



TELEDYNE INSTRUMENTS

Advanced Pollution Instrumentation

A Teledyne Technologies Company
9480 Carroll Park Drive, San Diego, CA 92121-5201
Phone (858) 657-9800 Fax: (858) 657-9818 Toll Free 1800 324-5190
E-mail: api-customerservice@teledyne.com <http://www.teledyne-api.com>

Service Note

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REMOVAL AND INSTALLATION OF THE PUMP DIAPHRAGM FOR KNF PUMPS (API P/N PU-7)

Scope: This document provides a procedure for removing and replacing the diaphragm on KNF pumps (PU-7) used in the M400, M300 SN# 364 and lower, and the M100A SN#250 and lower.

Tools

- A. Flat Blade Screwdriver
- B. 9/16" Wrench
- C. Phillips Head Screwdriver

Procedure

1. Turn analyzer power off.
2. Remove two tubes from the fittings on the top of the pump, leaving the fittings attached to the top of the pump.
3. Disconnect power connections from pump.
4. Remove mounting screws holding pump mounting bracket into chassis. Remove pump assembly from chassis.
5. Remove 4 flat-blade screws from top of pump.
6. Remove pump head from body of pump.
7. Holding pump upside down to avoid losing shims, grasp the edges of the diaphragm and turn the entire diaphragm counter-clockwise to unscrew it from the piston.
8. Remove shims from diaphragm screw and install them onto the new diaphragm.
9. Holding the pump upside down, install the diaphragm onto the piston shaft by turning the entire diaphragm clockwise until the diaphragm is seated.
10. Separate the two pieces of the pump head and remove the rubber gasket containing the leaf valve gasket from the pump head. Install a new gasket from the rebuild kit.
11. Installation of head and pump is the reverse of removal.

Optional: You can replace the diaphragm without removing the pump from the chassis, but it is difficult to do without losing the diaphragm shims. These shims are factory set by KNF and you must replace ALL the shims onto the new diaphragm to prevent low vacuum or premature diaphragm wear.