



VisualMILL® at Work with Dube's Custom Street Machines!

September 1996, Hudson New Hampshire, Keith Dube with the help of his wife and friends, opens a small engine repair shop, catering to local customers fixing mowers, trimmers and other landscaping equipment. It wasn't much at the time says Keith but it paid the bills and kept food on the table!

All the while, Keith was also rebuilding cars for himself and his family to drive - *simply because I couldn't afford to buy new ones!*

One thing quickly led to another and from the images shown here, we can see that Keith's *American Dream* has come certainly true! When customers saw the magic taking place in the opposite end of his small shop, they quickly wanted more than small engine repairs!



1970 Dodge Challenger RT Show Car contains a custom built engine bored and stroked at 101 cubic inches, from Dube's Customs.

(This is a \$300,000 Show Car!)

Today, Keith has a new shop, [Dube's Custom Street Machines](#) (known locally as simply *Dubes*) where he builds custom made, high-end muscle cars, street rods and motorcycles for an exclusive clientele. Keith and his wife Michelle enter these beauties in auto shows across the country including the annual [Detroit Auto-Rama](#) and [Boston World of Wheels!](#) You must have a look at the *1971 Chevrolet Chevelle SS* shown below!

The Transition to VisualMILL®

From the beginning, Keith's *attention to detail* has always made him stand out from other custom shops. Keith decided to take that step further by asking himself "*What more can I do to get my customers to want to come back to Dubies?*" For Keith the answer was *3D CAD/CAM* and the ability to design and build custom parts with his signature quality and detail.

In competition muscle cars there are only a few areas on the vehicle where Keith is allowed to advertise his shop by name. By taking advantage of the engraving toolpaths in VisualMILL®, Keith can personalize certain custom components with his company name, logo etc.

"I started out using Dolphin® CAD from Dolphin® USA but soon ran into support issues. Every time I had a problem, I ended up in a conference call with a technician overseas that I had difficulty understanding.

Then in 2008 I learned how to use Rhino® and VisualMILL® and purchased my first CNC machine in 2009. I downloaded the VisualMILL® and I was hooked! That free demo was the best thing that ever happened for me because that's when I learned how to use your software! It's that easy to learn! Plus your technical support is awesome!"

- Keith Dubes,

Dubes Custom Street Machines

The figure below shows the custom designed and engraved battery hold-down bracket for the 1970 Dodge Challenger RT shown above. Keith also engraves automotive make and model logos. See the *1971 Chevrolet Chevelle SS* shown below!

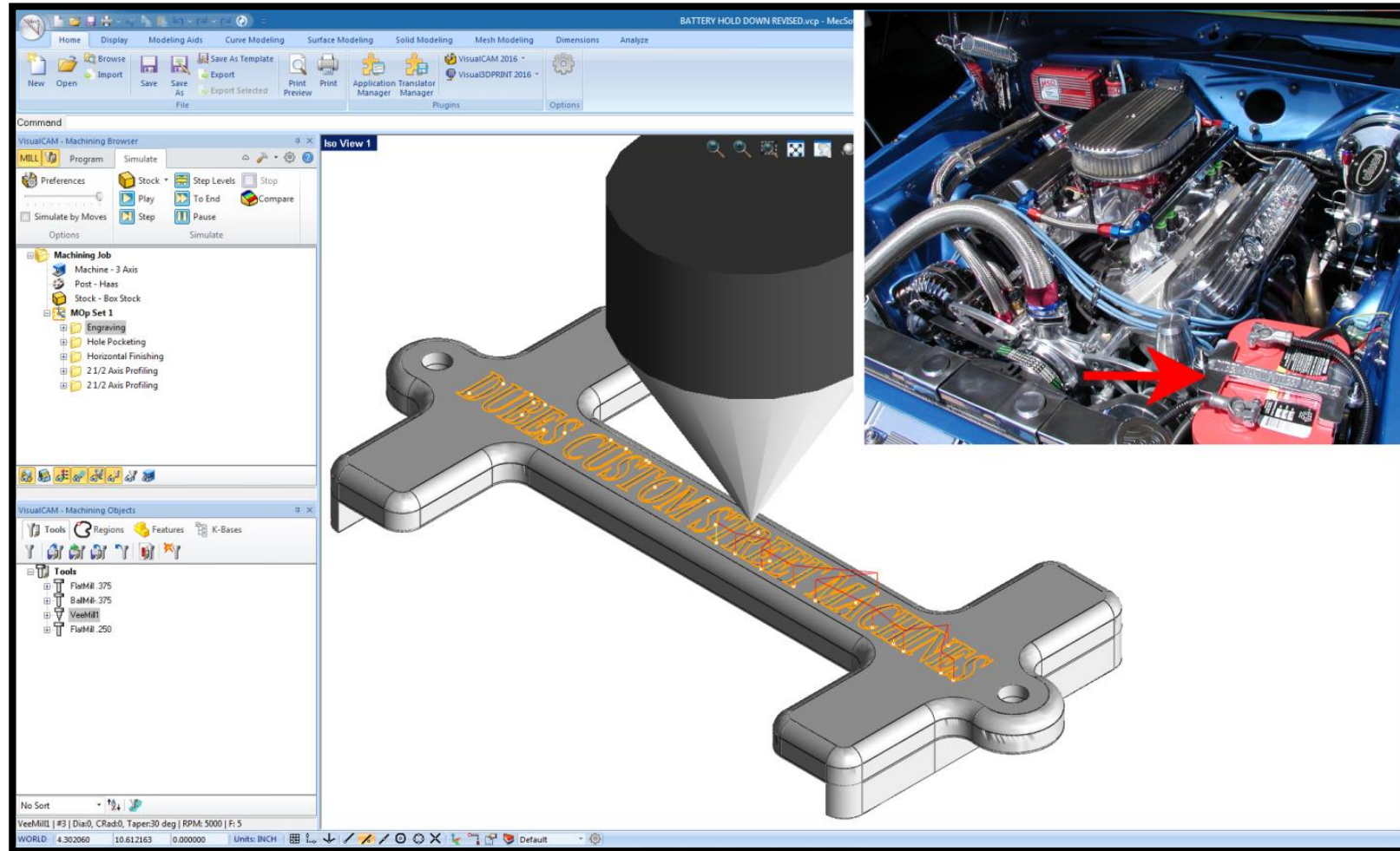


Figure 2 – VisualCADCAM® allows Keith to design & manufacture custom components. This image shows a custom designed battery hold-down bracket with Keith’s signature brand being engraved with VisualCAM®. The final chrome-plated part (inset) is shown assembled on the \$300,000 1970 Dodge Challenger RT show car shown in Figure 1 above.

VisualMILL® is perfect for production as well as 1-off custom designed and machined parts. The *Air Cleaner Base Adapter* shown inset below was custom made for a 1953 Military M37 using VisualMILL®. The 2½ axis toolpath Setup begins a *Facing* operation followed by *Hole Pocketing* for the large pocket (shown in Figure 3 below) followed by *Hole Pocketing* for the 4 counterbore mounting holes, *Hole Profiling* with automatically defined connecting tabs for the inner and outer cutouts. The center thread hole consists of *Center Drill & Tap Drill* followed by a ¼-20 Tap. All of the operations shown here can be performed with the VisualMILL® Standard configuration!

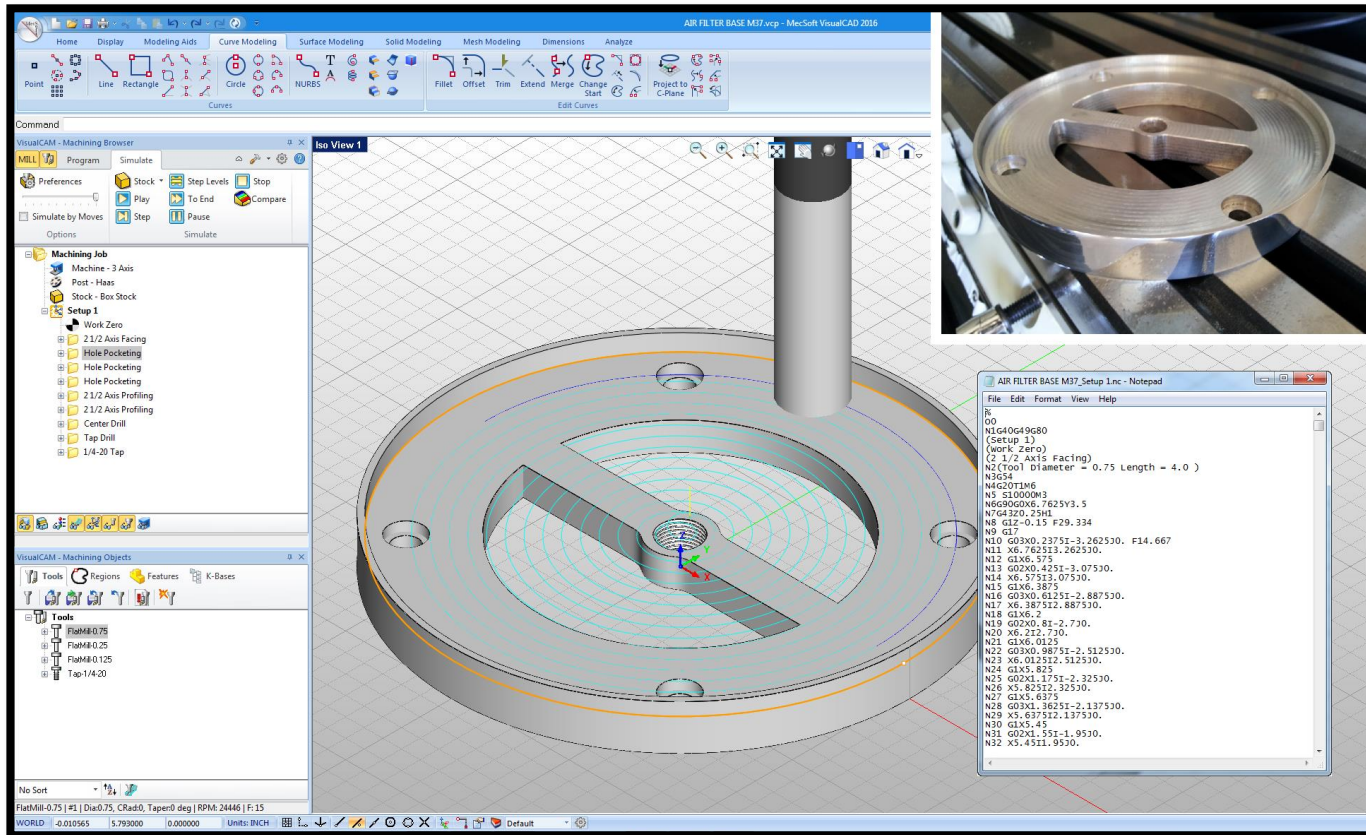


Figure 3 – Custom Air Cleaner Base Adapter for a 1953 Military M37 using the VisualMILL® Standard configuration.

The Upgrade to *VisualTURN*®

With the help of CNC and *VisualMILL*® Keith's business is booming! So much so that in November, 2015 he added a new *Haas CNC Turning Center* (shown here) and instantly put it to good use.

Keith called *MecSoft* and easily added the *VisualTURN*® module to his existing *VisualMILL*® license. Now [Dube's Custom Street Machines](#) has added custom turned components to his list of in-house capabilities. Keith is already getting proficient with his new turning center, creating custom shifter knobs and gas caps which he then fixtures onto his CNC mill to engrave his company logo using *VisualMILL*®.



Figure 3 – Keith's newest addition to his CNC capabilities – a new Haas CNC Turning Center arrived in November 2015!

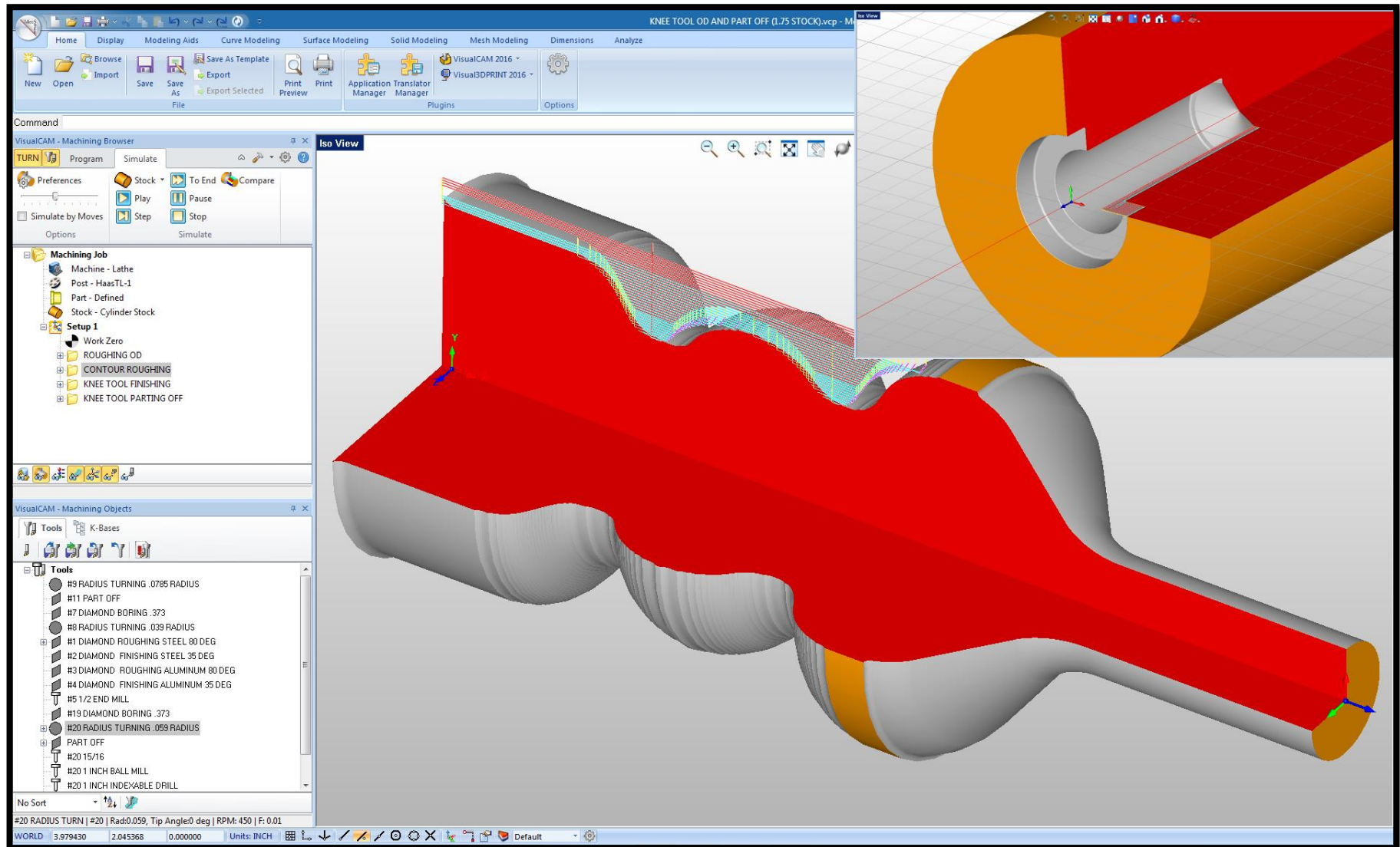


Figure 4 – In the main image a Turn OD Roughing operation is shown during cut material simulation using VisualTURN®. Shown inset is Turn Drilling and ID Turn ID Roughing cut material simulation.



(a)



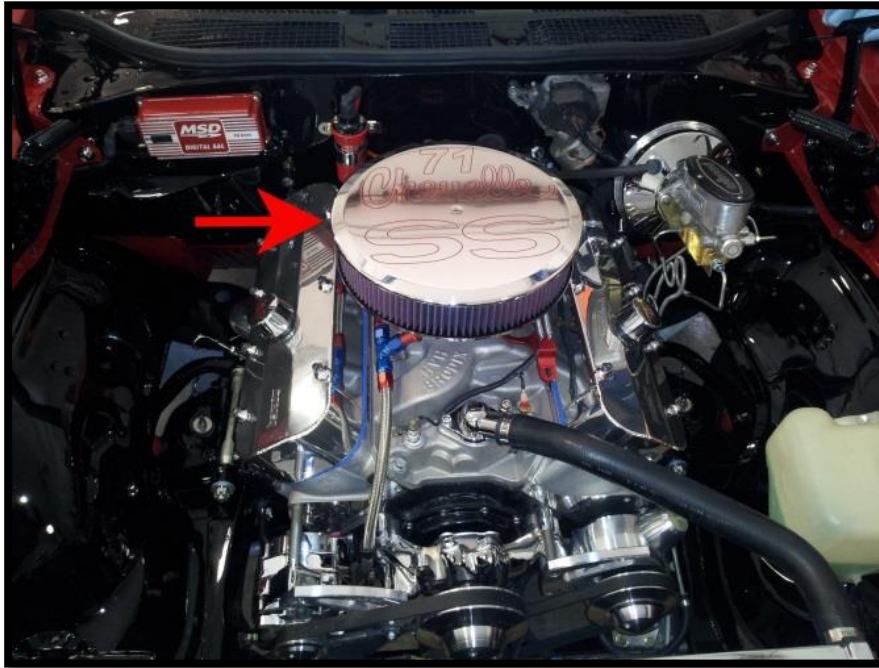
(b)

Figure 5 – (a) Milling fixture for Keith’s custom designed Bridgeport® Knee Tool attachments shown in Figure 4 above (b) rack of finished product.

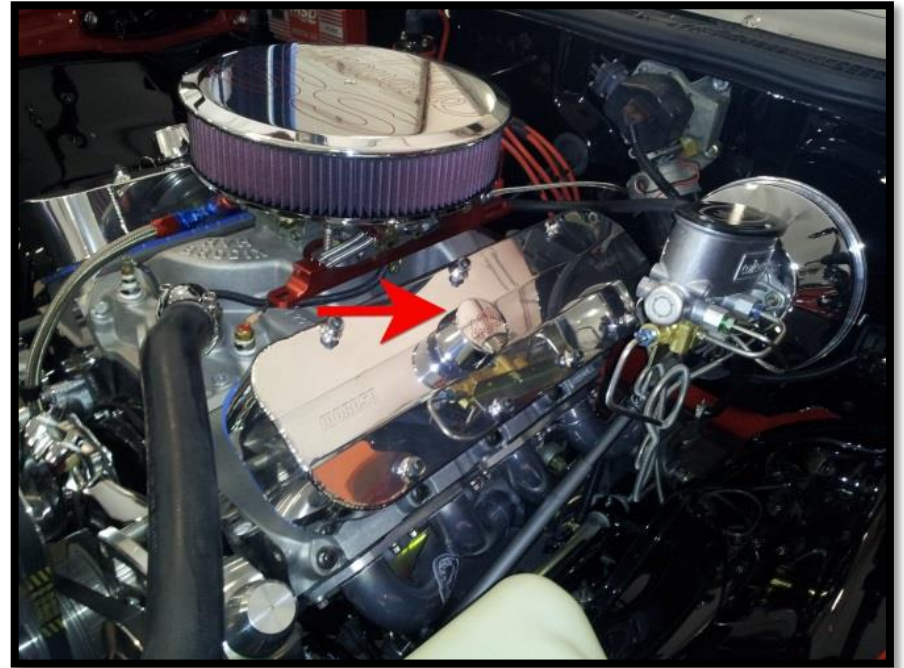
Here are some additional custom designed and engraved parts Keith has made using *VisualMILL®*, *VisualTURN®* and his own ingenuity. This is a beautiful 1971 Chevrolet Chevelle SS show car that took 1st place “Best in Class” in the [2014 World of Wheels Boston](#) show competition.



(c)



(d)



(e)

Figure 6 - 1971 Chevrolet Chevelle SS show car, 1st place "Best in Class", 2014 *World of Wheels* Boston (c) Finished Chevelle SS on display (d) Custom air cleaner cover machined and engraved using VisualMILL® (e) Custom valve cover breathers machined using VisualMILL® and engraved using VisualMILL®, both parts are aluminum, inlaid, wet sanded and polished.

More about Dube's Custom Street Machines

[Dube's Custom Street Machines](#) specializes in building, restoring, and customizing show cars and bikes. Serving the tristate area now for over 15 years, they are conveniently located in Christine Park in Hudson, NH. Visit Keith's [website](#) and [Facebook page](#) or better yet, stop by and talk shop, even if it's just to see what he's working on next!

More about VisualCADCAM®

For a complete list of features by product configuration see <http://mecsoft.com/visualmill/> for details. [VisualNEST®](#), [VisualTURN®](#), [VisualART®](#) and [Visual3DPRINT®](#) modules are also available. MecSoft's MILL and TURN modules also run as plug-ins within [Rhinoceros CAD](#) and [SolidWorks!](#)