

# OWNER'S MANUAL 2007

690 LC4 SUPERMOTO PRESTIGE

690 LC4 SUPERMOTO

ART. NR. 3.211.147 EN



**KTM**

We would like to congratulate you on your purchase of a KTM motorcycle. You are now the owner of a state-of-the-art sport motorcycle that guarantees to bring you lots of fun and enjoyment, provided that you clean and maintain it appropriately. Please insert the serial numbers of your motorcycle in the boxes below:

Frame number

Engine number

Key number

Stamp of dealer

All information contained is without obligation. KTM-Sportmotorcycle AG particularly reserves the right to modify any equipment, technical specifications, prices, colors, shapes, materials, services, service work, constructions, equipment and the like so as to adapt them to local conditions or to cancel any of the above items, all without previous announcement and without giving reasons. KTM may stop manufacturing certain models without previous notice. KTM shall not be held liable for any deviations of availability and/or ability to deliver, illustrations, descriptions, printing and/or other errors. The illustrated models partly contain extra equipment, which is not applied to standard models.

© 2007 by KTM-SPORTMOTORCYCLE AG, Mattighofen AUSTRIA; All rights reserved; Reprint, also in extracts, with written allowance of KTM-SPORTMOTORCYCLE AG, Mattighofen only.

**CONSUMER INFORMATION FOR AUSTRALIA ONLY Tampering with noise control system prohibited** Owners are warned that the law may prohibit:

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



In accordance with the international quality management ISO 9001 standard, KTM uses quality assurance processes that lead to the highest possible product quality.

## INTENDED PURPOSE

The 690 Supermoto / Prestige is designed and constructed for normal use on public roads but not for use on race courses or offroad terrain.

## OWNER'S MANUAL

Carefully read the entire Owner's Manual before you start riding your motorcycle, even if this will take a little time. It contains useful tips and information on the best way to handle the motorcycle and how to protect yourself from injuries. The Manual also contains important information on service and maintenance. In your own interest, pay particular attention to the information marked as follows:



### WARNING

- Ignoring these instructions, can endanger your body and your life.



### CAUTION

- Ignoring these instructions could cause damage to parts of your motorcycle or that the motor-cycle is not road-safe anymore.

The Owner's Manual corresponded to the latest information available for this model series at the time it was printed. Minor deviations resulting from enhancements to the motorcycle design cannot be entirely precluded. The Owner's Manual is an integral part of the motorcycle and must be handed over to the new owner when the motorcycle is sold.

## SERVICE

Observance of the service, maintenance and operating instructions for the engine and chassis specified in the Owner's Manual is a prerequisite for faultless operation and the avoidance of premature wear. Please observe the prescribed breaking-in periods, inspection intervals and service intervals. Strict observance will significantly prolong the service life of your motorcycle.

Use of the motorcycle under extreme conditions, e.g. on extremely muddy and wet terrain, can lead to higher than average wear on components such as the drive train or the brakes. In this case it may become necessary to service or replace wear parts before the service limit specified in the maintenance schedule has been reached.

## **WARRANTY**

The service work specified in the „Lubrication and Maintenance Schedule“ must be performed by an authorized KTM workshop. This is the only place that has the qualified technicians and the special tools required for the 690 Supermoto / Prestige. Be sure to have the workshop verify all service work carried out in the service manual to avoid losing your right to claim under the warranty. The warranty or guarantee shall become void for damage and consequential damage caused by manipulations or conversions to the motorcycle.

## **AUTOMOTIVE FLUIDS**

The fuels, lubricants and liquids specified in the Owner's Manual or automotive fluids with equivalent specifications must be used in accordance with the maintenance schedule.

## **SPARE PARTS, ACCESSORIES**

For your own safety, only use spare parts and accessories approved by KTM. KTM shall not assume any liability for other products or consequential damage resulting from the use of such products.

## **ENVIRONMENT**

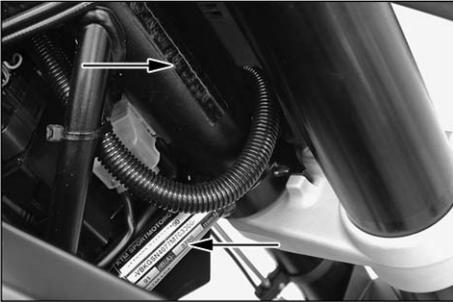
Motorcycle driving is a wonderful sport and we hope that you will be able to enjoy it to the full. It may, however, involve potential problems for the environment or lead to conflicts with others. These problems or conflicts can be avoided if the motorcycle is used responsibly. To safeguard the future of motorcycle sports, make sure that you use the motorcycle in accordance with the law, show that you are environmentally conscious and respect the rights of others.

Enjoy driving your motorcycle !

KTM SPORTMOTORCYCLE AG  
5230 MATTIGHOFEN, AUSTRIA

INTRODUCTION . . . . .	1	Compression damping of fork (690 Supermoto Prestige) . . .	18
IMPORTANT INFORMATION . . . . .	2	Rebound damping of shock absorber . . . . .	19
INDEX . . . . .	4	Damping action during compression of shock absorber (690 Supermoto Prest) . . . . .	19
SERIAL NUMBER LOCATIONS . . . . .	6	GENERAL TIPS AND WARNINGS FOR STARTING THE MOTORCYCLE . . . . .	20
Engine number, engine type . . . . .	6	Instructions for initial operation . . . . .	20
Chassis number, type label . . . . .	6	Running in the LC4 engine . . . . .	20
OPERATION INSTRUMENTS . . . . .	7	Accessories and payload . . . . .	21
Hand brake lever . . . . .	7	DRIVING INSTRUCTIONS . . . . .	22
Clutch lever (690 Supermoto) . . . . .	7	Check the following before each start . . . . .	22
Clutch lever (690 Supermoto Prestige) . . . . .	7	Starting the engine . . . . .	24
Combined instrument display . . . . .	8	Starting off . . . . .	25
Function buttons on combined instrument . . . . .	8	Shifting/Riding . . . . .	25
Combined instrument . . . . .	8	Braking . . . . .	26
Cooling liquid temperature display . . . . .	11	Stopping and parking . . . . .	27
Tachometer . . . . .	11	Fuel, refueling . . . . .	28
Indicator lamps . . . . .	12	PERIODIC MAINTENANCE SCHEDULE . . . . .	30
Ignition lock . . . . .	13	MAINTENANCE WORK ON CHASSIS AND ENGINE . . . . .	34
Combination switch . . . . .	13	Adjusting rebound damping of fork . . . . .	35
Fuel taps . . . . .	14	Adjusting compression damping of fork (690 Supermoto Prestige) . . . . .	35
Filler cap . . . . .	14	Adjusting the fork and shock absorber . . . . .	35
Emergency OFF tip switch, starter tip switch . . . . .	14	Compression damping of shock absorber (690 Supermoto Prestige) . . . . .	36
Grips . . . . .	15	Breathing the fork legs . . . . .	37
Seat lock, removing the seat . . . . .	15	Adjusting rebound damping of shock absorber . . . . .	37
Shift lever . . . . .	16	Checking the chain tension . . . . .	38
Tool set . . . . .	16	Correcting the chain tension . . . . .	38
Owner's manual . . . . .	16	Chain maintenance . . . . .	39
Footrests . . . . .	17		
Foot brake pedal . . . . .	17		
Side stand . . . . .	17		
Rebound damping of fork . . . . .	18		

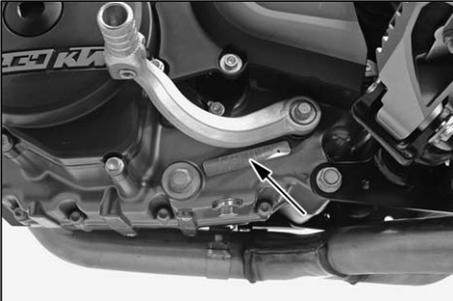
Checking the chain for wear . . . . .	39	Checking the oil level of the hydraulic clutch (690 Supermoto Prestige) . . . . .	63
General information on KTM disk brakes . . . . .	40	Adjusting the handlebar tilt . . . . .	63
Checking the front brake fluid level (690 Supermoto Prestige) . . . . .	42	Checking and adjusting the throttle cable play . . . . .	64
Checking of brake fluid level - front brake (690 Supermoto)	42	Engine oil . . . . .	64
Changing the basic position of the handbrake lever . . . . .	42	Checking the engine oil level . . . . .	65
Checking the front brake pads . . . . .	43	Refilling engine oil . . . . .	65
Checking the rear brake fluid level . . . . .	44	Changing the engine oil and the oil filter, cleaning the oil screen . . . . .	66
Checking the rear brake pads . . . . .	44	TRUBLESHOOTING . . . . .	69
Dismounting and remounting the front wheel . . . . .	46	CLEANING . . . . .	74
Dismounting and mounting the rear wheel . . . . .	48	CONSERVATION FOR WINTER OPERATION . . . . .	74
Checking the shock absorption rubbers in the rear hub . . . . .	50	STORAGE . . . . .	75
Tires, air pressure . . . . .	51	TECHNICAL SPECIFICATIONS – CHASSIS . . . . .	76
Battery . . . . .	52	TECHNICAL SPECIFICATIONS – ENGINE . . . . .	82
Charging the battery . . . . .	53	HEAD WORD INDEX . . . . .	84
Jump start . . . . .	54	CONSUMER INFORMATION FOR USA ONLY . . . . .	86
Main fuse . . . . .	54		
Fuses for individual power consumers . . . . .	55		
Replacing the headlight lamp . . . . .	56		
Replacing the flasher bulbs . . . . .	57		
Adjusting the headlight range . . . . .	57		
Cooling system . . . . .	58		
Checking the cooling liquid level in the compensating tank .	59		
Checking the cooling liquid level in the radiator . . . . .	60		
Coolant drain plug . . . . .	60		
Bleeding the cooling system . . . . .	61		
Checking the oil level of the hydraulic clutch (690 Supermoto) . . . . .	62		
Changing the original position of the clutch lever . . . . .	62		



## **Chassis number, Type label**

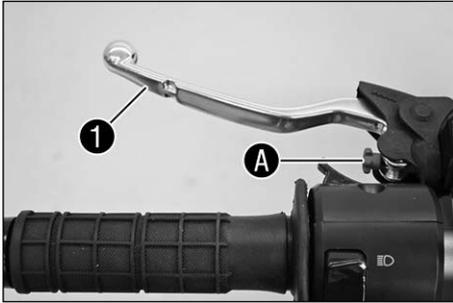
The chassis number is stamped on the right side of the steering head tube. Enter this number in the field on page no 1.

The type label is located next to the chassis number.



## **Engine number, engine type**

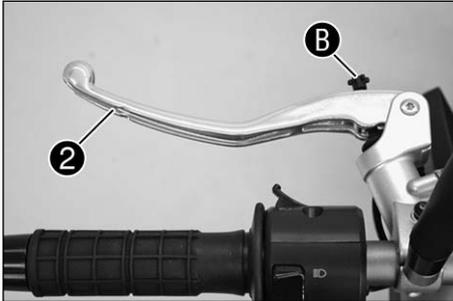
The engine number and the engine type are stamped into the left side of the engine below the engine sprocket. Enter this number on page 1.



## Clutch lever (690 Supermoto)

The clutch lever [1] is fitted on the left hand side of the handle bar. The adjusting screw [A] is used to change the original position of the clutch lever (see maintenance work on chassis and engine).

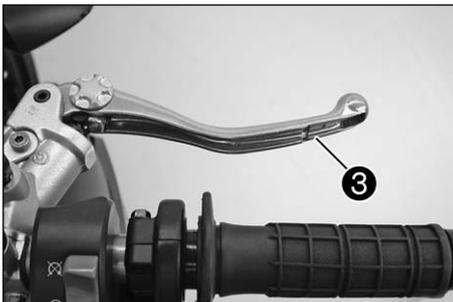
The clutch is hydraulically actuated and adjusts itself automatically.



## Clutch lever (690 Supermoto Prestige)

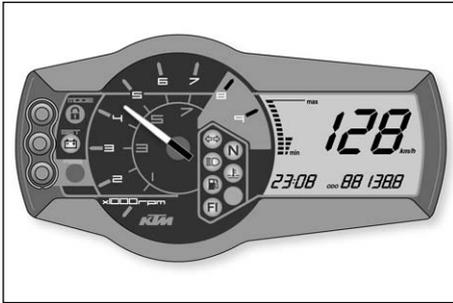
The clutch lever [2] is fitted on the left hand side of the handle bar. The adjusting screw [B] is used to change the original position of the clutch lever (see maintenance work on chassis and engine).

The clutch is hydraulically actuated and adjusts itself automatically.



## Hand brake lever

The hand brake lever [3] is mounted on the right side of the handlebar. The basic position of the handbrake lever can be changed in 4 or 5 steps (see Maintenance work on chassis and engine).



## Combined instrument

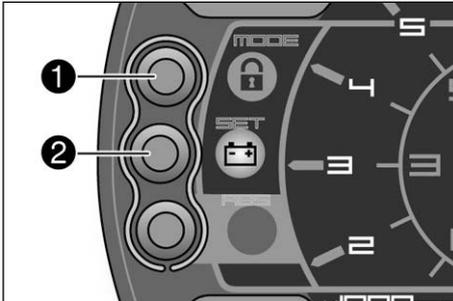
The combined instrument is divided into 4 parts.

Function buttons: to select the display modes and basic settings in the display

Tachometer: displays the engine speed

Indicator lamps: provide additional information on the motorcycle operating condition

Display: shows the speed, cooling liquid temperature, time, distance traveled (ODO), trip master 1 (TRIP 1), trip master 2 (TRIP 2), distance traveled since the reserve warning lamp went on (TRIP F)



## Function buttons on combined instrument

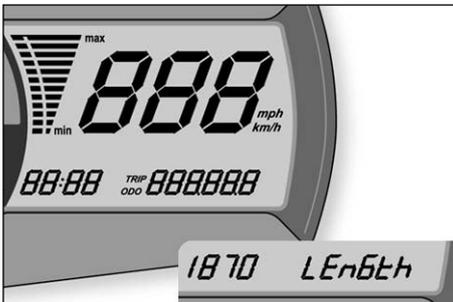
### MODE [1]

Briefly press the MODE button to go to the next display mode. The available display modes are distance traveled (ODO), trip master 1 (TRIP 1) and trip master 2 (TRIP 2). The speed, cooling liquid temperature and time are always displayed.

### SET [2]

Press the SET button to reset trip master 1 or 2 to 0.

The 3rd button is not programmed.



## Combined instrument display

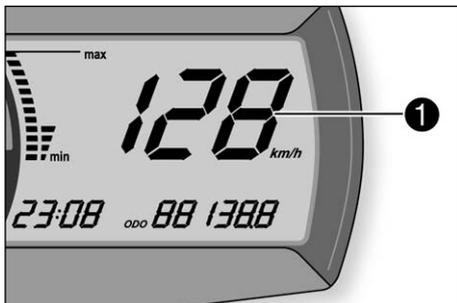
### TEST

When you switch on the ignition, all of the display elements will light up for 1 second for the function test.

### LENGTH

The display will change for 1 second to display the circumference of the front wheel in millimeters. 1870 mm corresponds to a 17" front wheel.

Then the display will change back to the mode that was activated when the ignition was switched off.



## SPEED [1]

The speed can be displayed in kilometers per hour (km/h) or miles per hour (mph).

## CHANGING THE SPEED DISPLAY FROM KM/H - MPH or MPH - KM/H

Switch on the ignition and press the MODE button more than 10 seconds in the ODO mode.



## CLOCK [2]

The dots between the hours and minutes will blink in the CLOCK display.

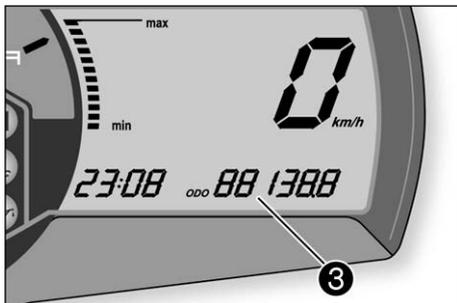
The clock must be set if the battery was disconnected or if the fuse 2 was blown.

## SETTING THE CLOCK

Switch on the ignition and select the ODO mode. Press and hold the MODE button while you press the SET button more than 1 second. The time will start to blink.

Use the MODE button to set the hours. Use the SET button to set the minutes.

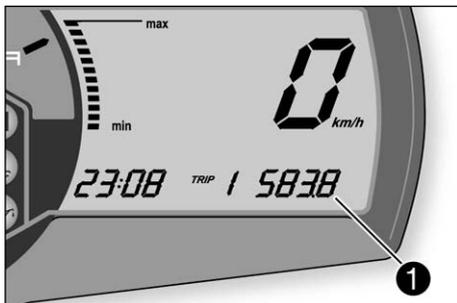
Then press the MODE and SET buttons simultaneously.



## ODO [3]

Displays the total kilometers or miles traveled.

This figure will not be cleared if the battery is disconnected.



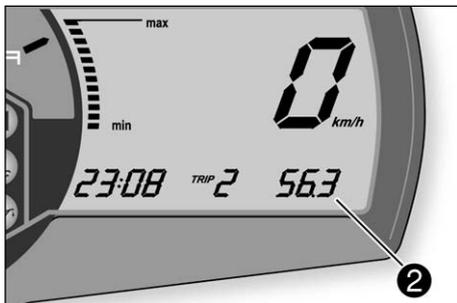
## TRIP 1 [1]

The trip meter 1 is always active and counts up to 999.9. It is used to measure the length of the trip or the distance between 2 refueling stops.

### TO RESET TRIP 1

To reset the trip meter 1 to zero, switch on the ignition, select the TRIP 1 display mode and press the SET button more than 2 seconds.

Press the MODE button to go to the next display mode.



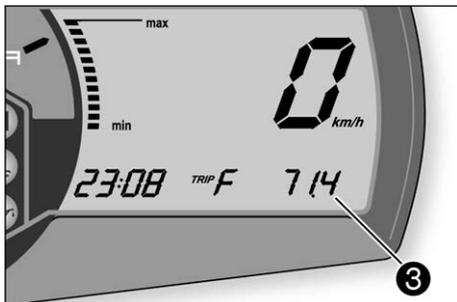
## TRIP 2 [2]

The trip meter 2 is always active and counts up to 999.9. It is used just like TRIP 1.

### TO RESET TRIP 2

To reset the trip meter 2 to zero, switch on the ignition, select the TRIP 2 display mode and press the SET button more than 2 seconds.

Press the MODE button to go to the next display mode.



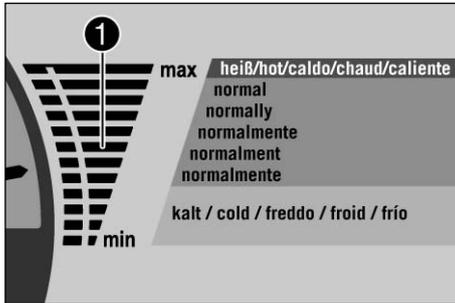
## TRIP F [3]

When the fuel level reaches the reserve mark, the display will automatically switch to TRIP F and begin to count (no matter which display mode was active before). At the same time, the fuel warning lamp will light up. You will still have enough reserve fuel for at least 30 kilometers.

After refueling, it will take approx. 3 minutes for the fuel lamp to go out, TRIP F to automatically reset to 0 and to return to the previous display mode.

### NOTE:

Press the SET button for 2 seconds to switch off the fuel warning lamp.



## Cooling liquid temperature display

The temperature display [1] is shown in 12 bars. The more bars that light up, the hotter the cooling liquid. When the upper bar lights up 115°C (239°F), all of the bars will start to blink and the red warning lamp [2] will light up.

### ⚠ WARNING

Possible causes for an increase in temperature, causing the red warning light for the cooling liquid temperature to light up:

- Driving too slowly and driving with a heavy load at high air temperatures
- Not enough cooling liquid in the system
- The ventilator on the left radiator is not running
- Improper use of the clutch when driving slowly



## Tachometer

The tachometer [3] shows the engine speed in revolutions per minute. Do not run the engine beyond the orange mark at 7800 rpm.

The speed limiter will set in at 8600 rpm, drastically reducing the engine power above this rotational speed.





## Indicator lamps

- 

The green indicator lamp will blink in the blinker rhythm when the blinker is switched on.  
NOTE: The indicator lamp will blink slower when a blinker is broken.
- 

The green indicator lamp will light up when the gearbox is in an idling position.
- 

The blue indicator lamp will light up when the high beams are switched on.
- 

The red warning light will light up when the cooling liquid has reached a temperature of approx. 115°C (239°F).
- 

The orange warning lamp will light up when the fuel level has reached the reserve mark. At the same time the display will automatically change to TRIP F (see TRIP F).
- 

The orange warning lamp (fuel injection) briefly lights up when the ignition is switched on. It will go out when the gasoline pressure is high enough. If this warning lamp lights up while driving, a component in the injection system is defective. The error can be identified by means of a blink code (see Trouble shooting).
- 

The red warning lamp will light up if the voltage in the on-board electrics drops below 10 volts. Immediately drive to the nearest authorized KTM workshop and have the electrical system checked.

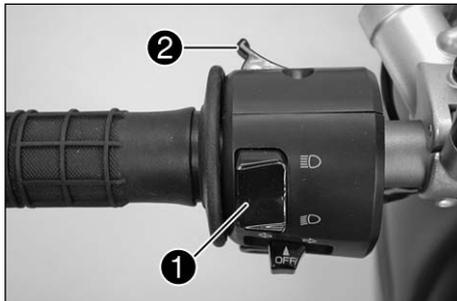


## Ignition lock

The ignition lock has 3 switching positions.

-  Ignition off, (engine can't be started)
-  Ignition on, light on (engine can be started)
-  Ignition off, handlebar blocked

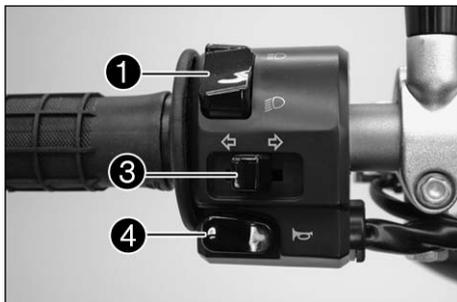
To switch the ignition to position  turn the ignition key to position  and firmly press it into the lock. Turn the handlebar to the left, then turn the ignition key to the left. The ignition key can be withdrawn in position  and .



## Combination switch

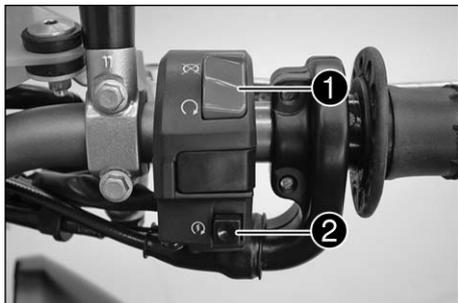
The rocker switch LIGHTS [1] actuates the high beam or low beam.

-  High-beam light
-  Low-beam light
-  The light signal (high beam) is actuated with button [2].



 The indicator switch [3] returns to central position after actuation. Press flasher switch towards switch housing to switch off the flasher.

 The horn is sounded with button [4].



## Emergency OFF tip switch, starter tip switch

The emergency off switch [1] is provided for emergency situations and should not be used to switch off the engine.

The engine is ready for operation in position ○ (ignition circuit and starter circuit are switched on).

The engine cannot be started in position ⊗ (ignition circuit and starter circuit are interrupted).



Use the starter tip switch [2] to operate the electric starter.



## Filler cap

The filler cap [3] can be locked and is provided with a fuel evaporation control system.

To open the cap insert the ignition key, turn it 90° counterclockwise, then lift off the filler cap.

To close the tank insert the filler cap, turn the ignition key 90° clockwise and take out the key.



## Fuel taps

2 fuel taps [4] are mounted on the fuel tank that must be open when the motorcycle is running. The level in the fuel tanks is equalized by means of a connecting hose.

The fuel cocks only need to be closed to remove the tank.

Opening the fuel tap: Turn the knob all the way to the left.  
 Closing the fuel tap: Turn the knob all the way to the right.



## Grips

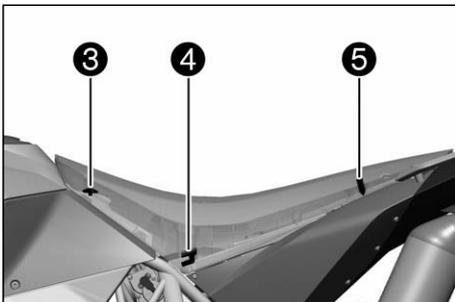
The grips [1] are used to maneuver the motorcycle. If carrying a passenger, the passenger can hold on to the grip during the ride.



## Seat lock, removing the seat

The seat lock [2] can be locked with the ignition key.

To remove the seat, insert the ignition key and turn 45° in a counterclockwise direction. Lift the seat in the back, pull back and lift off.

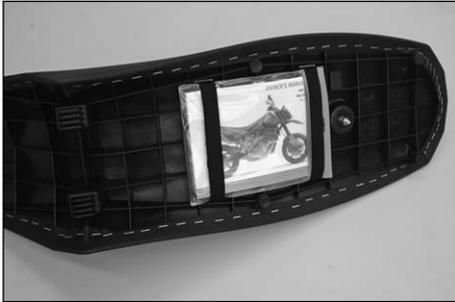


To mount the seat, attach the seat to the oval head screw [3], lower the seat in the back while sliding it towards the front. Both noses [4] should fit into the frame. Insert the catch bolts [5] in the lock housing and push the seat down in the back until you hear the catch bolts snap into place.

Check whether the seat is correctly mounted.

## **WARNING**

**If not correctly mounted, the seat can slip while you are driving and cause you to lose control of your motorcycle.**



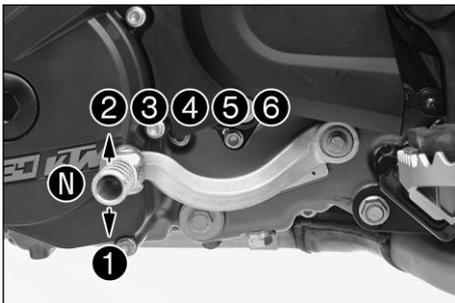
## Owner's manual

The vehicle comes with owner's manuals in several languages. Place the owner's manual issued in your language in the protective cover included in the scope of supply and fasten it under the seat (see photo).



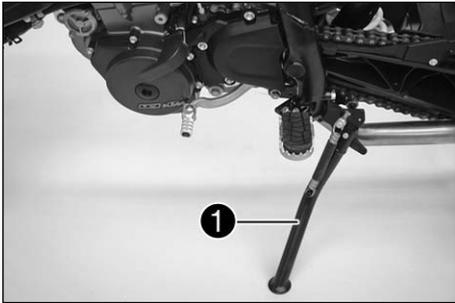
## Tool set

The tool set [1] is located in the storage compartment under the seat.



## Shift lever

The shift lever is mounted on the left side of the engine. The position of the gears is shown in the illustration. Neutral, or the idle speed, is located between first and second gear.



## Side stand

Fold the side stand [1] forward to the stop with your foot and put the weight of the motorcycle on the stand. Make sure it is standing securely on a firm surface. The side stand is linked to the safety start system; follow the driving instructions.



## Foot brake pedal

The foot brake pedal [2] is located in front of the right footrest. Its basic position can be adjusted to your seat position (see maintenance work).



## Footrests

The passenger footrests [3] fold up.



## Compression damping of fork (690 Supermoto Prestige)

The fork's damping action during compression travel (compression damping) can be adjusted. This allows you adjust the damping behavior to match your driving style and the payload. The adjusting screws [1] are located on the fork leg axle passage. More information is provided in the chapter "Adjusting the fork and shock absorber."



## Rebound damping of fork

The fork's damping action during rebound travel (rebound damping) can also be adjusted. This allows you adjust the damping behavior to match your driving style and the payload. The adjusting screws [2] are located on the upper end of the fork legs. More information is provided in the chapter "Adjusting the fork and shock absorber."



## Damping action during compression of shock absorber (690 Supermoto Prest)

The shock absorber's damping action during compression travel (compression damping) can be adjusted. This allows you adjust the shock absorber's damping behavior to match your driving style and the payload.

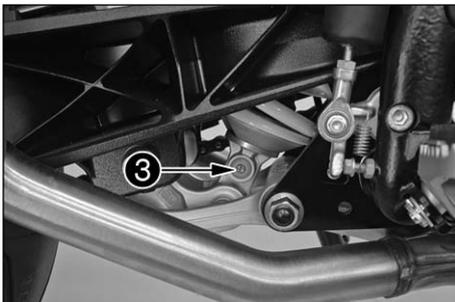
The damping rate can be adjusted in the low and high-speed range (Dual Compression Control). The designation low and high-speed refers to the movement of the shock absorber and not to the motorcycle's driving speed.



The adjusting screw [1] for the low-speed range can be adjusted with a screwdriver.

The adjusting screw [2] for the high-speed range can be adjusted with a 15 mm socket wrench.

More information is provided in the chapter "Adjusting the fork and shock absorber."



## Rebound damping of shock absorber

The shock absorber's damping action during rebound travel (rebound damping) can also be adjusted. This allows you adjust the damping behavior to match your driving style and the payload.

The adjusting screw [3] is located on the bottom of the shock absorber.

More information is provided in the chapter "Adjusting the fork and shock absorber."

## Instructions for initial operation

- Make sure the work for the „pre-delivery inspection“ was performed by your authorized KTM workshop. The DELIVERY CERTIFICATE and SERVICE MANUAL will be handed over when you pick up your vehicle.
- Read these operating instructions carefully before your first ride.
- Enter the chassis, engine and key numbers on page 1.
- Familiarize yourself with the operating elements.
- Adjust the clutch lever, the hand brake lever, the foot brake lever and the shift lever in the position that is most convenient for you.
- This motorcycle is equipped with a three-way catalytic converter. Leaded fuel will destroy the converter. Always use unleaded fuel.
- Get used to handling the motorcycle on an empty parking lot, before starting on a longer drive. Also try to drive as slowly as possible and in standing position, to improve your feeling for the vehicle.
- Hold the handlebars with both hands and leave your feet on the foot rests while driving.
- Remove your foot from the foot brake lever when you are not braking. If the foot brake lever is not released the brake pads rub continuously and the braking system is overheated.
- Do not make any alterations to the motorcycle and always use ORIGINAL KTM

SPARE PARTS. Spare parts from other manufacturers can impair the safety of the motorcycle.

- New tires have a smooth surface, which means that they must be run in to achieve full grip. For this purpose, ride the motorcycle carefully at moderate speed during the first 200 kilometers with new tires, tilting the vehicle at different angles so that all sections are properly roughened. Tires will not display their full grip characteristics until they are properly run in.
- Motorcycles are sensitive to changes in the weight distribution. Read the section on „Accessories and payload“ when carrying luggage.
- Pay attention to running-in procedure.

## Running in the LC4 engine

Even finely machined surfaces of engine parts have rougher surfaces than parts that slide on each other for a long time. Therefore, every engine must be run in. For this reason, do not demand maximum performance from the engine for the first 1000 kilometers (620 miles). The vehicle must be run in at low, changing performance level for the first 1000 km (620 miles). The maximum number of revolutions per minute must not go exceed 6000 rpm. Once you have run your engine in for 1000 km, you may push it to its 7800 rpm limit, i.e. up to the orange zone indicated in the tachometer. Exceeding the above listed rotations as well as pushing high rpm

when the engine is cold will have an adverse effect on the life of your engine.

## WARNING

- **Wear suitable clothing when driving a motorcycle. Clever KTM drivers always wear a helmet, boots, gloves and a jacket, regardless of whether driving all day or just for a short trip. The protective clothing should be brightly colored so that other vehicle can see you as early as possible. Your passenger will also need suitable protective clothing.**
- **Do not drive after having consumed alcohol.**
- **Drive at a moderate speed for the first few kilometers of each trip to allow the tires to reach the necessary operating temperature. Maximum road grip is assured when the tires are warm.**
- **The front and rear wheel are allowed to be fitted only with tires that have the same profile type.**
- **The tires must be designed for a maximum speed of 210 KPH (speed symbol H) and must be authorized by KTM.**

**⚠ WARNING**

- New tires have a smooth surface, which means that they must be run in to achieve full grip. For this purpose, ride the motorcycle carefully at moderate speed during the first 200 kilometers with new tires, tilting the vehicle at different angles so that all sections are properly roughened. Tires will not display their full grip characteristics until they are properly run in.
- Wheels with a different rim diameter or other rim width may not be mounted otherwise the vehicle handling will no longer be safe.
- Observe the traffic regulations, drive defensively and trying to look ahead as far as possible so that any hazards can be recognized as early as possible.
- The faster you drive, the more sensitive your motorcycle will be to crosswind and changing road conditions. Your motorcycle can easily go out of control at high speeds.
- Choose your driving speed according to the conditions and your driving skills.
- Drive carefully on unknown roads or on unfamiliar trails.
- Renew the visor on your helmet on time so as to ensure optimum vision in any situation. When light shines directly on scratched visor, the operator will be blinded.
- A passenger may only ride on the motorcycle if passenger footrests are mounted.

- Never leave your motorcycle without supervision if the engine is running.

**Accessories and payload**

Accessory parts and baggage can significantly decrease a motorcycle's driving stability. Please observe the following warnings.

**⚠ WARNING**

- Never drive faster than 130 kph (80 mph) if you have mounted accessory parts on your motorcycle. Accessory parts can significantly impair the motorcycle's handling, especially in the maximum speed range.
- Never drive faster than 130 kph (80 mph) if your motorcycle is loaded with cases or other baggage. They will impair the motorcycle's handling at higher speeds and can easily cause it to go out of control
- If you have cases mounted, do not exceed the manufacturer's recommended maximum payload.
- Make sure your luggage does not extend beyond the silencer, otherwise it may become singed from the heat.
- Make sure your luggage does not cover the tail light.
- Baggage must be securely and adequately fastened; loose baggage will significantly impair driving safety.
- A high payload will change the motorcycle's handling and considerably increase the braking distance; adapt your driving speed accordingly.

- Never exceed the maximum permissible laden weight and the axle weights. The maximum permissible laden weight is made up of the following components:
  - Motorcycle ready for operation and tank full
  - Luggage
  - Driver and passenger with protective clothing and helmet



## Check the following before each start

When you start, the motorcycle must be in perfect mechanical condition. For safety reasons, you should make a habit of performing an overall check of your motorcycle before each start.

The following checks should be performed:

### 1 FUEL

Check the fuel quantity in the tanks.

### 2 CHAIN

Check the tension and condition of the chain.

A loose chain can fall off the sprockets and a worn-out chain can tear. In both cases this can damage other motorcycle components and cause the motorcycle to go out of control. A chain that is too tight or not greased will cause unnecessary wear to the chain and sprockets.

### 3 TIRES

Check for damaged tires. Tires showing cuts or dents must be replaced. The tread depth must comply with the legal regulations. Also check the air pressure. Insufficient tread and incorrect air pressure deteriorate the driving performance.



### 4 BRAKES

Check correct functioning of the braking system. Check for sufficient brake fluid in the reservoir. The reservoirs have been designed in such a way that brake fluid does not need to be refilled even when the brake pads are worn. If the level of brake fluid falls below the minimum value, this indicates a leak in the braking system or completely worn out brake pads. Arrange for the braking system to be checked by a KTM specialist, as complete failure of the braking system can be avoided.

Also check the state of the brake hose and the thickness of the brake linings. Check free travel at hand brake lever and foot brake lever.

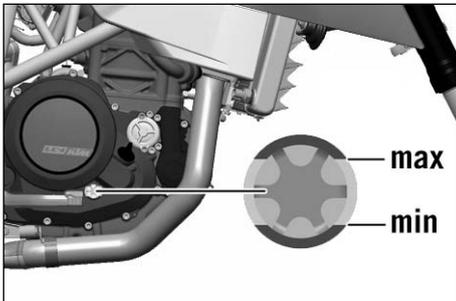




5 CABLES  
Check the throttle cable for correct adjustment and smooth operation.

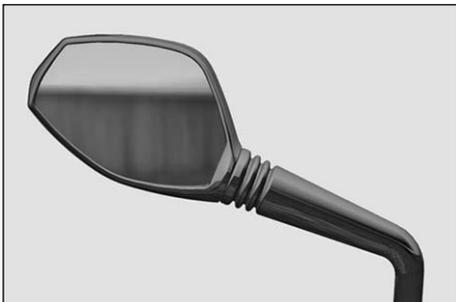
6 COOLING FLUID  
Check the level of cooling fluid when the engine is cold.

7 ELECTRICAL SYSTEM  
Start the engine and check the headlight, tail lamp, brake light, turn signals, indicator lamps, horn and emergency-off switch for proper functioning.



8 CHECK OIL LEVEL  
Insufficient oil results in premature wear and consequently to engine damage.

9 BAGGAGE, PAYLOAD  
Never exceed the maximum total weight (350 kg, 773 lbs) and the motorcycle's wheel loads. The maximum total weight is comprised of:  
– the motorcycle in a running condition and refueled (164 kg, 362 lbs)  
– the baggage and accessories  
– the driver and passenger with protective gear and helmet  
Adapt the tire air pressure and the damping properties of the fork and shock absorber to the motorcycle's total weight.  
Make sure your luggage is correctly fastened before you drive off.



10 REAR MIRROR  
Sit on the motorcycle and check the adjustment of the rear mirror.



## Starting the engine

- 1 Switch on emergency OFF switch [1].
- 2 Switch on ignition (turn ignition key [2] into position ○).

**NOTE:**

You will hear the operation of the fuel pump for approx. 2 seconds after switching on the ignition. The instrument cluster function test is also performed at this time.

- 3 Switch transmission to idle (green indicator lamp **N** [3] lights up).
- 4 **Do not accelerate**; operate starter button [4]. Do not actuate the starter control until the instrument cluster function test is completed.
- 5 Take the load off the side stand and fold the side stand all the way up.



### ⚠ WARNING

- Do not start the engine and allow it to idle in a closed room. Exhaust fumes are poisonous and can cause loss of consciousness and death. Always provide adequate ventilation while the engine is running.
- Never operate the motorcycle with a run-down battery or without the battery. This can damage the electronic components or safety equipment in either case and the motorcycle will no longer be roadworthy.

### ! CAUTION

- If you accelerate while starting, the engine management will not inject any fuel and the engine will not start. Do not accelerate while starting!
- Maximum period for continuous starting: 5 seconds. Wait at least 5 seconds before trying again.
- Don't ride your motorcycle with full load and don't rev engine when cold. Because the piston is warming up faster than the water cooled cylinder, it can cause engine damage. Always let the engine warm up before and refrain from driving with full load until the engine is warm.



IF THE ENGINE DOES NOT CRANK WHEN YOU ACTUATE THE STARTER TIP SWITCH:

- the transmission is switched to idle
- Check if the emergency OFF switch is on
- Check if the ignition is on
- the headlight is on
  - If this is not the case, the battery is discharged
- If the lights are on, proceed as described in the „Trouble-shooting“ section or contact a KTM dealer.

IF THE ENGINE CRANKS BUT DOES NOT START, WHEN YOU ACTUATE THE STARTER TIP SWITCH:

- whether you accelerated while starting
- whether the **FI** indicator lamp is blinking
  - if yes, check Troubleshooting - Blink codes table
- Check if sufficient fuel is in the tank
  - If this is not the case, refill the tank
  - if sufficient fuel is in the tank, proceed as described in the „Trouble-shooting“ section or contact a KTM dealer.

NOTE:

This motorcycle is equipped with a safety starting system. The engine can only be started if the transmission is in neutral or the clutch lever is pulled. If the side stand is folded down, the engine can only be started if the transmission is in neutral or the clutch lever is pulled. The engine will stall if a gear is

engaged and the clutch lever is released with the side stand folded down.

## Starting off

Pull the clutch lever and engage 1st gear. Slowly release the clutch lever while you gently accelerate.

## Shifting/Riding

You are now in first gear, referred to as the drive or uphill gear. Depending on the conditions (traffic, road gradient, etc.), you can shift to a higher gear. Close throttle, at the same time pull clutch lever and shift to the next higher gear. Let clutch lever go again and carefully open throttle. Do not shift gears and accelerate carefully in curves.

Only accelerate to the extent that road and weather conditions allow. Be especially careful when you accelerate in curves. Abrupt opening of the throttle can cause the motorcycle to go out of control and also increases fuel consumption.

By shifting down, use the brakes if necessary and close throttle at the same time. Pull clutch lever and shift down to the next gear. Let clutch lever go slowly and open throttle or shift down again.

If the engine is killed f.ex. at a crossing, simply pull the clutch lever and start. It is not necessary to switch the gear to NEUTRAL.

Stop immediately if the FI indicator lamp lights up while driving. The FI indicator lamp will start blinking as soon as the transmission is in neutral. The rhythm of the blinking lamp will let you determine the two-digit „blink code“, e.g.:

Blink code 24: FI blinks 2x long, 4x short, pause,

Blink code 06: FI blinks 6x short, pause  
The blink code will indicate which component is defective (see Troubleshooting). This makes it possible to pinpoint the defect if a diagnostic tool is unavailable.

## **WARNING**

- **Avoid abrupt load changes while riding around bends and on wet or slippery ground. Otherwise you might easily lose control over your motorcycle.**
- **While riding your motorcycle, never switch the ignition lock to positions  and .**
- **Do not try to change the settings of the combined instrument while driving. Your attention will be distracted from the traffic and this may cause you to lose control of your motorcycle.**
- **The passenger must hold on to the driver or the grab handles during the ride and keep his feet on the passenger footrests.**
- **Regularly make sure that the baggage and cases are tightly fastened.**

## ⚠ WARNING

- After falling with the motorcycle, check all functions thoroughly before starting up operations again.
- A bent handlebar must always be replaced. Never try to straighten the handlebar because this will cause it to lose its stability.

## ! CAUTION

- High rpm rates when the engine is cold have an adverse effect on the life of your engine. We recommend you run the engine in a moderate rpm range for a few miles giving it a chance to warm up. After that no further precautions in this respect need be taken. The engine has reached operating temperature as soon as the 5th bar on the temperature indicator lights up.
- Never have the throttle wide open when changing down to a lower gear. The engine will overspeed, damaging the valves. In addition, the rear wheel blocks so that the motorcycle can easily get out of control.
- Never use your motorcycle without an air filter. Otherwise dust and dirt may enter the engine and cause increased wear.
- The red coolant warning lamp lights up when the coolant temperature has reached 115°C (239°F).  
Possible causes for the increase in temperature:
  - low driving velocity and high load situation in high air temperatures

- level of coolant in the system is insufficient
- fan at radiator is not running
- improper use of the clutch while driving at low velocities

Let the engine cool down. Meanwhile, check whether any cooling liquid is leaking out of the motorcycle. Check the cooling liquid level in the radiator (not only in the compensating tank). - CAUTION SCALDING HAZARD! Do not drive on, until there is sufficient liquid in the cooling system.

- In the event that, while riding on your motorcycle, you notice any unusual operation-related noise, stop immediately, turn the engine off, and contact an authorized KTM dealer.

## Braking

Close throttle and apply the hand and foot brakes at the same time. Carefully apply the brakes on sandy, wet or slippery surfaces. Always brake with feeling, blocking wheels can cause you to skid or fall. Also change down to lower gears depending on your speed. Always finish braking before you enter a curve.

When driving downhill, use the braking effect of the engine. Change down one or two gears but do not overspeed the engine. In this way, you will not need to brake so much and the brakes will not overheat.

## ⚠ WARNING

- In the rain, or after the motorcycle has been washed, braking action may be delayed due to wet brake discs. First, the brakes must be braked dry.
- On salt-sprayed or dirty roads brake action may be delayed as well. First, the brakes must be braked clean.
- Remember that the stopping distance will be longer if you are carrying a passenger or baggage.
- When you brake, the brake discs, brake pads, brake caliper and brake fluid heat up. The hotter these parts get, the weaker the braking effect. In extreme cases, the entire braking system can fail.
- If the resistance in the hand brake lever or foot brake pedal feels „spongy“ (too much play), this is an indication that something is wrong with the brake system. Don't ride your motorcycle anymore without first having the brake system looked over by a KTM dealer.



### Stopping and parking

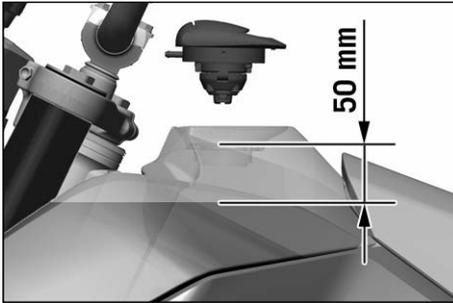
Apply the brakes fully and put the engine into neutral. To stop the engine, switch off the ignition. Fold the side stand forward to the stop with your foot, put the weight of the motorcycle on the stand and park the bike on a firm surface. Lock the motorcycle.

#### WARNING

- always park your motorbike on a solid and horizontal surface.
- Never leave your motorcycle without supervision as long as the engine is running.
- Motorcycle engines produce a great amount of heat while running. The engine radiators, exhaust, exhaust system, brake discs, and shock absorbers can become very hot. Do not touch any of these parts after operating the motorcycle, and take care to park it where pedestrians are not likely to touch it and get burned
- Never park your motorcycle in places where there exist fire hazards due to dry grass or other easily flammable materials.

#### CAUTION

- Always take out the ignition key when parking your motorcycle so that it cannot be used by unauthorized persons.
- The side stand is designed to hold the weight of the motorcycle only. By sitting on the motorcycle, you will put additional weight on the side stand, possibly causing the side stand or frame to be damaged or the motorcycle to fall down.



## Fuel, refueling

The LC4 engine requires unleaded fuel with at least RON 95 (USA = Premium PON 91, see technical specifications engine).

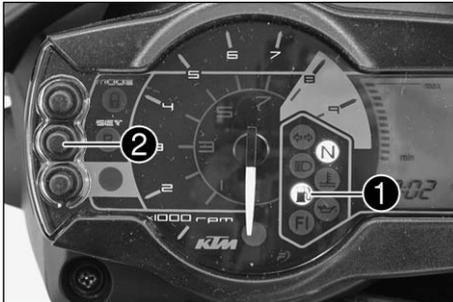
### ! CAUTION

**This motorcycle is equipped with a catalytic converter that will be destroyed if you use leaded fuel. Always use unleaded fuel.**

Fuel expands when its temperature rises. Therefore do not fill the tank to the top (see fig.). When you close the filler cap, make sure it is correctly positioned.

#### NOTE:

After refueling, it will take approx. 3 minutes for the fuel warning lamp [1] to switch off and for TRIP F to automatically reset to 0 and return to the previous display mode. Press the SET key [2] for 2 seconds to immediately turn off the fuel warning lamp.



### ⚠ WARNING

**Gasoline is highly flammable and poisonous. Extreme caution should be used when handling gasoline. Do not refuel the motorcycle near open flames or burning cigarettes. Always switch off the engine before refuelling. Be careful not to spill gasoline on the engine or exhaust pipe while the engine is hot. Wipe up spills promptly. If gasoline is swallowed or splashed in the eyes, seek a doctor's advice immediately.**



690 SUPERMOTO / 690 SUPERMOTO PRESTIGE 2007 A clean motorcycle can be checked more quickly which saves money!		1st Service after 1000 km (621 miles)	every 5000 km (3107 miles) or once a year	every 10000 km (6214 miles) or every 2 years
<b>ENGINE</b>	Change engine oil, coarse and fine filter	●	●	●
	Clean oil screens and drain plug magnet	●	●	●
	Renew spark plug			●
	Check and adjust valve clearance			●
	Check engine fastening bolts for tight fit	●	●	●
	Check all engine bolts accessible from the outside for tight fit	●	●	●
<b>FUEL INJECTION</b>	Check rubber boots for cracks or leaks	●		●
	Check fault memory with the KTM diagnosis tool	●	●	●
	Perform a status check of neutral, clutch, 2nd/3rd gear and side stand switch using the KTM diagnosis tool	●	●	●
	Make sure the fuel hose, SAS hoses and vent hoses are run correctly and check for damage	●	●	●
	Replace the O-ring on the fuel hose connection and check for leaks	●	●	●
<b>ADD-ON-PARTS</b>	Check the wiring harness on the throttle body for proper installation and damage	●		●
	Check cooling system for leaks and antifreeze protection	●	●	●
	Check radiator fan for proper operation	●	●	●
	Check the exhaust system for leaks and correct suspension and the clamps for a tight fit	●	●	●
	Check actuating cables for damage, smooth operation, and kink-less arrangement, adjust and lubricate	●	●	●
	Check the oil level in the hydraulic clutch reservoir		●	●
	Check air filter, renew if necessary, clean air filter box		●	●
Check cables for damage and kink-less arrangement	●	●	●	

690 SUPERMOTO / 690 SUPERMOTO PRESTIGE 2007 A clean motorcycle can be checked more quickly which saves money!		1st Service after 1000 km (621 miles)	every 5000 km (3107 miles) or once a year	every 10000 km (6214 miles) or every 2 years
ADD-ON-PARTS	Check headlamp adjustment	●	●	●
	Check electrical system for function (low/high beams, stop light, turn indicators, headlamp, flasher, tell-tale lamps, speedometer illumination, horn, side-stand switch, clutch switch, emergency-off switch)	●	●	●
	Make sure all bolts and nuts are tight	●	●	●
BRAKES	Check brake fluid level, lining thickness, and brake discs	●	●	●
	Change brake fluid			●
	Check brake lines for damage and leaks	●	●	●
	Check/adjust smooth operation, free travel of handbrake/footbrake levers	●	●	●
	Check bolts of brake system for tight fit	●	●	●
CHASSIS	Check shock absorber and fork for leaks and proper operation	●	●	●
	Clean fork dust sleeves		●	●
	Bleed fork legs	●	●	●
	Check swinging-fork pivot	●	●	●
	Check/adjust steering-head bearing	●	●	●
	Check all chassis bolts for tight fit (fork plates, fork leg, axle nuts/bolts, swinging-fork pivot, reversing lever, shock absorber)	●	●	●
	Lubricate PRO-LEVER relay lever			●

<b>690 SUPERMOTO / 690 SUPERMOTO PRESTIGE 2007</b> A clean motorcycle can be checked more quickly which saves money!		<b>1st Service after 1000 km (621 miles)</b>	<b>every 5000 km (3107 miles) or once a year</b>	<b>every 10000 km (6214 miles) or every 2 years</b>
<b>WHEELS</b>	Check rim joint	●	●	●
	Check tire condition and inflation pressure	●	●	●
	Check chain, sprockets and chain guides for wear, force fit and tension	●	●	●
	Check bolts on pinion and chain sprocket for locking devices and a tight fit	●	●	●
	Lubricate chain	●	●	●
	Check wheel bearings and jerk damper for play		●	●

IF MOTORCYCLE IS USED FOR COMPETITION 5000 KM (3107 MILES) SERVICE SHOULD BE CARRIED OUT AFTER EVERY RACE!  
 Service intervalls should never be exceeded by more than 500 km (311 miles).  
 Maintenance work performed by an authorized KTM workshop is not a substitute for care and maintenance by the driver!

<b>690 SUPERMOTO / 690 SUPERMOTO PRESTIGE 2007</b> ADDITIONAL SERVICE WORK TO BE PERFORMED UNDER A SEPARATE ORDER		
	<b>at least once a year</b>	<b>every 10000 km (6214 miles) or every 2 years</b>
Perform complete fork maintenance		●
Perform complete shock absorber maintenance		●
Clean and lubricate steering-head bearing and sealing elements	●	
Treat the electrical contacts and switches with contact spray	●	
Treat battery connections with contact grease	●	
Change coolant fluid		●

690 SUPERMOTO / 690 SUPERMOTO PRESTIGE 2007 VITAL CHECKS AND CARE PROCEDURES TO CONDUCTED BY THE OWNER OR THE MECHANIC			
	before each start	after every cleaning	every 1000 km (621 miles)
Check oil level	●		
Check brake fluid level	●		
Check brake pads for wear	●		
Check lighting system for proper operation	●		
Check horn for proper operation	●		
Lubricate actuating cables and nipples		●	
Bleed fork legs			●
Clean chain			●
Lubricate chain		●	●
Check chain tension	●		
Check tire pressure and wear	●		
Check coolant level	●		
Check fuel lines for leaks	●		
Check all control elements for smooth running	●		
Grease the hand brake lever and clutch lever		●	
Check brake performance	●	●	
Treat exposed metal components (except for the braking and exhaust system) with wax-based anti-corrosion agents		●	
Treat ignition/steering lock and light switch with contact spray		●	

## **!** CAUTION

- Do not clean the motorcycle with a power washer otherwise water will get into the bearings, electric socket connectors, etc.
- Use special KTM screws with the correct thread length to fasten the spoiler to the tank. Mounting other screws or longer screws could puncture the tank and cause fuel to leak out.
- If you disconnect socket connectors with self-locking nuts, replace them before remounting. If no new self-locking nuts are available, apply Loctite 243 to the thread of the old nuts. If the thread is damaged, replace the screws and nuts.
- Do not use toothed disks or split washers for the engine fastening bolts since they will work their way into the frame components and become loose. Always use self-locking nuts.
- Let the motorcycle cool down before servicing to avoid being burned.
- Properly dispose of oils grease, filters, fuel, cleansers, etc. Observe the regulations effective in your country.
- Never pour used oil in the sewer or dispose of it outdoors. 1 liter of used oil will pollute 1,000,000 liters of water.

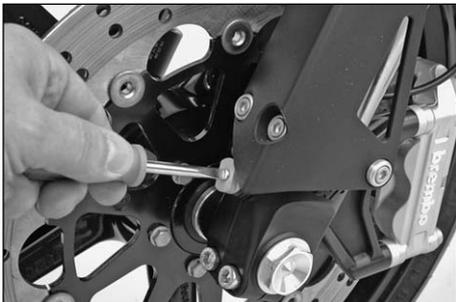
BASIC SETTING FORK WP 4860 ROMA	Supermoto				Supermoto Prestige			
	Driving Comfort	Basic Setting	Driving Sport	Maximum Payload	Fahrer Komfort	Basic Setting	Driving Sport	Maximum Payload
Compression adjuster (clicks)	-	-	-	-	20	15	10	10
Rebound adjuster (clicks)	20	15	10	10	20	15	10	10

## Adjusting the fork and shock absorber

There are a number of ways to adjust the fork and shock absorber to match the chassis to your driving style and the payload.

We have provided a table with pragmatistical values to help you tune up your motorcycle. These tune-up specifications are reference values only and should serve as a basis for your personal chassis and suspension tuning. Do not make arbitrary changes to the settings (maximum  $\pm 40\%$ ) since this may impair the handling characteristics (particularly in the high-speed range).

Make sure both fork legs are equally adjusted.

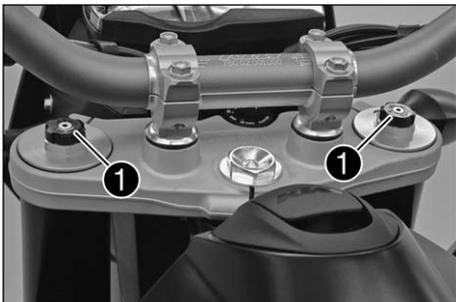


## Adjusting compression damping of fork (690 Supermoto Prestige)

Hydraulic compression damping determines the reaction when the fork is compressed. Turn the adjusting screws clockwise to increase damping, turn it counterclockwise to reduce damping during compression. Make the same damping rate adjustment to both fork legs.

### STANDARD ADJUSTMENT

- Turn adjusting screw clockwise as far as it will go.
- Turn 15 clicks in a counterclockwise direction.



## Adjusting rebound damping of fork

Hydraulic rebound damping determines the reaction when the fork is rebound. By turning the adjusting screw [1] (REB), the degree of damping of the rebound can be adjusted. Turn the knob clockwise to increase damping, turn it counterclockwise to reduce damping during rebounding. Make the same damping rate adjustment to both fork legs.

### STANDARD ADJUSTMENT

- Turn adjusting screw clockwise as far as it will go.
- Turn 15 clicks in a counterclockwise direction.

BASIC SETTING SHOCK ABSORBER WP 4618	Supermoto				Supermoto Prestige			
	Driving Comfort	Basic Setting	Driving Sport	Maximum Payload	Driving Comfort	Basic Setting	Driving Sport	Maximum Payload
	Compression adj. Low Speed (clicks)					20	15	10
Compression adj. High Speed (turns)					2	1.5	1	1
Rebound adjuster (clicks)	20	15	10	10	20	15	10	10
Spring preload (mm)	12	12	12	12	12	12	12	12

## Compression damping of shock absorber (690 Supermoto Prestige)

The shock absorber can synchronize the compression damping in the low and high-speed range separately (Dual Compression Control).

Low and high speed refers to the movement of the shock absorber during compression and not to the speed of the motorcycle.

The low and high-speed technology overlaps.

The low-speed setting is primarily for slow to normal shock absorber compression rates.

The high-speed setting is effective at fast compression rates.

Turning in a clockwise direction will increase the damping, turning counterclockwise will decrease the damping.



### STANDARD ADJUSTMENT LOW-SPEED:

- Turn adjusting screw [1] clockwise as far as it will go.
- Turn 15 clicks in a counterclockwise direction.



### STANDARD ADJUSTMENT HIGH-SPEED:

- Turn adjusting screw [2] (wrench size 15 mm) clockwise as far as it will go.
- Turn 1.5 turns in a counterclockwise direction.

### **⚠ WARNING**

The damping unit of the shock absorber is filled with high-compression nitrogen. Never try to take the shock absorber apart or to do any maintenance work yourself. Severe injuries could be the result.

Never unscrew the screw connection (24mm).



## Adjusting rebound damping of shock absorber

By using the adjusting screw [1], the degree of damping of the rebound can be adjusted. Turn the knob in a clockwise direction to increase damping, turn it in a counterclockwise direction to reduce damping during rebounding.

### STANDARD ADJUSTMENT:

- Turn adjusting screw clockwise as far as it will go.
- Turn 15 clicks in a counterclockwise direction.

### **⚠ WARNING**

The damping unit of the shock absorber is filled with high-compression nitrogen. Never try to take the shock absorber apart or to do any maintenance work yourself. Severe injuries could be the result.

BASIC SETTING SHOCK ABSORBER WP 4618	Supermoto				Supermoto Prestige			
	Driving Comfort	Basic Setting	Driving Sport	Maximum Payload	Driving Comfort	Basic Setting	Driving Sport	Maximum Payload
Compression adj. Low Speed (clicks)					20	15	10	10
Compression adj. High Speed (turns)					2	1.5	1	1
Rebound adjuster (clicks)	20	15	10	10	20	15	10	10
Spring preload (mm)	12	12	12	12	12	12	12	12



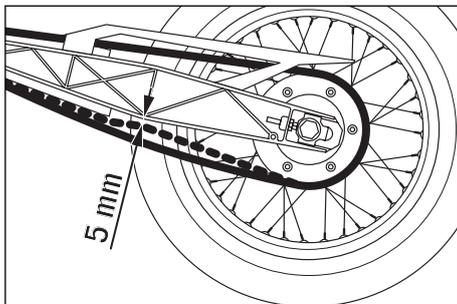
## Breathing the fork legs

Breathe the fork legs regularly (see Maintenance Schedule).

To breathe, place the motorcycle on the side stand and briefly remove the bleeder screws [2] to allow any overpressure to escape from the fork.

### **! CAUTION**

Excessive pressure in the interior of the fork can cause leaks in the fork. If your fork is leaking, it is recommended to open the breather plugs before having the seals replaced.

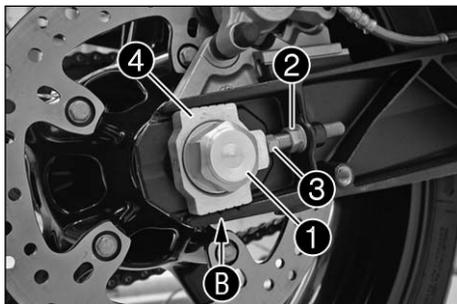


## Checking the chain tension

Place the motorcycle on the side stand. Switch the transmission to neutral and push the chain up. The distance between the chain and swing arm should be 5 mm (0.2 in) at the vertical rib when the upper part of the chain is tensioned (see drawing). Correct the chain tension if necessary.

### **⚠ WARNING**

- If chain tension is too great, parts within the secondary power transmission (chain, chain sprockets, transmission and rear wheel bearings) will be subjected to unnecessary stress, resulting in premature wear and even chain breakage.
- Too much slack in the chain, on the other hand, can result in the chain jumping off the chain wheels. If this happens, the chain could also block the rear wheel or damage the engine.
- In either case the operator is likely to lose control of the motorcycle.



## Correcting the chain tension

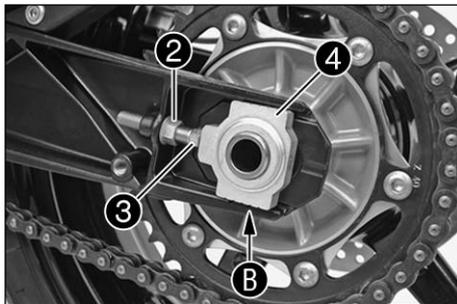
Loosen the collar nut [1], loosen the counternuts [2] and turn the left and right adjustment screws [3] the same distance. Tighten the counternuts [2].

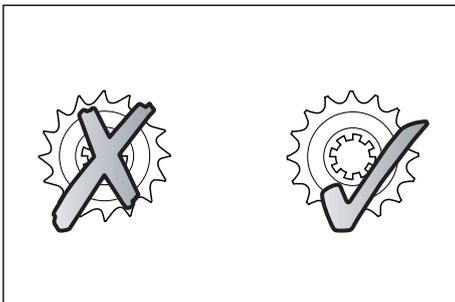
To make sure the rear wheel is aligned, the marks on the chain tensioners must be in the same position on the left and right in relation to the reference marks [B]. Before tightening the wheel spindle make sure the chain tensioner [4] rests against the adjustment screws and the rear wheel is aligned with the front wheel.

Tighten the collar nut [1] to 90 Nm.

### **⚠ WARNING**

If you don't happen to have a torque wrench at hand, make sure you have the tightening torque corrected by a KTM dealer as soon as possible. A loose wheel spindle can cause the motorcycle's handling performance to become instable and cause it to crash.





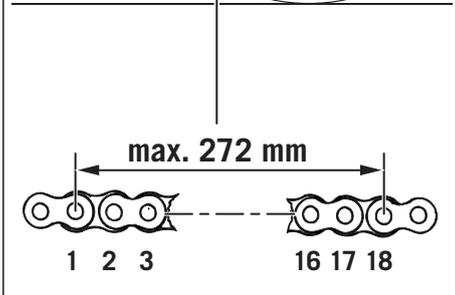
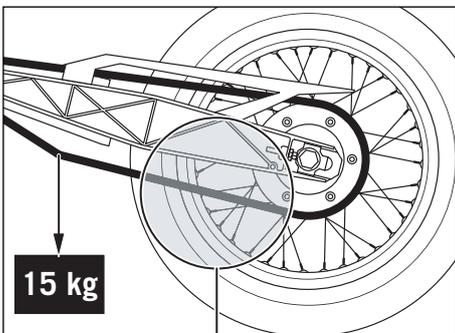
## Chain maintenance

Maintenance of the X-ring chain is reduced to a minimum. Rinse off any heavy dirt with plenty of water. Residual used grease must be removed prior to lubrication (Motorex Chain Clean 611). After drying, use a chain spray specially designed for X-ring chains (Motorex Chainlube 622 Strong).

### **⚠ WARNING**

- No lubrication is allowed to reach the rear tire or the brake disk, otherwise the road adherence and the rear wheel braking effects would be strongly reduced and the motorcycle could easily get out of control.
- The chain does not have a chain joint for safety reasons. Always have the chain replaced in an authorized KTM workshop where the service technicians have the required riveting tool.
- Never mount a normal chain joint.

Also check sprockets and chain guides for wear, and replace if necessary.



## Checking the chain for wear

To check the chain for wear proceed as follows:  
Switch the transmission to idle and put a load of approx. 15 kilograms (33 lbs) on the lower part of the chain (see illustration). Now measure the distance between 18 chain rollers on the lower part of the chain. The chain needs to be replaced when the distance is 272 mm (10.70 in). Since chains do not always wear evenly, repeat the measurement at different parts of the chain.  
Replace the chain if any X-rings are missing.

### NOTE:

If you mount a new chain, the sprockets should also be replaced. New chains wear faster if used on old used sprockets.



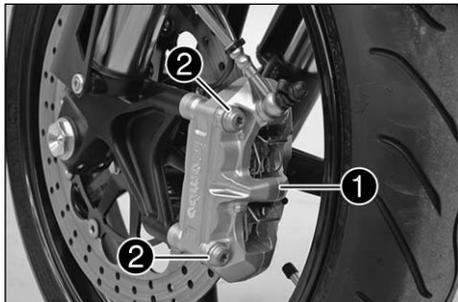
## General information on KTM disk brakes

### BRAKE CALIPERS:

The front brake calipers [1] have 4 brake pistons and are radially bolted to the fork legs. The front brake disks are designed as "floating" brake disks, i.e. they are not firmly connected to the front wheel.

The lateral balance ensures that the brake pads always have the best possible contact to the brake disk. Apply Loctite 243 to the screws [2] on the brake caliper support and tighten to 45 Nm.

The rear brake caliper [3] has 1 brake piston and is designed as a "floating brake caliper", i.e. it is not firmly connected to the brake caliper support. The lateral balance ensures that the brake pads always have the best possible contact to the brake disk.



### **⚠ WARNING**

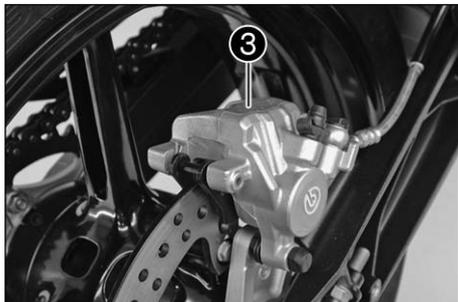
For safety reasons, always have maintenance work and repairs to the brake system performed by an authorized KTM workshop.

### BRAKE PADS:

The brake pads mounted by KTM were tested at length to guarantee maximum braking performance and are listed in the homologation papers.

### **⚠ WARNING**

Brake pads available in the accessory trade are often not authorized for operation of your KTM motorcycle in road traffic. The brake pads design and friction factor and therefore the braking power can deviate significantly from original KTM brake pads. If you use different brake pads than those provided with the original equipment, it cannot be warranted that they are authorized for use in road traffic. Your motorcycle will not longer comply with the regulations authorizing the use of vehicles for road traffic and the warranty will be void.





### BRAKE FLUID RESERVOIRS:

The brake fluid reservoirs on the front and rear wheel brakes have been designed in such a way that even if the brake pads are worn it is not necessary to top up the brake fluid. There is no reason to remove the reservoir cap under normal conditions. If the brake fluid level drops below the minimum either the brake system has a leak or the brake pads are completely worn down. In this case, consult an authorized KTM dealer immediately.

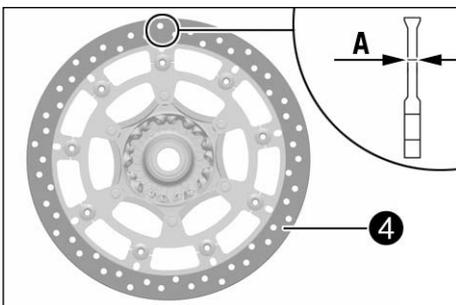


### BRAKE FLUID:

We recommend that you use Motorex DOT 5.1 brake fluid when you refill or change the brake fluid. DOT 5.1 brake fluid has a wet boiling point of 180°C / 356°F (25°C / 45°F higher than DOT 4) and is safer for high performance applications. Brake fluid DOT 5.1 is a polyethylene glycol based fluid, amber-colored and can be mixed with DOT 4 brake fluid. **Do not, in any event, use DOT 5 brake fluid.** It is based on silicone oil and is dyed purple. KTM motorcycle gaskets and brake hoses are not designed for DOT 5 brake fluid. Brake fluid is exposed to a high thermal load and absorbs moisture from the air, which lowers the boiling point. The brake fluid should therefore be changed at the prescribed intervals.

### **WARNING**

**Have the brake fluid for the front and rear brake changed at an authorized KTM workshop every 2 years.**

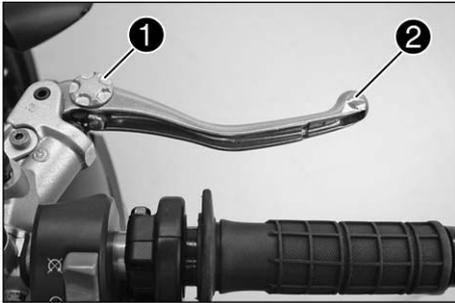


### BRAKE DISCS:

Wear will reduce the thickness of the brake disks at the mounting face [4] of the brake pads. At the weakest point [A] the brake disk should not be thinner than indicated on the disk.

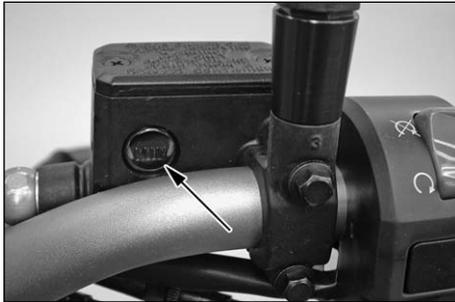
### **WARNING**

**Brake disks that are thinner than indicated on the brake disk are a safety risk.**



## Changing the basic position of the handbrake lever

The adjusting screw [1] allows you to change the basic position of the handbrake lever [2]. Press the handbrake lever's outer end forward, and, at the same time, turn the adjusting screw.

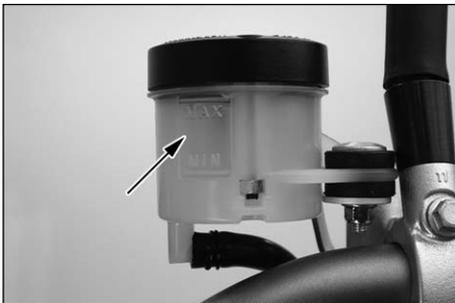


## Checking of brake fluid level - front brake (690 Supermoto)

The brake fluid reservoir is linked with the hand brake cylinder at the handlebar and the reservoir is provided with an inspection glass. With the reservoir in a horizontal position, the brake fluid level should not drop below the middle of the glass. The reservoir should be kept completely full at all times for best performance.

### **⚠ WARNING**

- If the brake fluid level drops below the minimum either the brake system has a leak or the brake pads are completely worn down. In this case, consult an authorized KTM dealer immediately.
- Have the brake fluid changed at an authorized KTM workshop every 2 years.

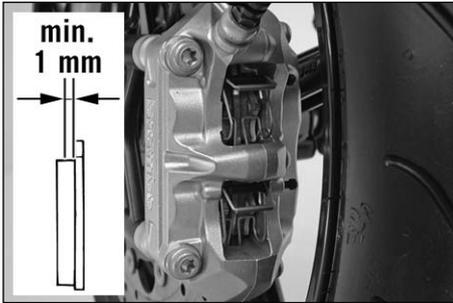


## Checking the front brake fluid level (690 Supermoto Prestige)

The brake fluid reservoir for the front brake is located on the right side of the handlebar and has a "MIN" and a "MAX" mark. The brake fluid level may not fall below the "MIN" mark when the vehicle is parked in a vertical position.

### **⚠ WARNING**

- If the brake fluid level drops below the minimum either the brake system has a leak or the brake pads are completely worn down. In this case, consult an authorized KTM dealer immediately.
- Have the brake fluid changed at an authorized KTM workshop every 2 years.



## Checking the front brake pads

The brake pads can be seen from the rear. The linings must be at least 1 mm (0.04 in) thick.

### **WARNING**

At their most worn point brake pad linings should not be thinner than 1 mm, otherwise they could lead to brake failure. For your own safety don't put off having your brake pads changed.

### **CAUTION**

If the brake pads are replaced too late when the lining is partly or completely worn off, the steel parts on the brake pads will grind against the brake disks. This significantly decreases the braking effect and destroys the brake disks.

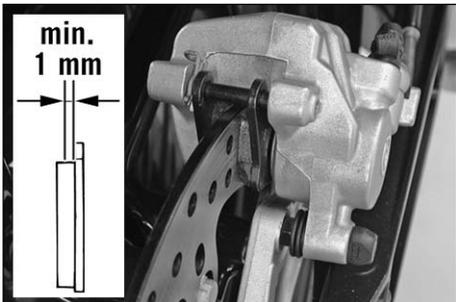


## Checking the rear brake fluid level

The brake fluid reservoir for the rear brake is located on the rear right of the vehicle and has a "MIN" and a "MAX" mark. The brake fluid level may not fall below the "MIN" mark when the vehicle is parked in an upright position.

### WARNING

- If the brake fluid level drops below the minimum either the brake system has a leak or the brake pads are completely worn down. In this case, consult an authorized KTM dealer immediately.
- Have the brake fluid changed at an authorized KTM workshop every 2 years.



## Checking the rear brake pads

The brake pads can be inspected from the rear. The thickness of the linings may not be less than 1 mm (0.04 in).

### WARNING

At their most worn point brake pad linings should not be thinner than 1 mm, otherwise they could lead to brake failure. For your own safety don't put off having your brake pads changed.

### CAUTION

If the brake pads are replaced too late so that the lining is partly or entirely worn away, the steel components of the brake pad will rub against the brake disc, impairing the braking effect and destroying the brake disc.

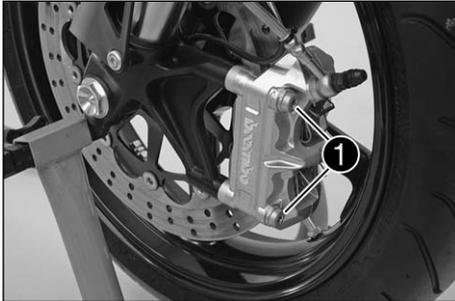




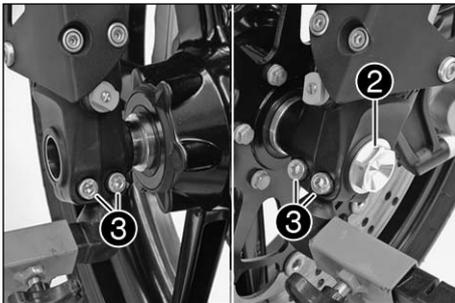
## Dismounting and remounting the front wheel

Special stands are required to dismount the wheels to make sure the motorcycle is securely fixed. The front stand only adequately fixes the motorcycle together with the rear stand. The stands shown in the illustration can be found in the KTM Power Parts catalog.

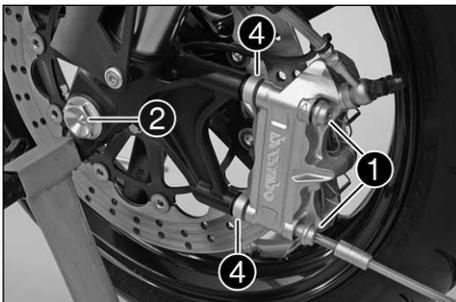
First mount the rear, then the front stand. Make sure the stands rest on solid ground and are correctly mounted. The front wheel should not touch the ground.



Remove the screws [1] from the brake caliper and carefully pull the brake caliper off the brake disk towards the rear



Loosen the collar screw [2] and the clamping screws [3] on both fork leg axle passages. Unscrew the collar screw approx 8 turns, press on the collar screw with your hand to push the wheel spindle out of the fork leg axle passage and remove the collar screw. Hold the front wheel while you pull out the wheel spindle. Lift the front wheel off the fork.

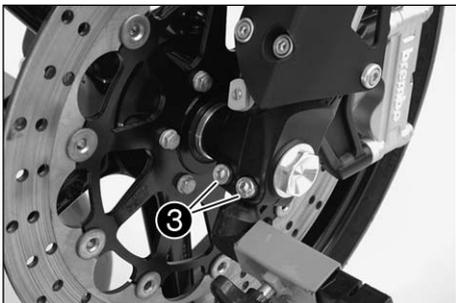


**! CAUTION**

- Do not operate the hand brake when the front wheel has been dismantled.
- Be careful not to damage the brake disk when you lay the front wheel down.

To mount, lift the front wheel in the fork and mount the wheel spindle and collar screw [2]. Tighten the collar screw to 40 Nm. Position the brake calipers and make sure the brake pads are correctly positioned. Apply Loctite 243 to the screw threads [1], mount the distance bushings [4], mount the screws and tighten to 45 Nm.

Take the motorcycle off the front stand, actuate the front wheel brake and vigorously compress the fork several times to align the fork legs.



Torque the clamping screws [3] on both fork stabs to 15 Nm. Actuate the hand brake until you feel the pressure point and check whether the front wheel can easily be turned. Remove the rear stand.

**⚠ WARNING**

- If you do not have a torque wrench to mount the wheel, have the torques corrected by an authorized KTM workshop as soon as possible. A loose wheel spindle can cause the motorcycle's handling performance to become instable and cause it to crash.
- After mounting the front wheel, keep operating the hand brake until the pressure point returns.
- Always keep the brake disks free from oil and grease, otherwise the braking effect will be significantly reduced.

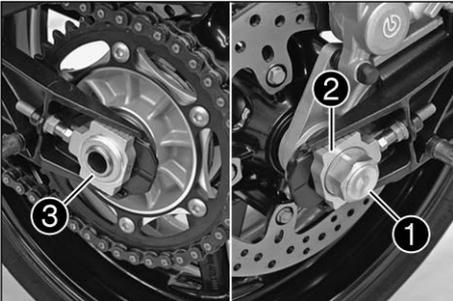




## Dismounting and mounting the rear wheel

Special stands are required to dismount the wheels to make sure the motorcycle is securely fixed. The stands shown in the illustration can be found in the KTM Power Parts catalog.

Mount the rear stand. Make sure the stand rests on solid ground and is correctly mounted. The rear wheel should not touch the ground



Unscrew the collar nut [1], remove the chain tensioner [2], hold the rear wheel while you pull out the wheel spindle [3]. Push the rear wheel forward as far as possible and remove the chain from the rear sprocket. Pull back the rear wheel together with the brake caliper support [4] until the brake caliper support can be tilted to the side. Carefully lift the rear wheel out of the swing arm.

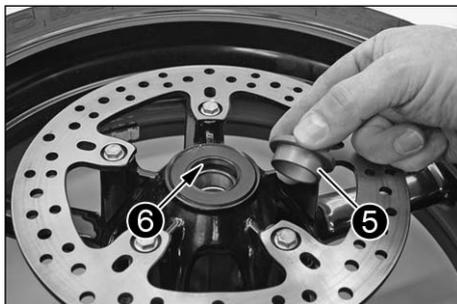
### ! CAUTION

- Do not operate the rear brake when the rear wheel has been dismounted.
- Always place the wheel on the ground with the brake disc pointing upwards. Otherwise the brake disc may be damaged.
- If the axle is dismounted, clean the thread of the wheel spindle and collar nut thoroughly and apply a new coat of grease (Motorex Long Term 2000) to prevent the thread from jamming.

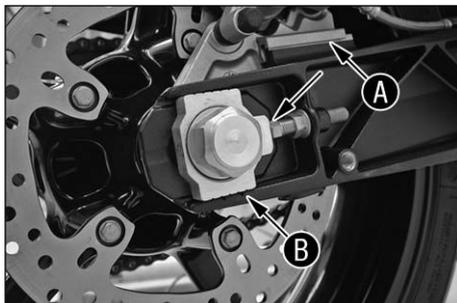


#### NOTE:

If the rear wheel has been dismounted, you should also check the shock absorption rubber.



Before you mount the rear wheel, clean and grease the bearing face of the bushing [5] and the shaft seal ring [6]. Clean the dolly at the brake caliper support and swing arm [A].



Assemble in the reverse order. Position the rear wheel in the swing arm and mount the brake caliper on the brake disk. Allow the brake caliper support and swing arm [A] dollies to engage, place the chain on the gear wheel and mount the wheel spindle. Make sure the chain tensioners [2] are mounted in the same way on the left and right. The marks on the chain tensioners must be in the same position on the left and right in relation to the reference marks [B]. Before you tighten the collar nut to 90 Nm, press the rear wheel towards the front to allow the chain tensioner to rest against the clamping screws.

## **⚠ WARNING**

- If you don't happen to have a torque wrench at hand, make sure you have the tightening torque corrected by a KTM dealer as soon as possible. A loose wheel spindle can cause the motorcycle's handling performance to become instable and cause it to crash.
- After mounting the rear wheel, keep operating the footbrake until the pressure point returns.
- It is very important to keep the brake disk free from oil and grease, otherwise the braking effect would be strongly reduced.





## Checking the shock absorption rubbers in the rear hub

LC4 models have a damped rear wheel hub. For this purpose, the engine power is conveyed from the rear sprocket via 6 shock absorption rubbers [1] to the rear wheel. These 6 absorption rubbers wear with increasing operation time, and should be checked for wear whenever the rear wheel is dismantled.



For this purpose, lie the rear wheel on a work bench with the rear sprocket upwards, and put the wheel spindle in the hub. Now hold the rear wheel firmly and try to turn the rear sprocket. The rear sprocket may not turn more than maximum 5 mm (0,2 in) measured on the outside. If the play in the chain wheel is larger, all 6 shock absorption rubbers are to be replaced.

Check the shock absorption rubbers for signs of damage and dirt.

### **! CAUTION**

**If the shock absorption rubbers are not replaced in good time, the rear sprocket carrier and the rear hub will be damaged. Always replace all 6 absorption rubbers, never single rubbers.**



## Tires, air pressure

Tire type, tire condition, and how much air pressure the tires have in them affect the way your motorcycle rides, and they must therefore be checked whenever you're getting ready to go anywhere on your motorcycle.

### **⚠ WARNING**

For driving safety and maximum handling, only use tires authorized by KTM (tire releases are available on the Internet at [www.ktm.com](http://www.ktm.com)) corresponding to the "H" speed index (uo to 210 KPH). Other tires can have a negative effect on the motorcycle's handling (e.g. can cause it to "wobble" at higher speeds).

- Tire type and size can be found in the technical specifications and in the homologation certificate.
- Tire condition has to be checked every time you want to ride your motorcycle. Before leaving check for punctures and nails or other sharp objects that might have become embedded in the tire.
- Refer to the specific regulations in your country for minimum tire tread requirements. We recommend replacing tires at the latest when the tread is down to 2 mm (0.08 in).
- Tire pressure should be checked regularly on a „cold“ tire. Adapt the air pressure to the motorcycle's total weight. Proper pressure ensures optimum driving comfort and extends the life of your tires.

### **⚠ WARNING**

- **Do not mount tires which have not been approved by KTM. Other tires could have adverse effects on the way your motorcycle rides.**
- **Use tires of the same brand and type for the front and rear wheels.**
- **For your own safety replace damaged tires immediately.**
- **Worn tires can have a negative effect on how your motorcycle performs, especially on wet surfaces.**
- **If air pressure is too low, abnormal wear and overheating of the tire can result**
- **New wheels have a smooth surface, which means that they must be run in to achieve full grip. For this purpose, ride the motorcycle carefully at moderate speed during the first 200 kilometers (125 miles) with new tires, tilting the vehicle at different angles so that all sections are properly roughened. Tires will not display their full grip characteristics until they are properly run in.**
- **For reasons of safety, it is recommended to exchange the valve insert whenever a new tire is mounted.**

TIRES - AIR PRESSURE		
	front	rear
Road, rider only	2.0 bar 28 psi	2.0 bar 28 psi
Road, with passenger	2.0 bar 28 psi	2.2 bar 31 psi
maximum payload	2.0 bar 28 psi	2.2 bar 31 psi



## Battery

The maintenance-free battery is located under the tank. Maintenance-free means you will not need to check the acid level. Clean the battery terminals regularly and grease with acid-free grease if necessary. The charge condition and type of charge are very important for the battery's service life.

### **⚠ WARNING**

**Never operate the motorcycle with a run-down battery or without the battery. This can damage the electronic components or safety equipment in either case and the motorcycle will no longer be roadworthy.**

### DISMOUNTING AND MOUNTING THE BATTERY:

Remove the seat and the screw [1]. Place a cloth over the subframe and straighten the handlebar. Carefully lift the tank and move it towards the rear. Set the tank down on the vehicle so that the left spoiler still rests on the compensating tank [2] (see photo). Place a cloth between the compensating tank and the spoiler to avoid damage.

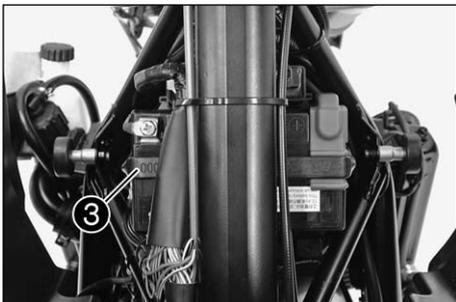
Detach and remove the rubber band [3]. First disconnect the negative terminal, then the positive terminal from the battery. Take the battery out of the frame towards the right.

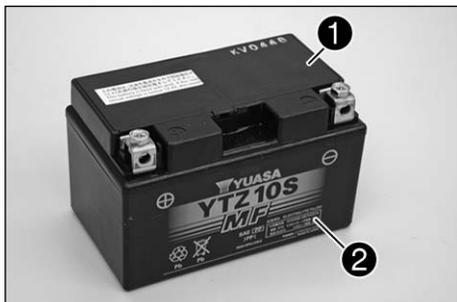
To mount, position the battery with the terminals facing the front (see photo), connecting the negative terminal to the battery last. Mount the positive terminal cover and the rubber band. Carefully position the tank, mount the M8 screw and tighten to 15 Nm. Mount the seat.



### **⚠ WARNING**

- If electrolyte (sulphuric acid) leaks from the battery, proceed with great care. The electrolyte can cause severe burns.
- In the case of skin contact rinse thoroughly with water.
- In the case of contact with the eyes, thoroughly rinse eyes with water for at least 15 minutes. Immediately consult a doctor.
- The battery is a closed model but can nevertheless emit explosive gases. Avoid sparks and open fire near the battery.
- Defective batteries must be stored out of the reach of children. Ensure proper disposal of discarded batteries.





**! CAUTION**

Do not remove the cover [1] otherwise it will be damaged.

**STORAGE:**

If the motorcycle is being immobilized for longer periods of time, remove and charge the battery. Storage temperature 0 - 35°C (32 - 95°F), avoid direct sunlight.

**Charge the battery every 3 months.**

**Charging the battery**

The battery discharges every day, even if it is not used.

Always disconnect the battery when charging. Charge the battery as described in the instructions [2] on the battery housing. Do not exceed the amperage and charging time. Quick charging at a high amperage has an adverse effect on the service life.



To charge the battery while mounted, always use the KTM battery charger (Item no. 58429074000) to ensure that the electric system is not damaged by excess voltage. **Always remove the battery if using other battery chargers!** You can also use this charging device to test the off-load voltage and startability of the battery and generator. It is impossible to over-charge the battery with this device.

Charge the battery immediately if it is empty when you start the motorcycle. If left to stand in an uncharged condition for a longer period of time, the battery will run down and sulfatize, destroying the battery.

**! CAUTION**

- Do not remove the cover [1] otherwise it will be damaged.
- To avoid damage to the on-board electronic system, always disconnect the minus pole before you charge the battery.
- To charge, connect the battery to the battery charger before you switch on the battery charger. When the battery is charged, switch off the battery charger before you disconnect the battery.
- Provide adequate ventilation when charging the battery in a closed room; the battery emits explosive gases when charging.
- Electrolytes will escape through the safety valves if the battery is charged too long or at an excessive voltage or amperage. This will reduce battery capacity.
- Try to avoid quick charges.

## Jump start

Jump starts are not recommended since they can damage the motorcycle's electronic system.



## Main fuse

The main fuse protects all power-consuming units on the motorcycle. It is located under the tank on the starter relay.

Remove the seat and move the tank back as described in the "Battery" section.

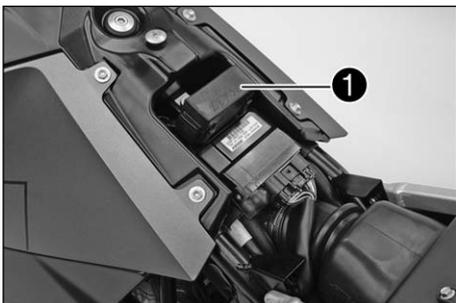
After removing the cap [1], the main fuse [2] can be pulled out with long-nose pliers. It has a capacity of 30 amperes. A spare fuse [3] is located on the starter relay. If a new fuse that has just been set in gets blown again, you are strongly advised to have it inspected by a KTM dealer. The fuse capacity is 30 Ampere.



## **!** CAUTION

- Under no circumstances is a stronger fuse allowed to be set in or a fuse allowed to be „repaired“. An inexpert treatment could damage the whole electrical installation!
- Contact a specialized KTM dealer, should defects of the electric system occur more frequently.

Mount the tank and seat.  
Set the clock.

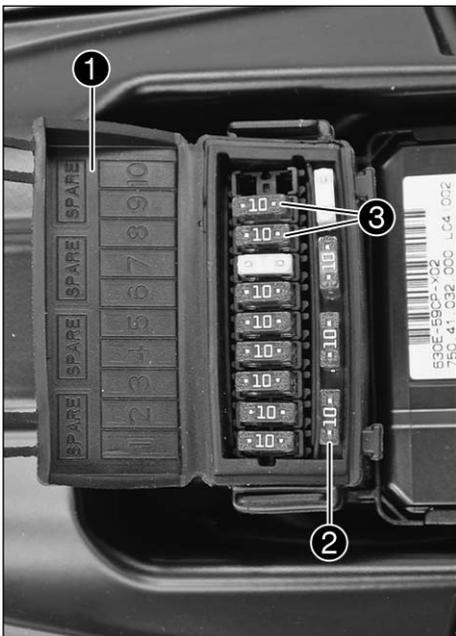


## Fuses for individual power consumers

A fuse box is mounted under the seat containing additional fuses that protect the individual electric power consumers.

The fuses are numbered on the inside of the fuse box cover [1]. The following list shows which fuses correspond to the individual power consumers. Spare fuses [2] with 10 and 15 amperes are also found in the fuse box.

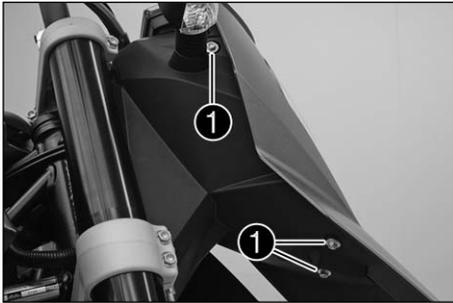
NO	CONSUMER	AMPERES
1	Ignition, instrument cluster, alarm system (optional)	10
2	Clock, ignition (CDI)	10
3	Control motor throttle EPT (Electronic Power Throttle)	10
4	Fuel pump	10
5	Fan	10
6	Horn, brake light, turn signal, alarm system (optional)	10
7	High beam, low beam, parking light, tail light, license plate lamp	10
8	for attachments (switched with the ignition)	10
9	for attachments (positive supply)	10
10	–	
SPARE	Spare fuses	10, 15



Replace a blown fuse only with an equivalent one. If a new fuse that has just been set in gets blown again, you are strongly advised to have it inspected by a KTM dealer.

**! CAUTION**  
**Under no circumstances is a stronger fuse allowed to be set in or a fuse allowed to be “repaired”.**  
**An inexperienced treatment could damage the whole electrical installation!**

The 8 and 9 fuses [3] are designed for attachments with a maximum power consumption of 10 amperes. The respective connector for this equipment is located in the headlight mask. Ask your authorized KTM workshop for details.

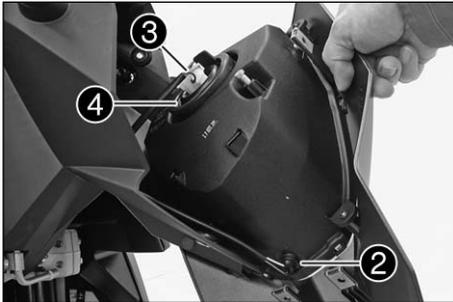


## Replacing the headlight lamp

Remove the 4 screws [1] and carefully remove the headlight mask.

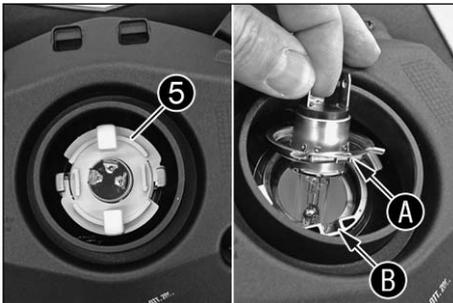
### ! CAUTION

Never touch the glass of the bulb with your fingers. The glass of the bulb must remain absolutely free from grease. Heat will otherwise cause the grease to evaporate and settle down on the reflector.



### PARKING LIGHT BULB:

Pull the bulb socket [2] out of the reflector and pull the bulb out of the bulb socket.



### HEADLIGHT BULB:

Unplug the connector [3] and remove the rubber cap [4]. Turn the bulb socket [5] approx. 15° in a counterclockwise direction and remove.

Insert a new bulb, making sure the tabs [A] on the lamp engage in the recess [B] in the headlight. Mount the bulb socket, rubber cap and connector.

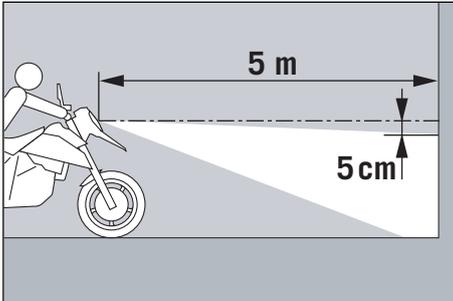
Position the headlight mask, mount the screws and tighten to 5 Nm.



## Adjusting the headlight range

The payload can make it necessary to correct the headlight range.

The headlight range can be adjusted at the back of the headlight with a screwdriver (see photo). Turning in a clockwise direction will increase the headlight range, turning in a counterclockwise direction will reduce the headlight range.



### TO CHECK:

Determine the distance from the ground to the center of the headlight when your motorcycle is loaded and ready for the trip (baggage, driver, passenger). Make a mark on a light wall behind a level surface at a height corresponding to the center of the headlight. Position your motorcycle loaded ready for the trip 5 meters (16,4 ft) away from the wall and switch on the low beam. The light/dark cut-off line should be 5 cm (2 in) under the mark (see drawing).

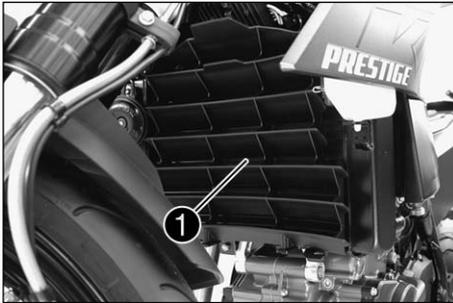


## Replacing the flasher bulbs

Remove the screw on the back of the turn signal, carefully fold the lens [1] towards the motorcycle and remove.

Slightly depress the bulb, turn it approx. 30° counterclockwise and pull it out of the socket.

To mount the lamp reverse the worksteps indicated above. When you mount the screw, first turn it in a counterclockwise direction until it engages in the thread and then tighten slightly.

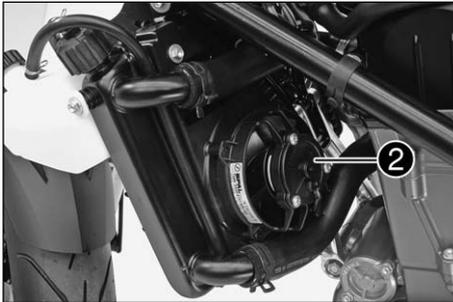


## Cooling system

The water pump in the engine ensures a forced circulation of the cooling liquid. When the engine is cold, the cooling liquid only circulates in the cylinders and cylinder heads. The thermostat will open when the engine reaches approx. 70°C (158°F) and the cooling liquid will also be pumped through the aluminum radiator [1].

Cooling is by means of the air stream. The lower the speed, the lower the cooling effect. Soiled cooling fins also impair the cooling effect.

If, for example, slow urban traffic or waiting at a traffic light cause little or no air to stream through the radiator, the temperature of the cooling liquid will rise. The radiator fan [2] switches on when the cooling liquid reaches a temperature of 102°C (216°F). Additional air is blown through the radiator to prevent the cooling system from overheating.

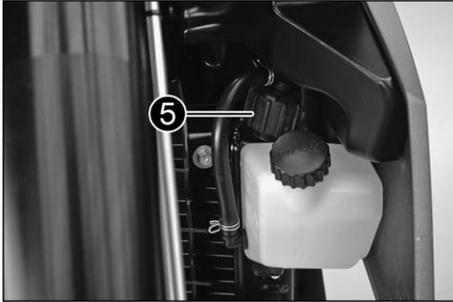


## ! CAUTION

The temperature indicator [3] will begin to blink and the red cooling liquid temperature warning lamp [4] will light up when the cooling liquid reaches approx. 115°C (239°F), having exceeded the normal operating temperature. Possible causes:

- Slow riding with large loads at a higher air temperature:  
If possible increase your running speed, so that more air can blow through the radiators. Should the warning light still be on off after 1500 meters (1 mile), stop immediately, switch off the engine and look for other possible causes.
- The cooling fan on the radiator is not working:  
The cooling fan must be running, when the cooling liquid temperature is 115°C (239°F) and the ignition is on. If the fan is not working, and there appears to be sufficient cooling liquid, the only thing you can do is to drive on to your nearest authorized KTM workshop at the least possible engine load.
- Too little cooling liquid in the system:  
Check whether any cooling liquid is leaking out (also on the bottom of the motorcycle). Let the engine cool down and check the cooling liquid level in the radiator (see chapter Checking the cooling liquid level in the radiator). Only continue to drive if there is enough cooling liquid in the system. Contact an authorized KTM workshop to have the error eliminated. You will damage the engine if you continue to drive when the cooling liquid temperature warning lamp is on.
- Excessive use of the clutch at slow speed.

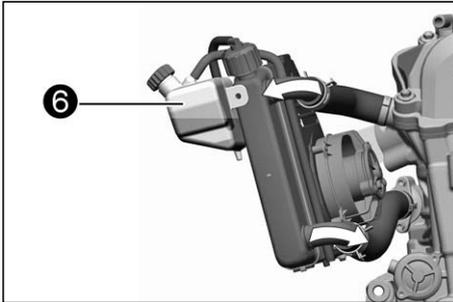




A mixture of 50% antifreeze and 50% distilled water is used as the cooling liquid. However, the anti-freeze protection must be at least  $-25^{\circ}\text{C}$  ( $-13^{\circ}\text{F}$ ). Aside from antifreezing protection, this mixture also provides great corrosion protection which is why it must not be replaced by pure water.

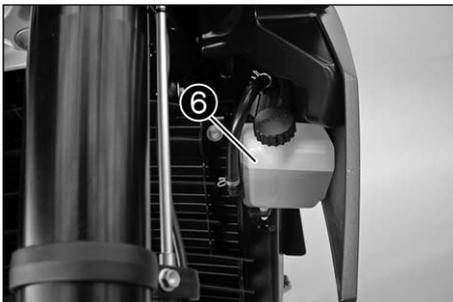
## ! CAUTION

- For the cooling system, use only high-grade antifreezer (Motorex Anti-Freeze). Using lowergrade antifreeze agents, can cause corrosion and coolant foaming.
- More antifreeze must be added if you plan to travel to a region where temperatures are expected to drop below  $-25^{\circ}\text{C}$  ( $-13^{\circ}\text{F}$ ).



Pressure induced by heating of the cooling liquid in the cooling system is controlled by a valve in the radiator cap [5]; a water temperature rising up to  $125^{\circ}\text{C}$  ( $257^{\circ}\text{F}$ ) is admissible, without fear of problems.

Any excess cooling liquid caused by thermal expansion is conducted to the compensating tank [6]. It will be sucked back in as soon as the temperature in the cooling system drops.



### Checking the cooling liquid level in the compensating tank

Check the level of the cooling liquid when the engine is cold. It should fall between the MIN and MAX marks on the compensating tank [6].

Add cooling liquid (see above for mixture ratio) if the cooling liquid level drops below the MIN mark.

If you need to add cooling liquid quite often, the cooling system may leak. If the compensating tank is empty, also check the cooling liquid level in the radiator. Have the cooling system checked by an authorized KTM workshop.



## Checking the cooling liquid level in the radiator

For better access to the radiator cap [1], move the tank towards the rear, as described in the "Battery" section.

Hold the radiator cap with a cloth, carefully turn in a counterclockwise direction and remove. The radiator should be completely filled with cooling liquid; no air should be in the radiator.

If any cooling liquid is missing, the cooling system is probably leaking. Have the cooling system checked at an authorized KTM workshop.

### **⚠ WARNING**

If possible, check the cooling liquid level when the engine is cold. If you need to remove the radiator cap when the engine is hot, hold the cap with a cloth and open slowly, allowing any excess pressure to escape (danger of scalding).

### **! CAUTION**

- If more than 0.5 (0.13 USgal) liter of cooling liquid needs to be added, you will need to bleed the cooling system.
- Only continue to drive if there is enough cooling liquid in the system. Contact an authorized KTM workshop to have the error eliminated. You will damage the engine if you continue to drive when the cooling liquid temperature warning lamp is on.



## Coolant drain plug

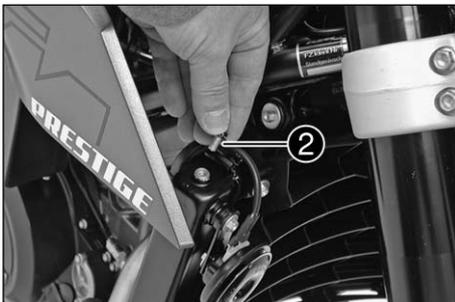
A drain plug [2] to drain the coolant is located on the engine case. Always mount a new gasket and tighten the drain plug to 15 Nm.



## Bleeding the cooling system

For better access to the radiator cap, move the tank towards the rear, as described in the "Battery" section.

Remove the radiator cap [1] and bleeder screw [2]. Slightly tilt the motorcycle to the right.



Add cooling liquid until it starts to emerge from the vent hole without any air bubbles and immediately mount the screw to prevent air from getting into the radiator. Fill up the radiator with cooling fluid, mount the radiator cap and rest the motorcycle on the side stand again. Move the tank forward, start the engine and allow to warm up until the 5th bar on the temperature indicator lights up.

Turn off the engine and allow to cool down for about 15 minutes. Move the tank back, slightly tilt the motorcycle to the right, cover the radiator cap with a cloth and carefully remove it.

### **WARNING**

**Cover the cap with a cloth and open slowly to allow excess pressure to escape - can potentially cause serious burn injuries.**



If necessary, pour cooling liquid into the radiator up to the upper edge of the filler neck, mount the radiator cap and rest the motorcycle on the side stand again. Fill the compensating tank with cooling liquid until it reaches a level between the MIN and MAX mark. Close the compensating tank.

Move the tank forward, mount the M8 screw and tighten to 15 Nm. Mount the seat.

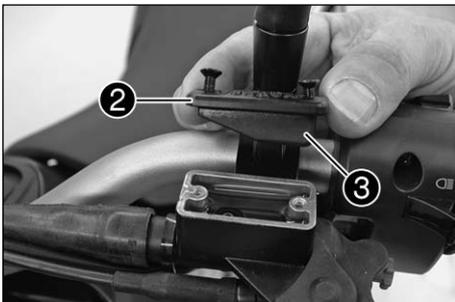
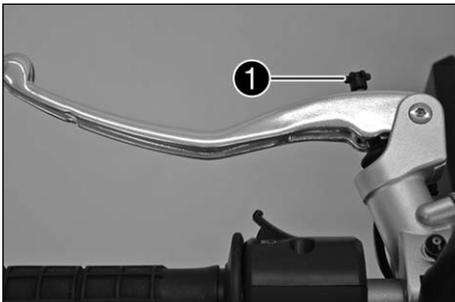


## Changing the original position of the clutch lever

The adjusting screw [1] can be used for individual adjustment of the original position of the clutch lever, thus allowing adjustment to an optimal position for every hand size. Turning the adjusting screw in a clockwise direction will move the clutch lever away from the handlebar. Turning the adjusting screw in a counterclockwise direction will move the clutch lever closer to the handlebar.

### ! CAUTION

Adjustment of the clutch lever position is only possible within certain limits. Only turn the adjusting screw manually and never apply excessive force.

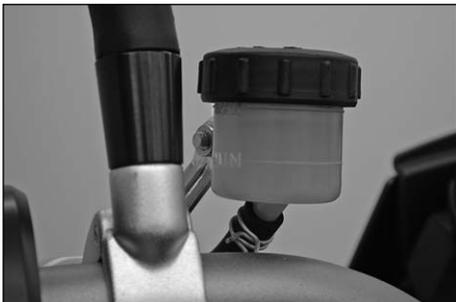


## Checking the oil level of the hydraulic clutch (690 Supermoto)

To check the oil level in the master cylinder of the clutch remove the cover. For this purpose, remove screws and cover [2] together with the rubber boot [3]. The oil level in the horizontal-standing master cylinder should be 4 mm below the upper edge. If necessary, add SAE 10 biodegradable hydraulic oil (Motorex clutch fluid 75), available from your authorized KTM workshop.

### ! CAUTION

KTM uses biodegradable, hydraulic mineral oil to actuate the hydraulic clutch. Do not mix this oil with any other hydraulic oil. Always use original KTM hydraulic oil (available from your authorized KTM workshop) to make sure your clutch operates smoothly. Never refill with brake fluid.



## Checking the oil level of the hydraulic clutch (690 Supermoto Prestige)

The oil level should be between the „MIN“ and „MAX“ marks with the master cylinder in a horizontal position.

If necessary, add SAE 10 biodegradable hydraulic oil (Motorex clutch fluid 75), available from your authorized KTM workshop.

### ! CAUTION

**KTM uses biodegradable, hydraulic mineral oil to actuate the hydraulic clutch. Do not mix this oil with any other hydraulic oil. Always use original KTM hydraulic oil (available from your authorized KTM workshop) to make sure your clutch operates smoothly. Never refill with brake fluid.**



## Adjusting the handlebar tilt

Loosen the screws [1]. Adjust the handlebar and tighten the screws to 20 Nm.

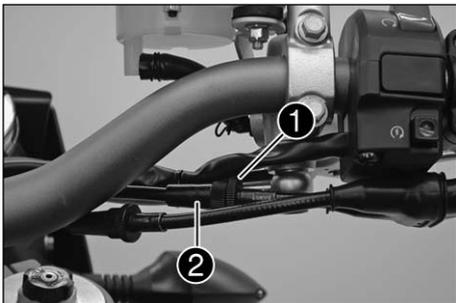
Make sure the handlebar instruments do not touch the fuel tank when the handlebar is completely turned.

### ⚠ WARNING

**Tilting the handlebar too far back will reduce the steering angle since the handlebar instruments will touch the fuel tank**

### ! CAUTION

**If the handlebar is tilted too far back, the handlebar instruments may damage the fuel tank.**



## Checking and adjusting the throttle cable play

You should feel 3-5 mm free travel on the throttle grip when you start to turn it.

To adjust, loosen the counternut [1], turn the adjusting screw [2] as required and tighten the counternut again.

Make sure that the throttle grip will return to the idle position automatically once you let go of it.

To check the correctness of this setting, start the engine, turn the handlebar left and right, in both cases as far as it will go. This must not cause any changes in idling speed. Otherwise, you have to increase the backlash of the throttle cable.

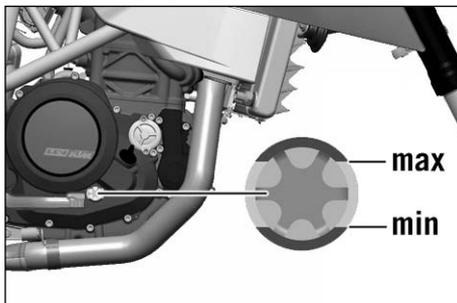


## Engine oil

Automobile engine oil used to be used for four-stroke motorcycles before there were separate motorcycle specifications. Different technical developments made it necessary to have a separate specification for four-stroke motorcycles - the JASO T903 MA standard. Whereas car engines require long changing intervals, motorcycle engines require a higher power output at higher speeds. Most motorcycle engines also use the same oil to lubricate the transmission and the clutch. The JASO MA standard responds to these special requirements.

Only use fully synthetic 10W/60 engine oils that meet the JASO MA quality requirements (see information on the can).

KTM recommends Motorex Cross Power 4T in the 10W/60 viscosity (for all temperatures).



## Checking the engine oil level

Check the engine oil level when the engine is warm (at least 5 bars on the temperature indicator). Place the motorcycle on a level surface (not on the side stand). Wait 30 seconds to allow the oil level to settle in the engine. The oil level should be between the MIN and MAX marks. Add engine oil if necessary.

### ! CAUTION

Always check the oil level when the engine is warm. A cold engine can distort the measuring results. Engine oil expands when heated, increasing the oil level.

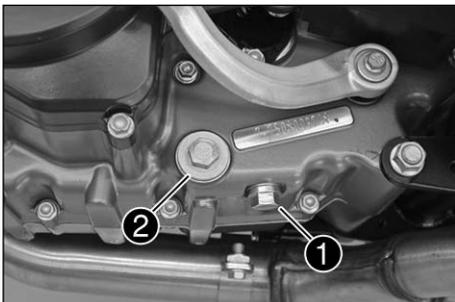


## Refilling engine oil

Unscrew the plug [1] and refill engine oil. Wait 30 seconds and check the oil level again. The quantity of oil between the MIN and MAX marks is 0.3 liter (0.08 USgal). Mount the plug and check the engine for leaks.

### ! CAUTION

- Insufficient amounts of or low-grade engine oil lead to premature wear in the engine.
- Do not overfill the engine case.
- Do not underfill the engine case.



## Changing the engine oil and the oil filter, cleaning the oil screen

### ! CAUTION

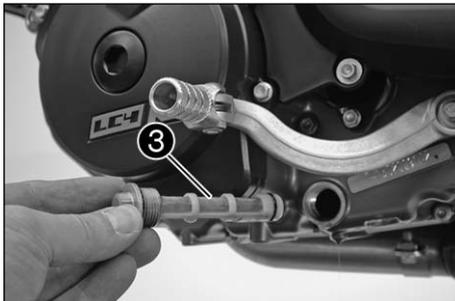
You may only change the engine oil yourself after the warranty period has expired. The warranty will become void if you change the oil yourself during the warranty period.

NOTE: Clean the 2 oil screens and replace the 2 oil filters after each oil change.

The engine oil change is to be carried out when the engine is still warm.

### ⚠ WARNING

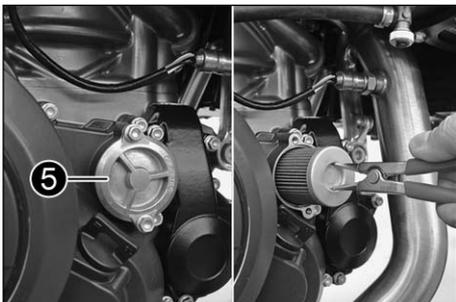
An engine having been run warm, and the engine oil in it is very hot – do not burn yourself.



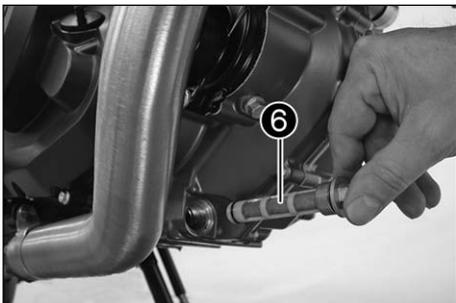
Rest the motorcycle on the side stand on a level surface. Place a pan under the engine to catch the used oil and remove the oil drain plug [1]. Remove the plug [2] with the oil screen [3].



Remove the oil filter cover [4] and pull the oil filter out of the engine case with circlip pliers (upside-down).

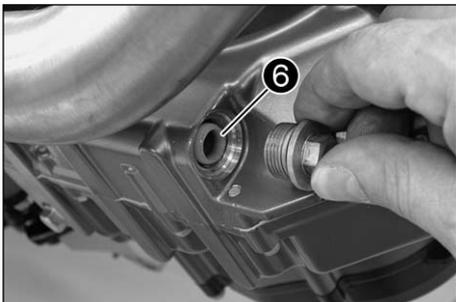


Remove the oil filter cover [5] and pull the oil filter out of the engine case with circlip pliers (upside-down).



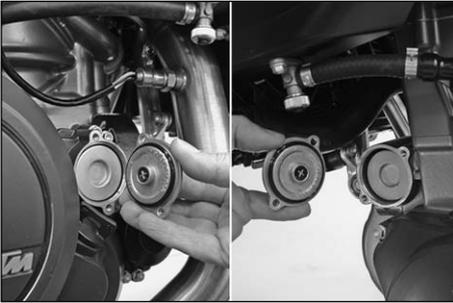
Remove the plug with the oil screen [6].

Thoroughly clean the plugs, cover and both oil screens. Clean all rubber seal rings and check for damage; replace if necessary. Clean the sealing areas on the engine case.



Insert the oil screen [6] in the engine case as illustrated, mount the plug and tighten to 15 Nm.

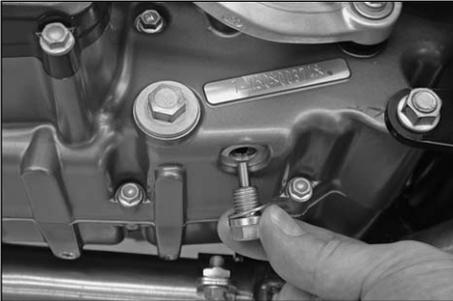
Use the same procedure to mount the oil screen on the right side of the engine.



Insert a new oil filter in the engine case, grease the O-rings and mount the oil filter cover together with the O-ring. Tighten the screws to 6 Nm.

## ! CAUTION

Only use original KTM oil filters. The engine can be damaged if other filters are used.



Mount the oil drain plug with a new seal ring and tighten to 20 Nm.



Unscrew the plug [1]. Add 2 liters (0,53 USgal) of fully-synthetic 10W/60 engine oil according to JASO MA quality requirement (e.g. Motorex Cross Power 4T 10W/60) and remount the plug. Start the engine and allow to run warm in neutral until 5 bars on the temperature indicator light up. Switch off the engine and check the engine oil level (see "Checking the engine oil level").

Check the engine for oil leakage.

If you have your motorcycle serviced as set forth in this manual, no malfunctioning is to be expected. Nevertheless, if an error does arise, we recommend that you look for the error according to the following chart.

Please note that you cannot perform all of the work yourself. If you are not sure, contact your KTM dealer.

TROUBLE	CAUSE	REMEDY
Engine does not start when the starter button is actuated	Operating error	Turn on the ignition, switch the gear to neutral and switch the emergency OFF switch on, do not accelerate while starting the engine.
	Discharged battery	Recharge the battery and investigate the causes for discharging; contact an authorized KTM workshop.
	Blown fuse	Replace fuse 1, 2, 3 or 4 in the fuse box
	Main fuse is blown	Remove the seat, move the tank back and replace the main fuse
	Defect ignition lock or emergency OFF switch	Check ignition lock and emergency OFF switch, contact an authorized KTM workshop.
	Defect safe-starting system.	Contact an authorized KTM workshop.
The engine cranks only with pulled clutch lever	A gear is engaged	Shift the transmission to neutral.
	A gear is engaged and the side stand is still folded down	Shift the transmission to neutral.
	Defect safe-starting system.	Contact an authorized KTM workshop.
Engine cranks with gear engaged.	Defect safe-starting system.	Contact an authorized KTM workshop.

TROUBLE	CAUSE	REMEDY
Engine cranks but doesn't start.	<p>Operating error</p> <p>Blown fuse for the fuel pump</p> <p>Connector not attached to the fuel line</p> <p>The plug and socket connector on the wiring harness is oxidized</p> <p>Error in the injection system</p>	<p>Pay attention to starting off information (see driving instructions).</p> <p>Replace fuse 4</p> <p>Connect the clutch to the fuel line</p> <p>Remove the panel and fuel tank, clean the plug and socket connector and spray with contact spray</p> <p>Visit an authorized KTM workshop</p>
Engine will not reach full power	<p>Air filter/fuel filter heavily soiled</p> <p>Error in the injection system</p>	<p>Have the air filter/fuel filter replaced at an authorized KTM workshop</p> <p>Visit an authorized KTM workshop</p>
Engine overheats	<p>Insufficient cooling liquid</p> <p>Radiator fins are extremely dirty</p> <p>Foam forms in cooling system</p> <p>Radiator hose is kinked or damaged</p> <p>Thermostat defective</p> <p>Blown fan fuse</p>	<p>Refill cooling liquid (see maintenance work), check cooling system for leaks</p> <p>Clean radiator with water jet</p> <p>Replace cooling liquid, use antifreezer with brand name</p> <p>Run the radiator hose correctly or replace</p> <p>Have the thermostat checked (opening temperature 70°C, (158°F) or replaced; contact an authorized KTM workshop</p> <p>Replace fuse 5</p>

TROUBLE	CAUSE	REMEDY
Engine overheats	Defect fan or thermoswitch for fan  Air in the cooling system	Contact an authorized KTM workshop.  Bleed the cooling system (see Maintenance work)
FI lamp is blinking / lights up	Error in the injection system	Visit an authorized KTM workshop
Engine stalls while driving	No fuel  The fuse for the ignition or fuel pump is blown	Refuel  Replace fuse 1, 2 or 4
High oil consumption	Engine oil level too high  Engine oil too thin (viscosity)  Kink in engine vent hose	Check engine oil level when the engine is warm; correct if necessary  Use thicker engine oil; see chapter „Engine oil“  Remove the seat, move the tank back and check engine vent hoses
Headlight and position light fail	Blown fuse	Replace fuse 7
Turn signal, brake light and horn do not function	Sicherung durchgeschmolzen	Replace fuse 6
Time is not displayed or not correctly displayed	Blown fuse, thus no continuous power supply	Replace fuse 2 and set the clock.

TROUBLE	CAUSE	REMEDY
The battery is discharged	The ignition (power consumer) hasn't been switched off  The battery isn't charged by the generator	Recharge the battery according to the relevant instructions.  Voltage regulator and generator should be checked by an authorized KTM workshop.
No values are visible in the combined instrument display.	Blown fuse	Replace fuse 1
The speed indication on the combined instrument is not working	Pickup cable is damaged or contacts on the cable connector have oxidized	Check the pickup cable for damage, visit an authorized KTM workshop

The blink code indicates which component is affected by an error. This allows the error to be identified if no diagnosis tool is available.

BLINK CODE	SIGNAL / COMPONENT	ERROR DESCRIPTION	ENGINE
02	Pulse generator	Malfunction	Stalls
06	Throttle sensor	Output signal too low /high	Continues to run
08	APS sensor (throttle grip sensor)	Output signal too low /high	Continues to run
09	Intake manifold air pressure	Output signal too low /high	Continues to run
12	Coolant temperature sensor	Output signal too low /high	Continues to run

BLINK CODE	SIGNAL / COMPONENT	ERROR DESCRIPTION	ENGINE
13	Air temperature sensor	Output signal too low /high	Continues to run
14	Ambient air pressure sensor	Output signal too low /high	Continues to run
15	Tilt angle sensor	Output signal too low /high	Continues to run
17	Lambda probe	Malfunction	Continues to run
24	Control unit voltage supply	Malfunction	Continues to run
25	Side stand switch	Short circuit to ground	Continues to run
26	EPT electric motor Hall sensor	Output signal too low /high	Continues to run
27	EPT battery voltage control unit	Output signal too low /high	Continues to run
33	Injection nozzle	Malfunction	Stalls
37	Ignition coil	Malfunction	Stalls
41	Fuel pump relay	Short circuit to ground / positive	Stalls
45	Lambda probe heater	Short circuit to ground / positive	Continues to run
53	Purge valve for carbon canister	Short circuit to ground / positive	Continues to run
54	Secondary air valve	Short circuit to ground / positive or interruption	Continues to run
55	EPT electric motor control unit	Supply voltage too low/high	Continues to run
58	EPT voltage control unit	Malfunction	Continues to run
60	EPT electric motor	Output signal too low /high	Continues to run
68	Manifold air pressure (MAP) sensor leak	O-Ring or sensor damaged	Continues to run
90	EPT throttle valve position	Abnormal deviation between setpoint and actual value	Continues to run
91	CAN Communication	Malfunction	Continues to run
92	EPT control unit battery voltage electric motor	Output signal too low /high	Continues to run

Regular cleaning and paintwork care are part of the maintenance work and help to maintain the value of your motorcycle.

## **!** CAUTION

**Never clean the motorcycle with a power washer or a strong water jet, otherwise the pressure will allow water to enter the electric components, plugs, cables, bearings, etc. which can cause malfunctioning or can lead to premature wear of these components.**

- Before you wash your motorcycle, close the muffler openings.
- Use warm water with a commercial detergent and sponge. Coarse dirt can be removed with a soft water jet. Areas that are heavily soiled can be sprayed with a motorcycle cleaner (e.g. Motorex Motoclean 900) and cleaned with a brush.
- After the motorcycle has been rinsed with a soft water jet, it should be dried by air pressure and a cloth. Then take a short drive until the engine has reached the working temperature and also use the brakes. Due to the heat, the water also evaporates at the unapproachable parts of the engine and the brakes.
- After the motorcycle has cooled down, oil or lubricate all of the friction bearings and bearing positions and treat the chain with chain spray. Treat all bare areas (except brake disks) with a corrosion inhibitor (e.g. Motorex Protect & Shine).
- The exhaust pipes and mufflers are made of stainless steel and should be treated with a suitable care product.
- To prevent failures in the electric system, you should treat the ignition lock, the emergency OFF switch, light switch and the socket connectors with contact spray.
- Treat all of the painted parts with a mild paint care product (e.g. Motorex Moto Polish).

# CONSERVATION FOR WINTER OPERATION »

In the event that the motorcycle is also used in winter and on roads where one has to expect salt spraying, you will have to take precautions against the aggressive road salt.

- clean motorcycle thoroughly and let it dry
- treat engine, swing arm, and all other bare parts (except for brake discs) with a wax-based anti-corrosion agent.

## **⚠** WARNING

**Keep anti-corrosion agent from getting into contact with the brake discs, for otherwise this will significantly reduce the braking power.**

## **!** CAUTION

**After rides on salted roads, clean motorcycle thoroughly with cold water and let it dry well!**

Should you desire to make a pause over a longer space of time, please observe the following instructions:

- Drive the tank empty to be able to fill up with fresh fuel when starting the motorcycle up again.
- Clean motorcycle thoroughly (see chapter: CLEANING)
- Change engine oil and oil filter (old engine oil contains aggressive contaminations).
- Check antifreezer and amount of cooling liquid.
- Correct tire pressure.
- Disassemble and charge battery (see chapter: BATTERY).
- Jack up the motorcycle if possible so the wheels do not touch the ground.
- The storage place should be dry and not subject to excessive temperature fluctuations.
- Cover the motorcycle with an air permeated tarpaulin or blanket. Do not use non air permeable materials as a possible humidity might not be able to escape and could cause corrosion.

## **!** CAUTION

**It would be very bad to let the engine run for a short time during the storage period. The engine would not get warmed up enough and the thus developed steam would condense during the combustion process and cause the valves and exhaust to rust.**

### **RE-INITIATION AFTER TIME OF STORAGE**

- Mount the charged battery (pay attention to polarity) and set the clock.
- Fill up tank with fresh fuel.
- Check motorcycle as before each start (see driving instructions).
- Take a short, careful test ride first.

NOTE: Before you put your motorcycle away for the winter, you have to check all parts for their function and wear. Should any service jobs, repairs, or any refitting be necessary, you should have them carried out during the off-season (lower workload a mechanics' shops). This way, you can avoid the long waiting times at your mechanic at the beginning of the next biking season.

CHASSIS	690 SUPERMOTO 2007	690 SUPERMOTO PRESTIGE 2007
Frame	Chromoly trellis frame, powder-coated	
Fork	WP Suspension – <b>Up Side Down</b> 4860 ROMA	
Spring travel front	210 mm (8.27 in)	
Rear suspension	WP Suspension - 4618 shock absorber - PRO-LEVER relay lever	
Spring travel rear	210 mm (8.27 in)	
Front brake	4-piston fixed radial caliper, brake disc Ø 320 mm (12.6 in)	
Rear brake	single-piston floating caliper, brake disc Ø 240 mm (9.45 in)	
Authorized front tires *	BRIDGESTONE Battlax BT090F 120/70 R17 M/C 58H	METZELER Sportec M3 Front 120/70 ZR17 M/C 58W
Air pressure	Road, driver only.....2.0 bar (28 psi) Road, with passenger / maximum payload .....2.0 bar (28 psi)	
Authorized rear tires *	BRIDGESTONE Battlax BT090R PRO 160/60 R17 M/C 69H	METZELER Sportec M3 160/60 ZR17 M/C 69W
Air pressure	Road, driver only.....2.0 bar (28 psi) Road, with passenger / maximum payload .....2.2 bar (31 psi)	
Fuel tank capacity	13 liters (3.44 USgal), 2.5 liters (0.66 USgal) Reserve	
Lighting	high beam + low beam .....H4 12V 60/55W (socket P43t) position light front.....12V 5W (socket W2.1x9.5d) Instrument lights + indicator lamp.....LED position light rear.....LED stoptlight .....LED licens plate illumination .....12V 5W (socket W2.1x9.5d) flashers .....12V 10W (socket BA15s)	

\* further tire releases are available on the Internet at [www.ktm.com](http://www.ktm.com)

CHASSIS	690 SUPERMOTO 2007	690 SUPERMOTO PRESTIGE 2007
Battery	maintenance-free battery 12V / 8.6 Ah	
Gear ratio – rear wheel	17:41 (17:42)	
Chain	5/8 x 1/4" X-ring	
Steering head angle	63.5°	
Wheel base	1472 ± 15 mm (57.95 ± 0.6 in)	
Seat height, unloaded	880 mm (34.65 in)	
Ground clearance, unloaded	245 mm (9.65 in)	
Dry weight	154 kg (339.5 lbs)	
Max. axle load front	150 kg (330.7 lbs)	
Max. axle load rear	200 kg (440.9 lbs)	
Max. total load	350 kg (771.6 lbs)	

FORK	690 SUPERMOTO	690 SUPERMOTO PRESTIGE
Type	14.18.7C.07 WP Suspension	14.18.7C.08 WP Suspension
Spring	5.2 - 430	5.2 - 430
Air chamber length	100 mm (39.37 in)	100 mm (39.37 in)
Fork oil	SAE 2.5	SAE 2.5

SHOCK ABSORBER	690 SUPERMOTO	690 SUPERMOTO PRESTIGE
Type	15.18.9C.07 WP Suspension	15.18.7C.08 WP Suspension
Spring	65 - 230	65 - 230
Spring preload	12 mm (0.472 in)	12 mm(0.472 in)



TIGHTENING TORQUES – CHASSIS 690 SUPERMOTO / 690 SUPERMOTO PRESTIGE 2007		
Screw for side stand switch	M4	Loctite 243 + 2 Nm
Spoke nipple	M4.5/M5	5 Nm
Screw for fuel pump, pressure regulator	M5	4 Nm
Screw for fuel level sensor	M5	3 Nm
Screw for foot brake pedal surface	M5	Loctite 243 + 6 Nm
Screw for plastic clamp brake line fork leg	M5	2 Nm
Screw for heat protector on exhaust	M5	Loctite 243 + 5 Nm
Screw for side cover	M5	2 Nm
Screw for seat lock	M5	Loctite 222 + 3 Nm
Screw for starter cable - starter	M5	3 Nm
Pushrod ball joint foot brake cylinder	M6	Loctite 243 + 10 Nm
Remaining screws for tank	M6	6 Nm
Screw for compensating tank rear wheel brake	M6	5 Nm
Screw for battery rack, control unit holder	M6	3 Nm
Screw for fuel cock	M6	6 Nm
Screw for front/rear brake disk	M6	Loctite 243 + 14 Nm
Screw for foot brake cylinder	M6	Loctite 243 + 10 Nm
Screw for horn	M6	Loctite 243 + 6 Nm
Screw for license plate holder	M6	8 Nm
Screw for lower radiator mount	M6	5 Nm
Screw for magnetic side stand holder	M6	Loctite 243 + 10 Nm
Screw for rectifier regulator	M6	8 Nm
Screw for headlight mask	M6	5 Nm
Screw for side stand bracket	M6	Loctite 243 + 10 Nm

<b>TIGHTENING TORQUES – CHASSIS 690 SUPERMOTO / 690 SUPERMOTO PRESTIGE 2007</b>		
Screw for SAS valve	M6	6 Nm
Nut for rear sprocket screw	M8	Loctite 243 + 35 Nm
Nuts for header - cylinder head	M8	copper paste + 25 Nm evenly, do not bend washer
Screw for silencer exhaust clamp	M8	25 Nm
Screw for header exhaust clamp	M8	copper paste + 25 Nm
Screw for side stand spring bracket	M8	Loctite 243 + 25 Nm
Screw for rear footrest support	M8	25 Nm
Screw for rear footrest bracket	M8	Loctite 243 + 25 Nm
Screw for upper triple clamp	M8	12 Nm
Screw for lower triple clamp	M8	15 Nm
Screw for fork stub	M8	15 Nm
Screw for grip	M8	6 Nm
Screw for steering stem clamping	M8	20 Nm
Screw for header - silencer	M8	copper paste + 25 Nm
Screw for handlebar clamp	M8	20 Nm
Screw for upper subframe	M8	Loctite 243 + 35 Nm
Screw for side stand bracket	M8	Loctite 243 + 25 Nm
Screw for tank bearing	M8	15 Nm
Screw for linkage bracket, front engine holder	M8	Loctite 243 + 25 Nm
Screw for front/rear brake disk	M8x1.25	Loctite 243 + 30 Nm
Engine mount screws	M10	Loctite 243 + 45 Nm
Screw for upper/lower shock absorber	M10	Loctite 243 + 45 Nm
Screw for handlebar mount	M10	20 Nm

<b>TIGHTENING TORQUES – CHASSIS 690 SUPERMOTO / 690 SUPERMOTO PRESTIGE 2007</b>		
Screw for side stand	M10	Loctite 243 + 35 Nm
Screw for front brake caliper	M10x1.25	Loctite 243 + 45 Nm
Screw for lower subframe	M10x1.25	Loctite 243 + 45 Nm
Lambda probe	M12x1.25	24.5 Nm
Nut for frame - connecting lever - rocker arm - swinging fork	M14x1.5	100 Nm
Nut for swing arm pivot	M16x1.5	100 Nm
Nut for engine sprocket	M20x1.5	Loctite 243 + 80 Nm
Screw for steering head	M20x1.5	12 Nm
Adjusting ring for swing arm support	M24x1.5	25 Nm
Screw for front wheel spindle	M24x1.5	40 Nm
Nut for rear wheel spindle	M25x1.5	90 Nm
Remaining chassis screws	M5	4 Nm
	M6	10 Nm
	M8	25 Nm
	M10	45 Nm
Remaining chassis screws	M6	15 Nm
	M8	30 Nm
	M10	50 Nm

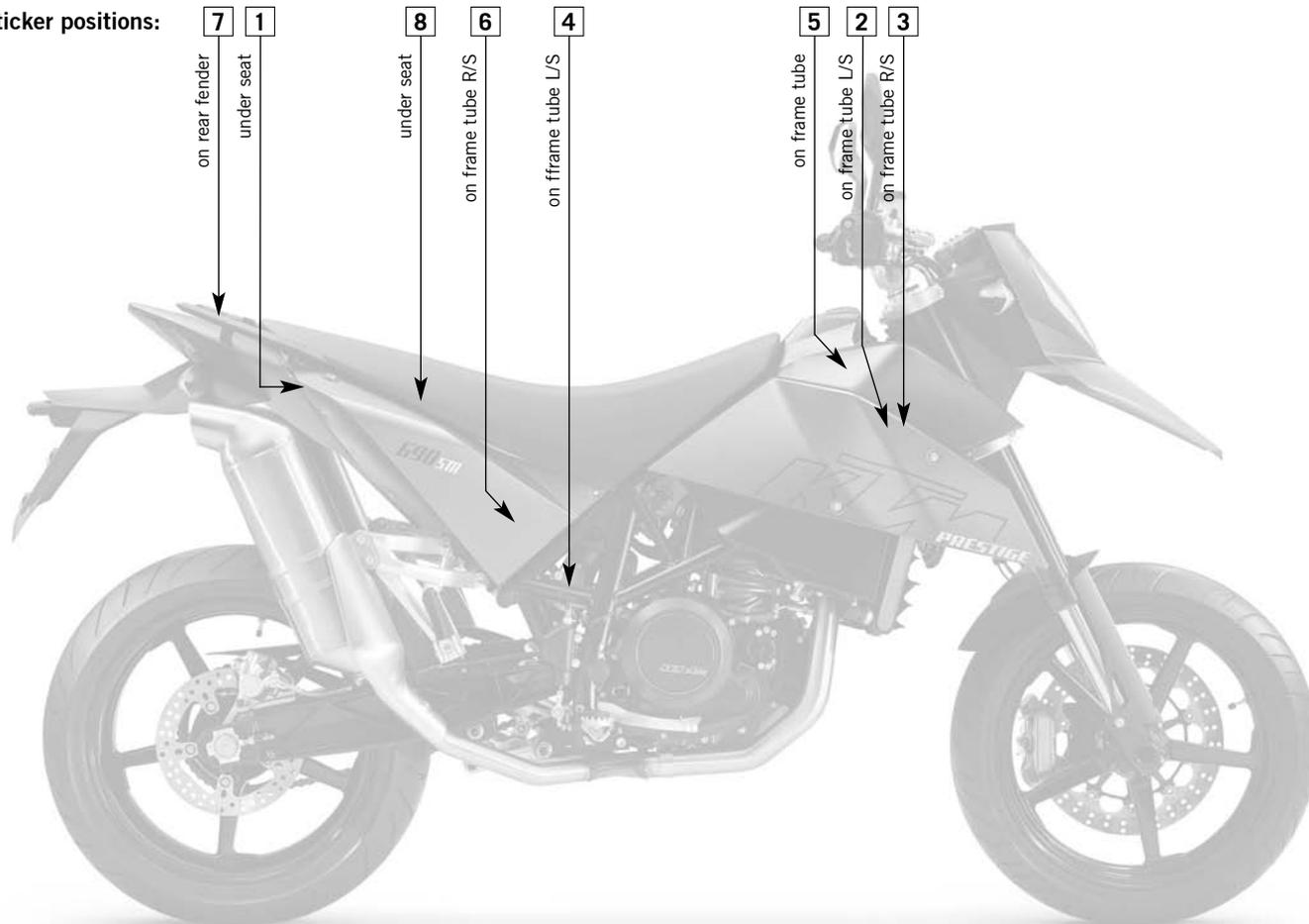
ENGINE	690 SUPERMOTO / 690 SUPERMOTO PRESTIGE 2007
Design	Single-cylinder, 4-stroke Otto engine with balancer shaft
Displacement	654 cc
Bore / Stroke	102 / 80 mm (4.02 / 3.15 in)
Compression ratio	11.8 : 1
Fuel	unleaded fuel with at least RON 95 (USA: Premium PON 91)
Valve timing	4 valves OHC, roller rocker arms
Valve diameter	Intake: 40 mm (1.57 in) Exhaust: 34 mm (1.34 in)
Valve clearance, cold	0.07 - 0.13 mm (0.00276 - 0.00512 in)
Crankcase bearing	Two-cylinder roller bearing
Conrod bearing	Needle bearing
Piston pin bearing	Bronze bushing
Piston	Light alloy – forged
Piston rings	1 L-ring, 1 tapered compression piston ring, 1 oil scraper ring
Engine lubrication	Semi-dry sump with 2 Eaton pumps
Engine oil	Fully-synthetic 10W/60 engine oil according to the JASO T903 MA specification (Motorex Cross Power 4T 10W/60)
Quantity of engine oil	approx. 2 liters (0.53 USgal)
Primary drive	Straight-toothed spur wheels 36 : 79
Clutch	APTC multi-disc wet clutch, hydraulically operated
Transmission	6-speed claw shifted
Gear ratio	1 <sup>st</sup> gear 14 : 35 2 <sup>nd</sup> gear 16 : 28 3 <sup>rd</sup> gear 21 : 28 4 <sup>th</sup> gear 21 : 23 5 <sup>th</sup> gear 23 : 22 6 <sup>th</sup> gear 23 : 20

ENGINE	690 SUPERMOTO / 690 SUPERMOTO PRESTIGE 2007
Mixture preparation	electronically controlled gasoline injection
Ignition system	breakerless transistorized electronic ignition system with digital ignition advance
Alternator	12V 224W at 5000 rpm
Spark plug	NGK LKAR8AI-9
Electrode distance	0.9 mm (0.035 in)
Cooling system	liquid cooled
Cooling liquid	1.2 liter (0.317 USgal), 50% antifreeze, 50% distilled water, at least -25°C (-13°F)
Starting aid	electric starter

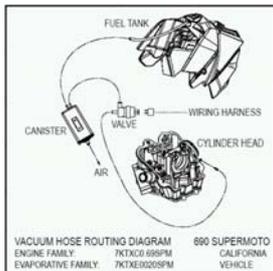
Accessories and payload . . . . .	21	Checking the oil level of the hydraulic clutch (690 Supermoto Prestige) . . . . .	63
Adjusting compression damping of fork (690 Supermoto Prestige) . . . . .	35	Checking the oil level of the hydraulic clutch (690 Supermoto) . . . . .	62
Adjusting rebound damping of fork . . . . .	35	Checking the rear brake fluid level . . . . .	44
Adjusting rebound damping of shock absorber . . . . .	37	Checking the rear brake pads . . . . .	44
Adjusting the fork and shock absorber . . . . .	35	Checking the shock absorption rubbers in the rear hub . . . . .	50
Adjusting the handlebar tilt . . . . .	63	CLEANING . . . . .	74
Adjusting the headlight range . . . . .	57	Clutch lever (690 Supermoto Prestige) . . . . .	7
Battery . . . . .	52	Clutch lever (690 Supermoto) . . . . .	7
Bleeding the cooling system . . . . .	61	Combination switch . . . . .	13
Braking . . . . .	26	Combined instrument . . . . .	8
Breathing the fork legs . . . . .	37	Combined instrument display . . . . .	8
Chain maintenance . . . . .	39	Compression damping of fork (690 Supermoto Prestige) . . . . .	18
Changing the basic position of the handbrake lever . . . . .	42	Compression damping of shock absorber (690 Supermoto Prestige) . . . . .	36
Changing the engine oil and the oil filter, cleaning the oil screen . . . . .	66	CONSUMER INFORMATION FOR USA ONLY . . . . .	86
Changing the original position of the clutch lever . . . . .	62	CONSERVATION FOR WINTER OPERATION . . . . .	74
Charging the battery . . . . .	53	Coolant drain plug . . . . .	60
Chassis number, type label . . . . .	6	Cooling liquid temperature display . . . . .	11
Check the following before each start . . . . .	22	Cooling system . . . . .	58
Checking and adjusting the throttle cable play . . . . .	64	Correcting the chain tension . . . . .	38
Checking of brake fluid level - front brake (690 Supermoto) . . . . .	42	Damping action during compression of shock absorber (690 Supermoto Prest) . . . . .	19
Checking the chain for wear . . . . .	39	Dismounting and mounting the rear wheel . . . . .	48
Checking the chain tension . . . . .	38	Dismounting and remounting the front wheel . . . . .	46
Checking the cooling liquid level in the compensating tank . . . . .	59	DRIVING INSTRUCTIONS . . . . .	22
Checking the cooling liquid level in the radiator . . . . .	60	Emergency OFF tip switch, starter tip switch . . . . .	14
Checking the engine oil level . . . . .	65	Engine number, engine type . . . . .	6
Checking the front brake fluid level (690 Supermoto Prestige) . . . . .	42	Engine oil . . . . .	64
Checking the front brake pads . . . . .	43	Filler cap . . . . .	14

Foot brake pedal . . . . .	17	SERIAL NUMBER LOCATIONS . . . . .	6
Footrests . . . . .	17	Shift lever . . . . .	16
Fuel taps . . . . .	14	Shifting/Riding . . . . .	25
Fuel, refueling . . . . .	28	Side stand . . . . .	17
Function buttons on combined instrument . . . . .	8	Starting off . . . . .	25
Fuses for individual power consumers . . . . .	55	Starting the engine . . . . .	24
General information on KTM disk brakes . . . . .	40	Stopping and parking . . . . .	27
GENERAL TIPS AND WARNINGS FOR STARTING THE MOTORCYCLE . . . . .	20	STORAGE . . . . .	75
Grips . . . . .	15	Tachometer . . . . .	11
Hand brake lever . . . . .	7	TECHNICAL SPECIFICATIONS – CHASSIS . . . . .	76
Ignition lock . . . . .	13	TECHNICAL SPECIFICATIONS – ENGINE . . . . .	82
IMPORTANT INFORMATION . . . . .	2	Tires, air pressure . . . . .	51
INDEX . . . . .	4	Tool set . . . . .	16
Indicator lamps . . . . .	12	TROUBLESHOOTING . . . . .	69
Instructions for initial operation . . . . .	20		
INTRODUCTION . . . . .	1		
Jump start . . . . .	54		
Main fuse . . . . .	54		
MAINTENANCE WORK ON CHASSIS AND ENGINE . . . . .	34		
OPERATION INSTRUMENTS . . . . .	7		
Owner's manual . . . . .	16		
PERIODIC MAINTENANCE SCHEDULE . . . . .	30		
Rebound damping of fork . . . . .	18		
Rebound damping of shock absorber . . . . .	19		
Refilling engine oil . . . . .	65		
Replacing the flasher bulbs . . . . .	57		
Replacing the headlight lamp . . . . .	56		
Running in the LC4 engine . . . . .	20		
Seat lock, removing the seat . . . . .	15		

Sticker positions:



## [1] EAVP



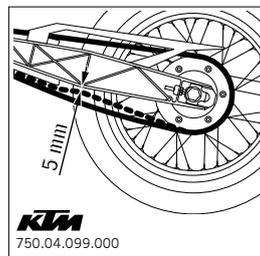
## [2] Type label CAN

MANUFACTURED BY/FABRIQUE PAR: <b>KTM SPORTMOTORCYCLE AG</b>		
GWWR/PNBV: 350 KG	DATE: 07.01	
V.I.N./N.I.V.: <b>VBKEXN4064M123456</b>		
TYPE:	MC	
GAWR/PNBE	TIRE/PNEU-DIMENSION-RIM/JANTE	COLD INFL. PRESS. PSULPC KPA
1st 150 KG	120/70-17 3.50-17	30 210
2nd 200 KG	150/80-17 5.00-17	30 210
THIS VEHICLE CONFORMS TO ALL APPLICABLE STANDARDS PRESCRIBED UNDER THE CANADIAN SAFETY REGULATIONS IN EFFECT ON THE DATE OF MANUFACTURE - CE VEHICULE EST CONFORME A TOUTES LES NORMES QUI LUI SONT APPLICABLES EN VERTU DU REGLEMENT SUR LA SECURITE DES VEHICULES AUTOMOBILES DU CANADA EN VIGUEUR A LA DATE DE SA FABRICATION		

## [3] Type label USA

<b>KTM</b>	MFD. BY KTM SPORTMOTORCYCLE AG AUSTRIA	DATE
MOTORCYCLE		
GAWR 771 lbs	350 kg	
GAWR FRONT 331 lbs	150 kg WITH 120/70-17 TIRE, 59H TYPE, 3.50-17 RIM, AT 30 psi 2.1 bar COLD	
GAWR REAR 441 lbs	200 kg WITH 160/60-17 TIRE, 69H TYPE, 5.00-17 RIM, AT 30 psi 2.1 bar COLD	
THIS VEHICLE CONFORMS TO ALL APPLICABLE U.S. FEDERAL MOTOR VEHICLE SAFETY STANDARDS IN EFFECT ON THE DATE OF MANUFACTURE SHOWN ABOVE.		
<b>VBKEXN4064M123456</b>		

## [4] Chain tension



## [5] Vehicle emission

VEHICLE EMISSION CONTROL INFORMATION	
<b>KTM</b>	KTM SPORTMOTORCYCLE AG, MATTHOFEN, AUSTRIA
IMPORTER : KTM NORTH AMERICA INC.	
ENGINE DISPLACEMENT 654 cc	EMISSION CONTROL E.M.
ENGINE FAMILY 7KTXC0.69SPM	
EVAP FAMILY 7KTXE002SPM	MODEL NAME 690 SUPERMOTO
THIS VEHICLE CONFORMS TO US EPA AND CALIFORNIA REGULATIONS APPLICABLE TO 2007 MODEL YEAR NEW MOTORCYCLES AND IS CERTIFIED TO 1.4 g/km HC + NOx EXHAUST EMISSION STANDARD IN CALIFORNIA.	
ENGINE TUNEUP SPECIFICATIONS:	
IGNITION TIMING :	<b>NON ADJUSTABLE</b>
IDLE SPEED :	<b>1500 rpm IN NEUTRAL</b>
IDLE MIXTURE :	<b>NON ADJUSTABLE</b>
SPARK PLUG :	<b>NGK LKARAI-9</b>
SPARK PLUG GAP :	<b>0,9 mm</b>
FUEL :	<b>UNLEADED GASOLINE - 91 OCTANE R+M/2</b>
OIL :	<b>SAE 10 W 60</b>
V.I.N. : VBKXXX40X7MXXXXXX	DATE OF MANUFACTURE : 23.01.2007

## [6] Noise emission

MOTORCYCLE NOISE EMISSION CONTROL INFORMATION	
KTM SPORTMOTORCYCLE AG, AUSTRIA	
THIS 2007 KTM750025 MOTORCYCLE 750.05.083.000 AND 750.05.083.100 MEETS U.S. EPA NOISE EMISSION REQUIREMENTS OF 80 dbA AT 3363 RPM BY THE U.S. FEDERAL TEST PROCEDURE. MODIFICATIONS WHICH CAUSE THIS MOTORCYCLE TO EXCEED FEDERAL NOISE STANDARDS ARE PROHIBITED BY U.S. FEDERAL LAW. SEE OWNER'S MANUAL.	
Motorcycle Type : 690 Supermoto	Date manufactured : 2007.01.23 VIN : VBKXXX40X7MXXXXXX

## [7] Before you go for the first ride

**ACHTUNG**  
 Lesen Sie vor der ersten Inbetriebnahme des Motorrads die gesamte Bedienungsanleitung aufmerksam durch!

**IMPORTANT**  
 Before you go for the first ride on your motorbike, read the entire User's Guide carefully!

**ATTENZIONE**  
 Prima della prima messa in servizio del motociclo, leggere attentamente l'intero manuale d'uso.

**ATTENTION**  
 Il convient de lire attentivement tout le manuel d'utilisation avant la première mise en service!

**ATENCIÓN**  
 Leer atentamente todas las instrucciones para el servicio antes de la primera puesta en marcha de la motocicleta.

## [8] Suspension setting

750.01.099.000	FORK	SHOCK	
SETTING	Compression (clicks)		
	Rebound (clicks)		
	Compression Low Speed (clicks)		
	Compression High Speed (turns)		
	Rebound (clicks)		
		Spring preload (mm)	
Comfort	- 20	- 20	12
<b>BASIC SETTING</b>	- 15	- 15	12
Sport	- 10	- 10	12
Max. payload	- 10	- 10	12

## REPORTING SAFETY DEFECTS

If you believe that your vehicle has a defect which could cause an accident resulting in injury or death, you should immediately inform the National Highway Traffic Safety Administration (NHTSA) in addition to notifying KTM North America, Inc.

If NHTSA receives similar complaints, it may open an investigation, and if it finds that a safety defect exists in a group of vehicles, it may order a recall and remedy campaign. However, NHTSA cannot become involved in individual problems between you, your dealer, or KTM North America, Inc.

To contact NHTSA, you may either call the Auto Safety Hotline toll-free at 1-800-424-9393 or visit the website [www.nhtsa.dot.gov](http://www.nhtsa.dot.gov), or write to: NHTSA, U.S. Department of Transportation, 400 7th Street, Southwest, Washington, D.C. 20590. You can also obtain other information about motor vehicle safety from the Hotline.

## NOISE EMISSION WARRANTY

KTM Sportmotorcycle AG warrants that this exhaust system, at the time of sale, meets all applicable U.S. EPA Federal noise standards. This warranty extends to the first person who buys this exhaust system for purposes other than resale, and to all subsequent buyers.

Warranty claims should be directed to:

KTM North America, Inc. 1119 Milan Avenue, Amherst, Ohio 44001, Telephone: (440) 9853553

## TAMPERING WARNING

TAMPERING WITH NOISE CONTROL SYSTEM PROHIBITED. FEDERAL LAW PROHIBITS THE FOLLOWING ACTS OR CAUSING THEREOF:

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

AMONG THOSE ACTS PRESUMED TO CONSTITUTE TAMPERING ARE THE ACTS LISTED BELOW.

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

## WARNING STATEMENT

This product should be checked for repair or replacement if the motorcycle noise has increased significantly through use. Otherwise, the owner may become subject to penalties under state and local ordinances.

## CONSUMER RIGHTS

Limited Warranty claims should be directed to an authorized KTM dealer. If you are not satisfied, please contact KTM North America, Inc., Customer Relations, 1119 Milan Avenue, Amherst, Ohio 44001.

Your rights may vary, please refer to the applicable state laws.



KTM Group Partner

01/2007

FOTO: MITTERBAUER



KTM Sportmotorcycle AG  
A-5230 Mattighofen  
[www.ktm.at](http://www.ktm.at)