

# Universal Lubrication

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This equipment requires lubrication every 200 to 400 running hours (see lubrication schedule for specifications). As specified in the lubrication schedule, each bearings grease fitting should receive a sufficient amount of grease to purge a portion of the existing grease from the bearing cage. Experience, along with knowledge of bearings and their applications dictate the particular amount of grease each bearing “needs”. One ounce by volume, not weight, is sufficient in most applications.

**Caution: Excessive greasing will cause the bearings to run HOT.**

1. Start out by oiling the entire machine. The machine has been properly greased before leaving the Mereen-Johnson assembly floor. Do not regrease the motor bearings.
2. Set up a lubrication schedule

## Preventative Maintenance

It is recommended that these greases or their equivalents be used on the Mereen-Johnson, LLC Equipment.

## General Recommendations

**Arbor bearing greasing use Lube Master**

### **Greases:**

Hiwin (Linear bearings) ..... G01 High Load  
Gopher Oil Company ..... Molylub 126-EP, #1 or #2  
Continental Oil Company.....Conoco Superlub NLGI #2  
Shell Oil Company ..... Cyprina #3  
Socony Vacuum Oil Company ..... Mobilux #2  
Standard Oil of California .....Calol  
The Texas Company..... Unitemp  
The Texas Company..... Hitetemp  
The Texas Company..... Regal Starfak AFB #2  
Sunoco .....Sunaplex 992 EP

### **Oil:**

Use SAE #10 or #20 non-detergent high quality automotive oil for the oil cups.

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## Air Mist Lubricators

Air mist lubricators require SAE #10 non-detergent high quality automotive oil. Machines that are operated in a cold climate (below 23°F), or in an unheated building, will require a lower temperature mist oil. Mereen-Johnson has available Low Temperature Mist Oil "MJ-100". "MJ-100" is not recommended for the Bijur Spin Rev® lubricators that lubricate the front motor bearings.

The ball screw should be kept coated with a thin film of oil or light grease to provide satisfactory service under normal conditions. Most ball screw applications may use a light oil. Applications that have low or intermittent duty cycles may be greased once for life. Each application should be individually analyzed for lubrication selection. Standard Oil Waytax #95 and Mobil-Vactra #4 are common lubricants that have been used successfully in some applications.

## Ball Bearing Screws & Preload Assemblies (if so equipped)

### Ambient Air Temperature +5° F to +77° F

Gulf Oil Company .....	Gulf EP S60
Chevron Oil Company.....	Non-Leaded Gear Compound 150
American Oil Company.....	Spartan EP 150
Mobil Oil Company.....	Mobilgear 629
Shell Oil Company .....	Omala Oil 100
Texaco Oil Company.....	Meropa 150

## Feed Drive Gear Unit

### Ambient Air Temperature +32° F to +104° F

Gulf Oil Company .....	Gulf EP S100
Chevron Oil Company.....	Non-Leaded Gear Compound 220
American Oil Company.....	Spartan EP 220
Mobil Oil Company.....	Mobilgear Oil 220
Shell Oil Company .....	Omala Oil 220
Texaco Oil Company.....	Meropa 220

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## Arbor Bearing Greasing

1. For grease gun applications by volume, inject 1/3 ounce of Lube Master “Courier” every 400 hours of operation. Monitor the bearing temperature weekly and immediately after greasing (up to 150° F can be considered normal). Adjust the greasing interval if it appears necessary from the temperature monitoring. If the temperature rises steadily week after week, to over 200° F, grease the bearings even if 400 hours of time has not elapsed. Then monitor the bearing after greasing
2. If the temperature rises dramatically after a greasing, then probably too much grease was added. If this condition occurs, open the bearing housing and remove the excess grease, close the bearing housing and run the arbor – again monitoring the temperature.
3. Yearly, open the bearing housings and inspect the condition of the grease. If contamination is evident wipe out excess grease and clean and repack to recommend packing instructions.
4. For repacking or packing a new bearing, use Lube Master “Courier” grease. Use 30% fill, which is 26.7 grams (29.7cc). The following break in procedure should be used for a new packing or repacking.
  - a. Jog the arbor 3 or 4 times, but do not allow the arbor to reach full speed; allow the arbor to stop rotating.
  - b. Run the arbor at full speed for one minute
  - c. Shut down and allow the bearings to cool to approximately the ambient temperature.
  - d. Run the arbor monitoring the temperature continuously. If the temperature exceeds 180° F, shut down and replace the bearings. Try again.
  - e. Place the machine into production.

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## Multi-Use EP Grease

Molylube 126 EP Grease is a new superior fibrous aluminum complex grease. This grease has been formulated with molybdenum disulfide and molbuamin to obtain in anti-wear and extreme pressure qualities.

When heavy bearing loads are encountered by Molylube 126 EP Grease and boundary lubrication occurs, molbuamin and molybdenum disulfide are activated to form a continuous monomolecular film. This film on metal surfaces resists metal to metal contact and reduces wear in “contact lubrication.”

Molylube 126 EP Grease will also lubricate better under hydrodynamic lubrication conditions because of the exceptional mechanical stability of this grease. Its excellent water resistance and high drop points make a superior multi-use grease.

## Typical Specifications

Grade Number	<u>0</u>	<u>1</u>	<u>2</u>
Worked Penetration @ 77°F, 60 Strokes	355 – 385	310 – 340	265 – 295
Penetration After 100,000 Strokes, Max.	390	340	295
Soap Type	Aluminum Complex	Aluminum Complex	Aluminum Complex
Drop Point °F	490	500+	500+
Water %	0	0	0
<u>Oxidation Stability</u> ASTM (D-942-50) Lbs Pressure Drop, Max.	2	2	2
<u>Water Washout Test</u> ASTM (d-1264-53T) @ 100°F, % Loss	- - -	Nil	Nil
Corrosion Test, ASTM D-174-607	Pass	Pass	Pass
Encor Corrosion Test	Pass	Pass	Pass
Timken O.K. Load, Lbs., Min.	55	55	55
Color	Gray	Gray	Gray

# *Universal Lubrication*

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**TENONER**

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