

INTEGRAL PISTON DIAPHRAGM REPLACEMENT

Tools Required:

- Diaphragm Inverter – 99-8989-99
- IPD Torquing Tool
 - 04-8985-99 – For 1.5" Pumps
 - 08-8985-99 – For 2" Pumps
 - 15-8985-99 – For 3" Pumps
- Exhaust Reducer Adapter
- Torque Wrench (1/2" Drive)
- Thread Locker



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



NOTE: Your specific pump model may vary from the configuration shown; however, pump disassembly procedure will be the same.



NOTE: Replace worn parts with genuine Wilden parts for reliable performance.



Step 1

NOTE: Steps 1-3 are for installation of IPDs on 1.5" pumps. For other sized pumps, jump to Step 4.

Thread both studs fully into the Integral Piston Diaphragms.



Step 2

Apply non-permanent thread locker to both insides of center shaft.



Step 3

Screw one stud onto the shaft. Install one outer piston onto the shaft. Screw one diaphragm onto the stud.

NOTE: Steps 4 and 5 are for pump other pump sizes than the 1.5" pumps. Jump to step 6 to continue installation.



Step 4

Install one of the inner pistons onto the shaft.



Step 5

Install the Integral Piston Diaphragm onto the shaft. Hand tighten onto the shaft.

NOTE: Do not use vice graps or any additional tools to tighten this diaphragm.



Step 6

Lightly grease shaft hole in the center of the air section for easier shaft installation.



Step 7

Press down on the Pilot Sleeve and Air Control Spool so they are fully recessed.



Step 8

Insert piston assembly into shaft hole.



Step 9

Flip the pump so that the empty end of the shaft is accessible.



Step 10

Install the second inner piston on the open end of the shaft.



Step 11

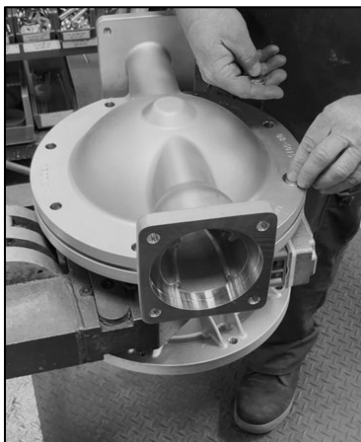
Hand tighten the second diaphragm onto the shaft.



Step 12

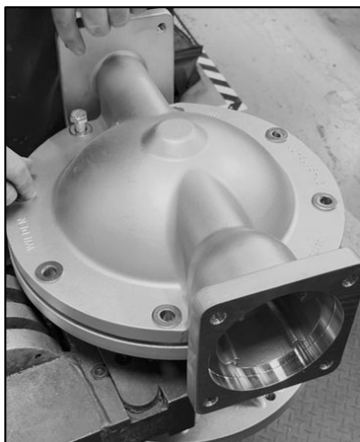
Set a liquid chamber on the center section and line up the bolt holes.

NOTE: Do not use vice graps or any additional tools to tighten this diaphragm.



Step 13

Place washers on the holes of the liquid chamber.



Step 14

Install bolts and hand tighten to prevent cross threading.



Step 15

Tighten bolts in a star shaped patter to the required torque values outlined in the Wilden EOMs for your specific pump.



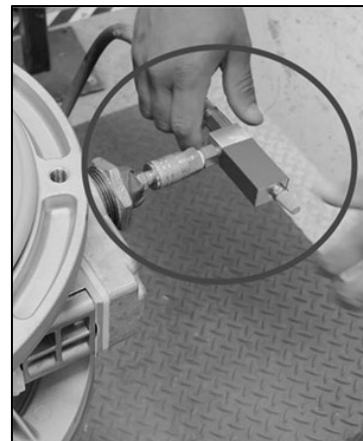
Step 16

Turn the pump back around to have access to the exposed Integral Piston Diaphragm.



Step 17

Install reducer adapter onto muffler plate and hand tighten.



Step 18

Install air inverter and provide compressed air. Wait for the diaphragm to pop up off of the air chamber.



Step 19

Install torquing fixture onto exposed diaphragm. Hand tighten the knobs to clamp the ends of the diaphragm.



Step 20

Use a torque wrench to torque diaphragm to specifications referenced below:

3" Pumps: 100 ft lbs

2" Pumps: 80 ft lbs

1.5" Pumps: 40 ft lbs

IPD TORQUING TOOL ASSEMBLY

Tools Required:

- Snap Ring Pliers
- Thread Locker
- 1/4" Allen Wrench

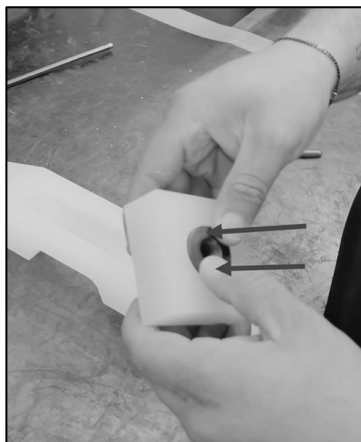
! **NOTE:** Your specific item may vary from the configuration shown; however, pump disassembly procedure will be the same.

! **NOTE:** Replace worn parts with genuine Wilden parts for reliable performance.



Step 1

Insert nut into opening of the small plastic piece. Repeat with both small plastic pieces and nuts.



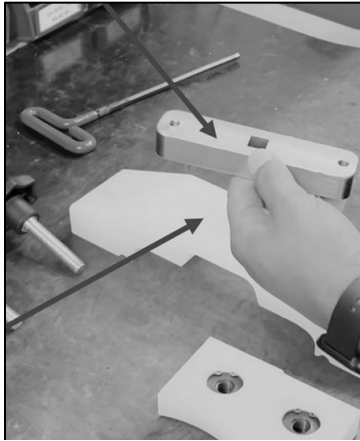
Step 2

Press nut into small plastic piece until it is fully seated. Repeat step for both nuts.



Step 3

Install snap rings for to hold both nuts in the small plastic pieces. Ensure the snap ring seats properly.



Step 4

Install large metal piece into large plastic piece.



Step 5

Apply thread locker to both screws. Install both screws into hole to secure the large metal piece to the large plastic piece. Tighten screws to 60 in lbs.



Step 6

Insert knob through large plastic piece and screw into the nut in the small plastic piece. Repeat this for both sides.