




**TOPIC 1 SAFETY PRECAUTIONS - AIRCRAFT
AND WORKSHOP**

TOPIC 2 WORKSHOP PRACTICES


TOPIC 3 TOOLS

SAFETY PRECAUTIONS - AIRCRAFT AND WORKSHOP

Keeping hangars, shop, and the flight line orderly and clean is essential to safety and efficient maintenance. The highest standards of orderly work arrangements and cleanliness should be observed during the maintenance of aircraft. Safety lanes, pedestrian walkways, and fire lanes should be painted around the perimeter inside the hangars. This is a safety measure to prevent accidents and to keep pedestrian traffic out of work areas. Signs should be posted to indicate dangerous equipment or hazardous conditions.

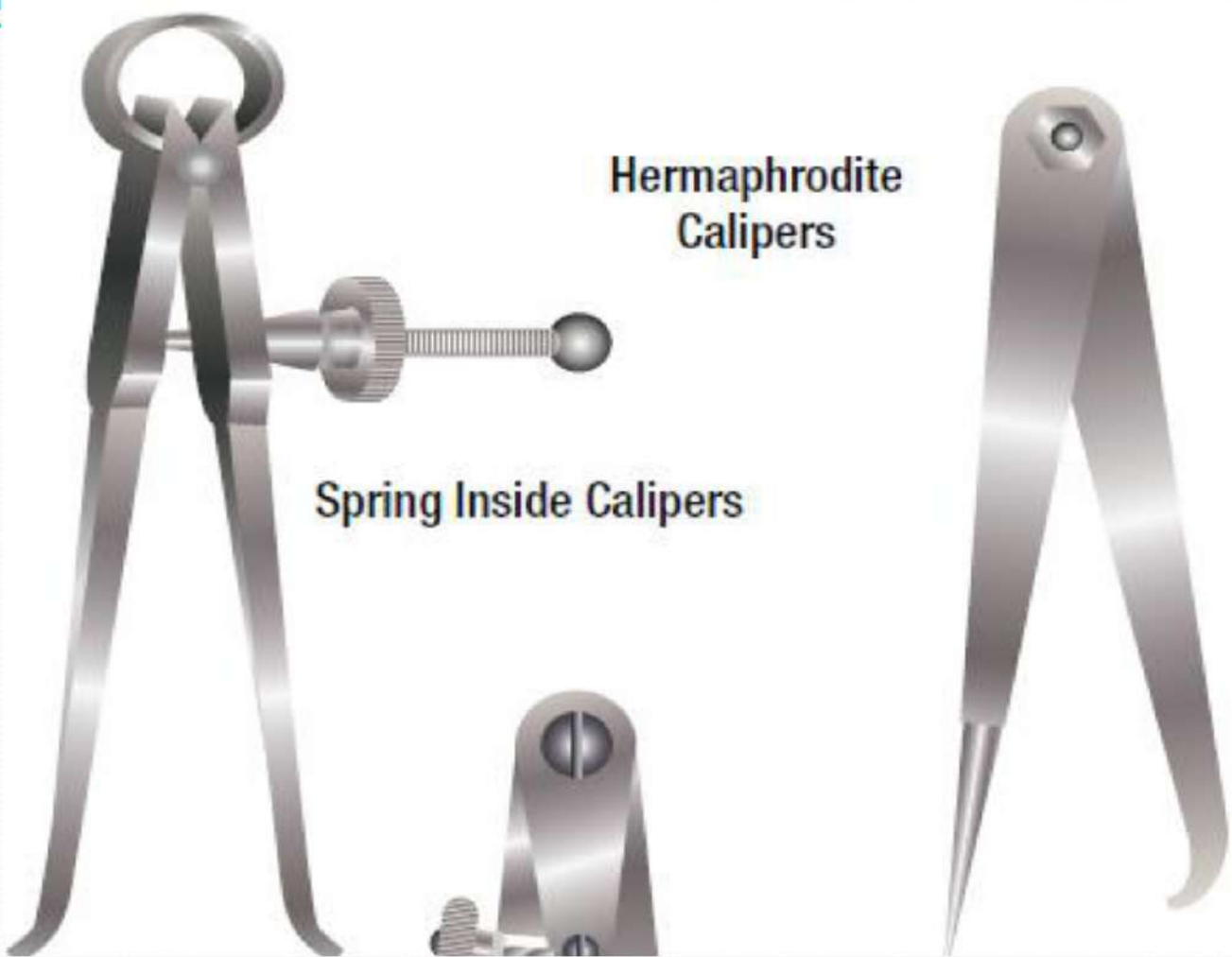


There should also be signs that provide the location of first aid and fire equipment. Safety is everyone's business, and communication is key to ensuring everyone's safety. Technicians and supervisors should watch for their own safety and for the safety of others working around them. If other personnel are conducting their actions in an unsafe manner, communicate with them. Remind them of their safety and that of others around them.



Where continuous work shifts are established, the outgoing shift personnel should remove and properly store personal tools and roll-a-way boxes. Work stands, maintenance stands, hoses, electrical cords, hoists, crates, and boxes that are still needed for the work to be accomplished may stay in the work area.

A face-to-face turnover of the progress made and the exact step in the procedure where the new technician must continue the operation should be mandatory. A review of the repair/maintenance documentation verifying all steps performed have been signed by the performing technician should also be done before or during turnover. This is of extreme importance because any work signed for is considered completely and satisfactorily accomplished by the incoming technician.



The image displays three different types of calipers used in engineering and manufacturing. On the left is a large pair of Hermaphrodite Calipers, which have one flat leg and one pointed leg. In the center is a pair of Spring Inside Calipers, which are smaller and have a coiled spring mechanism between the legs. On the right is a standard vernier caliper with two flat legs and a pointed tip. The labels are placed next to their respective tools.

**Hermaphrodite
Calipers**

Spring Inside Calipers



**Firm Joint Screw
Adjusting Inside
Calipers**





Spring Outside Calipers



Figure 3-4. Calipers.

MICROMETER CALIPERS

There are four types of micrometer calipers, each designed for a specific use: outside micrometer, inside micrometer, depth micrometer, and thread micrometer. Micrometers are available in a variety of sizes, either 0 to $\frac{1}{2}$ inch, 0 to 1 inch, 1 to 2 inch, 2 to 3 inch, 3 to 4 inch, 4 to 5 inch, or 5 to 6 inch sizes. In addition to the micrometer inscribed with the measurement markings, micrometers equipped with electronic digital liquid crystal display (LCD) readouts are also in common use.

The AMT will use the outside micrometer more often than any other type. It may be used to measure the outside dimensions of shafts, thickness of sheet metal stock, the diameter of drills, and for many other applications. (**Figure 3-5**) The smallest measurement which can be made with the use of the steel rule is one sixty-fourth of an inch in common fractions, and one one-hundredth of an inch in decimal fractions.



Figure 3-5. Outside micrometers.

To measure more closely than this (in thousandths and ten-thousandths of an inch), a micrometer is used. If a dimension given in a common fraction is to be measured with the micrometer, the fraction must be converted to its decimal equivalent.

Micrometer Parts

The fixed parts of a micrometer are the frame, barrel, and anvil. The movable parts of a micrometer are the thimble and spindle. The thimble rotates the spindle which moves in the threaded portion inside the barrel. Turning the thimble provides an opening between the anvil and the end of the spindle where the work is measured. The size of the work is indicated by the graduations on the barrel and thimble. (*Figure 3-6*)

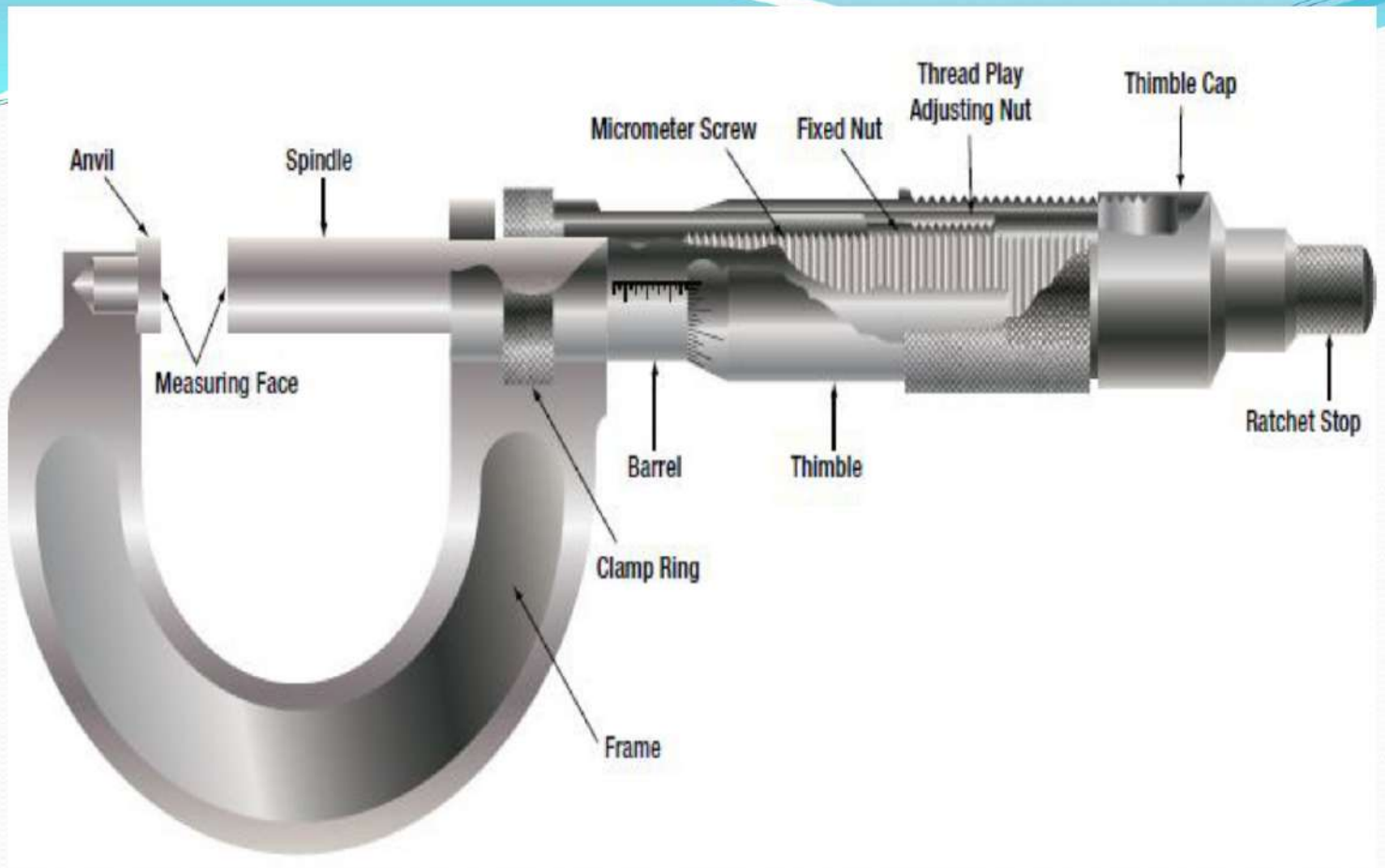




Figure 3-26. Torque wrench calibration tool.