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LSH Conversion Kit

Pump Retro-Fit

EOM

Engineering
Operation &
Maintenance



Refine your process



SANIFLO™ LSH
SANITARY PUMP TECHNOLOGY

WILDEN®

A DOVER COMPANY



WIL-12080-E-02
REPLACES WIL-12080-E-01

LSH Conversion Kit

WILDEN
A DOWNEY COMPANY
SANIFLO™ LSH
SANITARY PUMP TECHNOLOGY

CAUTIONS – READ FIRST

CAUTION: Do not exceed 8.6 bar (125 psig) air supply pressure.

CAUTION: Always wear safety glasses when operating pump. If diaphragm rupture occurs, material being pumped may be forced out air exhaust.

CAUTION: Do not apply compressed air to the exhaust ports, pump will not function.

CAUTION: Do not lubricate air supply – lubrication may reduce pump performance.

CAUTION: Before any maintenance or repair is attempted, the compressed air line to the pump should be disconnected and all air pressure allowed to bleed from pump.

CAUTION: Blow out air line for 10 to 20 seconds before attaching to pump to make sure all pipeline debris is clear. Use an in-line air filter. A 5-micron air filter is recommended.

CAUTION: Pumps should be thoroughly flushed with water before installation into process line.

NOTE: To ensure reliable performance, the temperature of the air valve should not exceed 88°C (180°F). Hot air generators or other heating devices are not recommended.

CAUTION: Tighten all hardware prior to installation.

TOOLS REQUIRED

- 1/4" Hex Head Wrench
- 3/16" Hex Head Wrench
- 9/16" Wrench
- Snap Ring Pliers
- O-ring Pick
- 2 Screwdrivers
- 2 Adjustable Wrenches

HOW IT WORKS

The LSH Conversion Kit uses the Pro-Flo V™ patent pending air distribution system, which greatly improves the performance characteristics of the air-operated, double-diaphragm pump. This innovative design incorporates two (2) moving parts: the air valve spool and the pilot spool. The heart of the system is the air valve. This valve design incorporates an unbalanced spool. The smaller end of the spool is pressurized continuously, while the large end is alternately pressurized, then exhausted, to move the spool. The air valve spool directs pressurized air to one air chamber while exhausting the other. The air causes the main shaft/diaphragm assembly to shift to one side —discharging liquid on that side and pulling liquid in on the other side. When the shaft recycles at the end of its stroke, the inner piston actuates the pilot spool, which pressurizes and exhausts the large end of the air valve spool. The repositioning of the air valve spool routes the air to the other air chamber.

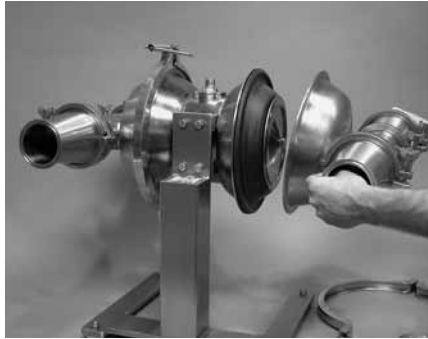
INSTALLATION



The following is a list of simple instructions that should be followed in order to ensure proper installation of the LSH Conversion Kit into an existing Murzan® pump.

CAUTION: Before any maintenance or repair is attempted, the compressed air line to the pump should be disconnected and all air pressure allowed to bleed from the pump. Disconnect all intake, discharge, and air lines. Be aware of the possible hazardous effects of contact with your process fluid.

INSTALLATION



Step 1

Before initiating the installation process, the Murzan center section and wetted path must be removed from the pump stand.



Step 2

Using a 9/16" box end wrench, remove the bolts holding the Murzan center section to the Murzan stand. Remove Murzan center section and replace with Wilden center section using Wilden center section fasteners. See exploded view.



Step 3

Using the same 9/16" box end wrench, install the LSH Conversion Kit onto the Murzan stand.



Step 4

Using 2 adjustable wrenches, ensure outer pistons are secure. Note: Torque should not exceed 105.3 N•m (78 ft-lbs).



Step 5

Install liquid chamber assembly on center section.



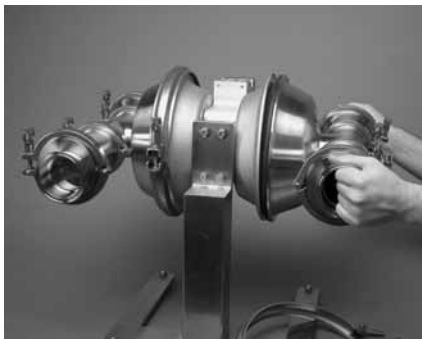
Step 6

Next, position two flathead screwdrivers on backside of inner piston, adjacent from previously installed liquid chamber assembly. Using the two screwdrivers, push towards center of pump, maneuvering shaft assembly outward.



Step 7

After maneuvering shaft assembly outward, conform diaphragm bead onto diaphragm bead groove located at outer edge of air chamber to ensure proper seal.



Step 8

Next, install the other liquid chamber assembly (includes check valves) and secure with clamp band.



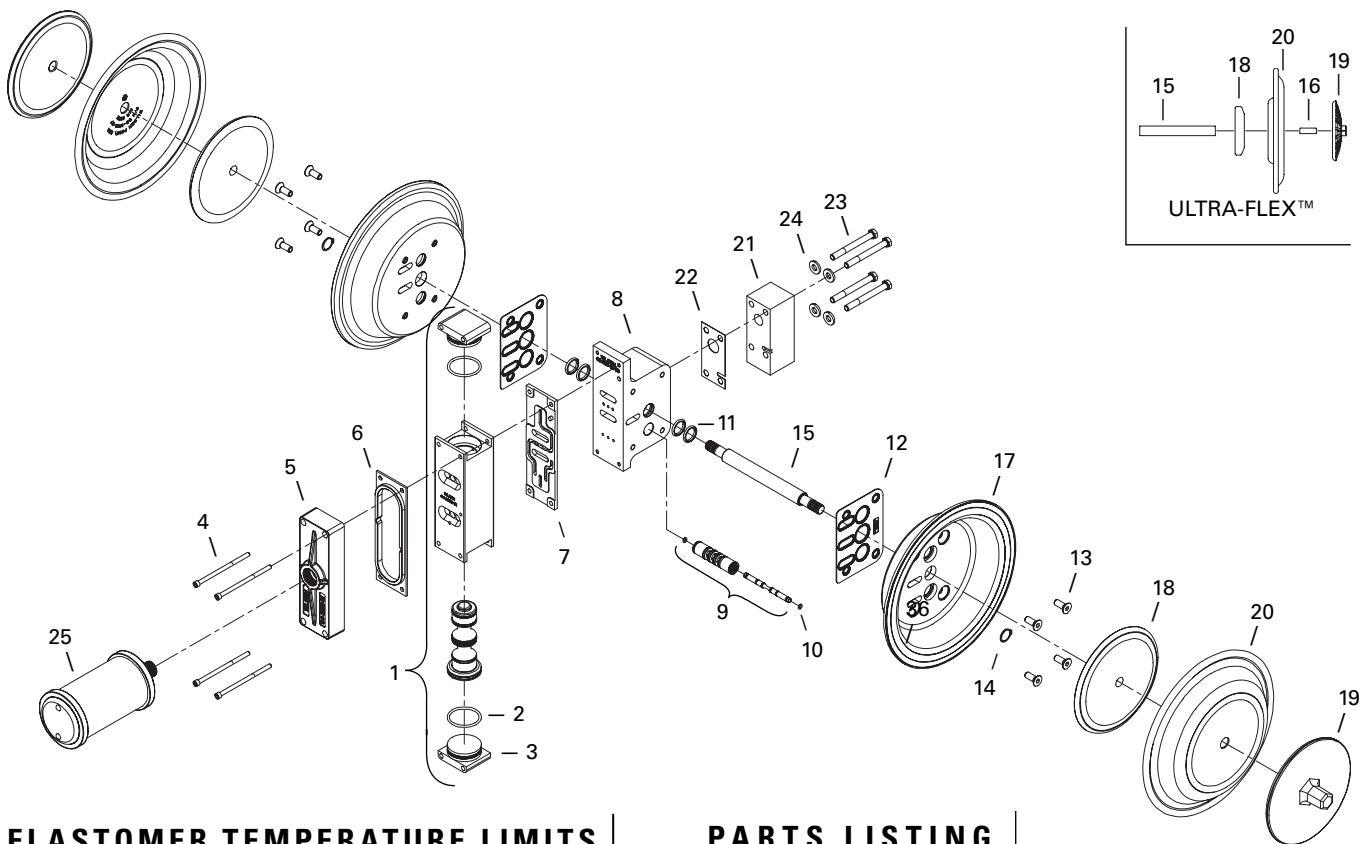
Step 9

With the installation process complete, the pump fitted with the LSH Conversion Kit is ready to be placed into the application.

PUMP CROSS SECTION & PARTS LISTING

LSH Conversion Kit

EXPLODED VIEW



ELASTOMER TEMPERATURE LIMITS

FDA Buna-N	-12.2°C to 82.2°C	10°F to 180°F
FDA EPDM	-51.1°C to 137.8°C	-60°F to 280°F
FDA Wil-Flex™	-40°C to 107.2°C	-40°F to 225°F
Saniflex™	-28.9°C to 104.4°C	-20°F to 220°F

ELASTOMER OPTIONS

MATERIAL	DIAPHRAGM
Saniflex™	08-1010-56
FDA Wil-Flex™	08-1010-57
FDA Buna-N	08-1010-69
FDA EPDM	08-1010-74
FDA Buna-N, Ultra-Flex™	08-1020-52
FDA EPDM, Ultra-Flex™	08-1020-54

PARTS LISTING

No.	Part Description	Qty.	Nickel Plated
1	Air Valve, Pro-Flo V™, Nickel Plated	1	04-2030-06
2	O-ring, End Cap (-225) Buna	2	04-2390-52-700
3	End Cap, Pro-Flo V™, Nickel Plated	2	04-2340-06
4	Screw, SHC, 1/4-20 X 4.5"	4	01-6000-03
5	Muffler Plate, Pro-Flo V™, Nickel Plated	1	04-3185-06
6	Gasket, Muffler Plate	1	04-3502-52
7	Gasket, Air Valve	1	04-2620-52
8	Center Block, Pro-Flo V™, LSH, Nickel Plated	1	08-3120-06-83
9	Removable Pilot Sleeve Assembly	1	04-3880-99
10	Pilot Spool Retaining O-ring	2	04-2650-49-700
11	Shaft Seal	4	08-3210-55-225
12	Gasket, Center Block	2	08-3529-52-83
13	Screw, HSFHS, 3/8-16 X 1.0"	8	71-6250-08
14	Retaining Ring	2	04-3890-03
15	Shaft	1	08-3810-03-83
	Shaft, Ultra-Flex™	1	08-3841-03
16	Shaft Stud (Ultra-Flex™ only)	2	08-6150-08
17	Air Chamber, Pro-Flo V™, Nickel Plated	2	08-3660-06-83
18	Inner Piston	2	08-3700-01
	Inner Piston, Ultra-Flex™	2	08-3761-01
19	Outer Piston	2	08-4550-10-72
	Outer Piston, Ultra-Flex™	2	08-4560-10-83
20	Diaphragm	2	*
21	Adapter Block	1	08-3545-03-83
22	Gasket, Adapter Block	1	08-3535-52-83
23	Screw, HHCS, 3/8-16 X 3-1/2	4	04-6191-03
24	Washer, Flat (.406 X .875 X .125)	4	04-6741-03
25	Sanitary Muffler	1	15-3510-06R
	LSH Assembly Tool Kit (not shown)	1	15-8983-99



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