WEAR YOUR SAFETY GLASSES
FORESIGHT IS BETTER THAN NO SIGHT
READ INSTRUCTIONS BEFORE OPERATING

The bar feeder base is available as an option.
Chucker Lathe Base (P/N 88323)
Ball Screw Lathe Base (P/N 883241)

PLEASE REFER TO
Bar Feeder: Pneumatic Cylinder and Component Instructions (P/N 8815)
for setting up the Pneumatic Cylinder with the Lever Collet Closer

SHERLINE PRODUCTS
INCORPORATED 1974

Pneumatic Bar Feeder Assembly Instructions

P/N 8825

This bar feeder is designed to work with our machines with our lever collet closer.

⚠CAUTION

Bar Feeder Operation Warning

1. This bar feeder uses compressed air to feed the stock forward into the machine.
2. The max air pressure through the air regulator into the bar feeder tube must Never exceed 30 – 40 PSI!
3. Never place your hands, face, or any body part in front of the bar feeder tube, or stock that is in the bar feeder tube! Failure to follow this warning may result in physical injury!
4. Be sure that the stock in the bar feeder is secured in place by a collet or chuck before energizing the bar feeder with air pressure! Failure to do so may result to damage to the machine or any physical structures or entities in or around the bar feeder!
5. This bar feeder system was designed solely for the use of feeding stock into our Sherline machines. Any other use or modifications of this product are not permitted by Sherline Products INC.

   NOTE: See instructions 8815 for all information related to opening and closing the collet.

NOTE: DO NOT connect the air supply to this assembly until the bar feeder is completely assembled.

If You Already Own a Sherline Chucker Lathe

You will need to modify the brass cover tube on the chucker lathe, so it does not interfere with the bar feeder front mount. The current brass cover tube will hit the bar feeder front mount (P/N 8826) when the chucker lathe saddle is all the way toward the headstock. You must cut off 1.0" from the end of the cover tube or buy the replacement brass cover tube (P/N 59049) and install it. You must take one of these steps before assembling the bar feeder front mount.

To cut the 1" off of an existing cover tube, we recommend using a tube cutter. Remove the brass cover tube from the chucker lathe. Mark 1" from the end of the tube, cut that amount off, and reinstall the cover tube.

NOTE: The original cover tube, P/Ns 59165 (14" base) and 58195 (18" base) are 8.875" and 12.75" long, respectively. You need to trim them to 7.875" (14" base) and 11.75" (18" base) to ensure that there is no interference with the bar feeder front mount.

Assembling the Pneumatic Bar Feeder

Read through the entire instructions and make sure that you have all of the parts for each individual assembly.

1. Insert a collet into the headstock. Place a piece of material in the collet and clamp it in place. The collet can be clamped manually by pulling the lever collet closer engagement-lever back towards the rear of the machine (as explained earlier in these instructions).

   NOTE: It is imperative that the lever collet closer is in the closed clamp position with a piece of stock in the collet. This will engage all of the lever collet closer parts to ensure the least amount of runout in the lever collet closer. This must be done in order to align the bar feeder properly.

2. Thread the Bar Feeder Alignment part (P/N 88277 for the chucker lathe) into the end of the 3C lever collet closer draw bar knob.

   For the ball screw lathe, you will insert (P/N 88278) into the end of the lever collet closer.

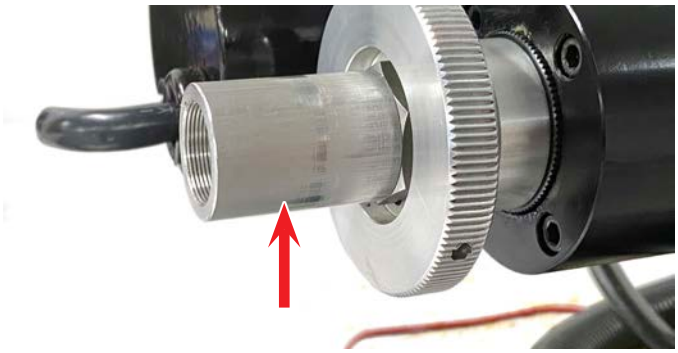


FIGURE 1

3. Threading in the bar feeder tube (P/N 88251).

   A. Both ends of the bar feeder tube have a 3/4-32 thread. One end of the bar feeder tube has been turned down smaller so it will fit into the rear mount.

FIGURE 2

   B. Thread the unturned end of the bar feeder tube (P/N 88251) into the end of the bar feeder alignment part (P/N 88277 or 88278).

   Be careful not to cross thread the parts when you thread them together. Be sure that the bar feeder is aligned properly. You may need to turn the bar feeder slowly CCW, while pushing it into the end of the alignment part to feel the start of the thread on the tube engage with the start of the thread on the alignment part (you will feel it click when the threads align). Then turn CW and thread the part in to the full depth (see Figures 3 and 4).

FIGURE 3

FIGURE 4

4. Turn the LCC draw bar knob by hand so you can see how much runout there is in the bar feeder tube (see Figure 5).

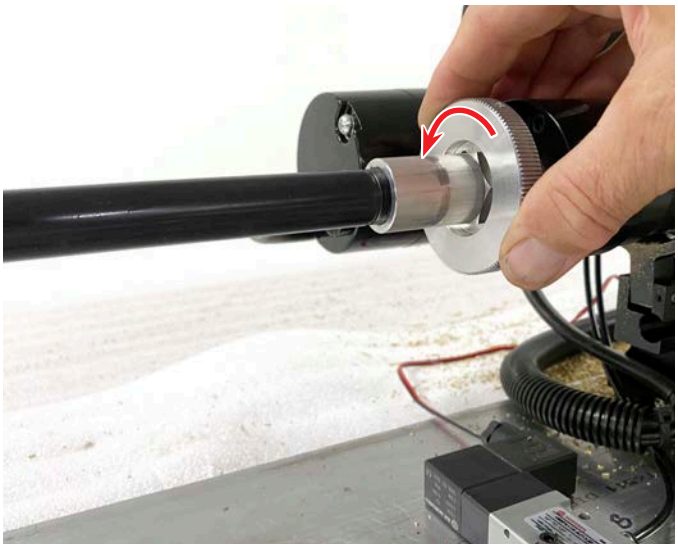


FIGURE 5

   A. There is going to be runout at the far end of the tube.

   B. Turn the tube with the LCC draw bar knob until the tube is orientated with the lowest point facing up and measure it (see Figure 6).

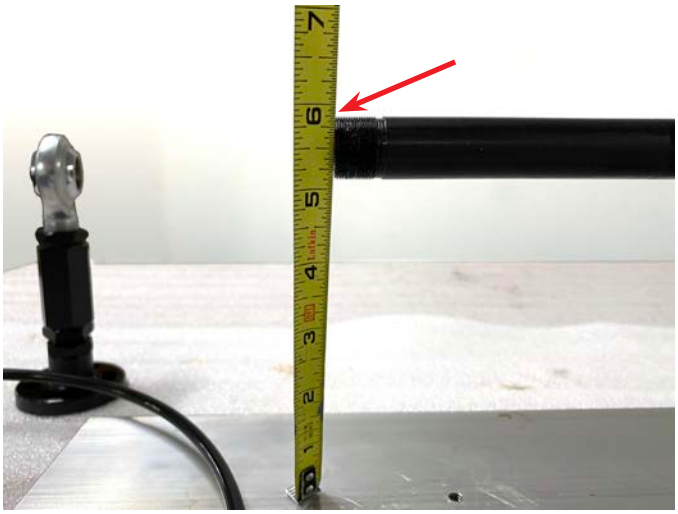


FIGURE 6—Low side up.

   C. Turn the tube until the highest side of run out is facing up and measure it (see Figure 7).

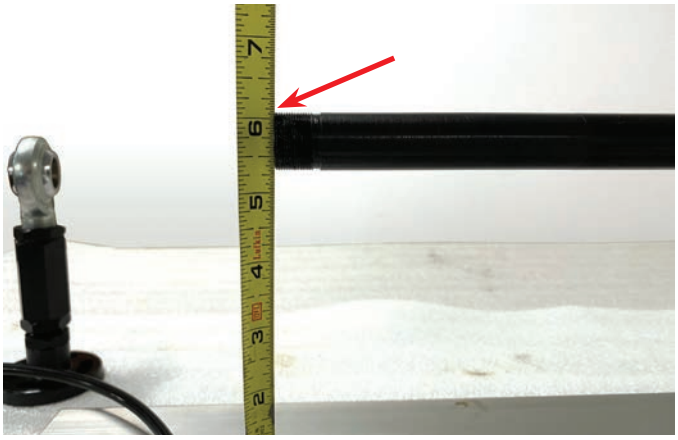


FIGURE 7—High side up.

D. With the tube's highest point of runout facing up, gently push down on the tube to get the run out as small as possible (the less, the better). Turn the tube and recheck the amount of run out. There will still be some run out, which is fine (see Figure 8).

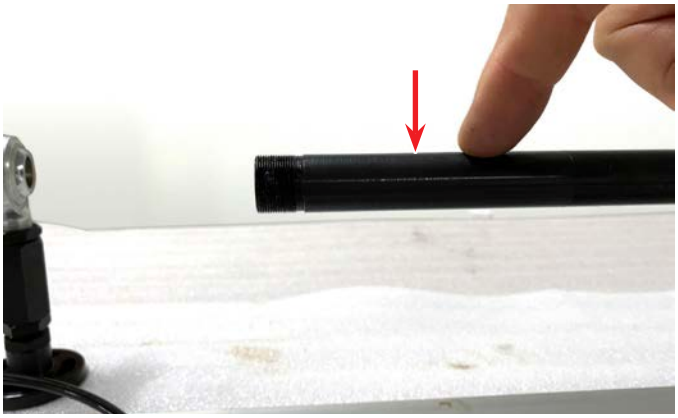


FIGURE 8

E. Turn the tube until it is at the midrange of the total run out. This is the orientation that you will use to adjust the height of the front and rear mount assemblies (see Figure 9).

FIGURE 9

F. Put a marker line on the alignment part so you can use it as an orientation mark (see Figure 10).

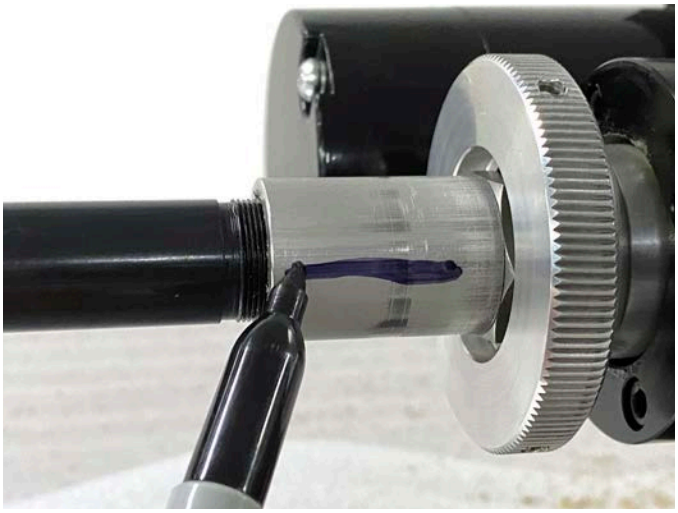


FIGURE 10

5. The front-mount top assembly will be fully assembled (Chucker Lathe, P/N 8826/ Ball Screw Lathe, P/N 8827) with the threaded-adjustment rod (P/N 882718/88272) threaded in with Loctite (see Figure 11).

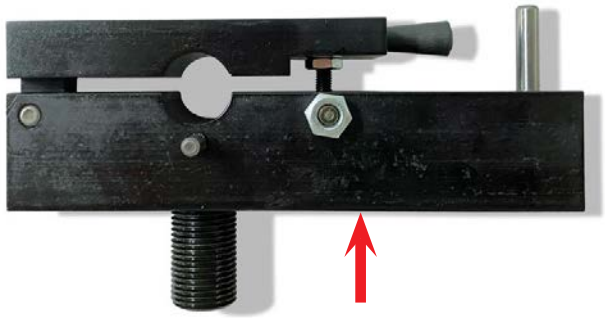


FIGURE 11— Bar Feeder Front-Mount Assembly (P/N 8826). The red arrow shows the offset location of the ball screw lathe threaded-adjustment rod (P/N 8827).

A. Collect all of the front-mount assembly parts.

FIGURE 12—8826/8827 (Bar Feeder Front-Mount Assembly), 88270 (3 pcs), 88274/88276 (1 pc.), 88271/88272 (1 pc.), 88262 (1 pc.)

B. Thread one locking nut (P/N 88270) onto the threaded-adjustment rod (P/N 88271/88272) that is on the top clamp assembly. Thread it on about 1/2" (13 mm) (8 full turns).

C. Thread the other two lock nuts (P/N 88270) onto the other threaded-adjustment rod. Thread each lock nut on about 1/2" (13 mm) (8 full turns).

D. Thread the bottom threaded-adjustment rod into one end of the connecting rod (P/N 88274/88276). Thread it in until the locking nut almost makes contact. Then thread the other end of the connecting rod (P/N 88271) onto the threaded-adjustment rod that is on the bottom of the front clamp assembly. Again, thread it on until it almost touches the locking nut.

E. Thread the table mounting flange (P/N 88262) onto the bottom threaded-adjustment rod until it almost touches the locking nut (see Figure 13 for the completed assembly).

FIGURE 13—Complete assembly of the bar feeder front-mount.

F. The dimension from the mounting surface to the centerline of the spindle is approximately 5-5/8" to 5-3/4" (124 mm to 146 mm). For the ball screw lathe, this height is approximately 7" to 7-1/8" (178 mm to 181 mm).

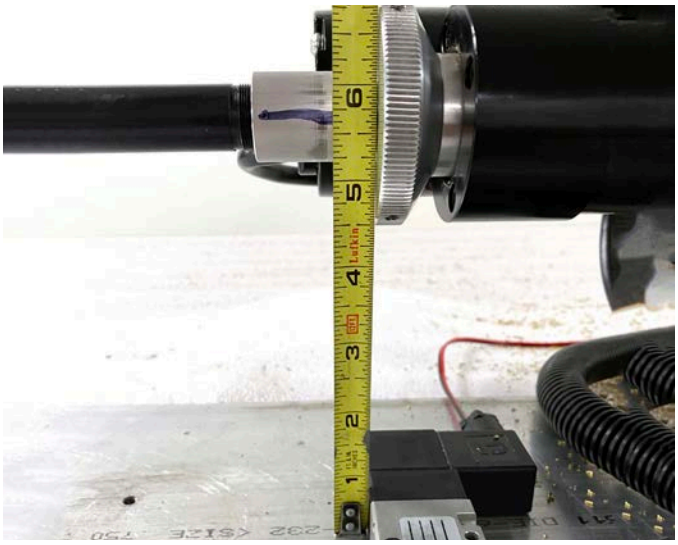


FIGURE 14

G. Adjust the overall length of the assembly to be the same height, or slightly lower, than the centerline of the spindle (see Figure 15).

FIGURE 15—See Figure 14 for comparison of the centerline height.

H. Move the assembly to the rear of the bar feeder tube (see Figure 16).

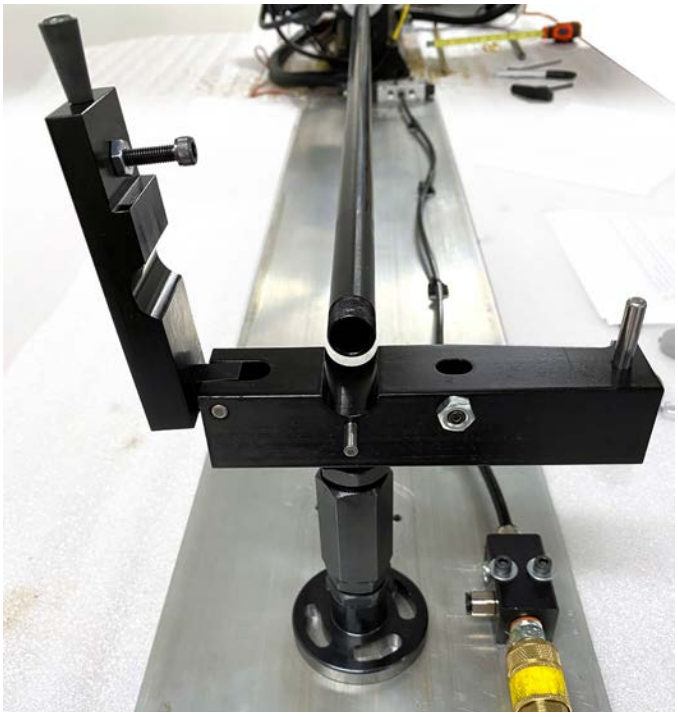


FIGURE 16

I. Adjust the height of the front-mount assembly until the bottom of the 3/4" radius on the top mount is slightly lower than the bottom of the bar feeder tube.

J. Slide the assembly forward on the feeder tube (see Figure 17).

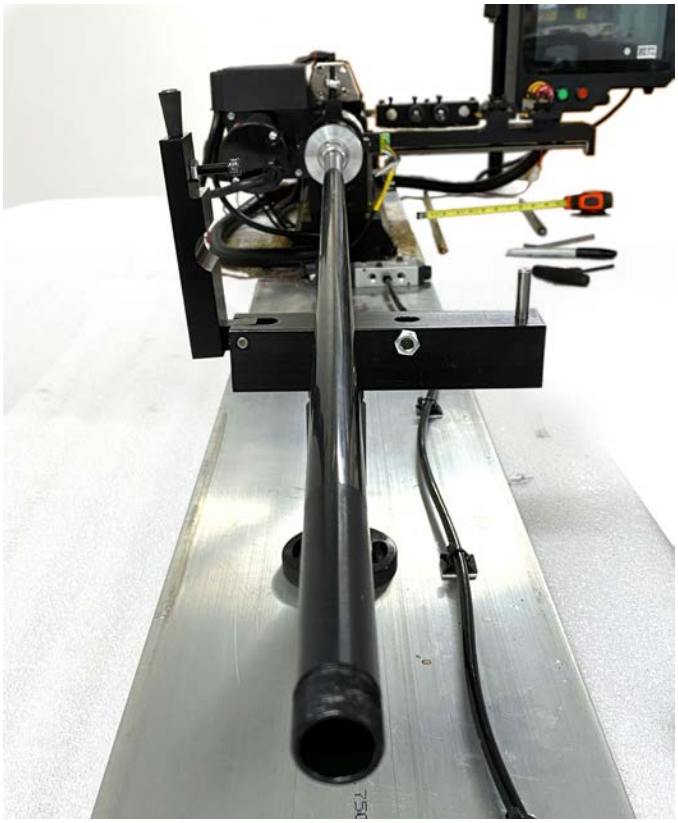


FIGURE 17

i. If the top-mount radius starts to rub on the bottom of the feeder tube, pull it back out and adjust the height so it is a bit lower.

ii. If there is clearance between the top mount and the feeder tube, continue to move the assembly forward into the mounting position.

K. Location of the front-mount assembly.

i. If you are using our bar feeder base (P/N 88323), there are already holes drilled and tapped for the front and rear-mount assemblies (see Figure 18).

FIGURE 18—The red oval shows the mounting holes.

ii. If you are mounting the bar feeder on your own work surface, the centerline of the mounting holes for the chucker lathe should be 3.0"-3.125" (76 mm-79 mm) from the end of the LCC draw bar knob to the front of the mounting assembly (see Figure 19). The ball screw lathe dimensions are 2.65 to 2.75 (67.3 mm to 70.0 mm). See bar feeder base dimensions at the end of these instructions.

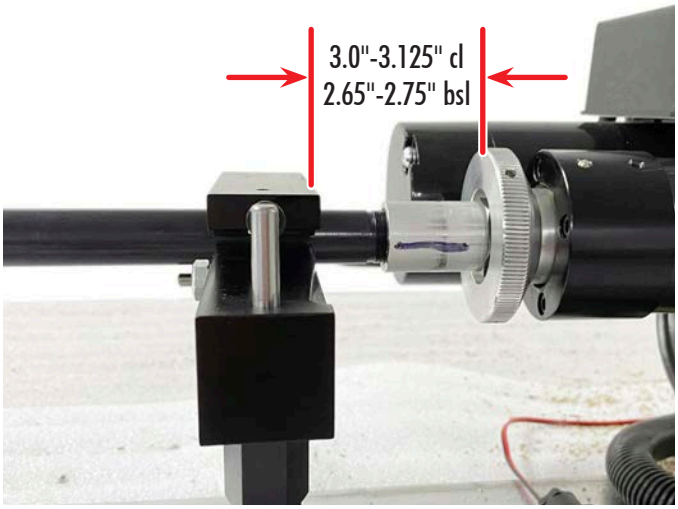


FIGURE 19

iii. Move the front-mount assembly over the mounting holes (see Figure 20).

FIGURE 20

iv. Once the front-mount assembly is in position over the mounting holes, close the top clamp (P/N 88268 onto the bar feeder tube to lock the front-mount assembly onto the feeder tube (see Figure 21).

FIGURE 21—The red arrow shows the direction to close the top clamp of the front-mount assembly.

v. At this time, there should be some space between the bottom of the table mount flange (P/N 88262) and the top of the base (or mounting surface).

A. All of the threaded parts of the front-mount assembly are right hand threads. There are (3) connection joints that can be adjusted to get the proper height and to rotate the mounting flange to align the mounting slots with the mounting holes in the base.

B. Adjust the threaded joints to first get the proper height. Then readjust if needed to align the mounting slots in the mounting flange with the mounting holes in the base.

C. Once the assembly height and flange orientation are acquired, secure the flange to the base using a minimum of (2) 1/4-20 SHCS x 1" (P/N 61120) with (2) 1/4" washers (P/N 21278). The mounting screws should be in opposing flange slots (see Figure 22).

FIGURE 22

D. With the flange secured to the base, tighten the (3) locking nuts at each joint (with the top clamp locked onto the feeder to keep the correct top clamp orientation). You will need (2) 1" wrenches. One to use on the locking nut, and one on the mating part to prevent it from turning (see Figure 23).

FIGURE 23—The 1" wrench that is used in the picture is our P/N 43234.

6. Assembly, adjustment, and mounting of the rear bar feeder support.

A. Collect all of the rear, bar-feeder support assembly parts (see Figure 24).

FIGURE 24— 88059, 88270 (3 pc), 88274/88276, 88271/88272, & 88262.

B. Thread the locking nut (P/N 88270) onto the rear mount ball joint (P/N 88059) approximately 1" (25 mm) (16 full turns). Thread the ball joint (P/N 88059) into one end of the connecting rod (P/N 88274/88276) until the locking nut almost makes contact.

C. Thread two locking nuts into the middle of the threaded adjustment rod (P/N 88274).

D. Thread the adjustment rod (P/N 88271/88272) into one end of the connecting rod (P/N 88274/88276) approximately 7/16" (11 mm) (7-8 full turns).

E. Thread the other end of the threaded rod into the mounting flange (P/N 88262) approximately 7/16" (11 mm) (7-8 full turns).

F. There will still be some run out at the end of the bar feeder tube. Turn the LCC draw bar knob until the mark that you made previously is aligned so that the bar feeder tube is in the middle of the run out range (see Figure 25).

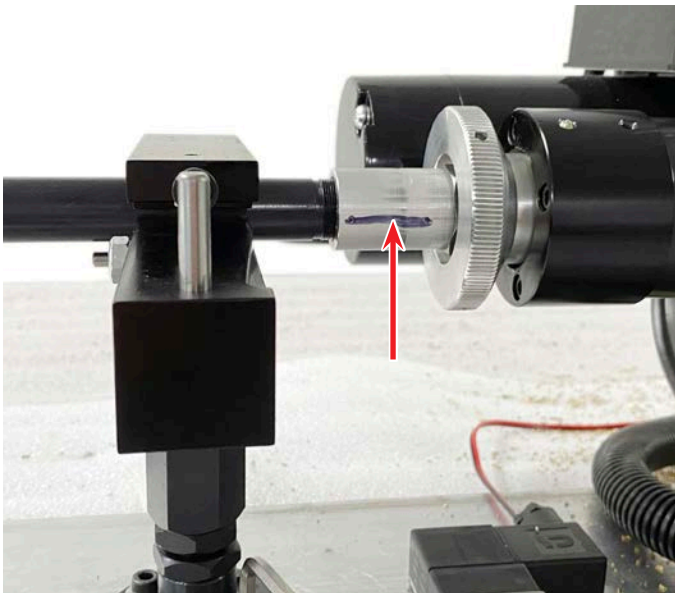


FIGURE 25—The red arrow is pointing to the mark you made previously on the bar feeder alignment tube.)

G. Place the rear mount assembly at the end of the bar feeder tube with the ball joint end perpendicular to the bar feeder tube (see Figure 26).

FIGURE 26

H. Adjust the overall height of the rear mount assembly so it is the same as the height of the end of the bar feeder tube.

I. Once the proper height is obtained, you should be able to move the rear mount assembly forward onto the end of the bar feeder tube with very little movement of the tube.

J. Move the assembly forward to the center of the mounting holes in the base. Align the slots in the flange with the mounting holes.

The distance from the end of the LCC draw bar knob to the centerline of the mounting holes for the rear mount is approximately 35" (889mm). These dimensions are different for the ball screw lathe. See dimensional print for the base dimensions at the end of these instructions. (see Figures 27 and 28).

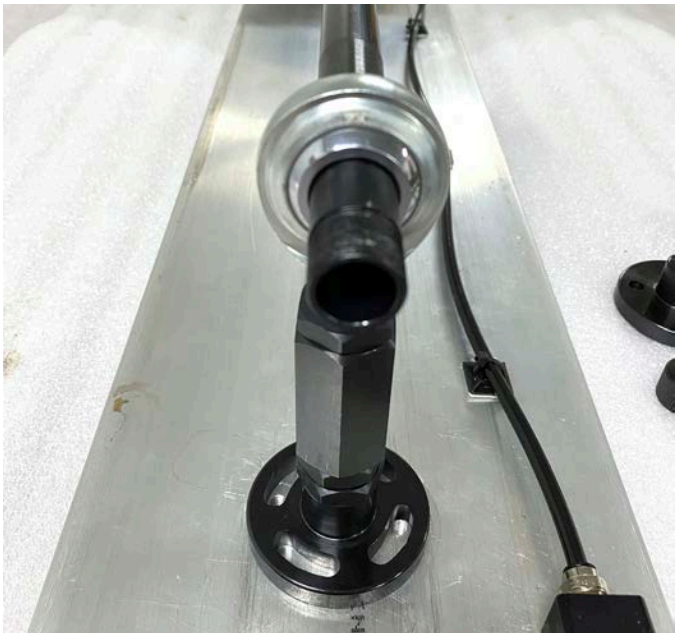


FIGURE 27

FIGURE 28

K. When the assembly is in position, there should be approximately 1-1/4" (32 mm) of the bar feeder tube extended out past the end of the ball joint (see Figure 29).

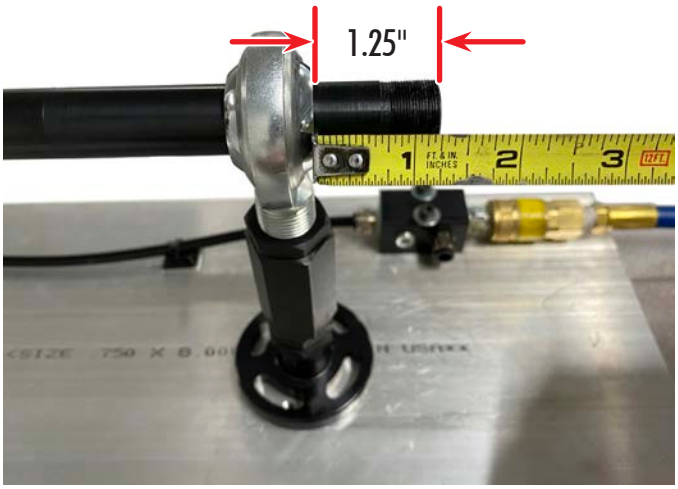


FIGURE 29

L. Thread in (2) of the 1/4-20 SHCS with (2) 1/4" washers and secure the flange to the base.

M. Tighten the three locking nuts using the same method as stated previously. Be sure to keep the head of the ball joint body perpendicular to the bar feeder tube when you tighten the top locking nut (see Figure 30).

FIGURE 30

7. Lay out all of the air regulator/bleeder valve parts for P/N 8805 (see Figure 31).

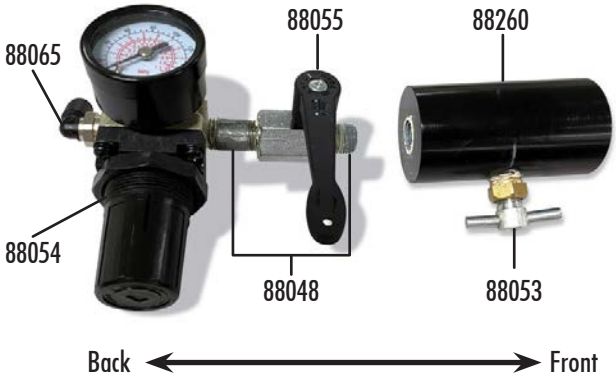


FIGURE 31— The assembly from front to back is as follows. 88260, 88053, 88048, 88055, 88048, 88054, and 88065.

A. Assemble all the parts using Teflon tape or pipe thread sealer. The finished assembly should be as shown below with the air regulator gauge (P/N 88054) and ball valve handle (P/N 88055) on the top, and the air-bleeder valve (P/N 88053) on the bottom.

NOTE: The ball-valve handle position can be adjusted by removing the screw in the handle. Adjust this handle so the closed position of the handle is perpendicular to the assembly (see Figure 31), and the "On" position is with the handle pointing towards the front of the bar feeder.

FIGURE 31

B. Thread the regulator assembly onto the end of the bar feeder tube. Use Teflon tape or pipe thread sealer on the threads (see Figures 32 and 33).

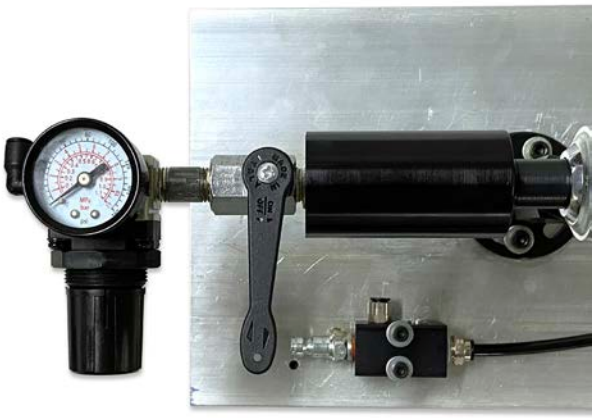


FIGURE 32—Top view, mounted to the bar feeder and the base.

FIGURE 33—Side view, mounted to the bar feeder and the base.

8. Unclamp the top clamp on the front mount. Then unthread the bar feeder tube from the alignment tool (P/Ns 88277 or 88278) (see Figure 34).

   NOTE: The end of the bar feeder tube is turned down far enough to allow the feeder tube to be retracted away from the end of the LCC.

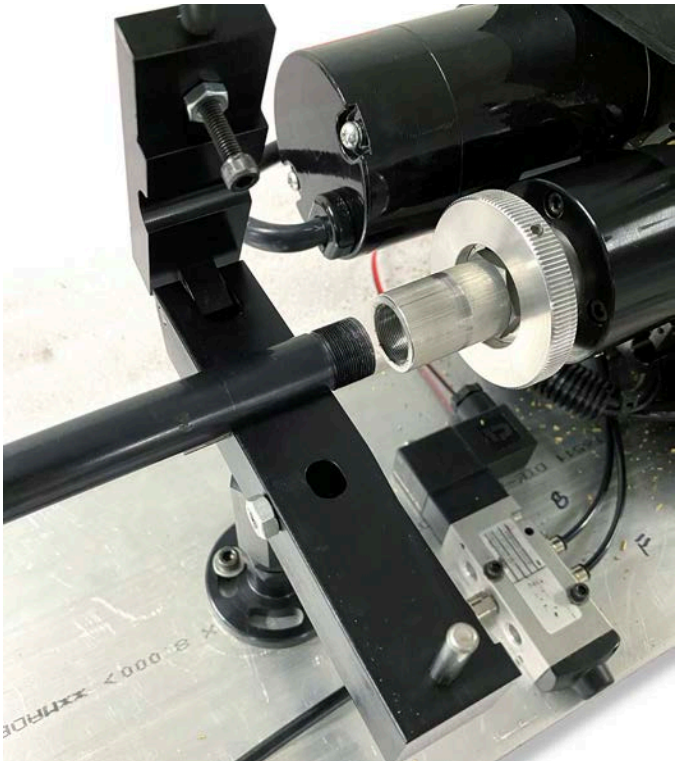


FIGURE 34

9. Unthread the alignment tool from the LCC.

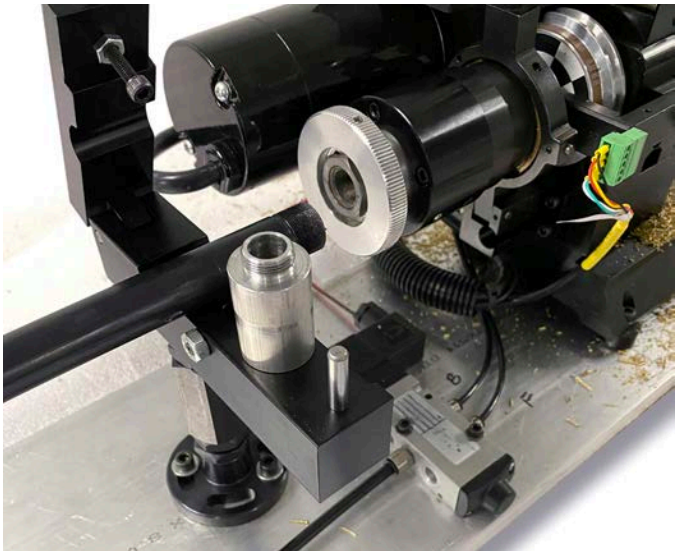


FIGURE 35

10. Slide the alignment collar (P/N 88253) onto the end of the bar feeder tube far enough to be on the backside of the front clamp.

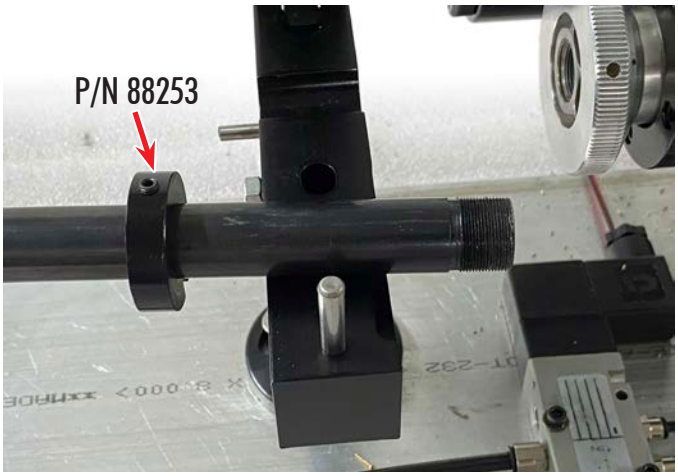


FIGURE 36

11. Thread the bar feeder nose cap (P/N 88256) all the way onto the end of the bar feeder tube.

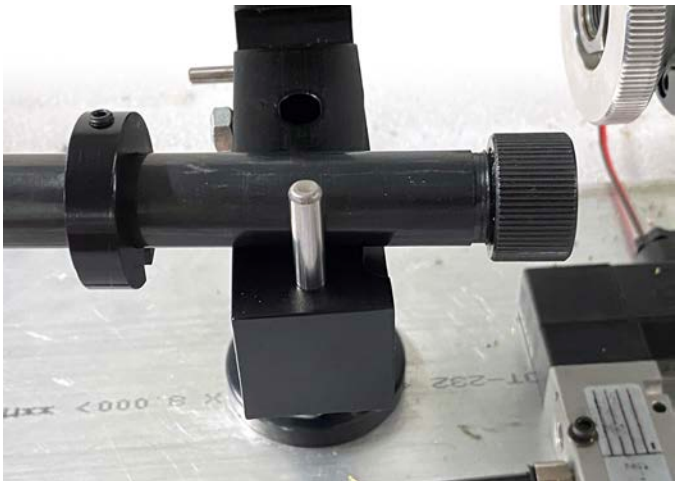


FIGURE 37

12. Place the bar feeder tube back into the radius of the front mount with about .050" (1.3mm) of space between the front of the mount and the back of the cap.

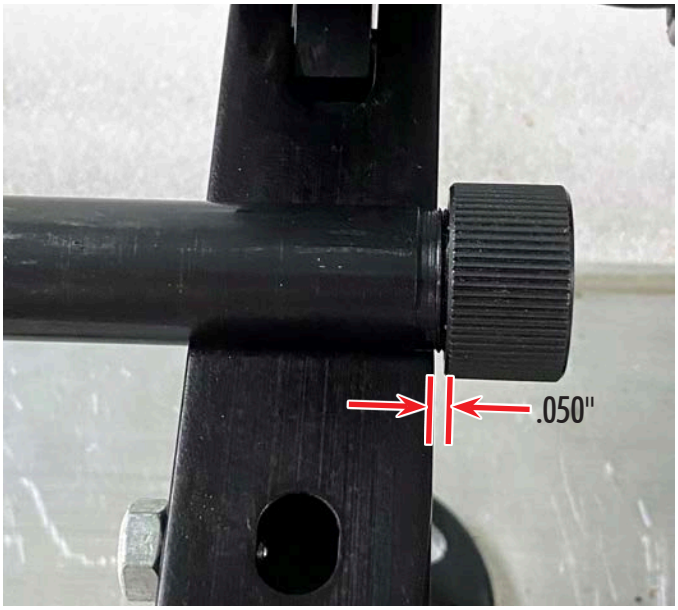


FIGURE 38

13. Rotate the bar feeder tube until the air regulator gauge and the ball valve lever handle are on the top facing up.

FIGURE 39

14. Close the front mount clamp to secure the bar feeder tube in place with the air gauge facing up.

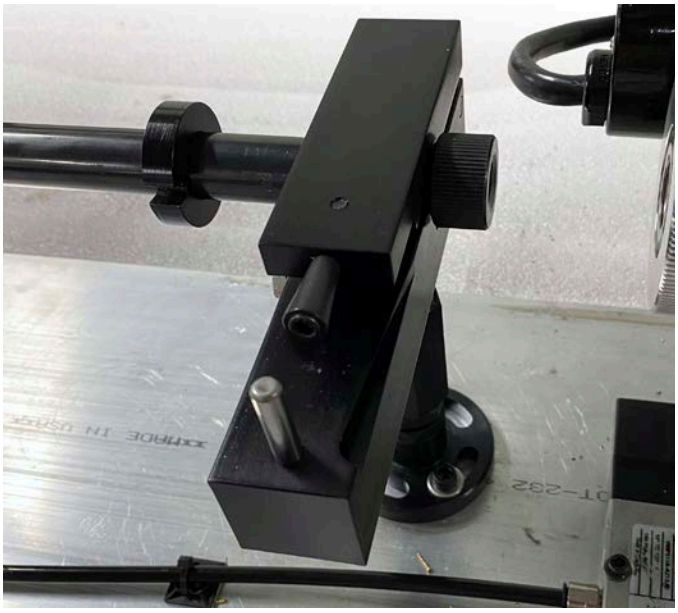


FIGURE 40

NOTE: You can adjust the top clamp closing mechanism by adjusting the 10-32 locking SHCS (P/N 40340) so it locks with the spring plunger (P/N 88266). Make sure the head of the SHCS sits below the ball of the spring plunger (see Figure 41).

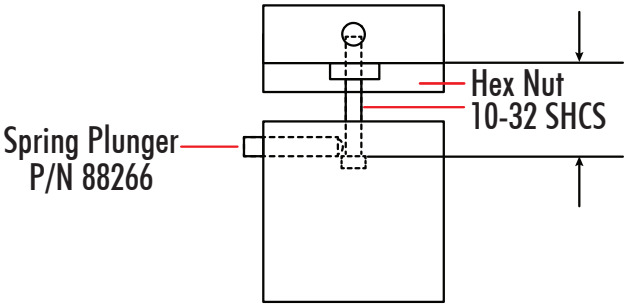


FIGURE 41

15. Rotate the alignment collar (P/N 88253) so the slot in the collar aligns with the 3/16" locating pin (P/N 88254) in the backside of the front mount (P/N 88264).

A. Slide the alignment collar forward over the locating pin.

FIGURE 41

B. Leave a space of .050" (1.3mm) between the front of the collar and the back of the front mount. Then tighten the set screw that is on the top of the alignment collar (tight enough to hold the collar in place, but not too tight).

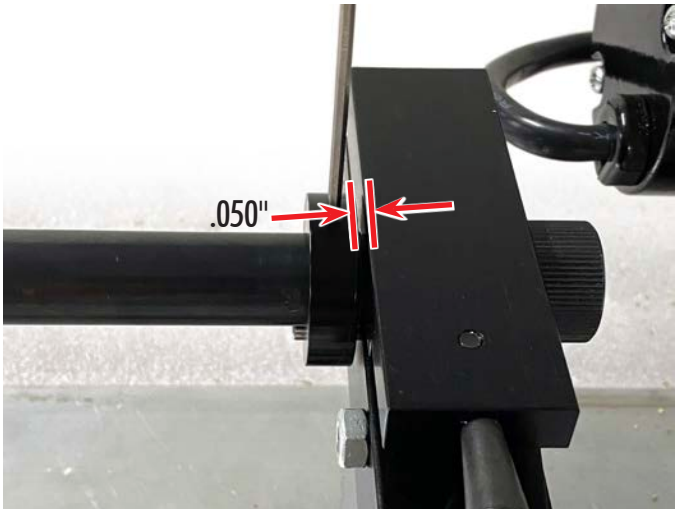


FIGURE 42

Note on the alignment collar and the nose cap:

When the bar feeder is being used, the nose cap is what keeps the bar feeder tube in place. The pressure of the bar feeder will push the bar feeder tube back towards the rear mount. The cap will act as a hard stop for the feeder tube.

The alignment collar rotates the bar feeder tube so the air regulator and ball valve lever will be orientated to the top of the bar feeder tube during operation.

When the top clamp of the front mount is opened, the bar feeder tube is free to rotate.

16. Open the top clamp and pull the bar feeder tube over against the stop pin (P/N 35630). Then remove the nose cap (see Figure 43).

    NOTE: The amount of pivot that is allowed by the ball joint in the rear mount gives the bar feeder tube a very wide range of motion.

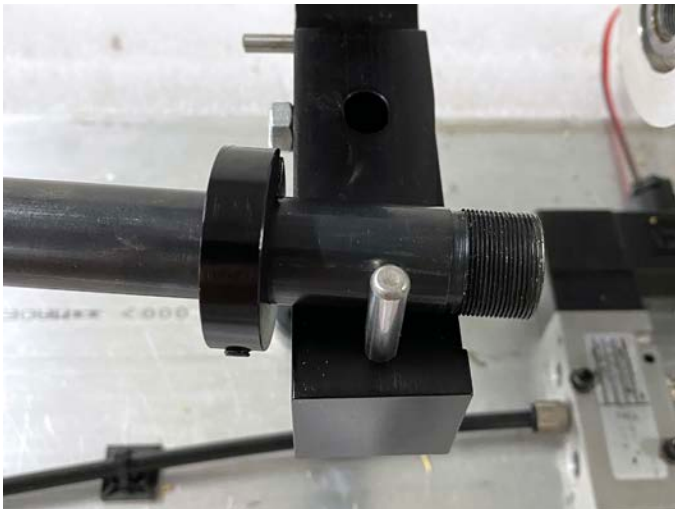


FIGURE 43

17. Stock Pusher (P/N 88257):

    A. Insert the two O-rings (P/N 88258) into the two grooves on the stock pusher (P/N 88257).

    B. Wipe some light oil such as 3-in-One oil onto the O-rings. Add a few drops to the area between the two O-rings as well.

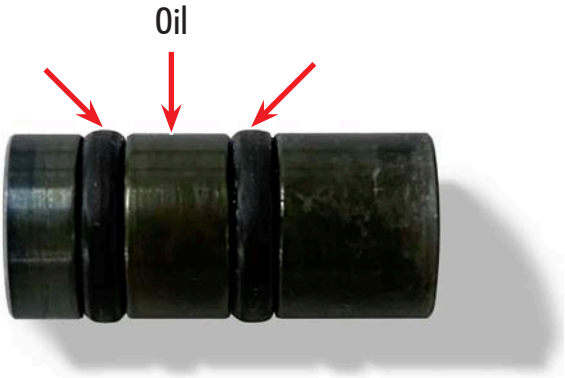


FIGURE 44—The red arrows indicate the oil application areas.

    C. Squirt a fair amount of 3-in-One oil in the end of the bar feeder tube. Rotate the bar feeder tube as you add the oil so it will coat the entire inside area of the bar feeder tube (see Figure 45).

FIGURE 45

    D. The stock pusher has a flat end that goes towards the rear of the bar feeder tube, and a tapered bore on the other end. The tapered bore end goes towards the machine (see Figure 46).

FIGURE 46

    E. Insert the stock pusher into the front of the bar feeder tube with the tapered bore end facing out towards the machine (see Figure 47).

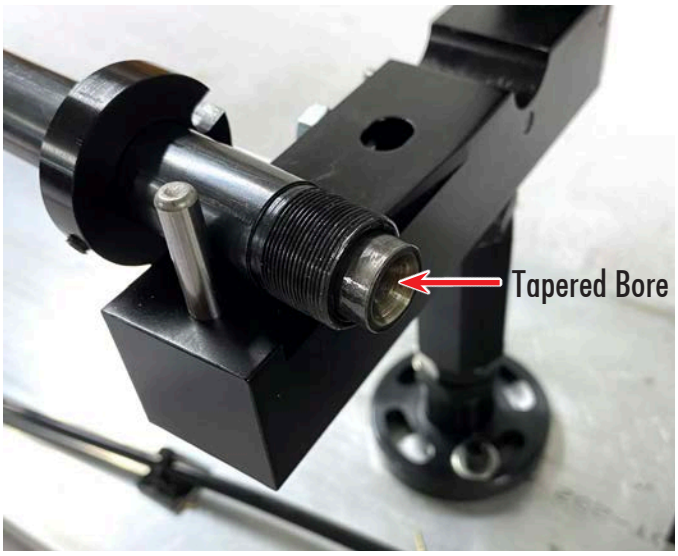


FIGURE 47

F. Use a piece of bar stock to push the stock pusher down into the bar feeder tube (see Figure 48).

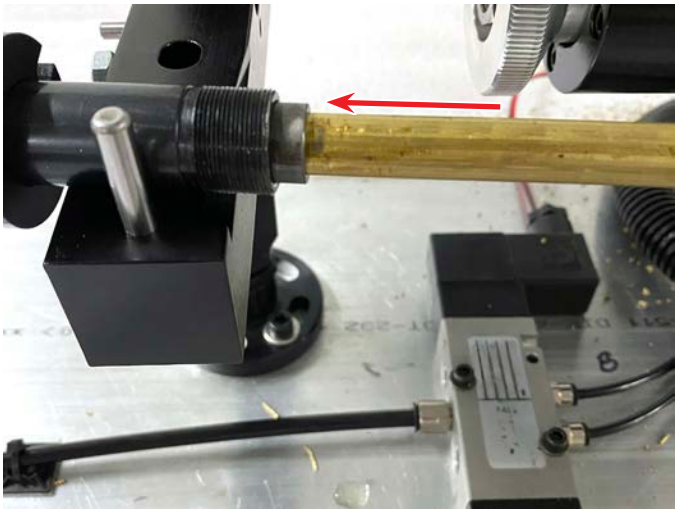


FIGURE 48

18. Your bar feeder comes with a set of bar feeder "stock guides" (P/N 8830).

FIGURE 49

These stock guides are designed to support the stock at the front of the bar feeder tube in order to keep the stock from whipping excessively inside the bar feeder tube.

For stock that is larger than 3/8" (9mm), a stock guide is not required. The nose cap will act as the stock guide.

For stock that is smaller than 3/8" (9mm), choose the stock guide that has an inside diameter that is slightly larger than the diameter of your stock.

A. The stock guide is designed so the smaller diameter will fit inside the end of the bar feeder tube (see Figures 50 and 51).

FIGURE 50

FIGURE 51

B. After you have inserted the stock guide, thread the nose cap on (snug, not too tight). This will hold the stock guide in place.

⚠CAUTION

WARNING/NOTICE

Always turn the air pressure to the bar feeder tube **OFF** whenever changing stock or changing the stock guides.

Air Pressure Shut-Off Procedure

1. Turn the ball valve lever to the closed position (P/N 88055). If you have assembled the ball valve lever correctly, the off position should have the lever perpendicular to the bar feeder tube. With the lever in the closed position, no air from the regulator side of the bar feeder can enter the bar feeder tube (see Figure 52).

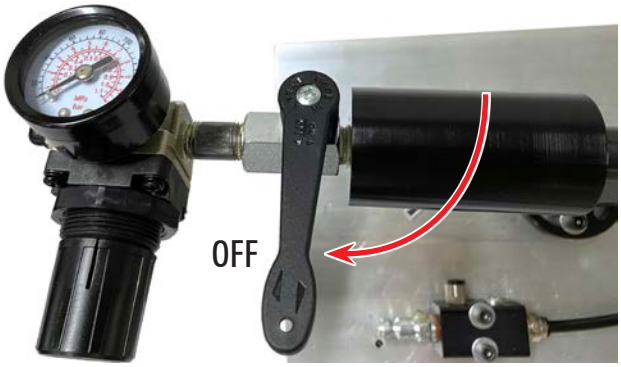


FIGURE 52

2. Open the air bleeder valve (P/N 88053) to release any pressure that may be in the bar feeder tube. This may take several turns of the bleeder valve knob. You should hear a "hissing noise" when the air pressure is released (if the system has been charged).

FIGURE 53—The drain valve (P/N 88053).

3. With the ball valve closed and the bleeder valve open, all air pressure on the backside of the stock pusher should be removed. Now the stock pusher will move freely in either direction. The O-ring fit is tight, so you will need to use some force to move the stock pusher into the desired position inside the feed tube.

Loading Stock into the Bar Feeder

1. First close the ball valve (P/N 88055).
2. Then open the bleeder valve (P/N 88053) to release any pressure behind the stock pusher.
3. The stock pusher has a 60° bore that is designed to hold the end of the stock in the center of the bar feeder tube. Your stock should have a 60° chamfer on the end so it will locate inside the tapered bore on the stock pusher (see Figure 54).

FIGURE 54

4. Push the bar stock all the way in until about 1" (25mm) is sticking out in front of the nose cap (see Figure 55).

   NOTE: you may need to use some force to get the stock pusher to move initially.

5. Move the bar feeder tube into the radius slot in the front mount with the slot in the alignment collar over the locator pin. Then close the top clamp onto the feeder tube to lock the feeder tube in place.

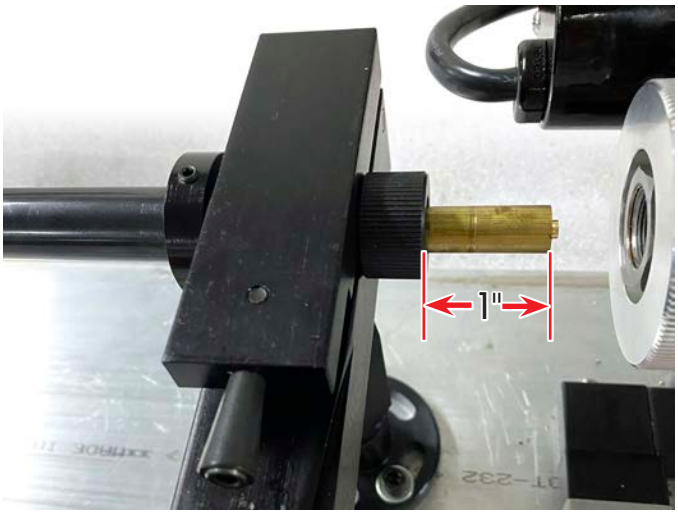


FIGURE 55

6. Now feed the stock through the headstock and the collet. Adjust the lever collet closer clamping pressure as described in the *8815 Pneumatic Cylnder and Component Assembly Instructions* to securely close the collet on the stock. You can pull the lever collet closer "stud" back towards the bar feeder by hand to close the collet (see Figure 56).

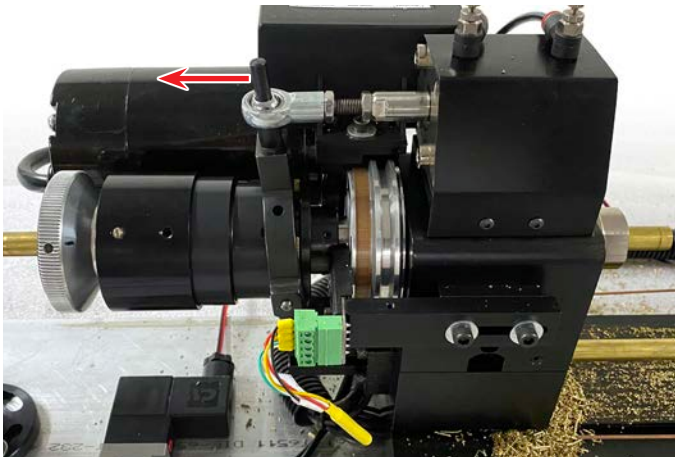


FIGURE 56

Connecting Air to the Bar Feeder

1. Mount the "Air Manifold Block" assembly (P/N 88061) to the base. If you are using our base, there are (2) 10-32 holes drilled and tapped just to the left of the rear mount flange. If you are mounting to your own work surface, drill and tap two mounting holes (hole space dimensions below). Use the (2) 10-32 x 1-1/2" SHCS 40720 with (2) #10 washers (P/N 40660).

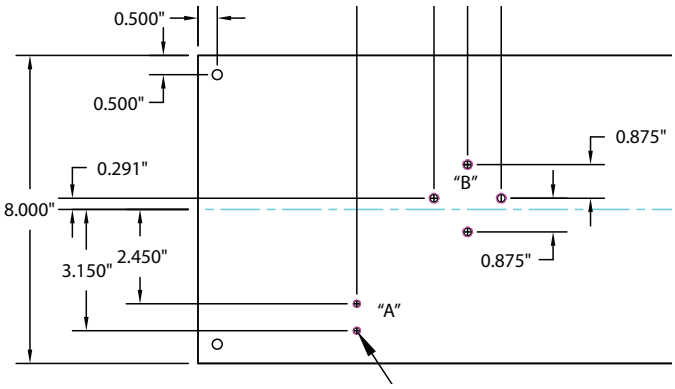


FIGURE 57—Chucker Lathe Base diagram shown for reference. See last page for full diagrams of the Chucker Lathe Base (P/N 88323) and the Ball Screw Lathe Base (P/N 883241)

2. Air Manifold Mount Assembly (P/N 8806).

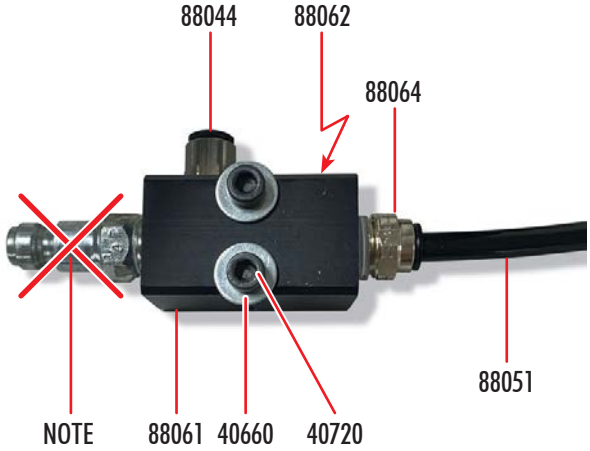


*FIGURE 58—P/N 8806 Assembly parts: 88061, 88044, 88962, 88064, 40720 (2), 40660 (2), 88051. *NOTE: The 1/4" NPT air fitting to connect the air is NOT SUPPLIED (purchase one that matches your air system).*

3. Once the manifold is mounted, cut a section of the 1/4" air line (P/N 88051) and connect the air line from P/N 88064 on the manifold, to 88044 on the Air Directional Control Valve (P/N 88042).

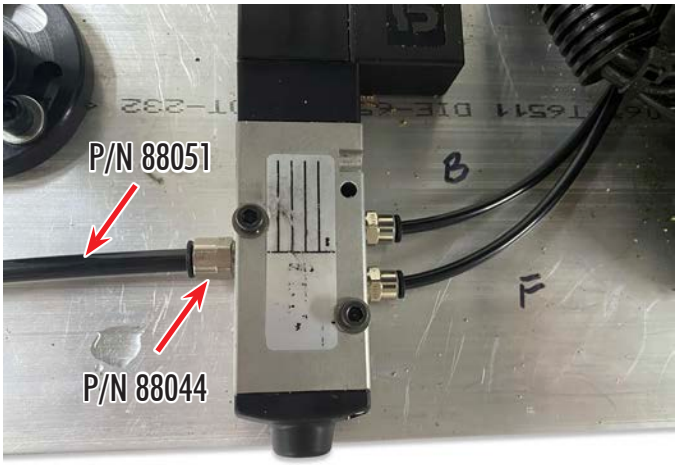


FIGURE 59

4. Cut another section of the 1/4" air line and connect 88044 on the manifold to 90° swivel air fitting (P/N 88065) on the back of the air regulator.

   NOTE: Be sure to make the 1/4" air line long enough to allow for movement of the back of the bar feeder tube for loading stock.

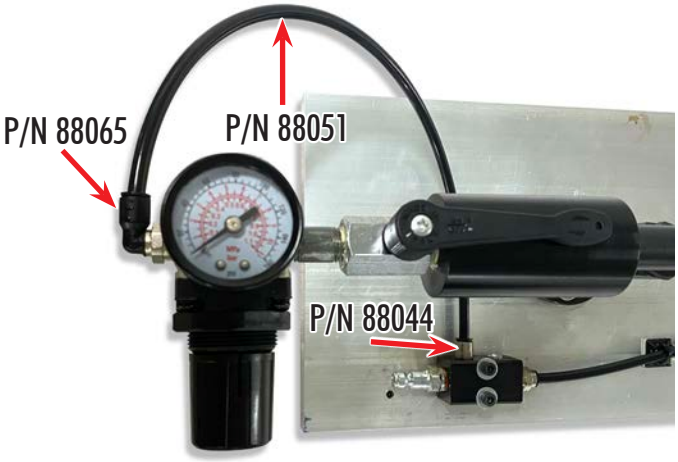


FIGURE 60

5. Now that all of the air lines are connected. Turn the ball valve lever to the closed position and close the bleeder valve (see Figure 61).

   NOTE: The bleeder valve has an O-ring inside of it. When you close the valve, just close it enough to stop the air from coming out. If you overtighten the valve, the O-ring will be damaged.

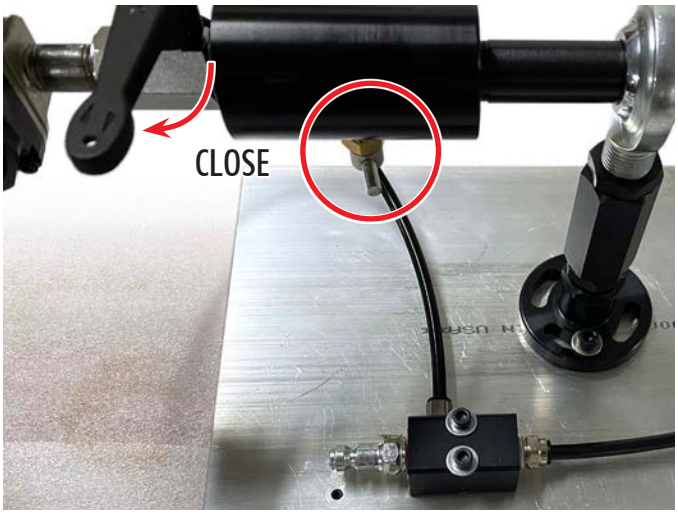


FIGURE 61—The red circle shows the location of the bleeder valve. Close both the bleeder valve and the ball valve lever.

6. Connect the air to the manifold. Set the regulator to 30 – 40 PSI MAXIMUM!

Loading the Stock and Energizing the Bar Feeder with Air

1. You should already have a piece of bar stock in the bar feeder tube from the previous section, "***Loading Stock into the Bar Feeder***," bullets 5 and 6. If not, follow those instructions and load a piece of stock into the bar feeder tube.

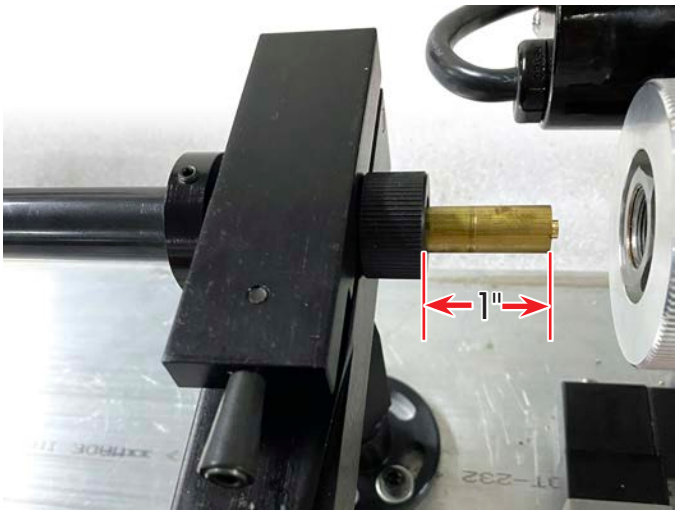


FIGURE 62

2. Read the instructions for 8815 related to how to open and close the collet pneumatically. This can also be done manually as described previously in these instructions.
3. With the bar feeder tube clamped securely in the front mount, pull the stock out of the feeder tube and push it forward through the headstock and collet.

   Now adjust the LCC draw bar knob as described n the 8815 instructions. Then close the collet with the LCC so the stock is held securely in the collet.
4. If you have a hard stop set up on your crosslide, position your crosslide so the hard stop is in front of the end of the stock. If you don't have a hard stop, position one of the tool post in front of the stock (see Figure 63).

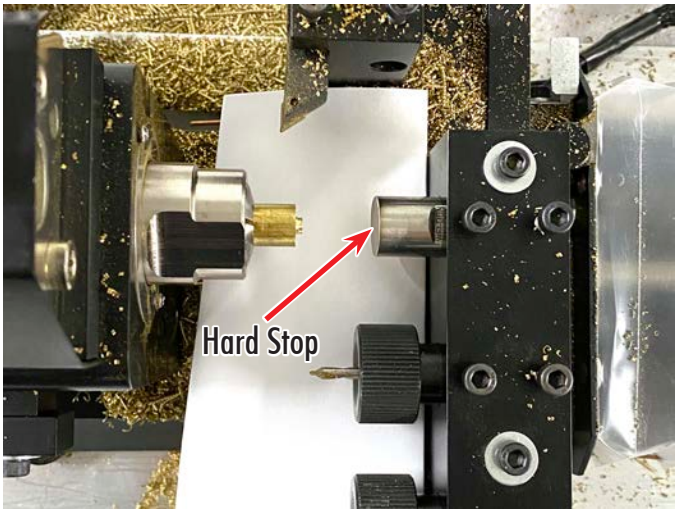


FIGURE 63

5. Check the pressure on the air regulator gauge and adjust as needed. Again, the Max pressure should be 30-40 PSI.
6. With the air pressure on and connected to the air manifold. Turn the ball valve lever to the open position (see Figure 64).

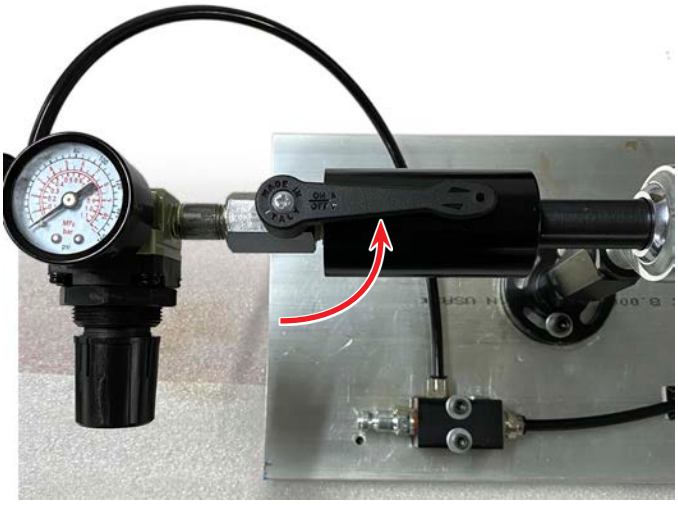


FIGURE 64

7. Because you have pulled the stock forward into the collet, there should be a space inside the feeder tube between the end of the stock and the stock pusher. When you open the ball valve, you should hear the air enter the feeder tube, followed by the sound of the stock pusher hitting the end of the stock.
8. With the bar feeder energized with air, check each of the threaded fittings for any air leaks. If any air leaks are detected, disconnect the air from the air manifold, close the ball valve, and open the bleeder valve. Then tighten the threaded fitting.

The Bar Feeder Extension Pusher (P/N 88309)

1. The bar feeder stock pusher (P/N 88257) is retained inside of the bar feeder tube (P/N 88251) by the bar feeder "nose cap" (P/N 88256). Therefore, the bar feeder pusher does not extend past the end of the bar feeder tube. This will leave and end piece of stock which is equivalent to the length from the front of the headstock collet to the front of the bar feeder end cap (several inches). In order to use as much of your stock length as possible we have designed the bar feeder extension "pusher". This is literally an extension of the bar feeder "pusher" that is used to advance the end piece of stock thru the lever collet closer and headstock up to the back of the collet. This will allow you to machine as much of your bar stock length as possible.

   NOTE: You can machine even more of the bar stock length if you insert an optional stop into your program after the line of code that opens the collet. Then pull the stock out by hand until it makes contact with your hard stop (hand feeding the stock). Then resume the program.

2. If you are running multiple lengths of stock, we suggest that you run all of the end pieces after the full lengths of stock have been run.

3. To use the extension pusher, do the following:

   A. **VERY IMPORTANT:** Close the air valve (P/N 88055) and open the drain valve (P/N 88053) as described previously in these instructions (see Figure 65). This will turn the air pressure off to the bar feeder tube and release the air that is in the bar feeder tube.

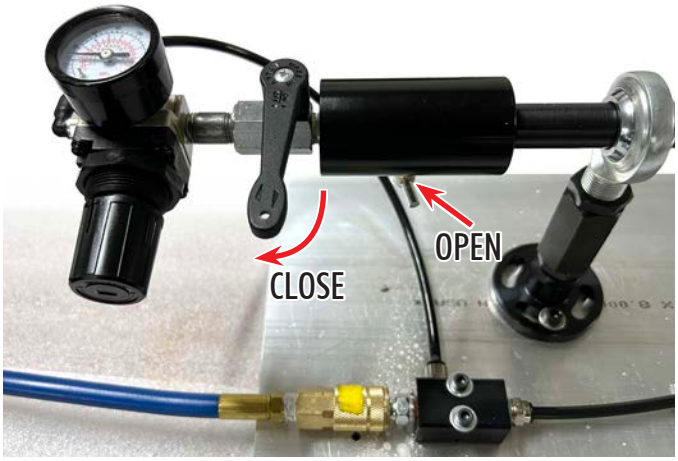


FIGURE 65—Close the air valve and open the drain valve.

   B. If there is stock in the collet, open the collet and pull the stock forward to allow space in front of the bar feeder to move the bar feeder tube off to the side (see Figures 66 and 67).

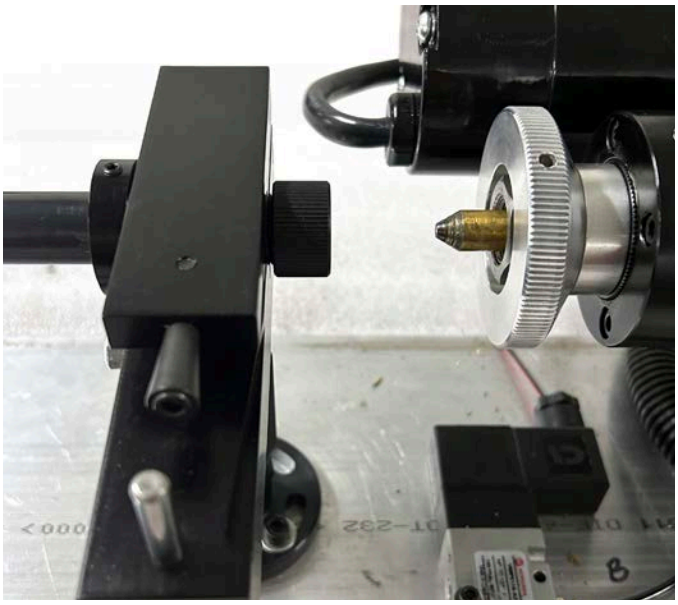


FIGURE 66

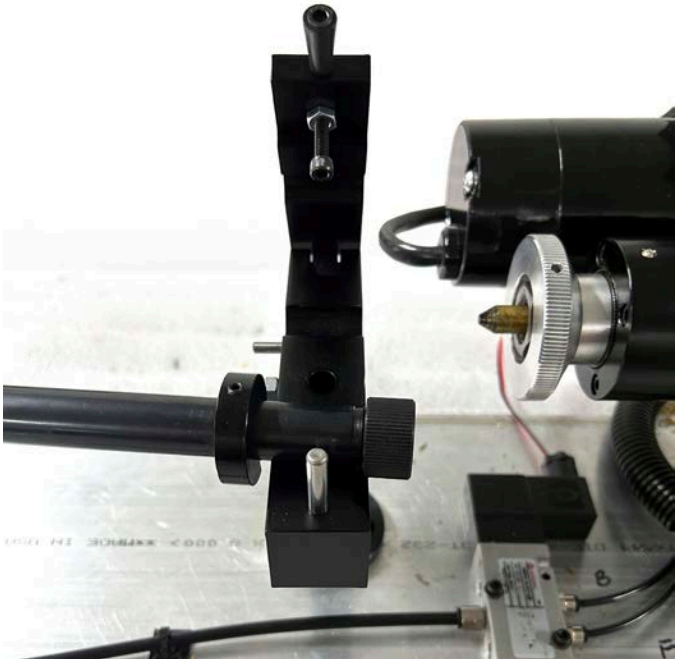


FIGURE 67—Shows the bar feeder tube moved off to the side.

   C. The extension pusher is hardened steel with an external taper on the back end and an internal taper at the front end.

FIGURE 68—The bar feeder extension pusher.

D. Place the back end into the bar feeder tube (no need to remove the end cap from the bar feeder tube). Insert the extension pusher into the bar feeder tube leaving enough of it protruding from the end cap to grip (see Figures 69 and 70).

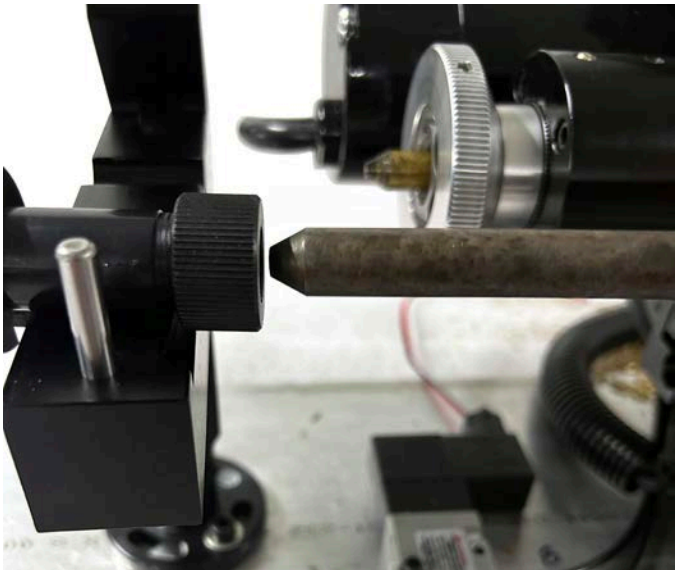


FIGURE 69

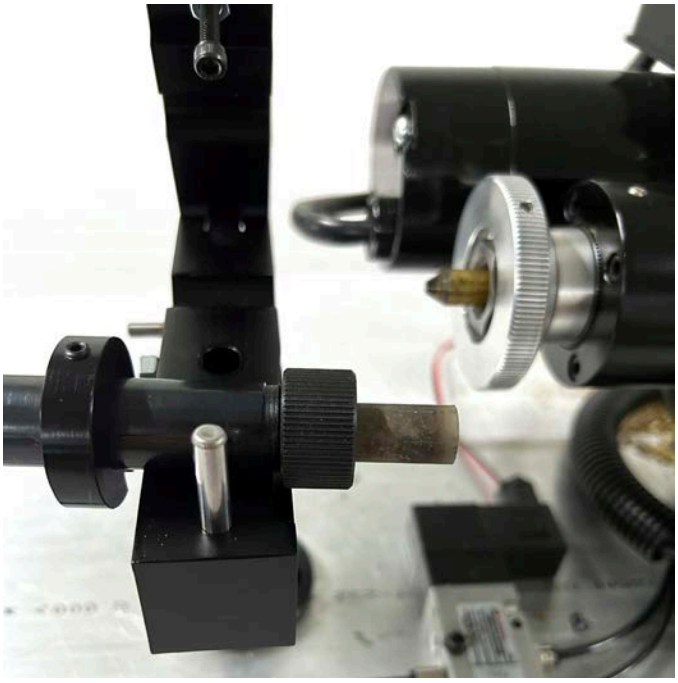


FIGURE 70

E. If there wasn't any stock in the headstock. Chamfer the front end of the stock first. Then insert the end piece into the back of the lever collet closer.

F. Place the bar feeder tube back into position and clamp it in place (see Figure 71).

FIGURE 71

G. Now use the extension pusher to push the stock through the collet. Do this by hand with the air OFF.

H. Be sure to position your hard stop in front of the stock in the collet (see Figure 72).

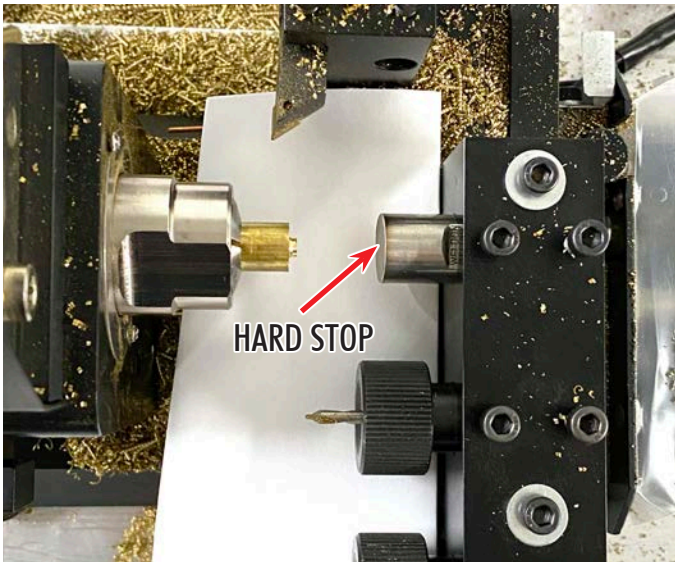


FIGURE 72

I. Close the collet.

J. At this point, the extension pusher should be inside the back end of the lever collet closer and the stock should be held firmly in the collet (see Figure 73).

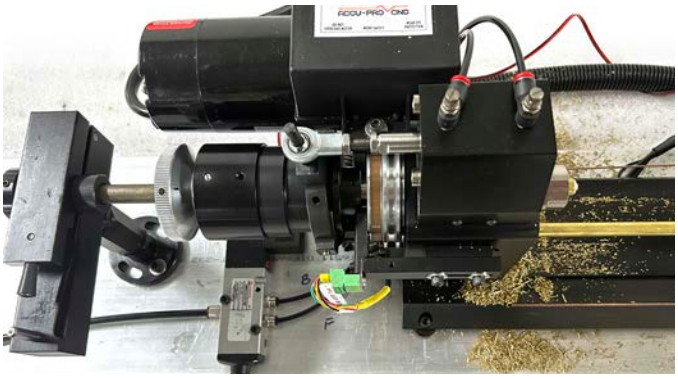


FIGURE 73

K. Close the drain valve. Now, slowly open the air valve to the full open position.

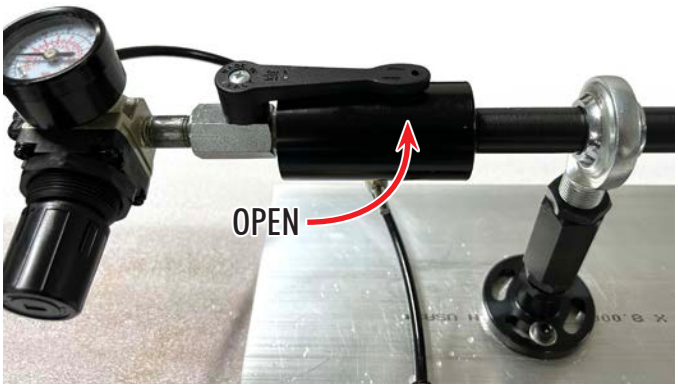


FIGURE 74

L. Now open the collet. Use the hard stop to push the front end of the stock back towards the collet until it is extended beyond the collet to the proper distance to start running your program. Then close the collet.

Now you are ready to run your program.

TIPS

1. If you are in an area with high humidity, or if you have water in your air system. We recommend placing an air dryer in line between your air source and the air manifold on the bar feeder. Water inside of the feeder tube will eventually cause rust which will be detrimental to the function and longevity of the bar feeder.
2. The compression fit between the ID of the feeder tube and the O-rings on the stock pusher is fairly tight in order to get a good air seal. Because of this, the stock pusher may stick in place periodically. Especially if it has been in one position for a while. You can free it up by giving it a sharp blow with the stock that you are putting into the feeder tube. If the stock isn't long enough, you can also free it by increasing the air pressure (just long enough to free it, then set the pressure back to 30-40 PSI). We also recommend that you set up your G-code program to first push the stock back in towards the headstock (after the collet is opened), then feed away from the headstock to the desired length that the stock will be extended from the face of the collet. The first move which pushes the stock in, will move the stock pusher enough to break it free (if it is stuck). Then on the next Z+ move, the stock pusher will advance the stock.
3. Keep the bar feeder tube lubricated.

   A. With continual use, squirt a few drops of oil into the end of the bar feeder tube before you load the first bar of stock each day. With intermittent use, squirt a few drops of oil in before each use.

   B. Oil in the front of the feeder tube will not find its way to the backside of the stock pusher. This is the side of the stock pusher where the air pressure is, and also the chance of water accumulation from the air.

4. To add oil to the backside of the stock pusher, there are two ways.

   A. Add oil at the air line fitting that the air hose connects to. However, oil that is added here will also go to the pneumatic cylinder that opens and closes the collet. It is alright to add oil to the pneumatic cylinder. However, if there is too much oil (or water) in the system, this will begin to spray out of the cylinder release ports whenever it is activated (see Figure 75).

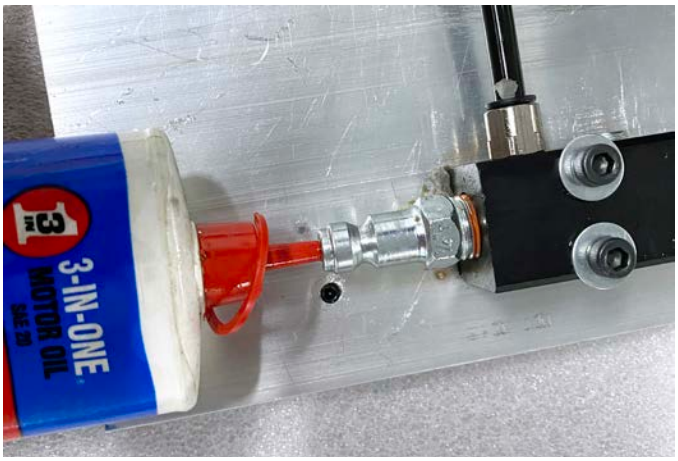


FIGURE 75—Option 1, adding oil at the air line filter.

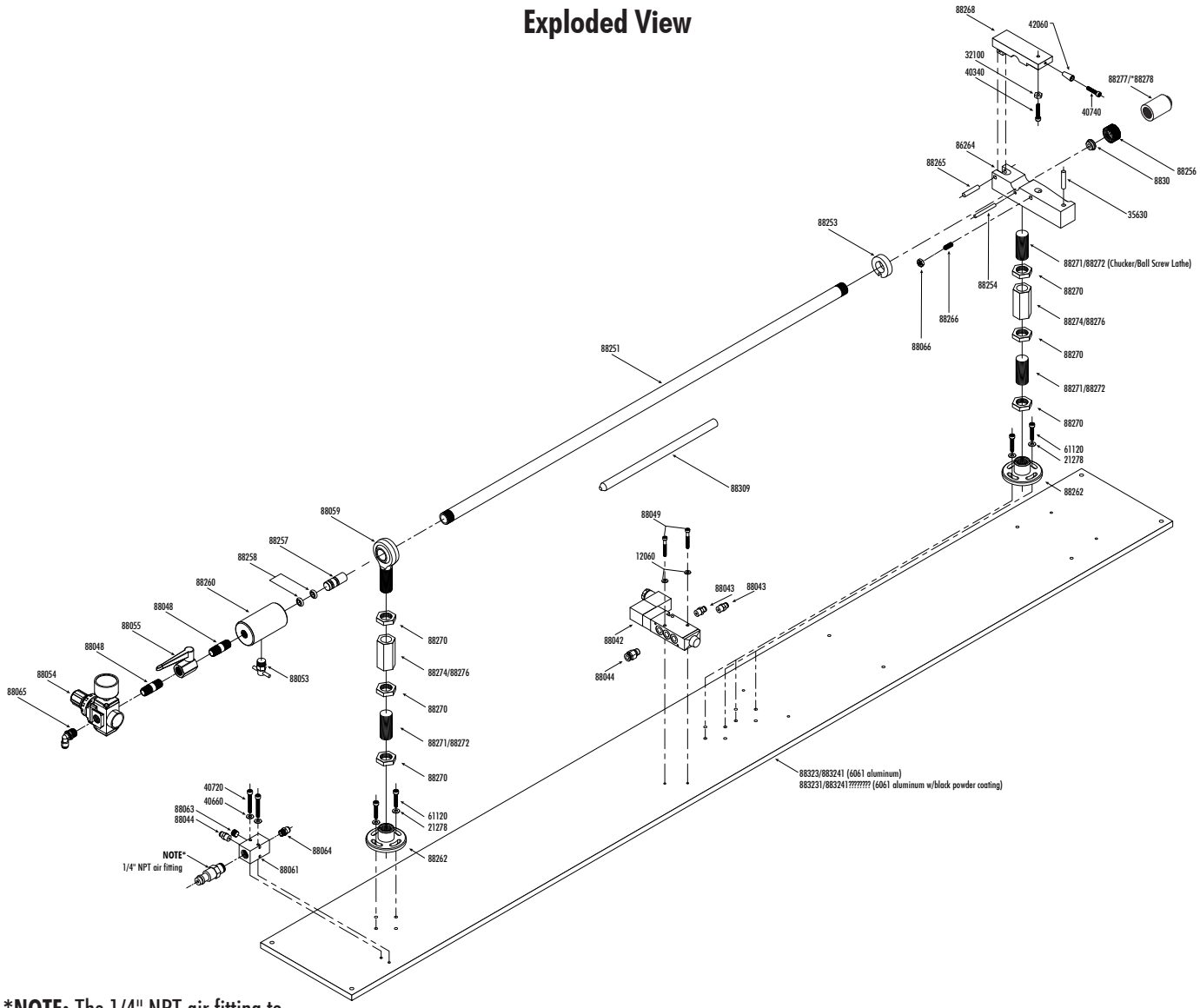
   B. The alternative is to unclamp the bar feeder tube and turn the bar feeder tube until the bleeder valve is facing upward. Then remove the valve stem and add oil through the valve (see Figure 76).

   Then replace the valve stem and tighten it (just snug). Then rotate the bar feeder back to its original position and clamp it in place. When oil is added here, it will only go into the backside of the feeder tube.

FIGURE 76—Option 2, adding oil at the bar feeder tube.

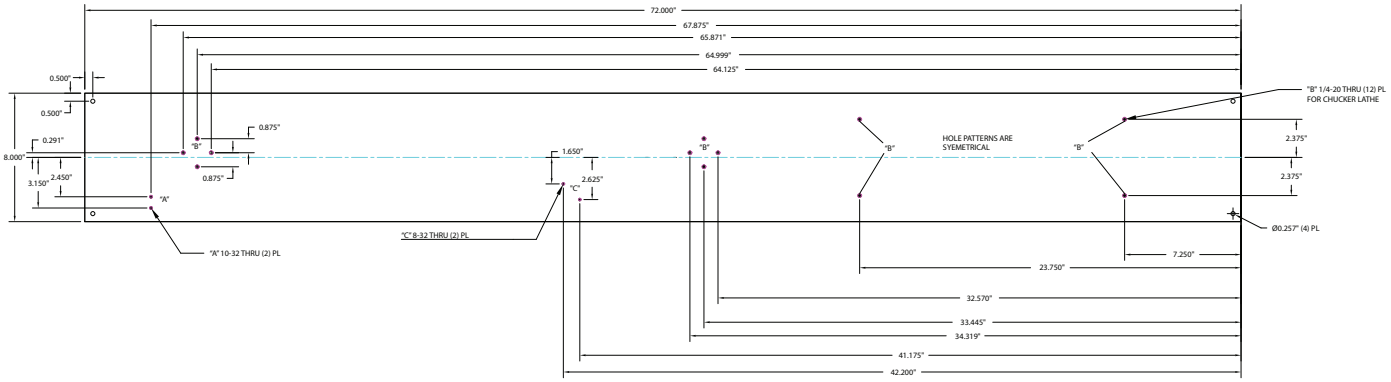
Thank you,
Sherline Products Inc.

Exploded View



***NOTE:** The 1/4" NPT air fitting to connect the air is NOT SUPPLIED (purchase one that matches your air system).

Base Diagrams
P/N 88323 Chucker Lathe Base



P/N 883241 Ball Screw Lathe Base