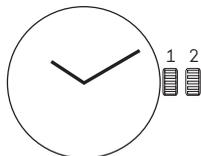
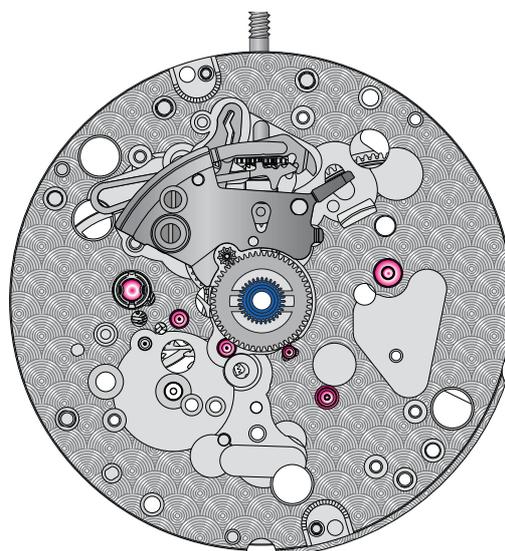
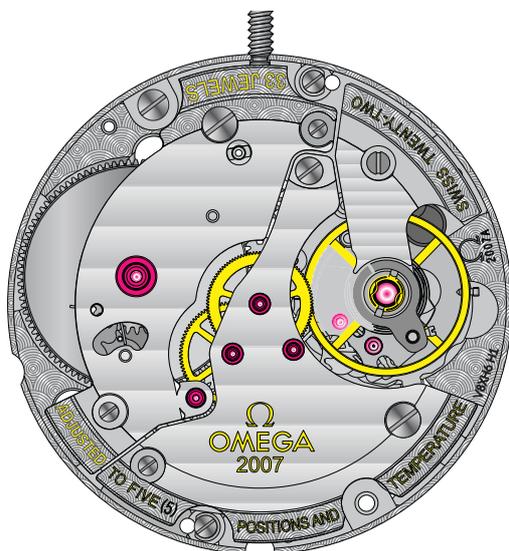


	Technical Guide		TG-19-C-054-E	B
	Made by: pelrom	Date: 08.01.2009	3	Modifications: See last page

CALIBRE 2007A

	Version A
$11\frac{1}{2}'''$ Ø 25,60 mm	
Height on movement	3.30 mm
Power reserve	48 h
Number of rubies	22
Frequency	3.5 Hz (25'200 A/h)



Manual winding movement with Co-Axial escapement, 2-hand display hours and minutes, Omega balance system without index.

	Page
Calibre 2007A	1
General information for Calibre 2007	3
Measuring instruments / tightening and untightening torque according to screw-thread size / Exploded views / Tools / Lubrificants	3
Technical modifications on version «A»	4
Spare parts list for Calibre 2007	5-6
Spare parts list	5
Spare parts list	6
Specific information for Calibre 2007	7-9
Escapement system installation	7
Balance bridge installation / Balance bridge dismantling	7
Hand fitting height	8
Pins and hand setting force / Components not requiring epilam coating	8
Instantaneous rate	9
Modifications of Technical Guide versions for Calibre 2007	10

Measuring instruments depending on operation type

Operation	Minimum equipment required	Comments
Full or partial maintenance service Co-Axial 3.5 Hz	- Watch Expert II (White case) - Chronoscope M1 (current version) - Chronoscope S1	
Rate adjustment on new watches: (Co-Axial 3.5 Hz)	- Watch Expert (red case) - Wicomètre Professionnel - Chronoscope M1 (former version)	Important: The amplitude will not be indicated precisely. This is acceptable for the rate adjustment only!

Tightening and untightening torque according to screw-thread size

Screw Ø	Tightening torque target cNm	Untightening torque mini cNm
Ø threads ≤ S 0.50 mm	1.0	0.7
Ø threads S 0.6 mm	1.4	0.8
Ø threads S 0.7 mm	1.8	0.9
Ø threads S 0.8 mm	2.2	1.1
Ø threads S 0.9 mm	2.6	1.3
Ø threads S 1.0 mm	3.0	1.6
Ø threads S 1.2 mm	3.5	2.0
Ø threads S 1.4 and >	4.0	2.5



Exploded views

Please refer to Calibre 2500C for the assembly phases and lubrication points.

Co-axial Escapement lubrication

See Working Instruction No 40.

Hand fitting

To fit the hands, the movement must be placed in a suitable, well-adjusted movement holder.

Tools

	Ref.
Movement holder for fitting hands	507 0017
Mainspring winder	502 150 0009
Timing key	502 200 0501
Tool for checking the escapement functions	506 0002
Hand fitting tool kit	507 0011

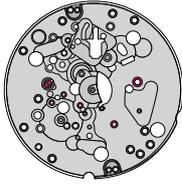
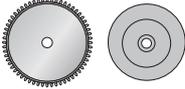
Lubricants

	Ref.
Moebius SYNT-A-LUBE 9010 (2ml)	504 200 0001
Moebius HP-500	504 5012
Moebius SYNT HP-1300 Sans Colorant	504 5013
Moebius 9504	504 5014

Technical modifications on version «A»

Intermediate escape wheel				
Old version	Risk	New version	Improvements	Notes
7222500C30039	Black residues within the engagement can cause low amplitude or a stop of the watch. The old version is yellow.	7222500C30039	Improvement of surface and material. The new version is grey. Available since 21/2008	The new version must automatically be assembled if black residues within the engagement are visible.
				

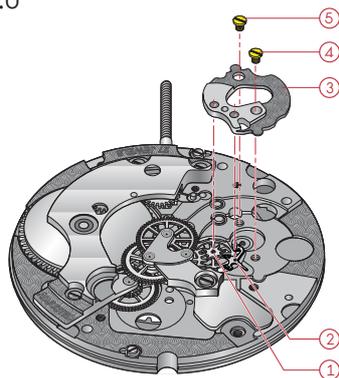
Spare parts list for Calibre 2007

Main plate, pre-assembled	Version	Reference	Intermediate wheel	Version	Reference
	2007	7222007A1002007		2007	722112030012
Barrel bridge, pre-assembled	Version	Reference	Intermediate train wheel	Version	Reference
	2007	7222007A1004107		2007	722112030025
Wheel train bridge, pre-assembled	Version	Reference	Seconds wheel	Version	Reference
	2007	7222007A1004807		2007	7222300A30027**
Balance bridge	Version	Reference	Intermediate escapement wheel	Version	Reference
	2007	7222007A1005824		2007	7222500C30039
Minute wheel train bridge	Version	Reference	Co-Axial wheel	Version	Reference
	2007	722112010062		2007	7222500C30040
Pallet fork bridge, pre-assembled	Version	Reference	Ratchet wheel	Version	Reference
	2007	72225001005707		2007	7222007A31020
Dial fastener	Version	Reference	Crown wheel	Version	Reference
	2007	722112010300		2007	7222007A31023
Barrel complete	Version	Reference	Intermediate crown wheel	Version	Reference
	2007	7222007A20010		2007	7222007A31024
Drum and cover for barrel	Version	Reference	Minute wheel	Version	Reference
	2007	7222007A20030		2007	722112031041
Barrel arbour	Version	Reference	Hour wheel, fitted	Version	Reference
	2007	7222007A20060		2007	722112031046**
Mainspring	Version	Reference	Cannon pinion with driving wheel	Version	Reference
	2007	7222007A2010019		2007	7222007A31083**

Spare parts list for Calibre 2007

Intermediate wheel	Version	Reference	In-setting, upper	Version	Reference
	2007	722112031100		2007	7222500C70641
Winding pinion	Version	Reference	Cap jewel, upper	Version	Reference
	2007	7222007A31120		2007	722112070900
Sliding pinion	Version	Reference	Cap jewel, lower	Version	Reference
	2007	7221120311211		2007	722112070901
Pallet fork	Version	Reference	Shock-absorber spring, upper	Version	Reference
	2007	7222500C40010		2007	722112078004
Complete studded balance	Version	Reference	Shock-absorber spring, lower	Version	Reference
	2007	7222500C4005021		2007	722112078005
Stud support	Version	Reference	Centre tube	Version	Reference
	2007	7222500B40200		2007	722112080400
Winding stem	Version	Reference	Click plate	Version	Reference
	2007	72211205101021		2007	7222007A81036
Yoke	Version	Reference	Screw for barrel bridge	Version	Reference
	2007	722112051050		2007	72211203503
Setting lever	Version	Reference	Screw for balance bridge	Version	Reference
	2007	72211205108006		2007	72211203503
Setting lever jumper	Version	Reference	Screw for setting lever jumper	Version	Reference
	2007	722220251091		2007	72211203503
Click	Version	Reference	Screw for automatic device	Version	Reference
	2007	7222007A51120		2007	72211203503
Operating lever for date corrector	Version	Reference	Screw for minute wheel train bridge	Version	Reference
	2007	722112053022		2007	72211203503
Click spring	Version	Reference	Screw for date jumper maintaining plate	Version	Reference
	2007	7222007A61080		2007	72211203503
Jewelled shock-absorber, upper	Version	Reference	Screw for click plate	Version	Reference
	2007	7222500C70530		2007	72211203509
Jewelled shock-absorber, upper	Version	Reference	Screw for pallet fork bridge	Version	Reference
	2007	7222500C70531		2007	72225003511
In-setting, upper	Version	Reference	Click screw	Version	Reference
	2007	7222500C70640		2007	7222007A3550

Fig. 1.0



1.0 Assembling of the escapement system

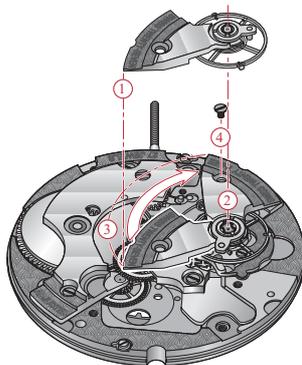
Key points

The order of assembly must be respected.
After assembling, the escapement functions must be checked accurately with the corresponding tool.

The pallet bridge positions the co-axial wheel and the pallet fork. To ensure the functioning of the escapement it is necessary to respect the following order of assembly:

1. Position the co-axial wheel.
2. Position the pallet fork.
3. Position the pallet bridge, screw no (4) must be correctly placed in their beds.
4. To position the pallet bridge, screw no (4) must be fixed first.
5. The second screw (5) fixes the bridge.

Fig. 2.1

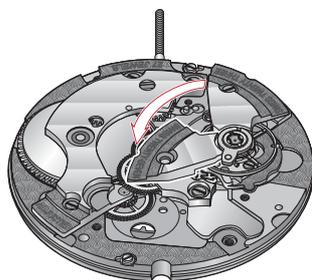


2.1 Assembling of the balance bridge

As the table roller is under the pallet fork, the balance must be assembled carefully.

1. Position the complete balance bridge (with balance). The bridge is pointing towards the center of the movement.
2. Check the position of the balance. The pivot of the balance-staff must be correctly placed in its bed.
3. Carefully turn the bridge to its normal position.
4. Fix the bridge with its screw.

Fig. 2.2



2.2 Disassembling of the balance bridge

The balance bridge must be disassembled by removing the parts in the opposite order of procedure 2.2. To avoid any risk of damaging the balance, the bridge has to be turned towards the center of the movement. In this position the bridge may be removed without any risk.

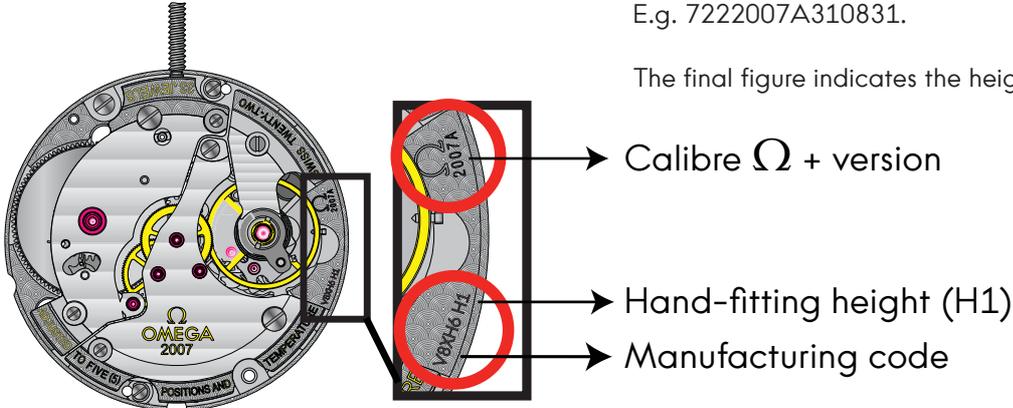
2.2 Hand height

A star next to a supply reference in the parts list means that several hand heights exist.
E.g. 7222007A31083*.

Movement spare parts should be ordered as follows:
E.g. 7222007A310831.

The final figure indicates the height of the wheel.

Fig. 2.2



3.0 Pins and hand setting force

Description	Movement holder	Nbr. of hand setting pins	Minimum force (N)	Maximum force (N)	Support (pivot)
Hour hand	507 0017	5	10	55	no
Minute hand		1	10	55	no

4.0 Epilame coating

4.1 Components that should not be epilam-treated after cleaning

Description	Reference	
Balance assembled on the balance bridge	4005021 + 1005824°	
Complete studded balance	4005021	
Co-Axial pallet fork	40010	
In-setting, upper *	70640	
In-setting, lower *	70641	
Pallet fork bridge, pre-assembled	1005707	
Barrel, complete **	20010	
Mainspring	2010019	

* Do not treat the shock-absorber settings with epilam; the end-stones should however be treated.

** Do not treat the complete barrel with epilam, only the drum, cover and arbour separately.

For additional information see Working Instructions No 27.

5.0 Instantaneous rate

5.1 Control of instantaneous rate

Demagnetise the movement according to Working Instruction 34.

The rate is controlled by acoustic measurement with a Chronoscope M1 or similar measuring tool. It is **important** to programme the instrument with a lift angle of 38 degree

Please consult Working Instructions 5 and 28 for instructions and tolerances.

Measure particularities according to instrument type used

Instrument type	Co-Axial 3.5 Hz calibres	Comments
Former Witschi instruments - Watch Expert (red case) - Wicomètre Professionnel - Chronoscope M1 (former version)	Lift angle set to 38°	3.5 Hz calibres: The frequency parameters (25'200 A/h) should be set manually so that the instantaneous rate is displayed correctly.
	The amplitude is not measured correctly	
New Witschi instruments - Watch Expert II (white case) - Chronoscope M1 (updated version) - Chronoscope S1	Lift angle set to 38°	Test mode: Parameters must be set for «Spe1»!
	All measurements are correct	

Fig. 5.0

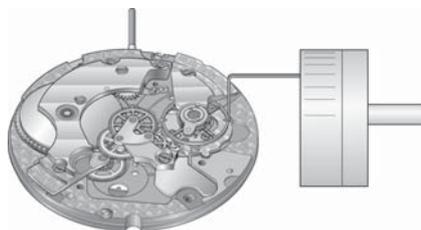
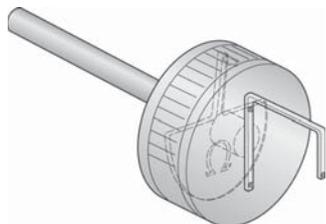
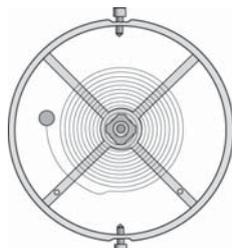


Fig. 5.1



REF. 502 200 0501

Fig. 5.2



5.2 Rate adjustment

A special timing key tool has been developed to adjust the rate even when the movement is cased in. The rate can be corrected according to the table below by turning the two balance screws a complete turn. A scale is found on the outside of the tool. A division corresponds to one correction (according to the table below).

One screw is located between two arms on the balance which are specially marked by points (see Figure 5.2) for easy identification of each screw during the correction process.

Balance

The annular balance has two adjusting micro-screws. A slow rate deviation is corrected by tightening the micro-screws (towards the centre of the balance), which reduces its moment of inertia and makes it run faster. A fast rate deviation is corrected by loosening the micro-screws (away from the centre of the balance). This increases its moment of inertia and makes it run slower.

Important:

The rate is always corrected using **both adjustment screws** to prevent an unbalance of the balance.

One correction turn = 86 seconds

One division = 1.7 seconds

Modifications of Technical Guide versions for Calibre 2007

Technical Guide versions			
First version:	02.10.2007	Version A	Made by:
Last version:	08.01.2009	Version B	

Modifications of Technical Guide version B	
Old version (A)	New version (B)
	<ul style="list-style-type: none">- Co-axial Escapement lubrication- Technical modifications on version «A»- Epilame coating