

DRO PROS

The Digital Readout Experts

DRO PROS Touch Probe

Congratulations on the purchase of your DRO PROS touch probe. Currently DRO PROS carries two types of stylus, breakaway and steel. The breakaway stylus is included as part of the touch probe, and may be pre-installed or located separately inside a plastic pouch. If the stylus is not installed, or if you want to change out a stylus, please keep the following points in mind:

When installing a new stylus, do not simply grasp the outside of the touch probe and install the new stylus. Doing so will allow the hub to rotate inside the body of the touch probe. When installing or removing a stylus, **it is imperative to hold the touch probe by the hub**, not the outside body! Allowing the hub to rotate inside the body of the touch probe, will permanently damage the internal parts.

Never install a stylus by simply holding the outer casing of the touch probe!

This is a kinematic style touch probe, and as such, the hub cannot conduct electricity and therefore cannot be made of metal. Because of this design requirement, the hub is manufactured out of a delrin type plastic. Therefore, be careful to not over-tighten the stylus, as the threads will strip if the stylus is over-tightened. Snug is good enough!

When inserting a new stylus, do not over-tighten!!



If you can't get a good enough grip on the hub, it is possible to disassemble the touch probe by removing the three 2.5mm cap screws. Work slowly and be careful to not lose the spring, which is located inside the probe. It has a tendency to 'jump out' if the probe is inverted during disassembly!

Remember, the touch probe is a delicate, precise measuring instrument. While it is manufactured to a much higher standard than any other touch probe in it's price class, it still must be treated with due care.

Recommended Operating Procedures:

In order to achieve the optimum results, we recommend you accomplish the following steps:

1 - Clean the contact points

The probe is manufactured and shipped to us with a fair amount of grease on the contact points. We have found that opening the touch probe and cleaning the contact points thoroughly yields the best results:

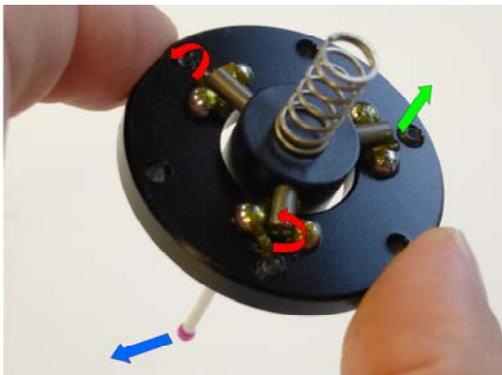


2 - Align the tip

The probe has three grub screws which can be screwed in or out to help align the tip of the touch probe. There are probably a hundred different methods / techniques on how to center the tip of the probe. This photo was sent in by one of our customers and illustrates the method he used to center the tip. You may find an easier way. If you do, please send in your photos!



3 - Move towards the part "properly". When contacting a part, move so that the stylus equally pivots on two points when it 'touches' the part. For example, in the picture below, the correct way to move toward a part is for the move to be in the direction of the blue arrow. As the tip touched the part, the two probe shafts would equally rotate as shown by the red arrows, and the third probe shaft / contact point would rise as shown by the green arrow. Note: While this method greatly improves the accuracy, it also assumes that the tip has been properly aligned per step 2. Another consideration to improve accuracy is to use the optional steel tip, as the breakaway tip must have some inherent flex.



Note: When performing datum capture, the touch probe can only correctly sense a touch on one side of your part, not both sides. If you find that datum capture does not seem to be working correctly, try capturing the datum touching the opposite side of your part. If this now works, but you still want to capture from the original side, the solution is to flip both the scale AND readhead of the offending axis end for end. After the scale and readhead are re-installed, readjust the scale travel direction in the user setup menu. The probe should now capture the datum on your part coming from the desired direction!

NEW UPDATE: A very helpful customer Frank F. found a reducer bushing that allows you to mount the touch probe 10mm shaft in a 1/2" collet. It is part # RB-120, manufactured by Amana Tools and can be purchased from routerbitworld.com.