



# 2.0 CASES AND BRACELETS WORKING INSTRUCTION N° 52

22.08.2017

## REPLACEMENT OF SOLDERED TUBES ON SEAMASTER

### TABLE OF CONTENTS

1.	RECOMMENDED TOOLS.....	2
2.	TUBE CONVERSION (SOLDERED TO SCREWED) ON SEAMASTER 120M, 200M AND 300M.....	5
3.	DRILLINGS INFORMATION AND TUBE LIST .....	11
4.	HISTORY OF MODIFICATIONS.....	13

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### REPLACEMENT OF SOLDERED TUBES ON SEAMASTER

## 1. Recommended tools





Image	Description	Use / Remarks
	8-SIDED KEY FOR TUBES 5100356	Fit and remove the new tubes
	6-SIDED KEY FOR TUBES 5022000004	Fit and remove the new tubes
	TOOL KIT FOR EXCHANGING CASE TUBES 5100285	Storage tool for tube exchange
	TOOL FOR TUBE EXCHANGE 5100186	To exchange the tube

Image	Description	Use / Remarks
	LOCTITE 586 (RED GLUE) 504W000635	Crowns and valves: Tube screwed into case middle  Pushers: Pushers screwed into case.
	PROOFMASTER S 220/230V 505 300 2002 PROOFMASTER S 110/130V 505 300 2003	Vacuum and air pressure test  See <a href="#">WI No 22</a>
	NATATOR 125 505 300 5557	Test in water  See <a href="#">WI No 22</a>
	ROXER PLAROX PR 1 220/230V 505 300 0041 ROXER PLAROX PR 1 110/130V 505 300 0042	Condensation test  See <a href="#">WI No 22</a>

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Image	Description	Use / Remarks
	RING N°1 Ø 29.51 5190073	Fixing middle case on tool
	RING N°2 Ø 31.51 5190074	Fixing middle case on tool
	RING N°3 Ø 26.80 5190075	Fixing middle case on tool
	RING N°4 Ø 28.01 5190076	Fixing middle case on tool
	RING N°5 Ø 30.90 5190077	Fixing middle case on tool

Image	Description	Use / Remarks
	RING N°6 Ø 33.41 5190078	Fixing middle case on tool
	RING N°7 Ø 30.70 519 0079	Fixing middle case on tool
	RING N°8 Ø 32.30 519 0081	Fixing middle case on tool
	ROUND CONICAL HEAD CUTTER 5280217	Remove burr after drilling
	BURR REMOVER 5140054	Remove burrs after cutting thread

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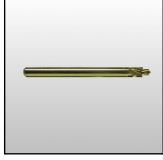


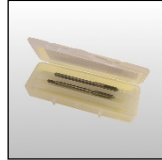
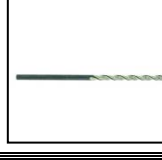



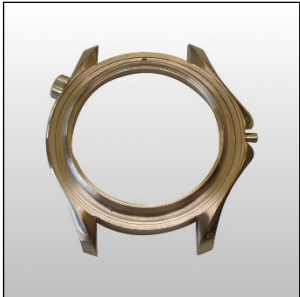


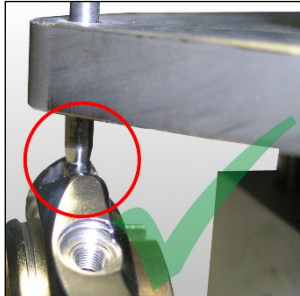
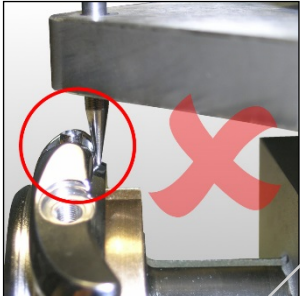
Image	Description	Use / Remarks
	HAND WRETCH 5150006	Cut the thread
	TWIST DRILL BIT TITEX ALPHA XE Ø 2.00 MM 523W001594	Drill out soldered tubes
	CUTTERS WITH PIVOTS 5160191	Removing of external tube remains
	LABORATORY OVEN E27/300S	Drying of glue
	ULTRASON WITH HEATING ELMASONIC S30H 5054000060	Cleaning of the case

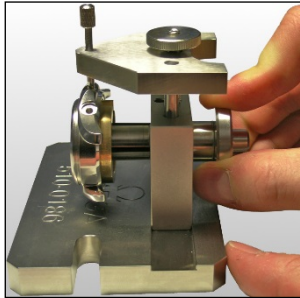
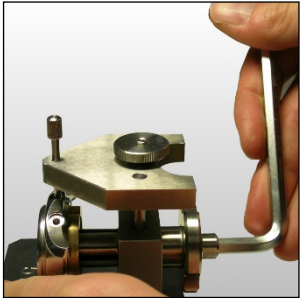

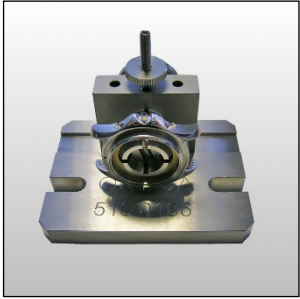
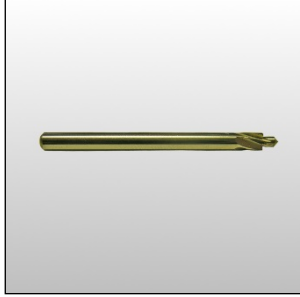
Image	Description	Use / Remarks
	TAB SET 5160103	Cut the thread
	TWIST DRILL BIT TITEX ALPHA XE Ø 2.30 MM 523W001595	Drill out soldered tubes
	HEXAGON KEY 6 5140208	Fix the case
	BEE-WAX 1562-J 5045011	Grease the tabs

### REPLACEMENT OF SOLDERED TUBES ON SEAMASTER





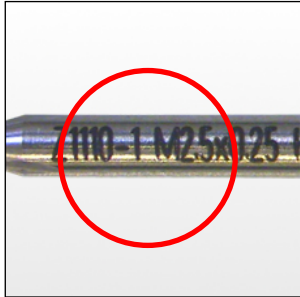
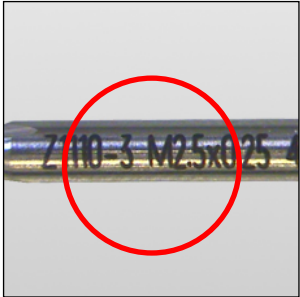
## 2. Tube conversion (soldered to screwed) on Seamaster 120M, 200M and 300M

Description / Step	Remark	Specific tools	Picture 1	Picture 2
1. Prepare the case for tube exchange: Remove case back, crystal, bezel and gaskets				
2. If the tube is not damaged:	If the tube is not damaged: Remove the damaged part by using a flat head cutter. Then, remove burs with a conical head cutter	TOOL FOR TUBE EXCHANGE 5100186		
3. Place the case on the tool and center the tube with the help of the guide stem.	Picture 1 is <b>ok</b> if the pin is well centered. Picture 2 is <b>ko</b> if the pin is not well centered.			

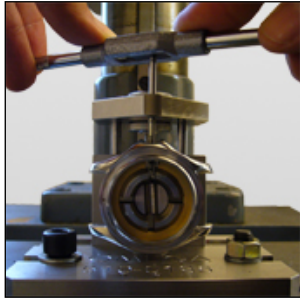
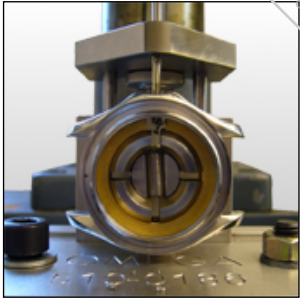



#### REPLACEMENT OF SOLDERED TUBES ON SEAMASTER

Description / Step	Remark	Specific tools	Picture 1	Picture 2
4.	When the pin has been well centered, fix the case.	HEXAGON KEY 6 5140208		
	Remove the upper part of the tool			
	Remove the external tube remains with the flat head cutter	Cut tube remains off and makes it even with the case. (Do not cut into the case!)	FLAT HEAD CUTTER WITH GUIDE PIN 516 0191	



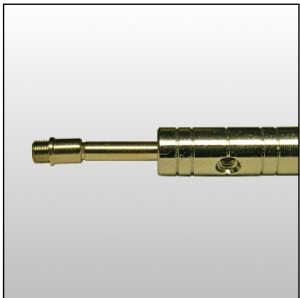


#### REPLACEMENT OF SOLDERED TUBES ON SEAMASTER

Description / Step	Remark	Specific tools	Picture 1	Picture 2
5. Drill the soldered tube out. 1 <sup>st</sup> step: Drill size: 2.00 mm (see page 11 and 12) 2 <sup>nd</sup> step: Drill size: 2.30mm	Drill until 2.30mm	TWIST DRILL BIT TITEX ALPHA XE Drill 2.00 mm 523W001594 Drill 2.30 mm 523W001595		
6. Remove the burr with a round Conical head cutter		ROUND CONICAL HEAD CUTTER 5280217		
7. Fit again the upper part of tool ref. 5100186				
8. Cut the thread with 2 tread-cutters (tabs).  <ul style="list-style-type: none"> <li>Pre-cut with tab 1</li> <li>Final cut with tab 3</li> </ul>	Start always with tab 1.	TAB SET 5160103		


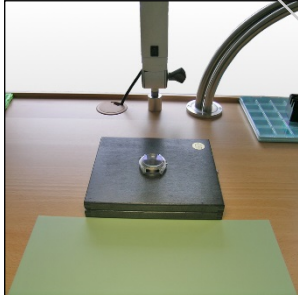



### REPLACEMENT OF SOLDERED TUBES ON SEAMASTER

Description / Step	Remark	Specific tools	Picture 1	Picture 2
<p>Cut the thread with 2 tread-cutters (tabs).</p> <ul style="list-style-type: none"> <li>Pre-cut with tab 1</li> <li>Final cut with tab 3</li> </ul>	<p>Cut cautiously by adding a slight pressure on the cutter, for- and backwards.</p> <p>Remove burrs and metal particles.</p> <p>Trick: Put some bee wax on the tread-cutters.</p>	<p>TAB SET 5160103</p> <p>BEE WAX 5045011</p>		
<p>Make sure that the thread is well cut (same as picture 1)</p>	<p>If not, exchange case middle part.</p>			
<p>9. Remove the case from tool</p>				
<p>10. Remove the burrs on inner side of tube</p>		<p>BURR REMOVER OR CUTTER 514 0054</p>		

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	<p>When the case is ready, please clean it using the ultrasonic</p>		<p>ULTRASON WITH HEATING ELMASONIC S30H 505 400 0060</p>		
11	<p>a) Apply the adhesive to the outer thread on the tube. b) Tighten 2/3, unscrew 1/3 and then tighten completely.</p>	<p>Quantity of glue as shown on picture 1 (ca. 4 complete thread revolutions minimum)</p>	<p>A) LOCTITE 586 504W00635 B) 6-SIDED TOOL 5022000004 or 5100356</p>		
12	<p>Remove the excess glue inside and/or outside the case, with a cloth. (Ref. 5170187 or 5170186)</p>				

### REPLACEMENT OF SOLDERED TUBES ON SEAMASTER

Description / Step	Remark	Specific tools	Picture 1	Picture 2
<b>13</b>	Drying of glue  a) 60 min. with 60°C ...or b) 6h at room ambient temperature	Oven or heater temperature of 60° Celsius		
<b>14</b>	After casing, it is imperative to carry out the vacuum/air pressure tests described in <a href="#">WI No 22</a>	PROOFMASTER S 220/230V 505 300 2002 PROOFMASTER S 110/130V 505 300 2003		
	In case of doubts or uncertainty, the water/condensation tests can be carried out with the case alone, before casing.	NATATOR 125 505 300 5557 ROXER PLAROX PR 1 220/230V 505 300 0041 ROXER PLAROX PR 1 110/130V 505 300 0042		

**REPLACEMENT OF SOLDERED TUBES ON SEAMASTER**

**3. Drillings information and tube list**

Reference 055...	Material	Ring	Drilling diameter		Tube 090ST...
1681501	DA, DP, ST	1	2.00 mm	2.30 mm	4205
1681502	DA, ST, SU	4	2.00 mm	2.30 mm	4205
1681503	DA, ST, SU	2	2.00 mm	2.30 mm	4205
1681601	ST, DA	1	2.00 mm	2.30 mm	4205
1681602	DA, ST, SU	4	2.00 mm	2.30 mm	4205
1681603	DA, ST, SU	2	2.00 mm	2.30 mm	4205
1681611	ST	1	2.00 mm	2.30 mm	4203
1681612	ST	4	2.00 mm	2.30 mm	4205
1681613	SU	5	2.00 mm	2.30 mm	4203
1681614	ST	1	2.00 mm	2.30 mm	4203
1681615	ST	4	2.00 mm	2.30 mm	4203
1681617	DC, ST	2	2.00 mm	2.30 mm	4203
1681618	SU	5	2.00 mm	2.30 mm	4203
1681621	ST	1	2.00 mm	2.30 mm	4203
1681622	DA, ST, SU	4	2.00 mm	2.30 mm	4203
1681623	DA, ST, SU	2	2.00 mm	2.30 mm	4203
1681624	ST	1	2.00 mm	2.30 mm	4203
1681625	ST	1	2.00 mm	2.30 mm	4203
1681626	SU	2	2.00 mm	2.30 mm	4203
1681627	ST	2	2.00 mm	2.30 mm	4203

### REPLACEMENT OF SOLDERED TUBES ON SEAMASTER

Reference 055...	Material	Ring	Drilling diameter		Tube 090ST...
1681628	ST	4	2.00 mm	2.30 mm	4203
1780504	DA, TI, ST, SU	8	2.00 mm	2.30 mm	4203
1780514	DA, ST, SU	8	2.00 mm	2.30 mm	1235
1961501	DA, ST	1	2.00 mm	2.30 mm	4205
1961502	DA, ST, SU	4	2.00 mm	2.30 mm	4205
1961503	DA, ST, SU	2	2.00 mm	2.30 mm	4205
1961516	ST	1	2.00 mm	2.30 mm	4205
1961522	DA, ST, SU	4	2.00 mm	2.30 mm	4203
1961523	DA, ST, SU	2	2.00 mm	2.30 mm	4203
1961524	ST	2	2.00 mm	2.30 mm	4203
1961525	ST	4	2.00 mm	2.30 mm	4203
1961526	ST	1	2.00 mm	2.30 mm	4205
1961536	ST	1	2.00 mm	2.30 mm	1235
2681501	DA	1	2.00 mm	2.30 mm	4205
2961501	DA	1	2.00 mm	2.30 mm	4205
1750504	ST	1	2.00 mm	2.30 mm	4203
1750514	ST	1	2.00 mm	2.30 mm	1235



**2.0 CASES AND BRACELETS  
WORKING INSTRUCTION N° 52**

**22.08.2017**

**REPLACEMENT OF SOLDERED TUBES ON SEAMASTER**

**4. History of modifications**

CHANGES OF THE DOCUMENT		
Date	Made	Modifications
22.08.2017	Selrom	All modifications are highlighted in cyan

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