

OWNER'S MANUAL 2009

690 Supermoto Limited Edition EU

Art. no. 3211364en



KTM

DEAR KTM CUSTOMER

We would like to congratulate you on deciding to purchase a KTM motorcycle. You are now the owner of a state-of-the-art sports motorcycle that will give you a great deal of pleasure during your ownership 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/type label (☛ p. 16)	Dealer's stamp
Engine number (☛ p. 17)	
Key number (☛ p. 16)	

The owner's manual contained the latest information for this model at the time of going to print. Minor differences due to developments in design cannot be ruled out completely.

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MEANS OF REPRESENTATION	6	Setting the clock	28
IMPORTANT INFORMATION	7	Combination instrument - display ODO	29
VIEW OF VEHICLE.....	12	Combination instrument - setting/resetting TRIP 1.....	29
View of vehicle, front left side.....	12	Combination instrument - setting/resetting TRIP 2.....	30
View of vehicle, rear right	14	Combination instrument - TRIP F display.....	31
LOCATION OF SERIAL NUMBERS	16	Combination instrument - coolant temperature indicator	31
Chassis number/type label.....	16	Opening filler cap.....	32
Key number	16	Closing filler cap	32
Engine number.....	17	Fuel taps	33
Fork part number.....	17	Handrails.....	33
Shock absorber part number	18	Seat lock	34
CONTROLS	19	Owner's manual.....	34
Clutch lever	19	Tool set	35
Hand brake lever	19	Passenger footrests.....	35
Light switch	20	Shift lever.....	36
Headlight flasher switch.....	20	Foot brake lever.....	37
Turn signal switch	21	Side stand	37
Horn button	21	GENERAL TIPS AND HINTS ON PREPARING FOR USE.....	38
Ignition/steering lock	22	Advice on first use.....	38
Emergency OFF switch.....	22	Running in the engine.....	39
Electric starter button	23	Loading the vehicle	40
Combination instrument.....	23	RIDING INSTRUCTIONS	42
Combination instrument - function buttons	24	Checks before putting into operation	42
Combination instrument - tachometer.....	24	Starting	43
Combination instrument - indicator lamps.....	25	Starting up	45
Combination instrument - display.....	26	Shifting, riding.....	45
Combination instrument - speedometer.....	27	Braking	48
Setting kilometers or miles	27	Stopping, parking	49
Combination instrument - time	28	Refueling.....	51

SERVICE SCHEDULE.....	53	Removing the front wheel 	76
Important maintenance work to be carried out by an authorized KTM workshop.	53	Installing the front wheel 	77
Important maintenance work to be carried out by an authorized KTM workshop. (as additional order).....	55	Removing rear wheel 	78
MAINTENANCE WORK ON FRAME AND ENGINE.....	57	Installing the rear wheel 	79
Jacking up front of motorcycle	57	Checking the rear hub rubber dampers 	81
Taking the front from the work stand	57	Checking the tire condition.....	82
Jacking up rear of motorcycle	58	Checking the tire pressure.....	84
Taking the rear from the workstand	58	Checking the spoke tension	85
Fork/shock absorber	59	Removing the seat.....	86
Adjusting the rebound damping of the fork.....	59	Mounting the seat	86
Adjusting the rebound damping of the shock absorber.....	60	Reinstalling the fuel tank	87
Bleeding the fork legs	61	Positioning the fuel tank	88
Checking the chain for dirt	62	Removing the battery 	89
Cleaning the chain.....	62	Installing the battery 	90
Checking the chain tension	63	Recharging the battery 	90
Adjusting the chain tension	64	Changing the main fuse	92
Checking rear sprocket / engine sprocket for wear	66	Changing the fuses of individual power consumers.....	93
Checking chain wear	67	Removing headlight mask with headlight	95
Checking the brake discs.....	68	Refitting the headlight mask with the headlight.....	96
Adjusting basic position of hand brake lever.....	69	Changing the headlight bulb.....	97
Checking the front brake fluid level	69	Changing the parking light bulb	98
Adding front brake fluid 	70	Changing the turn signal bulb.....	99
Checking the front brake linings.....	72	Checking the headlight setting.....	100
Checking free play of foot brake lever	72	Adjusting the headlight range	100
Checking rear brake fluid level.....	73	Cooling system	101
Adding rear brake fluid 	74	Checking the antifreeze and coolant level	102
Checking the rear brake linings.....	75	Checking the coolant level.....	105
		Draining the coolant 	106
		Filling/bleeding the cooling system 	107

Adjusting basic position of clutch lever.....	109	TECHNICAL DATA - CHASSIS	141
Checking the basic position of the shift lever.....	110	Lighting equipment	142
Adjusting the basic position of the shift lever 	111	Capacity - fuel.....	143
Checking/rectifying the fluid level of the hydraulic clutch ...	112	TECHNICAL DATA - FORK.....	144
Checking the play in the throttle cable.....	112	TECHNICAL DATA - SHOCK ABSORBER	145
Adjusting the play in the throttle cable 	113	TECHNICAL DATA - CHASSIS TIGHTENING TORQUES	146
Adjusting the handlebar angle 	114	OPERATING SUBSTANCES.....	150
Checking the engine oil level	114	AUXILIARY SUBSTANCES.....	153
Changing the engine oil and filter, cleaning the oil screens 	115	STANDARDS.....	155
Draining the engine oil 	115	INDEX	156
Removing the oil filter 	117		
Installing the oil filter 	118		
Cleaning the oil screens 	118		
Refilling with engine oil 	120		
Adding engine oil	121		
TRUBLESHOOTING.....	123		
BLINK CODE	126		
CLEANING.....	131		
Cleaning motorcycle	131		
PROTECTIVE TREATMENT FOR WINTER OPERATION.....	133		
Protective treatment for winter operation	133		
STORAGE	134		
Storage.....	134		
Putting into operation after storage	135		
TECHNICAL DATA - ENGINE.....	136		
Capacity - engine oil	137		
Capacity - coolant.....	137		
TECHNICAL DATA - ENGINE TIGHTENING TORQUES.....	138		

Symbols used

The meaning of specific symbols is described below.



Indicates an expected reaction (e.g. of a work step or a function).



Indicates an unexpected reaction (e.g. of a work step or a function).



All work marked with this symbol requires specialist knowledge and technical understanding. In the interest of your own safety, have these jobs done in an authorized KTM workshop! There, your motorcycle will be serviced optimally by specially trained experts using the specialist tools required.



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

Formats used

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

Specific name Identifies a proprietary name.

Name[®] Identifies a protected name.

Brand[™] Identifies a trademark.

Use definition

KTM sport motorcycles are designed and constructed to meet the normal demands of regular road operation but not for use on race courses or offroad.



Info

The motorcycle is authorized for public road traffic in the homologous version only.

Maintenance

A prerequisite for perfect operation and prevention of wear is that the engine and chassis maintenance and adjustment work described in the owner's manual are properly carried out. Poor adjustment and tuning of the engine and chassis can lead to damage and breakage of components.

Using the motorcycle in extreme conditions such as very muddy or wet roads 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 plan must only be carried out in an authorized KTM workshop and confirmed in the service record; otherwise all warranty claims will be disregarded. No warranty claim can be met for damage resulting from manipulation and/or other changes 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.

Some spare parts and accessory products 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 necessary for certain tasks. The tools are not contained in the vehicle but can be ordered under the number in parentheses. Example: valve spring mounter (59029019000)

During assembly, non-reusable parts (e.g. self-locking screws and nuts, seals and seal rings, O-rings, pins, lock washers) must be replaced by new parts.

If a thread lock (e.g. **Loctite**®) is used for screw connections, be sure to comply with the manufacturer's specific instructions on its usage. Parts that you want to reuse following repairs and servicing should be cleaned and checked for damage and wear. Change damaged or worn parts.

Following repairs or servicing, the vehicle must be checked for roadworthiness.

Transport

Note

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

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

Note

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

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

- Switch off the engine and remove the ignition key.
- Use straps or other suitable devices to secure the motorcycle against accidents or falling over.

Environment

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

Notes/warnings

Pay close attention to the notes/warning.



Info

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

Grades of risks



Danger

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



Warning

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



Caution

Identifies a danger that will possibly lead to light injury if the appropriate measures are not taken.

Note

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



Warning

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

Owner's manual

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

View of vehicle, front left side



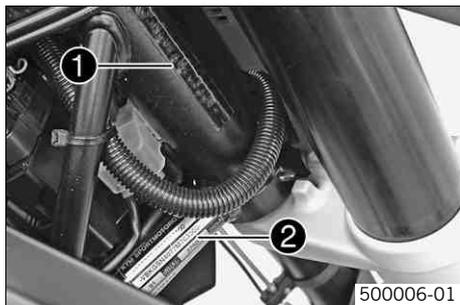
1	Combination instrument
2	Rear mirror
3	Clutch lever
4	Seat
5	Handrail
6	Front brake caliper
7	Left fuel tap
8	Shift lever
9	Engine number
10	Side stand

View of vehicle, rear right



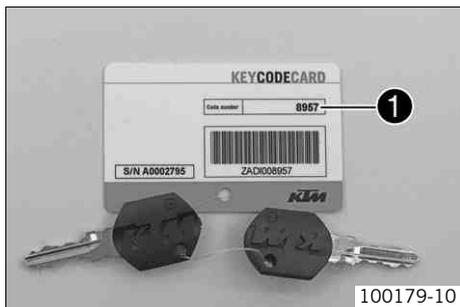
1	Seat lock
2	Light switch, headlight flasher switch, turn signal switch, horn
3	Filler cap
4	Emergency OFF switch, electric starter button
5	Hand brake lever
6	Chassis number, type label
7	Brake caliper, rear
8	Passenger footrests
9	Foot brake lever
10	Level viewer, engine oil
11	Right fuel tap

Chassis number/type label



The chassis number ❶ is stamped on the right of the steering head.
The type label ❷ is on the right of the frame behind the steering head.

Key number



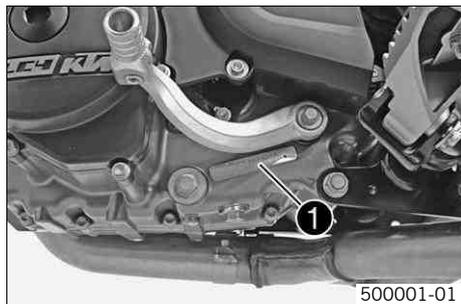
The key number ❶ can be found on the **KEYCODECARD**.



Info

You need the key number to order a spare key. Keep the **KEYCODECARD** in a safe place.

Engine number



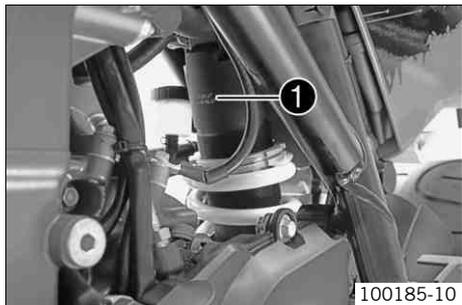
The engine number ❶ is stamped on the left side of the engine under the engine sprocket.

Fork part number



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

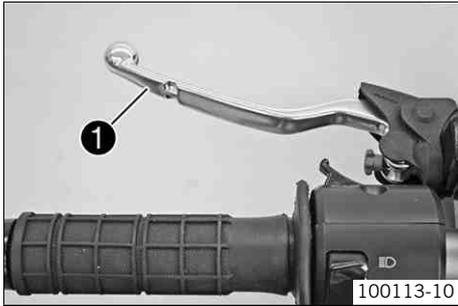
Shock absorber part number



100185-10

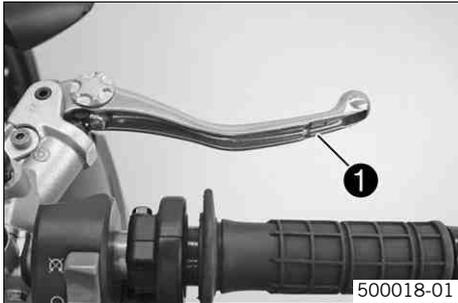
The shock absorber part number ❶ is stamped on the top of the shock absorber above the adjusting ring on the engine side.

Clutch lever



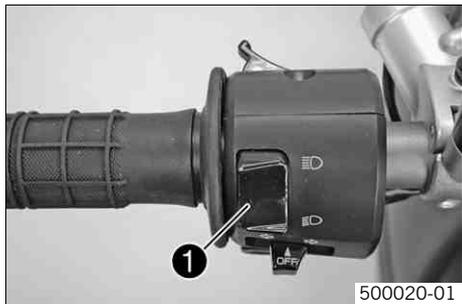
The clutch lever ❶ is fitted on the left side of the handlebar.
The clutch is hydraulically operated and self-adjusting.

Hand brake lever



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

Light switch

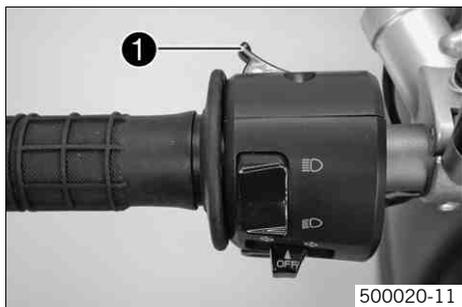


The light switch ❶ is fitted on the left side of the handlebar.

Possible states

	<p>Low beam on – Light switch is turned downwards. In this position, the low beam and tail light are switched on.</p>
	<p>High beam on – Light switch is turned upwards. In this position, the high beam and the tail light are switched on.</p>

Headlight flasher switch



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

Possible states

- Headlight flasher switch in neutral position
- Headlight flasher switch pressed – In this position, the headlight flasher (high beam) is actuated.

Turn signal switch



500021-10

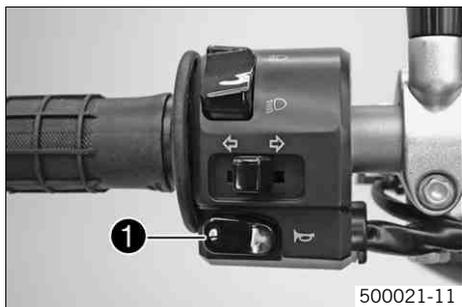
The turn signal switch ❶ is fitted on the left side of the handlebar.

Possible states

	Turn signal off
	Left turn signal on – The turn signal switch is pressed to the left. The turn signal switch automatically returns to the central position after use.
	Right turn signal on – The turn signal switch is pressed to the right. The turn signal switch automatically returns to the central position after use.

To switch off the turn signal, press the turn signal switch towards the switch housing.

Horn button



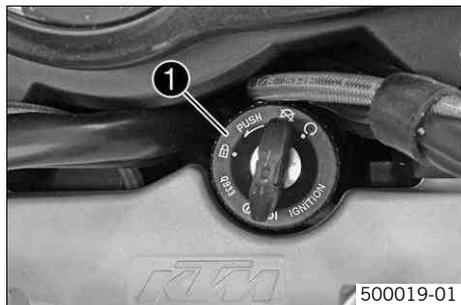
500021-11

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.

Ignition/steering lock

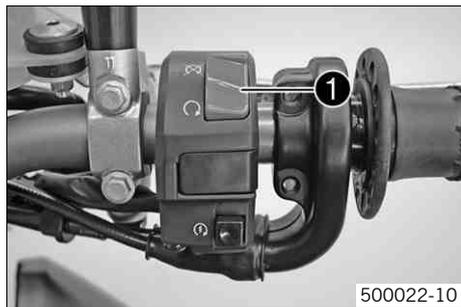


The ignition/steering lock ❶ is in front of the upper triple clamp.

Possible states

	<p>Ignition off – In this position, the ignition circuit is interrupted, a running engine stops, and a non-running engine will not start. The ignition key can be removed.</p>
	<p>Ignition on – In this position, the ignition circuit is closed and the engine can be started.</p>
	<p>Steering locked – In this position, the ignition circuit is interrupted and the steering locked. The ignition key can be removed.</p>

Emergency OFF switch



The emergency OFF switch ❶ is fitted on the right side of the handlebar.

Possible states

	<p>Emergency OFF switch off – In this position, the ignition circuit is interrupted, a running engine stops, and the engine cannot be started.</p>
	<p>Emergency OFF switch on – This position is necessary for operation as the ignition circuit is closed.</p>

Electric starter button

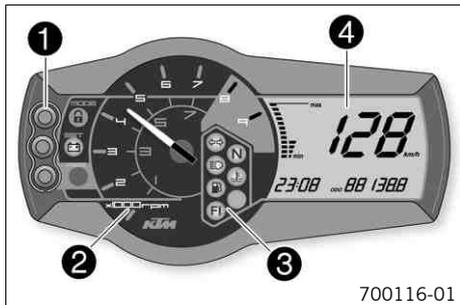


The electric starter button ❶ is fitted on the right side of the handlebar.

Possible states

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

Combination instrument

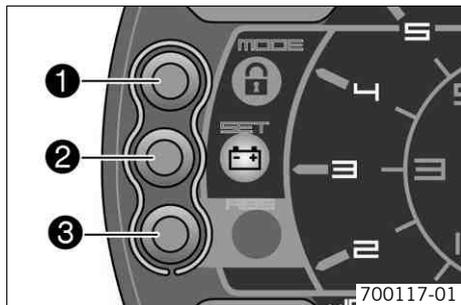


The combination instrument is installed in front of the handlebar.

The combination instrument is divided into 4 function areas.

- ❶ Function buttons
- ❷ Tachometer
- ❸ Indicator lights
- ❹ Display

Combination instrument - function buttons



You can change the display mode with the **MODE** button ❶.

Possible display modes are distance traveled (**ODO**), trip master 1 (**TRIP 1**) and trip master 2 (**TRIP 2**).

Press the **SET** button ❷ to reset the trip master 1 function (**TRIP 1**) and trip master 2 function (**TRIP 2**) to **0.0**.

Button ❸ has no function.

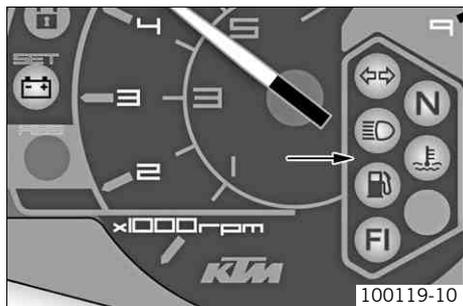
Combination instrument - tachometer



The tachometer ❶ shows the engine speed in revolutions per minute.

The red marking ❷ shows the excess speed range of the engine.

Combination instrument - indicator lamps



The indicator lamps offer additional information about the operating state of the motorcycle.

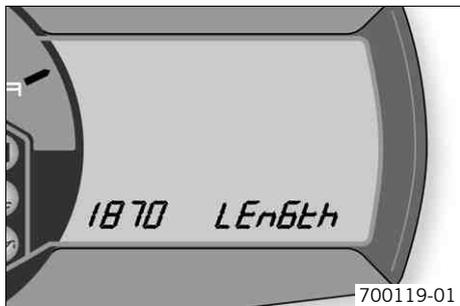
Possible states

	The turn signal indicator lamp flashes green simultaneously with the turn signal – The turn signal is switched on.
	The idle speed indicator lamp lights up green – The transmission is shifted to idle.
	The high beam indicator lamp lights up blue – The high beam is switched on.
	Temperature warning lamp lights up red – Coolant has reached a critical value.
	Fuel level warning lamp lights up orange – Fuel level has reached the reserve mark. Display switched to TRIP F .
	FI warning lamp (MIL) lights up/flashes orange – The OBD has detected an emission- or safety-critical fault.
	Battery warning lamp lights up red – Voltage in vehicle system too low.

Combination instrument - display



When you switch on the ignition, all display segments light up for one second as a function test.



LEnGth

Following the display function test, the **LEnGth** wheel circumference is shown for one second.

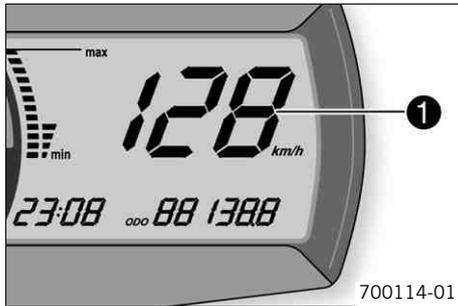


Info

1870 mm corresponds to the circumference of the 17" front wheel with a series production tire.

The display then changes to the last selected mode.

Combination instrument - speedometer



The speed ❶ is shown in kilometers per hour **km/h** or in miles per hour **mph**.

Setting kilometers or miles

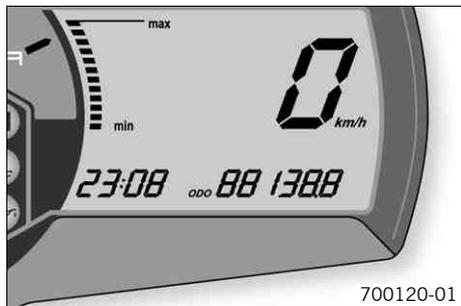


Info

If you change the unit, the value **ODO** is retained and converted accordingly.
Making the setting according to the country.

Condition

The motorcycle is stationary.



- Switch on the ignition by turning the ignition key to the position \odot .
- Press the **MODE** button repeatedly until the **ODO** mode is active.
- Keep the **MODE** button pressed until the display mode changes from **km/h** to **mph** or from **mph** to **km/h**.

Combination instrument - time



The time is shown in area ❶ of the display.



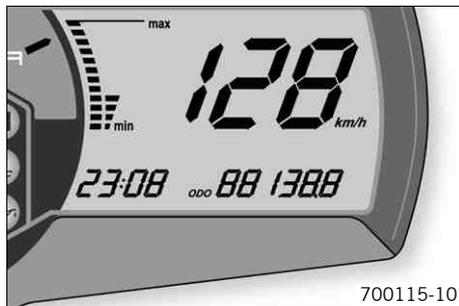
Info

The time has to be reset after the battery is reconnected or when the fuse is changed.

Setting the clock

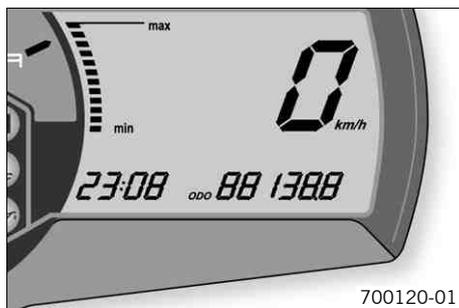
Condition

The motorcycle is stationary.



- Switch on the ignition by turning the ignition key to the position \odot .
- Press the **MODE** button repeatedly until the **ODO** mode is active.
- Keep the **MODE** button and the **SET** button pressed simultaneously.
 - ✓ The time display begins to flash.
- Press the **MODE** button to set the hour.
- Press the **SET** button to set the minute.
- Keep the **MODE** button and the **SET** button pressed simultaneously.
 - ✓ The time is set.

Combination instrument - display ODO



In the **ODO** display mode, the total distance traveled is shown in kilometers or miles.



Info

This value is retained, even if the battery is disconnected and/or the fuse blows.

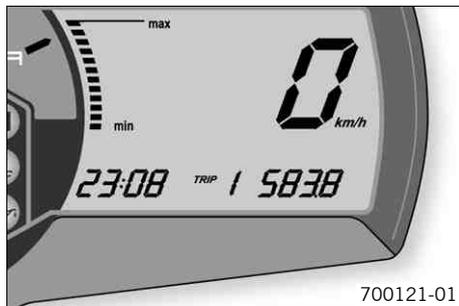
Combination instrument - setting/resetting TRIP 1



Info

The **TRIP 1** trip counter is always running and counts up to **999.9**.

The trip counter can be used to measure the distance covered during trips or between two refueling stops. After the value **999.9** is reached, the trip counter starts at **0.0** again.



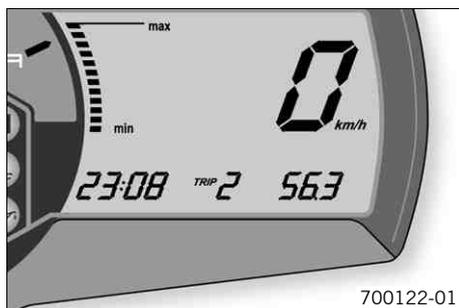
- Switch on the ignition by turning the ignition key to the position \odot .
- Press the **MODE** button repeatedly until the **TRIP 1** mode is active.
- Keep the **SET** button pressed.
- ✓ The **TRIP 1** display is set to **0.0**.

Combination instrument - setting/resetting TRIP 2

i Info

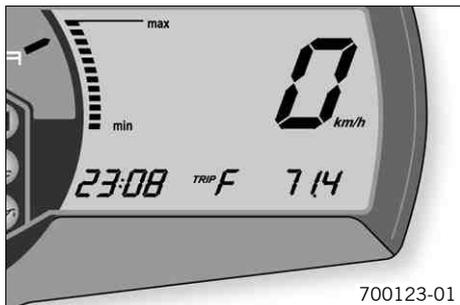
The **TRIP 2** trip counter is always running and counts up to **999.9**.

The trip counter can be used to measure the distance covered during trips or between two refueling stops. After the value **999.9** is reached, the trip counter starts at **0.0** again.



- Switch on the ignition by turning the ignition key to the position \odot .
- Press the **MODE** button repeatedly until the **TRIP 2** mode is active.
- Keep the **SET** button pressed.
- ✓ The **TRIP 2** display is set to **0.0**.

Combination instrument - TRIP F display



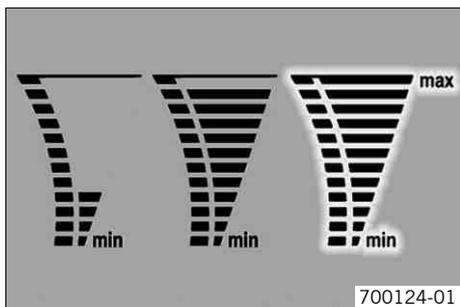
If the fuel level drops to the reserve mark, the display automatically changes to **TRIP F** and starts to count from **0.0**, regardless of the previous display mode.



Info

Parallel to the **TRIP F** display, the fuel warning light switches on.

Combination instrument - coolant temperature indicator



The temperature display consists of 12 bars. The more bars that light up, the hotter the coolant. When the upper bar lights up, all bars in the display begin to flash and the temperature warning lamp lights up.

Possible states

- Engine cold – Up to four bars light up.
- Engine warm – Five to eleven bars light up.
- Engine hot – All twelve bars flash.

Opening filler cap



- Lift the cover of the filler cap ❶ and insert the ignition key.
- Turn the ignition key 90° counterclockwise and remove the filler cap.



Info

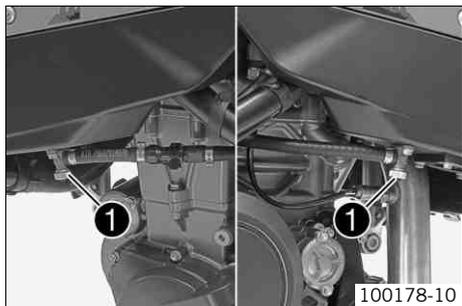
The filler cap has a tank air vent system.

Closing filler cap



- Put the filler cap back on and turn the ignition key 90° clockwise.
- Remove the ignition key and fold down the cover.

Fuel taps



The fuel taps ❶ are located on the left/right under the fuel tank.

Possible states

- Fuel supply closed – The knurled screws are turned clockwise as far as possible. The level cannot be compensated and no fuel can flow out of the fuel tank.
- Fuel tap open – The knurled screws are turned counterclockwise as far as possible. The level can be compensated and the fuel can flow out of the fuel tank.

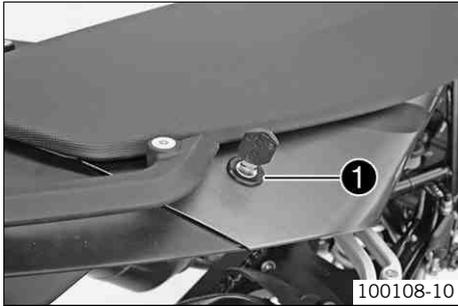
Handrails



The handrails ❶ are used for moving the motorcycle around.

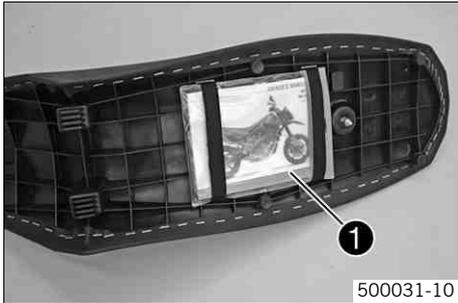
When you have a passenger, the passenger can hold on the handrails during the journey.

Seat lock



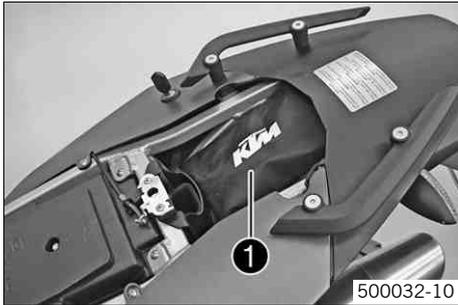
The seat lock ❶ is located to the right of the seat.
You can lock it with the ignition key.

Owner's manual



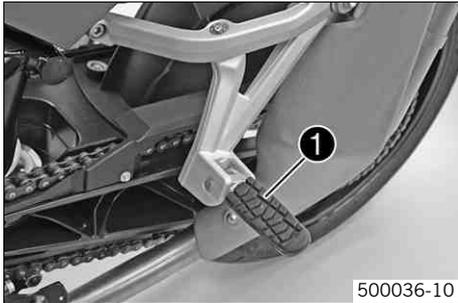
You can find the owner's manual ❶ in its protective case on the underside of the seat.

Tool set



The tool set ❶ is located in the storage compartment under the seat.

Passenger footrests

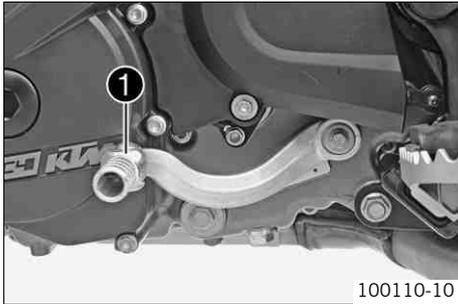


The passenger footrests ❶ can be folded in and out.

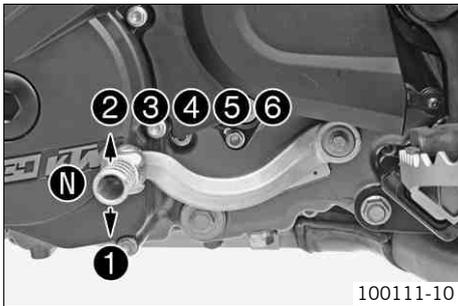
Possible states

- Passenger footrests folded up – For operation without a passenger.
- Passenger footrests folded down – For operation with a passenger.

Shift lever

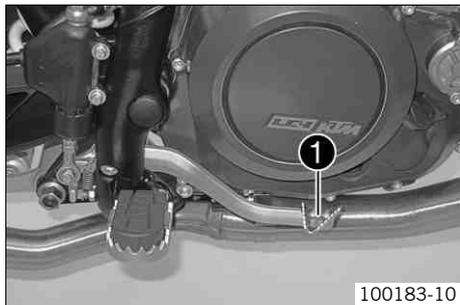


The shift lever ❶ is mounted on the left side of the engine.



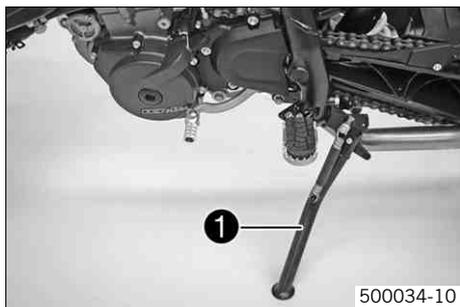
The gear positions can be seen in the photograph.
The neutral or idle position is between the first and second gears.

Foot brake lever



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

Side stand



The side stand ❶ is coupled with the safety electric starter system - see the riding instructions.

Possible states

- Side stand folded out – The vehicle can be supported on the side stand. The safety electric starter system is active.
- Side stand folded in – This position is mandatory for all journeys. The safety electric starter system is inactive.

Advice on first use



Danger

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

- Do not use the vehicle if you are inexperienced or if you have consumed alcohol or drugs.



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 Uncontrollable handling characteristic due to non-approved and/or non-recommended tires/wheels.

- Only tires/wheels approved by KTM and with the corresponding speed index should be used.



Warning

Danger of accidents Reduced road grip with new tires.

- New tires have a smooth rolling surface and therefore cannot provide full road grip. The entire rolling surface must be roughened in the first 200 kilometers (124.3 miles) by moderate riding at alternating angles. The full grip levels are not achieved until the tires have been run in.



Warning

Danger of accidents Failure of brake system.

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



Info

When using your vehicle, 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 clutch lever. (☛ p. 109)
- Adjust the basic position of hand brake lever. (☛ p. 69)
- Adjust the basic position of the foot brake lever.
- Get used to handling the vehicle on a car park before making a longer trip. Try also to ride as slowly as possible and in a standing position to get a better feeling for the vehicle.
- Hold the handlebars firmly with both hands and keep your feet on the footrests when riding.
- Run the engine in.

Running in the engine

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

Guideline

Maximum engine speed	
During the first: 1,000 km (621.4 mi)	6,000 rpm
After the first: 1,000 km (621.4 mi)	7,800 rpm

- Avoid fully opening the throttle!

Loading the vehicle



Warning

Danger of accidents Unstable riding behavior.

- Do not exceed the maximum permitted weight and axle loads. The overall weight consists of: motorcycle operational and with a full tank, driver and passenger with protective clothing and helmet, baggage.



Warning

Danger of accidents Unstable handling characteristics due to incorrect mounting of suitcase and/or tank rucksack.

- Mount and secure suitcase and tank rucksack according to the manufacturer's instructions.



Warning

Danger of accidents Unstable handling characteristics at high speed.

- Adapt your speed according to your payload. Ride more slowly if your motorcycle is loaded with cases or other baggage.
Maximum speed with baggage 130 km/h (80.8 mph)



Warning

Danger of accidents Risk of breakage of suitcase system.

- If you have fitted suitcases on your motorcycle, read the manufacturer's specifications concerning the maximum payload.



Warning

Danger of accidents Poor visibility for other road users due to slipped baggage.

- If the tail light is covered, you are less visible to traffic behind you, especially in the dark. Check that your baggage is fixed properly at regular intervals.



Warning

Danger of accidents Changed handling characteristics and longer stopping distance with excessive payload.

- Adapt your speed according to your payload.

**Warning**

Danger of accidents Unstable handling characteristics due to slipped baggage.

- Check the way your baggage is fixed regularly.

**Warning**

Danger of burns A hot exhaust system can burn baggage.

- Fasten your baggage in such a way that it cannot be burned or singed by the hot exhaust system.

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

Guideline

Maximum permissible overall weight	350 kg (772 lb.)
Maximum permissible front axle load	150 kg (331 lb.)
Maximum permissible rear axle load	200 kg (441 lb.)

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 engine oil level. (🔧 p. 114)
- Check the engine for loss of oil.
- Check the fuel level.
- Bleed the fork legs. (🔧 p. 61)

Guideline

All	1,000 km (621.4 mi)
-----	---------------------

- Check the chain tension. (🔧 p. 63)
- Clean the chain. (🔧 p. 62)
- Check the tire condition. (🔧 p. 82)
- Check the tire pressure. (🔧 p. 84)
- Check the front brake fluid level. (🔧 p. 69)
- Check the rear brake fluid level. (🔧 p. 73)
- Check the front brake linings. (🔧 p. 72)
- Check the rear brake linings. (🔧 p. 75)
- Check brake system function.
- Check the coolant level. (🔧 p. 105)
- Check that all controls are correctly adjusted and free to move.
- Check that the electrical equipment is functioning properly.
- Check that baggage is correctly secured.

- Sit on the motorcycle and check the rear mirror setting.

Starting



Danger

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

- When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in a closed space.



Caution

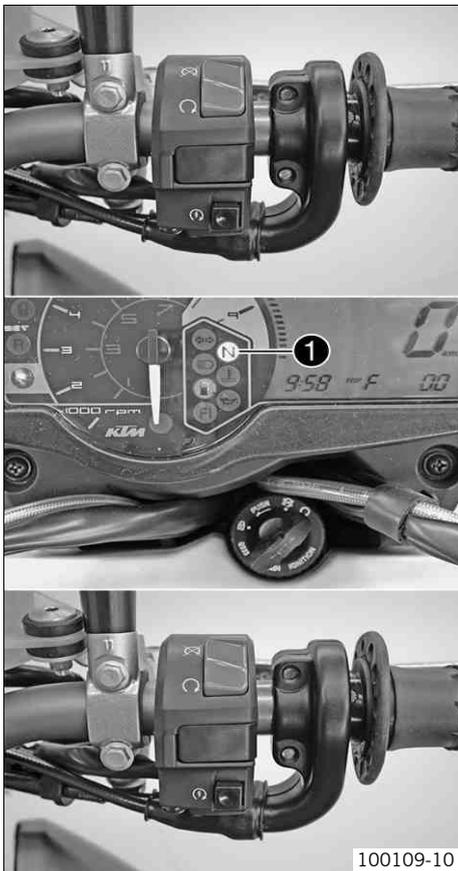
Danger of accidents If the vehicle is operated with a discharged battery or without a battery, electronic components and safety equipment may be damaged.

- Never operate the vehicle with a discharged battery or without a battery.

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.



100109-10

- Turn the emergency OFF switch to the position ○.
- Switch on the ignition by turning the ignition key to the position ○.
- ✓ After you switch on the ignition, you can hear the fuel pump working for about 2 seconds. At the same time, the function test of the combination instrument is run.
- Shift gear to neutral.
- ✓ The green idling speed indicator lamp **N** ❶ lights up.
- Press the electric starter button ❷.

i Info

Do not press the electric starter button until the function test of the combination instrument is finished.

When starting, **DO NOT** open the throttle. If you open the throttle during the starting procedure, fuel is not injected by the engine management system and the engine cannot start.

Press the starter for a maximum of 5 seconds. Wait for at least 5 seconds before trying again.

This motorcycle is equipped with a safety start system. You can only start the engine if the gearbox is in neutral or if the clutch is pulled when a gear is engaged. If the sidestand is folded out and you shift into gear and release the clutch, the engine stops.

- Take the weight off the side stand and swing it back up with your foot as far as it will go.

Starting up

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

Shifting, riding



Warning

Danger of accidents Abrupt load alterations can cause the vehicle to get out of control.

- Avoid abrupt load alterations and sudden braking actions, and adapt your speed to the road conditions.



Warning

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

- Do not shift into a low gear at high engine speed. The engine races and the rear wheel can lock up.



Warning

Danger of accidents Malfunctions caused by incorrect ignition key position.

- Do not change the ignition key position during a journey.



Warning

Danger of accidents Distraction from traffic activity by adjustments to the vehicle.

- Make all adjustments when the vehicle is at a standstill.



Warning

Risk of injury The passenger must be capable of sitting correctly on the passenger seat.

- The passenger must hold on to the rider or the handrails and place his feet on the passenger footrests. Note the regulations governing the minimum age of passengers in your country.



Warning

Danger of accidents Danger of accidents caused by dangerous driving.

- Observe the traffic regulations and ride defensively and with foresight in order to recognize danger as early as possible.



Warning

Danger of accidents Reduced road grip with cold tires.

- On every journey, take the first miles carefully at moderate speed until the tires reach operating temperature and optimal road grip is ensured.



Warning

Danger of accidents Reduced road grip with new tires.

- New tires have a smooth rolling surface and therefore cannot provide full road grip. The entire rolling surface must be roughened in the first 200 kilometers (124.3 miles) by moderate riding at alternating angles. The full grip levels are not achieved until the tires have been run in.



Warning

Danger of accidents Unstable riding behavior.

- Do not exceed the maximum permitted weight and axle loads. The overall weight consists of: motorcycle operational and with a full tank, driver and passenger with protective clothing and helmet, baggage.



Warning

Danger of accidents Unstable handling characteristics due to slipped baggage.

- Check the way your baggage is fixed regularly.



Warning

Danger of accidents Lack of roadworthiness.

- After a fall, check the vehicle as usual before putting it into operation.

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.

Note

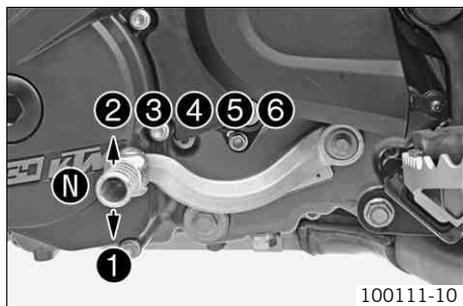
Engine failure Overheating of engine.

- If the coolant temperature warning lamp lights up, stop and switch off the engine. Allow the engine to cool down and check the coolant level in the radiator, and top up if necessary. If you continue with the coolant temperature warning lamp alight, you may have engine failure.



Info

If you hear unusual noises while riding, stop immediately, switch off the engine and contact an authorized KTM workshop.



- When conditions allow (incline, road situation, etc.), you can shift into a higher gear.
- Release the throttle while simultaneously pulling the clutch lever, shift into the next gear, release the clutch and open the throttle.



Info

You can see the positions of the six forward gears in the figure. The neutral or idle position is between the first and second gears. First gear is used for starting off or for steep inclines.

The operating temperature is reached when 5 bars of the temperature indicator light up.

- After reaching maximum speed by fully opening the throttle, turn the throttle back so it is $\frac{3}{4}$ open. This will barely reduce the speed but fuel consumption will be considerably lower.
- Accelerate only up to a speed suitable for the road surface and weather conditions. When traveling in bends, do not shift, and accelerate very carefully.
- To shift down, brake if necessary and close the throttle at the same time.
- Pull the clutch lever and shift into a lower gear, release the clutch lever slowly and open the throttle or shift again.

- If the engine stalls (e.g. at a crossroads), pull the clutch lever only and press the starter button. You do not need to shift into neutral.
- Switch off the engine if you expect to be standing for a long time.
- If the **FI** warning lamp (**MIL**) lights up during a trip, stop immediately. When you shift to neutral, the **FI** warning lamp (**MIL**) starts to flash.



Info

From the flashing rhythm, you can derive a two-digit number, the so-called blink code. The blink code tells you which component has a fault.

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 due to wet or dirty brakes.

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



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 Failure of brake system.

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



Warning

Danger of accidents Longer stopping distance due to higher overall weight.

- Take the longer stopping distance into account when carrying a passenger and baggage.



Warning

Danger of accidents Delayed brake action on salted roads.

- There may be salt deposits on the brake discs. In order to restore the normal braking efficiency, you will need to remove the deposits from the discs by carefully applying the brakes.

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

Stopping, parking



Warning

Risk of misappropriation Usage by unauthorized persons.

- Never leave the vehicle while the engine is running. Secure the vehicle against use by unauthorized persons. If you leave the vehicle, lock the steering and remove the ignition key.



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 can roll away or fall over.

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

Note

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

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

Note

Material damage Damage and destruction of components due to 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.
 - Switch off the ignition by turning the ignition key to the position ☒.



Info

If the engine is switched off with the emergency OFF switch and the ignition remains switched on at the ignition lock, power continues to flow to most power consumers and the battery will discharge. You should therefore always switch off the engine with the ignition key - the emergency OFF switch is intended for emergencies only.

-
- Park the motorcycle on a firm surface.
 - Swing the side stand forward with your foot as far as it will go and lean the vehicle on it.
 - Lock the steering by turning the handlebar fully to the left, pressing down the ignition key to position ☒ and turning it to position ☒. In order to ease steering lock engagement, move the handlebars gently back and forth. Remove the ignition key.

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 spilled, especially on hot vehicle components. Clean up spilled 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

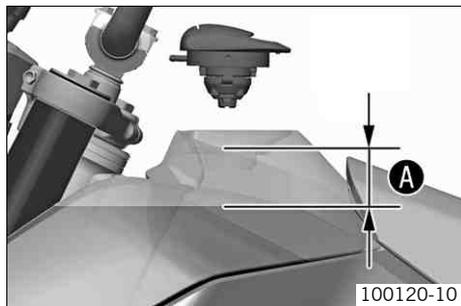
Environmental hazard Improper handling of fuel is a danger to the environment.

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



Info

This motorcycle is equipped with a regulated catalyst. Leaded fuel will destroy the catalyst. You should therefore use unleaded fuel only.



100120-10

- Switch off the engine.
- Open the filler cap. (☛ p. 32)
- Fill the fuel tank with fuel up to measurement **A**.

Guideline

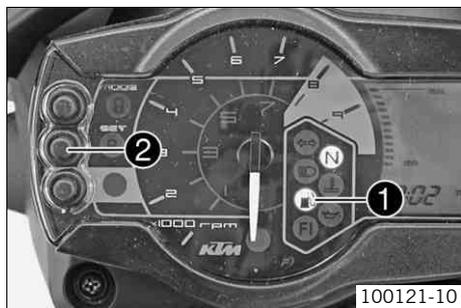
Level A	50 mm (1.97 in)
----------------	-----------------

Total fuel tank capacity, approx.	13.5 l (3.57 US gal)	Super unleaded (ROZ 95 / RON 95 / PON 91) (☛ p. 152)
-----------------------------------	-------------------------	--

- Close the filler cap. (☛ p. 32)
- Press the **SET** button **2** for two seconds.
- ✓ The fuel level warning lamp **1** switches off. **TRIP F** is set to 0 and appears in the previous display mode.

i Info

If you do not press the **SET** **2** button, the reset takes place automatically after about 3 minutes.



100121-10

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

		K10N	K50A	K100A	J1A	J2A
Engine	Change the engine oil and filter, clean the oil screens. 🛠️ (📖 p. 115)	•	•	•	•	•
	Check and adjust valve clearance. 🛠️			•		•
	Check engine mounting screws for tightness.	•	•	•	•	•
	Replace spark plug.			•		
	Check engine bolts accessible from outside for tightness.	•	•	•	•	•
Fuel injection	Check connection boots for cracks and leakage. 🛠️	•		•		•
	Read out the error memory with a KTM diagnostic tool. 🛠️	•	•	•	•	•
	Check fuel hoses, SLS hoses and vent hoses for damage, correct fitting and leaks. 🛠️	•	•	•	•	•
	Clean, check and grease the O-ring of the fuel hose connection. 🛠️		•	•	•	•
	Check the wiring harness of the throttle valve body for damage and correct routing. 🛠️	•		•		•
Attachments	Check the cooling system for leakage.	•	•	•	•	•
	Check the antifreeze and coolant level. (📖 p. 102)	•	•	•	•	•
	Check the functioning of the radiator fan. 🛠️	•	•	•	•	•
	Check the exhaust system for leaks and correct fitting and check that the exhaust clamps are tight. 🛠️	•	•	•	•	•
	Check the control cables for damage, smooth operation, kink-free routing and adjustment.	•	•	•	•	•
	Check/rectify the fluid level of the hydraulic clutch. (📖 p. 112)		•	•	•	•
	Check air filter and change if necessary. Clean the air filter box. 🛠️		•	•	•	•
	Check fuel tank for tightness.	•	•	•	•	•
	Check cables for damage and routing without sharp bends. 🛠️	•	•	•	•	•

		K10N	K50A	K100A	J1A	J2A
Attachments	Check the headlight setting. (☞ p. 100)	•	•	•	•	•
	Check the functioning of the electrical equipment.	•	•	•	•	•
	Check screws and nuts for tightness.	•	•	•	•	•
Brakes	Check the front brake linings. (☞ p. 72)	•	•	•	•	•
	Check the rear brake linings. (☞ p. 75)	•	•	•	•	•
	Check the brake discs. (☞ p. 68)	•	•	•	•	•
	Check the front brake fluid level. (☞ p. 69)	•	•	•	•	•
	Check the rear brake fluid level. (☞ p. 73)	•	•	•	•	•
	Change brake fluid. 🛠️					•
	Check brake lines for damage and leakage.	•	•	•	•	•
	Check the free play of the foot brake lever. (☞ p. 72)	•	•	•	•	•
	Check braking.	•	•	•	•	•
	Check screws and guide bolts of brake system for tightness. 🛠️	•	•	•	•	•
Chassis	Check shock absorber and fork for leakage and functioning. 🛠️	•	•	•	•	•
	Clean the dust boots of the fork legs.		•	•	•	•
	Bleed the fork legs. (☞ p. 61)	•	•	•	•	•
	Check swingarm bearing. 🛠️	•	•	•	•	•
	Check the steering head bearing play. 🛠️	•	•	•	•	•
	Check all screws to see if they are tight.	•	•	•	•	•
	Grease Pro-Lever deflector. 🛠️					•
Wheels	Check the spoke tension. (☞ p. 85)	•	•	•	•	•
	Check rim run-out. 🛠️	•	•	•	•	•
	Check the tire condition. (☞ p. 82)	•	•	•	•	•

		K10N	K50A	K100A	J1A	J2A
Wheels	Check the tire pressure. (🔧 p. 84)	•	•	•	•	•
	Check the chain wear. (🔧 p. 67)	•	•	•	•	•
	Check rear sprocket / engine sprocket for tightness.	•	•	•	•	•
	Check rear sprocket / engine sprocket for wear. (🔧 p. 66)	•	•	•	•	•
	Check the chain tension. (🔧 p. 63)	•	•	•	•	•
	Clean the chain. (🔧 p. 62)	•	•	•	•	•
	Check wheel bearing for play. 🛠️		•	•	•	•
	Check the rear hub rubber dampers. 🛠️ (🔧 p. 81)		•	•	•	•

K10N: after 1,000 km (621.4 mi)

K50A: every 5,000 km (3,107 mi)

K100A: every 10,000 km (6,214 mi)

J1A: annually

J2A: every 2 years

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

	K100A	J1A	J2A
Carry out a complete fork service. 🛠️	•		•
Carry out a complete shock absorber service. 🛠️	•		•
Clean and grease steering head bearing and sealing elements. 🛠️			•
Treat electric contacts with contact spray.		•	•
Clean the battery terminals and treat them with contact grease.		•	•
Change coolant. 🛠️			•

K100A: every 10,000 km (6,214 mi)

J1A: annually

J2A: every 2 years

Jacking up front of motorcycle

Note

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

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

- Jack up the rear of the motorcycle. (☛ p. 58)
- Move the handlebar to the straight-ahead position. Align the work stand to the front with the adapters to the fork legs.

Front work stand (61029055300)



Info

Always jack up the rear of the motorcycle first.

- Jack up the front of the motorcycle.



Taking the front from the work stand

Note

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

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

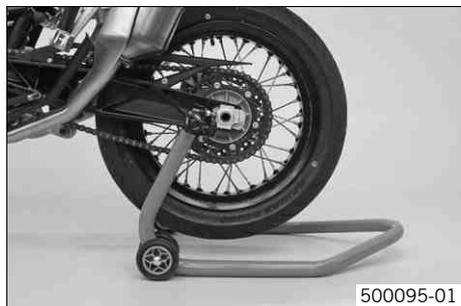
- Secure the motorcycle against falling over.
- Remove the work stand at the front.

Jacking up rear of motorcycle

Note

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

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



- Insert the work stand adapter in the work stand and screw it into the link forks.

Work stand adapter (61029055110)

Work stand rear (61029055100)

- Stand the motorcycle upright, align the work stand to the rear, and jack up the motorcycle.

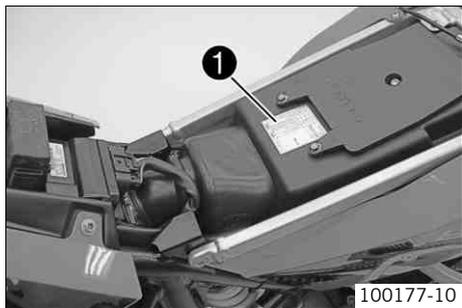
Taking the rear from the workstand

Note

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

- Always place the vehicle on a firm and even surface.
- Secure the motorcycle against falling over.
- Remove the work stand from the rear and lean the vehicle on the side stand.

Fork/shock absorber



The fork and the shock absorber offer many options of adapting the chassis to your riding style and the payload.



Info

To help you adapt the vehicle, we have summarized our findings in Table 1. You can find the table on the air filter box under the seat.

These adjustments should be understood as a guideline and should always be the basis of your own personal chassis adaptation. Do not change the adjustments at random or by more than $\pm 40\%$, since otherwise the riding characteristics could deteriorate, particularly at high speeds.

Adjusting the rebound damping of the fork



Info

The hydraulic rebound damping determines the fork rebound behavior.

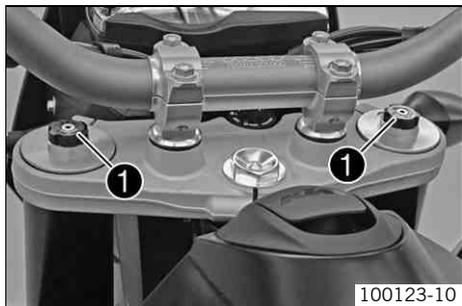
- Turn adjusting screws 1 clockwise all the way.



Info

The adjusting screws are located at the top end of the fork legs. Adjust both fork legs to the same setting.

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



Guideline

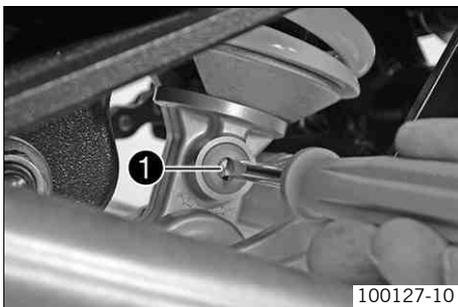
Rebound damping	
Comfort	25 clicks
Standard	20 clicks
Sport	15 clicks
Full payload	15 clicks

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



100127-10

- Turn adjusting screw **1** clockwise to the last perceptible click.
- Turn counterclockwise by the number of clicks corresponding to the shock absorber type.

Guideline

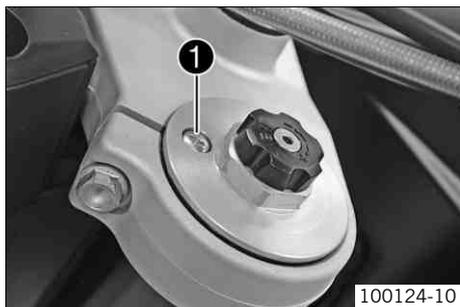
Rebound damping	
Comfort	25 clicks
Standard	20 clicks
Sport	15 clicks
Full payload	15 clicks



Info

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

Bleeding the fork legs



100124-10

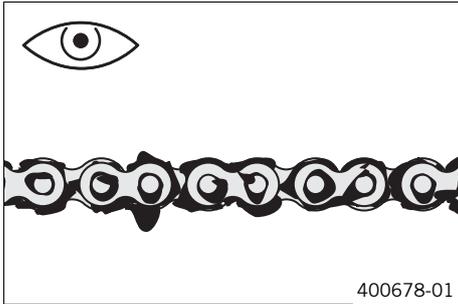
- Lean the motorcycle on the side stand.
- Remove bleeder screws ❶ briefly.
- ✓ Any excess pressure escapes from the interior of the fork.
- Mount and tighten bleeder screws.



Info

Carry out this action on both fork legs.

Checking the chain for dirt



- Check the chain for heavy soiling.
 - » If the chain is very dirty:
 - Clean the chain. (☛ p. 62)

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

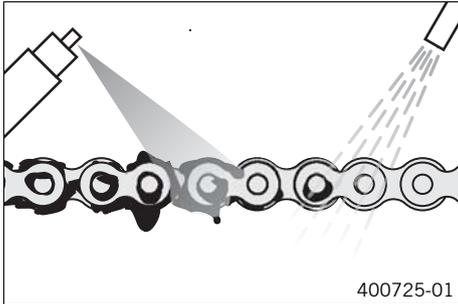
Environmental hazard Hazardous substances cause environmental damage.

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

Chain cleaner (☛ p. 153)

- After drying, apply chain spray.

Chain lube for road use (☛ p. 153)

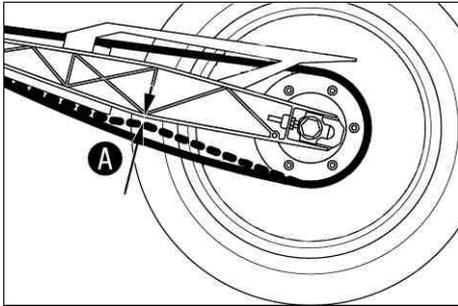
Checking the chain tension



Warning

Danger of accidents Danger caused by incorrect chain tension.

- If the chain is over tensioned, 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 may snap or the countershaft of the transmission can break. On the other hand, if the chain is loose, it may jump off the engine sprocket or the rear sprocket, causing the rear wheel to lock or damage the engine. Check for correct chain tension and adjust if necessary.



- Lean the motorcycle on the side stand.
- Shift gear to neutral.
- Push the chain upwards near the vertical rib of the swingarm and measure the chain tension **A**.



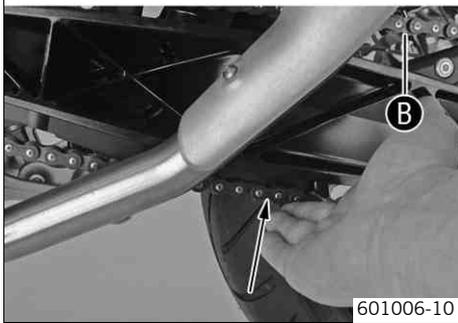
Info

The upper chain section **B** must be taut.

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

Chain tension	5 mm (0.2 in)
---------------	---------------

- » If the chain tension does not meet specifications:
 - Adjust the chain tension. (🔧 p. 64)



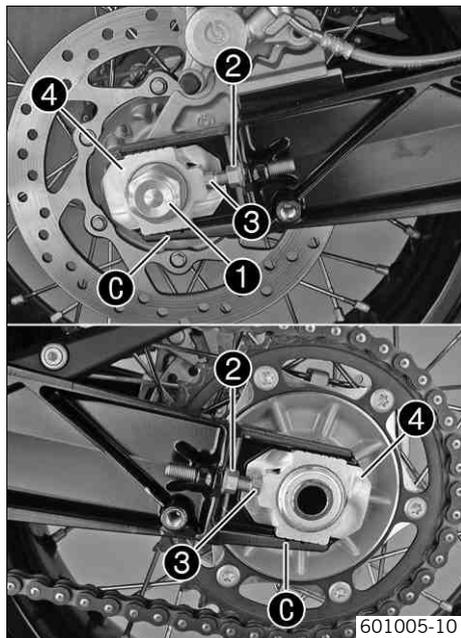
Adjusting the chain tension



Warning

Danger of accidents Danger caused by incorrect chain tension.

- If the chain is over tensioned, 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 may snap or the countershaft of the transmission can break. On the other hand, if the chain is loose, it may jump off the engine sprocket or the rear sprocket, causing the rear wheel to lock or damage the engine. Check for correct chain tension and adjust if necessary.



601005-10

- Check the chain tension. (☛ p. 63)
- Loosen nut ❶.
- Loosen nuts ❷.
- Adjust the chain tension by turning adjusting screws ❸ on the left and right.

Guideline

Chain tension	5 mm (0.2 in)
Turn the left and right adjusting screws ❸ so that the markings on the left and right chain adjusters ❹ are in the same position relative to the reference marks ❷. The rear wheel is then correctly aligned.	

i Info

The upper chain section must be taut.

Chain wear is not always even, so you should check this setting at different chain positions.

- Tighten nuts ❷.
- Make sure that the chain adjusters ❹ are installed correctly on adjusting screws ❸.
- Tighten nut ❶.

Guideline

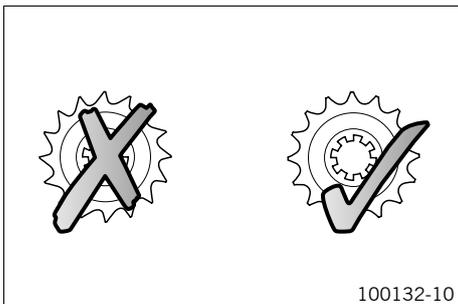
Nut, rear wheel spindle	M25x1.5	90 Nm (66.4 lbf ft)
-------------------------	---------	------------------------

i Info

The wide adjustment range of the chain adjusters (30 mm (1.18 in)) enables different secondary transmissions with the same chain length.

The chain adjusters ❹ can be turned through 180°.

Checking rear sprocket / engine sprocket for wear



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



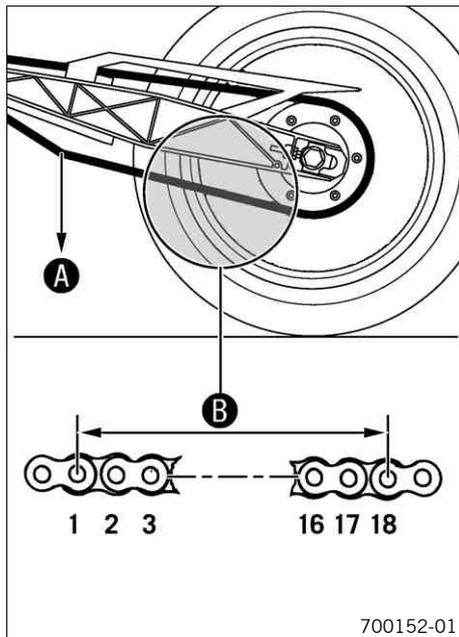
Info

The engine sprocket, rear sprocket and chain should always be replaced together.

For safety reasons, the chain has no chain joint. Always have the chain replaced in an authorized KTM workshop, where the necessary chain rivet tool is available.

- Check chain guides for tightness and wear.

Checking chain wear



- Shift into neutral, pull the lower chain section with the specified weight **A**.

Guideline

Weight of chain wear measurement	15 kg (33 lb.)
----------------------------------	----------------

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

i Info

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

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

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

i Info

When the chain is replaced, the rear sprocket and engine sprocket should also be changed.

New chains wear out faster on old, worn sprockets.

For safety reasons, the chain has no chain joint. Always have the chain changed in an authorized KTM workshop, where the necessary tool is available.

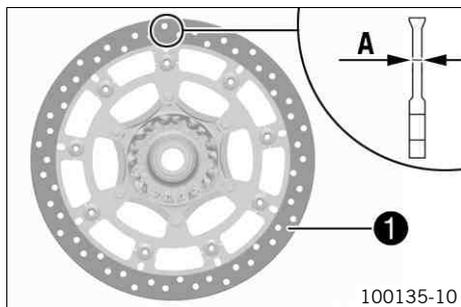
Checking the brake discs



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 in several places to ensure that it conforms to measurement **A**.

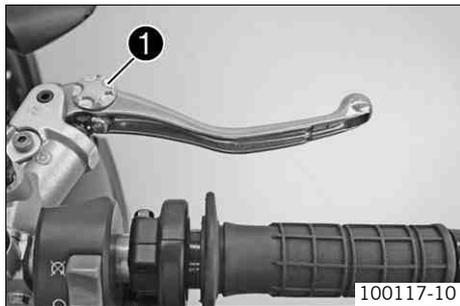
i Info

Wear reduces the thickness of the brake disc at the contact surface **1** of the brake disc.

Brake discs - wear limit	
Front	4.0 mm (0.157 in)
Rear	4.5 mm (0.177 in)

- » If the brake disc thickness is less than the specified value:
 - Replace the brake disc.
- Check the front and rear brake discs for damage, cracks, and deformation.
 - » If damage, cracks, or deformation are visible on the brake disc:
 - Replace the brake disc.

Adjusting basic position of hand brake lever



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



Info

Pull the brake lever forwards and turn the adjusting wheel.
Do not make any adjustments while riding!

Checking the front brake fluid level



Warning

Danger of accidents Failure of the brake system.

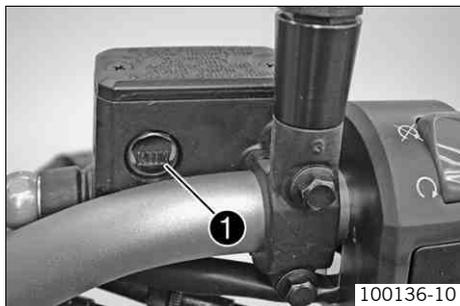
- If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)



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 ❶.
 - » If the brake fluid level is below the **MIN** mark:
 - Add front brake fluid. 🛠️ (📖 p. 70)

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.

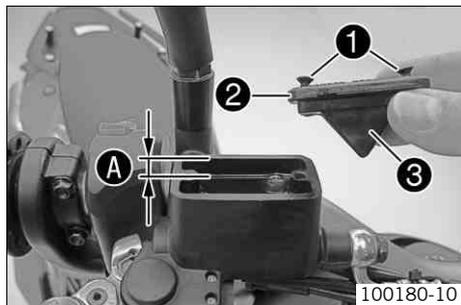


Info

Never use DOT 5 brake fluid! It is silicone-based and purple in color. Oil seals and brake lines are not designed for DOT 5 brake fluid.

Avoid contact between brake fluid and painted parts. Brake fluid is corrosive and will damage painted surfaces.

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.
- Add brake fluid to level A.

Guideline

Measurement of A	5 mm (0.2 in)
------------------	---------------

Brake fluid DOT 4 / DOT 5.1 (☛ p. 150)
--

- 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

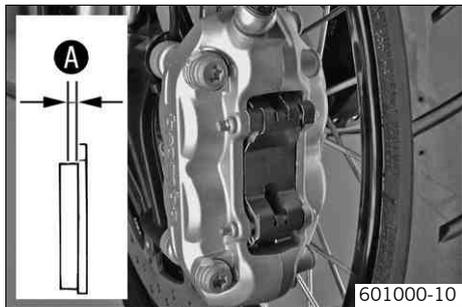
Danger of accidents Reduced braking efficiency caused by worn brake linings.

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

Note

Danger of accidents Reduced braking efficiency caused by damaged brake discs.

- If the brake linings are not changed in time, the steel brake lining carriers grind on the brake disc. The braking effect is greatly reduced and the brake discs are rendered unserviceable. Check the brake linings regularly.



- Check the brake linings for minimum thickness **A**.

Minimum thickness A	$\geq 1 \text{ mm } (\geq 0.04 \text{ in})$
----------------------------	---

» If the minimum thickness is less than specified:

- Change the front brake linings. 

- Check the brake linings for damage and cracking.

» If there is wear or tearing:

- Change the front brake linings. 

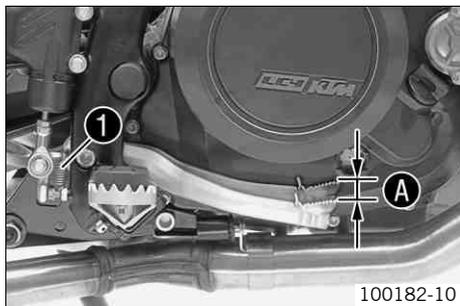
Checking free play of foot brake lever



Warning

Danger of accidents Failure of brake system.

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



- Detach spring ❶.
- Move the foot brake lever back and forth between the end stop and the contact to the foot brake cylinder piston and check free travel ❷.

Guideline

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

- » If the free travel does not meet specifications:
 - Have the free travel adjusted in an authorized KTM workshop.
- Attach spring ❶.

Checking rear brake fluid level



Warning

Danger of accidents Failure of the brake system.

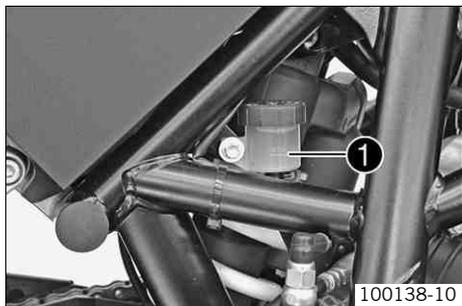
- If the brake fluid level falls below the **MIN** mark, this indicates a leakage in the brake system or worn-out brake linings. Check the brake system and do not continue riding. (Your authorized KTM workshop will be glad to help.)



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 brake fluid reservoir.
 - » If the fluid level reaches the **MIN** marking ❶:
 - Add rear brake fluid. 🛠️ (📄 p. 74)

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.

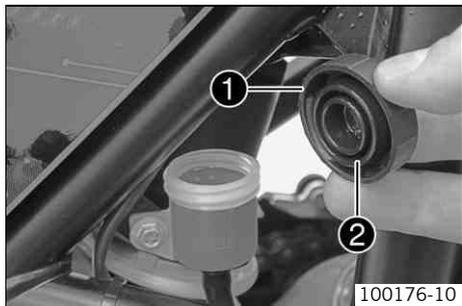


Info

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 the screw cap ❶ with the membrane ❷.
- Add brake fluid to **MAX** mark.

Brake fluid DOT 4 / DOT 5.1 (☛ p. 150)

- Mount the screw cap with the membrane.



Info

Clean up overflowed or spilt brake fluid immediately with water.

Checking the rear brake linings



Warning

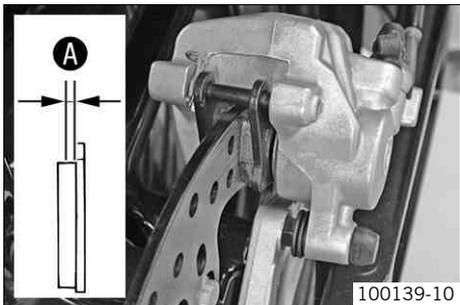
Danger of accidents Reduced braking efficiency caused by worn brake linings.

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

Note

Danger of accidents Reduced braking efficiency caused by damaged brake discs.

- If the brake linings are not changed in time, the steel brake lining carriers grind on the brake disc. The braking effect is greatly reduced and the brake discs are rendered unserviceable. Check the brake linings regularly.



100139-10

- Check the brake linings for minimum thickness **A**.

Minimum thickness A	$\geq 1 \text{ mm } (\geq 0.04 \text{ in})$
----------------------------	---

- » If the minimum thickness is less than specified:
 - Change the rear brake linings. 🛠️
- Check the brake linings for damage and cracking.
 - » If there is wear or tearing:
 - Change the rear brake linings. 🛠️

Removing the front wheel 🛠️

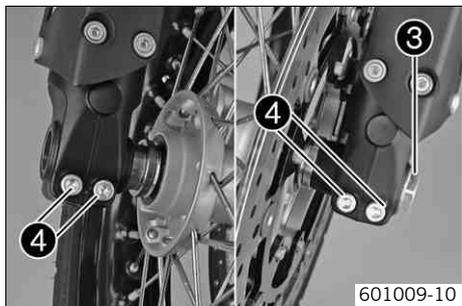
- Jack up the rear of the motorcycle. (🛠️ p. 58)
- Jack up the front of the motorcycle. (🛠️ p. 57)
- Remove screws **1** and spacers **2**.
- Press back the brake linings with a light lateral tilting of the brake caliper on the brake disc. Pull the brake caliper carefully back from the brake disc and hang it to one side.

i Info

Do not pull the hand brake lever while the brake caliper is removed.



601011-10



- Loosen screws ③ and ④.
- Unscrew screw ③ about 6 turns, press your hand on the screw to push the wheel spindle out of the fork stub. Remove screw ③.



Warning

Danger of accidents Reduced braking efficiency caused by damaged brake discs.

- Always lay the wheel down in such a way that the brake disc is not damaged.
- Holding the front wheel, withdraw the wheel spindle. Take the front wheel out of the fork.

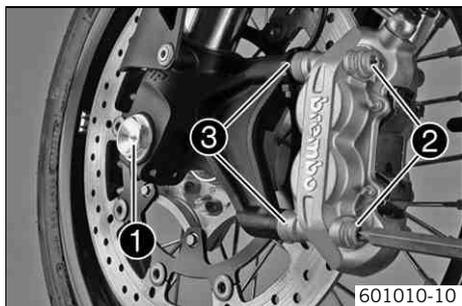
Installing the front wheel 🛠️



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 the thread of the wheel spindle and screw ①.

Long-life grease (🔧 p. 154)

- Lift the front wheel into the fork, position it, and insert the wheel spindle. Mount and tighten screw ①.

Guideline

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

- Position the brake caliper and check that the brake linings are seated correctly.
- Position spacers ③. Mount screws ② but do not tighten.

- Operate the hand brake lever repeatedly until the brake lining presses up against the brake disc and there is a pressure point. Fix the hand brake lever while it is activated.
 - ✓ The brake calipers straighten.
- Tighten screws ②.

Guideline

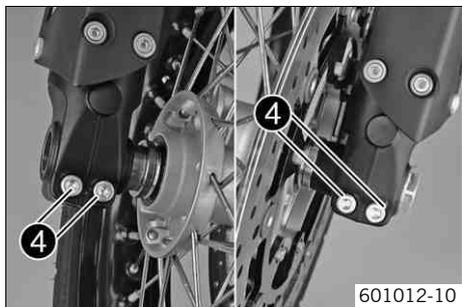
Screw, front brake caliper	M10x1.25	45 Nm (33.2 lbf ft)	Loctite® 243™
----------------------------	----------	------------------------	----------------------

- Remove the fixation of the hand brake lever.
- Take the front from the work stand. (🔧 p. 57)
- Pull the front wheel brake and push down hard on the fork several times to align the fork legs.
- Tighten screws ④.

Guideline

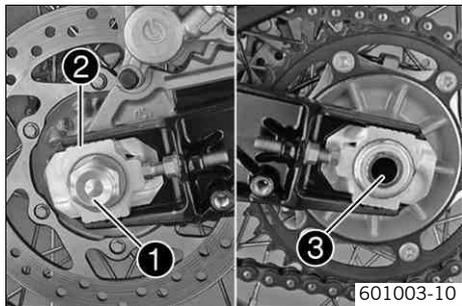
Screw, fork stub	M8	15 Nm (11.1 lbf ft)	
------------------	----	------------------------	--

- Taking rear from work stand. (🔧 p. 58)



Removing rear wheel 🛠️

- Jack up the rear of the motorcycle. (🔧 p. 58)



- Remove nut ❶. Remove chain adjuster ❷. Holding the rear wheel, withdraw the wheel spindle ❸.
- Push the rear wheel forwards as far as possible and take the chain off the rear sprocket.



- Pull the rear wheel and brake caliper support ❹ together to the rear until you can swing the brake caliper support to the side.



Warning

Danger of accidents Reduced braking efficiency caused by damaged brake discs.

- Always lay the wheel down in such a way that the brake disc is not damaged.

- Take the rear wheel out of the swing arm.



Info

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

Installing the rear wheel 🛠️



Warning

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

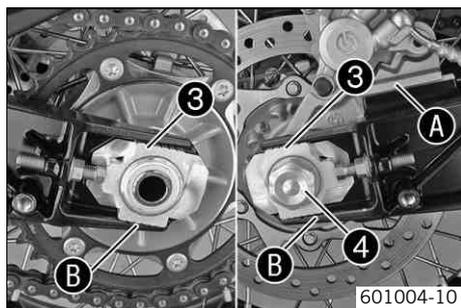
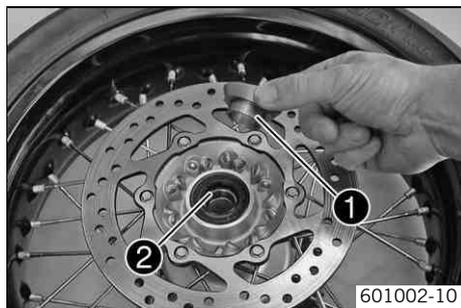
- Always keep the brake discs free of oil and grease, and clean them with brake cleaner when necessary.



Warning

Danger of accidents No braking effect when operating the rear brake.

- After installing the rear wheel, always operate the foot brake until the pressure point is reached.



- Check the rear hub rubber dampers. 🛠️ (📖 p. 81)
- Remove spacer ❶. Clean and grease the working surfaces of the bushing and shaft seal ring ❷.

Long-life grease (📖 p. 154)

- Clean and grease the thread of the wheel spindle and nut ❹.

Long-life grease (📖 p. 154)

- Clean the mating surfaces of the brake caliper frame and swingarm.
- Install the rubber damper and rear sprocket carrier in the rear wheel.
- Stand the rear wheel in the swingarm and mount the brake caliper on the brake disc.
- Push the brake caliper support and the swingarm ❸ into the fixing location. Lay the chain on the rear sprocket and mount the wheel spindle.

Info

Mount the left and right chain adjusters ❸ in the same position.

- Push the rear wheel forward so that the chain adjusters are in contact with the adjusting screws, and tighten nut ❹.

Guideline

In order for the rear wheel to be correctly aligned, the markings on the left and right chain adjusters must be in the same position relative to the reference marks ❷.

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

- Operate the foot brake lever repeatedly until the brake linings press up against the brake disc and there is a pressure point.
- Taking rear from work stand. (🔧 p. 58)

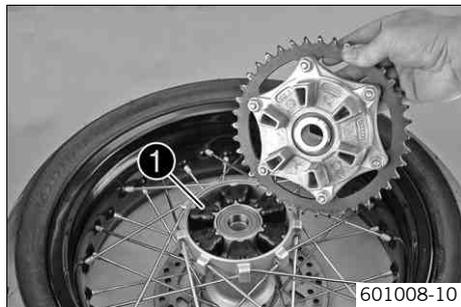
Checking the rear hub rubber dampers 🛠️

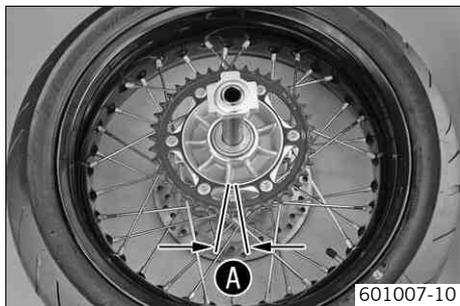


Info

The engine power is transmitted from the rear sprocket to the rear wheel via 6 rubber dampers. They eventually wear out during operation. If the rubber dampers are not changed in time, the rear sprocket carrier and the rear hub will be damaged.

- Remove the rear wheel. 🛠️ (🔧 p. 78)
- Check the rubber dampers ❶ of the rear hub for damage and wear.
 - » If the rubber dampers of the rear hub are damaged or worn:
 - Change all rubber dampers in the rear hub.





- Lay the rear wheel on a workbench with the rear sprocket facing upwards and insert the wheel spindle in the hub.
- To check the play **A**, hold the rear wheel tight and try to rotate the rear sprocket.

i Info

Measure the play on the outside of the rear sprocket.

Play in rubber dampers, rear wheel	$\leq 5 \text{ mm } (\leq 0.2 \text{ in})$
------------------------------------	--

- » If clearance **A** is larger than the specified value:
 - Change all rubber dampers in the rear hub.
- Install the rear wheel. 🛠️ (📖 p. 79)

Checking the tire condition



Warning

Danger of accidents Uncontrollable handling characteristic caused by a flat tire.

- For your own safety, have damaged tires changed immediately.



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 Uncontrollable handling characteristic due to non-approved and/or non-recommended tires/wheels.

- Only tires/wheels approved by KTM and with the corresponding speed index should be used.



Warning

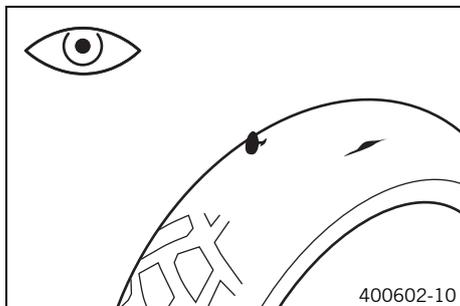
Danger of accidents Reduced road grip with new tires.

- New tires have a smooth rolling surface and therefore cannot provide full road grip. The entire rolling surface must be roughened in the first 200 kilometers (124.3 miles) by moderate riding at alternating angles. The full grip levels are not achieved until the tires have been run in.



Info

The type, condition and air pressure of the tires all have a major impact on the handling of the motorcycle. Worn tires have a negative effect on riding behavior, especially on wet surfaces.



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



Info

Note local national regulations concerning the minimum tread depth.

Minimum tread depth	$\geq 2 \text{ mm } (\geq 0.08 \text{ in})$
---------------------	---

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

i **Info**

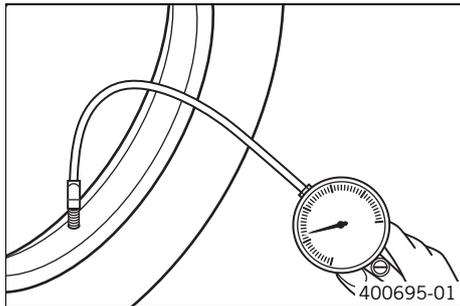
The tire's date of manufacture is usually part of the tire markings and is indicated by the last four digits of the **DOT** marking. The first two digits refer to the week of manufacture and last two digits refer to the year of manufacture. KTM recommends that the tires are changed regardless of the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

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

Checking the tire pressure

i **Info**

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



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

Tire air pressure, solo	
Front	2.0 bar (29 psi)
Rear	2.0 bar (29 psi)

Tire air pressure with passenger / fully loaded	
Front	2.0 bar (29 psi)
Rear	2.2 bar (32 psi)

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

- Mount the dust cap.

Checking the spoke tension



Warning

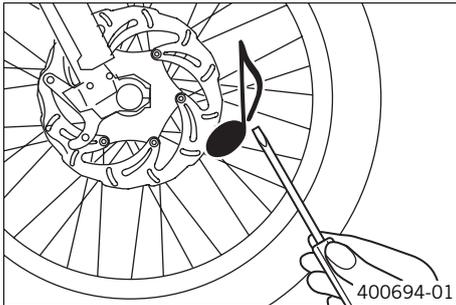
Danger of accidents Instable handling due to incorrect spoke tension.

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



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 a screwdriver blade.



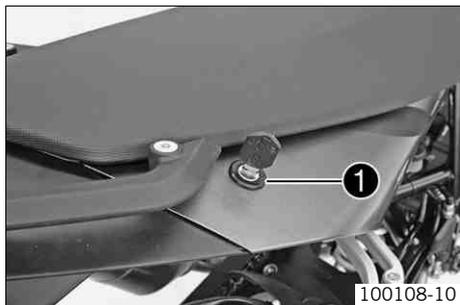
Info

The frequency of the tone is a function of the spoke length and spoke diameter. If you hear different tone frequencies from individual spokes of the same length and thickness, this is an indication of different spoke tensions.

You should hear a high note.

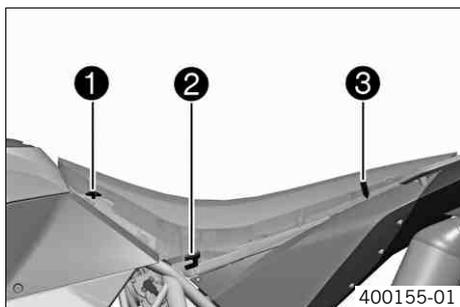
- » If the spoke tensions differ:
 - Corret the spoke tension. 🛠️

Removing the seat



- Insert the ignition key in the seat lock ❶ and turn it 45° counterclockwise.
- Lift up the seat at the rear, pull it back and remove from above.

Mounting the seat



- Suspend the seat on the screw ❶, press the rear downwards and at the same time push it forwards. The two projections ❷ must be inserted into the frame.
- Push the locking pin ❸ into the lock housing and push the back of the seat down until the locking pin locks in place with an audible click.
- Remove the ignition key from the seat lock.
- Finally, check that the seat is correctly mounted.

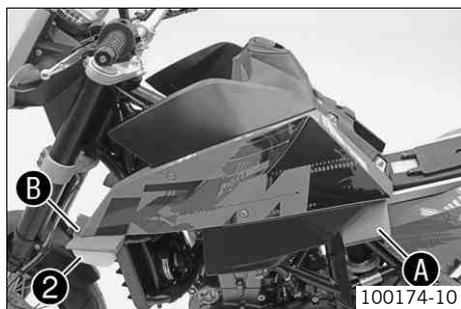
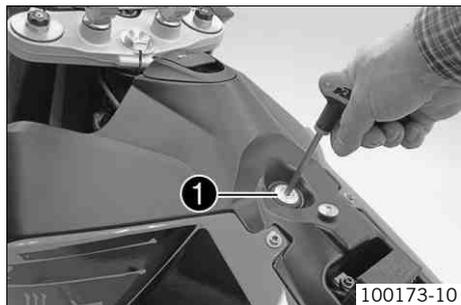
Reinstalling the fuel tank

- Remove the seat. (☛ p. 86)
- Remove screw **1**.



Info

The fuel lines do not need to be disconnected.



- Lay a cloth **A** over the subframe and straighten the steering.
- Carefully raise the fuel tank and move it backwards.
- Place the fuel tank on the vehicle so that the left spoiler is still lying on the compensating tank **2** (see illustration). Place a cloth **B** between the compensating tank and the spoiler to prevent damage.

Positioning the fuel tank



100174-11

- Remove the cloth **B** from between the compensating tank and the spoiler.



100175-10

- Carefully move the fuel tank forwards and lower it.
- Mount and tighten the screw **1** with the rubber bushing and bearing sleeve. Check fuel tank for tight fitting.

Guideline

Screw, fuel tank bracket	M8	15 Nm (11.1 lbf ft)
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- Check the routing of the fuel hoses.
- Mount the seat. (🔧 p. 86)

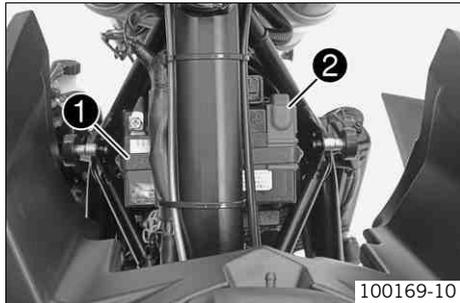
Removing the battery



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.



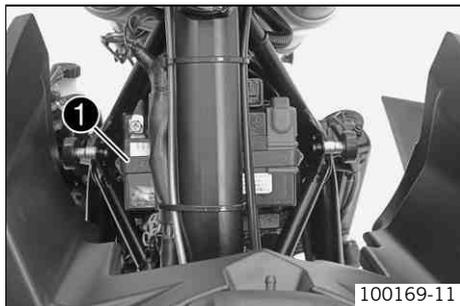
- Remove the seat. ( p. 86)
- Reinstall the fuel tank. ( p. 87)
- Disconnect the negative (minus) cable of the battery.
- Detach and remove the rubber band **1**.
- Take off the positive terminal cover **2**.
- Disconnect the positive (plus) cable of the battery.
- Pull the battery to the right out of the battery rack.



Info

Never operate the motorcycle with a discharged battery or without a battery. In both cases, electrical components can safety equipment can be damaged. The vehicle is then no longer safe to ride.

Installing the battery



- Push the battery from the right into the battery rack.



Info

The battery terminals must be at the front.

- Secure the battery with the rubber band **1**.
- Attach the positive cable and replace the positive terminal cover.
- Attach the minus cable .
- Position the fuel tank. ( p. 88)
- Mount the seat. ( p. 86)
- Set the clock. ( p. 28)

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.

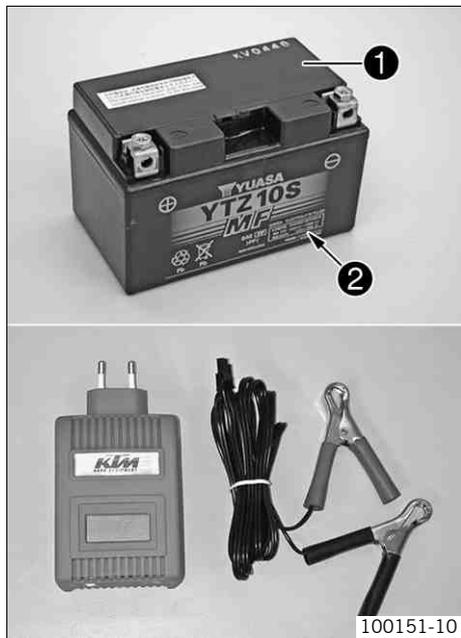
If the charging current, charging voltage and charging time are exceeded, electrolyte escapes through the safety valves. This reduces the battery capacity.

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, which means that the acid level does not need to be checked.

- Switch off all power consumers and switch off the engine.
- Reinstall the fuel tank. (☛ p. 87)
- Disconnect the minus (negative) cable of the battery to avoid damage to the motorcycle's electronics.



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

Battery charger (58429074000)

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

i Info

Never remove lid ①.

Charge the battery with a maximum of 10% of the capacity specified on the battery housing ②.

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

Guideline

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

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

- Position the fuel tank. (☛ p. 88)
- Mount the seat. (☛ p. 86)
- Set the clock. (☛ p. 28)

Changing the main fuse

Warning

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

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

i Info

The main fuse protects all power consumers of the vehicle. It is in the housing of the starter relay next to the battery.

- Switch off all power consumers and the engine.
- Remove the seat. (☞ p. 86)
- Reinstall the fuel tank. (☞ p. 87)
- Remove protective cover ❶.
- Remove a defective main fuse ❷ with a needle nose plier.
- Install a new main fuse.

Fuse (58011109130) (☞ p. 142)

i Info

A reserve fuse ❸ is located in the starter relay.

- Replace the protective cover.
- Position the fuel tank. (☞ p. 88)
- Mount the seat. (☞ p. 86)
- Set the clock. (☞ p. 28)

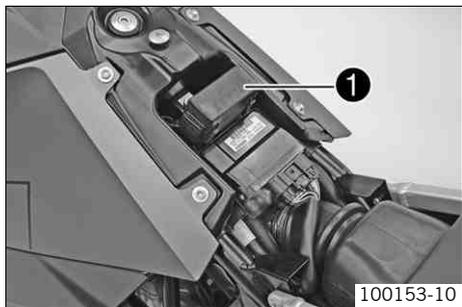


Changing the fuses of individual power consumers

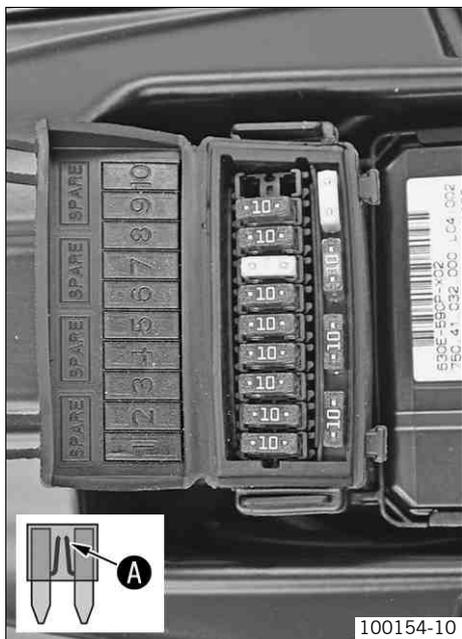
i Info

The fuse box containing the fuses of individual power consumers is located under the seat.

- Switch off all power consumers and the engine.
- Remove the seat. (☞ p. 86)



- Open fuse box cover ❶.



- Remove the faulty fuse.

Guideline

Fuse 1 - 10A - ignition, combination instrument, alarm system (optional)
Fuse 2 - 10A - clock, ignition (EFI control unit)
Fuse 3 - 10A - throttle valve control unit
Fuse 4 - 10A - fuel pump
Fuse 5 - 10A - radiator fan
Fuse 6 - 10A - horn, brake light, turn signal, alarm system (optional)
Fuse 7 - 15A - high beam, low beam, parking light, tail light, license plate lamp
Fuse 8 - 10A - for accessories (accessories connected with ignition switch)
Fuse 9 - 10A - for accessories (permanent positive)
Fuse 10 - not used
Fuse SPARE - 10A/15A - spare fuses

i Info

A defective fuse can be identified by the burned-out fuse wire ❶.



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.

- Use spare fuses with the correct rating only.

Fuse (75011088010) (☞ p. 142)

Fuse (75011088015) (☞ p. 142)

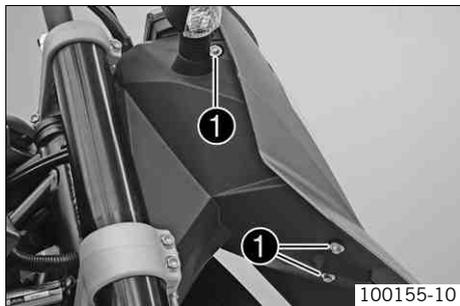


Tip

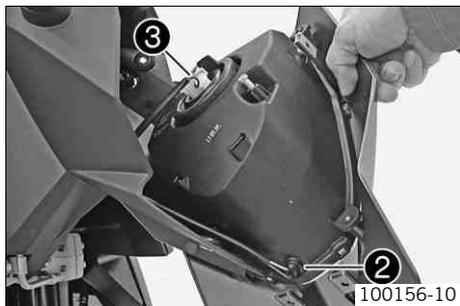
Replace the spare fuse in the fuse box so that it is available if needed.

- Check that the power consumer is functioning properly.
- Close the fuse box cover.
- Mount the seat. (☞ p. 86)

Removing headlight mask with headlight

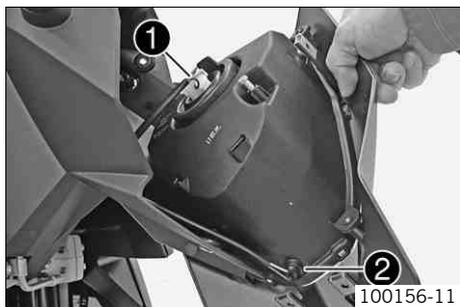


- Remove the 4 screws ❶ and carefully take off the headlight mask.

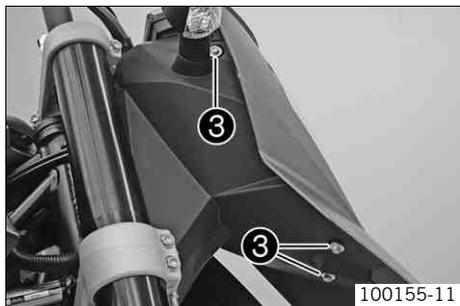


- Pull the bulb holder of the parking light ② out of the headlight housing.
- Pull the plug-in connector ③ off the headlight.
- Place the headlight mask to one side.

Refitting the headlight mask with the headlight



- Connect the plug-in connector ① to the headlight.
- Insert the bulb holder of the parking light ② into the headlight housing.



- Position the headlight mask. Mount and tighten screws ③.

Guideline

Screw, headlight mask	M6	5 Nm (3.7 lbf ft)
-----------------------	----	-------------------

- Check lighting function.

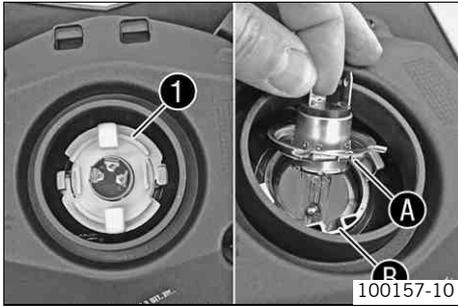
Changing the headlight bulb

Note

Damage to reflector Reduced luminance.

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

- Switch off all power consumers and the engine.
- Remove the headlight mask with the headlight. (🔧 p. 95)



- Take the rubber cap off the headlight bulb.
- Turn the bulb holder ❶ about 30° counterclockwise and remove it.
- Take the headlight bulb out of the headlight housing.
- Insert a new headlight bulb into the headlight housing.

Headlight (H4 / P43t socket) (☛ p. 142)



Info

Insert the headlight bulb so that the bayonet lugs **A** latch into the slots **B**.

- Position the bulb holder and turn it clockwise all the way.
- Replace the rubber cap.
- Refit the headlight mask with the headlight. (☛ p. 96)

Changing the parking light bulb

Note

Damage to reflector Reduced luminance.

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

- Switch off all power consumers and the engine.
- Remove the headlight mask with the headlight. (☛ p. 95)



- Pull the parking light bulb ❶ out of the holder.
- Insert a new parking light bulb in the holder.

Parking light (W5W / socket W2,1x9,5d) (☛ p. 142)

- Refit the headlight mask with the headlight. (☛ p. 96)

Changing the turn signal bulb

Note

Damage to reflector Reduced luminance.

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



- Remove the screw on the rear of the turn signal housing.
- Carefully remove diffuser ❶.
- Press the turn signal bulb carefully into the socket, turn it counterclockwise by about 30°, and take it out of the socket.



Info

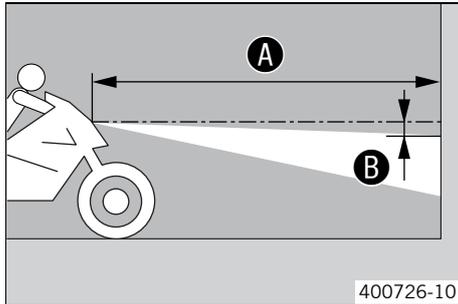
Do not touch the reflector with your fingers and keep it free from grease.

- Press the new turn signal bulb carefully into the socket and turn it clockwise all the way.

Turn signal light (RY10W / BAU15s socket) (☛ p. 142)

- Position the diffuser.
- Insert the screw and first turn it counterclockwise until it engages in the thread with a soft jerk. Tighten the screw slightly.
- Check that the turn signal system is functioning properly.

Checking the headlight setting



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

Guideline

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

- Stand the motorcycle at a distance of **A** in front of the wall and switch on the low beam.

Guideline

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

- Check the headlight setting.

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

- » If the boundary between light and dark does not meet specifications:
 - Adjust the headlight range. (☛ p. 100)

Adjusting the headlight range

- Check the headlight setting. (☛ p. 100)



- Use a screwdriver (see illustration) to adjust the headlight range.

Guideline

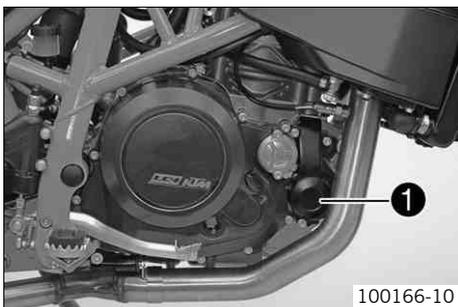
For a motorcycle with rider, the light/dark boundary must be exactly on the lower mark (made in: Checking headlight adjustment).

i Info

Turn clockwise to increase the light range, turn counterclockwise to reduce the light range.

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

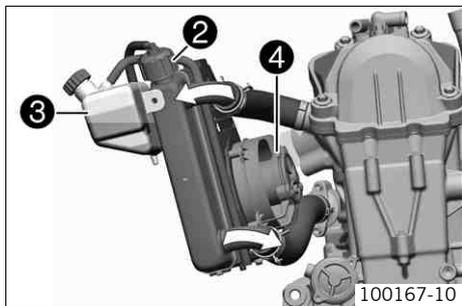
Cooling system



The water pump ❶ in the engine forces the coolant to flow.

The pressure in the cooling system resulting from heat is regulated by a valve in the radiator cap ❷. The heat expansion causes the surplus coolant to flow into the compensating tank ❸. When the temperature falls, this surplus coolant is sucked back into the cooling system. This permits the specified coolant temperature without causing any malfunctions.

125 °C (257 °F)



Cooling takes place by means of the air stream and a radiator fan ④, which is controlled by a thermost switch.

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 open the radiator, radiator hoses or other cooling system components when the engine is hot. Allow the engine and cooling system to cool down. In case of burns, rinse immediately with lukewarm water.

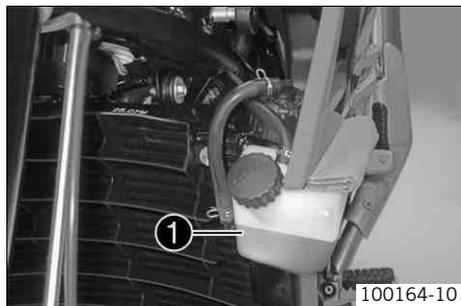


Warning

Danger of poisoning Coolants are poisonous and a health hazard.

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

- Remove the seat. (🔧 p. 86)
- Reinstall the fuel tank. (🔧 p. 87)



Condition

The engine is cold.

- Stand the motorcycle upright on a horizontal surface.
- Remove the cap of the compensating tank ❶.
- 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 compensating tank.

The coolant level must be between **MIN** and **MAX**.

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

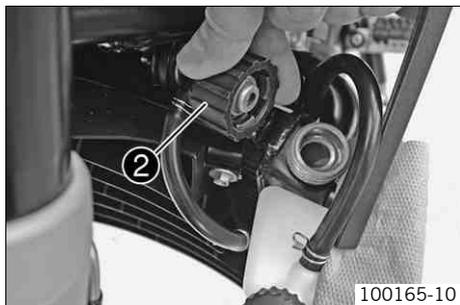
Alternative 1

Coolant (☛ p. 150)

Alternative 2

Coolant (mixed ready to use) (☛ p. 150)

- Mount the cap of the compensating tank.



- Screw off radiator cap ②.
- 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.

The radiator must be completely filled.

- » If the coolant level does not meet specifications:
 - Correct the coolant level and find out the cause of the loss.

Alternative 1

Coolant (☞ p. 150)

Alternative 2

Coolant (mixed ready to use) (☞ p. 150)

- » If you had to add more coolant than the specified amount:
 - > 0.50 l (> 0.53 qt.)
 - Fill/bleed the cooling system. ☞ (☞ p. 107)
- Mount the radiator cap.
- Position the fuel tank. (☞ p. 88)
- Mount the seat. (☞ p. 86)

Checking the coolant level



Warning

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

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



Warning

Danger of poisoning Coolants are poisonous and a health hazard.

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

- Remove the seat. (☞ p. 86)
- Reinstall the fuel tank. (☞ p. 87)

Condition

The engine is cold.

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

The coolant level must be between **MIN** and **MAX**.

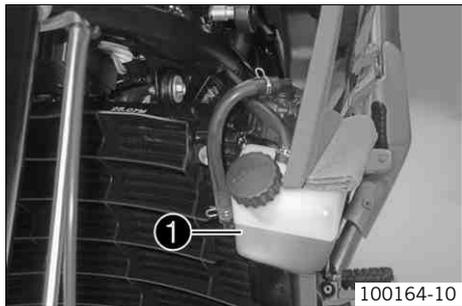
- » If the coolant level does not meet specifications:
 - Correct the coolant level.

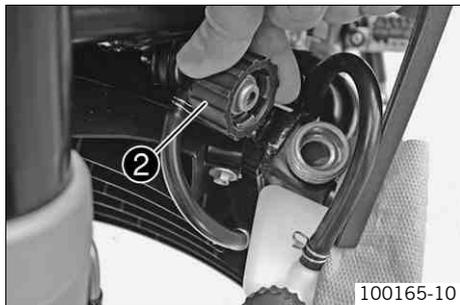
Alternative 1

Coolant (☞ p. 150)

Alternative 2

Coolant (mixed ready to use) (☞ p. 150)





- Screw off radiator cap ② and check the coolant level in the radiator.

The radiator must be completely filled.

- » If the coolant level does not meet specifications:
 - Correct the coolant level and find out the cause of the loss.

Alternative 1

Coolant (☞ p. 150)

Alternative 2

Coolant (mixed ready to use) (☞ p. 150)

- » If you had to add more coolant than the specified amount:
 - > 0.50 l (> 0.53 qt.)
 - Fill/bleed the cooling system. ☞ (☞ p. 107)
 - Mount the radiator cap.
- Position the fuel tank. (☞ p. 88)
- Mount the seat. (☞ p. 86)

Draining the coolant ☞



Warning

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

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



Warning

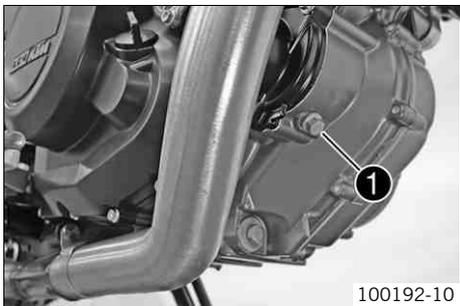
Danger of poisoning Coolants are poisonous and a health hazard.

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

- Remove the seat. (🔧 p. 86)
- Reinstall the fuel tank. (🔧 p. 87)
- Stand the motorcycle upright.
- Place a suitable container under the engine.
- Remove screw ❶. Remove the radiator cap.
- Completely drain the coolant.
- Mount screw ❶ with a new seal ring and tighten it.

Guideline

Plug, drain hole of water pump	M10x1	15 Nm (11.1 lbf ft)
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Filling/bleeding the cooling system 🛠️



Warning

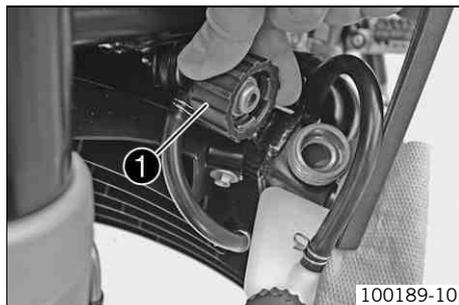
Danger of poisoning Coolants are poisonous and a health hazard.

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

Condition

Fuel tank is reset or removed.

- Remove radiator cap ❶.



100189-10

- Remove bleeder screw ❷.
- Tilt the vehicle slightly to the right.
- Pour in coolant until it emerges without bubbles at the vent hole, and then mount and tighten the bleeder screw immediately.

Alternative 1

Coolant (☛ p. 150)

Alternative 2

Coolant (mixed ready to use) (☛ p. 150)

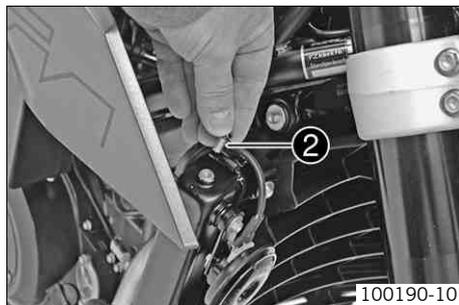
- Fill the radiator completely with coolant. Mount the radiator cap.
- Rest the vehicle on the sidestand.

Fuel tank is reset.

- Move the fuel tank forward.

The fuel tank is removed.

- Connect and position the fuel tank.



100190-10

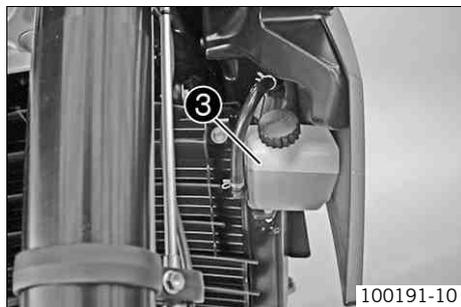


Danger

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

- When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in a closed space.

- Start the engine and run it until the 5th bar of the temperature indicator lights up.
- Stop the engine and allow it to cool down.
- When the engine is cool, check the coolant level in the radiator and, if necessary, add coolant.
- Remove the cap of the compensating tank ③ and add coolant until the coolant level is up to the **MAX** mark.
- Mount the cap of the compensating tank.

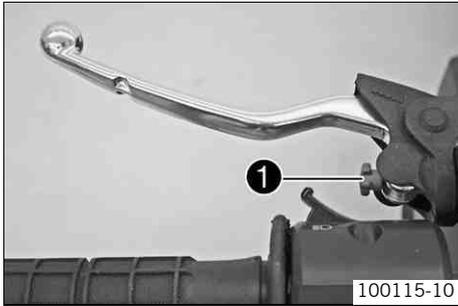


Adjusting basic position of clutch lever



Info

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



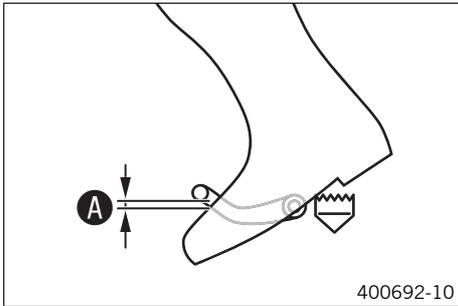
100115-10

- Adjust the basic setting of the clutch lever to your hand size by turning adjusting screw ❶.
- When adjusting the clutch lever make sure that there is a minimum clearance to other parts of the vehicle.

Guideline

Minimum clearance	5 mm (0.2 in)
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Checking the basic position of the shift lever



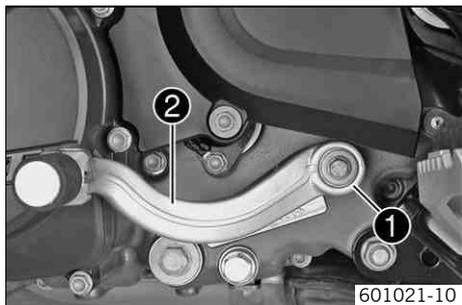
400692-10

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

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

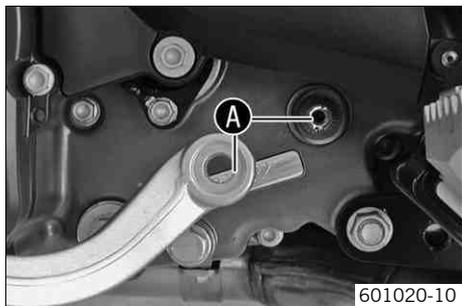
- » If the distance does not meet specifications:
 - Adjust the basic position of the shift lever. 🛠️ (👉 p. 111)

Adjusting the basic position of the shift lever



601021-10

- Remove screw ❶ and remove shift lever ❷.



601020-10

- 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.

Info

The range of adjustment is limited.

The shift lever may not come into contact with parts of the vehicle during shifting.

- Mount and tighten the screw.

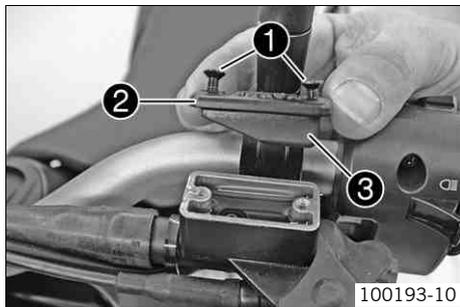
Guideline

Screw, shift lever	M6	10 Nm (7.4 lbf ft)	Loctite® 222
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Checking/rectifying the fluid level of the hydraulic clutch

i Info

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



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

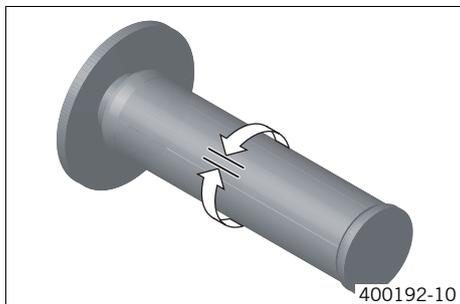
Fluid level under top level of container	4 mm (0.16 in)
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- » If the level of the coolant does not meet specifications:
 - Correct the fluid level of the hydraulic clutch.

Hydraulic fluid (15) (☛ p. 152)

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

Checking the play in the throttle cable



- Move the handlebar to the straight-ahead position. Move the throttle grip backwards and forwards to ascertain the play in the throttle cable.

Throttle cable play	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. 113)



Danger

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

- When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in a closed space.

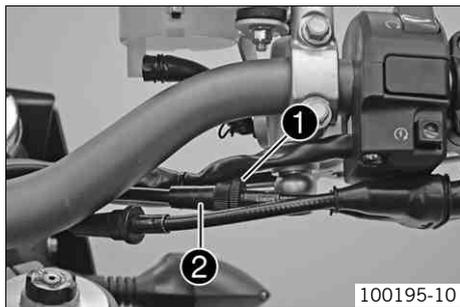
- Start the engine and let it run idle. Move the handlebar to and fro over the entire steering range.

The idle speed must not change.

» If the idle speed changes:

- Adjust the play in the throttle cable. 🛠️ (👉 p. 113)

Adjusting the play in the throttle cable 🛠️



100195-10

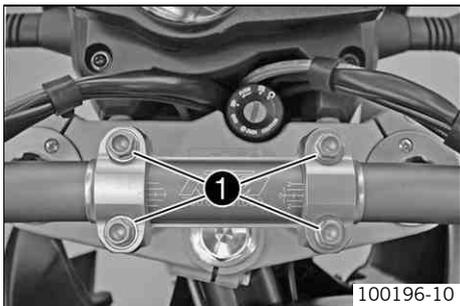
- Move the handlebar to the straight-ahead position.
- Use the KTM diagnostics tool to set the motor drive to the basic position.
- Loosen counter nut ❶.
- Set the play in the throttle cable by turning the adjusting screw ❷.

Guideline

Throttle cable play	3... 5 mm (0.12... 0.2 in)
---------------------	----------------------------

- Tighten counter nut ❶.

Adjusting the handlebar angle



- Loosen screws ❶.
- Move the handlebar to the desired position and slightly tighten the screws.
- Move the handlebar carefully in both directions as far as it will go.
 - » If the handlebar instruments touch the fuel tank:
 - Correct the handlebar angle.



Info

The distance between the handlebar support and the handlebar clamp must be the same at the front and rear.

- Fully tighten screws ❶.

Guideline

Screw, handlebar clamp	M8	20 Nm (14.8 lbf ft)
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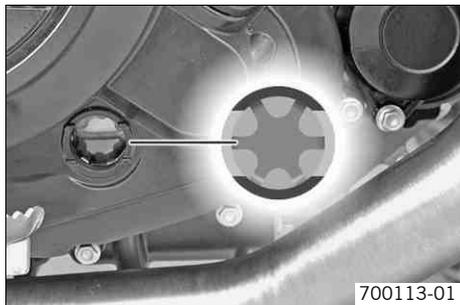
Checking the engine oil level



Info

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

- Stand the motorcycle upright on a horizontal surface.



Condition

The engine is at operating temperature.

- Check the engine oil level.



Info

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

The engine oil must be between the lower and upper edge of the oil level viewer.

- » If the engine oil level is not at the specified level:
 - Add the engine oil. (☞ p. 121)

Changing the engine oil and filter, cleaning the oil screens 🛠️



- Drain the engine oil. 🛠️ (☞ p. 115)
- Remove the oil filter. 🛠️ (☞ p. 117)
- Clean the oil screens. 🛠️ (☞ p. 118)
- Install the oil filter. 🛠️ (☞ p. 118)
- Fill up with engine oil. 🛠️ (☞ p. 120)

Draining the engine 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 engine oil only when the engine is warm.

- Stand the motorcycle on its side stand on a horizontal surface.
- Place a suitable container under the engine.
- Remove the oil drain plug ❶ with the magnet and seal ring.
- Completely drain the engine oil.



- Thoroughly clean the oil drain plug with a magnet.
- Mount the oil drain plug with the magnet and seal ring and tighten it.

Guideline

Oil drain plug with magnet	M12x1.5	20 Nm (14.8 lbf ft)
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Removing the oil filter



Warning

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

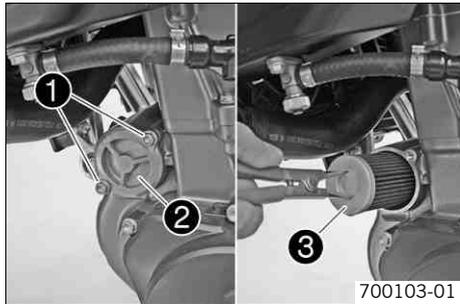
- Wear appropriate protective clothing and safety gloves. In case of burns, rinse immediately with lukewarm water.



Warning

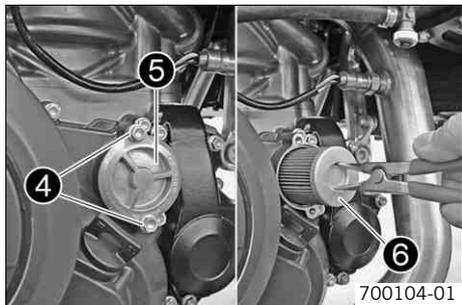
Environmental hazard Hazardous substances cause environmental damage.

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



- Place a suitable container under the engine.
- Remove screws **1**. Remove the oil filter cover **2** with the O-ring.
- Pull oil filter **3** out of the oil filter housing.

Circlip pliers reverse (51012011000)

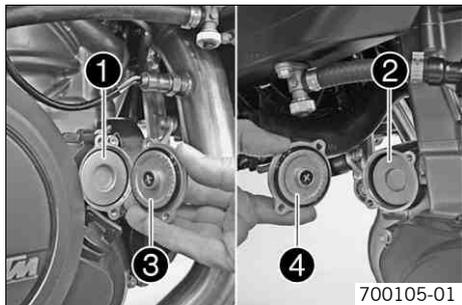


- Remove screws ④. Remove oil filter ⑤ with the O-ring.
- Pull oil filter ⑤ out of the oil filter housing.

Circlip pliers reverse (51012011000)

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

Installing the oil filter ↩



- Insert oil filters ① and ②.
- Oil the O-rings of the oil filter covers. Mount oil filter covers ③ and ④.
- Mount and tighten the screws.

Guideline

Screw, oil filter cover	M5	6 Nm (4.4 lbf ft)
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Cleaning the oil screens ↩



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.

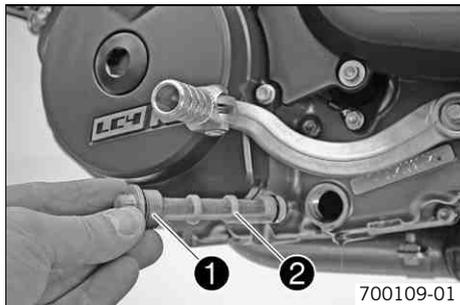


Warning

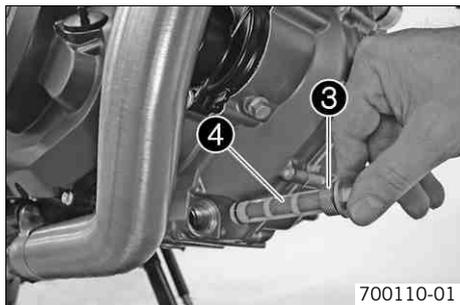
Environmental hazard Hazardous substances cause environmental damage.

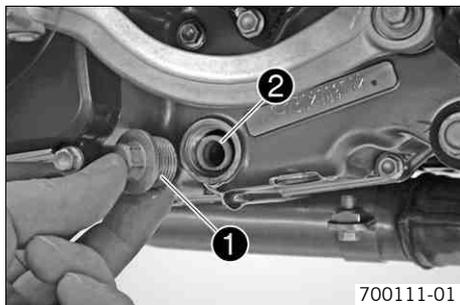
- Oil, grease, filters, fuel, cleaners, brake fluid, etc., should be disposed of as stipulated in applicable regulations.

- Place a suitable container under the engine.
- Remove plug **1** with oil screen **2** and the O-rings.



- Remove plug **3** with oil screen **4** and the O-rings.
- Completely drain the remaining engine oil.
- Thoroughly clean the parts and sealing area.

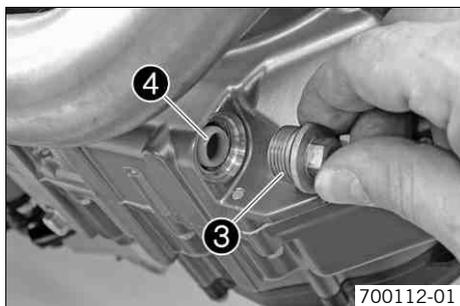




- Position oil screen ② with the O-rings.
- Mount and tighten plug ① with the O-ring.

Guideline

Plug, oil screen	M20x1.5	15 Nm (11.1 lbf ft)
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- Position oil screen ④ with the O-rings.
- Mount and tighten plug ③ with the O-ring.

Guideline

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



Info

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



700107-01

- Remove the oil filler plug with O-ring ❶ from the clutch cover and fill up with engine oil.

Engine oil	1.70 l (1.8 qt.)	Engine oil (SAE 10W/60) (00062010035) (☛ p. 151)	
		Alternative engine oil	Engine oil (SAE 10W/50) (☛ p. 151)

- Install and tighten the oil filler plug with O-ring ❶.



Danger

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

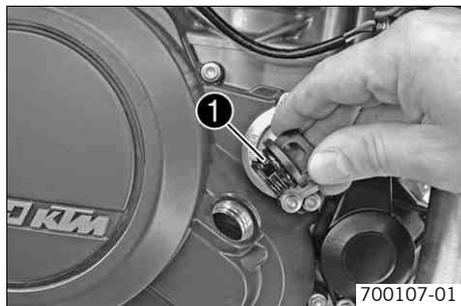
- When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in a closed space.
-
- Start the engine and check that it is oil-tight.
 - Check the engine oil level. (☛ p. 114)

Adding engine oil



Info

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



- Remove the oil filler plug with O-ring ❶ from the clutch cover and fill up with engine oil.

Engine oil (SAE 10W/60) (00062010035) (☛ p. 151)
--

Engine oil (SAE 10W/50) (☛ p. 151)

Info

For optimal performance of the engine oil, do not mix different types of engine oil.

If appropriate, change the engine oil.

- Install and tighten the oil filler plug with O-ring ❶.



Danger

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

- When running the engine, always make sure there is sufficient ventilation, and do not start or run the engine in a closed space.
-
- Start the engine and check that it is oil-tight.
 - Check the engine oil level. (☛ p. 114)

Faults	Possible cause	Action
The engine does not turn when the starter button is pressed	Operating error	– Carry out the start procedure. (☛ p. 43)
	Battery discharged	– Recharge the battery. 🛡️ (☛ p. 90) – Check the cause of discharging.
	Fuse 1, 2, 3 or 4 is blown	– Change the fuses of individual power consumers. (☛ p. 93)
	Main fuse burned out	– Change the main fuse. (☛ p. 92)
	Ignition/steering lock or emergency OFF switch defective	– Have ignition/steering lock or emergency OFF switch checked.
	Defect in safety start system	– Have the safety start system checked.
	No ground connection present.	– Check the ground connection.
Engine turns only if the clutch lever is drawn	The vehicle is in gear	– Shift gear to neutral.
	The vehicle is in gear and the side stand is folded out	– Shift gear to neutral.
	Defect in safety start system	– Have the safety start system checked.
Engine turns although a gear is engaged	Defect in safety start system	– Have the safety start system checked.
Engine turns but does not start.	Operating error	– Carry out the start procedure. (☛ p. 43)
	Fuse 4 blown	– Change the fuses of individual power consumers. (☛ p. 93)
	Coupling of fuel hose connection not connected	– Reconnect coupling of fuel hose connection.
	Socket connector of wiring harness oxidized	– Clean socket connector and treat it with contact spray.
	Defect in fuel injection system	– Read the error memory with the KTM diagnostics tool and correct the fault.

Faults	Possible cause	Action
Engine has too little power.	Air filter very dirty	– Have the air filter changed.
	Fuel filter very dirty	– Have the fuel filter changed.
	Defect in fuel injection system	– Read the error memory with the KTM diagnostics tool and correct the fault.
Engine overheats.	Too little coolant in cooling system	– Check the cooling system for leakage. – Check the coolant level. (🔧 p. 105)
	Radiator fins very dirty	– Clean radiator fins.
	Foam formation in cooling system	– Drain the coolant. 🛠️ (🔧 p. 106) – Fill/bleed the cooling system. 🛠️ (🔧 p. 107)
	Buckled or damaged radiator hose	– Have the radiator hose changed.
	Thermostat defective	– Have thermostat checked.
	Fuse 5 blown	– Change the fuses of individual power consumers. (🔧 p. 93)
	Defect in radiator fan system	– Have the radiator fan system checked.
	Air in cooling system	– Fill/bleed the cooling system. 🛠️ (🔧 p. 107)
FI warning lamp (MIL) lights/flashes	Defect in fuel injection system	– Read the error memory with the KTM diagnostics tool and correct the fault.
Engine dies during the journey	Lack of fuel	– Refuel. (🔧 p. 51)
	Fuse 1 , 2 or 4 blown	– Change the fuses of individual power consumers. (🔧 p. 93)
High oil consumption	Engine vent hose bent	– Route the vent hose without bends or change it if necessary.
	Engine oil level too high	– Check the engine oil level. (🔧 p. 114)
	Engine oil too thin (low viscosity)	– Change the engine oil and filter, clean the oil screens. 🛠️ (🔧 p. 115)

Faults	Possible cause	Action
Headlight and parking light not functioning	Fuse 7 blown	<ul style="list-style-type: none"> – Change the fuses of individual power consumers. (☛ p. 93)
Turn signal, brake light and horn not functioning	Fuse 6 blown	<ul style="list-style-type: none"> – Change the fuses of individual power consumers. (☛ p. 93)
Time is not (correctly) displayed	Fuse 2 blown	<ul style="list-style-type: none"> – Change the fuses of individual power consumers. (☛ p. 93) – Set the clock. (☛ p. 28)
Battery discharged	Ignition not switched off when vehicle was parked	<ul style="list-style-type: none"> – Recharge the battery. 🛑 (☛ p. 90)
	Battery is not charged by generator	<ul style="list-style-type: none"> – Check charging voltage.
Combination instrument shows nothing in the display	Fuse 1 blown	<ul style="list-style-type: none"> – Change the fuses of individual power consumers. (☛ p. 93)
Speedometer in combination instrument not functioning	Speedometer wiring harness damaged or plug oxidized	<ul style="list-style-type: none"> – Have the wiring harness and plug checked.

Blink code FI of warning lamp (MIL)	 <p>45 FI warning lamp (MIL) flashes 4x long, 5x short</p>
Error level condition	Lambda sensor heater cylinder 1, sensor 1 - short circuit to ground or open circuit
	Lambda sensor heater cylinder 1, sensor 1 - input signal too high
Blink code FI of warning lamp (MIL)	 <p>09 FI warning lamp (MIL) flashes briefly 9x</p>
Error level condition	Manifold absolute pressure sensor cylinder 1 - input signal too low
	Manifold absolute pressure sensor cylinder 1 - input signal too high
Blink code FI of warning lamp (MIL)	 <p>13 FI warning lamp (MIL) flashes 1x long, 3x short</p>
Error level condition	Intake air temperature sensor - input signal too low
	Intake air temperature sensor- input signal too high
Blink code FI of warning lamp (MIL)	 <p>12 FI warning lamp (MIL) flashes 1x long, 2x short</p>
Error level condition	Engine coolant temperature sensor - input signal too low
	Engine coolant temperature sensor- input signal too high

Blink code FI of warning lamp (MIL)	 06 FI warning lamp (MIL) flashes briefly 6x
Error level condition	Throttle position sensor circuit A - input signal too low
	Throttle position sensor circuit A - input signal too high
Blink code FI of warning lamp (MIL)	 17 FI warning lamp (MIL) flashes 1x long, 7x short
Error level condition	Lambda sensor cylinder 1, sensor 1 - circuit fault
Blink code FI of warning lamp (MIL)	 33 FI warning lamp (MIL) flashes 3x long, 3x short
Error level condition	Injector cylinder 1 - circuit fault
Blink code FI of warning lamp (MIL)	 08 FI warning lamp (MIL) flashes briefly 8x
Error level condition	Accelerator position sensor - input signal too low
	Accelerator position sensor - input signal too high
Blink code FI of warning lamp (MIL)	 02 FI warning lamp (MIL) flashes briefly 2x
Error level condition	Crankshaft position sensor circuit - circuit fault

Blink code FI of warning lamp (MIL)	 37 FI warning lamp (MIL) flashes 3x long, 7x short
Error level condition	Ignition coil cylinder 1 - circuit fault
Blink code FI of warning lamp (MIL)	 54 FI warning lamp (MIL) flashes 5x long, 4x short
Error level condition	Secondary air valve - short circuit to ground or open circuit
Blink code FI of warning lamp (MIL)	 24 FI warning lamp (MIL) flashes 2x long, 4x short
Error level condition	System voltage - circuit fault
Blink code FI of warning lamp (MIL)	 65 FI warning lamp (MIL) flashes 6x long, 5x short
Error level condition	E²PROM Error
Blink code FI of warning lamp (MIL)	 14 FI warning lamp (MIL) flashes 1x long, 4x short
Error level condition	Ambient air pressure sensor - input signal too low
	Ambient air pressure sensor - input signal too high

Blink code FI of warning lamp (MIL)	 41 FI warning lamp (MIL) flashes 4x long, 1x short
Error level condition	Fuel pump relay - short circuit to ground or open circuit
Blink code FI of warning lamp (MIL)	 26 FI warning lamp (MIL) flashes 2x long, 6x short
Error level condition	Hall type sensor EPT throttle motor drive - circuit fault
Blink code FI of warning lamp (MIL)	 58 FI warning lamp (MIL) flashes 5x long, 8x short
Error level condition	EFI control unit and EPT control unit - checking the control signal line
Blink code FI of warning lamp (MIL)	 92 FI warning lamp (MIL) flashes 9x long, 2x short
Error level condition	Motor drive voltage (internal) - circuit fault
Blink code FI of warning lamp (MIL)	 25 FI warning lamp (MIL) flashes 2x long, 5x short
Error level condition	Side stand switch - circuit fault

Blink code FI of warning lamp (MIL)	 15 FI warning lamp (MIL) flashes 1x long, 5x short
Error level condition	Rollover sensor - input signal too low
	Rollover sensor - input signal too high
Blink code FI of warning lamp (MIL)	 91 FI warning lamp (MIL) flashes 9x long, 1x short
Error level condition	CAN bus communication error
Blink code FI of warning lamp (MIL)	 60 FI warning lamp (MIL) flashes 6x long
Error level condition	Motor drive - circuit fault
Blink code FI of warning lamp (MIL)	 90 FI warning lamp (MIL) flashes 9x long
Error level condition	Throttle position - circuit fault

Cleaning motorcycle

Note

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

- Never clean the vehicle with high-pressure cleaning equipment or a strong water-jet. The excessive pressure can penetrate electrical components, 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 sunshine on the motorcycle during cleaning.

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

Motorcycle cleaner (👉 p. 154)



Info

Use warm water containing normal motorcycle cleaner and a soft sponge.
If you have ridden the vehicle on salted roads, clean it with cold water. Warm water would reinforce the effect of the salt.

- After rinsing the motorcycle thoroughly with a soft jet of water, dry it with compressed air and a cloth.



Warning

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

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

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



Info

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

- Push back the protection covers on the handlebar instruments to allow water to evaporate.
- After the motorcycle has cooled off, oil or grease all moving parts and bearings.
- Clean the chain. (🔧 p. 62)
- Treat bare metal parts (except for brake discs and exhaust system) with anti-corrosion materials.

Cleaning and polishing materials for metal, rubber and plastic (🔧 p. 153)

- Treat all painted parts with a mild paint polish.

High-luster polish for paint (🔧 p. 154)

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

Contact spray (🔧 p. 153)

- Oil the ignition/steering lock.

Universal oil spray (🔧 p. 154)

Protective treatment for winter operation

Info

If you use the motorcycle in winter, you must expect salt on the roads. You should therefore take precautions against aggressive road salt.

If the vehicle was operated in road salt, clean it with cold water. Warm water would enhance the corrosive effects of salt.

- Clean the motorcycle. (🔧 p. 131)
 - Treat the engine, the swingarm, and all other bare or galvanized parts (except brake discs) with a wax-based anti-corrosion substance.
-

Info

To prevent serious reduction of the braking efficiency, make sure no anti-corrosion substance gets on to the brake discs. After use on salted roads, clean the motorcycle thoroughly with cold water and dry it properly.

- Clean the chain. (🔧 p. 62)

Storage

Info

If you want to garage the motorcycle for a longer period, take the following actions.

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

- Make sure the tank is as empty as possible so that you can fill up with fresh fuel when you put the motorcycle back into operation.
- Clean the motorcycle. (🔧 p. 131)
- Change the engine oil and filter, clean the oil screens. 🛠️ (🔧 p. 115)
- Check the antifreeze and coolant level. (🔧 p. 102)
- Check the tire pressure. (🔧 p. 84)
- Remove the battery. 🛠️ (🔧 p. 89)
- Recharge the battery. 🛠️ (🔧 p. 90)

Guideline

Storage temperature of battery without direct sunshine.	0... 35 °C (32... 95 °F)
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- The storage place should be dry and not subject to large temperature differences.

Info

KTM recommends jacking up the motorcycle.

- Jack up the rear of the motorcycle. (🔧 p. 58)
- Jack up the front of the motorcycle. (🔧 p. 57)
- Cover the motorcycle with a porous sheet or blanket.



Info

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

Putting into operation after storage

- Take the front from the work stand. (🔧 p. 57)
- Taking rear from work stand. (🔧 p. 58)
- Recharge the battery. 🔌 (🔧 p. 90)
- Install the battery. 🔌 (🔧 p. 90)
- Set the clock. (🔧 p. 28)
- Refuel. (🔧 p. 51)
- Carry out checks before putting into operation. (🔧 p. 42)
- Make a test ride.

Design	1-cylinder 4-stroke engine, water-cooled
Displacement	654 cm ³ (39.91 cu in)
Stroke	80 mm (3.15 in)
Bore	102 mm (4.02 in)
Compression ratio	11.8:1
Control	OHC, 4 valves controlled via rocker arm, chain drive
Valve diameter, intake	40 mm (1.57 in)
Valve diameter, exhaust	34 mm (1.34 in)
Valve play, cold	0.07... 0.13 mm (0.0028... 0.0051 in)
Crankshaft bearing	2 roller bearings
Conrod bearing	Needle bearing
Piston pin bearing	Bronze bush
Pistons	Forged light alloy
Piston rings	1 L-ring, 1 tapered compression piston ring, 1 oil scraper ring
Engine lubrication	Semi-dry sump lubrication with two rotor pumps
Primary transmission	36:79
Clutch	APTC™ Antihopping clutch in oil bath / hydraulically operated
Gearbox	6-gears, claw-shifted
Transmission ratio	
1st gear	14:35
2nd gear	16:28
3rd gear	21:28
4th gear	21:23
5th gear	23:22
6th gear	23:20

Mixture preparation	Electronic fuel injection
Ignition	Contactless controlled fully electronic ignition with digital ignition adjustment
Generator	12 V, 224 W
Spark plug	NGK LKAR 8AI - 9
Spark plug electrode gap	0.9 mm (0.035 in)
Cooling	Water cooling, permanent circulation of coolant by water pump
Starting aid	Electric starter, automatic decompressor

Capacity - engine oil

Engine oil	1.70 l (1.8 qt.)	Engine oil (SAE 10W/60) (00062010035) (☛ p. 151)	
		Alternative engine oil	Engine oil (SAE 10W/50) (☛ p. 151)

Capacity - coolant

Coolant	1.20 l (1.27 qt.)	Coolant (☛ p. 150)
		Coolant (mixed ready to use) (☛ p. 150)

TECHNICAL DATA - ENGINE TIGHTENING TORQUES

Oil hole plug	self-tapping	9 Nm (6.6 lbf ft)	Loctite® 243™
Screw, membrane fixation	M3	2.5 Nm (1.84 lbf ft)	Loctite® 243™
Hose clamp, intake flange	M4	1.5 Nm (1.11 lbf ft)	–
Oil jet, conrod lubrication	M4	2 Nm (1.5 lbf ft)	Loctite® 243™
Locking screw for bearing	M5	6 Nm (4.4 lbf ft)	Loctite® 243™
Screw, breather cover on valve cover	M5	3 Nm (2.2 lbf ft)	Loctite® 243™
Screw, clutch spring	M5	6 Nm (4.4 lbf ft)	–
Screw, cover plate for oil return line	M5	6 Nm (4.4 lbf ft)	–
Screw, gear sensor	M5	5 Nm (3.7 lbf ft)	Loctite® 243™
Screw, oil filter cover	M5	6 Nm (4.4 lbf ft)	–
Screw, oil pump cover	M5	6 Nm (4.4 lbf ft)	Loctite® 243™
Plug, vacuum connection	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, Autodecompression	M6	3... 4 Nm (2.2... 3 lbf ft)	Loctite® 243™
Screw, axial lock of camshaft	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, clutch cover	M6	10 Nm (7.4 lbf ft)	–
Screw, clutch slave cylinder	M6x20	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, clutch slave cylinder	M6x35	10 Nm (7.4 lbf ft)	–
Screw, cylinder	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, cylinder head	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, engine housing	M6	10 Nm (7.4 lbf ft)	–
Screw, generator cover	M6	10 Nm (7.4 lbf ft)	–
Screw, generator cover (chain shaft through-hole)	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, ignition pulse generator	M6	10 Nm (7.4 lbf ft)	Loctite® 243™

TECHNICAL DATA - ENGINE TIGHTENING TORQUES

Screw, locking lever	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, rocker arm shaft	M6	12 Nm (8.9 lbf ft)	–
Screw, shift drum locating	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, shift lever	M6	10 Nm (7.4 lbf ft)	Loctite® 222
Screw, starter motor	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, stator bracket	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, thermostat housing	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, timing chain guide rail	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, timing chain tensioning rail	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, valve cover	M6	10 Nm (7.4 lbf ft)	–
Screw, water pump cover	M6	10 Nm (7.4 lbf ft)	–
Screw, water pump wheel	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Oil jet, piston cooling	M6x0.75	4 Nm (3 lbf ft)	Loctite® 243™
Plug, crankshaft location	M8	20 Nm (14.8 lbf ft)	–
Stud, exhaust flange	M8	10 Nm (7.4 lbf ft)	Loctite® 243™
Cylinder head screw	M10	Tightening sequence: Tighten diagonally, beginning with the rear screw on the chain shaft. Step 1 15 Nm (11.1 lbf ft) Step 2 30 Nm (22.1 lbf ft) Step 3 45 Nm (33.2 lbf ft) Step 4 60 Nm (44.3 lbf ft)	lubricated with engine oil

TECHNICAL DATA - ENGINE TIGHTENING TORQUES

Oil hole plug	M10x1	15 Nm (11.1 lbf ft)	Loctite® 243™
Plug, drain hole of water pump	M10x1	15 Nm (11.1 lbf ft)	–
Plug, oil bore for oil radiator	M10x1	15 Nm (11.1 lbf ft)	–
Screw, unlocking of timing chain tensioner	M10x1	10 Nm (7.4 lbf ft)	–
Spark plug	M12x1.25	17 Nm (12.5 lbf ft)	–
Coolant temperature sensor on cylinder head	M12x1.5	12 Nm (8.9 lbf ft)	–
Oil drain plug with magnet	M12x1.5	20 Nm (14.8 lbf ft)	–
Oil pressure regulator valve plug	M12x1.5	20 Nm (14.8 lbf ft)	–
Plug, oil bore	M14x1.5	15 Nm (11.1 lbf ft)	Loctite® 243™
Engine case stud	M16x1.5	25 Nm (18.4 lbf ft)	Loctite® 243™
Rotor nut	M18x1.5	100 Nm (73.8 lbf ft)	–
Nut, engine sprocket	M20x1.5	60 Nm (44.3 lbf ft)	Loctite® 243™
Nut, inner clutch hub	M20x1.5	100 Nm (73.8 lbf ft)	Loctite® 243™
Nut, primary gear	M20LHx1.5	90 Nm (66.4 lbf ft)	Loctite® 243™
Plug, oil screen	M20x1.5	15 Nm (11.1 lbf ft)	–
Plug, timing chain tensioner	M20x1.5	25 Nm (18.4 lbf ft)	–
Plug, oil thermostat	M24x1.5	15 Nm (11.1 lbf ft)	–
Screw in generator cover	M24x1.5	8 Nm (5.9 lbf ft)	–

Frame	Lattice frame made of chrome molybdenum steel tubing, powder-coated
Fork	WP Suspension Up Side Down 4860 ROMA
Shock absorber	WP Suspension 4618 with Pro-Lever deflector
Suspension travel	
Front	175 mm (6.89 in)
rear	175 mm (6.89 in)
Brake system	
Front	Disc brake with radially screwed four-piston brake caliper, floating brake disc
Rear	Disc brake with single-piston brake caliper, floating
Brake discs - diameter	
Front	320 mm (12.6 in)
Rear	240 mm (9.45 in)
Brake discs - wear limit	
Front	4.0 mm (0.157 in)
Rear	4.5 mm (0.177 in)
Tire air pressure, solo	
Front	2.0 bar (29 psi)
Rear	2.0 bar (29 psi)
Tire air pressure with passenger / fully loaded	
Front	2.0 bar (29 psi)
Rear	2.2 bar (32 psi)
Rear wheel gearing	16:40
Chain	5/8 x 1/4" X-ring

Steering head angle	63.5°
Wheelbase	1,472±15 mm (57.95±0.59 in)
Seat height unloaded	840 mm (33.07 in)
Ground clearance unloaded	210 mm (8.27 in)
Weight without fuel approx.	154 kg (340 lb.)
Maximum permissible front axle load	150 kg (331 lb.)
Maximum permissible rear axle load	200 kg (441 lb.)
Maximum permissible overall weight	350 kg (772 lb.)

Battery	YTZ10S	Battery voltage: 12 V Nominal capacity: 8.6 Ah maintenance-free
Fuse	58011109130	30 A
Fuse	75011088015	15 A
Fuse	75011088010	10 A

Lighting equipment

Headlight	H4 / P43t socket	12 V 60/55 W
Parking light	W5W / socket W2,1x9,5d	12 V 5 W
Instrument lights and indicator lamps	LED	
Turn signal light	RY10W / BAU15s socket	12 V 10 W
Brake/tail light	LED	

License plate lamp	W5W / socket W2,1x9,5d	12 V 5 W
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Front tire	Rear tire
120/70 R 17 M/C 58H TT Bridgestone BT090F	160/60 R 17 M/C 69H TT Bridgestone BT090R Pro

Additional information is available in the Service section under:
<http://www.ktm.com>

Capacity - fuel

Total fuel tank capacity, approx.	13.5 l (3.57 US gal)	Super unleaded (ROZ 95 / RON 95 / PON 91) (☛ p. 152)
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Fuel reserve, approx.	2.5 l (2.6 qt.)
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Fork part number	14.18.7E.47
Fork	WP Suspension Up Side Down 4860 ROMA
Rebound damping	
Comfort	25 clicks
Standard	20 clicks
Sport	15 clicks
Full payload	15 clicks
Spring length with preload spacer(s)	430 mm (16.93 in)
Spring rate	
Soft	4.8 N/mm (27.4 lb/in)
Medium (standard)	5.2 N/mm (29.7 lb/in)
Hard	5.6 N/mm (32 lb/in)
Air chamber length	100 ⁺³⁰ ₋₂₀ mm (3.94 ^{+1.18} _{-0.79} in)
Fork length	820 mm (32.28 in)
Fork oil (☛ p. 152)	SAE 5

TECHNICAL DATA - SHOCK ABSORBER

Shock absorber part number	15.18.9E.47
Shock absorber	WP Suspension 4618 with Pro-Lever deflector
Rebound damping	
Comfort	25 clicks
Standard	20 clicks
Sport	15 clicks
Full payload	15 clicks
Spring preload	10 mm (0.39 in)
Spring rate	
Weight of rider: 65... 75 kg (143... 165 lb.)	60 N/mm (343 lb/in)
Weight of rider: 75... 85 kg (165... 187 lb.)	65 N/mm (371 lb/in)
Weight of rider: 85... 95 kg (187... 209 lb.)	70 N/mm (400 lb/in)
Spring length	220 mm (8.66 in)
Gas pressure	12 bar (174 psi)
Static sag	27 mm (1.06 in)
Riding sag	60... 65 mm (2.36... 2.56 in)
Fitted length	367 mm (14.45 in)

TECHNICAL DATA - CHASSIS TIGHTENING TORQUES

Screw, combination instrument		1 Nm (0.7 lbf ft)	–
Screw, combination instrument holder		1 Nm (0.7 lbf ft)	–
Screw, side stand switch	M4	2 Nm (1.5 lbf ft)	Loctite® 243™
Spoke nipple, front wheel	M4.5	5 Nm (3.7 lbf ft)	–
Bolt, foot brake lever stub	M5	6 Nm (4.4 lbf ft)	Loctite® 243™
Remaining screws, chassis	M5	4 Nm (3 lbf ft)	–
Screw, exhaust heat shield	M5	5 Nm (3.7 lbf ft)	Loctite® 243™
Screw, fuel level indicator	M5	3 Nm (2.2 lbf ft)	–
Screw, fuel pump	M5	4 Nm (3 lbf ft)	–
Screw, plastic clamp of brake line on fork leg	M5	2 Nm (1.5 lbf ft)	–
Screw, pressure regulator	M5	4 Nm (3 lbf ft)	–
Screw, seat lock	M5	3 Nm (2.2 lbf ft)	Loctite® 222
Screw, side cover	M5	2 Nm (1.5 lbf ft)	–
Screw, starter cable on starter	M5	3 Nm (2.2 lbf ft)	–
Spoke nipple, rear wheel	M5	5 Nm (3.7 lbf ft)	–
Lower radiator bracket nut	M6	5 Nm (3.7 lbf ft)	–
Remaining nuts, chassis	M6	15 Nm (11.1 lbf ft)	–
Remaining screws on fuel tank	M6	6 Nm (4.4 lbf ft)	–
Remaining screws, chassis	M6	10 Nm (7.4 lbf ft)	–
Screw, ball joint of push rod on foot brake cylinder	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, battery holder	M6	3 Nm (2.2 lbf ft)	–
Screw, brake fluid reservoir of rear brake	M6	5 Nm (3.7 lbf ft)	–
Screw, control unit holder	M6	3 Nm (2.2 lbf ft)	–

TECHNICAL DATA - CHASSIS TIGHTENING TORQUES

Screw, foot brake cylinder	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, front brake disc	M6	14 Nm (10.3 lbf ft)	Loctite® 243™
Screw, fuel tap	M6	Tightening sequence: tighten in parallel 6 Nm (4.4 lbf ft)	–
Screw, headlight mask	M6	5 Nm (3.7 lbf ft)	–
Screw, horn	M6	6 Nm (4.4 lbf ft)	Loctite® 243™
Screw, license plate holder	M6	8 Nm (5.9 lbf ft)	–
Screw, lower radiator bracket	M6	5 Nm (3.7 lbf ft)	–
Screw, magnetic holder on side stand	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, rear brake disc	M6	14 Nm (10.3 lbf ft)	Loctite® 243™
Screw, side stand bracket	M6	10 Nm (7.4 lbf ft)	Loctite® 243™
Screw, SLS valve	M6	6 Nm (4.4 lbf ft)	–
Screw, voltage regulator/rectifier	M6	8 Nm (5.9 lbf ft)	–
Nut, manifold on cylinder head	M8	25 Nm (18.4 lbf ft)	Copper paste
Nut, rear sprocket screw	M8	35 Nm (25.8 lbf ft)	Loctite® 243™
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, exhaust clamp on main silencer	M8	25 Nm (18.4 lbf ft)	–
Screw, exhaust clamp on manifold	M8	25 Nm (18.4 lbf ft)	Copper paste
Screw, fork stub	M8	15 Nm (11.1 lbf ft)	–
Screw, fuel tank bracket	M8	15 Nm (11.1 lbf ft)	–
Screw, handlebar clamp	M8	20 Nm (14.8 lbf ft)	–
Screw, handrail	M8	6 Nm (4.4 lbf ft)	–

TECHNICAL DATA - CHASSIS TIGHTENING TORQUES

Screw, ignition lock	M8		Loctite® 243™
Screw, linkage bracket, front engine bracket	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
Screw, manifold on main silencer	M8	25 Nm (18.4 lbf ft)	Copper paste
Screw, rear footrest bracket	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
Screw, rear footrest clamp	M8	25 Nm (18.4 lbf ft)	–
Screw, side stand bracket	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
Screw, spring holder on side stand bracket	M8	25 Nm (18.4 lbf ft)	Loctite® 243™
Screw, steering stem	M8	20 Nm (14.8 lbf ft)	–
Screw, top triple clamp	M8	12 Nm (8.9 lbf ft)	–
Screw, upper subframe	M8	35 Nm (25.8 lbf ft)	Loctite® 243™
Engine carrying screw	M10	45 Nm (33.2 lbf ft)	Loctite® 243™
Remaining nuts, chassis	M10	50 Nm (36.9 lbf ft)	–
Remaining screws, chassis	M10	45 Nm (33.2 lbf ft)	–
Screw, bottom shock absorber	M10	45 Nm (33.2 lbf ft)	Loctite® 243™
Screw, foot brake lever	M10	25 Nm (18.4 lbf ft)	–
Screw, handlebar support	M10	20 Nm (14.8 lbf ft)	–
Screw, side stand	M10	35 Nm (25.8 lbf ft)	Loctite® 243™
Screw, top shock absorber	M10	45 Nm (33.2 lbf ft)	Loctite® 243™
Screw, front brake caliper	M10x1.25	45 Nm (33.2 lbf ft)	Loctite® 243™
Screw, lower subframe	M10x1.25	45 Nm (33.2 lbf ft)	Loctite® 243™
Lambda sensor	M12x1.25	24.5 Nm (18.07 lbf ft)	Copper paste
Nut, frame to linkage lever	M14x1.5	100 Nm (73.8 lbf ft)	–
Nut, linkage lever on swingarm	M14x1.5	100 Nm (73.8 lbf ft)	–

TECHNICAL DATA - CHASSIS TIGHTENING TORQUES

Nut, linkage lever to rocker arm	M14x1.5	100 Nm (73.8 lbf ft)	–
Nut, swingarm pivot	M16x1.5	100 Nm (73.8 lbf ft)	–
Screw, steering head	M20x1.5	12 Nm (8.9 lbf ft)	–
Adjusting ring of swingarm bearing	M24x1.5	25 Nm (18.4 lbf ft)	–
Screw, front wheel spindle	M24x1.5	40 Nm (29.5 lbf ft)	–
Nut, rear wheel spindle	M25x1.5	90 Nm (66.4 lbf ft)	–

Brake fluid DOT 4 / DOT 5.1

According to

- DOT

Guideline

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

Supplier

Castrol

- **RESPONSE BRAKE FLUID SUPER DOT 4**

Motorex®

- **Brake Fluid DOT 5.1**

Coolant

Guideline

- Use only suitable coolant (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
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Coolant (mixed ready to use)

Antifreeze	-40 °C (-40 °F)
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Supplier

Motorex®

- **Anti Freeze**

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

According to

- JASO T903 MA (☛ p. 155)
- SAE (☛ p. 155) (SAE 10W/60)
- KTM LC4 2007+

Guideline

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

Synthetic engine oil

Supplier

Motorex®

- **Motorex® KTM Cross Power 4T**

Engine oil (SAE 10W/50)

According to

- JASO T903 MA (☛ p. 155)
- SAE (☛ p. 155) (SAE 10W/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.

Fully synthetic engine oil

Supplier

Motorex®

- **Power Synt 4T**

Fork oil (SAE 5)

According to

- SAE (☛ p. 155) (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**

Hydraulic fluid (15)

According to

- ISO VG (15)

Guideline

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

Supplier

Motorex[®]

- **Hydraulic Fluid 75**

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

According to

- DIN EN 228 (ROZ 95 / RON 95 / PON 91)

Chain cleaner

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Chain Clean 611**

Chain lube for road use

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Chain Lube 622 Strong**

Cleaning and polishing 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**

High-luster polish for paint

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Moto Polish**

Long-life grease

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Fett 2000**

Motorcycle cleaner

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Moto Clean 900**

Universal oil spray

Guideline

- KTM recommends **Motorex®** products.

Supplier

Motorex®

- **Joker 440 Universal**

JASO T903 MA

Different technical development directions required a new specification for 4-stroke motorcycles – the JASO T903 MA Standard. Earlier, engine oils from the automobile industry were used for 4-stroke motorcycles because there was no separate motorcycle specification. Whereas long service intervals are demanded for automobile engines, high performance at high engine speeds are in the foreground for motorcycle engines. With most motorcycles, the gearbox and the clutch are lubricated with the same oil as the engine. The JASO MA Standard meets these special requirements.

SAE

The SAE viscosity classes were defined by the Society of Automotive Engineers and are used for classifying oils according to their viscosity. The viscosity describes only one property of oil and says nothing about quality.

A

Accessories	8
Antifreeze	
checking	102

B

Baggage	40
Battery	
fitting	90
recharging	90
removing	89
Blink code	126-130
Brake discs	
checking	68
Brake fluid	
front brake fluid, adding	70
rear brake, adding	74
Brake fluid level	
front brake, checking	69
rear brake, checking	73
Brake linings	
front brake, checking	72
rear brake, checking	75
Brakes	48
Braking	48

C

Chain	
cleaning	62
dirt, checking for	62
wear, checking	67
Chain tension	
adjusting	64
checking	63
Chassis number	16
Cleaning	131-132
Clutch	
checking/correcting fluid level	112
Clutch lever	19
basic position, adjusting	109
Combination instrument	23
clock, setting	28
coolant temperature indicator	31
display	26
function buttons	24
indicator lamps	25
kilometers or miles, setting	27
ODO display	29
speed display	27
tachometer	24
time	28
TRIP 1 display, setting/resetting	29
TRIP 2 display, setting/resetting	30

TRIP F display	31
Coolant	
draining	106
Coolant level	
checking	102, 105
Cooling system	101
filling/bleeding	107
D	
Display	26
E	
Electric starter button	23
Emergency OFF switch	22
Engine	
running in	39
Engine number	17
Engine oil	
adding	121
changing	115
draining	115
refilling	120
Engine oil level	
checking	114
Environment	9

F	
Filler cap	
closing	32
opening	32
Filling up	
fuel	51
Foot brake lever	37
free travel, checking	72
Fork	59
fork legs, bleeding	61
rebound, adjusting	59
Fork part number	17
Front wheel	
installing	77
removing	76
Fuel tank	
positioning	88
reinstalling	87
Fuel taps	33
Fuel, oils, etc.	7
Fuse	
individual power consumers, changing	93
H	
Hand brake lever	19
basic position, adjusting	69

- Handlebar angle**
adjusting114
- Handrails**33
- Headlight**
light range, adjusting100
- Headlight bulb, changing**97
- Headlight flasher switch**20
- Headlight mask with headlight**
fitting96
removing95
- Headlight setting, checking**100
- Horn button**21
- I**
- Ignition lock**22
- Indicator lamps**25
- K**
- Key number**16
- L**
- Light switch**20
- Loading the vehicle**40
- M**
- Main fuse**
changing92
- Maintenance**7
- Motorcycle**
cleaning131
jacking up front57
jacking up rear58
taking front from work stand57
taking rear from work stand58
- O**
- Oil filter**
changing115
installing118
removing117
- Oil screens**
cleaning115, 118
- Owner's manual**34
basics10
- P**
- Parking**49
- Parking light bulb, changing**98
- Passenger footrests**35
- Play in throttle cable**
adjusting113
checking112
- Protective treatment for winter operation**133
- Putting into operation**
advice on first use38
after storage135

checks before putting into operation42

R

Rear hub rubber dampers

checking81

Rear sprocket / engine sprocket

checking for wear66

Rear wheel

fitting79

removing78

Riding 45

starting up45

S

Seat

mounting86

removing86

Seat lock34

Service schedule 53-56

Shift lever 36

basic position, adjusting111

basic position, checking110

Shifting45

Shock absorber 59

rebound damping, adjusting60

Shock absorber part number18

Side stand37

Spare parts8

Spoke tension

checking85

Starting43

Steering lock22

Stopping49

Storage134

T

Tachometer24

Technical data

chassis 141-143

chassis tightening torques 146-149

engine 136-137

engine tightening torques 138-140

fork144

shock absorber145

Tire air pressure

checking84

Tire condition

checking82

Tool set35

Transport8

Troubleshooting 123-125

Turn signal bulb, changing99

Turn signal switch21

Type label16

U

Use definition7

V

View of vehicle

front left12

rear right14

W

Warranty7

Work rules8



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04/2009 Photo: Mitterbauer



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