

# Atlas – Craftsman Lathe Tailstock Lock Modification

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It all started with an annoying problem. My tailstock lock takes more than one sweep of the built in wrench in order to move between lock and unlock. As often happens, once I posted my problem on the atlas\_craftsman Yahoo group BBS, solutions started to appear.



The simplest and best suggestion came from David Beierl who said to put a spring around the bolt. It worked very well.

But I'm not one to leave a good idea alone. It occurred to me that if the clamping plate was not close to level, it might hang up even when the lock should be released. From there, the solution was simple.

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I first turned a shoulder washer. The smaller outside diameter matches this inside diameter of the spring.

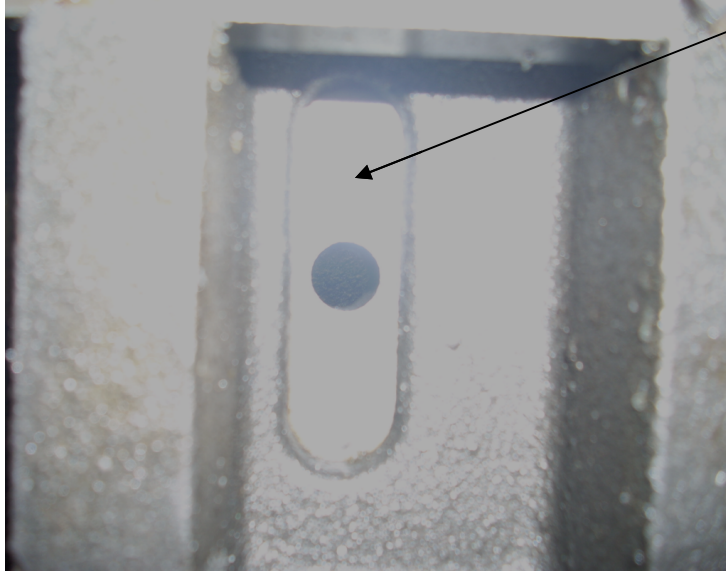


Then I turned the top piece which has a cone to center the spring. The cone was part of the scrap I was using. Otherwise, I would have turned another shoulder.



The narrower outside diameter was needed to fit the flat area on the underside of the tailstock.

I put Never-Seez® on the threads and nut.



Note that the slot is not centered over the hole. This caused me to turn a smaller outside diameter than initially planned. The slot is about 1/4" deep so my cone spacer rises up 0.3" at the square end.



Here you see the lock engaged.



No, this isn't the same picture. The lock is disengaged here. Very little movement was required.



I set up the lock so the tailstock is unlocked with the wrench all the way to the left.



It was fully locked in this position.



For comparison, here is the wrench all the way to the right.

As a test, I drilled a 1/2" hole in some aluminum round stock held in my 3 jaw chuck. The tailstock did not move at all.

I've got to believe that this is what was originally designed by the engineers for this lathe. Maybe some bean counter saw an opportunity to save a few pennies.

I welcome your comments and questions. All of us are smarter than any one of us. And a special thanks to Dave for the great starting point.

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