

LUBYACE SYSTEM (SINGLE LINE LUBRICATION SYSTEM)



INSTRUCTION MANUAL

Product: LB-type Manually Operated Pump

ATTENTION FOR SAFETY USE

Before operation, read carefully the instructions below for the safety use of LUBYACE lubrication system.

These safety-use instructions, composed of "⚠ Warning" and "⚠ Caution", are designed to protect customers from any possible harm and damage caused by misusing this system. Read and follow these instructions carefully to prevent misuse-driven this system troubles and protect yourself from danger.

 Warning	If ignoring instructions with this sign and operating wrong way, death or serious injury will happen.
 Caution	If ignoring instructions with this sign and operating wrong way, injury and equipment damage will happen.

 WARNING

1. Do not step on or pull the lubricator and pipe-related section as foothold or hand rail; you will slip and fall or it will damage the lubrication system.
2. Do not remodel or disassemble the equipment. If necessary, contact us beforehand. And if on-site maintenance job is needed, professional staff familiar with the mechanism must to work on it.

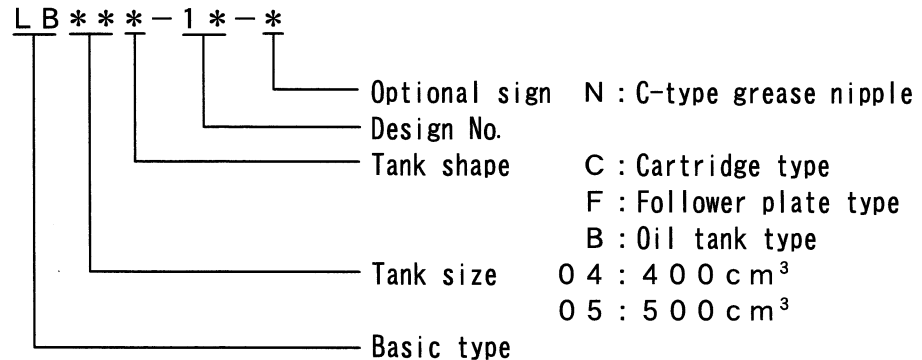
 CAUTION

1. In case of air venting, protect the pump beforehand with vinyl case or other alternatives; otherwise, grease-contained air will diffuse and damage your eyes and other objects.
2. Use protectors whenever handling grease; otherwise eye damage or skin inflammation will happen when grease contacts your eyes or skin.
3. Pull out all grease inside the tank whenever decomposing the tank; otherwise, it will cause injury in particular with the model with compressive spring fixed inside the tank.
4. Do periodical inspection, such as checking grease amount and operation, to maintain the lubrication system. If do not, machine trouble driven by bearing injuring will happen.
5. When operating manual-type pump, be careful link construction of the handle. It will catch your hand and cause injury.
6. Use the system within the rated capacity and under the adequate operational environment. If ignoring them and using it beyond the capacity or under the dangerous environment, including its installment nearby fire and explosives, the system will have mechanical problems or cause fire.

1. General Description

LB-type manually operated pump is used for easy handle operation type pump as supply source of centralized lubricating system which optionally and centralizing supplies the best suited volume of grease or oil.

2. Key to Type Code



3. Pump Type and Specifications

Type	LB04C	LB05F	LB05B
Max. working pressure (MPa)	17.5		7
Discharge rate (cm ³ /st)	0.6		
Discharge port size	Rc 3/8		
Consistency of applicable grease	For centralized lubricating No. 0 to No. 2		Mineral oil ISO VG 68 or 100
Tank capacity (cm ³)	400	500	500
Tank shape	Cartridge grease	Follower plate	Oil reserver
Method of replenishment	Change cartridge	Supply from feed port	Remove tank cap and supply
Working temperature range (°C)	No. 0, 1 : -5 to +50 No. 2 : 0 to +50	-5~+50	
Weight (kg)	1.0	1.1	
Handle operating force (N)	127		60

4. Construction and Principle of Operation

(See figure 1. This figure is LB04C, the same operation as LB05F or LB05B)

This pump discharge grease or oil by operating handle in front and behind within about 25°.

This handle is link construction, so pump piston operates to follow the handle.

- 1) When drawing the handle front side (left side about Figure 1), pump piston moves left and suction hole "A" is opened.
- 2) Grease in the cartridge or the tank, or oil in the tank lubricant in the pump chamber from this hole.
- 3) As the pump piston moves to the right side by operating handle, suction hole "A" is closed, the sucked lubricant increases its pressure gradually and pushes open the check gasket packing flows from discharge port.

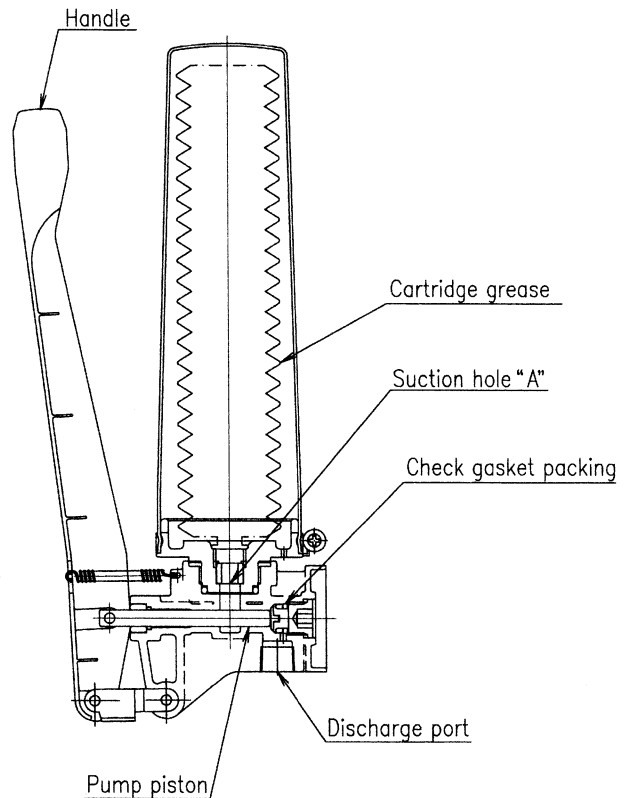


Figure 1

5. Replenishment of Grease and Oil

- 1) LB04C-12: Install general goods in the market for cartridge grease 400cm³.
(Figure 2) Install following method.
 - Loosen hexagon socket screw (size of square is 7mm) of fixing band.
(Using a spanner or a screwdriver)
 - Remove cartridge cover of the pump pull up (to be felled down) by hand.
 - Screw the top of cartridge on the part of center screw of the pump body.
 - When put the cartridge cover as it was, and tighten the screw of fixing band, installation is completed.
- 2) LB05F : When the first filling up, release air in the tank from air vent of the tank
(Figure 3) high level mark and keep the tank no air.
After the second time fill up to the high level.
In addition, supply grease by filling pump with pipe fitting is suited to the feed port. Our standard pump pipe fitting's dimension is G3/8. We prepare exclusive filling pump to accept your order.
We also prepare filling pump with grease nipple. Inquire us or our agency to order.

- 3) LB05B : Remove the cap of upper reserved tank, and supply through oil-strainer.
(Figure 4)

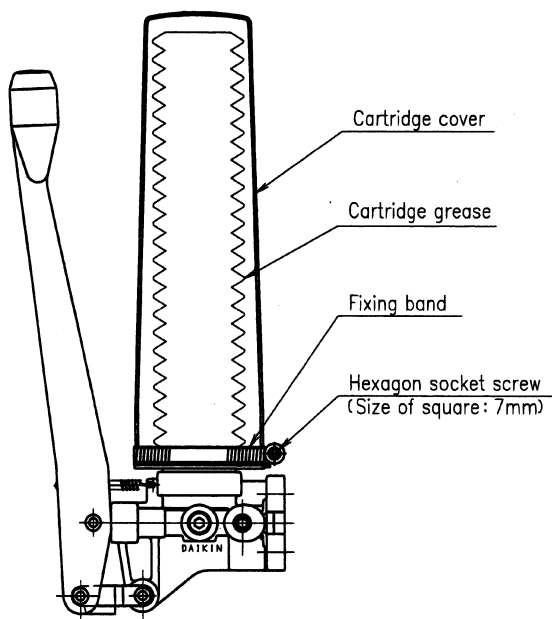
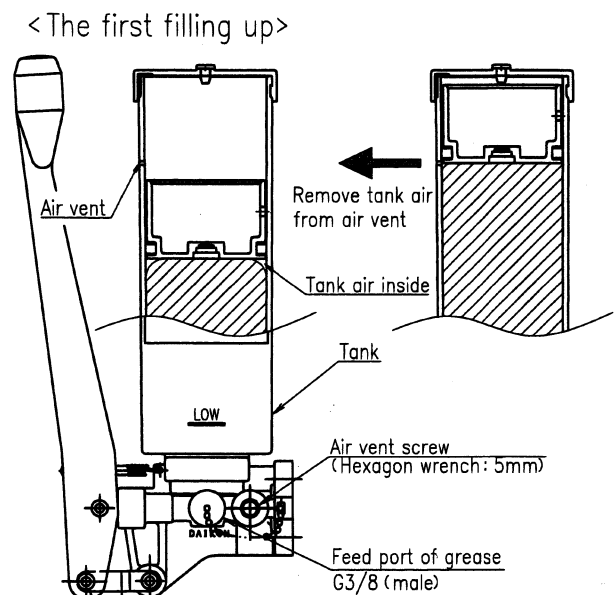


Figure 2



<From the second time>

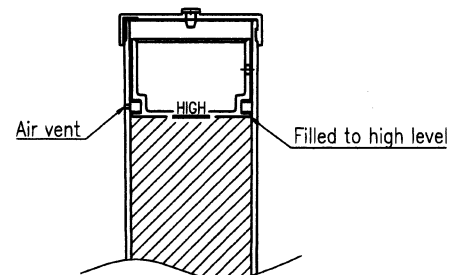


Figure 3

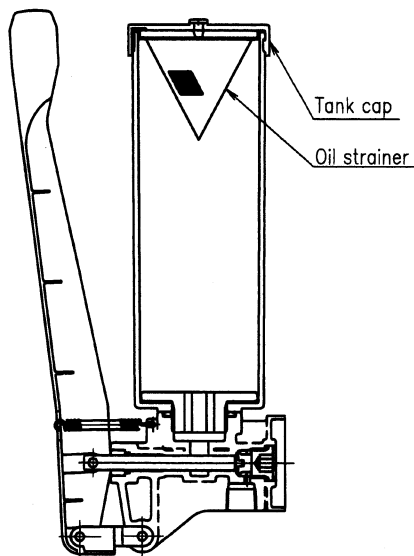
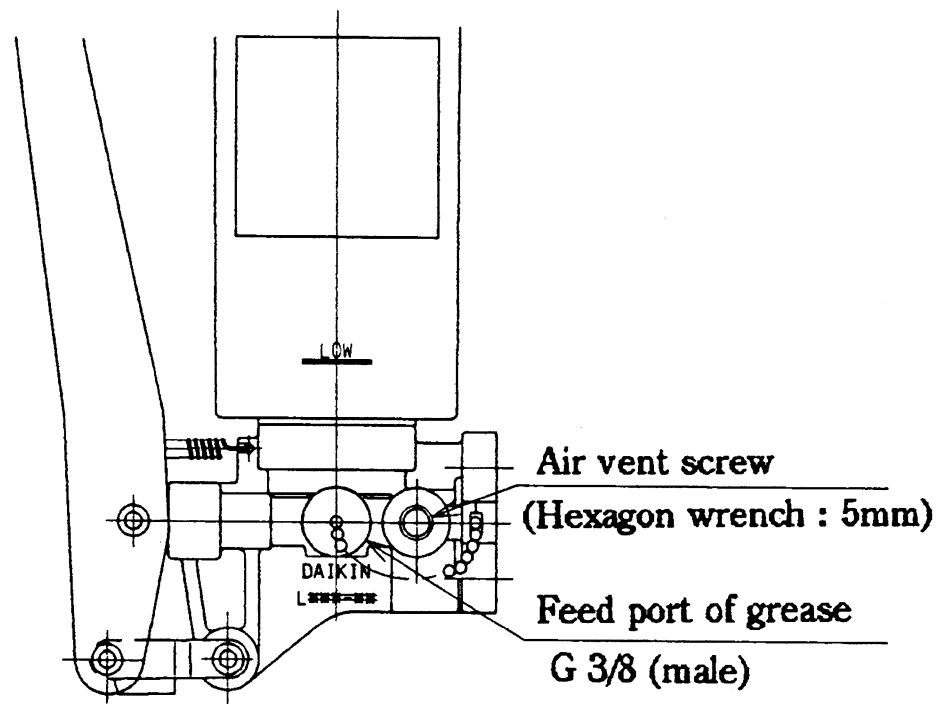


Figure 4

6. Cautiously Instructions

- 1) Be sure to use the type of grease consistency of centralized lubrication grease NLGI No. 0 to No. 1 and No. 2. Refer to specifications to know working temperature range. In addition, it should be used the oil suitable for ISO VG 68 or 100 mineral oil. Do not use other oil.
- 2) In case of first filling of the pipe with grease or oil, prepare another pump (ex. Air motor pump) and fill with the very grease or oil to take away air and dust from end of the pipe entirely.

- 3) Handle operating force at maximum working pressure of LB04C and LB05F is 127N, LB05B is 60N. If operate with excessively great force, it may be damaged.
- 4) When starting operation and making cartridge or tank empty, it may include air in the pump. In case light handle operation and no response, carry out air venting. Method of air venting is follow: After removing air vent screw (hexagon socket headless plug Rc1/8) of the pump side, operate the handle. Then grease include bubble is pushed out entirely, and continue until fresh grease comes out continuously. (Figure 5)
When grease flowing out is not enough about LB04C, operate the handle as pressing the cartridge.



(Figure 5)

7. Maintenance and Regulation

- 1) In normal operation, record the number of handle operating times which needs complete the working of distributing valve's motion indicator.
- 2) When the handle excessively heavy and difficult to operate, it may cause over-resistance of bearing side or trouble of distributing valve.
- 3) When the handle operation is excessively light and no response, it may cause so much air inclusion in the pipe or air in the pump. Carry out air venting entirely.