

# BIO LUBE



**Smith Sawmill Service**  
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## Operating Instructions

for

## LUBE MASTER SPRAY SYSTEM

### *1000 Series*



# BIOLUBE

The home of Lubie® saw lubricating systems and Lubie lubricants.

## Operation:

The function of the Lubie sprayer is to apply a small amount of lubricant/coolant through atomizing nozzles onto the cutting tool. The high-pressure air drives the lubricant/coolant onto the tooling.

The higher the speed of the tooling the higher the air pressure you will use. Band saws generally use 20-60 psi, moulders, finger jointers and circle saws 90-120 psi.

Disconnect or shut off air supply to the spray system.

1. After tank is completely de-pressurized remove cap.
2. Fill tank with Lubie approved lubricant.
3. Replace cap and reconnect or turn on air supply.
4. Maximum air pressure: 150 PSI



## IMPORTANT NOTES:

1. Use Lubie approved lubricants only.
2. Never use any flammable or combustible liquids (class 3 or 4) in Lubie spray systems; DIESEL FUEL IS CLASS 4.
3. Never remove the fill cap while the tank is pressurized. Always allow system to de-pressurize before attempting to remove fill cap.
4. Water-based lubricants will freeze in winter. If the temperature of your mill falls below 32° F then install a belly band tank heater (PN: OP-4) or build a heated enclosure around the tank.
5. It is important that you install the air pressure regulator with filter. Rust, scale and other contamination in air lines can clog the very small ports in the metering venturi.
6. The closer the nozzle to the tooling the better the lubricant delivery. Make sure and leave enough room to easily remove the tooling.

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## **Assembly and Mounting**

Unpack the box and check to make sure the tank, nozzles, tubing, air pressure regulator and any option parts are un-damaged. Generally mounting will take 45 minutes or less. You will need a compressed air line with ball valve and a ½” male NPT fitting going to the air pressure regulator.

We do not recommend nozzles on the outside of the band unless you are having problems with extreme pitch build-up, which is rare for most large vertical head saws and resaws cutting hardwoods. Two nozzles above the guide and two nozzles on the inside back.





Sometimes a narrow band has pitch problems on the outside and the Lube Master can help. Direct the outside nozzle to the band just before it enters the cut. Outside nozzles should only be installed at the guide just before the blade goes into the wood.

1. Sit the tank upright (it will not work laying on its side) somewhere close to the machine where you can fill the tank easily and where employees do not trip over the air line or tubing that runs to the nozzles.
2. Mount the spray nozzles/brackets so that they are between ½” and 3” away from the tooling. This will vary depending upon whether it’s a band saw, circle saw, finger jointer or other tooling. See nozzle mounting pictures. The closer the nozzle to the saw the better but leave room for saw removal.
3. Run the ¼” poly tubing from the tank to the nozzles and wire tie them so they don’t get caught in your machine.
4. Fill the tank with lube and attach your airline to the air pressure regulator.
5. You are now ready to start the sprayer. See Lubricator adjustment & pressure settings.

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## Nozzle Mounting:

	<p>12" Band Saw with 2 nozzles mounted just above guide, 2 additional nozzles go on the inside of the saw. Any place that is easy to attach the nozzles on the inside back is OK. The objective is to coat the blade before it reaches the top wheel. This prevents any pitch transfer to the wheel.</p>
	<p>1 1/2" narrow band inside mount.</p>
	<p>1 1/2" narrow band standard mount</p>
	<p>Finger Jointer</p>

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Now that the nozzle mounting is done, fill the tank with lube and attach your airline to the air pressure regulator. Turn on the air and set the air pressure regulator for the saw or tooling you are using. See the pressure settings below. Next set the lubricant flow by turning the black knob on the top of the clear sight dome.

## **Lubricator Adjustment & Pressure Settings**

**LEANER – Clockwise**

**RICHER –Counter Clockwise**

### **Drops per Minute**

**25 dpm**

**50 dpm**

**100 dpm**

**200 dpm**

### **Total Volume**

**1oz/hr (1/2 pint per 8 hours)**

**2 oz/hr (1 pint per 8 hours) standard narrow band setting, 2 nozzle**

**4 oz/hr (1 quart per 8 hours) standard 7"-12" band setting, 4 nozzle**

**8 oz /hr ( 1/2 gal per 8 hours) standard 12-14" band setting, 4 nozzle**

**3/4-2" band saws 20-30 psi**

**3-8" band saws 30-40 psi**

**10-14" band saws 50-70 psi**

**Circle saws, moulders, finger jointers 90-110 psi**

Your final adjustment will be to adjust the lubricant flow to each nozzle. This is done by opening or closing the ball valves on the top of the lubrication unit.

For band saws the best general adjustment is for the line that runs to the inside of the band pointing at the gullet and tooth area is left fully open. The nozzle that points to the inside body of the band is 50% open and the two nozzles spraying the outside of the band are 25% open. If you see build-up stating in any area of the band you can then fine tune the amount of lubricant to that area.

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## **Cold Weather Operation**

All water-based lubricants will freeze in the lines and tank at below 32F. There are a number of solutions to this problem.

1. Tank freezing is easily remedied by;
  - a. Installing a 110-volt belly band heater on the tank (PN: OP-4)
  - b. Building a box around the tank and putting a 25-watt light bulb in the box.
  - c. Sitting the tank on top of a metal pail and putting a 50-watt light bulb in the pail.
  
2. Lube freezing in the lines is the most common problem and to solve this first gently turn the black drip adjustor knob on top of the lubricator until it stops dripping. Wait for a minute or two and let the air pressure blow all the lube out of the lines. Then turn off your airline ball valve or on the air pressure regulator turn off the air. In the morning simply turn on the air and readjust the lube drip rate.

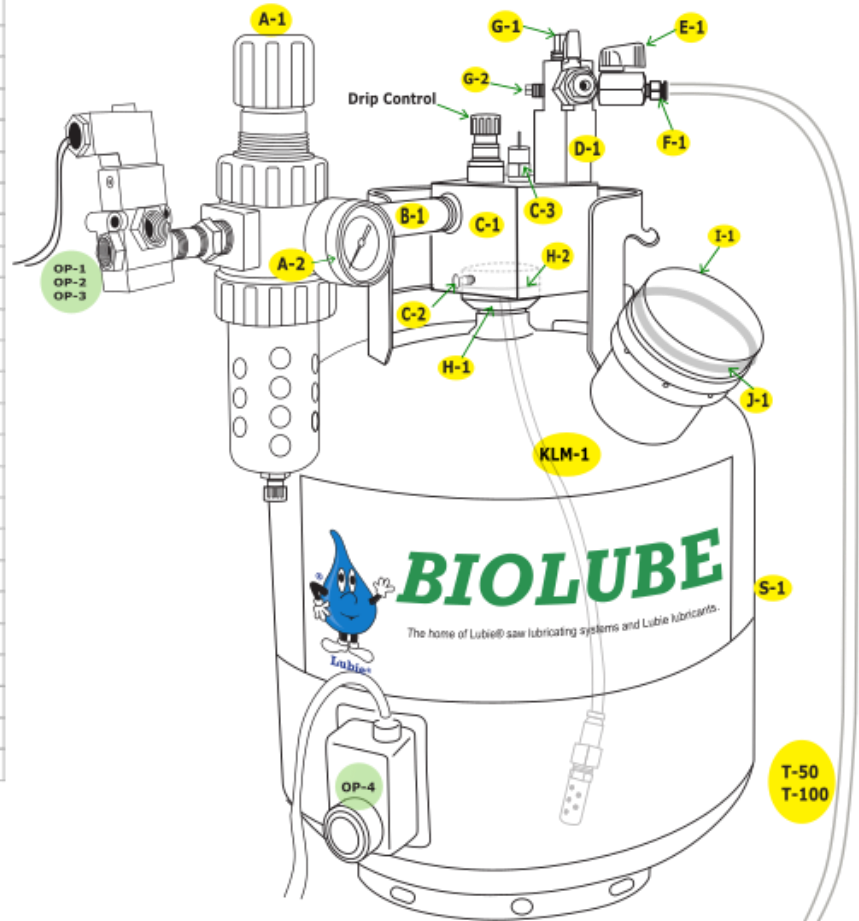


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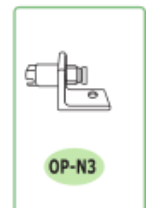
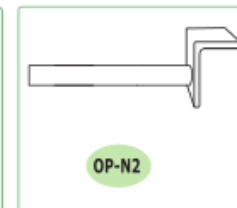
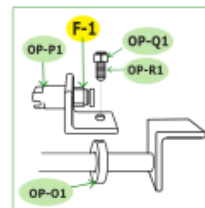
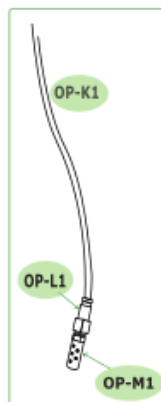
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## 1000 SERIES LUBE MASTER SPRAY SYSTEM

Part #	Description
1000-2	2 nozzle spray system
1000-4	4 nozzle spray system
1000-6	6 nozzle spray system
1000-8	8 nozzle spray system
A-1	Air regulator 1/2" ports
A-2	Air pressure gauge
B-1	1/2" x 6" pipe
C-1	Venturi 1/2" ports
C-2	1/4-20 thumb screw
C-3	150 psi pressure relief valve
D-1	4 port manifold
E-1	1/8" flow control valve
F-1	1/8" Press fitting
G-1	1/2" Plug
G-2	1/8" plug
H-1	Venturi to tank adapter
H-2	Gasket for adapter
I-1	Safety cap for fill port
J-1	2" gasket for safety cap
KLM-1	Tank pick-up assembly
N-4	1 spray bar with 2 nozzles
S-1	5-gallon tank with 2" fill port
T-50	50' 1/4" Nozzle tubing
T-100	100' 1/4" Nozzle tubing



Optional Equipment	
Part #	Description
OP-1	Solenoid air valve 110V 3/8" NPT
OP-2	Solenoid valve 24V 3/8" NPT
OP-3	Solenoid valve 12V 3/8" NPT
OP-4	Tank heater w/thermostat
OP-5	Venturi rebuild kit
OP-6	Drip control repair kit-venturi
OP-K1	5/32" nylon tubing
OP-L1	5/32" press fitting
OP-M1	Filter
OP-N1	2 hole nozzle mount
OP-N2	Spray bar with mount
OP-N3	1 Nozzle Assembly
OP-O1	1/2" ID Shaft collar
OP-P1	110° brass nozzle
OP-Q1	1/4" x 20 locking nut
OP-R1	1/4" x20 x 3/4" set screw



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## WARNING:

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY, AND PROPERTY DAMAGE.

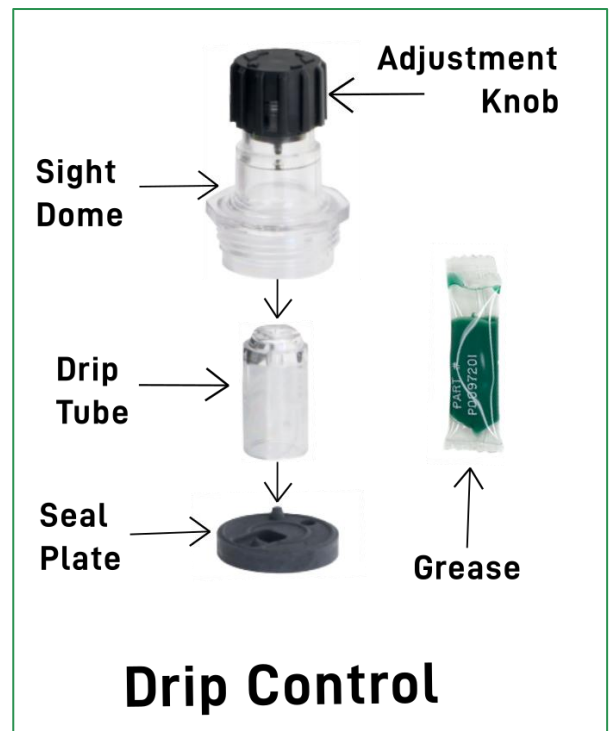
It is important to analyze all aspects of the applications, including consequences of any failure and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.

The products described herein, including without limitations, product features, specifications, designs, availability and pricing, are subject to change by Biolube and its subsidiaries at any time without notice.

Contact your local representative for extra copies of these instructions.

### To replace/remove the Drip Control (P# OP-6)

1. Turn off air supply and depressurize the unit
2. Unscrew drip control by rotating sight dome counterclockwise. Carefully remove seal plate.  
*Note: Do not damage surface on body underneath seal plate.*
3. Lubricate seal plate with grease found in kit. Align pin on underside of seal plate with mating hole in body and install seal plate.
4. Install sight dome and drip tube. Tighten to 10–15-inch pounds of torque.
5. Turn on air supply and check for leakage. If leaks occur, repeat repair procedure.





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## WARNING

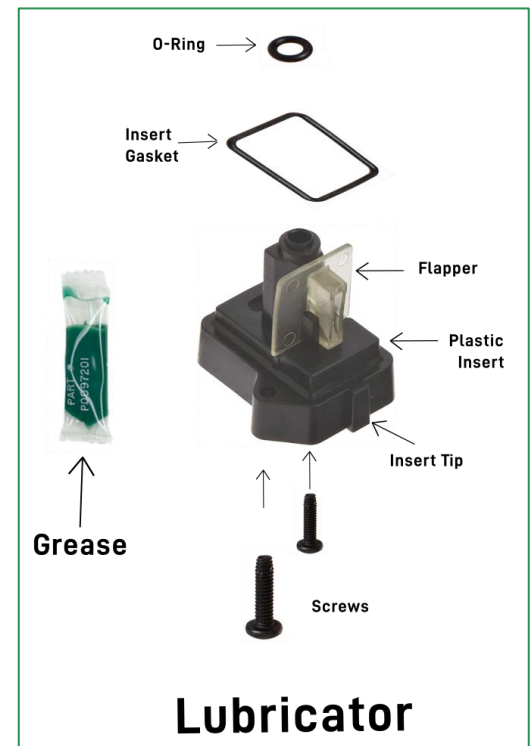
**To avoid unpredictable system behavior that can cause personal injury and property damage.**

- Disconnect air supply and depressurize all airlines connected to this product before installation, servicing, or conversion.
- Operate within the manufacturer's specified pressure, temperature and other conditions listed in these instructions.
- Medium must be moisture-free if ambient temperature is below freezing.
- Service according to procedures listed in these instructions.
- Installation, service, and conversion of these products must be performed by knowledgeable personnel who understand how pneumatic products are to be applied.
- After installation, servicing, or conversion, air supply should be connected and the product tested for proper function and leakage. If audible leakage is present, or the product does not operate properly, do not put into use.
- Warnings and specifications on the product should not be covered by paint, etc. If masking is not possible, contact your local representative for replacement labels.

### To service Venturi Lubricator (Use P# OP-5)

Turn off air supply and depressurize unit.

1. Unscrew thumb screw (P# C-2) and remove from the Venturi (P# C-1) from the tank.
2. Remove the two screws in the body holding the plastic insert. *Notice the direction the insert tip on the outside of the plastic insert!*
3. Clean all internal sealing surfaces. The lubricant you use generally works well for cleaning.
4. Lubricate all seats and O-rings with grease found in kit.
5. Install O-ring into plastic insert.
6. Sub-assemble the plastic insert and seal. *Note: The flapper must be assembled so that the hole in the flapper lines up with the hole in the insert.*
7. Install plastic insert. *Notice the direction the insert tip on the outside of the plastic insert!*
8. Tighten the two screws to 10-12 inch pounds of torque.
9. Install Venturi body (P# C-1) onto tank and lock into place.
10. Tighten thumb screw (P# C-2).
11. Turn on air supply and check lubricator for leakage. If leakage occurs, **Do Not Operate** - repair again.



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## Lubie® Lubes

Lubie Lubes are formulated for specific uses to meet your particular needs. No silicones or waxes are used in any of our products and most are free of toxic or hazardous chemicals and are biodegradable. Lubricants are available for both saw and moulder bed applications.

### Saw Lubricants

Oil Based					
Lubie® Lubes	Lube Cut 1	Lubie 2	Lubie 210	Lubie GP	Lubie 7WG
Hardwood	X	X	X	X	X
Softwood	X		X		
Freezable					
Diluteable					
Wide Band	X	X	X	X	X
Narrow Band	X	X	X	X	X
Gang Rip	X	X	X	X	X
Finger Jointer	X	X	X	X	X

*Oil based lubes are designed for unheated facilities that may freeze.*

Water Based				
Lubie® Lubes	Lubie 3ST	Lubie 43	Lubie 4	Lubie 9
Hardwood	X	X		X
Softwood	X	X	X	
Freezable	X	X	X	X
Diluteable	X	X	X	X
Wide Band			X	X
Narrow Band			X	X
Gang Rip	X	X	X	X
Finger Jointer	X	X	X	X

*All water based lubes will freeze at 32°*

### Moulder Bed Lubricants

Lubie® Lubes	Lubie 200	Lubie 200 LV	Lubie GPX
Oil Based	X	X	X
Hardwood	X	X	
Softwood			X

Our coolants and cleaners are formulated for all types of manual and automatic grinding and machining operations. They are commonly used with high-speed steel, carbide or coated carbide tooling. Economical and resistant to bacterial growth, these coolants have excellent water dilution rates, resist cobalt leaching, provide effective corrosion and rust protection extending tool life.

### Grinding Coolants

Lubie® Lubes	Lubie 312	Lubie 325	Lubie 329	Lubie 427	Lubie 501	Lubie 702	CoHib A
Oil Based					X	X	
Water Based	X	X	X	X			X
Steel	X			X			
Carbide		X	X		X	X	X

*CoHib A in an additive for recharging carbide coolants.*



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