

SOTERA[®]

PROUDLY MANUFACTURED BY TUTHILL

400B SERIES ELECTRIC DIAPHRAGM PUMPS

Owner's Operation Manual



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Thank You!

Thank you for your loyalty to the Sotera® brand of chemical, lubricant, and mixed hydrocarbon transfer pumps. Your safety is important, so please read and thoroughly understand the procedures set forth in this manual. Protect yourself as well as those around you by observing all safety instructions and adhering to all danger, warning, and caution symbols. Please save these instructions for future reference and record the model, serial number, and purchase date of your Sotera transfer pump.

Please register your Sotera product via [info.tuthill.com/sotera product registration](http://info.tuthill.com/sotera_product_registration)

IMPORTANT RETURN POLICY

Please do not return this product to the store. For all warranty and product questions, please contact Tuthill Customer Service at 1-800-634-2695 (M-F, 8am-6pm EST/EDT.)

MODEL#	
SERIAL#	
PURCHASE DATE:	



Limited Warranty Policy

FROM DATE OF SALE	PRODUCT SERIES	
Five (5) Years	400 Series pump only (all models) <i>Motor and meters not included</i>	
Two (2) Years	820, 825, and 850 meters	
One (1) Year	All motors regardless of voltage class (explosion proof, non-explosion proof; 12V DC, 24V DC, and 115V AC)	Accessories are defined as fittings, hoses, swivels, filters, strainers that are purchased within a 400B pump package or separately for use with a 400B pump or 820, 825, or 850 meter

Basic Definitions

Chemtraveller®: A compact, low-profile frame to allow for pump mobility without needing to handle the pump itself.

Diaphragm: A flexible membrane constructed of a synthetic rubber used to displace fluid through the pump cavity.

IBC Mount: A stainless steel bracket that can be mounted onto the cage of any size IBC tote.

Mix-n-Go: A recirculation system design to fit onto a 9" IBC gem cap. Units with this device have the recirculation valve built into the pump.

Poise (P): A unit of measurement of dynamic viscosity. For the purpose of this manual, Sotera will utilize the measurement of Centipoises (cP) which is one hundredth of a Poise or one millipascal-second (mPa-s).

Positive Displacement: Constant volume at a fixed speed, independent of system pressure.

Pump-n-Go: Free-standing pump mobility. Systems with this designation do not have any mounting frames.

Recirculation: The process of mixing fluids through the pump without discharging from the container.

Suction Lift: The distance below the center line of the pump to lift fluids.





Viscosity (V): The measurement of flow fluid or resistance.

Wetted Parts: All parts that are touched by the transferred fluid either in part or through immersion.

About This Manual

From initial concept and design through final production, your Sotera product is built to provide years of trouble-free use. To ensure the safety of yourself and those around you, it is critical that this manual is read in its entirety prior to attempting to install or operate your new purchase. We strongly urge that any installer and operator become familiar with the terms, diagrams, and technical data in this manual and pay close attention to any **DANGER**, **WARNING**, **CAUTION**, or **NOTICE** information. At Tuthill, your satisfaction with our products is paramount. If you have questions or need assistance with your product, please contact Customer Service at 1-800-634-2695 (M-F, 8am-6pm EST/EDT).

Symbols and Definitions

 DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
 WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION	Indicates a hazardous situation which, if not avoided, could result in moderate or minor injury.
 NOTICE	Indicates information considered important but not directly hazard related.

General Description

The Sotera 400B Series is a self-priming, positive displacement double action diaphragm pump. It features flow rates up to 13 gallons per minute (13GPM) and is engineered with polypropylene and stainless steel wetted parts, along with seals that are compatible with most agricultural and industrial chemicals as well as lubricants (e.g. those found within power transmission). These wetted materials consist of a polypropylene body and valves, stainless steel fasteners, Hastelloy® check valve springs, Buna-N, EPDM and Fluorocarbon seals, along with Hytrel® and Santoprene® diaphragms.

Sotera utilizes a recognizable naming system where model numbers reference the diaphragm material. Models that begin with 'SS' (eg. SS415B) contain Santoprene diaphragms, while models that begin with 'FR' (eg. FR410B) contain Hytrel diaphragms. Santoprene is designed for moving agriculture chemicals while Hytrel is used with oils and lubricating fluids. We strongly recommend referring to the *Sotera Chemical Resistance Guide* found at sotera.com to determine proper materials of construction for use with your application.

The 400B Series pump is not compatible with strong acids (pH of 3.4 or below), strong bases (pH above 12), non-diluted flammable liquids with a flash point below 100°F/38°C, or bleach (sodium hypochlorite).

General Safety Information

WARNING

The 400B pump series is not intended to be used to fuel any aircraft, on or off road vehicle, or marine vessel.

This pump is not suited for use with fluids for human consumption.

Any electrical wiring should be performed **ONLY** by a licensed electrician in compliance with all local, state, and national electrical codes (NEC/ANISI/NFPA 30, 30A, and 70) as appropriate to the intended use of the pump.

Always ensure that the pump is properly grounded prior to use.

Improper installation or use of this pump can result in injury or death.

Mechanical Installation

WARNING

The mechanical yoke assembly is under extreme pressure. Never disassemble under any reason.

Always secure before use by anchoring any holding tank or barrel to prevent tipping under any condition.

CAUTION

Do not use any additional check valves or foot valves without consulting with Sotera Technical Service. These valves will restrict flow rate and possibly increase system pressure that will affect the transfer pump performance.

NOTICE

Threaded pipe joints and connections must be sealed with an appropriate sealant that is compatible with the fluid being transferred to minimize the possibility of leaks. Leaks of any kind can be detrimental to the environment and cause injury to operators if in contact with skin or eyes.

To maximize performance and longevity of your 400B Series pump, we recommend the following considerations:

- **IMPORTANT:** Tanks and containers must be vented to prevent collapses
- Tighten all non-metallic fittings to a snug fit to prevent leakage. Damage could occur to the pump if these fittings are over tightened
- Do not use the pump as the structural support of the piping system
- Be certain the system components are properly supported to prevent stress on the pump parts. As a rule and unless specifically designed into the pump, suction and discharge connections should be flexible to avoid damaging the pump body. Ensure that any connection material is compatible with the substance being transferred through the pump itself

Installation Best Practices (Suction Side of Pump)

- All suction hoses should be reinforced to prevent collapse by system pressure
- If there is a possibility of solids or debris within the liquid, at minimum, a 10 mesh screen (0.07") or less needs to be utilized either at the end of the suction pipe or entry into the suction side of the pump. Particles greater than 0.1" will adversely affect pump performance
- All suction hoses or pipes must be 1" diameter. Large sizes may be used as long as it terminates to a 1" diameter at the suction inlet of the pump
- Placement of the suction pipe should terminate 2" from the bottom to avoid particulate contamination unless a 10 mesh in-line screen is being used as noted
- Maximum suction lift capacity is 9 FT (2.7 M) for water at sea level at 70°F. Suction lift for each application will be dependent on the Centipose (cP) of the individual fluid as affected by temperature and elevation

Installation Best Practices (Discharge Side of Pump)

- All discharge hoses should be a minimum of 1" diameter. Large sizes may be used as long as it terminates to a 1" diameter at the discharge outlet of the pump
- Hoses greater than 20' may be used, however, reduced outlet flow at the end of the hose or nozzle should be expected. Flow is dependent on the cP of the fluid as affected by temperature and elevation
- Always use hoses and accessories that are compatible to the product being transferred. For hoses, as a general practice Tuthill recommends EPDM for agricultural chemical and Nitrile or Buna-N for petroleum-based oils and lubricants

Electrical Installation



Be certain the power switch is **OFF** prior to connecting the battery clamps/power cables to the power source to prevent unexpected starting of the motor. Unexpected motor start can cause unintended discharge of fluid, creating explosion/fire/chemical spill hazards.



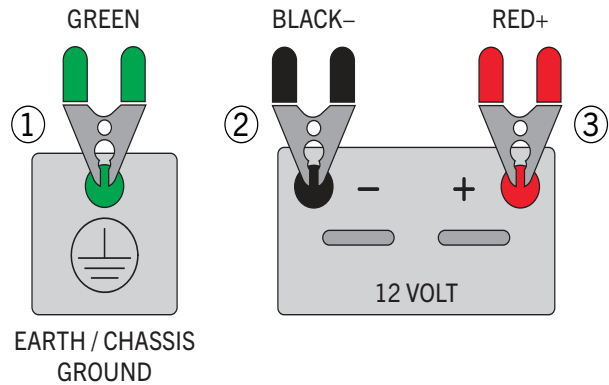
Never disconnect the power cable while pump is switched on. Always switch the pump off **PRIOR** to disconnecting the 12V DC battery clamps or the 110V AC plug from the power source. Electrical sparks or short can occur if not disconnected properly. Electrical wiring installation should **ONLY** be performed by a licensed electrician in compliance with all local, state, and national electrical codes (NEC/ANISI/NFPA 30, 30A, and 70) as appropriate for the intended use of the pump.

DC Power



Various models of the 400B Series are direct current (DC) through either an explosion-proof or non-explosion proof motor at either 12V DC or 24V DC power. These same models may or may not have supplied cables for connection to either a positive or negative battery terminal. For 12V DC circuits, a 30 amp fuse (20 amp fuse on 24V DC motors) should be installed on the battery cable to protect the electrical system in case of a short. This fuse should be placed on the positive cable.

- Tuthill strongly recommends grounding the pump and motor prior to any usage
- Electrically bonding to a vehicle frame or utilizing a ground circuit for stationary applications are preferred grounding methods. Always consult with a licensed electrician for your application
- Inspect any and all power and grounding cables prior to each use. Replace if the outer protective jacket has been removed to expose any wires
- For 12V DC non-explosion proof motors, the power cable terminates with battery clamps that are either red (+) or black (-); however a ground wire is not included
- For 12V DC explosion-proof motors, in general, neither a ground wire, power cable, or battery clamps are provided. See pages 14-15 for specific included components
- DO NOT connect the ground wire to the negative post of the DC power source



Utilizing the diagram above, proceed with the following connections:

1. Ground connection (green clamp or eyelet)
2. Negative connection (black clamp)
3. Power connection (red clamp)

DC Power (continued)

- All non-explosion proof 12V DC models come with a preinstalled power wire. 12V DC models will have a 30 amp fuse holder and fuse
- 12V DC and 24V DC explosion-proof models will not have a power cord installed but may include a power cable separately, depending on model configuration

AC Power



All AC pumps will operate at the rated nameplate voltage.

AC power should be supplied to the pump from a dedicated circuit with a 15 amp circuit protection. No other equipment should be powered by this circuit.

Wiring must be of sufficient size to carry the correct current for the pump.

Voltage drop will vary with distance to pump and size of wire. Refer to the National Electrical Code (NEC) or local codes for voltage drop compensation to be sure you are using the correct size wire for your application. Undersized wires can overheat and cause a fire.

Ensure proper grounding to avoid electrocution.

Models of 400B Series pumps with explosion-proof motors are classified for Class 1, Division 1 locations. It is highly recommended that any repairs be done by an authorized distributor to avoid voiding the warranty. It is important to maintain the explosion-proof integrity of the motor and system components.

Electrical wiring installation should be performed **ONLY** by a licensed electrician in compliance with local, state, and national electrical codes (NEC/ANSI/NFPA 70, NFPA30, and NFPA 30A) as appropriate to the intended use of the pump.



Voltage drop in wiring varies depending on the distance from the electrical source to the pump and the gauge of the wire used. Tuthill recommends referring to national, international, or local electrical codes to ensure the wire is of the correct size for your application. The following chart is to be used as a reference and is not a substitute to electrical codes:

Maximum Linear Distance (FT) of Solid and Stranded Copper Wire Length by Gauge								
	AWG	16	14	12	10	8	6	4
Wire	Solid	39	62	99	158	250		
	Stranded	38	61	96	154	245	389	620

Available AC Voltage Classes

- 115V AC, 60Hz, 2.5 amps, ¼ Hp (185 watts) motor, standard non-explosion proof
- 115V AC, 60Hz, 2.5 amps, ¼ Hp (185 watts) motor, explosion proof uL listed
- All non-explosion proof 110V AC models come with a preinstalled power cable. These models will terminate with a type B (3 pin) grounded, 15A plug that is compatible with type B sockets
- 110V AC explosion-proof models will not have a power cord installed but may include a power cable separately, depending on model configuration as outlined on pages 14-15

Best Operational Practices

Regular maintenance is critical to maintaining performance and extending the life of your 400B Series pump.

- Always turn off the transfer pump and disconnect from a power source prior to servicing
- Always flush the pump completely prior to any service or disassembly. Tuthill recommends the use of water for flushing agricultural and industrial chemicals. For petroleum-based products such as oils and lubricants, flushing with diesel fuel is acceptable
- **DO NOT PRESSURIZE THE FLUSHING FLUID.** Damage to the pump will occur. Instead, submerge the suction tube or inlet adapter in the flushing fluid, then operate the pump as normal for approximately 15-30 seconds or until the flushing fluid returns to its initial color. Allow the pump to air dry prior to any service
- **DO NOT SUBMERGE THE ENTIRE PUMP OR ELECTRICAL MOTOR IN THE FLUSHING FLUID, ONLY THE SUCTION TUBE OR INLET ADAPTER**
- Do not allow chemicals, lubricants, or oils to remain in the internal pump cavity for any extended period of time. Crystallization or a glum could become present, adversely affecting pump performance
- Tuthill highly recommends flushing the pump after each use to avoid 'dry out' and contamination between fluid transfers
- The interior pump cavity is filled with SAE 30W oil by the factory in order to lubricate the internal gear drive mechanism and yoke assembly. Certain pump repairs will require the draining of this fluid. If necessary, remove one of the site caps found on the exterior of the pump body and drain the oil through this port. Replace with new SAE 30W oil after repairs are completed through the same port. Tuthill recommends 16 oz of oil to be placed inside the cavity or until level is halfway within the site glass

Routine Maintenance Schedule

1. Always check oil level by the sight glass prior to any fluid transfer. The ideal oil level should be at the mid line or halfway point of both site glasses. Add SAE 30W oil as needed to maintain the necessary level
2. Inspect all external Torx(r) head screws are tight. If any screws appear to be loose, torque to 75 in-lbs
3. Inspect all motor flange hex head bolts are tight. If any bolts appear to be loose, torque to 50 in-lbs
4. Either annually or after 500 hours of usage, drain the existing SAE 30W weight oil through a site glass port and replace with approximately 16 oz of the same oil

Individual Pump Component Removal and Replacement (refer to exploded pump view, page 13)

⚠ WARNING	<p>DO NOT DISASSEMBLE EXTERNAL GEAR ASSEMBLY. The planetary gears and ring gear are marked for proper assembly and must not be altered.</p> <p>Never disassemble yoke assembly. This is under extreme pressure and injury could result.</p>
⚠ CAUTION	<p>Use care in removing the diaphragm and check valve assemblies to avoid damage to the pump body. DO NOT pry the diaphragm/check valve assembly away from the pump body with sharp or metal tools. Scratching or otherwise damaging the pump body may cause leaks.</p>
NOTICE	<p>Do not attempt to replace individual parts. Replace entire assembly when required (kit 400F6557).</p>

Diaphragm Assembly Replacement

Both the diaphragms and check valve assemblies can be serviced without removing the oil from the interior pump body cavity. It is important that only one (1) assembly be serviced at a time. Avoid any possible contamination of the oil within the internal pump cavity during this repair.

Procedure

1. Turn the pump on its side by which the diaphragm to be repaired is facing upward while the opposite diaphragm is facing downward
2. Remove the eight (8) diaphragm cover screws. This will require a Torx T30 bit
3. Remove the cover and turn it over to expose the inner side to avoid any contamination. The cover will have a gasket seal. It is highly recommended that this seal be replaced during this repair
4. Remove the four (4) retainer screws with a Phillips #2 screwdriver. These screws have a seated O-ring. It is recommended to replace both the screws and O-ring during this repair
5. Remove the diaphragm assembly by pulling on the four edge corners of the diaphragm itself, being careful to not tear or curl the diaphragm. If necessary, pulling on the check valve assemblies is acceptable. Do not use any tools to pry the diaphragm off the pump body as this could damage the surface of the pump. Be sure to retain the four (4) check balls that are within the cavity of the pump. These may be removed with the diaphragm
6. Install new diaphragm assembly in the same orientation as the one that was removed. Important that the check balls are seated prior to the diaphragm assembly placement
7. Insert the four (4) Phillips head screws and tighten to 35 in-lbs
8. Install the diaphragm cover with installed gasket. It is important to hand start all external screws prior to driving to a torque specification of 75 in-lbs

Motor with Gear Assembly Removal

1. Position the pump with the sight caps downward
2. Remove the four (4) screws holding this assembly and lift upward
3. Replace with new motor and gear assembly as supplied by Tuthill

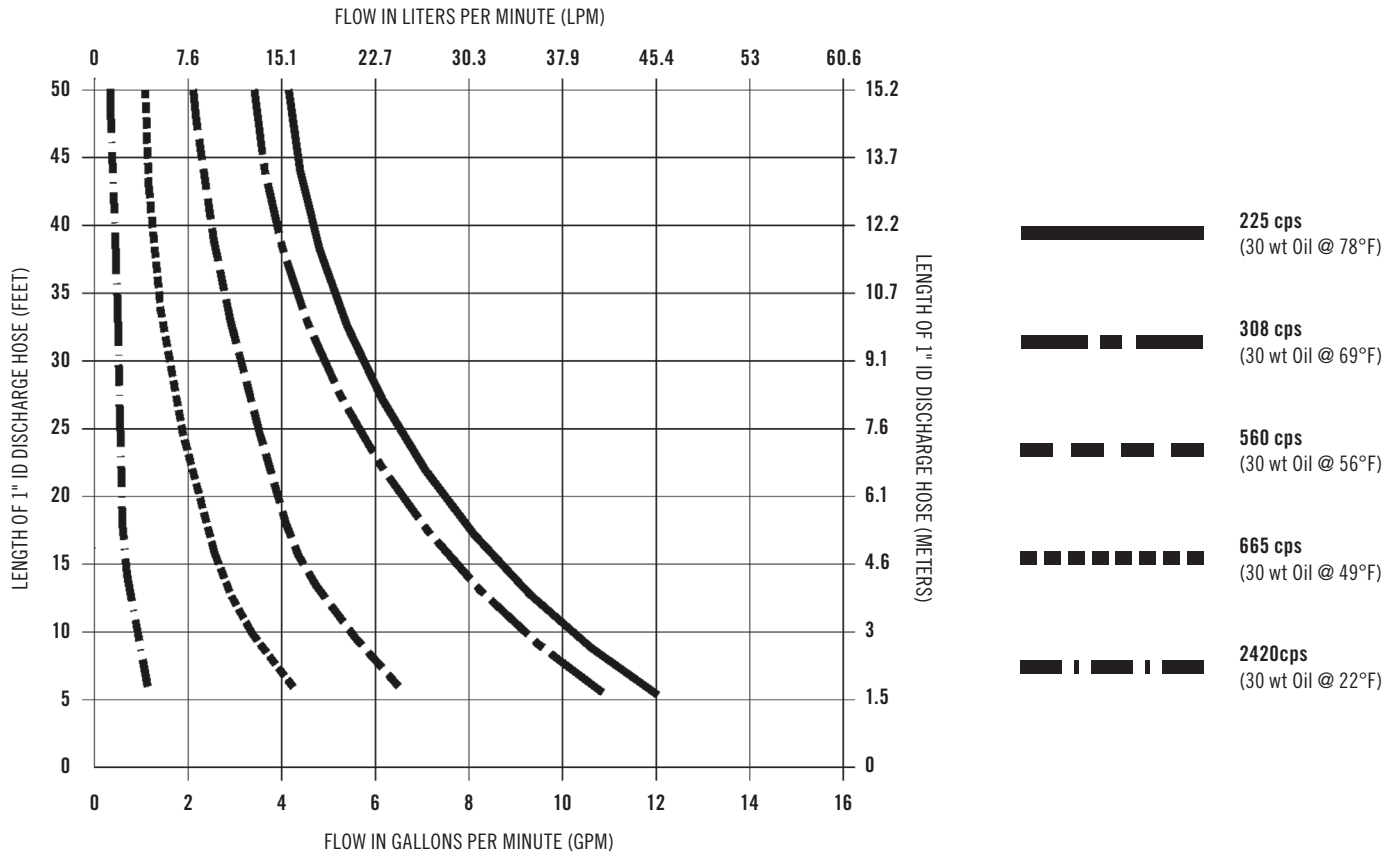
Gear Assembly Removal

1. Remove motor as noted above
2. Remove six (6) screws and key holding the gear pack assembly on the motor shaft
3. Replace with new assembly, install new screws, and key

Internal Mechanical Components *(Bearing Plate, Yoke, and Drive Shaft Assembly)*

1. Remove motor and gear assembly from pump cavity
2. Drain oil from interior cavity through this opening
3. Remove four (4) screws holding bearing plate
4. Remove bearing plate, allowing for the thrust plate to be removed as well
5. Remove drive shaft, bearing, bearing ring, and yoke assembly.
IMPORTANT: the yoke assembly is under pressure by two springs. Do not attempt to repair, only replace with factory authorized parts
6. Assemble in reverse order

Viscosity Correction Chart



Notes:

- SUCTION LOSSES:** Test pump was mounted on a 55 gallon drum of oil, 1/2 full. A Sotera 1" suction pipe was used. A longer or smaller diameter inlet pipe will lower the flow rate.
- VERTICAL HEAD LOSSES:** Test hose was horizontal with pump. Add 3 feet of hose for each 1 foot of vertical rise.
- OTHER LOSSES:** Elbows, quick-disconnects, swivels, and check valves in outlet or inlet hoses will restrict the flow. Add the estimated length of hose for each component used.

Fluid Compatibility by Diaphragm (Typical)

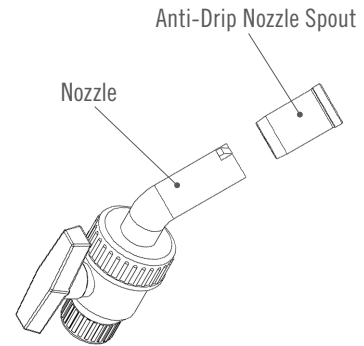
HYTREL (PETROLEUM)		SANTOPRENE (CHEMICAL)	
• Gear Oil [GL-1 to GL-5]	• Motor Oil	• Crop Oil	• Mild Acids
• Hydraulic Oil [HL, HM, HR]	• 000 Greases	• Detergents	• Pesticides
		• Liquid Fertilizers [UAN 28-32]	• Soaps
			• Water

Anti-Drip Nozzle Spout Kit 400KTF0237

For use with Norwesco and other nozzles with a 1 3/16" outside diameter.

Installation

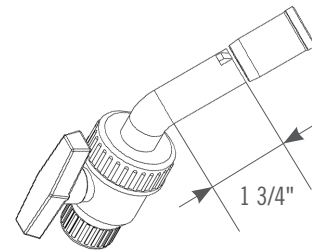
1. If there is a raised plastic notch on the nozzle, carefully remove it with a file before installing the anti-drip spout
2. Apply soapy water to the end to aid in the installation. Place the anti-drip spout on the nozzle as shown at right. Tap the spout with a rubber mallet until it is fully engaged. The space between the end of the spout and the bend in the nozzle should be slightly more than 1 3/4" when pressed fully into place



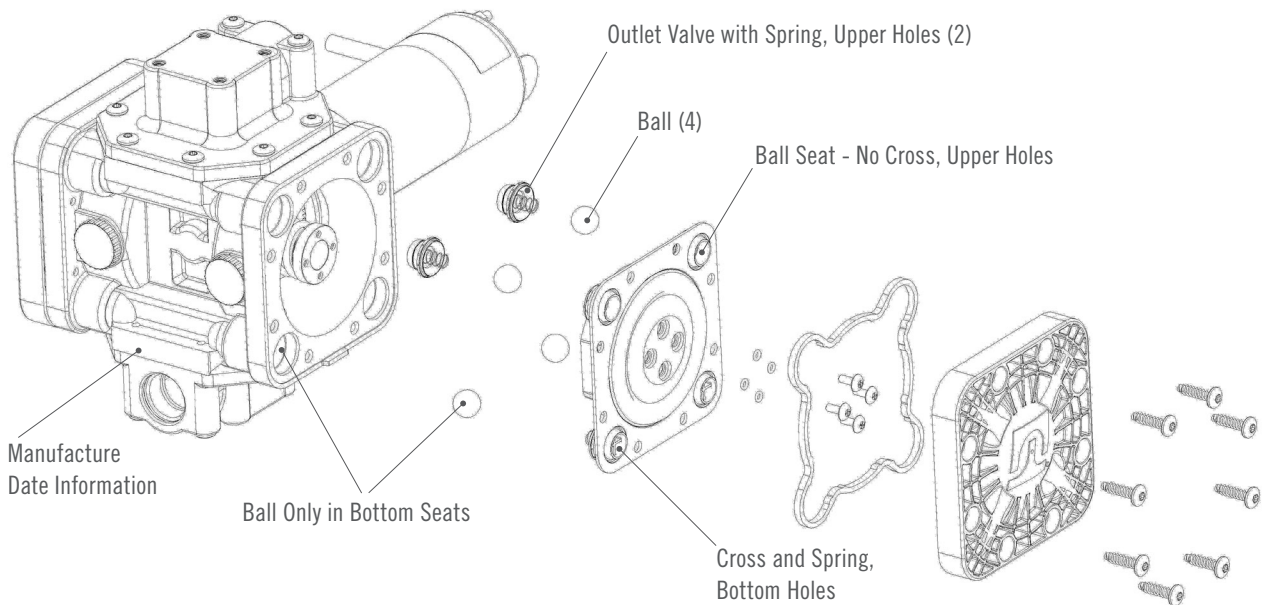
Proper Use

Place the nozzle into the container to be filled **BEFORE** turning the pump on.

After pumping, shut off the valve handle then gently shake the nozzle **BEFORE** removing it from the container. The spout will open when it senses pressure greater than 1 psi. Flow restriction will be minimal.

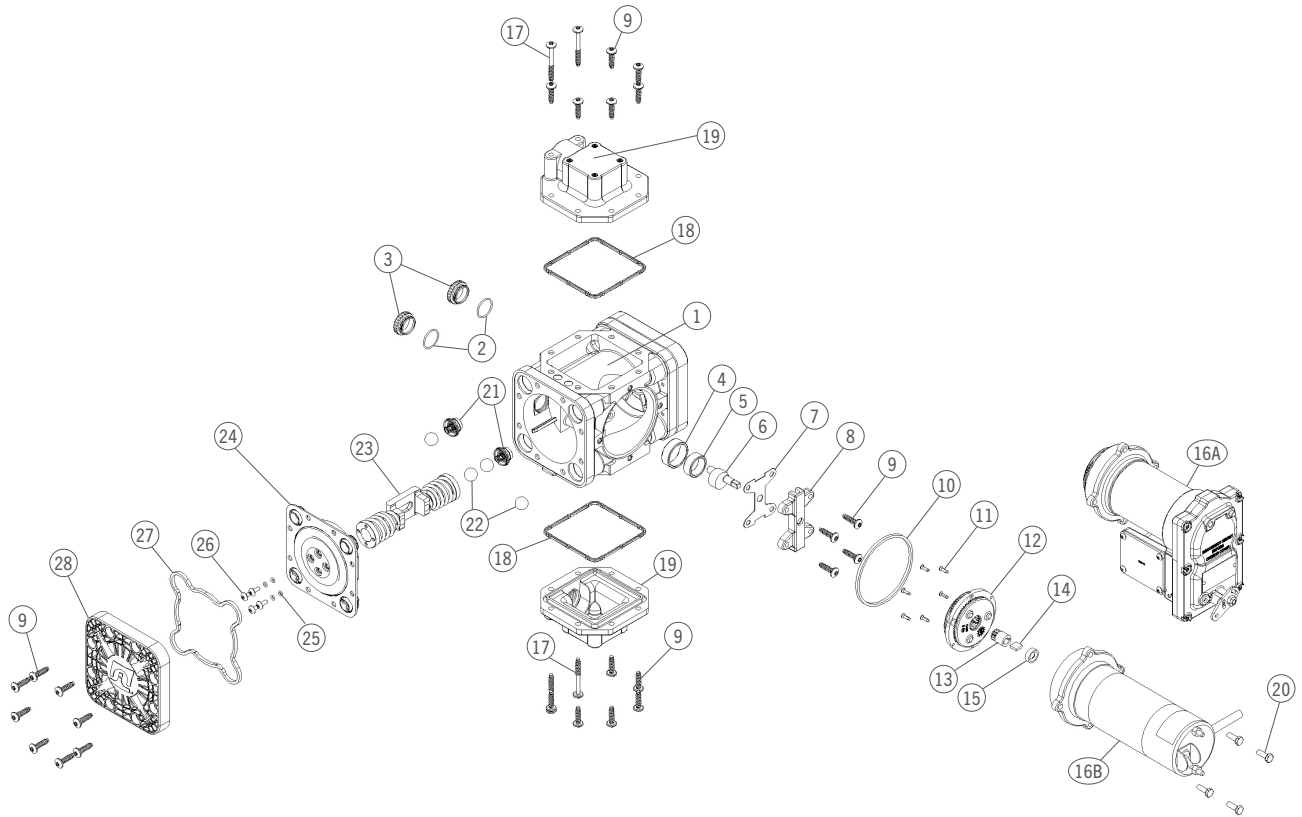


Diaphragm and Check Valve Orientation Detail



Troubleshooting Guide

SYMPTOM	POSSIBLE CAUSE	SOLUTION
Pump won't prime	Suction line problem	Check for leaks in suction line
	Leaky check valves	Check for dirt or damaged check valves and replace
	Check valves improperly installed	Check for proper installation
	Outlet plugged	Check for blockage and clear
	Motor not operating	Check power source
	Stripped or damaged gears	Repair or replace motor. Check gear assembly and drive gear for damage. Replace complete assembly if necessary
Pump hums but will not rotate	Motor faulty	Replace motor
	Gear mechanism jammed	Check for free rotation of the gears
Low pump capacity	Low voltage	Check power source
	Leaky suction line	Repair leaks
	Dirt in check valve	Dismantle and clean
	Faulty check valves	Install repair kit
	Debris ingested	Add inlet screen
Motor overheats	Pumping hot fluids	Shorten duty cycle
	Motor faulty	Replace motor
Fluid leakage	Faulty or missing gaskets	Install all gaskets specified in parts list
	Loose bolts	Torque all 1/4" torx head bolts to 76 in. lbs.
	Cracked component	Torque hex head 1/4-20 motor bolts to 50 in. lbs. Replace defective component



PARTS LIST

ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY
1	Pump Body	1	15	Shaft Lip Seal, 400 Motor Shaft	1
2	O-Ring Nitrile, -022	2	16A, 16B	Motor Assembly (see charts below for motor specifics)	1
3	Sight Cap	2	17	Screw, ¼ - 10 x 2.25 PTS-SS	4
4	Bearing Ring	1	18	Flange Gasket - EPDM	2
5	Brushing, 1.250 OD. x 1.00 ID.	1	19	90° Flange with Inserts	2
6	Drive Shaft	1	20	Screw, ¼ - 20 x .750 LG	4
7	Thrust Plate	1	21	Outlet Check Valve	4
8	Bearing Plate	1	22	Ball	8
9	Screw, ¼ - 10 x 1.00 PTS-SS	32	23	Yoke Assembly	1
10	O-Ring, Lathe Cut Nitrile	1	24	Diaphragm Assembly	2
11	Screw, 6-32 Flat Head Trilobular	6	25	O-Ring, EPDM, -007	8
12	Gear Pack Assembly	1	26	PHM Screw, 10 - 24 x .5 LG	8
13	Drive Gear	1	27	Diaphragm Cover Gasket - EPDM	2
14	Key, Rotor	1	28	Diaphragm Covers	2

ITEM	UL LISTED / CE CERTIFIED MOTORS	QTY
16A	12V DC CE Compliant Explosion Proof	1
16A	12V DC UL Listed Explosion Proof	1
16A	24V DC UL Listed Explosion Proof	1
16A	115V AC UL Listed Explosion Proof	1

ITEM	STANDARD-DUTY MOTORS	QTY
16B	12V DC	1
16B	115V AC	1

400B Series Model Information

LUBRICATING FLUIDS APPLICATIONS ¹					
MODEL NUMBER	VOLTAGE	INLET CONFIGURATION ²	STEEL SUCTION INLET	ACCESSORIES	
				DISCHARGE	
				1" MANUAL NOZZLE	HOSE ³
HYTREL/NBR DIAPHRAGM					
FR205B	24V DC UL EXP	AA	No Accessories		
FR205BX054		BB			
FR210B		AA	X	X	12'
FR405BEXPX054	12V DC UL EXP	BB	No Accessories		
FR410B	12V DC	AA	X	X	12'
FR410BEXP	12V DC UL EXP		X	X	12'
FR450B	115V AC		X	X	12'

ACCESSORY CONFIGURATORS BY MODEL ⁴									
MODEL	VERSION	FEMALE CAMLOCK COUPLER	1" POLY SHORT NIPPLE	2" TO 1" POLY REDUCER BUSHING	1" BALL VALVE & NOZZLE	HOSE BARBS & CLAMPS	DIGITAL METER		FRAME
							825	850	
Pump-N-Go	A	2"	-	X	X	X	-	-	-
Chemtraveller®	A	1"	X	-	X	X	X	-	Short
	B	2"	X	X	X	X	-	X	Short
	C	2"	X	X	X	X	-	-	Short
	D	1"	X	-	X	X	X	-	Tall
	E	-	-	-	X	X	-	-	Tall
Mix-N-Go	A	-	-	-	X	X	X	-	-

¹Always refer to the Sotera Chemical Resistance Guide (Sotera.com). ²Refer to the Sotera Technical Data Sheet, Suction table, Inlet Configuration column for more details.

³Non-UL w/ static wire fuel hose, ⁴Refer to the Sotera Technical Data Sheet, Version column for specific 400B Series Model Information

400B Series Model Information (continued)

CHEMICALS: AGRICULTURE & INDUSTRIAL ¹										
			ACCESSORIES							
			SUCTION INLET	DISCHARGE						
SANTOPRENE / EDPM DIAPHRAGM										
MODEL NUMBER	VOLTAGE	INLET	POLY ²	HOSE ³	ANTI-DRIP POLY	HOSE ³	SPECIAL	VERSION ⁴		
SS411BCEXP	12V DC CE EXP	FF	No Accessories					-		
SS413BCEXPPG		EE	-	39"	X	12'	Pump-N-Go	A		
SS415B	12V DC	AA	No Accessories							
SS415BX670										
SS415BEXPX670	12V DC UL EXP	EE	No Accessories							
SS415BX731	12V DC W/ BRACKET	AA	X	39"	X	12'	Pump-N-Go	A		
SS415BX731PG										
SS417B	12V DC	DD	X	-	X		Includes 1" Ball Valve, Hose Barbs, & Clamps	-		
SS419BX665		CC	X	-	X		Monsanto Coupler, Support Bracket for Pump	-		
SS420B		AA	X	-	X		Nozzle Hanger on Pump	-		
SS425B		EE	9" GEMCAP	-	39"		X	IBC Mount w/ Fittings	-	
SS435B				-	9'		X	Chemtraveller	A	
SS435BCEXP				12V DC CE EXP	-		9'	X	Chemtraveller	B
SS435BX675				12V DC	-		9'	X	Chemtraveller (All EPDM)	A
SS435BX700		-	9'		X		Chemtraveller	C		
SS435BX713		-	9'		X					
SS435BEXPX703		12V DC UL EXP	-	9'	X					
SS445B	12V DC	9" GEMCAP	X	-	X		Mix-N-Go w/ Recirculation & Check Valve	A		
SS445BX700			X	-	X		Mix-N-Go w/ Recirculation & Check Valve (All EPDM)	A		
SS445BX727			X	-	X	Mix-N-Go w/ Recirculation & Check Valve	A			
SS460B	115V AC	AA	X	-	X	Nozzle Hanger on Pump, 1" Ball Valve Nozzle, Barbs & Clamps	-			
SS460BX674		EE	X	-	X					
SS460BX731	115V AC W/ BRACKET	CC	X	-	X			Pump-N-Go	-	
SS460BX731PG			X	-	X					
SS465BEXP	115V AC UL EXP	EE	-	9'	X	Chemtraveller	D			
SS465BX713	115V AC		-	9'	X	Chemtraveller	E			
SS470B			-	39"	X	IBC Mount w/ Fittings	-			

¹Always refer to the Sotera Chemical Resistance Guide (Sotera.com), ²Telescoping Poly Suction Pipe (23" to 40"), ³EPDM Hose, ⁴Refer to page 14, Accessory Configurator table

Regulatory Compliance Information



The "400B CE" Series pumps comply with the European Directive 2006/42/EC Machinery Directive

The following standards were used to verify conformance:

EN 809:1998 +A:2009 - Pumps and pump units for liquids – common safety requirements

EN ISO 12100:2010 – Safety of machinery – basic concepts, general principal for design

Directive 2014/30/EU – Electromagnetic compatibility

EN 61000-6-4:2007 / +A1:2011 – General standard for industrial environments

Directive 2011/65/EU – Restrictions of the use of certain hazardous substances in electrical and electronic equipment



Specific models of the 400 Series pumps feature UL/cUL listed electric motors. Check your model versus the **MODEL / ACCESSORIES / CONFIGURATION INFORMATION** table (page 14-15) to determine how your particular pump is equipped.



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