ION LABS QUALITY FIRST	Standard Operating Procedure **Wilden Transfer Pump**	**SOP Number** **B-402**	**Revision** **0**
		Effective Date 09/24/21	**Page** **Page 1 of 3**

Written by/ Date	**Reviewed by/ Date**	**Approved by/ Date**
08/12/21	09/03/21	09/07/21
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1.0 Purpose

This document describes the standard operation of the diaphragm transfer pumps used in the liquids manufacturing department at Ion Labs.

2.0 Scope

This procedure applies to all diaphragm transfer pumps in operation at Ion Labs.

3.0 Responsibility

3.1 It is the responsibility of operations personnel to follow this procedure.

3.2 It is the responsibility of the department supervisor/manager to implement this procedure and ensure that the procedure is being followed.

4.0 Definitions

4.1 **PPE** – Personal Protective Equipment

4.2 **IPA** – Isopropyl Alcohol

5.0 References

5.1 B-105, SOP, Preparation of Cleaning and Sanitizing Chemicals for Production and Warehouse

5.2 B-103, SOP, Small Parts Cleaning and General Sanitation

5.3 B-111, SOP, Cleaning of Manufacturing/Production Areas and Equipment

6.0 Procedure

6.1 Operation

6.1.1 Protective eyewear is required when working with pneumatic equipment.

6.1.2 Ensure that the pump is equipped with a muffler. If the pump is not equipped with a muffler, then do not use the pump.

6.1.3 Before operation of transfer pumps in any batches ensure that it is clean. You must open up the pump and look inside the diaphragm to do this.

6.1.4 Ensure that the pump is correctly assembled.

6.1.5 Attach a hose to the bottom of the pump – this is the suction side.

6.1.6 Attach a hose to the top of the pump – this is the discharge side.

6.1.7 Connect the pump to the discharge vessel.

6.1.8 Connect the pump to the feed vessel.

6.1.9 Attach the compressed air line with the air valve closed to the diaphragm pump.

6.1.10 Open the valve slowly until the desired flow rate is achieved.

6.2 Cleaning

6.2.1 Prepare a cleaning solution per SOP B-105 Preparation of Cleaning and Sanitizing Chemicals for Production and Warehouse.

6.2.2 This procedure follows the basic cleaning procedures listed in SOP B-111 Cleaning of Manufacturing/Production Areas and Equipment.

6.2.3 Start by loosening all the manifold bolts with an appropriate wrench size.

6.2.4 Remove the manifold bolts from the bottom seat by pushing them away from the pump body.

6.2.5 Remove the top and lower fluid manifolds.

6.2.6 Carefully set aside the ball check valve and seat.

6.2.7 Remove the liquid chamber plate (side plates) from the diaphragms.

6.2.8 Wash any product residue that is evident in the top and bottom fluid channel with the prescribed cleaning solution. Use a pipe cleaner for residue inside the manifold.

6.2.9 Wash any product residue from the inside of the side plates with the prescribed cleaning solution.

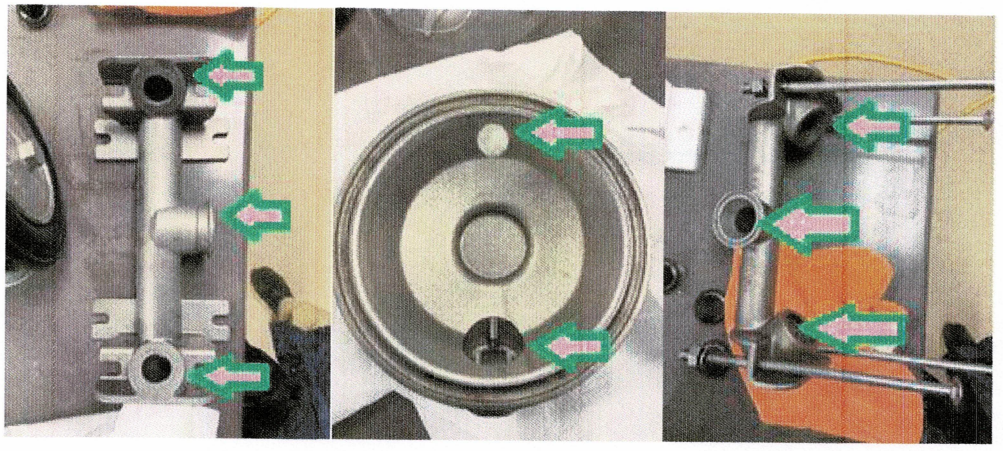
6.2.10 Wash the same areas with water followed by a light spray of 70% IPA. Areas of spray indicated below. Allow to Air Dry.

6.2.11 Put the pump back together by:

6.2.11.1 Putting the liquid chamber plates (side plates) back on first.

6.2.11.2 Putting the bottom and top back on with balls and seats in correct position with the shafts seated in place.

6.3 Sanitization Areas:



7.0 Revision History

Revision	Date	Description of Changes	CCR #	By
0	08/09/21	New procedure.	N/A	C. Rhoades