

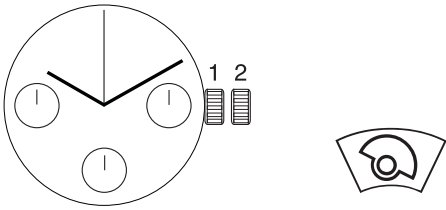


Omega 3220 Movement Parts (2)

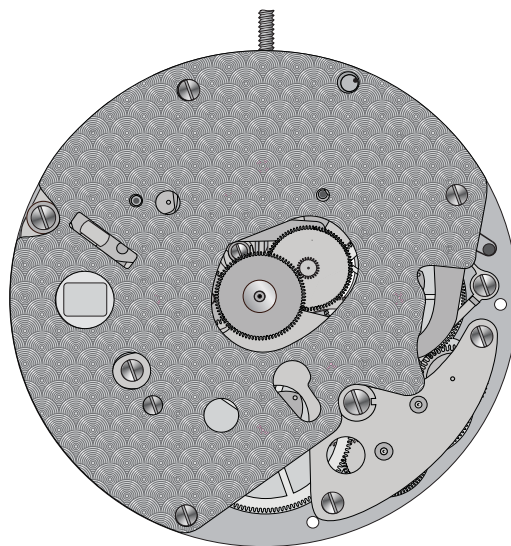
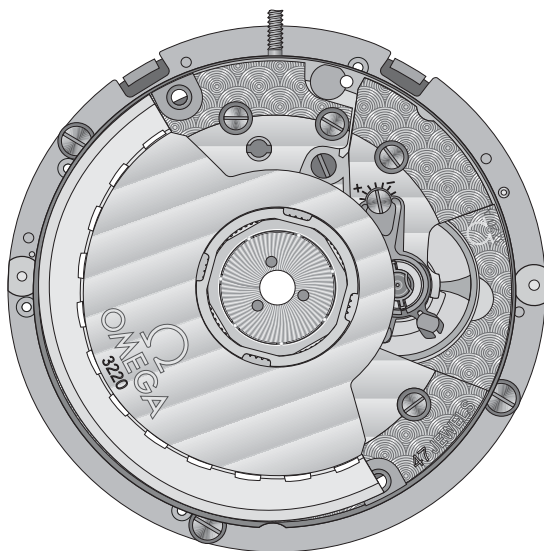
Compiled by EmmyWatch - <https://www.emmywatch.com>

	Technical Guide		TG-19-C-024-E	C
	Produced by: pelrom	Date: 20.09.2010	3	Modifications: see last page

CALIBRE 3220

$13\frac{1}{4}'''$ Ø 30 mm	Version A 
	Height on movement Power reserve Number of jewels Frequency Lift angle

EMMYWATCH
VINTAGE RESTORATIONS



Automatic movement with chronograph. Swiss lever escapement, minute counter (30 min.) at 9 o'clock, hour counter (12 h) at 6 o'clock + small second at 3 o'clock. Glucydur balance with Etachron system.
Display of hour, minute and second in centre.



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	Page
Calibre 3220	1
General information for Calibre 3220	3
Basic movement assembly	3
Lubricating the Swiss-lever escapement	3
Measuring instruments	3
Tightening and untightening torques according to screw thread	3
Mandatory tools / Lubricants	3
Exploded views for calibre 3220	4-16
Assembly - chronograph module	4-16
Specific information for calibre 3220	17-22
Disassembling the chronograph module	17
Inspection during re-assembly	17-19
Inspection + adjusting the hammer	19-20
Chronograph System Operation	20
Setting the time / Chronograph Operation	21
Runners for hand setting and hand setting force / Instantaneous rate	22
Spare parts list for calibre 3220	23-32
List and plate for chronograph module supplies	23-27
List and plate for movement supplies	28-31
List of jewels and bushes	32
Modifications of Technical Guide version for Calibre 3220	33

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VINTAGE RESTORATIONS

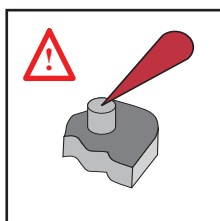
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General information for calibre 3220

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! The chronograph must be dismantled in the Start position (START).

! Some lubrication takes place on the top of pins

Basic movement assembly

See Calibre 1120 Technical Guide

Lubricating the Swiss-lever escapement

See Working Instruction 40.

Measuring instruments depending on operation types

Operation	Minimum equipment required
Rate adjustment after full or partial maintenance service 4 Hz	<ul style="list-style-type: none"> - Watch Expert II (white case) - Chronoscope S1 - Watch Expert (red case) - Wicomètre Professionnel - Chronoscope M1

Tightening and untightening torques according to screw thread

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

Mandatory tools:

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

Hand fitting

Hand fitting tool kit

Movement holder for hand fitting

Reference

507 0011

507 0026

Basic movement

Mainspring winder

ETACHRON stud extraction key

ETACHRON adjustment key

ETACHRON holder

Ball bearing set

Reference

502 150 0009

502 200 0062

502 200 0061

502 100 0311

502 S09 SET

Chronograph

Movement holder (ring)

Reference

502 110 0211

Lubricants

Moebius HP-500

Moebius SYNT HP-1300 Sans Colorant

Molycote DX

Moebius SYNT-A-LUBE 9010 (2ml)

Reference

504 5012

504 5013




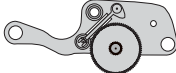

504 100 0052

504 200 0001

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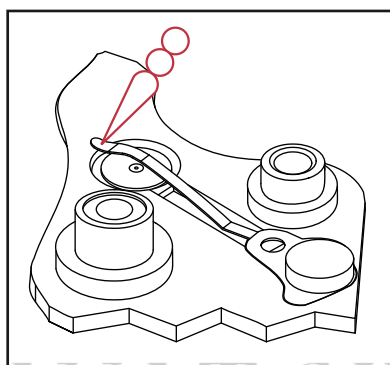
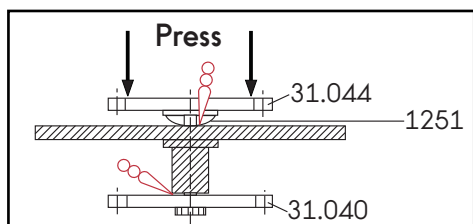


1.0 Parts for assembling

Movement holder	Second train driving wheel	Second train wheel small plate	Screw for second train driving wheel small plate	Additional minute train bridge assembled	Screw for additional minute train
	①	②	③	④	⑤
Ref.	Ref. 30.029	Ref. 15.050	Ref. 3448	Ref. 10.062	Ref. 3445
					

2.0 Pre-lubrication

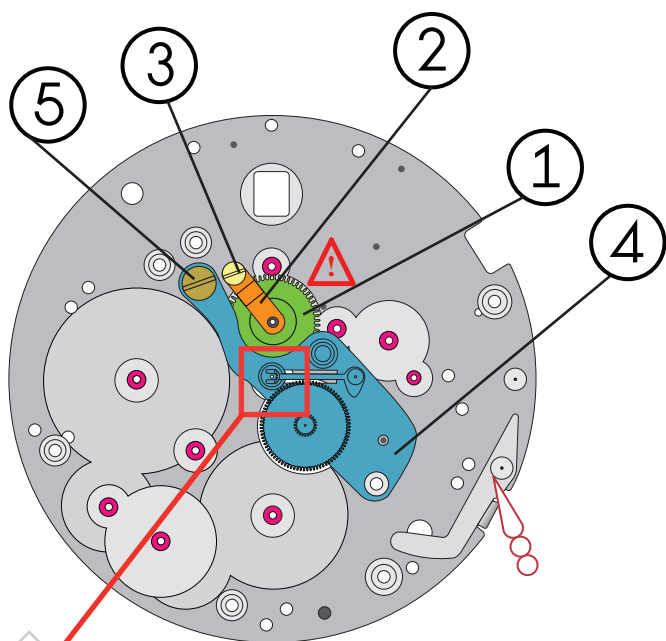
 Moebius SYNT HP-1300 Sans Colorant




EMMY WATCH

VINTAGE RESTORATIONS

3.0 Order of assembly








 Check that the wheel is free (ref. 30.029) use an air blower. Do not lubricate the second gear train driving wheel pivoting.

Check the height of the friction spring (see page 18).

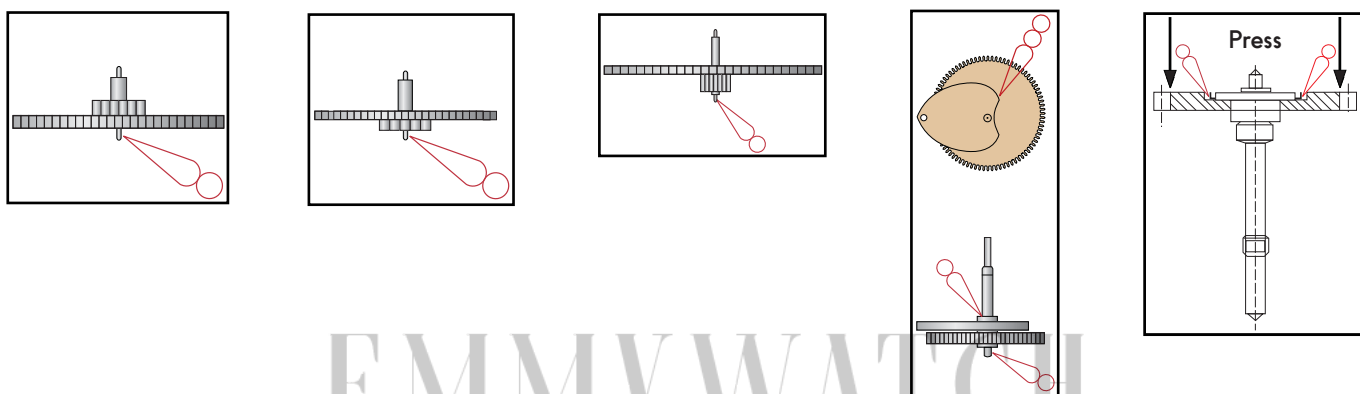


1.0 Parts for assembling

Movement holder	Hour counter intermediate wheel	Hour counter driving wheel	Minute counter driving wheel	Chronograph wheel	Support jewel for center wheel
	①	②	③	④	⑤
Ref.	Ref. 35.033	Ref. 35.031	Ref. 35.013	Ref. 35.010	Ref. 1594
					

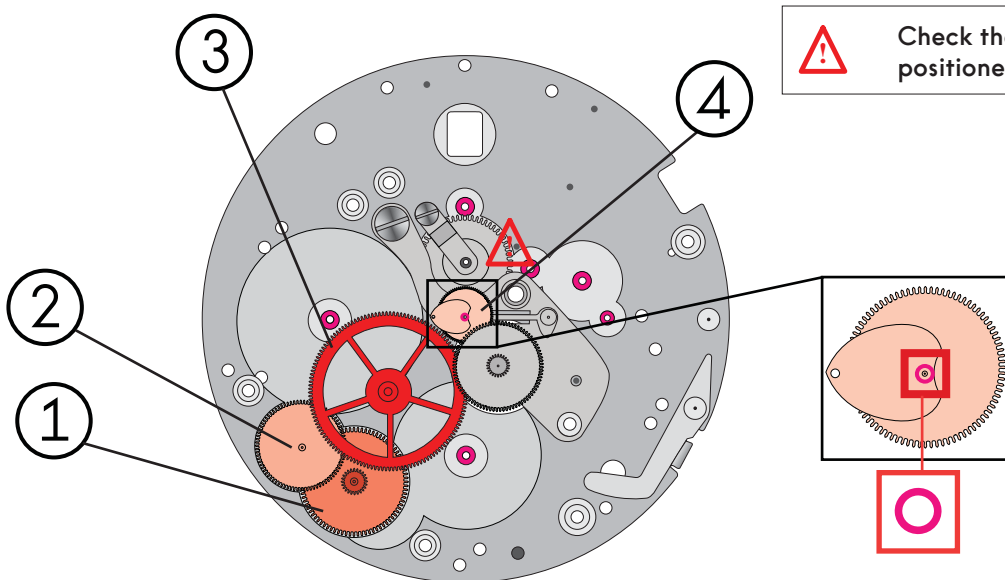
2.0 Pre-lubrication


-  Moebius SYNT HP-500
-  Moebius SYNT HP-1300 Sans Colorant



EMMYWATCH
VINTAGE RESTORATIONS

3.0 Order of assembly






 Check that the friction spring is positioned correctly (see page 18).

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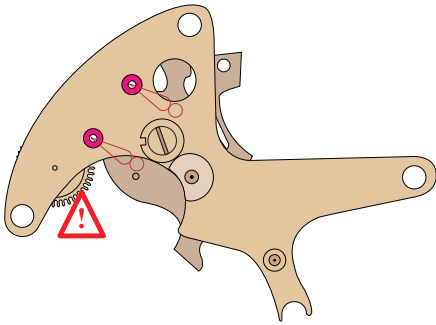
1.0 Parts for assembling

Movement holder	Chronograph bridge	Screw for chronograph bridge	Screw for chronograph bridge
	①	②	③
Ref.	Ref. 10.047	Ref. 3513	Ref. 2837
			

2.0 Pre-lubrication

 Moebius SYNT HP-500

 Check that the wheel is free use an air blower.

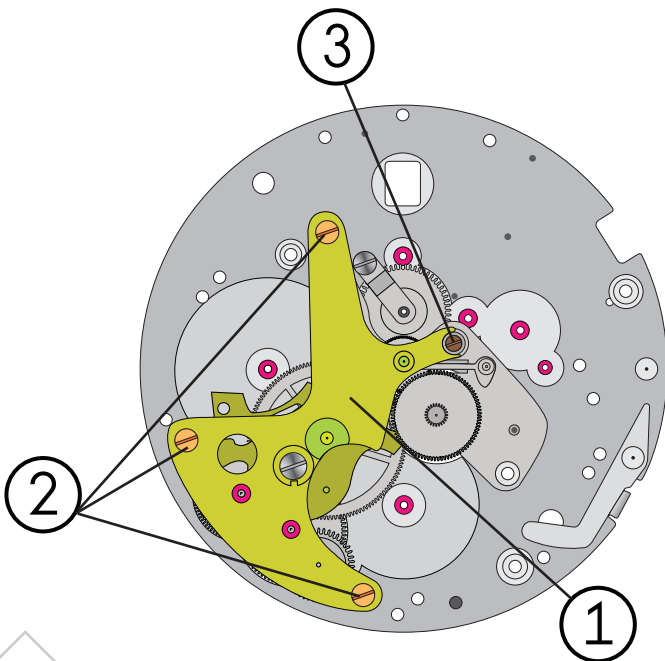


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
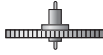

VINTAGE RESTORATIONS

3.0 Order of assembly

 Check the end shake of moving chronograph parts!

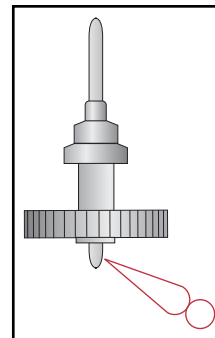
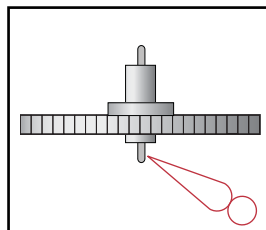
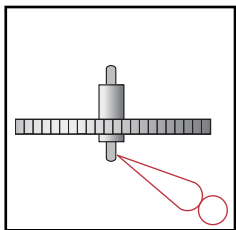


1.0 Parts for assembling

Movement holder	Second wheel driving pinion	Intermediate second wheel	Second pinion
	①	②	③
Ref.	Ref. 1544	Ref. 1542	Ref.30.027
			

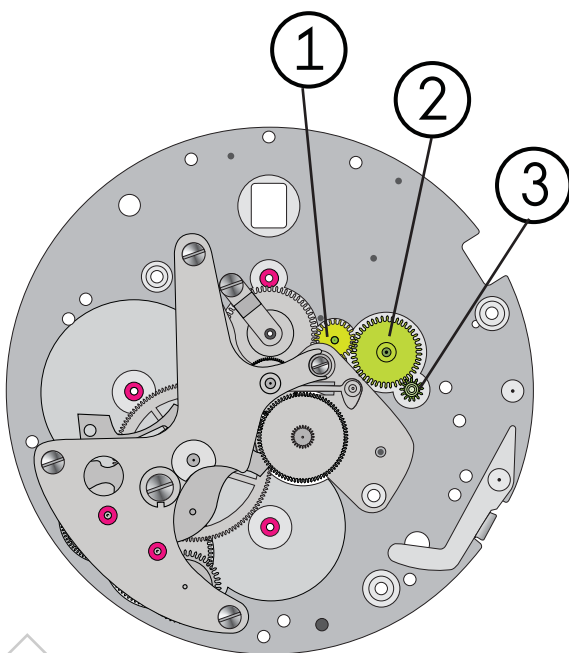
2.0 Pre-lubrication

 Moebius SYNT HP-500

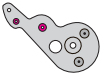




EMMYWATCH
VINTAGE RESTORATIONS

3.0 Order of assembly

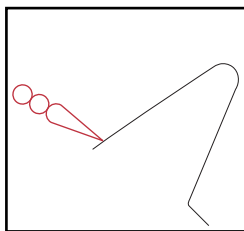
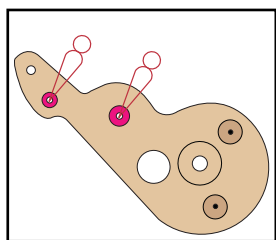


1.0 Parts for assembling

Movement holder	Second train bridge	Screw for second train bridge	Second pinion friction spring
	①	②	③
Ref.	Ref. 15.051	Ref. 3450	Ref. 120
			


2.0 Pre-lubrication

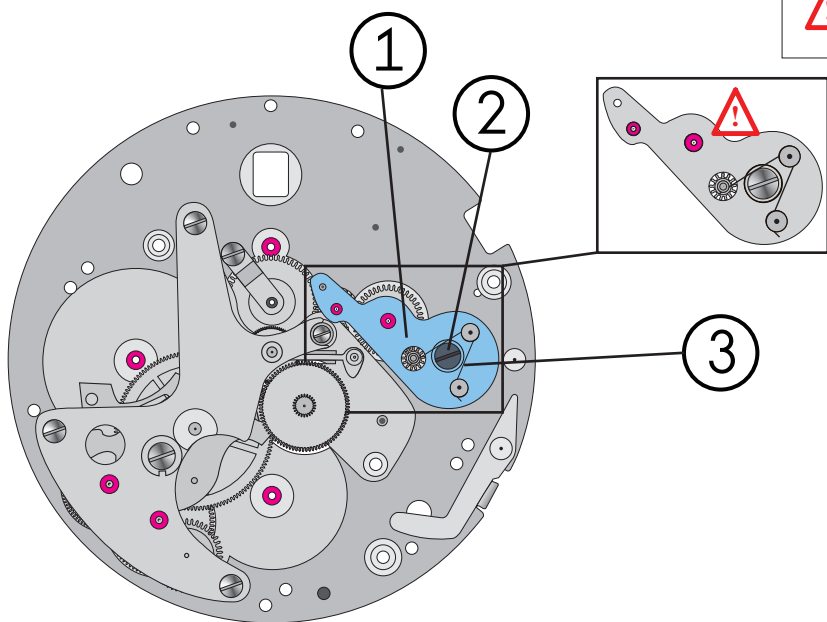
-  Moebius SYNT HP-500
-  Moebius SYNT HP-1300 Sans Colorant








EMMYWATCH
VINTAGE RESTORATIONS

3.0 Order of assembly

 Check the friction spring tension (see page 18) + end shake of moving parts!

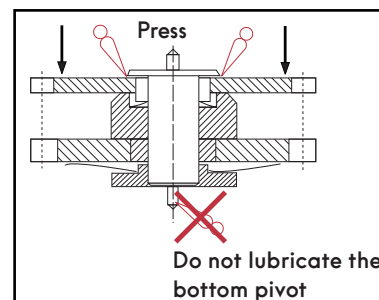
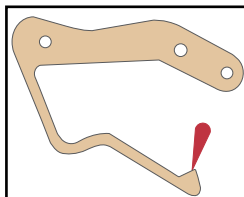
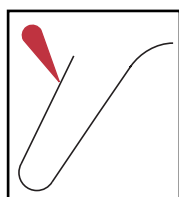
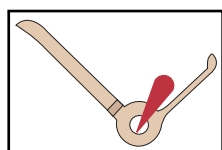


1.0 Parts for assembling

Movement holder	Lock	Screw for lock	Lock spring	Cam jumper	Clutch wheel
	①	②	③	④	⑤
Ref.	Ref. 55.281	Ref. 2838	Ref. 65.210	Ref. 55.138	Ref. 35.062
					

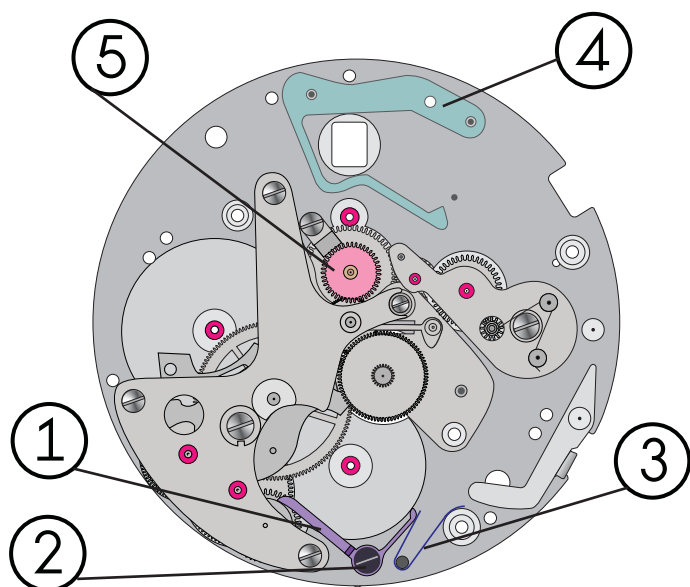
2.0 Pre-lubrication

 Moebius SYNT HP-500
 Molycote DX



EMMYWATCH
VINTAGE RESTORATIONS

3.0 Order of assembly





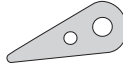


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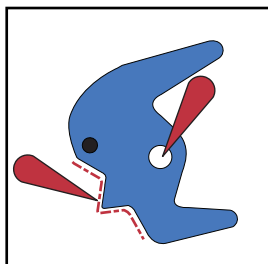
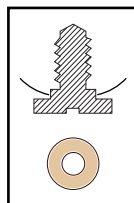
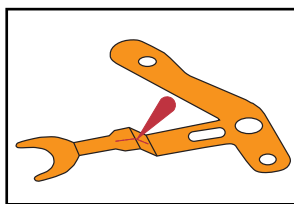
1.0 Parts for assembling

Movement holder	Clutch spring	Clutch spring maintaining washer	Screw for clutch spring and cam jumper	Chronograph cam	Reversing yoke
	①	②	③	④	⑤
Ref.	Ref. 65.046	Ref. 80.282	Ref. 2839	Ref. 55.200	Ref. 55.086
					

2.0 Pre-lubrication


2.1 Pre-assembly

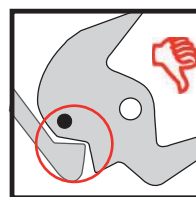
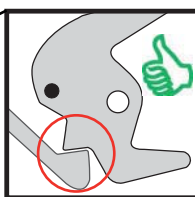
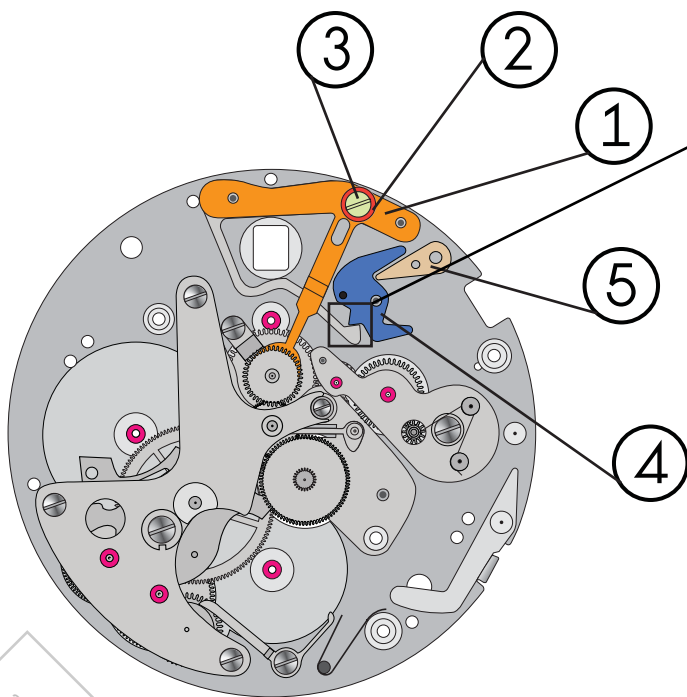
 Molycote DX



EMMYWATCH
VINTAGE RESTORATIONS

3.0 Order of assembly

 Check the uncoupling spring position (see page 19)





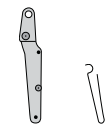


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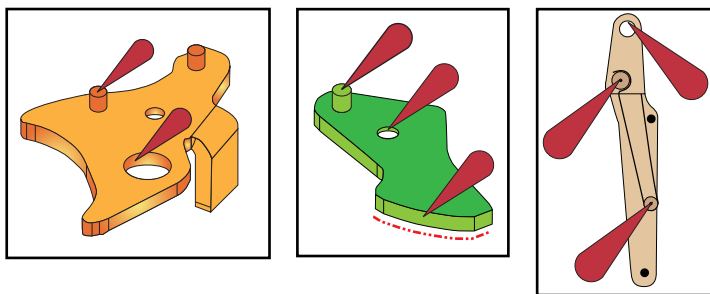


1.0 Parts for assembling

Movement holder	Operating lever, 2 functions	Maintaining ring	Fixing shuttle	Fly-back yoke bolt	Connecting rod + Connecting yoke lever spring
	①	②	③	④	⑤
Ref.	Ref. 55.041	Ref. 1175	Ref. 55.186	Ref. 55.341	Ref. 55.269 + 65.074
					

2.0 Pre-lubrication

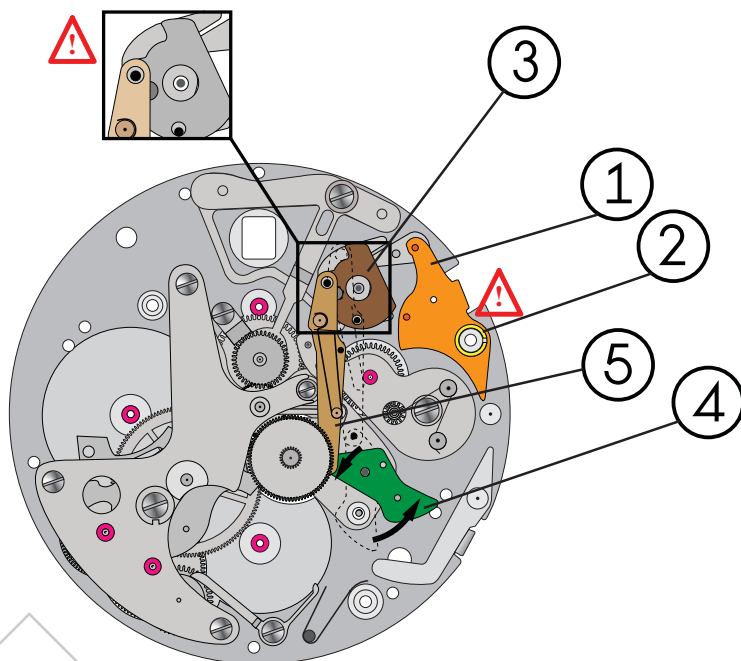
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EMMYWATCH

VINTAGE RESTORATIONS

3.0 Order of assembly



 Make sure the connecting rod is positioned correctly






 Check that the control is free after fitting the maintaining ring.

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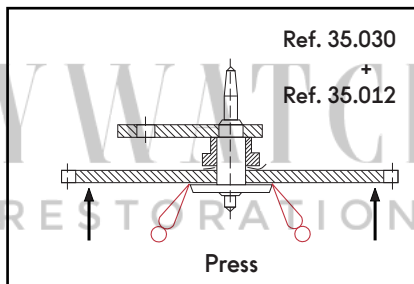
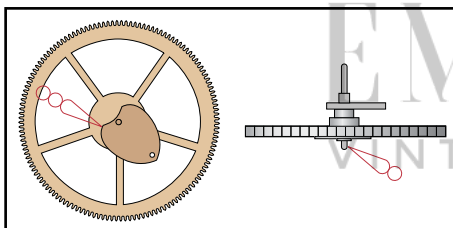
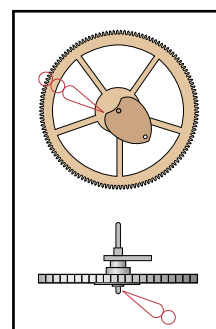
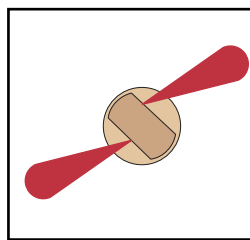
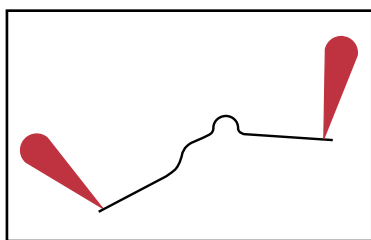
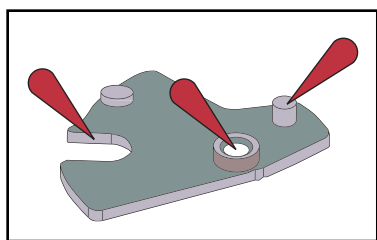


1.0 Parts for assembling

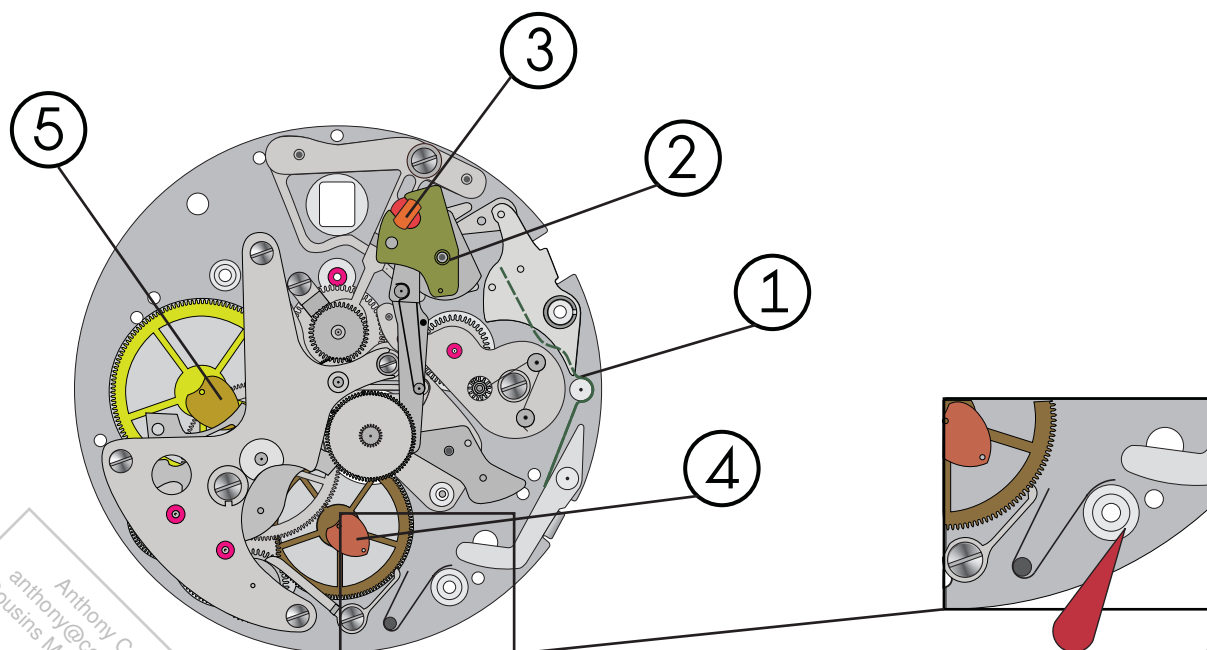
Movement holder	Operating lever spring	Upper wig-wag	Clutch operating lever	Hour counting wheel	Minute counting wheel
	①	②	③	④	⑤
Ref.	Ref. 65.041	Ref. 55.185	Ref. 55.187	Ref. 35.030	Ref. 35.012
					

2.0 Pre-lubrication


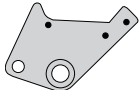
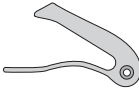

-  Moebius SYNT HP-500
-  Moebius SYNT HP-1300 Sans Colorant
-  Molycote DX




3.0 Order of assembly

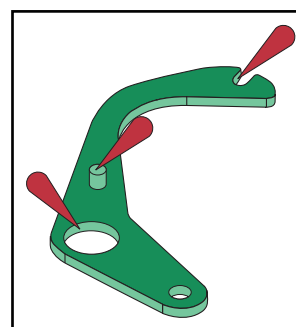
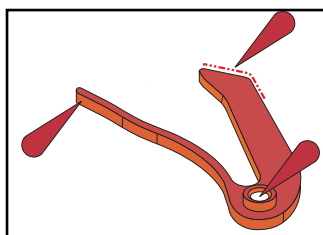
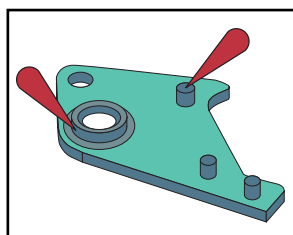
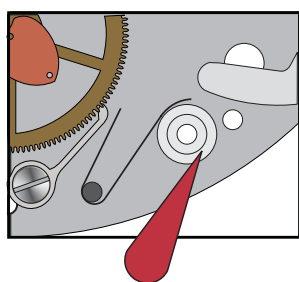


1.0 Parts for assembling

Movement holder	Screw for additional minute train bridge	Fly-back yoke	Fly-back yoke jumper	Hammer operating lever
	①	②	③	④
Ref.	Ref. 3445	Ref. 55.081	Ref. 55.142	Ref. 55.047
				

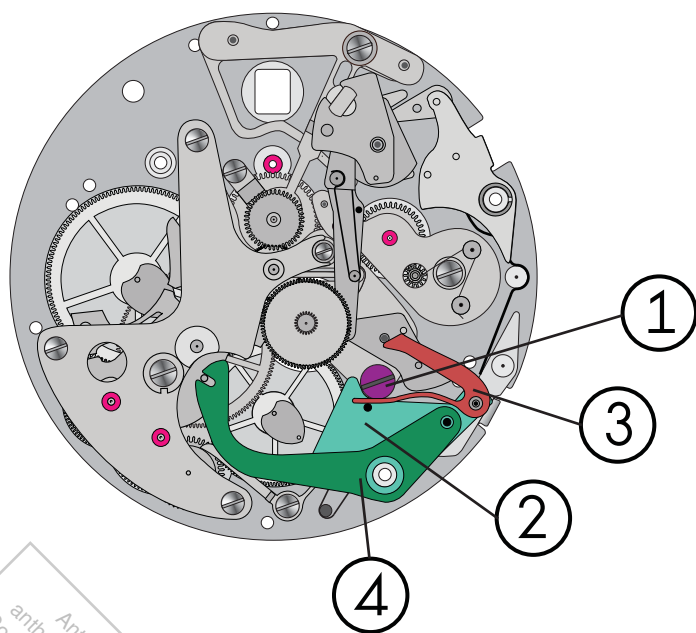
2.0 Pre-lubrication

 Molycote DX



EMMYWATCH
VINTAGE RESTORATIONS

3.0 Order of assembly

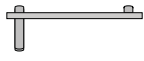
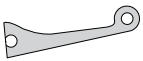
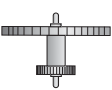



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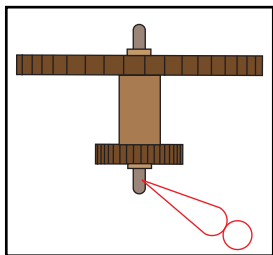
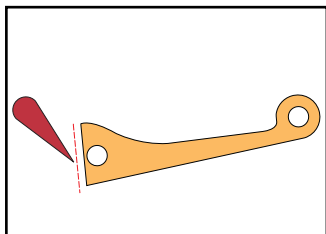


1.0 Parts for assembling

Movement holder	Reversing yoke lever	Connecting rod lever	Chronograph second wheel	Friction spring for minute counter driving wheel
	①	②	③	④
Ref.	Ref. 55.272	Ref. 55.321	Ref. 1543	Ref. 1532
				

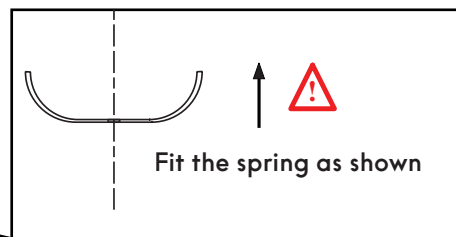
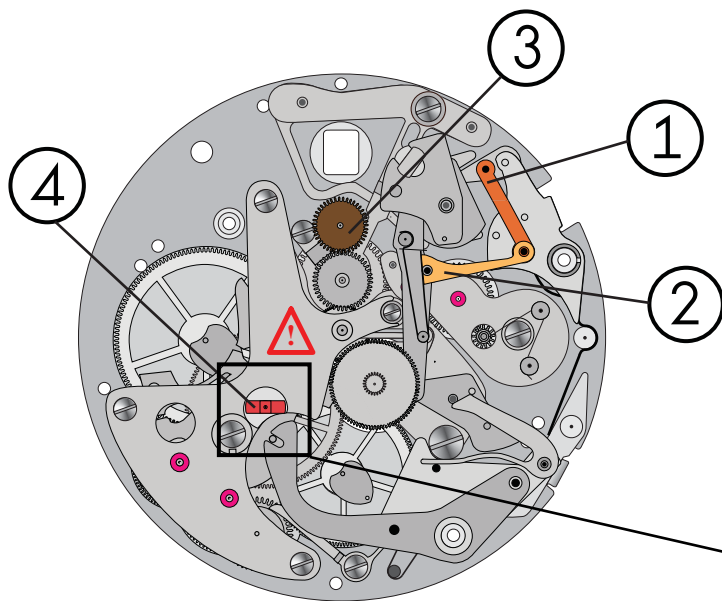
2.0 Pre-lubrication

-  Moebius SYNT HP-500
-  Molycote DX



EMMYWATCH
VINTAGE RESTORATIONS

3.0 Order of assembly



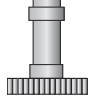


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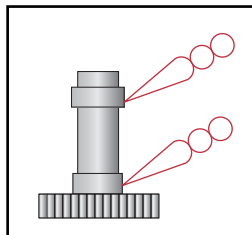
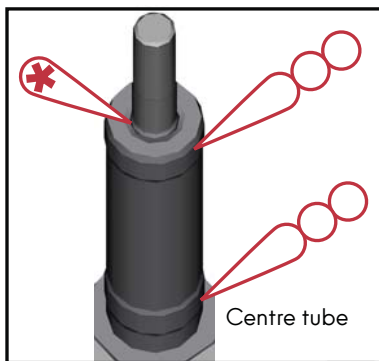


1.0 Parts for assembling

Movement holder	Chronograph mechanism cover	Screw for chronograph mechanism cover	Free cannon pinion
	①	②	③
Ref.	Ref. 15.150	Ref. 2081	Ref. 31.081
			

2.0 Pre-lubrication

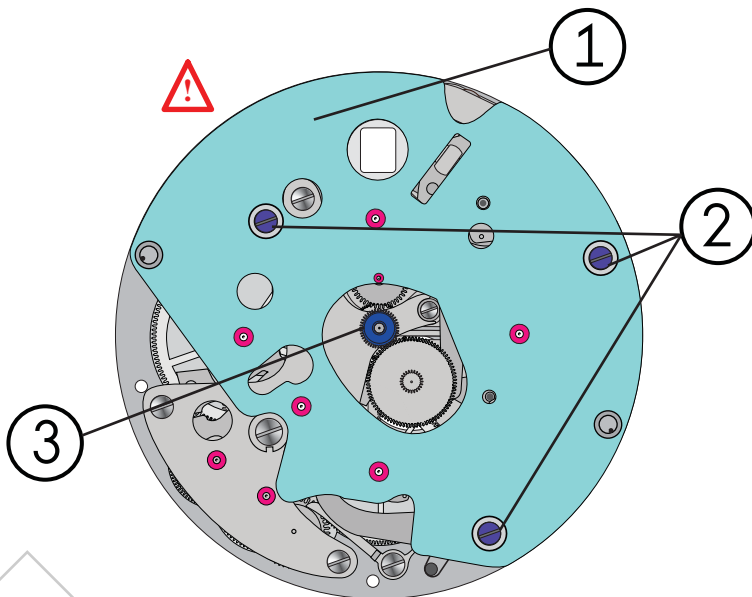
-  Moebius SYNT HP-9010
-  Moebius SYNT HP-1300 Sans Colorant



EMMYWATCH
VINTAGE RESTORATIONS

3.0 Order of assembly

-  Checking end shakes + functions before oiling! Adjustments see pages 19-20





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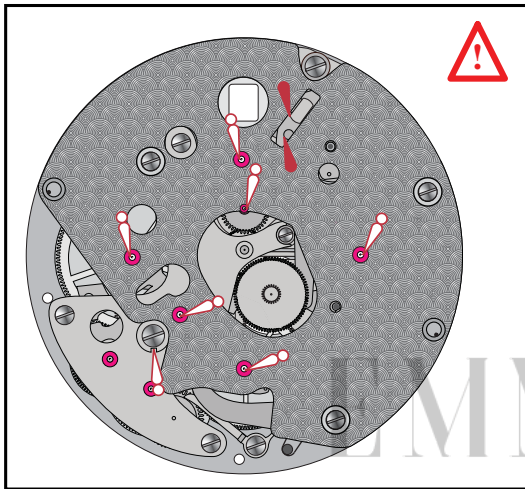
1.0 Parts for assembling

Movement holder	Chronograph hour wheel	Hour wheel friction spring
	①	②
Ref.	Ref. 31.046	Ref. 1449
		

2.0 Pre-lubrication

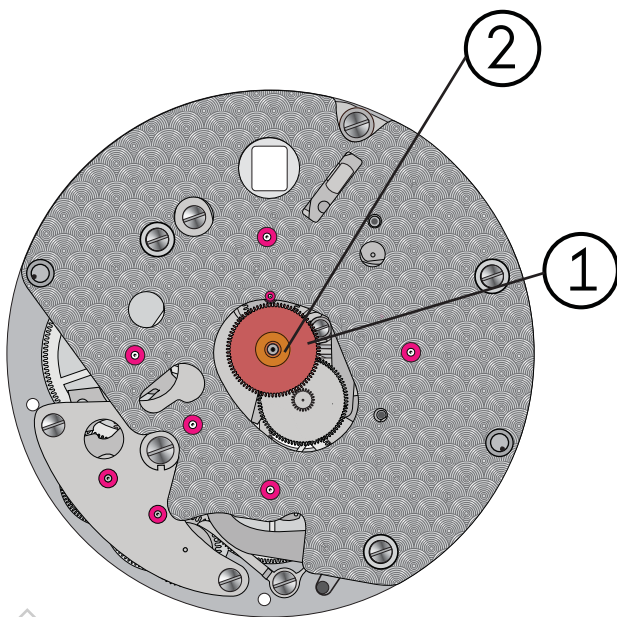
 Moebius SYNT HP-500
 Molycote DX

 Oil only after chrono settings!



JEMMYWATCH
 VINTAGE RESTORATIONS

2.0 Order of assembly



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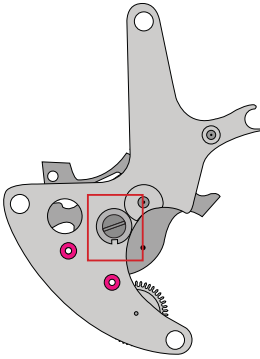
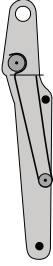
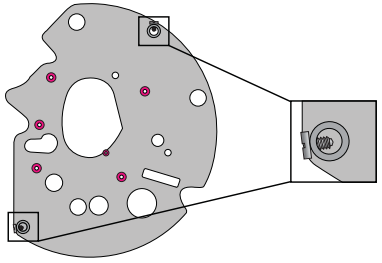
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 23.02.2012



2.0 Disassembling the chronograph module

The chronograph is always disassembled in the START position.

The chronograph module must be completely disassembled. All parts should be cleaned carefully. We do, however, advise you to keep the parts below assembled during cleaning.

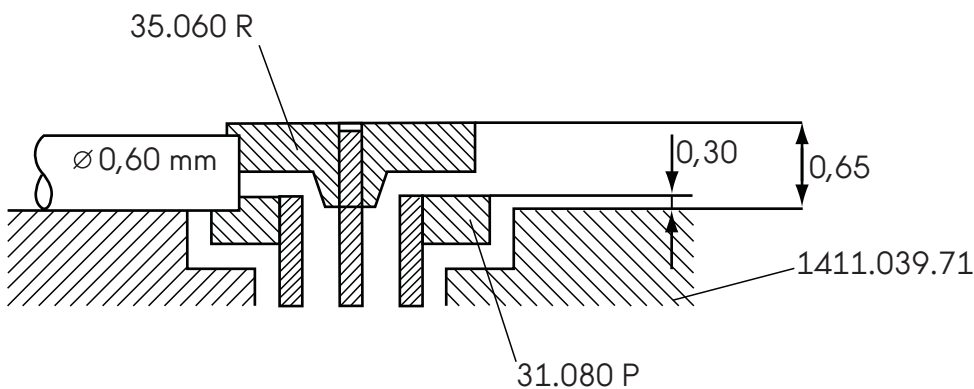
Components which must not be disassembled during cleaning		
		
Do not turn the eccentric screw needlessly!		The dial screws must be tightened well before cleaning to avoid losing them.

EMMYWATCH
VINTAGE RESTORATIONS

3.0 Inspection during re-assembly

3.1 Fitting the chronograph driving wheel

Check the wheel height:

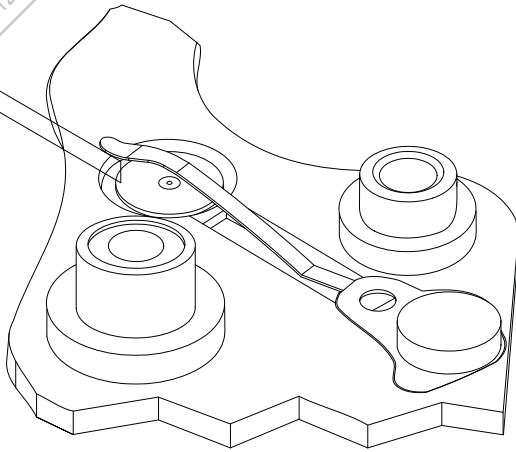


Check also that the wheel turns flat and round!

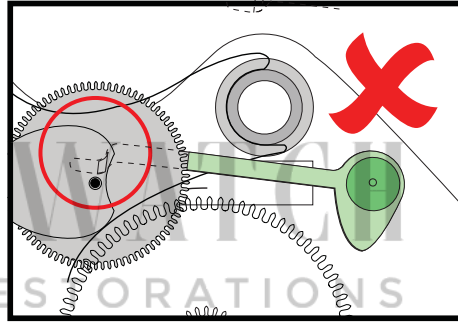
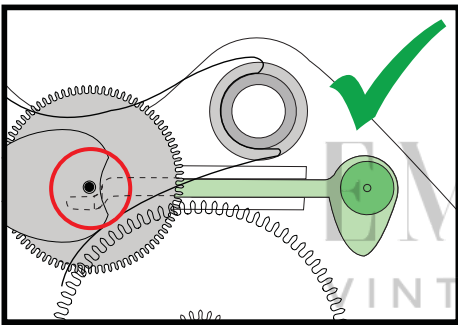


3.2 Check the friction height:

0,6 à 0,7mm
under the blade

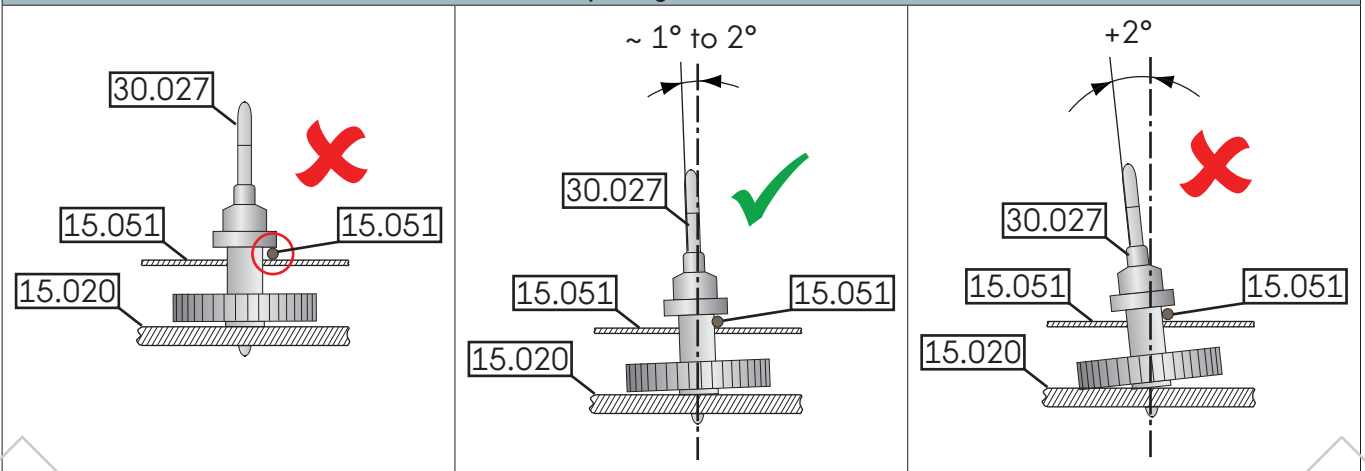


3.3 Check that the friction spring is positioned correctly:

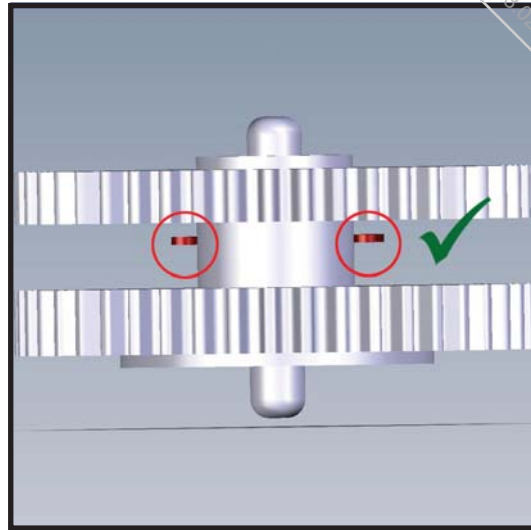
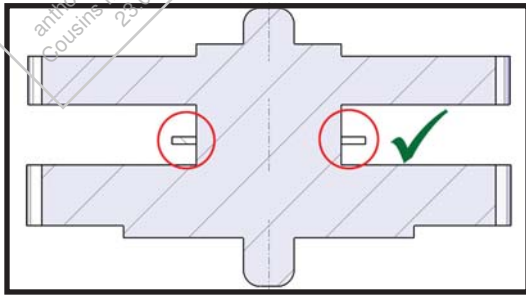


3.4 Check the friction spring tension on the second pinion:

Adjusting the tension



3.5 Check the uncoupling spring position:



4.0 Inspection + Adjusting the hammer

There is no need to adjust the hammer if the chronograph wheel bridge eccentric (ref. 10.047) has not been loosened during the service, as the movement is factory-adjusted.

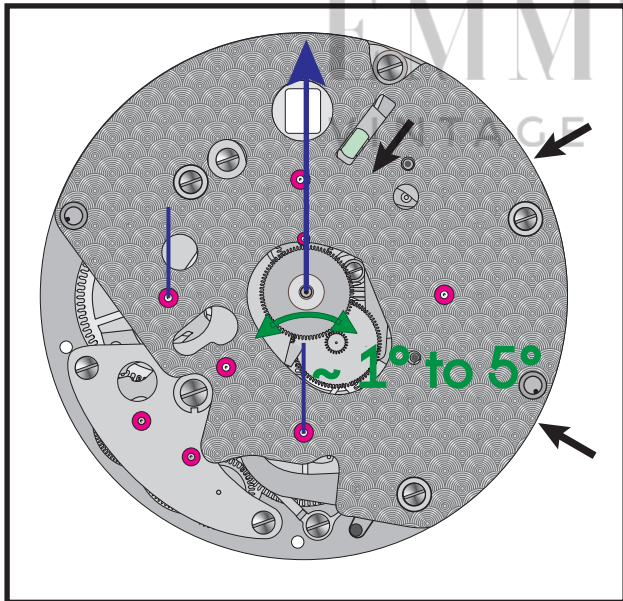
You can nevertheless check as follows :

1. Fit the chronograph hands (without the dial).
2. Carry out a START-STOP and then reset to zero.
3. Check that the hands are free using a wooden pin:
 - a. the chrono second hand + minute counter must not move when the reset is held down;
 - b. there must be a slight freedom play of the hour counter (~1° to 5°).

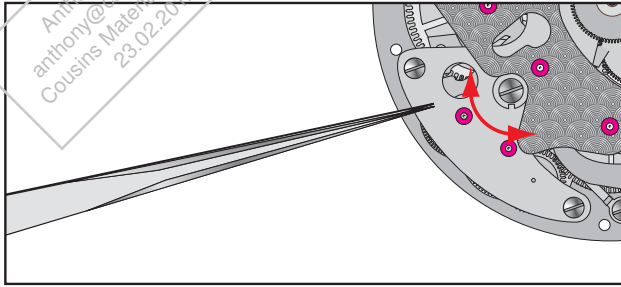
If OK: check finished, move to point 9.

If **not OK**: move to point 4.

4. Loosen the eccentric screw.



Specific Information for calibre 3220



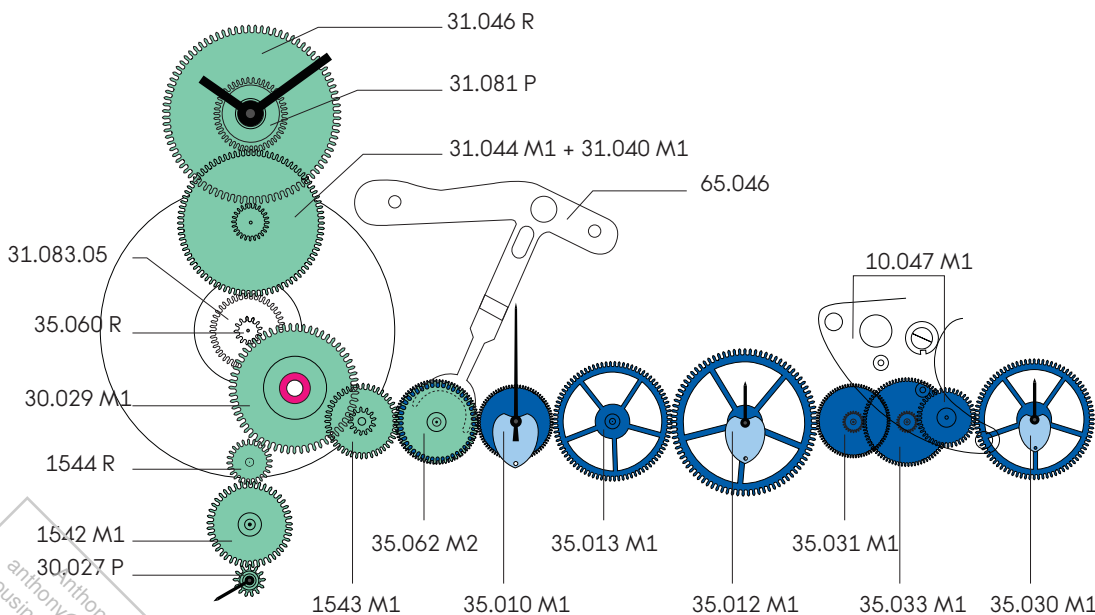
5. Whilst holding the reset down, turn the eccentric until the chronograph hand can be blocked (under tension). Then tighten the eccentric screw.
 6. Check the freedom of the hour counter (~1° to 5°). If not OK, start again at point 4.
 7. Check that the minute counter is blocked
If OK (no play): move to point 9.
If not OK (free): move the hammer pean aside gently using a screwdriver. This adjustment takes place in the START position.
- Reset and check that there is no freedom in the minute counter.
8. Carry out a START-STOP and then reset to zero. Then check again from point 3.
 9. Oil the eccentric pivoting lightly and oil the module according to the drawing on page 16.

EMMYWATCH

VINTAGE RESTORATIONS

5.0 Chronograph System Operation

- Hour, minute and second display
- Chronograph System



6.0 Setting the time

The instructions below must be followed to achieve perfect synchronisation of hands:

1. Firstly, adjust the small second: pull the crown to position 2; the small second at 3 o'clock stops. It is advisable to stop the small second at 60 seconds.
2. Turn the crown forwards or backwards to set the minute hand. For the minute and small second hand to synchronise perfectly, the minute hand must be 30 to 45 seconds ahead on the desired index (this procedure is specific to the Cal. 3220). The train energy is transmitted to the hands via three wheels. When setting the time, the gearing end play must be compensated for by advancing the minute hand by 30 to 45 seconds.
3. Push in the crown when the reference time matches the set time of the watch.



EMMYWATCH
VINTAGE RESTORATIONS

6.1 Chronograph Operation



Important:
Chrono hour and minute counters do not jump but instead move continuously while the chrono is running.



7.0 Runners for hand setting and hand setting force

Description	Movement holder	Supports	No. of runners for hand setting	Minimum force (N)	Maximum force (N)	Support (jewel)
Hour hand	507 0001	515 0014 / 17	5	10	30	no
Minute hand			2	10	30	no
Second hand			1	10	30	no
Chrono. Second hand			1	32	50	no
Minute counter hand			1	10	20	no
Hour counter hand			1	10	20	no

EMMYWATCH
VINTAGE RESTORATIONS

8.0 Instantaneous rate

8.1 Control of instantaneous rate



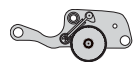

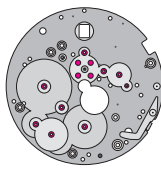
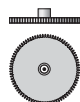


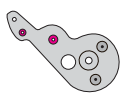

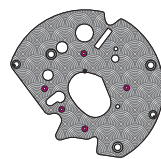
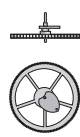
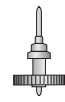



Demagnetise the movement prior to the checks according to Working Instruction 34.

The rate is controlled by acoustic measurement with a Chronoscope M1 or similar measuring tool. It is **important** to programme the instrument with a 51 degree lift angle.

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












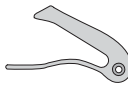













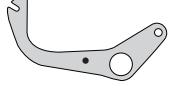

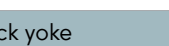


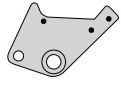

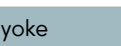



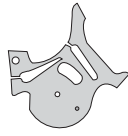





List and plate for chronograph module supplies for Calibre 3220

Chronograph bridge	Version	Reference	Motion work driving wheel	Version	Reference
	1140	722322010047M1		1140	722322031040M1
	1141				
	1143				
	3220				
Additional minute train bridge	Version	Reference	Additional chronograph minute wheel	Version	Reference
	1140	722322010062M1		1140	722322031044M1
	1141				
	1143				
	3220				
Chronograph mechanism plate	Version	Reference	Chronograph hour wheel	Version	Reference
	1140	722114015020M1		1140	722322031046R
	1141				
	1143				
	3220	722322015020M1			
Second train wheel small plate	Version	Reference	Free cannon pinion	Version	Reference
	1140	722322015050		1140	722322031081P
	1141				
	1143				
	3220				
Second train bridge	Version	Reference	Chronograph wheel	Version	Reference
	1140	722322015051M1		1140	722114035010M1
	1141				
	1143				
	3220			722322035010M1	
Chronograph mechanism cover	Version	Reference	Minute counting wheel	Version	Reference
	1140	722114015150M1		1140	722322035012M1
	1141				
	1143				
	3220	722322015150M1			
Second pinion	Version	Reference	Minute counter driving wheel	Version	Reference
	1140	722322030027P		1140	722322035013M1
	1141				
	1143				
	3220				
Second train driving wheel	Version	Reference	Hour counting wheel	Version	Reference
	1140	722322030029M1		1140	722322035030M1
	1141				
	1143				
	3220				



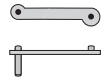

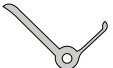



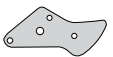









List and plate for chronograph module supplies for Calibre 3220

Hour counter driving wheel	Version	Reference	Reversing yoke	Version	Reference
	1140	722322035031M1		1140	722322055086
	1141				
	1143				
	3220				
Hour counter intermediate wheel	Version	Reference	Cam jumper	Version	Reference
	1140	722322035033M1		1140	722322055138
	1141				
	1143				
	3220				
Chronograph driving wheel	Version	Reference	Fly-back yoke jumper	Version	Reference
	1140	722322035060R		1140	722114055142
	1141				
	1143				
	3220				
Clutch wheel	Version	Reference	Upper wig-wag	Version	Reference
	1140	722322035062M2		1140	722322055185M1
	1141				
	1143				
	3220				
Operating lever, 2 functions	Version	Reference	Lower wig-wag	Version	Reference
	1140	722322055041M1		1140	722322055186
	1141				
	1143				
	3220				
Hammer operating lever	Version	Reference	Clutch operating lever	Version	Reference
	1140	722322055047M1		1140	722322055187
	1141				
	1143				
	3220				
Fly-back yoke	Version	Reference	Chronograph cam	Version	Reference
	1140	722114055081M1		1140	722322055200M1
	1141				
	1143				
	3220				
Fly-back yoke intermediate lever	Version	Reference	Hammer	Version	Reference
	1140	722322055083		1140	722322055241M1
	1141				
	1143				
	3220				



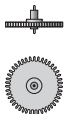

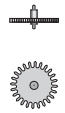







List and plate for chronograph module supplies for Calibre 3220

Connecting rod	Version	Reference	Lock spring	Version	Reference
	1140	722322055269M1		1140	722322065210
	1141				
	1143				
	3220				
Reversing yoke lever	Version	Reference	Second pinion friction spring	Version	Reference
	1140	722322055272M1		1140	7223220120
	1141				
	1143				
	3220				
Lock	Version	Reference	Fixing ring	Version	Reference
	1140	722322055281		1140	72232201175
	1141				
	1143				
	3220				
Connecting rod lever	Version	Reference	Chronograph fixing foot on movement	Version	Reference
	1140	722322055321		1140	72232201204
	1141				
	1143				
	3220				
Fly-back yoke bolt	Version	Reference	Eccentric ring for hammer adjusting	Version	Reference
	1140	722322055341		1140	72232201209
	1141				
	1143				
	3220				
Operating lever spring	Version	Reference	Set screw and support ring	Version	Reference
	1140	722322065041		1140	72232201243
	1141				
	1143				
	3220				
Clutch spring	Version	Reference	Minute wheel friction spring	Version	Reference
	1140	722322065046		1140	72232201251
	1141				
	1143				
	3220				
Connecting yoke lever spring	Version	Reference	Stud for fly-back yoke	Version	Reference
	1140	722322065074		1140	72232201297
	1141				
	1143				
	3220				


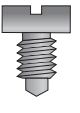



List and plate for chronograph module supplies for Calibre 3220

Hour wheel friction spring	Version	Reference	Screw for bridge	Version	Reference
	1140	72232201449		1140	72200002081
	1141				
	1143				
	3220				
Friction spring for minute counter driving wheel	Version	Reference	Screw for chronograph bridge	Version	Reference
	1140	72232201532		1140	72200002837
	1141				
	1143				
	3220				
Intermediate second wheel	Version	Reference	Screw for lock	Version	Reference
	1140	72232201542M1		1140	72200002838
	1141				
	1143				
	3220				
Chronograph second wheel	Version	Reference	Screw for clutch spring and cam jumper	Version	Reference
	1140	72232201543M1		1140	72200002839
	1141				
	1143				
	3220				
Second wheel driving pinion	Version	Reference	Screw for additional minute train bridge	Version	Reference
	1140	72232201544R		1140	72200003445
	1141				
	1143				
	3220				
Support jewel for center wheel	Version	Reference	Screw for dial foot	Version	Reference
	1140	72232201594		1140	72200003446
	1141				
	1143				
	3220				
Clutch spring maintaining washer	Version	Reference	Screw for second train driving wheel small plate	Version	Reference
	1140	722322080282		1140	72200003448
	1141				
	1143				
	3220				



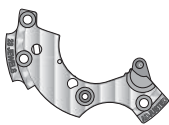
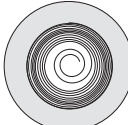


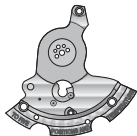

List and plate for chronograph module supplies for Calibre 3220

Screw for Hammer eccentric ring	Version	Reference	Screw for chronograph bridge	Version	Reference
	1140	72200003449		1140	72200003513
	1141				
	1143				
	3220				
Screw for second train bridge	Version	Reference			
	1140	72200003450			
	1141				
	1143				
	3220				

EMMYWATCH
VINTAGE RESTORATIONS





















List and plate for movement supplies for Calibre 3220

Mainplate	Version	Reference	Barrel arbor	Version	Reference
	1140	72232201002007		1140	722112020060
	1141				
	1143				
	3220				
Barrel bridge	Version	Reference	Mainspring	Version	Reference
	1140	7221140105RB		1140	722322020102
	1141				
	1143				
	3220				
Wheel train bridge jewelled	Version	Reference	Oscillating weight	Version	Reference
	1140	7221140110RB		1140	72211402201006
	1141			72211412201006	
	1143			72211432201006	
	3220			72232202201006	
Pallet bridge jewelled	Version	Reference	Ball bearing	Version	Reference
	1140	7221140125RB		1140	72211101479
	1141				
	1143				
	3220				
Balance bridge assembled	Version	Reference	Oscillating weight bolt	Version	Reference
	1140	7221140121RB		1140	72211101451
	1141				
	1143				
	3220				
Minute train bridge	Version	Reference	Intermediate wheel	Version	Reference
	1140	722112010062		1140	722112030012
	1141				
	1143				
	3220				
Automatic device framework	Version	Reference	Third wheel	Version	Reference
	1140	72211401203007		1140	722112030025
	1141				
	1143	72232201203007			
	3220				
Lower automatic device bridge	Version	Reference	Seconds wheel	Version	Reference
	1140	72211401141RB		1140	722322014040387
	1141				
	1143				
	3220				
Barrel, complete	Version	Reference	Escape wheel	Version	Reference
	1140	722322020010		1140	722112030040
	1141				
	1143				
	3220				



List and plate for movement supplies for Calibre 3220

Ratchet wheel	Version	Reference	Reduction wheel	Version	Reference
	1140	72211101100		1140	72211101484
	1141				
	1143				
	3220				
Intermediate ratchet wheel	Version	Reference	Intermediate reduction wheel	Version	Reference
	1140	722112031021		1140	722112032032
	1141				
	1143				
	3220				
Crown wheel	Version	Reference	Ratchet wheel driving wheel	Version	Reference
	1140	722112031023		1140	72211101437
	1141				
	1143				
	3220				
Intermediate crown wheel	Version	Reference	Reversing wheel	Version	Reference
	1140	722112031024		1140	722112032037
	1141				
	1143				
	3220				
Minute wheel	Version	Reference	Pallet fork	Version	Reference
	1140	722112031041		1140	722112040010
	1141				
	1143				
	3220				
Cannon pinion with driver	Version	Reference	Balance complete with stud	Version	Reference
	1140	72232203108305		1140	72211204005021
	1141				
	1143				
	3220				
Setting wheel	Version	Reference	Stud support	Version	Reference
	1140	722112031100		1140	722112040200
	1141				
	1143				
	3220				
Winding pinion	Version	Reference	Two-piece regulator	Version	Reference
	1140	722112031120		1140	72211204030223
	1141				
	1143				
	3220				
Sliding pinion	Version	Reference	Regulator corrector	Version	Reference
	1140	7221120311211		1140	722112040380
	1141				
	1143				
	3220				




List and plate for movement supplies for Calibre 3220

Winding stem*	Version	Reference	Shock-absorber upper	Version	Reference
	1140	72211205101021		1140	722112070530
	1141				
	1143				
	3220				
Yoke	Version	Reference	Shock-absorber lower	Version	Reference
	1140	722112051050		1140	722112070531
	1141				
	1143				
	3220				
Setting lever	Version	Reference	In-setting, upper	Version	Reference
	1140	72211205108006		1140	722112070640
	1141				
	1143				
	3220				
Setting lever jumper	Version	Reference	In-setting, lower	Version	Reference
	1140	722322051091		1140	722112070641
	1141				
	1143				
	3220				
Click	Version	Reference	Cap jewel, upper	Version	Reference
	1140	722112051120		1140	722112070900
	1141				
	1143				
	3220				
Reverser	Version	Reference	Cap jewel, lower	Version	Reference
	1140	722112052040		1140	722112070901
	1141				
	1143				
	3220				
Auxiliary reverser	Version	Reference	Shock-absorber spring, upper	Version	Reference
	1140	722112052041		1140	722112078004
	1141				
	1143				
	3220				
Date corrector operating lever	Version	Reference	Shock-absorber spring, lower	Version	Reference
	1140	722322053022		1140	722112078005
	1141				
	1143				
	3220				
Stop lever	Version	Reference	Centre tube	Version	Reference
	1140	722112056070		1140	722322014130217
	1141				
	1143				
	3220				

* Only working winding stem! For the correct reference, use the Extranet with the reference of the watch



List and plate for movement supplies for Calibre 3220

Click plate	Version	Reference	Screw for lower automatic device bridge	Version	Reference
	1140	722112081036		1140	72211203504
	1141				
	1143				
	3220				
Screw for barrel bridge	Version	Reference	Screw for pallet fork bridge	Version	Reference
	1140	72211203503		1140	72211203504
	1141				
	1143				
	3220				
Screw for setting lever jumper	Version	Reference	Screw for wheel train bridge	Version	Reference
	1140	72211203503		1140	72211203505
	1141				
	1143				
	3220				
Screw for balance bridge	Version	Reference	Screw for ball bearing	Version	Reference
	1140	72211203503		1140	72211203507
	1141				
	1143				
	3220				
Screw for minute train bridge	Version	Reference	Screw for click plate	Version	Reference
	1140	72211203503		1140	72211203509
	1141				
	1143				
	3220				
Screw for automatic device framework (black)	Version	Reference			
	1140	72200002989N			
	1141				
	1143				
	3220				



List of jewels and bushes for Calibre 3220

Description:	1140	1141	1143	3220
Lower jewel of intermediate second wheel				72200004600
Lower jewel of intermediate second wheel	72200004601	72200004601	72200004601	
Upper jewel of intermediate second wheel	72200004601	72200004601	72200004601	
Lower jewel of Chronograph second wheel			72200004600	72200004600
Lower jewel of Chronograph second wheel	72200004601	72200004601		
Upper jewel of Chronograph second wheel	72200004602	72200004602	72200004602	72200004602
Lower jewel of Second wheel driving pinion			72200004600	72200004600
Lower jewel of Second wheel driving pinion	72200004601	72200004601		
Upper jewel of Second wheel driving pinion	72200004603	72200004603	72200004603	72200004603
Lower jewel of Second pinion	72200004600	72200004600	72200004600	72200004600
Upper jewel of Second pinion	72200004604	72200004604	72200004604	72200004604
Central jewel of second train driving wheel	72200004605	72200004605	72200004605	72200004605
4 supporting jewels for second train driving wheel	72200004606	72200004606	72200004606	72200004606
Lower jewel of minute counting wheel			72200004600	72200004600
Lower jewel of minute counting wheel	72200004601	72200004601		
Upper jewel of minute counting wheel	72200004602	72200004602	72200004602	72200004602
Lower jewel of Minute counter driving wheel			72200004600	72200004600
Lower jewel of Minute counter driving wheel	72200004601	72200004601		
Upper jewel of Minute counter driving wheel	72200004604	72200004604	72200004604	72200004604
Lower jewel of hour counting wheel			72200004600	72200004600
Lower jewel of hour counting wheel	72200004601	72200004601		
Upper jewel of hour counting wheel				72200004602
Lower jewel of hour counter driving wheel			72200004600	72200004600
Lower jewel of hour counter driving wheel	72200004601	72200004601		
Upper jewel of hour counter driving wheel	72200004604	72200004604	72200004604	72200004604
Lower jewel of hour counter intermediate wheel			72200004600	72200004600
Lower jewel of hour counter intermediate wheel	72200004601	72200004601		
Upper jewel of hour counter intermediate wheel	72200004604	72200004604	72200004604	72200004604
Lower bushing of chronograph wheel	72200006300	72200006300	72200006300	72200006300
Upper bushing of chronograph wheel	72200006301	72200006301	72200006301	
Upper bushing of hour counting wheel	72200006302	72200006302	72200006302	
Lower bushing of clutch wheel	72200004607	72200004607	72200004607	72200004607
Upper jewel of clutch wheel	72200004608	72200004608	72200004608	72200004608



Modifications of Technical Guide version for Calibre 3220

Technical Guide versions			
Date first issued :	24.02.2004	Version A	Produced by : Pelrom Rendav
Date second issued :	10.03.2005	Version B	
Date of most recent issue :	20.09.2010	Version C	

Modifications to Technical Guide version B	
Former (edition A)	New (edition B)
Moebius Microgliss D5	Moebius SYNT-HP - 1300
Moebius 9501	Moebius 9504
	New oil introduced (Moebius SYNTHP-500)

Modifications to Technical Guide version C	
Former (edition B)	New (edition C)
	Exploded views updated Lubrication updated Miscellaneous information

EMMYWATCH

VINTAGE RESTORATIONS

