

worn-out-half-nuts-all

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Part of my machining hobby is restoring worn machinery to usable condition and getting those machines in the hands of people who want to make chips. A recent reconstruction of a South Bend Model A involved restoring completely worn out (as in completely gone) half nut threads.

I cannot figure how these half nuts were worn out so badly on a Model A, but there was no disputing what they were. I bored out old threads to a .900" bore. Made a bearing bronze spool to .895" to allow for epoxy to fill gap and account for misalignment. Then I single pointed the threads till spool threaded on leadscrew easily. I then made a few passes on the spool outside diameter at 4tpi to rough-up for epoxy to grip. I then installed the bored half-nuts in the apron, put the apron back on lathe, screwed the spool onto leadscrew, replaced lead screw end support to line things up, then clanked half nuts closed on spool to test fit.

Once it looked like it would work, I coated spool with epoxy, clanked half nuts closed, then let cure for a few days. I then removed the apron by running lathe screw backwards. I then drilled and pinned (1/16") on each end of spool lip. I then clamped the half-nut assembly in the mill vise and split it with a big slotting saw, drilled oil holes, and Voila. half nuts live again.

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