INDICATORS ARE ON EVERY GOOD TEAM'S BENCH
Do and Don’t for keeping them in the Game
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Just because dial indicators have been around since the early 1900s, do not expect them to fade away with the last century. This tool's long-term popularity is well earned. Dial indicators offer good resolution at low cost but that is not the main reason people still use them.

Beyond providing easy-to-read quantitative measurement, dial indicators give users a comparative sense that their parts are in the ballpark. You simply see if the indicator's needle is within tolerance bands or, simpler still lies within red sections highlighted on the dial. No interpreting is necessary. Not every result may read like a home run, but as long as it is not in the outfield, it scores as a good part.

Dial indicators vary widely in type, size and range. All translate variations (through internal movement of a plunger) into dial readings. Some will indicate dimensional variations as small as 0.00002". Therefore, you must handle these sensitive mechanisms with the same devoted care you give to other precision equipment.

To maintain high levels of quality and precision, take heed of the following tips.

Do:

- Mount dial indicators close to short support columns on test sets or comparators to avoid holding rod deflection.
- Keep the reference surface clean and level, with the test set base clean and seated positively.
- Mount your indicator securely to the fixture or holding device.
- Keep the indicator spindle and point clean using a soft, lint-free cloth.
- Make sure the indicator hand moves toward the minus side of the dial as work-piece dimension decreases.
- Handle the gauge lightly, so it can seat itself on the work-piece.
- Use diamond, tungsten carbide or hard chromium-tipped indicator points whenever it is likely that the contacts will be subject to heavy wear and be certain that the contact point is secure.

- Store your dial indicators in a safe, dry place and cover them to keep the dust and moisture away.
- Test your indicators under gauging conditions at intervals during the operating day. You can do this by gauging a part twice then comparing its readings to a master part.
- Clean dials with soap and water, benzene or soft eraser. Frequency of cleaning depends on the type of gauging and the contaminants.

Don’t:

- Do not subject indicators to harsh, sudden blows. If blows are unavoidable, use a cushioned movement indicator.
- Do not overlook accessories that will make your indicator more efficient, more adaptable and more versatile. E.g. lifting levers, right angle attachments, maximum point hands and weights for measuring compressible materials.
- Do not oil spindle bearings except under special conditions then do it sparingly and never use grease.
- Do not tighten contact points or adapters too far against rack spindle as the strain will cause distortion, make the spindle bind, the mechanism stick or the guide pin loosen or shear off.
- Do not clamp indicator against the stem with a setscrew. Too much pressure will make the rack spindle bind, causing the indicator to become sluggish and sticky.
- Do not lock the indicator in position until you've set it carefully under proper gauging tension, that is; at least a quarter turn from its "at rest" position.
- Do not oil an indicator that has been idle for some time. If the spindle sticks, work it in and out by hand until it slides freely on its own bearings.
- Do not drill holes in the back of the case. Chips will get inside and ruin the movement.
- Do not use an indicator that been dropped or struck until you have it tested thoroughly. Test it on a comparator set or some other supporting device to make sure it is precisely calibrate. Then re-set the indicator in position as precisely as you set it the first time.
- Do not use your dial indicator for anything but what it is intended for – accurate gauging. It is not a jackhammer or paperweight. It will not give good service unless you treat it the same as your other precision instruments.

By following these tips, what to do as well as what not to do with your dial indicator gauges, you can keep them accurate and in the game for a long time.