



Technology

Get a Grip on Overtorqued Tools

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Are you tightening your tools in an overtorqued death grip? If your notion of taper contact and pull stud torque dates back a few years, chances are that you're deforming your tools and ramping up your runout. Time to catch up with today's technology and give your tools a breather.

It's vital for shops to preserve their older operators' knowledge so younger hires can soak up the expertise, but a few ideas from the previous generation are worth setting aside – and that includes overtightened toolholding. Back in the early 2000s, pull stud torque ran 80 ft./lbs., compared to 30 ft./lbs. today. With toolholder-to-taper contact that involved only a few bands or the top two-thirds of the taper length, that giant squeeze might overtorque and swell up the part of the tool that hung out into free space in the spindle, but that wasn't a problem – then. Nowadays, with almost the entire taper length in spindle contact with the toolholder, that strategy would result in measurable deformation and runout.

Improper pull stud torque can make the toolholder too big at the bottom of the spindle, allowing the top of the holder to move during the cut. This movement leads to TIR, fretting and high vibration. If you back off the overtightened pull stud, TIR disappears. This scenario plays out in shops everywhere all the time, and simply lightening the pull stud adjustment “magically” cures their runout woes. But that solution doesn't supply a reliable, repeatable way to ensure quick, correct adjustment.

Not only does the old way of tightening pull studs choke your tools, but the entire collet holder setup process misses out on ease and accuracy – and requires a big wrench collection. You could use a regular wrench and simply tighten the pull stud or nut by feel, but that gives you no certainty that your setting is correct. When you switch to torque wrenches, now you're stuck looking for adjustment values on charts, setting up a wrench and relocking it. That sounds a whole lot easier than it really is, and as a result, many shops take a set-and-forget approach: They apply the maximum or minimum setup values and never unlock their wrenches again.

You can guess what happens next: improper adjustments, over-tightened tools, damaged toolholders, collets and nuts, and at the lower end of the adjustment scale, the prospect of turning an expensive piece of carbide into a workplace projectile.

Of course, none of these scenarios make toolholding sense, and the gadgets that many shops resort to using occupy too much bench space or cost too much. That's a shame, especially because the best way to improve the process rather than just change it takes up no more space than a shoebox. REGO-FIX calls it the TORCO-BLOCK.

They design everything they make to solve toolholding problems, and the TORCO-BLOCK is no exception. Bolt it to your workbench, and add the interchangeable insert and indicator ring that match your taper and toolholding. Once you set the indicator to match your tool diameter, drop in a tool and use any wrench to tighten until the indicator needle matches the settings needle. That's it. The device's hydraulics and easy settings do the hard work, with no guessing, charts or other hassles.

And yes, it's a REGO-FIX device, but it's compatible with all standard spindle interfaces, including CAT, SK, BT, HSK and REGO-FIX CAPTO options. Use it with any qualifying toolholder and enjoy the peace of mind from properly assembled tools. Of course, REGO-FIX will be happy to provide you with the toolholders as well – and if you have questions about the TORCO-BLOCK, their Tech Team is **ready to help**.

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