

HAAS USERS

In-put from some of our Haas customer using our High Torque Knob

Bulging Found, Removed

"After reading about your knob problem findings in a trade magazine, I checked my holders and found the bulging you described. I ordered two of your knobs and eliminated the problem. I rubbed the holder on my surface plate and could detect the bulge on new holders but after installing your knobs the rubbing left a straight line. My **HAAS VMC** cuts quieter and acts like a bigger machine."

Randy Bolt, River Rock Machine and Tool

Improved From 8 hours to 10 hours on 1/2" carbide endmill

During the troubleshooting of wear patterns on our Cat 40 toolholders we started analyzing spindle and toolholder runout. We had always been torqueing pull studs and collets and were very concerned about the poor performance of our machine. After having switched to JM's High Torque retention knobs, the problem completely disappeared. We switched all of our toolholders over to HT pull studs and now consistently achieve perfect wear patterns on our tools. Using **Haas** Advanced Tool Management we tracked tool life, and this improved from around 8 hours to 10 hours on a 1/2" carbide endmill.

Timo Minx, CapTherm Systems, Inc

Increase in Tool Life

I have a customer that cuts aluminum and keeps track of tool life by hours. They switched a CAT 40 holder on their **Haas VF2** machine from a standard retention knob to JM's High Torque JM31514HT and tightened as recommended. Tool life on an 1/8" diameter mill at same speeds and feeds went from 6 hours to 8 hours. Customer is very happy with results and wants to order 20 more knobs.

Marc Politi, Jergens Industrial Sales

JM's High Torque Retention Knobs at IMTS 2012

Thank you for supplying Swiftcarb with your high-torque retention knobs for our demonstration. At IMTS 2012, we were machining 6Al4V titanium in a **HAAS VF2SS**, at a rate of 128 Inches Per Minute, with our Swiftcarb Rampmills. We started by ramping into the workpiece at 7degrees, at 2062RPM and 38.4 inches per minute, until we reach 1inch deep, and then interpolate out to remove the rest of the material from the pocket. At 450 SFPM and a .0035 actual chip thickness, the application sounded good, however we were very near the limits of the machine. On the second day of the show, we switched out the standard retention knobs that we were using, for JM's High Torque Retention knobs. There was an immediately noticeable change in the pitch of the machining operation, and all 4 of us, with our hands on the machine, could feel the difference in the smoothness of the machining sound. After the part finished, we were also able to notice a smoother wall finish on the part than we were previously getting, and we have no doubt that if given the time, there would have been an increase in tool life as well. We are now firm believers in the productivity difference that a pull stud can make to a machining application, and we will be using JM's Pull studs for all future demos, as well as recommending them to our customers as a necessary part of any rigid machining setup!

Aaron Fike, Swiftcarb

"You made me a believer, let's change them all...."

Texlon Plastics in Gastonia NC produces injection molded plastic parts. John Boesen, their master mold maker, was skeptical of a simple retention knob redesign impacting his mold production. His JM distributor supplied him with a Cat 40, non coolant style retention knob on a free trial basis. John was running a P20 mold cavity with a finish copy mill and experiencing chatter as the tool overhang increased. He changed the retention knob and made no additional adjustments. When the machine was restarted and the tool returned to the cut, the sound of the tool changed and the chatter disappeared. "I'm amazed" was his response. "You made me a believer, let's change them all. The modest cost will have an immediate payback in finish quality." The machine was a **Haas VF3** with a 10,000 rpm spindle.

John Boesen, Texlon Plastics

"Payback on this investment can be measured in hours and days not weeks or months."

"Detroit Speed & Engineering in Mooresville, NC custom builds 70's era muscle cars and features an extensive catalog of parts for the maintenance and repair of similar vehicles by the do-it-yourself enthusiast. The catalog offering is designed in house and most of the components are built in house on state of the art CNC equipment. Greg Syverson manages the machine shop and was introduced to the concept of high performance retention knobs by their tooling distributor Turning Concepts Inc. in Matthews, NC. A test knob was delivered for trial on his **Haas VF-3 VMC**. A stainless steel thick wall tube was being drilled and bored to size with circle interpolation using an AD style 90 degree indexable end mill. The tool holder was removed from the tool changer, the knob was changed and the tool was returned to the tool changer. Upon machining the first part the sound of the tool in the cut changed dramatically. The bored hole size changed .0025 in diameter requiring an offset tool change to correct the bore size. Spindle load declined 7% and a burr generally protruding from the top and bottom edge of the hole reduced dramatically in size. Surface finish of the bored diameter also improved. By the end of the day it became obvious that carbide insert life had improved at least 30%. Kyle Tucker, co-owner of DSE, acknowledged that the engineering principal of the high torque knob made sense and the observed results pointed to rapid payback. The initial tool cost is not very different from a standard Retention Knob, but the performance and improvement in carbide tool life make immediate conversion a "no brainer". "Payback on this investment can be measured in hours and days not weeks or months" replied Kyle.

Kyle Tucker, Detroit Speed, Inc

"High Torque retention knobs doubled our tool life..."

Daystar Machining Technologies, Inc., operates Milltronics, Okuma, and **Haas vertical machining centers** in their production facility. In the facility, Jimmy Lytle was running a Walter, variable flute, solid carbide end mill doing perimeter work in 4140 steel. Running the manufacturer's recommended feeds and speeds yielded consistent tool life measured in linear inches. The Milltronics VMC was a cat 40, 25HP machine. Jimmy had the operator change to an HT retention knob when it became necessary to replace the 5/8 inch end mill. Replacing the end mill and retention knob in the existing holder had an immediate effect of reducing the perimeter width by a total of .010, or .005 per side. An offset adjustment had to be made to correct part size. This phenomenon baffled Jimmy since it implied the tool had changed on center. The next surprise was a doubling of tool life in linear inches produced. The tool life improvement repeated with each retooling. The bottom line calculation meant that every time they bought a \$76 dollar end mill and used it in conjunction with an HT retention knob they doubled their tool life, thus saving \$76 with each use. The knob cost was \$22 making the payback relative to less than a third of the linear inches run by the end mill. Jimmy decided to convert all the retention kbos resulting in an immediate order for over 500 pieces.

Jimmy Lytle, Daystar Machining Technologies, Inc.