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# K7 / KR MINI-LUBE

## INSTRUCTION MANUAL

### INTRODUCTION

The Macnaught K7/KR Mini-Lube is a completely portable high pressure manual greasing system, supplied with spring loaded pump, lid, rubber-edged follower plate, 1.5 meters of special Macnaught grease hose, and unique KR Pressurite (High pressure / High Volume) grease gun.

Please read and retain this instruction manual to assist you in the operation and maintenance of this quality product.

### GENERAL INFORMATION

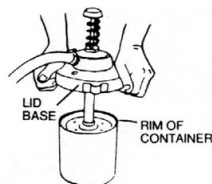
Please take a few moments to read through this manual before operating your Mini-Lube. If you experience a problem with this product, refer to the Maintenance and troubleshooting sections of this manual.

### ASSEMBLY

- 1) Remove the follower plate from the pump tube.
- 2) Insert the follower into grease (fig 1) as shown, with the follower boss facing upwards. Push follower firmly onto the grease until grease emerges through the boss.



(Fig 1)

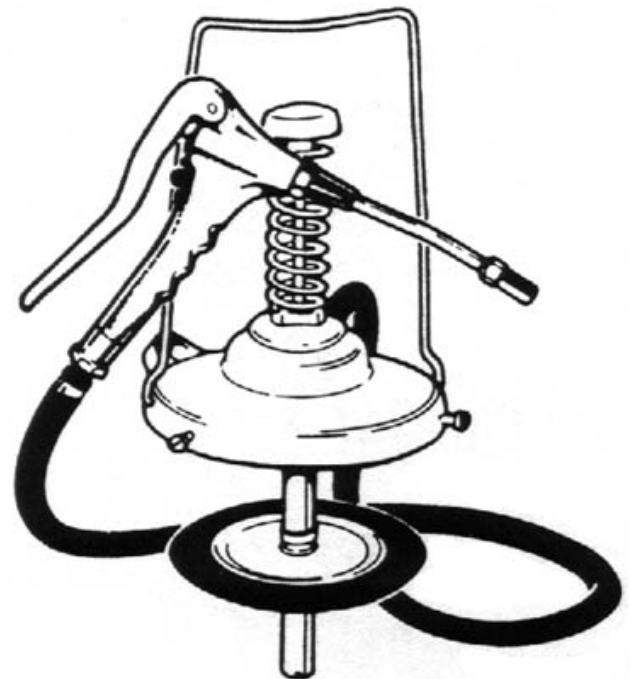


(Fig 2)

- 3) Push the pump tube through the follower boss until the lid sits on the rim of the container (fig 2). Tighten the 3 thumbscrews evenly under the container rim.
- 4) To prime, push the rod cap down several times with your foot. When the hose is full of grease, the rod cap will stay down.
- 5) Squeeze the KR gun handle and hold closed to bleed air out of the system. When fully bled, container grease will emerge from the gun end.

**Note:** Grease must travel through the entire length of the hose. It may be necessary to repeat step 4 to fully bleed the system.

**If the unit fails to prime,** bump the container base several times on a solid surface.



### OPERATING INSTRUCTIONS

After completing the assembly instructions described above, your Mini-Lube is now ready for use.

When greasing, the rod cap will rise slowly. When the rod is fully up and the gun loses pressure, push the rod cap down once or twice to re-prime the pump and continue greasing.

Each pump prime will provide sufficient grease for up to 30 shots of grease.

The gun is normally operated on the HI-VOLUME switch position. Should high pressure be required, simply push the switch on the gun to the HI-PRESSURE position.

**Note:** To remove air bubbles bump the container base several times on a solid surface.

### REFILLING CONTAINERS

For easy refilling of containers, use the Macnaught Model J2 grease pump.

## MAINTENANCE

Should the strainer require cleaning, undo the nut at the base of the pump spring with a suitable spanner, remove assembly, lever off strainer cover and remove strainer as illustrated. Clean all parts, replace any damaged or worn components before reassembly.



(Fig 3)



(Fig 4)

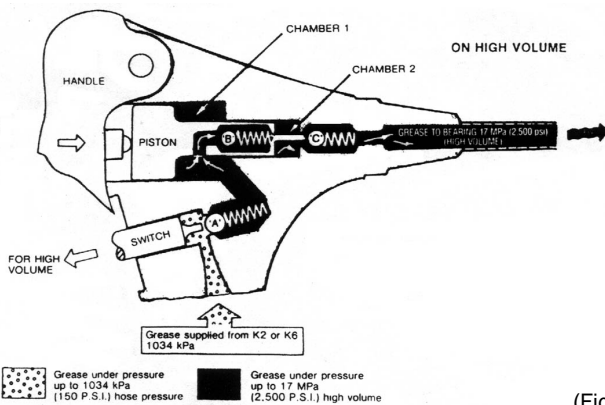


### Caution

If replacing hose assembly only use a genuine Macnaught hose, failure to do so may damage the pump.

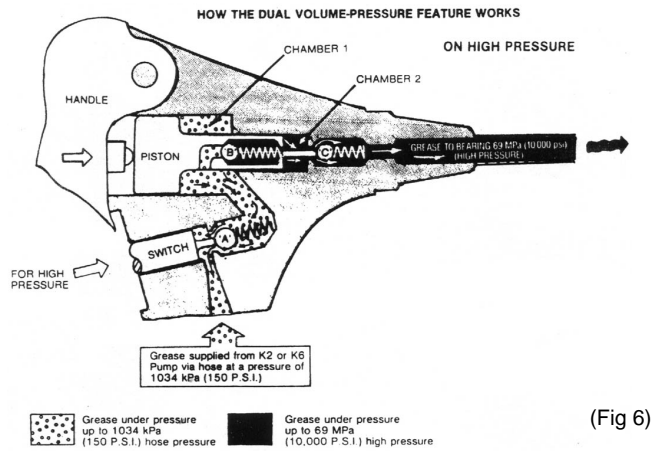
## KR PRESSURITE GUN FEATURES

### Operation on the High Volume Setting



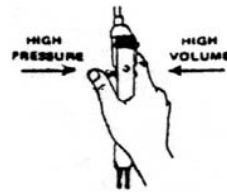
(Fig 5)

### Operation on the High Pressure Setting



(Fig 6)

**Note:** To select either high pressure or high volume, refer to Fig 7.

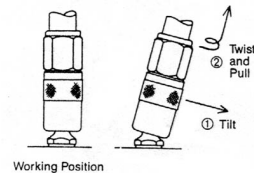


(Fig 7)

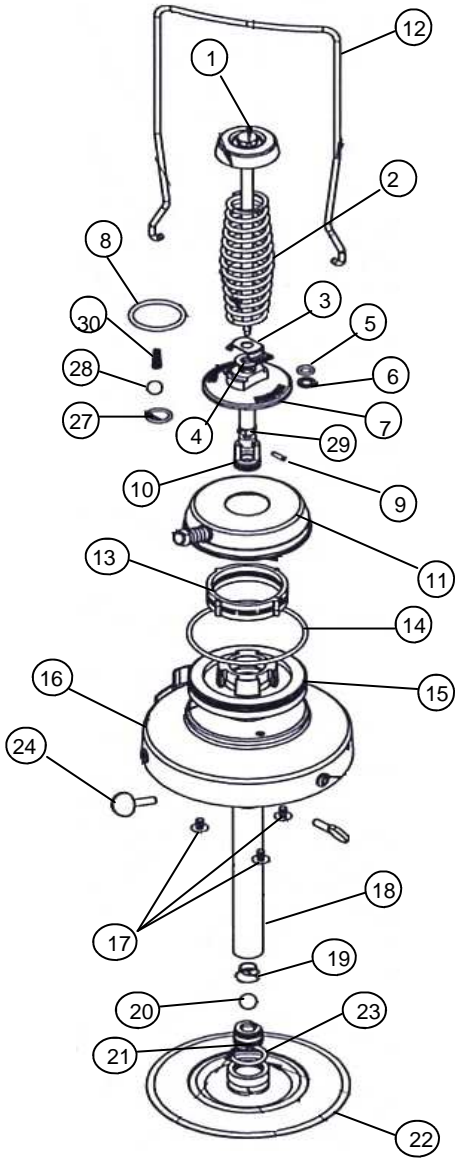
## GENERAL INSTRUCTIONS

When the KR gun has been serviced and the trouble has been caused by dirt in the valves, the pump unit should also be cleaned out.

### THE CORRECT METHOD FOR REMOVING THE KY COUPLER FROM A GREASE NIPPLE



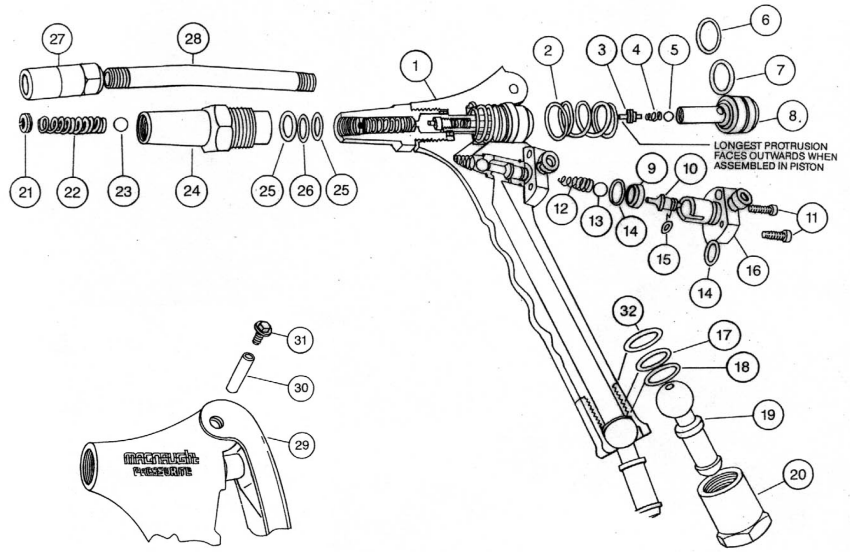
# K7 PUMP PARTS DIAGRAM



## K7 PUMP PARTS

ORDER FOR REPLACEMENT				
ITEM	PART No.	No. off	PART/SET	DESCRIPTION
			K7-2K (KIT A)	PUMP ROD ASSEMBLY KIT
			K7-3K (KIT B)	SEAL KIT
1	KM194	1	order K7-2K	A PISTON ROD AND CAP ASSY
2	KM2	1	order K7-2K	A PUMP SPRING
3	KM56	1	N151s	A RETAINER CAP
4	N125	1		A WASHER
5	N151	1	A & B BACK UP WASHER	
6	BS110	1	A & B O' RING	
7	KM50	1	order K7-2K	A CLAMP NUT
8	BS223	1	order N151s	A & B SEALING WASHER
9	N331	1	KM23s	A SPIROL PIN
10	KM24	1		A PISTON
11	KM17	1	KM226s	A STRAINER COVER
12	KM29	1		A HANDLE
13	KM9	1	KM38s	A STRAINER
14	BS240	1		A & B O' RING
15	KM44	1	A STRAINER CONTAINER	
16	KM45	1	LID BASE	
17	N52	3	KM57s	GUTTER BOLT
18	KM75	1		A PUMP TUBE
19	KM157	1	KM81s	B BALL RETAINER
20	N412	1		B 9/16" BALL
21	KM57	1	B FOOTVALVE	
22	KM81	1	B FOLLOWER	
23	BS214	1	B O' RING	
24	N72	3	N72s	THUMB SCREW
25	KH74	2	KH40s	HOSE CLAMP (Not Shown)
26	KH40	1		HOSE (Not Shown)
27	BS115	1	KM23s(incl item 9 & 10)	A & B O' RING
28	N410	1		A & B 1/2" BALL
29	N225	1	A NUT	
30	KH11	1	A & B BALL SPRING	

# KR GUN PARTS DIAGRAM



## KR GUN PARTS LIST

ORDER FOR REPLACEMENT				
Item	PART No.	No. off	NEW PART/SET	DESCRIPTION
			KR-1K (KIT A)	OVERHAUL KIT
			KR-2K (KIT B)	PISTON KIT
1	KR2	1	KR2	GUN BODY
2	KR3	1		A & B PISTON SPRING
3	KR1	1	KR-2K incl N326, N65	A & B VALVE STEM (PISTON)
4	KH5	1		A & B SPRING, PISTON CHECK
5	N403	1	KR12s	A & B 7/32" BALL, PISTON
6	KR5	1		A & B GLYDE RING
7	BS111	1	KR12s	A & B O' RING FOR GLYD RING
8	KR4	1		A & B PISTON
9	KH12	1	KR13s incl BS017	A VALVE SEAT
10	KH17	1		OPERATING PLUNGER CONTROL
11	N81	2	KR12s	CAP SOCKET 1/2"X3/16" WHIT
12	KH11	1		A SPRING, (INLET CHECK)
13	N402	1	KR12s	A 5/16" BALL, INLET
14	BS013	2		A O' RING, SEAL BODY
15	BS008	1	KR12s	A O' RING, PLUNGER CONTROL
16	KH13	1		CONTROL BODY ASSEMBLY
17	N113	1	KR13s incl BS017	A WASHER, HOSE ADAPTOR
18	BS113	1		A O' RING, HOSE ADAPTOR
19	KR6	1	KR12s	BALL END, HOSE ADAPTOR
20	KH77	1		BALL SOCKET RETAINER
21	KD64	1	KH22s	KEEPER SCREW (OUTLET)
22	KD61	1		A SPRING (OUTLET)
23	N400	1	KH22s	A 1/4" BALL (OUTLET)
24	KH22	1		OUTLET BODY
25	KH9	2	KY	A TEFLON BACK-UP WASHER
26	BS012	1		A O' RING PISTON
27	KY	1	KH23s	COUPLER
28	KH23	1		EXTENSION TUBE
29	KH19	1	KR14s	HANDLE
30	N326	1		A & B HANDLE PIN
31	N65	2	KR14s	A & B DRIVE SCREW
32	BS017	1		A RETAINER O' RING

## K7 PUMP UNIT TROUBLE SHOOTING GUIDE

TROUBLE	CAUSE	REMEDY
The pump rod cap rises slowly when not in use. (No visible leak)	A) Dirt trapped between the inlet ball (28) and the piston (10)	A) Unscrew the clamp nut (7) and withdraw the assembly. Clean the ball (28) and piston (10).
	B) The piston o'ring (27) is defective or worn.	B) Replace the piston o'ring (27).
The rod cap springs up and the unit will not pump grease.	A) Air lock caused by: i) Dent in the container ii) Damaged follower o'ring (23).	A) i) Remove dent or tilt follower (22) under the dent ii) Replace the o'ring (23) in the follower (22)
	B) Grease container empty.	B) Change to a new grease container or refill the old container
	C) Footvalve assembly is faulty.	C) Replace with a new footvalve assembly
The rod cap stays down, but the unit will not pump grease.	A) The grade of grease is too heavy	A) Use NLGI No2 grease or lighter
	B) The strainer (13) is blocked	B) Unscrew the clamp nut (7) and withdraw the assembly. Using a screwdriver, lever off the strainer cover (11). Clean or replace strainer(13).
Grease leaks at the top of the clamp nut (7).	Gland o'ring (6) and backup washer (5) are damaged.	Unscrew clamp nut (7) and withdraw assembly. Remove piston (10). Carefully push against the spring (2) with the clamp nut (7) and carefully undo the nut (29). Replace the o'ring (6) and back up washer (5), support the piston (10) when driving the pin (9) home. Ensure that the flat end of the spring (2) fits in the cap (1).
Grease leaks from the bottom of the strainer cover (11).	O'ring (14) damaged.	Unscrew the clamp nut (7) and withdraw the assembly. Using a screwdriver, lever off the strainer cover (11). Replace o'ring (14)
Grease leaks from under the clamp nut (7).	Dirt under clamp nut or o'ring (14) is damaged	Unscrew the clamp nut (7) and withdraw the assembly. Clean surfaces and replace o'ring (14)

## KR GUN TROUBLE SHOOTING GUIDE

TROUBLE	CAUSE	REMEDY
Coupler leaks.	A) Dirt under the outlet ball (23) seat.  <b>Note:</b> There is nothing wrong with the coupler itself.	A) Remove tube (28), spring keeper screw (21), spring (22) and ball (23)  Clean the seat and replace ball, spring and spring keeper screw (part way). Prime the pump and screw in the spring keeper screw until the grease stops leaking. Then screw in an extra 2 full turns. Reassemble extension tube. <b>Note:</b> If the coupler still leaks replace the outlet body assy.  When refitting outlet body (24) hold handle (29) in the closed position to enable the back-up washer and o'ring to enter squarely onto the piston.
	B) The valve stem (3) holding the outlet ball (23) off its seat.	B) Replace the complete piston assembly
Gun leaks at the back end of the piston.	Glyd ring is worn	Replace the piston assembly.
Gun fails to deliver grease on the high pressure setting.	A) Faulty piston or seals (25, 26) are worn	A) Replace the piston assembly.
	B) Valve stem (3) has become loose from the piston (8)	B) Replace the piston assembly.
Gun fails to deliver grease on the high volume setting.	A) Dirt on the inlet valve seat	A) Remove control body (16), tap out valve seat (9), o'ring (14), ball (13) and spring (12). Clean all parts and reassemble in the correct order.
	B) Operating plunger control (10) sticking in Body (16)	B) Replace the control body assembly
Push rod in the control body leaks	Damaged o'ring (15)	Remove the control body and replace worn or damaged parts
F) The gun leaks at the swivel joint.	Worn seals (18,23)	Replace swivel seals
G) When on the high volume the gun is too slow or hard to operate.	A) Springs (2 or 4) may have collapsed	A) Fit KR-1K overhaul kit.
	B) Grade of grease is too heavy	B) Change to NLGI No2 grease or lighter
	C) Too much compression on the outlet spring (22).	C) Reset the spring keeper screw (Refer to A) in trouble shooting guide) or replace the outlet body assembly.

### TECHNICAL SPECIFICATIONS

The KR Grease gun is suitable for use with Macnaught models K3 and K6 Lubrication systems.

The KR Grease Gun is recommended for use with greases up to and including NLGI No 2 consistency.

The KR Grease Gun will deliver greasing pressures up to 10,000 psi (69 MPa) on the high pressure setting.

The K6 Mini-Lube pump will deliver 30 shots of grease on each prime of the pump.



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### macnaught warranty

- Macnaught Pty Ltd ("Macnaught") warrants that all products manufactured by Macnaught and/or supplied by Macnaught under the "Macnaught" brand, excluding M-Series positive displacement meters ("Meters") and components subject to wear, will be free from any defects caused by faulty materials or workmanship ("Warranty") for a period of 5 years from the date of purchase of the product.
- For products (excluding Meters) which carry the "Macnaughtdesign" endorsement, an additional Warranty period of 5 years applies to all mechanical components (excluding electronic and electrical components), giving a total Warranty period of 10 years.
- For Meters, the Warranty period is 12 months from the date of purchase of the product.
- For components contained in all products which are usually subject to wear from normal operation of the products (such as o-rings, seals, springs, hoses and batteries), the Warranty period is 12 months from the date of purchase of the relevant product.
- For products and components which are not manufactured by Macnaught and are supplied by Macnaught under a brand name other than "Macnaught", the Warranty period is the longer of 12 months from the date of purchase of the relevant product and the period of the manufacturer's warranty.
- The warranties contained in clauses 1, 2, 3, 4 and 5 above are conditional on the purchaser, during the relevant Warranty period:
  - delivering to Macnaught a detailed notice setting out full details of any defect in any product and details of the date and place of purchase (together with copies of purchase receipts and/or other supporting documents), and
  - at the purchaser's own cost, returning the defective product to the nearest authorised Macnaught service centre.
- Subject to compliance by the purchaser with clause 6, Macnaught shall, at its option, repair or replace any product or component found defective by its inspection by reason of faulty materials or workmanship of Macnaught.
- This Warranty does not cover the failure of products, parts or components which, in the sole judgment of the Macnaught, arises other than from faulty materials or workmanship of Macnaught, including misuse, abrasion, corrosion, negligence, accident, substitution of non-Macnaught parts, unauthorised modification, improper use, storage or handling, faulty installation or tampering by the purchaser or any third party.
- If Macnaught's inspection discloses no defect in material or workmanship, repair or replacement and return (at Macnaught's sole option) will be made at customary charges, which will be advised to the purchaser.
- Macnaught's liability and the purchaser's rights under this Warranty shall be limited to the repair or replacement of defective products or components and particular, shall not extend to any direct, special, indirect or consequential damage or losses of any other warranties.
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- This Warranty does not form part of, nor does it constitute, a contract between Macnaught and the end-user or purchaser. It is additional to any warranty given by the seller of the products. This Warranty does not exclude, limit, restrict or modify the non-excludable rights or remedies conferred upon the end-user or purchaser, or the non-excludable duties or liabilities imposed on the seller or Macnaught, by Part V, Division 2, 2A, and Part VA of the Trade Act 1974 (Commonwealth) or other rights conferred on the end-user or purchaser or duties or liabilities imposed upon Macnaught.

