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UV PROCESS SUPPLY, INC.

CON-TROL-CURE™ TRANSFER PUMP 3 V REPAIR KIT INSTRUCTION MANUAL

PART # J004-073

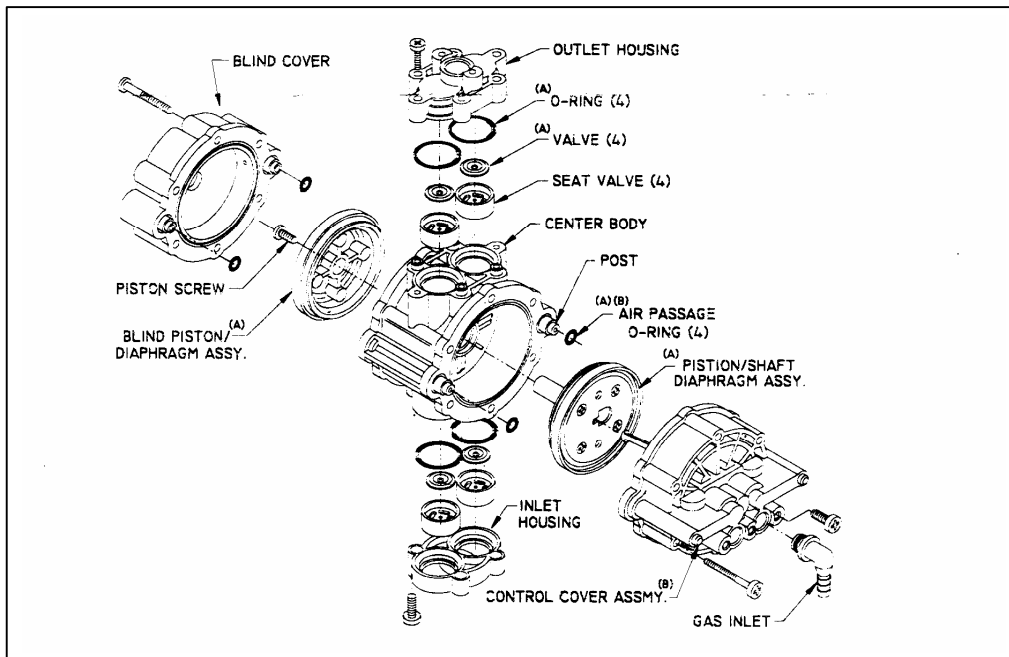
Transfer Pump 3 V Kit includes (piston/diaphragm assemblies, valves, and valve seat o-rings). Complete inspection of pump components is crucial to insure repairs will correct failed condition. If the gas/air chamber is breached or subjected to contamination, a new control cover assembly should be installed to insure longevity.

CAUTION:

Wear proper clothing, gloves, and eye wear when working on pumps used with chemicals. Always disconnect gas supply and relieve outlet pressure prior to initiating any repairs. Pump should be thoroughly flushed in a responsible manner prior to disassembly.

NOTE:

Flow rates or a dry running condition which results in a stroke rate of more than two per second **may** be detrimental to pump life. **Do not** control stroke rate by regulating gas pressure; restrict fluid outlet flow rate to maintain sufficient backpressure and insure pump components longevity.



INSTRUCTIONS

1. Remove the twelve screws retaining control cover, blind cover, and mounting bracket.
2. Remove the blind cover from the center body. Discard air passage o-rings (2).
3. Separate the control cover assembly from the center body (actuator may click over center) approximately 1/2" [15mm]. Rotate cover 90 degrees to disengage actuator rod from piston plate. Discard air passage o-rings (2).

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*NOTE: Small screws retaining the control cover actuator bracket and diaphragm piston plates should **never** be removed. Plastic screw threads are compromised once screws have been removed and may not maintain the proper torque when reinstalled.*

4. Remove piston shaft screw. Do **not** disassemble piston plates (4 screws) from piston assemblies. Remove and inspect piston assemblies for ruptures/pinches.
5. Disassemble inlet /outlet valve housings. Note the orientation of valve components. Inspect valves for warpage, swollen, or hardened conditions.
6. Inspect the center body for cracks and for obvious signs of wear of the shaft o-rings, which are non-repairable failures.
7. Install new or reuse good valve components. Reinstall as noted during disassembly. Torque inlet/outlet housing screws 1-12 in. lb. (70-85 N•m)
8. Install piston/shaft diaphragm assembly in center body (side with O-ring posts). Install blind piston diaphragm assembly and torque piston screw 10-12 in. lb. (70-85 N•m)
9. Install new air passage O-rings on the posts of the center body and the blind cover. Insure that diaphragm seals are properly seated in the grooves of the center body.
10. Install the control cover by inserting actuator rod into the piston plate and correctly orientated to the outlet housing (6 screws) as shown by the diagram. Take care not to pinch the diaphragm or disrupt O-rings while fitting the cover in place (actuator may click over center). Install five of the cover screws and snug down (leave out screw in mounting bracket position).
11. Carefully fit blind cover on the center body. Take care not to pinch the diaphragm or air passage O-rings. Install mounting bracket and the remaining cover screws (7). Torque all cover screws 10-12 in. lb. (70-85 N•m)

To insure dry prime operation, a small amount water should be entered into the pumps' inlet port to "wet" the valves. At start-up, adjust the gas regulator to about 15 psi.[1 bar] and allow the pump to stroke slowly until primed. The outlet (valve) may need to be opened to relieve trapped air within the tubing. Adjust gas regulator to achieve sufficient backpressure for the desired flow rate (but not greater than 60 psi).

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TROUBLESHOOTING - Most problems can be avoided through regular cleaning and maintenance. If the pump is not properly cleaned or maintained, dried ink or foreign matter may accumulate within the pump, and block or reduce material flow.

DOES NOT OPERATE / GAS APPLIED / OUTLET (VALVE) OPEN*

- Gas pressure too high
- Outlet tube kinked or restricted
- Operated without fluid for excess period (Dry run) [piston shaft seized on center body seals non-repairable failure]
- Control cover subjected contaminated gas supply or damaged [replace control cover assembly and insure clean gas supply]

OPERATES WILL NOT PRIME / OUTLET VALVE OPEN

- Warped/swollen valves or debris in valve seats [check compatibility, clean or replace valves as needed]

FLUID FROM EXHAUST OR IN GAS INLET TUBING

- Insure clean gas supply
- Inspect diaphragm/piston assemblies for ruptures [replace diaphragm/piston assembly and control cover; check compatibility]

AIR IN INLET AND/OR OUTLET TUBING

- Inlet tubing/fitting for vacuum leaks
- Inlet fitting o-ring; pinched or missing
- Air bubbles in output tubing only [inspect diaphragms for ruptures]

STROKES WITH OUTLET VALVE CLOSED

- Air trap in outlet tubing or fluid chambers [open outlet and purge air, check for vacuum leaks]
- Warped outlet valves or debris in valve seats [check compatibility, clean or replace valves as needed]
- Inspect center body o-rings and piston shaft for wear [piston shaft leaking across seals; non-repairable failure]

GAS BLOWING FROM EXHAUST CONTINUOUSLY

- Control cover subjected contaminated gas supply or damaged [replace control cover assembly and insure clean gas supply]

*To remove material blockage, you must open the pump, clean out all dried ink and foreign particulate. After cleaning, examine air pressure, air and material lines, the diaphragm and other internal components. If components are OK, reassemble the pump and test. If these troubleshooting remedies and the others listed above do not correct the problem, the pump may be returned for evaluation (must obtain return authorization number first). **Failure to clean the pump prior to return will result in a cleaning and maintenance fee above and beyond any repair costs, and regardless of whether the repair is covered by warranty.**

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