STU-6001

07-29-08

ECN 4949



MASTER PNEUMATIC

A6004[±]* & A6006[±]* Installation and Maintenance REV MJF 06-19-14

6701 - 18 Mile Rd | Sterling Heights, MI 48314 | Phone: (586) 254-1000 | Fax: (586) 254-6055 | Email: mp@masterpneumatic.com

THANK YOU!

You have just purchased a quality Serv-Oil Single Point Lubricator from Master Pneumatic.

With care in its installation and maintenance, you can expect it to have a long and economical service life Before you go any further, please take a few minutes to look over this information,



Installation & Operation Procedures

The Serv-Oil Single Point Lubricator with Integral Reservoir

Operating Principle:

A 3-way flow sensing valve opens and pressurizes a pneumatic counter each time an air flow is initiated. When air flow stops, the valve closes and exhausts air from the counter. The counter may be set to pressurize an adjustable servo-meter every cycle, every 5th cycle or every 10th cycle (for less oil M/P offers a double counter consult factory). When the servo-meter is pressurized, oil is injected into an 1/8th" pre-filled nylon tube that is connected to the lubricator outlet and runs inside the air hose to the tool. The amount of oil dispensed when the servo-meter is actuated may be adjusted down to 1/10th of full volume on the 1/2 and 1 drop servo-meters. The adjustment for the 2 drop version is 3/10th of full volume. (Shut off models are also available)

MODEL	PORTS	AIR PRESSURE PSIG BAR	OIL SUPPLY PSIG BAR	MIN FLOW SCFM LITERS/S	RATED FLOW W/ 3 PSI DROP AT 100 PSIG
A6004‡*	1/2"	45-150 3-10.2	0-30 0-2	5 10.6	60SCFM 127 L/S
A6006‡*	3/4"	45-150 3-10.2	0-30 0-2	5 10.6	100SCFM 212 L/S

Installation:

1. Install a filter or filter and regulator before the Serv-Oil Single Point Lubricator.

2. Lubricator has been factory tested with oil. However any air introduced from the oil supply must be evacuated. Follow these start up procedures:

A) Provide an oil supply. For manual fill, use M/P reservoir #M476R.

B) Central Oil Supply: If lubricator is installed vertically, install M481R Sight Dome Reservoir (air eliminator) at oil supply port having the plastic plug. If installed horizontally, lubricator should be positioned with this plug pointed up and use M482R Sight Dome Reservoir .

C) Oil supply tubing to Sight Dome Reservoir must be 3/8" O.D minimum. This is essential to prevent air lock.

3. Start Up Procedure: With oil supply connected pushdown on black plastic valve on top of Sight Dome Reservoir to fill bowl with oil. Loosen the 1/4" metal plug in the alternate servo-meter oil port and evacuate all air from the system (Note: some oil will leak out). This is a vital procedure to insure that the lubricator will dispense oil.

4. If oil supply runs dry and air enters central oil supply system, start-up procedures must be repeated.

5. Remove red protective cap from barbed fitting in outlet of the lubricator. Push the Manual Override Button several times until oil appears at the fitting.

6. Remove the red cap from one end of the nylon tube and connect to barbed fitting using the following procedures:

A) Make a square cut at end of nylon tube using a proper tube cutter.

B) Hold tube with M/P modified needle nose pliers (Part # 456-147M). Push and wiggle tube onto barbed fitting until it bottoms out. Note: Check Valve holder tool (Part# 456-148) can also be used to hold the brass barb (Part# 420-143) after it is removed from outlet side of Single Point Lubricator.

NOTE: Master Pneumatic offers optional Coaxial Fitting to simply this process.

7. Remove red cap from other end of the 1/8" nylon tube. Cut tube 3-4" shorter than air tool hose as some hoses contract when pressurized.

A) An Internal Check Valve (Part # 420-160) must be used. Install at tool end of nylon tube using M/P modified needle nose pliers (Part # 456-147M) and procedures as described in (6) above. M/P recommends using Check Valve holder tool (Part# 456-148) and modified needle nose pliers (Part# 456-147M) for installing Check Valve on nylon tube.

B) Feed tube through hose by pushing and shaking hose or using electricians snake.

8. Connect air tool to air hose and pressurize assembly. Cycle tool until oil appears at tool exhaust. The yellow counter indicator should move out and in with each tool cycle. The manual override button should go in every 5 tool cycles at factory setting, or every 1, 5 or 10 tool cycles if counter has been field adjusted.

A) To eliminate any transient air from the system, it is desirable to operate the tool during the first few hours of production with the adjustment at factory setting. However be prepared to readjust units, as some complaints of over-lubrication of smaller tools may result.

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Installation & Operation Procedures

Pneumatic Counter Adjusting Instructions: A418-04M Adjustable Counter:

1. Use small screwdriver to move the lever as shown. The switch is pre-set to operate the servo-meter every 5th tool cycle. If the indicator is moved to #1 setting the servo-meter will be actuated every tool cycle If moved to the #10 setting, the servo-meter will be actuated every 10th tool cycle.

2. Use adjusting key to adjust oil volume per servo-meter actuation. It is pre-set to deliver 1 full drop and may be adjusted downward to a minimum of 1/10 drop.

3. Adjustment instructions for various tool sizes are provided on the tag attached to each SPL.



Adjustment Knob Locking Instructions:

To put volume control knob into locked position, push on knob until click is felt. To unlock, wedge 457-34 key between volume control knob and shoulder until click is felt. Volume control knob will rotate freely. Use hex socket on key 457-34 to turn manual override button clockwise for more oil and counterclockwise for less oil, or turn volume control manually.



Unlocked

Adjustment Data							
MODEL NO	OIL DELIVERY (MAX)	OIL DELIVERY (MIN)	DROPS/ CLICK				
A60045*	1/2 Drop/Cycle	.05 Drop/Cycle	0.01				
A60041*	1 Drop/Cycle	.1 Drop/Cycle	0.02				
A60042*	2 Drop/Cycle	.6 Drop/Cycle	0.04				
A60065*	1/2 Drop/Cycle	.05 Drop/Cycle	0.01				
A60061*	1 Drop/Cycle	.1 Drop/Cycle	0.02				
A60062*	2 Drop/Cycle	.6 Drop/Cycle	0.04				

Adjustment Recommendation:

Locked

A lube rate of 1drop/20 std. Cu. Ft. of air used is recommended. Use formula to calculate.

Drops/Cycle= <u>Air Consumption (SCFM) x Duty Cycle (Sec)</u> 1200

1 DROP = 1/30cc (0.030 ml)

Recommended oil viscosity: 31 to 1000 SUS @ 100 $^\circ\text{F}.$ For other viscosities, contact Master Pneumatic.

Drop Conversion chart					
1/2DROP	1/60cc	0.015 ml			
1 DROP	1/30cc	0.030 ml			
2 DROP	1/15cc	0.060 ml			



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456-147M

456-148

Bent Nose Pliers

Check Valve Installation Tool

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Parts List			Section View			
KEY DES	CRIPTION	PART #				
1 SCREW		29-17				
2 PLATE		420-166				
3 GASKET		M420-03				
4 SPRING		415-21				
5 SENSING	DISC ASSY	A420-165	(3)			
6 HOUSING		M420-01-Δ				
7 POPPET A	SSY	A420-09				
8 O-RING		33-80				
9 COUNTER	ASSY	A418-04M				
10 O-RING		456-79				
11 SCREW		60L-05				
12 KEY		457-34				
13 END CAP	ASSY	A457-42MM				
14 METERINO	G PIN/ASSY	►				
15 RETURN S	SPRING	456-10A				
16 WASHER		457-11M				
17 O-RING		§				
18 METERINO		457-12-‡ 1				
19 SIGHT INL	DICATOR KIT	KA456-72				
20 SCREEN		420-60				
21 ALLEN PL		01986DM				
	SHER	420-120				
23 SCREW		420-107				
25 SERVO M						
26 OIL TUBIN	IG CONNECTOR	420-142				
27 OIL DELIV	ERY LINE	A-00942M				
28 CAP		02731				
29 OIL TUBE	ADAPTER	420-143	(32)(23) (22)			
30 O-RING		37-22PL				
31 O-RING		103-95				
32 FILTER		452-18	(#23) 20-30 in-lbs.			
$\Delta = 1/2$ FOR 1/2-1	L4 NPTF, 1/2W FOR	R 1/2-14 BSPP				
3/4 FOR 3/4-1 ► = 456-114-5 FC	DR HALF DROP SER	R 3/4-14 BSPP RVO-METER, A456-	116 FOR ONE DROP			
SERVO-METER	R, 456-114-2 FOR ⁻	TWO DROP SERVO				
SERVO-METER	, 456-111PL FOR	TWO DROP SERVO	-METER			
= 5 FOR HALF DF 2 FOR TWO DF	ROP SERVO-METER ROP SERVO-METER	R, 1 FOR ONE DRO	2 SERVO-METER,			
* = "W" FOR BSPP	* = "W" FOR BSPP THREADS, "J" FOR BSPT THREADS (NPTF_STANDARD)					
			Replacement Part and Accessories			
Part Number	Part Number Description					
PA457-40S-‡* Servo-Meter Assembly (Sensing Dist Metering Pin Assy, Springs, Filter, ar		sembly (Sensing ssy, Springs, Filt	g Disc Assembly, Servo-Meter Housing, Sight Indicator Kit, Meter Insert, Washer, End Cap Assy, er, and O-Ring)			
PAM420-01-∆ Housing Assembly (Housing		bly (Housing, Ga	isket, Cover Plate, Oil Connector, Oil Tube Adapter, Screws, Spring, and O-Rings)			
A420-165 Sensing Disc Assembly (Sensing D		sembly (Sensir	ig Disc, Grommet, and Valve Stem)			
A420-09 Poppet Assembly (Poppet and Spring)		ly (Poppet and	 Spring)			
A418-04M Counter Assembly (Counter Switch, Housing, Ball, Springs, Ratchet Plate, Cartridge, Piston, Retainer, Yellow Cap Plug, and O-Rings)						
A457-42MM End Cap Assembly (Override Indicator, Adjusting Screw, Adjusting Knob, Piston, End Cap, Insert, U-Cup, and O-Ring)						
KA456-72 Sight Indicator Kit (Indicator Housing, Sight Dome, and Indicator Ball)		ousing, Sight Dome, and Indicator Ball)				
420-160 Check Valve						