

90-404* (revised 01/05)

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MINIATURE SERIES LUBRICATOR

Operating Instructions and Parts List

Application:

The Miniature Series Lubricator is designed for applications where space is limited such as compact control panels and miniaturized circuits. These lubricator units feature tough die cast zinc body construction with either 1/8" or 1/4" in / out ports.

Features & Benefits:

- Tamperproof cap can be used to adjust oil delivery rate and lock desired lubrication level in place.
- Provides constant oil delivery at both steady and pulsing air flows.
- See-through drip tube gives visual indication of lubricant flow rate.
- Unit can be completely disassembled by hand, simplifying maintenance requirements.

Accessories:

	Model No.
Metal Bowl	ML140-41M

Technical Data:

Maximum Supply Pressure:

Plastic Bowl	150 PSI
Metal Bowl	250 PSI

Maximum Operating Temperature:

Plastic Bowl	120° F
Metal Bowl	250° F

Material:

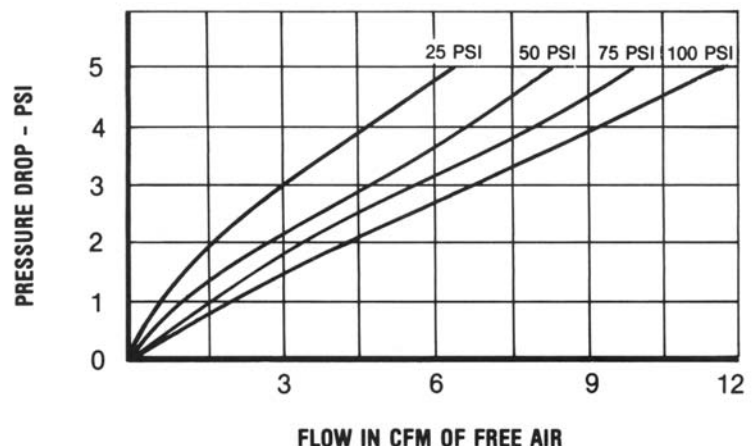
Body	Zinc Die Cast
Standard Bowl	Transparent Polycarbonate
Optional Bowl	Zinc Die Cast

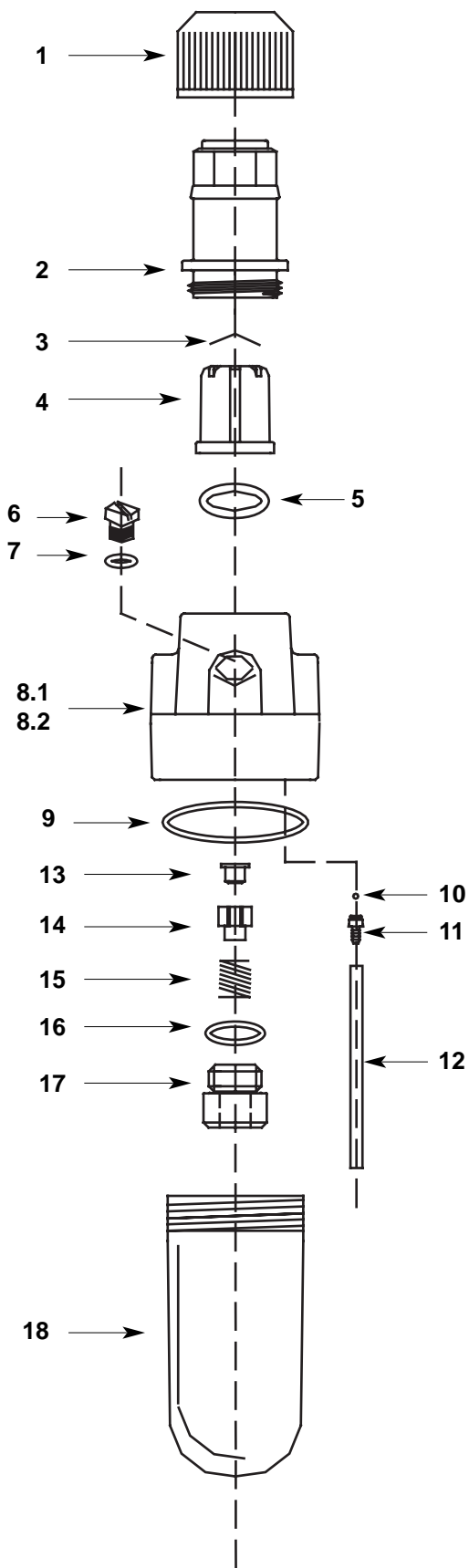
Dimensions and Weights:

Height5"
Width	1 1/2"
Weight	1/4 lb.



Performance Data:





Rebuilding Kit:

Lubricator Bowl Repair Kit (includes item 9 and 18) . . . ML2RK

We reserve the right to make engineering changes in design or materials without notification.

General Description of Operation:

As filtered and regulated air enters the lubricator, a small portion is diverted through the inlet passage to pressurize the **lubricator bowl** (18). As air flows through the lubricator, the majority of the air travels through the venturi section while the rest is slightly deflected to flow past the **back pressure valve** (14). The velocity of the air flowing through the venturi section creates a lower pressure at the throat section. This lower pressure allows oil to be forced from the **bowl** (18) through the **oil pickup tube** (12), past the **oil check ball** (10) to the **sight dome assembly** (2).

The oil flow rate is controlled by the **adjusting cap** (1). Oil flows through the clearance between the inner and outer **sight dome assembly** (2) where drops are formed and then drip through the **drip spout** (4) and into the throat section. Here it is broken into fine particles and mixed with the swirling air. This lubricated air is then reunited with the air that bypassed the **back pressure valve** (14) and exits through the out port.

As air flow increases, the **back pressure valve** (14) opens, allowing additional air to bypass the venturi section. This also creates a pressure drop through the venturi, increasing the oil delivery rate in proportion to the increased air flow rate.

The **oil check ball** (10) assures that when there is no air flow, oil in the **oil pickup tube** (12) is held in place, shortening the time required to resume oil delivery when flow is reestablished.

Lubricant –

Lubricants, as recommended by the equipment manufacturer, may be used, provided that they are not heavier than SAE#40 (S.U.V. 800 SEC at 100°F). **We recommend the use of Coilhose nondetergent ATL rustproofing lubricant in temperatures above 40° F. For applications between 45° F and -45° F, we suggest using Coilhose ATLW lubricant.**

Filling –

Once the system has been depressurized, the lubricator may be filled through the fill port even though the bowl remains pressurized. After carefully removing the fill plug, which depressurizes the bowl, insert the tip of a long spout oil can into the bottom of the fill port to avoid any blow back. Lubricator bowl should be filled to within 1/2" of the top.

Lubricators may also be filled by removing the bowl after the system has been depressurized. **Once the bowl has been filled and replaced, be sure it is in the locked position before repressurizing the system.**

Adjustment:

When the adjustment knob is turned completely clockwise, oil is not being delivered through the system and the equipment is not being lubricated. The adjusting knob should be set to the desired drip rate after the air has been turned on and flowing. Turning the adjustment knob in a clockwise direction reduces the oil feed rate. Although proper lubrication is determined through demand and experience, a good starting point is one to two drops per minute. To check lubrication rate, we suggest the following: Hold a piece of cardboard at the exhaust hole of the component in the least favorable position (farthest away from the lubricator or in the highest position). After the unit has run for about 100 strokes, an oil film on the cardboard will indicate that the setting is correct. If the oil film on the cardboard runs, the setting is too high. In order to prevent gumming, it is preferable to add too little rather than too much oil.

Cleaning and Maintenance:

The lubricator will provide long periods of uninterrupted service as long as both the air and oil supplies are kept clean and the oil level is kept above the end of the tube in the bowl. Failure of oil to drip through the sight dome, regardless of the position of the adjusting knob, indicates that cleaning is required. The lubricator does not need to be removed from the line for cleaning. Depressurize the air line and disassemble the lubricator using the parts drawing on this page as a guide. Cleaning is normally needed only in the oil metering area. After unscrewing the adjusting knob / sight dome assembly, remove the inner drip spout and clean all components with warm water and mild household detergent only.

Components:

Chart No.	Description	Model No.	Chart No.	Description	Model No.
1	Adjusting Cap	8742-31A	10	Oil Check Ball	8742-39
2	Sight Dome Assembly	8742-32A	11	Drip Tube Barb	ML140-17
3	Spring Washer	8742-42A	12	Oil Pickup Tube	ML140-65B
4	Drip Spout	8742-33A	13	Back Pressure Valve Seal	8742-35
5	Drip Spout O-Ring	26L-14	14	Back Pressure Seal Body	8742-36
6	Fill Plug	8742-34	15	Back Pressure Return Spring	8742-37
7	Fill Plug O-Ring	4275-10	16	O-Ring	30-6118
8.1	1/8" Lubricator Body	ML180-1	17	Back Pressure Retainer	8742-38
8.2	1/4" Lubricator Body	ML140-1	18	Polycarbonate Bowl	ML140-41L
9	Bowl Gasket	8722-31			