.: bearing puller (15112017000)

When the vehicle is assembled, non-reusable parts (e.g., self-locking screws and nuts, gaskets, seal rings, O-rings, splints, lock washers) must be replaced with new parts.

Where thread lockers are used on screw connections (e.g., **Loctite**®), follow the instructions for use from the manufacturer.

After disassembly, clean the parts that are to be reused and check them for damage and wear. Replace damaged or worn parts.

After you complete the repair or maintenance work, check the roadworthiness of the vehicle.

## Transport

### Note

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

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

### Note

**Fire hazard** Some vehicle components become very hot when the vehicle is operated.

- Do not park the vehicle near flammable or explosive substances. Do not place objects on the vehicle while it is still warm from being run. Always let the vehicle cool first.

- Switch off the engine.
- Turn handle ❶ of the fuel tap to the **OFF** position.
- Use straps or other suitable devices to secure the motorcycle against accidents or falling over.

## Environment

Motorcycling is a wonderful sport and we naturally hope that you can enjoy it to the full. 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/warnings.



### 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 potential hazards 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 information and tips that will assist you in operating and handling your motorcycle properly. Only then will you learn how to adjust the motorcycle to your own requirements and how to 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.

## View of the vehicle from the left front (example)



B00077-10

- |   |                      |
|---|----------------------|
| 1 | Hand brake lever     |
| 2 | Short circuit button |
| 3 | Clutch lever         |
| 4 | Air filter box lid   |
| 5 | Fuel tap             |
| 6 | Shift lever          |
| 7 | Chain guide          |
| 8 | Side stand           |

## View of the vehicle from the right rear (example)



B00076-10

- |   |                                    |
|---|------------------------------------|
| 1 | Shock absorber rebound adjustment  |
| 2 | Level viewer for brake fluid, rear |
| 3 | Foot brake lever                   |
| 4 | Kickstarter                        |
| 5 | Bleeder screw, fork leg            |
| 6 | Throttle grip                      |
| 7 | Chassis number                     |
| 8 | Filler cap                         |

## Chassis number



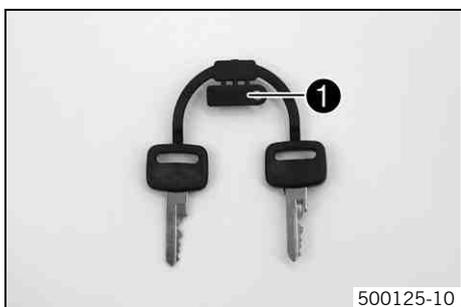
The chassis number ❶ is stamped on the right side of the steering head.

## Type label



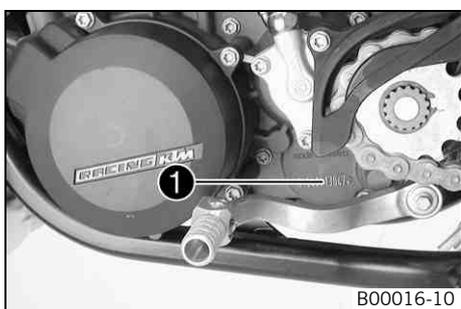
The type label ❶ is fixed to the front of the steering head.

## Key number



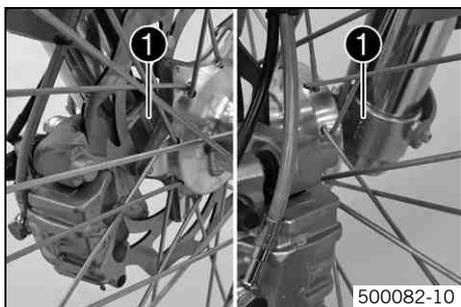
The key number ❶ is stamped on the key strap.

## Engine number



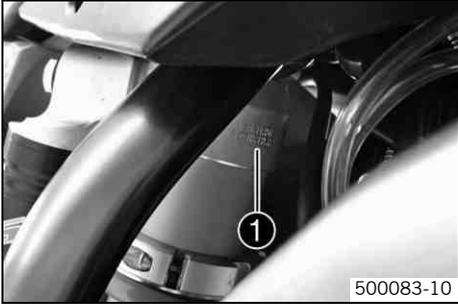
The engine number ❶ is stamped on the left side of the engine under the engine sprocket.

## Fork part number



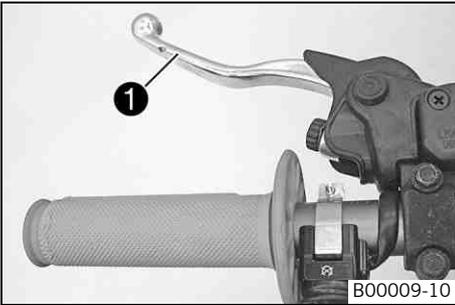
The fork part number ❶ is stamped on the inner side of the fork stub.

## Shock absorber part number



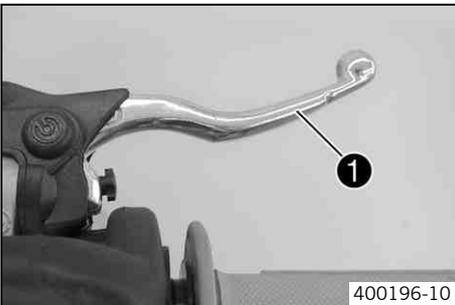
The shock absorber part number ❶ is stamped on the top of the shock absorber above the adjusting ring on the engine side.

## Clutch lever



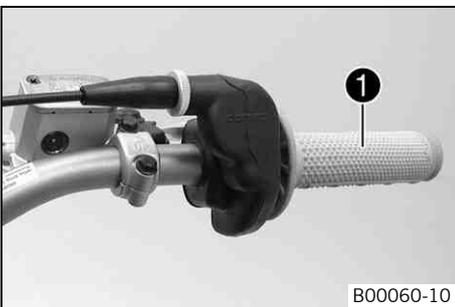
The clutch lever ❶ is fitted on the left side of the handlebar. The clutch is hydraulically operated and self-adjusting.

## Hand brake lever



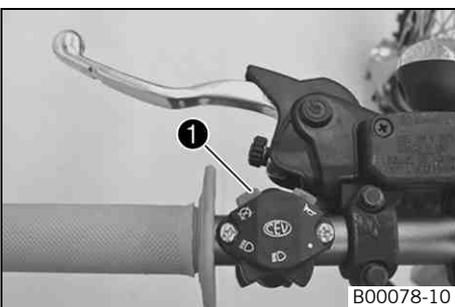
Hand brake lever ❶ is located on the right side of the handlebar. The hand brake lever is used to activate the front brake.

## Throttle grip



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

## Short circuit button

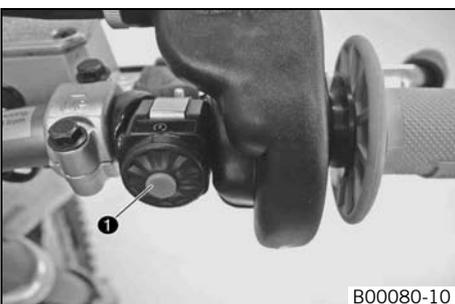


Short circuit button ❶ is fitted on the left side of the handlebar.

### Possible states

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

## Electric starter button

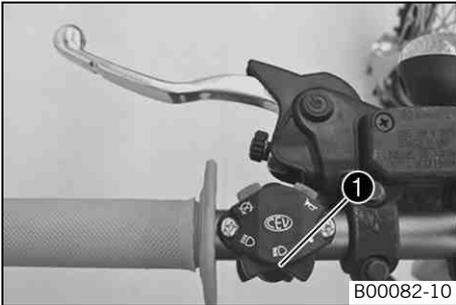


The electric starter button ❶ is fitted on the right side of the handlebar.

### Possible states

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

## Light switch

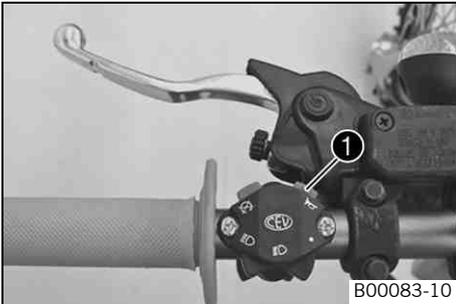


The light switch ❶ is fitted on the left side of the handlebar.

### Possible states

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

## Horn button

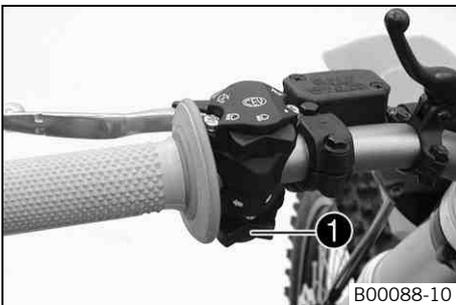


The horn button ❶ is fitted on the left side of the handlebar.

### Possible states

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

## Turn signal switch



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

### Possible states

◀	Turn signal off – The turn signal switch is in the central position.
	Left turn signal, on – The turn signal switch is turned to the left.
	Right turn signal, on – The turn signal switch is turned to the right.

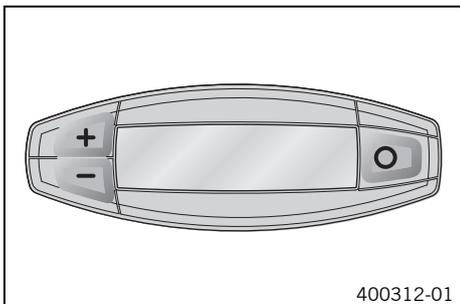
## Overview of indicator lamps



### Possible states

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

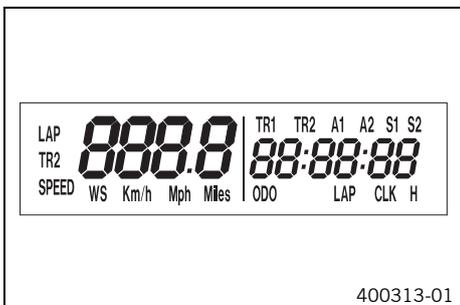
## Speedometer



- Press the key to change the display mode or change to one of the Setup menus.
- Press the key to control different functions.
- Press the key to control different functions.

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

## Speedometer activation and test



**Activating the speedometer:**  
The speedometer is activated when one of the keys is pressed or a signal is received 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.

**i 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

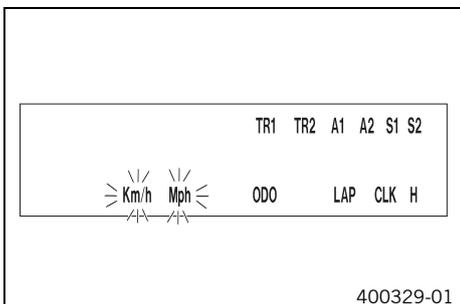
### (Option: Tripmaster switch)

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

**i Info**  
The trip master is an optional accessory.

## Setting kilometers or miles

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



### Condition

The motorcycle is stationary.

- 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

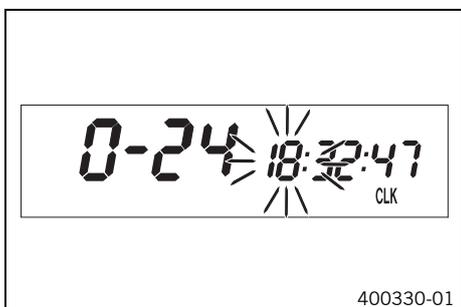
- Press the button .

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

**i 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 stationary.

- 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 .

**i Info**

The seconds can only be set to zero.

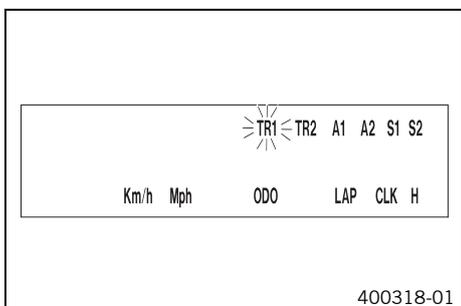
- Press the button  for 3 - 5 seconds.
- ✓ The settings are saved and the Setup menu closed.

**i 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

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



**Condition**

The motorcycle is stationary.

- 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 is displayed and the activated functions are shown.
- Change to the desired function by pressing the button  briefly.
- ✓ The selected function flashes.

**Activating a function**

- Press the button .
- ✓ The symbol remains on the screen and the display changes to the next function.

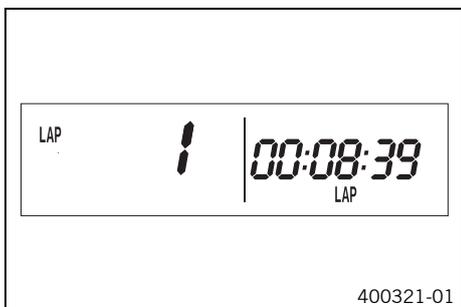
**Deactivating the function**

- Press the button .
- ✓ The symbol on the screen goes out and the display changes to the next function.
- All desired functions are activated or deactivated accordingly.
- Press the button  for 3 - 5 seconds.
- ✓ The settings are stored and the Setup menu is closed.

**i Info**  
If no button is pressed for 20 seconds, or if a pulse arrives from the wheel speed sensor, the settings are stored automatically and the Setup menu is closed.

**Querying the lap time**

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



**Condition**

The motorcycle is stationary.

- Press the button  briefly and repeatedly until **LAP** appears at the bottom right of the display.
- Press the button  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  briefly.
- ✓ Next display mode

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

**Display mode SPEED (speed)**

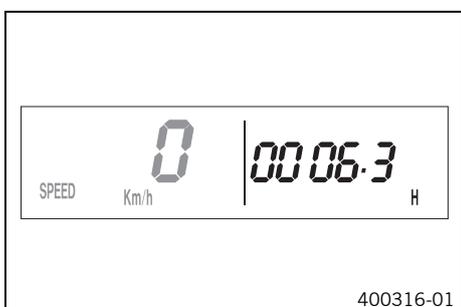


- Press the button  briefly and repeatedly until **SPEED** appears on the left side of the display.

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

**i Info**  
Make the country-specific settings. 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 stationary
- 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.

**i 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.

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

## Display mode SPEED/ODO (odometer)

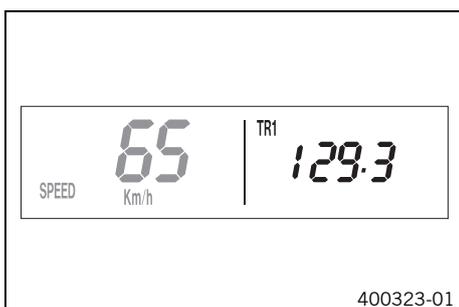


- Press the button briefly and repeatedly until **ODO** appears at the bottom right of the display.

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  for 3 - 5 seconds.	–
Press the button  briefly.	Next display mode

## Display mode SPEED/TR1 (trip master 1)



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

**TR1** (trip master 1) runs constantly and counts to 999.9.

You can use it to measure trips or the distance between refueling stops.

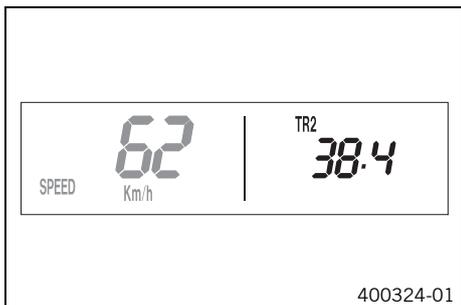
**TR1** is coupled with **A1** (average speed 1) and **S1** (stop watch 1).

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

Press the button .	No function
Press the button .	No function
Press the button  for 3 - 5 seconds.	The <b>TR1</b> , <b>A1</b> and <b>S1</b> displays are reset to 0.0.

Press the button  briefly.	Next display mode
---	-------------------

## Display mode SPEED/TR2 (trip master 2)



- Press the button  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 <b>TR2</b> .
Press the button  .	Reduces value of <b>TR2</b> .
Press the button  for 3 - 5 seconds.	Deletes value of <b>TR2</b> .
Press the button  briefly.	Next display mode

## Display 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 on the basis of **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.	The <b>TR1</b> , <b>A1</b> and <b>S1</b> displays 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 <b>TR1</b> , <b>A1</b> and <b>S1</b> 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 <b>S2</b> .
Press the button .	No function
Press the button  for 3 - 5 seconds.	Displays of <b>S2</b> and <b>A2</b> are reset to 0.0.
Press the button  briefly.	Next display mode

### Table of functions

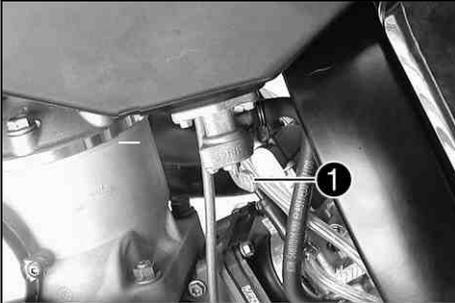
Display	Press the button .	Press the button .	Press the button  for 3 - 5 seconds.	Press the button  briefly.
Display mode <b>SPEED/H</b> (service hours)	No function	No function	The display changes to the Setup menu of the speedometer functions.	Next display mode
Display mode <b>SPEED/CLK</b> (clock)	No function	No function	The display changes to the Setup menu of the clock.	Next display mode
Display mode <b>SPEED/LAP</b> (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 <b>SPEED/ODO</b> (odometer)	No function	No function	–	Next display mode
Display mode <b>SPEED/TR1</b> (trip master 1)	No function	No function	The <b>TR1</b> , <b>A1</b> and <b>S1</b> displays are reset to 0.0.	Next display mode
Display mode <b>SPEED/TR2</b> (trip master 2)	Increases value of <b>TR2</b> .	Reduces value of <b>TR2</b> .	Deletes value of <b>TR2</b> .	Next display mode
Display mode <b>SPEED/A1</b> (average speed 1)	No function	No function	The <b>TR1</b> , <b>A1</b> and <b>S1</b> displays are reset to 0.0.	Next display mode
Display mode <b>SPEED/A2</b> (average speed 2)	No function	No function	–	Next display mode
Display mode <b>SPEED/S1</b> (stop watch 1)	No function	No function	Displays of <b>TR1</b> , <b>A1</b> and <b>S1</b> are reset to 0.0.	Next display mode
Display mode <b>SPEED/S2</b> (stop watch 2)	Starts or stops <b>S2</b> .	No function	Displays of <b>S2</b> and <b>A2</b> are reset to 0.0.	Next display mode

### Table of conditions and menu activation

Display	The motorcycle is stationary	Menu can be activated
Display mode <b>SPEED/H</b> (service hours)	•	

Table of conditions and menu activation		
Display	The motorcycle is stationary	Menu can be activated
Display mode <b>SPEED/CLK</b> (clock)		•
Display mode <b>SPEED/LAP</b> (lap time)		•
Display mode <b>SPEED/TR1</b> (trip master 1)		•
Display mode <b>SPEED/TR2</b> (trip master 2)		•
Display mode <b>SPEED/A1</b> (average speed 1)		•
Display mode <b>SPEED/A2</b> (average speed 2)		•
Display mode <b>SPEED/S1</b> (stop watch 1)		•
Display mode <b>SPEED/S2</b> (stop watch 2)		•

## Fuel tap

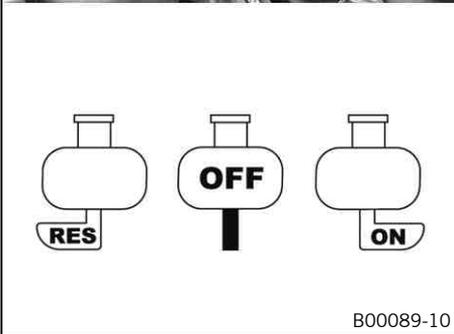


The fuel tap is on the left side of the fuel tank.

Tap handle ❶ on the fuel tap is used to open or close the supply of fuel to the carburetor.

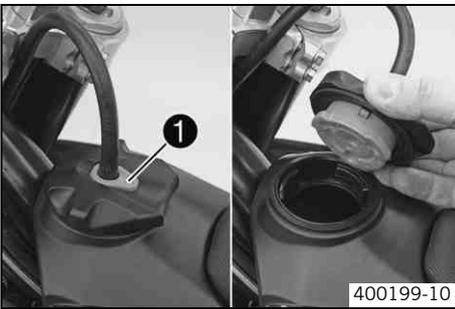
### Possible states

- Fuel supply closed **OFF** – No fuel can flow from the tank to the carburetor.
- Fuel supply open **ON** – Fuel can flow from the tank to the carburetor. The fuel tank empties down to the reserve.
- Reserve fuel supply open **RES** – Fuel can flow from the tank to the carburetor. The fuel tank empties completely.



B00089-10

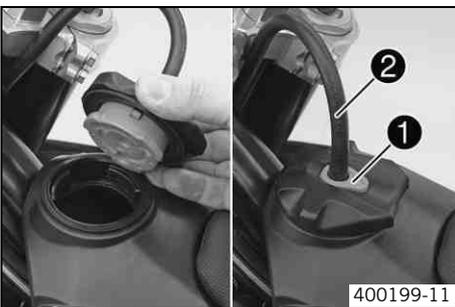
## Opening the filler cap



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

400199-10

## Closing the filler cap



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

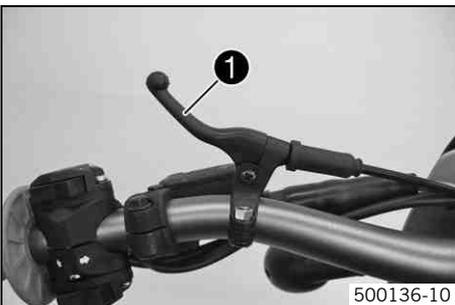


### Info

Run the fuel tank breather hose ❷ without kinks.

400199-11

## Choke



The choke lever ❶ is fitted on the left side of the handlebar.

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

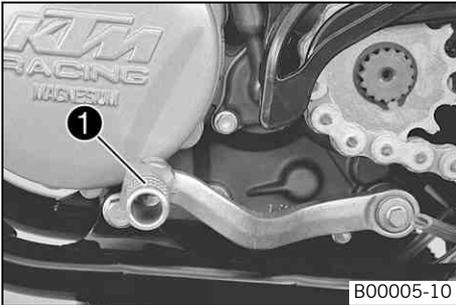
If the engine is warm, the choke function must be deactivated.

### Possible states

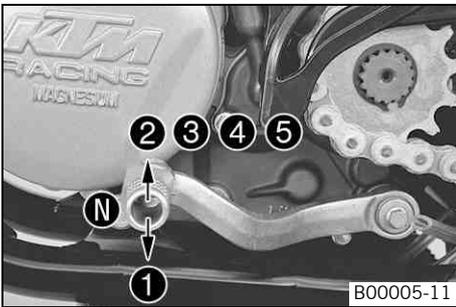
- Choke function activated – The choke lever is pulled to the stop.
- Choke function deactivated – The choke lever is pushed back to the stop.

500136-10

## Shift lever

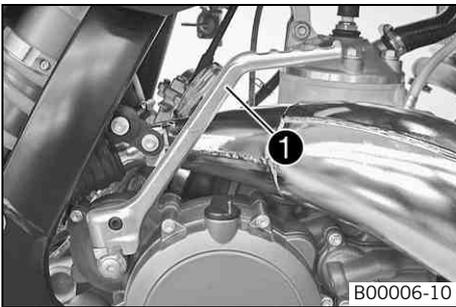


Shift lever ❶ is mounted on the left side of the engine.



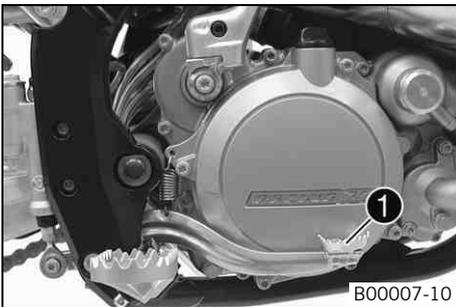
The gear positions can be seen in the photograph. The neutral or idle position is between the first and second gears.

## Kickstarter



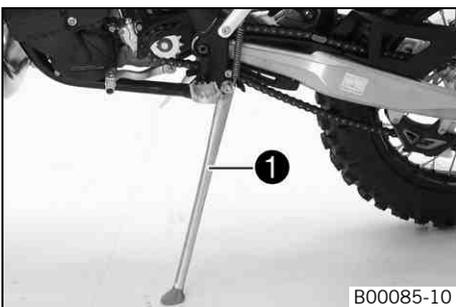
The kickstarter ❶ is fitted on the right side of the engine. The top part can be swiveled.

## Foot brake lever



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

## Side stand



**Note**

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

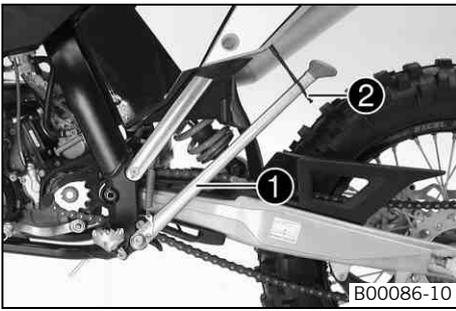
- Always place the vehicle on a firm and even surface.

**Note**

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

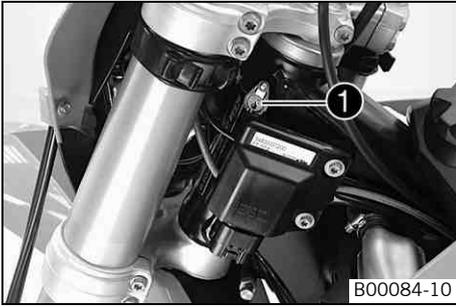
- The side stand is designed for the weight of the motorcycle only. Do not sit on the motorcycle when it is supported by the side stand only. The side stand and/or the frame could be damaged and the motorcycle could fall over.

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



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

## Steering lock



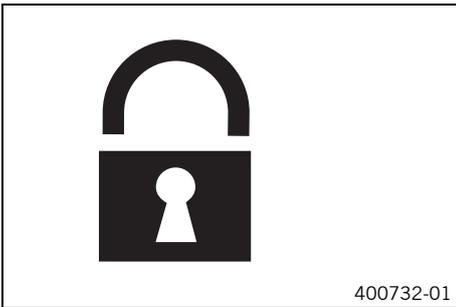
Steering lock ❶ is fitted on the left side of the steering head. The steering lock is used to lock the steering. Steering, and therefore riding, is no longer possible.

## Locking the steering

### Note

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

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



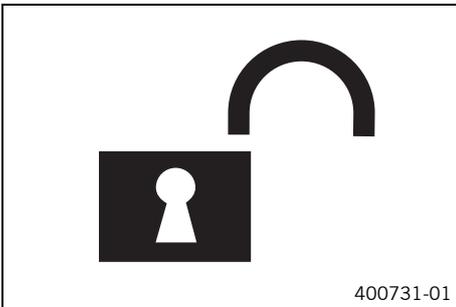
- Park the vehicle.
- Turn the handlebar as far as possible to the right.
- Insert the key in the steering lock, turn it to the left, press it in and turn it to the right. Remove the key.
- ✓ Steering is no longer possible.



### 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.

## Advice on first use



### Danger

**Danger of accidents** Danger arising from the rider's judgement being impaired.

- Do not operate the vehicle while under the influence of alcohol, drugs and certain medications or physically or mentally impaired.



### Warning

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

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



### Warning

**Danger of crashing** Poor vehicle handling 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** Failure of brake system.

- If the foot brake lever is not released, the brake linings drag continuously. The rear brake may fail due to overheating. Take your foot off the foot brake lever when you are not braking.



### Warning

**Danger of accidents** Unstable riding behavior.

- Do not exceed the maximum permissible 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 position of the clutch lever. (☞ p. 73)
- Adjust the free travel of the hand brake lever. (☞ p. 50)
- Adjust the basic position of the foot brake lever. ☞ (☞ p. 53)
- Adjust the basic position of the shift lever. ☞ (☞ p. 74)
- 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.

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

- Check the spoke tension. (☛ p. 60)

**i Info**

The spoke tension must be checked after riding the motorcycle for one half hour.

- Run the engine in.

## Running in the engine

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

Guideline

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

- Avoid fully opening the throttle!

## Preparing the vehicle for difficult operating conditions

- The use of motorcycles under difficult operating conditions can lead to above-average wear of components such as the drive train or brakes. For this reason, it may be necessary to service or replace worn parts before the limit specified in the service schedule is reached.

**Difficult operating conditions are:**

- Riding on dry sand. (☛ p. 24)
- Riding on wet sand. (☛ p. 25)
- Riding on wet and muddy surfaces. (☛ p. 26)
- Riding at high temperatures and low speeds. (☛ p. 27)
- Riding at low temperatures and in snow. (☛ p. 27)

## Preparations for riding on dry sand



- Check the radiator cap.

Value on the radiator cap	1.8 bar (26 psi)
---------------------------	------------------

» If the displayed value does not equal the setpoint value:



**Warning**

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

- Do not remove the radiator cap, radiator hoses or other cooling system components when the engine is hot. Allow the engine and cooling system to cool down. In case of scalding, rinse immediately with lukewarm water.

- Change the radiator cap.

- Seal the air filter box. ☛

**i Tip**

Seal the air filter box at the edges to prevent dirt from entering.

- Clean the air filter. ☛ (☛ p. 72)

**i Info**

Check the air filter approx. every 30 minutes.



- Mount the dust cover for the air filter.

Dust cover for air filter (59006019000)



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



- Mount the dust cover for the air filter for sand.

Sand cover for air filter (59006022000)



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

- Adjust the carburetor jetting and setting.



**Info**  
Recommendations on the carburetor setting are available from your authorized KTM workshop.



- Clean the chain.

Chain cleaner (☞ p. 98)

- Mount the steel sprocket.



**Tip**  
Do not grease the chain.

- Clean the radiator fins.
- Carefully align bent radiator fins.

## Preparations for riding on wet sand



- Check the radiator cap.

Value on the radiator cap	1.8 bar (26 psi)
---------------------------	------------------

- » If the displayed value does not equal the setpoint value:



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

- Do not remove the radiator cap, radiator hoses or other cooling system components when the engine is hot. Allow the engine and cooling system to cool down. In case of scalding, rinse immediately with lukewarm water.

- Change the radiator cap.

- Seal the air filter box. ☞



**Tip**  
Seal the air filter box at the edges to prevent dirt from entering.

- Clean the air filter. ☞ (☞ p. 72)



**Info**  
Check the air filter approx. every 30 minutes.



- Mount the rain cover for the air filter.

Rain cover for air filter (59006021000)



**Info**

Read the **KTM PowerParts** installation instructions.

- Adjust the carburetor jetting and setting.



**Info**

Recommendations on the carburetor setting are available from your authorized KTM workshop.

- Clean the chain.

Chain cleaner (☛ p. 98)

- Mount the steel sprocket.



**Tip**

Do not grease the chain.

- Clean the radiator fins.
- Carefully align bent radiator fins.



## Preparations for riding on wet and muddy surfaces

- Seal the air filter box. ☛



**Tip**

Seal the air filter box at the edges to prevent dirt from entering.

- Clean the air filter. ☛ (☛ p. 72)



**Info**

Check the air filter approx. every 30 minutes.

- Mount the rain cover for the air filter.

Rain cover for air filter (59006021000)



**Info**

Follow the **KTM PowerParts** mounting instructions.

- Adjust the carburetor jetting and setting.



**Info**

The recommended carburetor tuning is available from your authorized KTM workshop.



- Mount the steel sprocket.
- Clean the motorcycle. (☛ p. 81)
- Carefully align bent radiator fins.



## Preparations for riding at high temperatures and low speeds



- Check the radiator cap.

Value on the radiator cap	1.8 bar (26 psi)
---------------------------	------------------

- » If the displayed value does not equal the setpoint value:



### Warning

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

- Do not remove the radiator cap, radiator hoses or other cooling system components when the engine is hot. Allow the engine and cooling system to cool down. In case of scalding, rinse immediately with lukewarm water.

- Change the radiator cap.

- Seal the air filter box. 🗑️



### Tip

Seal the air filter box at the edges to prevent dirt from entering.

- Clean the air filter. 🗑️ (👉 p. 72)



### Info

Check the air filter approx. every 30 minutes.

- Adjust the secondary ratio to the terrain.



### Info

The engine oil heats up rapidly if the clutch needs to be operated too frequently because the secondary ratio is too long.

- Clean the chain.

Chain cleaner (👉 p. 98)
-------------------------

- Clean the radiator fins.
- Carefully align bent radiator fins.
- Check the coolant level. (👉 p. 68)



## Preparations for riding at low temperatures and in snow

- Seal the air filter box. 🗑️



### Tip

Seal the air filter box at the edges to prevent dirt from entering.

- Clean the air filter. 🗑️ (👉 p. 72)



### Info

Check the air filter approx. every 30 minutes.

- Mount the rain cover for the air filter.

Rain cover for air filter (59006021000)
---



### Info

Follow the **KTM PowerParts** mounting instructions.

- Adjust the carburetor jetting and setting.



### Info

The recommended carburetor tuning is available from your authorized KTM workshop.



## Checks before putting into operation



### Info

Make sure that the motorcycle is in a perfect technical condition before use.  
In the interests of riding safety, make a habit of making a general check before you ride.

- Check the gear oil level. (☛ p. 76)
- Check the fuel supply.
- Check the chain tension. (☛ p. 47)
- Check the chain for dirt. (☛ p. 46)
- Check the tire condition. (☛ p. 60)
- Check the tire air pressure. (☛ p. 60)
- Check the front brake fluid level. (☛ p. 50)
- Check the rear brake fluid level. (☛ p. 54)
- Check the front brake linings. (☛ p. 51)
- Check the rear brake linings. (☛ p. 55)
- Check that the brake system is functioning properly.
- Check the coolant level. (☛ p. 68)
- Check the settings of all controls and ensure that they can be operated smoothly.
- Check that the electrical equipment is functioning properly.

## Starting



### Danger

**Danger of poisoning** Exhaust gases are poisonous and inhaling them may 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 an enclosed 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.

### Engine has been out of use for more than one week

- Empty the carburetor float chamber. ☛ (☛ p. 76)
- Turn handle ❶ of the fuel tap to the **ON** position.
  - ✓ Fuel can flow from the fuel tank to the carburetor.
- Remove the motorcycle from the stand.
- Shift gear to neutral.

### The engine is cold

- Pull the choke lever to the stop.
- Press the electric starter button or press the kickstarter robustly through its full range.



### Info

Do not open the throttle.

## Starting up

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

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

## 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 lock up.

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

- 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.
- When you reach maximum speed after fully opening the throttle, turn back the throttle to about  $\frac{3}{4}$  of its range. This barely reduces vehicle speed but lowers fuel consumption considerably.
- Always open the throttle only as much as the engine can handle – abrupt throttle opening increases fuel consumption.
- To shift down, brake 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

$\geq 2 \text{ min}$
----------------------

- 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 efficiency caused by spongy pressure point of front or rear brake.

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

- ! Warning**  
**Danger of accidents** Reduced braking efficiency due to 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.

## 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 vehicle is in use.

- 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 may roll away or fall over.

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

### Note

**Fire hazard** Some vehicle components become very hot when the vehicle is operated.

- Do not park the vehicle near flammable or explosive substances. Do not place objects on the vehicle while it is still warm from being run. Always let the vehicle cool first.

### 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.

- Brake the motorcycle.
- Shift gear to neutral.
- Press and hold the short circuit button ☒ while the engine is idling until the engine stops.
- Turn handle ❶ of the fuel tap to the **OFF** position.
- Park the motorcycle on firm ground.

## Refueling



### Danger

**Fire hazard** Fuel is highly flammable.

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



### Warning

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

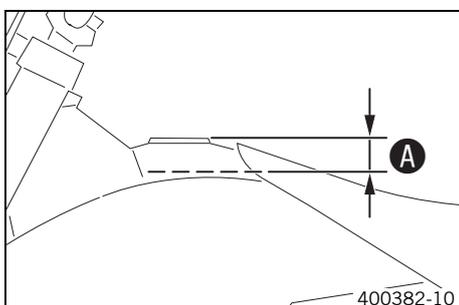
- Avoid contact of the fuel with skin, eyes and clothing. Do not inhale fuel vapors. If fuel gets into your eyes, rinse immediately with water and contact a doctor. Wash affected skin areas immediately with soap and water. If fuel is swallowed, contact a doctor immediately. Change clothing that has come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



### Warning

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

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



- Switch off the engine.
- Open the filler cap. (☛ p. 20)
- Fill the fuel tank with fuel up to measurement **A**.

#### Guideline

Measurement of <b>A</b>	35 mm (1.38 in)	
Total fuel tank capacity, approx.	9.5 l (2.51 US gal)	Super unleaded gasoline, mixed with 2-stroke engine oil (1:60) (☛ p. 97)

- Close the filler cap. (☛ p. 20)

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

		S10N	S20A	S40A
Engine	Check the gear oil level. (🔧 p. 76)		•	•
	Change the gear oil. 🛠️ (🔧 p. 77)	•		•
	Check spark plug and replace if required. 🛠️	•	•	•
	Clean the spark plug connectors and check for tightness. 🛠️		•	•
	Check that the screws in the shift lever and the kickstarter are tight.	•	•	•
	Check the engine mounting screws for tightness.	•	•	•
	Clean the bearing bush in the starter drive, check that it is seated firmly and grease it. 🛠️			•
	Check the starter drive for play. 🛠️			•
Carburetor	Check intake flange and carburetor connection boot for cracks and leakage.	•		•
	Check the idle.	•		•
	Check the vent hoses for damage and routing without sharp bends.	•		•
Attachments	Check the cooling system for leakage.	•		•
	Check the antifreeze and coolant level. (🔧 p. 67)	•		•
	Check the exhaust system for leakage and looseness.		•	•
	Check the throttle cables for damage, smooth operation and routing without sharp bends.	•	•	•
	Check the fluid level of the hydraulic clutch. (🔧 p. 73)	•	•	•
	Clean the air filter. 🛠️ (🔧 p. 72)	•	•	•
	Check the cables for damage and routing without sharp bends.	•		•
	Check that the electrical equipment is functioning properly.	•	•	•
	Check the headlight setting. (🔧 p. 64)	•	•	•
Brakes	Check the front brake linings. (🔧 p. 51)	•		•
	Check the rear brake linings. (🔧 p. 55)	•		•
	Check the brake discs. (🔧 p. 49)	•		•
	Check the front brake fluid level. (🔧 p. 50)	•	•	•
	Check the rear brake fluid level. (🔧 p. 54)	•	•	•
	Check the brake lines for damage and leakage.	•		•
	Check the free travel of the hand brake lever. (🔧 p. 49)	•	•	•
	Check the free travel of the foot brake lever. (🔧 p. 53)	•	•	•
	Check that the brake system is functioning properly.	•	•	•
	Check the screws and guide bolts of the brake system for tightness.	•	•	•
Chassis	Check the shock absorber and fork for leakage and functioning. 🛠️	•	•	•
	Clean the dust boots of the fork legs. (🔧 p. 40)	•	•	•
	Bleed the fork legs. (🔧 p. 40)	•	•	•
	Check the frame and swingarm for damage.	•		•
	Check the swingarm bearing.	•		•
	Check the play of the steering head bearing. (🔧 p. 41)	•		•
	Check all screws to see if they are tight.	•		•
Wheels	Check the spoke tension. (🔧 p. 60)	•	•	•
	Check the wheel hubs for damage.	•	•	•
	Check the rim run-out.	•	•	•
	Check the tire condition. (🔧 p. 60)	•	•	•
	Check the tire air pressure. (🔧 p. 60)	•	•	•
	Check chain wear. (🔧 p. 47)	•	•	•
	Check the chain tension. (🔧 p. 47)	•	•	•
	Clean the chain. (🔧 p. 46)	•	•	•
	Check the wheel bearing for play.	•		•
Clean and grease the adjusting screws of the chain adjuster.	•	•	•	

**S10N:** Once after 10 operating hours

**S20A:** Every 20 operating hours

**S40A:** Every 40 operating hours/after every race

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

	Competition use				Hobby use				J1A
	S10A	S20A	S40A	S80A	S20A	S40A	S60A	S80A	
Perform a fork service. 🛠️			•	•		•		•	
Perform a shock absorber service. 🛠️			•	•			•		
Grease the steering head bearing. 🛠️									•
Change the foot brake cylinder seals. 🛠️		•	•	•		•		•	
Change the glass fiber yarn filling of the main silencer. 🛠️ (🔧 p. 71)		•	•	•		•		•	
Change the hydraulic clutch fluid. 🛠️ (🔧 p. 73)									•
Change the front brake fluid.									•
Change the rear brake fluid.									•
Treat electric contacts with contact spray.									•
Check/set the carburetor components. 🛠️			•	•				•	
Check the intake diaphragm. 🛠️		•	•	•		•		•	
Check the clutch lining discs. 🛠️		•	•	•		•		•	
Check the length of the clutch springs. 🛠️		•	•	•		•		•	
Check the cylinder and piston. 🛠️		•	•	•		•		•	
Check the seating of the piston pin. 🛠️		•	•	•		•		•	
Check exhaust control for functioning and smooth operation, clean. 🛠️	•	•	•	•	•	•	•	•	
Change the crankshaft main bearing. 🛠️				•				•	
Change the conrod bearing. 🛠️			•	•				•	
Check the transmission. 🛠️			•	•				•	
Check the shift mechanism. 🛠️			•	•				•	

**S10A:** Every 10 operating hours

**S40A:** Every 40 operating hours

**S20A:** Every 20 operating hours

**S60A:** Every 60 operating hours

**S80A:** Every 80 operating hours

**J1A:** Annually

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

	NB1A
Check the gear oil level. (🔧 p. 76)	•
Check the front brake fluid level. (🔧 p. 50)	•
Check the rear brake fluid level. (🔧 p. 54)	•
Check the front brake linings. (🔧 p. 51)	•
Check the rear brake linings. (🔧 p. 55)	•
Check and adjust the cables.	•
Bleed the fork legs. (🔧 p. 40)	•
Clean the dust boots of the fork legs. (🔧 p. 40)	•
Clean the chain. (🔧 p. 46)	•
Check the chain tension. (🔧 p. 47)	•
Check chain wear. (🔧 p. 47)	•
Check the rear sprocket/engine sprocket for wear. (🔧 p. 47)	•
Clean the air filter. 🛠️ (🔧 p. 72)	•
Check the tire air pressure. (🔧 p. 60)	•
Check the tire condition. (🔧 p. 60)	•

	NB1A
Check the coolant level. (☞ p. 68)	•
Empty the carburetor float chamber. ☞ (☞ p. 76)	•
Check all controls for smooth operation.	•
Check braking.	•
Check all screws, nuts and hose clamps regularly for tightness.	•

**NB1A:** Depending on conditions of use according to requirements.

## Jacking up the motorcycle



### Note

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

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

- Jack up the motorcycle underneath the engine. 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 may 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 need 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

The shock absorber can separately regulate compression damping in the low- and high-speed ranges (Dual Compression Control). Here, low-speed and high-speed refer to the movement of the shock absorber during compression and not 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 high-speed compression damping of the shock absorber



### Danger

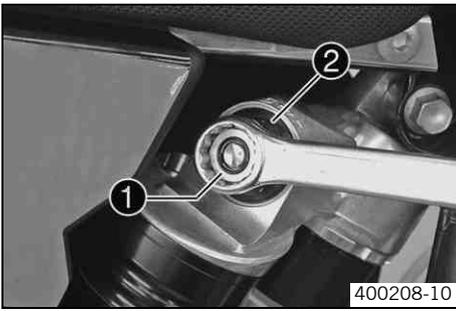
**Danger of accidents** Disassembly of pressurized parts can lead to injury.

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



### Info

The high-speed setting can be seen during the fast compression of the shock absorber.



- Turn adjusting screw ❶ all the way clockwise with a ring wrench.

**i Info**  
Do not loosen nut ❷!

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

**Guideline**

Compression damping, high-speed	
Comfort	2 turns
Standard	1.5 turns
Sport	1.25 turns

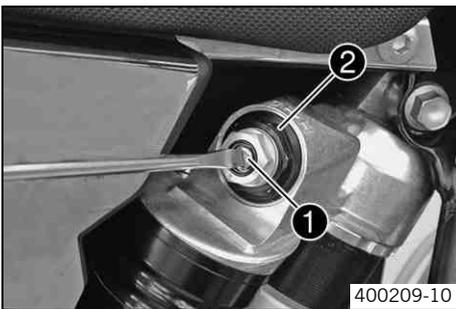
**i Info**  
Turn clockwise to increase damping; turn counterclockwise to reduce damping.

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

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

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

**i Info**  
The low-speed setting can be seen during the slow to normal compression of the shock absorber.



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

**i Info**  
Do not loosen nut ❷!

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

**Guideline**

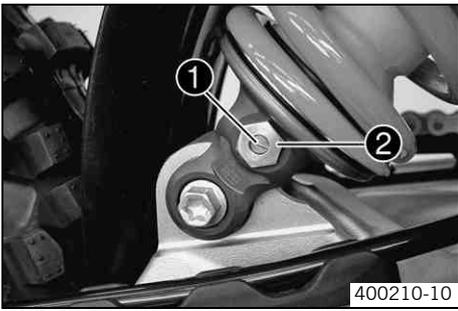
Compression damping, low-speed	
Comfort	22 clicks
Standard	20 clicks
Sport	15 clicks

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

## Adjusting the rebound damping of the shock absorber

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

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



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

**i Info**  
Do not loosen nut ❷!

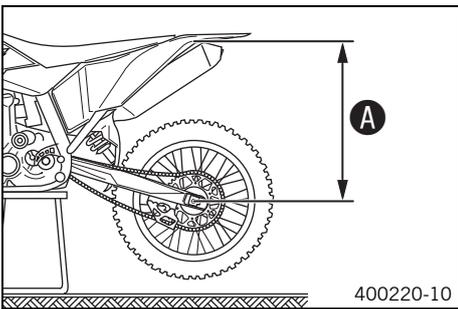
- Turn back counterclockwise by the number of clicks corresponding to the shock absorber type.

**Guideline**

Rebound damping	
Comfort	26 clicks
Standard	24 clicks
Sport	22 clicks

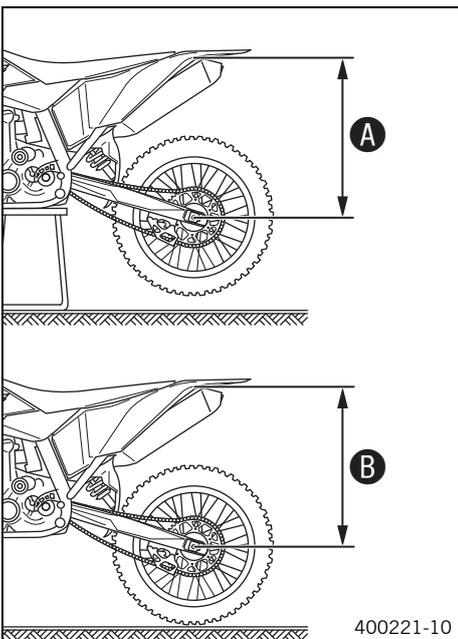
**i Info**  
Turn clockwise to increase damping; turn counterclockwise to reduce damping.

## Measuring the sag of the unloaded rear wheel



- Jack up the motorcycle. (☞ p. 34)
- 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 A.
- Remove the motorcycle from the work stand. (☞ p. 34)

## Checking the static sag of the shock absorber



- Measure distance A of the unloaded rear wheel. (☞ p. 36)
- 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 B.

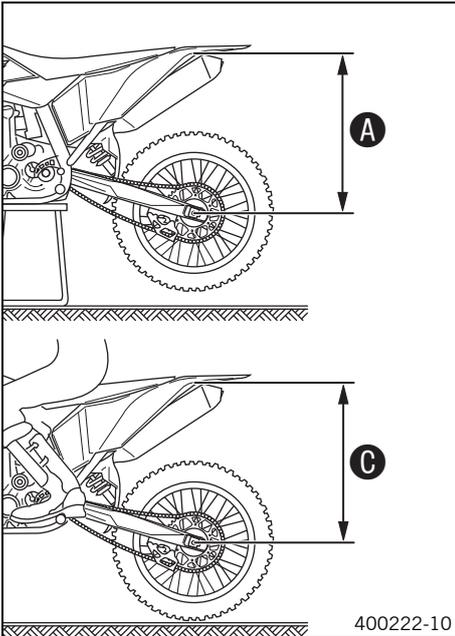
**i Info**  
The static sag is the difference between measurements A and B.

- Check the static sag.

Static sag	35 mm (1.38 in)
------------	-----------------

- » If the static sag is less or more than the specified value:
  - Adjust the spring preload of the shock absorber. ☞ (☞ p. 37)

## Checking the riding sag of the shock absorber



- Measure distance **A** of the unloaded rear wheel. (🔧 p. 36)
- With another person holding the motorcycle, the rider, wearing a full set of protective clothing, sits on the motorcycle in the normal sitting position (feet on the footrests) and bounces up and down a few times until the rear suspension levels out.
- The other person now measures the distance between the rear axle and the fixed point again.
- Make a note of the value as measurement **C**.

### **i** Info

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

- Check the riding sag.

#### Guideline

Riding sag	105 mm (4.13 in)
------------	------------------

- » If the riding sag differs from the specified measurement:
  - Adjust the riding sag. 🛠️ (🔧 p. 38)

## Adjusting the spring preload of the shock absorber 🛠️

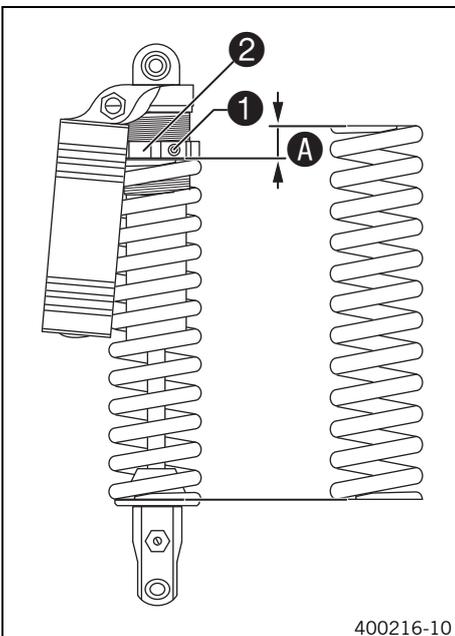
### **!** Danger

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

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

### **i** Info

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



- Remove the shock absorber. 🛠️ (🔧 p. 38)
- After removing the shock absorber, clean it thoroughly.
- Loosen screw **1**.
- Turn adjusting ring **2** 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 **2** to measurement **A**.

#### Guideline

Spring preload	8 mm (0.31 in)
----------------	----------------

### **i** Info

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

- Tighten screw **1**.

#### Guideline

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

- Install the shock absorber. 🛠️ (🔧 p. 38)

## Adjusting the riding sag 🛠️

- Remove the shock absorber. 🛠️ (👉 p. 38)
- After removing the shock absorber, clean it thoroughly.
- Choose and mount a suitable spring.

Guideline

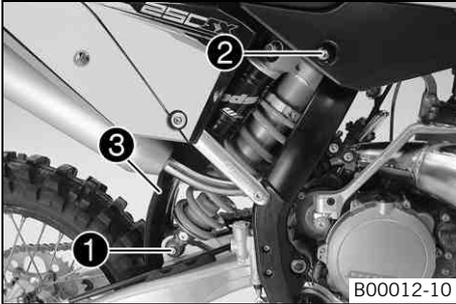
Spring rate	
Weight of rider: 65... 75 kg (143... 165 lb.)	66 N/mm (377 lb/in)
Weight of rider: 75... 85 kg (165... 187 lb.)	69 N/mm (394 lb/in)
Weight of rider: 85... 95 kg (187... 209 lb.)	72 N/mm (411 lb/in)

### **i** Info

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

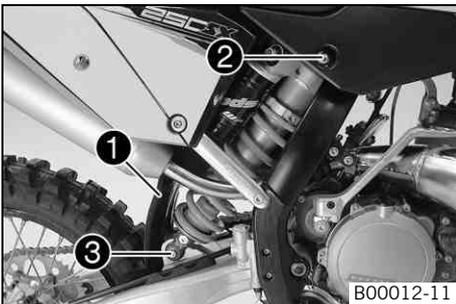
- Install the shock absorber. 🛠️ (👉 p. 38)
- Check the static sag of the shock absorber. (👉 p. 36)
- Check the riding sag of the shock absorber. (👉 p. 37)
- Adjust the rebound damping of the shock absorber. (👉 p. 35)

## Removing the shock absorber 🛠️



- Jack up the motorcycle. (👉 p. 34)
- Remove screw ❶ and lower the rear wheel with the swing arm as far as possible without blocking the rear wheel. Fix the rear wheel in this position.
- Remove screw ❷, push splash protector ❸ to the side, and remove the shock absorber.

## Installing the shock absorber 🛠️



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

Guideline

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

- Mount and tighten screw ❸.

Guideline

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

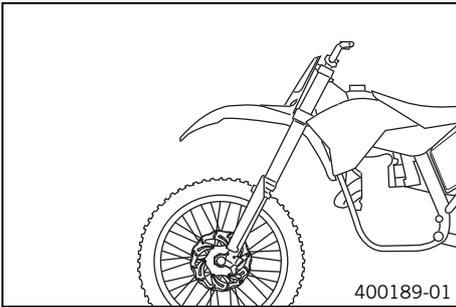
### **i** Info

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

- Remove the motorcycle from the work stand. (👉 p. 34)

## Checking the basic setting of the fork

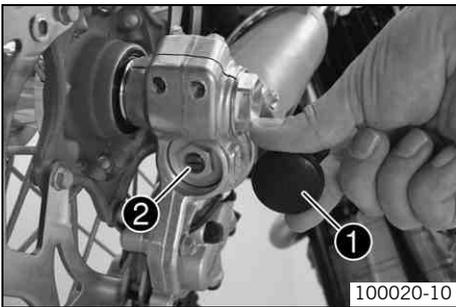
**i Info**  
For various reasons, no exact riding sag can be determined for the forks.



- As with the shock absorber, smaller weight differences can be compensated by the spring preload.
- However, if your fork often bottoms out (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

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



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

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

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

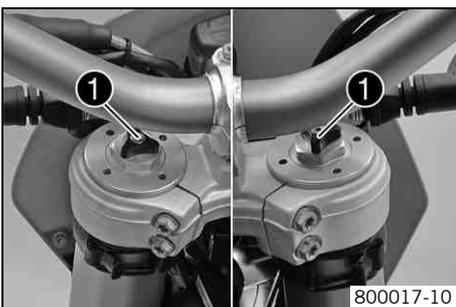
Compression damping	
Comfort	26 clicks
Standard	22 clicks
Sport	18 clicks

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

- Mount protection covers ❶.

## Adjusting the rebound damping of the fork

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



- Turn adjusting screws ❶ clockwise all the way.

**i 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 by the number of clicks corresponding to the fork type. Guideline

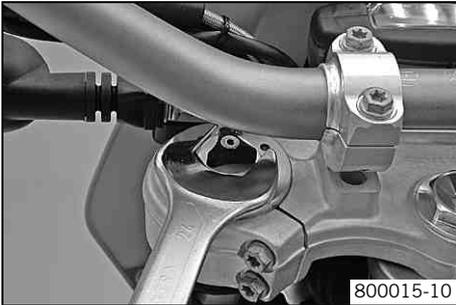
Rebound damping	
Comfort	24 clicks
Standard	20 clicks
Sport	20 clicks



**Info**

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

## Adjusting the spring preload of the fork



- Turn the adjusting screws counterclockwise all the way.



**Info**

Make the same adjustment on both fork legs.

- Turn back clockwise by the number of turns corresponding to the fork type.

**Guideline**

Spring preload - Preload Adjuster	
Comfort	0 turn
Standard	2 turns
Sport	4 turns



**Info**

Turn clockwise to increase spring preload; turn counterclockwise to reduce spring preload.

Adjusting the spring preload has no influence on the absorption setting of the rebound damping.

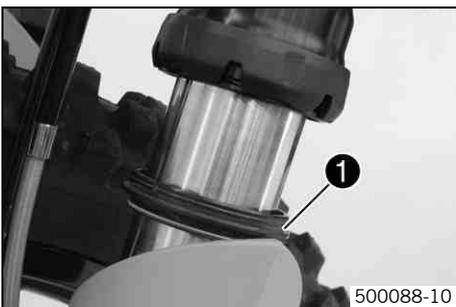
Basically, however, you should set the rebound damping higher with a higher spring preload.

## Bleeding the fork legs



- Jack up the motorcycle. (☛ p. 34)
- 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. 34)

## Cleaning the dust boots of the fork legs



- Jack up the motorcycle. (☛ p. 34)
- Loosen the fork protection. (☛ p. 41)
- 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 efficiency due to oil or grease on the brake discs.

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

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

Universal oil spray (☛ p. 99)

- Press the dust boots back into their normal position.

- Remove excess oil.
- Position the fork protection. (☛ p. 41)
- Remove the motorcycle from the work stand. (☛ p. 34)

## Loosening the fork protection



- Remove screws ❶ and take off the clamp.
- Remove screws ❷ on the left fork leg. Push the fork protection downwards.
- Remove the screws on the right fork leg. Push the fork protection downwards.

## Positioning the fork protection



- Position the fork protection on the left fork leg. Mount and tighten screws ❶.

Guideline

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

- Position the brake line. Position the clamp and mount and tighten screws ❷.
- Position the fork protection on the right fork leg. Mount and tighten the screws.

Guideline

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

## Checking the play of the steering head bearing



### Warning

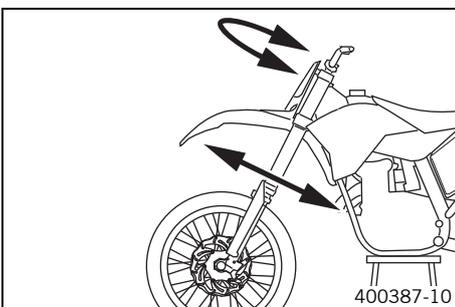
**Danger of accidents** Unstable vehicle handling from incorrect steering head bearing play.

- Adjust the steering head bearing play without delay. (Your authorized KTM workshop will be glad to help.)



### Info

If the bike is ridden for a lengthy period 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. 34)
- Move the handlebar to the straight-ahead position. Move the fork legs to and fro in the direction of travel.

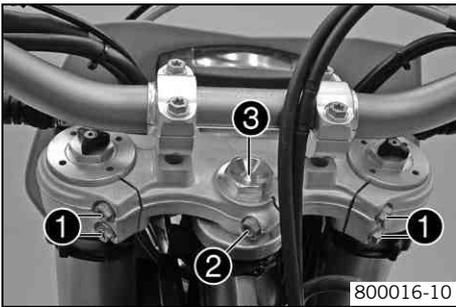
No play should be noticeable in the steering head bearing.

- » If there is noticeable play present:
  - Adjust the play of the steering head bearing. ☛ (☛ p. 42)
- Move the handlebar to and fro over the entire steering range.

The handlebar must be able to move easily over the entire steering range. There should be no perceptible detent positions.

- » If detent positions are noticeable:
  - Adjust the play of the steering head bearing. ☛ (☛ p. 42)
  - Check the steering head bearing and replace if required.
- Remove the motorcycle from the work stand. (☛ p. 34)

## Adjusting the play of the steering head bearing



- Jack up the motorcycle. (☛ p. 34)
- Loosen screws ❶ and ❷.
- Loosen and retighten screw ❸.

Guideline

Screw, top steering head	M20x1.5	10 Nm (7.4 lbf ft)
--------------------------	---------	--------------------

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

Guideline

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

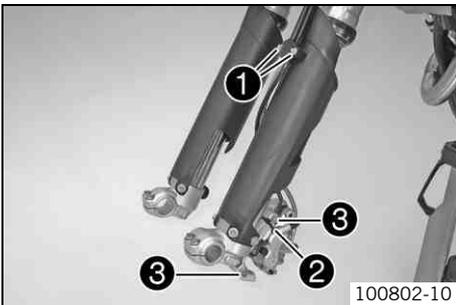
- Tighten screw ❷.

Guideline

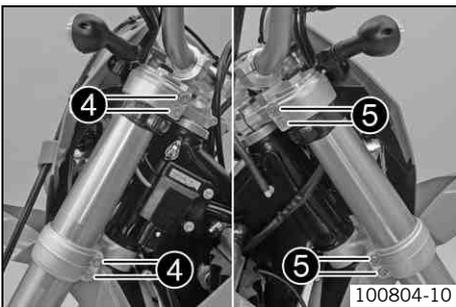
Screw, top steering stem	M8	20 Nm (14.8 lbf ft)
--------------------------	----	---------------------

- Check the play of the steering head bearing. (☛ p. 41)

## Removing the fork legs



- Remove the front wheel. (☛ p. 57)
- Remove screws ❶ and take off the clamp.
- Remove cable binder ❷.
- Remove screws ❸ and take off the brake caliper.
- Hang the brake caliper and the brake line loosely to the side.



- Loosen screws ❹. Remove the fork leg on the left.
- Loosen screws ❺. Remove the fork leg on the right.

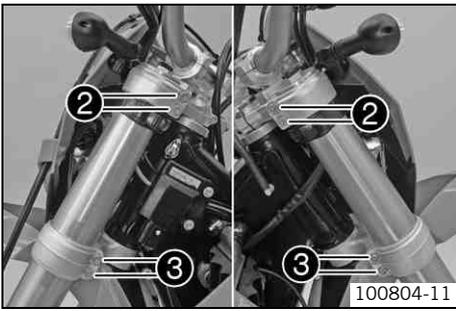
## Installing the fork legs



- Position the fork legs.

**i** Info

The topmost sunk nut in the fork leg must be flush to the upper edge of the upper triple clamp.  
Position bleeder screws ❶ toward the front.



- Tighten screws ②.

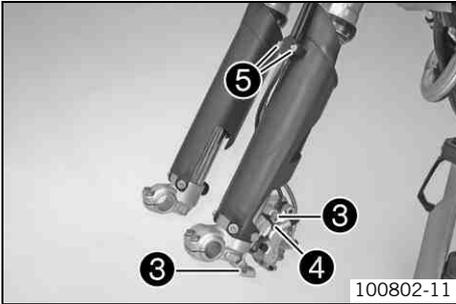
Guideline

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

- Tighten screws ③.

Guideline

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



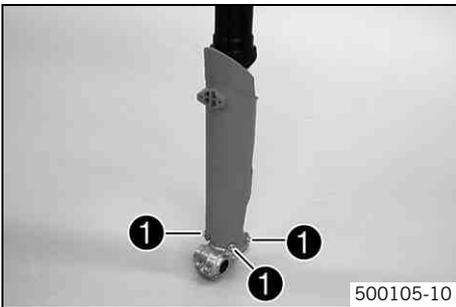
- Position the brake caliper and mount and tighten screws ③.

Guideline

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

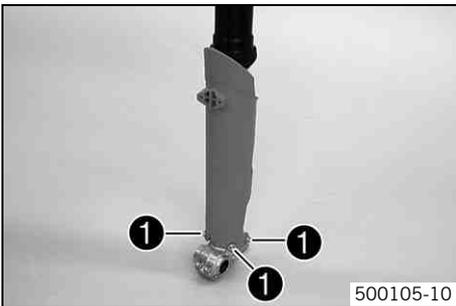
- Mount cable binder ④.
- Position the brake line and wiring harness. Put on the clamp and mount and tighten screws ⑤.
- Install the front wheel. 🛠️ (📄 p. 58)

## Removing the fork protector 🛠️



- Remove the fork legs. 🛠️ (📄 p. 42)
- Remove screws ① on the left fork leg. Lift off the fork protector.
- Remove the screws on the right fork leg. Lift off the fork protector.

## Installing the fork protector 🛠️



- Position the fork protection on the left fork leg. Mount and tighten screws ①.

Guideline

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

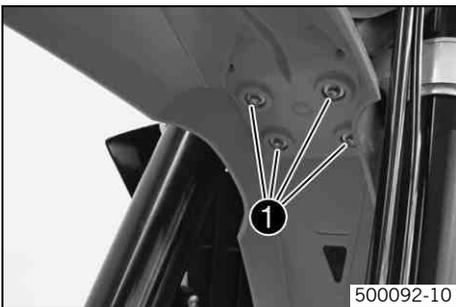
- Position the fork protection on the right fork leg. Mount and tighten the screws.

Guideline

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

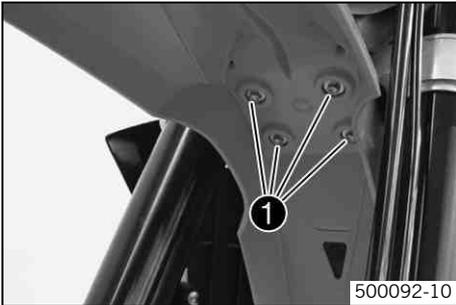
- Install the fork legs. 🛠️ (📄 p. 42)

## Removing the front fender 🛠️



- Remove screws ①. Remove the front fender.
- Make sure the spacers remain in place.

## Installing the front fender



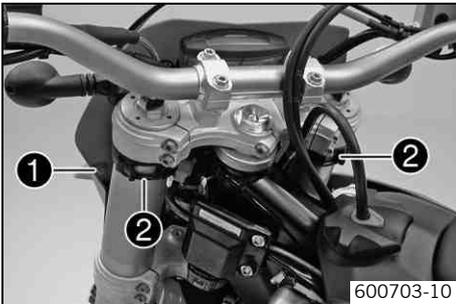
- Ensure that the spacers are mounted in the fender.
- Position the front fender. Mount and tighten screws ❶.

### Guideline

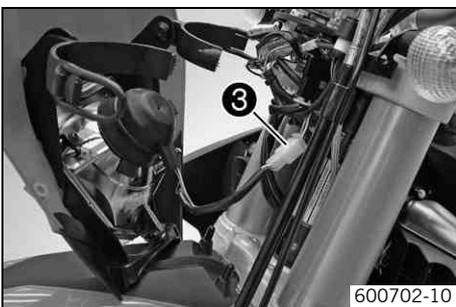
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)
---------------------------	----	--------------------

**i Info**  
Make sure the holding lugs engage in the start number plate.

## Removing the headlight mask with the headlight

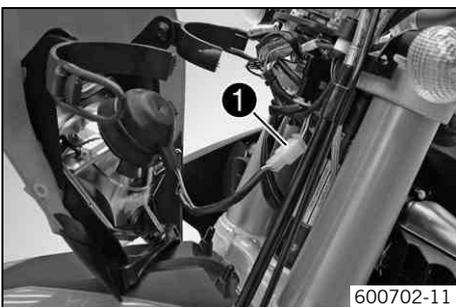


- Switch off all power consumers.
- Remove screw ❶ and take off the clamp.
- Release rubber band ❷. Slide the headlight mask up and swing it forward.

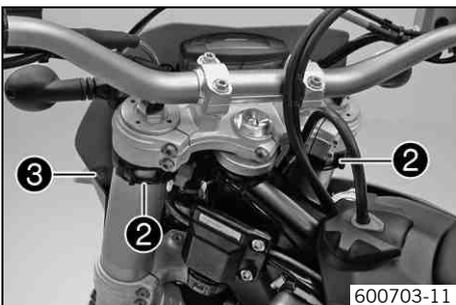


- Disconnect the electrical plug-in connection ❸ and take off the headlight mask with the headlight.

## Refitting the headlight mask with the headlight



- Connect the electric plug connector ❶.

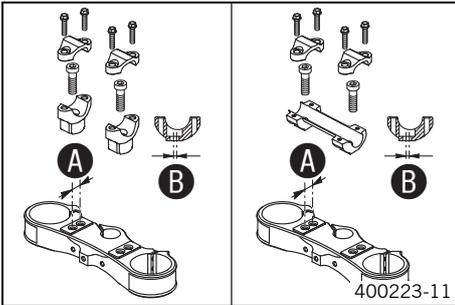


- Position the headlight mask and fix it with the rubber band ❷.

**i Info**  
Ensure that the holding lugs engage in the fender.

- Position the brake line and wiring harness. Put on the clamp and mount and tighten screw ❸.
- Check the headlight setting. (☛ p. 64)

## Handlebar position



On the upper triple clamp, there are two holes a distance of **A** apart.

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

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

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

The handlebar can be mounted in four different positions. In this way, the handlebar can be mounted in the position that is most comfortable for the rider.

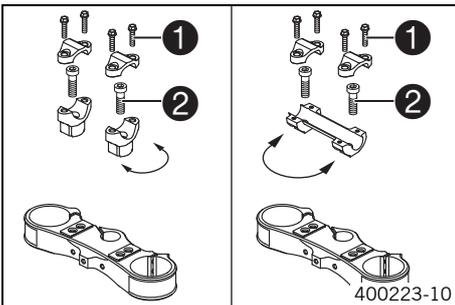
## Adjusting the handlebar position



### Warning

**Danger of accidents** Handlebar breakage.

- If the handlebar is bent or straightened it will cause material fatigue, and the handlebar can break. Always replace handlebar.



- Remove the four screws **1**. Remove the handlebar clamp. Remove the handlebar and lay it to one side.



### Info

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

- Remove the two screws **2**. Remove the handlebar support.
- Place the handlebar support in the required position. Mount and tighten the two screws **2**.

### Guideline

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



### Info

Position the left and right handlebar supports evenly.

- Position the handlebar.



### Info

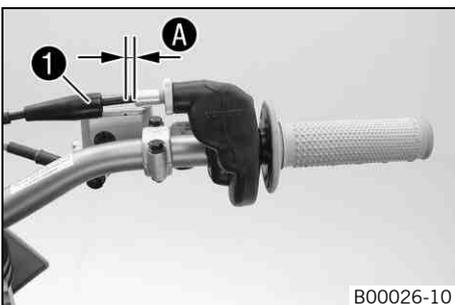
Make sure cables and wiring are positioned correctly.

- Position the handlebar clamp. Mount and evenly tighten the four screws **1**.

### Guideline

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

## Checking the play in the throttle cable



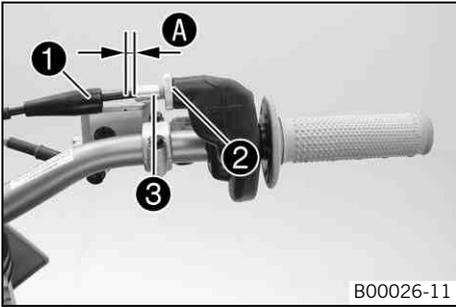
- Move the handlebar to the straight-ahead position.
- Push back bellows **1**.
- Pull back the throttle cable casing until you sense a resistance.
- Now check throttle cable play **A**.

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

» If the throttle cable play does not meet specifications:

- Adjust the play in the throttle cable. (p. 46)
- Push on bellows **1**. Check the throttle grip for smooth operation.

## Adjusting the play in the throttle cable



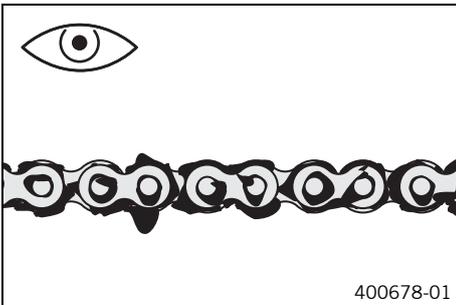
- Move the handlebar to the straight-ahead position.
- Push back bellows ①.
- Loosen nut ②. Turn adjusting screw ③ in as far as possible.
- Turn the adjusting screw so that there is play ④ at the outer casing of the throttle cable.

Guideline

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

- Tighten the nut.
- Push on bellows ①. Check the throttle grip for smooth operation.

## Checking the chain for dirt



- Check the chain for heavy soiling.
  - » If the chain is very dirty:
    - Clean the chain. (☛ p. 46)

## Cleaning the chain



### Warning

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

- Remove oil and grease with a suitable cleaning material.



### Warning

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

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



### Warning

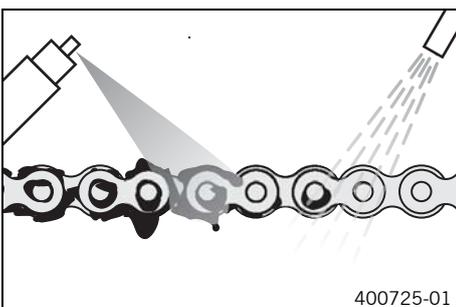
**Environmental hazard** Hazardous substances cause environmental damage.

- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.



### Info

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



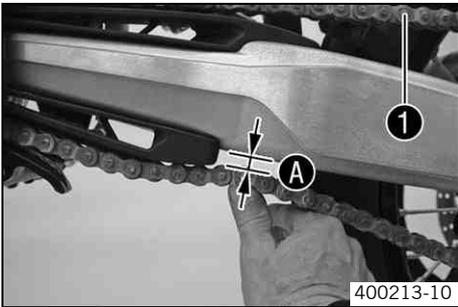
- Clean the chain regularly and then treat with chain spray.

Chain cleaner (☛ p. 98)
Off-road 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 the chain tension and correct if necessary.



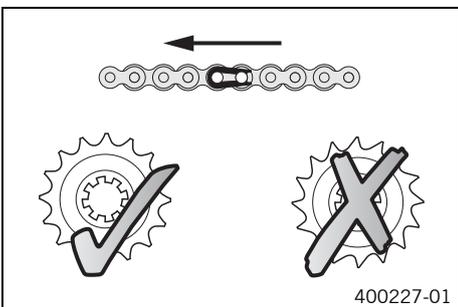
- Jack up the motorcycle. (☛ p. 34)
- Push the chain at the end of the chain sliding component upwards to measure chain tension **A**.

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

Chain tension	8... 10 mm (0.31... 0.39 in)
---------------	------------------------------

- » If the chain tension does not meet specifications:
  - Adjust the chain tension. (☛ p. 48)
- Remove the motorcycle from the work stand. (☛ p. 34)

## Checking the rear sprocket/engine sprocket for wear

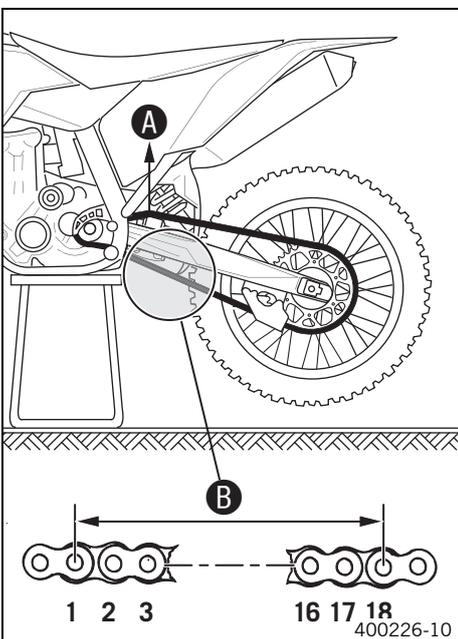


- Check the rear sprocket/engine sprocket for wear.
  - » If the rear sprocket/engine sprocket are worn:
    - Replace the rear sprocket/engine sprocket.

**i Info**  
 When fitting 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 guide for tightness and wear.

## Checking chain wear



- Jack up the motorcycle. (☛ p. 34)
- Shift gear to neutral.
- Pull on the upper part of the chain with the specified weight **A**.

Guideline

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

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

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

Maximum distance <b>B</b> at the longest chain section	272 mm (10.71 in)
--	-------------------

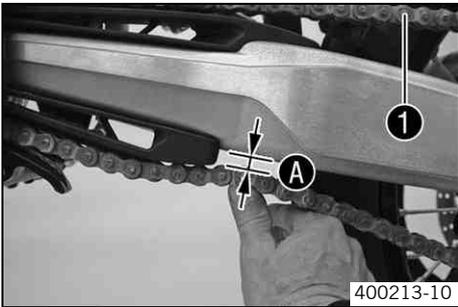
- » If the distance **B** is greater than the specified measurement:
  - Replace the chain.

**i Info**  
 When you replace the chain, you should also replace rear sprocket and engine sprocket.  
 New chains wear out faster on old, worn sprockets.

- Remove the motorcycle from the work stand. (☛ p. 34)

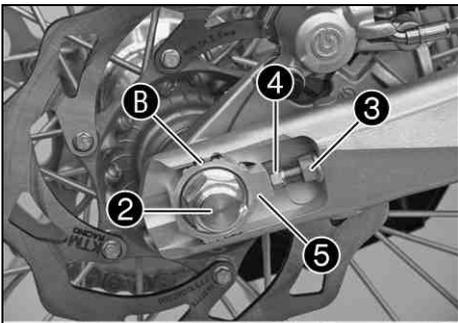
## Adjusting the chain tension

- 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 the chain tension and correct if necessary.



- Jack up the motorcycle. (☛ p. 34)
- Push the chain at the end of the chain sliding component upwards to measure chain tension **A**.

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



- Loosen nut **2**.
- Loosen nuts **3**.
- Adjust the chain tension by turning the adjusting screws **4** to the left and right.

**Guideline**

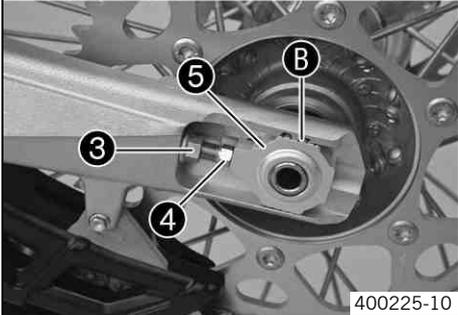
Chain tension	8... 10 mm (0.31... 0.39 in)
Turn adjusting screws <b>4</b> on the left and right so that the markings on the left and right chain adjusters are in the same position relative to reference marks <b>B</b> . The rear wheel is then correctly aligned.	

- Tighten nuts **3**.
- Make sure that chain adjusters **5** are fitted correctly on adjusting screws **4**.
- Tighten nut **2**.

**Guideline**

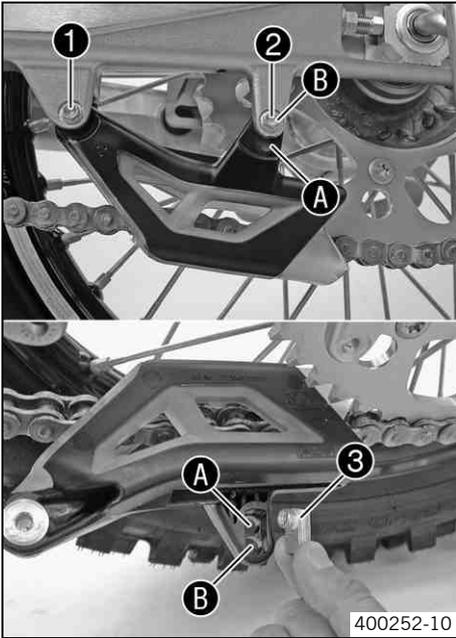
Nut, rear wheel spindle	M20x1.5	80 Nm (59 lbf ft)
-------------------------	---------	-------------------

**i Info**  
 The wide adjustment range of the chain adjusters (32 mm) enables different secondary ratios with the same chain length.  
 Chain adjusters **5** can be turned by 180°.



- Remove the motorcycle from the work stand. (☛ p. 34)

## Adjusting the chain guide



- Remove screws 1 and 2. Take off the chain guide.

### Condition

Number of teeth:  $\leq 44$  teeth

- Insert nut 3 in hole A. Position the chain guide.
- Mount and tighten screws 1 and 2.

### Guideline

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

### Condition

Number of teeth:  $\geq 45$  teeth

- Insert nut 3 in hole B. Position the chain guide.
- Mount and tighten screws 1 and 2.

### Guideline

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

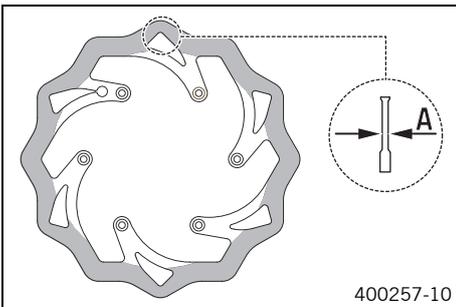
## Checking the brake discs



### Warning

**Danger of accidents** Reduced braking efficiency due to worn brake disc(s).

- Change the worn brake disc(s) without delay. (Your authorized KTM workshop will be glad to help.)



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



### Info

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

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

- » If the brake disc thickness is less than the specified value:
  - Change the brake disc.
- Check the front and rear brake discs for damage, cracking and deformation.
  - » If the brake disc exhibits damage, cracking or deformation:
    - Change the brake disc.

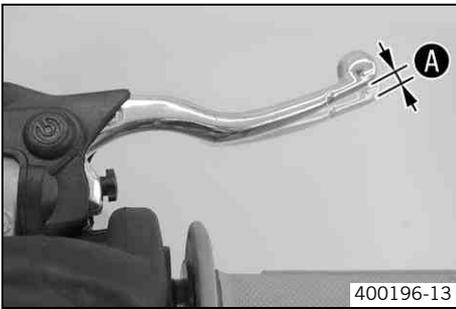
## Checking the free travel of the hand brake lever



### Warning

**Danger of accidents** Brake system failure.

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

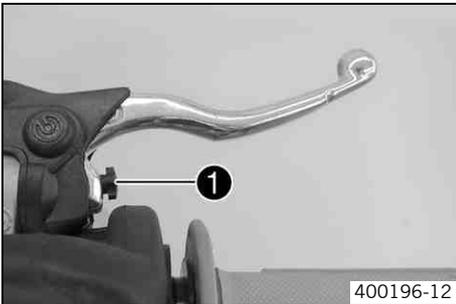


- Push the hand brake to the handlebar and check free travel **A**.

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 hand brake lever. (🔧 p. 50)

## Adjusting free travel of hand brake lever



- Check the free travel of the hand brake lever. (🔧 p. 49)
- Adjust the free travel of the hand brake lever with the adjustment screw **1**.

### **i** 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!

## Checking the front brake fluid level



### Warning

**Danger of accidents** Failure of the brake system.

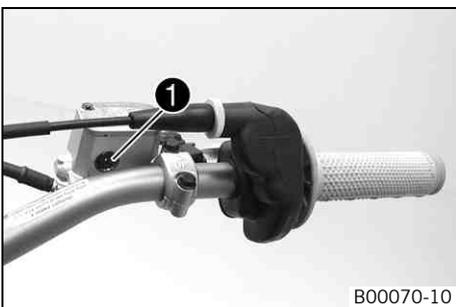
- If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)



### Warning

**Danger of accidents** Reduced braking effect caused by old brake fluid.

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



- Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
- Check the brake fluid level in the viewer **1**.
  - » If the brake fluid is below the **MIN** marking:
    - Add front brake fluid. 🛠️ (🔧 p. 50)

## Adding front brake fluid 🛠️



### Warning

**Danger of accidents** Failure of the brake system.

- If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)



### Warning

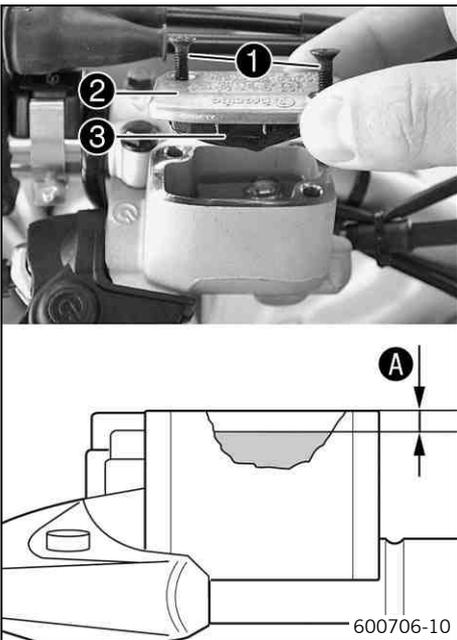
**Skin irritation** Brake fluid can cause skin irritation on contact.

- Avoid contact with skin and eyes, and keep out of the reach of children.
- Wear suitable protective clothing and goggles.
- If brake fluid gets into your eyes, rinse thoroughly with water and contact a doctor immediately.

- Warning**  
**Danger of accidents** Reduced braking effect caused by old brake fluid.
- Change the brake fluid of the front and rear brakes according to the service schedule. (Your authorized KTM workshop will be glad to help.)

- Warning**  
**Environmental hazard** Hazardous substances cause environmental damage.
- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

- Info**  
 Never use 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 A.

Guideline

Dimension A (brake fluid level below top edge of container)	5 mm (0.2 in)
---	---------------

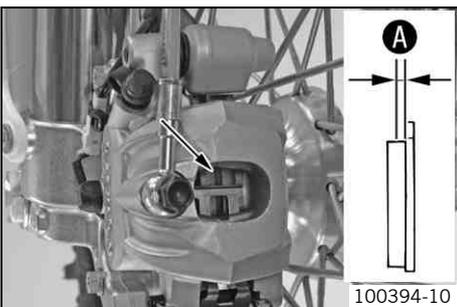
Brake fluid DOT 4 / DOT 5.1 (☞ p. 96)
---------------------------------------

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



- Check the brake linings for minimum thickness A.

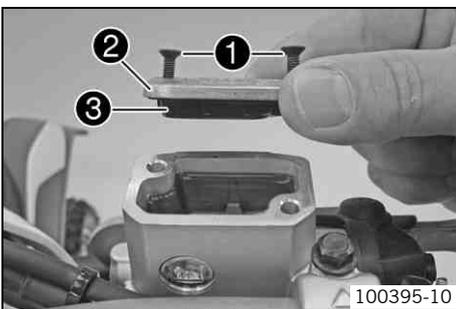
Minimum thickness A	≥ 1 mm (≥ 0.04 in)
---------------------	--------------------

- » If the minimum thickness is less than specified:
  - Change the front brake linings. ☞ (☞ p. 52)
- Check the brake linings for damage and cracking.
  - » If damage or cracking is visible:
    - Change the front brake linings. ☞ (☞ p. 52)

## Changing the front brake linings

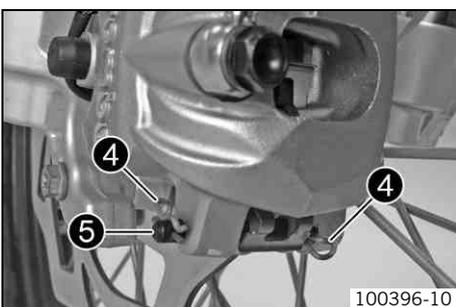
- Warning**  
**Danger of accident** Brake system failure.
  - Maintenance work and repairs must be carried out professionally. (Your authorized KTM workshop will be glad to help.)
- Warning**  
**Skin irritation** Brake fluid can cause skin irritation on contact.
  - Avoid contact with skin and eyes, and keep out of the reach of children.
  - Wear suitable protective clothing and goggles.
  - If brake fluid gets into your eyes, rinse thoroughly with water and contact a doctor immediately.
- Warning**  
**Danger of accidents** Reduced braking effect caused by old brake fluid.
  - Change the brake fluid of the front and rear brakes according to the service schedule. (Your authorized KTM workshop will be glad to help.)
- Warning**  
**Danger of accidents** Reduced braking efficiency due to oil or grease on the brake discs.
  - Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.
- Warning**  
**Danger of accidents** Reduced braking efficiency due to use of non-approved brake linings.
  - Brake linings available from accessory suppliers are often not tested and approved for use on KTM vehicles. The construction and friction factor of the brake linings and therefore the brake power can differ considerably from the original KTM brake linings. If brake linings are used that differ from the originals, there is no guarantee that they comply with the original license. The vehicle no longer corresponds to the condition at delivery, and the warranty is no longer valid.
-  **Warning**  
**Environmental hazard** Hazardous substances cause environmental damage.
  - Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

**i Info**  
Never use 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!

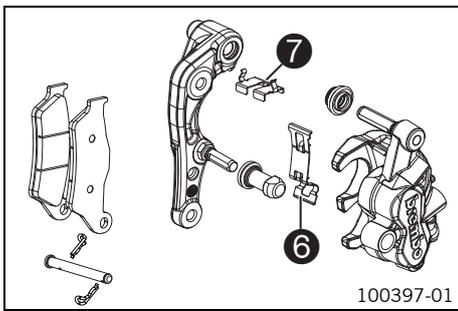


- Move the brake fluid reservoir mounted on the handlebar to a horizontal position.
- Remove screws **1**.
- Remove cover **2** with membrane **3**.
- Press the brake caliper onto the brake disc by hand in order to push back the brake pistons. Ensure that brake fluid does not overflow from the brake fluid reservoir, using suction to remove it if it does.

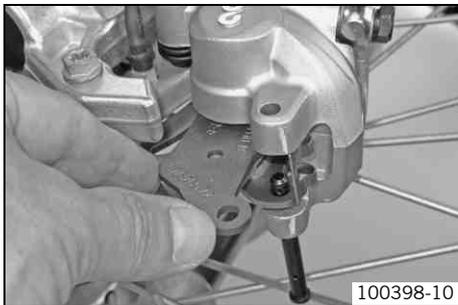
**i Info**  
Make sure when pushing back the brake pistons that you do not press the brake caliper against the spokes.



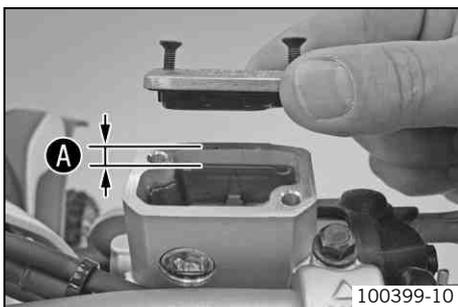
- Remove locking split pins **4**, withdraw bolt **5**, and take out the brake linings.
- Clean the brake caliper and brake caliper support.



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



- Fit the brake linings, insert the bolt, and mount the locking split pins.
- Operate the hand brake lever repeatedly until the brake linings lie on the brake disc and there is a pressure point.



- Correct the brake fluid quantity to level ①.

Guideline

Dimension ① (brake fluid level below top edge of container)	5 mm (0.2 in)
---	---------------

Brake fluid DOT 4 / DOT 5.1 (☞ p. 96)
---------------------------------------

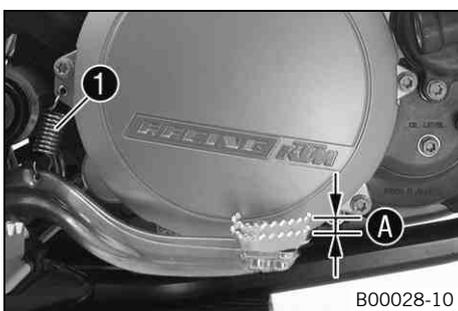
- Position the cover with the membrane. Mount and tighten the screws.

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

## Checking the free travel of the foot brake lever

**Warning**  
**Danger of accidents** Brake system failure.

- If there is no free travel on the foot brake lever, pressure builds up on the rear brake circuit. The rear brake can fail due to overheating. Adjust free travel on foot brake lever according to specifications.



- Disconnect spring ①.
- Move the foot brake lever back and forth between the end stop and the foot brake cylinder piston bracket and check free travel ①.

Guideline

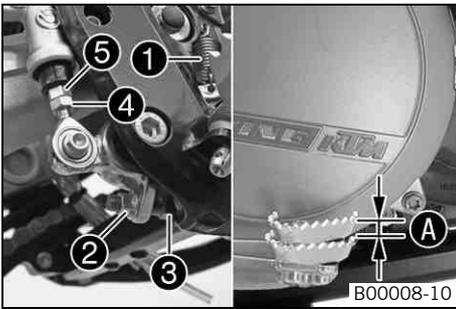
Free play of foot brake lever	3... 5 mm (0.12... 0.2 in)
-------------------------------	----------------------------

- » If the free travel does not meet specifications:
  - Adjust the basic position of the foot brake lever. ☞ (☞ p. 53)
- Attach spring ①.

## Adjusting the basic position of the foot brake lever ☞

**Warning**  
**Danger of accidents** Brake system failure.

- If there is no free travel on the foot brake lever, pressure builds up on the rear brake circuit. The rear brake can fail due to overheating. Adjust free travel on foot brake lever according to specifications.



- Disconnect spring ❶.
- Loosen nut ❷ and, with push rod ❸, turn it back until you have maximum free travel.
- To adjust the basic position of the foot brake lever individually, loosen nut ❸ and turn screw ❹ accordingly.



**Info**

The range of adjustment is limited.

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

Guideline

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

- Hold screw ❹ and tighten nut ❸.

Guideline

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

- Hold push rod ❸ and tighten nut ❷.

Guideline

Remaining nuts, chassis	M6	15 Nm (11.1 lbf ft)
-------------------------	----	------------------------

- Attach spring ❶.

## Checking the rear brake fluid level



**Warning**

**Danger of accidents** Failure of the brake system.

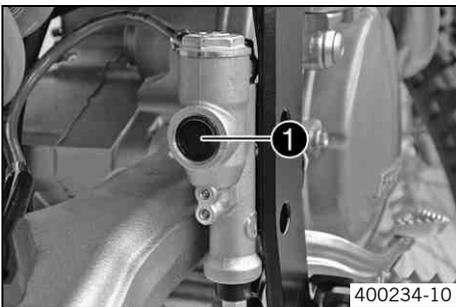
- If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)



**Warning**

**Danger of accidents** Reduced braking effect caused by old brake fluid.

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



- Stand the vehicle upright.
- Check the brake fluid level in the viewer ❶.
  - » If an air bubble is visible in viewer ❶:
    - Add rear brake fluid. 🛠️ (📄 p. 54)

## Adding rear brake fluid 🛠️



**Warning**

**Danger of accidents** Failure of the brake system.

- If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)



**Warning**

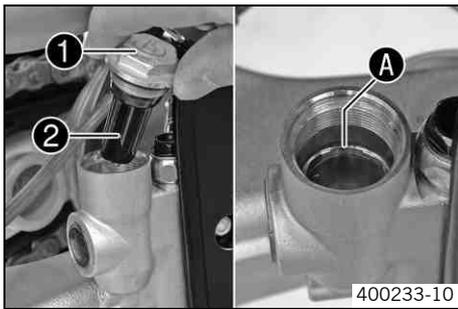
**Skin irritation** Brake fluid can cause skin irritation on contact.

- Avoid contact with skin and eyes, and keep out of the reach of children.
- Wear suitable protective clothing and goggles.
- If brake fluid gets into your eyes, rinse thoroughly with water and contact a doctor immediately.

- Warning**  
**Danger of accidents** Reduced braking effect caused by old brake fluid.
- Change the brake fluid of the front and rear brakes according to the service schedule. (Your authorized KTM workshop will be glad to help.)

- Warning**  
**Environmental hazard** Hazardous substances cause environmental damage.
- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

**i Info**  
 Never use 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.
- Remove screw cap ❶ with membrane ❷ and the O-ring.
- Add brake fluid to level A.

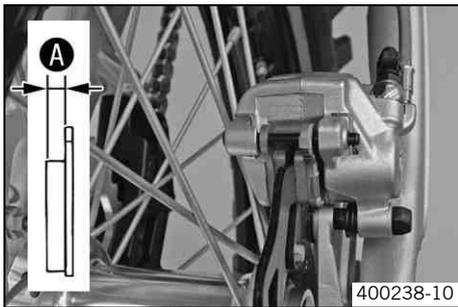
Brake fluid DOT 4 / DOT 5.1 (☞ p. 96)

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

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

## Checking the rear brake linings

- Warning**  
**Danger of accidents** Reduced braking efficiency caused by worn brake linings.
- Change worn brake linings immediately. (Your authorized KTM workshop will be glad to help.)



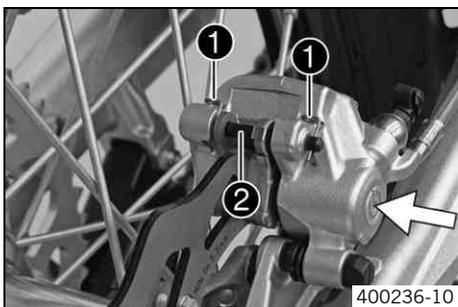
- Check the brake linings for minimum thickness A.

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

- » If the minimum thickness is less than specified:
  - Change the rear brake linings. ☞ (☞ p. 56)
- Check the brake linings for damage and cracking.
  - » If damage or cracking is visible:
    - Change the rear brake linings. ☞ (☞ p. 56)

## Removing the rear brake linings ☞

- Warning**  
**Danger of accident** Brake system failure.
- Maintenance work and repairs must be carried out professionally. (Your authorized KTM workshop will be glad to help.)



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

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

- Remove locking split pins ❶, withdraw bolt ❷, and take out the brake linings.
- Clean the brake caliper and brake caliper support.

## Installing the rear brake linings



### Warning

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

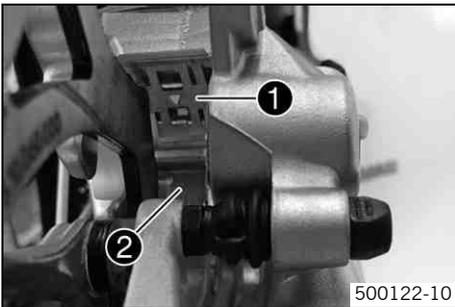
- Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.



### Warning

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

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

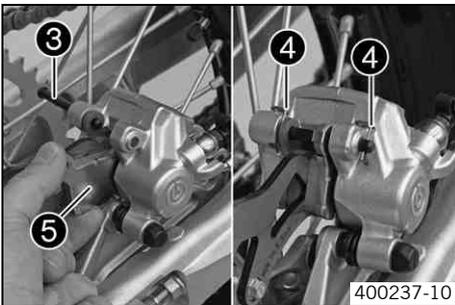


- Check the brake discs. ( p. 49)
- Check that leaf spring **1** in the brake caliper and sliding plate **2** in the brake caliper support are seated correctly.



### Info

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



- Insert the brake linings, insert bolt **3**, and mount locking split pins **4**.



### Info

Make sure that the decoupling plate **5** is mounted on the piston side of the brake lining.

- Operate the foot brake lever repeatedly until the brake linings lie on the brake disc and there is a pressure point.

## Changing the rear brake linings



### Warning

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

- Avoid contact with skin and eyes, and keep out of the reach of children.
- Wear suitable protective clothing and goggles.
- If brake fluid gets into your eyes, rinse thoroughly with water and contact a doctor immediately.



### Warning

**Danger of accidents** Reduced braking effect caused by old brake fluid.

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



### Warning

**Environmental hazard** Hazardous substances cause environmental damage.

- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

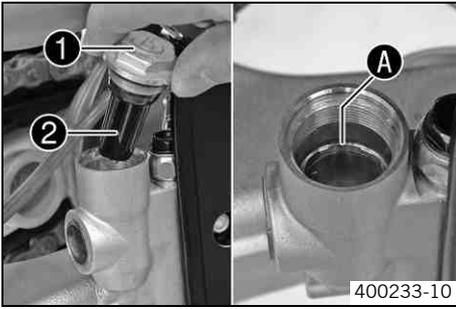


### Info

Never use 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!



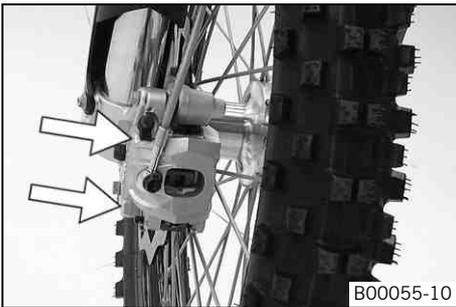
- Remove the rear brake linings. (🔧 (🔧 p. 55)
- Stand the vehicle upright.
- Remove screw cap ❶ with membrane ❷ and the O-ring.
- Press the brake piston back to its basic position and make sure that no brake fluid overflows from the brake fluid reservoir.
- Install the rear brake linings. (🔧 (🔧 p. 56)
- Add brake fluid to level A.

Brake fluid DOT 4 / DOT 5.1 (🔧 p. 96)

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

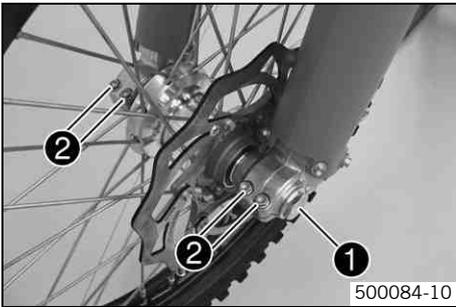
**i Info**  
Clean up overflowed or spilt brake fluid immediately with water.

## Removing the front wheel 🛠️



- Jack up the motorcycle. (🔧 p. 34)
- Press the brake caliper onto the brake disc by hand in order to push back the brake pistons.

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

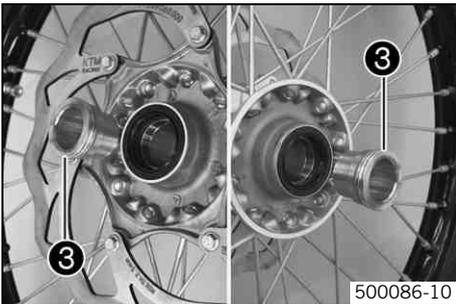


- Remove screw ❶.
- Loosen screws ❷.



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

**i 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.



- Remove spacers ❸.

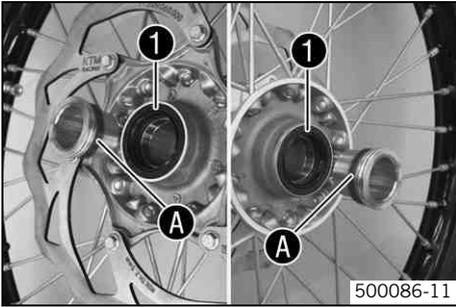
## Installing the front wheel



### Warning

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

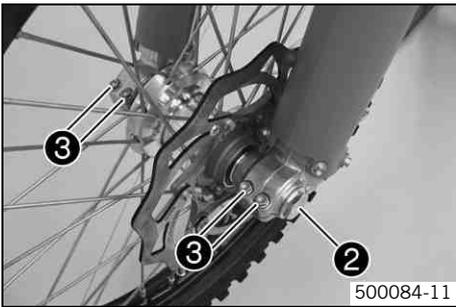
- Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.



- Clean and grease shaft seal rings ① and bearing surface ① of the spacers.

Long-life grease (☛ p. 98)

- Insert the spacers.



- Lift the front wheel into the fork, position it, and insert the wheel spindle.
- Mount and tighten screw ②.

### Guideline

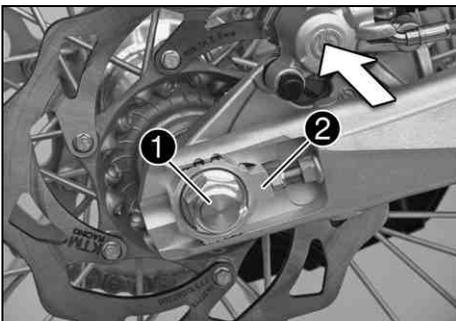
Screw, front wheel spindle	M24x1.5	45 Nm (33.2 lbf ft)
----------------------------	---------	------------------------

- Operate the hand brake lever several times until the brake linings are lying correctly on the brake disc.
- Remove the motorcycle from the work stand. (☛ p. 34)
- Pull the front wheel brake and push down hard on the fork several times to align the fork legs.
- Tighten screws ③.

### Guideline

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

## Removing the rear wheel



- Jack up the motorcycle. (☛ p. 34)
- Press the brake caliper onto the brake disc by hand in order to push back the brake piston.



### Info

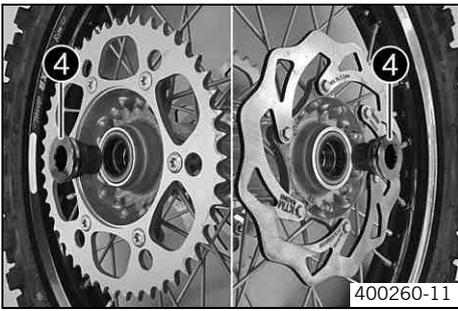
Make sure when pushing back the brake piston that you do not press the brake caliper against the spokes.

- Remove nut ①.
- Remove chain adjuster ②. Withdraw wheel spindle ③ only enough to allow the rear wheel to be pushed forward.
- Push the rear wheel forward as far as possible. Remove the chain from the rear sprocket.
- Holding the rear wheel, withdraw the wheel spindle. Take the rear wheel out of the swingarm.



### 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 spacers 4.

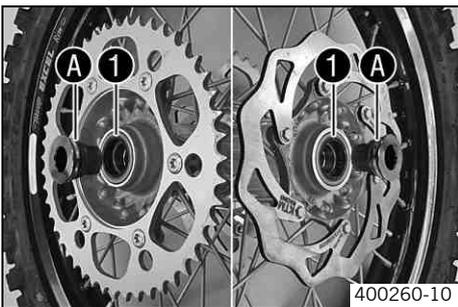
## Installing the rear wheel ↩



### Warning

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

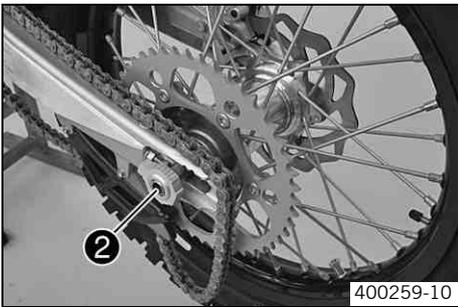
- Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.



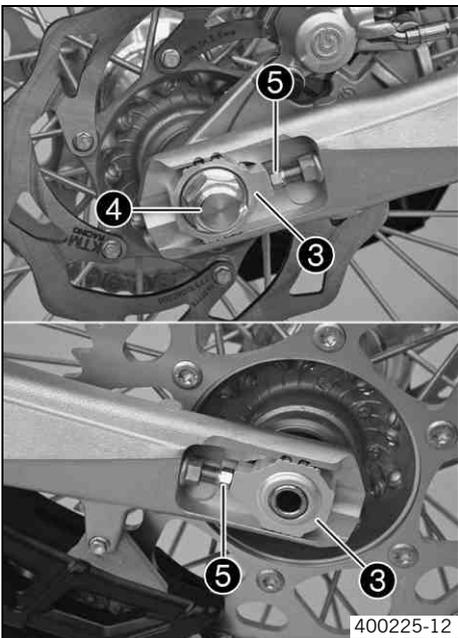
- Clean and grease shaft seal rings 1 and bearing surface A of the spacers.

Long-life grease (☛ p. 98)

- Insert the spacers.



- Lift the rear wheel into the swing arm, position it, and insert wheel spindle 2.
- Apply the chain.



- Position chain adjuster 3. Mount nut 4, but do not tighten it yet.
- Check the chain tension. (☛ p. 47)
- Make sure that chain adjusters 3 are fitted correctly on adjusting screws 5.
- Tighten nut 4.

### Guideline

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



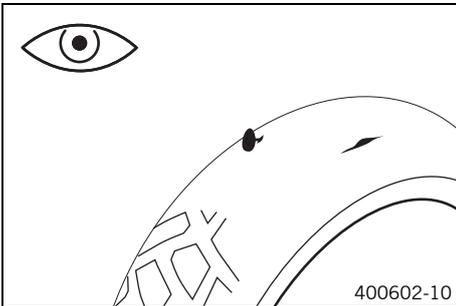
### Info

The wide adjustment range of the chain adjusters (32 mm) enables different secondary transmissions with the same chain length. Chain adjusters 3 can be turned by 180°.

- Operate the foot brake lever repeatedly until the brake linings lie on the brake disc and there is a pressure point.
- Remove the motorcycle from the work stand. (☛ p. 34)

## Checking the tire condition

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



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

- i Info**  
 Note local national regulations concerning the minimum tread depth.

Minimum tread depth	≥ 2 mm (≥ 0.08 in)
---------------------	--------------------

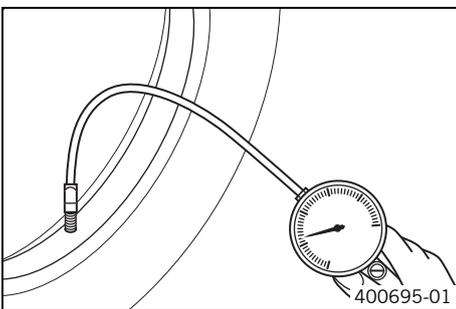
- » If the tread depth is less than the minimum permissible depth:
  - Change the tire.
- Check the tire age.

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

- » If the tire is older than five years:
  - Change the tire.

## Checking the tire air pressure

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



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

Tire air pressure off road	
Front	1.0 bar (15 psi)
Rear	1.0 bar (15 psi)

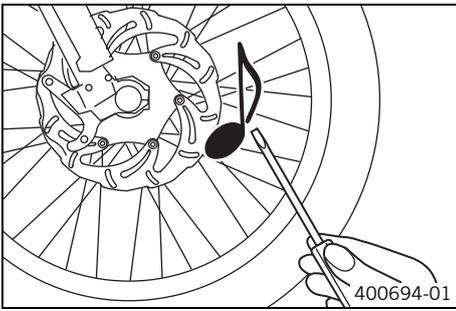
- » If the tire pressure does not meet specifications:
  - Correct the tire pressure.
- Mount the dust cap.

## Checking the spoke tension

- ⚠ Warning**  
**Danger of accidents** Instable handling due to incorrect spoke tension.

- Ensure that the spoke tension is correct. (Your authorized KTM workshop will be glad to help.)

- i Info**  
 A loose spoke causes wheel imbalance and rapidly leads to more loose spokes.  
 If the spokes are too tight, they can break due to local overload.  
 Check the spoke tension regularly, especially on a new motorcycle.



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

**i Info**

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

You should hear a high note.

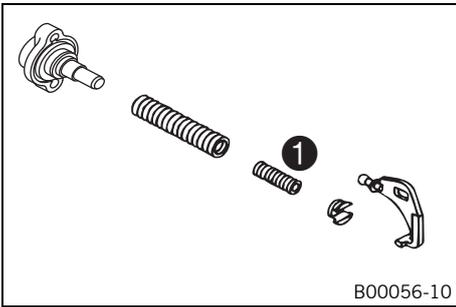
- » If the spoke tension varies:
  - Correct the spoke tension. 🛠️
- Check the spoke torque.

**Guideline**

Spoke nipple, front wheel	M4.5	5... 6 Nm (3.7... 4.4 lbf ft)
Spoke nipple, rear wheel	M5	5... 6 Nm (3.7... 4.4 lbf ft)

Torque wrench with various accessories in set (58429094000)

## Engine characteristic - auxiliary spring



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

**Possible states**

- Auxiliary spring with yellow marking – Auxiliary spring mounted at the factory with medium tuning (standard) for good rideability.
- Auxiliary spring with green marking – Auxiliary spring contained in the separate enclosure for softer performance.
- Auxiliary spring with red marking – Auxiliary spring contained in the separate enclosure for more aggressive performance.

The engine characteristic can be influenced by different spring strengths of the auxiliary spring ①.

## Engine characteristic - adjusting the auxiliary spring 🛠️

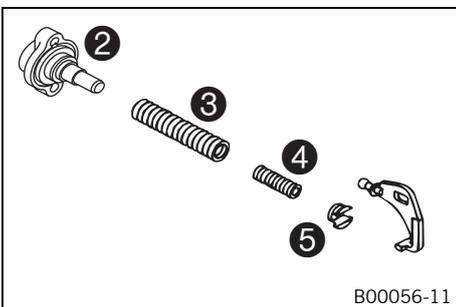
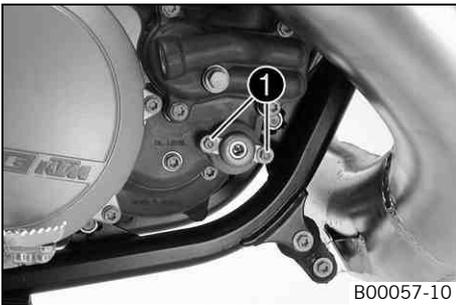


**Warning**

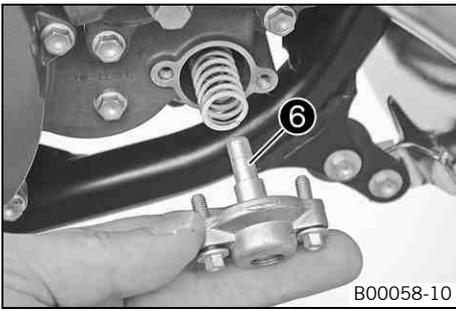
**Danger of burns** Some vehicle components get very hot when the vehicle is in use.

- 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.

- Tilt the motorcycle approx. 45° to the left and secure it in this position to prevent it from falling over.
- Remove screws ①.



- Take the locking cap ②, adjusting spring ③, auxiliary spring ④ and spring insert ⑤ out of the clutch cover.
- Pull both springs off of the spring insert.



- Mount the desired auxiliary spring ④ and adjusting spring ③ and slide them into the clutch cover together.

Auxiliary spring with yellow marking (54837072300)
--

Auxiliary spring with green marking (54837072100)
---

Auxiliary spring with red marking (54837072000)
---

- ✓ The cut-out of spring insert ⑤ engages in the angle lever.



**Info**

Under no circumstances should screw ⑥ be turned as this would have a negative effect on the engine characteristic.

- Check the O-ring in the locking cap.
- Position the locking cap.
- Mount and tighten the screws.

**Guideline**

Remaining screws, engine	M5	6 Nm (4.4 lbf ft)
--------------------------	----	-------------------

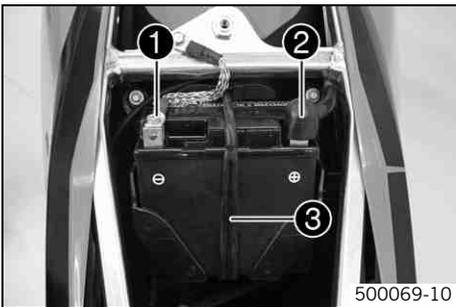
## Removing the battery ↩



**Warning**

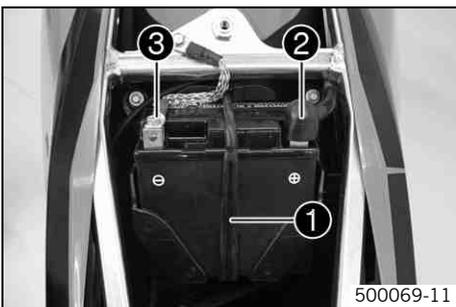
**Risk of injury** Battery acid and battery gases cause serious cauterization.

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



- Switch off all power consumers and switch off the engine.
- Remove the seat. (↩ p. 65)
- Disconnect the negative (minus) cable ① of the battery.
- Pull back the plus pole cover ② and disconnect the positive (plus) cable of the battery.
- Hang the rubber band ③ out to the bottom.
- Lift the battery up.

## Installing the battery ↩



- Place the battery in the battery holder.

Battery (YTX4L-BS) (↩ p. 88)
------------------------------

- Reconnect the rubber band ①.
- Attach the plus cable and replace the plus pole cover ②.
- Attach the minus cable ③.
- Mount the seat. (↩ p. 65)

## Recharging the battery ↩



### Warning

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

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



### Warning

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

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



### Warning

**Environmental hazard** Hazardous substances cause environmental damage.

- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.



### Info

Even when there is no load on the battery, it still loses power steadily.

The charge state and the type of charge are very important for the service life of the battery.

Rapid recharging with a high charging current shortens the battery's service life.

If the charging current, charging voltage and charging time are exceeded, electrolyte escapes through the safety valves. This reduces the battery capacity.

If the battery is depleted from starting the vehicle repeatedly, the battery must be charged immediately.

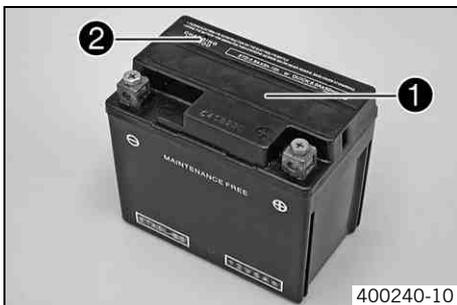
If the battery is left in a discharged state for an extended period, it will become over-discharged and sulfate, destroying the battery.

The battery is maintenance-free, i.e., the acid level does not have to be checked.

- Switch off all power consumers and switch off the engine.
- Remove the seat. (↩ p. 65)
- 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 alternator. With this device, you cannot overcharge the battery.



### Info

Never remove the lid ❶.

Charge the battery with at most 10% of the capacity specified on the battery ❷.

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

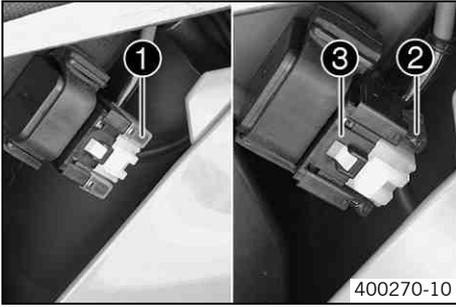
### Guideline

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

Charge the battery regularly when the motorcycle is not in use	3 months
--	----------

- Mount the seat. (↩ p. 65)

## Removing a fuse



- Switch off all power consumers and switch off the engine.
- Remove the air filter box lid. (☛ p. 71)
- Remove the protection cover ❶.

**i Info**

The fuse ❷ is located in the starter relay ❸ under the filter box cover.

- Remove the fuse ❷.

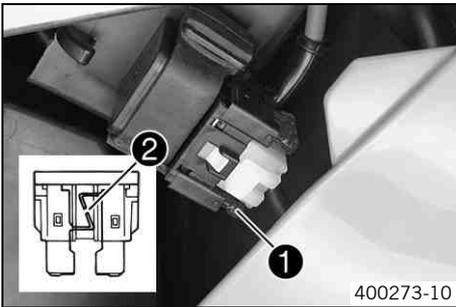
## Replacing the fuse



**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.



- Refit the fuse.

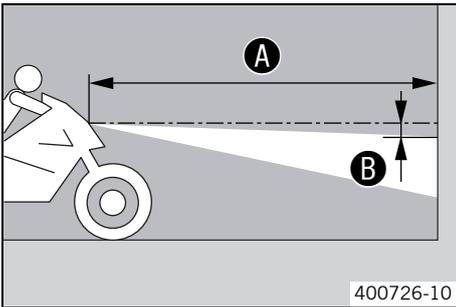
Fuse (58011109110)
--------------------

**i Info**

A reserve fuse ❶ is located in the starter relay.  
Replace a burned-out fuse ❷ only by an equivalent fuse.

- Replace the protection cover.
- Install the air filter box lid. (☛ p. 71)

## Checking the headlight setting



- On a light-colored wall behind a horizontal area, make a mark as high as the center of the headlight.
- Make another mark a distance ❷ under the first mark.

Guideline

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

- Position the motorcycle vertically a distance ❶ away from the wall. The rider, wearing a full set of protective clothing, sits on the motorcycle in the normal sitting position (feet on the footrests).

Guideline

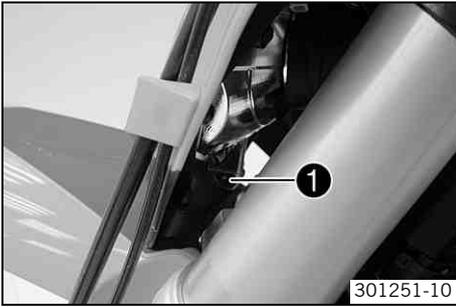
Distance ❶	5 m (16 ft)
------------	-------------

- Switch on the low beam. Check the headlight setting.

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

- » If the boundary between light and dark does not meet specifications:
  - Adjust the headlight range. (☛ p. 65)

## Adjusting the headlight range



- Check the headlight setting. (☛ p. 64)
- Loosen screw ❶.
- Adjust the headlight range by moving the headlight.

### Guideline

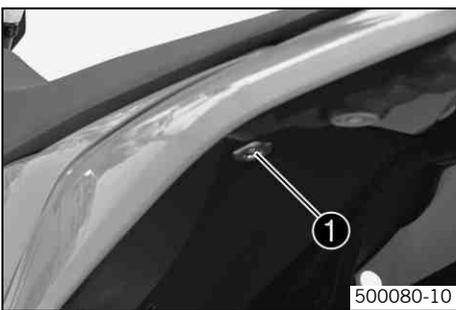
The boundary between light and dark must be exactly on the lower mark for an operational motorcycle with a rider (to prepare the mark, see: Checking the headlight setting).

### Info

The headlight range may need to be corrected if luggage is carried on the vehicle.

- Tighten screw ❶.

## Removing the seat



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

## Mounting the seat



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

### Guideline

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

## Removing the fuel tank ☹



### Danger

**Fire hazard** Fuel is highly flammable.

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

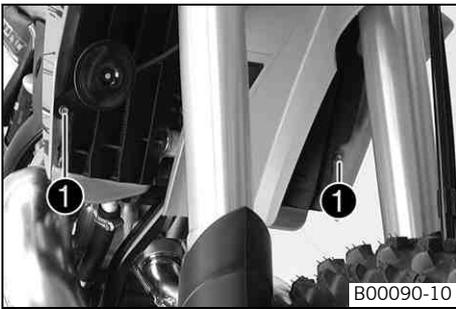


### Warning

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

- Avoid contact 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. 65)



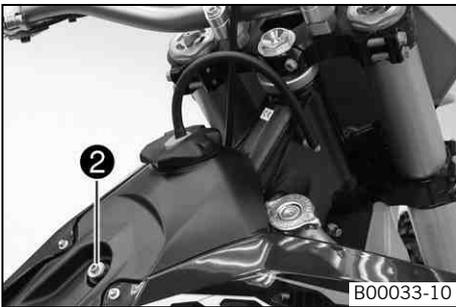
- Turn handle ❶ of the fuel tap to the **OFF** position. (Figure B00089-10 p. 20)
- Pull off the fuel hose.



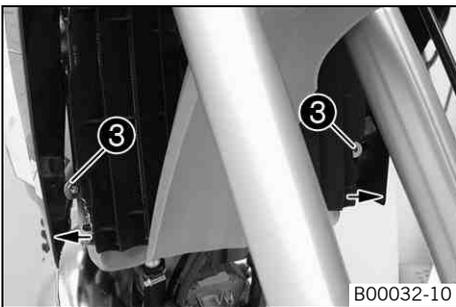
**Info**

Remaining fuel may run out of the fuel hose.

- Remove screws ❶ with the collar sleeve.
- Hang the horn and horn bracket to one side.



- Remove screw ❷ with the collar sleeve.
- Remove the tube from the fuel tank vent line.



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

## Installing the fuel tank



**Danger**

**Fire hazard** Fuel is highly flammable.

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



**Warning**

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

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



- Position the fuel tank and fit the two spoilers to the sides of the radiator bracket.
- Make sure that no cables are trapped or damaged.

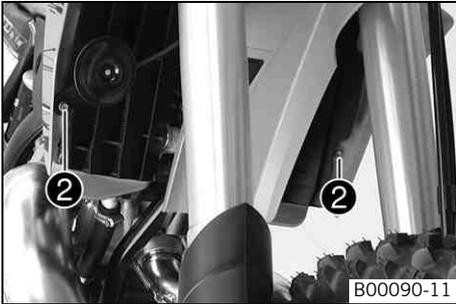


- Mount the fuel tank vent hose.
- Mount and tighten screw ① with the collar sleeve.

Guideline

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

- Position the horn with the horn bracket.



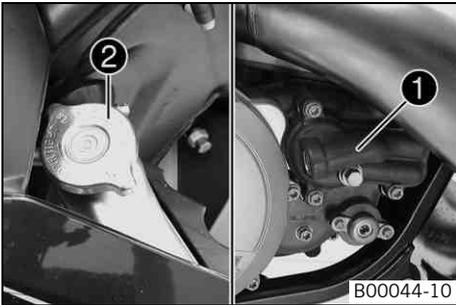
- Mount and tighten screws ② with the collar sleeve.

Guideline

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

- Connect the fuel hose.
- Mount the seat. (☛ p. 65)

## Cooling system



Water pump ① in the engine circulates the coolant.

The pressure resulting from the warming of the cooling system is regulated by a valve in radiator cap ②. This ensures that operating the vehicle at the specified coolant temperature will not result in a risk of malfunctions.

120 °C (248 °F)
-----------------

Cooling is effected by the air stream.

The lower the speed, the less the cooling effect. Dirty cooling fins also reduce the cooling effect.

## Checking the antifreeze and coolant level



**Warning**

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

- Do not remove the radiator cap, radiator hoses or other cooling system components when the engine is hot. Allow the engine and cooling system to cool down. In case of scalding, rinse immediately with lukewarm water.



**Warning**

**Danger of poisoning** Coolant is poisonous and a health hazard.

- Avoid contact between coolant and skin, eyes and clothing. If it 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 coolant out of the reach of children.

**Condition**

The engine is cold.

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

-25... -45 °C (-13... -49 °F)
-------------------------------

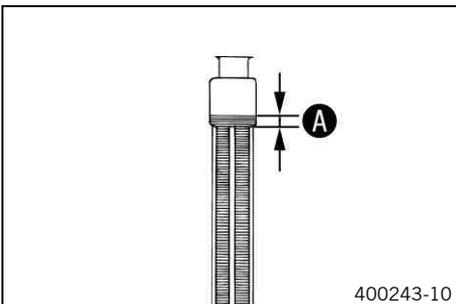
» If the coolant antifreeze does not meet specifications:

- Correct the coolant antifreeze.

- Check the coolant level in the radiator.

Coolant level ① above the radiator fins.	10 mm (0.39 in)
--	-----------------

» 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)
--

- Mount the radiator cap.

## Checking the coolant level



**Warning**

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

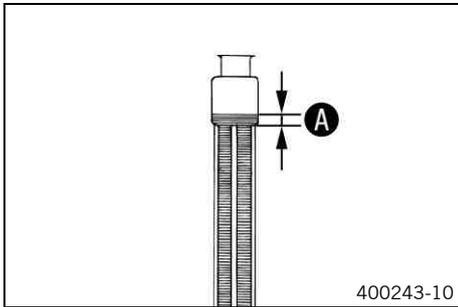
- Do not remove the radiator cap, radiator hoses or other cooling system components when the engine is hot. Allow the engine and cooling system to cool down. In case of scalding, rinse immediately with lukewarm water.



**Warning**

**Danger of poisoning** Coolant is poisonous and a health hazard.

- Avoid contact between coolant and skin, eyes and clothing. If it 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 coolant out of the reach of children.



**Condition**

The engine is cold.

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

Coolant level <b>A</b> above the radiator fins.	10 mm (0.39 in)
---	-----------------

- » 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)
--

- Mount the radiator cap.

## Draining the coolant



**Warning**

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

- Do not remove the radiator cap, radiator hoses or other cooling system components when the engine is hot. Allow the engine and cooling system to cool down. In case of scalding, rinse immediately with lukewarm water.



**Warning**

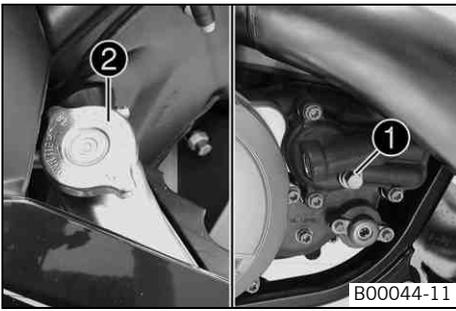
**Danger of poisoning** Coolant is poisonous and a health hazard.

- Avoid contact between coolant and skin, eyes and clothing. If it 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 coolant out of the reach of children.

**Condition**

The engine is cold.

- Stand the motorcycle upright.
- Place a suitable container under the water pump cover.



- Remove screw ❶. Remove radiator cap ❷.
- Completely drain the coolant.
- Mount screw ❶ with a new seal ring and tighten it.

Guideline

Drain plug, water pump cover	M10x1	15 Nm (11.1 lbf ft)
------------------------------	-------	------------------------

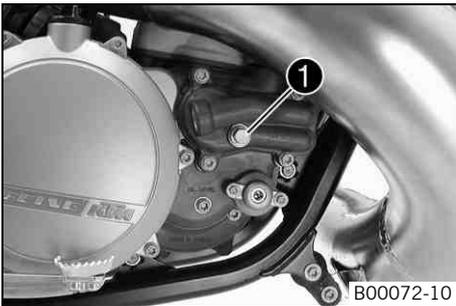
## Refilling with coolant



### Warning

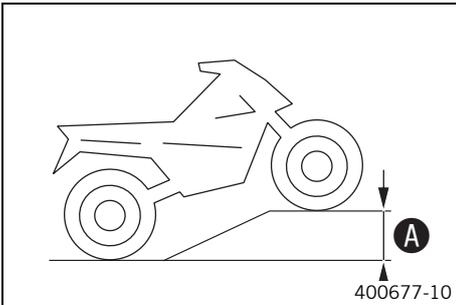
**Danger of poisoning** Coolant is poisonous and a health hazard.

- Avoid contact between coolant and skin, eyes and clothing. If it 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 coolant out of the reach of children.



- Make sure that screw ❶ is tightened.
- Stand the motorcycle upright.
- Fill the radiator completely with coolant.

Coolant	1.2 l (1.3 qt.)	Coolant (☛ p. 96)
		Coolant (mixed ready to use) (☛ p. 96)



- Position the vehicle as shown and secure it against rolling away. A height difference of **A** must be reached.

Guideline

Height difference <b>A</b>	75 cm (29.5 in)
----------------------------	-----------------



### Info

To ensure that all of the air can escape from the cooling system, the front of the vehicle must be jacked up. A poorly bled cooling system is less effective at cooling and may result in overheating of the engine.



- Place the vehicle back on a level surface.
- Fill the radiator completely with coolant.
- Mount radiator cap ❷.
- Run the engine until it is warm.
- Check the coolant level. (☛ p. 68)

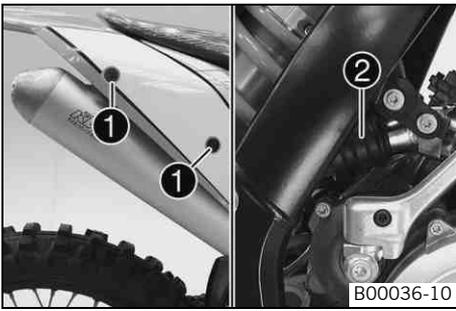
## Removing the main silencer



### Warning

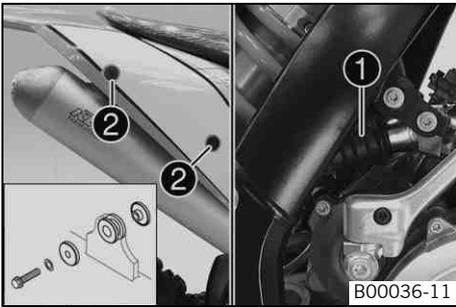
**Danger of burns** The exhaust system gets very hot when the vehicle is driven.

- Allow the exhaust system to cool down. Do not touch hot components.



- Remove screws ❶.
- Pull the main silencer off of the manifold at the rubber sleeve ❷.

## Installing the main silencer

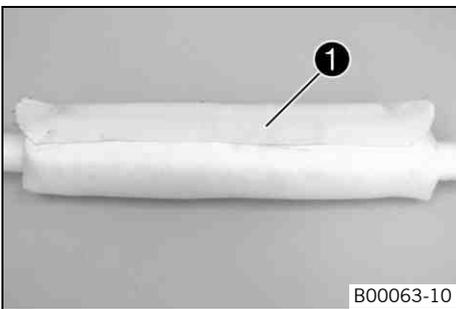


- Mount the main silencer with rubber sleeve ❶.
- Mount and tighten screws ❷.

Guideline

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

## Glass fiber yarn filling of main silencer



The main silencer is filled with glass fiber yarn ❶.  
Over a period, the fibers of the insulating material vanish into the air, and the silencer "burns out".  
Not only is the noise level higher, the performance characteristic changes.

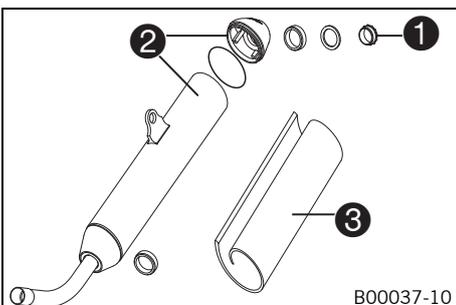
## Removing the glass fiber yarn filling of the main silencer



### Warning

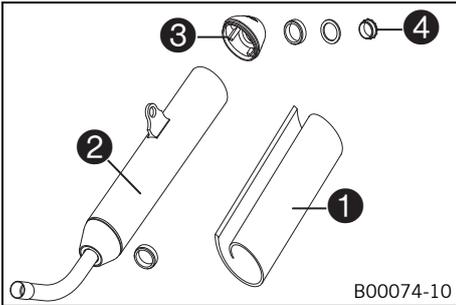
**Danger of burns** The exhaust system gets very hot when the vehicle is driven.

- Allow the exhaust system to cool down. Do not touch hot components.



- Remove the main silencer. (☞ p. 69)
- Remove nut ❶.
- Remove the locking cap and outer tube ❷.
- Pull the glass fiber yarn filling ❸ from the inner tube.
- Clean the parts that are to be reinstalled.

## Installing the glass fiber yarn filling of the main silencer



- Slide the glass fiber yarn filling ① over the inner tube.
- Slide the outer tube ② over the glass fiber yarn filling.

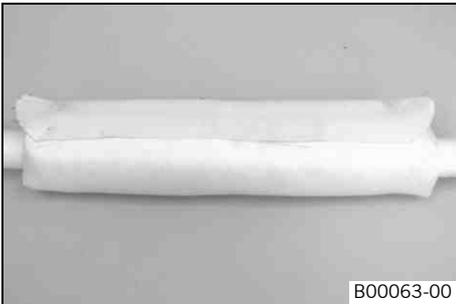


### Info

Ensure that the O-rings are seated properly.

- Insert locking cap ③ into the outer tube.
- Mount and tighten nut ④.
- Install the main silencer. (☛ p. 70)

## Changing the glass fiber yarn filling of the main silencer



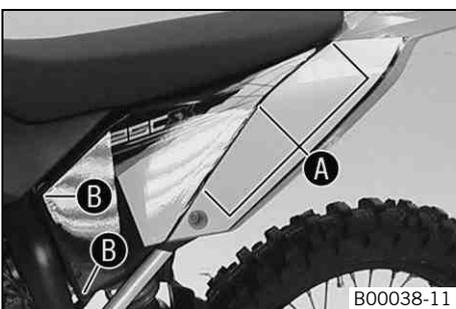
- Remove the glass fiber yarn filling of the main silencer. (☛ p. 70)
- Install the glass fiber yarn filling of the main silencer. (☛ p. 71)

## Removing the air filter box lid



- Pull off the air filter box lid in area A sideways and remove it toward the front.

## Installing the air filter box lid



- Insert the air filter box lid into the rear area A and clip it into the front area B.

## Removing the air filter

### 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.



### Warning

**Environmental hazard** Hazardous substances cause environmental damage.

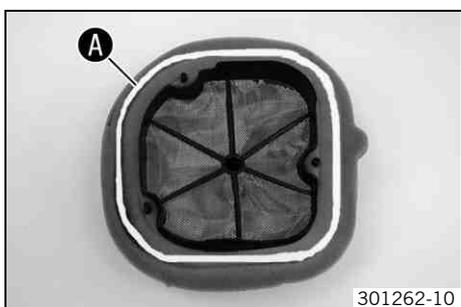
- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

- Remove the air filter box lid. (☛ p. 71)



- Detach air filter holder ❶ at the bottom and swing it to one side. Remove the air filter with the air filter support.
- Remove the air filter from the air filter support.

## Installing the air filter



- Mount the clean air filter onto the air filter support.
- Grease the air filter in area ❸.

Long-life grease (☛ p. 98)



- Put in both parts together, position them, and fix them with air filter holder ❶.



### Info

If the air filter is not correctly mounted, dust and dirt can penetrate into the engine and can cause damage.

- Install the air filter box lid. (☛ p. 71)

## Cleaning the air filter



### Warning

**Environmental hazard** Hazardous substances cause environmental damage.

- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.



### Info

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

- Remove the air filter. ☛ (☛ p. 71)
- Wash the air filter thoroughly in special cleaning liquid and allow it to dry properly.

Air filter cleaner (☛ p. 98)



### Info

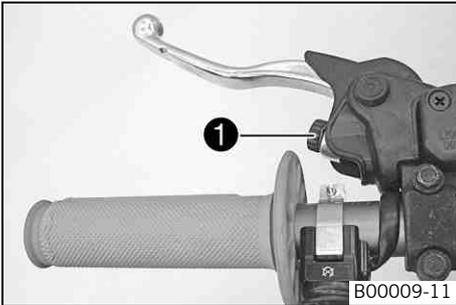
Only press the air filter to dry it; never wring it out.

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

Oil for foam air filter (☛ p. 98)

- Clean the air filter box.
- Check the carburetor connection boot for damage and tightness.
- Install the air filter. ☛ (☛ p. 72)

## Adjusting the basic position of the clutch lever



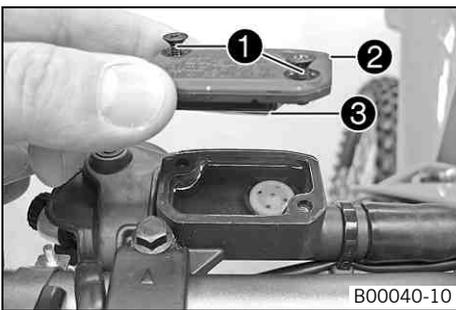
- Adjust the basic setting of the clutch lever to your hand size by turning adjusting screw ❶.

### **i** Info

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

## Checking the fluid level of the hydraulic clutch

**i** Info  
 The fluid level rises with increasing wear of the clutch lining discs.



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

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

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

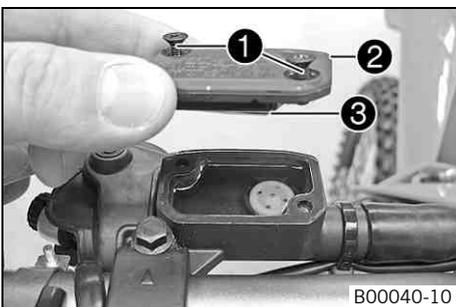
Brake fluid DOT 4 / DOT 5.1 (☞ p. 96)
---------------------------------------

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

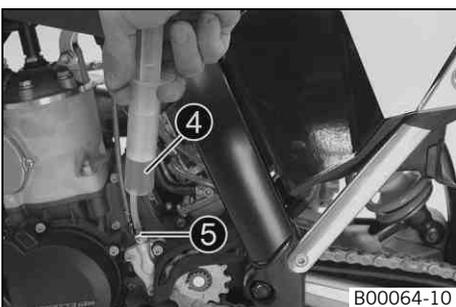
## Changing the hydraulic clutch fluid ☞

**Warning**  
**Environmental hazard** Hazardous substances cause environmental damage.

- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.



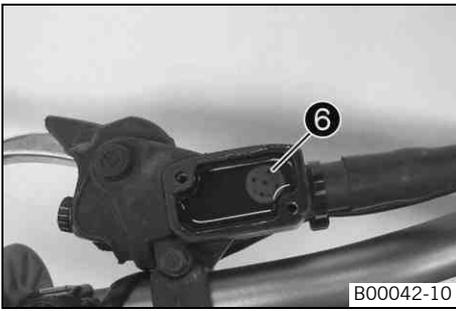
- Move the clutch fluid reservoir mounted on the handlebar to a horizontal position.
- Remove screws ❶.
- Remove cover ❷ with membrane ❸.



- Fill bleeding syringe ❹ with the appropriate hydraulic fluid.

Bleed syringe (50329050000)
Brake fluid DOT 4 / DOT 5.1 (☞ p. 96)

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



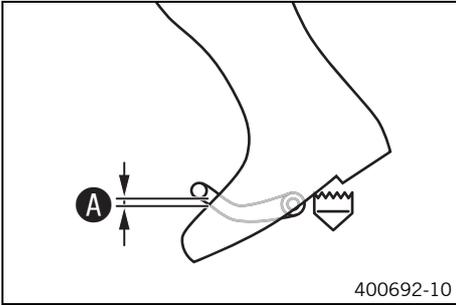
- Inject the liquid into the system until it escapes from hole 6 of the master cylinder without bubbles.
- To prevent overflow, drain fluid occasionally from the master cylinder reservoir.
- Remove the bleeding syringe. Mount and tighten the bleeder screw.
- Correct the fluid level of the hydraulic clutch.

**Guideline**

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

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

## Checking the basic position of the shift lever

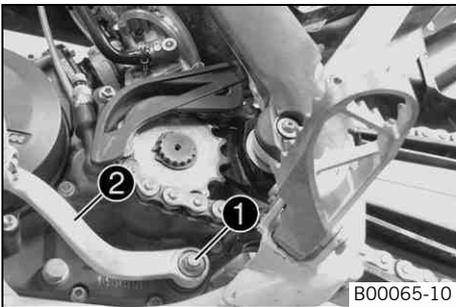


- Sit on the vehicle in the riding position and determine the distance between the upper edge of your boot and shift lever A.

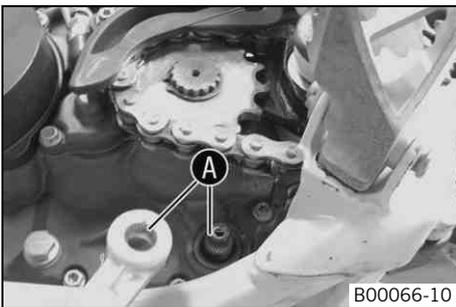
Distance between shift lever and upper edge of boot	10... 20 mm (0.39... 0.79 in)
---	-------------------------------

- » If the distance does not meet specifications:
  - Adjust the basic position of the shift lever. (p. 74)

## Adjusting the basic position of the shift lever



- Remove screw 1 and remove shift lever 2.



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

**i Info**

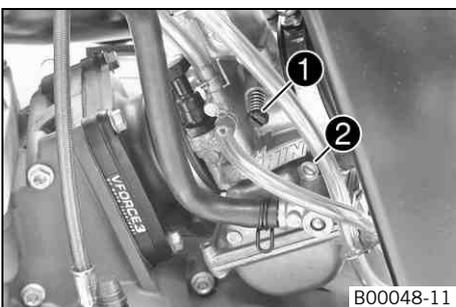
The range of adjustment is limited. The shift lever must not come into contact with any other vehicle components during the shift procedure.

- Mount and tighten the screw.

**Guideline**

Screw, shift lever	M6	14 Nm (10.3 lbf ft)	Loctite® 243™
Screw, shift lever	M6	14 Nm (10.3 lbf ft)	Loctite® 243™

## Carburetor



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.

**i Info**

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

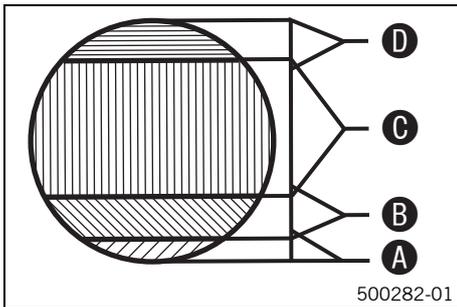
The factory setting for the carburetor is set for the following values.

Elevation above sea level	500 m (1,640 ft)
---------------------------	------------------

Ambient temperature	20 °C (68 °F)
---------------------	---------------

Super unleaded gasoline, mixed with 2-stroke engine oil (1:60) (☛ p. 97)
--

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



### Idle air range A

Operation with the throttle slide closed. This range is influenced by adjusting screw ❶ and the idle air adjusting screw ❷.

### Transition range B

Behavior of the engine when the throttle slide is being opened. This range is influenced by the idling jet and by the form of the throttle slide.

If the engine sputters and smokes heavily when it starts despite a good idle and part-load setting, and if it abruptly reaches full power at a high rpm, the carburetor setting is too rich, or the float level is too high or the float needle valve is leaky.

### Part-load range C

Operation with the throttle slide partially open. This range is influenced by the jet needle (form and position). The idle setting influences the engine tuning in the lower range, and the main jet influences the engine tuning in the upper range.

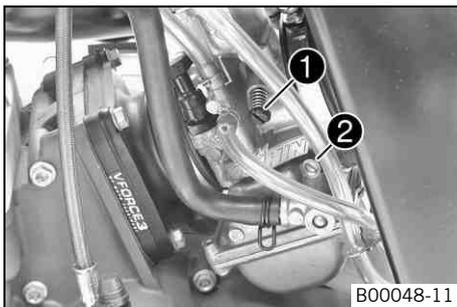
If the engine stutters when accelerating with a partially open throttle slide, the jet needle must be lowered by one notch. If the engine knocks when accelerating at the full power rpm range, the jet needle must be raised. If the above events occur on idle or just above it, the idle system must be set to a leaner setting if the engine is stuttering or to a richer setting if the engine is knocking.

### Full-load range D

Operation with the throttle slide open (full throttle). This range is influenced by the main jet and jet needle.

If the insulator of a new spark plug is very light or white after a brief ride at full throttle, or if the engine knocks, a larger main jet needs to be used. If the insulator is dark brown or sooty, a smaller main jet needs to be used.

## Carburetor - adjusting the idle speed ☛



- Screw in idle air adjusting screw ❷ all the way and turn it to the specified basic position.

Guideline

Idle air adjusting screw	
Open	1.75 turns

- Run the engine until warm.

Guideline

Warm-up time	≥ 5 min
--------------	---------



### Danger

**Danger of poisoning** Exhaust gases are poisonous and inhaling them may 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 an enclosed space without an effective exhaust extraction system.

- Adjust the idle speed with adjusting screw ❶.

Guideline

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

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



**Info**

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

## Emptying the carburetor float chamber



**Danger**

**Fire hazard** Fuel is highly flammable.

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



**Warning**

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

- Avoid contact 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.



**Warning**

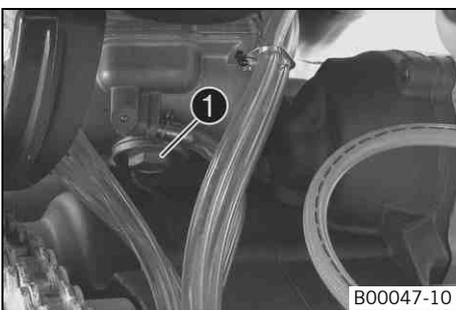
**Environmental hazard** Improper handling of fuel is a danger to the environment.

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



**Info**

Carry out this work with a cold engine.  
 Water in the float chamber results in malfunctioning.



- Turn handle ❶ of the fuel tap to the **OFF** position.  
 ✓ No more fuel flows from the tank to the carburetor.
- Place a cloth beneath the carburetor to soak up emerging fuel.
- Remove plug ❶.
- Completely drain the fuel.
- Mount and tighten the plug.

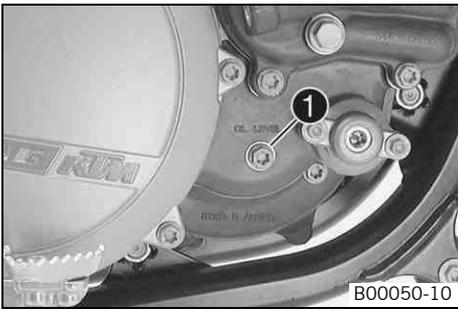
## Checking the gear oil level



**Info**

The gear oil level must be checked when the engine is cold.

- Stand the motorcycle upright on a horizontal surface.



B00050-10

- Remove gear oil level check screw ❶.
- Check the gear oil level.

A small amount of gear oil should flow out of the hole.

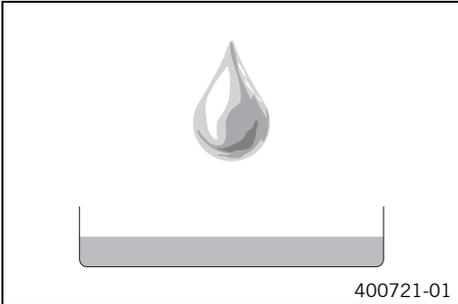
- » If no gear oil flows out:
  - Add gear oil. 🛠️ (👉 p. 78)

- Mount and tighten the gear oil level check screw.

Guideline

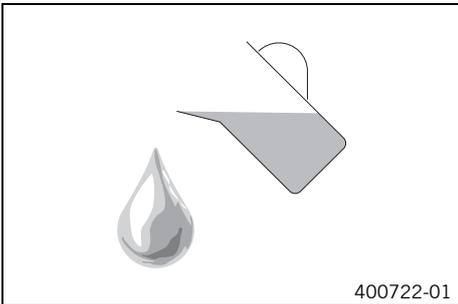
Screw, gear oil level check	M6	10 Nm (7.4 lbf ft)
-----------------------------	----	--------------------

## Changing the gear oil 🛠️



400721-01

- Drain the gear oil. 🛠️ (👉 p. 77)



400722-01

- Refill with gear oil. 🛠️ (👉 p. 78)

## Draining the gear oil 🛠️



**Warning**

**Danger of scalding** Engine oil and gear oil get very hot when the motorcycle is ridden.

- Wear appropriate protective clothing and safety gloves. In case of burns, rinse immediately with lukewarm water.



**Warning**

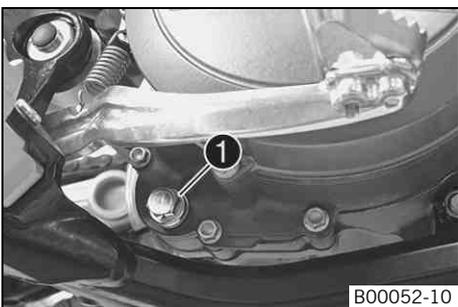
**Environmental hazard** Hazardous substances cause environmental damage.

- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.



**Info**

Drain the gear oil only when the engine is warm.



B00052-10

- Place the motorcycle on a level surface.
- Place a suitable container under the engine.
- Remove the gear oil drain plug with magnet ❶.
- Completely drain the gear oil.
- Thoroughly clean the gear oil drain plug with a magnet.
- Clean the sealing area on the engine.
- Mount the gear oil drain plug with magnet ❶ and the seal ring and tighten it.

Guideline

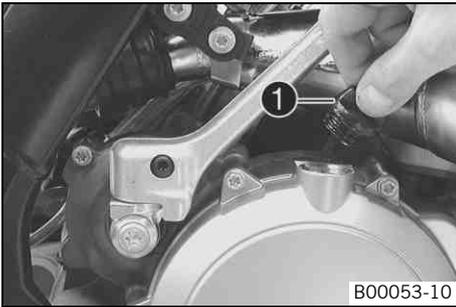
Gear oil drain plug with magnet	M12x1.5	20 Nm (14.8 lbf ft)
---------------------------------	---------	---------------------

## Refilling with gear oil



### Info

Too little gear oil or poor-quality oil results in premature wear of the transmission.



- Remove screw cap ❶ and fill up gear oil.

Gear oil	0.70 l (0.74 qt.)	Engine oil (15W/50) (☛ p. 96)
----------	-------------------	-------------------------------

- Mount and tighten the screw cap.



### Danger

**Danger of poisoning** Exhaust gases are poisonous and inhaling them may 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 an enclosed space without an effective exhaust extraction system.

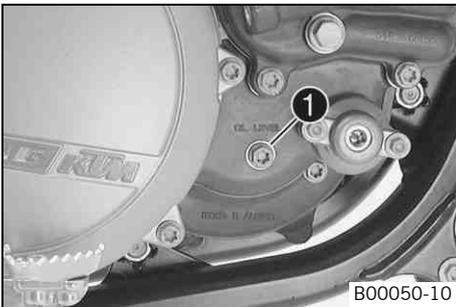
- Start the engine and check that it is oil-tight.
- Check the gear oil level. (☛ p. 76)

## Adding gear oil

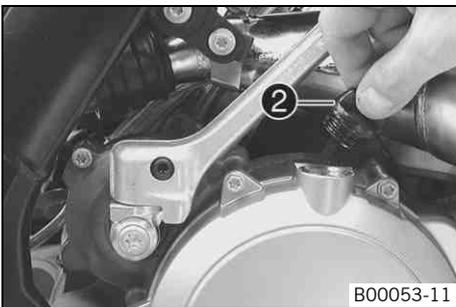


### Info

Too little gear oil or poor-quality oil results in premature wear of the transmission. The gear oil must be added when the engine is cold.



- Place the motorcycle on a level surface.
- Remove gear oil level check screw ❶.



- Remove screw cap ❷.
- Add gear oil until it flows out of the hole of the gear oil level check screw.

Engine oil (15W/50) (☛ p. 96)
-------------------------------

- Mount and tighten the gear oil level check screw.

### Guideline

Screw, gear oil level check	M6	10 Nm (7.4 lbf ft)
-----------------------------	----	--------------------

- Mount and tighten screw cap ❷.



### Danger

**Danger of poisoning** Exhaust gases are poisonous and inhaling them may 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 an enclosed space without an effective exhaust extraction system.

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

Faults	Possible cause	Action
The engine cannot be cranked (electric starter)	Operating error	– Go through the steps of starting the engine. (☛ p. 28)
	Battery discharged	– Recharge the battery. ☛ (☛ p. 63) – Check the charging voltage. ☛ – Check the closed current. ☛ – Check the alternator. ☛
	Fuse blown	– Remove the fuse. (☛ p. 64) – Replace the fuse. (☛ p. 64)
	Starter relay faulty	– Check the starter relay. ☛
	Starter motor faulty	– Check the starter motor. ☛
Engine turns but does not start	Operating error	– Go through the steps of starting the engine. (☛ p. 28)
	Motorcycle was out of use for a long time and there is old fuel in the float chamber	– Empty the carburetor float chamber. ☛ (☛ p. 76)
	Fuel feed interrupted	– Check the fuel tank breather. – Clean the fuel tap. – Check/set the carburetor components.
	Spark plug oily or wet	– Clean and dry the spark plug, or change it if necessary.
	Electrode distance (plug gap) of spark plug too wide	– Adjust the plug gap. Guideline Spark plug electrode gap 0.60 mm (0.0236 in)
	Fault in ignition system	– Check the ignition system. ☛
	Short circuit cable in wiring harness frayed, short circuit button defective	– Check the short circuit button. ☛
	Socket connector or ignition coil is loose or oxidized	– Clean the plug-in connector and treat it with contact spray.
Engine has no idle	Water in carburetor or jets blocked	– Check/set the carburetor components.
	Idling jet blocked	– Check/set the carburetor components.
	Adjusting screws on carburetor distorted	– Carburetor - adjust the idle speed. ☛ (☛ p. 75)
	Spark plug defective	– Change the spark plug.
Engine does not speed up	Ignition system defective	– Check the ignition coil. ☛ – Check the spark plug connector. ☛
	Carburetor running over because float needle dirty or worn	– Check/set the carburetor components.
	Loose carburetor jets	– Check/set the carburetor components.
Engine has too little power	Fault in ignition system	– Check the ignition system. ☛
	Fuel feed interrupted	– Check the fuel tank breather. – Clean the fuel tap. – Check/set the carburetor components.
	Air filter very dirty	– Clean the air filter. ☛ (☛ p. 72)
	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. ☛ (☛ p. 71)
	Diaphragm or reed valve housing damaged	– Check the diaphragm and reed valve housing.
Engine stalls or is popping into the carburetor	Lack of fuel	– Turn handle ❶ of the fuel tap to the <b>ON</b> position. – Refuel. (☛ p. 30)
	Engine takes in bad air	– Check the intake flange and carburetor for tightness.

Faults	Possible cause	Action
Engine stalls or is popping into the carburetor	Socket connector or ignition coil is loose or oxidized	– Clean the plug-in connector and treat it with contact spray.
Engine overheats	Too little coolant in cooling system	– Check the cooling system for leakage. – Check the coolant level. (☛ p. 68)
	Too little air stream	– Switch off engine when stationary.
	Radiator fins very dirty	– Clean the radiator fins.
	Foam formation in cooling system	– Drain the coolant. ☛ (☛ p. 68) – Refill with coolant. ☛ (☛ p. 69)
	Damaged cylinder head or cylinder head gasket	– Check the cylinder head or cylinder head gasket.
	Bent radiator hose	– Change the radiator hose. ☛
	Incorrect ignition point due to loose stator	– Adjust the ignition. ☛
White smoke emission (steam in exhaust gas)	Damaged cylinder head or cylinder head gasket	– Check the cylinder head or cylinder head gasket.
Gear oil exits at the vent hose	Too much gear oil added	– Check the gear oil level. (☛ p. 76)
Water in the gear oil	Damaged shaft seal ring or water pump	– Check the shaft seal ring and water pump.

## Cleaning the 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, socket connects, throttle cables, and bearings, etc., and can damage or destroy these parts.



### Warning

**Environmental hazard** Hazardous substances cause environmental damage.

- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.



### Info

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

- Close off the exhaust system to prevent water from entering.
- Remove coarse dirt particles by spraying gently with water.
- Spray very dirty areas with a normal motorcycle cleaner and then clean with a soft brush.

Motorcycle cleaner (☛ p. 98)



### Info

Use warm water containing normal motorcycle cleaner and a soft sponge.

- After rinsing the motorcycle with a gentle water spray, allow it to dry thoroughly.
- Empty the carburetor float chamber. ☛ (☛ p. 76)



### Warning

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

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

- After cleaning, take a short ride until the engine reaches operating temperature.



### Info

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

- Push back the protective covers from the handlebar armatures to allow the water to evaporate.
- After the motorcycle has cooled off, oil or grease all moving parts and bearings.
- Clean the chain. (☛ p. 46)
- Treat bare metal parts (except for brake discs and exhaust system) with anti-corrosion materials.

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

- Treat all plastic parts and powder-coated parts with a mild cleaning and care product.

Cleaning and preserving materials for metal, rubber and plastic (☛ 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. 99)

## 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 put the motorcycle into storage 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. 81)
- Change the gear oil. 🛢️ (🔧 p. 77)
- Check the antifreeze and coolant level. (🔧 p. 67)
- Drain the fuel from the tank into a suitable container.
- Empty the carburetor float chamber. 🛢️ (🔧 p. 76)
- Check the tire air pressure. (🔧 p. 60)
- Remove the battery. 🛢️ (🔧 p. 62)
- Recharge the battery. 🛢️ (🔧 p. 63)

#### Guideline

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

- Store the vehicle in a dry location that is not subject to large fluctuations in temperature.



### Info

KTM recommends jacking up the motorcycle.

- Jack up the motorcycle. (🔧 p. 34)
- Cover the vehicle 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. Because the engine will not warm up sufficiently, the water vapor produced during combustion will condense, causing engine parts and the exhaust system to rust.

## Putting into operation after storage

- Remove the motorcycle from the work stand. (🔧 p. 34)
- Install the battery. 🛢️ (🔧 p. 62)
- Refuel. (🔧 p. 30)
- Perform the checks before putting into operation. (🔧 p. 28)
- Make a test ride.

Design	1-cylinder 2-stroke engine, water-cooled, with reed intake and exhaust control
Displacement	249 cm <sup>3</sup> (15.19 cu in)
Stroke	72 mm (2.83 in)
Bore	66.4 mm (2.614 in)
Exhaust valve - Beginning of adjustment	5,500 rpm
Exhaust valve - end of adjustment with red auxiliary spring	7,300 rpm
Exhaust valve - end of adjustment with yellow auxiliary spring	7,800 rpm
Exhaust valve - end of adjustment with green auxiliary spring	8,300 rpm
Crankshaft bearing	1 grooved ball bearing/1 roller bearing
Conrod bearing	Needle bearing
Piston pin bearing	Needle bearing
Pistons	Aluminum cast
Piston rings	2 rectangular rings
X (upper edge of piston to upper edge of cylinder)	0... 0.10 mm (0... 0.0039 in)
Z (height of control flap)	47.5 mm (1.87 in)
Primary transmission	26:72
Clutch	Multidisc clutch in oil bath/hydraulically activated
Gearbox	5-gear, claw shifted
Transmission ratio	
1st gear	14:30
2nd gear	17:26
3rd gear	19:23
4th gear	20:20
5th gear	29:23
Ignition	Kokusan E
Ignition point (BTDC)	1.9 mm (0.075 in)
Spark plug	NGK BR 7 ES
Spark plug electrode gap	0.60 mm (0.0236 in)
Starting aid	Kick starter and electric starter

## Capacity - transmission oil

Gear oil	0.70 l (0.74 qt.)	Engine oil (15W/50) (☛ p. 96)
----------	-------------------	-------------------------------

## Capacity - coolant

Coolant	1.2 l (1.3 qt.)	Coolant (☛ p. 96)
		Coolant (mixed ready to use) (☛ p. 96)

Remaining screws, engine	M5	6 Nm (4.4 lbf ft)	–
Screw, exhaust control cover	M5	5 Nm (3.7 lbf ft)	–
Screw, ignition pulse generator	M5	6 Nm (4.4 lbf ft)	<b>Loctite® 243™</b>
Screw, retaining bracket of exhaust control	M5	7 Nm (5.2 lbf ft)	<b>Loctite® 243™</b>
Screw, water pump wheel	M5	6 Nm (4.4 lbf ft)	<b>Loctite® 243™</b>
Remaining screws, engine	M6	10 Nm (7.4 lbf ft)	–
Screw, alternator cover/electric starter	M6	8 Nm (5.9 lbf ft)	–
Screw, clutch cover	M6	10 Nm (7.4 lbf ft)	–
Screw, clutch spring	M6	10 Nm (7.4 lbf ft)	–
Screw, control flap of exhaust control	M6	10 Nm (7.4 lbf ft)	<b>Loctite® 243™</b>
Screw, engine housing	M6	10 Nm (7.4 lbf ft)	–
Screw, gear oil level check	M6	10 Nm (7.4 lbf ft)	–
Screw, intake flange	M6	8 Nm (5.9 lbf ft)	–
Screw, intermediate wheel bolt	M6	8 Nm (5.9 lbf ft)	<b>Loctite® 2701</b>
Screw, shift drum locating	M6	10 Nm (7.4 lbf ft)	<b>Loctite® 243™</b>
Screw, shift lever	M6	14 Nm (10.3 lbf ft)	<b>Loctite® 243™</b>
Screw, stator bracket	M6	8 Nm (5.9 lbf ft)	<b>Loctite® 243™</b>
Screw, water pump cover	M6	10 Nm (7.4 lbf ft)	<b>Loctite® 243™</b>
Remaining screws, engine	M8	25 Nm (18.4 lbf ft)	–
Screw, cylinder head	M8	27 Nm (19.9 lbf ft)	–
Screw, kickstarter	M8	25 Nm (18.4 lbf ft)	<b>Loctite® 243™</b>
Nuts, cylinder base	M10	35 Nm (25.8 lbf ft)	–
Remaining screws, engine	M10	45 Nm (33.2 lbf ft)	–
Drain plug, water pump cover	M10x1	15 Nm (11.1 lbf ft)	–
Nut, rotor	M12x1	60 Nm (44.3 lbf ft)	–
Gear oil drain plug with magnet	M12x1.5	20 Nm (14.8 lbf ft)	–
Spark plug	M14x1.25	25 Nm (18.4 lbf ft)	–
Nut, inner clutch hub	M18x1.5	100 Nm (73.8 lbf ft)	<b>Loctite® 2701</b>
Nut, primary gear	M18LHx1.5	150 Nm (110.6 lbf ft)	<b>Loctite® 243™</b>

Carburetor type	KEIHIN PWK 36S AG
Carburetor identification number	FK0251
Needle position	3rd position from top
Jet needle	N84K (N8RH / N8RJ / N8RW)
Main jet	115 (162 / 165)
Idling jet	38X38 (35)
Starting jet	50 (85)
Idle air adjusting screw	
Open	1.75 turns
Throttle slide	7 with cut-out
Slide stop	Present

## Carburetor configuration



### Danger

**Loss of approval for road use and insurance coverage** 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 property remote from public road traffic.

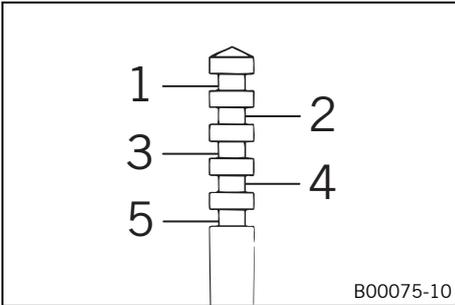
KEIHIN PWK 36S AG							
M/FT ASL ↓	TEMP →	-20°C ... -7°C	-6°C ... 5°C	6°C ... 15°C	16°C ... 24°C	25°C ... 36°C	37°C ... 49°C
		-2°F ... 20°F	19°F ... 41°F	42°F ... 60°F	61°F ... 78°F	79°F ... 98°F	99°F ... 120°F
3.000 m 10,000 ft ↑ 2.301 m 7,501 ft	ASO IJ NDL POS MJ	1 35 N8RW 4 165	1 35 N8RW 3 165	1,5 35 N8RJ 3 162	1,5 35 N8RJ 2 160	2 35 N8RK 2 158	
2.300 m 7,500 ft ↑ 1.501 m 5,001 ft	ASO IJ NDL POS MJ	1 35 N8RH 4 168	1 35 N8RW 4 165	1 35 N8RW 3 165	1,5 35 N8RJ 3 162	1,5 35 N8RJ 2 160	2 35 N8RK 2 158
1.500 m 5,000 ft ↑ 751 m 2,501 ft	ASO IJ NDL POS MJ	1 35 N8RG 4 170	1 35 N8RH 4 168	1 35 N8RW 4 165	1 35 N8RW 3 165	1,5 35 N8RJ 3 162	1,5 35 N8RJ 2 160
750 m 2,500 ft ↑ 301 m 1,001 ft	ASO IJ NDL POS MJ	1 38 N8RG 5 172	1 35 N8RG 4 170	1 35 N8RH 4 168	<b>1</b> <b>35</b> <b>N8RW</b> <b>4</b> <b>165</b>	1 35 N8RW 3 165	1,5 35 N8RJ 3 162
300 m 1,000 ft ↑ 0 m 0 ft	ASO IJ NDL POS MJ	0,75 40 N8RG 5 175	1 38 N8RG 5 172	1 35 N8RG 4 170	1 35 N8RH 4 168	1 35 N8RW 4 165	1 35 N8RW 3 165

400751-01

M/FT ASL	Sea level
TEMP	Temperature
ASO	Idle air adjusting screw is open
IJ	Idling jet
NDL	Needle
POS	Needle position from above
MJ	Main jet

Does not apply to sand surfaces!

## General carburetor configuration ↴



1... 5

Needle position from above

The five needle positions are shown here.

The carburetor configuration depends on the defined ambient and operating conditions.

Frame	Central tube frame made of chrome molybdenum steel tubing	
Fork	<b>WP Suspension</b> Up Side Down 4860 MXMA PA	
Suspension travel		
Front	300 mm (11.81 in)	
Rear	335 mm (13.19 in)	
Fork offset	22 mm (0.87 in)	
Shock absorber	<b>WP Suspension</b> PDS 5018 DCC	
Brake system	Disc brakes, brake calipers on floating bearings	
Brake discs - diameter		
Front	260 mm (10.24 in)	
Rear	220 mm (8.66 in)	
Brake discs - wear limit		
Front	2.5 mm (0.098 in)	
Rear	3.5 mm (0.138 in)	
Tire air pressure off road		
Front	1.0 bar (15 psi)	
Rear	1.0 bar (15 psi)	
Secondary ratio	13:40	
Chain	5/8 x 1/4"	
Rear sprockets available	38, 40, 42, 45, 48, 49, 50, 51, 52	
Steering head angle	63.5°	
Wheelbase	1,475±10 mm (58.07±0.39 in)	
Seat height unloaded	985 mm (38.78 in)	
Ground clearance unloaded	385 mm (15.16 in)	
Weight without fuel, approx.	100.8 kg (222.2 lb.)	
Maximum permissible front axle load	145 kg (320 lb.)	
Maximum permissible rear axle load	190 kg (419 lb.)	
Maximum permissible overall weight	335 kg (739 lb.)	

Battery	YTX4L-BS	Battery voltage: 12 V Nominal capacity: 3 Ah maintenance-free
---------	----------	---

## Lighting equipment

Headlight	S2 / socket BA20d	12 V 35/35 W
Parking light	W5W / socket W2.1x9.5d	12 V 5 W
Indicator lamps	W2.3W / socket W2x4.6d	12 V 2.3 W
Turn signal	R10W / socket BA15s	12 V 10 W
Brake/tail light	LED	
License plate lamp	W5W / socket W2.1x9.5d	12 V 5 W

## Tires

Front tire	Rear tire
<b>90/90 - 21 M/C 54M M+S TT</b> Metzeler MCE 6 DAYS EXTREME	<b>140/80 - 18 M/C 70M M+S TT</b> Metzeler MCE 6 DAYS EXTREME
Additional information is available in the Service section under: <a href="http://www.ktm.com">http://www.ktm.com</a>	

## Capacity - fuel

Total fuel tank capacity, approx.	9.5 l (2.51 US gal)	Super unleaded gasoline, mixed with 2-stroke engine oil (1:60) (☛ p. 97)
Fuel reserve, approx.	2 l (2 qt.)	

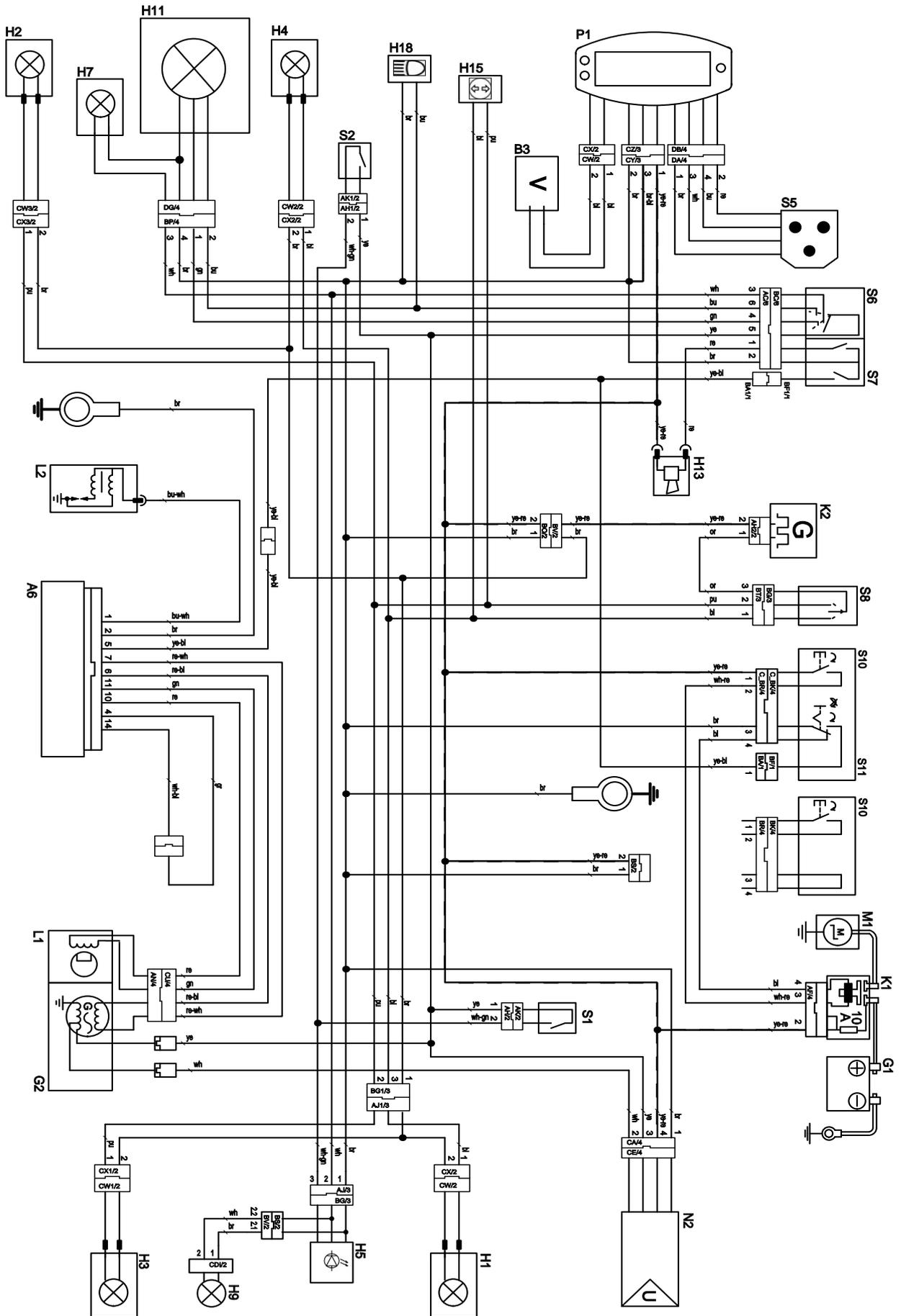
Fork part number	14.18.7J.04
Fork	<b>WP Suspension</b> Up Side Down 4860 MXMA PA
Compression damping	
Comfort	26 clicks
Standard	22 clicks
Sport	18 clicks
Rebound damping	
Comfort	24 clicks
Standard	20 clicks
Sport	20 clicks
Spring length with preload spacer(s)	
Weight of rider: 65... 75 kg (143... 165 lb.)	510 mm (20.08 in)
Weight of rider: 75... 85 kg (165... 187 lb.)	513 mm (20.2 in)
Weight of rider: 85... 95 kg (187... 209 lb.)	510 mm (20.08 in)
Spring rate	
Weight of rider: 65... 75 kg (143... 165 lb.)	4.0 N/mm (22.8 lb/in)
Weight of rider: 75... 85 kg (165... 187 lb.)	4.2 N/mm (24 lb/in)
Weight of rider: 85... 95 kg (187... 209 lb.)	4.4 N/mm (25.1 lb/in)
Fork length	940 mm (37.01 in)
Air chamber length	110 <sup>+20</sup> <sub>-30</sub> mm (4.33 <sup>+0.79</sup> <sub>-1.18</sub> in)
Spring preload - <b>Preload Adjuster</b>	
Comfort	0 turn
Standard	2 turns
Sport	4 turns
Fork oil per fork leg	Fork oil (SAE 5) (☛ p. 96)

Shock absorber part number	12.18.7J.04
Shock absorber	<b>WP Suspension</b> PDS 5018 DCC
Compression damping, low-speed	
Comfort	22 clicks
Standard	20 clicks
Sport	15 clicks
Compression damping, high-speed	
Comfort	2 turns
Standard	1.5 turns
Sport	1.25 turns
Rebound damping	
Comfort	26 clicks
Standard	24 clicks
Sport	22 clicks
Spring preload	8 mm (0.31 in)
Spring rate	
Weight of rider: 65... 75 kg (143... 165 lb.)	66 N/mm (377 lb/in)
Weight of rider: 75... 85 kg (165... 187 lb.)	69 N/mm (394 lb/in)
Weight of rider: 85... 95 kg (187... 209 lb.)	72 N/mm (411 lb/in)
Spring length	250 mm (9.84 in)
Gas pressure	10 bar (145 psi)
Static sag	35 mm (1.38 in)
Riding sag	105 mm (4.13 in)
Fitted length	411 mm (16.18 in)
Shock absorber oil (☛ p. 96)	SAE 2,5

Spoke nipple, front wheel	M4.5	5... 6 Nm (3.7... 4.4 lbf ft)	–
Spoke nipple, rear wheel	M5	5... 6 Nm (3.7... 4.4 lbf ft)	–
Remaining nuts, chassis	M6	15 Nm (11.1 lbf ft)	–
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)	–
Screw, ball joint of push rod on foot brake cylinder	M6	10 Nm (7.4 lbf ft)	–
Screw, front brake disc	M6	14 Nm (10.3 lbf ft)	–
Screw, rear brake disc	M6	14 Nm (10.3 lbf ft)	–
Screw, shock absorber adjusting ring	M6	5 Nm (3.7 lbf ft)	–
Nut, rear sprocket screw	M8	35 Nm (25.8 lbf ft)	<b>Loctite® 243™</b>
Nut, rim lock	M8	10 Nm (7.4 lbf ft)	–
Remaining nuts, chassis	M8	30 Nm (22.1 lbf ft)	–
Remaining screws, chassis	M8	25 Nm (18.4 lbf ft)	–
Screw, bottom triple clamp	M8	15 Nm (11.1 lbf ft)	–
Screw, engine brace	M8	33 Nm (24.3 lbf ft)	–
Screw, fork stub	M8	15 Nm (11.1 lbf ft)	–
Screw, front brake caliper	M8	25 Nm (18.4 lbf ft)	<b>Loctite® 243™</b>
Screw, side stand attachment	M8	40 Nm (29.5 lbf ft)	<b>Loctite® 243™</b>
Screw, subframe	M8	35 Nm (25.8 lbf ft)	<b>Loctite® 243™</b>
Screw, top steering stem	M8	20 Nm (14.8 lbf ft)	–
Screw, top triple clamp	M8	20 Nm (14.8 lbf ft)	–
Engine bracket screw	M10	60 Nm (44.3 lbf ft)	–
Remaining nuts, chassis	M10	50 Nm (36.9 lbf ft)	–
Remaining screws, chassis	M10	45 Nm (33.2 lbf ft)	–
Screw, handlebar support	M10	40 Nm (29.5 lbf ft)	<b>Loctite® 243™</b>
Screw, bottom shock absorber	M12	80 Nm (59 lbf ft)	<b>Loctite® 243™</b>
Screw, top shock absorber	M12	80 Nm (59 lbf ft)	<b>Loctite® 243™</b>
Nut, seat fixing	M12x1	20 Nm (14.8 lbf ft)	–
Nut, swingarm pivot	M16x1.5	100 Nm (73.8 lbf ft)	–
Nut, rear wheel spindle	M20x1.5	80 Nm (59 lbf ft)	–
Screw, top steering head	M20x1.5	10 Nm (7.4 lbf ft)	–
Screw-in nozzles, cooling system	M20x1.5	12 Nm (8.9 lbf ft)	<b>Loctite® 243™</b>
Screw, front wheel spindle	M24x1.5	45 Nm (33.2 lbf ft)	–



## Wiring diagram



## Components

A6	CDI controller
B3	Wheel speed sensor
G1	Battery
G2	Alternator
H1	Right rear turn signal
H2	Left front turn signal
H3	Left rear turn signal
H4	Right front turn signal
H5	Brake/tail light
H7	Parking light
H9	License plate lamp
H11	Low/high beam
H13	Horn
H15	Turn signal indicator light
H18	High beam indicator light
K1	Starter relay with main fuse
K2	Turn signal relay
L1	Pulse generator
L2	Ignition coil
M1	Starter motor
N2	Voltage regulator/rectifier
P1	Speedometer
S1	Rear brake light switch
S2	Front brake light switch
S5	Tripmaster switch (optional)
S6	Light switch
S7	Horn button, kill switch
S8	Turn signal switch
S10	Electric starter button
S11	Emergency OFF switch (EXC OFF)

## Cable colors

bl	Black
bl-wh	Black-white
br	Brown
br-bl	Brown-black
bu	Blue
bu-wh	Blue-white
gn	Green
gr	Gray
or	Orange
pu	Violet
re	Red
re-bl	Red-black
re-wh	Red-white
wh	White
wh-gn	White-green
wh-re	White-red
ye	Yellow
ye-bl	Yellow-black
ye-re	Yellow-red

## Brake fluid DOT 4 / DOT 5.1

### According to

- DOT

### Guideline

- Use only brake fluid that complies with the specified standard (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 (also in countries with high temperatures). 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 inhibitor/antifreeze 50 % distilled water
--	---

## Coolant (mixed ready to use)

Antifreeze	-40 °C (-40 °F)
------------	-----------------

### Supplier

#### Motorex®

- **Anti Freeze**

## Engine oil (15W/50)

### According to

- JASO T903 MA (☛ p. 100)
- SAE (☛ p. 100) (15W/50)

### 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.

### Supplier

#### Motorex®

- **Top Speed 4T**

## Fork oil (SAE 5)

### According to

- SAE (☛ p. 100) (SAE 5)

### Guideline

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

### Supplier

#### Motorex®

- **Racing Fork Oil**

## Shock absorber oil (SAE 2,5) (50180342S1)

### According to

- SAE (☛ p. 100) (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 gasoline, mixed with 2-stroke engine oil (1:60)

### According to

- DIN EN 228
- JASO FC (☛ p. 100) (1:60)

### Mixture ratio

1:60	2-stroke engine oil Super unleaded (ROZ 95 / RON 95 / PON 91)
------	--

## Air filter cleaner

### Guideline

- KTM recommends **Motorex®** products.

### Supplier

#### Motorex®

- **Twin Air Dirt Bio Remover**

## Chain cleaner

### Guideline

- KTM recommends **Motorex®** products.

### Supplier

#### Motorex®

- **Chain Clean 611**

## Cleaning and preserving materials for metal, rubber and plastic

### Guideline

- KTM recommends **Motorex®** products.

### Supplier

#### Motorex®

- **Protect & Shine 645**

## Contact spray

### Guideline

- KTM recommends **Motorex®** products.

### Supplier

#### Motorex®

- **Accu Contact**

## Long-life grease

### Guideline

- KTM recommends **Motorex®** products.

### Supplier

#### Motorex®

- **Fett 2000**

## Motorcycle cleaner

### Guideline

- KTM recommends **Motorex®** products.

### Supplier

#### Motorex®

- **Moto Clean 900**

## Off-road chain spray

### Guideline

- KTM recommends **Motorex®** products.

### Supplier

#### Motorex®

- **Chain Lube 622**

## Oil for foam air filter

### Guideline

- KTM recommends **Motorex®** products.

### Supplier

#### Motorex®

- **Twin Air Liquid Bio Power**

## Universal oil spray

### Guideline

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

### Supplier

#### **Motorex**<sup>®</sup>

- **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.

## JASO FC

JASO FC is a classification for a 2-stroke engine oil that was specifically developed for the extreme demands of racing. Thanks to first rate synthetic esters and specially designed additives, superb combustion is achieved even under extreme operating conditions.

**A**

**Accessories** . . . . . 5

**Air filter**

    cleaning . . . . . 72

    installing . . . . . 72

    removing . . . . . 71

**Air filter box lid**

    installing . . . . . 71

    removing . . . . . 71

**Antifreeze**

    checking . . . . . 67

**B**

**Basic chassis setting**

    checking with rider's weight . . . . . 34

**Battery**

    installing . . . . . 62

    recharging . . . . . 63

    removing . . . . . 62

**Brake discs**

    checking . . . . . 49

**Brake fluid**

    front brake, adding . . . . . 50

    rear brake, adding . . . . . 54

**Brake fluid level**

    front brake, checking . . . . . 50

    rear brake, checking . . . . . 54

**Brake linings**

    front brake, changing . . . . . 52

    front brake, checking . . . . . 51

    rear brake, changing . . . . . 56

    rear brake, checking . . . . . 55

    rear brake, installing . . . . . 56

    rear brake, removing . . . . . 55

**C**

**Carburetor** . . . . . 74

    float chamber, emptying . . . . . 76

    idle speed, adjusting . . . . . 75

**Chain**

    cleaning . . . . . 46

**Chain guide**

    adjusting . . . . . 49

**Chain tension**

    adjusting . . . . . 48

    checking . . . . . 47

**Chain wear**

    checking . . . . . 47

**Chassis number** . . . . . 9

**Choke** . . . . . 20

**Cleaning** . . . . . 81

**Clutch**

    fluid level, checking . . . . . 73

    fluid, changing . . . . . 73

**Clutch lever** . . . . . 11

    basic position, adjusting . . . . . 73

**Compression damping**

    fork, adjusting . . . . . 39

**Compression damping, high-speed**

    shock absorber, adjusting . . . . . 34

**Compression damping, low-speed**

    shock absorber, adjusting . . . . . 35

**Coolant**

    draining . . . . . 68

    refilling . . . . . 69

**Coolant level**

    checking . . . . . 67-68

**Cooling system** . . . . . 67

**D**

**Difficult operating conditions** . . . . . 24

    dry sand . . . . . 24

    high temperatures . . . . . 27

    low temperatures . . . . . 27

    muddy surfaces . . . . . 26

    riding at low speeds . . . . . 27

    snow . . . . . 27

    wet sand . . . . . 25

    wet surfaces . . . . . 26

**E**

**Electric starter button** . . . . . 11

**Engine**

    running in . . . . . 24

**Engine characteristic**

    auxiliary spring . . . . . 61

    spring . . . . . 61

**Engine number** . . . . . 9

**Environment** . . . . . 6

**F**

**Filler cap**

    closing . . . . . 20

    opening . . . . . 20

**Filling up**

    fuel . . . . . 30

**Foot brake lever** . . . . . 21

    basic position, adjusting . . . . . 53

    checking free travel . . . . . 53

**Fork**

    basic setting, checking . . . . . 39

**Fork legs**

    bleeding . . . . . 40

    dust boots, cleaning . . . . . 40

    installing . . . . . 42

    removing . . . . . 42

**Fork part number** . . . . . 9

**Fork protector**

    installing . . . . . 43

    removing . . . . . 43

**Front fender**

    installing . . . . . 44

    removing . . . . . 43

**Front wheel**  
installing ..... 58  
removing ..... 57

**Fuel tank**  
installing ..... 66  
removing ..... 65

**Fuel tap** ..... 20

**Fuel, oils, etc.** ..... 5

**Fuse**  
installing ..... 64  
removing ..... 64

**G**

**Gear oil**  
adding ..... 78  
changing ..... 77  
draining ..... 77  
refilling ..... 78

**Gear oil level**  
checking ..... 76

**H**

**Hand brake lever** ..... 11  
free travel, adjusting ..... 50  
free travel, checking ..... 49

**Handlebar position** ..... 45  
adjusting ..... 45

**Headlight**  
range, adjusting ..... 65

**Headlight mask with headlight**  
installing ..... 44  
removing ..... 44

**Headlight setting**  
checking ..... 64

**Horn button** ..... 12

**K**

**Key number** ..... 9

**Kickstarter** ..... 21

**L**

**Light switch** ..... 12

**M**

**Main silencer**  
glass fiber yarn filling, changing ..... 71  
glass fiber yarn filling, installing ..... 71  
glass fiber yarn filling, removing ..... 70  
installing ..... 70  
removing ..... 69

**Maintenance** ..... 5

**Motorcycle**  
cleaning ..... 81

**O**

**Overview of indicator lamps** ..... 12

**Owner's manual** ..... 6

**P**

**Putting into operation**  
advice on first use ..... 23

after storage ..... 82  
checks before putting into operation ..... 28

**R**

**Rear sprocket/engine sprocket**  
checking for wear ..... 47

**Rear wheel**  
installing ..... 59  
removing ..... 58

**Rebound damping**  
fork, adjusting ..... 39  
shock absorber, adjusting ..... 35

**Riding sag**  
adjusting ..... 38

**S**

**Seat**  
mounting ..... 65  
removing ..... 65

**Service schedule** ..... 31-33

**Shift lever** ..... 21  
basic position, adjusting ..... 74  
basic position, checking ..... 74

**Shock absorber**  
installing ..... 38  
removing ..... 38  
riding sag, checking ..... 37  
static sag, checking ..... 36

**Shock absorber part number** ..... 10

**Short circuit button** ..... 11

**Side stand** ..... 21

**Spare parts** ..... 5

**Speedometer**  
adjusting ..... 14  
clock, setting ..... 14  
function description ..... 13  
setting kilometers or miles ..... 13

**Spoke tension**  
checking ..... 60

**Spring preload**  
fork, adjusting ..... 40  
shock absorber, adjusting ..... 37

**Starting** ..... 28

**Steering**  
locking ..... 22  
unlocking ..... 22

**Steering head bearing play**  
adjusting ..... 42  
checking ..... 41

**Storage** ..... 82

**T**

**Technical data**  
carburetor ..... 85-87  
chassis ..... 88-89  
chassis tightening torques ..... 92  
engine ..... 83  
engine tightening torques ..... 84

fork ..... 90  
shock absorber ..... 91

**Throttle cable play**  
adjusting ..... 46  
checking ..... 45

**Throttle grip** ..... 11

**Tire air pressure**  
checking ..... 60

**Tire condition**  
checking ..... 60

**Transport** ..... 5

**Troubleshooting** ..... 79-80

**Turn signal switch** ..... 12

**Type label** ..... 9

**U**

**Use definition** ..... 5

**V**

**View of vehicle**  
right rear ..... 8

**W**

**Warranty** ..... 5

**Wiring diagram** ..... 94-95

**Work rules** ..... 5



3211469en



01/2010 Photo: Mitterbauer



KTM-Sportmotorcycle AG  
5230 Mattighofen/Austria  
<http://www.ktm.com>