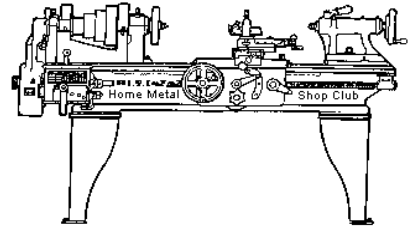




September 2026 Newsletter

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<http://www.homemetalsclub.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.

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Dean Eicher

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Secretary
Joe Sybille

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Novice SIG
John Cooper

This newsletter is available as an electronic subscription from the front page of our [website](http://www.homemetalsclub.org/). There are over 1027 subscribers located around the world.

About the Upcoming 10 October 2026 Meeting

The next general meeting will be held 10 October 2026 at 12:00 P.M. (Noon - Central Daylight Time) at TxRxLabs, 6501 Navigation Blvd., Houston, Texas 77011 and on-line at Zoom.us. Log-in credentials are as follows: Meeting ID = 817 7331 4801 Passcode = 368722. [A link to the meeting](#).

General Announcements

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 Dean Eicher](#).

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 [Secretary Joe Sybille](#).

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 twenty years of service, our current webmaster would like to pass the webmaster torch to a successor. Positions still vacant are vice-president and casting special interest group leader.

For those wishing to join the Tinkering user group please visit <https://groups.io/g/tinkering> and follow the prompts.

Recap of the 12 September 2026 General Meeting

By Joe Sybille

Eight participants attended the meeting. Seven participants were in-person; one was on-line. Dean Eicher led the meeting (right photo below). There were no visitors.



Presentation

There was no presentation today.

Show and Tell

Dean Eicher displayed parts of a non-functioning printer he disassembled recently. See photo at left.



John Cooper told about the issues he had with finding a replacement dash for his 1996 pickup. Also, he displayed scissors that were battery powered. He purchased the scissors to cut heavy duty card board boxes. See photo below.



Mark Heidorn demonstrated an auto-ranging digital capacitance meter he built many years ago. It still works well. See photo at left. The discovery of a YouTube channel by Bettina Neumryr reminded him of the project he built. See photo at left. Neumryr's channel focuses on building vintage electronic devices.

Gary Toll showed an adapter he made for a shop vacuum. Also, he exhibited an acrylic handle he made to replace a broken screwdriver handle. See photo at right.



Safety Moment

Participants were shown photos of workers at a residence making house repairs. The photos reveal a lack of personal protective equipment (PPE) worn by the workers who were sawing with power saws and nailing with pneumatic nailers. One photo depicted a worker atop the steeply pitched roof of a two storey house. This worker wore no safety harness and was not tied off to a safety line.

Problems and Solutions

A participant described how tarnished coins were cleaned by using in a tumbler stainless steel pellets and walnut shells.

Another participant described how taking apart a commercially built device can be accomplished without breaking the assembly. The key is to examine the assembly closely and to take one's time.

Articles

When Your Shaft Breaks: Fix It

By Gary Toll

This article is not a how-to-do-it but rather how you recover from mistakes; whether caused by nature, normal use, or some accidental damage to equipment. Most equipment has a shaft to transmit power from an engine in order to produce the desired mechanical work. Here are three cases where I was involved and how the subsequent repair was accomplished. They are stories rather than how-tos and food for thought on how you can make a fix.

Some years ago, in the late 60's, I owned a small 17-foot inboard runabout boat on the Ohio river. Every year, over the Fourth of July, in Madison IN, a racing regatta for unlimited hydroplanes occurred. Most hydros at that time were powered by World War II supercharged aircraft engines manufactured by either Allison or Rolls Royce. This story isn't about the race itself, but my desire to see the races firsthand.

I lived in northern Kentucky near Cincinnati, OH and wanted to take the boat to Madison, IN to watch the races up close. My thought was to camp out along the river over the course of a weekend to see the races. My cousin and I planned to leave in the early evening, taking a leisurely cruise down river at night.

Unfortunately, it didn't work out the way we planned. About ten miles down river from Cincinnati, we hit a log in the water and in doing so bent the prop and shaft. I saw the log but could not put the transmission in neutral fast enough to avoid damage. The result: the boat could move but with excessive vibration and at much slower speed. The next town on the river was Aurora, IN. where we might find much needed repairs. We slept in the wave rocked boat all that night and the next morning borrowed some tools from the marina to remove the prop and shaft. After inquiries, I was told there was a machinist some 2 miles down the road and he had made numerous repairs for many of the locals. So we walked about 2 miles to his shop.

I showed the bent shaft to the machinist and he agreed to attempt repairs to the shaft. Only the prop end of the shaft was bent to the extent that it looked straight on one side and the other was bent at a large angle, it should have been a tapered fit. The machinist pulled out two blocks with two ball

bearings so that he could rotate a shaft for 360 degrees and then he used a dial indicator to find the highs and lows on the shaft. He marked the highs and lows on the shaft and then placed the shaft in a screw press to straighten it. This took several iterations but finally he straightened the shaft within about ten thousandths of an inch. It only took about 15 to 20 minutes to straighten the shaft but we spent most of the morning traveling and working on the boat. The prop was another story, he didn't have any way of setting the correct pitch or making sure the blades were at the correct angle to the axis of the hub. I would have to take it to a marine dealership and see if they could send it out to be repaired.

His shop was really interesting, it looked like it was about fifty years old. All the power tools including lathes, drill press etc. were powered by overhead line shafts. This was housed behind his garage with an extension out the back which looked down the hill on the banks of the Ohio river.

Before we left we were offered refreshments of lemonade and we sat in the backyard between the house and the shop. There were two chairs which were made by the machinist and his father. They were made only of wire no cushions. The chairs consisted of a heavy wire frame and hundreds of vertical and horizontal wires woven in a crisscross pattern. Looking at the chairs you might think they might be uncomfortable, however, that was really not the case. Nevertheless, it was relaxing especially because we had a long walk back to the boat. The weekend excursion never took place, but I learned a lesson to carry an extra shaft, prop along with tools to change the prop. Subsequently, I built a specific prop puller which I also carried in the boat. The other thing I learned on this trip was that it is not the age of the tools that one has but the ability to use them that counts.

THE MINI-BIKE ENGINE

My second shaft repair was on a single cylinder gas engine used to power a mini bike. The crankshaft was broken off just outside the crank case. The bike had crashed and the shaft's end with the pulley broke off when the bike was dropped or hit another object. The engine was replaced and no longer needed. I asked why the owner didn't just purchase a new crankshaft and then repair and replace the engine on the bike. He mentioned he didn't have the time but one of his employees could just install a new engine. The owner then said that I could have the engine and get a new crankshaft.

I mentioned getting a crankshaft to another friend, whose uncle ran a lawn mower repair shop, my thinking was I could get a new crankshaft to replace the broken one. He suggested instead, because he knew I had a lathe, that I should drill out the shaft, thread it, and screw in a new extension and braze it in place to keep the extension from backing out when in use.

After tearing down the engine, I set the crankshaft in the lathe utilizing a three jaw chuck and a steady rest to firmly hold the crankshaft. Then I faced off the end for drilling, drilled and threaded it with internal threads. Next I prepared a new shaft extension, screwed it in and brazed it in place. I then replaced the crank back in the lathe with the steady rest supporting the main bearing to turn the shaft concentric with the main bearing and then a keyway was cut in the shaft.

Later, I installed the engine on a garden rototiller, used it for several years, and then sold it before moving to Houston.

CHEVROLET CRANKSHAFT REPAIR

In the early eighties, my wife requested that I help her friend's husband replace the engine in a Chevrolet station wagon, he was going to let his oldest son drive. He had already purchased a rebuilt engine and was in the process of installing it but was having problems. My wife thought I could help. When I arrived, the engine was already installed and the problems, as it turned out, were that numerous items did not readily connect with the new engine. This should have been my first clue why they were having problems! They had already returned the original engine, and in several cases, fittings were not removed from it. Some of the fittings were needed in order to connect the smog equipment which we did not connect due to lack of fittings. We spent most of the weekend reinstalling accessories, alternators, ac-compressor, ignition distributor, wires, etc. Finally, we cranked it up and got it running only to find out the whole engine shook. We could not figure out what was making the engine vibrate excessively.

Several days later, I found out the car was taken to a repair shop the mechanics determined the problem was that the owner had replaced a 400 CID engine with a 350. The big difference between the engines is that the 400 was externally balanced with a front damper on the crankshaft and the 350 was internally balanced. The wrong damper was the problem. The out of balance caused by the wrong damper on the front of the crankshaft gouged a groove in the keyway that held it in place and then the timing could not be set accurately because the damper kept moving on the crankshaft.

What to do now? Repair the crankshaft or replace it. I thought the crank could be welded if the damage was not too bad. Big question. How bad? Only one way to find out. Take it apart and check. I disconnected the battery, removed the antifreeze, fan, fan shroud, front pulley and damper, water pump, timing chain and gears. The gouge was about an inch and a half long and only to the depth of the key in one direction. Welding could possibly work.

A wet rag was placed around the crankshaft to keep it cool and prevent slag from entering the crankcase. A bolt was inserted in the center of the crankshaft to attach the ground clamp. The crank was welded up to the top surface of the crankshaft. With slag cleaned off, a file shaped the keyway so it would accept the key for the damper pulley. Once everything fit securely, the accessories were reinstalled, fluids topped off, and we reconnected the battery. When finished, I got in and started the engine. It ran like it was meant to. Done.

These various ways to save a shaft are now in the past I have been able to save some money and return equipment to service with the least possible cost.