

A COMPLETE GUIDE TO WATCH CARE AND MAINTENANCE

1 - WATCH REVISION

The mechanism of a watch, manual or automatic, is composed 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 in perfect working order, the mechanical parts must always be well cleaned and properly lubricated. In fact, over the years the oils degrade, and friction can lead to wear on the mechanical parts, producing harmful micro-powders that dirty and damage the functioning of the watch. Furthermore, the wear of the most stressed mechanical parts sometimes makes it necessary to replace them, with non-negligible costs.

WHEN TO REVISE YOUR WATCH

A new watch that is thoroughly revised on a regular basis has an unlimited lifespan. The optimal frequency of the complete revision is every 5-6 years, regardless of whether the watch is used daily or not. Furthermore, in our laboratory the quotation is precise, written and free of charge. On the other hand, a watch that is used daily for 5 years is comparable to a car that has done 300.000 km. Of course, well before 300.000 km, we subject our cars to maintenance, changing the filters and oils. Even for watches that have not been used for a long period (5-6 years and over) it is necessary to periodically have them checked because, as explained above, over the years the oils degrade until they lose some or all of their lubricating properties. Extending the revision time in respect to the recommended 5-6 years increases the possibility that, in the long run, there will be wear such as to require the replacement of some parts of the movement with non-negligible costs.

2 - THE WATER RESISTENCE OF A WATCH

DENOMINAZIONE PRESSIONE							
IMPERMEABILITA'	PIOGGIA	SCHIZZI	DOCCIA	BAGNO	NUOTO TRANQUILLO	IMMERSIONI A BASSE PROFONDITA'	IMMERSIONI IN ACQUE PROFONDE
3bar = 30 metri	SI	SI	NO	NO	NO	NO	NO
5bar = 50 metri	SI	SI	SI	SI	SI	NO	NO
10bar = 100 metri	SI	SI	SI	SI	SI	SI	NO
20/30bar = 200/300 metri	SI	SI	SI	SI	SI	SI	SI

Table's source: Assorologi

PAY ATTENTION to the words "water resistant" 30 meters (3 atm or 3 bar): THESE WATCHES DO NOT ALLOW YOU TO DO WATER ACTIVITIES. However, even for "water resistant" watches 50 meters (5 atm or 5 bar) I would not recommend water activity, even if the table indicates otherwise. Only with watches waterproof up to 100 meters (10 atm or 10 bar) it is possible to do water activities without

problems. While for deep diving activities a watch waterproof to 200 meters (20 atm or 20 bar) or more is required.

Waterproof maintenance:

For professional use, such as for Comex divers, the watch is a vital instrument and therefore water resistance must always be 100% guaranteed. According to the German standards DIN 8310, waterproofing is not a permanent property. Therefore, for diving watches it is necessary to carry out the waterproofing test once a year, preferably before the summer and, if necessary, to replace the gaskets. In fact, the seals are subject to natural aging and wear. This deterioration process is accelerated by severe temperature changes, sweat, chlorine, soap, and salt water. With the consequent loss of the seal of the gaskets and of the water resistance of the watch. Diving after a long exposure to the sun is particularly dangerous. In this case, a depression is created due to rapid cooling, which can lead to water infiltrations. Our waterproofing test, visible in the video, is performed with the Witschi Proofmaster S and is carried out at the depression of - 0.7 atmospheres and at the overpressure of 10 atmospheres. Finally, it should be remembered that the infiltration of water is often caused by the winding crown not screwed down properly. So you have to be very careful when closing the screw-down winding crown.

Water infiltration in 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 is salt water, which is very corrosive to the parts of the movement. If this is not possible, the watch must be placed in the freezer to stop the movement from oxidizing. Then, as soon as possible, it is necessary to take the watch to a watchmaking workshop. Sometimes it happens that after a few days you no longer see the condensation and you think that nothing has happened to the movement. Error! Even if the condensation disappears, the oxidation process of the movement continues, leading to the blocking of the clock 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 for damage to the movement and to repair it, saving the watch.

3 - WINDING A MANUAL WATCH

Manual winding watches should be wound every 24 hours because they typically last 36 hours, about a day and a half. The winding operation must be carried out with the watch in hand and always and only turning the winding crown forward about 20 times, until a strong resistance is felt. This means that the spring is fully loaded. Typically, the winding is done in the morning, becoming a pleasant habit, after taking a shower and getting dressed, we put on our beloved watch.

4 - WINDING AN AUTOMATIC WATCH

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

HOW TO MANUALLY WIND AN AUTOMATIC WATCH

In position 1 - CLOSED, gently rotate the crown forward about 15 turns.

In this way the spring acquires the necessary energy for correct daily operation.

For watches with a screw-down crown, such as Rolex, the crown must be unscrewed and in position 1 perform the manual winding. Then the crown must be screwed back.

The automatic watch works correctly when used for business or leisure activities where there is constant movement of the wrist. In this way the automatic mechanism recharges the watch spring and

allows both normal function during use and nocturnal function when the watch is generally left at rest.

Sometimes it may occur, after a day of work in which we did little movement or after a day of vacation in which we were lying on the beach sunbathing, the automatic watch stops during the following night hours.

Nothing to worry about: we simply did not make enough movement during the day to wind the mainspring and run the watch during the nighttime hours of inactivity. So, we must do the manual winding explained above.

5 - DATE SETTING

The date watch needs to be adjusted when it has been standing still and unused for a certain period. On the other hand, when the watch is working and we are on the 30th of a month with 30 days, the advice is to let the hands carry on for 1 day or if we are at 28th or 29th February for 3 or 2 days. Most of the watches, from the 1970's onwards, have the QUICK DATE CORRECTION system. IMPORTANT precaution to observe: DO NOT PERFORM rapid date correction (via crown or correction button) BETWEEN 9 AM AND 3 AM (the hands in the upper half of the dial). This is because, if we are in the NIGHT BAND, the automatic shutter-date device is already inserted, and the quick fix could cause SERIOUS DAMAGE to the date change mechanism.

HOW TO CHANGE THE DATE

The winding crown has three positions:

- 1 - CLOSED (near the cash desk). It is used to manually wind the watch, see chapter 3.
- 2 - INTERMEDIATE. It is used to change the date quickly.
- 3 - OPEN. It is used to move the hands forward and set the time.

METHOD:

- A - Pull the crown to position 3 - OPEN and advance the hands until the date window clicks (midnight). Bring the hands to 6 AM.
- B - Return the crown to position 1 - CLOSED.
- C - Turn the crown to position 2 - INTERMEDIATE and move forward (backwards on some watches) until the correct date is obtained. If the date change is push button, press the button several times until the correct date is reached.
- D - Return the crown to position 1 - CLOSED.
- E - Bring the crown to position 3 - OPEN and move the hands forward until the exact time of morning or afternoon.
- F - Return the crown to position 1 - CLOSED.

IMPORTANT: For watches with a screw-down crown, such as ROLEX, you have to unscrew the crown, change the date and then screw the crown back on.

6 - THE PRECISION OF MECHANICAL WATCHES

"My clock goes forward" or "my clock goes backwards".

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

A new mechanical watch (automatic or manual), with a chronometer certificate (issued by the COSC in Switzerland and identified by the word "chronometer" on the dial), can have a daily deviation from -4 seconds to + 6 seconds.

The difference is very small, bearing in mind that a day has 86,400 seconds.

This means that the monthly difference can vary from -2 minutes to +3 minutes.

A new mechanical watch (automatic or manual), without a chronometer certificate, has an unspecified running tolerance, but which on average can range from -10 / -15 to + 10 / + 15 seconds per day.

The difference is always small, bearing in mind that a day has 86,400 seconds.

So, 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 a chronometer watch and a non-chronometer watch.

The same conditions are also valid for used watches that have always had a periodic review every 5 years.

Let's consider the real situation, in which most of the watches are found.

Often the watch is brought to the watchmaker after many years from the purchase or from the last revision, only when it presents some functioning problems: it goes very far forward or backward, or it has stopped.

The watch will therefore need a complete review and sometimes even the replacement of worn parts due to the lack of cleaning and lubrication.

In addition, 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 functioning of the watches.

A sedentary lifestyle does not allow the winding spring of automatic watches to wind completely.

Therefore, at night, with the watch at rest, the balance wheel does not have sufficient energy for correct operation and the watch becomes inaccurate.

In these cases, it is advisable to carry out a manual winding in the evening.

The 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 running of the watch.

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

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