

Spirax-Monnier ML3 Miniature Compressed Air Lubricator Installation and Maintenance Instructions

How to fit

Fit in horizontal pipework with the air flow in the direction of the arrow, and bowl vertically downwards. The lubricator should be fitted as close as possible to the unit it is serving. A Spirax-Monnier MF2 filter should be fitted upstream to prevent any contaminants reaching the system to be lubricated.

To adjust lubrication rate

The normal oil requirement for most pneumatic systems is one drop of oil for every 5 dm³ of free air used. To simplify setting up the oil drip rate, particularly for low air flows, only a proportion (approximately 5%) of the oil drops as seen in the sight dome (1) is carried into the system. To increase the oil rate, turn the oil adjustment screw (2) anticlockwise.

To fill bowl

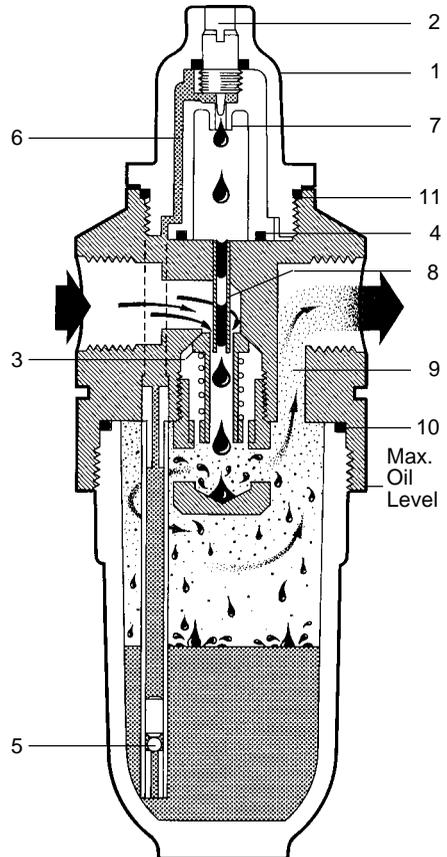
Turn off air supply. Remove bowl guard if fitted. Unscrew bowl. Clean bowl if required. Refill bowl with suitable lubricant (see paragraph below), to level shown (bottom of bowl thread) and refit carefully, with bowl seal (10). A good hand tight joint between bowl and body is correct. Turn on air supply.

Lubricant

The oil used must be compatible with the equipment being served by the lubricator, and with the materials of construction of the lubricator itself. Generally the oil will be of the free fogging type in the viscosity range of 7.5 to 64 centistokes (45 to 280 seconds Redwood No. 1) at 38°C. Use only new clean oils.

How does it work

Compressed air entering the lubricator pressurises the complete unit. Air flow passing through or around the Venturi valve (3) causes a slight pressure reduction, which is sensed in the sight dome (1). This pressure differential causes oil to flow up the pick up tube (past the non return valve 5)), and into the transfer port (6) in the sight dome, to the drip point (7). The oil drips formed are carried into the air stream through the transfer tube (8) and are atomised in the Venturi area. The larger oil particles are returned by gravity to the bowl, whilst the very small oil particles mix fully with the compressed air and are carried out into the system through port (9).



To service lubricator

Shut off air supply and vent system pressure to atmosphere. Remove bowl guard if fitted. By hand, unscrew bowl slowly to allow any residual pressure to vent. To clean the bowl, wash in soap and water only (do not use solvents or proprietary cleaners) and wipe dry with a lint free cloth, reassemble, having filled bowl to the appropriate level (bottom of bowl thread) with the clean correct oil. If the sight dome assembly has been removed, clean as for bowl. Reassemble ensuring the two 'O' rings (4 and 11) are correctly seated. Do not over-tighten bowl or sight dome assembly.

Warning

Polycarbonate bowls are attacked by phosphate ester fluids, solvents, paint thinners and carbon tetrachloride. These and similar substances should never be allowed to come into contact with the bowl. Certain compressor lubricating oils also contain additives harmful to polycarbonate and, where there is any doubt, we recommend, in the interest of safety that a bowl guard be fitted.

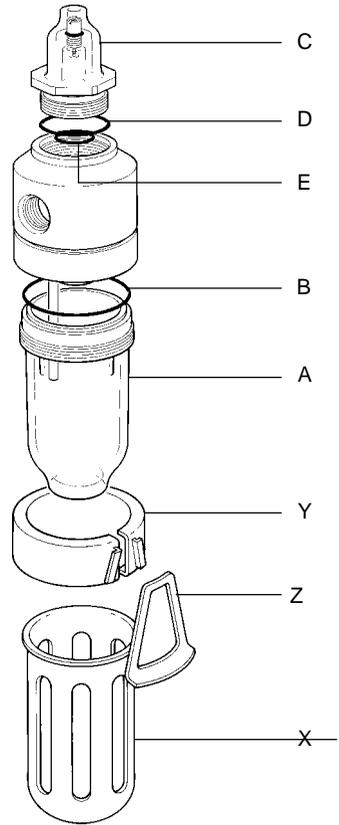
Spare parts

AVAILABLE SPARE

Bowl assembly	A,B
Sight Dome Assembly	C,D,E
Bowl Guard Assembly	X,Y,Z

How to order

Example — 1 Bowl Assembly for ¼" Spirax-Monnier ML3



Spirax-Monnier Products

General Safety, Installation and Maintenance Guidelines

WARNING

As with all Pressurised Systems, do NOT attempt ANY Installation or Maintenance function if there is ANY pressure in the product or connected system.

Spirax-Monnier

Spirax Monnier compressed air products are of well proven and simple design, with high natural levels of designed safety built in. However, used or installed incorrectly, their performance and that of the system they are protecting or controlling, may suffer. The information given indicates the product limiting conditions, maintenance and installation requirements and any specific component disposal needs.

Product Maintenance - See Over

Installation and Operation

1. Filters, Filter/Regulators, Lubricators, Flow Meters, Separators and Drain Traps should be fitted in horizontal pipelines, with the bowls vertically downwards.
2. Regulators and Ball Valves can be installed in any position.
3. On Pressure Regulators and combined Filter/regulators, a Pressure Gauge can be connected to one of the 1/8" ports. The gauge should be selected to cover the maximum pressure range of the main Control Spring. The gauge will indicate the downstream or controlled pressure.
4. Ensure that the Control Spring range for Regulators and Filter/Regulators fully meets the pressure requirements of the system.
5. There are Maximum Operating Pressures, and Maximum Operating and Environmental Temperatures for each product. These are shown in the table over.
6. Adequate space should be provided around any product to allow easy access for routine servicing requirements.
7. Products fitted with a Bowl (Polycarbonate or Metal) should be adequately drained - manually or automatically - to reduce the potentially harmful effects of water carryover.
8. **WARNING** Polycarbonate Bowls and Sight Domes, and Sight Levels fitted to Metal bowls, may be attacked by Phosphate Ester based fluids, Solvents, Chemical cleaners, Carbon Tetrachloride, etc. These and other similar substances should never be allowed to come into contact with these product components. Certain compressor lubricating oils also contain additives harmful to these components. Where there is any doubt, we recommend, in the interests of safety, that Bowl Guards or Metal Bowls are fitted.
9. Local regulations may restrict the use of this product below the conditions quoted.
10. For more detailed information on any individual product, please ask for the appropriate Technical Information Sheet listed in the table.

For Maximum Pressures/Temperatures see overleaf
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MAXIMUM PRESSURES/TEMPERATURES

FILTERS	Polycarbonate Bowl		Metal Bowl		Metal Bowl with Sight level		DISPOSAL CLASS	TI
	bar	°C	bar	°C	bar	°C		
MF2	10	50	-	-	-	-	1 & 3	P050-05
IF2/D/A	10	50	17	80	17	70	1 & 2	P500-01
IC3/4/DA	10	50	17	80	17	70	1 & 2	P501-01
IXI	10	50	17	70	17	70	1 & 2	P057-01
SF3/A	-	-	17	80	17	70	1 & 3	P050-03

REGULATORS

MR1/2/3	21 bar 70°C : CONTROL RANGES : 0.2/2. 0.3/4, 0.7/9 bar	1 & 3	P051-01
IRI	20 bar 70°C : CONTROL RANGES : 0.2/3.5, 0.5/1 bar	1 & 2	P058-01
SR2	21 bar 70°C : CONTROL RANGES : 1.3 - 17.0 bar	1 & 3	P570-01
SR3	21 bar 70°C : CONTROL RANGES : 0.2/4, 0.3/9 bar	1 & 3	P570-03

FILTER REGULATORS

IP2/A/D	10	50	17	80	17	70	1 & 2	P510-01
	RANGES : 0.2/3.5, 0.5/10 bar							
MP2	10	50	-	-	-	-	1 & 3	P054-01
	RANGES : 0.2/2.0, 0.3/4.0, 0.7/9.0 bar							
MPC2	10	50	-	-	-	-	-	P054-04
	RANGES : 0.2/2.0, 0.3/4.0, 0.7/9.0 bar						1 & 3	

LUBRICATORS

ML3	10	50	-	-	-	-	1 & 3	P052-07
IL1	10	50	17	80	17	70	1 & 2	P059-01
SL3	-	-	17	80	17	70	1 & 3	P052-04

OTHER PRODUCTS

IFM2	10	50	-	-	-	-	1 & 2	P580-01
S.M.S.	-	-	17	70°C	-	-	1 & 3	P050-17
BALL	all to 15 bar & 45°C							
VALVES (all)	(see performance graph on TI for full details)						1 & 4	P560-01
DRI-LINE	-	-	16	80°C	-	-	1 & 3	P050-07
EDT 1	16	60	-	-	-	-	1, 4 & 5	P059-01

DISPOSAL

1. Some plastic and/or rubber components
2. Main body Zinc - epoxy coated
3. Main body Aluminium - epoxy coated
4. Brass and Steel
5. Electronic Components

Note

Customers are reminded that under UK and EC Health, Safety and Environmental Law, when returning products to Spirax Sarco they must provide information on any hazards and the precautions to be taken due to contamination residues or mechanical damage which may present a health, safety or environmental risk. This information must be provided in writing including Health and Safety data sheets relating to any substances identified as hazardous.