

# **1 SERVICE-INFORMATIONS**

---

## **2 GENERAL INFORMATION**

---

## **3 REMOVING AND REFITTING ENGINE**

---

## **4 DISASSEMBLING ENGINE**

---

## **5 SERVICING INDIVIDUAL COMPONENTS**

---

## **6 ASSEMBLING ENGINE**

---

## **7 ELECTRICAL**

---

## **8 FUEL SYSTEM**

---

## **9 TROUBLE SHOOTING**

---

## **10 TECHNICAL SPECIFICATIONS**

---

## **11 PERIODIC MAINTENANCE SCHEDULE**

---

## **12 WIRING DIAGRAMS**

---

**13**

---

**14**

---

**15**

---

**16**









## EXPLANATION - UPDATING

<b>3.206.027-E</b>	<b>Repair Manual 250 SX-F</b> Basic version Model year 2005/06 (Engine number with first digit "5" and "6")	<b>5/2005</b>
<b>3.206.052-E</b>	<b>Updating of Rep.Manual 3.206.027-E</b> Model year 2007/08 (Engine number with first digit "7" and "8")	<b>10/2007</b>
<b>3.206.063-E</b>	<b>Updating of Rep.Manual 3.206.027-E</b> Model year 2009/10 (Engine number with first digit "9" and "0")  Modification / Updating: Technical Details, Technical Specifications, Tightening torques, Periodic Maintenance Schedule	<b>6/2009</b>



## INTRODUCTION

This repair manual offers extensive repair-instructions and is an up-to-date version that describes the latest models of the series. However, the right to modifications in the interest of technical improvement is reserved without updating the current issue of this manual.

A description of general working modes common in work shops has not been included. Safety rules common in the work shop have also not been listed. We take it for granted that the repairs are made by qualified professionally trained mechanics.

Read through the repair manual before beginning with the repair work.

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**⚠                      WARNING                      ⚠**

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**STRICT COMPLIANCE WITH THESE INSTRUCTIONS IS  
ESSENTIAL TO AVOID DANGER TO LIFE AND LIMB.**

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**!                      CAUTION                      !**

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**NON-COMPLIANCE WITH THESE INSTRUCTIONS CAN LEAD TO  
DAMAGE OF MOTORCYCLE COMPONENTS OR RENDER MOTORCYCLES  
UNFIT FOR TRAFFIC !**

**„NOTE” POINTS OUT USEFUL TIPS.**

Use only **ORIGINAL KTM SPARE PARTS** when replacing parts.

The KTM high performance engine is only able to meet user expectations if the maintenance work is performed regularly and professionally.



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

KTM Sportmotorcycle AG reserves the right to modify any equipment, technical specifications, colors, materials, services offered and rendered, and the like so as to adapt them to local conditions without previous announcement and without giving reasons, or to cancel any of the above items without substituting them with others. It shall be acceptable to stop manufacturing a certain model without previous announcement. In the event of such modifications, please ask your local KTM dealer for information.

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# REPLY FAX FOR REPAIR MANUALS

We have made every effort to make our repair manuals as accurate as possible but it is always possible for a mistake or two to creep in.

To keep improving the quality of our repair manuals, we request mechanics and shop foremen to assist us as follows:

If you find any errors or inaccuracies in one of our repair manual – whether these are technical errors, incorrect or unclear repair procedures, tool problems, missing technical data or torques, inaccurate or incorrect translations or wording, etc. – please enter the error(s) in the table below and fax the completed form to us at 0043/7742/6000/5349.

NOTE to table:

- Enter the complete item no. for the repair manual in column 1 (e.g.: **3.206.063-E**).  
You will find the number on the cover page or in the left margin on each right page of the manual.
- Enter the corresponding page number in the repair manual (e.g.: **5-7**) in column 2.
- Enter the current text (inaccurate or incomplete) in column 3 by quoting or describing the respective passage of the text. If your text deviates from the text contained in the repair manual, please write your text in German or English if possible.
- Enter the correct text in column 4.

Your corrections will be reviewed and incorporated in the next issue of our repair manual.

Item no. of repair manual	Page	Current text	Correct text

Additional suggestions, requests or comments on our Repair Manuals (in German or English):

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Name mechanic/shop foreman

Company/work shop



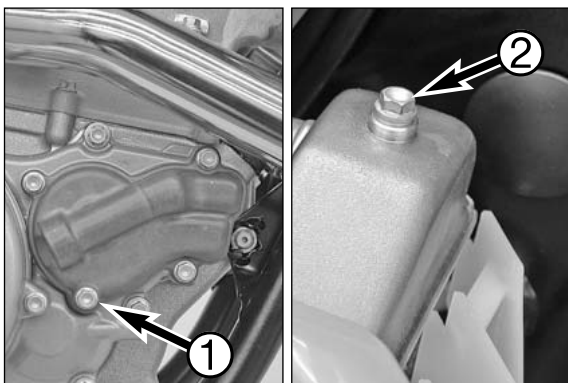
# GENERAL INFORMATION

# 2

## INDEX

<b>BLEEDING THE COOLING SYSTEM</b> .....	<b>.2-2</b>
<b>CHANGING THE OIL FILTER</b> .....	<b>.2-2</b>
<b>OIL CIRCUIT</b> .....	<b>.2-3</b>
<b>BLEEDING OF THE HYDRAULIC CLUTCH</b> .....	<b>.2-4</b>
<b>ADJUSTING THE THROTTLE CABLES</b> .....	<b>.2-4</b>
<b>SPECIAL TOOLS ENGINE</b> .....	<b>.2-5</b>

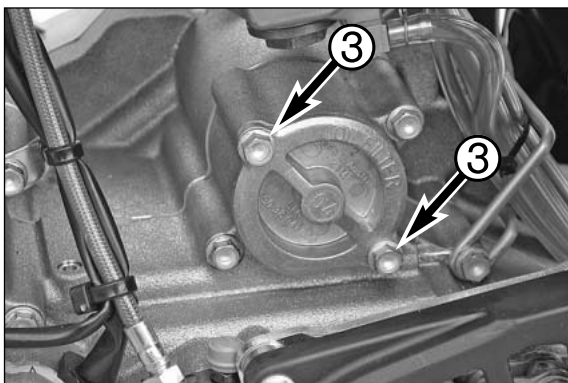




### Bleeding the cooling system

The cooling liquid can be drained by removing the screw ❶ on the water pump cover.

To bleed the cooling system add approx. 1 liter of cooling liquid and remove the bleeder screw ❷. Do not replace the bleeder screw until cooling liquid starts to leak out of the hole without bubbles. Now add cooling liquid until it reaches a level of approx. 10 mm above the radiator fins. Take a short ride and check the cooling liquid level again.

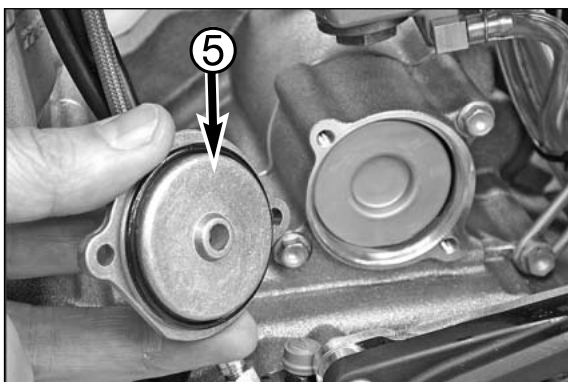


### Changing the oil filter

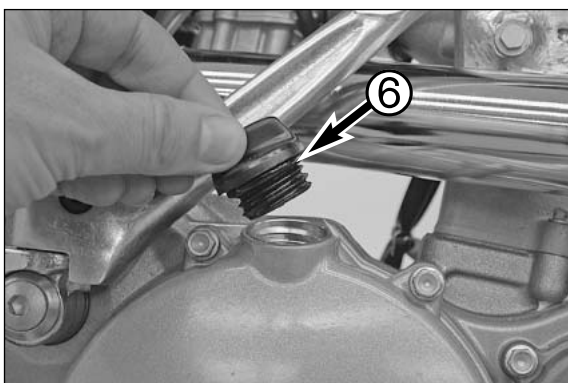
– Place a vessel under the engine to catch the used oil. Remove the 2 screws ❸ and take off the oil filter cover.



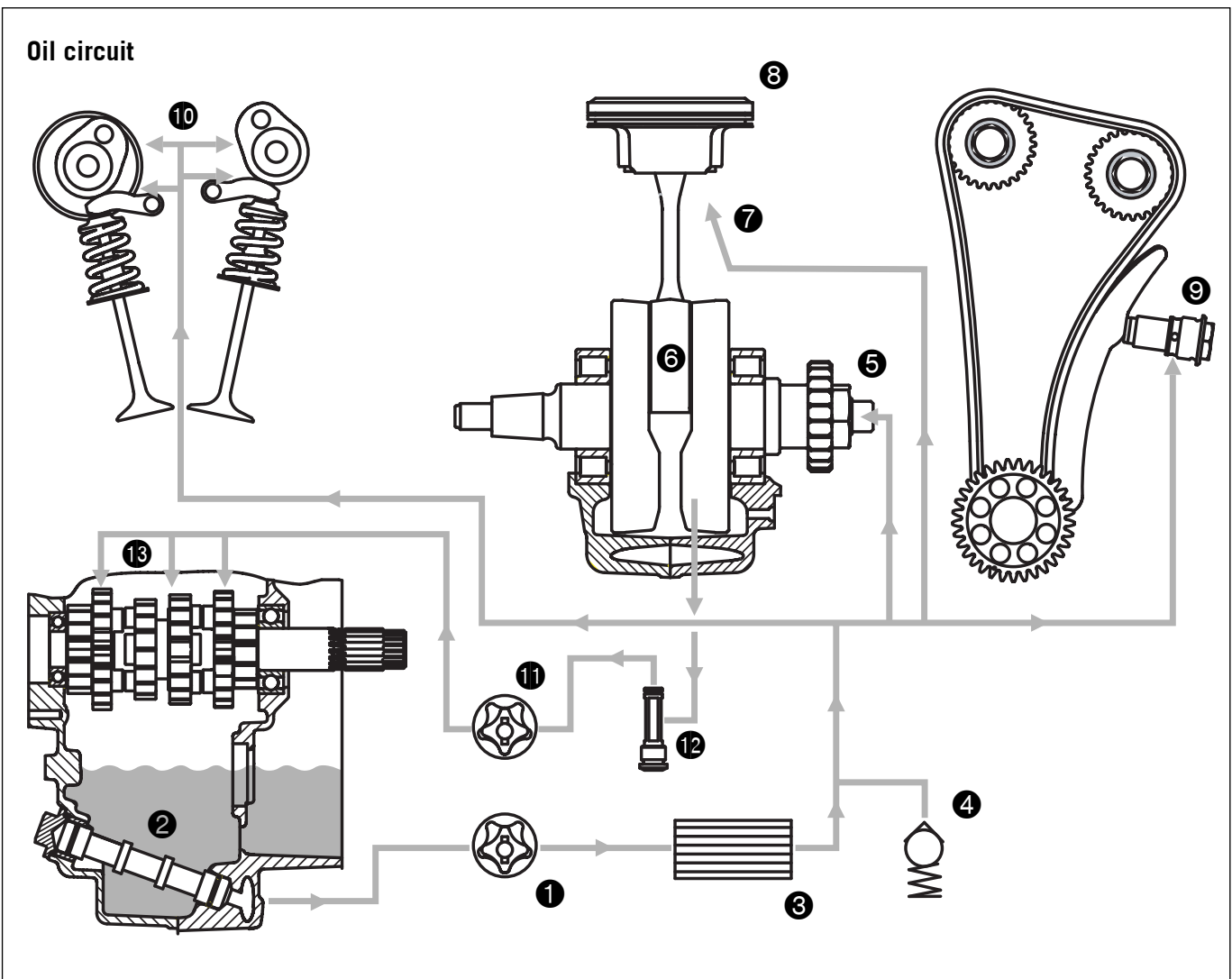
– Use circlip pliers to pull the oil filter insert ❹ out of the case.  
– Clean the oil filter cover, the sealing area on the O-ring and the engine case. Check the O-ring in the oil filter cover for damage and replace if necessary.



– Lay the motorcycle down and fill the oil filter case about half full with engine oil. Fill the oil filter up with oil and insert the oil filter in the case.  
– Grease the O-ring in the oil filter cover and mount the cover ❺. Mount the screws and tighten to 6 Nm.

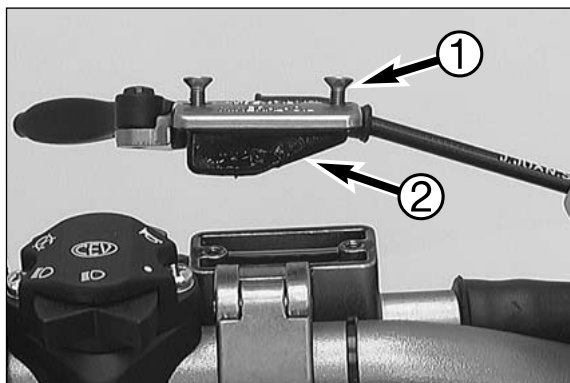


– Put the motorcycle in an upright position again.  
– Remove the screw cap ❻ from the clutch cover and add 1.1 liters of fully synthetic engine oil (Motorex Power Synt 4T 10W/50).  
– Start the engine and check all screw connections and the oil filter cover for leaks.  
– Finally, check the engine oil level and correct if necessary.



### Oil circuit

The oil pump ① draws the engine oil from the transmission oil sump through the long oil screen ② and conveys it to the oil filter ③, where any contamination is filtered out. The cleansed engine oil is pumped past the bypass valve ④ through the hole in the crankshaft ⑤ to the conrod bearing ⑥ and sprayed onto the piston ⑧ from below through a jet ⑦. Two other oil ducts lead into the cylinder head. One duct supplies the hydraulic chain tensioner ⑨, the other duct leads to the camshaft bearing bridge ⑩, where the camshaft bearings and the cam lever are supplied with oil (via spraying nozzles). The second oil pump ⑪ draws the engine oil out of the crankcase through the short oil screen ⑫ and uses it to grease the transmission gears ⑬.

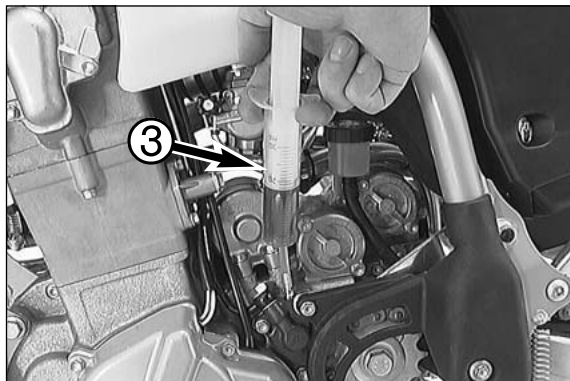


### Checking the oil level of the hydraulic clutch

To check the oil level in the master cylinder of the clutch remove the cover. For this purpose, remove bolts ① and cover together with the rubber boot ②. The oil level in the horizontal-standing master cylinder should be 4 mm (0,157 in) below the upper edge. If necessary add SAE 10 biodegradable hydraulic oil (Motorex Kupplungs-Fluid 75).

! **CAUTION** !

ONLY USE SAE 10 BIODEGRADABLE HYDRAULIC OIL (MOTOREX KUPPLUNGS-FLUID 75) TO REFILL THE MASTER CYLINDER. NEVER USE BRAKE FLUID!



### Bleeding of the hydraulic clutch

- For bleeding, the cover of the master cylinder of the clutch needs to be removed. For this purpose, remove screws ① and take off cover together with rubber bellows ②.
- At the slave cylinder of the clutch, remove the bleeder nipple. At its place, mount the bleeder syringe ③ which is filled with biodegradable hydraulic oil (Motorex Kupplungs-Fluid 75).

- Refill oil, until oil is discharged from the bore ④ of the master cylinder in a bubble-free state. Make sure that the oil does not overflow.

! **CAUTION** !

HAVING COMPLETED THE BLEEDING PROCEDURE, YOU HAVE TO VERIFY THAT THE OIL LEVEL IN THE MASTER CYLINDER IS CORRECT. FOR FILLING OF THE MASTER CYLINDER, USE SAE 10 BIODEGRADABLE HYDRAULIC OIL (MOTOREX KUPPLUNGS-FLUID 75) ONLY. NEVER USE BRAKE FLUID NOR MIX BIODEGRADABLE HYDRAULIC OILS WITH MINERAL OILS.



### Adjusting the throttle cables

The throttle grip should always provide for a backlash of 3-5 mm. Besides, with the engine running, the idling speed must not change if you turn the handlebar all the way to the left or right.

To adjust the throttle cables, dismount the seat and the tank together with spoilers. Slide back the protection cover ④. Loosen the counter nut ⑤ and turn the adjusting screw ⑥ accordingly. Turning the adjusting screw counterclockwise will reduce the backlash, turning the adjusting screw clockwise will increase the backlash.

Tighten the counter nut and check whether the throttle grip can be actuated smoothly. Mount tank and seat.

- After a short, careful test ride, check engine oil and coolant level once more.

