

EBAUCHES S. A.

NEUCHÂTEL

SWITZERLAND

Edited and published by Ebauches S. A.

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FABRIQUE D'ÉBAUCHES
VENUS S. A., MOUTIER

12½'''	230
ALERTIC	
28 mm	

Lever movement, direct sweep second, with :



Alarm device

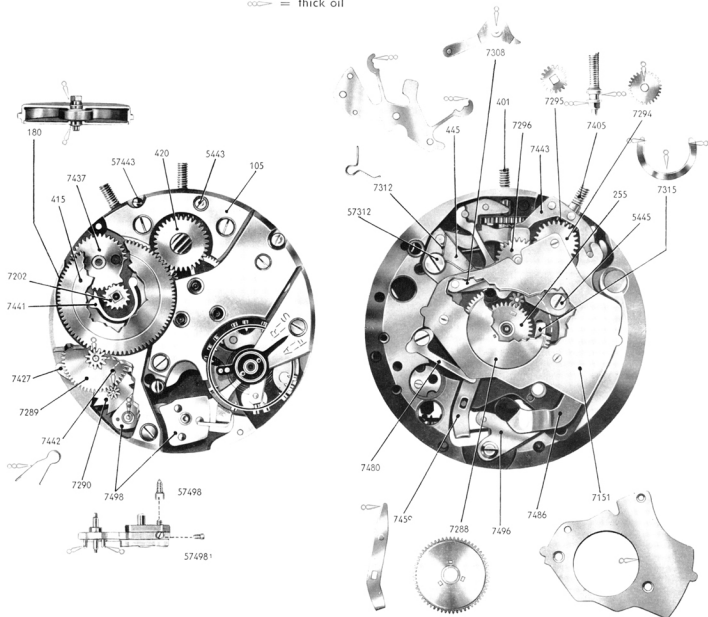
Caliber with single barrel



Enlarged movement

TECHNICAL AND PRACTICAL COMMUNICATION FOR THE GUIDANCE OF WATCH REPAIRERS

 = fluid oil
 = thick oil



DISASSEMBLING :

1. Let down the mainspring as indicated under « Remarks ».
2. Remove balance wheel and pallet fork.
3. Remove winding stem 401 and alarm setting stem 7405 ; remove casing clamps or case screws (dog screws), and take the movement out of the case.
4. Remove hands and dial.
5. Remove unlocking wheel holder 7151, then unlocking wheel 7288, friction spring of the unlocking wheel 7315, hour wheel 255, intermediate setting wheel for alarm 7296, intermediate setting yoke for alarm 7308, disconnecter spring 7480, disconnecter 7459, alarm bolt yoke 7486, alarm bolt 7496, alarm setting connection wheel 7294, intermediate setting yoke spring for alarm 7312, setting lever spring (set bridge) 445, alarm setting lever 7443, alarm setting wheel 7295, and then the ordinary parts of the winding and setting mechanism.
6. Remove ratchet wheel 415 (screw with left-hand thread) and, in the following order : barrel arbor wheel for alarm 7202, alarm stop wheel spring 7441, alarm stop wheel 7437, barrel bridge 105, intermediate wheel for alarm 7289, intermediate wheel rocker for alarm 7427, rocker spring for intermediate wheel of alarm 7442, alarm hammer 7498 and alarm wheel 7290.
7. Dismantle the watch movement proper and clean all its parts in the usual way.

ASSEMBLING :

1. Assemble the gear train, then place pallet fork in position (this makes it easier to check the alarm mechanism).
2. Fit the barrel, alarm wheel 7290, alarm hammer 7498, rocker spring for intermediate wheel of alarm 7442, intermediate wheel rocker for alarm 7427, intermediate wheel for alarm 7289, setting lever springs 5443 and 57443, and barrel bridge 105.

- Fit barrel arbor wheel for alarm 7202, alarm stop wheel spring 7441, alarm stop wheel 7437, ratchet wheel 415 with its screw, and crown wheel 420 with its screw.
- Fit the parts of the ordinary winding and setting mechanism, then alarm setting wheel 7295, alarm setting stem 7405, alarm setting lever 7443, setting lever spring (set bridge) 445 with its screw 5445, disconnector 7459, disconnector spring 7480, alarm bolt 7496, alarm bolt yoke 7486, friction spring of unlocking wheel 7315, hour wheel for sweep second 255, unlocking wheel 7288, alarm setting connection wheel 7294, intermediate setting yoke for alarm 7308, intermediate setting wheel for alarm 7296, unlocking wheel holder 7151, intermediate setting yoke spring for alarm 7312 with its screw 57312.
- Fit balance wheel, dial and hands, and then place the movement in the case.

REMARKS

1. Adjustment of alarm hammer

To alter the height of stop screw 57498, it is sufficient to loosen set screw 57498/1 and to effect the necessary adjustment. The set screw should then be tightened again.

2. Letting down the mainspring

If the mainspring has to be let down, this can be done in one of two ways:

- Remove balance cock, balance wheel and pallet fork, and let the train wheels turn, braking them at the same time.
- To let down the spring without dismantling the movement, proceed as follows:
 - Turn the alarm setting knob until the catches of hour wheel 255 fall into the corresponding holes in unlocking wheel 7288. This releases the alarm hammer by the action of disconnector 7459.
 - Wind the watch until stop wheel 7437 clicks. This wheel is just below the ratchet wheel and projects slightly beyond it.
 - With a pair of tweezers, hold the stop wheel in the unlocked position (same operation as in normal letting down), and release the winding crown.
 - Pull out the alarm setting crown, at the same time holding the stop wheel to prevent it from turning. The alarm train is then released, and the mainspring runs down by degrees.

IMPORTANT NOTES

On no account let down the mainspring by means of the pinion of intermediate wheel for alarm 7289. When casing has been done, make certain that the winding stem A is free.

STEM FUNCTIONS

Winding stem A

In normal position :

The mainspring of the movement and alarm is wound only when the disk is red.

Pulled out :

Setting the watch hands.



Red

Alarm stem B

In normal position :

The red disk shows that the alarm mechanism is blocked. The alarm hand is moved. The stability of the alarm hand is insured by turning stem B slightly backwards before pulling it out.

Pulled out :

The green disk shows that the alarm mechanism is released and that at the same time the effect of the stems is cancelled as regards the setting of the watch hands. Push back stem B to stop the alarm mechanism.

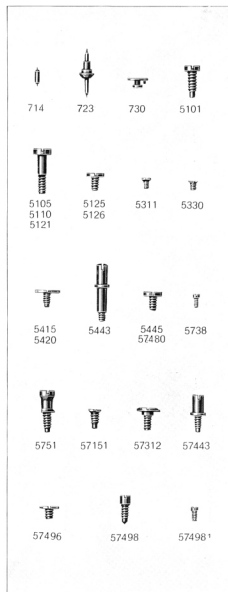
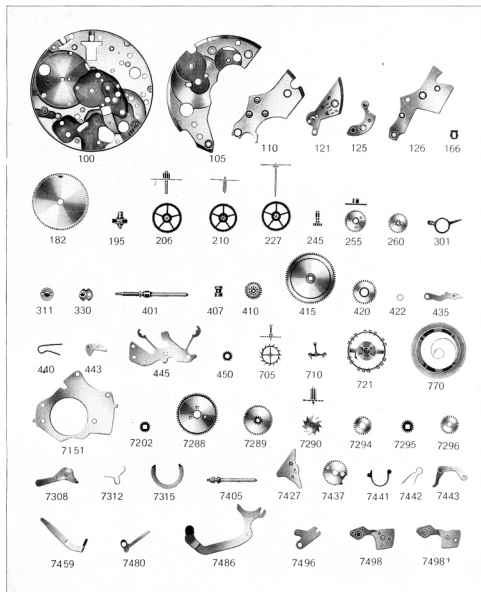


Green



Description and numbering of spare parts according to the « Technological Dictionary of Watch Parts », 2nd edition.

100	Plate	445	Setting lever spring (set bridge)	7290	Alarm wheel
106	Barrel bridge	450	Setting wheel	7294	Alarm setting connection wheel
110	Train wheel bridge	705	Escape wheel and pinion with straight pivots	7295	Alarm setting wheel
121	Balance cock for flat hairspring	710	Jewelled pallet fork and staff	7796	Intermediate setting wheel for alarm
125	Pallet cock	714	Pallet staff	7308	Intermediate setting yoke for alarm
126	Center wheel cock	721	Balance with flat hairspring, regulated	7312	Intermediate setting yoke spring for alarm
166	Casing clamp	723	Balance staff, pivoted	7315	Friction spring for unlocking wheel
182	Barrel and cover (without arbor)	730	Roller	7405	Alarm setting stem
195	Barrel arbor	770	Mainspring	7427	Intermediate wheel rocker for alarm
206	Center wheel and pinion, drilled, without cannon pinion	5101	Case screw (dog screw)	7437	Alarm stop wheel
210	Third wheel and pinion	5105	Bridge screws	7441	Alarm stop wheel spring
227	Sweep second wheel and pinion	5110	Bridge screws	7442	Rocker spring for intermediate wheel of alarm
245	Cannon pinion with clam notch, for sweep second	5121	Bridge screws	7443	Alarm setting lever
255	Hour wheel for sweep second	5125	Pallet cock screw	7459	Disconnector
260	Minute wheel	5126	Center wheel cock screw	7480	Disconnector spring
301	Regulator for flat hairspring	5311	Upper end-piece screw, for balance	7486	Alarm bolt yoke
311	Upper cap jewel with end-piece, for balance	5330	Lower end-piece screw, for balance	7496	Alarm bolt
330	Lower cap jewel with end-piece, for balance	5415	Ratchet wheel screw	7498	Alarm hammer, double function
401	Winding stem	5420	Crown wheel screw	7498 ¹	Alarm hammer, single function
407	Clutch wheel	5443	Setting lever screw	57151	Unlocking wheel holder screw
410	Winding pinion	5445	Screw for setting lever spring	57312	Screw for intermediate setting yoke spring of alarm
415	Ratchet pinion	5738	Hairspring stud screw	57443	Alarm setting lever screw
420	Crown wheel	5751	Dial key (dial foot screw)	57480	Screw for disconnector spring
422	Crown wheel ring	7151	Unlocking wheel holder	57496	Alarm bolt screw
436	Push-pin setting yoke	7202	Barrel arbor wheel for alarm	57498	Stop screw for alarm hammer
440	Yoke spring (set spring)	7288	Unlocking wheel	57498 ¹	Set screw for alarm hammer
443	Setting lever (detent)	7289	Intermediate wheel for alarm		



When ordering parts for a shock-protecting device, make certain to specify its exact type. For further details of the description and numbering of spare parts, see the « Technological Dictionary of Watch Parts », 2nd edition, published by Ebauches S. A.

Order repair parts through your jobber, giving the numbers and designations, thus insuring prompt and efficient deliveries.