This is a SAFETY ALERT SYMBOL. When you see this symbol on the product, or in the manual, look for one of the following signal words and be alert to the potential for personal injury, death or major property damage.

**DANGER**

Warns of hazards that WILL cause serious personal injury, death or major property damage.

**WARNING**

Warns of hazards that CAN cause serious personal injury, death or major property damage.

**CAUTION**

Warns of hazards that CAN cause personal injury or property damage.

**NOTICE:**

Indicates special instructions which are very important and must be followed.

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Blackmer pumps **MUST** only be installed in systems which have been designed by qualified engineering personnel. The system **MUST** conform to all applicable local and national regulations and safety standards.

This manual is intended to assist in the installation and operation of the Blackmer pumps, and **MUST** be kept with the pump.

Pump service shall be performed by qualified technicians **ONLY**. Service shall conform to all applicable local and national regulations and safety standards.

Thoroughly review this all instructions and hazard warnings in this manual and the appropriate model pump manual, **BEFORE** performing any work on the Blackmer pump.

Maintain ALL system and pump operation and hazard warning decals.

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Blackmer pump manuals and parts lists may be obtained from Blackmer’s website (www.blackmer.com) or by contacting Blackmer Customer Service.

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**WARNING**

Disconnecting fluid or pressure containment components during pump operation can cause serious personal injury, death or major property damage

**WARNING**

Failure to disconnect and lockout electrical power before attempting maintenance can cause shock, burns or death

**WARNING**

Failure to disconnect and lockout electrical power or engine drive before attempting maintenance can cause severe personal injury or death

**WARNING**

Failure to relieve system pressure prior to performing pump service can cause serious personal injury or property damage.

**WARNING**

Systems with meters will still be pressurized even after the hose is emptied

**WARNING**

Failure to set the vehicle emergency brake and chock wheels before performing service can cause severe personal injury or property damage.

**WARNING**

If pumping hazardous or toxic fluids, system must be flushed and decontaminated, inside and out, prior to performing service or maintenance.
Preparation
All components should be kept intact as shipped until ready to be used.
Contaminated components must be restored to as shipped condition before use.
Carefully inspect housing bore and shaft. Remove raised metal, burrs, sharp edges and contamination before attempting seal installation.

Lubrication
Lubricate both the drive rings and the STATOR rings (if equipped) with lubricant supplied, neutral mineral oil or petroleum jelly at installation.

Installation / Maintenance
Assemble the stator (if equipped) to the housing with the gravity drain at six o'clock.
When installing the rotor over a shaft with a keyway the FKM drive rings must be protected from being sliced or sheared by sharp edges or burrs on keyway. Use shim stock provided if necessary.
As this is a non-contacting seal, no maintenance is required. However, an occasional visual inspection of the seal is recommended.