

DIGITAL AND DIAL CALIPER CALIBRATION PROCEDURE #1

ENVIRONMENT:

The environment must be relatively dust free. Clean surrounding inspection area with Citri-Clean, clean all inspection tools.

A. VISUAL INSPECTION

1. Inspect the crystal for readability, nicks and general appearance.
 - a) Open the caliper and inspect the rack gear, slider and slider opening for nicks, wear and debris.
 - b) Inspect for missing components.
2. Clean the caliper.
 - a) Open the caliper and spray WD-40 into the rack (spray away from main body) onto the slider and jaws. Remove any metal filings or dirt buildup.
 - b) Close and open the caliper. When open remove metal filings from the rack gear, slider and slider opening.
 - c) Clean the bezel/crystal assembly with Citri-clean or lens cleaner.
3. Inspect the function of the caliper.
 - a) Does the bezel rotate smoothly? Does it seat properly?
 - b) Does the condition of the crystal impair the ability to read?
 - c) Does the caliper open and close smoothly?
 - d) Inspect the slider bar for unnecessary movement.
 - e) Inspect the internal and external jaws for straightness, nicks and wear.

B. CALIBRATION

1. Clean the granite surface plate with a clean, damp, lint free cloth.
2. Clean the storing oil from the gauge blocks and setting ring.
3. For measuring OD the 1" and 2" will have to be wrung together. Do this by applying a small amount of molycoat lubricant to one measuring surface, rub the surfaces from each gauge block together, and then apply pressure. The two surfaces will adhere.
4. To calibrate the OD measure gage blocks 1", 2", 3", 4", 5" and 6". Be sure to take several measurements ranging from the tip of the jaw to the heel. Record findings on Inspection Report.

5. To measure the ID measure the ID of the setting ring. The correct measurement should be 1.1995". Be sure to take several measurements ranging from the tip of the jaw to the heel. Record findings on the Inspection Report.
 6. To measure depth, clean both surfaces of the setting ring and the surface plate. Place the setting ring onto the surface plate.
 - a) Making sure the caliper is exactly 90° to the surface plate, measure the depth of the setting ring. The correct measurement should be .5985". Repeat this step several times to guarantee consistency. Record findings on the Inspection Report.
 7. To measure the step, place the caliper vertically on the surface plate (previous to this you should inspect measuring surface on the caliper for burrs).
 - a) Open the caliper.
 - b) The caliper must be 90° to the surface of the surface plate and the edge of the setting ring, "or perfectly vertical in both directions".
 - c) Lower the main body until the step surface touches the top of the setting ring. Record the measurements on the Inspection Report.
- Note: Should one of the calibration tests turn up negative you must evaluate the reason. A minor filing can tweak a jaw back to proper calibration.**
8. Return all tools to their proper place.
 9. Make sure gauge blocks and the setting ring have storing oil applied before placing in protective case.