

BALANCE JEWELS DIRTY

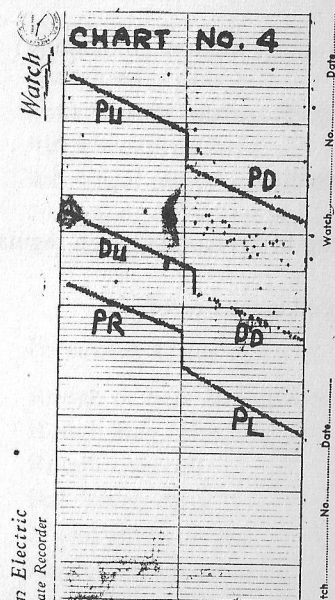
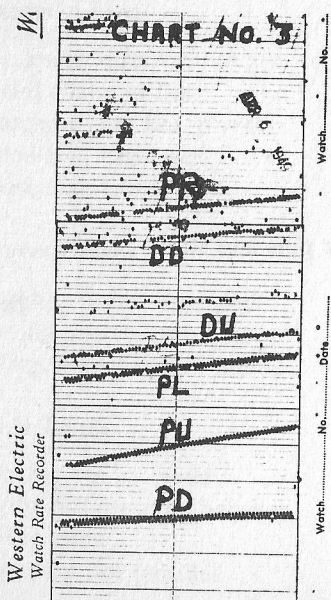
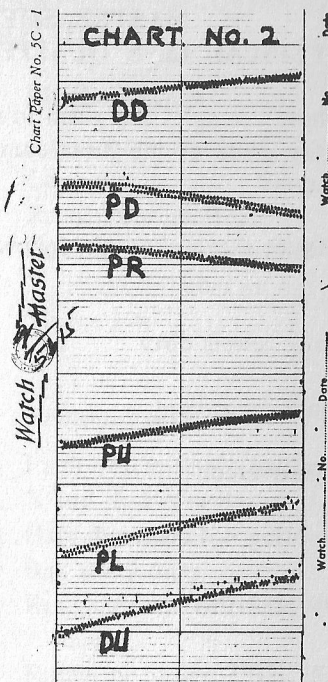
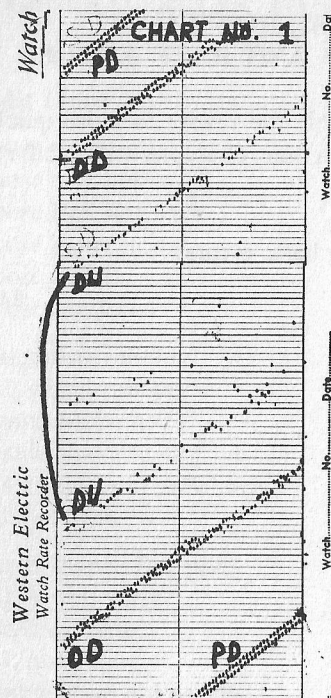


CHART NO. 1

Note the split line at DU. Since the DD line is of much better quality it is easy to determine that the probable cause of poor quality lines is in the upper balance jewel. Rates are close and the quality of the SD line is good except for the out-of-beat condition.

CHART NO. 2

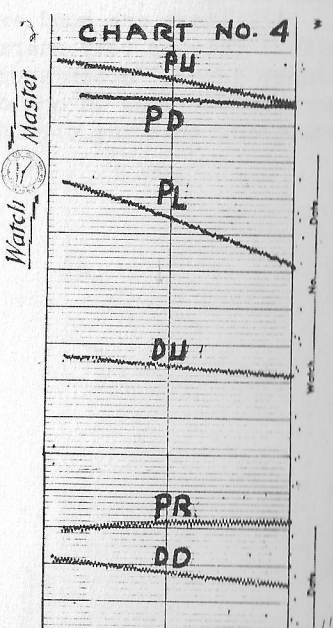
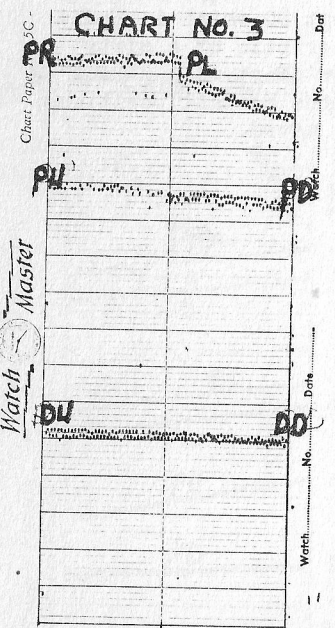
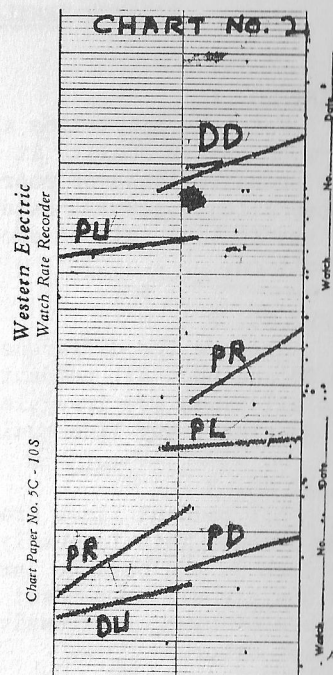
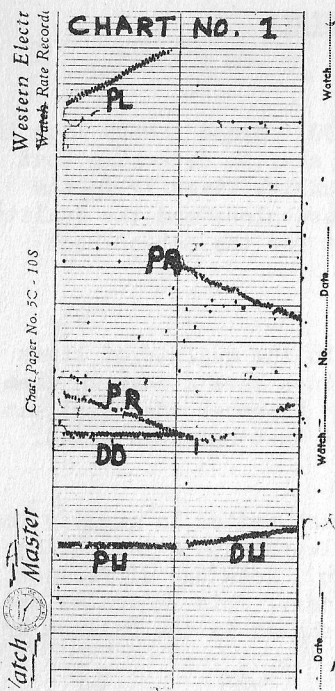
Observe the difference in the quality of lines at DU and DD. All pendant lines have a wave in them and all lines are irregular. Remember that dirt can cause almost any line quality that has been named.

CHART NO. 3

All pendant lines are much better in quality than the dials. This is nearly always a sure indication of dirt in the balance jewels. Note the difference in quality of the pendant lines. This indicates bad regulator pins or excessive shakes in the balance or pallet arbor.

CHART NO. 4

All lines are good except DD which is badly split. This is very characteristic of a dirty balance jewel. Often another chart will show a poor quality line in one of the pendant positions indicating that the dirt has moved.



BALANCE PIVOT BENT

CHART NO. 1

Note the irregular lines in all positions. The apparent poise error PR and PL is characteristic of bent pivots. In strap and bracelet watches the rate variation may be much greater as a result of a bent pivot.

CHART NO. 2

In this chart the quality of all lines is good but the same apparent poise error is present. Note that all lines have slight irregularities.

CHART NO. 3

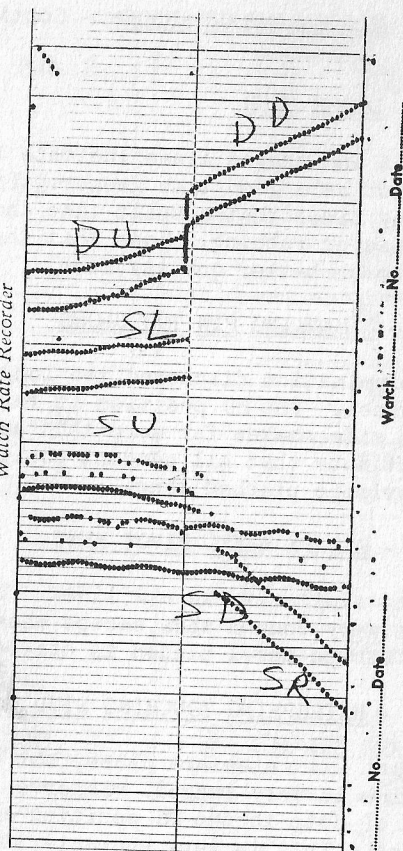
Again the apparent poise error is indicated. All lines are very ragged. The PU line indicates a good possibility of excessive side shakes in addition to the bent pivot. With ragged lines, the possibility of dirt should always be kept in mind.

CHART NO. 4

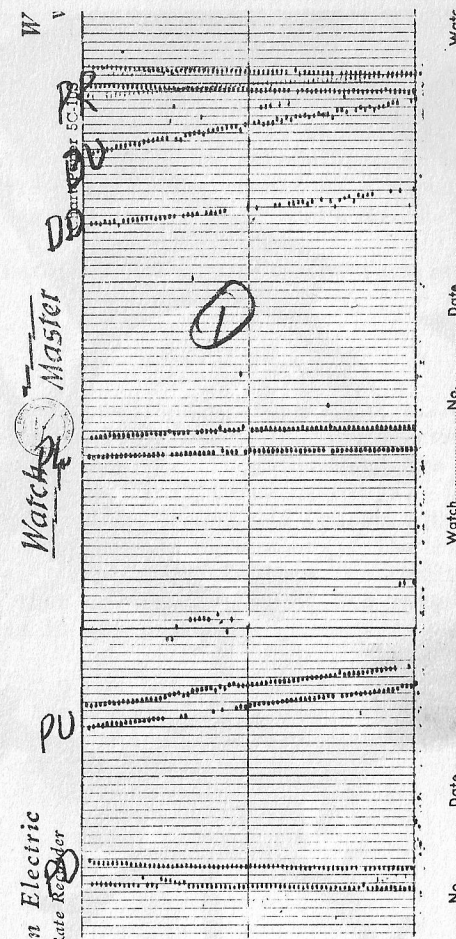
Here we have all four pendant positions showing a typical poise error. The lines are only slightly irregular but position rates are very bad. This watch was also slightly magnetized. When the pivot was straightened and the watch demagnetized, all rates were close.

Western Electric
Watch Rate Recorder

Chart Paper No. 5C-10S



The above chart is typical of a magnetized strap or bracelet watch. This watch was a very poor time keeper. Note the extreme variation in rates and poor quality lines. When the watch was demagnetized, all rates were within a few seconds of each other and gaining approximately one minute in twenty-four hours. It is very important that every watch be checked for magnetism before handing it to a customer.



The above chart represents the reading obtained from a new sixteen size pocket watch. Close inspection failed to disclose anything loose, but it was found that draw on the R stone was very light. This watch was an excellent time piece although lack of draw allowed the pallet fork to bounce away from the banking pin and permitted the guard finger to contact the safety roller in a series of vibrations.