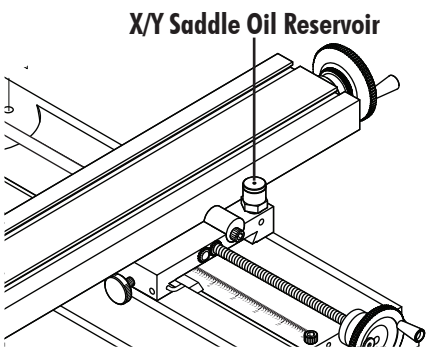

SHERLINE PRODUCTS

INCORPORATED 1974

Lubrication

- **Machine Slides**–Use a light oil such as sewing machine oil, or 3-in-One Multi-Purpose oil, on all points where there is sliding contact. This should be done immediately after each cleanup. We grease the slides at the factory to ensure the lubrication stays in place during shipping, but light oil will work fine once you begin using the machine.
- **Leadscrew, Tailstock Feed Screw, Crosslide Screw**–Light oil should be placed along all threads regularly. At the same time, check that the threads are free from any metal chips. Use an air hose or paint brush to keep them clean. All Sherline mills now include oil reservoirs on the X/Y axes and the Z axis to help keep critical parts lubricated. Another new feature is the brass leadscrew cover that keeps chips off the rear of the Y-axis leadscrew.
- **Tailstock Spindle**–Wind out the spindle as far as it will go and lightly oil it with light oil.
- **Handwheels**–A few drops of light oil behind the handwheel will reduce friction between the surfaces and make operation easier and smoother.
- **Headstock Bearings**–These bearings are lubricated at the factory for the lifetime of the machine and should not need further lubrication. DO NOT break the seals.
- **Motor**–Sealed ball bearings require no maintenance.

About the X/Y Saddle Oil Reservoir

Oil reservoirs are on the X/Y axes and the Z axis to help keep critical parts lubricated. These were initially developed for CNC machines but are now standard on all Sherline mills. The small saddle reservoir holds oil that is distributed to the X and Y leadscrews. The oiler is located in the right front corner of the mill saddle. Unscrew the cap and fill the reservoir before each machining session and refill if necessary after several hours of use.

Our mill saddle oiler system is gravity-fed (see Figure 1). The oil level in the oiler cup must be higher than any area that is lubricating the saddle. Therefore, the top of the oiler cup is intentionally elevated above the top of the mill saddle.

When the oil cup is filled, the oil in the cup that is above the top surface of the saddle will come out of the top bleeder hole. The oil stops coming out of the bleeder hole once the oil level in the cup reaches the same level as the top of the saddle.

When the oiler system is full, filling the cup to the top will cause this overflow.

Oil may continue to leak out after use, but the reservoir does not hold an extremely large volume of oil, so cleanup should not be a problem. Even so, we suggest that machines should be set in a metal pan like the kind used under auto engines on a garage floor. This will help contain chips, coolant and excess lubrication, making cleanup easier. They are available from any auto parts store.

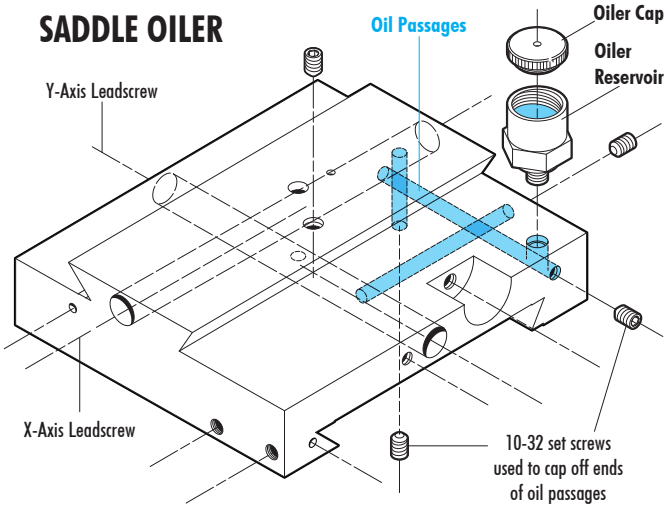

FIGURE 1—*Oil passages are shown in blue. The mill oiler is located in the front right corner of Sherline mill saddles.*

Special Notes for CNC Machines

CNC demands lubrication more often than when used manually. Machine slides, and the Z-axis column in particular should be lubricated with light machine oil about every two hours during CNC use.

CAUTION: Do NOT use 3-in-One Penetrant or WD-40 for lubrication! These products are not lubricating oils.

When NOT to Lubricate Certain Surfaces

The mating surfaces of the arm, the column ,and the column cap on the Models 2000 and 5800 mills are to be kept free from lubrication. Tightening the column bolt causes friction between these surfaces to resist movement of the arm during the forces and vibration of machining. If these smooth surfaces are lubricated, the arm or the column could move

during machining even if the bolt is securely tightened. Clean these surfaces periodically with mild detergent or bathroom spray cleaner to keep a good “bite” between surfaces. The same goes for the surfaces between the “knuckle” and the ends of the swing arm. These surfaces are smooth enough that adjustment is easily accomplished with the nut loosened even without lubrication. They should be free of dirt and chips, but please resist your natural inclination to lubricate them, as they do their intended job better when dry.

Thank you,
Sherline Products Inc.