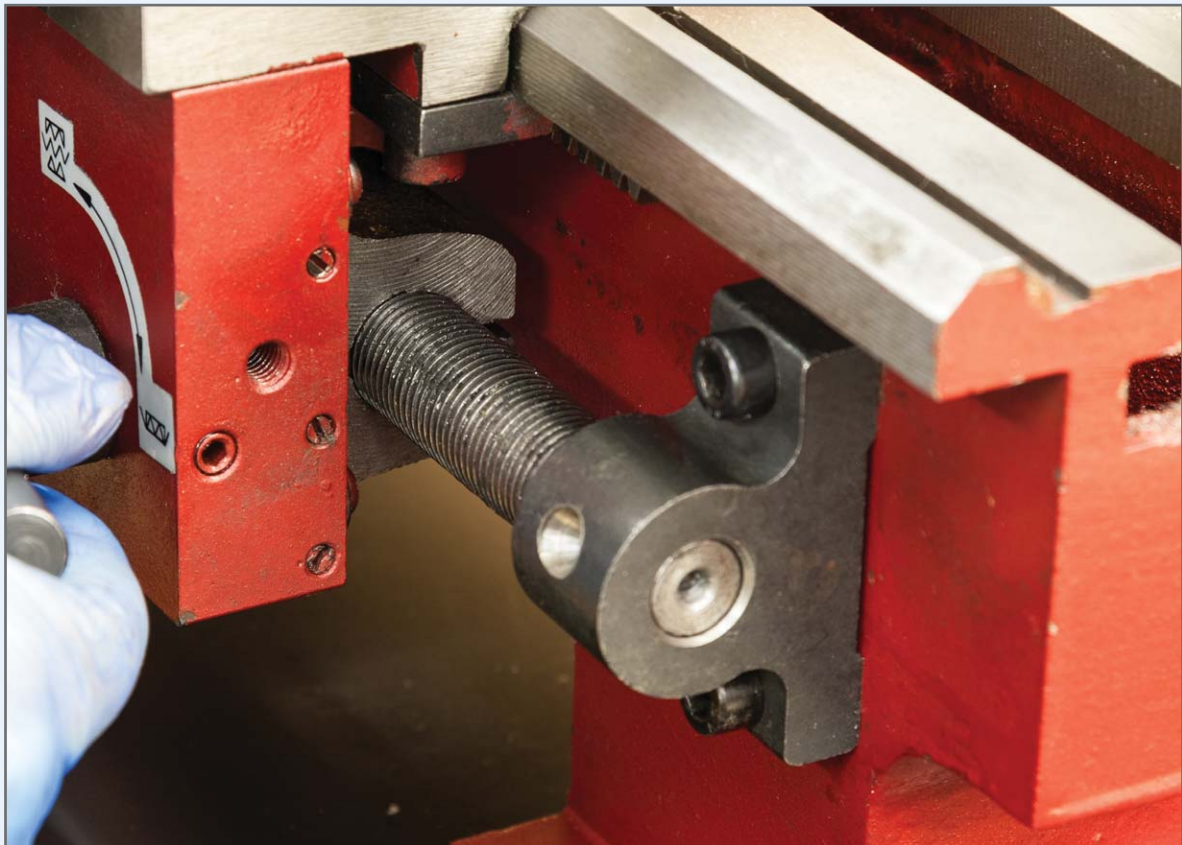


SIEG Super C3 Mini Lathe



Half Nut Conversion Guide

A picture story book to help you improve your SIEG Super C3 Mini Lathe with a pair of half nuts

When SIEG launched their Super C3 HiTorque Mini Lathe, the addition of a leadscrew cover looked like the perfect way of keeping swarf out of the leadscrew threads. However, nothing in life is perfect and this is certainly true with the leadscrew cover.

In order to make space for the leadscrew cover, the SIEG design engineers had to make a compromise and change from a pair of half nuts (as fitted to the older C3 Mini Lathe) to a single half nut beneath the leadscrew and a fixed "hook" above it to prevent the leadscrew bending when the half nut is engaged.

Mechanically, the half nut / hook arrangement takes a lower load than a pair of half nuts when using the auto feed to take a heavy cut. This is acceptable for most users and keeps your leadscrew clear of swarf.

However, some users prefer the traditional use of 2 half nuts to ensure

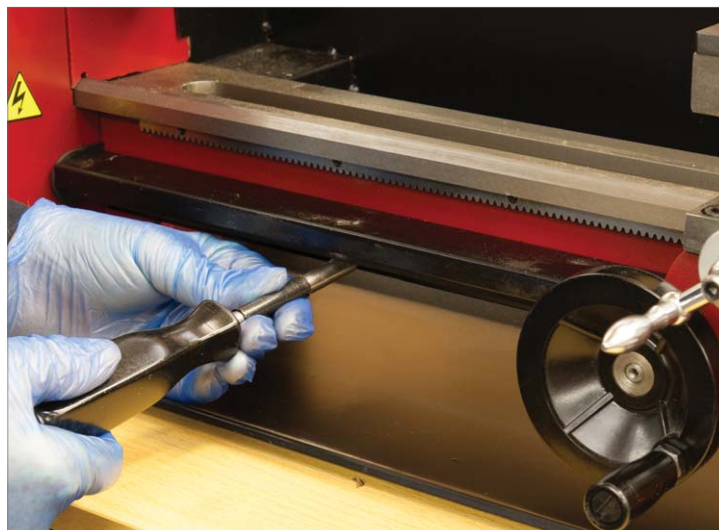
greater accuracy and load capability. For them the task to convert the machine to use a pair of half nuts is covered by this guide. The downside to this is that there simply isn't enough space above the leadscrew for the cover *and* the top half nut so you will have to periodically clean the leadscrew threads. There is also the increased health & safety risk of having an exposed leadscrew which the user needs to take into consideration.

This guide applies to:

- SIEG Super C2 HiTorque Mini Lathes.
- SIEG Super C3 HiTorque Mini Lathes.
- Some SIEG C2 Mini Lathes.



1. Remove the tailstock from the bed (as you can probably tell, this is a display model!).



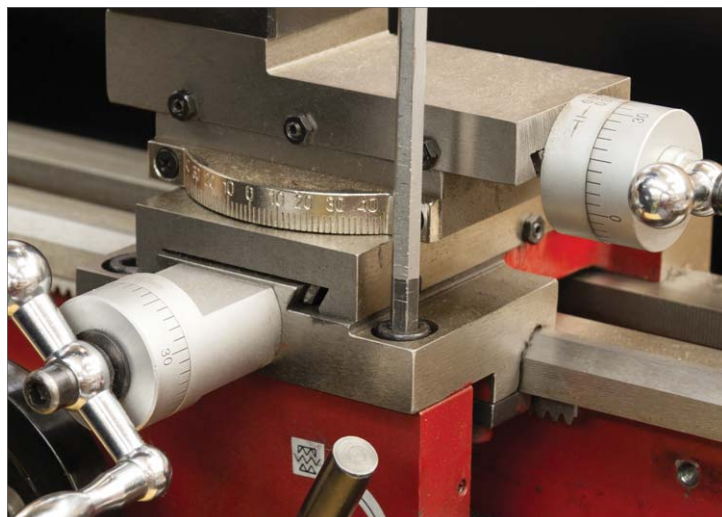
2. Remove the 4 screws retaining the leadscrew cover.



3. Remove the right hand leadscrew bracket.

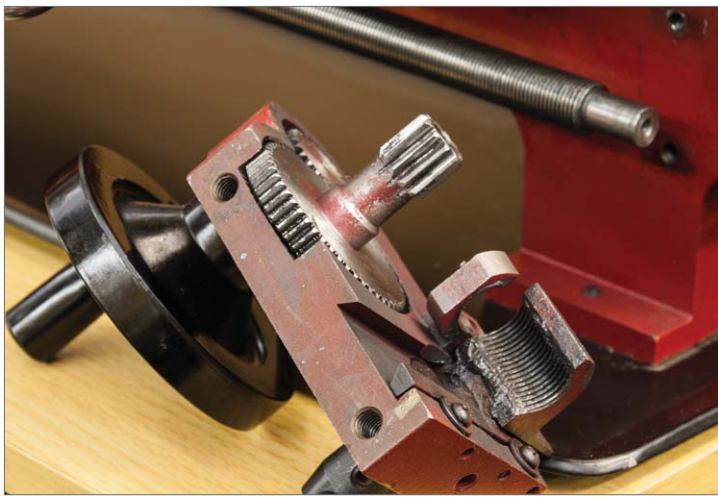


4. Slide out the leadscrew cover.

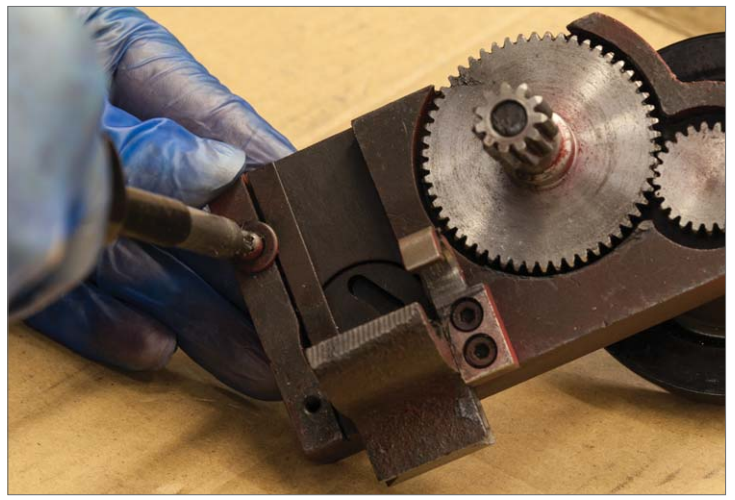


5. Remove the 2 hex socket head screws that fix the apron to the saddle and carefully slide the apron off the end of the leadscrew.

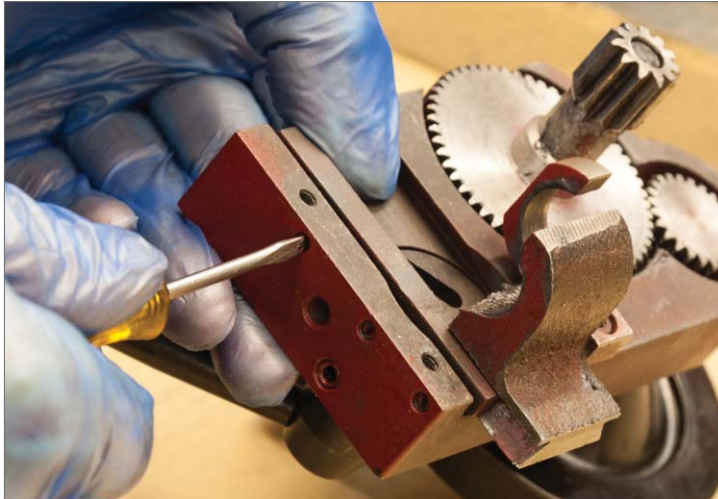




6. The apron removed.



7. Remove the 2 gib retaining screws.



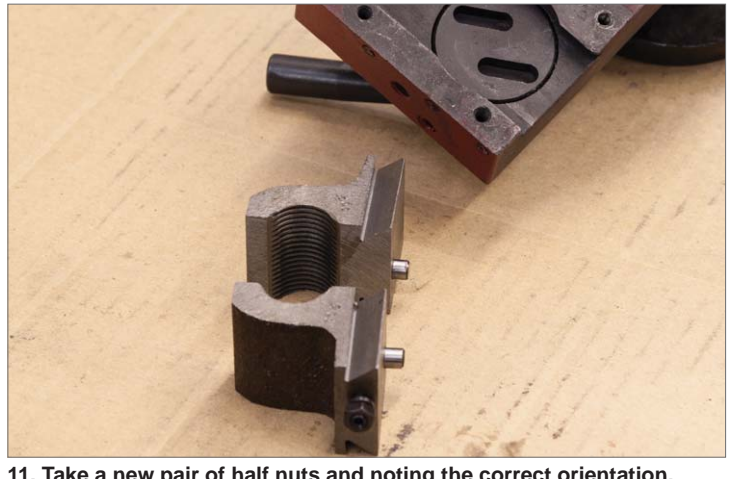
8. Slacken off the gib adjusting screws.



9. Remove the gib and half nut.



10. Remove the leadscrew support arm.

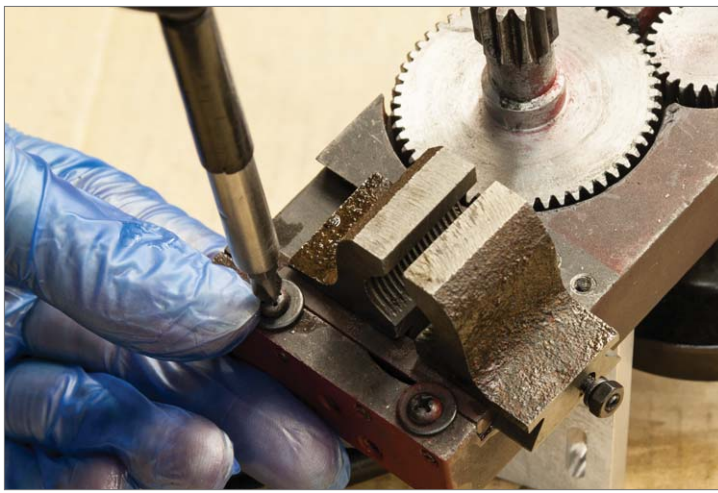


11. Take a new pair of half nuts and noting the correct orientation, slacken off the adjusting screw fitted to the lower half nut.

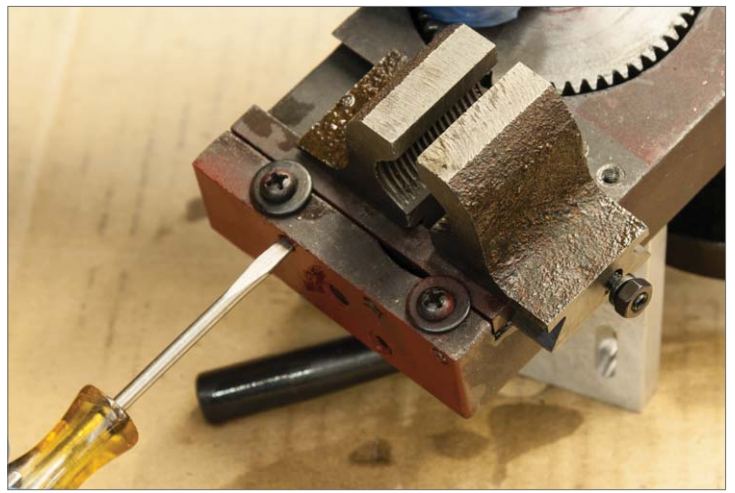


12. Lubricate the dovetail slide, locate the half nut pins in the slots of the cam disc and slide in the gib.





13. Re-fit the gib retaining screws and washers.



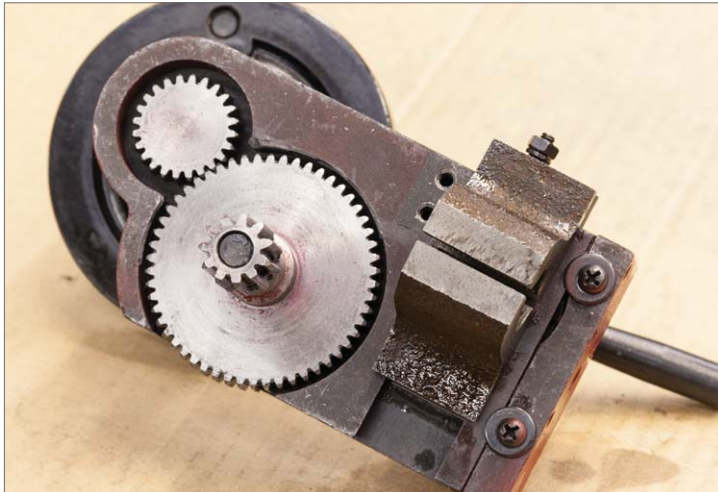
14. Adjust the gib screws.



15. Check the operation of the handle for a smooth action.



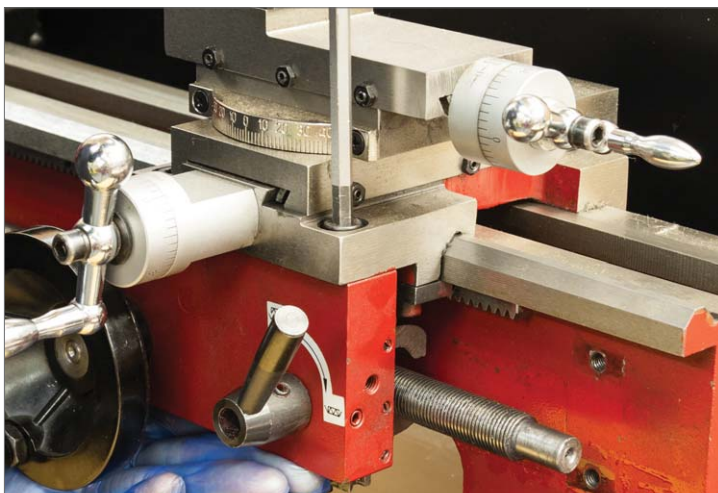
16. Check there is no slop in the half nuts.



17. The finished apron assembly.



18. Slide the apron back into position.



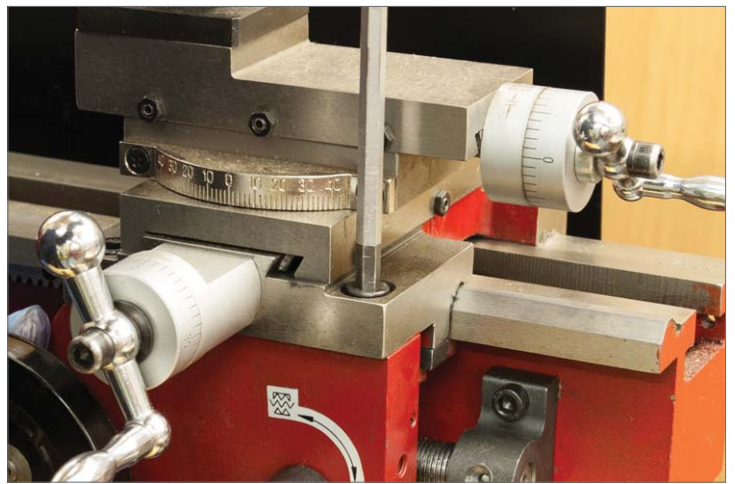
19. Loosely fit the apron fixing screws.



20. Re-fit the lead screw bracket with the screws finger tight.



21. Lock the half nuts onto the leadscrew near the end of the bed.



22. Ensure the half nuts are seated before pinching the apron screws.



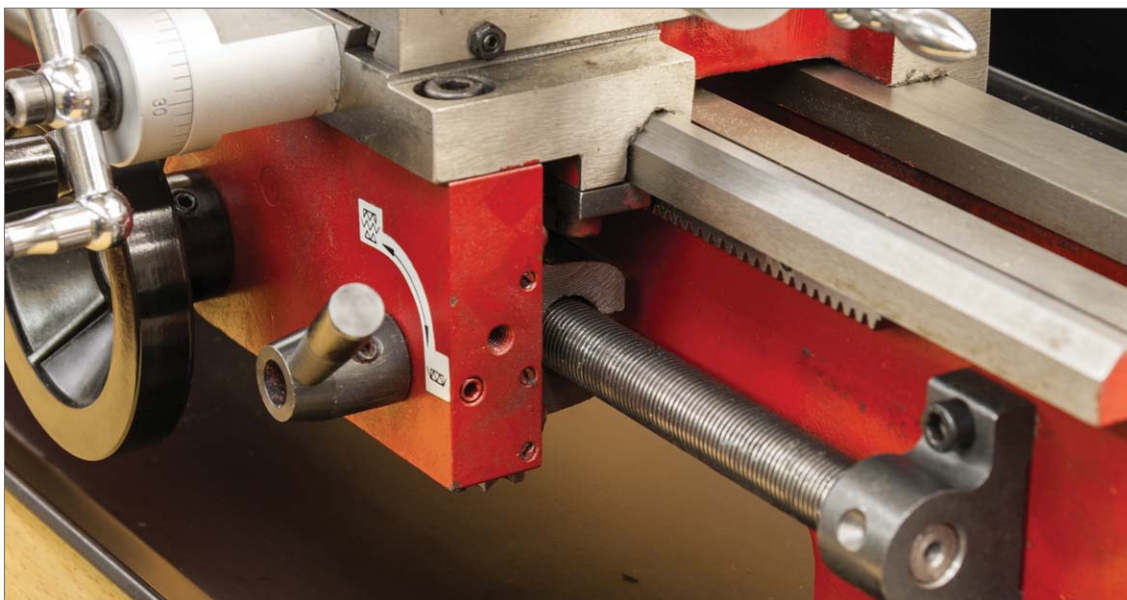
23. Slacken and then pinch the leadscrew bracket screws.



24. Check the bite of the half nuts and if necessary slacken and re-pin the apron screws. If everything is correctly aligned, finally tighten the apron screws and the leadscrew bracket screws.



24. Lightly tighten the lower half nut adjusting screw and then back-off $\frac{1}{4}$ turn. Lock the adjusting screw with the lock nut.



25. Work the half nut operating handle a few times and rack the saddle up and down the bed to finally check everything is working smoothly.

The End