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INSTRUCTIONS FOR LONG-TERM STORAGE OF PUMPS

General guides

- a) Product should be stored in a clean and dry environment with stable temperature and humidity. If this cannot be ascertained, additional care should be taken to prevent rust formation.
- b) Shaft should be turned 360° at least 10 times every 3 months to avoid preloaded bearing damage.
- c) Complete preservation procedure should be repeated every 12 months or more frequently in humid and unstable temperature environments.
- d) The governing procedure adopted shall be such that a sufficient quantity of the appropriate grade of preservative is brought into contact with product metal to be protected. The preservative shall displace any remaining traces of dirt, water, or oil, and leave a continuous protective film on surfaces. Excess preservative is to be drained off to prevent the formation of stagnant pools that may, with age, solidify and complicate putting a pump back into service.
- e) The term “preservative” is referred here to MIL-L-21260, PE 30, (grade 30), PE 10, (grade 10), or Mobilarma 524 fluids or equivalent, for all internal surfaces.
- f) The term “preservative” is referred to an appropriate grade of MIL-C-16173 (Mobilarma 247 or equivalent) for the external surfaces of pumps.

Product turn-over by an external drive mechanism

- a) Remove cap protections on pump ports and thoroughly drain the product of all fluids.
- b) Fill the product to normal capacity with proper preservative.
- c) Engage drive sufficiently to circulate the preservative thoroughly across all lubricated surfaces. Several runs are recommended to ensure that the compound is reaching all points. If an electric motor is used for turning the product, runs shall be limited to 5-10 revolutions each to prevent overheating. At least two minutes shall elapse between runs.
- d) Drain the preservative until all the liquid flows out the return line, paying particular attention to low spots and pockets where the compound could collect. Save drained compound for future use.
- e) Seal all openings in the product to prevent entrance of dirt or water. If possible, reinsert all plugs and covers that came with the product. If those are no longer intact, a blank metal or other non-porous material plate should be installed over suction, discharge and case drain ports to prevent moisture from seeping back into the product. Attach a waterproof tag on the blank plate with a warning: “remove blank plate prior to starting equipment as damage may occur”.
- f) Using grade 2 compound, MIL-C-16173, spray or brush over all external areas. If the product is exposed to altering weather conditions, grade 1 compound shall be used for this purpose, instead.
- g) Attach a waterproof tag to product top with a warning: “the unit has been treated with preservative”. The tag shall include the date of treatment and a statement that the product is not to be turned over until ready to be put into operation or if 3 month elapsed (as turning over may impair the protective film), and that product should be flushed before operating it.
- h) Before putting into service a product that has been treated with preservative, circulate clean hydraulic fluid through the unit. Turn the driveshaft about 10 times to ensure proper flushing. Inspect drive shaft seal for cracks.

**Failure to follow these procedures may put pump at risk of poor performance
and may also void warranty**