



GASBOY

DIAPHRAGM AND PISTON PUMPS INSTALLATION/OPERATION/PARTS MANUAL

FOR MODELS

1620 and 1720 Diaphragm Pumps

1420, 1520, 1520T Piston Pumps

031975

REV. 07/25/03

INSTALLERS - IMPORTANT

In addition to installation information, this manual contains warnings, safeguards and procedures on the use and care of the diaphragm and piston pumps. Please leave this manual with the pump owner after the installation is complete.

Copyright 2003 by Gasboy International LLC All rights reserved.

The information in this document is confidential and proprietary. No further disclosure shall be made without permission from Gasboy International LLC Gasboy International LLC believes that the information in this document is accurate and reliable. However, we assume no responsibility for its use, nor for any infringements of patents or other rights of third parties resulting from its use. We reserve the right to make changes at any time without notice.

GASBOY INTERNATIONAL LLC LANSDALE, PA

IMPORTANT WARNINGS AND SAFEGUARDS

Gasoline and petroleum products are flammable. To avoid injury or death to persons or damage to equipment or property, follow these listed warnings and other warnings and precautions outlined in this manual when installing, using, or working around this equipment. Check with GASBOY Technical Services for compatibility of liquids with pump materials.

TURN OFF AND LOCK OUT ALL POWER TO PUMP BEFORE PERFORMING SERVICE, MAINTENANCE OR IN THE EVENT OF A FUEL SPILL.

All products must be installed by a qualified installer and used in conformance with all building, fire, and environmental codes and other safety requirements applicable to its installation and use, including, but not limited to, NFPA 30, NFPA 30A, NFPA 395 & NFPA 70. A qualified installer is familiar with fuel systems installations under the above stated building, fire, and environmental codes and other safety requirements for the particular type of installation.

This product is only part of a fuel dispensing system and additional equipment and accessories, such as, but not limited to, breakaway connectors, shear valves, pressure regulators, flow limiters, and other safety devices may be necessary to meet the applicable codes.

For maximum safety, we recommend that all employees be trained as to the location and procedure for turning off power to the entire system. Instructions regarding proper operation of the equipment along with the appropriate safety warnings should be posted in plain view at the fuel island.

Before performing service or maintenance (including changing of fuel filters or strainers) or in the event of a fuel spill, turn off and lock out all power to the system. In battery-powered pumps, disconnect power source. In submersible pump applications, turn off and lock out power at the master panel and close any impact valves to the submersible pump and any other dispensers which use that submersible pump. AC power can feed back into a shut-off dispenser when dispensers share a common submersible pump or starter relay. Also block islands so no vehicles can pull up to the dispenser when the dispenser is being worked on.

DO NOT use Teflon tape for any pipe threads in the product.

DO NOT use consumer pumps for pumping fuel or additives into aircraft.

DO NOT use commercial pumps for direct fueling of aircraft without filters and separators necessary to ensure product purity.

DO NOT use where sanitary design is required (for food products for human consumption) or with water-based liquids.

DO NOT smoke near the pump or when using the pump.

DO NOT use near open flame or electrical equipment which may ignite fumes.

DO NOT permit the dispensing of gasoline or other petroleum products into a vehicle with its motor running.

DO NOT permit the dispensing of gasoline or other petroleum products into unapproved containers or into approved containers in or on vehicles including trucks. All containers must be filled on the ground to prevent static discharge. Always use Approved and Listed hoses and nozzles with electric pumps and dispensers.

DO NOT block open the nozzle in any manner. Nozzles shall conform to UL and NFPA code requirements for attended or unattended service.

DO ensure that the pump is equipped with proper filters based on the product being dispensed and its intended use.

DO wear safety goggles and protective clothes when dispensing any liquid which may be potentially harmful or hazardous.

DO keep all parts of body and loose clothing clear of belts, pulleys, and other exposed moving parts at all times.

DO require washing and changing of clothes if fuel is spilled on a person or his/her clothing. Keep away from open flames, sparks, or people smoking.

DO provide a receptacle for catching product from pump/meter when servicing.

DO clean up product spills on the driveway. Turn off and lock out all power prior to cleanup.

DO insure pump is properly grounded.

DO insure hose is compatible with fluid being dispensed.

DO inspect hose, nozzle, and pump on a regular basis for wear, damage, or other conditions which may create a safety or environmental hazard.

DO make sure all pipe threads are properly cut and the inside reamed to remove burrs. Use UL classified gasoline-resisting compound on all joints of gasoline handling piping. Sealing compound must also be resistant to Gasohol (Ethanol and Methanol). Use gasoline-resistant pipe compound on male threads only; pipe compound used on female threads can be squeezed into the supply line where it can enter the product stream and become lodged in the pump or meter.

DO ensure that junction box covers are in place and properly tightened. Mating surfaces between the box and cover must be free of dirt, nicks, and scratches. All unused entries into the junction box must be properly plugged.

CONTENTS

Section 1:	FEATURES	
	General Description.....	1-1
	Operating Instructions	1-2
Section 2:	INSTALLATION	
	Installation Precautions	2-1
	Suction Tube and Underground Tank Piping	2-1
	Installation on Drum or Barrel.....	2-2
	Installation on an Aboveground (Skid) Tank	2-2
	Installation on an Underground Tank - Pedestal Mount	2-2
	Installing Bung Adapter	2-2
	Attaching Hose and Nozzle	2-3
	Attaching Meter Register.....	2-3
Section 3:	PARTS LIST	
	When Your Pump Needs Service.....	3-1
	Diaphragm and Piston Pump Parts	3-2
	Accessories for Diaphragm and Piston Pumps	3-4
	Disassembling the Pump.....	3-6
	Replacing Piston Cups	3-7
	Repacking the Stuffing Box	3-9
	Cleaning the Suction Screen.....	3-9
	Changing the Diaphragm	3-9

FEATURES

GENERAL DESCRIPTION

GASBOY diaphragm and piston pumps are hand-operated heavy-duty pumps designed for fast transfer of petroleum-based liquids from standard size drums (16 to 55 gallon); truck tanks or skid or underground tanks.

NOTE: If pumps are used to pump flammables, such as gasoline, a UL-Listed model is required.

Diaphragm pumps include GASBOY models 1620 (unpainted) and 1720 (painted); piston pumps include GASBOY models 1420 (unpainted), 1520, and 1520T (both painted). While both pump types have the same general features, piston and diaphragm pumps differ internally and each model is supplied with different components.

Features common to both pump types include:

- Push-pull handle with handle locking device
- Adjustable suction tube
- Cast aluminum housing
- Delivery rate of approximately .1 gallon per stroke (.2 gallon per complete cycle)
- One-piece spring-loaded valve assembly of thermoplastic or molded Teflon with stainless steel springs.
- For 1520T model, cover seals, inlet and outlet fitting seals, and shaft seals are chemically inert Teflon. Piston cups are a Teflon compound. Internal parts are stainless steel or aluminum.
- Diaphragm of tough Buna-N, nylon reinforced, supported by heavy gauge steel plate
- Self-venting adjustable bung adapter. Speeds simple installation and removal of pump to any radial position (360°)
- Built-in strainer and vacuum breaker
- Easy to install and remove for fast changeover to another tank or drum
- Accommodates a wide variety of industrial and chemical liquids. Contact the GASBOY Quick Facts Hotline (1-800-934-5522) for a complete list.

NOTES: Where indicated, delivery hose must be equipped with a static wire.

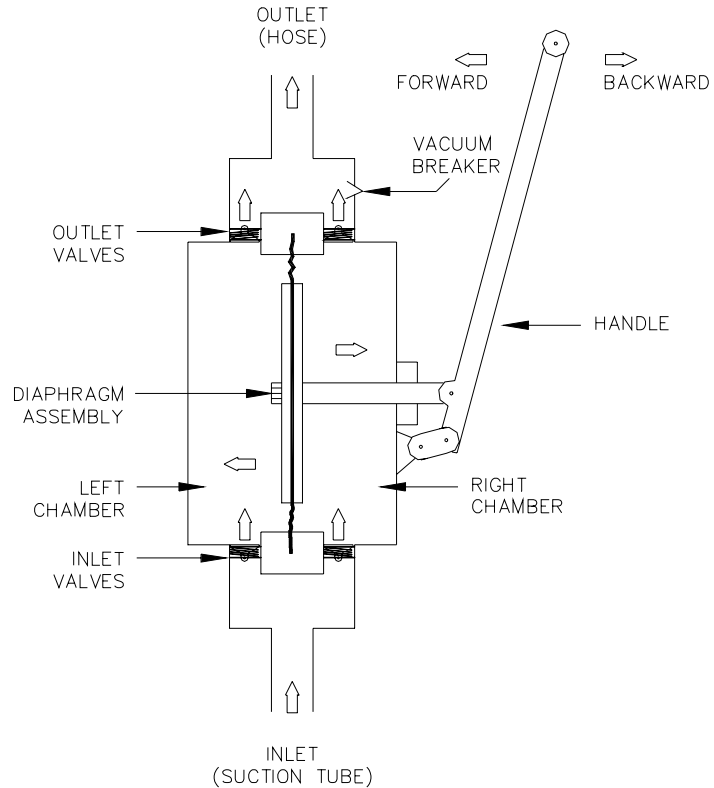
OPERATING INSTRUCTIONS

GASBOY's diaphragm pump is double-action, in that it pumps fluid on both the forward and backward stroke. The diaphragm pump has four valves; two inlet valves and two outlet valves. Each valve is hooked to a spring which holds the valve to its seat.

The diaphragm itself divides the pump body into two chambers (left and right). Each chamber has two parts, one for the inlet valve and one for the outlet valve.

When the pump handle is pushed forward, the diaphragm shifts to the left chamber. This action closes the left inlet valve and simultaneously opens the left outlet valve forcing liquid in the chamber to flow through the outlet valve into the discharge hose (see note). At the same time, in the right chamber the inlet valve opens and liquid from drum or tank is drawn into right chamber.

NOTE: Initially, no liquid will be discharged at the hose because pump has to be operated several times for priming.



When the handle is pulled outward, the diaphragm shifts to the right chamber. The liquid in the right chamber is forced out the outlet valve and liquid from the drum is drawn into the left chamber.

As liquid flows in the hose, an automatic vacuum breaker, installed in the exhaust fitting of the pump opens to atmospheric pressure to speed up hose drainage.

WARNING

GASBOY hand-operated pumps utilize a normally-open type nozzle. When fuel is added to an empty storage tank, fuel trapped in the pump may be displaced by the air trapped in the pump suction tube and may cause a spill. To prevent a spill, raise the nozzle above the height of the pump until all air is purged from the piping.

Section 2

INSTALLATION

INSTALLATION PRECAUTIONS

All tanks and installations must conform with all building/fire codes, all Federal, State, and Local codes, National Electrical Code, (NFPA 70), NFPA 30, and Automotive and Marine Service Station Code (NFPA 30A) codes and regulations.

Plan your installation carefully. Dispensing troubles, which seem to be pump-related, are frequently traced to faulty installation. Review the following list of installation **DO's** and **DON'T's** to avoid potential problems:

1. **DO** read the **WARNINGS** page at the front of this manual, preceding the Table of Contents. It contains important information regarding the safe use of your pumps.
2. **DO** have the pump installed by a competent installer.
3. **DO NOT** experiment with a pump if you are not sure the installation is correct.
4. **DO NOT** install any underground piping without proper swing joints. (Always use shoulder nipples, never close nipples).
5. **DO NOT** cover any lines until they have been both air- and liquid-tested.
6. **DO NOT** back-fill the tank or supply line with cinders or ashes. (Back-fill with clean sand, crushed rock, or pea gravel).
7. **DO NOT** use black iron pipe or fittings for underground installations. (Use only new galvanized or fiberglass* pipe and fittings). *Install all fiberglass pipe and fittings according to manufacturer's specifications and requirements.
8. **DO NOT** install fill pipe to tank where it can be submerged with standing water.

SUCTION TUBE AND UNDERGROUND TANK PIPING

If you are using an underground tank, pitch the tank away from suction end. Horizontal runs of suction line should slope down from the pump toward the tank.

Suction lifting capabilities vary depending upon fluid and pump model. Do not exceed the following:

Model	Max Lift (Ft) Gasoline	Max Lift (Ft) Diesel
Diaphragm (1620, 1720)	12	13
Piston (1420, 1520)	12	13
Piston (1520T)	10	11

If your suction pipe is flat cut, the end of the suction pipe must be at least three inches from bottom of tank. If the end of your suction pipe is cut at a 45° angle, it can rest at the bottom of the tank.

The tank or piping should not be located under traffic areas. Swing joints (two ells) will prevent damage to piping due to frost heave or ground settlement.

Use nonhardening, gasoline-resistant pipe compound on male threads of all pipe joints for liquid handling piping.

INSTALLATION ON DRUM OR BARREL

1. Apply pipe compound on threads of sliding suction tube and connect it to inlet fitting of pump. Extend suction tube a little longer than necessary for the height of the drum or tank. The tube will automatically adjust to proper position when installed.
2. Insert tube into drum or tank.
3. Turn bung adapter clockwise until snug against gasket and drum for a watertight connection.
4. Follow procedure for **Installing Bung Adapter**.

INSTALLATION ON AN ABOVEGROUND (SKID) TANK

1. Obtain sufficient 1" pipe to reach the bottom of the tank. Measure distance from bottom of tank to top of adapter (subtract 3 inches to keep end of tube off bottom of tank, if required, see **Suction Tube and Underground Tank Piping** earlier in this section)
2. Apply pipe compound on threads of suction tube and connect it to the inlet fitting of the pump. Extend suction tube a little longer than necessary for the height of the tank. The tube will automatically adjust to proper position when installed.
3. Insert tube into tank.
4. Turn bung adapter clockwise until snug against gasket and tank for a watertight connection.
5. Follow procedure for **Installing Bung Adapter**.

INSTALLATION ON AN UNDERGROUND TANK - PEDESTAL MOUNT

Foundation

Foundation should be cement. After placing pump on cement, fasten lag bolts loosely. They should not be tightened until the end of the installation.

Piping

Use only new galvanized or fiberglass pipe and fittings. (Install fiberglass pipe and fittings according to manufacturer's specifications and requirements.) See that all threads are properly cut. Each end of the pipe must be reamed out and the insides washed out with solvent to ensure cleanliness. Wash all lubricating oil off threads of pump. Use a good grade of gasoline-resistant sealing compound on all pipe joints.

INSTALLING BUNG ADAPTER

1. Screw the bung adapter into the tank or drum opening and tighten by hand.
2. Insert pump into hole in bung adapter and line up one of the screws of the adapter with the slot in the back of the pump intake and tighten this screw to secure the pump.
3. Tighten the adapter using the pump for a hand hold.

4. If the pump is not in a desirable position, back out the screw from the slot and turn the pump to a desirable position. Do not loosen the bung adapter.
5. When desired position is attained, tighten all three screws of the adapter to hold the pump securely in place. The screw inserted into the slot in Step 2 is no longer needed.

ATTACHING HOSE AND NOZZLE

1. Screw the hose into the product outlet on top or on the side of the pump. Apply gasoline-resistant pipe compound to male threads.
2. Screw nozzle onto hose.

ATTACHING METER REGISTER

A meter register is optional. If used, it must be mounted on a vertical riser coming out of the pump. In some cases, it may be necessary to change the location of the pump outlet to obtain a vertical discharge. If the pump does not have a nozzle equipped with a hook, GASBOY nozzle P/N 003785 can be substituted and will hang up in the hose drain valve body of the meter register.

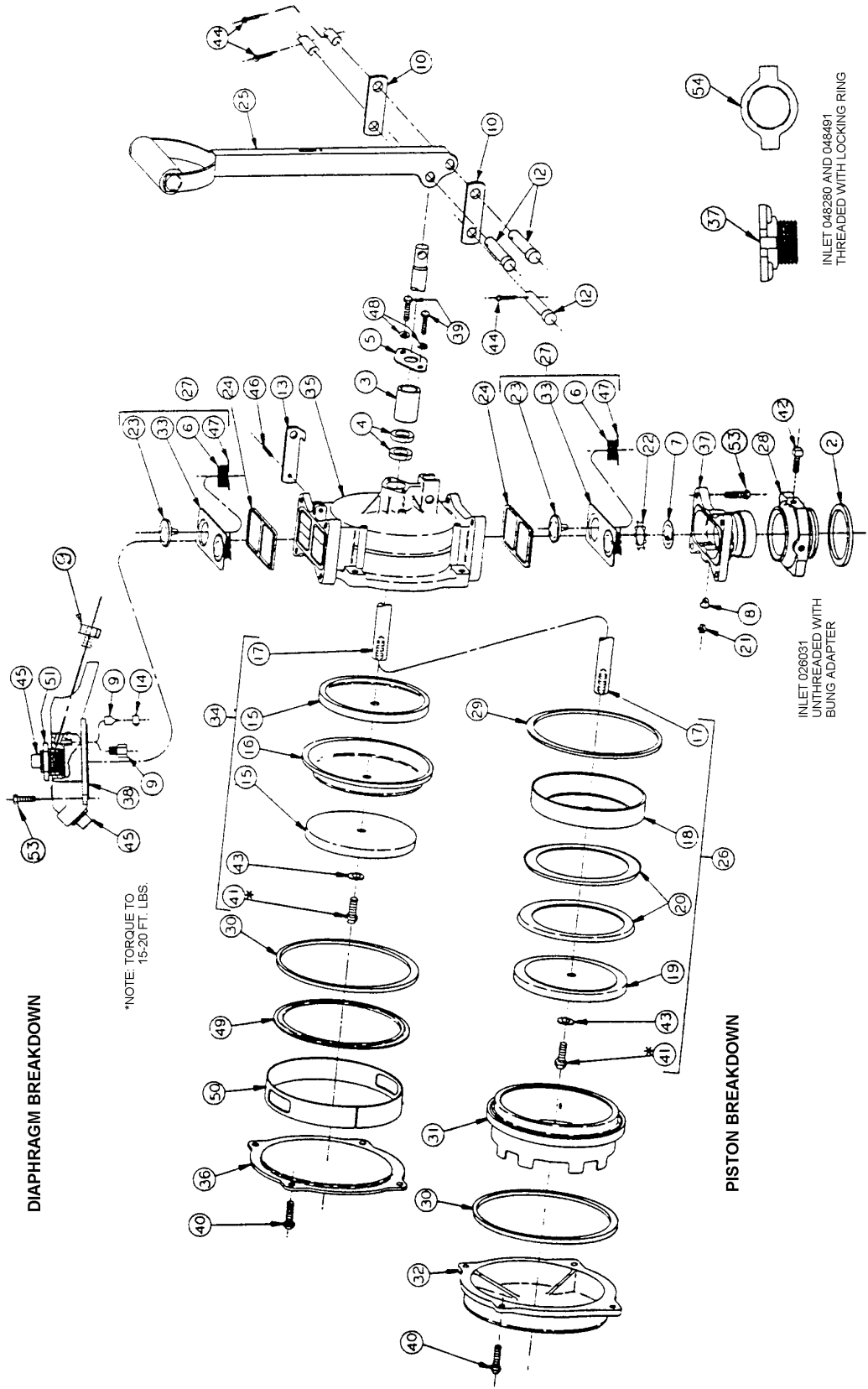
PARTS LIST

WHEN YOUR PUMP NEEDS SERVICE

When your pump needs service, follow these guidelines:

- Procedures requiring disassembly of portions of the pump should be performed by competent service personnel. GASBOY has a distributor network which services fuel dispensing equipment in every part of the country.
- Replace worn, rusted, or corroded parts immediately with new authorized service parts supplied by GASBOY. Replacing parts with incorrect or substandard substitutes will result in unsatisfactory pump operation. Always use new gaskets or seals when servicing or rebuilding Gasboy equipment; do not re-use old ones.

The following pages list parts and service procedures for the diaphragm and piston pumps. Using part numbers when ordering will expedite your order and reduce the possibility of the wrong parts being shipped.



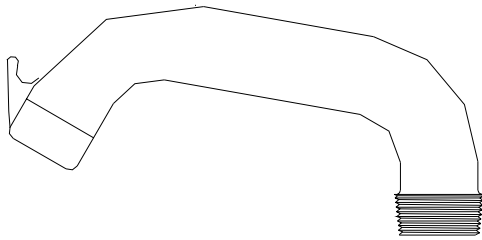
DIAPHRAGM AND PISTON PUMP PARTS

Item	Part No.	Description	Item	Part No.	Description
2	027367	Gasket (Bung Adapter)	31	003927	Piston Cylinder (piston pumps only)
3	048252	Bearing	32	003506	Piston Cover
4	048249	Packing		023060	Piston Cover, 1520T
	040046	Packing, 1520T	33	048247	Valve Plate
5	048254	Bearing Plate	34	048273	Diaphragm Assembly
6	048285	Valve Spring	35	048911	Pump Body
7	048260	Suction Screen	36	048245	Cover
	051616	Suction Screen, 1520T	37	026031	Inlet Fitting, 1" FNPT used w/bung adapter
8	048253	Fire Screen		048280	Inlet Fitting, 1" FNPT x 2" MNPT with vent hole
	051613	Fire Screen, 1520T		048491	Inlet Fitting, 1" FNPT x 2" MNPT without vent hole
9	048266	Vacuum Breaker (<i>Production prior to 2/27/98</i>)	38	026032	Fitting, 1" vertical outlet
	066570	Vacuum Breaker (<i>Production 2/27/98 or later</i>)		026056	Fitting, 1" vertical outlet, 1520T
	066527	Vacuum Breaker, 1520T		048267	Fitting, 3/4" side outlet <i>NOTE: Outlet fittings also require items 9 and 14 to prevent leakage.</i>
10	034916	Connecting Link	39	048296	1/4-20 x 7/8 Lg Hex Hd Thread Forming Screw
12	043020	Pin 1-15/32" long	40	048296	1/4-20 x 7/8 Lg Hex Hd Thread Forming Screw
13	020641	Clasp	41	051981	3/8-24 x 3/4 Lg Self-locking screw
14	048264	Retainer (except 1520T)		051977	3/8-24 x 7/8 Lg Self-locking screw, 1520T
15	048271	Diaphragm Retainer	42	053245	1/4-20 x 3/4 Lg Sq Hd Cup Pt set screw
16	048272	Diaphragm	43	068044	3/8 Lockwasher
17	048270	Shaft		068936	3/8 Lockwasher
	055895	Shaft (piston pumps only)	44	042355	3/32 x 3/4 Lg Cotter Pin
18	045662	Piston Retainer	45	047290	Pipe Plug, 3/4"
	045660	Piston Retainer, 1520T	46	043261	3/16 Dia x 1/2 Lg Roll Pin
19	045663	Piston Retainer	47	048286	Spring Retainer
	045661	Piston Retainer, 1520T	48	068155	1/4 Lockwasher
20	045705	Piston Cup (piston pumps only)	49	048244	Diaphragm Washer
21	048297	Push-On Ring	50	048246	Diaphragm Ring
	049531	Push-On Ring, 1520T	51	017278	Bushing - Hexagon, 1520T
22	048287	Push-On Ring	53	048296	1/4-20 x 7/8 Lg Hex Hd Thread Forming Screw
	049532	Push-On Ring, 1520T	54	039163	Locking Ring
23	048288	Valve			
	066941	Valve, 1520T			
24	048289	Valve Gasket			
	054150	Small Valve Seal, 1520T			
	054151	Large Valve Seal, 1520T			
25	029398	Handle and Grip Assy.			
26	045701	Piston Assembly			
	045702	Piston Assembly, 1520T			
27	048278	Valve Assembly			
	066942	Valve Assembly, 1520T			
28	026116	Bung Adapter Assembly			
29	027368	Ring - Square Cut			
	054092	Seal Ring Assembly, 1520T			
30	048243	Ring - Square Cut			
	054086	Cover Seal, 1520T			

ACCESSORIES FOR DIAPHRAGM AND PISTON PUMPS

Part No.	Description	Part No.	Description
064895	Sliding Suction, Polyethylene	000785	Nozzle (Regular, Manual)
064841	Sliding Suction, Alum.	000784	Nozzle (Unleaded, Manual)
066110	Sliding Suction, Alum., 1520T	038455	Nozzle (Regular, automatic)
030550	5/8" x 8' Hose (Std.)	032694	Repair Kit - Diaphragm
030530	5/8" x 8' Hose (UL-approved)	032695	Repair Kit - Piston
		032696	Repair Kit - Piston (1520T)

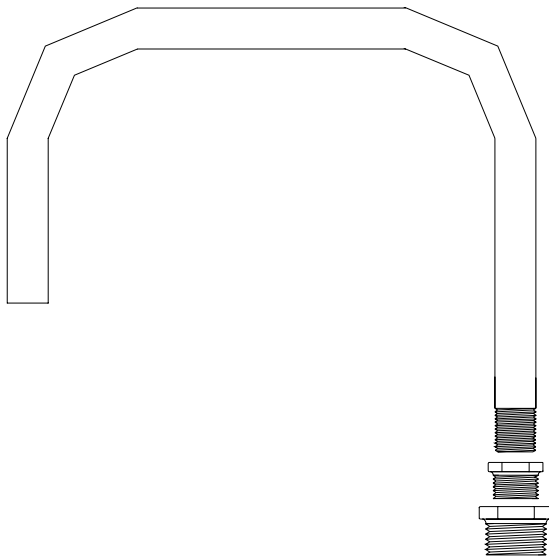
003855 Discharge Spout



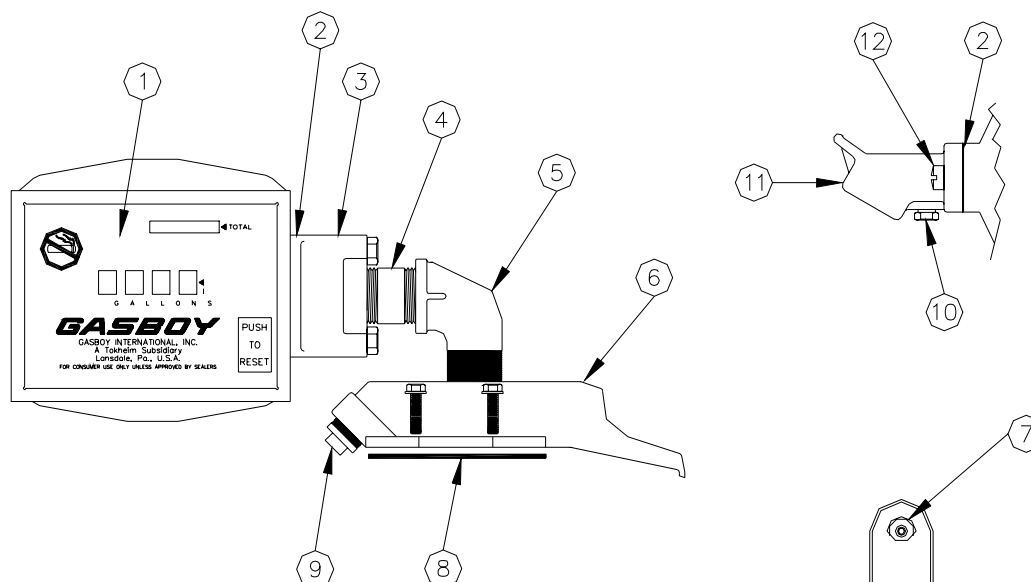
003924 Pedestal only (casting)



049495 Bottle Filler Kit



Meter-Register Conversion Kit



- 035624 Conversion Kit, US Gas & Diesel
 035629 Conversion Kit, Liter Gas & Diesel
 035628 Conversion Kit, Imperial Gas & Diesel

Item	Part No.	Description
1	036341	Meter Register, 4860P-40, US Gal. Gas & Diesel
	036343	Meter Register, 4860P-44, Liter Gas & Diesel
	036345	Meter Register, 4860P-52, Imperial Gas & Diesel
2	027055	Gasket, Inlet/Outlet
3	003650	Flange
4	038035	Pipe TBE, 1 x 1-1/2 Close Nip
5	024941	Elbow, Street 1 x 90
6	026032	Adapter-Spout
7	047279	Plug Pipe, Soc Hd, 1/8
8	048289	Valve Gasket
9	047290	Plug Pipe, Sq Hd
10	066570	Vac Breaker Assy.
11	003606	Elbow, Flange, 3/4 Dsch, Vac Breaker
12	052555	Screw, 3/8-16 x 7/8

DISASSEMBLING THE PUMP

Parenthesized numbers relate to exploded drawing of pump.

1. Loosen set screws (42) to disconnect bung adapter (28), if applicable) from inlet fitting of pump.
2. Remove pump from drum.
3. Unscrew bung adapter (28) from drum and remove gasket (2) from bung adapter.
4. Unscrew sliding suction tube from inlet fitting.
NOTE: When reassembling, apply pipe compound on threads of sliding suction tube.
5. Disconnect handle and grip assembly (25) from shaft and pump body by removing three cotter pins (44), two thrust washers (1), and two connecting links (10).
6. Unscrew hose from fitting. Remove hose from tube.
7. Detach fitting (38) from pump body by removing four screws (53).
8. Disassemble valve assembly by separating valve (23), valve plate (33), valve spring (6), and spring retainer (47).
9. Detach valve gasket (24).
10. Detach vacuum breaker (9) either by removing retainer (14, except for 1520T) or by unscrewing the external vacuum breaker (production models 2/27/98 or later).

The next three steps pertain to disassembly of diaphragm. If disassembling a piston pump, follow the instructions for **Replacing Piston Cups** and resume with Step 14.

11. Separate diaphragm cover (36), ring (50) and washer (49) from pump body by removing four screws (40).
12. Remove screw (41) and lockwasher (43) from shaft.
13. Disassemble diaphragm assembly by separating two diaphragm retainers (15), diaphragm (16), and shaft (17). Remove shaft from pump body.
14. Remove square-cut ring (30).
15. Remove two screws (39), two lockwashers (48), bearing plate (5), and two packings (4).
NOTE: On reassembly, apply oil to bearings and packing.
16. Remove four screws (53), inlet fitting (37), push-on ring (21), and suction screen (7).
17. Repeat Steps 8 and 9.
18. Remove push-on ring (21) and fire screen (8).
19. Clean parts and inspect for wear or damage.
20. Replace worn parts with new ones.
21. Reassemble and replace pump into drum by reversing Steps 1 through 18.

REPLACING PISTON CUPS

The Piston Assembly consists of:

- 2 piston cups
- 1 shaft with drilled hole
- 2 piston retainers (1 with wide flange, 1 with narrow flange)
- 1 3/8" - 24 screw
- 1 internal tooth lockwasher

Removing Old Piston Cups

1. Remove cotter pin and washer securing the handle and grip assembly to the shaft. Drop handle and grip assembly.
2. Remove the four (4) hex head cap screws securing the piston cover to the pump body and remove cover. Loosen the two (2) slotted hex head machine screws on packing plate.
3. Pull the piston cylinder and piston assembly from the pump body.
4. Remove the hex head screw and lockwasher which holds the piston assembly together and remove the old piston cups.

Installing New Piston Cups

Figure 1

1. Position the piston retainer with the widest flange (c) face down on a flat surface.
2. Place one piston cup (b) on top of the piston retainer (c) with the opening of the cup centered with the raised portion of the retainer.
3. Holding the piston cylinder (a) in both hands with notched side up, press evenly onto the retainer and piston cup.

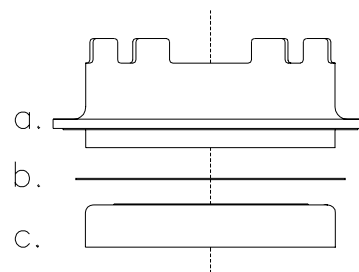


Figure 2

4. Next take piston retainer with the narrow flange (d) and position the second piston cup (b), flange down, on the retainer. Center the piston cup with the raised portion of the retainer.

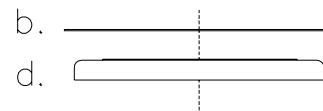


Figure 3

5. Turn over, press into cylinder and insert lockwasher and screw (e) (use Loctite #277) into piston retainer (d).

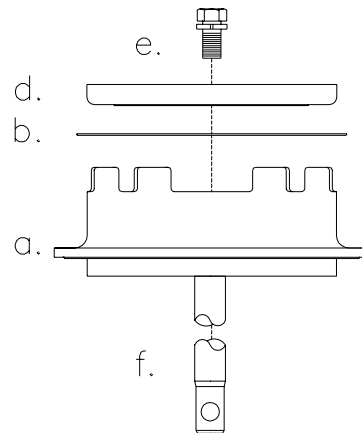
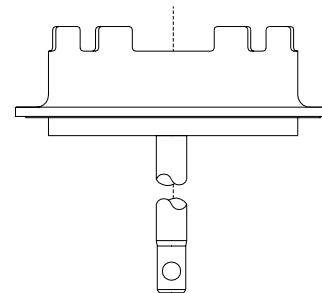


Figure 4

6. Grasp entire assembly, turn over, and assemble shaft (f). Tighten screw to 15 to 20 ft. lbs. torque.

NOTE: When tightening the screw, hold the shaft with a drift pin or rod inserted through the shaft hole only. **DO NOT** grip the shaft in a vise, etc, as this is a bearing surface and can result in damage to the surface.



7. Slide the completed assembly into the housing carefully so that the shaft does not score the bearings.
8. When inserting the cylinder, align the small boss on the cylinder with the guide in the body casting.
9. Reassemble the cylinder and piston assembly into the pump body.
10. Replace the cover plate with the four (4) hex head screws previously removed.
11. Align hole in shaft with the connecting links and replace the pin, washer, and cotter pin.

REPACKING THE STUFFING BOX

The stuffing box is located on the pump illustration between the handle and the pump body.

1. Remove two screws (39) and slide bearing (3) back on shaft (17).
2. Remove old seal (4) and insert new seal.
3. Push bearing (3) against packing.
4. Place bearing plate (5) in position and tighten screws (39).

CLEANING THE SUCTION SCREEN

The suction screen is located at the pump inlet.

1. Remove inlet fitting (37) by taking out screws. This will allow the removal of the valve assembly (27) and push-on ring (22).
2. Replace screen (7) or clean with solvent. Dry and replace.

CHANGING THE DIAPHRAGM

1. Separate diaphragm cover (36), ring (50) and washer (49) from pump body by removing four screws.
2. Remove screw (41) and lockwasher (43) from shaft (17).
3. Disassemble diaphragm assembly by separating two diaphragm retainers (15), diaphragm (16), and shaft (17). Remove shaft from pump body.
4. Remove gasket (30).
5. When reassembling, replace gasket with a new one.
6. Apply Loctite #277 to threads of screw and attach lockwasher. Torque to 15 to 20 ft. lbs.

WARRANTY

General Statements:

Gasboy International LLC warrants all new equipment manufactured by Gasboy against defective material and/or workmanship, for the warranty period specified below, when the equipment is installed in accordance with specifications prepared by Gasboy.

This warranty does not cover damage caused by accident, abuse, Acts of God, lack of surveillance of automatic recording systems, negligence, mis-application, faulty installation, improper or unauthorized maintenance, installation or use in violation of product manuals, instructions, or warnings. Under no circumstance shall Gasboy be liable for any indirect, special, or consequential damages, losses, or expenses to include, but not limited to, loss of product, loss of profits, litigation fees, or the use, or inability to use, our product for any for any purpose whatsoever.

Parts Only - During the warranty period, Gasboy will, at its option, repair or replace defective parts returned transportation prepaid to its factory.

On-Site Labor Included - Gasboy will also provide, within the Continental United States and during the warranty period, the services of an Authorized Service Representative (ASR) for on-site repair or replacement of defective parts.

Replacement Parts - Any system components that are not part of the original system order, including Island Card Readers, Pump Control Units, etc., are considered replacement parts.

Equipment	Term	Coverage
Commercial Pumps and Dispensers Full-Cabinet Consumer Pumps	One year from date of installation or 18 mos. from date of Gasboy International's invoice to the purchaser, whichever comes first.	Parts and Labor.
Small Transfer Pumps, Meters, Pressure Regulators	One year from date of installation or 18 mos. from date of Gasboy International's invoice to the purchaser, whichever comes first.- Excepting the Model 2020 Hand Pump, which has a 90-day warranty from date of GASBOY International's invoice.	Parts Only.
Keytrol	One year from date of installation or 18 mos. from date of Gasboy International's invoice to the purchaser, whichever comes first.	Parts and Labor.
Fuel Management Systems: - CFN/ Profit Point - Series 1000/Fleetkey - TopKAT - Fuel Point Readers (sold with new systems)	One year from date of start-up or 15 mos. from date of Gasboy International's invoice to the purchaser, whichever comes first.- The basic warranty only applies to systems which have been started up by a Gasboy Authorized Service Representative (ASR).	Parts and Labor.
Additional Fuel Point Items: - Fuel Point Readers sold for retrofitting existing systems. - Fuel Point vehicle and dispenser components.	One year from date of start-up or 15 mos. from date of Gasboy International's invoice to the purchaser, whichever comes first.	Parts Only.
Encoders, Embossers, Modems, CRTs, and Logger Printers	Purchased with Fuel Management System (Encoders, Embossers only): 90 days from the date of start-up by a Gasboy ASR, or 180 days from date of Gasboy International's invoice, whichever occurs first. Purchased with Fuel Management System (Modems, CRTs, and Logger Printers only): Matches system warranty. Purchased Separately: 90 days from date of Gasboy International's invoice to the purchaser.	Purchased with System (Encoders, Embossers only): Parts only. Purchased with System (Modems, CRTs, Logger Printers only): Matches system warranty. Purchased Separately: Parts Only.
Air Diaphragm Pumps	Three years from date of purchase (for full warranty description, see Price List).	Parts Only.
Items not manufactured by Gasboy (ex. automatic nozzles, hoses, swivels, etc.)	Not warranted by Gasboy International (consult original manufacturer's warranty).	Not Applicable.
Replacement Parts	One year from date of Gasboy International's invoice to the purchaser.	Parts Only.

To the extent permitted by law, this warranty is made in lieu of all other warranties, expressed or implied, including warranties of freedom from patent infringement, or merchantability, or fitness for a particular purpose, or arising from a course of dealing or usage of trade. No one is authorized to vary the terms of the warranty nor may anyone make any warranty of representation, or assume any liability other than that herein stated, in connection with the sale described herein. The acceptance of any order by Gasboy International is expressly made subject to the purchaser's agreement to these conditions.



GASBOY INTERNATIONAL LLC

P.O. Box 309, Lansdale, PA 19446 ● (800) 444-5579 ● FAX: (800) 444-5569 ● www.gasboy.com