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Technical Bulletin

Bulletin Number: 9402 Rev. 3
Distribution: All PM570L/PM575, All ASM-series, and All KE-700 Series
Customers and All Service Engineers
Issued By: Gerry Padnos, Service Manager
Subject: Shaft O-Ring Maint. for PM570/575, ASM and KE-700 Series

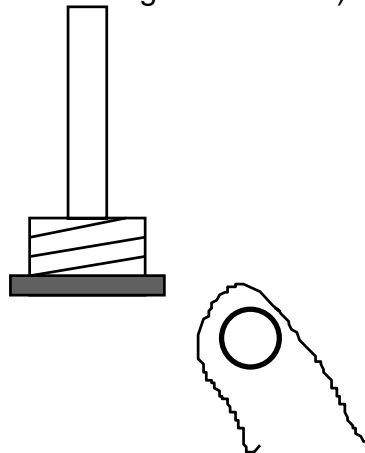
It is very important that proper maintenance on the O-ring inside the shaft is performed in accordance with the instructions in your machine's Instruction manual. Improper maintenance can cause nozzle pick errors and vacuum leaks.

When replacing the O-ring inside the shaft it is very important that the O-ring is properly seated in the groove. It is almost impossible to see this unless the spline shaft is removed, but the use of a hand-held mirror and flashlight will help without removing the shaft from the machine. There are a few symptoms of improper installation of the O-ring that will help you diagnose this problem.

Those symptoms are: difficulty attaching nozzles (especially nozzle number 4, or 104, which has a unique shape), dropping nozzles during production (this is actually associated with improper attachment of the nozzle), unusually low vacuum levels in Machine Setup, ATC Nozzle Setup.

If you experience any of these symptoms, remove your O-ring, clean it, grease it and try the following procedure. From our testing, this procedure seems to work very well and usually results in proper seating of the o-ring.

1. Place the cleaned, greased O-ring on your index finger.
2. Insert the O-ring into the bottom of the shaft so that it goes in as straight as possible (so that the O-ring is horizontal).



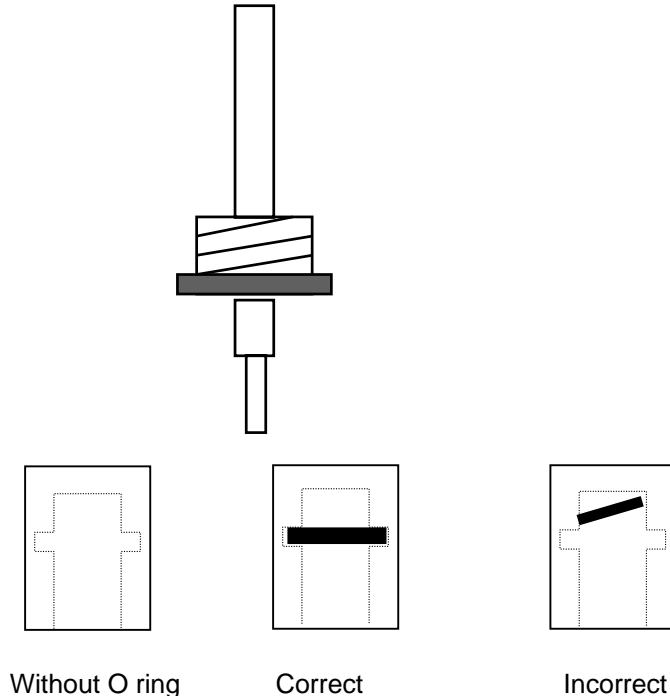
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- Use the thick side of a 6mm blue plug (on PM570s they are found all over the middle of the machine plugging the air ports for the feeder banks) to gently push the O-ring up. Be sure to push all around the inside edge of the shaft.



- When the O-ring is installed properly, it will sit somewhere around the middle of the top portion of the nozzle. If it is incorrectly installed, it gets pushed way up to the top of the nozzles. This causes many problems specifically with nozzle 4.
- Check the installation of the O-ring by manually putting in nozzle 4 and nozzle 1 (or any other nozzle). Compare how close the wide flange on the nozzle is to the bottom of the shaft. They should be about the same. If not, remove the O-ring and try again. Check for any of the symptoms described above.
- If you lift up on the end of the shaft (the spring loaded 'nozzle outer') then there should be no movement of the nozzle. If the nozzle moves, or falls out, then O-ring may not be seated correctly, or the O-ring needs to be replaced.
- The O-ring needs to be greased (EP2) at least once a month and replaced once every six (6) months. The part number for the O-ring is RO0801502000.

Note: Only the EP2 grease, supplied with the machine, should be used to lubricate the O-ring. Any other type of lubricate could cause the O-ring to expand and deteriorate. An additional tube of EP2 grease can be purchased using part number: MGREAS400G0.

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