

## **GENERAL MAINTENANCE GUIDELINES**

The unit should be checked at regular intervals for any slight increase in noise or heat that may develop in any part of the pump, including the coupling, stuffing box and bearings. See the Troubleshooting section at the end of this manual for help in diagnosing the cause of this problem.

The mechanical seal is primarily designed to prevent air being drawn into the back of the pump through the stuffing box. It also prevents gritty particles in the pumping liquid from entering the stuffing box. When servicing or replacing the seal, it is essential that precautions are taken to assure that the seal chamber is kept free of dirt. Though the mechanical seal is designed to allow the pump to run dry for prolong periods, the seal relies upon a constant supply of oil for both lubrication and cooling. Never run the pump without first checking the seal's oil reserve is full.

The pump end's bearings are grease lubricated. The bearing housing should be about one-third full of good ball bearing grease. Extreme care must be taken to assure that dirt does not contaminate the bearing grease. Too much grease in the bearing housing causes the bearing to run hot. Add small amount of grease every 3 to 6 months being careful to remove old grease if necessary to maintain the housing not more that 1/3 full.

Maintenance of the correct clearance between the pump end's suction cover and impeller significantly affects the operating efficiency of the complete unit. The pump end is supplied with replaceable wear rings that are designed to maintain the correct clearance. When the clearance increases by about .020" the rings should be replaced.

| Summary of engine and pump lubricants |                     |                                             |        |
|---------------------------------------|---------------------|---------------------------------------------|--------|
| Engine                                | Lubricating oil     | All season                                  | 15W-40 |
|                                       |                     | Winter                                      | 10W-30 |
|                                       |                     | Artic                                       | 5W-30  |
|                                       | Oil filter          | Fleetguard LF3345                           |        |
| Pump                                  | Mechanical seal oil | Mobil Rarus 4-27                            |        |
|                                       | Bearing grease      | Esso Multi-P Purpose H or Texaco Multifak 2 |        |