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Service Note

01-023B
28 May, 2002

HOW TO REBUILD A KNF PUMP P/N PU0000020

I. PURPOSE:
To provide instructions on how to rebuild a KNF pump P/N (PU0000020).

II. TOOLS:
Flat tipped screwdriver

III. PARTS:
Part number PU0000022

V. PROCEDURE:

1. Follow steps 1 – 12 of the Changing of the Diaphragm and Valve Plate procedure on the attached pages.

For Head Materials AV, SV
Kit Part Number: K005-0XVA

Qty	ID#	Description
1	E	Valveplate Viton
1	H	Diaphragm Viton

Notes:
1. If your model Number begins with MPU, PU or PJ, contact KNF Customer Service for the proper Parts Kit, as the contents may differ from those kits listed above.
2. Contact KNF Customer Service for ordering information.

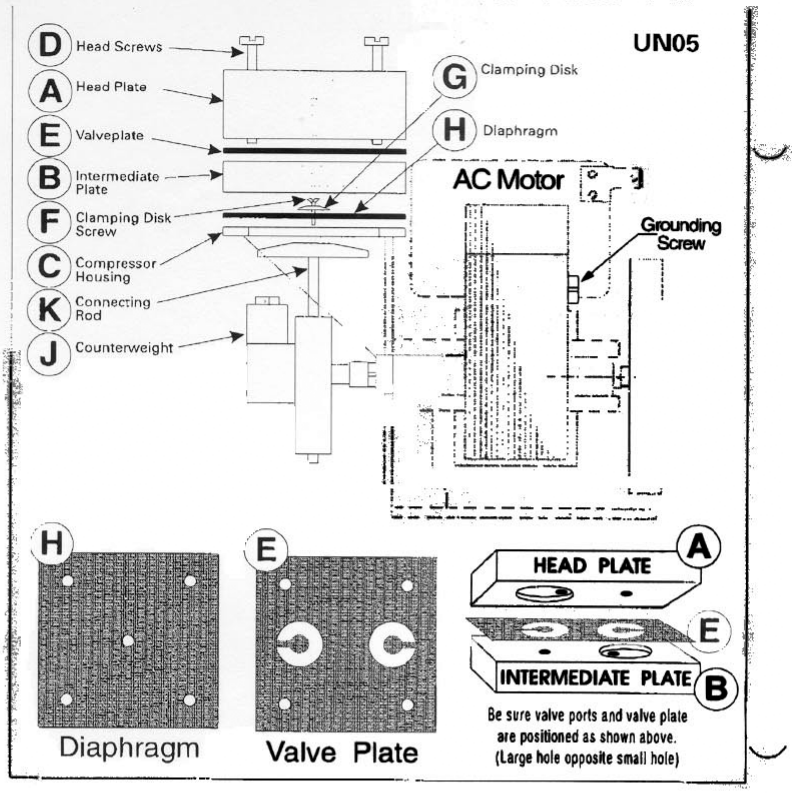
Changing the Diaphragm and Valve Plate

During normal use, the diaphragm and valve plate are the only parts of the pump that need to be replaced. Changing them **is a simple process when the** following **steps are taken.**

If you run into a problem or have a question regarding the following procedure, please call KNF Applications Engineering for assistance.

Materials/Tools needed:
The proper replacement kit(s)
Marking Pencil
Slotted-head screwdriver

Procedure
1. Disconnect the pump from electrical power.
2. Mark the relative positions of the head plate **A** intermediate plate **B** and ccompressor housing **C** with a line using a marker for ease of reassembly.
3. Undo the 4 slotted-head cap screws **D** and lift off the head plate **A,** valve plate **E** and intermediate plate **B.**
4. Lightly clean the valve seat area of the head plate **A** and intermediate plate **B,** if necessary, of any debris or deposits with fine steel wool. This area must be clean and smooth, without pits or scratches.
5. Loosen the countersunk clamping disc screw **F** and remove the clamping disc **G,** and the diaphragm **H.**
6. Turn the counterweight **J** until the connecting rod **K** is at mid-stroke, and place the new diaphragm **H** (Teflon (white) side up on AT or ST models) on the housing **C,** lining it up with the screw holes.
7. Place the clamping disc **G** (bevel side up) on top of the new diaphragm **H. SNUGLY** tighten the assembly using the countersunk clamping disc screw **F.** *Do not overtighten!*
8. Place the intermediate plate **B** over the diaphragm, lining up the marks made previously in step 2.
9. Place the valve plate **E** on top of the intermediate plate **B,** orienting the valve flaps with the holes. There is no top or bottom of the valve plate.
10. Place the head plate **A** on top of the valve plate **E,** lining it up with the markings you made in step 2. Note orientation of the valve ports in the diagram.
11. Be sure that all components are centered, then tighten the 4 slotted-head cap screws **C** uniformly to a **SNUG FIT** in a criss-cross pattern. *Do not overtighten!*



12. Check that the pump runs freely by turning the counterweight **J** by hand. Check all mechanical and electrical connections for tightness.
13. Apply power to the pump. Listen for a possible "knocking sound". If it is present, equally loosen the four head screws slightly until the sound just disappears. This step is to be sure that the clamping disc does not touch the intermediate plate during operation.

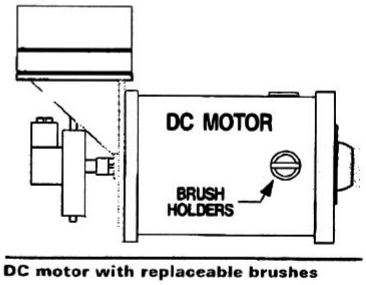
Note: Excessive tightening of the clamping disc screw and the four head screws will cause premature wear on the diaphragm and bearings and *must be avoided.*

DC Motor Brush Replacement

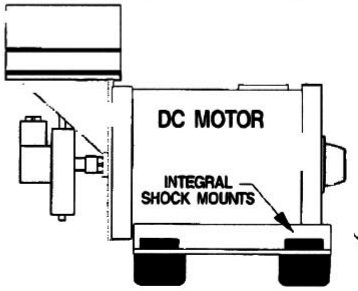
Two brush-type DC motors are currently used with KNF pumps. To determine if the brushes in your motor are replaceable, match your pump to the outlines to the right.

Contact Customer Service for replacement brush kits, if applicable.

For Service or Parts CONTACT:
KNF NEUBERGER, INC.
Two Black Forest Road
Trenton, New Jersey 08691-1810
Fax: 609-890-8323 · Phone: 609-890-8600



DC motor with replaceable brushes



DC motor with non-replaceable brushes