



Lynx Series High Pressure Grease Pump

Model 1151-034*	25-35# Outfit**
Model 1150-022	25-35# Bare Pump w/bung adapter
Model 1151-035*	120# Outfit**
Model 1150-023	120# Bare pump w/bung adapter
Model 1151-036*	400# Outfit**
Model 1150-024	400# Bare pump w/bung adapter



*Model 1151-036



*Model 1151-035



*Model 1151-034







**Drum not included



Thoroughly read and understand this manual before installing, operating or servicing this equipment.



**OPERATION, INSTALLATION,
MAINTENANCE AND REPAIR GUIDE**



General Safety



Thoroughly read and understand this manual before installing, operating or servicing the described products.

	 IMPORTANT
<p>Because this pump can be incorporated into a pressurized systems, the following safety precautions should be observed.</p>	
<p>Check equipment regularly and repair or replace worn and damaged parts.</p>	
<p>Never alter or modify any parts of this pump, doing so may cause damage to pump and/or personal injury.</p>	
<p>Under no circumstances should the dispensing valve be aimed at any person at any time. Personal injury may result.</p>	
<p>Release pressures built up in the system before any service or repair is begun. See the pressure relief procedure below.</p>	
<p>Do not operate this pump above 140 PSI (10 BAR) air inlet pressure or 200 cycles per minute.</p>	
<p>Always read and follow the fluid manufacturer's recommendations regarding the use of protective eyewear, clothing and respirators.</p>	
	 WARNING
<p>Pressure Relief Procedure:</p>	
<p>Follow this procedure whenever you shut off the pump, when checking or servicing any part of the system and when installing, cleaning or changing any part of the system.</p>	
<ol style="list-style-type: none">1) Disconnect the air to the pump.2) Point dispensing valve away from yourself and others.3) Open dispensing valve until pressure is relieved.	
	 WARNING
<p>Use 3241-002 Pump Over-Run control valve on pump air inlet for remotely operated pumps. Failure to use this valve can cause pump to cycle quickly when barrel is empty of grease. THIS WILL DAMAGE THE PUMP and may void factory warranty.</p>	

	 WARNING
<p>WARNING: The Lynx 55:1 grease pump develops up to 7700 psi (531 Bar) maximum working pressure at 140 psi (10 Bar) maximum inlet air pressure and stall conditions. Be sure that any components or accessories used in the system are rated to withstand this pressure. To determine fluid output pressure at stall conditions, multiply the ratio of the pump by the air pressure being used.</p> <p>EXAMPLE: 55:1 Pump Ratio x 100 psi air pressure = 5500 psi fluid pressure at stall.</p>	

	 WARNING
<p>THIS PUMP CONTAINS ALUMINUM AND ZINC PARTS. DO NOT use 1-1-1 Trichloroethane, methylene chloride or other halogenated hydrocarbon solvents or fluids containing such solvents in this pump. Use of these solvents/fluids may result in a violent chemical reaction, causing serious bodily injury, property damage or death. All fluids used in this pump must be chemically compatible with the wetted parts materials shown on page three (3) of this manual. Consult your chemical supplier to ensure compatibility.</p>	

	 WARNING
<p>DANGER: Not for use with fluids that have a flash point below 100°F (38°C). Examples: gasoline, alcohol. Sparking could result in an explosion which could result in death.</p>	

	 WARNING
<p>In the presence of explosive vapors, take action to prevent static sparking. Failure to ground the pump, piping, valves, containers, or other miscellaneous equipment can result in fire or explosion. A green grounding lug is provided on the pump.</p>	

PRODUCT DESCRIPTION

The Lynx 55:1 grease pump features an in-line balanced design which ensures that a maximum amount of energy is directed into the pump. This design provides even distribution of loads allowing for long seal life. The Lynx 55:1 is a double acting pump, this allows pumping of the product on both the up and down stroke providing smooth and reliable flow and pressure. An effective priming piston provides positive pump feeding, even when used with high viscosity or tacky greases and a hardened foot valve minimizes pump damage due to dirt. Corrosion proof airmotor design tolerates moisture in compressed air. The pump adjusts speed to match system flow and pressure requirements when the discharge is closed: the pump stops. The pump can be left in the stalled condition without damaging the pump or consuming compressed air. The Lynx 55:1 features a one piece molded air piston - No external air pipes. All pneumatic conductions are integrated in the air cylinder mold. The one toggle driven air valve mechanism provides fast and accurate reversing action. Sintered components and precision machined parts provide high reliability.

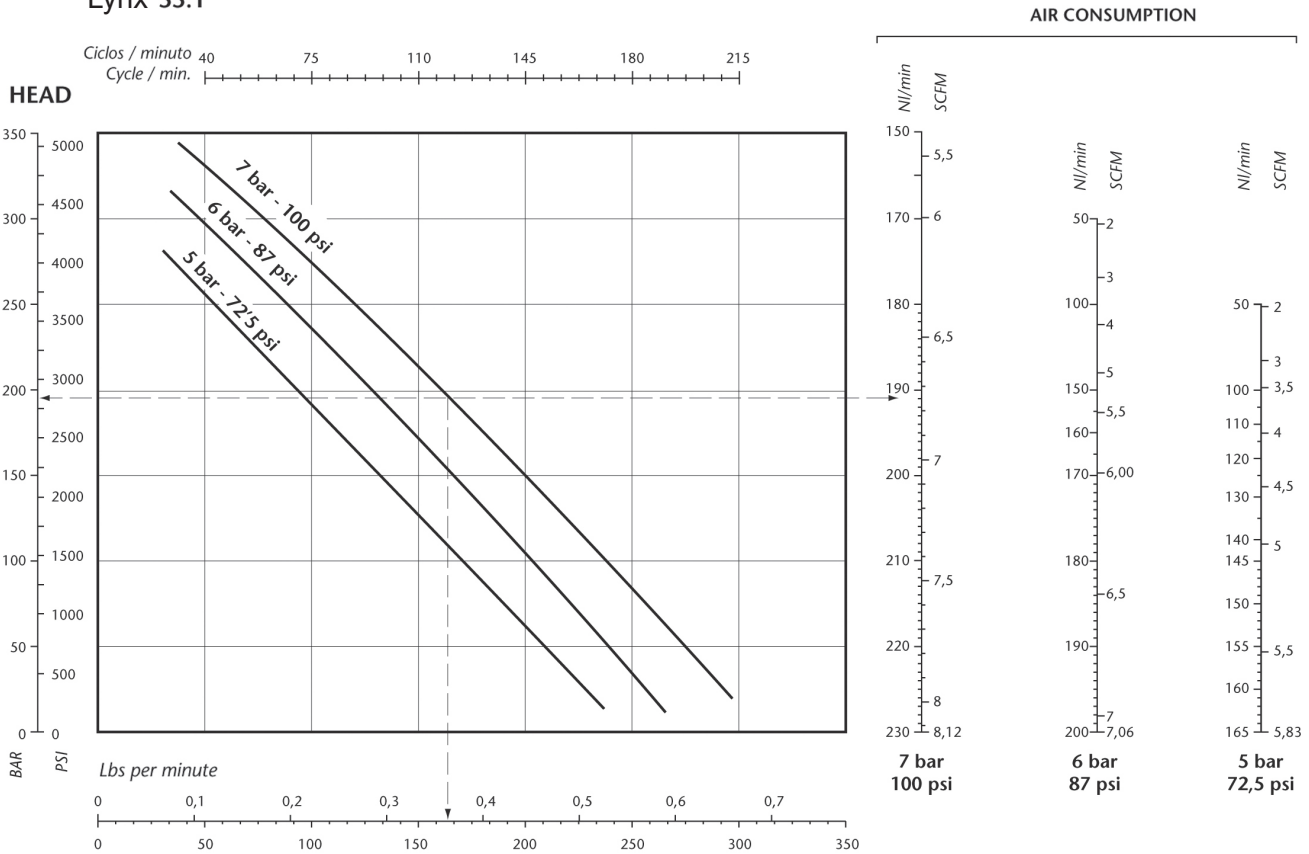
TECHNICAL DATA

Pressure Ratio.....	55:1
Air Pressure Operating Range	40 to 140 psi (2.8 - 10 BAR)
Air Motor Bore	2.75"
Air Motor Stroke.....	1.4"
Air Consumption (@100 psi)	8.1 CFM ¹
Cycles Per Minute	210 ²
Maximum Free Flow Delivery066 lbs/min ³
Air Inlet Port Size.....	1/4" NPT(F)
Material Outlet Port.....	1/4"NPT(F)
Noise Level.....	92dB ⁴
Wetted Parts.....	Steel, Zinc, Aluminum, Buna-N, PTFE

1. Maximum air consumption with 100 psi air inlet pressure and free delivery.
2. Cycles per minute for a flow rate of 10.6 ounces per minute.
3. Maximum free delivery at 100 psi, NLGI-2 grease.
4. Maximum noise level measured at 1 meter from the pump, 100 psi and free delivery.

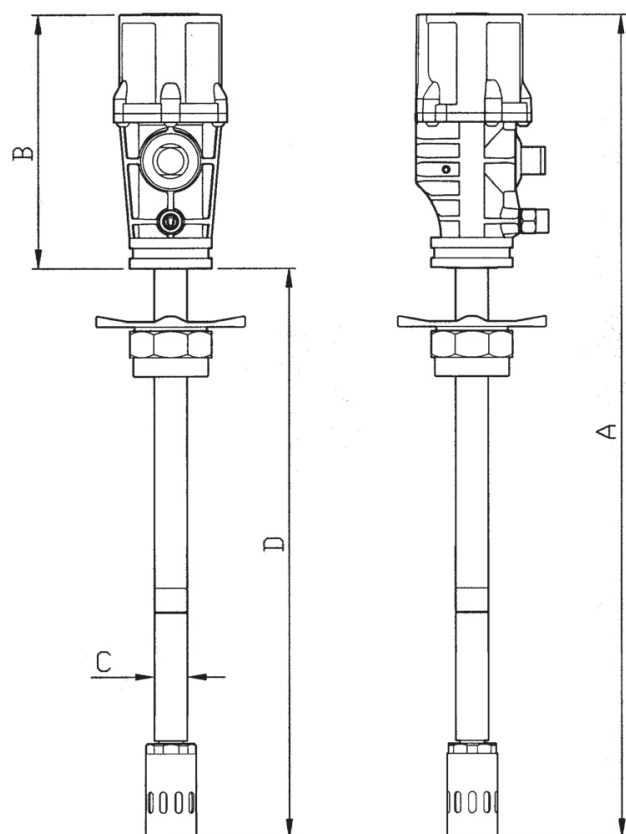
PUMP PERFORMANCE CURVES

Lynx 55:1



DIMENSIONS

Model	A	B	C	D	Weight
1150-022	24.02"	7.87"	1.02"	16.14"	7.32 lb
1150-023	36.42"	7.87"	1.02"	28.54"	9.48 lb
1150-024	44.09"	7.87"	1.02"	36.22"	10.58 lb



INSTALLATION

These pumps must be mounted on drums using covers fitted with a 2" bung. Loosen the star nut (1) of the bung adapter to remove the inferior nut (3), and screw this into the 2" bung opening of the cover. Place the star nut (1) and the three jaws (2) on the suction tube. Insert the pump through the opening and fasten the assembly at the desired height (fig 2). Fasten the cover to the drum.

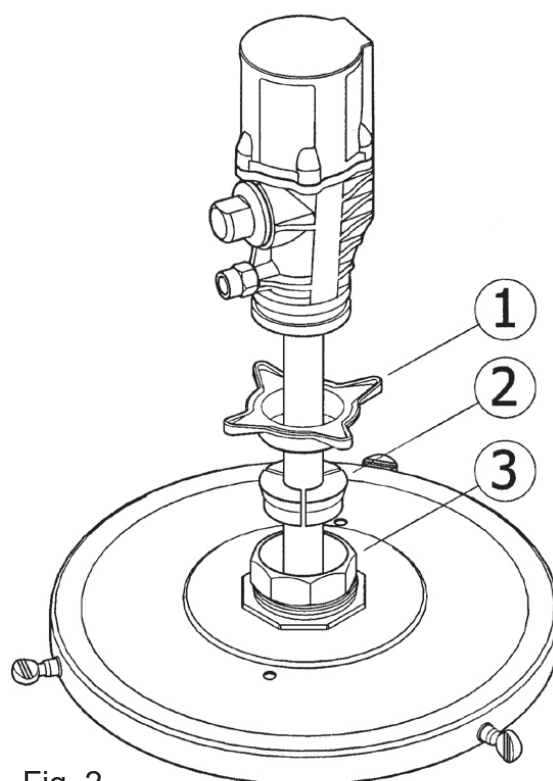


Fig. 2

See figure 3 for a typical installation with all the recommended accessories for the pump to operate correctly.



NOTE

The compressed air supply must be between 40 and 140 psi (2.8 – 10 bar), 90 psi (6 bar) being the recommended pressure. An air shut-off valve must be installed, in order to be able to close the compressed air line at the end of the day.



WARNING

If the system is left unattended and the air inlet is not closed, if there is a leakage at some point of the grease outlet circuit, the pump will start automatically, emptying the container.

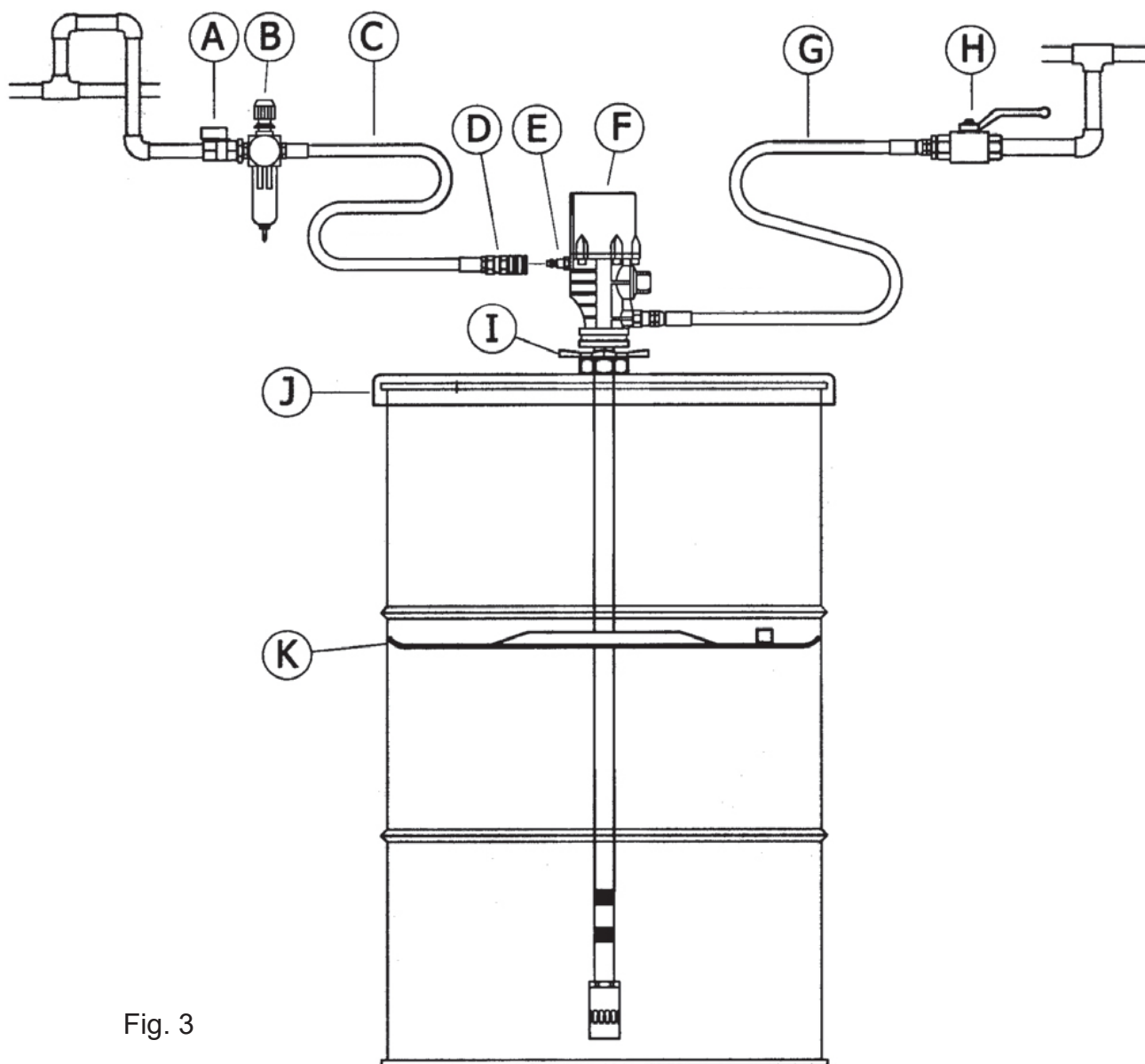


Fig. 3

Item	Description
A	Air shut-off valve
B	Filter Regulator
C	Air hose
D	Quick coupling
E	Connection nipple
F	Lynx 55:1 pump
G	Grease hose
H	Grease shut-off valve
I	Bung adapter
J	Cover
K	Follower plate

This pump is self-priming. To prime it the first time, you must connect the air supply to the pump and slowly increase the air pressure from 0 psi to the desired pressure using a pressure regulator, while keeping the outlet valve (ex. a grease gun) opened. Once grease starts to come out through the grease gun/ guns, the pump is primed.



NOTE

It is important that the foot valve does not come in contact with dirty areas, such as a workshop floor, because it may allow dirt or other foreign particles to enter the pump that can damage the seals.

TROUBLESHOOTING

Symptom	Possible Cause	Solution
The pump is not working or there is no grease delivery.	Not enough air supply pressure.	Increase the air supply pressure.
	An outlet line component is clogged or closed.	Clean or open the outlet circuit.
	There are air pockets in the grease inlet area.	Compact the grease.
The pump begins to operate very fast.	The drum is empty or the grease level is beneath the suction tube inlet.	Replace the drum or lower the suction tube until the inlet reaches the grease level.
The pump keeps on operating although the grease outlet is closed.	There is a grease leakage in some point of the outlet circuit.	Verify and tighten or repair.
	Impurities in the upper valve or in the foot valve.	Remove and clean. Replace in case of damage.
Grease leakage through the air outlet muffler.	Grease has by-passed to the air motor caused by worn or damaged seals (22, 23) or O-ring (21).	Replace the worn or damaged parts.
	The suction tube is not tightened enough to the motor body.	Tighten the threaded union. Verify that the O-ring (21) is in its correct position.
Air leakage through the air outlet muffler.	The sliding valve (12) does not close correctly.	Remove and clean. Replace in case of damage.
	The valve support (13) or the spring (19) are damaged.	Replace the items.
	The air piston (3) is damaged.	Replace it.
	The O-ring (5) is damaged.	Replace the Gland housing assembly.
Reduction in grease delivery.	There are air pockets in the grease inlet area.	Compact the grease.
	Impurities in the upper valve or in the foot valve.	Remove and clean. Replace in case of damage.
Reduction in grease pressure.	The high pressure cylinder (33) or the high pressure piston (29) scratched.	Replace the items.

MAINTENANCE



WARNING

Before starting any kind of maintenance or repair, Follow the pressure relief procedure on page 2 of this service bulletin.

Foot valve kit

1. Insert the pump in a vice in a horizontal position, grasp it by the suction tube.
2. Unscrew the intake filter tube (42) from the intake filter head (39) (fig. 1).
3. Unscrew the air motor body from the suction tube using a threaded rod (fig. 2), and pull it out until it stops. The union nut should be visible.
4. Introduce an open end wrench in the milling of the lower part of the air piston and unscrew the nut (41) and remove the washer (40) (fig. 3).
5. Remove the pin (25) situated in the upper part of the union nut (fig. 4) and unscrew the air motor body from the suction tube assembly.

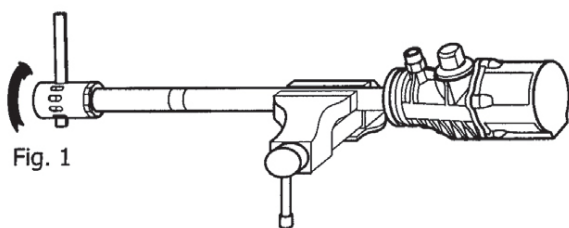


Fig. 1

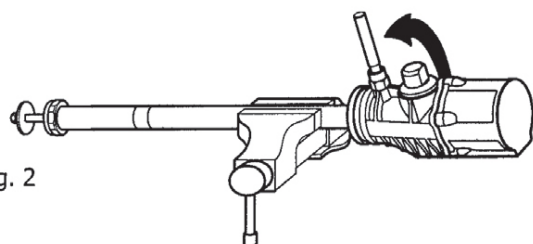


Fig. 2

6. Unscrew the foot tube with the intake filter (39) from the high pressure cylinder. Attach the foot tube to the vice, unscrew the intake filter (39) remove the foot valve seat (38), the foot valve assembly (37) and the valve washer (36).

7. Clean these parts, replace in case of damage. Assemble the pump following the previous instructions, reversing each step.

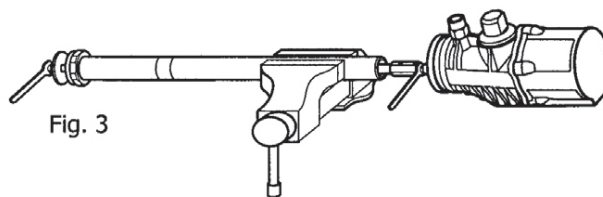
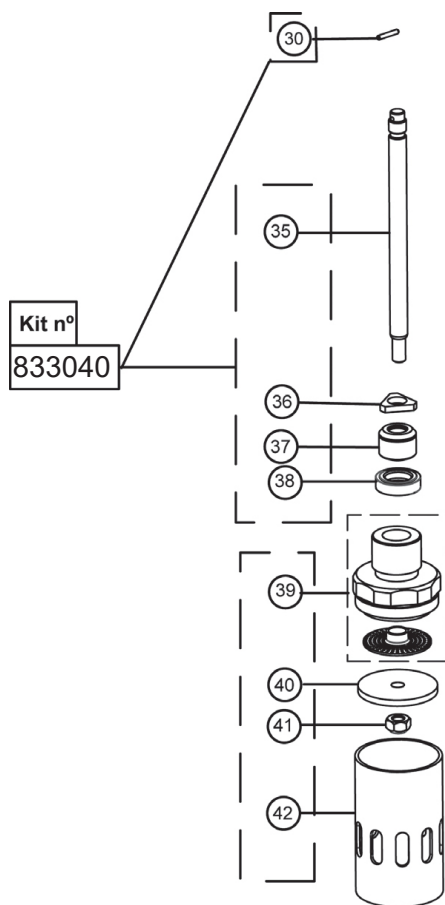


Fig. 3

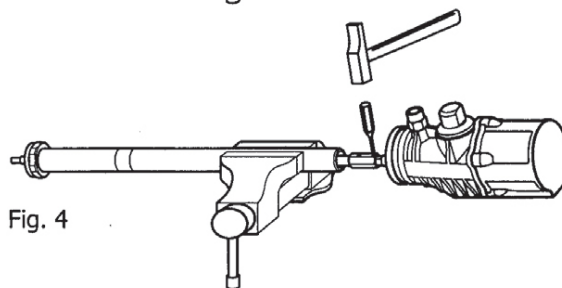


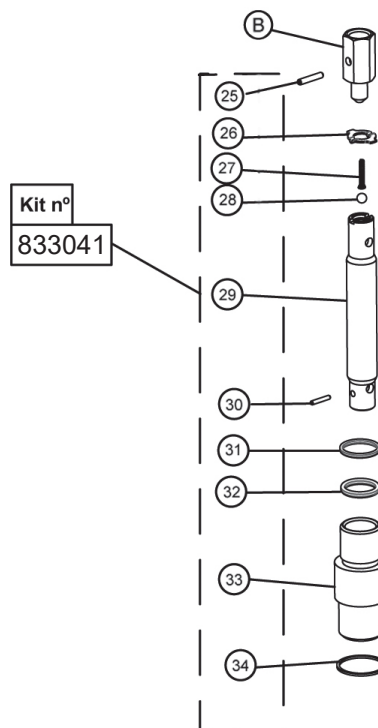
Fig. 4

HP piston/cylinder & check valve kit

1. Introduce a steel rod (ø 4 mm recommended) through the lower grease passing hole in the high pressure piston (29) and unscrew it from the grease valve body (B).

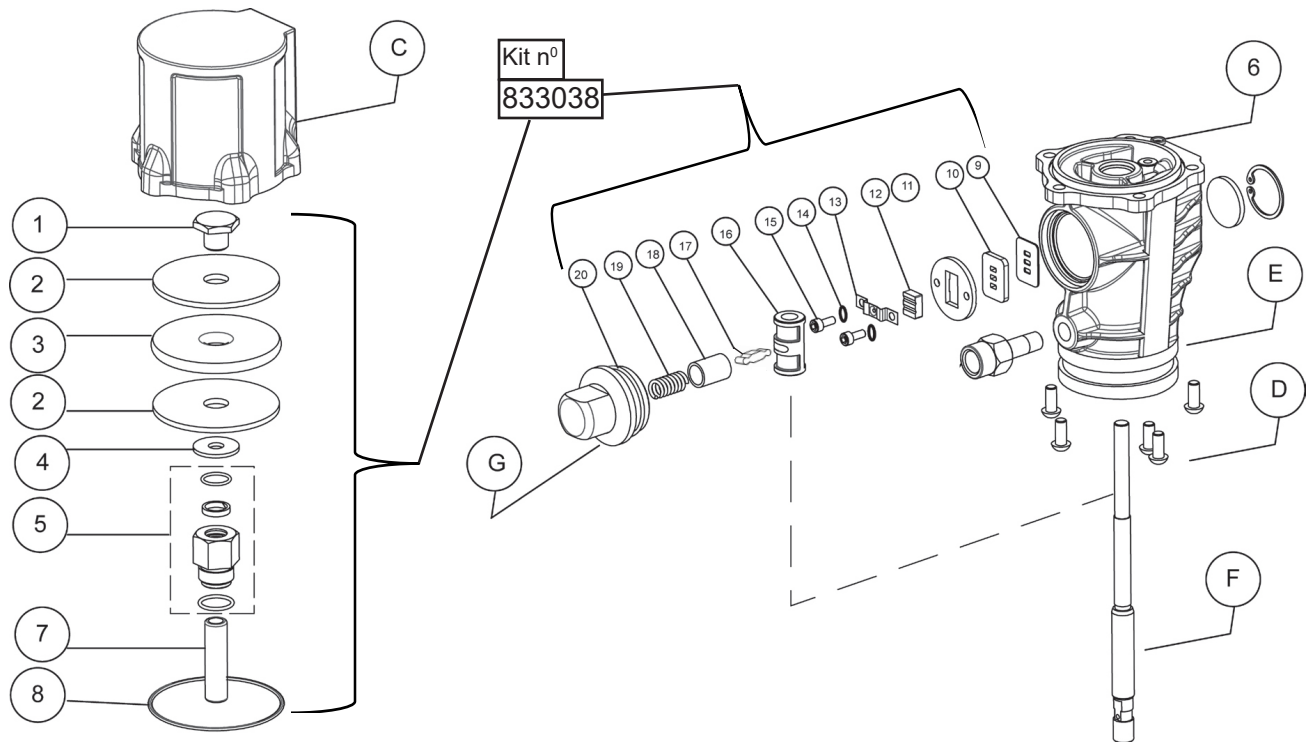
2. Clean the grease valve ball (28) and its seat in the high pressure piston (29). In case of damage, replace the affected parts.

3. If the high pressure piston (29) is scratched, unscrew also the high pressure cylinder (33) from the suction tube and from the foot tube (37) to check it. Assemble the pump following the previous instructions, reversing each step. NOTE: The high pressure piston and cylinder must always be replaced at the same time.



Air motor kit

1. Fix the air motor body in a suitable way and loosen the five screws (D) to remove the air motor cap (C).
2. Introduce an open end wrench in the milling of the lower part of the air piston . With another wrench unscrew the air piston nut (1) and remove the parts (1), (2), (3) and (4).
3. Pull the air piston rod downwards until it is completely outside the motor body .
4. Unscrew the spring nut (G) from the motor body and remove the parts (G), (20), (19), (18) and (17).
5. Unscrew the screws (15) and remove the parts (14), (13), (12), (11), (10) and (9).

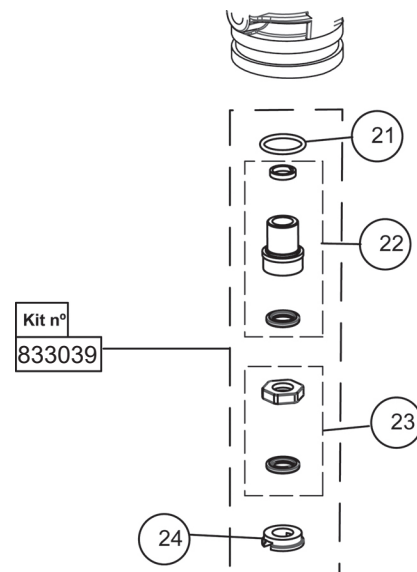


Packing seal kit

1. Follow the procedure for the air motor until the air piston rod is outside the air motor body.
2. Remove the packing set (22-24) and the O-ring (21). Replace these parts and clean the seat of the O-ring.

NOTE

It is important that these parts are mounted in correct order: Place first the O-ring in its correct position inside the motor body. Introduce thereafter the big and the small packing set.



ACCESSORIES (included in outfits)

Outfit Model	Description	Part Number
1151-034	Drum cover 25-35#	4420-010
1151-035	Drum cover 120#	4420-011
1151-036	Drum cover 400#	4420-015



Outfit Model	Description	Part Number
1151-034	Follower plate 25-35#	4440-013
1151-035	Follower plate 120#	4440-014
1151-036	Follower plate 400#	4440-018



Outfit Model	Description	Part Number
1151-034	Bung adapter 25-35#	4411-023
1151-035	Bung adapter 120#	4411-023
1151-036	Bung adapter 400#	4411-023



Outfit Model	Description	Part Number
1151-034	Filter Regulator 25-35#	3260-033
1151-035	Filter Regulator 120#	3260-033
1151-036	Filter Regulator 400#	3260-033



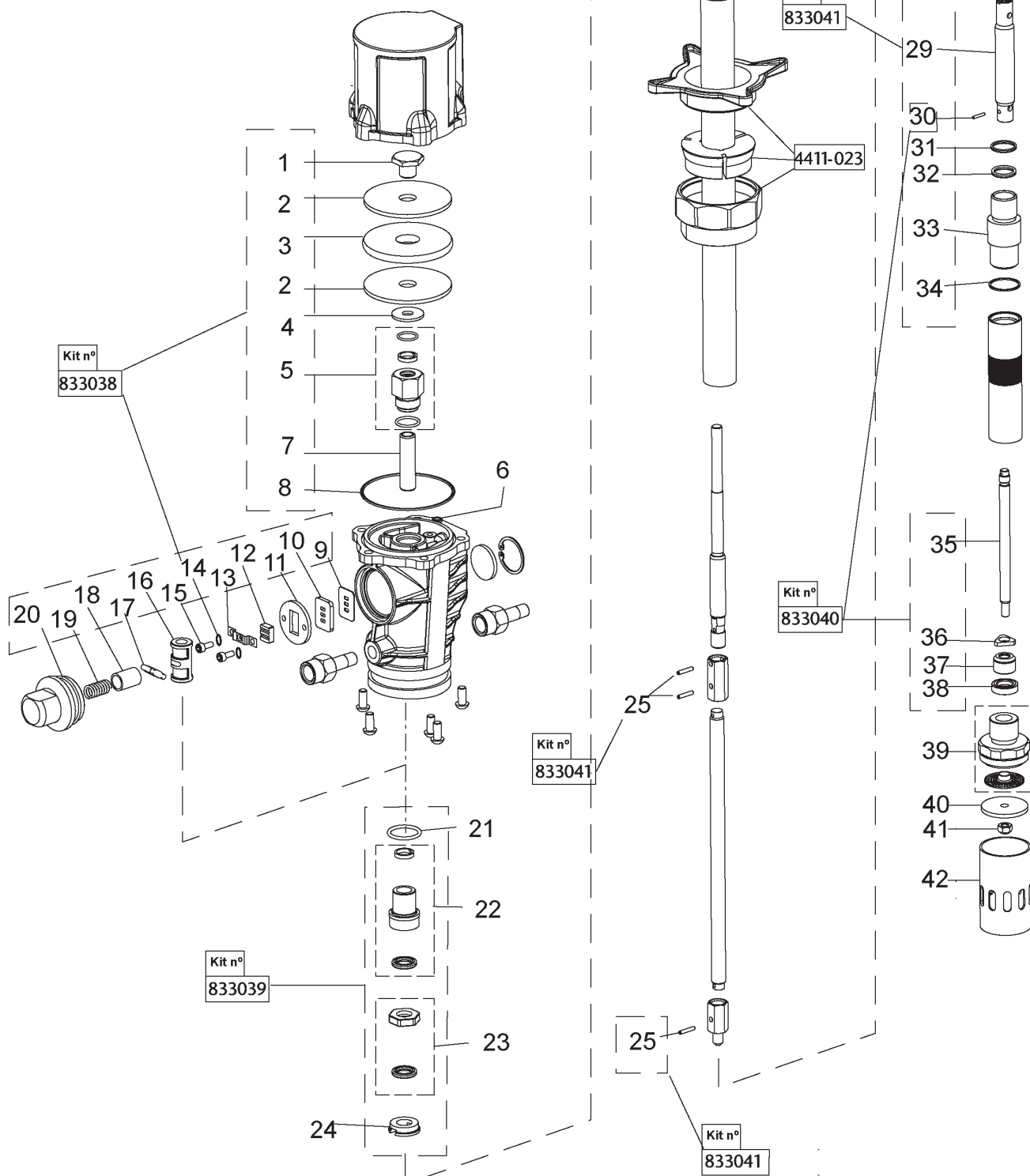
OPTIONAL ACCESSORIES (not included in outfits)

Description	Part Number
Grease gun holder	4420-012



REPAIR KITS

Part number	Description
833038	Air motor kit
833039	Packing seal kit
833040	Foot valve kit
833041	HP piston/cylinder & check valve
4411-023	Bung adapter



**For Warranty Information Visit
www.balcrank.com**

Balcrank® Corporation
Weaverville, NC 28787
800-747-5300
800-763-0840 Fax
www.balcrank.com

SERVICE BULLETIN SB 1116
Rev. D 3/20

Revision Log:

Rev. A - New release
Rev B - Added bare pump model numbers
Rev C - Added 400# models
Rev D - Replaced numbers 1151-027,
1151-028, 1151-032 with 1151-034,
1151-035 and 1151-036