

INSTALLATION GUIDE

15L SLANT-PRO LATHE MANUAL 5C DRAWTUBE



TECHNICAL DOCUMENT

PURPOSE

This document gives instructions on installing the 15L Slant-PRO Lathe Manual 5C Drawtube.

PRODUCT INFORMATION

Product: 15L Slant-PRO Lathe Manual 5C Drawtube (PN 50408)



Quantity	Description
1	15L 5C Manual Drawtube (PN 50404)
1	Adapter Spacer (PN 38253)
1	Drawtube Standoff (PN 50469)
1	Manual Drawtube Handwheel (32920)
1	Retaining Ring (50407)
8	Screw, Socket Head Cap, M6 × 1 - 22 (PN 31843)
1	Thrust Bearing (50406)



Note: If any items are missing, we can help. Email support@tormach.com to contact Tormach Technical Support for guidance on how to proceed.

REQUIRED TOOLS

This procedure requires the following tools. Collect them before you begin.

- Dead-blow hammer, 2
- Dial Test Indicator Kit (PN 31948)
- Hex wrench, 5 mm
- Machinist stone
- Phillips screwdriver

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INSTALL THE 15L SLANT-PRO LATHE MANUAL 5C DRAWTUBE

Complete the following steps in the order listed:

Remove the Belt Guard Cover.....	3
Install the Drawtube.....	4
Re-Install the Belt Guard Cover.....	7

Remove the Belt Guard Cover

1. Power off the machine and the PathPilot controller.
 - a. Push in the Emergency Stop button on the operator box, which removes power to motion control.
 - b. From the PathPilot interface, select **Exit**.
 - c. Turn the Main Disconnect switch to **OFF** on the side of the electrical cabinet.
2. Identify the rotary encoder on the belt guard cover.



Figure 1: Rotary encoder on the belt guard cover.

3. Disconnect the power connector from the rotary encoder.
4. Identify the encoder cover below the rotary encoder.
5. Remove the encoder cover's three screws with a Phillips screwdriver, and set aside the encoder cover and its screws
6. Identify the spindle bore cover above the rotary encoder.

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Figure 2: Spindle bore cover on the belt guard cover.

7. Remove the spindle bore cover's screws with a Phillips screwdriver, and discard the spindle bore cover and its screws.
8. Remove the five screws that secure the belt guard cover to the enclosure and the stand with a Phillips screwdriver, and set aside the belt guard cover and its screws.

Install the Drawtube

1. Remove any burrs on the face of the spindle pulley with a machinist's stone. Burrs could cause runout.

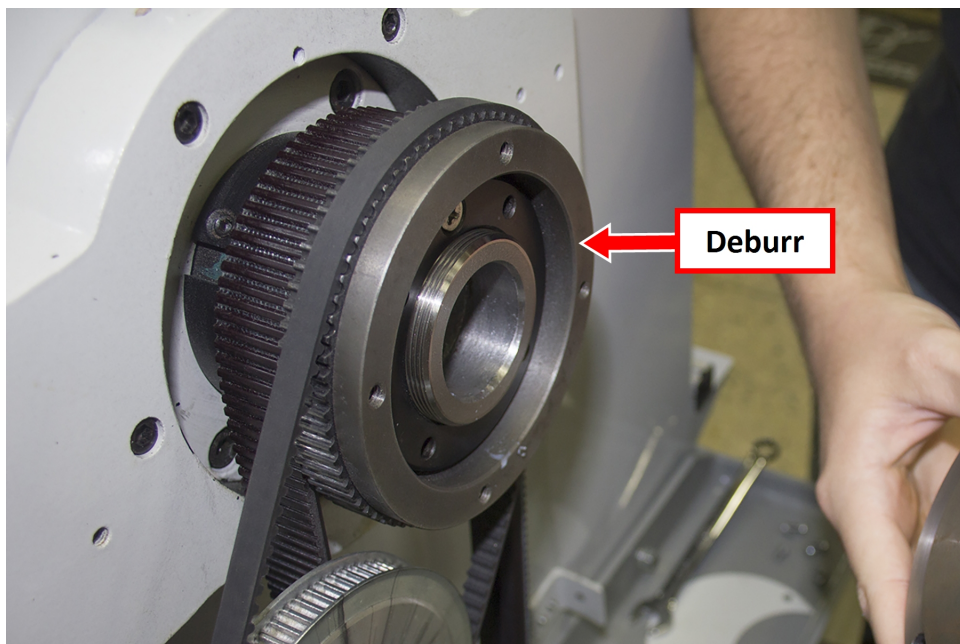


Figure 3: Face of the spindle pulley on the left side of the machine.

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2. Remove the adapter spacer from the drawtube. Set the drawtube aside.

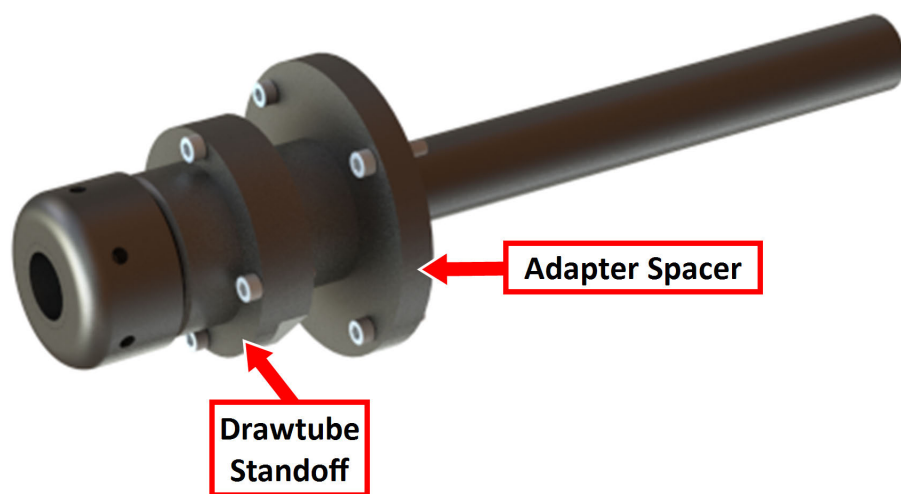


Figure 4: Drawtube components.

3. Attach the adapter spacer to the spindle pulley with a 5 mm hex wrench and four M6 × 1 - 22 socket head cap screws.

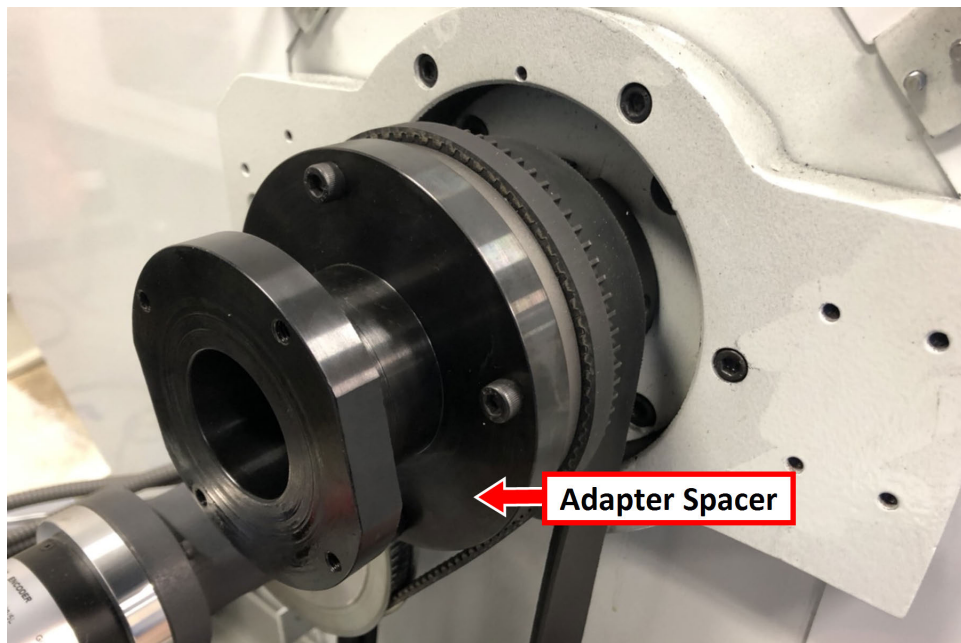


Figure 5: Adapter spacer installed.

4. Put the base of a magnetic dial indicator on either side of the spindle pulley. Verify that the magnetic dial indicator touches the adapter spacer.



Figure 6: Magnetic dial indicator on the adapter spacer.

5. Rotate the spindle clockwise. On the magnetic dial indicator, the needle rises and falls. Continue to rotate the spindle until the needle reaches the highest point on the magnetic dial indicator. Then, gently tap the mounting flange with two dead-blow hammers.
6. Rotate the spindle clockwise until the needle again reaches the highest point on the magnetic dial indicator.
7. Repeat Steps 5 through 6 until the spindle runout is less than 0.002 in.
8. Put the drawtube into the adapter spacer.
9. Attach the drawtube standoff to the adapter spacer with a 5 mm hex wrench and four M6 × 1 - 22 socket head cap screws.
10. Put the base of a magnetic dial indicator on either side of the spindle pulley. Verify that the magnetic dial indicator touches the drawtube standoff.

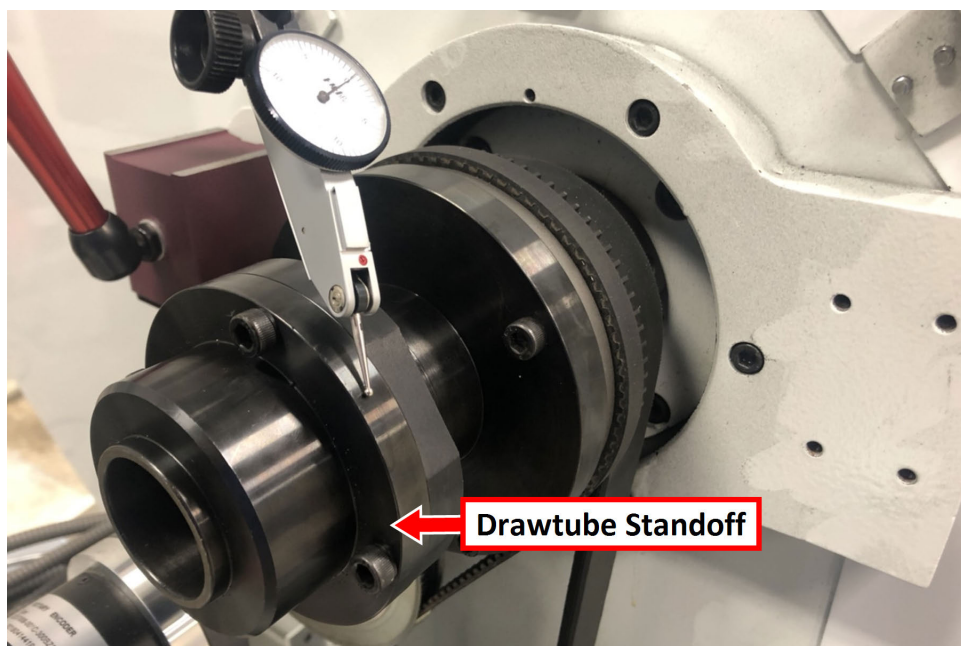


Figure 7: Magnetic dial indicator on the drawtube standoff.

11. Repeat Steps 5 through 6 until the spindle runout is less than 0.004 in.

Re-Install the Belt Guard Cover

1. Find the belt guard cover and its five screws that you set aside earlier.
2. Attach the belt guard cover to the left side of the lathe with a Phillips screwdriver.
3. Find the encoder cover and its three screws that you set aside earlier.
4. Attach the encoder cover to the belt guard cover with a Phillips screwdriver.
5. Connect the power connector to the rotary encoder.
6. Power on the machine and the PathPilot controller.
 - a. Turn the Main Disconnect switch to **ON** on the side of the electrical cabinet.
 - b. Twist out the Emergency Stop button on the operator box, which enables movement to the machine axes and the spindle.
 - c. Press the Start button on the operator box.