NEW LUBRICANTS

Lubrication problems

Despite research efforts made by several laboratories, the lubricants used up to the present time in watchmaking have produced variable results, not always satisfactory and sometimes even disappointing.

The wearing of the pivots has deteriorated many wheel trains, the drying or leaking of the lubricant has progressively immobilized the escapements, both phenomena producing problems of seizing or corrosion of the mechanisms.

For all these reasons, the watch's performances are diminished and require more frequent servicing to maintain its running. In such a situation, an improvement of the lubricants is considered as expected and necessary.

After several years of testing on a large number of movements with various calibres, it is certain that the new lubricants presented in this text meet these requirements owing to the highly satisfactory results they have produced.

Synt-A-Lube oil 9010 blue, OMEGA 1.15

This oil replaces the old Synt-A-Lube 9010, OMEGA 1.02.

Its use is recommended for the gear train and balance bearings in small and medium calibres.

Our own tests have confirmed its principal advantage, namely being less sensitive to humidity; in practice this means that it assures a more stable amplitude and better protects the parts in contact from corrosion and wear.

Synt-A-Visco-Lube oil 9020 new, OMEGA 1.16

This oil replaces the old Synt-A-Visco-Lube 9020, OMEGA 1.03.

Its use is recommended for the pivotings and functions of the manual or automatic winding and the time-setting mechanisms, that is for cases where the resistance to the pressure of the SAL would be insufficient.

In these applications it displays the same advantages in a humid atmosphere as the SAL and at the same time produces a lasting lubricant effect and better protection against corrosion.

Remark : We recommend using the oil Microgliss D/5, Omega 1.14 instead of the 1.16, as it offers a better resistance against specific high pressures.

Moebius 9415 grease for escapement, OMEGA 2.16

This new grease is designed especially for the lubrication of the escapement, one of the most important functions for maintaining the amplitude of the balance and the running of the watch.

During our tests on these two parameters, grease 9415 was compared to grease F, OMEGA 2.0; it achieved a greater stability in course of time, especially in a humid atmosphere. Its performances are judged equal to those of Lubrifar.

Lubrication of the escapement for production in large series

Though there are greases on the market which guarantee a smooth and lasting functioning of the escapement, the greasing operation itself is delicate and it is difficult to assure 100% success in large series production. For this reason Omega has chosen the Lubrifar procedure in which the lubricant is protected and fixed on the impulse planes of the escapement wheels by a well-suited mechanical device. This procedure is backed up by a wide-scale experience over several years and provides an application regularity unattainable by manual work.

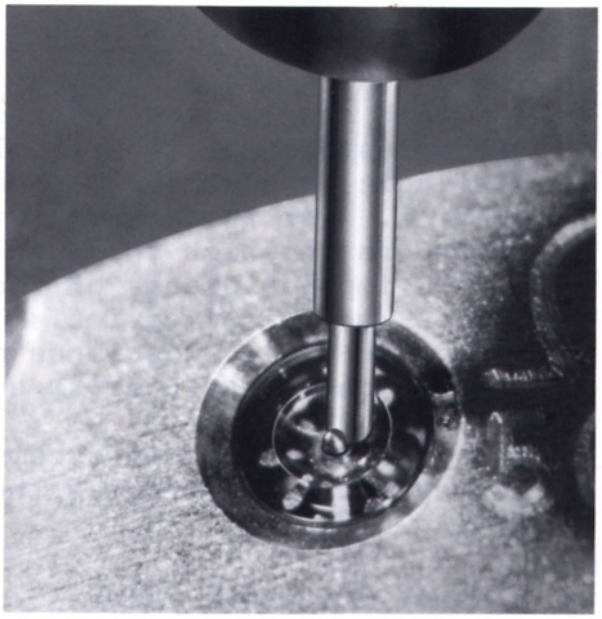
The Lubrifar disappears completely during cleaning and to replace it we propose the use of Moebius grease 9415, OMEGA 2.16.

Symbols for lubrication

The signs preceding the names of the new lubricants in the above paragraphs are standard symbols which will be used from now on in the lubrication plans. Their meaning is given in the following table:

Oil		Fluid	for rapid wheels and ruby bearings
			for slow wheels, subject to medium pressure and ruby or metallic bearings
		Viscous	for very slow wheels, subject to high pressures
		Special	for escapement
Grease			for mechanisms
			for frictions and particular cases
			for sliding attachment
			for escapement
			for synthetic materials

How to apply the lubricants



Wheel trains

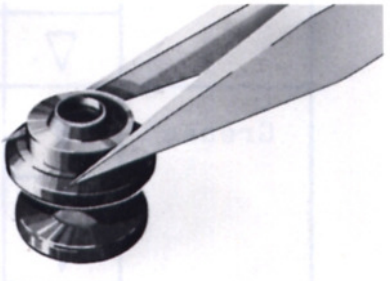
Deposit oil with an oiler or an oil-pike in one or several steps.

The amount is correct if the oil sink is only 2/3 full and if the rim of the jewel is free of oil.

Incabloc

The oiling is done outside the movement.

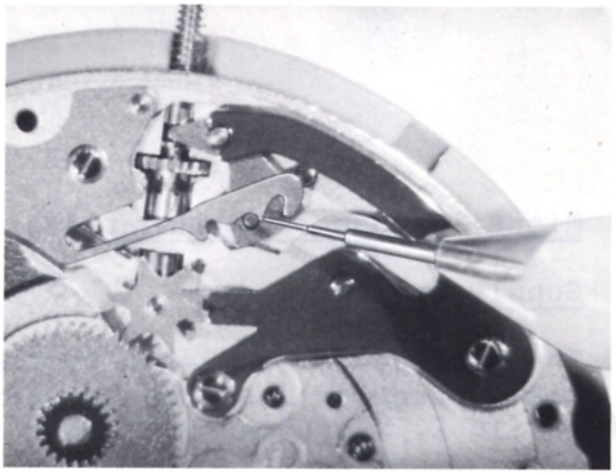
Deposit the drop of oil with an oiler or an oil-pike on the end-stone, then cover it with the setting. The two pieces adhere by capillarity and can be placed together in the bloc.



The dosage is made according to a general rule: the drop of oil should not exceed 2/3 of the diameter of the jewel (not the end-stone), as observed when the bloc is mounted.

Various mechanisms

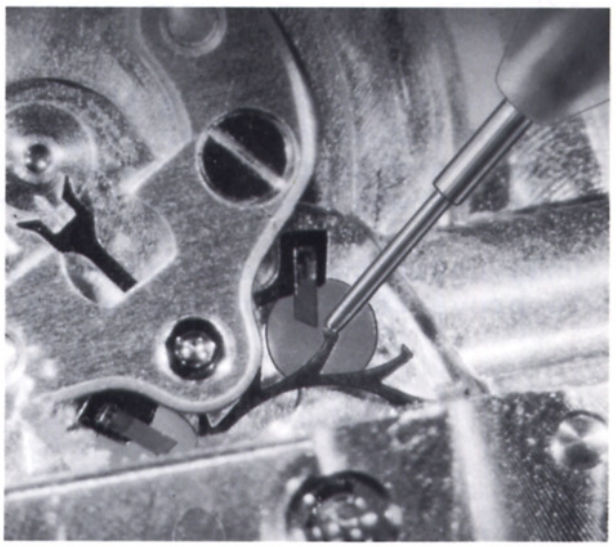
Deposit the oil with an oiler or an oil-pike, in moderate quantities, in the prescribed places.



Escapements

1. Wind slightly the mainspring.
2. Apply the grease with a greaser or an oil-pike on the impulse surface of 3 teeth of the escapement wheel.
3. Let the wheel turn and repeat the operation 2 or 3 times.

The quantity of grease is normal when a small reserve appears on the impulse surfaces of the lifts of the pallets, here and there as the teeth of the escapement wheel pass.



Remark: The deposit of grease on the escapement temporarily lowers the amplitudes of the balance.

Miscellaneous recommendations

Supply in lubricants

The lubricants delivered by the World Service Organization are stored for less than a year in a refrigerated cabinet at -18°C. Supplies from this source are assuredly fresh.

Storage

Once at the user's, the lubricants should be kept in their original wrapping, sheltered from light and heat, to keep their freshness for around one year.

At the work places, the lubricants kept in bowls should be replaced each week; however, lubricants in oilers and greasers can be used until these containers are emptied.

Cleanliness of movements

Top quality oils applied with care; what more could be asked if not clean movements on which to apply these oils. For this purpose, the cleaning baths should be supervised to see that each day the dissipated liquid is filled again and that the baths are renewed after the washing of 200 movements, or once a week. It should be avoided to wash anything else than the movements in the baths meant for them and, last of all, the condition of the jewels should be observed after the cleaning since this is the best indication of a job well done.

It goes without saying that the cleaned movements must only be handled with rubber fingers, which should be changed twice a day, and that the accessories such as pegwoods, leather buffs, bowls and oiling tools must be kept impeccably clean.

Only under these conditions will the new lubricants be able to prove their remarkable qualities.