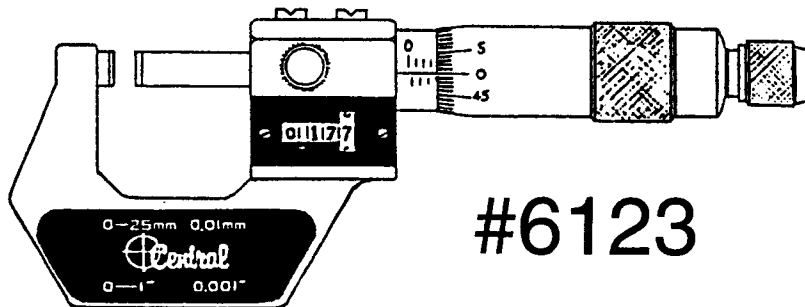


 **Central® Tools, Inc.**
"Your Automotive Measuring People"

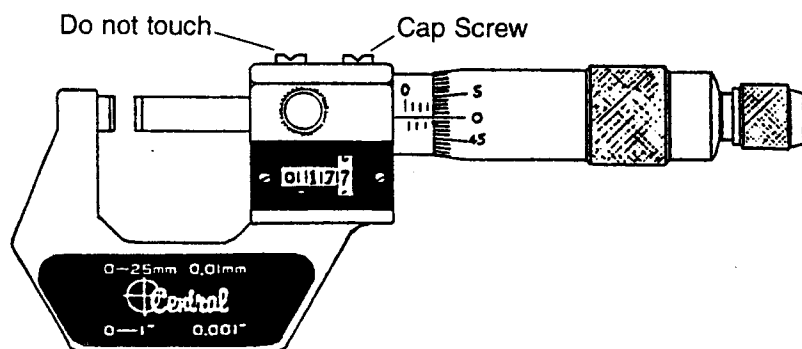


HOW TO READ YOUR MECHANICAL DIGITAL MICROMETER

1. Your micrometer will indicate both metric and English readings simultaneously. Metric measurement is read on the conventional micrometer while English (inch) measurement are conveniently displayed on the counter wheels.
2. In order to use the metric measurement, follow this procedure:
 1. As you will see by turning the thimble, it is made in one piece with the spindle which moves toward or away from the anvil by means of a screw within the barrel. This screw has 2 threads to the MM so the spindle during one complete revolution moves 1/2 of a MM or .50MM. Corresponding with these threads, the graduations on the barrel are 50 in number, and each space equals .50MM. Every 9 spaces is numbered 0, 5, 10, etc., representing MM (0MM, 5MM, 10MM, etc.). The bevel edge of the thimble is graduated into equal parts. When all 50 of these graduations have passed the horizontal line on the barrel, the spindle has made one revolution and has moved .50MM. Therefore, every time the spindle moves far enough to cause one graduation on the thimble to pass the horizontal line on the barrel, it will move 1/50th of .50MM, OR .01MM.
 2. To measure a work piece, first clean the measuring faces of the micrometer with a chamois, soft cloth, or paper. Then insert the work piece between the surfaces of the anvil and spindle and turn the thimble until the spindle comes in contact with the piece being measured. As we have already noted, the barrel is divided into five major sections, each representing 5MM and each major section is sub-divided into 10 parts. Therefore, each division on the barrel represents .5MM.
 3. First, note the last figure (MM) visible on the barrel. Second, count the number of graduations visible beyond the last figure, each of which represents .5MM.
 4. Third, note the number of the division on the bevel of the thimble that coincides with the horizontal line of the barrel. The addition of these three figures will give you your final reading.

FOR EXAMPLE, AS SHOWN IN THE ILLUSTRATION

| | |
|---|---------------|
| Highest figure shown on barrel is 0 which equals | .00 |
| Number of lines visible between the number on the barrel and the thimble edge is eight or | .40 |
| Number of line on bevel of the thimble turned past horizontal line is forty-seven | .07 |
| Final reading | <u>4.47MM</u> |



ZERO ADJUSTMENT

When the counter reading (inch) is correct but the metric reading is incorrect:

- A. If the deviation is less than 0.02MM, slightly loosen the set screw on the sleeve and rotate the barrel with furnished spanner to correct the observed error. Retighten the set screw.
- B. If the deviation is over 0.02MM, remove the ratchet stop with the spanner, push the thimble outward to disengage it from the spindle (the thimble is taper-fitted to the spindle. Unseat the taper by pulling and gently rocking the thimble by hand. The thimble will not rotate freely on the spindle.); rotate it to the zero position and push spindle back on. Reassemble ratchet stop.

When the metric reading is correct on the thimble and wrong on the counter.

- A. Lightly clamp the micrometer in a vise, being careful not to damage it. Refer to the illustration and remove the cap screw. (Do not tamper with the other cap screw). Rotate the thimble until the adjusting screw is located at the bottom of the hole. (This screw is on a slider which you may have to move to gain full access to the screw).
- B. Slightly untighten the adjusting screw. Holding the adjusting screw with the screwdriver, rotate the thimble until the counter and thimble readings are equivalent, then tighten the adjusting screw. To calculate equivalent readings, multiply the inch reading by 25.4 to give the metric reading in MM.
- C. Recheck the zero setting; replace the cap screw.

CARE INSTRUCTIONS

1. Do not remove the spindle.
2. Do not apply excessive force or shock to the micrometer.
3. Do not tamper with the mechanical counter. Return to the factory for service.
4. Keep the micrometer free from water and oil. Do not immerse the micrometer in any liquids.