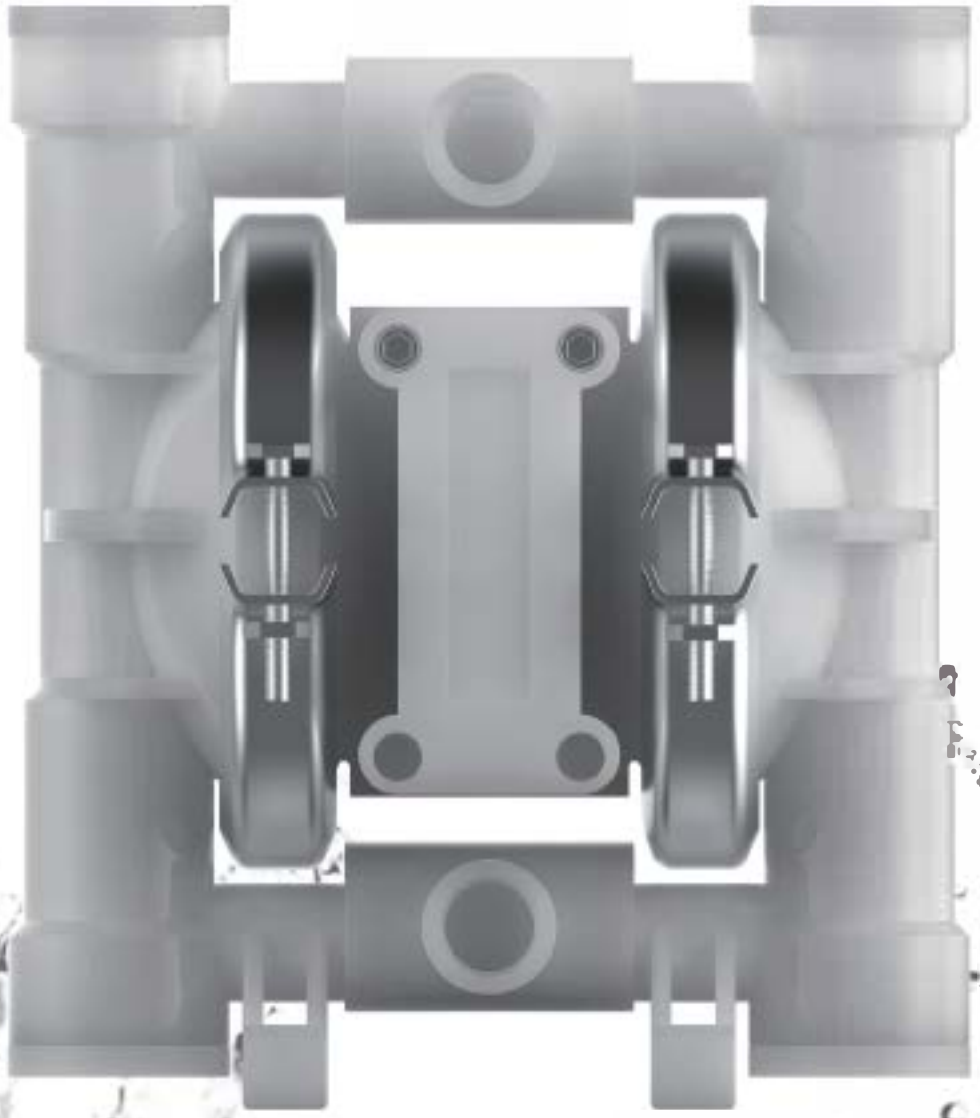
LIQUADE

EOM

Engineering Operation
& Maintenance



GT06

PLASTIC Pumps

CE

CONTENTS

SECTION 1

CAUTIONS—READ FIRST!

⚠ TEMPERATURE LIMITS:

Material	Temperature Limit (Celsius)	Temperature Limit (Fahrenheit)
Polypropylene	0°C to 79°C	+32°F to 175°F
PVDF	–12°C to 107°C	+10°F to 225°F
Santoprene	–40°C to 107.2°C	–40°F to +225°F
PTFE	-4°C to 104.4°C	+24.8°F to +220°F

CAUTION:

All wetted components have temperature limit, this must be taken in to consideration when selecting pump materials. For example: PTFE has a maximum limit of 104.4°C (220°F) but Polypropylene has a maximum limit of only 79°C (175°F).

- Maximum temperature limits are based upon mechanical stress only. Certain chemicals will significantly reduce maximum safe operating temperatures. Refer to engineering guide for chemical compatibility and temperature limits.

  Diaphragm rupture might happen during pumping operation, this will result in the liquid being pumped to be force out of the air exhaust muffler. Therefore, it is important to wear safety glasses throughout the operation.

- Do not exceed 8.62 bar (125 psig) air supply pressure.

- Detach the compressed air line from the pump before carry out maintenance and repair as this helps to release all air pressure from the pump and follow by disconnect all suction, discharge and air line. Drain the pump by turning it upside down and allowing any fluids to flow into a suitable container.

- Blow out the air line for 10 to 20 seconds before connecting to pump to ensure all pipe lines are free from particles. Use an in-line air filter. ***A 5µ (micron) air filter is recommended.***

- Check the chemical compatibility of the process and cleaning fluid to the material of the pump's component in the Chemical Resistance Guide.

- The GT06 pump is not submersible.

SECTION 1

CAUTIONS—READ FIRST!

WARNING:

- Prevention of static sparking – Fire or explosion might take place if static sparking occurs. Thus, it is important to ground all pump, valves and containers when dealing with ignitable liquids and whenever discharge of static electricity is a hazard.

NOTES:

- Before starting disassembly, mark a line from each liquid chamber to its corresponding air chamber. This line will assist in proper alignment during reassembly.
- Fitting may loosen during transportation, it is always important to tighten the clamp bands and retainers before installation.
- When installing PTFE diaphragms,it is important to tighten piston outer simultaneously (turning in opposite directions) to ensure tight fit.
- Plastic series pumps are made of virgin plastic and are not UV stabilized. Expose to direct sunlight for prolonged periods can cause deterioration of plastics.

SECTION 2

GT06 PLASTIC

LIQUADE Pump Model Description Chart:

GT06	P	P	P	T	T	P	XXX
Model	Housing	Center Body	Air Valve	Diaphragms	Valve Ball	Valve Seat	Specialty

GT: Air-operated diaphragm pump, GT-Series

MODEL: Port size, 6mm (1/4”)

Housing material:

K = PVDF
P = POLYPROPYLENE

Center Body material:

P = POLYPROPYLENE

Air Valve material:

P = POLYPROPYLENE

Diaphragm material:

T= PTFE
W= SANTOPRENE

Valve Ball material:

T=PTFE

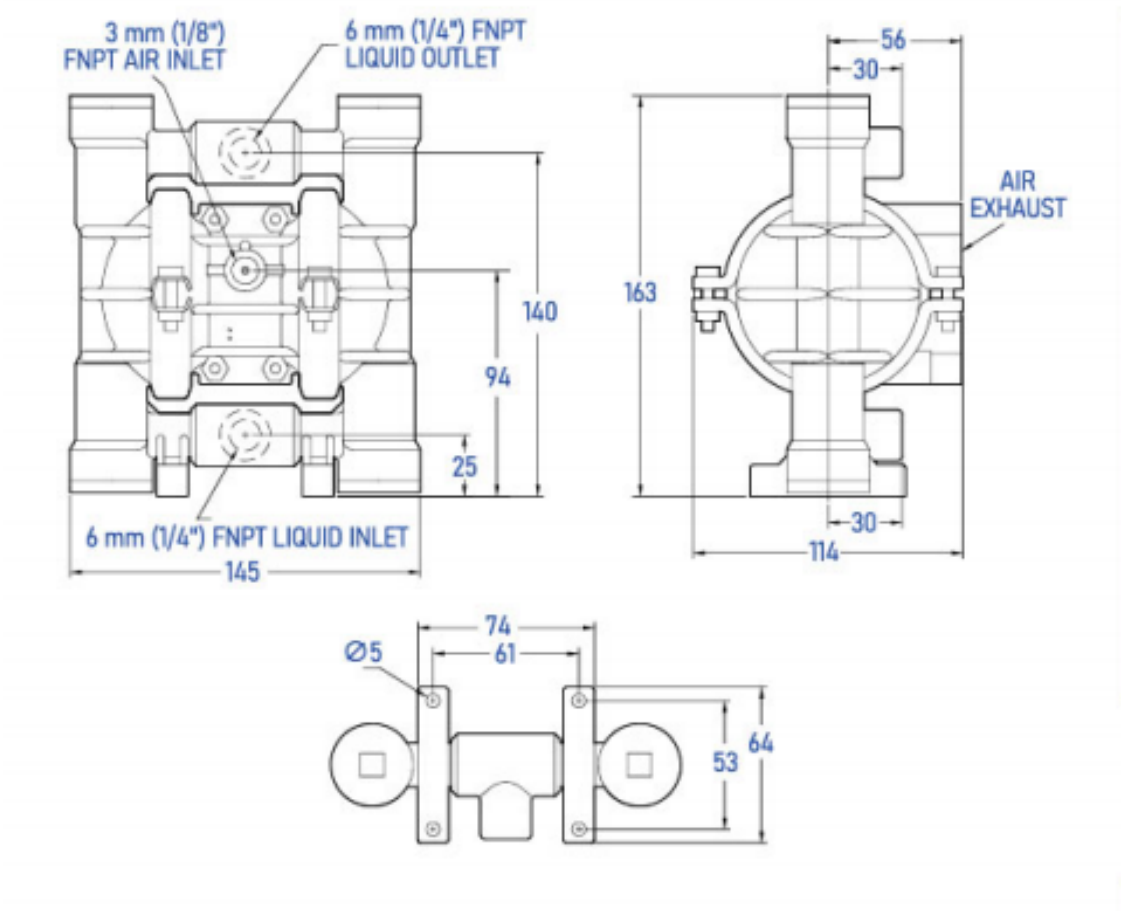
Valve Seat material:

K = PVDF
P = POLYPROPYLENE

SPECIALTY :
CH : PTFE coated hardware

SECTION 3

DIMENSIONAL DRAWINGS



NOTE:

In the event of a power failure, the shutoff valve should be closed, if the restarting of the pump is not desirable once power is regained.

AIR-OPERATED PUMPS:

To stop the pump from operating in an emergency situation, simply close the "shut-off" valve (user supplied) installed in the air supply line. A properly functioning valve will stop the air supply to the pump, therefore stopping output. This shut-off valve should be located far enough away from the pumping equipment such that it can be reached safely in an emergency situation.

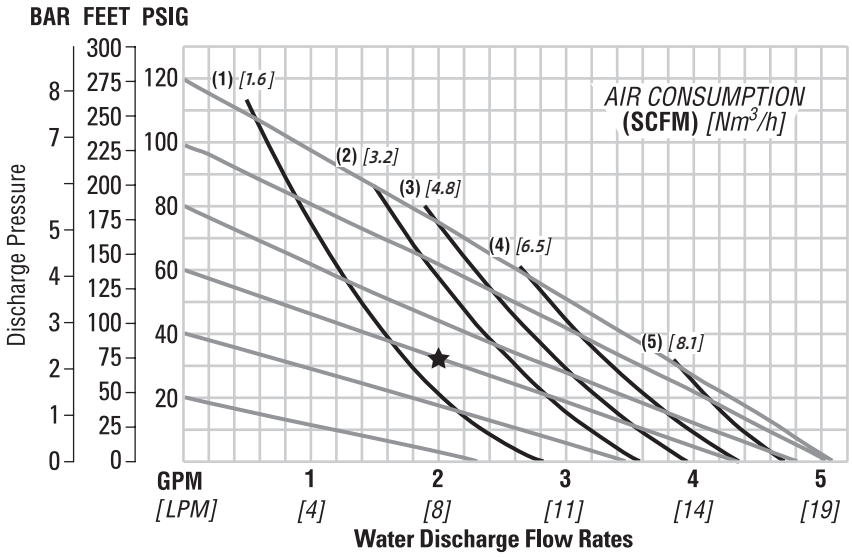
GT06 PLASTIC SANTOPRENE - FITTED

Height ---------- 163 mm (6.4")
Width ---------- 145 mm (5.7")
Depth ---------- 115 mm (4.5")
Est. Ship Weight--Polypropylene 1.4 kg (3 lbs)
PVDF 1.5kg (3.3 lbs)
Air Inlet ---------- 3 mm (1/8")
Inlet ---------- 6 mm (1/4")
Outlet ---------- 6 mm (1/4")
Suction Lift -------3 m Dry (9.8')
9 m Wet (29.5')

Displacement Per Stroke
---------- 0.02 l gal. (0.005)1 Max.
Flow Rate --- 18.9 lpm (4.99gpm)
Max. Size Solids ------- 0.4 mm (1/64")

1Displacement per stroke was calculated at 4.8 bar (70 psig) air inlet pressure against a 2 bar (30 psig) head pressure.

Example: To pump 8 lpm (2.11 gpm) against a discharge pressure head of 2 bar (30 psig) requires 4.1 bar (60 psig) and 2.0 Nm3/h (1.25 scfm) air consumption. (See dot on chart.)
Caution: Do not exceed 8.6 bar (125 psig) air supply pressure.



Flow rates indicated on chart were based on pumping water.
For optimum life and performance, pumps should be specified so that daily operation parameters will fall in the center of the pump performance curve.

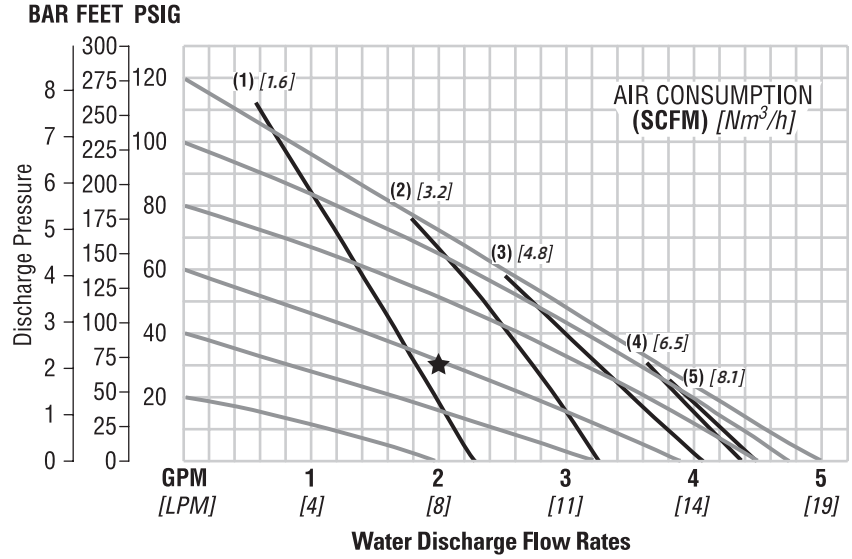
GT06 PLASTIC PTFE-FITTED

Height ---------- 163 mm (6.4")
Width ---------- 145 mm (5.7")
Depth ---------- 115 mm (4.5")
Est. Ship Weight – Polypropylene 1.4 kg (3 lbs)
PVDF 1.5kg (3.3 lbs)
Air Inlet ---------- 3 mm (1/8")
Inlet ---------- 6 mm (1/4")
Outlet ---------- 6 mm (1/4")
Suction Lift ----2.6 m Dry (8.5')
8.6 m Wet (28')

Displacement per
Stroke ---------- 0.02 l (0.005 gal.)1
Max. Flow Rate ----- 18.1 lpm (4.78 gpm)
Max. Size Solids ------- 0.4 mm (1/64")

1Displacement per stroke was calculated at 4.8 bar (70 psig) air inlet pressure against a 2 bar (30 psig) head pressure.

Example:To pump 8 lpm (2.11 gpm) against a discharge pressure head of 2 bar (30 psig) requires 4.1 bar (60 psig) and 2.4 Nm3/h (1.5 scfm) air consumption. (See dot on chart.)
Caution: Do not exceed 8.6 bar (125 psig) air supply pressure.



Flow rates indicated on chart were based on pumping water.
For optimum life and performance, pumps should be specified so that daily operation parameters will fall in the center of the pump performance curve.

SECTION 5

SUGGESTED INSTALLATION

The model GT06 has a 6 mm (1/4") inlet and 6 mm (1/4") outlet and is designed for flows to 18.7 lpm (4.8 gpm). The GT06 Plastic pump is manufactured with wetted parts of pure, unpigmented PVDF or polypropylene. The center section of the GT06 Plastic is constructed of virgin polypropylene. A variety of diaphragms and o-rings are available to satisfy temperature, chemical compatibility, abrasion resistant and flex life.

The suction pipe size should be at least 6 mm (1/4") diameter or larger if viscous liquid is being pumped. The suction hose must be non-collapsible, reinforced type as the GT06 is capable of pulling a high vacuum. Discharge piping should be at least 6 mm (1/4"); larger diameter in order to reduce friction losses. It is critical that all fittings and connections are air tight to avoid loss of pump suction capability.

INSTALLATION:
Premature failure and long term dissatisfaction can be avoided if reasonable care is carry out throughout the installation process.

LOCATION:
Factors such as noise, safety, and other logistical reasons normally dictate that “utility” equipment be situated away from the production floor. Multiple installations with conflicting requirements can result in congestion of utility areas, leaving few choices for siting of additional pumps. It is advisable every pump should be located in such a way that four key
factors are balanced against each other to maximum advantage.

1.ACCESS:
Ensure that the pump locations are easy accessible in order to reduce the time use for the maintenance personnel carrying out routine inspections and adjustments. It help to speed up the repair process and reduce total downtime especially should major repairs are required.

2.AIR SUPPLY:
To achieve a desired pumping rate, it is important to have air line large enough to supply require air volume to every pump locations. (Refer to pump performance chart). Use air pressure up to a maximum of 8.6 bar (125 psig) depending on pumping requirements.

3.ELEVATION:
In order to eliminate loss-of-prime problems and not to affect pump efficiency, it is advisable to select a site location that is well within the dynamic lift capability of the pump.

4.PIPING:
It is necessary to evaluate the piping problems of every possible piping location before the final selection of pump site location.

A site with a shortest and straightest hook-up of suction and discharging piping would be the best option when choosing a pump site. Ensure to avoid unnecessary elbows, bends and fittings. It is also important to select pipe sizes to keep the friction losses within limits. All piping
to be supported independently of the pumps and piping must be aligned to reduce pump fitting placing problems.

Flexible hose can be installed to aid in absorbing the forces created by the natural pulsation of the pump. If the pump is to be bolted down to a solid location, a mounting pad placed between the pump and the foundation will assist to minimize pump vibration. Flexible connections between the pump and rigid piping will also assist in minimizing pump vibration. If quick-closing valves are installed at any point in the discharge system, or if pulsation within a system becomes a problem, a Liquade LD1⁄2 Dampener should be installed to protect the pump, piping and gauges from surges and water hammer.

When pumps are installed in applications involving flooded suction or suction head pressures, a gate valve should be installed in the suction line to allow closing of the line for pump service.

The GT06 cannot be used in submersible applications.

For self-priming application, make sure that all connections are air tight and the suction lift is within the model’s ability. Note: Materials of construction as well as elastomer material have an effect on suction lift parameters. Please consult Liquade distributors for specifics.

Pumps in service with a positive suction head are most efficient when inlet pressure is limited to 0.4–0.7 bar (7–10 psig). If the positive suction is 0.7 bar (10 psig) or higher, it may cause premature diaphragm failure.

THE MODEL GT06 WILL PASS 0.4 MM (1/64”) SOLID. A STRAINER SHOULD BE USED ON THE SUCTION LINE TO AVOID LARGER SOLID OBJECTS SUCKED INTO THE PUMP.
CAUTION: DO NOT EXCEED 8.6 BAR (125 PSIG) AIR SUPPLY PRESSURE.
BLOW OUT AIR LINE FOR 10 TO 20 SECONDS BEFORE ATTACHING TO PUMP TO MAKE SURE ALL PIPE LINE DEBRIS IS CLEAR.

▲ The GT pump is not submersible.

SECTION 6

TROUBLESHOOTING

Pump does not run or runs slowly.

1. Ensure that the air inlet pressure is at least 5 psig above startup pressure and that the differential pressure (the difference between inlet and discharge pressure) to be more than 10 psig.

2. Check air inlet filter for particles (see recommended installation).

3. Check if there is extreme air leakage which would indicate worn out seals/bores.

4. Dismantle pump to inspect for obstructions in the air passageways or objects which would hinder the movement of internal parts.

5. Check for sticking valve ball. Swelling may occur if pumping liquid is not compatible with pump elastomers. Replace valve ball and seals with proper elastomers. Also, as valve balls wear out, they become smaller and can become stuck in the seats. In this case, replace both balls and seats.

Pump runs but little or no liquid flows

1. Check for pump cavitation; slow down the pump speed match the viscosity of the pumping liquid.

2. Verify the vacuum required to lift liquid is not greater than the vapor pressure of the material being pumped (cavitation).

3. Check for sticking valve ball. Swelling may occurs if pumping liquid is not compatible with pump elastomers. Replace valve ball and seals with proper elastomers. Also, as the valve balls wear out, they become smaller and can become stuck in the seats. In this case, replace both balls and seats. Ensure all inlet connections are tight, especially on the lower valve ball retainers.

Pump air valve freezes.

1. 1.Check for excessive moisture in compressed air. Either install a dryer or hot air generator for compressed air. Alternatively, a coalescing filter may be used to remove the water from the compressed air in some applications.

Air bubbles found in pump discharge.

1. Check for ruptured failures.

2. Check tightness of outer pistons.

3. Check tightness of clamp bands and integrity of o-rings and seals, especially at inlet manifold.

4. Ensure pipe connections are air tight.

Liquid leakage from air exhaust. (Muffler)

1. Check for diaphragm rupture.

2. Check tightness of pistons to shaft.

Pump rattles.

1.Create false discharge head or suction lift.

SECTION 7

PUMP DISASSEMBLY

CAUTION: Before perform any maintenance or repair, disconnect the compressed air line to the pump to allow all air pressure to bleed from pump. Disconnect all inlet, discharge, and air lines. Drain the pump by turning it upside down and allowing any fluid to flow into a suitable container. Wet flushing of parts may be required prior to handling.

The Liquade model GT06 (Figure 1) is an air-operated, double-diaphragm pump with all wetted parts of polypropylene or PVDF. The single-piece center section, consisting of center block and air chambers, is molded from polypropylene. All fasteners and hardware are stainless steel. The air valve is manufactured of polypropylene. All o-rings used in the pump are of special materials and should only be replaced with factory-supplied parts.

To expedite parts ordering, please find an exploded view of the GT06 model at the back of this manual.

PLEASE read all instructions before starting disassembly.

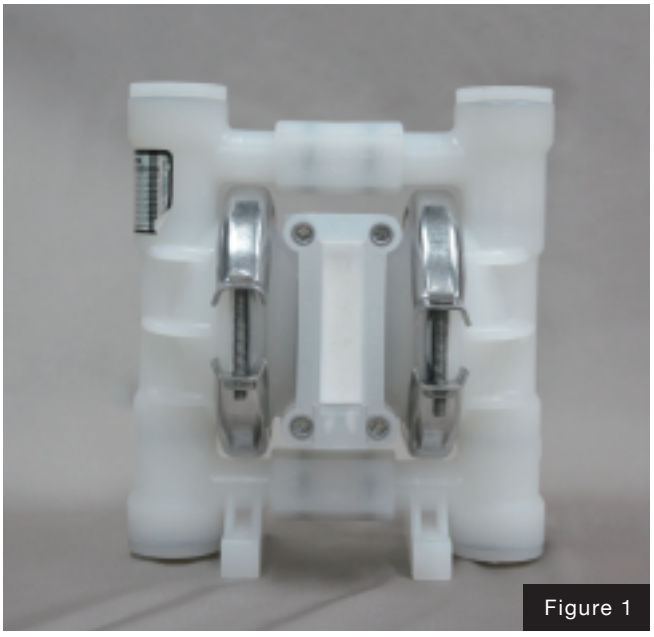


Figure 1

TOOLS REQUIRED:

5/32” Hex Key (Allen wrench) 7/16” Wrench or Socket
(Qty. 2) 5/16”Wrench
3/8” Wrench
1/4” Socket Drive O-ring Pick
3/16” Rod or Equivalent

DISASSEMBLY:

STEP 1.

Before carry out disassembly, drain all remaining fluid in the pump into a suitable container by turning it up-side down. Take extra caution if the liquid is corrosive or toxic.

Figure 2

STEP 2.

Use a ¼” socket wrench to remove the top retainer.

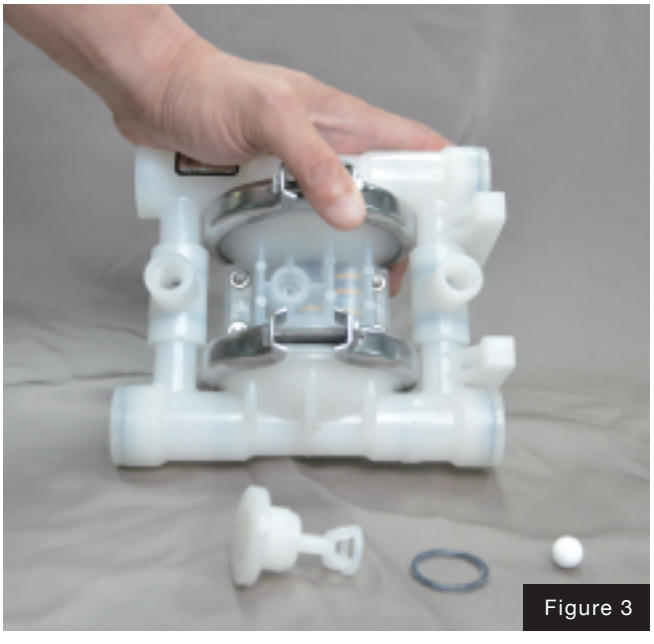


Figure 3

STEP 3.

Inspect the ball retainer, retainer o-ring, and valve ball. If swelling, cracking or other damage are found, these parts must be replaced with genuine Liquade parts.

SECTION 7

PUMP DISASSEMBLY

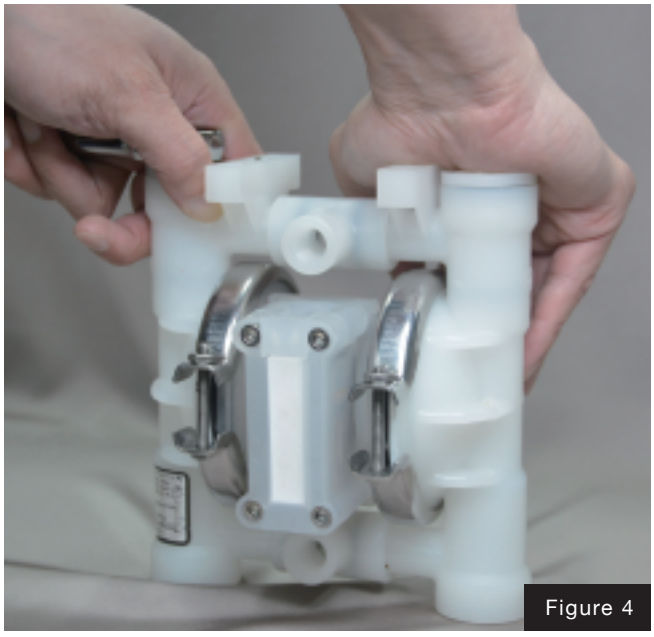


Figure 4

STEP 4.

Loosen the bottom retainer by turning the pump upside down.

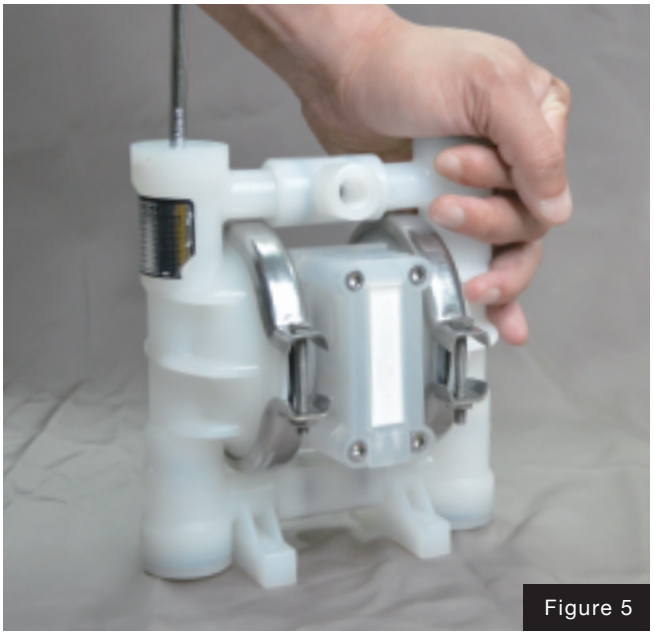


Figure 5

STEP 5.

To remove valve seats, use approximately 3/16" rod or equivalent and push seats out from top to bottom.

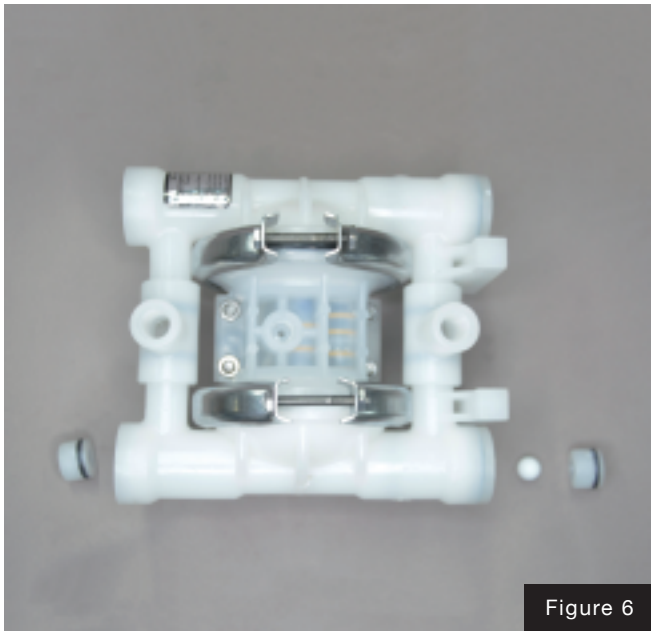


Figure 6

STEP 6.

Inspect ball and seats for abrasion. Inspect seat o-rings and bottom retainer o-rings for swelling, cracking, or other damage. These parts should be replaced if damage is observed.

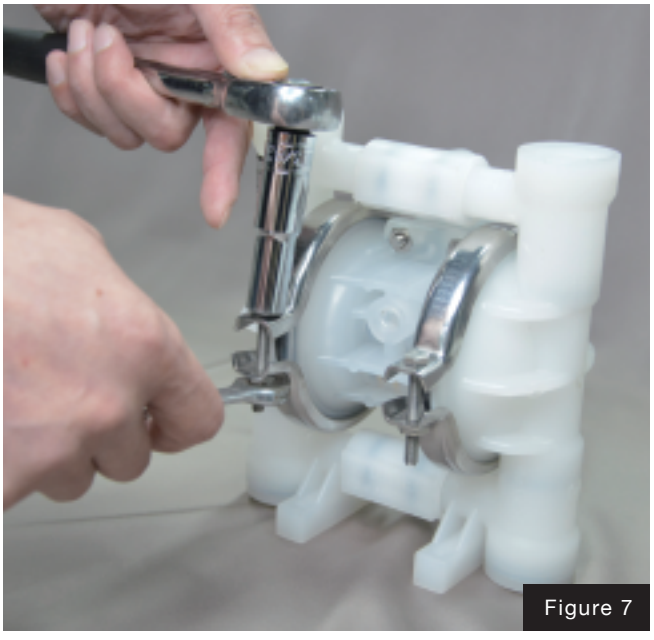


Figure 7

STEP 7.

Use 5/16” socket and 3/8” wrench to loosen clamp band and follow by remove the bolts and nuts.

SECTION 7

PUMP DISASSEMBLY

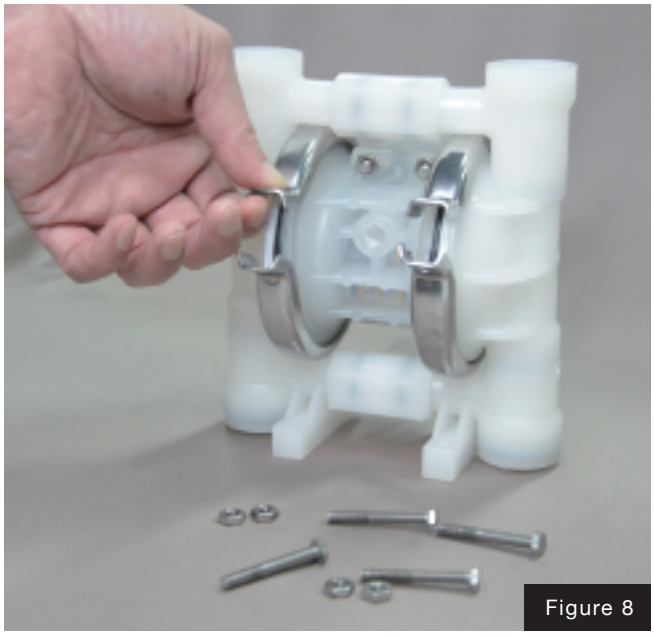


Figure 8

STEP 8.

Rotate clamp band as shown and remove by sliding up the clamp band.

Figure 9

STEP 9.

Remove liquid chambers by pulling chamber away from center section and inlet-discharge T-sections.

Figure 10

STEP 10.

Remove T-section from liquid chamber follow by T-section o-rings from T-section with an o-ring pick. Care should be utilized in order not to damage the o-ring. Inspect and replace as necessary.

SECTION 7

PUMP DISASSEMBLY

Figure 11

STEP 11.

Loosen outer piston with 7/16" wrench and 7/16" socket and twist off outer piston and then remove the diaphragm and inner piston.

NOTE: PTFE-fitted pumps employ a PTFE diaphragm with an integral outer piston. Turn diaphragm counterclockwise to loosen.

NOTE: PTFE-fitted pumps utilize a neoprene back-up o-ring. Santoprene -fitted pumps do not has back-up o-ring

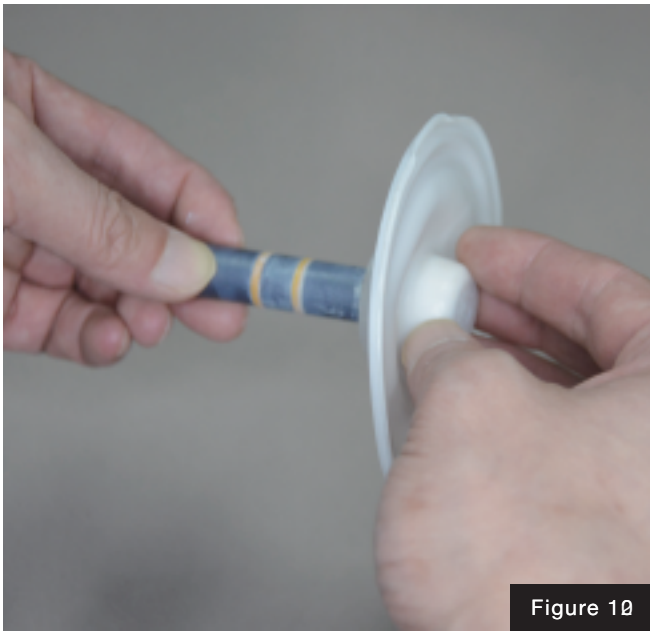


Figure 12

STEP 12.

Pull the remaining diaphragm that is attached to the shaft through the center section. Hold diaphragm and remove outer piston with 7/16" wrench for Santoprene fitted pumps (not shown). Inspection of diaphragms, inner pistons, disc spring, outer pistons and shaft are now possible.

SECTION 7 AIR VALVE/CLEANING & INSPECTION

AIR VALVE DISASSEMBLY:

CAUTION: Before perform any maintenance or repair, disconnect the compressed air line to the pump to allow all air pressure to bleed from pump. Disconnect all inlet, discharge, and air lines. Drain the pump by turning it upside down and allowing any fluid to flow into a suitable container. Be careful of dangerous effects of contact with the process fluid.

The Liquade Plastic GT06 utilizes an advance air distribution system. A 3 mm (1/8") air inlet connect the air supply to the center section. Composite seals reduce the coefficient of friction and allow the GT06 to run lube-free. Constructed of polypropylene, the air distribution system is designed to perform in on/off function, non-freezing, non-stalling and tough duty application.

TOOLS REQUIRED:

5/32" Hex Head Wrench
O-ring Pick

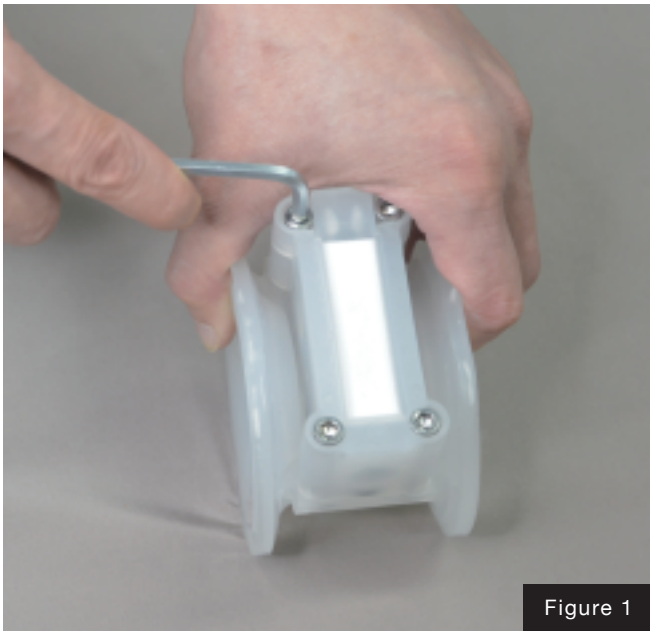


Figure 1

STEP 1.

Before carry out disassembly, drain all remaining fluid in the pump into a suitable container by turning it up-side down. Take extra caution if the liquid is corrosive or toxic.

Figure 2

STEP 2.

Be aware not to damage the gasket while removing air valve assembly.

NOTE: Air valve has molded-in alignment pins for proper positioning during assembly.

Figure 3

STEP 3.

Remove air valve end cap by pulling it away from the air valve body (no tools required).

Inspect o-ring and replace as needed with genuine Liquade parts.

SECTION 7 AIR VALVE/CLEANING & INSPECTION

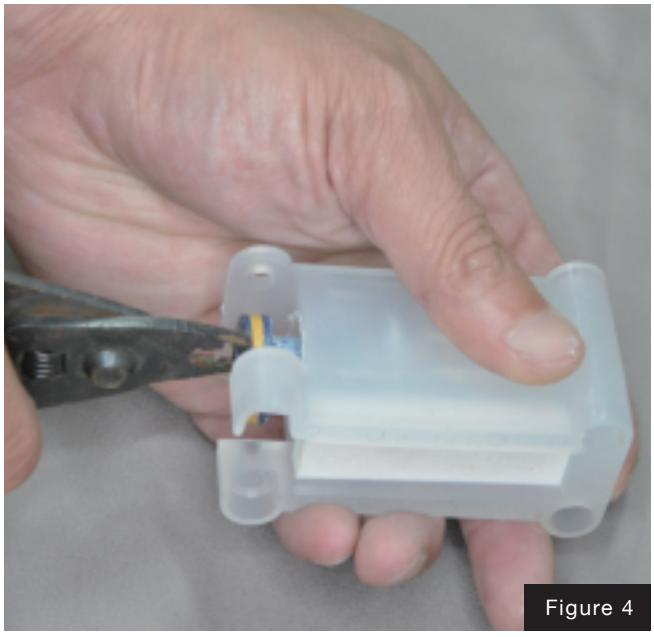


Figure 4

STEP 4.

Use a 4-40 Unified National Coarse thread (UNC) screw to screw into the threaded hole located in the center of the spool, grip the screw with piler to remove the air valve spool. If a I4-40 UNC screw is not available, the spool can be tapped out against a wood block or blown out with compressed air. Upon reassembly, lube the air valve with NLGI grade 2 white EP bearing grease or equivalent.

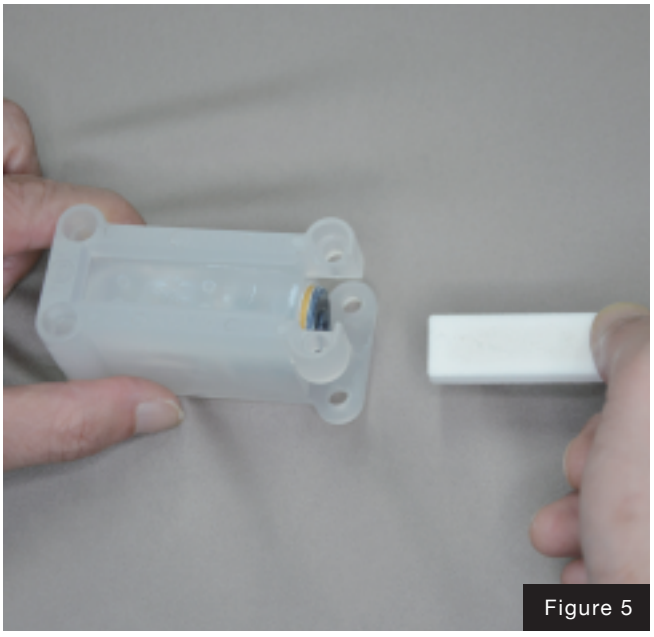


Figure 5

STEP 5.

Remove the porous polyethylene muffler element by sliding it toward the end cap opening. The element can be cleaned by soaking it in a cleaning solution (no solvents). Replace the muffler element if it restricts air exhaust.

Figure 6

STEP 6.

Remove the pilot spool retaining ring with an o-ring pick.

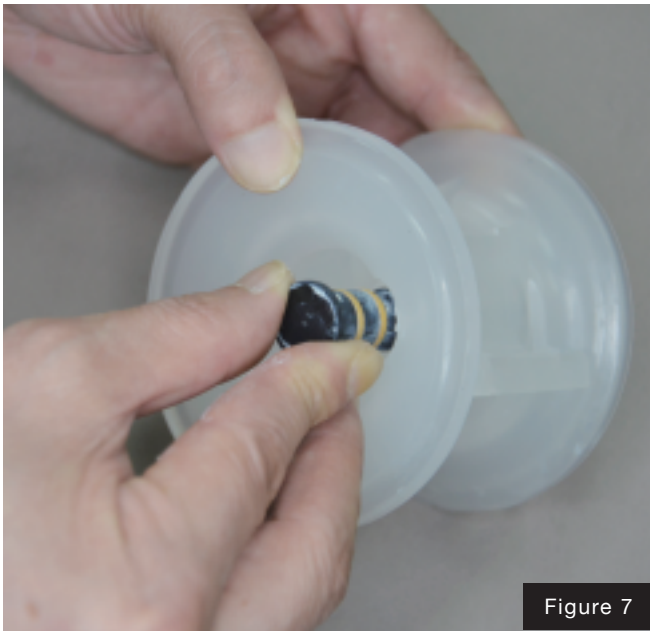


Figure 7

STEP 7.

Remove the pilot spool by pushing it through the center section. Inspect integrity of the seals and if the spool is damage. Replace pilot spool assembly if necessary. Upon reassembly of spool, apply a film of NLGI grade 2 white EP bearing grease or equivalent.

SECTION 8

REASSEMBLY

After completed applicable maintenance to the air distribution system, the pump can now be reassembled. Please refer to the disassembly instructions for photos and parts placement. To reassemble the pump, follow the disassembly instructions in reverse order. The air distribution system needs to be assembled first, follow by the diaphragms and finally the wetted parts. Please find require torque specifications in this section.
When o-rings have been replaced, all GT06 require a run-in period of 2–3 minutes at air pressure above 60 psig.

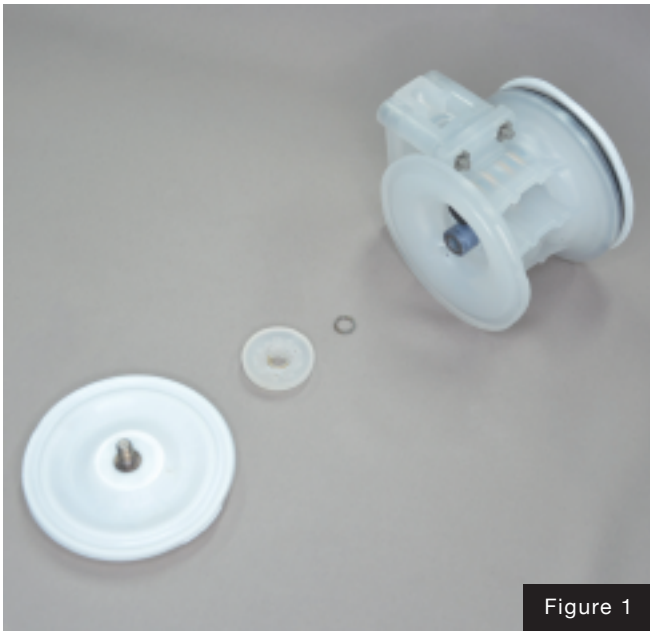


Figure 1

Santoprene diaphragm configuration

GT06 models have two types of diaphragm configuration available.
1.Santopren diaphragm
2.PTFE primary diaphragm with back-up o-rings. Look for the diaphragm's convex side for the "This Side Out" marking. Install the disc spring, inner piston, diaphragm and backup o-ring (PTFE-fitted models only.)
NOTE: Integral piston diaphragm is used in PTFE-fitted pumps only. Add a small amount of Loctite 242 to the main shaft bore. The set-up time is 20 minutes. Use the torque value below to tighten up the outer piston.

Figure 2

PTFE diaphragm configuration

Lubricate the main shaft assembly with NLGI grade 2 white EP bearing grease or equivalent and insert through main shaft bore in center section. Assemble the other side and torque to proper value as listed below. Please review the photos above for proper alignment.

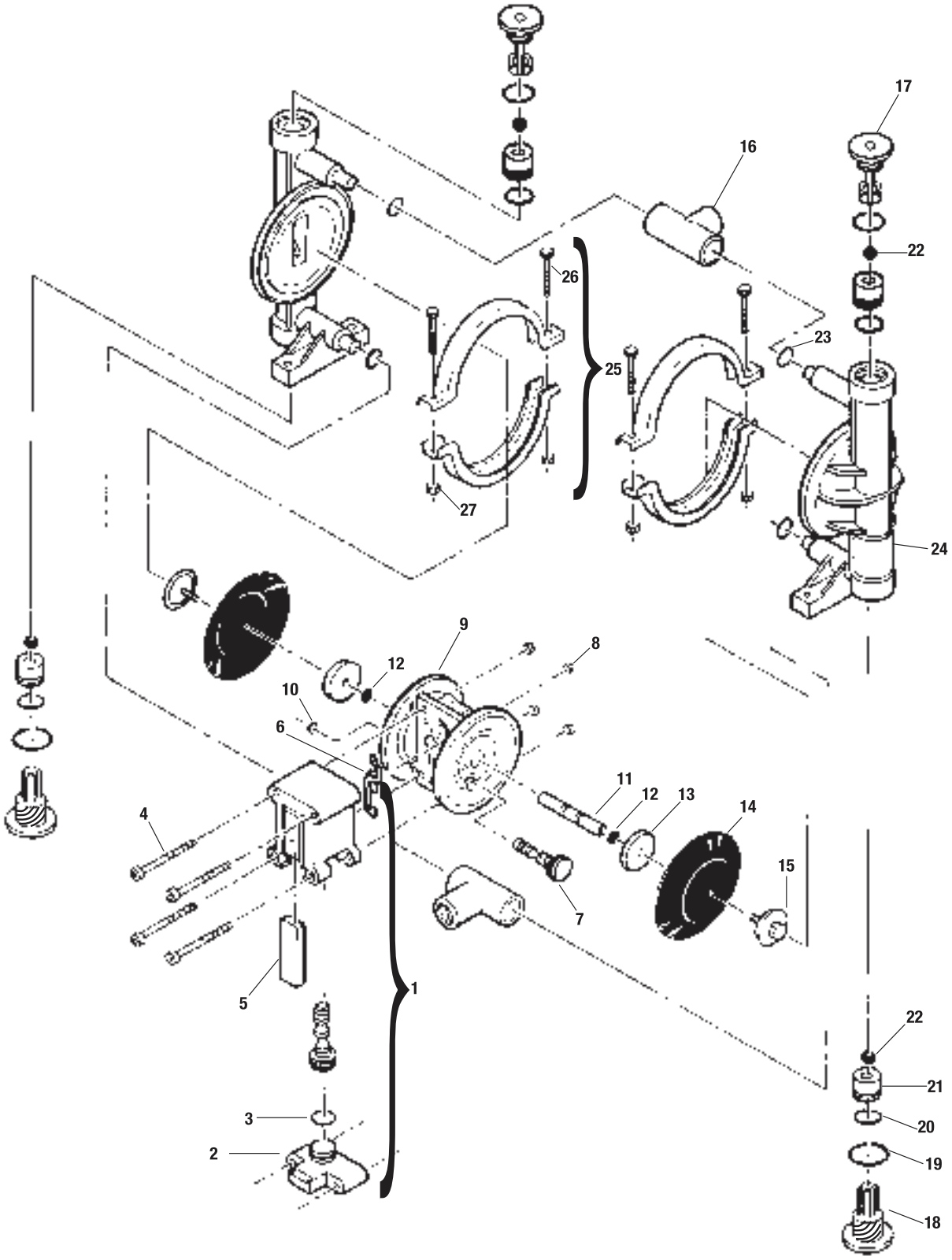
TORQUE SPECIFICATIONS FOR MODEL GT06 PUMPS

Parts Description	Maximum Torque
Air Valve	2.3 N•m (20 in-lbs)
Outer Piston, Santoprene Diaphragms	5.6 N•m (50 in-lbs)
Clamp Band	2.3 N•m (20 in-lbs)
Top and Bottom Retainer, Poly	5.1 N•m (45 in-lbs)
Top and Bottom Retainer, PVDF	5.1 N•m (45 in-lbs)
Top and Bottom Retainer	5.1 N•m (45 in-lbs)

• Apply a small amount of Loctite 242 to the steel bore of the shaft from the diaphragm assembly.

GT06 PLASTIC

SANTOPRENE-FITTED EXPLODED VIEW



SECTION 9 EXPLODED VIEW & PARTS LISTING

GT06 PLASTIC SANTOPRENE -FITTED PARTS LISTING

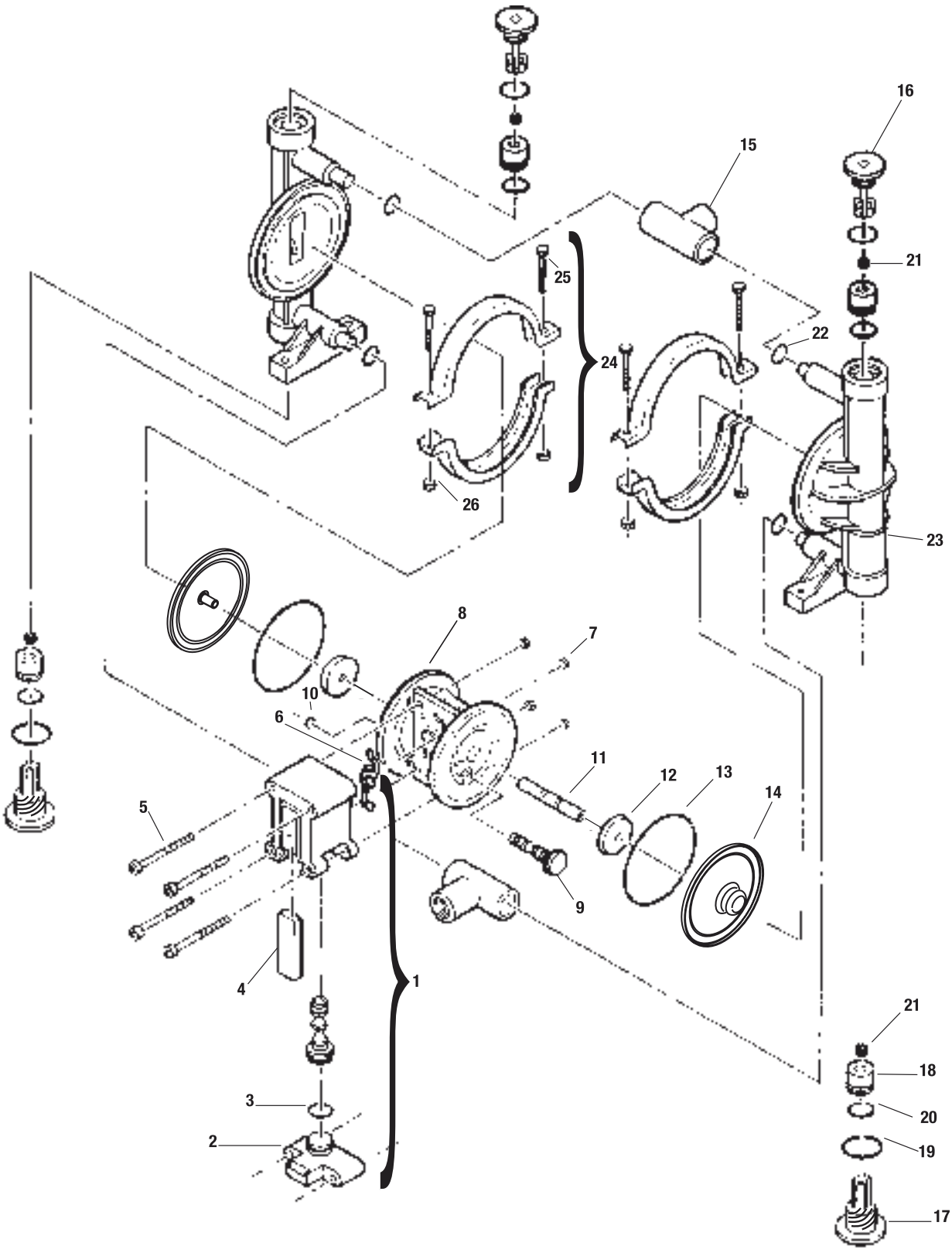
Item #	Description	Qty. per Pump	GT06 PPP P/N	GT06 KPP P/N
1	Air Valve Assembly	1	L00-2000-20-700	L00-2000-20-700
2	Air Valve End Cap	1	L00-2300-20-700	L00-2300-20-700
3	End Cap O-Ring	1	L00-2390-52-700	L00-2390-52-700
4	Air Valve Bolt	4	L00-6000-03-700	L00-6000-03-700
5	Muffler Element	1	L00-3240-26-700	L00-3240-26-700
6	Air Valve Gasket	1	L00-2600-52-700	L00-2600-52-700
7	Pilot Spool Assembly	1	L00-3850-99-700	L00-3850-99-700
8	Center Section	4	L01-6400-03	L01-6400-03
9	Pro-Flo® Center Section	1	L00-3150-20-700	L00-3150-20-700
10	Pilot Spool Retaining Ring	1	L00-2650-03-700	L00-2650-03-700
11	Shaft	1	L00-3800-99-700	L00-3800-99-700
12	Disc Spring	2	L00-6800-08	L00-6800-08
13	Inner Piston for Rubber/TP	2	L00-3700-20-700	L00-3700-20-700
14	Diaphragm*	2	*	*
15	Outer Piston	2	L00-4570-20	L00-4570-21
16	Manifold Tee-Section	2	L00-5160-20	L00-5160-21
17	Top Retainer	2	L00-5411-20	L00-5411-21
18	Bottom Retainer	2	L00-5420-20	L00-5420-21
19	Combo Retainer O-Ring*	4	*	*
20	Valve Seat O-Ring*	4	*	*
21	Valve Seat	4	L00-1130-20	L00-1130-21
22	Valve Ball	4	L00-1080-55	L00-1080-55
23	Tee Section O-Ring*	4	*	*
24	Liquid Chamber	2	L00-5001-20	L00-5001-21
25	Clamp Band Assembly	2	L00-7300-03	L00-7300-03
26	– ClampBandBolt	4	L01-6100-03	L01-6100-03
27	– ClampBandNut	4	L01-6400-03	L01-6400-03

*Refer to Elastomer Options in Section 10. 1Air Valve Assembly includes items 2, 3, and 4.

All boldface items are primary wear parts.

GT06 PLASTIC

PTFE-FITTED EXPLODED VIEW



SECTION 9 EXPLODED VIEW & PARTS LISTING

GT06 PLASTIC

PTFE-FITTED EXPLODED VIEW

Item #	Description	Qty. per Pump	GT.06 PPP P/N	GT.06 KPP P/N
1	Pro-Flo® Air Valve Assembly1	1	L00-2000-20-700	L00-2000-20-700
2	Pro-Flo® Air Valve End Cap	1	L00-2300-20-700	L00-2300-20-700
3	End Cap O-Ring (–017)	1	L00-2390-52-700	L00-2390-52-700
4	Muffler Element	1	L00-3240-26-700	L00-3240-26-700
5	Air Valve Bolt	4	L00-6000-05-700	L00-6000-05-700
6	Air Valve Gasket	1	L00-2600-52-700	L00-2600-52-7
7	Air Valve Nut	4	L01-6400-05	L01-6400-0
8	Center Section	1	L00-3150-20-700	L00-3150-20-700
9	Pilot Spool Assembly	1	L00-3850-99-700	L00-3850-99-700
10	Pilot Spool Retaining Ring	1	L00-2650-03-700	L00-2650-03-700
11	Shaft	1	L00-3800-99-700	L00-3800-99-700
12	Inner Piston for PTFE Fitted	2	L00-3750-20-700	L00-3750-20-700
13	Back-Up O-Ring*2,3	2	L00-1070-51	*
14	Diaphragm*	2	L00-1030-55	L00-1030-55
15	Manifold Tee-Section	2	L00-5160-20	L00-5160-21
16	Top Retainer	2	L00-5411-20	L00-5411-21
17	Bottom Retainer	2	L00-5420-20	L00-5420-21
18	Valve Seat	4	L00-1130-20	L00-1130-21
19	Combo Retainer O-Ring*	4	*	*
20	Valve Seat O-Ring*	4	*	*
21	Valve Ball	4	L00-1080-55	L00-1080-55
22	Tee Section O-Ring*	4	*	*
23	Liquid Chamber	2	L00-5001-20	L00-5001-21
24	Clamp Band Assembly	2	L00-7300-03	L00-7300-03
25	– ClampBandBolt	4	L01-6100-03	L01-6100-03
26	– ClampBandNut	4	L01-6400-03	L01-6400-03

*Refer to Elastomer Options in Section 10.

1. Air Valve Assembly includes items 2, 3, and 4.
2. Part used only on PTFE-fitted pumps.
3. Neoprene back-up o-ring standard (P/N L00-1070-51).

All boldface items are primary wear parts.

GT06 Plastic

Material	Valve Seat O-Ring	Combo Retainer O-Ring	Diaphragm	Back-Up Diaphragm O-Ring	Valve Ball	Tee Section O-Ring
SANTOPRENE	L00-1200-58	L00-1260-58	L00-1010-58	L00-1070-58	L00-1080-58	L00-1300-58
PTFE	—	—	L00-1030-55	—	L00-1080-55	—
PTFE-Encapsulated FKM	L00-1200-60	L00-1260-601	—	—	—	L00-1300-60[1]
Neoprene	—	—	—	L00-1070-51	—	—

WARRANTY

Each and every product manufactured by Liquade Pump and Engineering, LLC is built to meet the highest standards of quality. Every pump is functionally tested to insure integrity of operation.
Liquade Pump and Engineering, LLC warrants that pumps, accessories and parts manufactured or supplied by it to be free from defects in material and workmanship for a period of five (5) years from date of installation or six (6) years from date of manufacture, whichever comes first. Failure due to normal wear, misapplication, or abuse is, of course, excluded from this warranty.

Since the use of Liquade pumps and parts is beyond our control, we cannot guarantee the suitability of any pump or part for a particular application and Liquade Pump and Engineering, LLC shall not be liable for any consequential damage or expense arising from the use or misuse of its products on any application. Responsibility is limited solely to replacement or repair of defective Liquade pumps and parts.

All decisions as to the cause of failure are the sole determination of Liquade Pump and Engineering, LLC.

Prior approval must be obtained from Liquade for return of any items for warranty consideration and must be accompanied by the appropriate MSDS for the product(s) involved. A Return Goods Tag, obtained from an authorized Liquade distributor, must be included with the items which must be shipped freight prepaid.

The foregoing warranty is exclusive and in lieu of all other warranties expressed or implied (whether written or oral) including all implied warranties of merchantability and fitness for any particular purpose. No distributor or other person is authorized to assume any liability or obligation for Liquade Pump and Engineering, LLC other than expressly provided herein.

PLEASE PRINT OR TYPE AND FAX TO WILDEN

PUMP INFORMATION

Item # _____ Serial # _____

Company Where Purchased _____

YOUR INFORMATION

Company Name _____

Industry _____

Name _____ Title _____

Street Address _____

City _____ State _____ Postal Code _____ Country _____

Telephone _____ Fax _____ E-mail _____ Web Address _____

Number of pumps in facility? _____ Number of Wilden pumps? _____

Types of pumps in facility (check all that apply): ☐ Diaphragm ☐ Centrifugal ☐ Gear ☐ Submersible ☐ Lobe

☐ Other _____

Media being pumped? _____

How did you hear of Wilden Pump? ☐ Trade Journal ☐ Trade Show ☐ Internet/E-mail ☐ Distributor

☐ Other _____

www.liquade.com