

## ROPE SEAL PUMP GUIDE

**SEAL TYPES** - A Centrifugal Water Pump will have either a Rope Seal or Mechanical Seal around the shaft. Rope Seals are designed to be serviceable in the field without having to take the pump apart but will leak water from the Packing Box. Mechanical Seals will not leak any water, however are more prone to breakage from excessive heat than a Rope Seal and require dismantling of the pump to be replaced.

**STARTING A ROPE SEAL** - Before starting a Pump with a Rope Packing Seal for the first time, loosen the Gland Nuts and re-tighten **EVENLY**, finger tight. Once the pump is running, allow the Packing to leak liberally for a few moments until saturated then continue tightening the Gland Nuts one complete turn each until leakage is reduced to 40-60 drops per minute.

**CHECK FOR EXCESSIVE HEAT** - After a short period of operation, verify that the Packing Box and Gland are not hot. If heat is detected, loosen the Gland Nuts evenly until water is just running out of the Packing Box in a DROPLET form. Water must not be streaming or spraying out. Verify cool operation periodically. Adjust Gland Nuts **EVENLY** as necessary for lubrication and cooling of the Packing. If Packing has been tightened to the limit of the Packing Gland travel, additional Packing is necessary.

**KNOW WHEN TO SERVICE** - Rope Packing will degrade over time and needs to be replaced on a regular basis. Rope Packing Pumps should only leak while running. If your Pump is leaking while the PTO is disengaged, it may be time to add or replace the Rope Packing. Check the drip rate of your Pump when the PTO is engaged. Any drip rate beyond 40-60 drops per minute is excessive and may require additional Packing or tightening of the Packing Gland until the optimal drip rate is achieved. If the Pump still leaks excessively after replacing the Rope Packing, inspect the Shaft to verify there are no scratches or grooves worn into it. If markings or grooves are found it may be time to replace the Shaft.

**PRECAUTIONS** - Do not over-tighten the Gland Nuts or you risk breaking the Bolt Seats which will require replacement of the Pump Frame. Periodically verify the integrity of the Pump Shaft and Sleeve. Do not run the Pump dry. Water from the Pump is used to lubricate and cool the Rope Packing and running it dry can damage your Packing and Shaft. Do NOT use any sort of sealant like Silicone to stop the Pump from leaking. If you need a Pump that will not leak, a Mechanical Seal may be more appropriate.