SHERLINE PRODUCTS
INCORPORATED 1974

Ball Screw Lubrication

⚠CAUTION

First and most important: NEVER remove the ball screw from the ball screw "Nut." Doing so will allow the (very tiny) balls to come out of the ball nut. If this happens, your ball screw is ruined and not reparable!

Second: To lubricate the ball screw, do not remove the ball screw from the machine. The alignment of the ball screw is critical. This alignment is set at the factory. You can gain access to the ball screw without removing it.

Our ball screw manufacturer recommends using "NSK AS2 Grease" (or comparable) for our ball screws.

Lubricating the Ball Screws

1. Move each of the axes to expose the ball screws.

A. **On the mill:**

i. This will be the home position for the Z-axis.

FIGURE 1—Mill Z-axis.

ii. This will be close to the end of travel in the X- and Y- directions.

iii. X-axis: Lubricate between the stepper motor and the ball nut (see Figure 2).

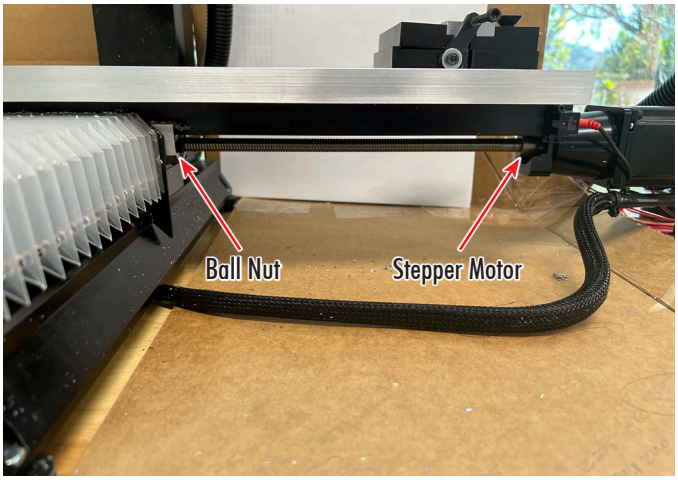

FIGURE 2—Mill X-axis.

iv. Y-axis: Lubricate the section under the Y-axis cover close to the saddle (see Figure 3).

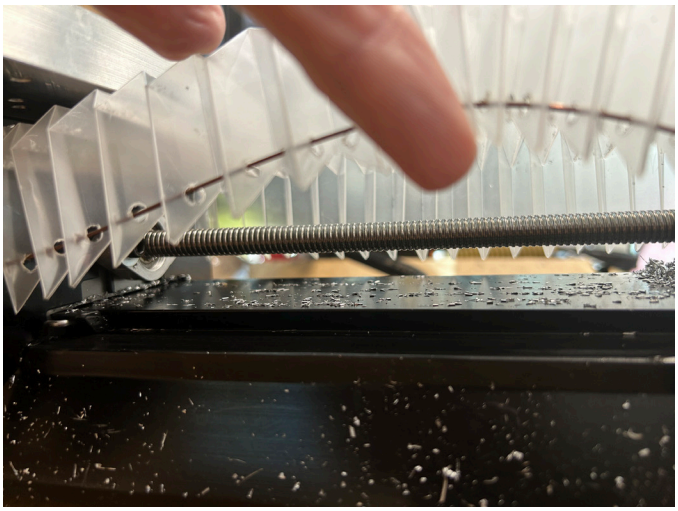

FIGURE 3—Mill Y-axis.

B. **On the lathe and chucker lathe:**

i. Move the Z-axis as close to the headstock as possible (Z-). Apply the grease near the saddle (see Figures 4 and 5).

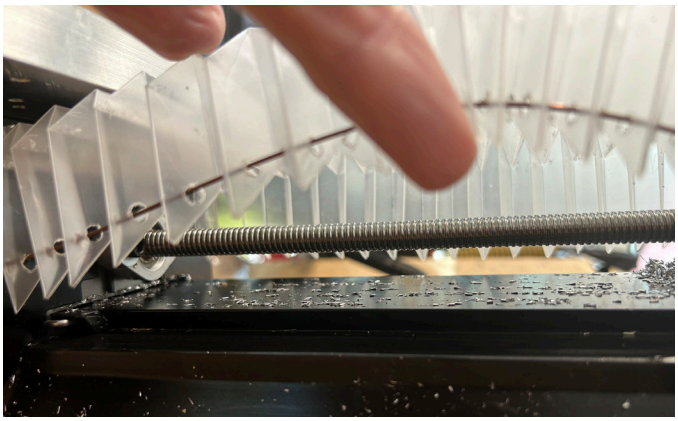

FIGURE 4—Chucker Lathe Z-axis.

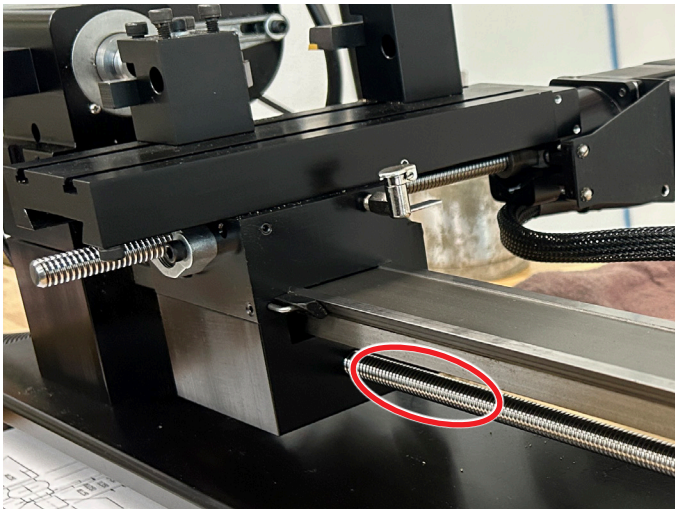

FIGURE 5—Ball Screw Lathe and Accu-Pro Lathe Z-axis.

C. **X-axis on the ball screw lathes:**

i. On the ball screw lathe, move the X-axis to the end of travel.

ii. On the Accu-Pro lathe, move the X-axis to the home position.

iii. On both of these machines apply the grease as close to the ball nut as possible and 1"-2" (25 – 50mm) away from the ball nut (see Figure 6).

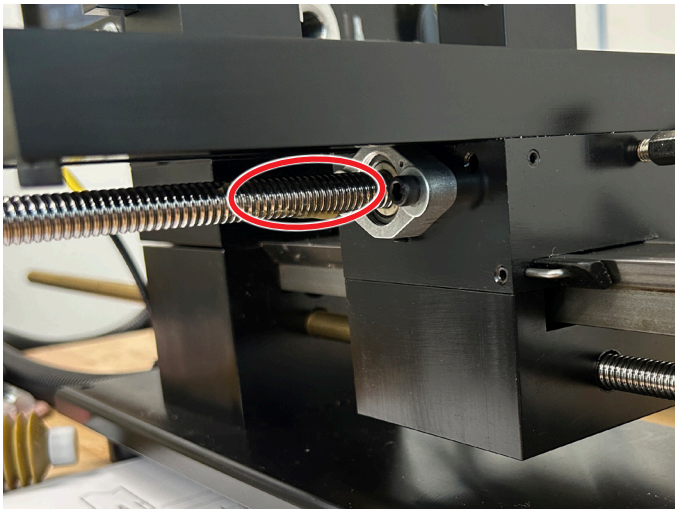

FIGURE 6—Ball Screw Lathe X-axis.

D. **X-axis on the Chucker Lathe:**

On the Chucker lathe, move the axis to the middle of travel. Then apply grease on both sides of the ball screw near the saddle and the ball nut. (see Figures 7 and 8).

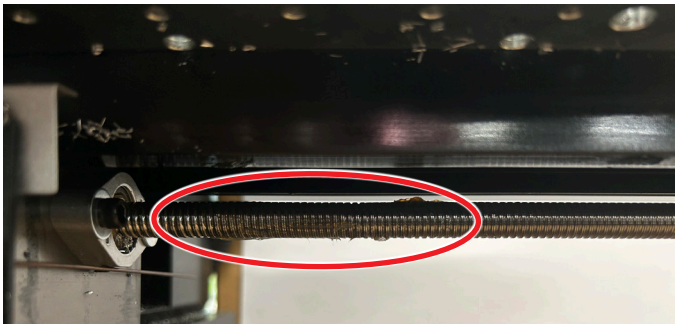

FIGURE 7—Chucker Lathe X-axis.

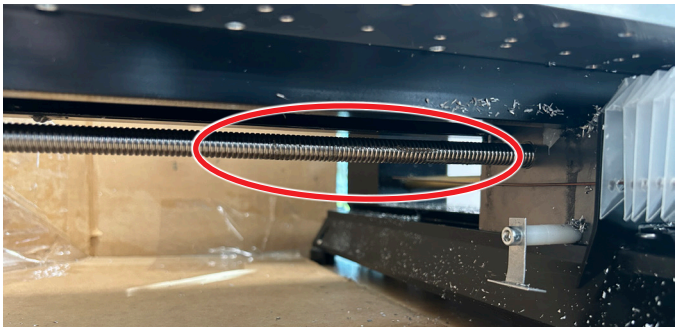

FIGURE 8

2. Place a small amount of the NSK AS2 grease on your finger tip (see Figure 9).

FIGURE 9

3. Wipe the NSK grease onto the exposed section of the ball screw closest to the saddle and the ball nut. Wipe it on thin and cover an area of about 1.0” – 2.0” (25mm – 50mm).

4. Now jog each axis back and forth over the entire travel distance of the axis. Jogging the axes will spread the grease along the entire length of the ball screws and into the ball screw nuts.

Thank you,
Sherline Products Inc.