



VIDEO INSTRUCTIONS AVAILABLE
For Adjusting the Chucker Lathe Headstock Height video instructions, please visit our YouTube channel at <https://youtu.be/kH4Ao4aXyuc>

SHERLINE
PRODUCTS
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Chucker Lathe Headstock Height Adjustment

Adjusting the Headstock Height on a Sherline Chucker Lathe

First and foremost, all of the parts associated with the height and centerline alignment of the headstock and the tool holders are held to a thickness tolerance of + or - .001". See the parts circled below from the exploded view of our Accu-Pro Chucker Lathe. Because each part in these assemblies has a tolerance, when they are all assembled the final height can be + or - .003". This is called "stack tolerance." Because of the stack tolerance and the height difference that will occur, we purposely designed the headstock spacer block (P/N 59129) so it was undersized by .003" - .004". This would then allow us to build the entire machine and then see how much the headstock would need to be elevated in order to have the headstock centerline as close as possible to the tool holder centerline. On the machines that we sell, the height alignment is .001" or less.

We adjust the height of the headstock by placing shim stock of the correct thickness between the headstock riser block (P/N 59129) and the top of the chucker base (P/N 58011). We place two pieces of shim stock of the same thickness on either side of the mounting screws (P/N 56240). Each piece of shim stock is the same length as the headstock riser block. This will ensure that when the headstock riser block is secured in place, it will sit perfectly level and will not be forced "out of square" (tilted) when the mounting bolts are tightened.

To find out how much shim stock you will need to place under the headstock, we use a method almost exactly the same as the method shown to indicate in your gang tool post in this video ([Accu-Pro Turn Lathes - Indicating in a Gang-Tool Holder - YouTube](#)). If you go to about the 8:00 point in this video, it shows you how to indicate the tool holder pocket so it is centered on the center of the headstock spindle. We use the same method to find out what the height difference is between the tool holder and the centerline of the headstock spindle.

1. As shown in the video, center the indicator point on the tool pocket of the tool holder.
2. Indicate the tool pocket in from side to side first until it is within .001". Now the indicator should read the same on both sides of the tool pocket (within .001").

3. Now turn the indicator to see what the difference is between the bottom of the tool pocket and the top of the tool pocket. Half of this amount will be the thickness of the shim stock that you will need to elevate the headstock in order to get the centerline of the headstock to be the same as the centerline of the tool holder.

NOTE: We place the shim stock between the headstock riser and the base because these two parts are never disassembled. Our customers may remove their headstock for various reasons and we didn't want the shim stock to be in a place where it could inadvertently be removed, misplaced, or reinstalled incorrectly.

4. Since this is your machine, and you now know why the shim stock is used, it will be far easier to place the shim stock between the bottom of the headstock and the top of the headstock riser block. However, it should still be installed on both sides of the headstock and the full length of the headstock.
5. Once the shim stock is installed, use the clamping set screw (P/N 40540) to lock down the headstock on top of the riser block.
6. Now indicate the tool pocket again to see how close the centerline of the headstock is to the centerline of the tool post. Remember, as an example, if there is a .001" difference the top and bottom indicator readings, you are only .0005" off center line.
7. After indicating in the tool pocket if you find that you are still too far off of centerline, recalculate the difference and add or remove that amount of shim stock.

NOTE: It is easier to use .001" and .002" shim stock. Then either add or remove a piece of .001" shim stock from the existing shim stock that is already under the headstock until you achieve the correct height.

NOTE ON SHIM STOCK: You can purchase two, cheap feeler gauge sets from an automotive store for use as shim stock.

Thank you,
Sherline Products Inc.