

AUTOMATIC CALIBER WITH ALARM SYSTEM

980 17.50 RA SC PC CAL CORR SON 19 jewels

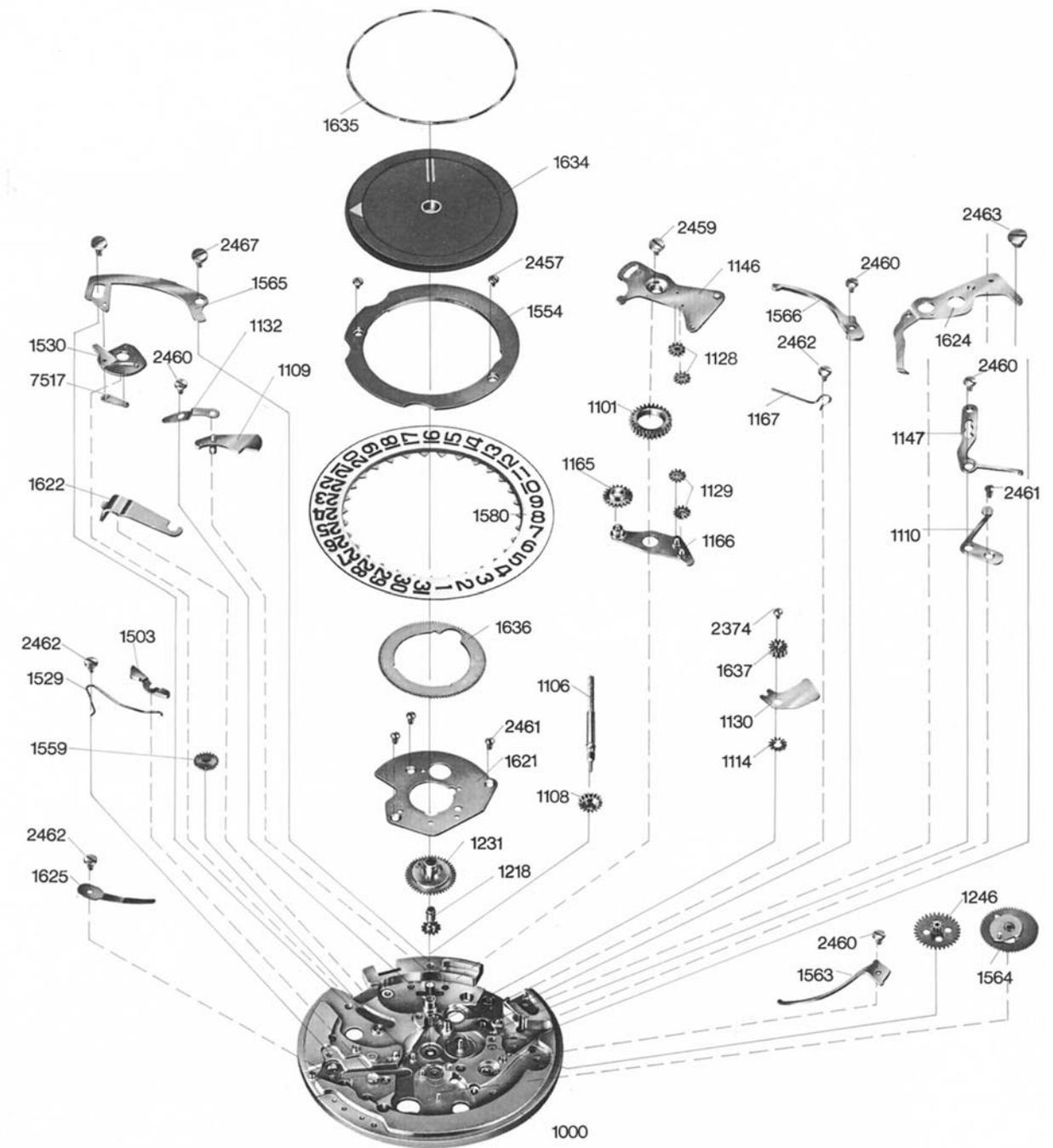
<p>∅ 30.80 mm</p>	
<p>Running time Jewel number Frequency Angle of lift of balance</p>	<p>48 h (ringing of alarm) 19 21'600 A/h 50°</p>



Manipulation

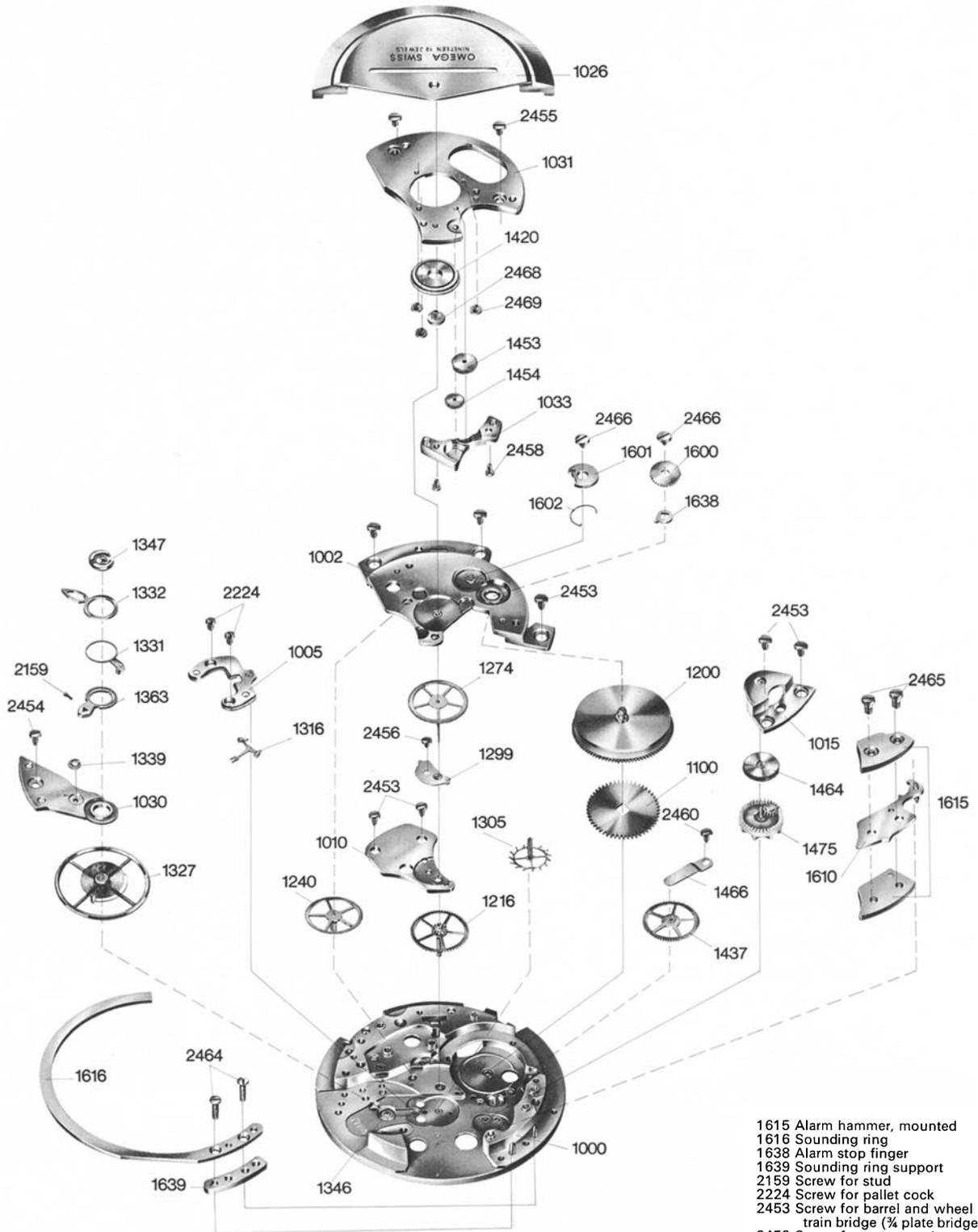
		Designation
1	1	MANUAL WINDING Movement - alarm system
2	1	ALARM SYSTEM CONNECTED Manual winding disconnected
3	1	SETTING OF ALARM (2 directions)
1 or 2	2	SETTING OF WATCH
A		Hour index for alarm system
B		Minute index for alarm system
C		Date corrector





- | | | | |
|--|--|--|--|
| 1000 Plate | 1167 Lower hand setting yoke spring | 1621 Plate for release wheel | 2460 Screw for hand setting yoke spring, upper |
| 1101 Crown wheel | 1218 Cannon pinin | 1622 Alarm operating lever | 2460 Screw for cam spring for date indicator driving wheel |
| 1106 Winding stem | 1231 Hour wheel | 1624 Release device | 2460 Screw for operating lever spring for date corrector |
| 1108 Winding pinion | 1246 Minute wheel | 1625 Spring for release device | 2461 Screw for setting lever spring |
| 1109 Setting lever | 1246 Minute wheel | 1634 Time display module | 2461 Screw for release wheel plate |
| 1110 Setting lever spring | 1246 Minute wheel | 1635 Hour indicator ring | 2462 Screw for hand setting yoke spring, lower |
| 1114 Setting wheel for minute wheel | 1246 Minute wheel | 1636 Fixed ring wheel for alarm system | 2462 Screw for date jumper spring |
| 1128 Upper hand setting wheel (2 pieces) | 1246 Minute wheel | 1637 Connecting wheel for release wheel | 2462 Screw for spring of release device |
| 1129 Lower hand setting wheel (2 pieces) | 1246 Minute wheel | 2374 Screw for connecting wheel of release wheel | 2463 Screw for securing release device |
| 1130 Setting wheel insulator | 1503 Date jumper | 2457 Screw for date indicator guard | 2467 Screw for operating lever of date corrector |
| 1132 Pressure spring for setting lever | 1529 Date jumper spring | 2459 Screw for upper hand setting yoke | |
| 1146 Upper hand setting yoke | 1530 Date corrector | 2460 Screw for pressure spring for setting lever | |
| 1147 Upper hand setting yoke spring | 1554 Date indicator guard | | |
| 1165 Ratchet winding wheel | 1559 Double date setting wheel | | |
| 1166 Lower hand setting yoke | 1563 Cam spring for date indicator driving wheel | | |
| | 1564 Date indicator driving wheel | | |
| | 1565 Operating lever for date corrector | | |
| | 1566 Operating lever spring for date corrector | | |
| | 1580 Date indicator | | |
| | 1621 Plate for release wheel | | |
| | 1622 Alarm operating lever | | |
| | 1624 Release device | | |
| | 1625 Spring for release device | | |
| | 1634 Time display module | | |
| | 1635 Hour indicator ring | | |
| | 1636 Fixed ring wheel for alarm system | | |
| | 1637 Connecting wheel for release wheel | | |
| | 2374 Screw for connecting wheel of release wheel | | |
| | 2457 Screw for date indicator guard | | |
| | 2459 Screw for upper hand setting yoke | | |
| | 2460 Screw for pressure spring for setting lever | | |
| | 2460 Screw for hand setting yoke spring, upper | | |
| | 2460 Screw for cam spring for date indicator driving wheel | | |
| | 2460 Screw for operating lever spring for date corrector | | |
| | 2461 Screw for setting lever spring | | |
| | 2461 Screw for release wheel plate | | |
| | 2462 Screw for hand setting yoke spring, lower | | |
| | 2462 Screw for date jumper spring | | |
| | 2462 Screw for spring of release device | | |
| | 2463 Screw for securing release device | | |
| | 2467 Screw for operating lever of date corrector | | |

Important For basic caliber numbers applying to the above parts, please refer to our spare part catalogue.



- 1000 Plate
- 1002 Barrel and wheel train bridge (¾ plate bridge)
- 1005 Pallet cock
- 1010 Center cock
- 1015 Alarm bridge
- 1026 Rotor
- 1030 Balance cock
- 1031 Upper bridge for automatic device
- 1033 Lower bridge for automatic device
- 1100 Ratchet wheel
- 1200 Barrel with arbor

- 1216 Center wheel
- 1240 Third wheel
- 1274 Sweep second wheel, HO
- 1299 Supporting plate for sweep second wheel
- 1305 Escape wheel
- 1316 Pallet fork
- 1327 Balance
- 1331 Regulator ring
- 1332 Regulator pointer
- 1339 Adjuster for regulator
- 1346 Incabloc, lower
- 1347 Incabloc, upper
- 1363 Stud-holder

- 1420 Bearing for rotor
- 1437 Driving gear for ratchet wheel
- 1453 Large connecting wheel for winding gear
- 1454 Small connecting wheel for winding gear
- 1464 Winding gear
- 1466 Clamp of driving gear for ratchet wheel
- 1475 Differential
- 1600 Alarm ratchet wheel
- 1601 Alarm stop-click
- 1602 Alarm stop-click spring
- 1610 Alarm hammer with axle

- 1615 Alarm hammer, mounted
- 1616 Sounding ring
- 1638 Alarm stop finger
- 1639 Sounding ring support
- 2159 Screw for stud
- 2224 Screw for pallet cock
- 2453 Screw for barrel and wheel train bridge (¾ plate bridge)
- 2453 Screw for center cock
- 2453 Screw for alarm bridge
- 2454 Screw for balance cock
- 2455 Screw for upper bridge of automatic device
- 2456 Screw for supporting plate for sweep second wheel
- 2458 Screw for lower bridge of automatic device
- 2460 Screw for clamp of driving gear for ratchet wheel
- 2464 Screw for sounding ring
- 2465 Screw for alarm hammer weight
- 2466 Screw for alarm ratchet wheel
- 2466 Screw for alarm stop-click
- 2468 Screw for rotor
- 2469 Screw for rotor bearing

Important For basic caliber numbers applying to the above parts, please refer to our spare part catalogue.

DISASSEMBLING

Warning

When disassembling, remove the springs very carefully so as not to foul their winding.

2.1. UNCASING

Before removing the automatic unit, make the alarm ring. The alarm release button should be pushed in again completely.

2.1.1. Remove the automatic unit.

2.1.2. Let down the movement (to do this, wind by 1/5th turn of the stem, press the alarm stop-click 1601).

2.1.3. Uncase according to the usual procedure. The alarm operating lever stem is in 2 pieces, pull away the button. Press the setting lever axle 1109 in order to extract the winding stem 1106.

2.1.4. Align the indexes of the time display module 1634 on 12 h.; then remove the hands.

2.1.5. Remove the sounding ring 1616 and the sounding ring support 1639.

2.1.6. Remove the hour circle (lift in several places where the plate has clearance, so as not to foul the track).

Remove the hour indicator ring 1635.

2.1.7. Remove the time display module 1634. **The latter must neither be disassembled nor cleaned by immersion. If not working correctly, it should be replaced.**

2.2. DISASSEMBLING OF THE WHEEL TRAIN, DATE AND ALARM SYSTEMS

2.2.1. Check the strength of the indenting before disassembling; if necessary, re-tighten the cannon pinion 1218.

2.2.2. Remove: date indicator guard 1554 and date indicator 1580;

fixed ring wheel for alarm system 1636;

plate for release wheel 1621

hour wheel 1231 and double date setting wheel 1559;

date corrector - winding - alarm setting mechanisms.

2.2.3. Disassemble movement and clean all parts according to the usual procedure except: **the winding gear 1464** which must not be cleaned by immersion. Pin its pivoting hole, clean the leaves of the pinion and the tothing in hard elder-pith.

2.3. DISASSEMBLING OF THE AUTOMATIC UNIT

2.3.1. Remove:

the rotor 1026;

the lower bridge for automatic device 1033, the large connecting wheel for winding gear 1453 and the small connecting wheel for winding gear 1454;

the bearing for rotor 1420.

2.3.2. Clean all parts following the usual procedure except: **the bearing for rotor 1420** which must not be submitted to ultra-sonic cleaning, but cleaned in benzine. Allow to dry in the air (do not pass it through sawdust).

ASSEMBLING OF THE AUTOMATIC UNIT

3.1. Place in position and screw the bearing for rotor

1420 on the upper bridge for automatic device 1031.

3.2. Oil (1.03) the rolling of the bearing for rotor 1420 and the tothing (1.02).

3.3. Oil (1.07) the post of the large connecting wheel for winding gear 1453, and the post of the small connecting wheel for winding gear 1454.

3.4. Check the freedom of the bearing for rotor 1420 (must not scratch).

3.5. Fit the large connecting wheel for winding gear

1453 and the small connecting wheel for winding gear 1454 (**flat side** uppermost) on the upper bridge for automatic device 1031.

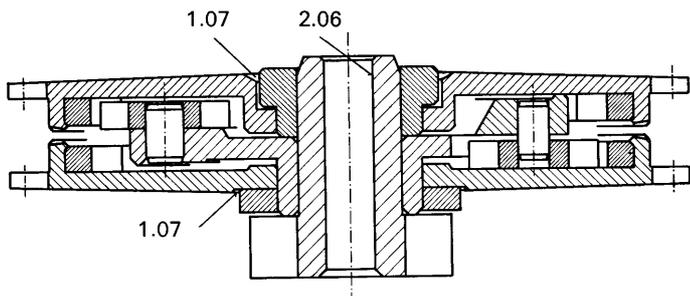
3.6. Place in position and screw the lower bridge for automatic device 1033. Oil (1.07) the tothing of the large and small connecting wheels for winding gear 1453 and 1454.

3.7. **Fitting of the rotor 026 on the automatic unit will take place when casing-up is effected.**

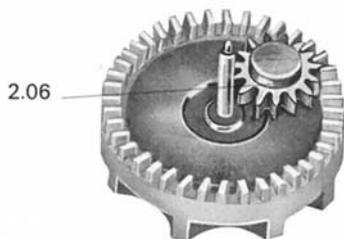
CHECKING OF THE PARTS

4.1. **Barrel with arbor 1200.** When completely wound, the mainspring should have a minimum development of 7 turns; if not, the mainspring 1208 should be replaced.

4.2. **Winding gear 1464.** Check its functioning.



4.3. **Differential 1475.** Check deterioration of crown of differential and grease pivoting point of satellite before fitting differential 1475 on movement.



4.4. Check condition of the other parts according to the usual procedure.

5. FITTING OF THE WHEEL TRAIN

Note

Oiling to be carried out during fitting operations is indicated below. For other oiling, please see 6.4.

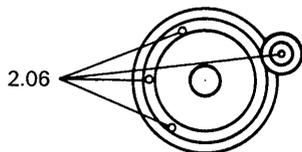
5.1. **Grease** before fitting:

support of ratchet wheel 1100 on the plate: 3 points (2. 06);

post of driving gear for ratchet wheel 1437 (2. 06);

toothing of ratchet wheel 1100 (2.06),

toothing of driving gear for ratchet wheel 1437 (2.06).



5.2. **Fit** in the following order:

ratchet wheel 1100;

driving gear for ratchet wheel 1437;

clamp of driving gear for ratchet wheel 1466;

center wheel 1216;

barrel with arbor 1200. **Take care** to see that the square of the arbor goes into the hole of the ratchet wheel 1100;

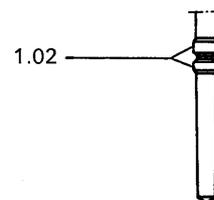
center cock 1010. Oil (1.07) upper pivot of center wheel 1216;

supporting plate for sweep second wheel 1299;

third wheel 1240;

escape wheel 1305;

oil and fit sweep second wheel 1274 HO (see diagram below);



barrel and wheel train bridge (3/4 plate bridge) 1002. Grease (2.01) upper pivot of barrel with arbor 1200 and alarm ratchet wheel fitting 1600;

aileron stop finger 1638. Grease (2.01) bearing of aileron stop-click 1601 ;

alarm stop-click spring 1602;

alarm stop-click 1601 ;

alarm ratchet wheel 1600. Tighten its screw 2466 in order to lock it.

6. FITTING OF THE ALARM SYSTEM AND PALLET FORK

6.1. **Fit** in the following order:

alarm hammer, mounted, 1615;

differential 1475;

winding gear 1464;

aileron bridge 1015. Before screwing the latter, make sure that the pinion of the winding gear 1464 is engaged in the satellite of the differential 1475;

pallet fork 1316;

pallet cock 1005.

6.2. **Check carefully** endshake of the hammer 1615: 0.02 mm max.

6.3. **Do not fit the balance 1327 et this stage, but only after the hand-fitting.**

6. 4. **Lubrication of the movement**

	Upper (bridge side)	Lower (dial side)
Oil 1.02	sweep second wheel 1274 escape wheel 1305 balance 1327	escape wheel 1305 balance 1327
Oil 1.06	pallets 1316	
Oil 1.07	pivoting of setting lever 1109 toothing of alarm stop-click 1601 third wheel 1240 differential 1475 alarm hammer, mounted, 1615	center wheel 1216 third wheel 1240 differential 1475 alarm hammer, mounted, 1615
Is not oiled	pallet fork 1316	pallet fork 1316
Grease 2.01		barrel with arbor 1200

6. 5. **Fit** the automatic unit (without rotor 1026).

7. REASSEMBLING OF THE TIME DISPLAY AND ALARM SYSTEMS, ALARM SETTING AND DATE MECHANISMS

7. 1. PREPARATION OF PARTS BEFORE REASSEMBLING

7.1.1. Upper hand setting yoke 1146;

grease (2.01) the 2 posts of the upper hand setting wheels 1128;

grease (2.01) the post of the crown wheel 1101;

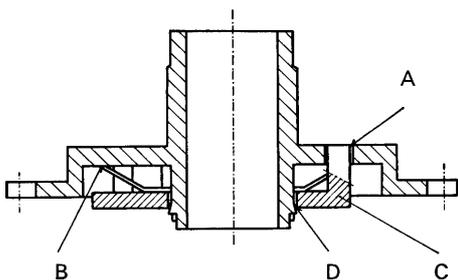
fit the 2 upper hand setting wheels 1128 and the crown wheel 1101.

7.1.2. Hour wheel 1231
oil (1.07) the 3 catches (A);

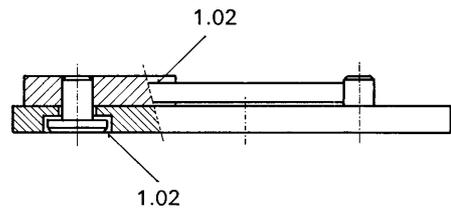
oil (1.07) the 3 blades (B), after having pushed the cam in completely;

check freedom of cam (C);

oil (1.07) the cam hale (D).

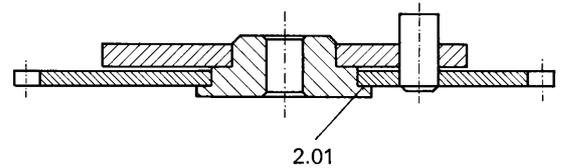


7.1.3. **Date corrector 1530:**



7.1.4. **Date indicator driving wheel 1564:**

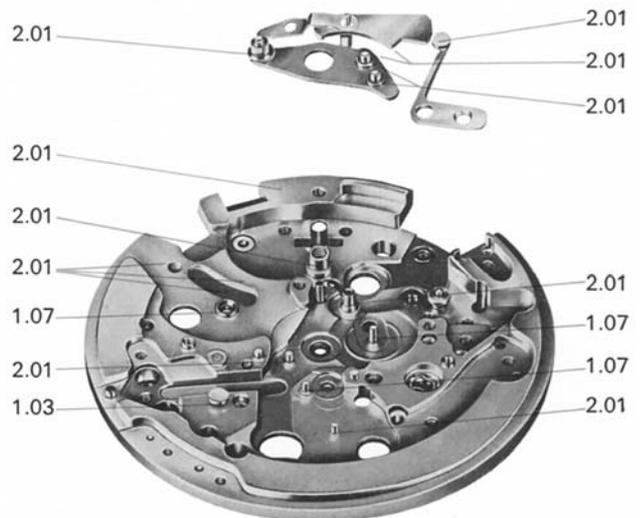
grease



7.2. **FIT** in the following order:

- grease (2.01) and fit the winding pinion 1108;
- grease (2.01) and fit the winding stem 1106;
- setting lever 1109;
- pressure spring for setting lever 1132;
- grease (2.01) and fit lower hand setting yoke spring 1167;
- lower hand setting yoke 1166;
- setting lever spring 1110.

7.3. **LUBRICATE** according to indications given below



7.4. **FIT** in the following order:

2 lower hand setting wheels 1129;

ratchet winding wheel 1165;

oil (1.07) post of center wheel 1216;

cannon pinion 1218;

minute wheel 1246;

setting wheel for minute wheel 1114;

setting wheel insulator 1130;

connecting wheel for release wheel 1637. Check its freedom after locking of screw 2374;

upper hand setting yoke spring 1147. Check its freedom after locking of screw 2460;

grease (2.01) notch of upper hand setting yoke spring 1147;

release device 1624;

upper hand setting yoke 1146. Check its functioning;

spring for release device 1625;

date corrector rod 7517;

date corrector 1530;

alarm operating lever 1622;

operating lever for date corrector 1565;

operating lever spring for date corrector 1566;

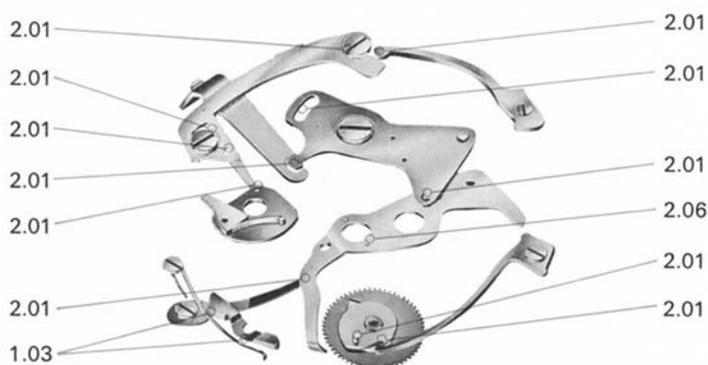
date jumper 1503;

date jumper spring 1529;

date indicator driving wheel 1564;

cam spring for date indicator driving wheel 1563.

7.5. **LUBRICATE** according to indications given below:



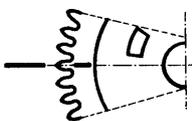
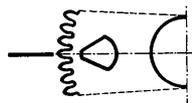
7.6. SETTING OF DATE MECHANISM AT GUIDE-MARK:

place in position for alarm setting;

turn date indicator driving wheel 1564 according to guide-mark (stamped on plate);

fit and turn hour wheel 1231 according to guide-mark (stamped on plate);

fit double date setting wheel 1559. **Take care** to keep these 2 wheels at the guide-marks.



Warning

Do not operate further the hand settings of the movement and alarm system in order to avoid alteration of the guide-mark for the date indicator wheel train.

7.7. **PROCEED** in the following order:

7.7.1. **Fit:** plate for release wheel 1621. Recheck positions of:

a) date indicator driving wheel 1564 with guide-mark on the plate;

b) guide-mark for hour wheel 1231 with that of plate for release wheel 1621 (in the initial series it is slightly staggered on the right).

7.7.2. **Grease** (2.01 underneath plate for release wheel 1621, the friction surfaces of: a) alarm operating lever 1622; b) upper hand setting yoke 1146.

7.7.3. **Fit:**

date indicator 1580;

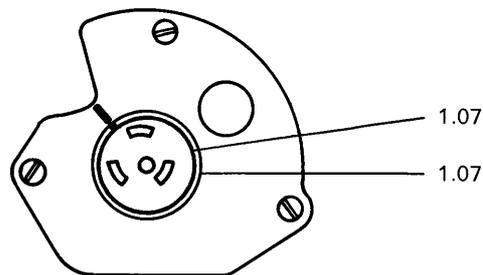
date indicator guard 1554. To fit the latter, it is necessary to press on the operating lever for date corrector 1665 so as to make the date corrector 1530 rest against a tooth of the date indicator 1580.

7.8. **CHECKING** of the date mechanism:

ascertain that the date corrector 1530 withdraws from the tooth of the date indicator 1580. If such is not the case, tighten the spring of the date corrector.

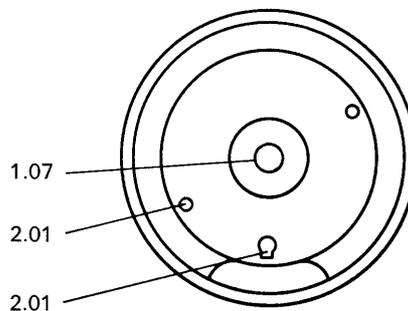
7.9. **PROCEED** in the following order:

fit the fixed ring wheel for alarm system 1636;
oil according to indications below:



7.9.1. **Oil** (1.03) 3 teeth of date indicator 1580.

7.9.2. **Grease** time display module 1634 according to indications below:



fit time display module 1634, indexes on 12 h. (see 2. 1. 4.);

fit hour indicator ring 1635;

fit hour circle. Position its countersink on the steady-pin of the plate (at 12 h.).

7.10. **HAND-FITTING:**

fit hour, minute and second hands;
check alarm release device: tol. ± 4 min.;
check date jump: tol. ± 10 min. If variation is greater, recheck setting to guide-mark of the date mechanism (7. 6.).

7.11. **PROCEED** in the following order:

fit balance 1327;

fit sounding ring support 1639 and sounding ring 1616;

fail enlargement ring;

case-up the movement;

make alarm ring;

remove upper bridge for automatic device 1031 and fit rotor 1026 on same;

fit automatic unit;
check automatic winding.