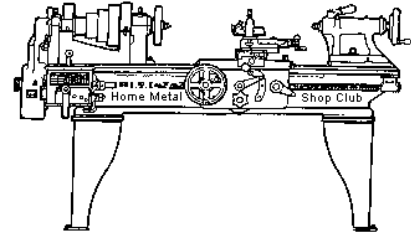




April 2021
Newsletter

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<http://www.homemetalshopclub.org/>

The Home Metal Shop Club has brought together metal workers from all over the Southeast Texas area since its founding by John Korman in 1996.

Our members' interests include Model Engineering, Casting, Blacksmithing, Gunsmithing, Sheet Metal Fabrication, Robotics, CNC, Welding, Metal Art, and others. Members enjoy getting together and talking about their craft and shops. Shops range from full machine shops to those limited to a bench vise and hacksaw.

If you like to make things, run metal working machines, or just talk about tools, this is your place. Meetings generally consist of **general announcements**, an **extended presentation** with Q&A, a **safety moment**, **show and tell** where attendees share their work and experiences, and **problems and solutions** where attendees can get answers to their questions or describe how they approached a problem. The meeting ends with **free discussion** and a **novice group** activity, where metal working techniques are demonstrated on a small lathe, grinders, and other metal shop equipment.

President <i>Brian Alley</i>	Vice President <i>Ray Thompson</i>	Secretary <i>Joe Sybille</i>	Treasurer <i>Gary Toll</i>	Librarian <i>Ray Thompson</i>
Webmaster/Editor <i>Dick Kostelnicek</i>	Photographer <i>Jan Rowland</i>	CNC SIG <i>Martin Kennedy</i>	Casting SIG <i>Tom Moore</i>	Novice SIG <i>John Cooper</i>

This newsletter is available as an electronic subscription from the front page of our [website](#). We currently have over 1027 subscribers located all over the world.

About the Upcoming 08 May 2021 Meeting

The next general meeting will be held on 08 May 2021 at 1:00 P. M. on-line at Zoom.us. A week before the meeting invitees will receive from the webmaster the meeting ID and passcode to join the on-line meeting.

General Announcements

[Videos of recent meetings](#) can be viewed on the HMSC website.

The HMSC has a large library of metal shop related books and videos available for members to check out at each meeting. These books can be quite costly and are not usually available at local public libraries. Access to the library is one of the many benefits of club membership. The club has funds to purchase new books for the library. If you have suggestions, contact the [Librarian Ray Thompson](#).

We need more articles for the monthly newsletter! If you would like to write an article, or would like to discuss writing an article, please contact the [Webmaster Dick Kostelnicek](#). Think about your last project. Was it a success, with perhaps a few 'uh ohs' along the way? If so, others would like to read about it. And, as a reward for providing an article, you'll receive a free year's membership the next renewal cycle!

Ideas for programs at our monthly meeting are always welcomed. If you have an idea for a meeting topic, or if you know someone that could make a presentation, please contact [Vice-President Ray Thompson](#).

Members are requested to submit to the club secretary the name, address, telephone number, and website address, if any, of any metal or other material stock supplier with whom the member has had any favorable dealings. A listing of the suppliers will appear on the homepage of the club website. Suppliers will be added from time to time as appropriate.

The club is looking for a member to serve as webmaster. After over ten years of service, our current webmaster would like to pass the webmaster torch to a successor.

Recap of the 10 April 2021 General Meeting

By Joe Sybille



Fourteen participants attended the 1:00 P.M. virtual meeting. There were three visitors, Wilfred Nijs, Hudson Smith, and PinkCNC. President emeritus Vance Burns, led the meeting (right photo).



Presentation

There was no formal presentation.

Treasurer's Report

For the period 13 March 2021 to 10 April 2021, treasurer Gary Toll reported the club account balance is \$3308.45. Dues of \$15.00 per year have been suspended for the duration of the current pandemic and as long as the club is meeting virtually. There were no disbursements made since 13 March 2021 and there are no planned upcoming expenses. Pending is a decision by the club officers on whether the virtual meetings will continue once the CDC has declared the pandemic ended and the club is able to meet in person.

Show and Tell

Dick Kostelnicek showed a all wooden vise inherited from his grandfather. The vise has remained in serviceable condition for well over 70 years. Also, he exhibited an electronic parts tester used to identify components, for example, transistors, capacitors, resistors, and inductors. See photos at right.

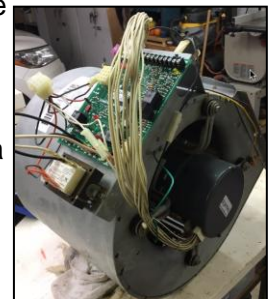


PinkCNC displayed an instrument panel cut from aluminum and covered with acrylic.



Joe Sybille showed the transmission of a vintage washing machine and hopes to salvage a few usable gears once the case is opened. See photo at left.

Gary Toll described the replacement of his HVAC furnace fan. He intends to re-purpose the controller for the fan as a variable speed controller for his bandsaw. See photo at right.



Wilfried Nijs displayed a level he made to adjust the cutting tool set in his lathe tool holder. Upon receiving a suggestion for improvement by PinkCNC, Wilfried modified the level to use in both the lathe chuck and the tailstock. See below photos.



Problems and Solutions

A participant has a problem with an adjustment nut on a lathe tool holder and requested suggestions on how best to keep the nut from loosening during lathe operations. Several suggestions were offered. Also, the participant believes there is a problem with a power supply that makes a clicking noise when powered on. After hearing the noise, other participants considered the clicking noise 'normal' for a power supply. Lastly, the participant has over time accumulated ER40 and ER50 collets and would like to settle on one size. Several suggestions were offered.

Another participant has trouble drilling holes in exact locations on workpieces and requested suggestions on sources for spotting drills. A few sources were offered.

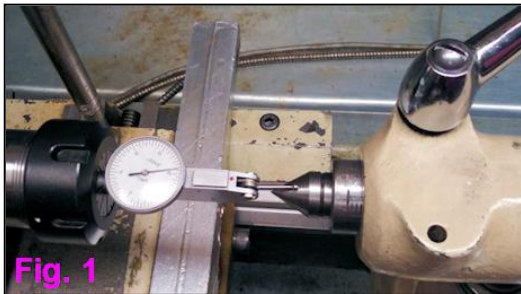
Another participant shared an experience encountered while using a ¼ rounding bit to shape the ends of bar stock. While shaping the ends, the heavy duty mill began to vibrate. The cause of the vibration: the operator forgot to lock the quill.

Another participant requested information on welding blankets for an upcoming project involving sweating of copper pipes. Suggestions revealed welding blankets were overkill for the project and that a visit to a plumbing store or the plumbing section of a big box store would offer less expensive alternatives for flame protection.

Articles

A Rookie Mistake

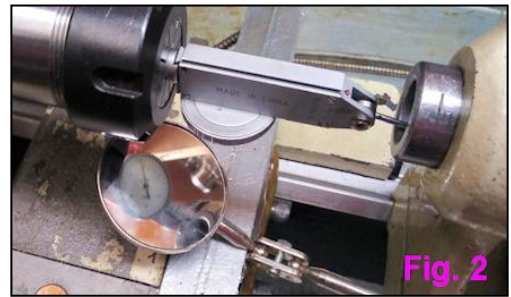
By Dick Kostelnicek



I was doing some lathe mandrel work and turning between centers. I work this old style way because I can remove the part from the lathe, measure it, and then pick up where I left off without all the fuss of re-chucking. When finished, the work measured tapered by 0.015 inch in 4 inches, indicating it was time to check and realign the tailstock.

My trusted method for adjusting the tailstock set-over is shown in Fig. 1. Sweep around a 60 degree tailstock center with an indicator mounted in the headstock and note any run-out. Then, adjust the set screws in the tailstock's base casting until the horizontal run-out is reduced to zero. This is where a mirror comes in handy to see the reading on the back side of the 60 degree center. Job done! But, to my annoyance I noted 0.006 inches of vertical run-out. That amount of vertical run-out will not produce a noticeable tapered turning if your tool bit is on center. But, it was there and I wanted it also gone!

A 60 degree center with a Morse tapered shank can be ground off center and give an inaccurate run-out reading. Also, the ram should be cleaned out with a Morse tapered reamer, which I did. Still the vertical run-out persisted. So, I went on to a more definitive technique. Sweep the bore of the tailstock ram (Fig.2). Note the use of a mirror this time. The vertical run-out was still 0.006. I extended the tailstock's ram to its maximum, tightened down the ram's clamp and still had 0.006 run-out. Well at least the ram was tracking parallel to the lathe's ways.



I checked the indicator's dial rotation relative to its plunger displacement and determined my tailstock was too low. No problem! Just put a 0.006 shim between the sliding tailstock base and its top part (Fig. 3). This is where the rookie mistake comes in! No deal! Now I have 0.005 vertical run-out in the opposite direction! Back and forth with different shim thicknesses and for each shim correction that I made, it seemed to get worse!

Then it hit me! This is like centering an independent 4-jaw chuck. You should move the chuck jaws by half the run-out. Eureka! 0.006 of vertical run-out needs just a 0.003 shim under the top tailstock casting.

You may encounter a similar problem where the tail stock ram is too high. Then, you'll have to mill off a bit from the upper surface of the lower part of the tailstock casting. Not to worry! If you mill off too much, then use a shim to get the tailstock ram spot on center.