

September Meeting



Good turn out for a late summer evening!

In the foreground you can see some of the pre-meeting action, usually a productive time for folks to catch up and get some networking completed; in particular there was a discussion about reamer stock removal taking place which was producing some differing opinions...

Bob was seeking advice on a small, two piece, fixture to hold some material that needs to be drilled, part to part precision being important, as part of his latest project. The fixture is going to be aluminum and the two halves are going to locate to one another with a set of dowels. The question of drill size and stock removal for the reamer was the main topic.

*The dowel size being proposed was 0.125" , with reamers needed to make a press fit on one half and a slip "locating" fit on the other side. Did some digging and found info from the **Hannibal Technical Team** that may be of help:*

REAMER BASICS

The reamer is used to finish machine a previously formed hole to an exact diameter with a smooth finish. It should not be used to significantly enlarge a hole (max. 5% - depending on material and hardness).

*For the 1/8" dowel Bob was considering, they recommend in the **HANNIBAL PRE-REAM DRILL SIZE CHART** , a #31 (0.1225") for 2% and a 3mm drill (0.1213") for 3% stock removal, to get the correct hole diameter for reaming. Just some info that I've picked up along the way; a reamer will always "follow" the existing hole so if you are dealing with something very accurate / fussy it is best to, when possible, single point bore a very straight hole before reaming.*

On the Dowel side of things ; In the Machinery's Handbook (American National Standard Hardened Ground Machine Dowel Pins) a range of between 0.1251" and 0.1253" is given for a standard 1/8" dowel, so clearance reamers would need to be selected to accommodate that range. Bob had a great plan to drill and ream the two halves together so location of dowels should not be an issue.

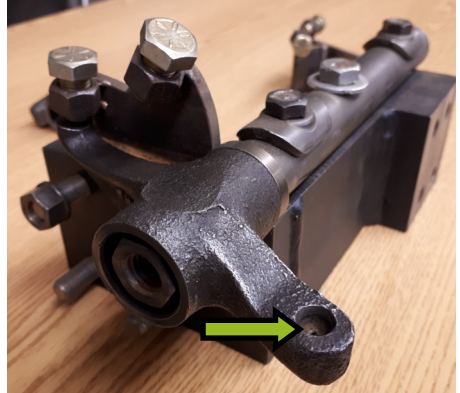
Lots of info here (<https://www.hannibalcabride.com/technical-support/reamers/>) if you're so inclined to read on.

This is why we meet!

Show-N-Tell

A few good show-n-tells made the trip out this month; we always could use more so if you've got a how to, how do I, or a who the heck...., bring it out - everyone will do their best to help.

Kevin was firing on all cylinders this month, with his automotive back-ground on display. A rework fixture, customer supplied, to accommodate the rockers off a Chrysler 392 that's being retro fit with adjustable rockers and solid roller lifters was on display.



Most engines run with hydraulic lifters, or lash adjusters on overhead cam engines, that have the ability to "take up" changes and differences in the valvetrain systems. Older engines and many performance engines opt to remove this "spongy" technological advancement for the more labour intensive



solid / adjustable system (see adjusting screw in photo to the left). Much like a gear drive timing system eliminates lag during rpm changes, solid rollers and adjustable rockers allow for near instantaneous response.

One step in the rework will be annealing the rocker so it's soft enough to modify. Our group can offer some really good insight and knowledge, in this case the recommendation / question from George was, " how will you keep the rest of the rocker from heating up during the annealing".... That had Kevin pausing and re-evaluating his approach which is all part of what the meetings and information sharing can provide.

Kevin also had some interesting stories, from way back, to share about a similar engine being stuffed into a friends 57 Plymouth!! Always a treat to hear Kevin's passion, Thanks Kevin !!!!

Our resident "Dr. Gadget" a.k.a. Don, who's always one step, in this case a few steps, ahead of the group presented a new product video. The Beta testing of a handheld CNC router (Product name—Shaper) kickstart was Don's latest gadget to have the FULL attention of the entire group.

With stick on, consumable, tape that is the datum reference location for the CNC you could nearly produce a limitless work envelope. The product compensates for the operators errors, as you drive the router around the design, and you only needing to hit a generous target zone in order to produce very accurate results.

The product is capable of too much to convey here, you must check it out on YouTube!!! Search "Shaper CNC" and you'll find it.



Thanks Don "Dr. Gadget" !!!!

Amazing!

Some lose ends...

Mark is stepping up and taking on the task of handling the fashion where for the club, thanks again Mark—we need all the help we can get—for taking this on. Please see Mark if you're interested in purchasing some items. They make great gifts too so get your orders in before the holiday season!!



On tour...

Our three amigos (Steve, Louis, Jim) are headed off to the MID-EAST OHIO ENGINEERING EXPO, SEPTEMBER 28-29, 2018. They're also going to be doing some local shop tours while down there. Good luck guys, we know you'll represent us well!!!

From the Video Vault...

As you know I try to bring relevant videos to the group; videos that will add both knowledge and provoke some incentive to strive for perfection... As always, when I need a go-to video that represents the pinnacle of the “mechanical arts” there are a few names that I can always count on. Robin Renzetti ,is of course tops on that list. If you have not yet started following Robin on his social media platforms (Instagram—@robinrenzetti, YouTube—ROBRENZ) , make sure that you do, there are details packed into every square inch of his shop and he freely shares them with all. His solution for the pulley change, Tormach Mill, had everyone thinking.... Geez I better step up my game. Thanks Robin!!

In Closing

The Vice President reminds everyone to continue participating, it makes the club what it is...He also noted that when we do, “we all go home with smarter minds”. **Great point Kevin!!**

Next meeting is **Oct 10th**