1 – THE WATCH MAINTENANCE 1

The mechanism of a watch, manual or automatic, is made up of many gears, wheels and levers that are always moving and in contact with each other. To prevent these mechanical parts from wearing out over time and to always have the watch working perfectly, the mechanical parts must be cleaned and lubricated appropriately.

In fact, over the years the oils degrade, and friction can lead to wear of the mechanical parts, producing harmful micro-dust that dirty and damage the functioning of the watch.

Furthermore, the usury of the most stressed mechanical parts sometimes makes it necessary to replace them, with non-negligible costs.

WHEN TO SERVICE YOUR WATCH

A new watch, which is completely serviced on a regular basis, has an unlimited lifespan.

The optimal frequency of the complete overhaul is 5-6 years, regardless of whether the watch is used daily or not.

On the other hand, a watch that is used daily for 5 years is comparable to a car that travels 300 thousand km.

Certainly, well before 300 thousand km, we will carry out maintenance on our car, changing the filters and oils.

Even for watches that have not been used for a long period (over 5-6 years) it is necessary to have a periodic overhaul because over time the oils can degrade to the point of losing part or all their lubricating capabilities.

Lengthening the overhaul times compared to the recommended 5-6 years increases the possibility that, in the long run, wear will occur that requires the replacement of some parts of the movement.

CLEANING THE OUTSIDE OF THE WATCH 4

The watches with the case waterproof to 100 m. and more (chap. 2) and the metal bracelet must be rinsed with fresh water after use at sea.

Furthermore, they must be washed regularly with fresh water and liquid soap to remove traces of dust and sweat. The bracelet should be washed using a soft toothbrush together with liquid soap and fresh water.

To dry, use a soft, dry cloth.

2 - THE WATER RESISTANCE OF THE WATCH

IMPERMEABILITÀ	PIOGGIA SCHIZZI	DOCCIA BAGNO	NUOTO	SNORKELING	IMMERSIONI
3 atm = 30 m	SI	NO	NO	NO	NO
5 atm = 50 m	SI	NO	NO	NO	NO
10 atm = 100 m	SI	SI	SI	SI	NO
20-30 atm = 200 -300 m	SI	SI	SI	SI	SI

Pay attention to the writing "water resistant" 30 meters (3 atm or 3 bar): These watches do not allow water activities.

Even for "water resistant" watches 50 meters (5 atm or 5 bar) it is recommended NOT to do activities in water, even if the manufacturers indicate otherwise.
In fact, entering the water with a dive, the pressure is well above 5 atmospheres.

Only with watches that are waterproof to 100 meters (10 atm or 10 bar) is it possible to carry out activities in water without problems.

While for scuba diving activities you need a watch waterproof to 200 meters (20 atm or 20 bar) or higher.

WATERPROOF MAINTENANCE

For professional use, such as for Comex divers, the watch is a vital instrument and therefore waterproofness must always be guaranteed 100%.

According to the German standards DIN 8310, waterproofness is not a permanent property. Therefore, for diving watches it is necessary to carry

out a water resistance test once a year, preferably before the summer, and, if necessary, replace the seals.

The gaskets are, in fact, subject to natural aging and wear. This deterioration process is accelerated by strong temperature changes, sweat, chlorine, soap and salt water with the consequent loss of the seals and the waterproofness of the watch.

Diving after long exposure to the sun is particularly dangerous. In this case, a depression is created due to rapid cooling, which can lead to water infiltration into the watch.

Furthermore, it is advisable NOT to use the watch in spas or spas, where very strong temperature changes can cause condensation under the glass and damage the dial and movement.

Our waterproof test is performed with the Witschi Proofmaster S and is done at a depression of – 0.7 atmospheres and an overpressure of 10 atmospheres. Finally, it should be remembered that water infiltration is often caused by the winding crown not being screwed down correctly.

So, you have to be very careful when closing the screw-down winding crown.

WATER LEAKS INTO THE WATCH

In the event of water infiltration into the watch, you will immediately see condensation on the inside of the glass and/or small drops of water on the dial. In these cases, it is necessary to intervene immediately by taking the watch to a laboratory within 24 hours, especially if it involves salt water, which is very corrosive for the movement parts.

If this is not possible, you must put the watch in the freezer to stop the oxidation of the movement and take the watch to a watchmaking laboratory as soon as possible.

Sometimes it happens that after a few days you can no longer see the condensation and you mistakenly think that nothing has happened to the movement.

However, even if the condensation disappears, the oxidation process of the movement continues, leading to the watch blocking and the need to replace the entire movement, with very high costs.

Therefore it is always necessary to take it to a laboratory as soon as possible, to check the damage to the movement and arrange for repairs, thus saving the watch.

3 - WINDING A MANUAL WATCH

Manually wound watches must be wound every 24 hours because generally the winding lasts 36 hours, about a day and a half.

The winding operation must be carried out by rotating the winding crown always and only forwards for approximately 20 times, until a strong resistance is felt which indicates that the mainspring is fully wound.

The winding operation can become a pleasant habit to carry out in the morning, when after taking a shower and getting dressed you put on your beloved watch.

4 - WINDING AN AUTOMATIC WATCH 12

The automatic watch requires MANUAL WINDING when it has been STILL and unused for a certain period.

HOW TO MANUALLY WIND AN AUTOMATIC WATCH

In position 1 – CLOSED (fig. page 16) delicately rotate the crown forward for approximately 20 turns.

In this way the spring acquires the energy necessary for correct daily functioning.For watches with a screw-down crown, such as Rolexes, you need to unscrew the crown and wind it manually in position 1.

The crown must then be screwed back on.

The automatic watch works correctly if used for work or leisure activities during which there is constant movement of the wrist. In this way the automatic mechanism recharges the watch spring and allows both normal operation during use and operation during the night hours when the watch is generally left at rest. Sometimes it can happen that, after a day of work in which we did little movement or after a day of vacation in which we lay on the beach sunbathing, the automatic watch stops during the following night hours.

Nothing to worry about, we simply didn't make enough movement during the day to wind the spring and make the watch work during the hours of inactivity at night. We must therefore carry out the manual winding explained above.

5 – SETTING THE DATE

The date watch needs the date to be adjusted when it has been left standing still and unused for a certain period.

However, when the clock is working and we are on the 30th of a month with 30 days, the advice is to move the hands forward for 1 day or if we are on the 28th or 29th of February for 3 or 2 days.

Most watches, from the 70s onwards, have a RAPID DATE CORRECTION system, via the winding crown or the correction button.

IMPORTANT precaution to observe: DO NOT rapidly correct the date BETWEEN 9 O'clock and 3 o'clock (hands in the upper half of the dial).

This is because, if we are in the NIGHT TIME, the date release device is already inserted and the quick correction could cause SERIOUS DAMAGE to the date change mechanism.

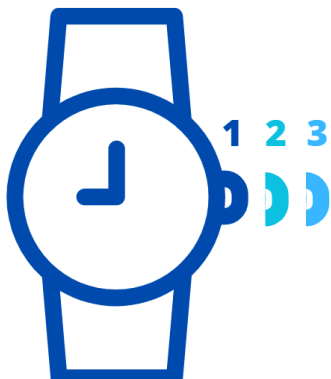
HOW TO CHANGE THE DATE

The winding crown has three positions (fig. page 16):

1 – CLOSED (near the cash register). It is used to manually wind the watch, see chapter 3. For watches with a screw-down crown, such as Rolexes, you must first unscrew the crown.

2 – INTERMEDIATE. It is used for quickly changing the date.

3 – OPEN. It is used to move the hands forward and adjust the time.



A - Bring the crown to position 3 – OPEN and move the hands forward until the date clicks (midnight). Set the hands TO 6 AM IN THE MORNING.

B - Return the crown to position 1 – CLOSED.

C - Move the crown to position 2 – MID and turn forward (back in some watches) until you get the correct date. If the date change is push-button, press the button several times until the correct date is reached.

D - Bring the crown to position 3 – OPEN and advance the hands to the exact morning or afternoon time.

E - Return the crown to position 1 – CLOSED. For watches with a screw-down crown, such as Rolexes, remember to screw the crown down.

6 - THE PRECISION OF MECHANICAL WATCHES

“My watch goes forward” or “my watch goes back”.

Behind these two sentences there is a set of situations dependent on different factors.

A NEW mechanical watch (automatic or manual), with the chronometer certificate (issued by the COSC in Switzerland and identified by the writing “chronometer” on the dial), can have a daily deviation of -4 seconds to +6 seconds.

The gap is very small, keeping in mind that a day has 86,400 seconds. This means that the monthly gap can vary from -2 minutes to +3 minutes.

A NEW mechanical watch (automatic or manual), without the chronometer certificate, has an unestablished running tolerance, but which on average can range from -10/-15 to + 10/+15 seconds per day. The difference is always small, keeping in mind that a day has 86,400 seconds. Therefore, the monthly difference can vary from -5/-7.5 minutes to +5/+7.5 minutes.

These conditions, referring to a new watch, are the optimal situations for running a chronometer watch and a non-chronometer watch.

The same conditions are also valid for used watches which have always had periodic inspection every 5 years.

Let's get to the real situation, in which most watches find themselves.

Often the watch is taken to the watchmaker many years after purchase or the last service, only when it has functioning problems: it goes very fast or very backward or has stopped.

The watch will therefore need a complete overhaul and sometimes even the replacement of worn parts due to lack of cleaning and lubrication. Furthermore, the movement has worked for years under stress, without cleaning and lubrication, and therefore its optimal performance has decreased.

Lifestyle and conditions of use also influence the running rate of watches. A sedentary lifestyle does not allow the winding spring of automatic watches to wind completely.

Therefore, during the night, with the watch at rest, the balance wheel does not have enough energy to function correctly and the watch becomes inaccurate. In these cases we recommend carrying out a manual charge in the evening.

Conditions of use can also affect the accuracy of the watch. In fact, the balance wheel, which is the heart of the watch, is very sensitive to vibrations and shocks that can change the gear of the watch. Therefore, it is advisable not to use the mechanical watch (manual or automatic) during manual or sporting activities where strong and repeated stresses and vibrations are present.

To guarantee correct functioning it is therefore advisable to carry out periodic maintenance every 5 years and adjust the time every 3-4 weeks.