EGM

Motor Driven Grease Pump

Owner's Manual

LUBE USA, INC.

Context

Outline

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This pump is designed to lubricate to each point by delivering relatively small amount of grease through metering valves.

1. Model:

1.1 Name : Motor Driven Grease Pump

1.2 Model

Model	Part No.	Power	Reservoir	System Type
EGM-10S-4-4C	103810	24VDC	400CC cartridge	Main Tubing Pressure Relief Type
EGM-10S-4-7C	103811	24VDC	700CC cartridge	(PDI System)
EGM-10T-4-4C	103834	24VDC	400CC cartridge	
EGM-10T-4-7C	103835	24VDC	700CC cartridge	Twin Type
EGM-10S-4-3P	103812	24VDC	260cc reservoir	Main Tubing Pressure Relief Type
EGM-10S-4-2C	103809	24VDC	200cc Cartridge	(PDI System)

Twin Type : By switching built-in solenoid, this pump can be used for both PDI (Positive Displacement Injector) and Series Progressive system.

2. Specifications

2.1 Specifications

(1) Motor & Pump

	Specifications				
Motor					
	Voltage (V)	24VDC ± 10%			
	Rated Output (W)	20			
	Rated Current (A)	0.8A			
Pump					
	Discharge Volume	10cc/min.			
	Discharge Pressure	10MPa			
	Pressure Relief Method	Solenoid Valve			
Reservoir		200cc Cartridge	400cc Cartridge	700cc Cartridge	Reservoir 260cc
Grease Used	Cartridge Type	LUBER MP-0, MP-1, MP-2, FS-2			
	Reservoir Type	NLGI No. 000, 00 1* Lithium based grease			

* NLGI No1 can be used when the ambient temperature is higher than 20 deg. C.

(2) Motor

Part No.	Rated Voltage
539205	24VDC

(3) Grease Cartridge

	400cc	700cc
LUBER MP-0	249050 (MP0-4)	——
LUBER MP-1	249051 (MP1-4)	——
LUBER FS-2	249053 (FS2-4)	249063 (FS2-7)

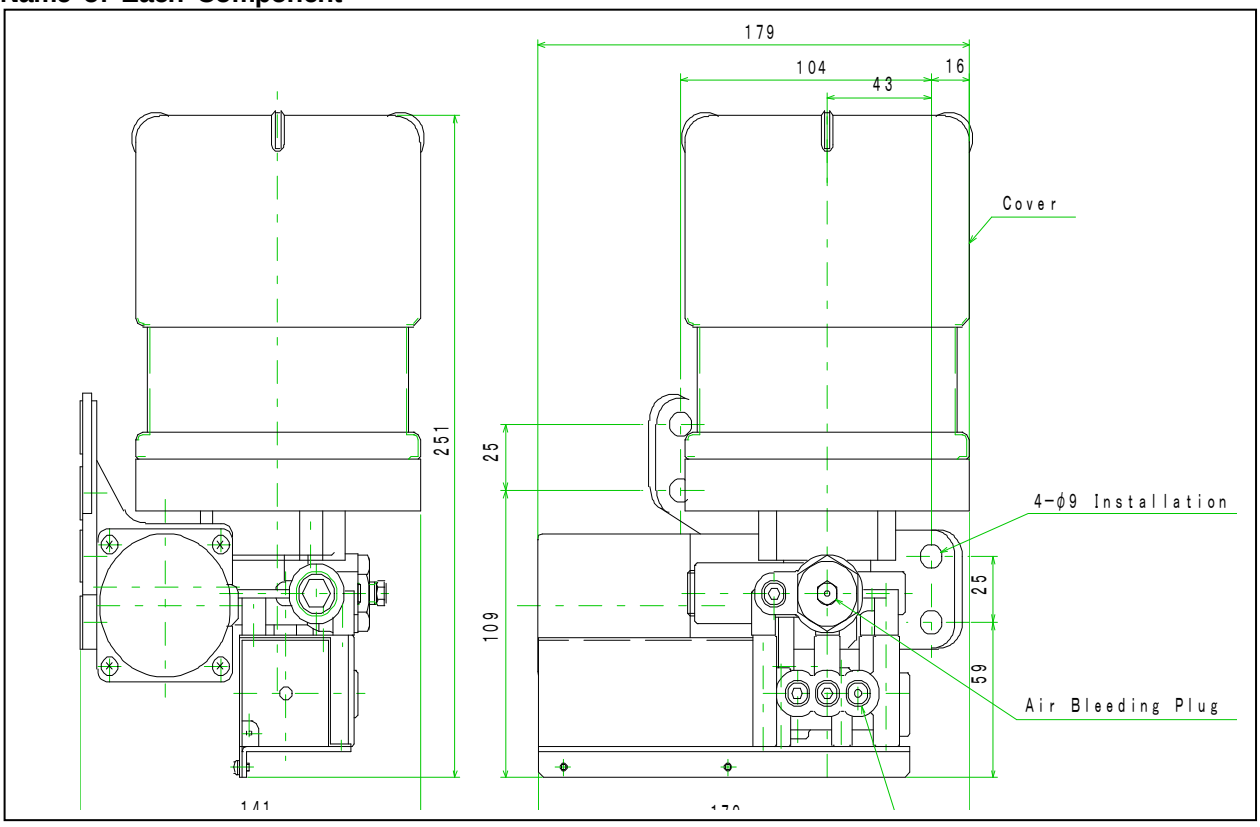
(4) Reservoir

Part No.	Cartridge Size	Material
539131	400cc Cartridge	Resin
530705	700cc Cartridge	Resin
530377	260cc	Resin

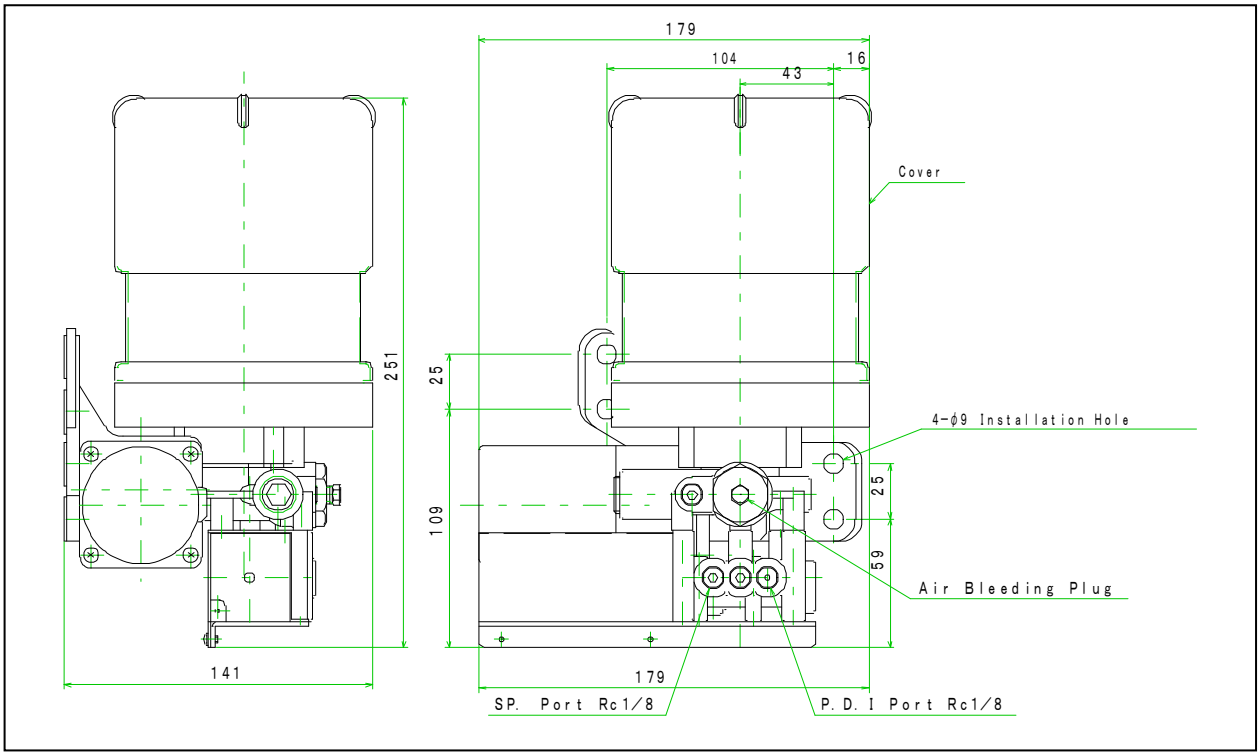
(5) Pressure gauge（Optional Parts）

Part No.	Pressure range	Thread
109141	25MPa	R1/8

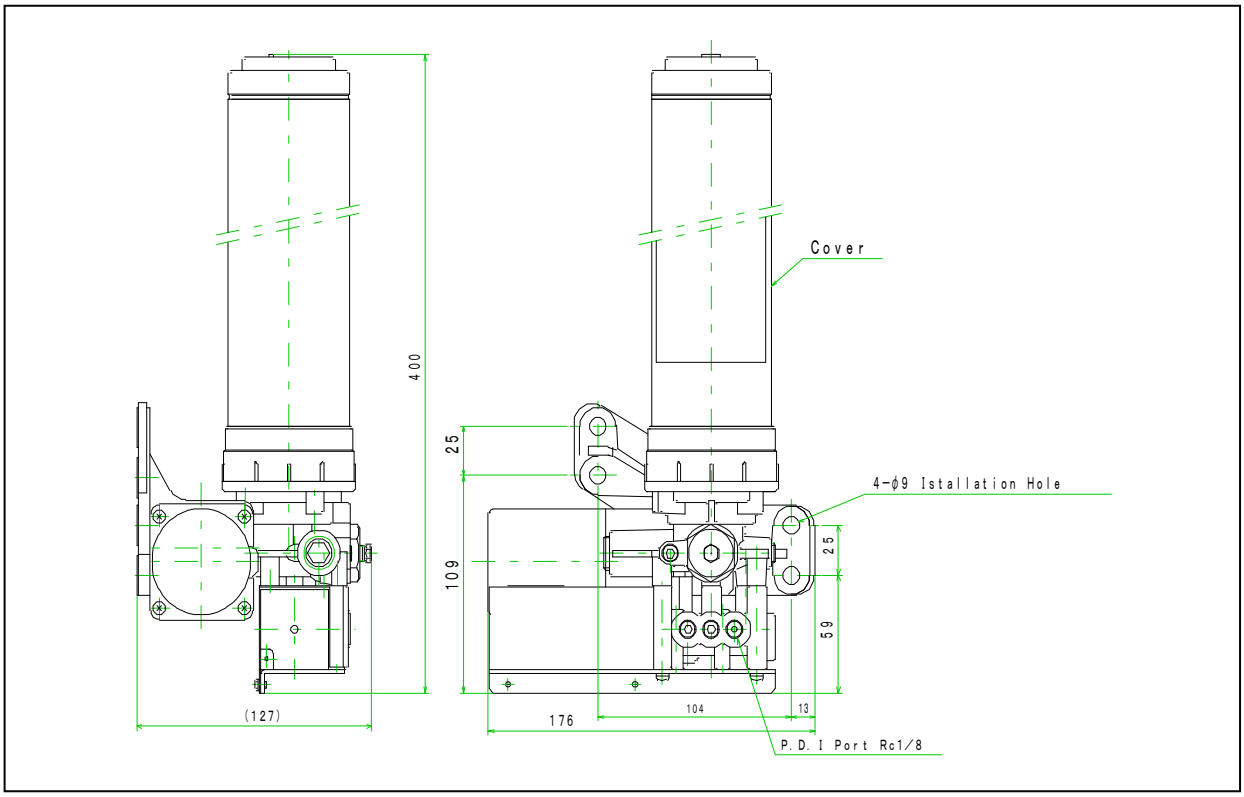
2.2 Name of Each Component



EGM-10S-4-7C



EGM-10T-4-7C



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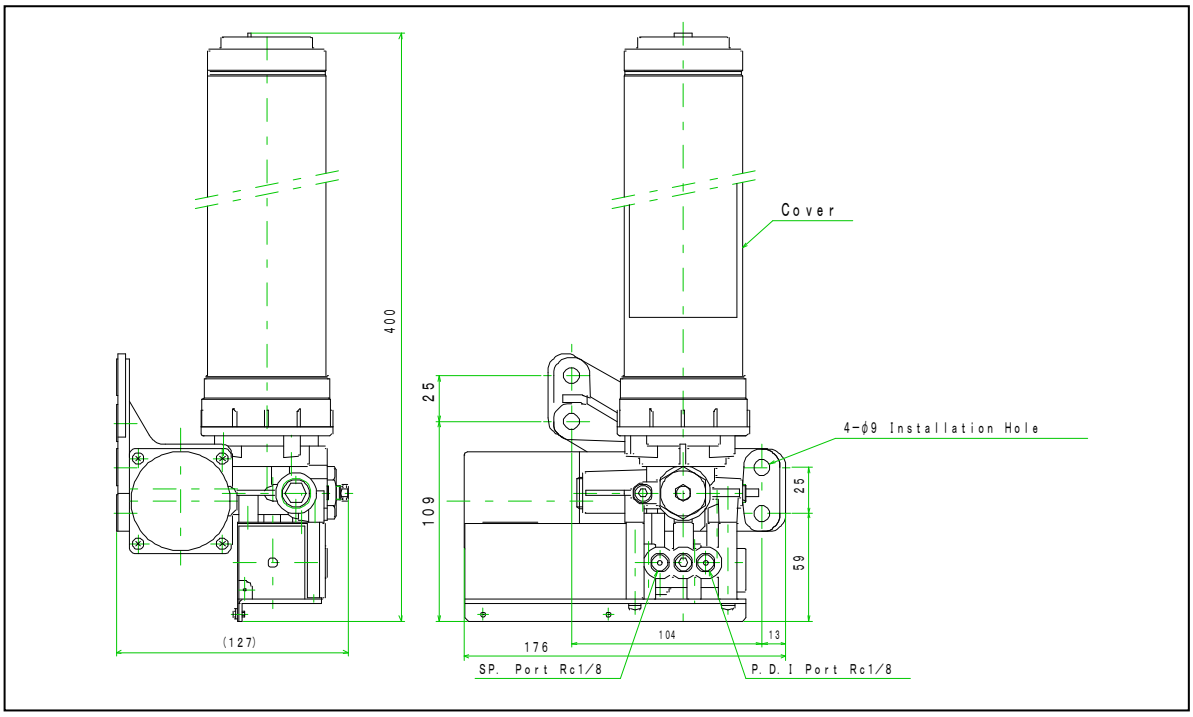
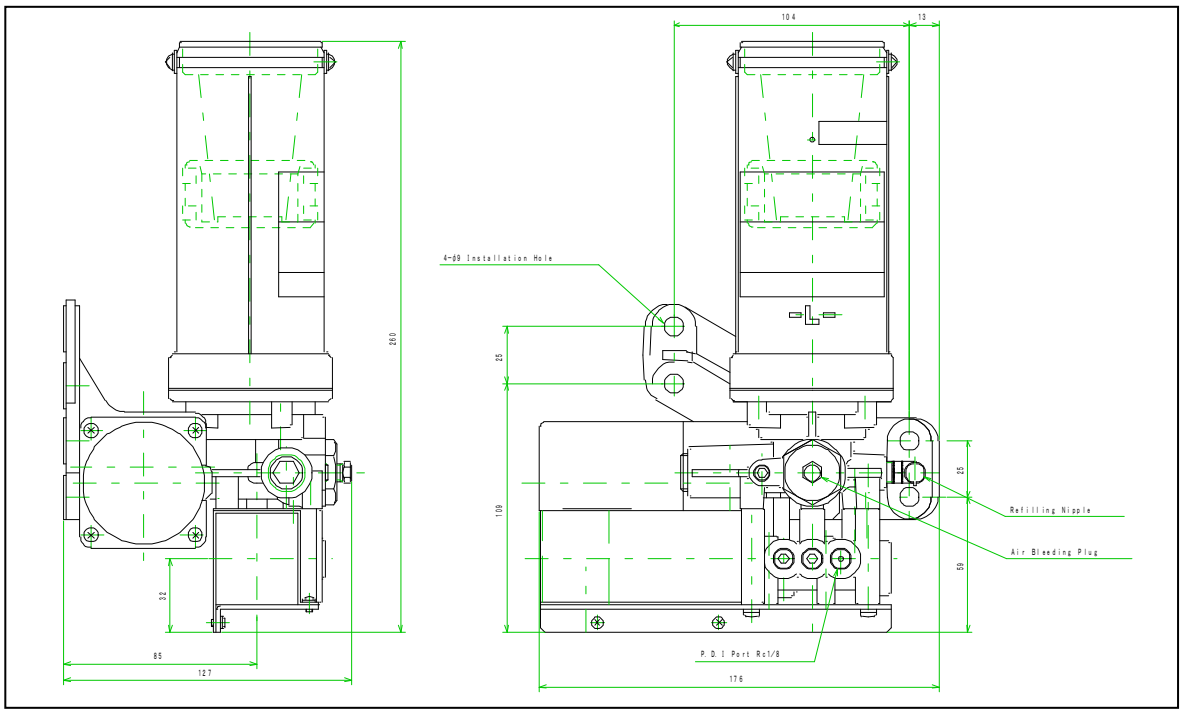


EGM-10T-4-4C



EGM-10S-4-3P

3. Safety Manual

3.1 Installation

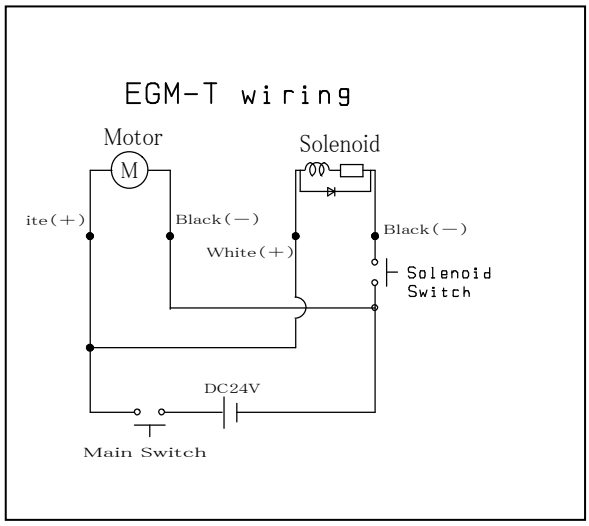
Mount the pump firmly against the wall or on the flat stand or board. Use M8 screws and mount the pump firmly with three screws. Anti-vibration rubber is recommended when the pump is exposed to vibration.

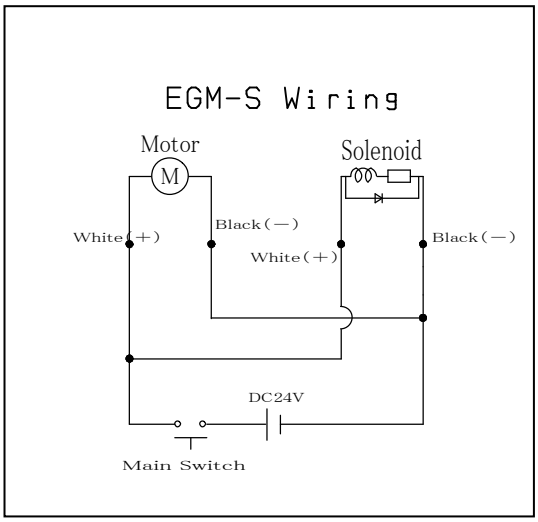
3.2 Wiring

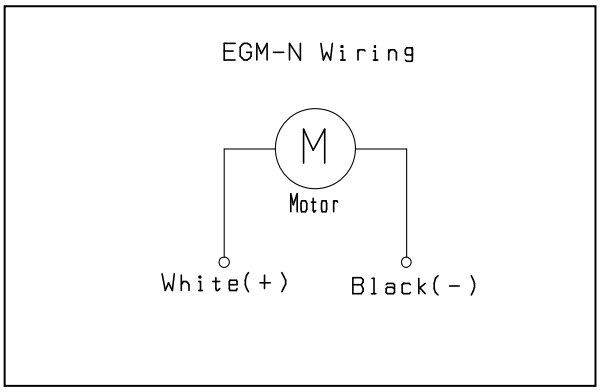
Wire Connection

1) Solenoid and motor (DC24V) have polarity (+, -).
Please pay attention to the color of the leads when wiring. **White (+), Black (-)**

2)When the wires may touch the machine body and /or human body, please use insulated wires.







3.3 Tubing to the Discharge Port.

Connect tubing to the discharge port with a proper torque and make sure that there is no grease leaking.

3.4 Grease to be Use and Refilling

(1) Grease to be Used

Use only grease cartridge specified in 2.1.

The use of the other grease could cause trouble with pump and/or clogging.

(2) Refilling - Cartridge Type

When the end of the cartridge comes down to the low level, please replace the cartridge.

Cartridge is NOT recyclable. Never refill grease into the cartridge. Cartridge may burst.

Please refer to 3.8. Replacement of the Cartridge and make sure that no air and/or foreign particle is introduced into the pump during replacement.

(3) Reservoir Type

Please make sure to refill the grease when the follow plate gets down to the low level.

When refilling, please make sure to refill through the refill port. Otherwise, it might cause a trouble.

Please pay attention not to introduce air and/or foreign particles into the reservoir.

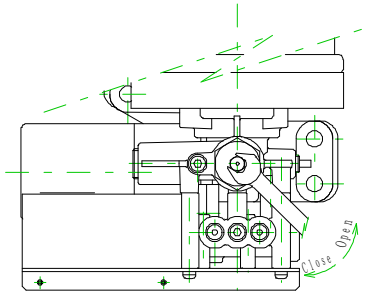
3.5 Working Conditions (Please use within the range below.)

Working ambient temperature 0 deg. C - +40 deg. C

Working ambient humidity 35% - 85% (RH)

3.6 Air Bleeding

Please make sure to bleed air after connection of tubing and/or air is introduced into the pump. Loosen the Air Bleeding Plug and run the pump until no air comes out of the pump. When air stop coming out, tighten the Air Bleeding Plug.



3.7 Timer on the Machine

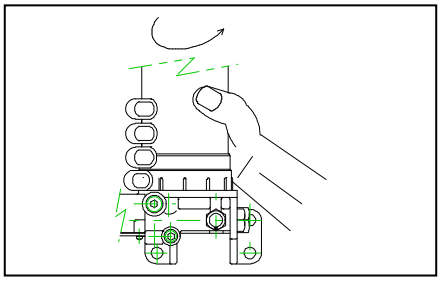
This pump can be controlled (Discharge Time and Interval)by the timer on a machine. Make sure to set ON and OFF time. ON time should be less than 7min. 30sec. and OFF time should be at least three (3) times longer than ON time. If this condition is not met, it would activate solenoid valve thermostat and pump pressure does not rise.

When filling the main tubing with grease or commissioning, make sure to follow the condition below.

- ON time 30sec. and OFF time 90sec. Repeat this, but in total 30min. (Max.)

After 30min. operation in total, take one (1) hour interval.

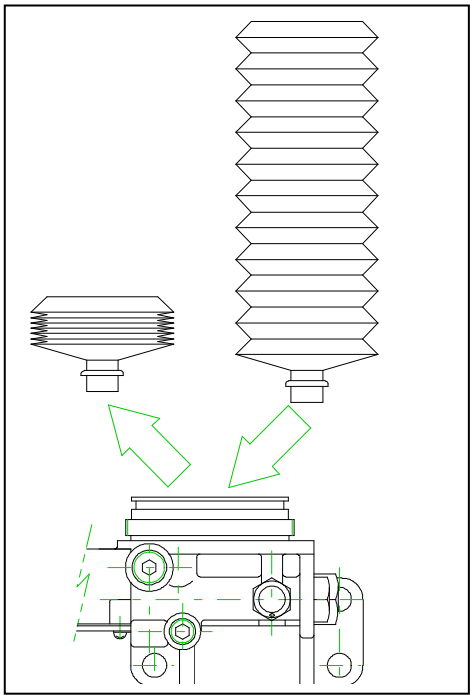
3.8 Replacement of Grease Cartridge (Cartridge type only)



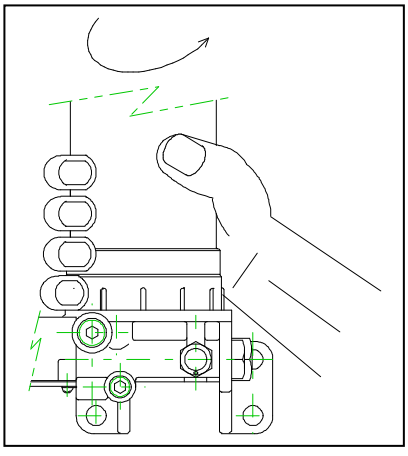
3.8.1 400cc Cartridge

(1) Pull up the chain (so that the new cartridge can be in).
Hook the chain to the slot.

(2) Turn the cover C.C.W. and remove it from the pump.



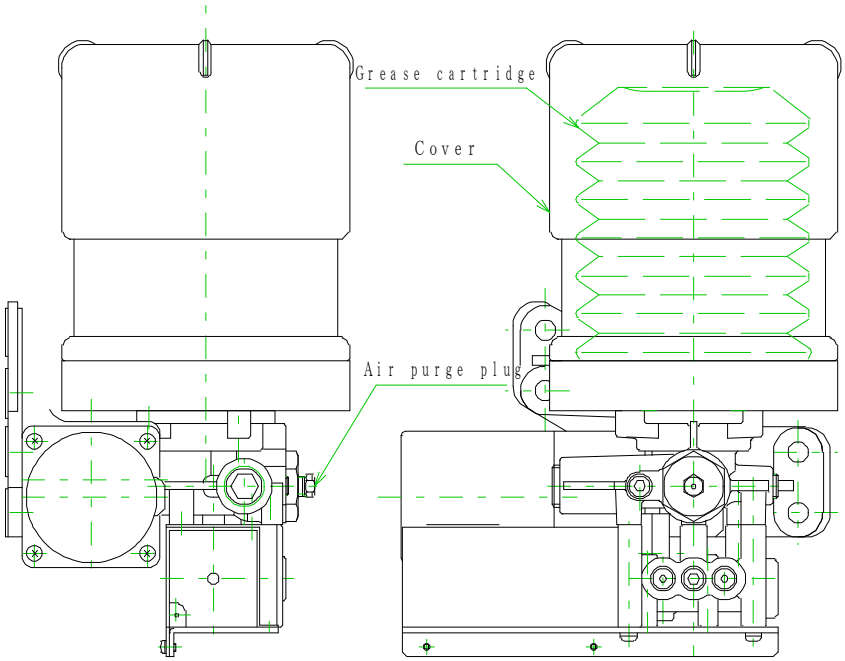
(3) Take the empty cartridge and set the new one.
During replacement, be careful that no air and/or foreign particle is introduced.



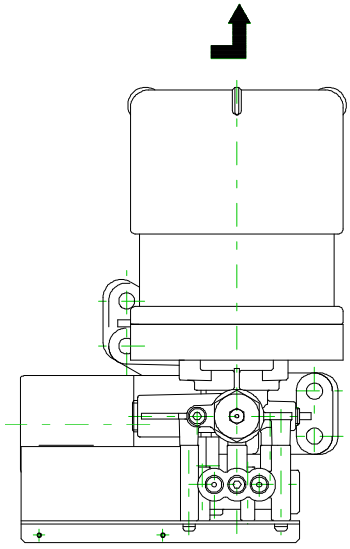
(4) Put the cover back and tighten it firmly until the label faces front.

3.8.1 700cc Cartridge

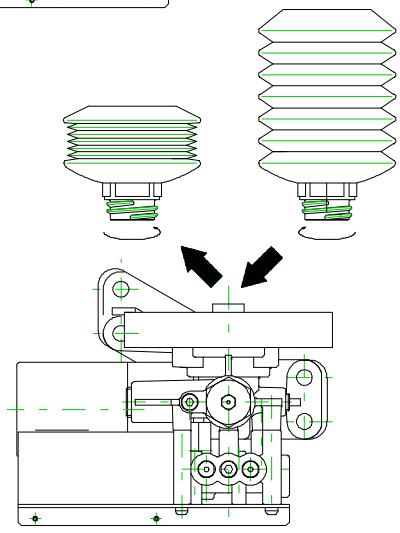
When the end of the cartridge comes down to the low level, please replace the cartridge.
Cartridge is NOT recyclable. Never refill grease into the cartridge. Cartridge may burst.



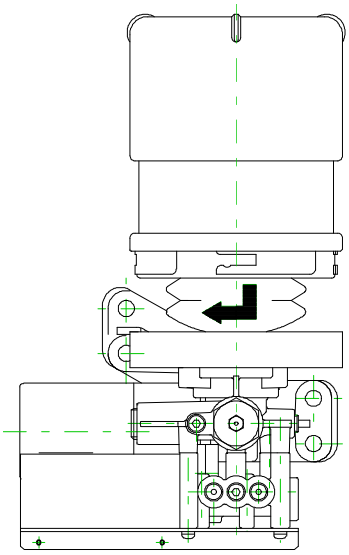
(1) Turn the cover C.C.W. and remove it from the pump.



(2) Take the empty cartridge and set the new one.
During replacement, be careful that no air and/or foreign particle is introduced.



(3) Put the cover back and turn it C.W. firmly until it stops.



4. Pump Operation

4.1 Normal Operation

Model EGM-T

(1) Power supply from the machine controller for the pump “ON”.

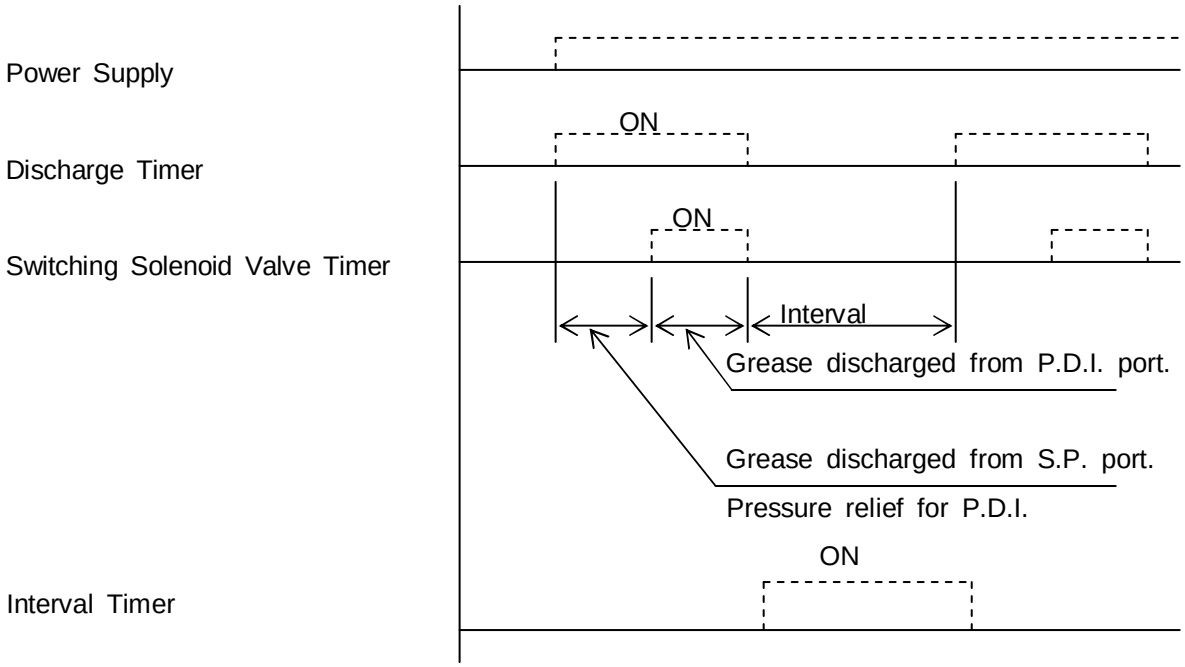
(2) Discharge timer “ON” (Timer on the machine).

(3) Switching solenoid valve timer “OFF”, grease discharged from Series Progressive port.

(4) Switching solenoid valve timer “ON”, grease discharged from P.D.I. port.

(5) Interval timer “ON”（Timer on the machine）

(6) Repeat from (2) to (5).



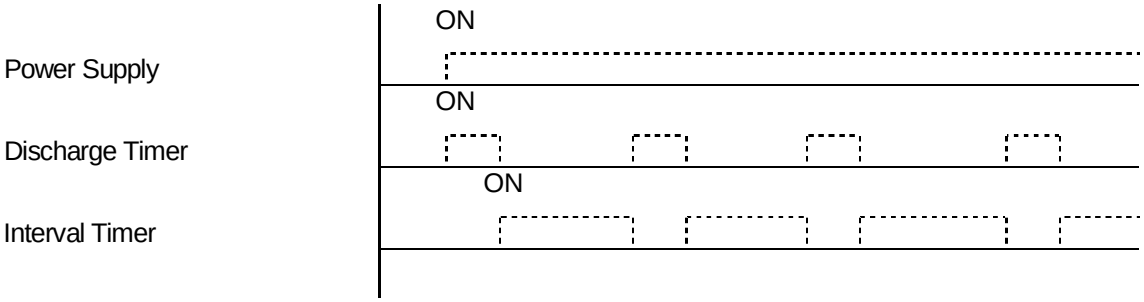
Model EGM-S, EGM-N

(1) Power supply from the machine controller for the pump “ON”.

(2) Discharge timer “ON”. （Timer on the machine）

(3) Interval timer “ON”. （Timer on the machine）

(4) Repeat from (2) to (3).



5. Trouble Shooting

Trouble	Cause	Measures to take
No grease discharged from pump	Little grease left in the reservoir.	Refill reservoir or replace cartridge with the same grease.
	Air in the pump.	Perform air bleeding
	Pump does not operate.	Check the connection of the wires.
		If the motor exceeds its life expectancy、replace the motor.
Pressure in the main tubing is not built up.	No grease discharged from the pump.	Refer to the above measures.
	Air in the tubing.	Take off the closure plug(s) at the end and operate the pump and bleed air in the tubing.
	Foreign particle(s) at the ball seating section of the relief valve.	Disassemble the relief valve and clean.
	Wrong setting of the pressure of the relief valve.	Set at the proper pressure (8.0Mpa)
	Grease leaking from pipe connection parts. (Due to looseness or excessive tightness)	Tighten them with proper torque or re-pipe them.
	Damaged tubing.	Replace the damaged tubing.
	Malfunction of Pressure Relief Valve.	Check the wiring and correct the wiring if wrong.

Air in the system	Air in the pipe	Refer to the above measures.
	Due to the low level of grease in the reservoir, air is introduced into the pump.	Refill the reservoir or replace the cartridge with the same grease and perform air purge.
No grease discharged from the valve.	Clogged valve(s)	Replace the valve(s)
	No grease is filled in the tail tubing.	Fill the tail tubing with grease at installation.
	Malfunction of the relief valve.	Check the wiring and correct if wrong.
Pressure in the pipe does not decrease properly.	Clogged valve(s) and termination fitting(s).	Disassemble the valves, inspect and replace, if necessary. Replace the termination fittings.
	Crashed tubing.	Replace the tubing.
	Improper NLGI# grease is used.	Check NLGI# and ambient temperature.

6. Grease Contamination : Cause(s)and Measure(s)

6.1 Cause(s) of contamination.

Causes can be divided into two categories:

(1) Before the completion of installation.
Foreign particles in the tubing or pump reservoir.
(Manufacturing defects of the assembly parts or connecting parts.)

(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.)

6.2 Measures

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

(2) Keep the grease for refilling at the proper place.
(If the system is installed outdoor, proper care must be taken since introduction of dust or rain into the grease would lead to system malfunction.)