



## Mill Saddle Lock Upgrade Installation Instructions

P/N 4017U (Metric P/N 4117U)

### Why the lock upgrade came about

The column saddle lock upgrade provides a superior method of preventing mill column saddle movement by locking the saddle nut against the leadscrew. This is much more positive than the friction saddle lock used prior to 2/99. We have looked for a way to produce a lock like this for years, but it required a way to start a thread in exactly the same place each time so that the locking movement could be confined to a limited quadrant. A new piece of equipment in our factory now makes it possible to control this operation accurately, so the lock will be added to all production mills from now on. This upgrade kit can be added to any Sherline mill made prior to 2/99 and is easy to install.

### Installing the new saddle nut and locking lever

The new locking lever requires the replacement of the old saddle nut. The new saddle nut has a spring-loaded ball that keeps the lever from inadvertently locking when the handwheel is turned. To install the new lock, complete the following steps:

1. Remove the socket head cap screw that now holds the saddle to the existing saddle nut.
2. Remove the countersunk screw from the top of the column bed that holds the leadscrew thrust to the bed. The leadscrew and thrust can now be removed.
3. Unscrew the old saddle nut from the leadscrew. Thread the new locking lever and then the new saddle nut onto the leadscrew. Make sure the saddle nut is installed in the proper direction with the spring-loaded ball facing the locking lever.

4. Reattach the leadscrew and thrust to the column bed.
5. Slide the saddle into position so the hole aligns with the hole in the saddle nut and reinstall the socket head cap screw to attach the saddle to the saddle nut.
6. If necessary, readjust the backlash on the leadscrew by adjusting the two set screws on either side of the attachment screw. To adjust, the saddle should first be positioned at the end of its travel as close to the handwheel as possible. With the screw that attaches the saddle to the saddle nut loosened, bring each set screw into light contact with the saddle nut and retighten the screw. If binding occurs, readjust the two set screws until the leadscrew moves freely.

### Using the saddle locking lever

When the saddle is in final position for your cut, turn the lever counterclockwise until it locks against the saddle nut. This will prevent the leadscrew from turning so the saddle cannot move downward during the cut due to vibration. To release the locking lever, push it clockwise over the spring-loaded ball. This ball will keep the lever from accidentally locking while the saddle height is readjusted. Turning the handwheel clockwise will also release the locking lever.

Thank you,  
Sherline Products Inc.

*NOTE: For additional information see the instructions that cover the replacement of a standard saddle nut (P/N 4017). It provides more detailed information on backlash and adjustment of the saddle nut for optimum operation. This information also applies to your new locking saddle nut.*