

Pulsafeeder Metering Pump Storage Procedures

Always check all equipment and accessories against the order documents immediately upon receipt. Any evidence of damage must be noted on the shipping documents, and reports of damage and/or suspected shortages must be reported to your Pulsafeeder Representative immediately.

Storage – all intervals

- It is preferred that the pump be stored indoors in a dry, controlled environment.
- If the pump has been in service, the wet end should be thoroughly flushed of chemical substances and neutralized appropriately, both to prevent buildup of residues that might affect operation, and also for safety during storage.
- The pump gearbox, eccentric box, and hydraulic section must be filled with the appropriate PULSAlube oil. If the pump is new, oil must be placed into the pump within 2 months of the ship date. An oil reference chart can be found on *page 2*.
- A spray-type rust preventative, for example “LPS-3®”, should be used to protect the interior surfaces of the pump that are not submerged in the oil.
- Set the pump to position the diaphragm in a neutral position, as per the attached table (*page 2*).
- Ensure that housings for all electronic components and controls are protected from the ingress of moisture and chemical vapors. Seal any open ports.
- Consult with the manufacturer or representative of any accessory or ancillary items for special storage recommendations, for example motors, gearboxes, pressure valves, dampeners, etc.

Storage – 3 month intervals

- Inspect the overall condition of the pump, check inside all housings including controls and electronics for evidence of moisture or ingress of contaminants.
- Examine the condition of the oil, if there is evidence of moisture or contamination of any kind, change the oil as per the directions in your Pulsafeeder IOM.
- Raise the stroke length setting to 100% and manually cycle the piston through several full strokes to circulate the oil and coat internal surfaces (see **NOTES** below).
- The motor should be operated for 1 hour, to eliminate buildup of moisture and prevent damage to bearings (see **NOTES** below). No extended warranty coverage is offered on motors that have been in storage, and users are advised to consult with the motor manufacturer directly for further recommendations.
- Reset the stroke setting as per the attached table before the pump is returned to storage.

Storage – 1 year intervals

- PULSAlube oil must be drained from the pump, the gearbox and internal components should be cleaned and inspected, and the pump refilled with fresh PULSAlube oil. Even when a pump is not in service, the oil will be affected by moisture and environmental contaminants. Detailed instructions for oil changes are found in your Pulsafeeder IOM.
- Spray-type rust preventative, for example “LPS-3®”, should be re-applied at this time.

NOTES: during storage, it is not necessary to have liquid in the wet end. However, any time the piston is moved or the motor is run, the suction and discharge connections of the pump must be open to the atmosphere to prevent hydraulic upset and diaphragm damage.

For pumps equipped with PULSAlarm vacuum coupled leak detection diaphragms, it is not required to maintain vacuum during storage periods, however a vacuum should be drawn any time the piston and diaphragm will be moved or cycled. Pressure-based leak detection systems and barrier/intermediate fluids do not need specific attention during storage but should be checked prior to startup.

Startup

After any storage period, the pump must be inspected before being placed back into service. Certain components such as gaskets, seals, elastomer diaphragms, and other items may deteriorate with age and should be replaced. Your local Pulsafeeder Representative can assist with inspection and service. If the oil has not been changed within the past 6 months, it is recommended that an oil change be done before returning the pump to service.

After inspection and any required maintenance, perform startup as per the instructions in your Pulsafeeder IOM. If an IOM is not available, they may be downloaded from www.pulsa.com, or acquired from your local Pulsafeeder Representative.

Diaphragm Position Table

Following these recommendations will maintain the diaphragm in a neutral position during storage, minimizing the possibility of damage. For long storage intervals, diaphragms may still need replacement before the pump is returned to service.

Diaphragm type	Storage recommendation
Pulsa Series, Full Motion Models 7120-7440-7660-8480-9490 Flat Diaphragm	Stroke length set at 0% to keep flat diaphragm in neutral position
Pulsa Series, Full Motion Models 7120-7440-7660-8480 Hydratube Diaphragm	Stroke length at 100% setting, piston moved to full rearward position to keep Hydratube fully open
Pulsa Series, Lost motion Models 680-880 Flat Diaphragm	Stroke length at 50% setting, rotate drive so that piston is not resting on any part of the cam *
Pulsa Series, Lost motion Models 680-880 Hydratube Diaphragm	Stroke length at 100% setting, piston moved to full rearward position to keep Hydratube fully open
Pulsa Series Models 340, R1, 680C Hydracone Diaphragm	Stroke length at 100% setting, piston moved to full rearward position to keep Hydracone in a neutral position
PULSAR, all models	Stroke length at 50% setting, rotate drive so that piston is not resting on any part of the cam *
SHADOW, all models	Mechanical diaphragm pump, storage position is not critical for this model

* for lost motion type pumps with flat diaphragms, it is harder to monitor the exact position of the piston and diaphragm. These pumps should be cycled more frequently to maintain the diaphragm during storage.

Oil Reference Table

Pump Type	Recommended Oil	
All Pulsa Series, R1 thru 8480	PULSAlube # 1 or PULSAlube # 5	
PULSAR Hydraulic Pumps	Eccentric box	PULSAlube 7H
	Gearbox	PULSAlube 8G
SHADOW Mechanical pumps	Eccentric box	PULSAlube 9M
	Gearbox	PULSAlube 8G

NOTE: Some pumps may use alternate lubricants, consult your Specification Sheet for guidance