



Air-operated Grease Distribution Kits Instruction Manual



M3GP5



M3GP16



M3GP55



WARNING:

Read carefully and understand all **INSTRUCTIONS** before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury. Save these instructions in a safe place and on hand so that they can be read when required. Keep these instructions to assist in future servicing.



GENERAL SAFETY REGULATIONS



WARNING: The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions or situations that could occur. It must be understood by the operator that common sense and caution are factors that cannot be built into this product, but must be supplied by the operator.

1. Keep the work area clean and dry. Damp or wet work areas can result in injury.
2. Keep children away from work area. Do not allow children to handle this product.
3. 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 do the job better and more safely at the capacity for which it was intended. Do not modify this equipment, and do not use this equipment for a purpose for which it was not intended.
4. Check for damaged parts. Before using this product, carefully check that it will operate properly and perform its intended function. Check for damaged parts and any other conditions that may affect the operation of this product. Replace damaged or worn parts immediately.
5. Do not overreach. Keep proper footing and balance at all times to prevent tripping, falling, back injury, etc.
6. DO NOT use the equipment when tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating this equipment may result in serious personal injury.

TECHNICAL DETAILS

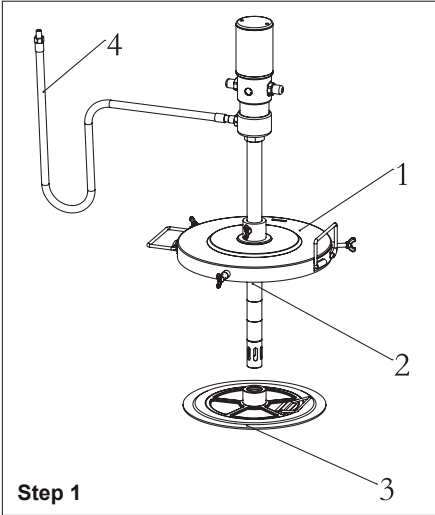
Item No.	M3GP5	M3GP16	M3GP55	
Product Description	Grease Pump 5 Gal	Grease Pump 16 Gal	Grease Pump 55 Gal	
Including	Pump	P/N: PU104.14	P/N:GP12050-1-001	P/N:GP40050-1-001
	Drum Cover	P/N:M3GPC5	P/N:M3GPC16	P/N:M3GPC55
	Follow Plate	P/N: M3GPF5	P/N:M3GPF16	P/N:M3GPF55
	Grease Nozzle	P/N: M3B3-01	P/N: M3B3-01	P/N: M3B3-01
	Connection Hose	1/4"x13ft	1/4"x13ft	1/4"x13ft

LIMITED WARRANTY

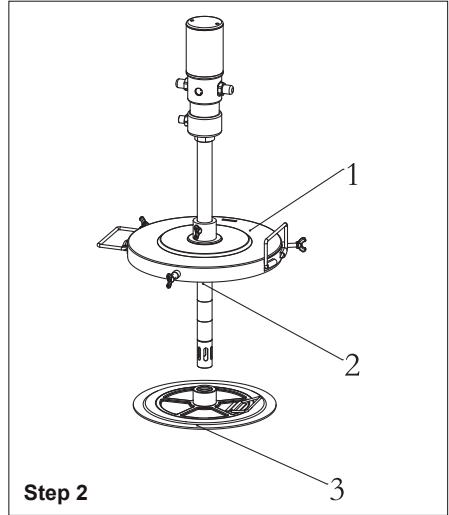
1. Macnaught warrants this product against defects in material and craftsmanship, for a period of 3 years from date of purchase, but not including wearing parts.
2. Macnaught's liability is limited to replacement or repair of defective material within the warranty period, when returned freight prepaid to the distributor or their designated service depot.
3. The warranty does not cover damage caused by accident, misuse or faulty installation.
4. The product must be installed and maintained in compliance with the instructions.

INSTALLATION STEPS

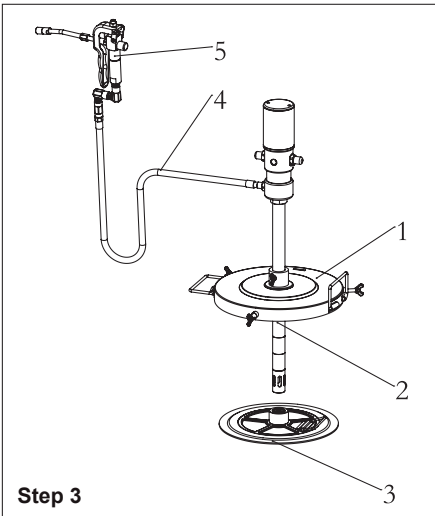
Note: Before connecting and assembling each component, please assemble each component according to the component instructions).



1. Put the drum cover (part No.2) and follower plate (part No.3) onto the suction tube of pump respectively.

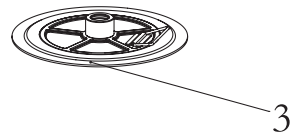
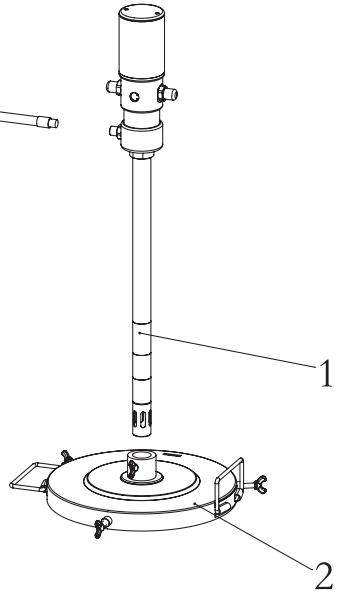
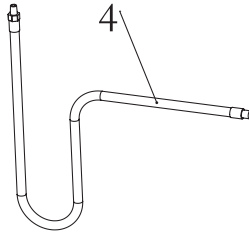
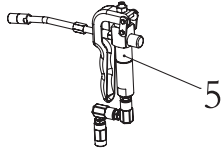


1. Tighten the female thread of delivery hose (part No.4) on the male thread of pump outlet.



1. Tighten the male thread of delivery hose (part No.4) with the female thread of grease control valve (part No.5).

EXPLODED VIEW AND DETAILS



Part No.	Description	QTY
1	Grease Pump Assembly	1
2	Drum Cover	1
3	Follower Plate	1
4*	Delivery Hose Assembly	1
5	Grease Control Valve Assembly	1

* Wearing parts.

TECHNICAL DETAILS - GREASE PUMP ASSEMBLY

Item No.	PU104.14	GP12050-1-001	GP40050-1-001
Drum Application	44~60lbs	110~132lbs	400~484lbs
Pressure Ration	50:1		
Air Inlet Pressure	70~150psi		
Max. Fluid Pressure	7500psi		
Air Motor Effective Dia.	2-1/2"		
Air Consumption	3.6CFM @150psi		
Max.free Flow Rate	1.76lbs		
Suction Tube Dia.	1-3/16"		
Suction Tube Length	19"	29-1/8"	37"
Suction Tube Material	Carbon Steel		
Air Inlet Connection	1/4" NPT female		
Oil Outlet Connection	1/4" NPT male		

THE MANUAL OF GREASE PUMP

Read the following precautions and instructions before you begin assembly or using. Failure to comply with these instructions could result in personal injury or property damage. Keep these instructions in a convenient location for future reference.

IMPORTANT NOTE

The guarantee will be void if the pump has been altered in any way.

PROFILE

Grease pumps are designed for transferring grease from drum to where it would be used.

- Compressed air operated reciprocating pumps are designed for high pressure greasing.
- Be applicable to the manipulation of all types of grease (up to NLGI-2 consistency) from its original drums.
- The pumps can be supplied as separate components or as a complete system with all the elements - necessary for its installation.
- The pumps can be assembled on mobile units as well as on fixed positions, connected to steel pipes.

This manual is applicable to the following pump only, please confirm your pump is included.

STORAGE AND MAINTENANCE

Pumps are delivered in appropriate cardboard boxes. Packaging material should be properly disposed.

Handling and storage of the new pump do not require any special procedures.

The dust in compressed air can slow down or even block the motor cylinder. The following steps may prevent this from happening:

1. Let in 50 gram of Vaseline oil or other lubricator from the air inlet hole weekly operate the pump for several minutes after having lubricator into the pump.
2. Turn on the pump for several minutes until moving parts is fully lubricated.
3. You may repeat the above operation if necessary.
4. The above steps should be carried out on a weekly base.

For the pumps that are attached with compressed air treatment equipment please empty the water retained in the reservoir of the filter-purger frequently.

For the pumps that are attached with a lubricator, please pay close attention to the lubricator's grease level and refill with NLGL-2 conditions when necessary.

NOTE: The user should perform only routine maintenance operations (such as filters, silencers, cleaning...) in order not to damage it or compromise its safety. Contact our sales or service centers when the pump needs further maintenance.

GENERAL SAFETY REGULATIONS

When the pump is connected to the compressed air supply:

- The compressed air must be filtered to avoid dust into pump.
- The max compressed air pressure must not exceed 0.8Mpa/115psi.
- To deliver grease, press the knob on the delivery gun; delivery stops when the knob is released but the whole system remains under pressure.
- Position the gun so that the circuit can't open accidentally. Otherwise grease could leak onto the ground.
- Never point the gun at people.
- Press the gun knob only after you are sure that the gun is in the right place so that the grease doesn't leak onto the ground.
- Always cut off the air supply after use so that grease can't leak out in case one of the pump's components should break.
- Use only original spare parts in case the pump has to be repaired or its components have to be replaced.
- Ensure the tightness of all joints and screwed unions.
- When no load, cut off compressed air to stop pump.
- Do not use the pump near open flames. Do not smoke during this operation.
- Wear oil-proof gloves.
- The pumps can be used only to deliver grease. Do not use the pump for any other Substance. Please contact us if you have any special request.

HOW TO USE

PUMP INSTALLATION

- When the pump is applied to a high viscosity grease, or used in low temperature, a grease follower plate is recommended to avoid air pockets and to get the most out of your grease. The follower plate, which is pulled towards the bottom of the drum by suction pressure produced by the air operated pump, compress the grease, preventing the formation of air pockets which may cause a blockage in delivery. And the follower plate will always keep the grease clean to preserve its characteristics and also enable the grease to be collected from the bottom of the drum to avoid waste.
- Loosen the bung adaptor or wall bracket adaptor star nut. Slide the bung adaptor off of the suction tube.
- Carefully place the pump through the bung adaptor and the follower plate. Then tighten the star nut firmly in order to attach the pump.

CONNECTION OF THE AIR INLET LINE

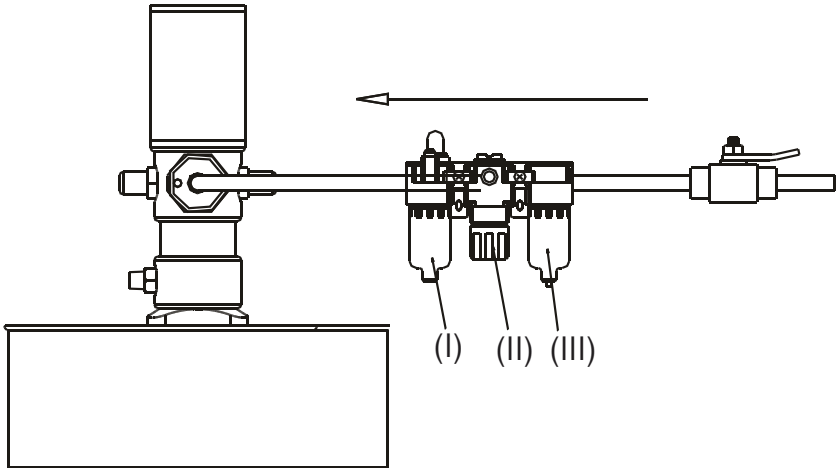
Air inlet connection is 1/4"quick coupling(or 1/4"NPT female) in all versions.

Compressed air connection (to be supplied by the customer) should be done using suitable tubes.

A compressed air treatment unit (filter and regulator) is recommended to be attached to the pump. In order to improve the efficiency of the pump, the installation of a lubricator is also recommended.

CONNECTION OF THE REGULATOR

The lubricator (I) must be placed as close as possible to the air inlet, followed by the pressure regulator (II) and finally, the filter (III). In the case of pumps not installed on wall support it is very important to equip the pump's air inlet with an adaptor for quick coupling and the air inlet hose with a quick quick connector.



CONNECTION OF GREASE DISCHARGE

1. The Grease discharge outlet is a 1/4"G thread. Connect the outlet to the high pressure hose (according to DIN-SAE norms) through the corresponding adapter and terminal.
2. Ensure the gun or corresponding valve is closed.
3. Slowly open the pump's compressed air inlet valve. The pump will start to function, filling the feed circuit with grease. Maintain pressure on the gun until the grease starts to come out. The pump is now ready for its usual function.

PUMP OPERATION

If the pump has already been primed and the compressed air feed is connected to the appropriate work pressure level (5-8 bar/70-115psi,) the pump will start automatically when the nozzle or gun situated at the end of the grease delivery circuit is opened.

To stop the pump, simply close the nozzle or disconnect the air inlet line.

THE MANUAL OF GREASE PUMP DISTRIBUTION KITS

PRESSURE RELIEF PROCEDURE

To reduce the risk of serious bodily injury, including fluid injection, splashing in the eyes or on the skin, or injury from moving parts, please always follow this procedure whenever you shut off the pump, when check or service any part of the spray/dispensing system, when instal, clean or change spray tips/nozzles, and whenever you stop spraying/dispensing.

1. Shut off the air to the pump.
2. Point the outlet of grease gun to container and trigger the grease gun to relieve pressure.

IMPORTANT NOTES:

1. If you suspect that the spray tip/nozzle or hose is completely clogged, or that pressure has not been fully relieved after following the steps above, VERY SLOWLY loosen the retaining nut or hose end coupling and relieve pressure gradually, then loosen completely. Now clear the tip/nozzle or hose.
2. On the pump downstroke, the shovel washer extends beyond the intake cylinder to pull the material into the pump. The shovel washer works under extreme force. During operation and whenever the pump is charged with air, the shovel washer can severely injure or amputate a hand or finger, or break a tool, caught between it and the intake cylinder. Always follow the Pressure Relief Procedure below, before checking, clearing, cleaning, flushing or servicing any part of the pump.
3. This equipment conducts very high fluid pressure. Spray from the grease gun, leaks or ruptured components can inject fluid through your skin and into your body and cause extremely serious bodily injury, including the need for amputation. Also, fluid injected or splashed into the eyes or on the skin can cause serious damage.

NEVER point the grease gun at anyone or at any part of the body.

NEVER put hand or fingers over the spray tip.

ALWAYS follow the Pressure Relief Procedure, right, before cleaning or removing the spray tip or servicing any system equipment.

NEVER try to stop or deflect leaks with your hand or body.

Be sure equipment safety devices are operating properly before each use.

4. Any misuse of the system equipment or accessories, such as overpressure, modifying parts, using incompatible chemicals and fluids, or using worn or damaged parts, can cause them to rupture and result in fluid injection, splashing in the eyes or on the skin, or other serious bodily injury, or fire, explosion or property damage.

NEVER alter or modify any part of this equipment; doing so could cause if any malfunction.

CHECK all equipment regularly and immediately repair or replace worn or damaged parts.

System Pressure

NEVER exceed the recommended working pressure or the maximum air inlet pressure stated on your pump.

Be sure that all dispensing equipment and accessories are rated to withstand the maximum working pressure of the pump. DO NOT exceed the maximum working pressure of any component or accessory used in the system.

Fluid Compatibility

The system is only suitable for grease.

5. High pressure fluid in the hoses can be very dangerous. If the hose develops a leak, split or rupture due to any kind of wear, damage or misuse, the high pressure spray emitted from it can cause a fluid injection injury or other serious bodily injury or property damage.

TIGHTEN all fluid connections securely before each use. High pressure fluid can dislodge a loose coupling or allow high pressure spray to be emitted from the coupling.

NEVER use a damaged hose. Before each use, check the entire hose for cuts, leaks, abrasion, bulging cover, damage or movement of the hose couplings. If any of these conditions exist, replace the hose immediately. DO NOT try to mend it with tape or any other device. A repaired hose cannot safely contain the high pressure fluid.

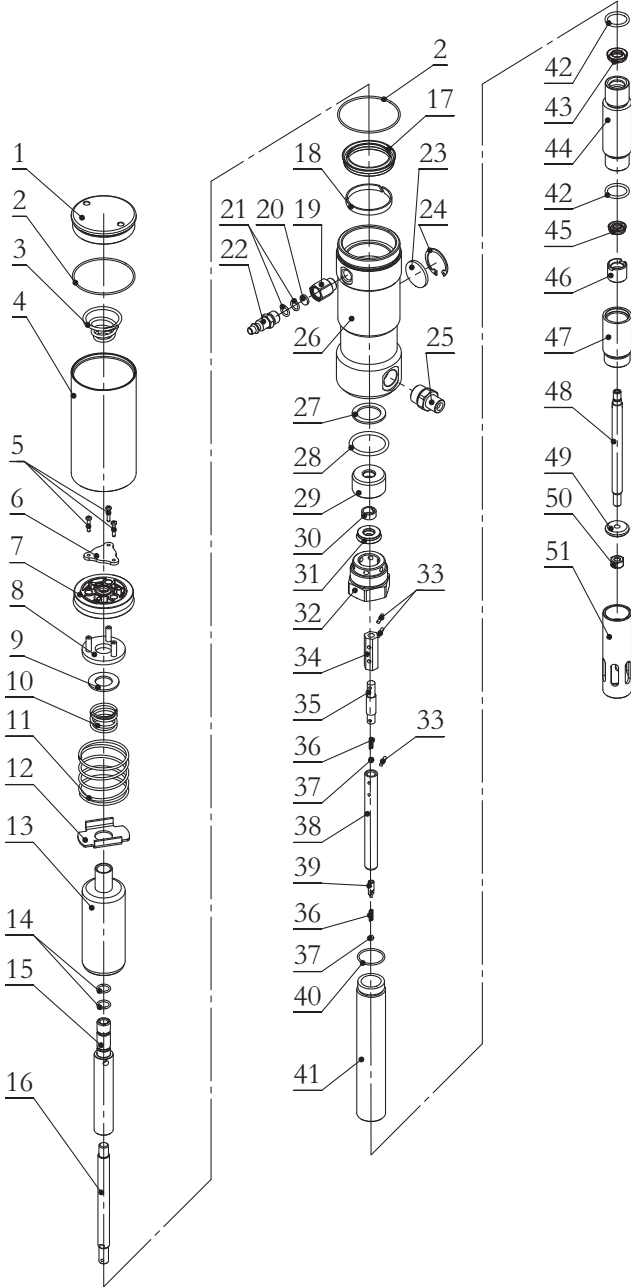
TROUBLESHOOTING

Problem	Possible Causes	Solutions
The pump continues to operate after the gun trigger has been released.	<ol style="list-style-type: none"> 1. Grease missing around the suction filter. 2. There is a grease leak at some point of the circuit . 3. Valve(part No. 15) closes incorrectly due to dirt or wearing. 	<ol style="list-style-type: none"> 1. Remove cover and take out pump and follower plate. Compact grease and fill the drum or substitute it for a full one. 2. Check and tighten unions. Repair the leak. 3. Disassemble and clean valves. Substitute them if danged.
Reduction of the grease delivery. Or reduced pressure in the grease delivery.	<ol style="list-style-type: none"> 1. Air bags in the grease drum. 2. Silencer(210) dirtied. 3. Blocked at some point of the grease circuit. 4. Ball valve (103) closes incorrectly due to dirt or wearing. 5. Damaged O-ring(216). 	<ol style="list-style-type: none"> 1. Remove the cover and take out the pump and the follower plate. Compact the grease and fill the drum. 2. Clean or recharge silencer. 3. Use clean grease. 4. Substitute damaged elements.
Air loss through the air exhaust.	<ol style="list-style-type: none"> 1. The sliding valve (7) does not close properly. 2. The press piece(36) broken. 3. Damaged O-ring(208, 209or 211). 4. Damaged piston (2). 5. Damaged washer(31). 6. Broken spring (33). 	<ol style="list-style-type: none"> 1. Disassemble and clean. Substitute them if damaged. 2. Substitute damaged elements.
Grease leaks through the air exhaust.	<ol style="list-style-type: none"> 1. Seal set (11) damaged. 	<ol style="list-style-type: none"> 1. Substitute damaged elements.

If the pump has anything wrong, please contact dealer or their technical supporter.

We don't recommend customer repair the pump themselves.

50: 1 AIR-OPERATED GREASE PUMP EXPLODED AND PARTS LIST



Part No.	Description	QTY	Part No.	Description	QTY
1	Air motor cover	1	27	Washer	1
2*	O-ring	2	28*	O-ring	1
3	Spring	1	29	Valve seat	1
4	Air motor shell inside	1	30	Guiding ring	1
5	Screw	3	31*	Sealing ring	1
6	Fixing plate	1	32	Connector	1
7*	Piston	1	33	Pin	3
8	Fixing plate	1	34	Connect shell	1
9	Washer	1	35	Shaft	1
10	Spring	1	36	Spring	2
11	Spring	1	37	Ball	2
12	Baffle	1	38	Shaft	1
13	Piston	1	39	Spring seat	1
14*	O-ring	2	40*	O-ring	1
15	Shaft	1	41	Connect tube	1
16	Shaft	1	42*	O-ring	2
17*	Sealing ring	1	43*	Sealing ring	1
18	Guiding ring	1	44	Valve seat	1
19	Connector	1	45*	Sealing ring	1
20	Silencer	1	46	Valve	1
21*	O-ring	2	47	Valve seat	1
22	Quick plug (option, only for 1/4" BSP)	1	48	Shaft	1
23	Silencer	1	49	Shovel washer	1
24	Circlip	1	50	Nut	1
25	Outlet	1	51	Suction tube	1
26	Air control center	1			

Note: The Part No. with "*" are the wearing parts.

TECHNICAL DETAILS - GREASE CONTROL VALVE

Item No.	M3B3-01
Inlet Connection	1/4" female 360° swivel
Pressure Range	5800psi / 400bar
Weight	3.15lbs / 1.43kgs

▲IMPORTANT

Read the safety warnings and instructions in this manual carefully, before installation and start-up of the control handle. It is the responsibility of the purchaser to retain this manual for future reference. Failure to comply with the recommendations stated in this manual may damage the control handle and void factory warranty.

Airborne particles and loud noise hazards.

Wear ear and eye protection.

Before doing any maintenance on the control handle, be certain all pressure is completely vented from the pump, suction, discharge, piping, and all other openings and connections.

Be certain the air supply is locked out or made non-operational, so that it cannot be started while work is being done on the control handle. Be certain that approved eye protection and protective clothing are worn at all times in the vicinity of the control handle. Failure to follow these recommendations may result in serious injury or death.

▲CAUTION

Maximum fluid pressure 600BAR/8700 PSI. Under no circumstances should the control handle be aimed at any person body. Personal injury may be caused.

PRODUCT DESCRIPTION

The control handles are used for dispensing automotive lubricants.

OPERATION

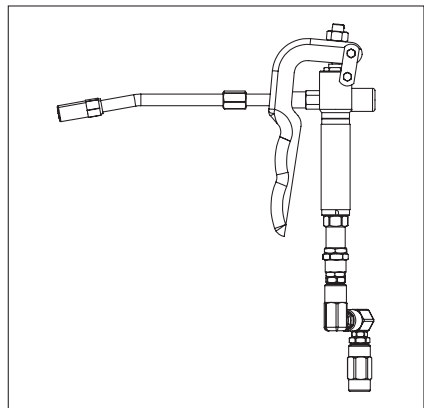
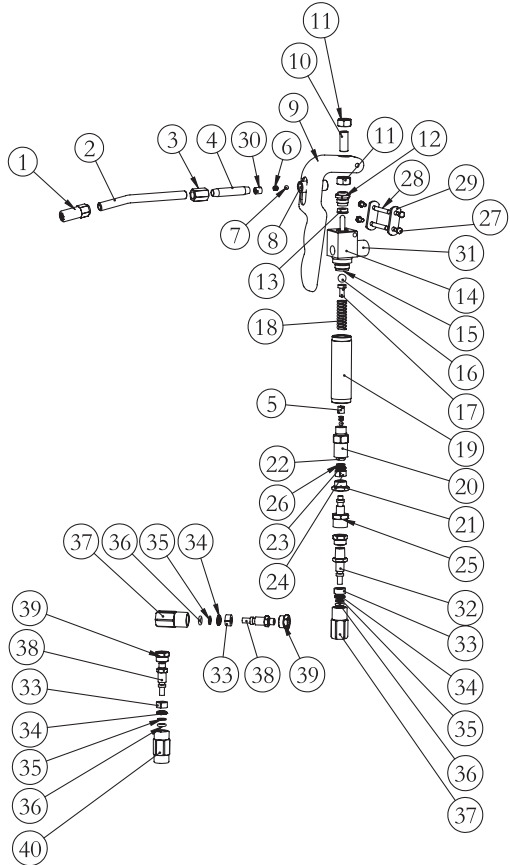
1. Connect the control handle to the lubricant supply line(1/4 BSP or 1/4 NPT male thread required).
2. Open the manual tip.
3. Squeeze control handle trigger. When the required amount of product has been dispensed, release the trigger to stop delivery. Close the manual tip.

TROUBLE SHOOTING

If lubricant leaks around inlet and threads; apply thread sealant to tighten threads.

GREASE CONTROL VALVE EXPLODED VIEW AND PART LIST

Part No.	Description	Q'ty
1	4jaws gease fitting	1
2	Rigid delivery pipe	1
3	Hexad tie-in	1
4	Take-over tube	1
5	Adjust bolt	1
6	Spring	2
7	Steel ball	2
8	Unilateralism vave	1
9	Wrench	1
10	Adjust bolt	1
11	Nut	2
12	Guide	1
13	Gasket	1
14	Gun seat	1
15	Rod	1
16	Steel ball	1
17	Set	1
18	Spring	
19	Handle	1
20	Valve seat	1
21	Nut	1
22	O-ring	1
23	Block ring	1
24	Axis tile	2
25	Axes	1
26	Liner ring	1
27	Hexad bolt	4
28	Join pipe	2
29	Join piece	2
30	Adjust Bolt	1
31	Clump Weight	1
32	Join	1
33	Axis tile	6
34	Block ring	3
35	Liner ring	3
36	O-ring	3
37	Join	2
38	Join	2
39	Nut	2
40	Join	1





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* Read Manual Before Use!