

# Making a Few *VERY* Minor Improvements to my Hold-down Set

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By R. G. Sparber

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When I am working on a project, I simply reach over and grab the necessary parts out of my hold down set. I've done that for over 20 years. Yet a few things have always been a minor annoyance to me. Not so bad that I want to stop working on my project, but enough that I am reminded every time I hit one. Well, today I was puttering in my shop with a little time on my hands and decided it was time to address these annoyances.

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### **Annoyance #1**

The shortest threaded rod sits too low in the holder making it hard to grab and pull out.

Solution: cut a piece of wood  $\frac{1}{2}$ " x 2" x 8  $\frac{1}{2}$ " and slide it under the threaded rods. Now I can get a good grip on the shortest rods

without dropping them back in the hole. The

rest of the rods are raised up too which is harmless.

### **Annoyance #2**

The smallest step blocks sit too low in their compartment and are hard to grab.

Solution: cut a piece of wood  $\frac{1}{2}$ " x 1" x 1.4" and wedge into the bottom of the compartment. Now these step blocks sit much higher and are easy to access.

### **Annoyance #3**

Extra T nuts sometimes fall out. You can see two of them sitting sideways on the right plus a pair of trapezoidal T nuts on the left. Solution: wedge a strip of flexible magnetic material behind them. They come out with a gentle pull but don't move due to the vibration of removing threaded rods from the rack.

### **Annoyance #4 (actually fixed a few years ago)**

My T slot cleaning tool is a thin piece of steel. If I lay it down, it is hard to pick back up. Solution: put a magnet under the hold down set and stick the tool to it.

You can just see part of the tool on the left side.

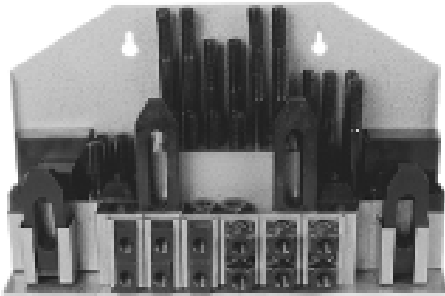


### **Annoyance #5**

Often the threads get clogged with swarf and oil making it hard to finger tighten into the T nuts and nuts. Solution: put the threaded rod down on a flat surface and use an old toothbrush to clean the threads.

### **Annoyance #6**

This one is so minor and obvious that I almost didn't mention it. I am constantly pulling out one threaded rod and then discovering it is too short. I put it back in order to get the next longer one and often pull out the one that is two sizes longer. Solution: arrange the rods as shown in the picture above.



In the Enco<sup>®</sup> catalog the rods are shown arranged in an almost random order.

## Improvements Supplied by Readers

Bill from the mill\_drill Yahoo group wrote:

I made some CrMoV threaded rods for a processing mill a while back. They were 1" in diameter, 8" long, and I had to machine both ends about 1-1/2" long, and then thread them 1/2"-13. These were used in some high temp operation, which is generally why CrMoV is used. I know that the material I received was annealed. It machined about like 4140, which is more commonly used for B7 all thread.

Corey from the mill\_drill Yahoo group wrote:

1. In both of my sets, there is a region of lengths in which the shortest studs are too short and the next size up is too long. I made a few replacements out of all-thread. They are handy because there is no unthreaded portion in the middle.
2. Occasionally the 1/2-13 hardware is just too big for the item I need to clamp. I have drilled and tapped a few of my 1/2-13 studs down the center for a smaller screw to thread into them. I think they take #10-24. Comes in handy sometimes.

EdwinB from the mill\_drill Yahoo group wrote:

On the wall next to my hold down set is a rack with various lengths of cap screws with thick washers and an Allen wrench. They bridge the gaps when I can't find the right length of rod in the hold down set.

## Acknowledgements

Thanks to Bill, Corey, and Ed for their contributions.

## What next?

If you have improved your hold-down set, let me know and I will add it to the pile.

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