


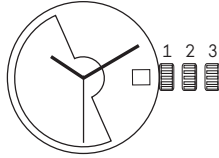


Omega 2520 Movement Parts (1)

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

	Technical Guide		TG-19-C-038-E	B
	Made by: pelrom	Date: 21.08.2008	3	Modifications: see last page

CALIBRE 2520

	Version A
$8\frac{3}{4}''$ Ø 19,40 mm	
Height on movement	3.60 mm
Power reserve	40 h
Number of jewels	20
Frequency	4 Hz (28'800 A/h)

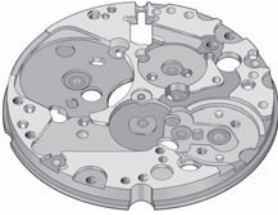
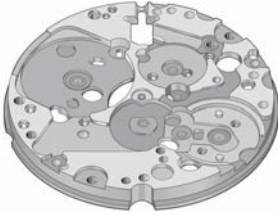




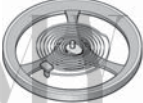
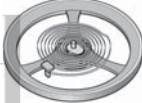


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VINTAGE RESTORATIONS



Automatic movement. Omega customised. Display of hour, minute and second in centre, date display.
Swiss lever escapement.

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Differences between calibres 725 and 2520

		Calibre 725		Calibre 2520
Mainplate	NO LONGER AVAILABLE		AVAILABLE	
		ref. 722 0725 100 Engraving 725		ref. 722 2520 100* Engraving 2520
Barrel, complete				
		ref. 722 0725 182 90 teeth		ref. 722 2520 180/1 91 teeth
Intermediate wheel				
	ref. 722 0725 203 18 teeth	ref. 722 2520 203 19 teeth		
Balance, complete				
	$I = 2.0$ $I =$ moment of inertia (mgcm ²) réf. 722 0725 721	$I = 2.7$ $I =$ moment of inertia (mgcm ²) réf. 722 2520 721		
Oscillating weight, pre-assembled				
	ref. 722 725 1143/1 Engraving 725	ref. 722 2520 1143/1 Engraving 2520		

Tightening and untightening torques 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



Automatic device lower bridge

The lower bridge on the automatic device ref. 722 0725 1141 is no longer supplied.

Swiss pallet fork Escapement lubrication

See Working Instruction No 40.

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Mandatory tools:

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

Hand fitting

Movement holder for hand fitting
Hand fitting tool kit

Reference

507 0021
507 0011

Movement

Mainspring winder
Etachron stud adjustment key
Etachron stud extraction key

Reference

502 150 1003
502 200 0061
502 200 0062






Lubricants

Moebius SYNT-A-LUBE 9010 (2ml)
Moebius 9415
Moebius SYNT HP-1300 Sans Colorant
Moebius 9504
Kluber P125

Reference

504 200 0001
504 100 0003
504 5013
504 5014
504 100 0071

Fig. 1

Components of exchange kit	
Ratchet wheel 7222520415	Pallet fork 7222520710
	
Reversing wheel maintaining plate 72225201467	Stop pinion 72225201471
	
Cannon pinion 7222520242*	Reversing wheel 72225201488
	

Exchange Kit 6 components

Introduction :

Some components have been modified to improve the quality of the calibre 2520, especially the power reserve and the instantaneous rate results. These 6 modified components are assembled in a kit (see Figure 1) and are offered at a special price.

1. Movement exchange, recommended by Omega HQ

Omega HQ recommends changing this movement instead of carrying out a full service. This process is described in detail in Working Instructions No. 31.

All recycled movements provided by Omega HQ are assembled with the modified components.

2. Repair

Should it be impossible to exchange the movement (as described in point 1), the kit with the 6 improved components must be fitted automatically during a full service.

The kit has a different order reference depending on the hand fitting height. See the table below:

Hand fitting height	Reference
Height 1	72225209999H1
Height 2	72225209999H2
Height 3	72225209999H3
Height 4	72225209999H4
Height 5	72225209999H5



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The correct hand fitting height for ordering can be defined via Extranet or using the table in Figure 2.

Fig. 2

	Height 1	Height 2	Height 3	Height 4	Height 5
Second wheel	4.23 mm	4.48 mm	4.73 mm	4.98 mm	5.23mm
Cannon pinion	1.75 mm	1.99 mm	2.24 mm	2.49 mm	2.74 mm
Hour wheel	1.00 mm	1.25 mm	1.50 mm	1.75 mm	2.00 mm

Fig. 3

Components not included in the kit	
Barrel bridge New version from week 50/2005. Ref. 7222520105	Barrel, complete New version from week 09/2007. Ref. 7222520180/1
	

What precautions should be taken during repair work ?



The new versions of barrels and their bridges in new calibre 2520 movements supplied by Omega HQ are automatically fitted since date code 36/07. No need to exchange them.



These two components are not replaced automatically in the recycled movement. It may be that components from the old version are still fitted. No systematic exchange.


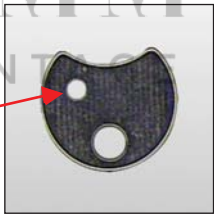
These two components are not included in the kit, however, although they may be ordered separately (see Fig. 3).

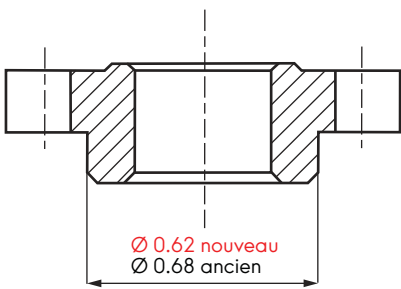
General information for calibre 2520

Technical improvements

Ratchet wheel			
Old version	New version	Improvements	Comments
7220725415	7222520415	Change in surface coating in an attempt to reduce wear.	No visible difference with the naked eye between the versions; only components after date code 47/05 should be used. The new version must be fitted during a maintenance service. Part of Kit 72225209999*
			

Pallet fork			
Old version	New version	Improvements	Comments
7220725710	7222520710	Change in penetrations and the adhesive maintaining the pallet-stones.	A white translucent appearance of the adhesive distinguishes the new version from the old; only components after date code 41/07 should be used. The new version must be fitted during a maintenance service. Part of Kit 72225209999*
			

Reversing wheel maintaining plate			
Old version	New version	Improvements	Comments
72207251467	72225201467	Centring has been improved by adding an additional centring hole.	An additional hole distinguishes the new version from the old; only components after date code 47/05 should be used. The new version must be fitted during a maintenance service. Part of Kit 72225209999*
			

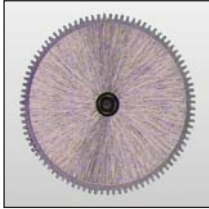
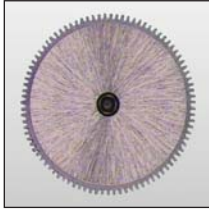
Stop pinion			
Old version	New version	Improvements	Comments
72207251471	72225201471	New geometric shape means better stay of lubrication and improved function.	The diameter of the smallest pinion shoulder diameter (0,62 mm) distinguishes the new version from the old; only components after date code 36/07 should be used. The new version must be fitted during a maintenance service. Part of Kit 72225209999*
 <p style="text-align: center; color: red;">∅ 0.62 nouveau ∅ 0.68 ancien</p>			

General information for calibre 2520

Technical improvements

Barrel bridge (crown wheel + click (built into the barrel bridge))			
Old version	New version	Improvements	Comments
7220725105	7222520105	Geometric click force modified and play reduced to prevent meshing during winding. Change in barrel bridge surface and improved crown wheel surface state.	Only the shape of the click nose distinguishes the new version from the old; only components after date code 50/05 should be used.
			
Upper automatic bridge (reduction wheel)			
Old version	New version	Improvements	Comments
72207251134	72225201134	Modification to the surface coating of the reduction wheel to reduce wear.	No visible difference with the naked eye between the versions; only components after date code 03/07 should be used.
			
Cannon pinion			
Old version	New version	Improvements	Comments
7220725242H1	7222520242H1	New material for the driving wheel plate. Aim: Increase the resistance to the magnetic fields.	No visible difference with the naked eye between the versions; only components after date code 50/05 should be used. The new version must be fitted during a maintenance service. Part of Kit 72225209999*
			
Reversing wheel			
Old version	New version	Improvements	Comments
72207251488	72225201488	Click wheel, inversion wheel and driving disc: The beat tolerance is lowered to reduce noise and eliminate butting	No visible difference with the naked eye between the versions; only components after date code 47/05 should be used. The new version must be fitted during a maintenance service. Part of Kit 72225209999*
			

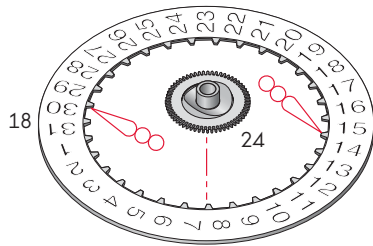
Technical improvements

Barrel, complete			
Old version	New version	Improvements	Comments
7220725182	7222520180/1	Change in surface coating on the barrel drum and cover.	No visible difference with the naked eye between the versions; only components after date code 09/07 should be used.
			

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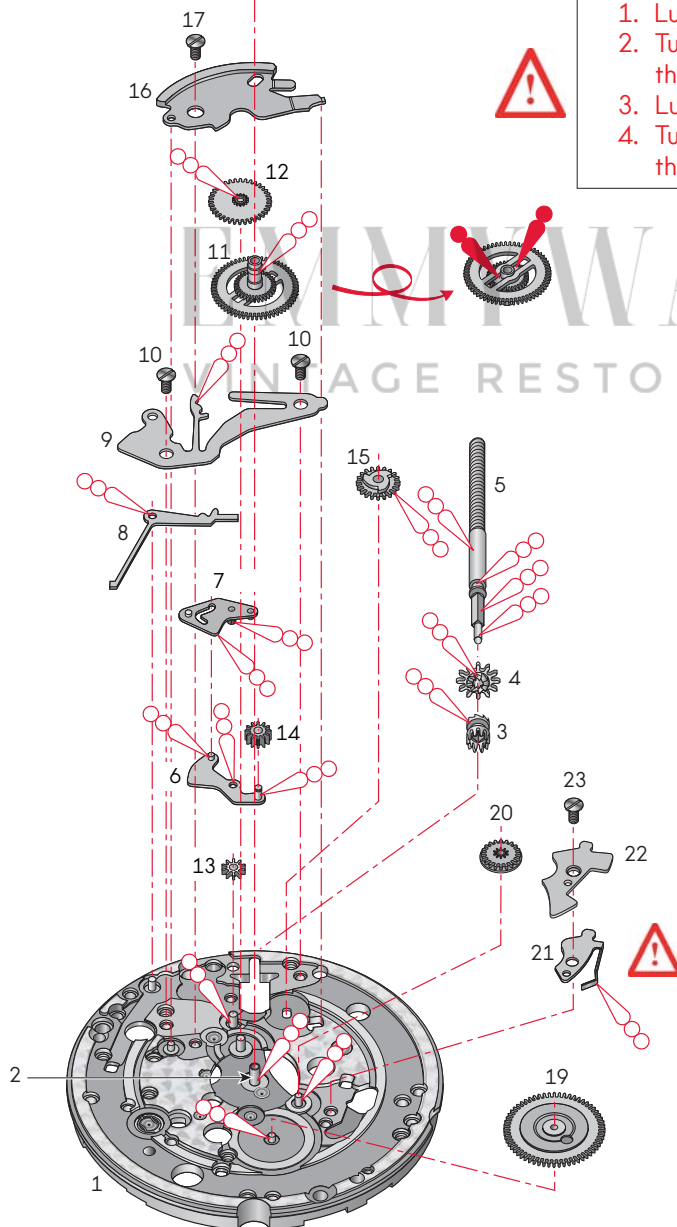
Parts listed in order of assembly

1 = 100	13 = 450
2 = 161	14 = 453
3 = 407	15 = 2566
4 = 410	16 = 462
5 = 401	17 = 5445
6 = 2539	18 = 2557/1
7 = 443/1	19 = 2556
8 = 435/1	20 = 2543
9 = 445	21 = 2576
10 = 5445 (2x)	22 = 2595
11 = 242	23 = 5445
12 = 260	24 = 255/1



 Moebius SYNT HP-1300 Sans Colorant
 Moebius 9504





1. Lubricate part 2576.
2. Turn part 2557/1 about ten teeth with the quick date correction.
3. Lubricate part 2576 again.
4. Turn part 2557/1 again about ten teeth with the quick date correction.

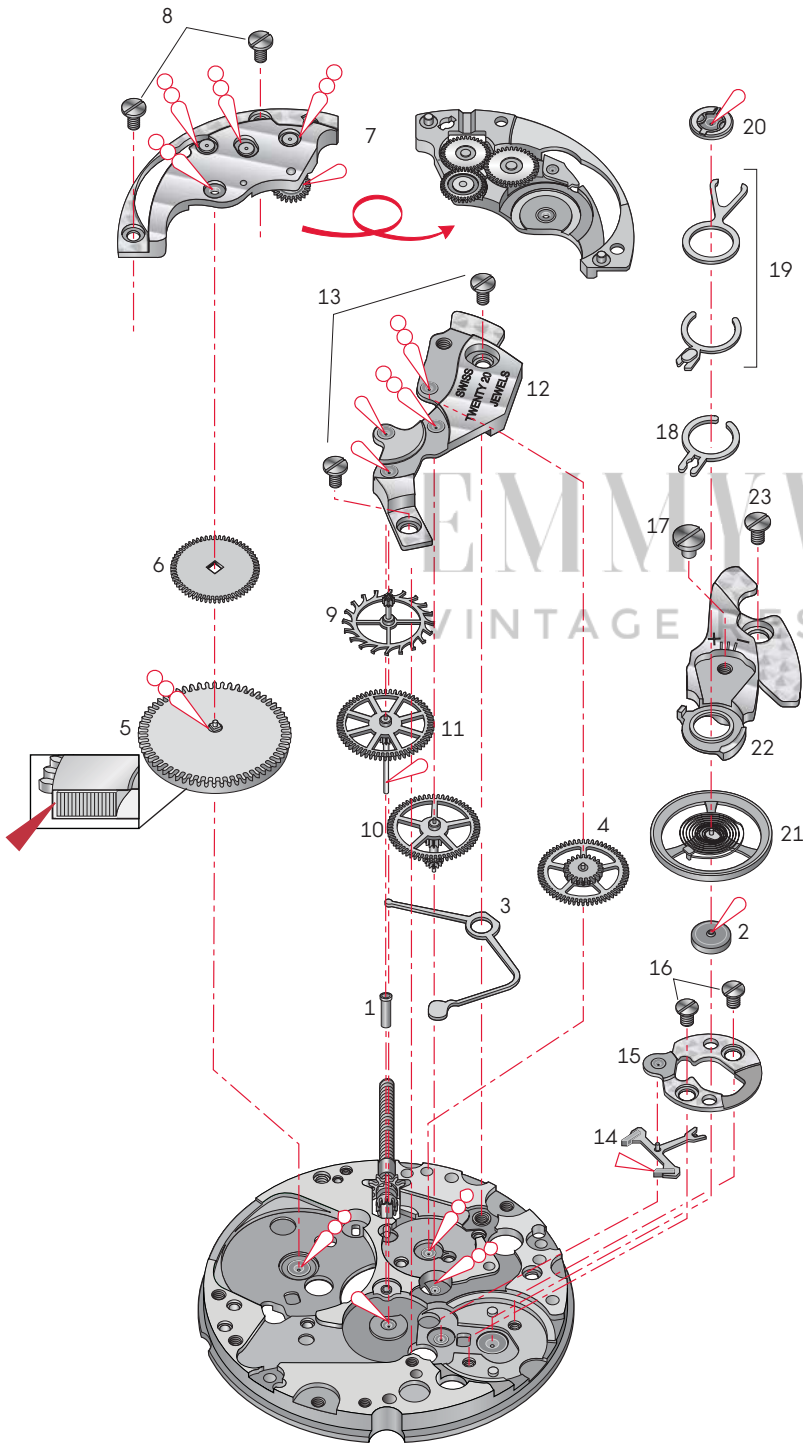


Exploded views - Movement side for calibre 2520

Parts listed in order of assembly

1 = 161	13 = 5105 (2x)
2 = 3025	14 = 710
3 = 9433	15 = 125
4 = 203	16 = 5105 (2x)
5 = 180/1	17 = 358
6 = 415	18 = 375
7 = 105	19 = 303/15
8 = 5105 (2x)	20 = 3024
9 = 705	21 = 721
10 = 210	22 = 121/4
11 = 227	23 = 5105
12 = 110	



-  Moebius SYNT HP-1300 Sans Colorant
-  Moebius SYNT-A-LUBE 9010
-  Moebius 9415
-  Kluber P125




Exploded views - Movement side for calibre 2520

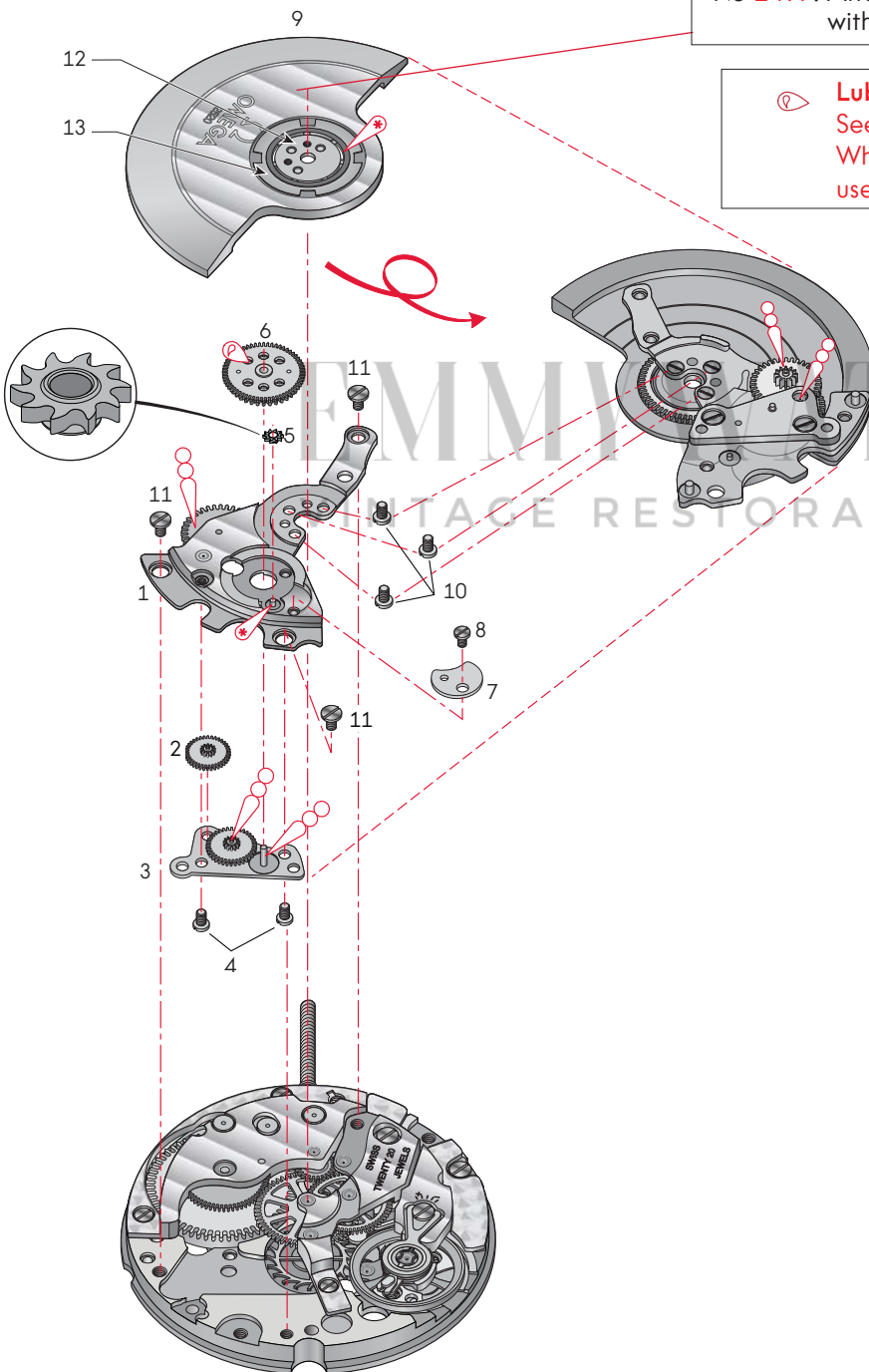
Parts listed in order of assembly

1 = 1134	8 = 5445
2 = 1481	9 = 1143/1
3 = 1141	10 = 51143 (3x)
4 = 5445 (2x)	11 = 5105 (3x)
5 = 1471	12 = 1497
6 = 1488	13 = 1491
7 = 1467	

 **Moebius SYNT HP-1300 Sans Colorant**
 **Moebius SYNT-A-LUBE 9010**

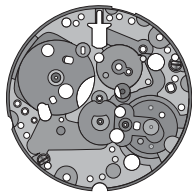























No 1497: After clearing only, very light lubrication with Moebius 9010

 **Lubeta V105**
 See Working Instruction No 40.
 When Lubeta V105 is available, do not use Moebius 9010








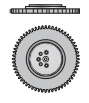






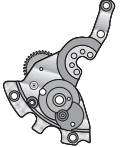









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WATCH RESTORATIONS



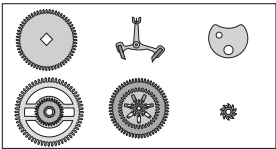












Spare parts list for calibre 2520

Main plate, pre-assembled	Version	Reference	Cannon pinion with driving wheel	Version	Reference
	2520	7222520100*		2520	7222520242**
Barrel bridge, pre-assembled	Version	Reference	Hour wheel	Version	Reference
	2520	7222520105		2520	7220725255**
Wheel train bridge, pre-assembled	Version	Reference	Minute wheel	Version	Reference
	2520	7220725110		2520	7220725260
Balance bridge, pre-assembled	Version	Reference	Two-piece regulator	Version	Reference
	2520	72207251214		2520	7220725303/5
Pallet fork bridge, pre-assembled	Version	Reference	Regulator corrector	Version	Reference
	2520	7220725125		2520	7220725358
Dial fastener	Version	Reference	Stud support etachron	Version	Reference
	2520	7220725144		2520	7220725375
Centre tube	Version	Reference	Winding stem	Version	Reference
	2520	7220725161		2520	7220725401
Barrel, complete	Version	Reference	Sliding pinion	Version	Reference
	2520	7222520180/1		2520	7220725407
Barrel arbor	Version	Reference	Winding pinion	Version	Reference
	2520	7220725195		2520	7220725410
Intermediate wheel	Version	Reference	Ratchet wheel	Version	Reference
	2520	7222520203		2520	7222520415
Intermediate train wheel	Version	Reference	Spring-yoke	Version	Reference
	2520	7220725210		2520	7220725435/1
Second wheel	Version	Reference	Setting lever	Version	Reference
	2520	7220725227**		2520	7220725443/1

Spare parts list for calibre 2520

Setting lever jumper combined 	Version	Reference	Reduction wheel 	Version	Reference
	2520	7220725445		2520	72207251481
Setting wheel 	Version	Reference	Reversing wheel 	Version	Reference
	2520	7220725450		2520	72225201488
Intermediate setting wheel 	Version	Reference	Oscillating weight bolt 	Version	Reference
	2520	7220725453		2520	72207251491
Minute train bridge 	Version	Reference	Ball bearing 	Version	Reference
	2520	7220725462		2520	72207251497
Escape wheel 	Version	Reference	Date corrector operating lever 	Version	Reference
	2520	7220725705		2520	72207252539
Pallet fork 	Version	Reference	Intermediate date wheel 	Version	Reference
	2520	7222520710		2520	72207252543
Balance, complete 	Version	Reference	Date indicator driving wheel 	Version	Reference
	2520	7222520721		2520	72207252556
Slipping mainspring 	Version	Reference	Date indicator 	Version	Reference
	2520	7220725771		2520	7222520A9144*
Upper automatic bridge, pre-assembled 	Version	Reference	Date corrector 	Version	Reference
	2520	72225201134		2520	72207252566
Oscillating weight, pre-assembled 	Version	Reference	Date jumper 	Version	Reference
	2520	72225201143/1		2520	72207252576
Reversing wheel maintaining plate 	Version	Reference	Date jumper maintaining plate 	Version	Reference
	2520	72225201467		2520	72207252595
Stop pinion 	Version	Reference	Shock-absorber, upper 	Version	Reference
	2520	72225201471		2520	72207253024

Spare parts list for calibre 2520

Shock-absorber, lower	Version	Reference
	2520	72207253025
Stop lever	Version	Reference
	2520	72207259433
Exchange KIT 6 components	Version	Reference
	2520	72225209999*
Case screw, special	Version	Reference
	2520	72207255102
Screw for barrel bridge	Version	Reference
	2520	72207255105
Screw for wheel train bridge	Version	Reference
	2520	72207255105
Screw for balance bridge	Version	Reference
	2520	72207255105
Screw for pallet fork bridge	Version	Reference
	2520	72207255105
Screw for automatic device	Version	Reference
	2520	72207255105
Screw for combined setting lever jumper	Version	Reference
	2520	72207255445
Screw for minute train bridge	Version	Reference
	2520	72207255445
Screw for automatic device lower bridge	Version	Reference
	2520	72207255445
Screw for reversing wheel maintaining plate	Version	Reference
	2520	72207255445
Screw for maintaining plate date jumper	Version	Reference
	2520	72207255445
Screw for oscillating weight	Version	Reference
	2520	72207251143

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3.0 Runners for hand setting and hand setting force

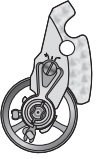






Description	Movement holder for hand setting	No. of runners for hand setting	Minimum force (N)	Maximum force (N)	Support (jewel)
Hour hand	507 0021	4	8	40	no
Minute hand		2	8	40	no
Second hand		1	8	30	yes

4.0 Epilame coating

4.1 Partially treated with epilam

Description	Reference	
Pallet fork**	710	

4.2 Components that should not be epilam-treated after cleaning

Description	Reference	
Balance assembled on the balance bridge	1214 + 721	
Balance, complete	721	
In-setting, upper *	3024	
In-setting, lower *	3025	
Pallet fork bridge, pre-assembled	125	
Barrel, complete ***	180/1	
Reversing wheel	1488	

* Do not treat the in-settings with epilam; the cap jewels should however be treated

** Pallet fork: only dip the two pallet stones in the epilam.

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

5.0 Instantaneous rate

5.1 Check of instantaneous rate

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

The rate is checked by acoustic measurement with a Chronoscope M1, S1 or similar measuring tool.

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

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Modifications to the Technical Guide version for calibre 2520

Technical Guide versions				
Date first issued:	20.12.2004	Version A	Produced	Pelrom
Date of most recent issue:	21.08.2008	Version B	by:	Rendav

Modifications to Technical Guide version B	
Old (version A)	New (version B)
	Exploded views updated Lubrication updated Miscellaneous information

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