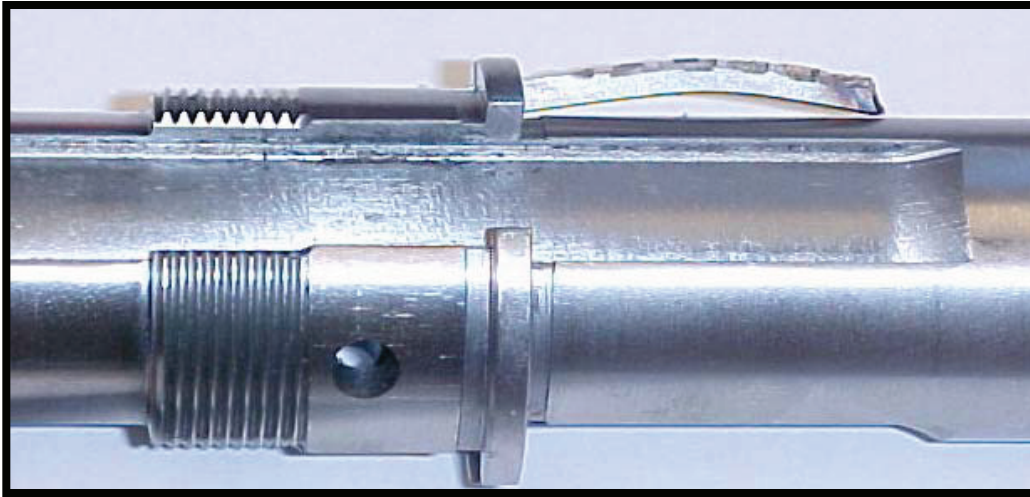


Product Comparison Bulletin

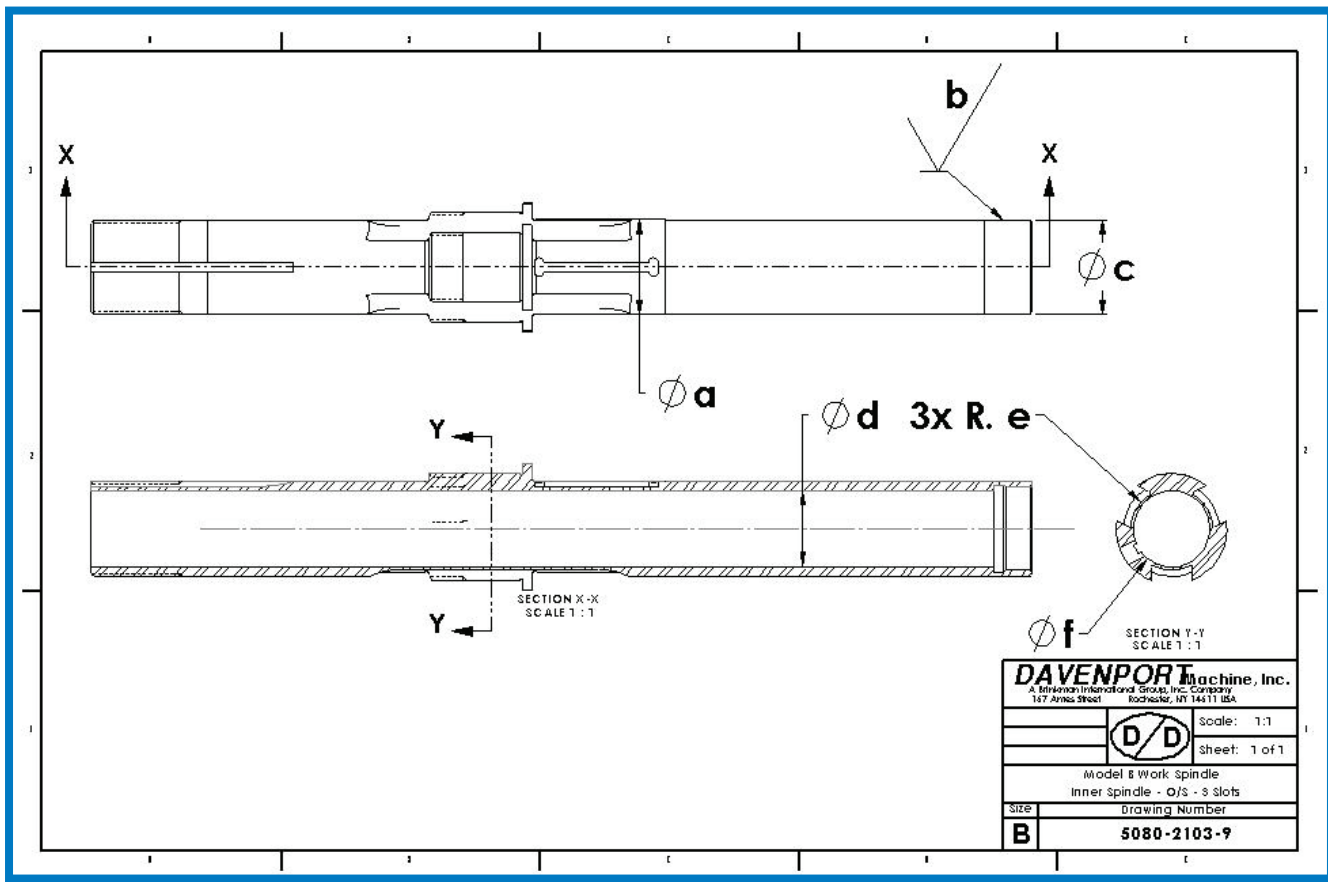
5080-2103-9 NTRP Spindles with Welded Key

Davenport Machine is the only ISO 9001:2008 certified supplier of Davenport Replacement Parts in the world. We offer superior quality parts that outperform our competitor's parts in test after test. Davenport offers an engineer's analysis of the NTRP Spindles with Welded Key. If you aren't buying the OEM Davenport part, you may be risking quality and performance, as well as costly tooling and machine damage.



- Although the welds look good, looks can be deceiving.
- The key came out in our tear-out test, and failed the test.
- The same test was applied to a Davenport Staked Key and the Davenport Key stayed in the spindle, and passed the test.
- Based on this single destructive test, the welded key is more likely to break and come loose than a Davenport Staked Key.
- If the key shears or wears out, the collet is almost impossible to remove, because there is nothing to stop inner spindle rotation.
- **If the part were to stop turning, because the inner spindle no longer has a key, extensive tool damage and possible machine damage could occur. Cheap or inferior parts can save you pennies, but can cost you thousands.**
- The spindle was inspected for conformance to a Davenport drawing (next page). Of the 9 most important dimensions checked, 67% were outside of our acceptable range.
- Using the NTRP spindle would probably make machine setup to run good parts more difficult than it needs to be, most notably on mid to high precision parts.
- The spindle could prevent the machine from running tight tolerance parts consistently.

Davenport drawing 5080-2103-9



- a. Pilot \varnothing for rear of outer spindle – too low by .0020/.0025 – can cause part chatter, taper, and run out.
- b. Finish of pilot \varnothing for collet – up to 49RMS – finish is too rough, could cause collet to stick closed and wear early.
- c. Pilot \varnothing for collet – too small by .002/.003 – can cause run out and taper. This is the likely reason the collets are not sticking *every* time.
- d. Inner diameter – too big by .0007/.0015 – possible excessive vibration in feed tubes when running at high speeds, but not very significant.
- e. Slot depth for extensions – too shallow by .002 – could cause extensions to bind, preventing assembly and causing collets to stick shut.
- f. Ball bearing diameter – too small by .00015 – slightly looser location fit on spindle bearings. Will allow more run out/taper on a part than a Davenport Spindle.

Davenport Machine OEM parts are constantly being upgraded and redesigned to maximize the *value* to the customer. Any parts supplier can sell you yet another *replacement* part for a particular problem, but the team at Davenport Machine will supply you with a cost effective *solution* to it instead. Contact your local distributor, or call us directly at 1-800-344-5748 and ask about our many new and improved products that will help put profits back where they belong ... in your pocket.