

REPAIRMANUAL2005-2007



WP FORK 4860 MXMA CC

REPARATURANLEITUNG

MANUALE DI RIPARAZIONE

MANUEL DE RÉPARATION

MANUAL DE REPARACIÓN

ART.NR.: 3.211.199-E

suspension
WP

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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.

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

!	CAUTION	!
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/WP SPARE PARTS** when replacing parts.

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



REG.NO. 12 100 6061

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.

KTM Sportmotorcycle AG
5230 Mattighofen, Austria

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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.: 3.211.199-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.: 4-7**) 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):

Name mechanic/shop foreman

Company/work shop

SPECIAL TOOLS

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Pin spanner



T 131
Loctite 243



T 132
Loctite 2701



T 137S
Squeeze bottle



T 158
O-Ring grease



T 159
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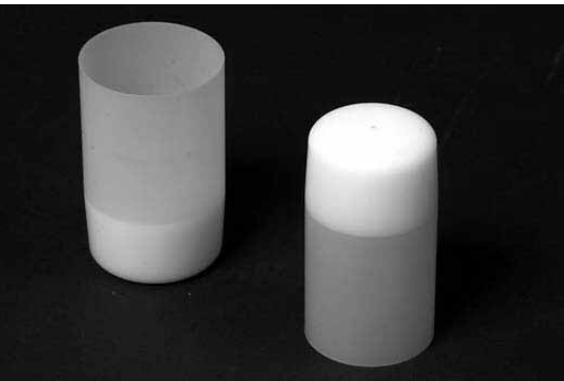
T 511
Grease for seals



T 605
Pin



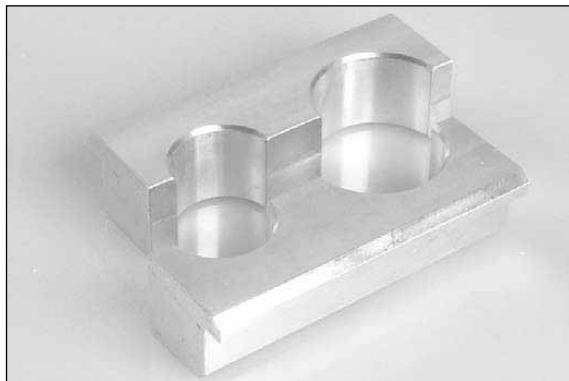
T 1240S
Vacuum filling device



T 1401
Assembling tool for seal

**T 1402S**

Assembling tool seal and DU-bush

**T 1403S**

Clamping-block 48/60

**T 1404**

Pin spanner inner-tube

**T 14.015S**

Clamping block 27

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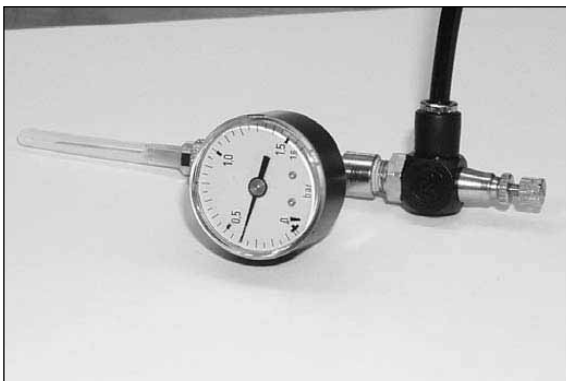
Clamping block 12



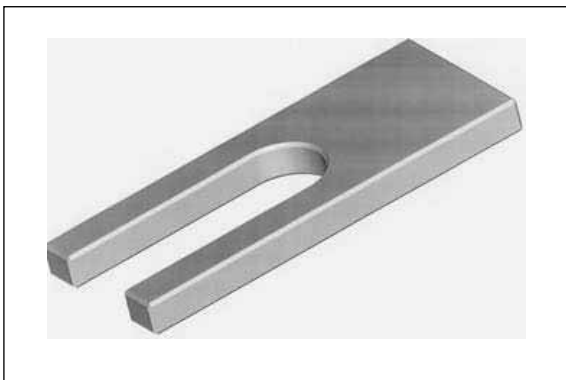
T 14.017
Spanner 50



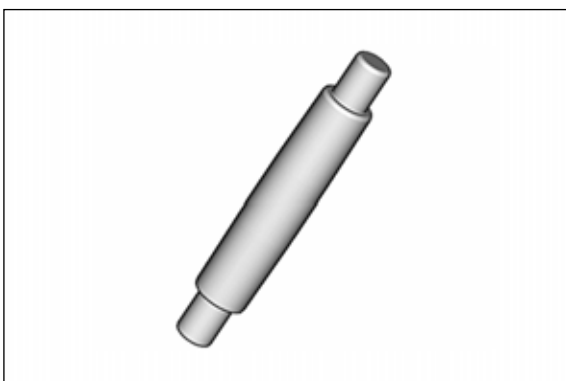
T 14.018
Spanner screw-cap membrane holder



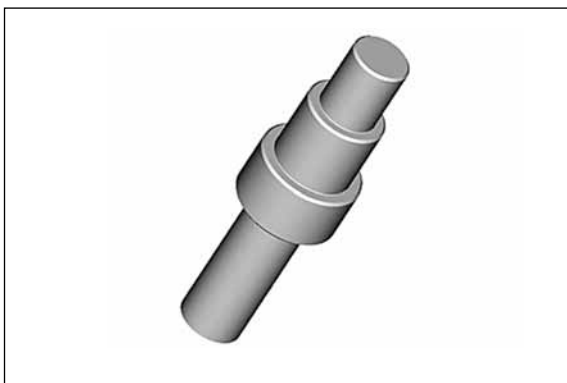
T 14.019
Charging device tool



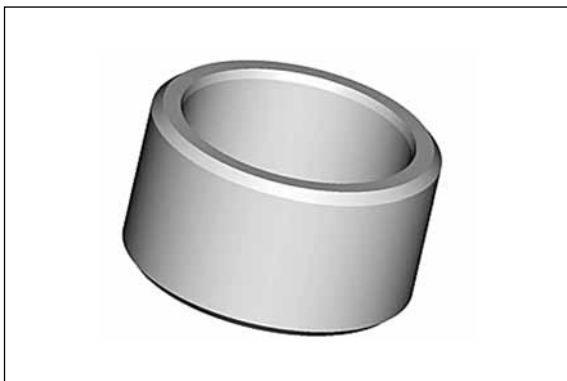
T 14.020
Support tool dis-/assembling closed cartridge.



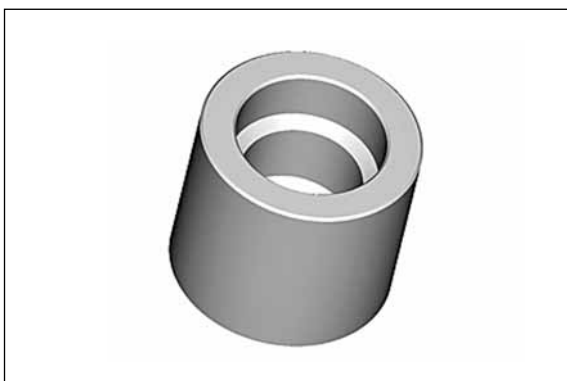
T 14.021
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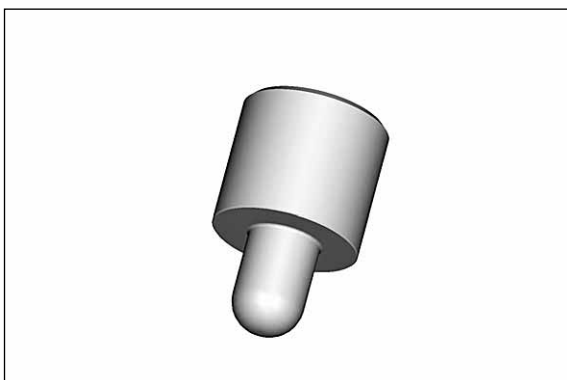
Dis-/assembling tool DU-bush

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**T 14.029**

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T 14.030

Adaptor

GENERAL INFORMATION

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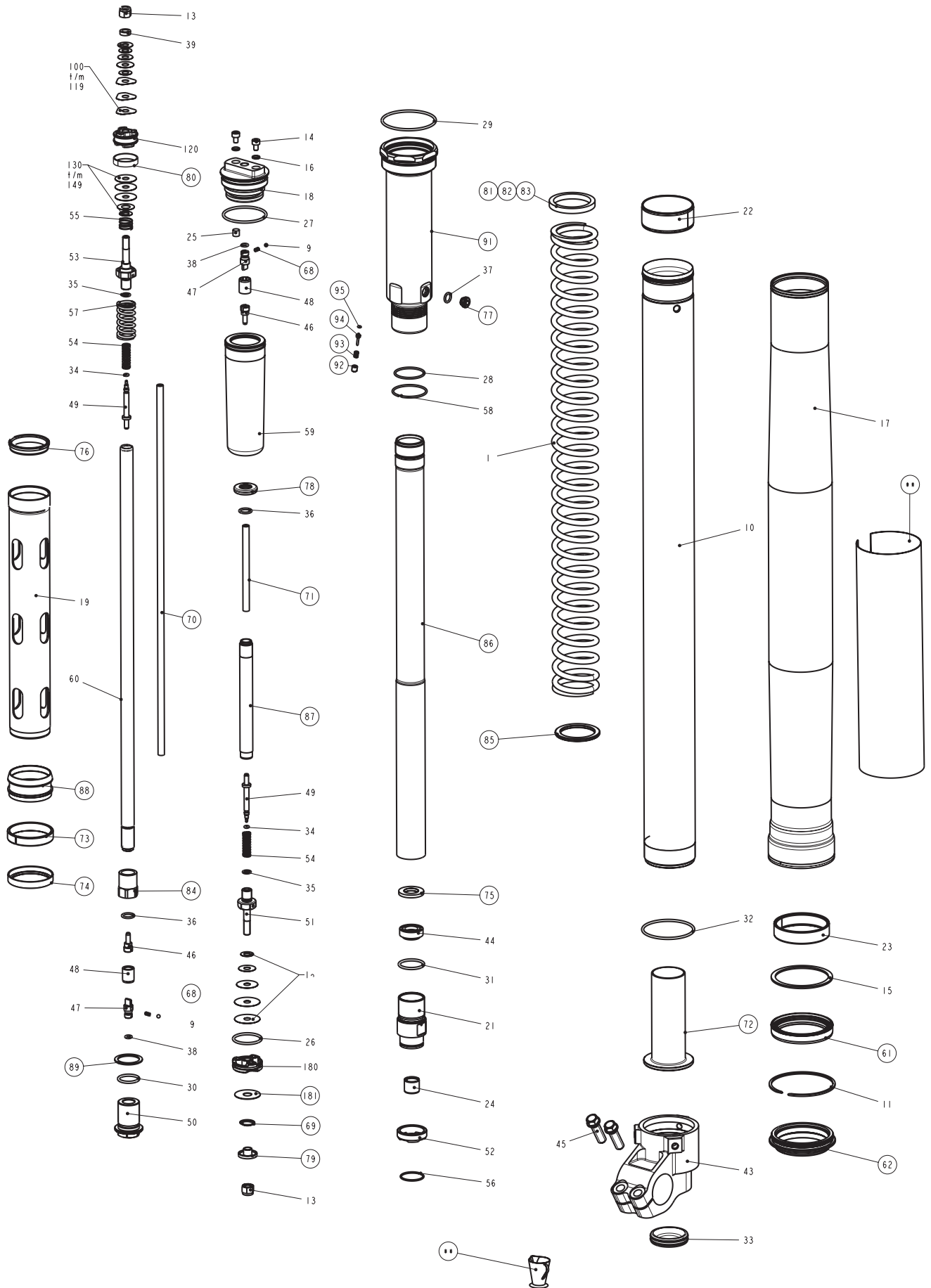
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Exploded view SXS 2005

Art.No.: 3.211.199-E

Repair manual WP Fork "Closed Cartridge"



Part list SXS 2005

Pos.	Part description	Art. No.	Pcs
9	Ball-steel d3	4054.0603.	2
10	Inner-tube SXS'05 d48 L595 Ti	4860.0439.	1
11	Lock washer SB58	4860.0070.	1
13	Lock nut M6x1	4860.0441.	2
14	Cil.head screw	4860.0443.	2
15	Support ring d50xd57.6x1.5	4860.0013.	1
16	Oil seal washer d4	4860.0440.	2
17	Outer-tube 54/60 L577	4860.0244	1
18	Screw cap	4860.0284.	1
19	Tube d35xD 37.5	4860.0468.	1
21	Screw sleeve M24.5x1	4860.0470.	1
22	DU-bush d47xd49x20 DDL02	4860.0428.	1
23	DU-bush d48xd52x12 DDL02	4860.0429.	1
24	DU-bush d14xd12x10 DDL02	4860.0430.	1
25	Rubber plug	1508.0017.	1
26	O-ring N.B.R. 24x2	3548.0320.	1
27	O-ring N.B.R. 38x2	4054.0037.	1
28	O-ring N.B.R. 261.5	4054.0230.	1
29	O-ring N.B.R. 48x2	4681.0016.	1
30	O-ring N.B.R. 17x2	4681.0811.	1
31	O-ring N.B.R. 21x2	4681.1499.	1
32	O-ring N.B.R. 46x2	4860.0048.	1
33	Rubber cap	4860.0141.	1
34	O-ring N.B.R. 2x1.5	4860.0298.	2
35	O-ring N.B.R. 6x1.2	4860.0299.	2
36	O-ring N.B.R. 9.5x1.5	4860.0301.	2
37	O-ring Viton 7x1.5	5018.0157.	1
38	O-ring N.B.R. 4x1.5	5018.0222.	2
39	Bush d10x3	4054.0497.	1
42	Axle-clamp Ma brake KTM SXR "03	4860.0465.	1
43	Axle-clamp MA ri KTM SXR "03	4860.0466.	1
44	Oil seal d12xd22x9.5	4860.0471.	1
45	Bolt with flange M 8x25	5060.0113.	2
46	Holder adj. tube d4 L=18	4860.0271.	2
47	Adj. screw 1.8	4860.0272.	2
48	Retainer Ring d10.8	4860.0273.	2
49	Needle bleed adj.	4860.0277.	2
50	Bolt M20x1 L33	4860.0280.	1
51	Tap compression d2.5 '03	4860.0282.	1
52	Check valve ring	4860.0297.	1
53	Piston rod tap rebound	4860.0450.	1
54	Spring rebound adj. C=4N/mm	4860.0444.	2
55	Shuttle valve spring C0.4 Lo=8	4860.0382.	1
56	Lock washer d20	4860.0446.	1
57	Rebound spring L33.5 d=13 c=11	4860.0447.	1
58	Lock washer d30	4860.0448.	1
59	Membrane CC	4860.0281.	1
60	Piston rod d12 M9x1 L405	4860.0464.	1
61	Oil seal d48xd57.8x9.5 '03	4860.0347.	1
62	Dust stripper d48 d58.4 x11.8	4860.0400.	1
68	Spring d2.9 L6.5	4860.0490.	2
69	Check valve spring th 0.7	4860.0202.	1
70	Adj. Tube L=371	4860.0269.	1
71	Adj. tube L=85	4860.0274.	1
72	Hydr.stop d28	4860.0286.	1
73	Guiding ring D44.2xs39.3	4860.0294.	1
74	Ring D42.4x6.5	4860.0295.	1
75	Ring D23.45x2.65	4860.0296.	1
76	Support ring D37.5	4860.0304.	1
77	Plug G1/8	4860.0452.	1
78	Clamping disc	4860.0453.	1
79	Check valve holder L=7	4860.0454.	1
80	Piston ring 5x1x68	4860.0455.	1
81	Spacer 43x35x2.5	4860.0456.	1
82	Spacer 43x35x5	4860.0457.	1
83	Spacer 43x35x1.5	4860.0458.	1
84	Contra nut M12x1 SLW17	4860.0459.	1
85	Washer 32x42x2.5	4860.0460.	1
86	Tube d23 L417 CC	4860.0461.	1
87	Piston rod d12 L117	4860.0462.	1
88	Adaptor guiding bush	4860.0463.	1
89	Washer copper 20.5x26x1	4860.0275.	1
91	Membrane holder cpl.	4860.0476.	1
92	Adj.screw M5	4860.0472.	1
93	Spring d=3.9 C=1.1N/mm Lo=8mm	4860.0473.	1
94	Pin valve	4860.0474.	1
95	O-ring Viton 1.5 x 1	4681.1351.	1
120	Piston rebound bleed 1.2	4860.0489.	1
180	Piston compression	4860.0047.	1

Setting list 4860 MXMA Fork 14.18.7A.14 KTM 125 SXS 2005

Compression

Pos	Part description	Art. No.	Pcs
160	Shim 6x16x0.25	4054.0414.	1
161	Backpl. 6x8.5x0.20	4054.0425.	1
162	Shim 6x12x0.1	4054.0400.	1
163	Shim 6x14x0.1	4054.0401.	1
164	Shim 6x16x0.1	4054.0402.	1
165	Shim 6x18x0.1	4054.0403.	1
166	Shim 6x20x0.1	4860.0065.	1
167	Shim 6x22x0.1	4860.0064.	1
168	Shim 6x24x0.1	4860.0063.	4

Check-valve setting

181	Check valve d8xd24x0.4	4860.0061.	1
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Rebound

100	Shim 6x14x0.25	4054.0314.	1
101	Backpl. 6x11x0.30	4054.1391.	1
102	Shim 6x12x0.10	4054.0400.	1
103	Shim 6x13x0.10	4860.0325.	1
104	Shim 6x14x0.10	4054.0401.	1
105	Shim 6x16x0.10	4054.0402.	1
106	Shim 6x12x0.10	4054.0400.	1
107	Shim 6x20x0.10	4860.0479.	3

Check-valve setting

130	Shim 8x10x0.20	4860.0480.	2
131	Shim 8x14x0.10	4860.0213.	1
132	Shim 8x16x0.10	4860.0214.	1
133	Shim 8x18x0.10	4357.0120.	2
134	Check valve d8xd20x0.10	4860.0215.	3

Spring

1	Spring 4.2 N/mm	9141.0025.	1
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Adjustments

Position compression	24
Position rebound	26
Oil volume (ml)	385
Code	14.18.7A.14
Stroke check-valve comp. (mm)	1.5
Stroke check-valve reb. (mm)	0.4
Total length (mm)	940
Stroke (mm)	300
Gas pressure (bar)	1.0
Preload spring (mm)	5.5
Spring length with spacers (mm)	509

Setting list 4860 MXMA Fork 14.18.7A.15 KTM 250 SXS 2005

Compression

Pos	Part description	Art. No.	Pcs
160	Shim 6x16x0.25	4054.0414.	1
161	Backpl 6x9.5x0.20	4054.0427.	1
162	Shim 6x12x0.10	4054.0400.	1
163	Shim 6x13x0.10	4860.0325	1
164	Shim 6x14x0.10	4054.0401.	1
165	Shim 6x15x0.10	4860.0327.	1
166	Shim 6x16x0.10	4054.0402.	1
167	Shim 6x17x0.10	4860.0329.	1
168	Shim 6x18x0.10	4054.0403.	1
169	Shim 6x19x0.10	4860.0331.	1
170	Shim 6x20x0.10	4860.0065.	1
171	Shim 6x21x0.10	4860.0332.	1
172	Shim 6x22x0.10	4860.0064.	1
173	Shim 6x23x0.10	4860.0333.	1
174	Shim 6x24x0.10	4860.0063.	5

Check-valve setting

181	Check valve D8xD24x0.40	4860.0061.	1
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Rebound

100	Shim 6x14x0.25	4054.0314.	1
101	Backpl 6x11x0.30	4054.1391.	1
102	Shim 6x12x0.10	4054.0400.	1
103	Shim 6x13x0.10	4860.0325.	1
104	Shim 6x14x0.10	4054.0401.	1
105	Shim 6x16x0.10	4054.0402.	1
106	Shim 6x12x0.10	4054.0400.	1
107	Shim 6x20x0.10	4860.0479.	3

Check-valve setting

130	Shim 8x10x0.20	4860.0480.	2
131	Shim 8x14x0.10	4860.0213.	1
132	Shim 8x16x0.10	4860.0214.	1
133	Shim 8x18x0.10	4357.0120.	2
134	Check valve D8xD20x0.10	4860.0215.	3

Spring

1	Spring 4.4 N/mm	9141.0026.	1
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Adjustments

Position compression	24
Position rebound	25
Oil volume (ml)	395
Code	14.18.7A.15
Stroke check-valve comp. (mm)	1.5
Stroke check-valve reb. (mm)	0.4
Total length (mm)	940
Stroke (mm)	300
Gas pressure (bar)	1.0
Preload spring (mm)	5.5
Spring length with spacers (mm)	509

Setting list 4860 MXMA Fork 14.18.7A.16 KTM 450/540 SXS 2005

Compression

Pos	Part description	Art. No.	Pcs
160	Shim 6x16x0.25	4054.0414.	1
161	Backpl 6x9.5x0.20	4054.0427.	1
162	Shim 6x12x0.10	4054.0400.	1
163	Shim 6x13x0.10	4860.0325	1
164	Shim 6x14x0.10	4054.0401.	1
165	Shim 6x15x0.10	4860.0327.	1
166	Shim 6x16x0.10	4054.0402.	1
167	Shim 6x17x0.10	4860.0329.	1
168	Shim 6x18x0.10	4054.0403.	1
169	Shim 6x19x0.10	4860.0331.	1
170	Shim 6x20x0.10	4860.0065.	1
171	Shim 6x21x0.10	4860.0332.	1
172	Shim 6x22x0.10	4860.0064.	1
173	Shim 6x23x0.10	4860.0333.	1
174	Shim 6x24x0.10	4860.0063.	6

Check-valve setting

181	Check valve D8xD24x0.40	4860.0061.	1
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Rebound

100	Shim 6x14x0.25	4054.0314.	1
101	Backpl 6x11x0.30	4054.1391.	1
102	Shim 6x12x0.10	4054.0400.	1
103	Shim 6x13x0.10	4860.0325.	1
104	Shim 6x14x0.10	4054.0401.	1
105	Shim 6x16x0.10	4054.0402.	1
106	Shim 6x12x0.10	4054.0400.	1
107	Shim 6x20x0.10	4860.0479.	3

Check-valve setting

130	Shim 8x10x0.20	4860.0480.	2
131	Shim 8x14x0.10	4860.0213.	1
132	Shim 8x16x0.10	4860.0214.	1
133	Shim 8x18x0.10	4357.0120.	2
134	Check valve D8xD20x0.10	4860.0215.	3

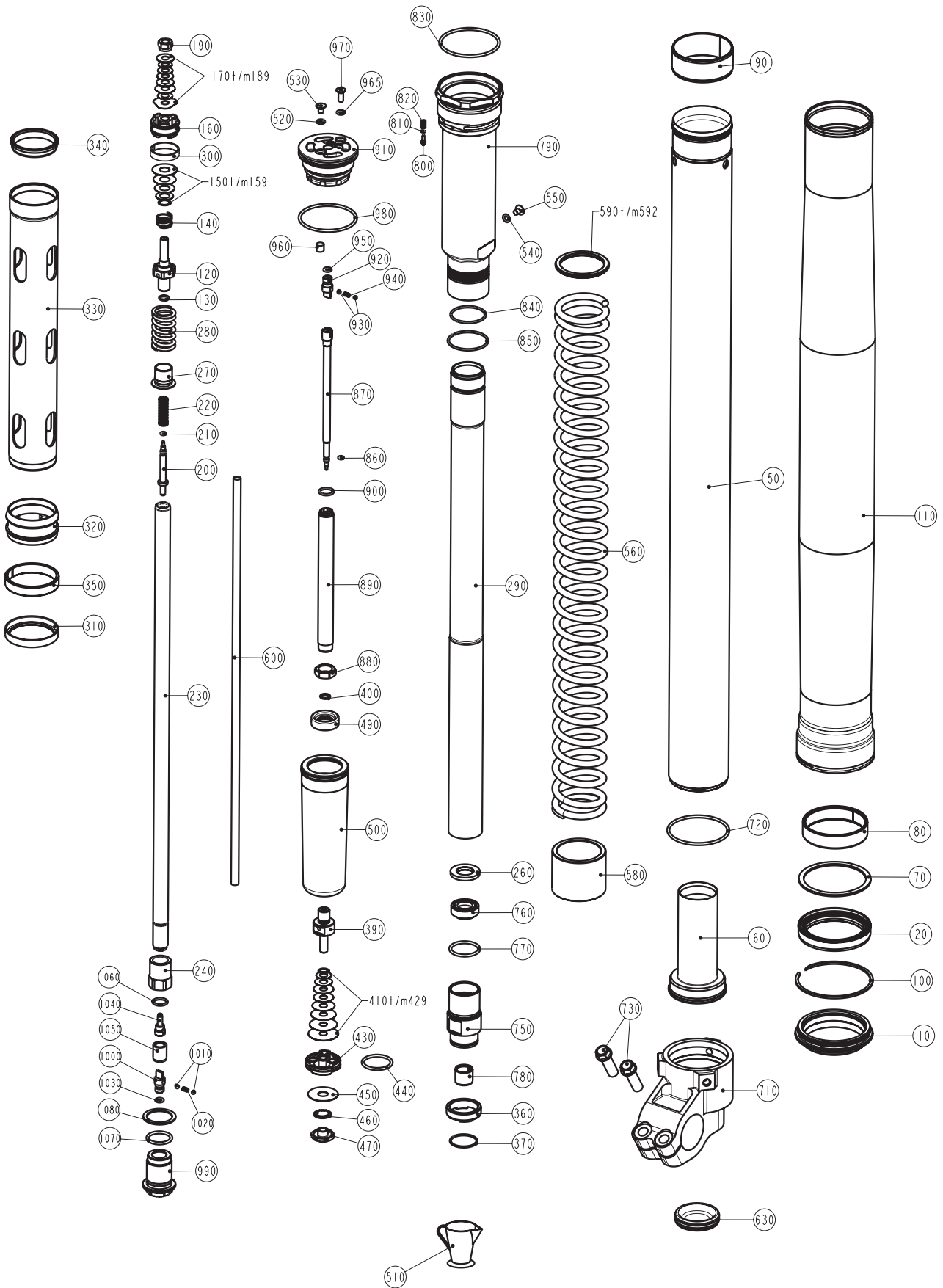
Spring

1	Spring 4.6 N/mm	9141.0032.	1
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Adjustments

Position compression	24
Position rebound	25
Oil volume (ml)	395
Code	14.18.7A.16
Stroke check-valve comp. (mm)	1.5
Stroke check-valve reb. (mm)	0.4
Total length (mm)	940
Stroke (mm)	300
Gas pressure (bar)	1.0
Preload spring (mm)	5.5
Spring length with spacers (mm)	509

Exploded view SXS/SMR 2006



Part list SXS/SMR 2006

Pos.	Part description	Part number	Pieces
10	Dust stripper	4860.0400	1
20	Oil seal	4860.0347	1
50	Inner-tube	4860.0550	1
60	Hydr.stop	4860.0521	1
70	Support ring	4860.0013	1
80	DU-bush	4860.0429	1
90	DU-bush	4860.0428	1
100	Lock washer	4860.0070	1
110	Outer-tube	4860.0539E	1
120	Check valve ring	4860.0513	1
130	O-ring	4860.0299	1
140	Shuttle valve spring	4860.0382	1
160	Piston rebound bleed	4860.0489	1
190	Lock nut	4054.0486	1
200	Needle bleed adj.	4860.0277	1
210	O-ring	4860.0298	1
220	Spring rebound adj.	4860.0444	1
230	Piston rod	4860.0531	1
240	Contra nut	4860.0459	1
260	Ring	4860.0296	1
270	Spring guide	4860.0525	1
280	Rebound spring	4860.0511	1
290	Tube	4860.0461	1
300	Piston ring	4860.0455	1
310	Ring	4860.0295	1
320	Adaptor guiding bush	4860.0463	1
330	Tube	4860.0468	1
340	Support ring	4860.0304	1
350	Guiding ring	4860.0294	1
360	Cap	4860.0297	1
370	Lock washer	4860.0446	1
390	Tap compression	4860.0509	1
400	O-Ring	4860.0299	1
410	Shim	4054.0414	1
430	Piston compression	4860.0047	1
440	O-ring	4681.1499	1
450	Check valve	4860.0061	1
460	Check valve spring	4860.0202	1
470	Check valve holder	4860.0163	1
490	Clamping disc	4860.0514	1
500	Membrane	4860.0281	1
510	Fork oil	4860.0401	0,5
520	Oil seal washer	5018.0222	1
530	Bleeder screw	4860.0527	1
540	O-ring	5018.0222	1
550	Plug	4860.0542	1
560	Spring	9141.0052	1
580	Washer	4860.0552	1
590	Spacer	4860.0456	1
600	Adj.tube	4860.0533	1
630	Rubber cap	4860.0141	1
710	Axle-clamp	4860.0545	1
720	O-ring	4860.0048	1
750	Screw sleeve	4860.0546	1
760	Oil seal	4860.0471	1
770	O-ring	4681.1499	1
780	DU-bush	4860.0430	1
790	Membrane holder cpl.	4860.0548	1
800	Bolt	4860.0518	1
810	O-ring	4860.0541	1
820	Spring	4860.0540	1
830	O-ring	4681.0340	1
840	O-ring	4054.0230	1
850	Lock washer	4860.0448	1
860	O-ring	4860.0298	1
870	Needle bleed adj.	4860.0506	1
880	Lock nut	4860.0276	1
890	Piston rod	4860.0516	1
900	O-Ring	4860.0301	1
910	Screw cap	4860.0532	1
920	Adj. screw	4860.0523	1
930	Ball-steel	4054.0603	2
940	Spring	4860.0522	1
950	O-ring	5018.0222	1
960	Rubber plug	1508.0017	1
965	Oil seal washer	5018.0222	1
970	Cil.head screw	4860.0526	1
980	O-ring	4014.0024	1
990	Bolt	4860.0280	1
1000	Adj. screw	4860.0523	1
1010	Ball-steel	4054.0603	2
1020	Spring	4860.0522	1
1030	O-ring	5018.0222	1
1040	Holder adj. tube	4860.0271	1
1050	Retainer ring	4860.0273	1
1060	O-ring	4860.0301	1
1070	O-ring	4681.0811	1
1080	Washer copper	4860.0275	1

Art.No.: 3.211.199-E

Repair manual WP Fork "Closed Cartridge"

Setting list 4860 MXMA Fork 14.18.7B.14 KTM 125 SXS 2006

Compression

Pos.	Part description	Part number	pcs
410	Shim 6x16x0.25	4054.0414	1
411	Shim 6x10x0.1	4054.1404	1
412	Shim 6x11x0.1	4860.0323	1
413	Shim 6x12x0.1	4054.0400	1
414	Shim 6x13x0.1	4860.0325	1
415	Shim 6x14x0.1	4054.0401	1
416	Shim 6x15x0.1	4860.0327	1
417	Shim 6x16x0.1	4054.0402	1
418	Shim 6x18x0.1	4054.0403	1
419	Shim 6x20x0.1	4860.0065	1
420	Shim 6x22x0.1	4860.0064	1
421	Shim 6x23x0.1	4860.0333	1
422	Shim 6x18x0.1	4054.0403	1
423	Shim 6x24x0.1	4860.0063	6

Check-valve setting

450	Check valve 8x24x0.4	4860.0061	1
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Rebound

170	Shim 6x20x0.1	4860.0479	3
171	Shim 6x12x0.1	4054.0400	1
172	Shim 6x16x0.1	4054.0402	1
173	Shim 6x14x0.1	4054.0401	1
174	Shim 6x13x0.1	4860.0325	1
175	Shim 6x12x0.1	4054.0400	1
176	Shim 6x11x0.3	4054.1391	1
177	Shim 6x14x0.25	4054.0413	1

Check-valve setting

150	Check valve 8x16x0.2	4860.0555	1
151	Shim 8x10x0.2	4860.0480	1
152	Shim 8x16x0.1	4860.0214	1
153	Shim 8x18x0.1	4357.0120	3
154	Check valve 8x20x0.1	4860.0215	4

Spring

560	Spring 4.2 N/mm	9141.0051	1
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Adjustments

Position compression	22
Position rebound	24
Oil volume (ml)	370
Code	14.18.7B.14
Stroke check-valve comp. (mm)	1.5
Stroke check-valve reb. (mm)	0.3
Total length (mm)	940
Stroke (mm)	300
Gas pressure (bar)	1.0
Preload spring (mm)	5
Spring length with spacers (mm)	509

Setting list 4860 MXMA Fork 14.18.7B.15 KTM 250 SXS 2006

Compression

Pos.	Part description	Part number	pcs
410	Shim 6x16x0.25	4054.0414	1
411	Shim 6x11x0.1	4860.0323	1
412	Shim 6x12x0.1	4054.0400	1
413	Shim 6x13x0.1	4860.0325	1
414	Shim 6x14x0.1	4054.0401	2
415	Shim 6x15x0.1	4860.0327	1
416	Shim 6x16x0.1	4054.0402	1
417	Shim 6x17x0.1	4860.0329	1
418	Shim 6x18x0.1	4054.0403	1
419	Shim 6x19x0.1	4860.0331	1
420	Shim 6x20x0.1	4860.0065	1
421	Shim 6x21x0.1	4860.0332	1
422	Shim 6x22x0.1	4860.0064	1
423	Shim 6x23x0.1	4860.0333	1
424	Shim 6x18x0.1	4054.0403	1
425	Shim 6x24x0.1	4860.0063	8

Check-valve setting

450	Check valve 8x24x0.4	4860.0061	1
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Rebound

170	Shim 6x20x0.1	4860.0479	3
171	Shim 6x13x0.1	4860.0325	1
172	Shim 6x16x0.1	4054.0402	1
173	Shim 6x14x0.1	4054.0401	1
174	Shim 6x13x0.1	4860.0325	1
175	Shim 6x12x0.1	4054.0400	1
176	Shim 6x11x0.3	4054.1391	1
177	Shim 6x14x0.25	4054.0413	1

Check-valve setting

150	Check valve 8x16x0.2	4860.0555	1
151	Shim 8x10x0.2	4860.0480	1
152	Shim 8x16x0.1	4860.0214	1
153	Shim 8x18x0.1	4357.0120	3
154	Check valve 8x20x0.1	4860.0215	4

Spring

560	Spring 4.4 N/mm	9141.0052	1
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Adjustments

Position compression	22
Position rebound	24
Oil volume (ml)	380
Code	14.18.7B.15
Stroke check-valve comp. (mm)	1.5
Stroke check-valve reb. (mm)	0.3
Total length (mm)	940
Stroke (mm)	300
Gas pressure (bar)	1.0
Preload spring (mm)	5
Spring length with spacers (mm)	509

Setting list 4860 MXMA Fork 14.18.7B.16 KTM 450/540 SXS 2006

Compression

Pos.	Part description	Part number	pcs
410	Shim 6x16x0.25	4054.0414	1
411	Shim 6x12x0.1	4054.0400	1
412	Shim 6x13x0.1	4860.0325	1
413	Shim 6x14x0.1	4054.0401	1
414	Shim 6x15x0.1	4860.0327	1
415	Shim 6x16x0.1	4054.0402	1
416	Shim 6x17x0.1	4860.0329	1
417	Shim 6x18x0.1	4054.0403	1
418	Shim 6x19x0.1	4860.0331	1
419	Shim 6x20x0.1	4860.0065	1
420	Shim 6x21x0.1	4860.0332	1
421	Shim 6x22x0.1	4860.0064	1
422	Shim 6x23x0.1	4860.0333	1
423	Shim 6x18x0.1	4054.0403	1
424	Shim 6x24x0.1	4860.0063	9

Check-valve setting

450	Check valve 8x24x0.4	4860.0061	1
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Rebound

170	Shim 6x20x0.1	4860.0479	3
171	Shim 6x13x0.1	4860.0325	1
172	Shim 6x16x0.1	4054.0402	1
173	Shim 6x14x0.1	4054.0401	1
174	Shim 6x13x0.1	4860.0325	1
175	Shim 6x12x0.1	4054.0400	1
176	Shim 6x11x0.3	4054.1391	1
177	Shim 6x14x0.25	4054.0413	1

Check-valve setting

150	Check valve 8x16x0.2	4860.0555	1
151	Shim 8x10x0.2	4860.0480	1
152	Shim 8x16x0.1	4860.0214	1
153	Shim 8x18x0.1	4357.0120	3
154	Check valve 8x20x0.1	4860.0215	4

Spring

560	Spring 4.6 N/mm	9141.0053	1
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Adjustments

Position compression	22
Position rebound	24
Oil volume (ml)	380
Code	14.18.7B.16
Stroke check-valve comp. (mm)	1.5
Stroke check-valve reb. (mm)	0.3
Total length (mm)	940
Stroke (mm)	300
Gas pressure (bar)	1.0
Preload spring (mm)	5
Spring length with spacers (mm)	509

Setting list 4860 MXMA Fork 14.18.7B.18 KTM 450/560 SMR 2006**Compression**

Pos.	Part description	Part number	pcs
410	Shim 6x18x0.25	4054.0415	1
411	Shim 6x11x0.3	4054.1391	1
412	Shim 6x14x0.15	4054.0405	1
413	Shim 6x16x0.15	4054.0406	1
414	Shim 6x18x0.1	4054.0403	1
415	Shim 6x20x0.1	4860.0065	1
416	Shim 6x22x0.1	4860.0064	2
417	Shim 6x24x0.1	4860.0063	2

Check-valve setting

450	Check valve 8x24x0.4	4860.0061	1
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Rebound

170	Shim 8x11x0.20	4860.0346	1
171	Check valve 8x18x0.1	4860.0068	1
172	Check valve 8x20x0.1	4860.0215	1
173	Check valve 8x22x0.1	4860.0216	1
174	Check valve 8x24x0.1	4860.0062	4

Check-valve setting

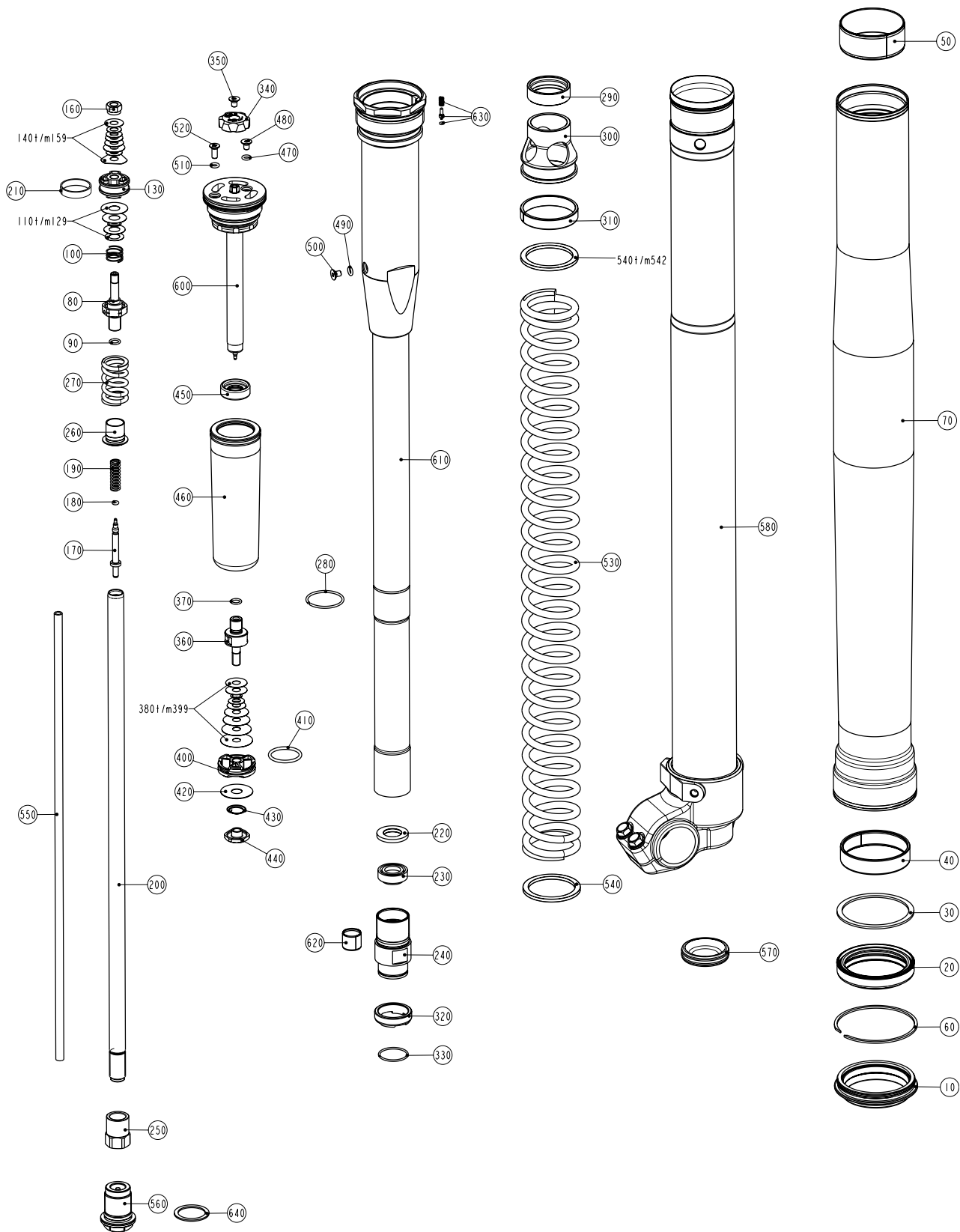
150	Shim 6x24x0.1	4860.0116	5
151	Shim 20x16,25x0.2	4860.0212	1
152	Shim 6x16x0.1	4054.0402	1
153	Shim 6x20x0.15	4860.0069	3
154	Shim 6x11x0.3	4054.1391	1
155	Shim 6x16x0.25	4054.0414	

Spring

560	Spring 4.6 N/mm	9141.0019	1
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Adjustments

Position compression	19
Position rebound	17
Air chamber length	100 mm
Code	14.18.7B.18
Stroke check-valve comp. (mm)	1.5
Stroke check-valve reb. (mm)	1.0
Total length (mm)	915
Stroke (mm)	275
Gas pressure (bar)	1.0
Preload spring (mm)	20
Spring length with spacers (mm)	499



Part list SX 2007

Pos.	Part description	Part number	Pieces
10	Dust stripper	4860.0400	1
20	Oil seal	4860.0399	1
30	Support ring	4860.0013	1
40	DU-bush	4860.0429	1
50	DU-bush	4860.0428	1
60	Lock washer	4860.0070	1
70	Outer-tube	4860.0492E	1
80	Rebound support	4860.0576	1
90	O-ring	4860.0299	1
100	Shuttle valve spring	3548.0377	1
130	Piston rebound	4860.0575	1
160	Nut	4054.0486	1
170	Needle for rebound adjustment	4860.0277	1
180	O-ring	4860.0298	1
190	Spring for rebound adjustment	4860.0444	1
200	Piston rod	4860.0464	1
210	Piston ring	4860.0455	1
220	Ring	4860.0296	1
230	Oil seal	4860.0471	1
240	Screw sleeve	4860.0546S	1
250	Lock nut	4860.0459	1
260	Spring guide	4860.0525	1
270	Rebound spring	4860.0511	1
280	Lock washer	4860.0512	1
290	Support ring	4860.0577	1
300	Guiding ring adapter	4860.0520	1
310	Guiding ring	4860.0294	1
320	Check valve ring	4860.0297	1
330	Lock washer	4860.0446	1
340	Control knob for compression	4860.0569	1
350	Screw	4860.0527	1
360	Tap compression	4860.0509	1
390	O-ring	4860.0299	1
400	Piston compression	4860.0047	1
410	O-ring	4681.1499	1
430	Check valve spring	4860.0202	1
440	Check valve holder	4860.0163	1
450	Clamping disc	4860.0514	1
460	Membrane	4860.0281	1
470	O-ring	5018.0222	1
480	Screw	4860.0527	1
490	O-ring	5018.0222	1
500	Screw	4860.0542	1
510	O-ring	5018.0222	1
520	Screw	4860.0526	1
530	Spring	9141.0052	1
540	Spacer	4860.0456	1
541	Spacer	4860.0457	1
542	Spacer	4860.0458	1
550	Adj.tube	4860.0269	1
560	Bolt	4860.0280	1
570	Rubber cap	4860.0141	1
580	Inner-tube	4860.0530S1	1
600	Piston rod	4860.0516S1	1
610	Membrane holder cpl.	4860.0519S1	1
620	DU-bush	4860.0430	1
630	Check valve, complete	4860.0518S	1

Setting list 4860 MXMA Fork 14.18.7C.01 KTM 125 SX 2007

Compression

Pos.	Part description	Part number	pcs
380	Shim 6x16x0.25	4054.0414	1
381	Shim 6x9,5x0.30	4054.0450	1
382	Shim 6x12x0.10	4054.0400	1
383	Shim 6x14x0.15	4054.0405	1
384	Shim 6x16x0.15	4054.0406	1
385	Shim 6x18x0.15	4054.0407	1
386	Shim 6x20x0.15	4860.0069	1
387	Shim 6x22x0.15	4860.0097	1
388	Shim 6x24x0.15	4860.0100	4
389	Shim 6x14x0.10	4054.0401	1
390	Shim 6x24x0.15	4860.0100	3

Check-valve setting

420	Check valve 8x24x0.40	4860.0061	1
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Rebound

149	Shim 6x20x0.10	4860.0479	3
150	Shim 6x13x0.10	4860.0325	1
151	Shim 6x16x0.10	4054.0402	1
152	Shim 6x14x0.10	4054.0401	1
153	Shim 6x13x0.10	4860.0325	1
154	Shim 6x12x0.10	4054.0400	1
155	Shim 6x11x0.30	4054.1391	1
156	Shim 6x16x0.25	4054.0414	1

Check-valve setting

110	Check valve 8x16x0.15	4860.0350	1
111	Scheibe 8x11x0.20	4860.0346	1
112	Scheibe 8x18x0.10	4357.0120	1
113	Scheibe 8x20x0.10	4860.0215	5

Spring

560	Spring 4.2 N/mm	9141.0051	1
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Adjustments

Position compression	18
Position rebound	21
Oil volume (ml)	385
Code	14.18.7C.01
Stroke check-valve comp. (mm)	1.5
Stroke check-valve reb. (mm)	0.45
Total length (mm)	940
Stroke (mm)	300
Gas pressure (bar)	1.2
Preload spring (mm)	5
Spring length with spacers (mm)	465

Setting list 4860 MXMA Fork 14.18.7C.03 KTM 250 SX/250 SX-F 2007**Compression**

Pos.	Part description	Part number	pcs
380	Shim 6x16x0.25	4054.0414	1
381	Shim 6x9,5x0.2	4054.0427	1
382	Shim 6x12x0.15	4054.0404	1
383	Shim 6x14x0.15	4054.0405	1
384	Shim 6x16x0.15	4054.0406	1
385	Shim 6x18x0.15	4054.0407	1
386	Shim 6x20x0.15	4860.0069	1
387	Shim 6x22x0.15	4860.0097	1
388	Shim 6x24x0.15	4860.0100	6
389	Shim 6x16x0.10	4054.0402	1
390	Shim 6x24x0.15	4860.0100	4

Check-valve setting

420	Check valve 8x24x0.4	4860.0061	1
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Rebound

149	Shim 6x20x0.10	4860.0479	3
150	Shim 6x13x0.10	4860.0325	1
151	Shim 6x16x0.10	4054.0402	1
152	Shim 6x14x0.10	4054.0401	1
153	Shim 6x13x0.10	4860.0325	1
154	Shim 6x12x0.10	4054.0400	1
155	Shim 6x11x0.30	4054.1391	1
156	Shim 6x16x0.25	4054.0414	1

Check-valve setting

110	Check valve 8x16x0.15	4860.0350	1
111	Shim 8x11x0.20	4860.0346	1
112	Shim 8x18x0.10	4357.0120	1
113	Shim 8x20x0.10	4860.0215	5

Spring

560	Spring 4.4 N/mm	9141.0052	1
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Adjustments

Position compression	15
Position rebound	20
Oil volume (ml)	385
Code	14.18.7C.03
Stroke check-valve comp. (mm)	1.5
Stroke check-valve reb. (mm)	0.45
Total length (mm)	940
Stroke (mm)	300
Gas pressure (bar)	1.2
Preload spring (mm)	5
Spring length with spacers (mm)	465

Setting list 4860 MXMA Fork 14.18.7C.05 KTM 450 SX-F 2007
Compression

Pos.	Part description	Part number	pcs
380	Shim 6x16x0.25	4054.0414	1
381	Shim 6x10x0.2	4054.1403	1
382	Shim 6x12x0.15	4054.0404	1
383	Shim 6x14x0.15	4054.0405	1
384	Shim 6x16x0.15	4054.0406	1
385	Shim 6x18x0.15	4054.0407	1
386	Shim 6x20x0.15	4860.0069	1
387	Shim 6x22x0.15	4860.0097	1
389	Shim 6x17x0.10	4054.0402	1
390	Shim 6x24x0.15	4860.0100	7

Check-valve setting

420	Check valve 8x24x0.4	4860.0061	1
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Rebound

149	Shim 6x20x0.10	4860.0479	3
150	Shim 6x13x0.10	4860.0325	1
151	Shim 6x16x0.10	4054.0402	1
152	Shim 6x14x0.10	4054.0401	1
153	Shim 6x13x0.10	4860.0325	1
154	Shim 6x12x0.10	4054.0400	1
155	Shim 6x11x0.30	4054.1391	1
156	Shim 6x16x0.25	4054.0414	1

Check-valve setting

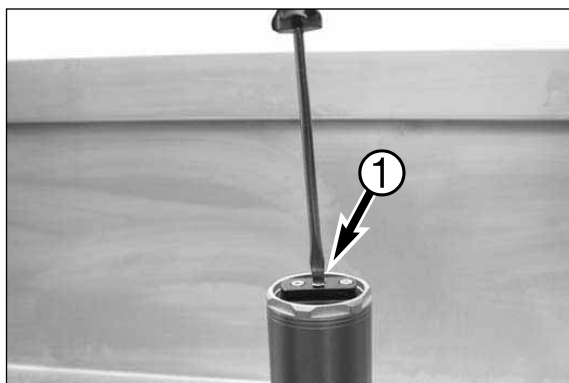
110	Check valve 8x11x0.20	4860.0346	1
111	Shim 8x16x0.10	4860.0350	2
112	Shim 8x18x0.10	4357.0120	3
113	Shim 8x20x0.10	4860.0215	5

Spring

560	Spring 4.6 N/mm	9141.0053	1
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Adjustments

Position compression	15
Position rebound	21
Oil volume (ml)	375
Code	14.18.7C.05
Stroke check-valve comp. (mm)	1.5
Stroke check-valve reb. (mm)	0.3
Total length (mm)	940
Stroke (mm)	300
Gas pressure (bar)	1.2
Preload spring (mm)	5
Spring length with spacers (mm)	465

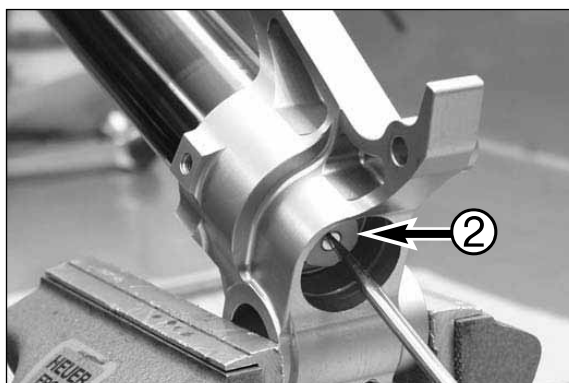


Adjustments

- Take notice of the position of the compression adjustment ❶!
- Count the amount of clicks by turning the adjustment screw clockwise till fully closed.



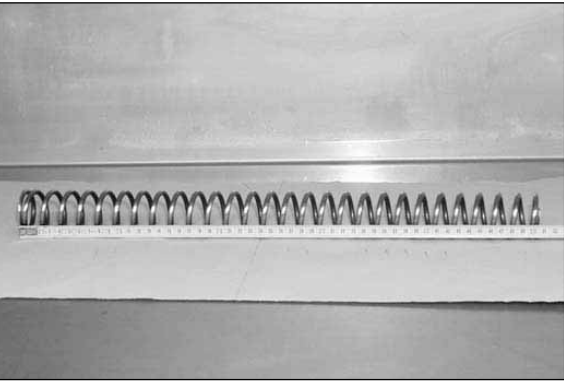
- Remove the rubber cap out of the axleclamp.



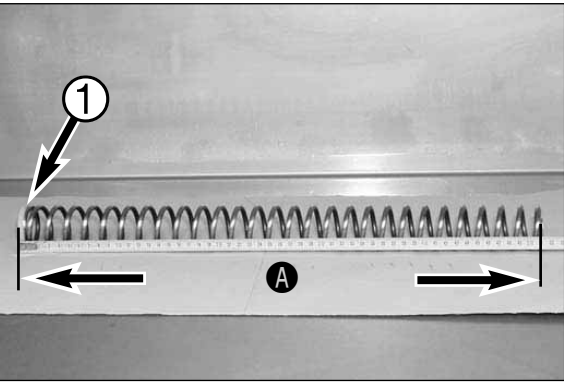
- Take notice of the position of the rebound adjustment ❷!
- Count the amount of clicks by turning the adjustment screw clockwise till fully closed.
- For the standard position see setting list.

Position of the compression and rebound adjustment

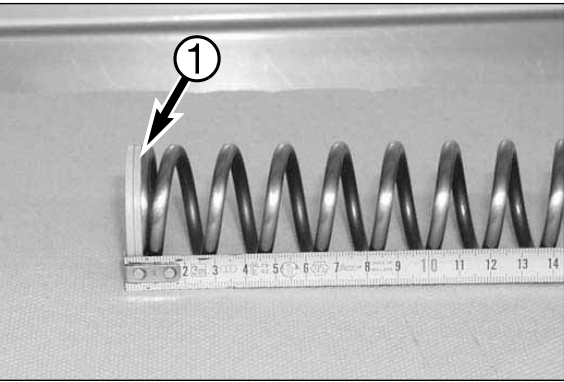
- Set the rebound position ❶, see KTM-Owners manual.
- Assemble the rubber cap.
- Set the compression position ❷, see KTM-Owners manual.



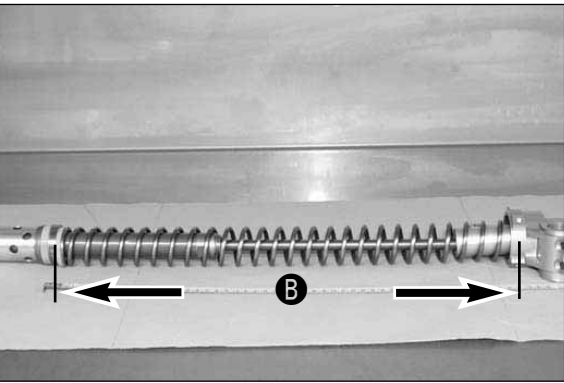
Explanation of the spring preload
– Total spring length without the spacers, see chapter inspection of the spring!



– Spring length with spacers ❶, see setting list.



– Spring with the spacers. ❶.



– The spring is assembled in the front fork leg.
NOTE: the distance of “B” is less then the length of “A”.

$$\frac{A}{- B}$$

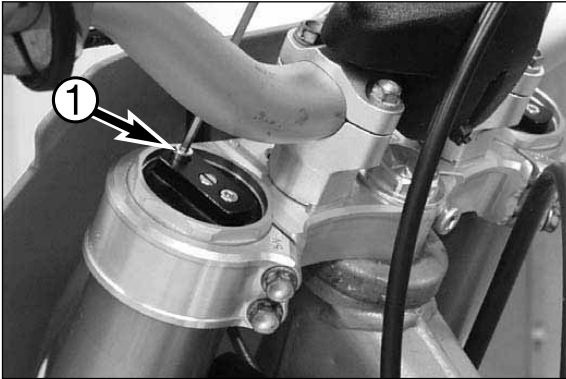
= Spring preload



Air release screw

- Place the motorcycle on the stand.

NOTE: the front wheel must be lift of the floor!



- Unscrew the air release screw ❶ of the screw cap on top of the front fork and tighten after approx. 10 seconds the air release screw.

Recommended periodic maintenance and inspection of the 4860 SX/SXS/SMR front fork

A 100 liter fuel consumption is equivalent to approx. 15 operating hours	10 hours 65 liter	20 hours 130 liter	30 hours 200 liter	40 hours 260 liter	50 hours 325 liter	60 hours 400 liter	70 hours 455 liter	80 hours 520 liter	90 hours 600 liter	100 hours 665 liter
Clean dust scrapers (after 1 hour)										
Bleed fork legs regularly - after every cleaning										
Check the inner tubes on scratches / leakage	●	●	●	●	●	●	●	●	●	●
Visual check of damaging of the outer-tubes / replace if necessary	●	●	●	●	●	●	●	●	●	●
Complete service without disass. the closed cartridge of the fork	●			●				●		
Complete service including the closed cartridge of the front fork		●				●				●

DISMOUNTING/MOUNTING THE FORK

3

INDEX

DISMOUNTING THE FORK3-2

MOUNTING THE FORK3-3



Dismounting the fork

- Place your motorcycle on a stand.



- Notice the position of the front fork in the triple-clamps.



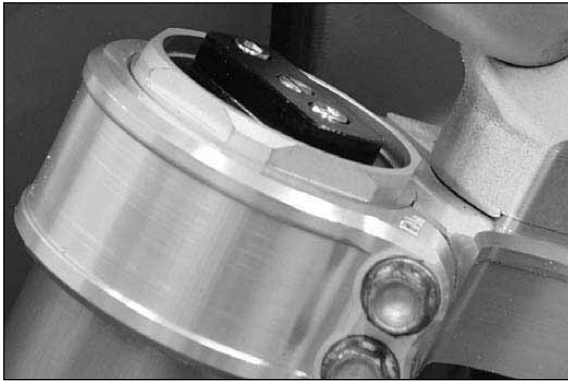
NOTE: To remove the front fork. Read your KTM Instruction Manual or Workshop Manual.





Mounting the fork

- Clean the innerside of the triple-clamps with brake cleaner.
- Slide both fork legs into the triple-clamps.

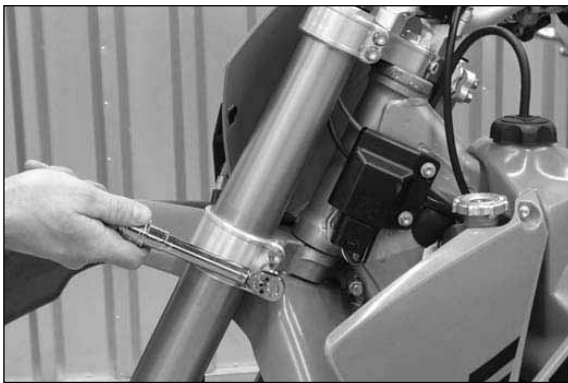


NOTE: Pay attention to the position of the fork legs.

Standard riding height!



NOTE: The maximum riding height is the level of the second groove!



- Tighten the middle bolt of the lower triple clamp to a torque of 17 Nm!
- Tighten the first bolt of the lower triple clamp to a torque of 17 Nm!
- Tighten the third bolt of the lower triple clamp to a torque of 17 Nm!



- Tighten both bolts of the upper tripleclamp to a torque of 20 Nm.

DISASSEMBLING/ASSEMBLING THE FORK

4

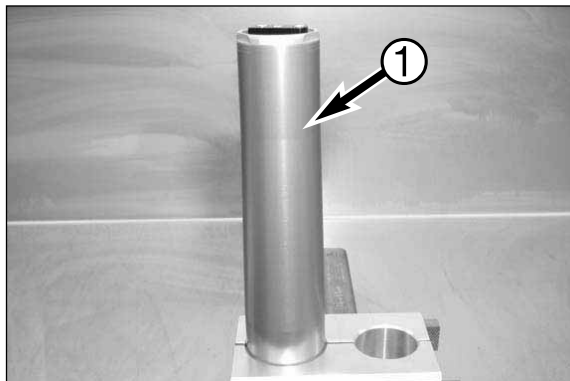
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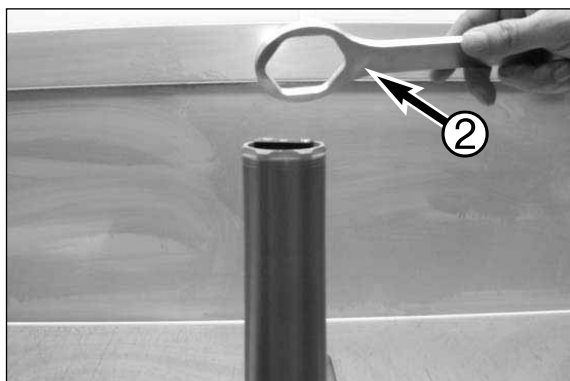


Disassembling the cartridge out of the front fork leg

- Place clamping block T1403S in the vice.



- Clamp the outer-tube ① of the front fork leg in the clamping block at the level of the lower triple-clip.



- Place T14.017 ② on the screw-cap of the front fork leg.



- Loosen the screw-cap.



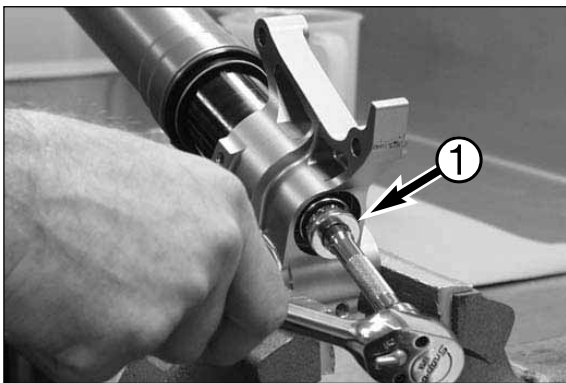
- Remove the front fork leg out of the vice and move the outer-tube downwards to the axle-clamp.



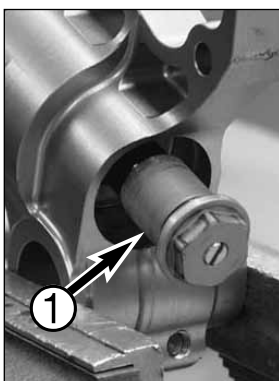
- Drain the oil out of the front fork leg.
- Only for replacing the spring or changing the spring preload!

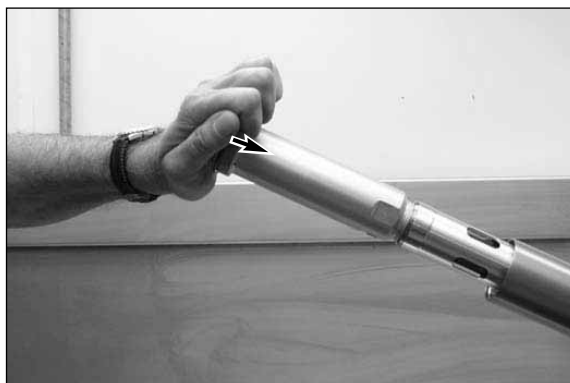


- Place the front fork leg in the vice according to the picture.



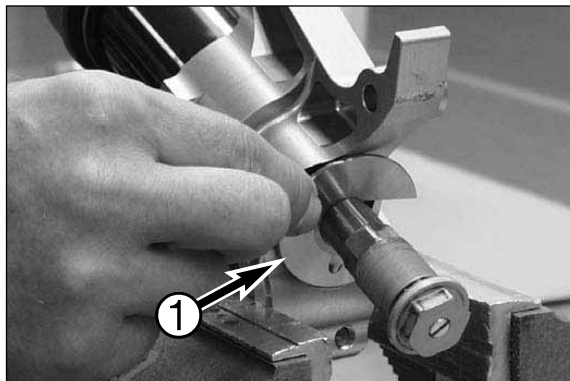
- Unscrew the rebound adjustment holder ❶ out of the axle-clamp, (Size 19).





- Push the cartridge downwards and place T14.020 ❶ over the piston-rod, just below the contra nut. (art. no. 4860.0459)

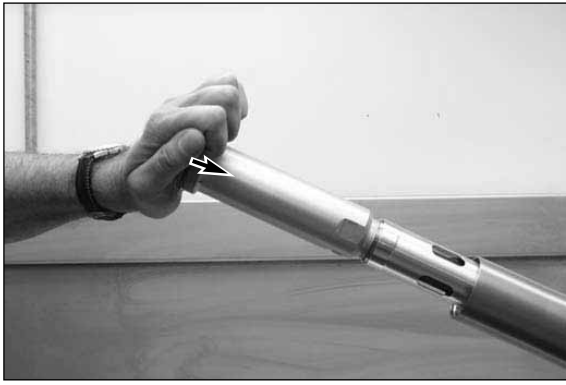
NOTE: Do this with help of a second person.



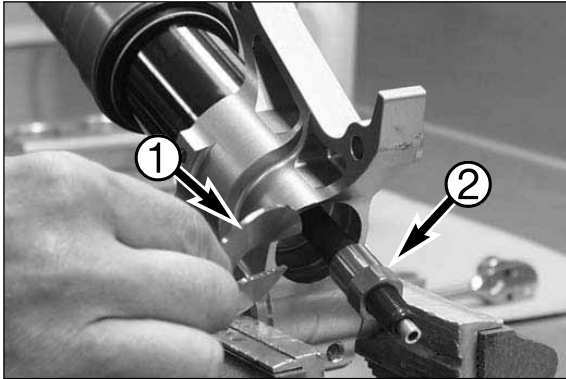
- Screw the rebound adjustment holder from the nut, (Size 19 and 17)



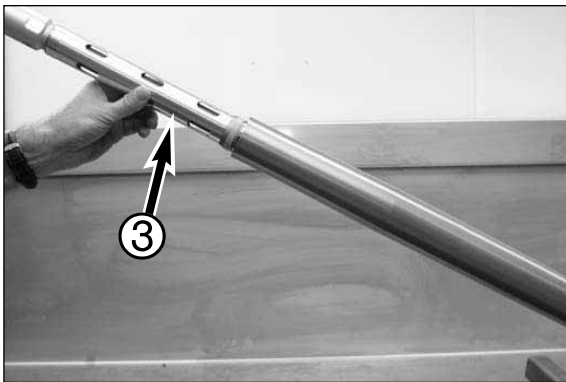
- Unscrew the rebound adjustment holder from the piston-rod.
- Pay attention to the rebound adjustment tube ❷, remove it when it comes out of the piston-rod!



- Push the cartridge downwards and remove T14.020 ❶.



- Remove the nut ❷.



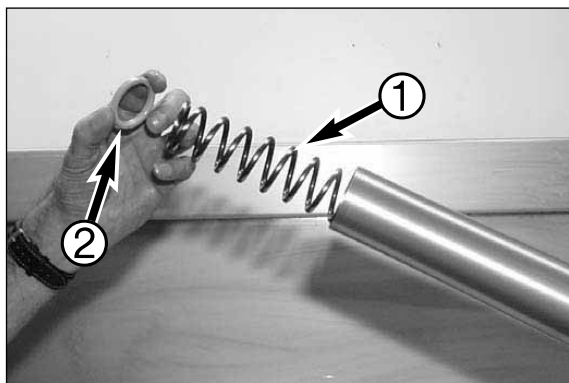
- Release the spring pressure on the cartridge slowly.
- Remove the closed cartridge ❸ complete.



- “The closed cartridge complete” SXS 2005/06.



- “The closed cartridge complete” SX 2007



- Remove the spring ❶ with the spacer ❷.
- Also remove the bushing on the lower end of the spring (2006 model).

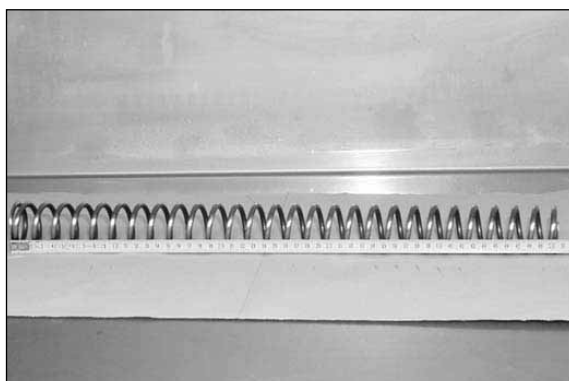


Inspection of the spring

NOTE: Only for replacing the spring or changing the spring preload!

- It is necessary to place the front fork leg according to the picture for about 5 minutes. The amount of rest oil that stay left in the front fork leg is $\pm 10\text{ml}$.
- See the setting list for the correct amount of oil volume, this oil volume is minus the 10ml of rest oil.

For example $385\text{ml} - 10\text{ml} = 375\text{ml}$.



Model 2005:

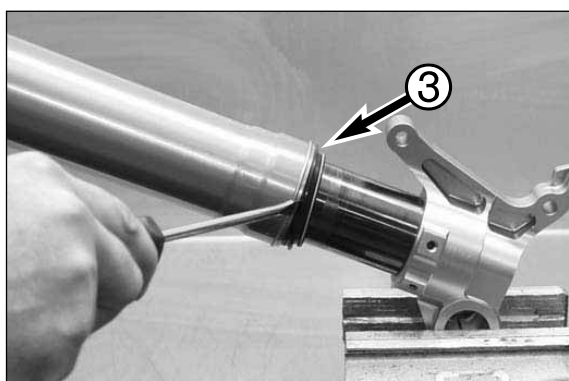
- The total length of the spring (without spacers) is $505\text{mm} \pm 3\text{mm}$.
- Replace the spring when the total length is less then 495mm .

model 2006 onwards:

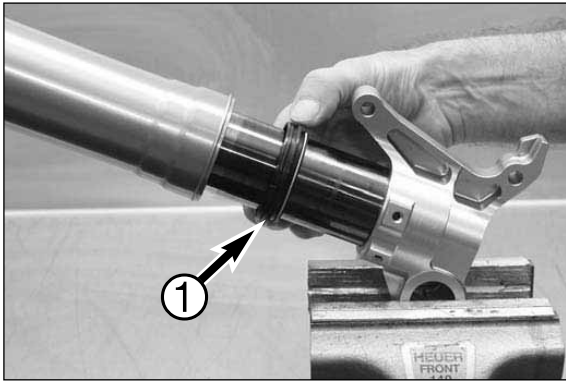
- The total length of the spring (without spacers) is $455\text{mm} \pm 3\text{mm}$.
- Replace the spring when the total length is less then 447mm .
- Inspect the coils of the spring if they are not flat, incase they are, you have to replace the spring.

Disassembling the inner-tube / outer-tube

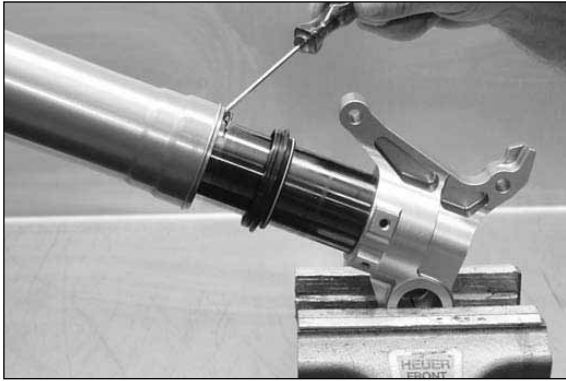
- Place the front fork leg in the vice according to the picture.



- Remove the dust stripper carefully ❸.



- Slide the dust stripper ❶ downwards.

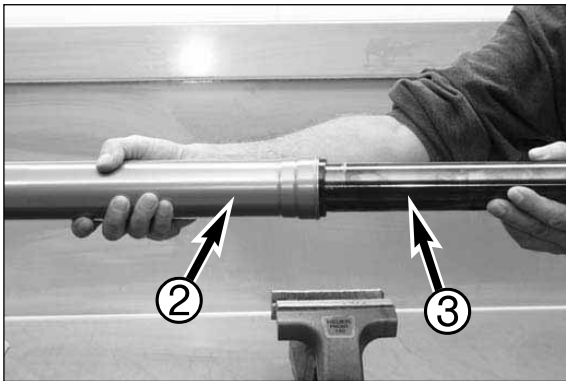


- Remove the lock washer with a screwdriver.

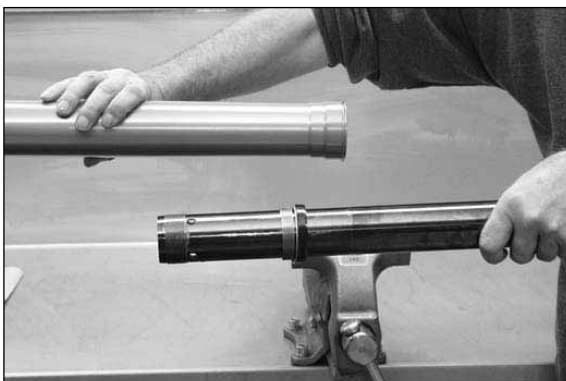
NOTE: The lock washer is on one side chamfered to disassemble it easier!



- Heat the surface of the outer-tube near the oil seal to a temperature of $\pm 50^{\circ}\text{C}$.



- Remove the front fork leg out of the vice and pull with both hands the outer-tube from the inner-tube. ❷ vom Innenrohr ❸.



Inspection of the outer-tube

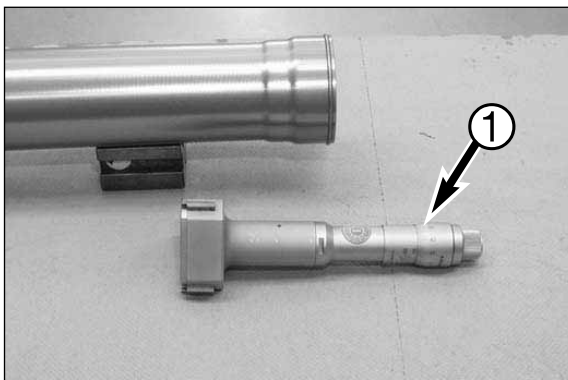
- The outer-tube.



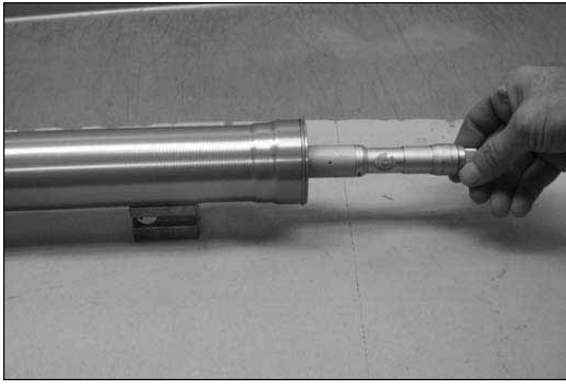
- Inspect the outside surface of the outer-tube if there isn't any damage because of (for example) stones.



- Inspect the inside running surface of the outer-tube on scratches.
- Also inspect the anodized coating of the running surface.



- Micrometer ❶ for measuring the oil seal and DU-bush chambers of the outer-tube.



- Measure the chamber for the DU-bush.

The maximum diameter is: 52.15 mm



- Measure the chamber for the oil seal.

The maximum diameter is: 57.50 mm

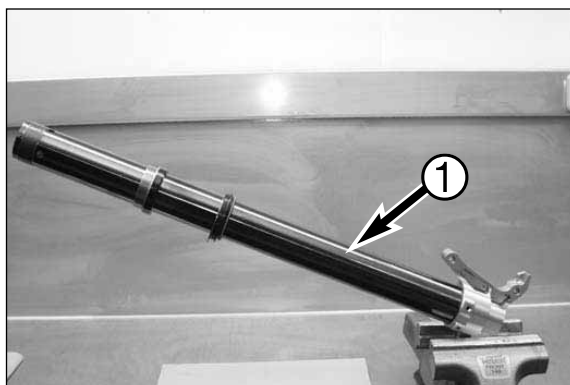


- Micrometer for measuring the diameter of the running surface of the outer-tube.

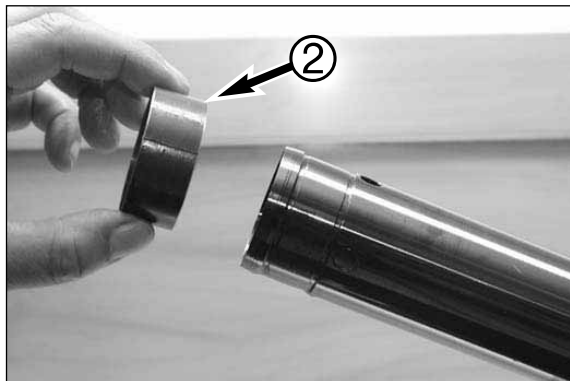


- Place at the side of the screw cap the micrometer ± 300 mm into the outer-tube.
- Measure the diameter of the running surface and measure again after rotating the outertube 90°.

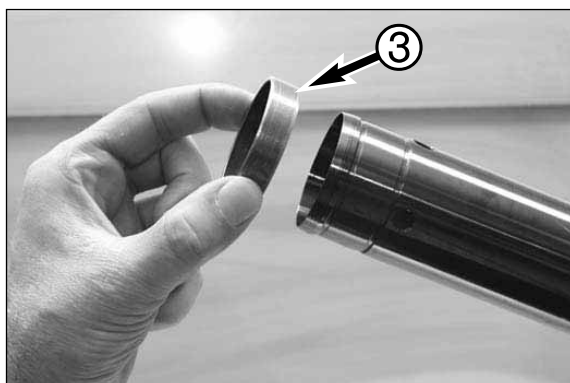
The maximum diameter is: 49.20mm



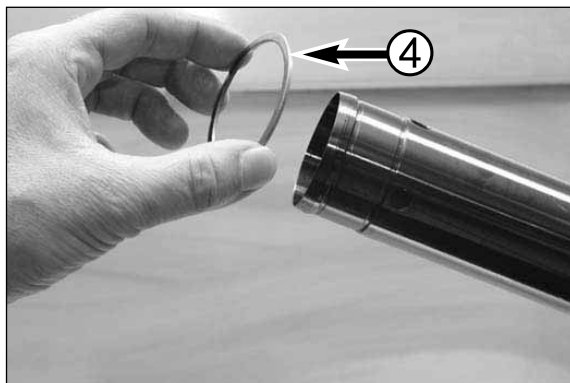
- Place the inner-tube ❶ in the vice according to the picture.



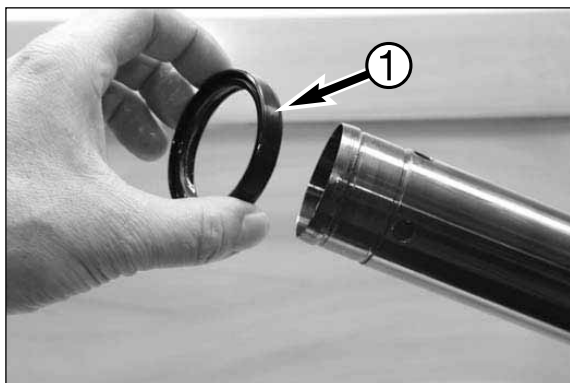
- Remove the DU-bush ❷ from the inner-tube.



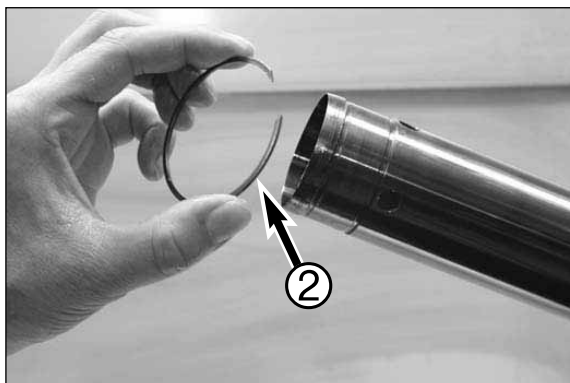
- Remove the outer-tube DU-bush ❸.



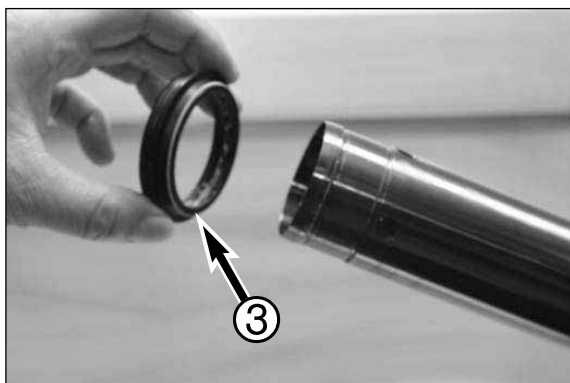
- Remove the support ring ❹.



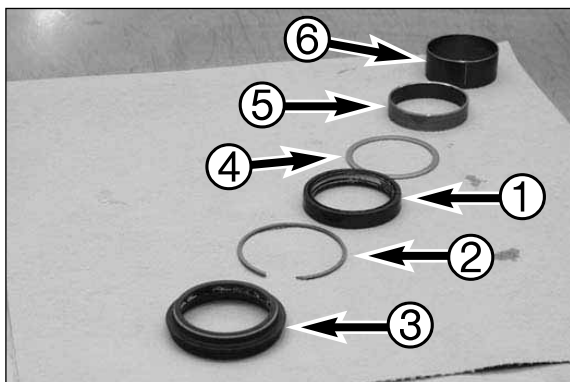
- Remove the oil seal ①.



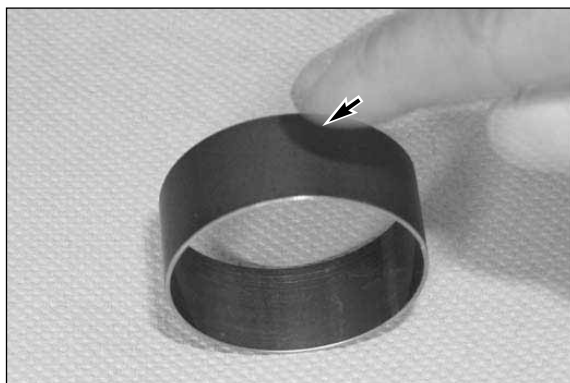
- Remove the lock ring. ②.



- Remove the dust stripper ③.



- Dust stripper ③
- Lock ring ②
- Oil seal ①
- Support ring ④
- DU-bush outer-tube ⑤
- DU-bush inner-tube ⑥



Inspection of the DU-bushes, support ring and seals

- Replace the DU-bush of the inner-tube if the surface is feeling rough.

NOTE: The best way to do this is to compare it with a new one!



- Replace the DU-bush when you see through the surface a bronze color.



- Replace the DU-bush of the outer-tube if the surface is feeling rough.

NOTE: The best way to do this is to compare it with a new one!



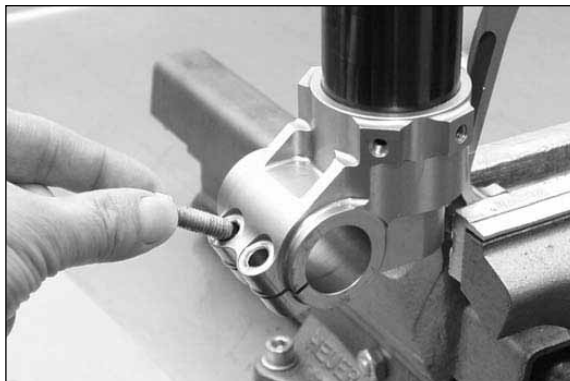
- Replace the DU-bush when you see through the surface a bronze color.



- Check if the support ring is not bended.



- Always replace the dust stripper and oil seal with every service! See periodic service interval!

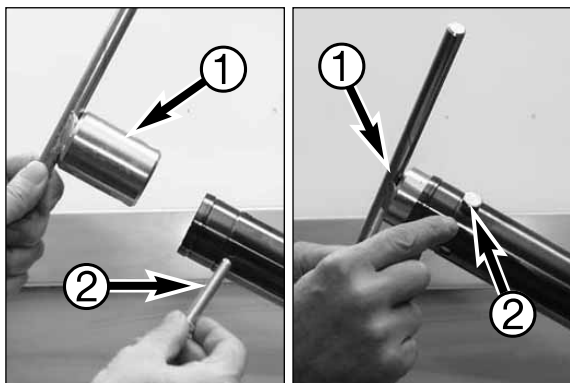


- Unscrew both bolts out of the axle-clamp.



- Heat the axle-clamp.

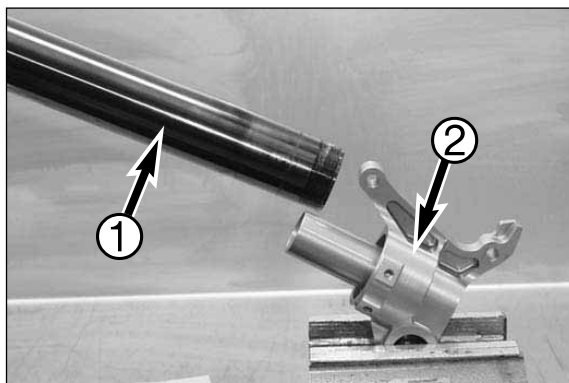
NOTE: the inner tube and axle clamp come as a unit for SX models starting in 2007 and do not need to be disassembled.



- Place T1404S ① in the inner-tube with the pin (T605) ② through the holes of the inner-tube.



- Loosen the inner-tube.



- Unscrew the inner-tube ❶ from the axle-clamp ❷.



- Take the axle-clamp out of the vice.



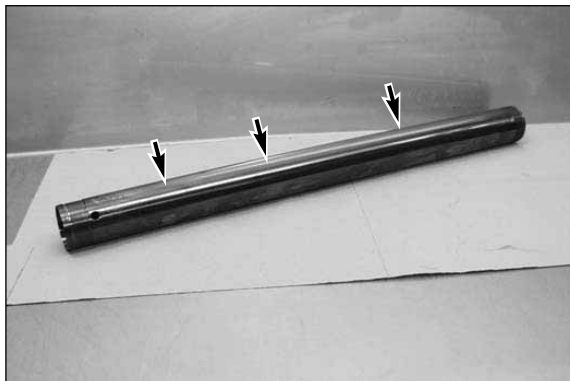
- Axle-clamp complete!

Inspection of the inner-tube

- Inner-tube.



- Inspect the outside running surface of the inner-tube on scratches, wear and tear.



NOTE: When the scratches are sharp and they are not too deep, polish them with "Scotch Brite" hand pad.



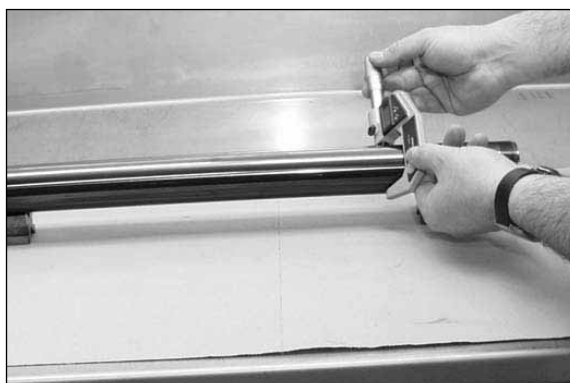
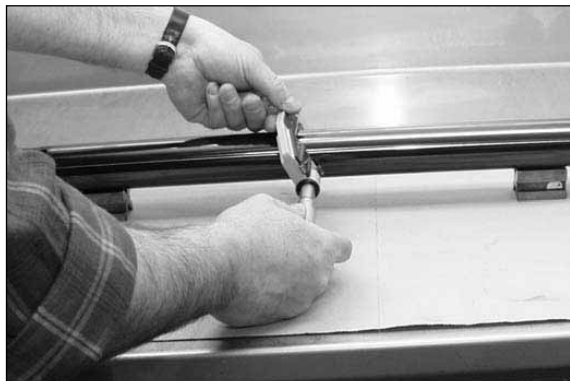
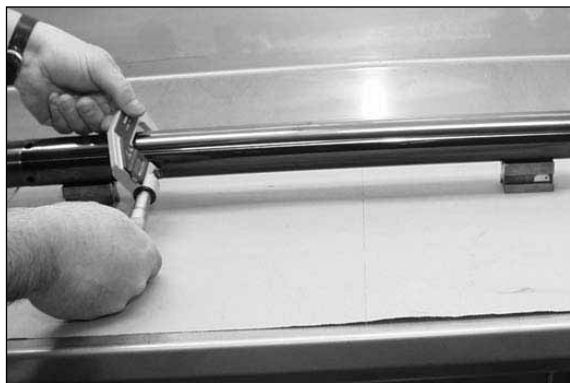
- Micrometer for measuring the outside diameter of the inner-tube.



- Measure the outside diameter of the inner-tube, rotate the inner-tube 180° and measure again. Repeat these measurements on several places of the inner-tube.

The maximum diameter is: 48.005mm

The minimum diameter is: 47.950mm



- Clock gauge for measuring the straightness of the inner-tube.

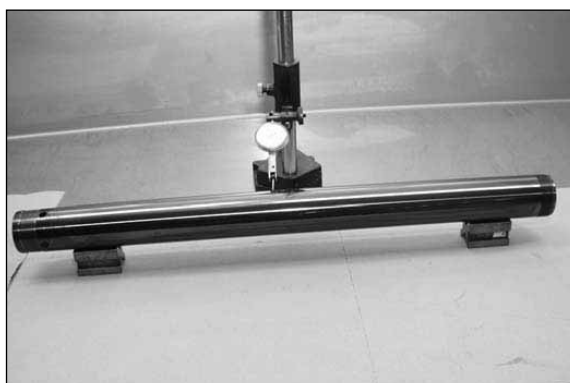


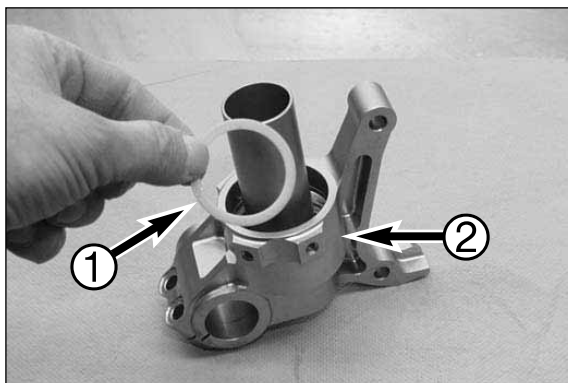
- Measure the straightness of the inner-tube.

NOTE:

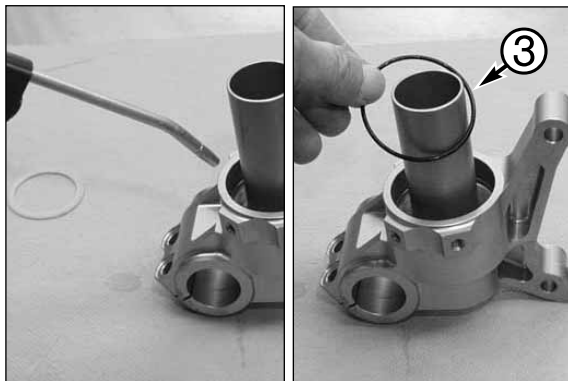
- Place the V-blocks as far as possible at the sides of the running surface of the innertube according to the picture
- Place the gauge clock in the middle of the inner-tube.
- Rotate the inner-tube 360°.

The maximum travel is: 0.06mm

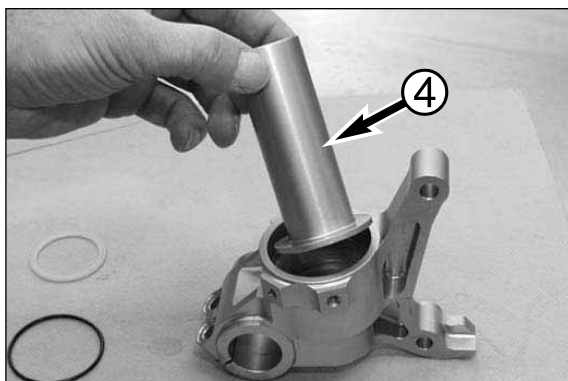




- Take the spacer ① out of the axle-clamp ②.



- Use air pressure to remove the O-ring ③ out of the groove of the axleclamp.



- Remove the hydraulic sleeve ④.



- Axle-clamp with components.



Disassembling the closed cartridge

- The closed cartridge complete.



- Remove the rebound adjustment tube ❶.



- Clamp the reservoir of the cartridge in the vice according to the position of the picture.

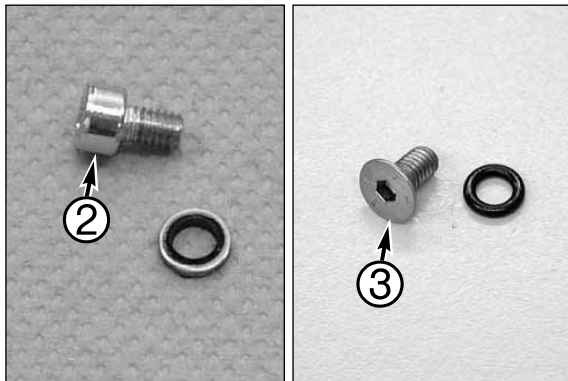


- Hold the rebound adjusting screw ❷ and loosen the screw ❸.

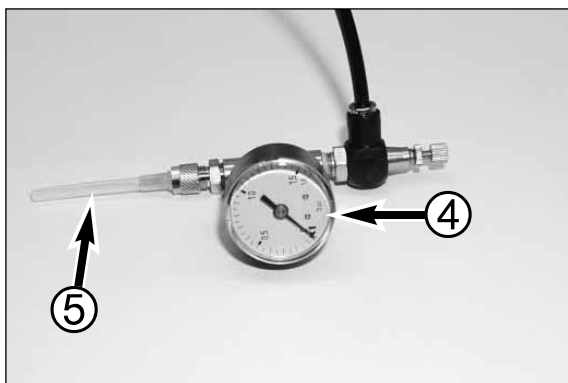


Release the nitrogen gas pressure

- Unscrew the Allen bolt ❶ that is nearest to the compression adjustment screw, (Size 3).
- Remove the Allen bolt ❶ with the seal out of the screw-cap.



- Model 2005: Allen bolt ❷ with the seal.
- From model 2006 on: AH flat-head screw ❸ with O-ring.

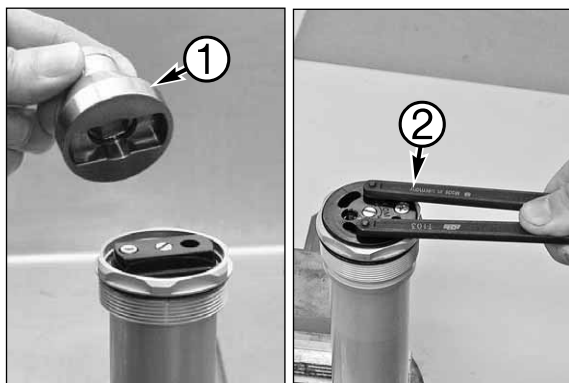


- Special tool T14.019 ❹.



- Remove the protecting cap ❺ of the needle and stick the needle through the middle of the filling rubber plug.

NOTE: you will hear that the nitrogen gas pressure is releasing the membrane.



- 2005: place T14.018 ❶ on the screw-cap.
- 2006: place T103 ❷ on the screw-cap.



- Loosen the screw-cap of the membrane holder.



- Lift with a screw driver the screw-cap ❸ of the membrane holder out of the reservoir.



- Take the membrane holder ❹ out of the reservoir.



- Drain the oil out of the cartridge.