

Manually Operated Lubrication Pump
(Models: EGH-C and EGH-P)

Operation Manual

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| 6.1 Causes of Contamination | |
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Overview

This grease feed equipment is a pump for force-feeding a comparatively small amount of grease manually to each grease feed point from the distributor (constant-volume pressure-forwarding valve).

1. Models of Grease Feed Equipment

1.1 Name: Manually operated lubrication pump

1.2 Models: EGH-C and EGH-P

2. Specifications

2.1 List of Product Specifications

(1) EGH-C and E-GH-P type pumps

| Pump | Model | EGH-2C | EGH-4C | EGH-4CB |
|------------------|---------------------------------|-------------------------|----------------|----------------------------|
| | Discharging volume (mℓ /stroke) | 1 | | |
| | Discharging pressure (MPa) | 10 | | |
| | Pressure reducing method | Operation by the handle | | |
| | Tank | Cartridge type | Cartridge type | Cartridge type with spring |
| Specified grease | NLGI viscosity number | 0 ...* | 0...* | 0,1 |
| | Soap group | Lithium family | | |

* NLGI No. 1 may be used only under air temperature of 20°C or more.

| Pump | Model | EGH-3P |
|------------------|---------------------------------|--|
| | Discharging volume (mℓ /stroke) | 1 |
| | Discharging pressure (MPa) | 10 |
| | Tank | Effective capacity 0.26 L Plastic tank |
| Specified grease | NLGI viscosity number | 000, 00, 0, 1 |
| | Soap group | Lithium family |

* NLGI No. 1 may be used only under air temperature 20°C or more.

(3) Pressure gauge (optional part)

| Code No. | Pressure range | Connection port |
|----------|----------------|-----------------|
| 109141 | 25 MPa | R1/8 |

(4) Tank

| Code No. | Capacity (effective) | Material |
|----------|------------------------------------|---------------|
| 530377 | 0.26 L | PCTA |
| 539131 | 0.4 L cartridge type | Polypropylene |
| 539133 | 0.4 L cartridge type (with spring) | Polypropylene |
| | 0.2 L cartridge type | Polypropylene |

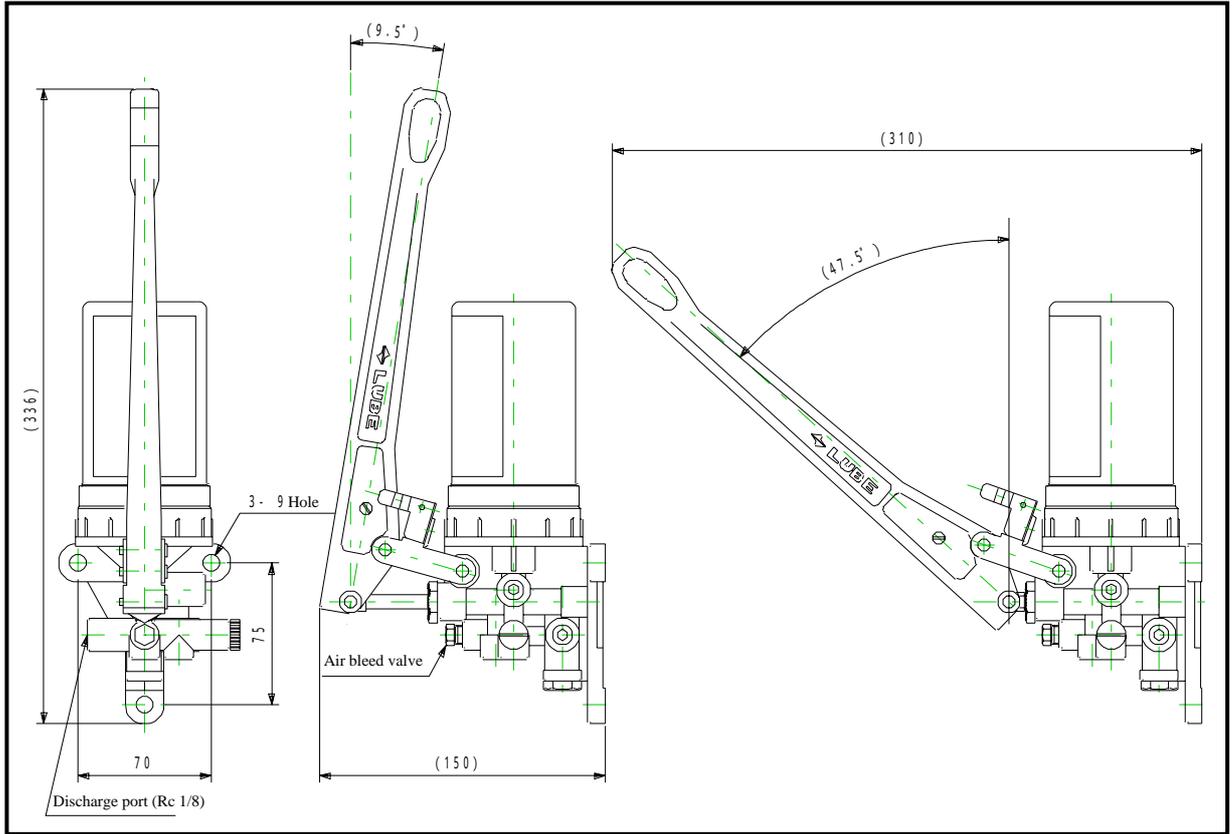
(5) Waterproof cap for cartridge (optional part)

| Code No. | Use | Material |
|----------|---|---------------|
| 530492 | Cartridge (with spring) for outdoor use | Polypropylene |

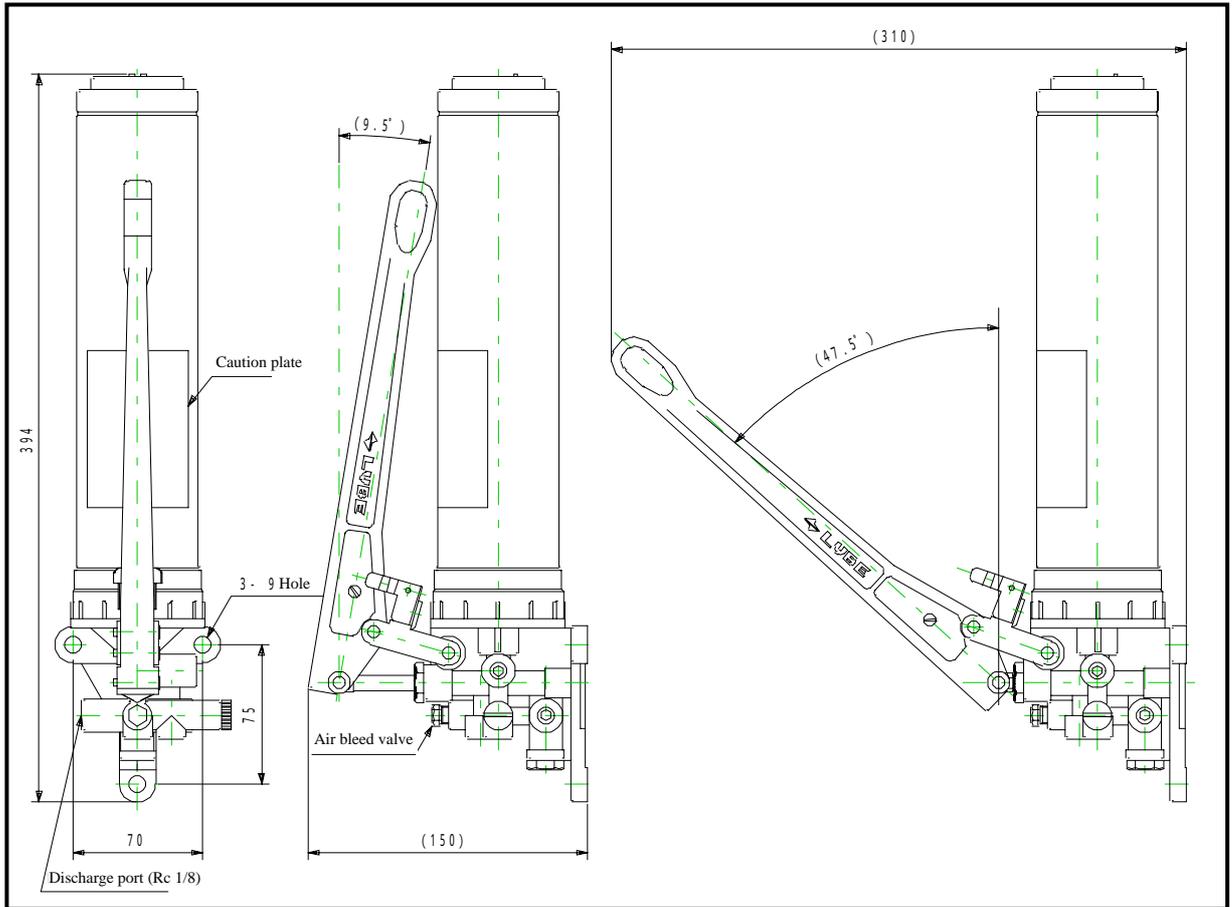
2.2 List of Code Numbers for EGH-C and EGH-P

| Code No. | Model | Type of Tank | Pressure reduction |
|----------|---------|-------------------------|-------------------------|
| 103780 | EGH-2C | Cartridge | Operation by the handle |
| 103781 | EGH-4CB | Cartridge (with spring) | Ditto |
| 103782 | EGH-4C | Cartridge | Ditto |
| 103783 | EGH-3P | 0.26 L | Ditto |

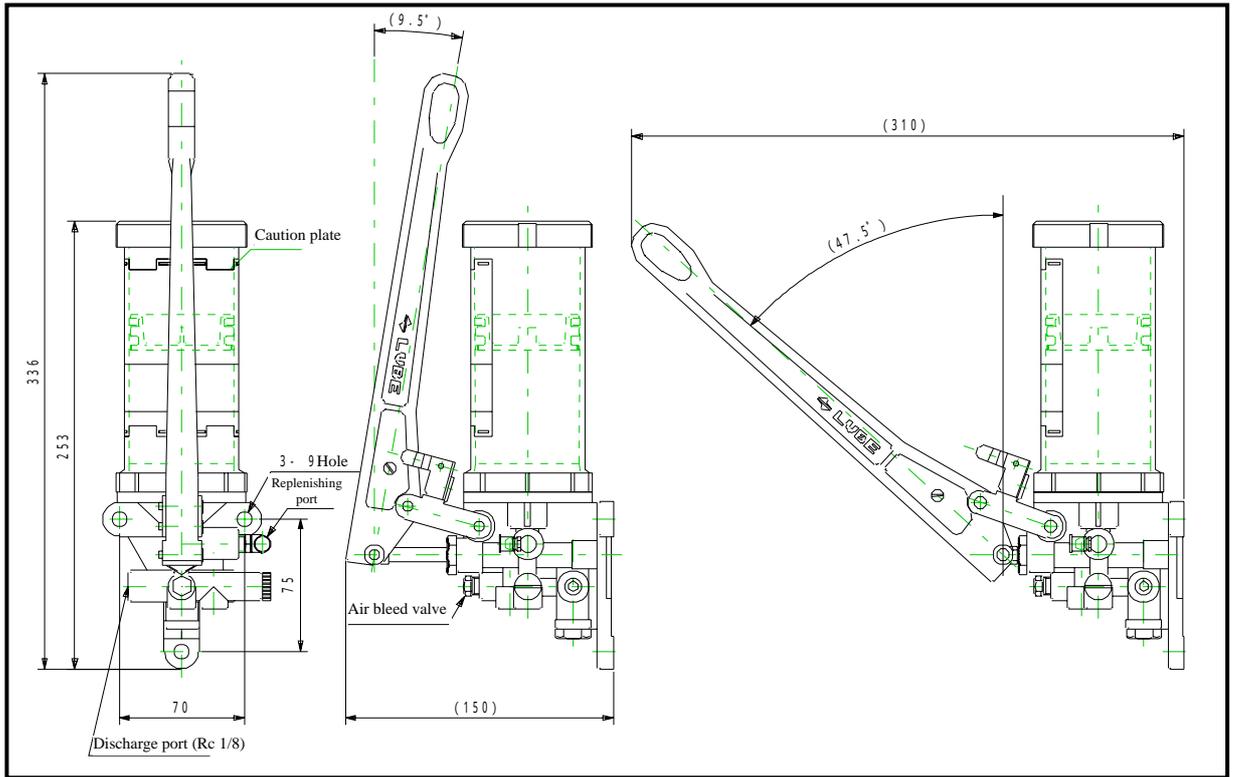
2.3 Name of Each Section



EGH-2C



EGH-4C



EGH-3P

3. Handling for Safety

3.1 Product Installation

Choose a place for installation that allows easy operation of the handle, etc.

Mount the grease feed equipment on a vertical wall or a flat stand or board and secure it reliably.

Use M8 screws for installation and fix at three points.

If any vibration is expected, do not install the equipment directly but only through a rubber isolator, etc.

3.2 Port Connection

Carry out port connection by tightening with an appropriate torque and make sure that there is no grease leakage.

3.3 Greases to be Used and Replenishment

(1) Grease

Do not use any grease other than those lithium family greases specified in “2.1 List of Product Specifications” so that no pump failure, clogging of the system, etc. occur.

(2) Replenishment

Standard 0.26 L tank

If the follow plate inside the tank has come down to the low level, replenish grease without fail.

In replenishing, feed grease only from the replenishing port. Otherwise, it may cause a failure. Use appropriate attention so as not to introduce air, foreign substances, etc.

Cartridge type

If the end of the cartridge container has come down to the low level, replace the cartridge without fail.

Never reuse the cartridge, for example, by refilling it. Otherwise, the cartridge container may burst. Carry out replacement operation with appropriate attention so as not to allow air, foreign substances, etc. to enter referring to “3.7 How to Replace the Cartridge.”

3.4 Usage Conditions (When using the equipment, maintain the following conditions.)

Operating ambient temperature 0°C to +40°C

Operating ambient humidity 35% to 85%

3.5 Air Bleeding

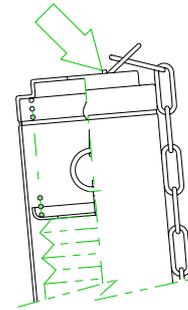
After system piping work and when air is introduced into the pump, carry out air bleeding by all means. In carrying out air bleeding, loosen the air bleeding valve of the pump (return for approximately a turn counterclockwise) and move the handle to and fro until grease comes out and air stops coming out and, after completing air bleeding, close the air bleeding valve.

3.6 How to Operate the Handle (Operation and P.D.I.)

- (1) Disengage the handle with the handle stop.
- (2) Move the handle to and fro to feed grease.
- (3) When the handle can no longer be pulled toward you, feeding of grease has been completed. (Completion of grease feed).
- (4) After completing grease feeding, push the handle until it touches the tank in order to reduce pressure. In the case of EGH-2C, the handle does not tilt to the extent it touches the tank. If pushed toward the tank, it stops moving forward. Stop pushing at that point.

3.7 How to Replace the Cartridge (only for cartridge type models)

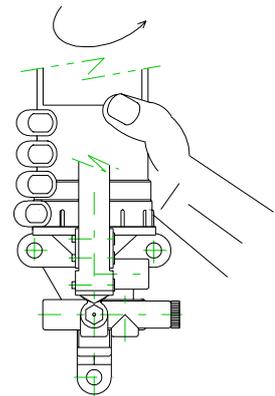
- (1) Pull up the chain (so that a new cartridge can be inserted) and hook the chain to the tab on the top of the cover (the point indicated by the arrow in the drawing on the right).



- (2) Turn the cover by hand and remove it from the pump.

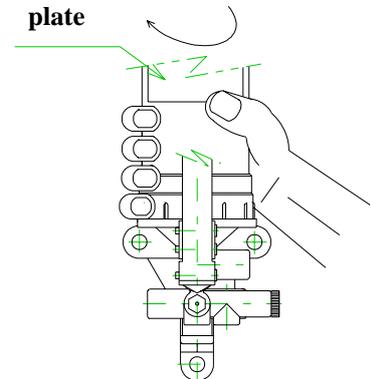
- (3) Remove the empty cartridge from the pump, and mount a new cartridge paying appropriate attention so as not to allow air and foreign substances to enter.

* Use the same brand and same grade of grease.



- (4) Mount the cover to the pump again and tighten it by hand.
(Position in which the seal comes to the front)

**Caution
plate**

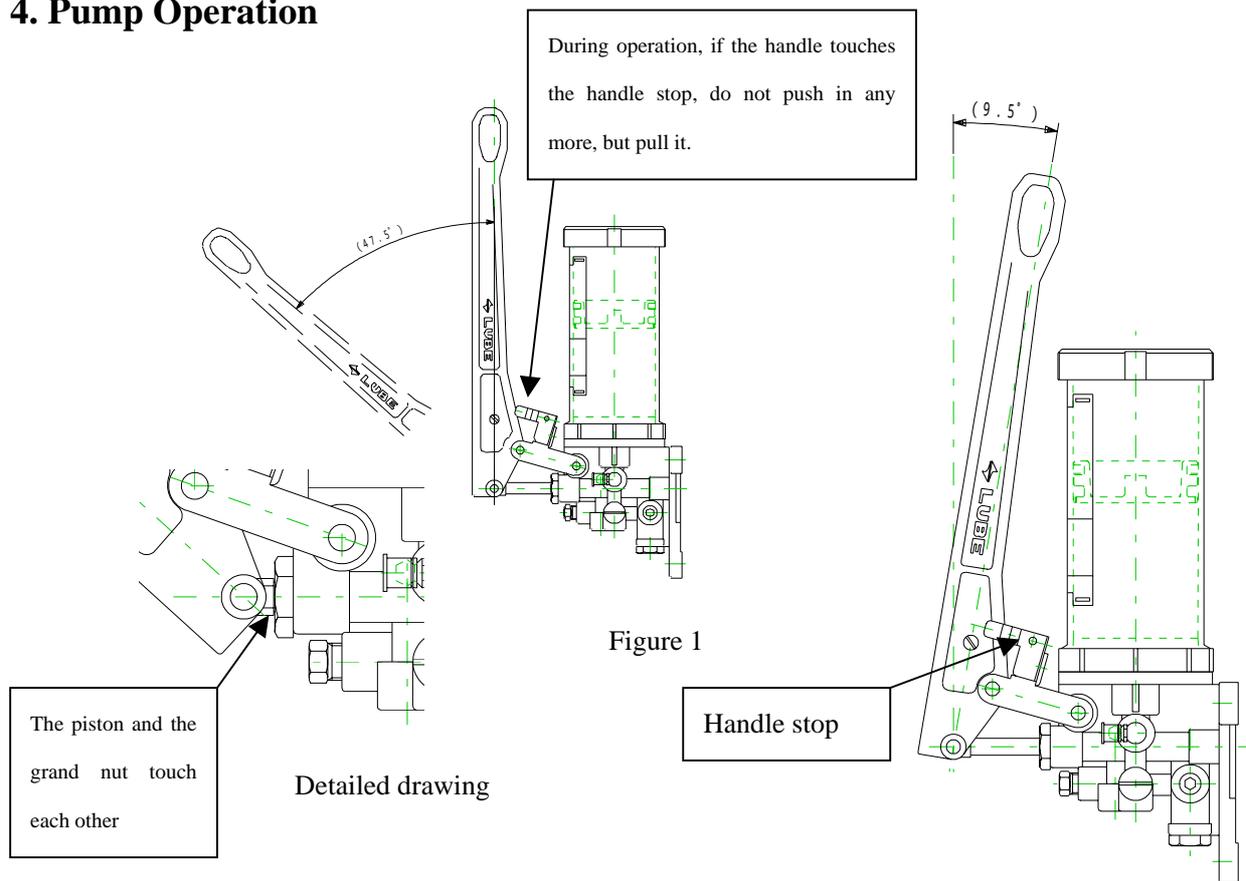


- (5) Pull up the chain to remove from the tab and move it down slowly.

Note: Put the chain completely in the cover.

Note: For types without a spring, steps (1) and (5) are not necessary.

4. Pump Operation



- (1) Disengage the handle with the handle stop (as shown in Figure 1).

- (2) Feed grease by moving the handle to and fro.

* Pulling the handle to you sets the system to discharge operation and pushing it sets the system to sucking operation.

- (3) Grease feed operation is completed when the handle can no longer be pulled toward you. (The handle can be pulled toward you until the stepped portion of the piston shown in Figure 1 touches the grand nut. Refer to the detailed drawing.)
- (4) When pushing the handle during operation, stop the handle when the handle touches the end of the handle stop. (At this point, the handle is approximately parallel with the tank.)
- (5) After completing grease feeding, push the handle until it comes into the status shown in Figure 2 for reducing pressure (Figure 2). Under this status, the handle is locked to the handle stop. Then, stop pushing the handle.

5 . Troubleshooting and Measures to take

| Trouble | Cause | Measures to take |
|---|--|--|
| No grease discharged from pump | Little grease left in the reservoir. | Refill the reservoir or replace cartridge with the same or equivalent grease. |
| | Air in the pump. | Bleed air. |
| | Insufficient move of the handle. | Move the handle until it does not move. |
| Pressure in main tubing is not built up | No grease discharged from pump due to any of above causes. | Refer to above measures. |
| | Air in the tubing. | Take off closure plug(s) at the end and operate pump and bleed air in the tubing. |
| | Foreign particle(s) at the Ball seating section of relief valve. | Contact LUBE |
| | Pump discharge pressure is low due to relief valve's wrong pressure setting. | Contact LUBE The relief valve pressure has been set before shipment. |
| | Grease leaking from pump discharge port or pipe connection parts. (Due to looseness or excessive tightness) | Tighten them with proper torque or re-pipe them. |
| | Damaged tubing. | Replace damage tubing. |
| | Handle is pushed to reservoir too much. (Depressurize valve is opened.) | Operate the handle at correct range. |
| Air in the system | Air in the system due to above reasons. | Refer to above measures for " Air in the pump " and " Air in the tubing " . |
| | Due to low level of grease in tank or cartridge, air is introduced into pump. | Refill reservoir with same or equivalent grease or replace cartridge and then bleed air. |
| No grease discharged from valve(s) | Clogged valve(s) | Replace valve(s) |
| | No grease is filled in tail tubing. | Fill tail tubing with grease at installation. |

| Trouble | Cause | Measures to take |
|--|--|--|
| Pressure in tubing's does not decrease properly. | Clogged termination fitting(s) and/or Valve(s) | Replace termination fitting. Disassemble valve, inspect and replace them, if necessary. |
| | Crashed tubing. | Replace the tubing. |
| | Grease gets too hard doe to low ambient temperature. | Check NLGI# and ambient temperature. |
| | Handle is not positioned for decreasing pressure. | Place the handle to the position for decreasing pressure. |

6 . Appendix. Grease Contamination: Causes and Measures

6.1 Causes

Causes for contamination can be divided into two categories.

(1) Before the completion of installation

Foreign particles in the tubing or pump tank.

(Manufacturing defects of the assembly parts or connecting parts and unconformity during construction.)

(2) During operation

Foreign particles from outside or generated inside of the system.

(Condensation of the moisture in the air due to change in temperature or separation of grease ingredients.)

6.2 Measures

(1) Clean the tank and remove the foreign particles.

(2) Keep the grease for refilling in the proper place.

If the system is installed and/or grease is stored outdoor, proper care must be taken since introduction of dust or rain into the grease would lead to system malfunction.