

Adjustable Tailstock Install for Lathe

Product Identification: Adjustable Tailstock for Lathe (PN 34926)

Purpose: This document details installation of the Adjustable Tailstock on the 15L Slant-PRO™ lathe.

Qty. Adjustable Tailstock

1	Adjustable Tailstock
1	Gib Plate
1	Lock-down Handle
1	Lock-down Pin
1	Limit Switch Flag with (2) Phillips Screws
1	Offset Cable Carrier Bracket (early model lathes only)

NOTE: If any of these items are missing, contact Tormach Customer Service for a replacement at (608) 849-8381.

1. In addition to the Adjustable Tailstock, this installation kit includes five other parts as seen in **Figure 1**.
2. Remove Z-axis Limit Switch Flag and retain for future use (see **Figure 2**).

NOTE: Z-axis Limit Switch Flag must be reinstalled if tailstock is removed.

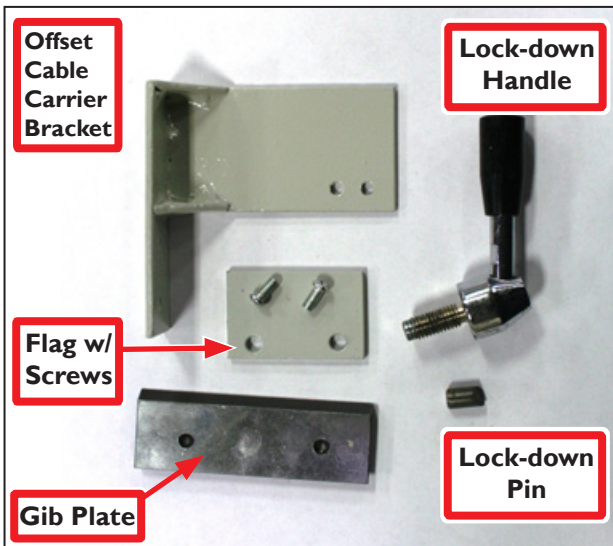
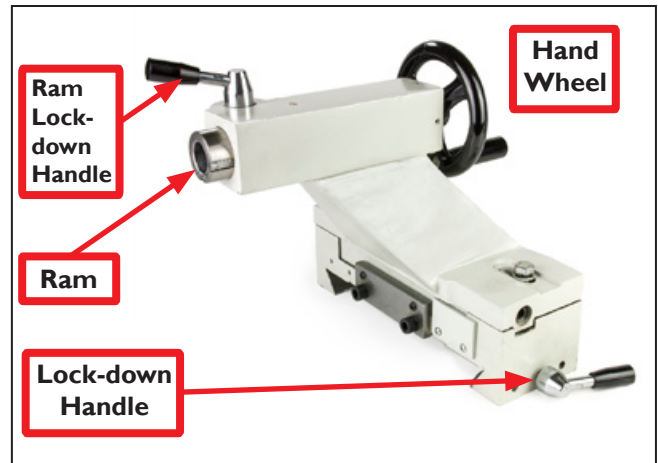


Figure 1

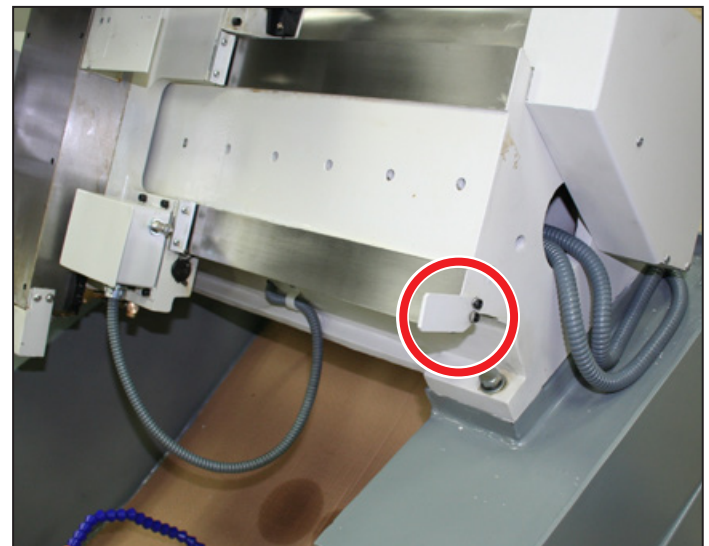


Figure 2

3. With the uninstalled tailstock on its side, attach the Limit Switch Flag (see **Figure 3**). This flag creates an end stop for the Z-axis Limit Switch (once tailstock install is complete).

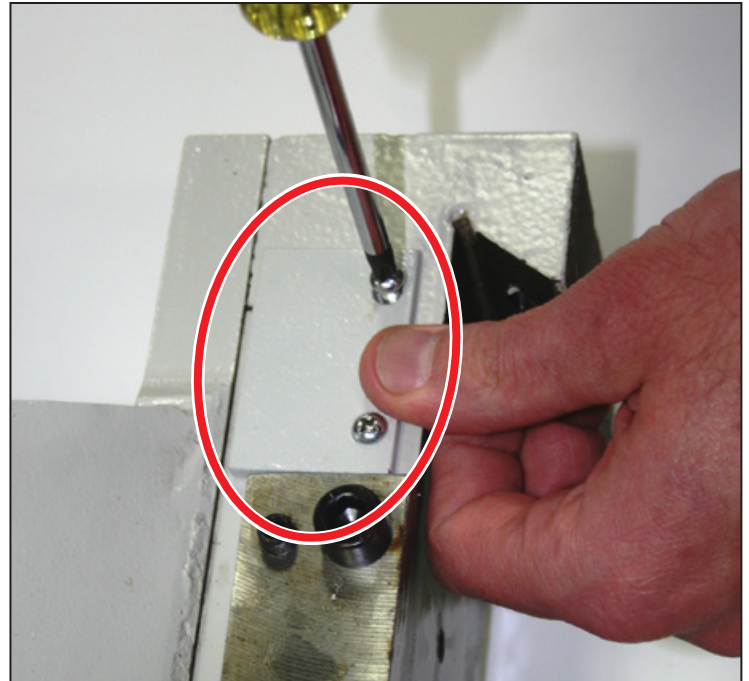


Figure 3

4. Inspect ways for debris or lubricant buildup; wipe clean (see **Figure 4**).
5. Install tailstock by matching up dovetail with lathe; slide onto lathe (see **Figure 4**).

IMPORTANT! Be careful not to damage the ways or tailstock during installation.

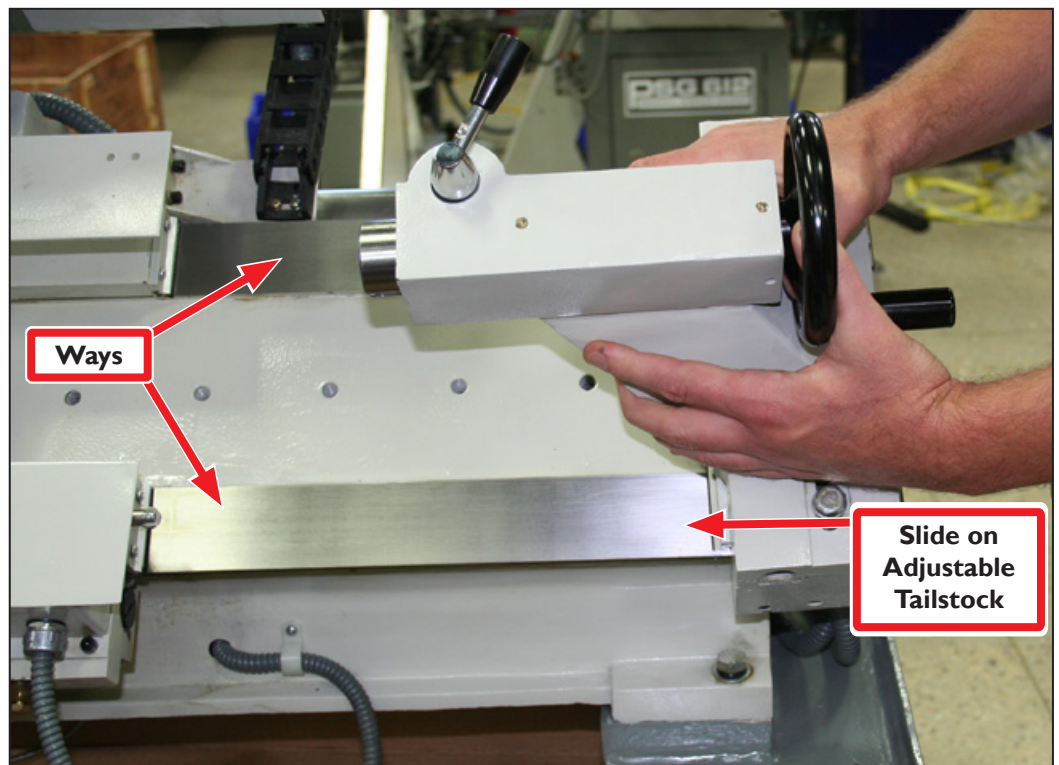


Figure 4

6. Unscrew and remove two set screws and set aside (see **Figure 5**).
7. In the same two holes, loosen two pointed-set screws (see **Figure 5**). This allows the insertion of the Gib Plate (see **Figure 6**).

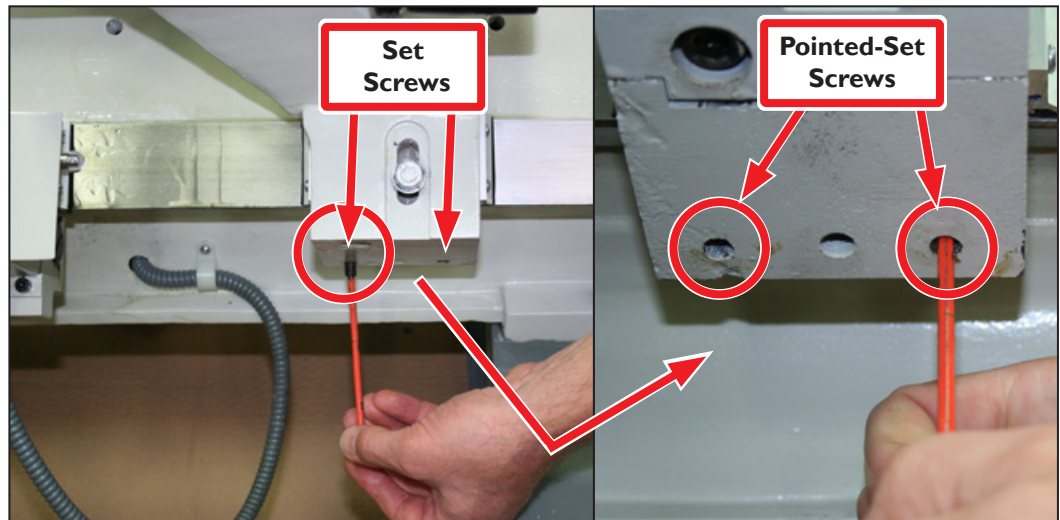


Figure 5

8. Insert Gib Plate flush with way as shown in **Figure 6**.
9. Holding the Gib Plate in place, adjust the two pointed-set screws to hold the gib in place (not tight).

NOTE: Make sure the two pointed-set screws match up with the Gib Plate's two dimples.

10. Reinsert and tighten the two set screws (set aside earlier) to lock pointed-set screws in place (see **Figure 5**).
11. Insert Lock-down Pin into Lock-down Handle hole; screw in Lock-down Handle. Handle is used to lock tailstock in place.

NOTE: If tailstock does not slide freely when Lock-down Handle is loosened, slightly loosen the two pointed-set screws.

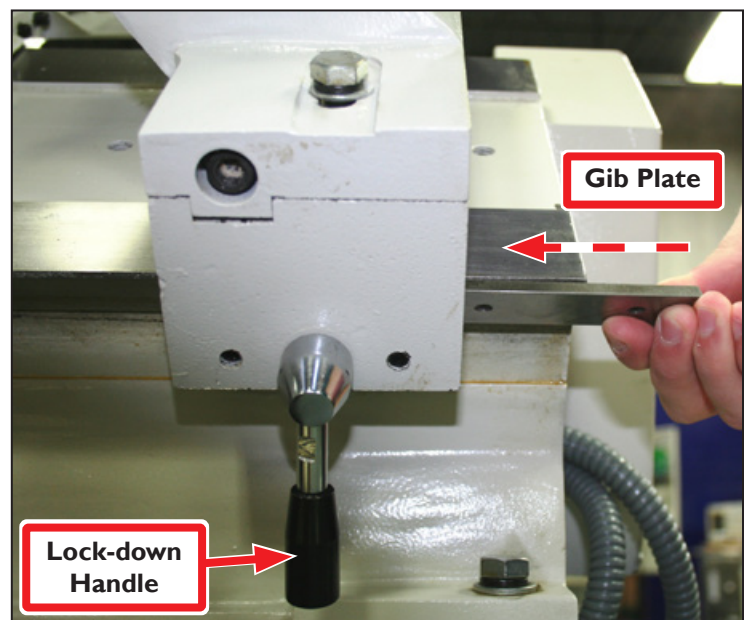


Figure 6

NOTE: Some early models of the 15L Slant-PRO lathe require installation of an Offset Cable Carrier Bracket (see steps 12 through 15). This bracket allows for proper tailstock clearance.

12. Remove two Cable Carrier screws and nuts (see **Figure 7**); set aside.
13. Remove two Cable Carrier Bracket cap screws that attach bracket to the mill (see **Figure 7**); set aside. Discard bracket.
14. In the same location, attach the Offset Cable Carrier Bracket using two cap screws (set aside earlier) as shown in **Figure 8**. Tighten snugly.
15. Reattach the Cable Carrier using two screws and nuts (set aside earlier) as shown in **Figure 8**. Tighten snugly.

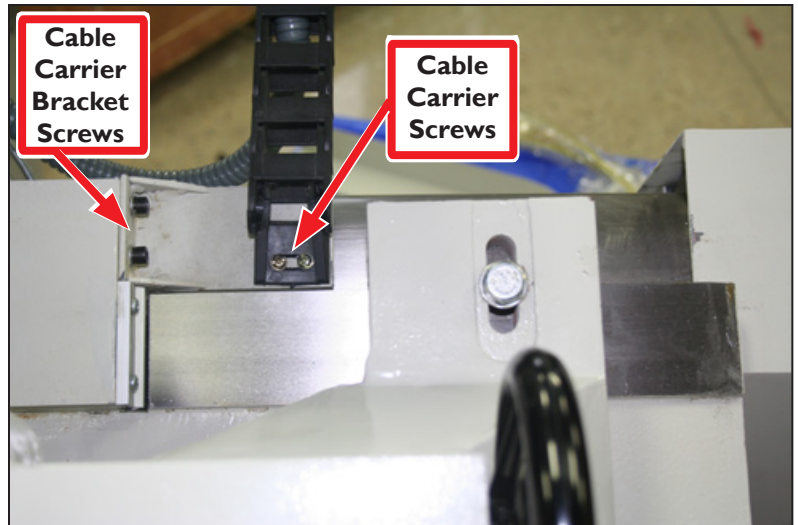


Figure 7

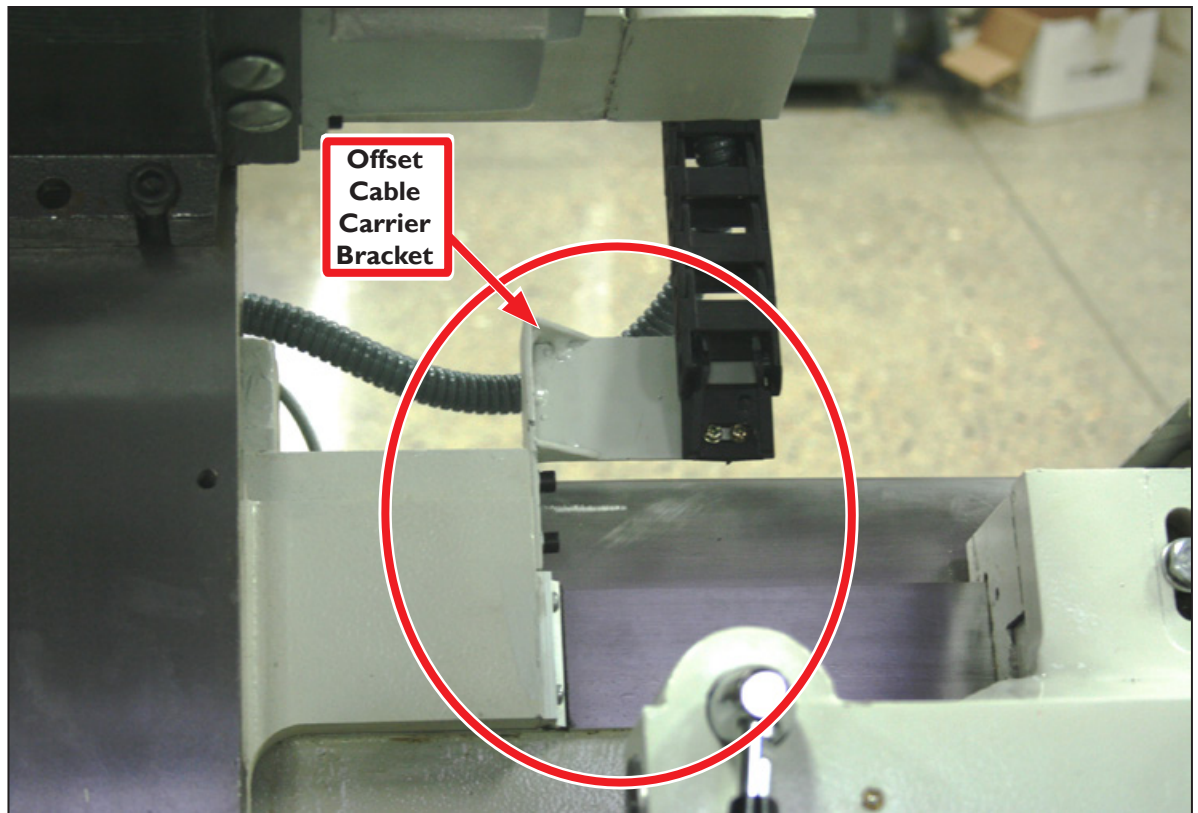


Figure 8

Aligning Tailstock to Spindle Center

1. Insert a live center in both the spindle and tailstock ram; tighten snugly (see **Figure 9**). Another option would be to cut a tapered point on a piece of round stock.
2. Bring the points of the two close together as shown in **Figure 9**.

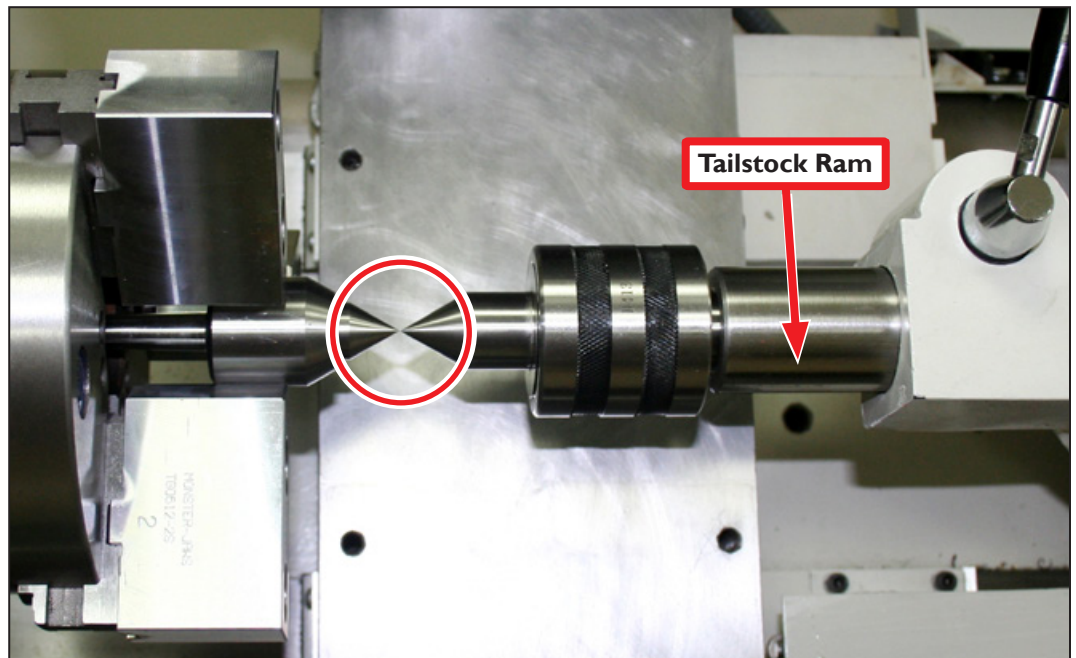


Figure 9

3. Insert a 6" steel rule between the two pointed centers and rotate the tailstock hand wheel to lightly pinch the 6" rule (see **Figure 10**). Before proceeding, ensure the Ram Lock-down Handle is tight.

NOTE: This 6" rule procedure serves to visually magnify tailstock to spindle alignment.

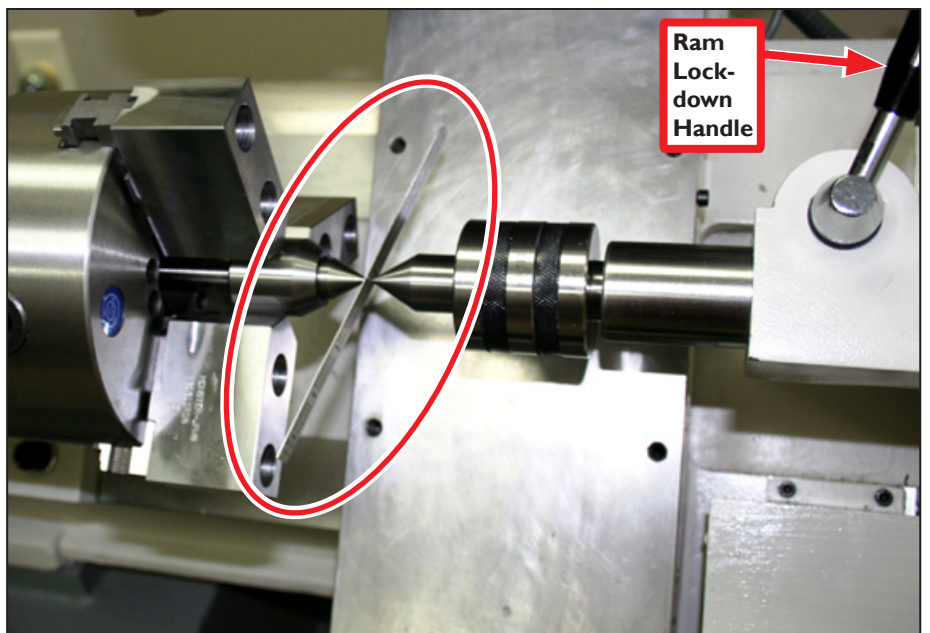


Figure 10

4. Using the tailstock adjustment points (A and C) shown in **Figure 11**, fine tune the tailstock's live center alignment until the 6" rule is straight (see **Figure 12**).

	A	B	C
Adjusts alignment			
	Front to back	Up and down	
		(Used to lock down bolts)	

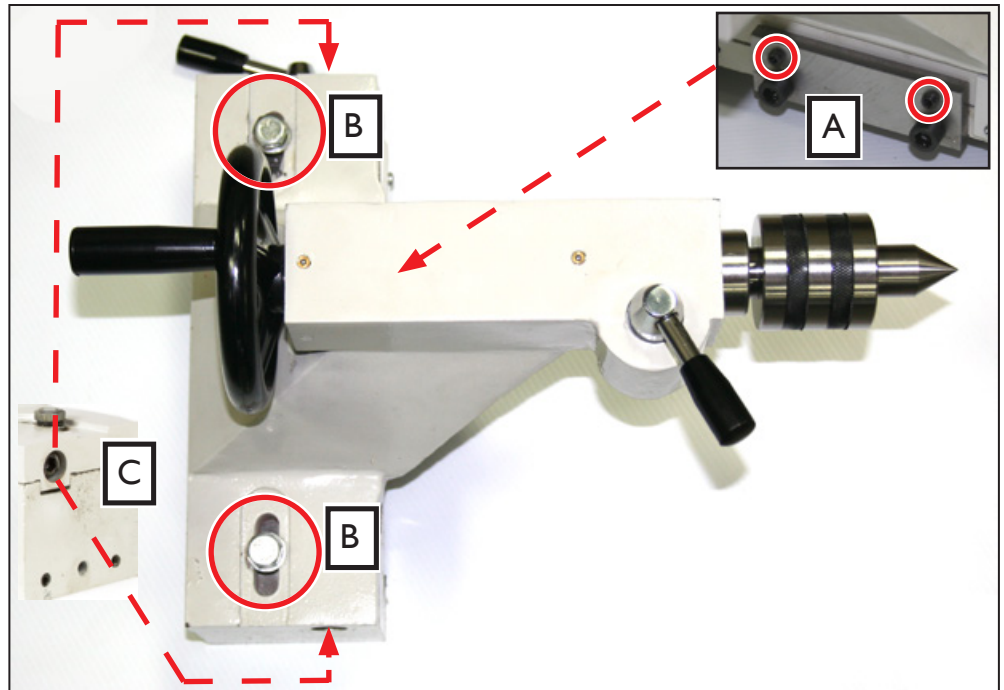


Figure 11

IMPORTANT! Use two bolts "B" to lock down all adjustments. Please note that this is done by tightening both B bolts together (small amount of tightening back and forth between bolts). If one is tightened more than the other, the tailstock will move out of position.

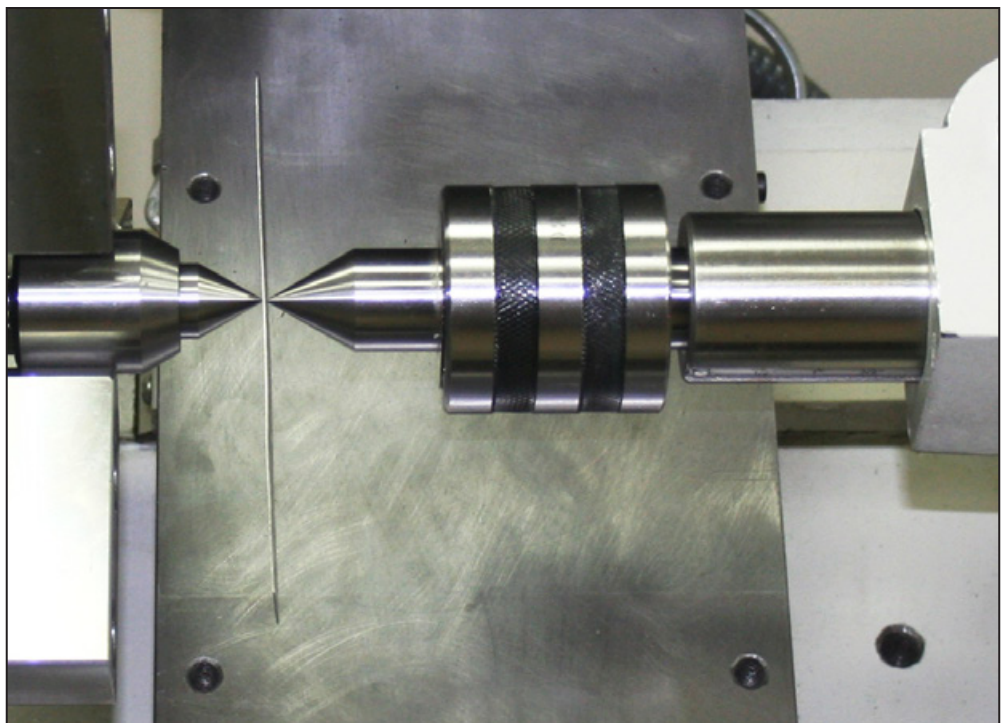


Figure 12

5. If necessary, make any additional adjustments using a dial indicator. To do this, insert a dial indicator in the spindle and sweep the tailstock's live center until desired accuracy is reached (see **Figure 13**).

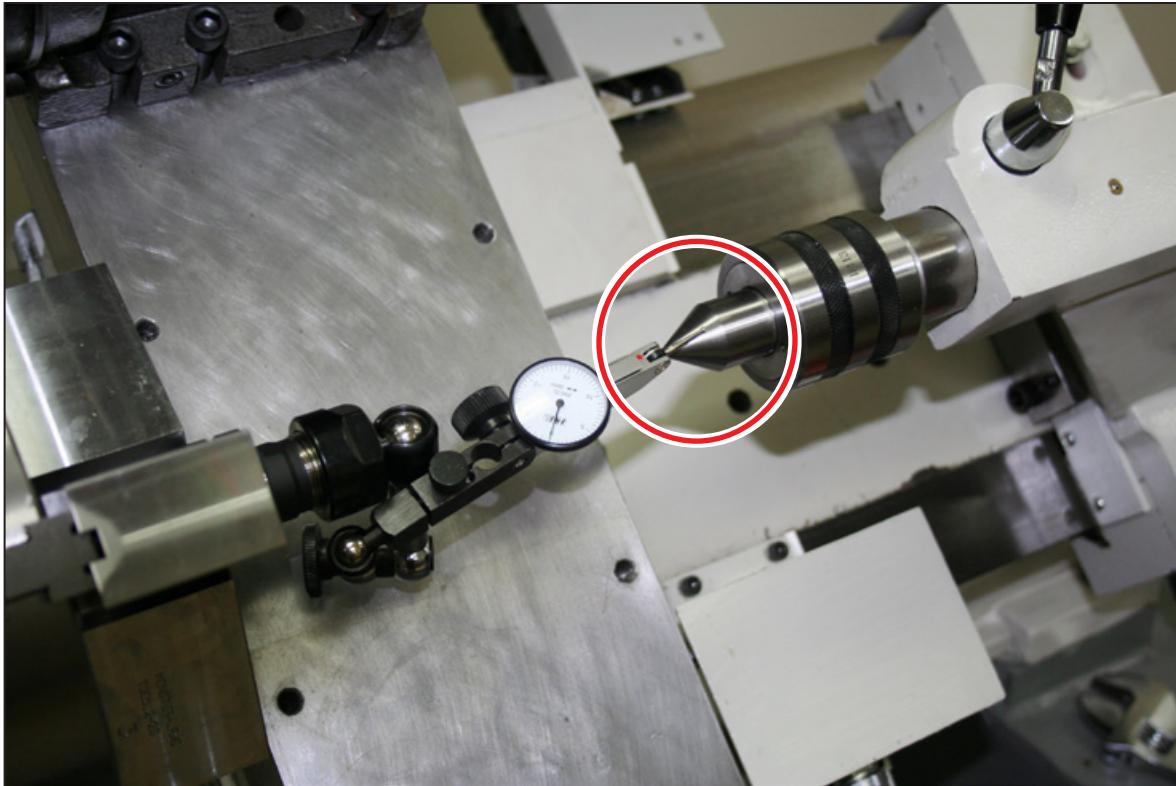


Figure 13

IMPORTANT! For more information on using a dial indicator to sweep the tailstock, view the YouTube video:

Tormach 15L Slant-PRO CNC Lathe: Setting Up the Tailstock