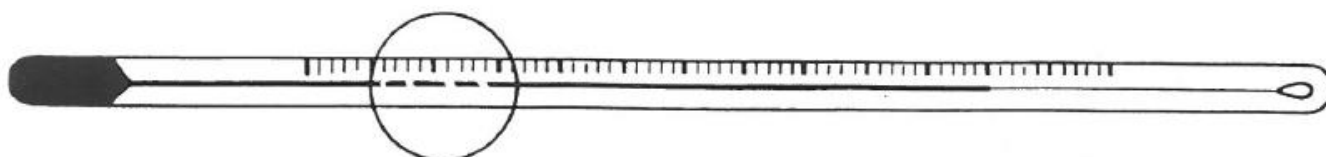


Check your thermometer

A mercury or spirit separation can be determined by careful visual inspection and/or by subjecting the thermometer to a known temperature and checking to see that it is reading correctly.

1. Place the thermometer on a flat surface with the bulb to the left and examine it carefully. The mercury or spirit in the bulb should appear as a continuous line from the bulb into the capillary and up to the beginning of the contraction chamber. The separation is most often evident in or above the chamber.
2. Determine how the separation is situated. If the separation is a free piece of mercury in the chamber (see illustration #1) then proceed to paragraph 4.
- 3a. If the mercury is wedged in the upper end of the chamber and/or extends up into the capillary (illustration #2), cool the bulb by dipping it into a cold water and ice mixture a few seconds at a time until the wedged mercury retreats into the chamber and forms a droplet. Proceed to paragraph 4.
- 3b. If the separation is at the lower end of the chamber and/or in the capillary below the chamber (illustration 3), warm the bulb by dipping in and out of warm water until the separation rises higher into the chamber and forms a loose droplet. Proceed to paragraph 4.
- 3c. If a piece of mercury from the main column has risen to the expansion chamber and become lodged there, it will be necessary to first force the separation to the lower portion of the expansion chamber as explained in paragraph 4, and then to warm the bulb (paragraph 38) until the main column rises into the chamber and joins with the separation. Proceed to paragraph 6.
- 3d. If the range of the thermometer is such that the main column is continuous up into the expansion chamber, as would be the case on a thermometer whose upper range is below room temperature and the mercury is separated in the expansion chamber, refer to paragraph 4.
4. Holding the thermometer exactly vertical, tap it gently but firmly downward onto a padded surface such as a magazine, pad of paper or the like. Repeat as necessary. The force generated by tapping will drive the separated droplet further down the chamber to rejoin with the main column. Proceed to paragraph 6.
5. If the column appears to be intact from the bulb to the top of the column and yet the thermometer indicates a falsely high temperature, the Likelihood is that some of the nitrogen gas (the invisible gas above the column used to keep pressure on the column) has become trapped in the bulb. If this is the case, it will be necessary to subject the lower half only of the bulb to dry ice or suitable low temperature medium to retract all the mercury down into the bulb. Holding the thermometer exactly vertical, tap downward onto a padded surface as described above to displace the nitrogen. Allow to return slowly to ambient temperature (do not heat).
6. Important! Prior to returning the thermometer to service it is good practice to check the thermometer at a known temperature to assure that the mercury separation repair was successful.



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