

KLUTCH

Air Lubricator 1/4In., 3/8In., and 1/2In.

Owner's Manual



⚠ WARNING: Read carefully and understand all ASSEMBLY AND OPERATION INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Items #57389, #57390, #57394

Thank you very much for choosing a Klutch™ product!

For future reference, please complete the owner's record below:

Serial Number/Lot Date Code: _____

Purchase Date: _____

Save the receipt, warranty, and this manual. It is important that you read the entire manual to become familiar with this product before you begin using it.

This air lubricator is designed for certain applications only. Northern Tool & Equipment is not responsible for issues arising from modification or improper use of this product such as an application for which it was not designed. We strongly recommend that this product not be modified and/or used for any application other than that for which it was designed.

For technical questions, please call **1-800-222-5381**.

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Intended Use

Air Lubricators are used to apply lubricants to pneumatic equipment. They maintain a constant oil-to-air density over a wide range of flow. The Klutch Air Lubricators have a die cast aluminum head and a polycarbonate bowl with a steel bowl guard. The head is fitted with an oil drop indicator, oil drop controller, and oil filling plug.

WHY USE A LUBRICATOR?

Air lubricators are used with air supply lines where the compressed air is required to be lubricated before being supplied to the tool /equipment.

WETTED COMPONENTS

Aluminum, Bronze, Steel, Acetal, Polycarbonate, Stainless Steel, and Nitrile

Technical Specifications

Part #	Port Size	Flow Rate (Max)**		Bowl Size		Bowl Capacity (Max)		Height		Width	
		CFM	LPM	Oz.	ml	Oz.	ml	Inch	mm	In	mm
57394	1/4"	48	1350	1.22	35	0.68	20	5.31	135	1.57	40
57389	3/8"	106	3000	2.63	75	1.98	57	6.18	157	2.16	55
57390	1/2"	200	5650	6.31	180	5.13	152	7.48	190	2.75	7

** Inlet Pressure 90 PSI (6 Bar) and Pressure Drop 7.5 PSI (0.5 Bar)

Important Safety Information

⚠️WARNING

- Read and understand all instructions. Failure to follow all instructions may result in serious injury or property damage.
- The warnings, cautions, and instructions in this manual cannot cover all possible conditions or situations that could occur. Exercise common sense and caution when using this tool. Always be aware of the environment and ensure that the tool is used in a safe and responsible manner.
- Do not allow persons to operate or assemble the product until they have read this manual and have developed a thorough understanding of how it works.
- Do not modify this product in any way. Unauthorized modification may impair the function and/or safety and could affect the life of the product. There are specific applications for which the product was designed.
- Use the right tool for the job. DO NOT attempt to force small equipment to do the work of larger industrial equipment. There are certain applications for which this equipment was designed. It will be a safer experience and do the job better at the capacity for which it was intended. DO NOT use this equipment for a purpose for which it was not intended.
- Industrial or commercial applications must follow OSHA requirements.

⚠️WARNING

WORK AREA SAFETY

- Inspect the work area before each use. Keep work area clean, dry, free of clutter, and well-lit. Cluttered, wet, or dark work areas can result in injury. Using the product in confined work areas may put you dangerously close to other cutting tools and rotating parts.
- Do not use the product where there is a risk of causing a fire or an explosion; e.g., in the presence of flammable liquids, gases, or dust. The product can create sparks, which may ignite the flammable liquids, gases, or dust.
- Keep children and bystanders away from the work area while operating the tool. Do not allow children to handle the product.
- Be aware of all power lines, electrical circuits, water pipes, and other mechanical hazards in your work area. Some of these hazards may be hidden from your view and may cause personal injury and/or property damage if contacted.

⚠️WARNING

PERSONAL SAFETY

- Stay alert, watch what you are doing, and use common sense when operating the air lubricator. Do not use the tool while you are tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating the tool may result in serious personal injury.
- Dress properly. Do not wear loose clothing, dangling objects, or jewelry. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewelry, or long hair can be caught in moving parts. Air vents on the tool often cover moving parts and should be avoided.
- Wear the proper personal protective equipment when necessary. Use ANSI Z87.1 compliant safety goggles (not safety glasses) with side shields, or when needed, a face shield. Use a dust mask in dusty work conditions. Also use non-skid safety shoes, hardhat, gloves, dust collection systems, and hearing protection when appropriate. This applies to all persons in the work area.
- Do not overreach. Keep proper footing and balance at all times.

⚠️CAUTION

AIR LUBRICATOR USE AND CARE

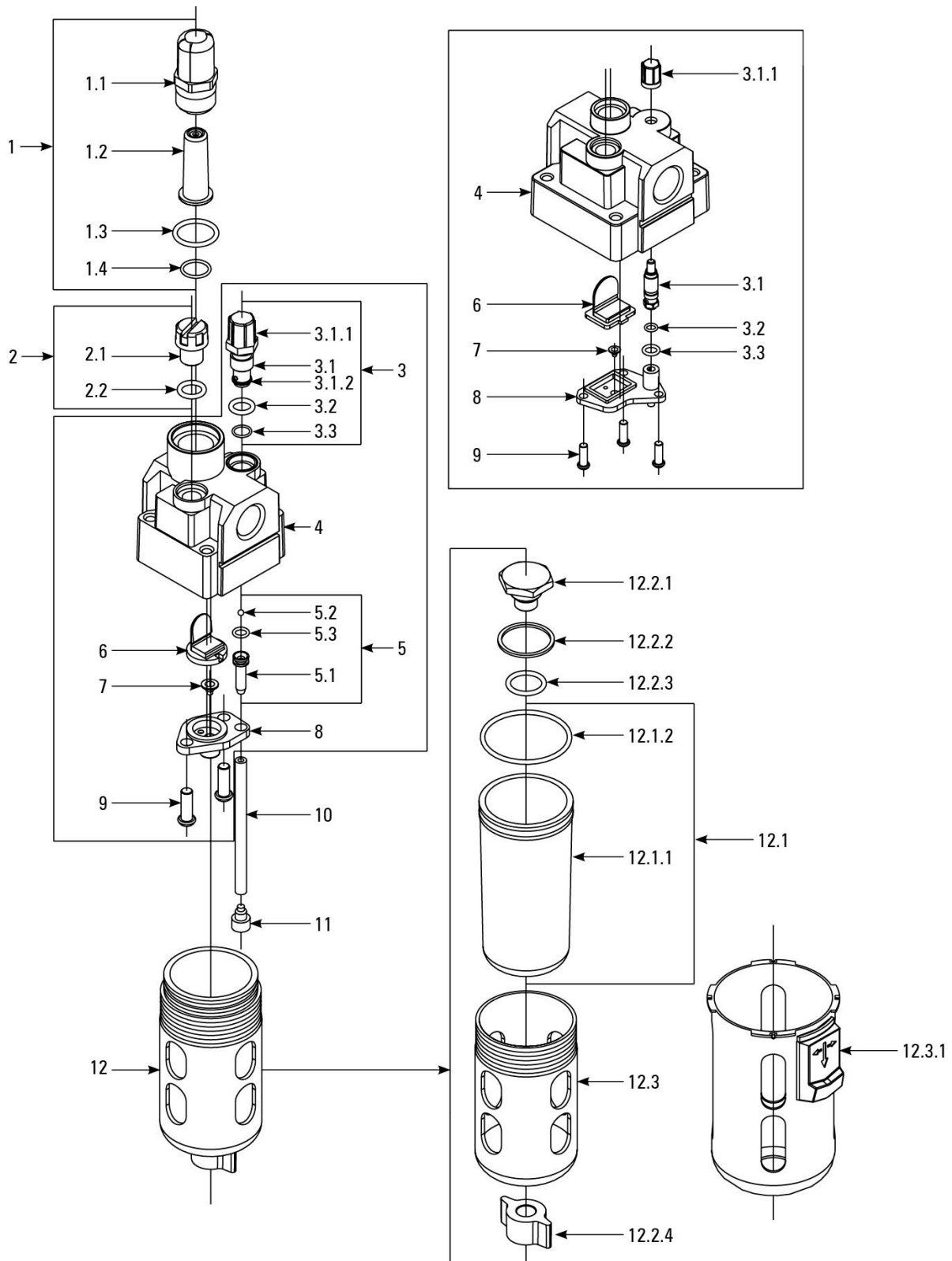
- Do not force the air lubricator. Products are safer and do a better job when used in the manner for which they are designed. Plan your work, and use the correct product for the job.
- Check for damaged parts before each use. Carefully check that the product will operate properly and perform its intended function. Replace damaged or worn parts immediately. Never operate the product with a damaged part.
- Store the product when it is not in use. Store it in a dry, secure place out of the reach of children. Inspect the tool for good working condition prior to storage and before re-use.
- Use only accessories that are recommended by the manufacturer for use with your product. Accessories that may be suitable for one product may create a risk of injury when used with another tool. Never use an accessory that has a lower operating speed or operating pressure than the tool itself.

Specific Operation Warnings

⚠WARNING

- Do not exceed the PSI rating.
- Wear ANSI Z87.1 compliant eye protection during use.
- Do not expose polycarbonate bowls to synthetic oils, thinner, solvents, trichloroethylene, kerosene, or other aromatic hydrocarbons. The polycarbonate bowl may get damaged and possibly fail if exposed.

Main Parts of Air Lubricator



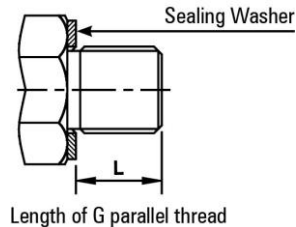
Reference	Description	Quantity
1	Sight Dome Assembly	1
1.1	Oil Drop Indicator	1
1.2	Oil Drop Controller	1
1.3	'O' Ring	1
1.4	'O' Ring	1

Reference	Description	Quantity
2	Oil Filling Plug Assembly	1
2.1	Oil Filling Plug	1
2.2	'O' Ring	1
3	Needle Assembly	1
3.1	Needle Housing Assembly	1
3.1.1	Knob	1
3.1.2	'O' Ring	1
3.2	'O' Ring	1
3.3	'O' Ring	1
4	Housing	1
5	Connector Assembly	1
5.1	Connector	1
5.2	Ball	1
5.3	'O' Ring	1
6	Jet Deflector	1
7	Valve Seat	1
8	Deflector Retainer Assembly	1
9	Philip Head Screw	2/3
10	Suction Tube	1
11	Oil Filter	1
12	Bowl & Bowl Guard Assembly	1
12.1	Bowl Assembly	1
12.1.1	Bowl	1
12.1.2	O-Ring	1
12.2	Gland Plug Assembly	1
12.2.1	Gland Plug	1
12.2.2	Sealing Washer	1
12.2.3	O-Ring	1
12.2.4	Gland Nut	1
12.3	Bowl Guard	1
12.3.1	Locking Piece	1

Assembly Instructions

1. Install in a clean/acid-free atmosphere.
2. Flush the piping for dirt, dust, and other foreign particles.
3. Use proper thread sealant for taper threads to ensure a leak-proof connection.
4. Screw the Inlet/Outlet pipe to the respective port.
5. Open the inlet valve/switch on the air supply.
6. When using (G) parallel thread nipples, check the length of the thread (table provided).

Thread Size	Tightening Torque. In.-Lb. (Nm)	Length of Thread (L)
G1/8	62 - 79 (7 - 9)	6 mm Max.
G1/4	106 - 125 (12 - 14)	8 mm Max.
G3/8	195 - 215 (22 - 24)	9 mm Max.
G1/2	250 - 270 (28 - 30)	12 mm Max.



Lubricator Installation Tips

WHERE TO INSTALL A LUBRICATOR?

- To avoid any further pressure loss, install as close to the tool or as close as possible.
- Lubricator should be the last component in the FRL series.
- With arrows pointing in the direction of air flow (towards tool/equipment).

Operating Instructions

- **Oil Filling:** Remove the Oil Filling Plug Assembly (2). Pour the oil (Recommended oil ISO VG 32/ Servo system 32) into the lubricator.
- **Oil Flow Adjustment:** Turn the knob (3.1.1) to adjust the oil drops to your requirement, clockwise to decrease, and counter-clockwise to increase the oil flow..

Maintenance

⚠WARNING

Do not use thinner, kerosene, petrol, synthetic oil, trichloroethylene, or other aromatic hydrocarbons to clean the bowl. (The polycarbonate bowl may get damaged and possibly fail if exposed to these solvents.)

Maintain the air lubricator by adopting a program of conscientious repair and maintenance in accordance with the following recommended procedures. It is recommended that the general condition of any tool be examined before it is used. Keep your tool in good repair. Keep inlet/outlet threads dry, clean, and free from oil and grease. The following chart is based on a normal operation schedule.

57394	57389	57390
1. Before dismantling the unit, exhaust the air in the line completely.		
2. To clean the filter element (5) and the bowl (7.1.1).		
a. Unscrew the threaded Bowl & Bowl Guard assembly (12) in a counter-clockwise direction. Dismantle the components, clean the Bowl (12.1.1), and blow with compressed air.	b. Lift the Bowl and Bowl Guard assembly (12) upwards. Pull down the locking piece (12.3.1). Turn the bowl guard by 45° and pull down.	
3. Check for damages in the o-rings and other parts. Replace if needed or clean and reassemble.		
4. Apply general purpose grease on the o-rings and on the surface of the Housing where the o-ring enters the Housing (4). Reassemble all the components.		
5. Screw the threaded bowl guard (12) on to the housing (1).	5. Position the top flange lug portion of the bowl guard (12) to the corresponding slots in the housing (4). Push the bowl guard fully into the housing. Turn the bowl guard 45° till the locking piece (12.3.1) enters into the housing slot fully.	

Troubleshooting

Use the table below to troubleshoot problems before contacting service personnel or your local dealer. If the problem continues after troubleshooting, call your local dealer for assistance.

Failure	Possible Cause	Corrective Action
1. Oil does not flow.	1. Wrong port connection.	1. Change the port connection.
	2. Air flow rate insufficient.	2. Refer specification and select the model.
	3. Oil below "minimum oil level".	3. Pour Oil.
	4. Oil adjusting screw in closed condition.	4. Adjust oil drops to your requirement.
	5. Oil filter (11) clogged.	5. Clean and reassemble.
	6. Oil Path clogged.	6. Dismantle the unit. Clean the Oil Path with air jet and reassemble.
2. Oil leaks through Needle Assembly (3).	O-ring (3.1.2) damaged.	Replace the O-ring (3.1.2).
3. Oil leaks through Housing and Needle Assembly.	O-ring (3.2) damaged.	Replace the O-ring (3.2).
4. Flow of oil is not adjustable.	O-ring (5.3) damaged.	Replace the O-ring (5.3).
5. Air bubbles along with oil drop.	O-ring (3.3) damaged.	Replace the O-ring (3.3).
6. Oil drops not visible through Oil Drop Indicator (1.1).	O-ring (1.4) damaged.	Replace the O-ring (1.4).
7. Air leaks through Sight Dome (1).	O-ring (1.3) damaged.	Replace the O-ring (1.3).
8. Air leaks through Housing (4) and Bowl Guard (12) interface.	O-ring (12.1.2) damaged.	Replace the O-ring (12.1.2).
9. Air leaks at the gland plug (12.2.1) and Bowl Guard (12) interface.	O-ring (12.2.3) damaged.	Replace the O-ring (12.2.3).

Failure	Possible Cause	Corrective Action
10. Air leaks through Oil Filling Plug (2.1).	O-ring (2.2) damaged.	Replace the O-ring (2.2).

Replacement Parts

- For replacement parts and technical questions, please call Customer Service at **1-800-222-5381**.
- Not all product components are available for replacement. The illustrations provided are a convenient reference to the location and position of parts in the assembly sequence.
- When ordering parts, the following information will be required: item description, item model number, item serial number/item lot date code, and the replacement part reference number.
- The distributor reserves the rights to make design changes and or improvements to product lines and manuals without notice.

Limited Warranty

Northern Tool and Equipment Company, Inc. ("We" or "Us") warrants to the original purchaser only ("You" or "Your") that the Klutch product purchased will be free from material defects in both materials and workmanship, normal wear and tear excepted, for a period of **one year** from date of purchase. The foregoing warranty is valid only if the installation and use of the product is strictly in accordance with product instructions. There are no other warranties, express or implied, including the warranty of merchantability or fitness for a particular purpose. If the product does not comply with this limited warranty, Your sole and exclusive remedy is that We will, at our sole option and within a commercially reasonable time, either replace the product or product component without charge to You or refund the purchase price (less shipping). This limited warranty is not transferable.

Limitations on the Warranty

This limited warranty does not cover: (a) normal wear and tear; (b) damage through abuse, neglect, misuse, or as a result of any accident or in any other manner; (c) damage from misapplication, overloading, or improper installation; (d) improper maintenance and repair; and (e) product alteration in any manner by anyone other than Us, with the sole exception of alterations made pursuant to product instructions and in a workmanlike manner.

Obligations of Purchaser

You must retain Your product purchase receipt to verify date of purchase and that You are the original purchaser. To make a warranty claim, contact Us at 1-800-222-5381, identify the product by make and model number, and follow the claim instructions that will be provided. The product and the purchase receipt must be provided to Us in order to process Your warranty claim. Any returned product that is replaced or refunded by Us becomes our property. You will be responsible for return shipping costs or costs related to Your return visit to a retail store.

Remedy Limits

Product replacement or a refund of the purchase price is Your sole remedy under this limited warranty or any other warranty related to the product. We shall not be liable for: service or labor charges or damage to Your property incurred in removing or replacing the product; any damages, including, without limitation, damages to tangible personal property or personal injury, related to Your improper use, installation, or maintenance of the product or product component; or any indirect, incidental or consequential damages of any kind for any reason.

Assumption of Risk

You acknowledge and agree that any use of the product for any purpose other than the specified use(s) stated in the product instructions is at Your own risk.

Governing Law

This limited warranty gives You specific legal rights, and You also may have other rights which vary from state to state. Some states do not allow limitations or exclusions on implied warranties or incidental or consequential damages, so the above limitations may not apply to You. This limited warranty is governed by the laws of the State of Minnesota, without regard to rules pertaining to conflicts of law. The state courts located in Dakota County, Minnesota shall have exclusive jurisdiction for any disputes relating to this warranty.

KLUTCH

Distributed by:

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Burnsville, Minnesota 55306

www.northerntool.com

Made in India